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Lisa Sabin-Wilson

WordPress®

ALL-IN-ONE

3rd Edition

by Lisa Sabin-Wilson

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WordPress® All-in-One For Dummies®, 3rd Edition

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Contents at a Glance

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Introduction

WordPress is the most popular online content management software on the planet. Between the hosted service at WordPress.com and the self-hosted software available at WordPress.org, millions of bloggers use WordPress, and to date, WordPress powers 25 percent of the Internet. That's impressive. With WordPress, you can truly tailor a website to your own tastes and needs.

With no cost for using the benefits of the WordPress platform to publish content on the web, WordPress is as priceless as it is free. WordPress makes writing, editing, and publishing content on the Internet a delightful, fun, and relatively painless experience, whether you're a publisher, a designer, a developer, or a hobbyist blogger.

About This Book

The fact that WordPress is free and accessible to all, however, doesn't make it inherently easy for everyone to use. For some people, the technologies, terminology, and coding practices are a little intimidating or downright daunting. *WordPress All-in-One For Dummies,* 3rd Edition, eliminates any intimidation about using WordPress. With a little research, knowledge, and time, you'll soon have a blog that suits your needs and gives your readers an exciting experience that keeps them coming back for more.

WordPress All-in-One For Dummies is a complete guide to WordPress that covers the basics: installing and configuring the software, using the Dashboard, publishing content, creating themes, and developing plugins. Additionally, this book provides advanced information about security, the WordPress tools, the Multisite features, and search engine optimization.

Foolish Assumptions

I make some inescapable assumptions about you and your knowledge, including the following:

- You're comfortable using a computer, mouse, and keyboard.
- You have a good understanding of how to access the Internet, use email, and use a web browser to access web pages.
- You have a basic understanding of what a website is; perhaps you already maintain your own.
- You want to use WordPress for your online publishing, or you want to use the various WordPress features to improve your online publishing.

If you consider yourself to be an advanced user of WordPress, or if your friends refer to you as an all-knowing WordPress guru, chances are good that you'll find some of the information in this book elementary. This book is for beginner, intermediate, and advanced users; there's something here for everyone.

Icons Used in This Book

The little pictures in the margins of the book emphasize a point to remember, a danger to be aware of, or information that you may find helpful. This book uses the following icons:

TIP

Tips are little bits of information that you may find useful — procedures that aren't necessarily obvious to a casual user or beginner.

WARNING

When your mother warned you, "Don't touch that pan — it's hot!" but you touched it anyway, you discovered the meaning of "Ouch!" I use this icon for situations like that one. You may very well touch the hot pan, but you can't say that I didn't warn you!

TECHNICAL STUFF

All geeky stuff goes here. I use this icon when talking about technical information. You can skip it, but I think that you'll find some great nuggets of information next to these icons. You may even surprise yourself by enjoying them. Be careful — you may turn into a geek overnight!

REMEMBER

When you see this icon, brand the text next to it into your brain so that you remember whatever it was that I thought you should remember.

Beyond the Book

On the web, you can find some extra content that's not in this book. Go online to find

- The Cheat Sheet for this book is at `www.dummies.com/cheatsheet`. In the Search field, type **WordPress All-in-One For Dummies Cheat Sheet** to find the Cheat Sheet for this book.
- Updates to this book, if any, are at `www.dummies.com`. Search for the book's title to find the associated updates.

Where to Go from Here

From here, you can go anywhere you please! *WordPress All-in-One For Dummies* is designed so that you can read any or all of the minibooks between the front and back covers, depending on what topics interest you.

Book 1 is a great place to get a good introduction to the world of WordPress if you've never used it before and want to find out more. Book 2 gives you insight into the programming techniques and terminology involved in running a WordPress website — information that's extremely helpful when you move forward to the other minibooks.

Above all else, have fun with the information contained within these pages! Read the minibooks on topics you think you already know; you might just come across something new. Then dig into the minibooks on topics that you want to know more about.

1 WordPress Basics

Contents at a Glance

IN THIS CHAPTER

- » **Discovering content publishing**
- » **Publishing and archiving content**
- » **Interacting through comments**
- » **Syndicating through RSS**
- » **Using WordPress as a content management tool to create different types of sites**

Chapter 1
Exploring Basic WordPress Concepts

Blogging provides regular, nontechnical Internet users the ability to publish content on the World Wide Web quickly and easily. Consequently, blogging became extremely popular very quickly, to the point that it's now considered mainstream. In some circles, blogging is even considered passé, as it has given way to publishing all different types of content freely, and easily, using WordPress. Regular Internet users are blogging, and Fortune 500 businesses, news organizations, and educational institutions are using WordPress to publish content on the web. Today, approximately one in four websites is powered by WordPress. That is, roughly, 25 percent of all sites on the web have WordPress behind them.

Although you can choose among several software platforms for publishing web content, for many content publishers, WordPress has the best combination of options. WordPress is unique in that it offers a variety of ways to run your website. WordPress successfully emerged as a favored blogging platform and expanded to a full-featured content management system (CMS) that includes all the tools and features you need to publish an entire website on your own without requiring a whole lot of technical expertise or understanding.

In this chapter, I introduce you to such content basics such as publishing and archiving content, interacting with readers through comments, and providing ways for readers to have access to your content through social media syndication, or RSS technologies. This chapter also helps you sort the differences between a blog and a website, and introduces how WordPress, as a CMS, can help you build an entire website. Finally, I show you some websites that you can build with the WordPress platform.

Discovering Blogging

A blog is a fabulous tool for publishing your diary of thoughts and ideas; however, blogs also serve as excellent tools for business, editorial journalism, news, and entertainment. Here are some ways that people use blogs:

- **Personal:** You're considered to be a personal blogger if you use your blog mainly to discuss topics related to you or your life: your family, your cats, your children, or your interests (such as technology, politics, sports, art, or photography). My business partner, Brad Williams, maintains a personal blog at `http://strangework.com`.
- **Business:** Blogs are very effective tools for promotion and marketing, and business blogs usually offer helpful information to readers and consumers, such as sales events and product reviews. Business blogs also let readers provide feedback and ideas, which can help a company improve its services. A good example of a business blog is the Discovery Channel corporate blog, at `https://corporate.discovery.com/blog/`.
- **Media/journalism:** Popular news outlets, such as Fox News, MSNBC, and CNN, are using blogs on their websites to provide information on current events, politics, and news on regional, national, and international levels. *Variety* magazine hosts its entire website on WordPress at `http://variety.com`.
- **Government:** Governments use blogs to post news and updates to the web quickly and to integrate social media tools as a means to interact with their citizens and representatives. openNASA (`https://open.nasa.gov`) is the official site of NASA's open data initiative, which was built to provide transparency of data to benefit society and humankind. (See Figure 1-1.) NASA staff members provide content by way of blog posts, photos, and videos, and they integrate feeds from their Twitter and Facebook accounts.
- **Citizen journalism:** Citizens are using blogs with the intention of keeping the media and politicians in check by fact-checking news stories and exposing inconsistencies. Major cable news programs interview many of these bloggers because the mainstream media recognize the importance of the citizen voice that's emerging via blogs. An example of citizen journalism is Power Line at `www.powerlineblog.com`.

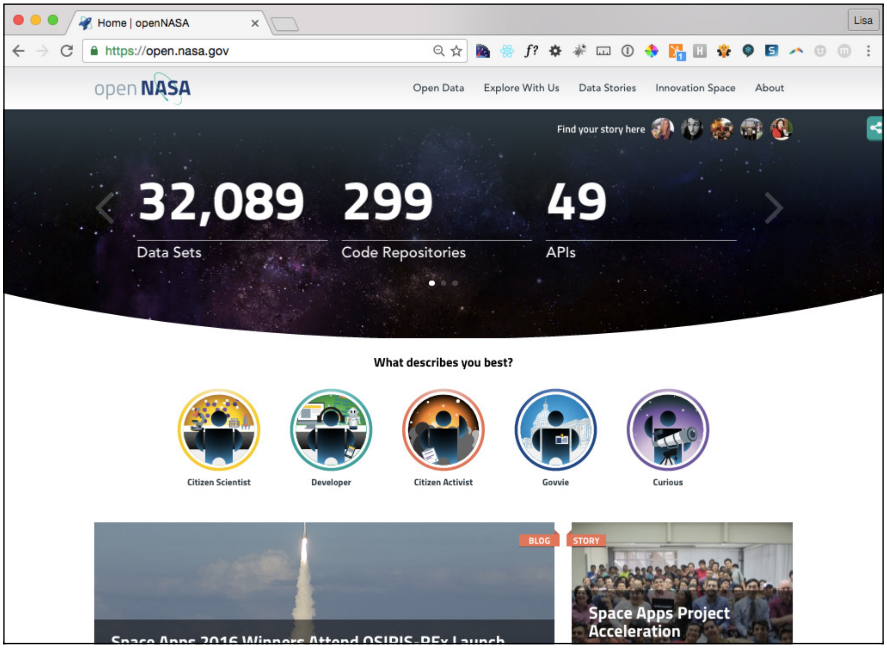


FIGURE 1-1: openNASA, the official website of NASA's open data initiative.

- **Professional:** Professional blogs typically generate revenue and provide a source of monetary income for the owner through avenues such as advertising or paid membership subscriptions. Check out Darren Rowse's ProBlogger blog at `www.problogger.net`. Darren is considered to be the grandfather of all professional bloggers.

The websites and blogs I provide in this list run on the WordPress platform. A wide variety of organizations and individuals choose WordPress to run their blogs and websites because of its popularity, ease of use, and the large and active development community.

Understanding WordPress Technologies

The WordPress software is a personal publishing system that uses a PHP-and-MySQL platform, which provides you everything you need to create your blog and publish your content dynamically without having to program the pages yourself. In short, with this platform, all your content is stored in a MySQL database in your hosting account.

TECHNICAL STUFF

PHP (which stands for *PHP Hypertext Preprocessor*) is a server-side scripting language for creating dynamic web pages. When a visitor opens a page built in PHP, the server processes the PHP commands and then sends the results to the visitor's browser. MySQL is an open-source relational database management system (RDBMS) that uses Structured Query Language (SQL), the most popular language for adding, accessing, and processing data in a database. If all that sounds like Greek to you, think of MySQL as being a big filing cabinet where all the content on your blog is stored.

REMEMBER

Keep in mind that PHP and MySQL are the technologies that the WordPress software is built on, but that doesn't mean you need experience in these languages to use it. Anyone with any level of experience can easily use WordPress without knowing anything about PHP or MySQL.

Every time a visitor goes to your website to read your content, she makes a request that's sent to your server. The PHP programming language receives that request, obtains the requested information from the MySQL database, and then presents the requested information to your visitor through her web browser.

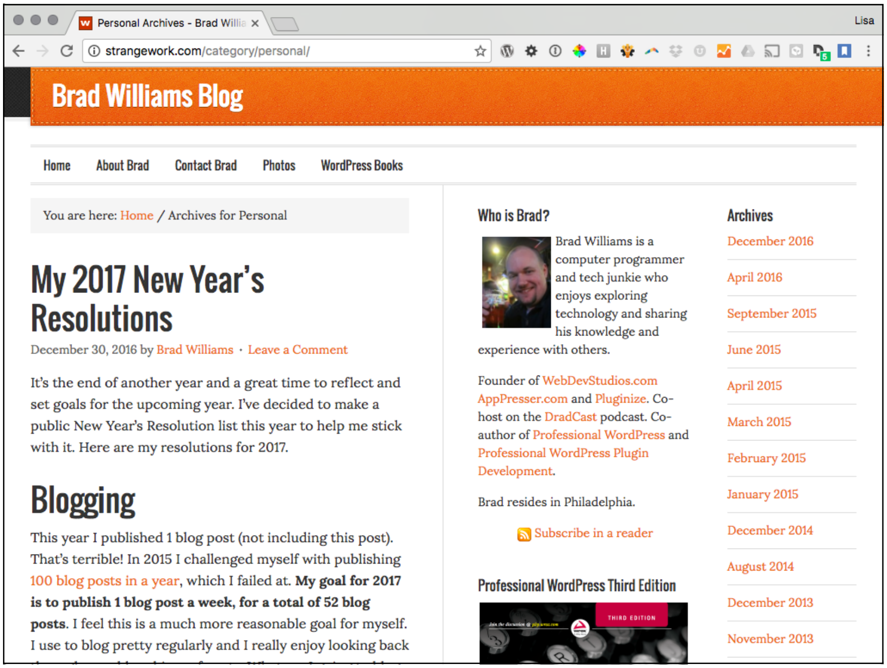
TIP

Book 2, Chapter 1 gives you more in-depth information about the PHP and MySQL requirements you need to run WordPress. Book 2, Chapter 3 introduces you to the basics of PHP and MySQL and provides information about how they work together with WordPress to create your blog or website.

Archiving your publishing history

Content, as it applies to the data that's stored in the MySQL database, refers to your websites posts, pages, comments, and options that you set up in the WordPress Dashboard or the control/administration panel of the WordPress software, where you manage your site settings and content (see Book 3, Chapter 2).

WordPress maintains chronological and categorized archives of your publishing history automatically. This archiving process happens with every post you publish to your blog. WordPress uses PHP and MySQL technology to organize what you publish so that you and your readers can access the information by date, category, author, tag, and so on. When you publish content on your WordPress site, you can file a post in any category you specify — a nifty archiving system that allows you and your readers to find posts in specific categories. The archives page of my business partner's blog (`http://strangework.com/archives`), for example, contains a Category section, where you find a list of categories he created for his blog posts. Clicking the Personal link below the Categories heading takes you to a listing of posts on that topic. (See Figure 1-2.)



You are here: Home / Archives for Personal

My 2017 New Year's Resolutions

December 30, 2016 by Brad Williams · Leave a Comment

It's the end of another year and a great time to reflect and set goals for the upcoming year. I've decided to make a public New Year's Resolution list this year to help me stick with it. Here are my resolutions for 2017.

Blogging

This year I published 1 blog post (not including this post). That's terrible! In 2015 I challenged myself with publishing 100 blog posts in a year, which I failed at. **My goal for 2017 is to publish 1 blog post a week, for a total of 52 blog posts**. I feel this is a much more reasonable goal for myself. I use to blog pretty regularly and I really enjoy looking back

Who is Brad?

Brad Williams is a computer programmer and tech junkie who enjoys exploring technology and sharing his knowledge and experience with others.

Founder of WebDevStudios.com AppPresser.com and Pluginize. Co-host on the DradCast podcast. Co-author of Professional WordPress and Professional WordPress Plugin Development.

Brad resides in Philadelphia.

Subscribe in a reader

Professional WordPress Third Edition

Archives

December 2016
April 2016
September 2015
June 2015
April 2015
March 2015
February 2015
January 2015
December 2014
August 2014
December 2013
November 2013

FIGURE 1-2: A page with posts in the Personal category.

WordPress lets you create as many categories as you want for filing your content. Some sites have just one category, and others have up to 1,800 categories. When it comes to organizing your content, WordPress is all about personal preference. On the other hand, using WordPress categories is your choice. You don't have to use the category feature if you'd rather not.

TIP

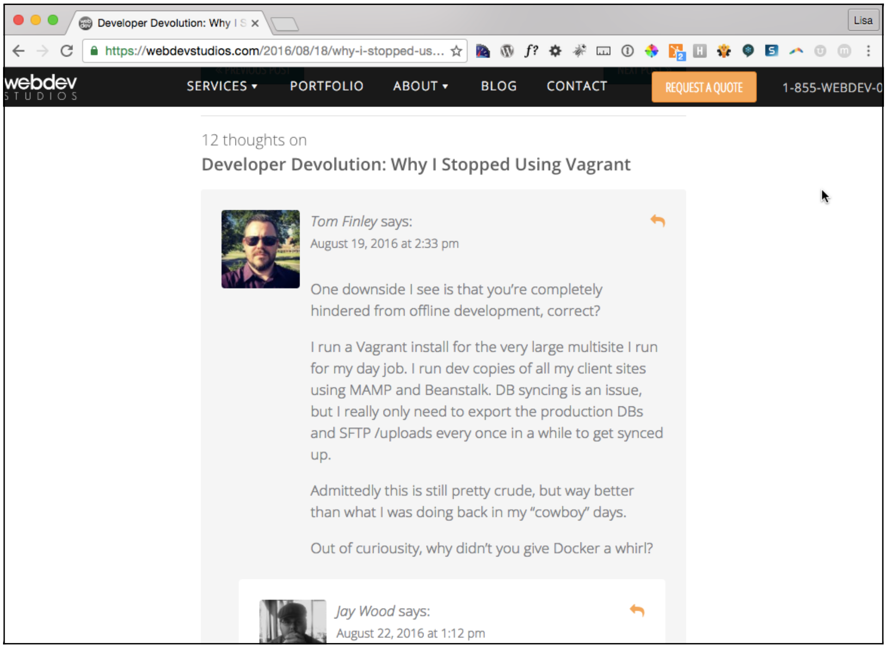
When you look for a hosting service, keep an eye out for hosts that provide daily backups of your site so that your content won't be lost if a hard drive fails or someone makes a foolish mistake. Web hosting providers that offer daily backups as part of their services can save the day by restoring your site to a previous form.

REMEMBER

The theme (design) you choose for your site — whether it's the default theme, one that you create, or one that you custom-design — isn't part of the content. Those files are part of the file system and aren't stored in the database. Therefore, it's a good idea to create a backup of any theme files you're using. See Book 6 for further information on WordPress theme management.

Interacting with your readers through comments

An exciting aspect of publishing content with WordPress is receiving feedback from your readers after you publish to your site. Receiving feedback, or *comments*, is akin to having a guestbook on your site. People can leave notes for you that publish to your site, and you can respond and engage your readers in conversation. (See Figure 1-3.) These notes can expand the thoughts and ideas you present in your content by giving your readers the opportunity to add their two cents' worth.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webdev STUDIOS
SERVICES ▾
PORTFOLIO
ABOUT ▾
BLOG
CONTACT
REQUEST A QUOTE
1-855-WEBDEV-0

12 thoughts on

Developer Devolution: Why I Stopped Using Vagrant

Tom Finley says:

August 19, 2016 at 2:33 pm

One downside I see is that you're completely hindered from offline development, correct?

I run a Vagrant install for the very large multisite I run for my day job. I run dev copies of all my client sites using MAMP and Beanstalk. DB syncing is an issue, but I really only need to export the production DBs and SFTP /uploads every once in a while to get synced up.

Admittedly this is still pretty crude, but way better than what I was doing back in my "cowboy" days.

Out of curiousity, why didn't you give Docker a whirl?

Jay Wood says:

August 22, 2016 at 1:12 pm

FIGURE 1-3: Blog comments and responses.

REMEMBER

The WordPress Dashboard gives you full administrative control over who can leave comments. Additionally, if someone leaves a comment with questionable content, you can edit the comment or delete it. You're also free to not allow comments on your site at all. (See Book 3, Chapter 4 for more information.)

Feeding your readers

RSS stands for *Really Simple Syndication*. An *RSS feed* is a standard feature that blog readers have come to expect. So what is RSS, really?

RSS is written to the web server in XML (Extensible Markup Language) as a small, compact file that can be read by RSS readers (as I outline in Table 1-1). Think of an RSS feed as a syndicated, or distributable, autoupdating "What's New" list for your website.

Tools like feed readers and email newsletter services can use the RSS feed from your website to consume the data and aggregate it into a syndicated list of content published on your website. Website owners allow RSS to be published to allow these tools to consume and then distribute the data in an effort to expand the reach of their publications.

Table 1-1 lists some popular tools that use RSS feeds to distribute content from websites.

TABLE 1-1 Popular RSS Feed Readers

Reader	Source	Description
Feedly	`http://feedly.com`	RSS aggregator for websites that publish an RSS feed. It compiles published stories from various user-chosen sources and allows the Feedly user to organize the stories and share the content with others.
MailChimp	`https://mailchimp.com`	MailChimp is an email newsletter service. It has an RSS-to-email service that enables you to send your recently published content to your readers via an email subscription service.
dlvr.it	`https://dlvrit.com/`	Use RSS to auto-post to Facebook, Twitter, LinkedIn, Pinterest, and other social media sites.

For your readers to stay up-to-date with the latest and greatest content you post, they can subscribe to your RSS feed. WordPress RSS feeds are *autodiscovered* by the various feed readers. The reader needs only to enter your site's URL, and the program automatically finds your RSS feed.

WordPress has RSS feeds in several formats. Because the feeds are built into the software platform, you don't need to do anything to provide your readers an RSS feed of your content.

Tracking back

The best way to understand *trackbacks* is to think of them as comments, except for one thing: Trackbacks are comments left on your site by other sites, not people. Sounds perfectly reasonable, doesn't it? After all, why wouldn't inanimate objects want to participate in your discussion?

Actually, maybe it's not so crazy after all. A trackback happens when you make a post on your site, and within the content of that post, you provide a link to a post made by another author on a different site. When you publish that post, your site sends a sort of electronic memo to the site you linked to. That site receives the memo and posts an acknowledgment of receipt in the form of a comment to the post that you linked to on the site. The information contained within the trackback includes a link back to the post on your site that contains the link to the other site — along with the date and time, as well as a short excerpt of your post. Trackbacks are displayed within the comments section of the individual posts.

The memo is sent via a *network ping* (a tool used to test, or verify, whether a link is reachable across the Internet) from your site to the site you link to. This process works as long as both sites support trackback protocol. Almost all major CMSes support the trackback protocol.

REMEMBER

Sending a trackback to a site is a nice way of telling the author that you like the information she presented in her post. Most authors appreciate trackbacks to their posts from other content publishers.

Dealing with comment and trackback spam

The absolute bane of publishing content on the Internet is comment and trackback spam. Ugh. When blogging became the "it" thing on the Internet, spammers saw an opportunity. If you've ever received spam in your email program, you know what I mean. For content publishers, the concept is similar and just as frustrating.

Spammers fill content with open comments with their links but not with any relevant conversation or interaction in the comments. The reason is simple: Websites receive higher rankings in the major search engines if they have multiple links coming in from other sites. Enter software, like WordPress, with comment and trackback technologies, and these sites become prime breeding ground for millions of spammers.

Because comments and trackbacks are published to your site publicly — and usually with a link to the commenter's website — spammers got their site links posted on millions of sites by creating programs that automatically seek websites with open commenting systems and then hammer those systems with tons of comments that contain links back to their sites.

No one likes spam. Therefore, developers of CMSes, such as WordPress, spend untold hours in the name of stopping these spammers in their tracks, and for the most part, they've been successful. Occasionally, however, spammers sneak through. Many spammers are offensive, and all of them are frustrating because they don't contribute to the conversations that occur on the websites where they publish their spam comments.

All WordPress systems have one important thing in common: Akismet, which kills spam dead. Akismet is a WordPress plugin brought to you by Automattic, the creator of the WordPress.com service. I cover the Akismet plugin, and comment spam in general, in Book 3, Chapter 4.

Using WordPress as a Content Management System

A *content management system* (CMS) is a platform that lets you run a full website on your domain. This means that WordPress enables you to create and publish all kinds of content on your site, including pages, blog posts, e-commerce pages for selling products, videos, audio files, events, and more.

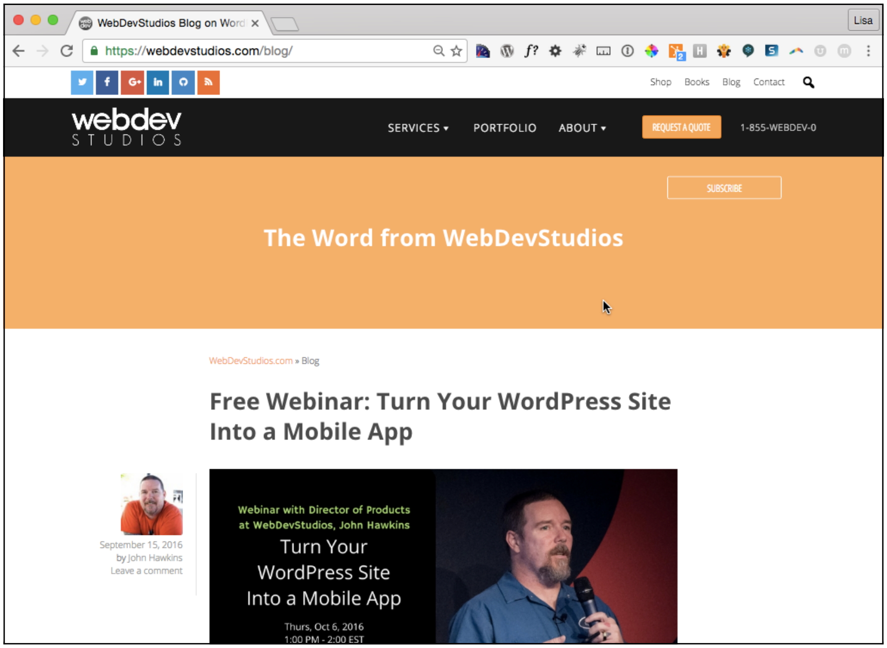
A *blog* is a chronological display of content — most often, written by the blog author. The posts are published and, usually, categorized into topics and archived by date. Blog posts can have comments activated so that readers can leave their feedback and the author can respond, creating a dialogue about the blog post.

A *website* is a collection of published pages with different sections that offer the visitor different experiences. A website can incorporate a blog but usually contains other sections and features. These other features include

- **Photo galleries:** Albums of photos uploaded and collected in a specific area so that visitors can browse through and comment on them
- **E-commerce stores:** Fully integrated shopping area into which you can upload products for sale and from which your visitors can purchase them
- **Discussion forums:** Where visitors can join, create discussion threads, and respond to one another in specific threads of conversation
- **Social communities:** Where visitors can become members, create profiles, become friends with other members, create groups, and aggregate community activity
- **Portfolios:** Sections where photographers, artists, or web designers display their work
- **Feedback forms:** Contact forms that your visitors fill out with information that then gets emailed to you directly
- **Static pages (such as Bio, FAQ, or Services):** Pages that don't change as often as blog pages, which change each time you publish a new post

The preceding list isn't exhaustive; it's just a listing of some of the most common website sections.

Figure 1-4 shows what the front page of my business blog looked like at the time of this writing. Visit `https://webdevstudios.com/blog` to see that the site displays a chronological listing of the most recent blog posts.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ABOUT ▾
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1-855-WEBDEV-0
SUBSCRIBE
Webinar with Director of Products at WebDevStudios, John Hawkins
Turn Your WordPress Site Into a Mobile App
Thurs, Oct 6, 2016
1:00 PM - 2:00 EST

The Word from WebDevStudios

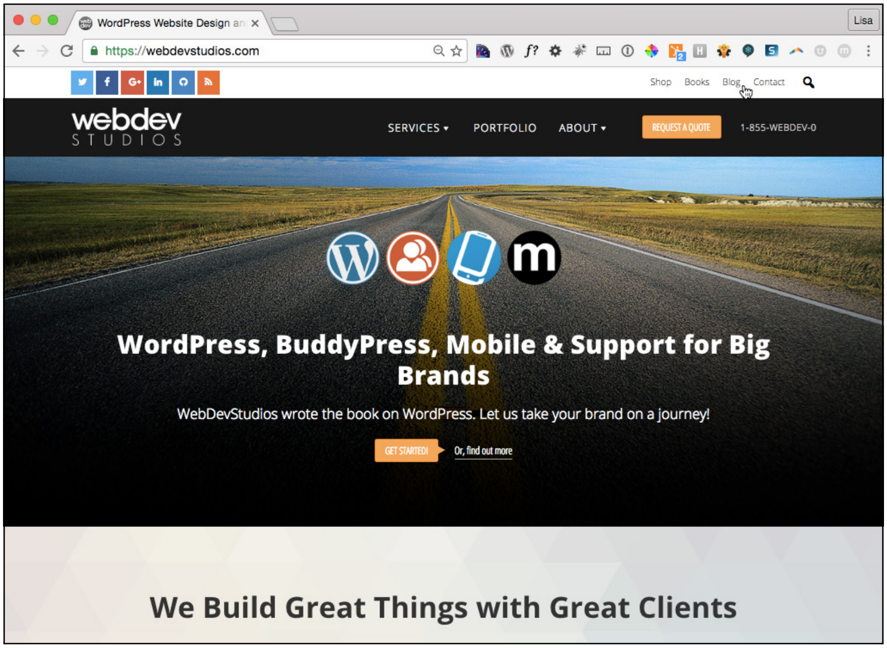
WebDevStudios.com » Blog

Free Webinar: Turn Your WordPress Site Into a Mobile App

September 15, 2016
by John Hawkins
Leave a comment

FIGURE 1-4: Visit my business blog at `http://webdevstudios.com/blog` to see an example of a chronological listing of blog posts.

My business website at `https://webdevstudios.com` also uses WordPress. This full site includes a static front page of information that acts as a portal to the rest of the site, on which you can find a blog; a portfolio of work; a contact form; and various landing pages, including service pages that outline information about the different services we offer (`https://webdevstudios.com/services`). Check out Figure 1-5 for a look at this website; it's quite different from the blog section of the site.



WordPress, BuddyPress, Mobile & Support for Big Brands

WebDevStudios wrote the book on WordPress. Let us take your brand on a journey!

We Build Great Things with Great Clients

FIGURE 1-5: My business website uses WordPress as a CMS.

Using WordPress as a CMS means that you're creating more than just a blog; you're creating an entire website full of sections and features that offer different experiences for your visitors.

IN THIS CHAPTER

- » Exploring open-source concepts
- » Discovering examples of open-source projects
- » Understanding WordPress licensing
- » Applying WordPress licensing

Chapter 2

Exploring the World of Open-Source Software

Open-source software is a movement that started in the software industry in the 1980s. Its origins are up for debate, but most people believe that the concept came about in 1983, when a company called Netscape released its Navigator web browser source code to the public, making it freely available to anyone who wanted to dig through it, modify it, or redistribute it.

WordPress software users need a basic understanding of the open-source concept and the licensing upon which WordPress is built because WordPress's open-source policies affect you as a user — and greatly affect you if you plan to develop plugins or themes for the WordPress platforms. A basic understanding helps you conduct your practices in accordance with the license at the heart of the WordPress platform.

This chapter introduces you to open-source; the Open Source Initiative (OSI); and the GPL (General Public License), which is the specific license that WordPress is built upon (GPLv2, to be exact). You also discover how the GPL license applies to any projects you may release (if you're a developer of plugins or themes) that depend on the WordPress software and how you can avoid potential problems by abiding by the GPL as it applies to WordPress.

REMEMBER

IANAL — *I Am Not a Lawyer* — is an acronym you often find in articles about WordPress and the GPL. I use it here because I'm not a lawyer, and the information in this chapter shouldn't be construed as legal advice. Rather, you should consider the chapter to be an introduction to the concepts of open-source and the GPL. The information presented here is meant to inform you about and introduce you to the concepts as they relate to the WordPress platform.

Defining Open-Source

A simple, watered-down definition of open-source software is software whose source code is freely available to the public and that can be modified and redistributed by anyone without restraint or consequence. An official organization called the Open Source Initiative (OSI; `https://opensource.org`), founded in 1998 to organize the open-source software movement in an official capacity, has provided a very clear and easy-to-understand definition of open-source. During the course of writing this book, I obtained permission from the OSI board to include it here.

Open-source doesn't just mean access to the source code. The distribution terms of open-source software must comply with the following criteria:

1. **Free Redistribution**

   The license shall not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources. The license shall not require a royalty or other fee for such sale.

2. **Source Code**

   The program must include source code, and must allow distribution in source code as well as compiled form. Where some form of a product is not distributed with source code, there must be a well-publicized means of obtaining the source code for no more than a reasonable reproduction cost preferably, downloading via the Internet without charge. The source code must be the preferred form in which a programmer would modify the program. Deliberately obfuscated source code is not allowed. Intermediate forms such as the output of a preprocessor or translator are not allowed.

3. **Derived Works**

   The license must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software.

4. **Integrity of the Author’s Source Code**

   The license may restrict source-code from being distributed in modified form only if the license allows the distribution of “patch files” with the source code for the purpose of modifying the program at build time. The license must explicitly permit distribution of software built from modified source code. The license may require derived works to carry a different name or version number from the original software.

5. **No Discrimination Against Persons or Groups**

   The license must not discriminate against any person or group of persons.

6. **No Discrimination Against Fields of Endeavor**

   The license must not restrict anyone from making use of the program in a specific field of endeavor. For example, it may not restrict the program from being used in a business, or from being used for genetic research.

7. **Distribution of License**

   The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.

8. **License Must Not Be Specific to a Product**

   The rights attached to the program must not depend on the program’s being part of a particular software distribution. If the program is extracted from that distribution and used or distributed within the terms of the program’s license, all parties to whom the program is redistributed should have the same rights as those that are granted in conjunction with the original software distribution.

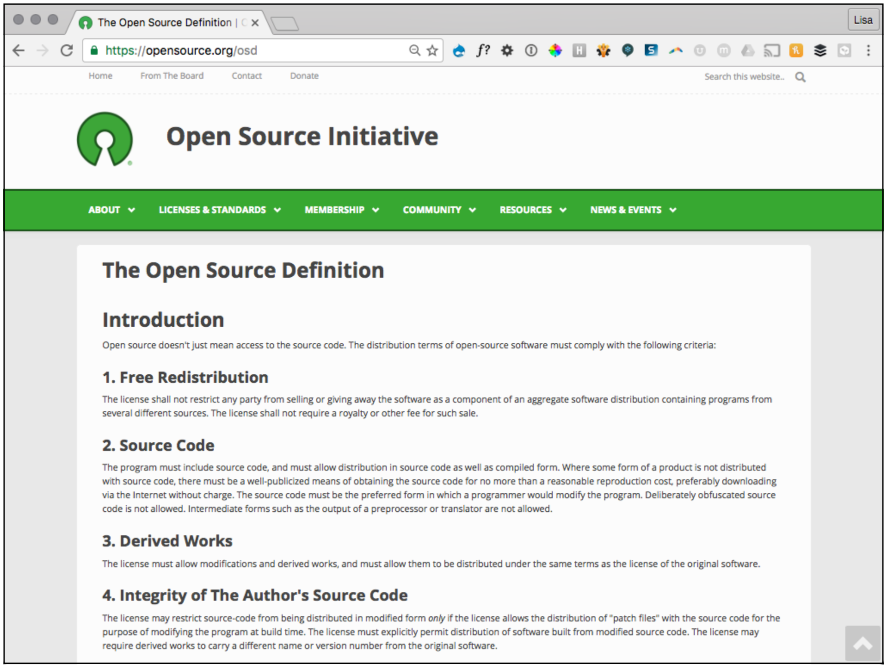
9. **License Must Not Restrict Other Software**

   The license must not place restrictions on other software that is distributed along with the licensed software. For example, the license must not insist that all other programs distributed on the same medium must be open-source software.

10. **License Must Be Technology-Neutral**

    No provision of the license may be predicated on any individual technology or style of interface.

The preceding items comprise the definition of open-source as provided by the Open Source Initiative. You can find this definition (see Figure 2-1) at `https://opensource.org/osd`.



The Open Source Definition

Introduction

Open source doesn't just mean access to the source code. The distribution terms of open-source software must comply with the following criteria:

1. Free Redistribution

The license shall not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources. The license shall not require a royalty or other fee for such sale.

2. Source Code

The program must include source code, and must allow distribution in source code as well as compiled form. Where some form of a product is not distributed with source code, there must be a well-publicized means of obtaining the source code for no more than a reasonable reproduction cost, preferably downloading via the Internet without charge. The source code must be the preferred form in which a programmer would modify the program. Deliberately obfuscated source code is not allowed. Intermediate forms such as the output of a preprocessor or translator are not allowed.

3. Derived Works

The license must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software.

4. Integrity of The Author's Source Code

The license may restrict source-code from being distributed in modified form *only* if the license allows the distribution of "patch files" with the source code for the purpose of modifying the program at build time. The license must explicitly permit distribution of software built from modified source code. The license may require derived works to carry a different name or version number from the original software.

FIGURE 2-1: Definition of open-source from the OSI.

Open-source software source code must be freely available, and any licensing of the open-source software must abide by this definition. Based on the OSI definition, WordPress is an open-source software project. Its source code is accessible and publicly available for anyone to view, build on, and distribute at no cost anywhere, at any time, or for any reason.

Several examples of high-profile software enterprises, such as the ones in the following list, are also open-source. You'll recognize some of these names:

- **Mozilla (`https://www.mozilla.org`):** Community whose projects include the popular Firefox Internet browser and Thunderbird, a popular email client. All projects are open-source and considered to be public resources.
- **PHP (`http://php.net`):** An HTML-embedded scripting language that stands for PHP Hypertext Preprocessor. PHP is popular software that runs on most web servers today; its presence is required on your web server for you to run the WordPress platform successfully on your site.
- **MySQL (`www.mysql.com`):** The world's most popular open-source database. Your web server uses MySQL to store all the data from your WordPress

installation, including your posts, pages, comments, links, plugin options, theme option, widgets, and more.

- **Linux (`www.linux.org`):** An open-source operating system used by web hosting providers, among other organizations.

As open-source software, WordPress is in some fine company. Open-source itself is not a *license*; I cover licenses in the next section. Rather, open-source is a movement — some people consider it to be a philosophy — created and promoted to provide software as a public resource open to community collaboration and peer review. WordPress development is clearly community-driven and focused. You can read about the WordPress community in Book 1, Chapter 4.

Understanding WordPress Licensing

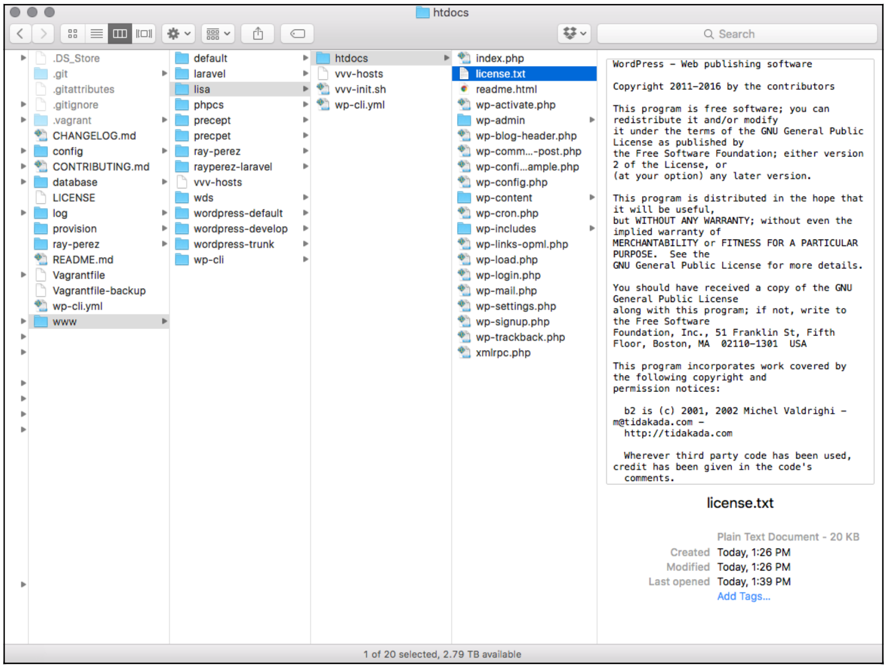
Most software projects are licensed, meaning that they have legal terms governing the use or distribution of the software. Different kinds of software licenses are in use, ranging from very restrictive to least restrictive. WordPress is licensed by the GPL (General Public License), one of the least restrictive software licenses available.

If you're bored, read the GPL text at `www.gnu.org/licenses/gpl-2.0.html`. Licensing language on any topic can be a difficult thing to navigate and understand. It's sufficient to have a basic understanding of the concept of GPL and let the lawyers sort out the rest, if necessary.

TIP

A complete copy of the GPL is included in every copy of the WordPress download package, in the `license.txt` file. The directory listing of the WordPress software files shown in Figure 2-2 lists the `license.txt` file.

Simply put, any iteration of a piece of software developed and released under the GPL must be released under the very same license in the future. Check out the nearby sidebar "The origins of WordPress," which tells the story of how the WordPress platform came into existence. Essentially, the software was *forked* — meaning that the original software (in this case, a blogging platform called b2) was abandoned by its original developer and adopted by the founders of WordPress, who took the b2 platform, called it WordPress, and began a new project with a new plan, outlook, and group of developers.



```
WordPress - Web publishing software

Copyright 2011-2016 by the contributors

This program is free software; you can
redistribute it and/or modify
it under the terms of the GNU General Public
License as published by
the Free Software Foundation; either version
2 of the License, or
(at your option) any later version.

This program is distributed in the hope that
it will be useful,
but WITHOUT ANY WARRANTY; without even the
implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR
PURPOSE.  See the
GNU General Public License for more details.

You should have received a copy of the GNU
General Public License
along with this program; if not, write to
the Free Software
Foundation, Inc., 51 Franklin St, Fifth
Floor, Boston, MA  02110-1301  USA

This program incorporates work covered by
the following copyright and
permission notices:

  b2 is (c) 2001, 2002 Michel Valdrighi -
m@tidakada.com -
  http://tidakada.com

  Wherever third party code has been used,
credit has been given in the code's
  comments.
```

license.txt

Plain Text Document - 20 KB
Created Today, 1:26 PM
Modified Today, 1:26 PM
Last opened Today, 1:39 PM

FIGURE 2-2: The GPL text is included in every copy of WordPress.

Because the b2 platform was originally developed and released under the GPL, by law, the WordPress software (all current and future iterations of the platform) must also abide by the GPL. Because of the nature of the GPL, you, your next-door neighbor, or I could do the very same thing with the WordPress platform. Nothing is stopping you, or anyone else, from taking WordPress, giving it a different name, and rereleasing it as a completely different project. Typically, open-source projects are forked when the original project development stalls or is abandoned (as was the case with b2) or (in rare cases) when the majority of the development community is at odds with the leadership of the open-source project. I'm not suggesting that you do that, though, because WordPress has one of the most active development communities of any open-source project I've come across.

THE ORIGINS OF WORDPRESS

Once upon a time, there was a simple PHP-based blogging platform called b2. This software, developed in 2001, slowly gained a bit of popularity among geek types as a way to publish content on the Internet. Its developer, Michel Valdrighi, kept development active until early 2003, when users of the software noticed that Valdrighi seemed to have disappeared. They became a little concerned about b2's future.

Somewhere deep in the heart of Texas, one young man in particular was very concerned, because b2 was his software of choice for publishing his own content on the World Wide Web. He didn't want to see his favorite publishing tool become obsolete. You can view the original post to his own blog in which he wondered what to do (`http://ma.tt/2003/01/the-blogging-software-dilemma`).

In that post, he talked briefly about some of the other software that was available at the time, and he tossed around the idea of using the b2 software to "to create a fork, integrating all the cool stuff that Michel would be working on right now if only he was around."

Create a fork he did. In the absence of b2's developer, this young man developed from the original b2 codebase a new blogging application called WordPress.

That blog post was made on January 24, 2003, and the young man's name was (and is) Matt Mullenweg. On December 26, 2003, with the assistance of a few other developers, Mullenweg announced the arrival of the first official version of the WordPress software. The rest, as they say, is history. The history of this particular piece of software surely is one for the books, as it's the most popular blogging platform available today.

Applying WordPress Licensing to Your Projects

Regular users of WordPress software need never concern themselves with the GPL of the WordPress project at all. You don't have to do anything special to abide by the GPL. You don't have to pay to use the WordPress software, and you aren't required to acknowledge that you're using the WordPress software on your site. (That said, providing on your site at least one link back to the WordPress website is common courtesy and a great way of saying thanks.)

Most people aren't even aware of the software licensing because it doesn't affect the day-to-day business of blogging and publishing sites with the platform. It's not a bad idea to educate yourself on the basics of the GPL, however. When you try to be certain that any plugins and themes you use with your WordPress installation abide by the GPL, you have peace of mind that all applications and software you're using are in compliance.

Your knowledge of the GPL must increase dramatically, though, if you develop plugins or themes for the WordPress platform. (I cover WordPress themes in Book 6 and WordPress plugins in Book 7.)

The public licensing that pertains to WordPress plugins and themes wasn't decided in a court of law. The current opinion of the best (legal) practices is just that: opinion. The opinion of the WordPress core development team, as well as the opinion of the Software Freedom Law Center (`https://www.softwarefreedom.org/services`), is that WordPress plugins and themes are derivative works of WordPress and, therefore, must abide by the GPL by releasing the development works under the same license that WordPress has.

A *derivative work*, as it relates to WordPress, is a work that contains programming whose functionality depends on the core WordPress files. Because plugins and themes contain PHP programming that call WordPress core functions, they rely on the core WordPress framework to work properly and, therefore, are extensions of the software.

TECHNICAL STUFF

The text of the opinion by James Vasile from the Software Freedom Law Center is available at `http://wordpress.org/news/2009/07/themes-are-gpl-too`.

To maintain compliance with the GPL, plugin or theme developers can't release development work under any (restrictive) license other than the GPL. Nonetheless, many plugin and theme developers have tried to release material under other licenses, and some have been successful (from a moneymaking standpoint). The WordPress community, however, generally doesn't support these developers or their plugins and themes. Additionally, the core WordPress development team considers such works to be noncompliant with the license and, therefore, with the law.

WordPress has made it publicly clear that it won't support or promote any theme or plugin that is not in 100 percent compliance with the GPL. If you're not 100 percent compliant with the GPL, you can't include your plugin or theme in the WordPress Plugin Directory hosted at `https://wordpress.org/plugins`. If you develop plugins and themes for WordPress, or if you're are considering dipping your toe into that pool, do it in accordance with the GPL so that your works are in compliance and your good standing in the WordPress community is protected.

Table 2-1 provides a brief review of what you can (and can't) do as a WordPress plugin and theme developer.

TABLE 2-1 Development Practices Compliant with GPL License

Development/Release Practice	GPL-Compliant?
Distribute to the public for free with GPL.	Yes
Distribute to the public for a cost with GPL.	Yes
Restrict the number of users of one download with GPL.	No
Split portions of your work among different licenses. (PHP files are GPL; JavaScript or CSS files are licensed with the Creative Commons license.)	Yes (but WordPress.org won't promote works that aren't 100 percent GPL across all files)
Release under a different license, such as the PHP License.	No

The one and only way to make sure that your plugin or theme is 100 percent compliant with the GPL is to do the following before you release your development work to the world:

- Include a statement in your work indicating that the work is released under the GPLv2 license in the `license.txt` file, which WordPress does. (Refer to Figure 2-2.) Alternatively, you can include this statement in the header of your plugin file:

```
<?php

 This program is free software; you can redistribute it and/or modify it under the
   terms of the GNU General Public License, version 2, as published by the Free
   Software Foundation.

 This program is distributed in the hope that it will be useful,
 but WITHOUT ANY WARRANTY; without even the implied warranty of
 MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
 GNU General Public License for more details.

 You should have received a copy of the GNU General Public License
 along with this program; if not, write to the Free Software
 Foundation, Inc., 51 Franklin St., Fifth Floor, Boston, MA 02110-1301 USA
*/
?>
```

- Don't restrict the use of your works by the number of users per download.
- If you charge for your work, which is compliant with the GPL, the licensing doesn't change, and users still have the freedom to modify your work and rerelease it under a different name.
- Don't split the license of other files included in your work, such as CSS or graphics. Although this practice complies with the GPL, it won't be approved for inclusion in the WordPress Plugin Directory.

IN THIS CHAPTER

- » Delving into WordPress release cycles
- » Exploring betas, release candidates, and final release versions
- » Navigating WordPress release archives
- » Tracking WordPress development
- » Using bleeding-edge builds

Chapter 3

Understanding Development and Release Cycles

If you're planning to dip your toe into the WordPress waters (or you've already dived in and gotten completely wet), the WordPress platform's development cycle is really good to know about and understand, because it affects every WordPress user on a regular basis.

WordPress and its features form the foundation of your website. WordPress is a low-maintenance way to publish content on the web, and the software is free in terms of monetary cost. WordPress isn't 100 percent maintenance-free, however, and part of maintenance is ensuring that your WordPress software is up to date to keep your website secure and safe.

This chapter explains the development cycle for the WordPress platform and shows you how you can stay up to date and informed about what's going on. This chapter also gives you information on WordPress release cycles and shows you how you can track ongoing WordPress development on your own.

Discovering WordPress Release Cycles

Book 1, Chapter 2 introduces you to the concept of open-source software and discusses how the WordPress development community is primarily volunteer developers who donate their time and talents to the WordPress platform. The development of new WordPress releases is a collaborative effort, sometimes requiring contributions from more than 300 developers.

The public schedule for WordPress updates is roughly one new release every 120 days. As a user, you can expect a new release of the WordPress software about three times per year. The WordPress development team sticks to that schedule closely, with exceptions only here and there. When the team makes exceptions to the 120-day rule, it usually makes a public announcement so that you know what to expect and when to expect it.

Mostly, interruptions in the 120-day schedule occur because the development of WordPress occurs primarily on a volunteer basis. A few developers — employees of Automattic, the company behind WordPress.com — are paid to develop for WordPress, but most developers are volunteers. Therefore, the progress of WordPress development depends on the developers' schedules.

REMEMBER

I'm confident in telling you that you can expect to update your WordPress installation at least three, if not four, times per year.

Upgrading your WordPress experience

Don't be discouraged or frustrated by the number of times you'll upgrade your WordPress installation. The WordPress development team is constantly striving to improve the user experience and to bring exciting, fun new features to the WordPress platform. Each upgrade improves security and adds new features to enhance your (and your visitors') experience on your website. WordPress also makes the upgrades easy to perform, as I discuss in Book 2, Chapter 6.

The following list gives you some good reasons why you should upgrade your WordPress software each time a new version becomes available:

- **Security:** When WordPress versions come and go, outdated versions are no longer supported and are vulnerable to malicious attacks and hacker attempts. Most WordPress security failures occur when you're running an outdated version of WordPress on your website. To make sure that you're running the most up-to-date and secure version, upgrade to the latest release as soon as you can.

- **New features:** Major WordPress releases (I discuss the difference between major and minor, or point, releases later in the chapter) offer great new features that are fun to use, improve your experience, and boost your efficiency and productivity. Upgrading your WordPress installation ensures that you always have access to the latest, greatest tools and features that WordPress has to offer.
- **Plugins and themes:** Most plugin and theme developers work hard to make sure that their products are up to date with the latest version of WordPress. Generally, plugin and theme developers don't worry about backward compatibility, and they tend to ignore out-of-date versions of WordPress. To be sure that the plugins and themes you've chosen are current and not breaking your site, make sure that you're using the latest version of WordPress and the latest versions of your plugins and themes. (See Book 6 for information about themes and Book 7 for details about plugins.)

Understanding the cycles of a release

By the time the latest WordPress installation becomes available, that version has gone through several iterations, or *versions.* This section helps you understand what it takes to get the latest version to your website and explains some of the WordPress development terminology.

The steps and terminology involved in the release of a new version of WordPress include

- **Alpha:** This phase is the first developmental phase of a new version. Alpha typically is the "idea" phase in which developers gather ideas, including those from users and community members. During the alpha phase, developers determine which features to include in the new release and then develop an outline and a project plan. After features are decided, developers start developing and testers start testing until they reach a "feature freeze" point in the development cycle, where all new features are considered to be complete. Then development moves on to perfecting new features through user testing and bug fixes.
- **Beta:** This phase is for fixing bugs and clearing any problems that testers report. Beta cycles can last four to six weeks, if not longer. WordPress often releases several beta versions with such names as WordPress version 4.7 Beta, WordPress version 4.7 Beta 1, and so on. The beta process continues until the development team decides that the software is ready to move into the next phase in the development cycle.
- **Release candidate:** A version becomes a release candidate (RC) when the bugs from the beta versions are fixed and the version is nearly ready for final release. You sometimes see several RC iterations, referred to as RC-1, RC-2, and so on.

- **Final release:** After a version has gone through full testing in several (ideally, all) types of environments, use cases, and user experiences; any bugs from the alpha, beta, and RC phases have been squashed; and no major bugs are being reported, the development team releases the final version of the WordPress software.

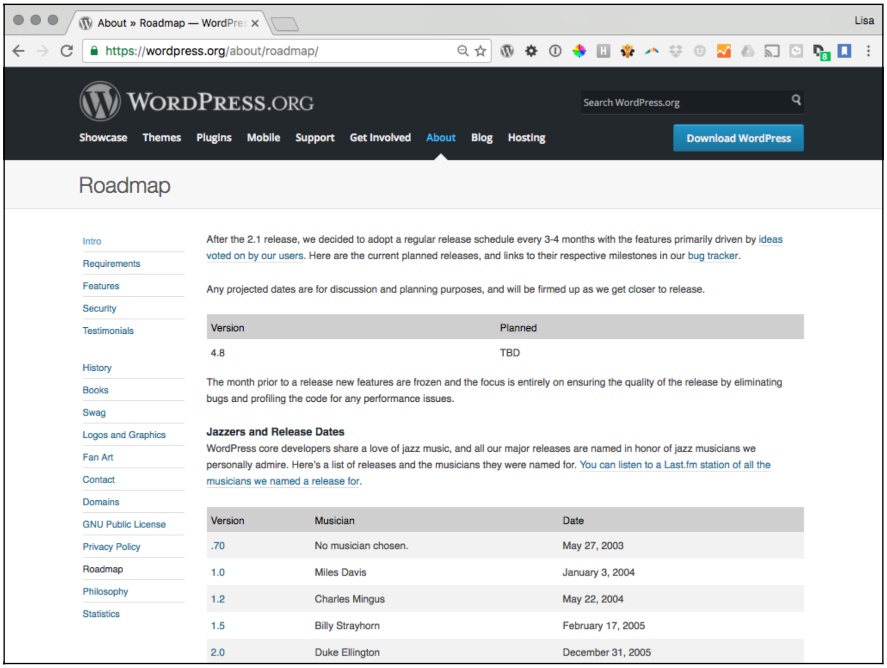
After the WordPress development team issues a final release version, they start again in the alpha phase, gearing up and preparing to go through the development cycle for the next major version.

REMEMBER

Typically, a development cycle lasts 120 days, but this figure is an approximation, because any number of things can happen (from developmental problems to difficult bugs) to delay the process.

Finding WordPress release archives

WordPress keeps a historical archive of all versions it has ever released at `https://wordpress.org/download/release-archive`, as shown in Figure 3-1. On that page, you find releases dating back to version 0.17 from 2003.



Roadmap

After the 2.1 release, we decided to adopt a regular release schedule every 3-4 months with the features primarily driven by ideas voted on by our users. Here are the current planned releases, and links to their respective milestones in our bug tracker.

Any projected dates are for discussion and planning purposes, and will be firmed up as we get closer to release.

Version	Planned
4.8	TBD

The month prior to a release new features are frozen and the focus is entirely on ensuring the quality of the release by eliminating bugs and profiling the code for any performance issues.

Jazzers and Release Dates

WordPress core developers share a love of jazz music, and all our major releases are named in honor of jazz musicians we personally admire. Here's a list of releases and the musicians they were named for. You can listen to a Last.fm station of all the musicians we named a release for.

Version	Musician	Date
.70	No musician chosen.	May 27, 2003
1.0	Miles Davis	January 3, 2004
1.2	Charles Mingus	May 22, 2004
1.5	Billy Strayhorn	February 17, 2005
2.0	Duke Ellington	December 31, 2005

FIGURE 3-1: The archive of every WordPress release on record.

MAJOR VERSUS POINT RELEASES

You may have noticed that WordPress versions are numbered. These numbers show the progress of the development of the software, and they also tell you something else about the version you're using. *Software versioning* is a method of assigning unique numbers to each version release. Generally, the two types of versioning are

- **Point release:** Point releases usually increase the numbered version only by a decimal point or two, indicating a relatively minor release. Such releases include insignificant updates or minor bug fixes. When the version number jumps from 4.6 to 4.6.1, for example, you can be certain that the new version was released to fix minor bugs or to clean up the source code rather than to add new features.
- **Major release:** A major release most often contains new features and jumps by a more seriously incremented version number. When WordPress went from 4.6.1 to 4.7 (release 4.6 versioned into 4.6.1 before jumping to 4.7), that release was considered to be a major release because it jumped a whole number rather than a decimal point. A large jump is a sign to users that new features are included in this version, rather than just bug fixes or cleanup of code. The bigger the jump in the version number, the more major the release is. A release jumping from 4.0 to 4.5, for example, is an indication of major new features.

WARNING

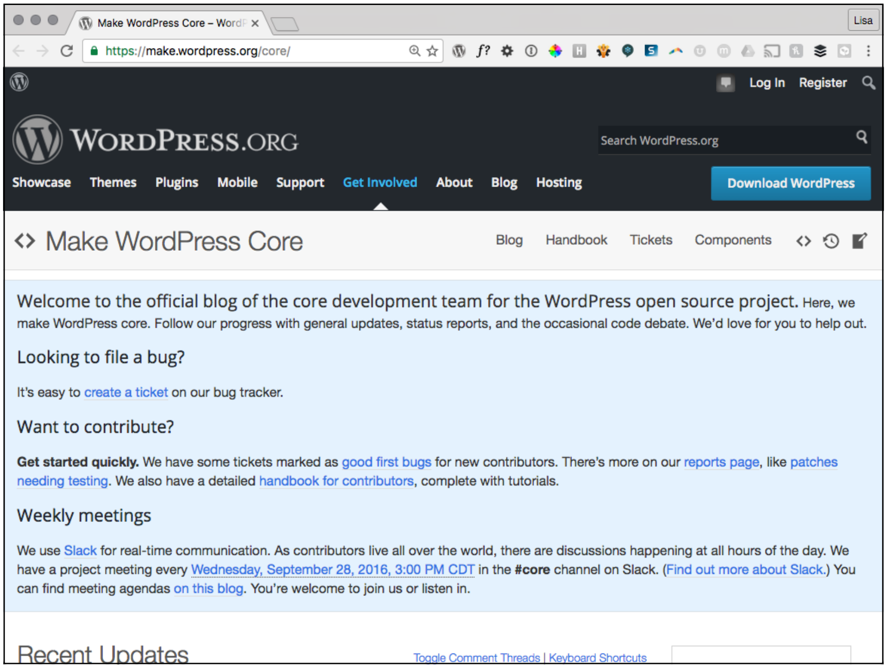
None of the releases on the WordPress website is safe for you to use except the latest release in the 4.7.x series. Using an older version leaves your website open to hackers. WordPress just likes to have a recorded history of every release for posterity's sake.

Keeping Track of WordPress Development

If you know where to look, keeping track of the WordPress development cycle is easy, especially because the WordPress development team tries to make the development process as transparent as possible. You can track updates by reading about them in various spots on the Internet and by listening to conversations between developers. If you're so inclined, you can jump in and lend the developers a hand, too.

You have several ways to stay up to date on what's going on in the world of WordPress development, including blog posts, live chats, development meetings, tracking tickets, and bug reports, just to name a few. The following list gives you a solid start on where you can go to stay informed:

- **WordPress development updates (`https://make.wordpress.org/core`):** The WordPress development team's blog, Make WordPress Core, is where you can follow and keep track of the progress of the WordPress software project while it happens. (See Figure 3-2.) You find agendas, schedules, meeting minutes, and discussions surrounding the development cycles.



Welcome to the official blog of the core development team for the WordPress open source project. Here, we make WordPress core. Follow our progress with general updates, status reports, and the occasional code debate. We'd love for you to help out.

Looking to file a bug?

It's easy to create a ticket on our bug tracker.

Want to contribute?

Get started quickly. We have some tickets marked as good first bugs for new contributors. There's more on our reports page, like patches needing testing. We also have a detailed handbook for contributors, complete with tutorials.

Weekly meetings

We use Slack for real-time communication. As contributors live all over the world, there are discussions happening at all hours of the day. We have a project meeting every Wednesday, September 28, 2016, 3:00 PM CDT in the **#core** channel on Slack. (Find out more about Slack.) You can find meeting agendas on this blog. You're welcome to join us or listen in.

Recent Updates

Toggle Comment Threads | Keyboard Shortcuts

FIGURE 3-2: The WordPress development blog.

- **WordPress developers' chats (`https://make.wordpress.org/chat`):** Developers who are involved in development of WordPress core use a real-time communication platform called Slack (`https://slack.com`). You can easily participate in any of the scheduled meetings listed on `https://make.wordpress.org/core` (regular scheduled chats are listed in the right sidebar of the site).
- **WordPress Trac (`https://core.trac.wordpress.org`):** Here are ways to stay informed about the changes in WordPress development:
  - Follow the timeline: `https://core.trac.wordpress.org/timeline`
  - View the road map: `https://core.trac.wordpress.org/roadmap`

  - Read reports: `https://core.trac.wordpress.org/report`
  - Perform a search: `https://core.trac.wordpress.org/search`
- **WordPress mailing lists (`https://codex.wordpress.org/Mailing_Lists`):** Join mailing lists focused on different aspects of WordPress development, such as bug testing, documentation, and hacking WordPress. (For specific details about mailing lists, see Book 1, Chapter 4.)

Downloading Nightly Builds

WordPress development moves pretty fast. Often, changes in the software's development cycle occur daily. While the developers are working on alpha and beta versions and release candidates, they commit the latest core changes to the repository and make those changes available to the public to download, install, and test on individual sites. The changes are released in a full WordPress software package called a *nightly build.* This nightly build contains the latest core changes submitted to the project — changes that have not yet been released as full and final versions.

WARNING

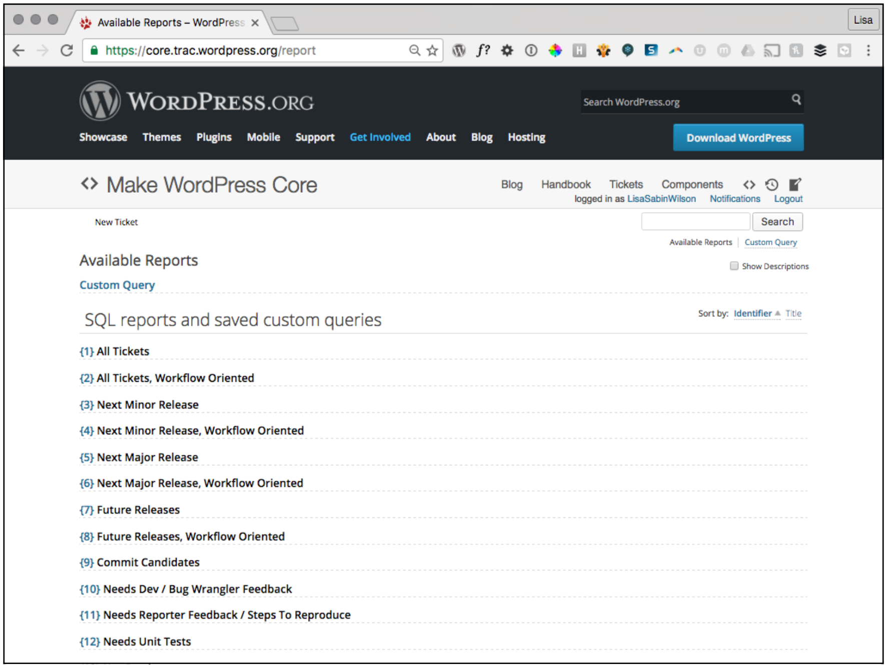
Using nightly builds isn't a safe practice for a live site. I strongly recommend creating a test environment to test nightly builds. Many times, especially during alpha and beta phases, the core code breaks and causes problems with your existing installation. Use nightly builds in a test environment only, and leave your live site intact until the final release is available.

Hundreds of members of the WordPress community help in the development phases, even though they aren't developers or programmers. They help by downloading the nightly builds, testing them in various server environments, and reporting to the WordPress development team by way of Trac tickets (shown in Figure 3-3; check out `https://core.trac.wordpress.org/report`) any bugs and problems they find in that version of the software.

You can download the latest nightly build from the WordPress repository at `https://wordpress.org/download/nightly`. For information about installing WordPress, see Book 2, Chapter 4.

REMEMBER

Running the latest nightly build on your website is referred to as using *bleeding-edge* software because the software is an untested version, requiring you to take risks just to run it on your website.



Available Reports

Custom Query

SQL reports and saved custom queries

{1} All Tickets

{2} All Tickets, Workflow Oriented

{3} Next Minor Release

{4} Next Minor Release, Workflow Oriented

{5} Next Major Release

{6} Next Major Release, Workflow Oriented

{7} Future Releases

{8} Future Releases, Workflow Oriented

{9} Commit Candidates

{10} Needs Dev / Bug Wrangler Feedback

{11} Needs Reporter Feedback / Steps To Reproduce

{12} Needs Unit Tests

FIGURE 3-3: WordPress Trac tickets.

TIP

WordPress Beta Tester (`https://wordpress.org/plugins/wordpress-beta-tester`), by Peter Westwood, is a super plugin that enables you to use the automatic upgrade tool in your WordPress Dashboard to download the latest nightly build. For information about installing and using WordPress plugins, check out Book 7, Chapter 2.

IN THIS CHAPTER

- » Finding WordPress users
- » Locating users on social networks
- » Getting help in the support forums
- » Participating in testing and bug squashing
- » Discovering professional consultants and services
- » Attending and organizing local WordCamps

Chapter 4
Meeting the WordPress Community

Allow me to introduce you to the fiercely loyal folks who make up the WordPress user base, better known as the WordPress community. These merry ladies and gentlemen come from all around the globe, from California to Cairo, Florida to Florence, and all points in between.

Early on, in March 2005, Matt Mullenweg of WordPress proudly proclaimed that the number of WordPress downloads had reached 900,000 — an amazing landmark in the history of the software. By contrast, in 2016, the download counter for WordPress version 4.6 had exceeded 17 million. The World Wide Technology Surveys (`https://w3techs.com`) published results showing WordPress to be the most popular content management system (CMS) being used on the web today. An astounding 26.7 percent of all sites on the Internet using a CMS use WordPress. This popularity makes for a large community of users, to say the least.

This chapter introduces you to the WordPress community and the benefits of membership within that community, such as finding support forums; locating other WordPress users on various social networks; getting assistance from other users, participating in WordPress development; and hooking up with WordPress users face to face at WordPress events, such as WordCamp.

Finding Other WordPress Users

Don't let the sheer volume of users intimidate you: WordPress has bragging rights to the most helpful blogging community on the web today. Thousands of websites exist that spotlight everything, including WordPress news, resources, updates, tutorials, and training. The list is endless. Do a quick Google search for *WordPress*, and you'll get about 1.9 billion results.

My point is that WordPress users are all over the Internet, from websites to discussion forums and social networks to podcasts and more. For many people, the appeal of the WordPress platform lies not only in the platform itself, but also in its passionate community of users.

Finding WordPress news and tips on community websites

WordPress-related websites cover an array of topics related to the platform, including everything from tutorials to news and even a little gossip, if that's your flavor. The Internet has no shortage of websites related to the popular WordPress platform. Here are a few that stand out:

- **WP Tavern (`https://wptavern.com`):** A site that covers everything from soup to nuts: news, resources, tools, tutorials, and interviews with standout WordPress personalities. You can pretty much count on WP Tavern to be on top of what's new and going on in the WordPress community. WP Tavern is owned by Automattic, the parent company of WordPress.com.
- **Smashing Magazine (`https://www.smashingmagazine.com/category/wordpress/`):** A very popular and established online design magazine and resource that has dedicated a special section of its website to WordPress news, resources, tips, and tools written by various members of the WordPress community.
- **Make WordPress Core (`https://make.wordpress.org/core`):** A website that aggregates content from all the "Make WordPress" websites built and maintained by the WordPress.org community. It includes resources for contributing to WordPress core, making plugins and themes, planning WordPress events, supporting WordPress, and more.

Locating users on social networks

In addition to WordPress, many bloggers use microblogging tools such as Twitter (`https://twitter.com`) and/or social-media networks such as Facebook (`https://www.facebook.com`) to augment their online presence and market their blog, services, and products. Within these networks, you can find WordPress users, resources, and links, including the following:

- **WordPress Twitter lists:** Twitter allows users to create lists of people who have the same interests, such as WordPress. You can find a few of these lists here:
  - *Twitter:* `https://twitter.com/search?q=WordPress`
  - *Google:* `https://www.google.com/#q=WordPress+Twitter+Lists`
- **Facebook Pages on WordPress:** Facebook users create Pages and groups around their favorite topics of interest, such as WordPress. You can find some interesting WordPress Pages and groups here:
  - *WordPress.org:* `https://www.facebook.com/WordPress`
  - *Advanced WordPress:* `https://www.facebook.com/groups/advancedwp`
  - *Matt Mullenweg (founder of WordPress):* `https://www.facebook.com/matt.mullenweg`

TIP

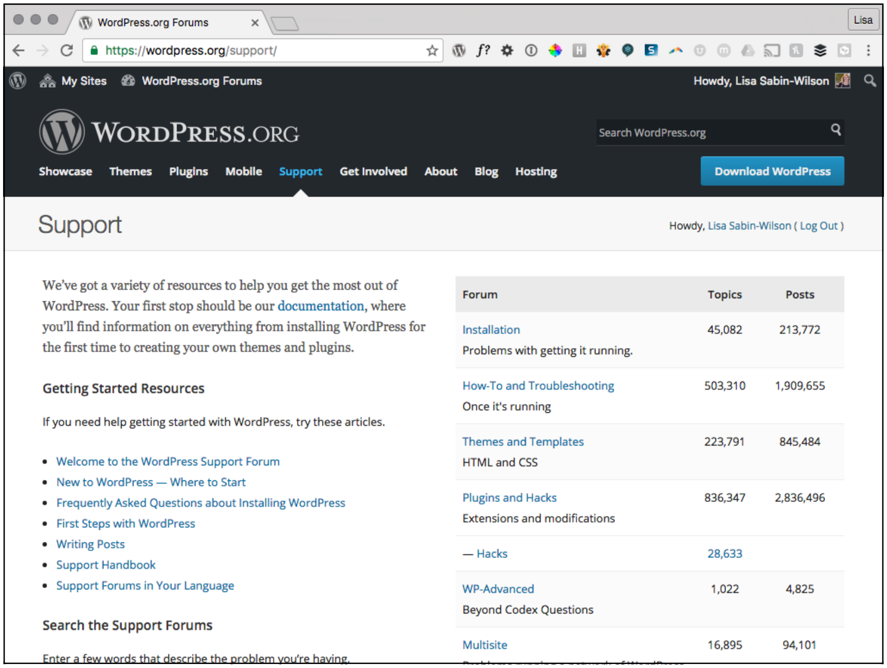
You can include Twitter lists on your site by using the handy Twitter widget for WordPress at `https://wordpress.org/plugins/widget-twitter`.

Users Helping Users

Don't worry if you're not a member of the WordPress community. Joining is easy: Simply start your own website by using the WordPress platform. If you're already publishing on a different platform, such as Drupal or Tumblr, WordPress makes migrating your data from that platform to a new WordPress setup simple. (See Book 2, Chapter 7 for information on migrating to WordPress from a different platform.)

WordPress support forums

You can find the WordPress Forums page (shown in Figure 4-1) at `https://wordpress.org/support`. This page is where you find users helping other users in their quest to use and understand the platform.



Support

Howdy, Lisa Sabin-Wilson (Log Out)

We've got a variety of resources to help you get the most out of WordPress. Your first stop should be our documentation, where you'll find information on everything from installing WordPress for the first time to creating your own themes and plugins.

Getting Started Resources

If you need help getting started with WordPress, try these articles.

- Welcome to the WordPress Support Forum
- New to WordPress — Where to Start
- Frequently Asked Questions about Installing WordPress
- First Steps with WordPress
- Writing Posts
- Support Handbook
- Support Forums in Your Language

Search the Support Forums

Enter a few words that describe the problem you're having.

Forum	Topics	Posts
Installation Problems with getting it running.	45,082	213,772
How-To and Troubleshooting Once it's running	503,310	1,909,655
Themes and Templates HTML and CSS	223,791	845,484
Plugins and Hacks Extensions and modifications	836,347	2,836,496
— Hacks	28,633	
WP-Advanced Beyond Codex Questions	1,022	4,825
Multisite	16,895	94,101

FIGURE 4-1: WordPress Forums page.

REMEMBER

The support forums are hosted on the WordPress.org website, but don't expect to find any official form of support from the WordPress developers. Instead, you find a large community of people from all walks of life seeking answers and providing solutions.

Users from beginner and novice level to the most advanced level browse the forums, providing support for one another. Each user has his or her own experiences, troubles, and knowledge level with WordPress, and the support forums are where users share those experiences and seek out the experiences of other users.

REMEMBER

It's important to keep in mind that the people you find and interact with on these official forums are offering their knowledge on a volunteer basis only, so as always, common-courtesy rules apply. "Please" and "thank you" go a long, long way in the forums.

TIP

If you find solutions and assistance in the WordPress support forums, consider browsing the forum entries to see whether you can help someone else by answering a question or two.

WordPress user manual

You can find users contributing to the very helpful WordPress Codex (a collection of how-to documents) at `https://codex.wordpress.org`. *Codex*, by the way, is Latin for *book.*

The WordPress Codex is a collaborative effort to document the use of the WordPress software. All contributors to the codex are WordPress users who donate their time as a way of giving back to the free, open-source project that has given them a dynamic piece of software for publishing freely on the web.

WordPress mailing lists

You can subscribe to various mailing lists, too. These lists offer you the opportunity to become involved in various aspects of the WordPress community as well as future development of the software. All the available WordPress mailing lists are on the Automattic website at `http://lists.automattic.com/mailman/listinfo`. The most popular ones include

- **wp-hackers (`http://lists.automattic.com/mailman/listinfo/wp-hackers`):** Subscribe to this mailing list to interact and talk to other WordPress users about *hacking* WordPress — otherwise known as altering WordPress code to make it do what you want it to do.
- **wp-testers (`http://lists.automattic.com/mailman/listinfo/wp-testers`):** This mailing list is filled with people who are testing new releases (as well as beta versions) of WordPress and reporting any bugs or problems that they find.
- **wp-edu (`http://lists.automattic.com/mailman/listinfo/wp-edu`):** This mailing list is dedicated to people in the education field who use WordPress, such as teachers and professors.

Discovering Professional WordPress Consultants and Services

You have big plans for your blog, and your time is valuable. Hiring a professional to handle the back-end design and maintenance of your blog enables you to spend your time creating the content and building your readership on the front end.

Many bloggers who decide to go the custom route by hiring a design professional do it for another reason: They want the designs/themes of their blogs to be unique. Free themes are nice, but you run the risk that your blog will look like hundreds of other blogs out there.

A *brand*, a term often used in advertising and marketing, refers to the recognizable identity of a product — in this case, your blog. Having a unique brand or design for your site sets yours apart from the rest. If your blog has a custom look, people will associate that look with you. You can accomplish branding with a single logo or an entire layout and color scheme of your choosing.

Many consultants and design professionals put themselves up for hire. Who are these people? I get to that topic in just a second. First, you want to understand what services they offer, which can help you decide whether hiring a professional is the solution for you.

Here are some of the many services available:

- Custom graphic design and CSS styling for your blog
- Custom templates
- WordPress plugin installation and integration
- Custom WordPress plugins
- WordPress software installation on your web server
- Upgrades of the WordPress software
- Web hosting and domain registration services
- Search engine optimization and site marketing

REMEMBER

Some bloggers take advantage of the full array of services provided, whereas others use only a handful. The important thing to remember is that you aren't alone. Help is available for you and your blog.

Table 4-1 pairs the three types of blog experts — designers, developers, and consultants — with the services they typically offer. Many of these folks are freelancers with self-imposed titles, but I've matched titles with typical duties. Keep in mind that some of these professionals wear all these hats; others specialize in only one area.

I wish I could tell you what you could expect to pay for any of these services, but the truth is the levels of expertise — and expense — vary wildly. Services can range from $5 per hour to $300 or more per hour. As with any purchase, do your research and make an informed decision before you buy.

TABLE 4-1 Types of WordPress Professionals

Title	Services
Designers	These folks excel in graphic design, CSS, and the development of custom WordPress themes.
Developers	These guys and gals are code monkeys. Some of them don't know a stitch about design, but they can provide custom code to make your blog do things you never thought possible. Usually, you'll find these people releasing plugins in their spare time for the WordPress community to use free.
Consultants	If you're blogging for a business, these folks can provide you a marketing plan for your blog or a plan for using your blog to reach clients and colleagues in your field. Many of these consultants also provide search engine optimization to help your domain reach high ranks in search engines.

Listing all the professionals who provide WordPress services is impossible, but Tables 4-2 through 4-4, later in this chapter, list some of the most popular ones. I tried to cover a diverse level of services so that you have the knowledge to make an informed decision about which professional to choose.

WordPress designers

WordPress designers can take a simple blog and turn it into something dynamic, beautiful, and exciting. These people are experts in the graphic design, CSS styling, and template tagging needed to create a unique theme for your website. Often, WordPress designers are skilled in installing and upgrading WordPress software and plugins; sometimes, they're even skilled in creating custom PHP or plugins. These folks are the ones you want to contact when you're looking for someone to create a unique design for your website that's an individual, visual extension of you or your company.

Some blog designers post their rates on their websites because they offer design *packages*, whereas other designers quote projects on a case-by-case basis because every project is unique. When you're searching for a designer, if the prices aren't displayed on the site, just drop the designer an email and ask for an estimate. Armed with this information, you can do a little comparison shopping while you search for just the right designer.

The designers and design studios listed in Table 4-2 represent a range of styles, pricing, services, and experience. All of them excel in creating custom WordPress blogs and websites. This list is by no means exhaustive, but it's a nice starting point.

TABLE 4-2 **Established WordPress Designers**

Who They Are	Where You Can Find Them
WebDevStudios	`https://webdevstudios.com`
10up	`https://10up.com`
Range	`http://ran.ge`

Developers

The WordPress motto sits at the bottom of the WordPress home page:

> Code is poetry.

No one knows this better than the extremely talented blog developers in the core WordPress development team. A developer can take some of the underlying code, make a little magic happen between PHP and the MySQL database that stores the content of your blog, and create a dynamic display of that content for you. Most likely, you'll contact a developer when you want to do something with your blog that's a little out of the ordinary, and you can't find a plugin that does the trick.

If you've gone through all the available WordPress plugins and still can't find the exact function that you want your WordPress blog to perform, contact one of these folks. Explain what you need. The developer can tell you whether it can be done, whether she's available to do it, and how much the job will cost. (Don't forget that last part!) You may recognize some of the names in Table 4-3 as developers/authors of some popular WordPress plugins.

TABLE 4-3 **Established WordPress Developers**

Who They Are	Where You Can Find Them
WebDevStudios	`https://webdevstudios.com`
eHermits, Inc.	`http://ehermitsinc.com`
Covered Web Services — Mark Jaquith	`http://coveredwebservices.com`
Voce Communications	`http://vocecommunications.com`

Consultants

Blog consultants may not be able to design or code for you, but they're probably connected to people who can. Consultants can help you achieve your goals for your blog in terms of online visibility, marketing plans, and search engine optimization. Most of these folks can help you find out how to make money with your blog and connect you with various advertising programs. Quite honestly, you can do what blog consultants do by investing just a little time and research in these areas. As with design and coding, however, figuring everything out and then implementing it takes time. Sometimes it's easier — and more cost-effective — to hire a professional than to do it yourself.

Who hires blog consultants? Typically, a business that wants to incorporate a blog into its existing website or a business that already has a blog but wants help taking it to the next level. Table 4-4 lists some people and organizations that offer this kind of consulting.

TABLE 4-4 Established Blog Consultants

Who They Are	Where You Can Find Them	Type of Consulting
Copyblogger	`www.copyblogger.com`	SEO, marketing
Convertiv	`https://www.convertiv.com`	WordPress design and development, social media consulting
WordPress 101	`https://www.wp101.com`	WordPress training

Contributing to WordPress

Contributing code to the core WordPress software is only one way of participating in the WordPress project. You don't need to be a coder or developer to contribute to WordPress — and it's easier than you might think. Here are several ways you can contribute to the project, including (but not limited to) code:

- **Code:** One of the most obvious ways you can contribute to WordPress is providing code to be used in the core files. The WordPress project has several hundred developers who contribute code at one time or another. You submit code through the WordPress Trac at `https://core.trac.wordpress.org`. Within the Trac, you can follow current development and track changes. To contribute, you can use the Trac to download and test a code patch or look at reported bugs to see whether you can offer a fix or submit a patch. Required skills include, at the very least, PHP programming, WordPress experience, and MySQL database administration. (That isn't an exhaustive list, mind you.)

- **Testing:** You can join the wp-testers mailing list (refer to "WordPress mailing lists" earlier in this chapter) to test beta versions of WordPress and report your own user experience. WordPress developers monitor this mailing list and try to fix any true bugs or problems.
- **Documentation:** Anyone can submit documentation to the WordPress Codex (the user documentation for WordPress). All you need to do is visit `https://codex.wordpress.org`, create an account, and dig in!

  TIP

  Be sure to check out the article titled "Codex: Contributing" (`https://codex.wordpress.org/Codex:Contributing`), which provides good tips on how to get started, including guidelines for documentation contributions.
- **Tutorials:** Do you feel that you have a few tips and tricks you want to share with other WordPress users? Take them to your blog! What better way to contribute to WordPress than sharing your knowledge with the rest of the world? Write up your how-to tutorial, publish it on your website, and then promote your tutorial on Twitter and Facebook.
- **Support forums:** Volunteer your time and knowledge on the WordPress support forums at `https://wordpress.org/support`. The involvement of the WordPress users who donate their time and talents in the support forum is an essential part of the WordPress experience.
- **Presentations:** In the next section of this chapter, I discuss live WordPress events where users meet face to face. Consider offering to speak at one of those events to share your knowledge and experience with other users — or host one in your area.

Participating in Live WordPress Events

You can not only find out about WordPress and contribute to the project online via the Internet, but also get involved in WordPress offline. Live WordPress events, called WordPress Meetups and WordCamps, are where users and fans get together to discuss, learn, and share information about their favorite platform. The two events are somewhat different:

- **WordPress Meetups:** Generally, these events involve small groups of people from the same geographical location. Typically, these speakers, organizers, and attendees enjoy gathering on a monthly or bimonthly basis.

  You can find a WordPress Meetup near your community by visiting the Meetup website at `https://www.meetup.com` or by performing a search, using the keyword *WordPress* and your city or zip code.

- **WordCamps:** These annual events are usually much larger than Meetups and are attended by people from all over the country. WordCamps are hosted in almost every major city in the United States and abroad. Usually, WordCamps cost a small amount to attend, and speakers at WordCamps are well-known personalities from the WordPress community.

  You can find a WordCamp event close to you by visiting the WordCamp website at `http://central.wordcamp.org` and browsing the upcoming WordCamps.

TIP

If there isn't a Meetup or WordCamp scheduled in your area, consider getting involved and organizing one! You can find some great tips and information about organizing WordCamps at `http://central.wordcamp.org`.

IN THIS CHAPTER

- » Getting hosted with WordPress.com
- » Self-hosting with WordPress.org
- » Running a network of blogs with the multisite feature
- » Exploring enterprise options and VIP services

Chapter 5

Discovering Different Versions of WordPress

Website publishers have a wealth of software platforms to choose among. You want to be sure that the platform you choose has all the options you're looking for. WordPress is unique in that it offers two versions of its software. Each version is designed to meet the various needs of publishers.

One version is a hosted platform available at WordPress.com that meets your needs if you don't want to worry about installing or dealing with software; the other is the self-hosted version of the WordPress software available at `https://wordpress.org`, which offers you a bit more freedom and flexibility, as described throughout this chapter.

This chapter introduces you to both versions of the WordPress platform so you can choose which version suits your particular needs the best.

Comparing the Two Versions of WordPress

The two versions of WordPress are

- The hosted version at WordPress.com
- The self-installed and self-hosted version available at WordPress.org

Certain features are available to you in every WordPress site setup, whether you're using the self-hosted software from WordPress.org or the hosted version at WordPress.com. These features include (but aren't limited to)

- Quick and easy installation and setup
- Full-featured publishing capability, letting you publish content to the web through an easy-to-use web-based interface
- Topical archiving of your posts, using categories
- Monthly archiving of your posts, with the capability to provide a listing of those archives for easy navigation through your site
- Comment and trackback tools
- Automatic spam protection through Akismet
- Built-in gallery integration for photos and images
- Media Manager for managing video and audio files
- Great community support
- Unlimited number of static pages, letting you step out of the blog box and into the sphere of running a fully functional website
- RSS capability with RSS 2.0, RSS 1.0, and Atom support
- Tools for importing content from different content management systems (such as Blogger and Movable Type)

Table 5-1 compares the two WordPress versions.

TABLE 5-1 Exploring the Differences between the Two Versions of WordPress

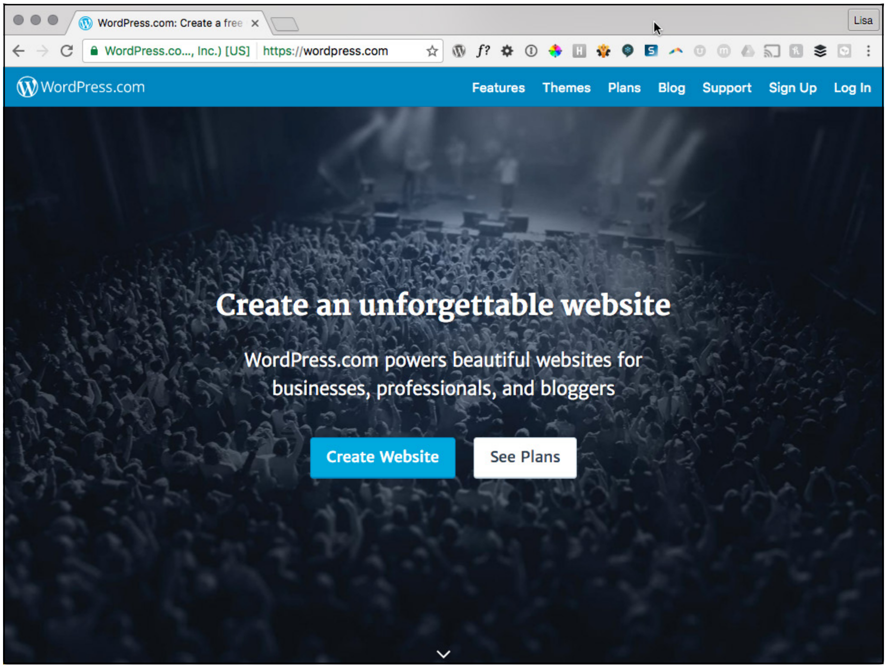
Feature	WordPress.org	WordPress.com
Cost	Free	Free
Software download required	Yes	No
Software installation required	Yes	No
Web hosting required	Yes	No
Custom CSS control	Yes	Available in the Premium or Business plan up to $99/year
Template access	Yes	No
Sidebar widgets	Yes	Yes
RSS syndication	Yes	Yes
Access to core code	Yes	No
Ability to install plugins	Yes	No
WP themes installation	Yes	No
Multiauthor support	Yes	Yes
Unlimited number of blog setups with one account (multisite)	Yes*	Yes
Community-based support forums	Yes	Yes

**Only with the Multisite feature enabled*

Choosing the hosted version from WordPress.com

WordPress.com (see Figure 5-1) is a free service. If downloading, installing, and using software on a web server sound like Greek to you and are chores you'd rather avoid, the WordPress folks provide a solution for you at WordPress.com.

WordPress.com is a *hosted solution*, which means that it has no software requirement, no downloads, and no installation or server configurations. Everything's done for you on the back end, behind the scenes. You don't even have to worry about how the process happens; it happens quickly, and before you know it, you're making your first blog post.



Create an unforgettable website

WordPress.com powers beautiful websites for businesses, professionals, and bloggers

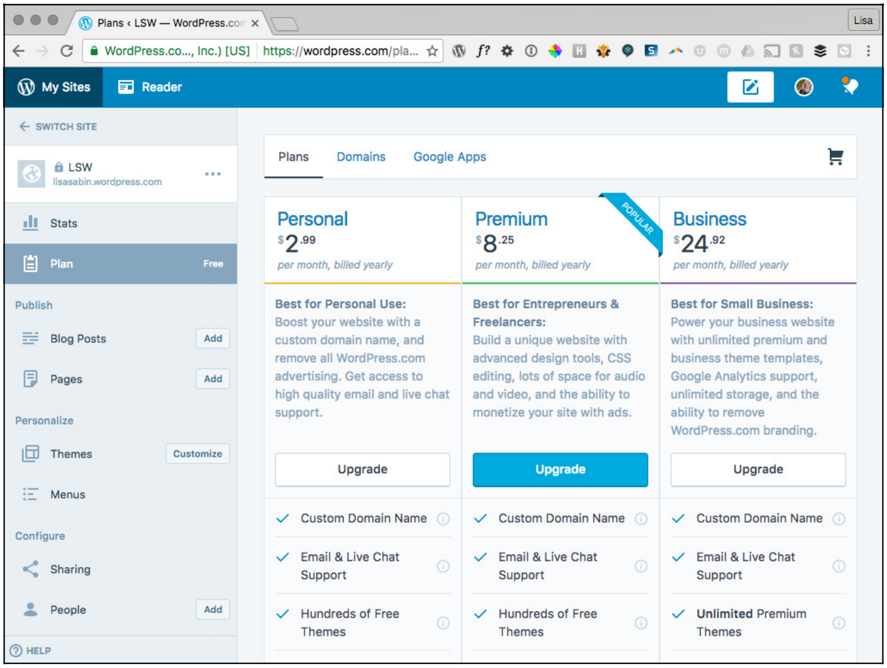
FIGURE 5-1: The WordPress.com website.

WordPress.com offers several upgrades (see Figure 5-2) to help make your publishing life easier. Here's a list of package upgrades you can purchase to enhance your WordPress.com account, with prices reflecting the annual cost:

- **Personal:** This plan allows you to add your own domain name to your WordPress.com account; see Book 2, Chapter 1. This service also provides you email and live chat support, basic design customizations, and 3GB of storage space. For the additional fee, your site also becomes ad-free. (With the free plan, WordPress.com advertisements are part of your experience.) This plan costs $2.99 per month, billed annually at $35.88 per year.
- **Premium:** This plan provides you everything included in the Personal plan and also includes more advanced theme customization (full control of the CSS), increased storage space at 13GB, the ability to monetize your site, and VideoPress support. This plan costs $8.25 per month, billed annually at $99 per year.

  TIP

  The VideoPress service is described in the "Discovering WordPress VIP Services" section at the end of this chapter.
- **Business:** This plan provides you everything included in both the Personal and Premium plans. In addition, you have access to premium themes, unlimited storage space, live courses, Google Analytics integration, and the removal of all WordPress.com branding — all for the cost of $24.92 per month, billed annually at $299.04 per year.



Personal	Premium	Business
$2.99 per month, billed yearly	$8.25 per month, billed yearly	$24.92 per month, billed yearly
Best for Personal Use: Boost your website with a custom domain name, and remove all WordPress.com advertising. Get access to high quality email and live chat support.	**Best for Entrepreneurs & Freelancers:** Build a unique website with advanced design tools, CSS editing, lots of space for audio and video, and the ability to monetize your site with ads.	**Best for Small Business:** Power your business website with unlimited premium and business theme templates, Google Analytics support, unlimited storage, and the ability to remove WordPress.com branding.
Upgrade	Upgrade	Upgrade
✓ Custom Domain Name	✓ Custom Domain Name	✓ Custom Domain Name
✓ Email & Live Chat Support	✓ Email & Live Chat Support	✓ Email & Live Chat Support
✓ Hundreds of Free Themes	✓ Hundreds of Free Themes	✓ **Unlimited** Premium Themes

FIGURE 5-2: Several paid upgrades available on the WordPress.com free service.

TIP

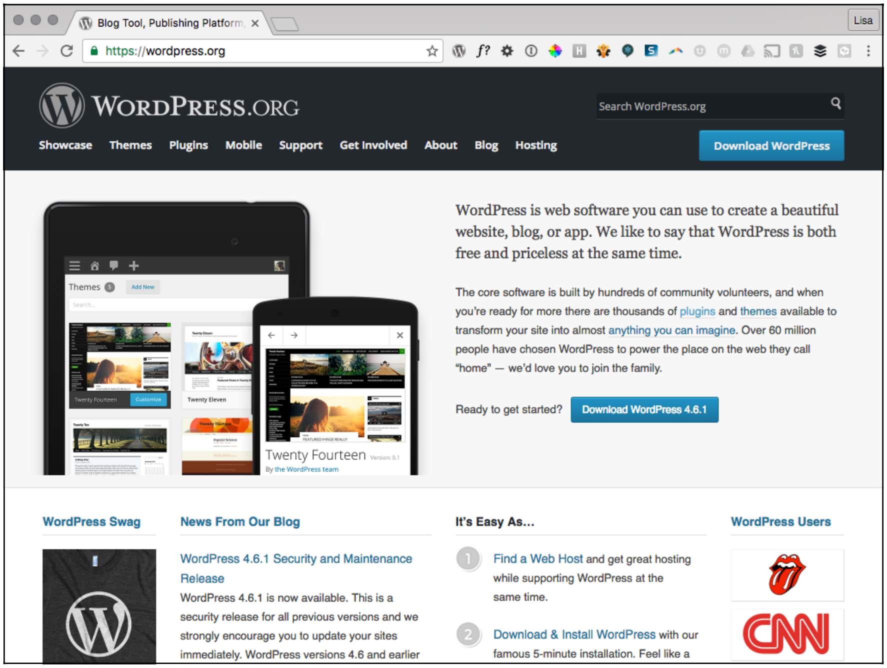
WordPress.com has some limitations. You can't install plugins or custom themes, for example. Neither can you can customize the base-code files, sell advertising, or monetize your site without upgrading to a paid plan. But even with its limitations, WordPress.com is an excellent starting point if you're brand-new to Internet publishing and a little intimidated by the configuration requirements of the self-installed WordPress.org software.

The good news is that if you outgrow your WordPress.com-hosted site and want to move to the self-hosted WordPress.org software, you can. You can even take all the content from your WordPress.com-hosted site with you and easily import it into your new setup with the WordPress.org software.

Therefore, in the grand scheme of things, your options aren't really that limited.

Self-hosting with WordPress.org

The self-installed version from WordPress.org is the primary focus of *WordPress All-in-One For Dummies.* Using WordPress.org requires you to download the software from the WordPress website at `https://wordpress.org` (shown in Figure 5-3); then you need to install it on a server from which your website operates.



WordPress is web software you can use to create a beautiful website, blog, or app. We like to say that WordPress is both free and priceless at the same time.

The core software is built by hundreds of community volunteers, and when you're ready for more there are thousands of plugins and themes available to transform your site into almost anything you can imagine. Over 60 million people have chosen WordPress to power the place on the web they call "home" — we'd love you to join the family.

Ready to get started? Download WordPress 4.6.1

WordPress Swag

News From Our Blog

WordPress 4.6.1 Security and Maintenance Release

WordPress 4.6.1 is now available. This is a security release for all previous versions and we strongly encourage you to update your sites immediately. WordPress versions 4.6 and earlier

It's Easy As...

1 Find a Web Host and get great hosting while supporting WordPress at the same time.

2 Download & Install WordPress with our famous 5-minute installation. Feel like a

WordPress Users

FIGURE 5-3: The WordPress.org website.

The WordPress.org website is an excellent repository of tools and resources for you throughout the lifespan of your WordPress-powered website, so be sure to bookmark it for future reference! Here's a list of helpful things that you can find on the website:

- **Plugins (`https://wordpress.org/plugins`):** The WordPress Plugins page houses a full directory of plugins available for WordPress. You can search for and find the plugins you need for search engine optimization (SEO) enhancement, comment management, and social media integration, among many others.
- **Themes (`https://wordpress.org/themes`):** The Theme Directory page, shown in Figure 5-4, is a repository of WordPress themes that are free for the taking. In this section of the WordPress.org website, you can browse more than 5,000 themes to use on your site to dress up your content.
- **Codex (`https://codex.wordpress.org`):** Almost every piece of software released comes with documentation and user manuals. The Support section of the WordPress.org website contains the WordPress Codex, which tries to help you answer questions about the use of WordPress and its various features and functions.

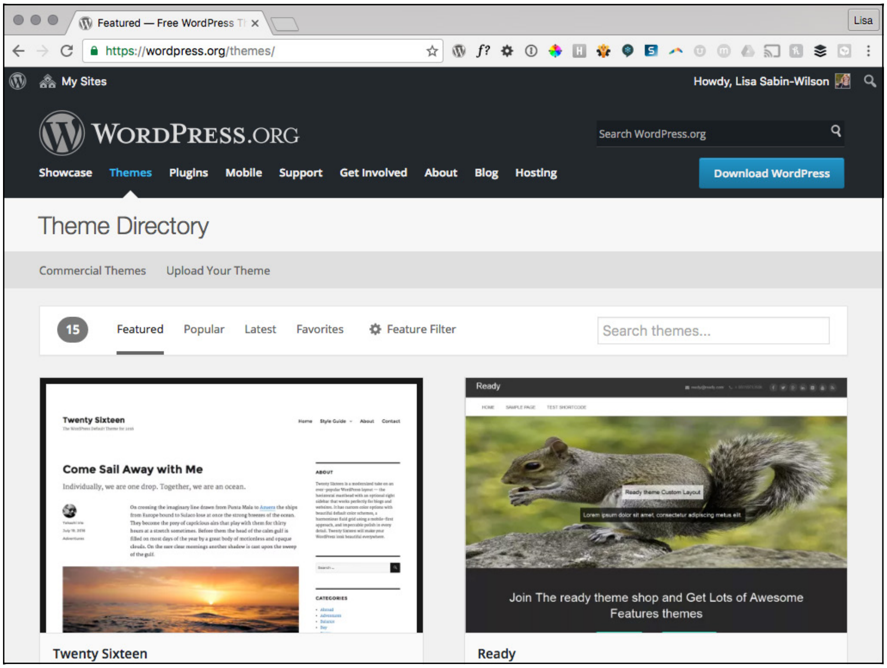


FIGURE 5-4: Theme Directory on WordPress.org.

- **Forums (`https://wordpress.org/support`):** The support forums at WordPress.org involve WordPress users from all over with one goal: finding out how to use WordPress to suit their particular needs. The support forums are very much a community of users (from beginners to experts) helping other users, and you can generally obtain a solution to your WordPress needs here from other users of the software.
- **Roadmap (`https://wordpress.org/about/roadmap`):** This section of the WordPress.org website doesn't contain support information or tools that you can download; it offers an at-a-glance peek at what's new and upcoming for WordPress. The Roadmap page gives you a pretty accurate idea of when WordPress will release the next version of its software; see Book 1, Chapter 3 for information about versions and release cycles.

TIP

Click the version number to visit the WordPress Trac and see what features developers are working on and adding.

WordPress.org is the self-installed, self-hosted software version of WordPress that you install on a web server you've set up on a domain that you've registered. Unless you own your own web server, you need to lease one. Leasing space on a web server is *web hosting*, and unless you know someone who knows someone, hosting generally isn't free.

That said, web hosting doesn't cost a whole lot, either. You can usually obtain a good, basic web hosting service for anywhere from $10 to $15 per month. (Book 2, Chapters 1 and 2 give you some great information on web hosting accounts and tools.) You need to make sure, however, that any web host you choose to work with has the required software installed on the web server. The recommended minimum software requirements for WordPress include

- PHP version 5.6 or later
- MySQL version 5.6 or later *or* MariaDB version 10.0 or later

After you have WordPress installed on your web server (see the installation instructions in Book 2, Chapter 4), you can start using it to publish to your heart's content. With the WordPress software, you can install several plugins that extend the functionality of the software, as I describe in Book 7. You also have full control of the core files and code that WordPress is built on. If you have a knack for PHP and knowledge of MySQL, you can work within the code to make changes that you think would be good for you and your website.

You don't need design or coding ability to make your site look great. Members of the WordPress community have created more than 1,600 WordPress themes (designs), and you can download them free and install them on your WordPress blog. (See Book 6, Chapter 2.) Additionally, if you're creatively inclined, like to create designs on your own, and know Cascading Style Sheets (CSS), you have full access to the template system within WordPress and can create your own custom themes. (See Book 6, Chapters 3 through 7.)

Hosting Multiple Sites with One WordPress Installation

The self-hosted WordPress.org software also lets you run an unlimited number of sites on one installation of its software platform, on one domain. When you configure the options within WordPress to enable a multisite interface, you become administrator of a network of sites. All the options remain the same, but with the multisite options configured, you can add more sites and domains, as well as allow registered users of your website to host their own sites within your network. For more information about the Multisite feature in WordPress, see Book 8.

The following types of sites use the Network options within WordPress:

- **Blog networks,** which can have more than 150 blogs. The tech giant Microsoft uses WordPress to power thousands of tech blogs at its TechNet portal: `https://blogs.technet.microsoft.com/wikininjas/2016/09/25/sunday-surprise-technet-forums`.

- **Newspapers and magazines,** such as *The New York Times,* and universities, such as Harvard Law School, use WordPress to manage the blog sections of their websites.
- **Niche-specific blog networks,** such as Edublogs.org, use WordPress to manage their full networks of free sites for teachers, educators, lecturers, librarians, and other education professionals.

TIP

Extensive information on running a network of sites by using the Multisite feature in WordPress is available in Book 8. The chapters there take you through everything: setup, maintenance, and the process of running a network of sites with one WordPress installation.

With the Multisite features enabled, users of your network can run their own sites within your installation of WordPress. They also have access to their own Dashboards with the same options and features you read about in Book 3. Heck, it probably would be a great idea to buy a copy of this book for every member within your network so everyone can become familiar with the WordPress Dashboard and features, too. At least have a copy on hand so people can borrow yours!

If you plan to run just a few of your own sites with the WordPress Multisite feature, your current hosting situation is probably well suited. (See Book 2, Chapter 1 for information on web hosting services.) If you plan to host a large network with hundreds of sites and multiple users, however, you should consider contacting your host and increasing your bandwidth and the disk space limitations on your account.

The best example of a large blog network with hundreds of blogs and users (actually, more like millions) would be the hosted service at WordPress.com, which I discuss earlier in this chapter. At WordPress.com, people are invited to sign up for an account and start a blog by using the Multisite feature within the WordPress platform on the WordPress server. When you enable this feature on your own domain and enable the user registration feature (covered later in this chapter), you invite users to

- Create an account
- Create a site on your WordPress installation (on your domain)
- Create content by publishing posts and pages
- Upload media files, such as photos, audio, and video
- Invite their friends to view their blogs or sign up for their own accounts

WARNING

In addition to the necessary security measures, time, and administrative tasks that go into running a community of sites, you have a few things to worry about. Creating a community increases the resource use, bandwidth, and disk space on your web server. In many cases, if you go over the allotted limits given to you by your web host, you incur great cost. Make sure that you anticipate your bandwidth and disk-space needs before running a large network on your website! (Don't say you weren't warned.)

REMEMBER

Many WordPress network communities start with grand dreams of being large and active. Be realistic about how your community will operate to make the right hosting choice for yourself and your community.

Small Internet communities are handled easily with a shared-server solution; larger, more active communities should consider a dedicated server solution for operation. The difference between the two lies in their names:

- **Shared-server solution:** You have one account on one server that has several other accounts on it. Think of this as apartment living. One building has several apartments under one roof.
- **Dedicated server:** You have one account on one server. The server is dedicated to your account, and your account is dedicated to the server. Think of this as owning a home where you don't share your living space with anyone else.

A dedicated-server solution is a more expensive investment for your community; a shared-server solution is more economical. Base your decision on how big and how active you estimate that your community will be. You can move from a shared-server solution to a dedicated-server solution if your community becomes larger than you expect, but starting with the right solution for your community from day one is best. For more information on hosting WordPress, see Book 2, Chapter 1.

Discovering WordPress VIP Services

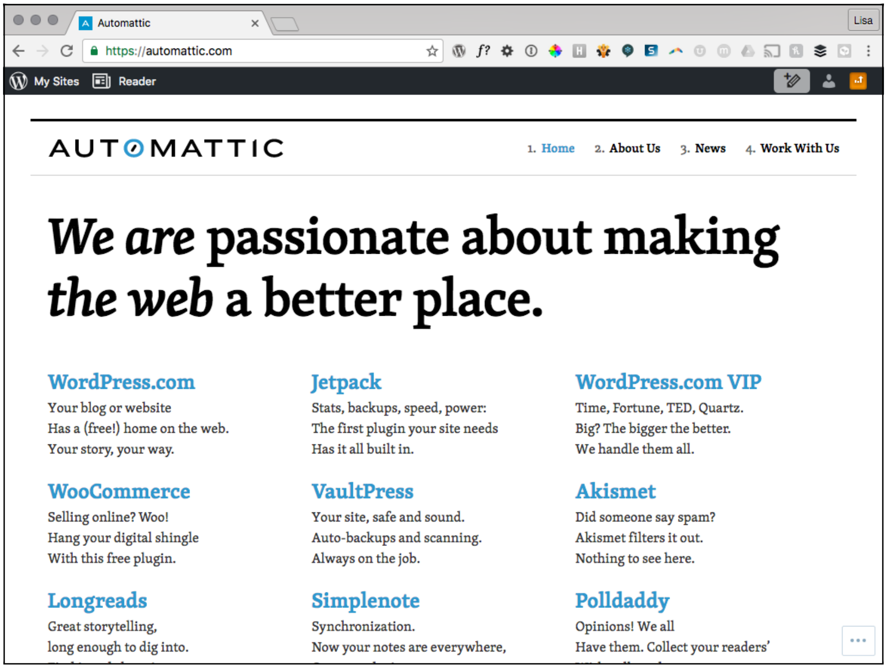
The company behind the Automattic WordPress.com service is owned and operated by the WordPress cofounder, Matt Mullenweg. Although Automattic doesn't own the WordPress.org software, Automattic is a driving force behind all things WordPress.

REMEMBER

As an open-source platform, WordPress.org is owned by the community and hundreds of developers that contribute to the core code.

Have a look at the Automattic website at `https://automattic.com` (shown in Figure 5-5). The folks behind WordPress own and operate several properties and services that can extend the features of your WordPress site, including

- **WordPress.com (`https://wordpress.com`):** A hosted WordPress blogging service, discussed previously in this chapter.
- **Jetpack (`https://jetpack.com`):** A suite of plugins that can be installed on a WordPress.org self-hosted site.
- **VaultPress (`https://vaultpress.com`):** Premium backup and restoration service for your blog.
- **Akismet (`https://akismet.com`):** Spam protection for your blog. This service comes with every WordPress.org installation, but there are different levels of service, as discussed in Book 3, Chapter 4.
- **Polldaddy (`https://polldaddy.com`):** A polling and survey software that easily plugs into the WordPress platform.



We are passionate about making *the web* a better place.

WordPress.com
Your blog or website
Has a (free!) home on the web.
Your story, your way.

Jetpack
Stats, backups, speed, power:
The first plugin your site needs
Has it all built in.

WordPress.com VIP
Time, Fortune, TED, Quartz.
Big? The bigger the better.
We handle them all.

WooCommerce
Selling online? Woo!
Hang your digital shingle
With this free plugin.

VaultPress
Your site, safe and sound.
Auto-backups and scanning.
Always on the job.

Akismet
Did someone say spam?
Akismet filters it out.
Nothing to see here.

Longreads
Great storytelling,
long enough to dig into.

Simplenote
Synchronization.
Now your notes are everywhere,

Polldaddy
Opinions! We all
Have them. Collect your readers'

FIGURE 5-5: The Automattic website.

- **VideoPress (`https://videopress.com`):** Video hosting and sharing application for WordPress.
- **Gravatar (`https://gravatar.com`):** Photos or graphical icons for comment authors (discussed in Book 3, Chapter 2).
- **Longreads (`https://longreads.com`):** Great examples of storytelling on the Internet.
- **Simplenote (`https://simplenote.com`):** An easy way to keep notes across various iOS, Android, Mac, and Windows devices.
- **WordPress.com VIP (`https://vip.wordpress.com`):** Enterprise-level web hosting and WordPress support starting at $15,000 per year (usually reserved for heavy hitters such as CNN, BBC, and *Time* magazine, for example).
- **Cloudup (`https://cloudup.com`):** Easy sharing of media including videos, music, photos, and documents.

2

Setting Up the WordPress Software

Contents at a Glance

IN THIS CHAPTER

- » Registering a domain name
- » Exploring web hosting environments
- » Knowing the basic requirements for PHP and MySQL
- » Getting web hosting recommendations for WordPress
- » Understanding bandwidth and disk space needs

Chapter 1

Understanding the System Requirements

Before you can start blogging with WordPress, you have to set up your foundation. Doing so involves more than simply downloading and installing the WordPress software. You also need to establish your *domain* (your website address) and your *web hosting service* (the place that houses your website). Although you initially download your WordPress software onto your hard drive, you install it on a web hosting server.

Obtaining a web server and installing software on it is something you may already have done on your site, in which case you can move on to the next chapter. If you haven't installed WordPress, you must first consider many factors, as well as cope with a learning curve, because setting up your website through a hosting service involves using some technologies that you may not feel comfortable with. This chapter takes you through the basics of those technologies, and by the last page of this chapter, you'll have WordPress successfully installed on a web server with your own domain name.

Establishing Your Domain

You've read all the hype. You've heard all the rumors. You've seen the flashy websites powered by WordPress. But where do you start?

The first steps in installing and setting up a WordPress site are making a decision about a domain name and then purchasing the registration of that name through a domain registrar. A *domain name* is the *unique* web address that you type in a web browser's address bar to visit a website. Some examples of domain names are `WordPress.org` and `Google.com`.

REMEMBER

I emphasize *unique* because no two domain names can be the same. If someone else has registered the domain name you want, you can't have it. With that in mind, it sometimes takes a bit of time to find a domain that isn't already in use.

Understanding domain name extensions

When registering a domain name, be aware of the *extension* that you want. The `.com`, `.net`, `.org`, `.info`, or `.biz` extension that you see tagged onto the end of any domain name is the *top-level domain extension.* When you register your domain name, you're asked to choose the extension you want for your domain (as long as it's available, that is).

A word to the wise here: Just because you registered your domain as a `.com` doesn't mean that someone else doesn't, or can't, own the very same domain name with a `.net`. Therefore, if you register `MyDogHasFleas.com`, and the site becomes hugely popular among readers with dogs that have fleas, someone else can come along, register `MyDogHasFleas.net`, and run a similar site to yours in the hope of riding the coattails of your website's popularity and readership.

DOMAIN NAMES: DO YOU OWN OR RENT?

When you "buy" a domain name, you don't really own it. Rather, you're purchasing the right to use that domain name for the time specified in your order. You can register a domain name for one year or up to ten years. Be aware, however, that if you don't renew the domain name when your registration period ends, you lose it — and most often, you lose it right away to someone who preys on abandoned or expired domain names. Some people keep a close watch on expiring domain names, and as soon as the buying window opens, they snap the names up and start using them for their own websites, in the hope of taking full advantage of the popularity that the previous owners worked so hard to attain for those domains.

If you want to avert this problem, you can register your domain name with all available extensions. My personal website, for example, has the domain name `lisasabin-wilson.com`, but I also own `lisasabin-wilson.net` just in case someone else out there has the same combination of names.

Considering the cost of a domain name

Registering a domain costs you anywhere from $5 to $300 per year or more, depending on what service you use for a registrar and what options (such as storage space, bandwidth, privacy options, search engine submission services, and so on) you apply to your domain name during the registration process.

REMEMBER

When you pay the domain registration fee today, you need to pay another registration fee when the renewal date comes up again in a year, or two, or five — however many years you chose to register your domain name for. (See the nearby "Domain names: Do you own or rent?" sidebar.) Most registrars give you the option of signing up for a service called Auto Renew to automatically renew your domain name and bill the charges to the credit card you set up on that account. The registrar sends you a reminder a few months in advance, telling you that it's time to renew. If you don't have Auto Renew set up, you need to log in to your registrar account before it expires and manually renew your domain name.

TIP

When choosing a domain name for your website, you may find that the domain name you want isn't available. You know if it's available when you search for it at the domain registrar's website (listed in the next section). Have some backup domain names prepared just in case the one you want isn't available. If your chosen domain name is `cutepuppies.com`, but it's not available, you could have some variations of the domain ready to use, such as `cute-puppies.com` (notice the dash), `mycutepuppies.com`, or `reallycutepuppies.com`.

Registering your domain name

Domain registrars are certified and approved by the Internet Corporation for Assigned Names and Numbers (ICANN). Although hundreds of domain registrars exist, the ones in the following list are popular because of their longevity in the industry, competitive pricing, and variety of services they offer in addition to domain name registration (such as web hosting and website traffic builders):

- **GoDaddy:** `https://www.godaddy.com`
- **Register.com:** `https://www.register.com`
- **Network Solutions:** `https://www.networksolutions.com`
- **NamesDirect:** `http://namesdirect.com`

No matter where you choose to register your domain name, here are the steps you can take to accomplish this task:

1. **Decide on a domain name.**

   A little planning and forethought are necessary here. Many people think of a domain name as a *brand* — a way of identifying their websites or blogs. Think of potential names for your site and then proceed with your plan.

2. **Verify the domain name's availability.**

   In your web browser, enter the URL of the domain registrar of your choice. Look for the section on the registrar's website that lets you enter the domain name (typically, a short text field) to see whether it's available. If the domain name isn't available as a `.com`, try `.net` or `.info`.

3. **Purchase the domain name.**

   Follow the domain registrar's steps to purchase the name, using your credit card. After you complete the checkout process, you receive an email confirming your purchase, so be sure to use a valid email address during the registration process.

The next step is obtaining a hosting account, which the next section covers.

REMEMBER

Some of the domain registrars have hosting services that you can sign up for, but you don't have to use those services. Often, you can find hosting services for a lower cost than most domain registrars offer. It just takes a little research.

Finding a Home for Your Blog

After you register your domain, you need to find a place for it to live: a web host. Web hosting is the second piece of the puzzle that you need to complete before you begin working with WordPress.org.

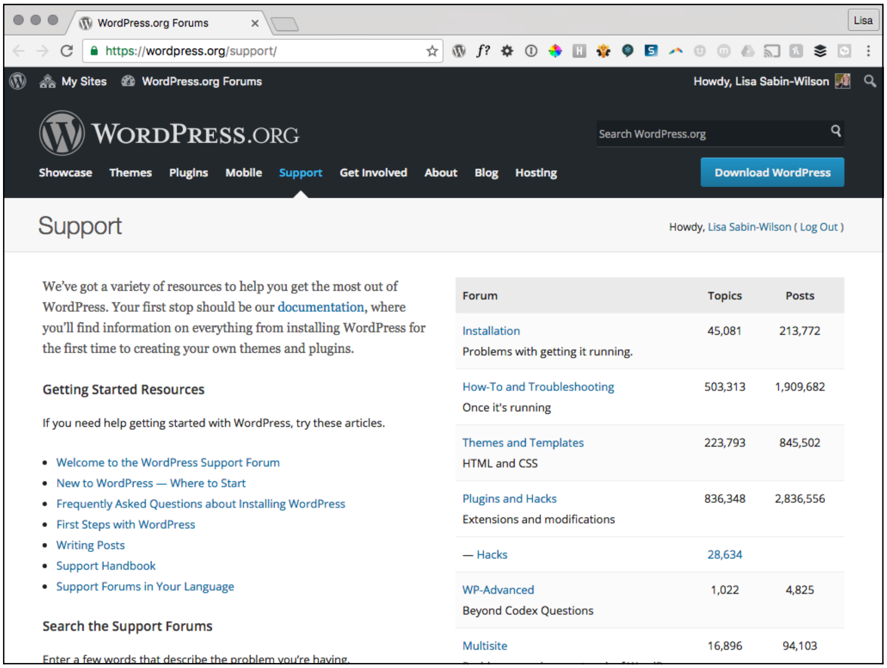
A *web host* is a business, group, or person that provides web server space and bandwidth for file transfer to website owners who don't have it. Usually, web hosting services charge a monthly or an annual fee — unless you're fortunate enough to know someone who's willing to give you server space and bandwidth free. The cost varies from host to host, but you can usually obtain quality web hosting services for $10 to $30 per month to start.

REMEMBER

When discussing web hosting considerations, it's important to understand where your hosting account ends and WordPress begins. Support for the WordPress software may or may not be included in your hosting package.

Some web hosts consider WordPress to be a *third-party application.* This means that the host typically won't provide technical support on the use of WordPress (or any other software application) because software support generally isn't included in your hosting package. The web host supports your hosting account but typically doesn't support the software you choose to install.

On the other hand, if your web host supports the software on your account, it comes at a cost: You have to pay for that extra support. To find whether your chosen host supports WordPress, ask first. If your host doesn't offer software support, you can still find WordPress support in the support forums at `https://wordpress.org/support`, as shown in Figure 1-1.



Support

Howdy, Lisa Sabin-Wilson (Log Out)

We've got a variety of resources to help you get the most out of WordPress. Your first stop should be our documentation, where you'll find information on everything from installing WordPress for the first time to creating your own themes and plugins.

Getting Started Resources

If you need help getting started with WordPress, try these articles.

- Welcome to the WordPress Support Forum
- New to WordPress — Where to Start
- Frequently Asked Questions about Installing WordPress
- First Steps with WordPress
- Writing Posts
- Support Handbook
- Support Forums in Your Language

Search the Support Forums

Enter a few words that describe the problem you're having.

Forum	Topics	Posts
Installation Problems with getting it running.	45,081	213,772
How-To and Troubleshooting Once it's running	503,313	1,909,682
Themes and Templates HTML and CSS	223,793	845,502
Plugins and Hacks Extensions and modifications	836,348	2,836,556
— Hacks	28,634	
WP-Advanced Beyond Codex Questions	1,022	4,825
Multisite	16,896	94,103

FIGURE 1-1: The WordPress support forums.

TIP

Several web hosting providers also have WordPress-related services available for additional fees. These services can include technical support, plugin installation and configuration, and theme design.

Generally, hosting services provide (at least) these services with your account:

- Hard drive space
- Bandwidth (transfer)

- Domain email with web mail access
- File Transfer Protocol (FTP) access
- Comprehensive website statistics
- MySQL database(s)
- PHP

Because you intend to run WordPress on your web server, you need to look for a host that provides the *minimum* requirements needed to run the software on your hosting account, which are

- PHP version 5.6 (or later)
- MySQL version 5.0 (or later) *or* MariaDB version 10.0 (or later)

You also want a host that provides daily backups of your site so that your content won't be lost in case something happens. Web hosting providers that offer daily backups as part of their services can save the day by restoring your site to its original form.

TIP

The easiest way to find whether a host meets the minimum requirement is to check the FAQ (Frequently Asked Questions) section of the host's website, if it has one. If not, find the contact information for the hosting company and fire off an email requesting information on exactly what it supports. Any web host worth dealing with will answer your email within a reasonable amount of time. (A response within 12 to 24 hours is a good barometer.)

TIP

If the technojargon confuses you — specifically, all that talk about PHP, MySQL, and FTP in this section — don't worry! Book 2, Chapter 2 gives you an in-depth look at what FTP is and how you use it on your web server; Book 2, Chapter 3 introduces you to the basics of PHP and MySQL. Become comfortable with these topics, because they're important when using WordPress.

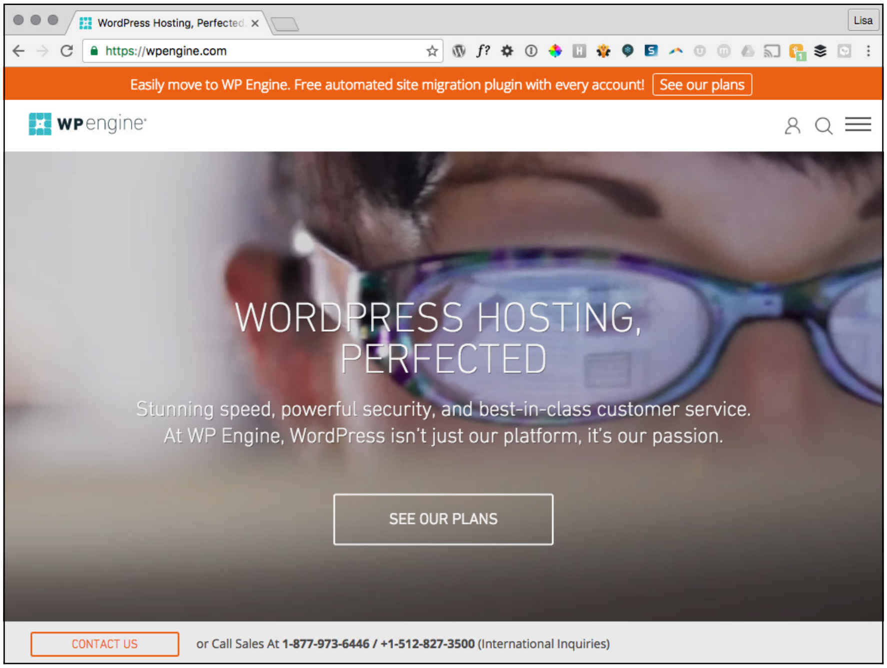
Getting help with hosting WordPress

The popularity of WordPress has given birth to web services — including designers, consultants, and (yes) web hosts — that specialize in using WordPress.

Many web hosts offer a full array of WordPress features, such as an automatic WordPress installation included with your account, a library of WordPress themes, and a staff of support technicians who are very experienced in using WordPress.

Here is a list of some of those providers:

- **Pagely:** `https://pagely.com`
- **WP Engine:** `https://wpengine.com` (shown in Figure 1-2)
- **Pressable:** `https://pressable.com`



Easily move to WP Engine. Free automated site migration plugin with every account!

WORDPRESS HOSTING, PERFECTED

Stunning speed, powerful security, and best-in-class customer service. At WP Engine, WordPress isn't just our platform, it's our passion.

or Call Sales At **1-877-973-6446 / +1-512-827-3500** (International Inquiries)

FIGURE 1-2: The WP Engine WordPress hosting provider.

WARNING

A few web hosting providers offer free domain name registration when you sign up for hosting services. Research this topic and read the terms of service because that free domain name may come with conditions. Many clients have gone this route, only to find out a few months later that the web hosting provider has full control of the domain name and the client can't move that domain off the host's servers, either for a set period (usually, a year or two) or for infinity. You need control in *your* hands, not someone else's, so stick with an independent domain registrar, such as Network Solutions.

Dealing with disk space and bandwidth

Web hosting services provide two very important things with your account:

- **Disk space:** The amount of space you can access on the web servers' hard drive, generally measured in megabytes (MB) or gigabytes (GB).
- **Bandwidth transfer:** The amount of transfer your site can do per month. Typically, traffic is measured in gigabytes.

Think of your web host as a garage that you rent to park your car in. The garage gives you the place to store your car (disk space). It even gives you the driveway so that you, and others, can get to and from your car (bandwidth). It won't, however, fix the rockin' stereo system (WordPress or any other third-party software application) that you've installed — unless you're willing to pay a few extra bucks for that service.

TIP

Most web hosting providers give you access to a hosting account manager that allows you to log in to your web hosting account to manage services. cPanel is perhaps the most popular management interface, but Plesk and NetAdmin are still widely used. These management interfaces give you access to your server logs, where you can view such things as bandwidth and hard disk usage. Get into the habit of checking those things occasionally to make sure that you stay informed about how much storage and bandwidth your site is using. Typically, I check monthly.

Managing disk space

Disk space is nothing more complicated than the hard drive on your own computer. Each hard drive has capacity, or space, for a certain amount of files. An 80GB hard drive can hold 80GB of data — no more. Your hosting account provides you a limited amount of disk space, and the same concept applies. If your web host provides you 10GB of disk space, that's the absolute limit you have. If you want more disk space, you need to upgrade your space limitations. Most web hosts have a mechanism in place for you to upgrade your allotment.

Starting with a self-hosted WordPress website doesn't take much disk space at all. A good starting point for disk space is 10GB to 20GB. If you find that you need additional space, contact your hosting provider for an upgrade.

Choosing the size of your bandwidth pipe

Bandwidth refers to the amount of data that's carried from point A to point B within a specific period (usually, only a second or two). I live out in the country — pretty much in the middle of nowhere. The water that comes to my house is provided by a private well that lies buried in the backyard somewhere. Between my house and the well are pipes that bring the water to my house. The pipes provide a free flow of water to our home so that everyone else can enjoy long, hot showers while I labor over dishes and laundry, all at the same time. Lucky me!

The very same concept applies to the bandwidth available with your hosting account. Every web hosting provider offers a variety of bandwidth limits on the accounts it offers. When I want to view your website in my browser window, the bandwidth is essentially the pipe that lets your data flow from your "well" to my computer. The bandwidth limit is similar to the pipe connected to my well: It can hold only a certain amount of water before it reaches maximum capacity and won't bring the water from the well any longer. Your bandwidth pipe size is determined by how much bandwidth your web host allows for your account. The larger the number, the bigger the pipe. A 50MB bandwidth limit makes for a smaller pipe than a 100MB limit, for example.

Web hosts are pretty generous with the amount of bandwidth they provide in their packages. Like disk space, bandwidth is measured in gigabytes. Bandwidth provision of 50GB to 100GB is generally a respectable amount to run a website with a blog.

WARNING

In my experience, I've found that if your website exceeds its allowed bandwidth, the web host won't turn off your website or limit traffic. The host will continue to allow inbound web traffic to your site but will bill you at the end of month for any bandwidth overages. Those charges can get pretty expensive, so if you find that your website is consistently exceeding the bandwidth amount every month, contact your web host to find whether if you can get an upgrade to allow for increased bandwidth.

REMEMBER

Websites that run large files — such as video, audio, or photo files — generally benefit from higher disk space compared with sites that don't involve large files. Keep this point in mind when you're signing up for your hosting account. Planning now will save you a few headaches down the road.

Be wary of hosting providers that offer things like unlimited bandwidth, domains, and disk space. Those offers are great selling points, but what the providers don't tell you outright (you may have to look into the fine print of the agreement) is that although they may not put those kinds of limits on you, they will limit your site's CPU usage.

CPU (which stands for *central processing unit*) is the part of a computer (or web server, in this case) that handles all the data processing requests sent to your web servers whenever anyone visits your site. Although you may have unlimited bandwidth to handle a large amount of traffic, if a high spike in traffic increases your site's CPU usage, your host will throttle your site because it limits the CPU use.

What do I mean by *throttle*? I mean that the host shuts down your site — turns it off. The shutdown isn't permanent, though; it lasts maybe a few minutes to an hour. The host does this to kill any connections to your web server that are causing the spike in CPU use. Your host eventually turns your site back on — but the inconvenience happens regularly with many clients across various hosting environments.

TIP

When looking into different web hosting providers, ask about their policies on CPU use and what they do to manage a spike in processing. It's better to know about it up front than to find out about it after your site's been throttled.

IN THIS CHAPTER

- » Discovering SFTP
- » Understanding secure file transfer
- » Exploring easy-to-use SFTP clients
- » Making sense of SFTP terminology
- » Editing files by using SFTP
- » Changing file permissions

Chapter 2
Using Secure File Transfer Protocol

Throughout this entire book, you run into the term *SFTP.* SFTP (Secure File Transfer Protocol) is a network protocol used to copy files from one host to another over the Internet. With SFTP, you can perform various tasks, including uploading and downloading WordPress files, editing files, and changing permissions on files.

Read this chapter to familiarize yourself with SFTP; understand what it is and how to use it; and discover some free, easy-to-use SFTP clients and programs that make your life as a WordPress website owner much easier. If you run across sections in this book that ask you to perform certain tasks by using SFTP, you can refer to this chapter to refresh your memory on how to do it, if needed.

Understanding SFTP Concepts

This section introduces you to the basic elements of SFTP, which is a method of transferring files in a secure environment. SFTP provides an additional layer of security beyond what you get with regular FTP, as it uses SSH (Secure Shell) and encrypts sensitive information, data, and passwords from being clearly transferred within the hosting network. Encrypting the data ensures that anyone monitoring the network can't read the data freely — and, therefore, can't obtain information that should be secured, such as passwords and usernames.

TIP

I highly recommend using SFTP over FTP because it's a secure connection to your web host. If your web hosting provider doesn't provide SFTP connections for you, strongly consider switching to a hosting provider that does. Almost all hosting providers these days provide SFTP as the standard protocol for transferring files.

The capability to use SFTP with your hosting account is a given for almost every web host on the market today. SFTP offers two ways of moving files from one place to another:

- **Uploading:** Transferring files from your local computer to your web server
- **Downloading:** Transferring files from your web server to your local computer

You can do several other things with SFTP, including the following, which I discuss later in this chapter:

- **View files.** After you log in via SFTP, you can see all the files that are located on your web server.
- **View date modified.** You can see the date when a file was last modified, which can be helpful when trying to troubleshoot problems.
- **View file size.** You can see the size of each file on your web server, which is helpful if you need to manage the disk space on your account.
- **Edit files.** Almost all SFTP clients allow you to open and edit files through the client interface, which is a convenient way to get the job done.
- **Change permissions.** You can control what type of read/write/execute permissions the files on your web server have. This is commonly referred to as CHMOD, which is the command that you use to change the permissions.

SFTP is a convenient utility that gives you access to the files located on your web server, which makes managing your WordPress website a bit easier.

Setting Up SFTP on Your Hosting Account

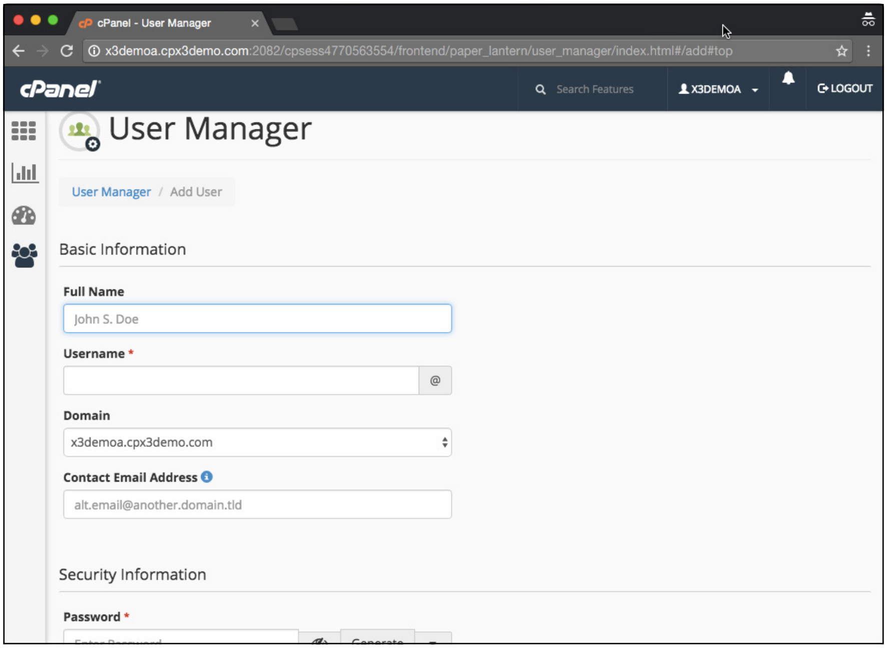
Many web hosts today offer SFTP as part of their hosting packages, so confirm that your hosting provider makes SFTP available to you for your account. In Book 2, Chapter 1, I mention the hosting account management interface called cPanel.

cPanel is by far the most popular hosting account management software used by hosts on the web, eclipsing other popular tools such as Plesk and NetAdmin. It's cPanel, or your hosting account management interface, that allows you to set up an SFTP account for your website.

TIP

In this chapter, I use cPanel as the example. If your hosting provider gives you a different interface to work with, the concepts are still the same, but you need to refer to your hosting provider for the specifics to adapt these directions to your specific environment.

Mostly, the SFTP for your hosting account is set up automatically. Figure 2-1 shows you the User Manager page in cPanel, where you set up user accounts for SFTP access.



x3demoa.cpx3demo.com:2082/cpsess4770563554/frontend/paper_lantern/user_manager/index.html#/add#top

User Manager

User Manager / Add User

Basic Information

Full Name

John S. Doe

Username *

@

Domain

x3demoa.cpx3demo.com

Contact Email Address

alt.email@another.domain.tld

Security Information

Password *

FIGURE 2-1: The User Manager page within cPanel.

Follow these steps to get to this page and set up your SFTP account:

1. **Log in to the cPanel for your hosting account.**

   Typically, you browse to `http://yourdomain.com/cpanel` to bring up the login screen for your cPanel. Enter your specific hosting account username and password in the login fields, and click OK.

2. **Browse to the User Manager page.**

   Click the Add User button in your cPanel to open the User Manager page, shown in Figure 2-1.

3. **View the existing SFTP account.**

   If your hosting provider automatically sets you up with an SFTP account, you see it listed on the User Manager page. Ninety-nine percent of the time, the default SFTP account uses the same username and password combination as your hosting account or the login information you used to log in to your cPanel in Step 1.

If the SFTP Accounts page doesn't display a default SFTP user in the User Manager page, you can create one easily in the Add SFTP Account section:

1. **Fill in the provided fields.**

   The fields of the User Manager page ask for your name, desired username, domain, and email address.

2. **Type your desired password in the Password field.**

   You can choose to type your own password or click the Password Generator button to have the server generate a secure password for you. Retype the password in the Password (Again) field to validate it.

3. **Check the Strength indicator.**

   The server tells you whether your password is Very Weak, Weak, Good, Strong, or Very Strong. You want to have a very strong password for your SFTP account so that it's very hard for hackers and malicious Internet users to guess and crack.

4. **In the Services section, click the Disabled icon within the FTP section.**

   This action changes the icon label to Enabled and enables FTP for the user you are creating.

5. **Indicate the space limitations in the Quota field.**

   Because you're the site owner, leave the radio-button selection set to Unrestricted. (In the future, if you add a new user, you can limit the amount of space, in megabytes [MB], by selecting the radio button to the left of the text field and typing the numeric amount in the text box, such as 50MB.)

6. **(Optional) Type the directory access for this user.**

   Leaving this field blank gives this new user access to the root level of your hosting account — which, as the site owner, you want, so leave this field blank. In the future, if you set up accounts for other users, you can lock down their access to your hosting directory by indicating which directory the user has access to.

7. **Click the Create button.**

   You see a new screen with a message that the account was created successfully. Additionally, you see the settings for this new user account; copy and paste them into a blank text editor window (such as Notepad for PC or TextEdit for Mac users). The settings for the user account are the details you need to connect to your web server via SFTP.

8. **Save the following settings.**

   Username, Password, and SFTP Server are specific to your domain and the information you entered in the preceding steps.

   - Username: *username@yourdomain.com*
   - Password: *yourpassword*
   - Host name: *yourdomain*.com
   - SFTP Server Port: 22
   - Quota: Unlimited MB

TIP

Ninety-nine point nine percent of the time, the SFTP Server Port will be 22. Be sure to double-check your SFTP settings to make sure that this is the case because some hosting providers have different port numbers for SFTP.

REMEMBER

At any time, you can revisit the User Accounts page to delete the user accounts you've created, change the quota, change the password, and find the connection details specific to that account.

Finding and Using Free and Easy SFTP Programs

SFTP programs are referred to as SFTP *clients* or SFTP *client software.* Whatever you decide to call it, an SFTP client is software that you use to connect to your web server to view, open, edit, and transfer files to and from your web server.

Using SFTP to transfer files requires an *SFTP* client. Many SFTP clients are available for download. Here are some good (and free) ones:

- **SmartFTP (PC):** `https://www.smartftp.com/download`
- **FileZilla (PC or Mac):** `https://sourceforge.net/projects/filezilla`

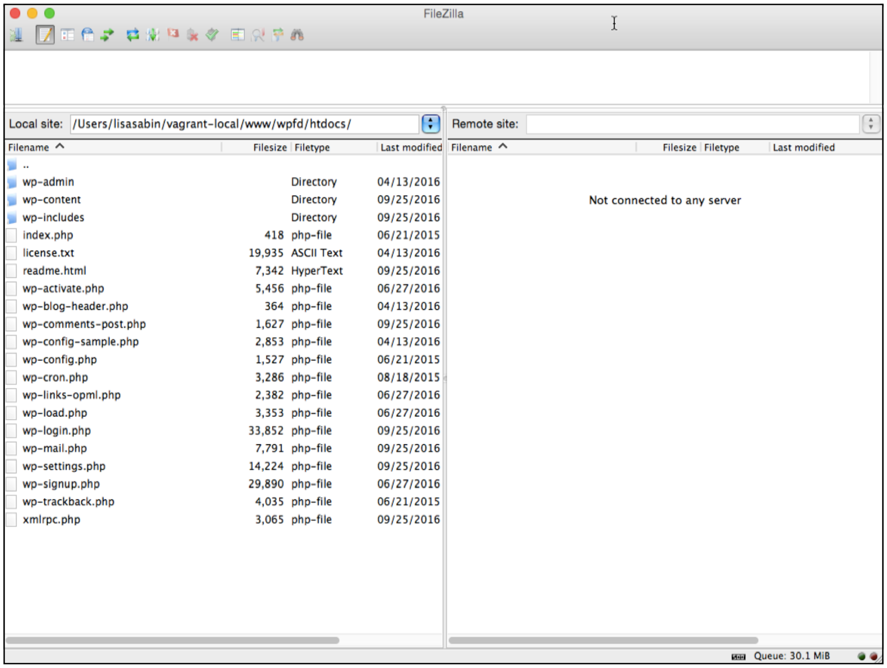
- **Transmit (Mac):** `http://panic.com/transmit`
- **FTP Explorer (PC):** `www.ftpx.com`

In Book 2, Chapter 1, you discover how to obtain a hosting account, and in the previous section of this chapter, you discover how to create an SFTP account on your web server. By following the steps in the previous section, you also have the SFTP username, password, server, and port information you need to connect your SFTP client to your web server so you can begin transferring files. In the next section, you discover how to connect to your web hosting account via SFTP.

Connecting to the web server via SFTP

For the purposes of this chapter, I use the FileZilla SFTP client (`https://sourceforge.net/projects/filezilla`) because it's easy to use and the cost is free ninety-nine (open-source geek speak for free!).

Figure 2-2 shows a FileZilla client that's not connected to a server. By default, the left side of the window displays a directory of files and folders on the local computer.



Local site: /Users/lisasabin/vagrant-local/www/wpfd/htdocs/

Remote site:

Filename	Filesize	Filetype	Last modified
..			
wp-admin		Directory	04/13/2016
wp-content		Directory	09/25/2016
wp-includes		Directory	09/25/2016
index.php	418	php-file	06/21/2015
license.txt	19,935	ASCII Text	04/13/2016
readme.html	7,342	HyperText	09/25/2016
wp-activate.php	5,456	php-file	06/27/2016
wp-blog-header.php	364	php-file	04/13/2016
wp-comments-post.php	1,627	php-file	09/25/2016
wp-config-sample.php	2,853	php-file	04/13/2016
wp-config.php	1,527	php-file	06/21/2015
wp-cron.php	3,286	php-file	08/18/2015
wp-links-opml.php	2,382	php-file	06/27/2016
wp-load.php	3,353	php-file	06/27/2016
wp-login.php	33,852	php-file	09/25/2016
wp-mail.php	7,791	php-file	09/25/2016
wp-settings.php	14,224	php-file	09/25/2016
wp-signup.php	29,890	php-file	06/27/2016
wp-trackback.php	4,035	php-file	06/21/2015
xmlrpc.php	3,065	php-file	09/25/2016

Filename	Filesize	Filetype	Last modified

Not connected to any server

Queue: 30.1 MiB

FIGURE 2-2: Mozilla FileZilla SFTP client software.

The right side of the window displays content when the FileZilla client is connected to a web server; specifically, it shows directories of the web server's folders and files.

REMEMBER

If you use different SFTP client software from FileZilla, the steps and look of the software will differ. You need to adapt your steps and practice for the specific SFTP client software you're using.

Connecting to a web server is an easy process. The SFTP settings you saved from Step 8 in "Setting Up SFTP on Your Hosting Account" section in this chapter are also the same settings you see in your cPanel User Manager page if your SFTP was set up automatically for you.

Username: *username@yourdomain.com*

Password: *yourpassword*

Server: *yourdomain*.com

SFTP Server Port: 22

Quota: Unlimited MB

This process is where you need that information. To connect to your web server via the FileZilla SFTP client, follow these few steps:

1. **Open the SFTP client software on your local computer.**

   Locate the program on your computer and click (or double-click) the program icon to launch the program.

2. **Choose File➪Site Manager to open the Site Manager utility.**

   Site Manager appears, as shown in Figure 2-3.

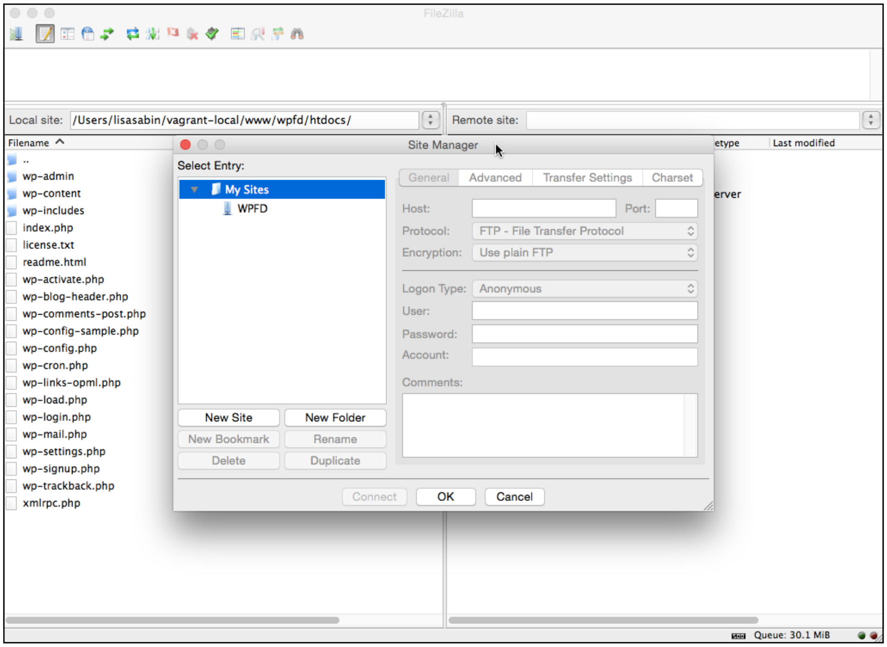
3. **Click the New Site button.**

4. **Type a name for your site that helps you identify the site.**

   This site name can be anything you want it to be because it isn't part of the connection data you add in the next steps. (In Figure 2-4, you see WPFD — short for *WordPress For Dummies*.)

5. **Enter the SFTP server in the Host field.**

   Host is the same as the SFTP server information provided to you when you set up the SFTP account on your web server. In the example, the SFTP server is `wpfd.wpengine.com`, so that's entered in the Host field, as shown in Figure 2-4.



Local site: /Users/lisasabin/vagrant-local/www/wpfd/htdocs/

Remote site:

Host: Port:

Protocol: FTP - File Transfer Protocol

Encryption: Use plain FTP

Logon Type: Anonymous

User:

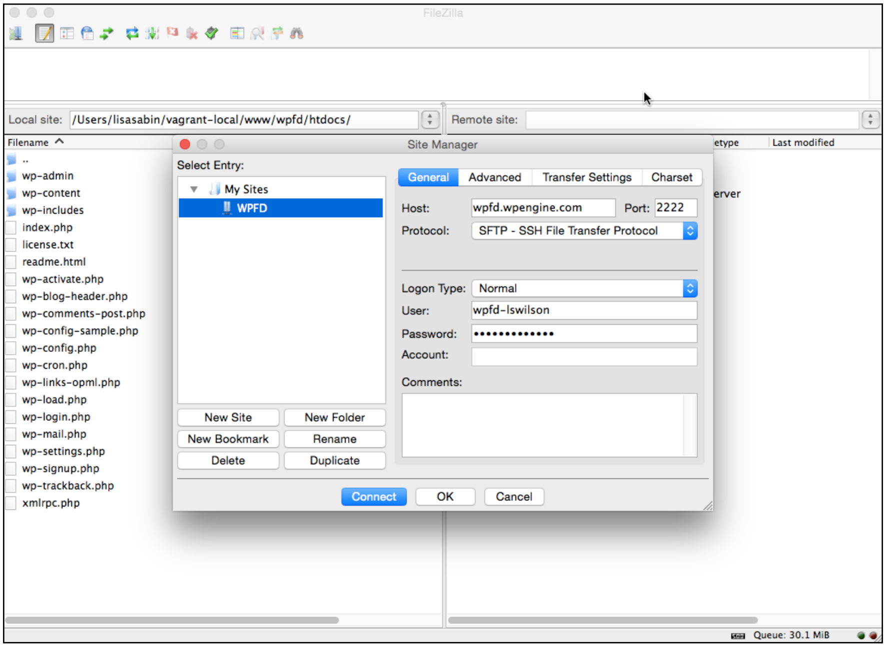
Password:

Account:

Comments:

..
wp-admin
wp-content
wp-includes
index.php
license.txt
readme.html
wp-activate.php
wp-blog-header.php
wp-comments-post.php
wp-config-sample.php
wp-config.php
wp-cron.php
wp-links-opml.php
wp-load.php
wp-login.php
wp-mail.php
wp-settings.php
wp-signup.php
wp-trackback.php
xmlrpc.php

FIGURE 2-3: The Site Manager utility in the FileZilla SFTP client software.



Local site: /Users/lisasabin/vagrant-local/www/wpfd/htdocs/

Remote site:

Host: wpfd.wpengine.com Port: 2222

Protocol: SFTP - SSH File Transfer Protocol

Logon Type: Normal

User: wpfd-lswilson

Password: •••••••••••••

Account:

Comments:

..
wp-admin
wp-content
wp-includes
index.php
license.txt
readme.html
wp-activate.php
wp-blog-header.php
wp-comments-post.php
wp-config-sample.php
wp-config.php
wp-cron.php
wp-links-opml.php
wp-load.php
wp-login.php
wp-mail.php
wp-settings.php
wp-signup.php
wp-trackback.php
xmlrpc.php

FIGURE 2-4: FileZilla Site Manager utility with SFTP account information filled in.

6. **Enter the SFTP port in the Port field.**

   Typically, in most hosting environments, SFTP uses port 22, and this setting generally never changes. My host, on the other hand, uses port 2222 for SFTP. In case your host is like mine and uses a port other than 22, double-check your port number and enter it in the Port field, as shown in Figure 2-4.

7. **Select the server type.**

   FileZilla asks you to select a server type (as do most SFTP clients). Choose SFTP – SSH File Transfer Protocol from the Protocol drop-down menu, as shown in Figure 2-4.

8. **Select the logon type.**

   FileZilla gives you several logon types to choose among (as do most SFTP clients). Choose Normal from the Logon Type drop-down menu.

9. **Enter your username in the Username field.**

   This username is given to you in the SFTP settings.

10. **Type your password in the Password field.**

    This password is given to you in the SFTP settings.

11. **Click the Connect button.**

    This step connects your computer to your web server. The directory of folders and files from your local computer displays on the left side of the FileZilla SFTP client window, and the directory of folders and files on your web server displays on the right side, as shown in Figure 2-5.

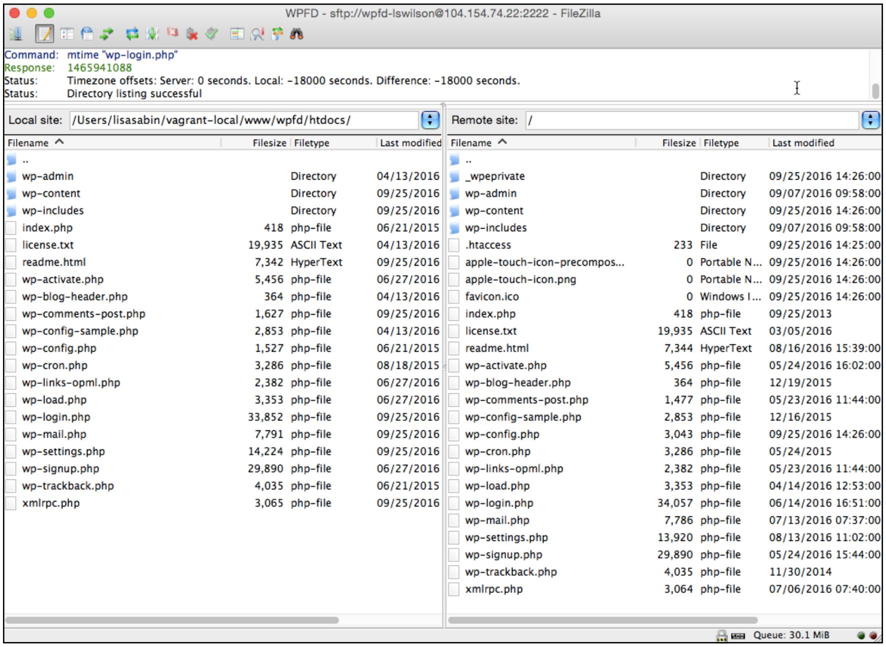
Now you can take advantage of all the tools and features SFTP has to offer you!

Transferring files from point A to point B

Now that your local computer is connected to your web server, transferring files between the two couldn't be easier. Within the SFTP client software, you can browse the directories and folders on your local computer on the left side and browse the directories and folders on your web server on the right side.

SFTP clients make it easy to transfer files from your computer to your hosting account by using a drag-and-drop method. Two methods of transferring files are

- **Uploading:** Generally, transferring files from your local computer to your web server. To upload a file from your computer to your web server, click the file you want to transfer from your local computer and then drag and drop it on the right side (the web-server side).



```
Command:  mtime "wp-login.php"
Response: 1465941088
Status:   Timezone offsets: Server: 0 seconds. Local: -18000 seconds. Difference: -18000 seconds.
Status:   Directory listing successful
```

Local site: /Users/lisasabin/vagrant-local/www/wpfd/htdocs/

Filename	Filesize	Filetype	Last modified
..			
wp-admin		Directory	04/13/2016
wp-content		Directory	09/25/2016
wp-includes		Directory	09/25/2016
index.php	418	php-file	06/21/2015
license.txt	19,935	ASCII Text	04/13/2016
readme.html	7,342	HyperText	09/25/2016
wp-activate.php	5,456	php-file	06/27/2016
wp-blog-header.php	364	php-file	04/13/2016
wp-comments-post.php	1,627	php-file	09/25/2016
wp-config-sample.php	2,853	php-file	04/13/2016
wp-config.php	1,527	php-file	06/21/2015
wp-cron.php	3,286	php-file	08/18/2015
wp-links-opml.php	2,382	php-file	06/27/2016
wp-load.php	3,353	php-file	06/27/2016
wp-login.php	33,852	php-file	09/25/2016
wp-mail.php	7,791	php-file	09/25/2016
wp-settings.php	14,224	php-file	09/25/2016
wp-signup.php	29,890	php-file	06/27/2016
wp-trackback.php	4,035	php-file	06/21/2015
xmlrpc.php	3,065	php-file	09/25/2016

Remote site: /

Filename	Filesize	Filetype	Last modified
..			
_wpeprivate		Directory	09/25/2016 14:26:00
wp-admin		Directory	09/07/2016 09:58:00
wp-content		Directory	09/25/2016 14:26:00
wp-includes		Directory	09/07/2016 09:58:00
.htaccess	233	File	09/25/2016 14:25:00
apple-touch-icon-precompos...	0	Portable N...	09/25/2016 14:26:00
apple-touch-icon.png	0	Portable N...	09/25/2016 14:26:00
favicon.ico	0	Windows I...	09/25/2016 14:26:00
index.php	418	php-file	09/25/2013
license.txt	19,935	ASCII Text	03/05/2016
readme.html	7,344	HyperText	08/16/2016 15:39:00
wp-activate.php	5,456	php-file	05/24/2016 16:02:00
wp-blog-header.php	364	php-file	12/19/2015
wp-comments-post.php	1,477	php-file	05/23/2016 11:44:00
wp-config-sample.php	2,853	php-file	12/16/2015
wp-config.php	3,043	php-file	09/25/2016 14:26:00
wp-cron.php	3,286	php-file	05/24/2015
wp-links-opml.php	2,382	php-file	05/23/2016 11:44:00
wp-load.php	3,353	php-file	04/14/2016 12:53:00
wp-login.php	34,057	php-file	06/14/2016 16:51:00
wp-mail.php	7,786	php-file	07/13/2016 07:37:00
wp-settings.php	13,920	php-file	08/13/2016 11:02:00
wp-signup.php	29,890	php-file	05/24/2016 15:44:00
wp-trackback.php	4,035	php-file	11/30/2014
xmlrpc.php	3,064	php-file	07/06/2016 07:40:00

FIGURE 2-5: FileZilla displays local files on the left and server files on the right.

- **Downloading:** Transferring files from your web server to your local computer. To download a file from your web server to your local computer, click the file you want to transfer from your web server and drag and drop it on the left side (the local-computer side).

TIP

Downloading files from your web server is a very efficient, easy, and smart way of backing up files to your local computer. It's always a good idea to keep your files safe — especially things like theme files and plugins, which Books 6 and 7 cover.

Editing files by using SFTP

At times, you need to edit certain files that live on your web server. You can use the methods described in the preceding section to download a file, open it, edit it, save it, and then upload it back to your web server. Another way is to use the edit feature built into most SFTP client software by following these steps:

1. **Connect the SFTP client to your web server.**
2. **Locate the file you want to edit.**
3. **Open the file by using the internal SFTP editor.**

   Right-click the file with your mouse, and choose View/Edit from the shortcut menu. (Remember that I'm using FileZilla for these examples; your SFTP client may use different labels, such as Open or Edit.) FileZilla, like most SFTP clients, uses a program (such as Notepad for a PC or TextEdit for Mac) designated for text editing that already exists on your computer. In some rare cases, your SFTP client software may have its own internal text editor.

4. **Edit the file to your liking.**
5. **Save the changes you made.**

   Click the Save icon or choose File➪Save.
6. **Upload the file to your web server.**

   After you save the file, FileZilla alerts you that the file has changed and asks whether you want to upload the file to the server. Click the Yes button. The newly edited file replaces the old one.

That's all there is to it. Use the SFTP edit feature to edit, save, and upload files as you need to.

WARNING

When you edit files by using the SFTP edit feature, you're editing files in a "live" environment, meaning that when you save the changes and upload the file, the changes take effect immediately and affect your live website. For this reason, I strongly recommend downloading a copy of the original file to your local computer before making changes. That way, if you happen to make a typo in the saved file and your website goes haywire, you have a copy of the original to upload to restore the file to its original state.

TECHNICAL STUFF

Programmers and developers are people who generally are more technologically advanced than your average user. These folks typically don't use SFTP for editing or transferring files. Instead, they use a version-control system called Git. Git manages the files on your web server through a versioning system that has a complex set of deployment rules for transferring updated files to and from your server. Most beginners don't use such a system for this purpose, but Git *is* a system that beginners can use. If you're interested in using Git, you can find a good resource to start with at SitePoint (`https://www.sitepoint.com/git-for-beginners`).

Changing file permissions

Every file and folder on your web server has a set of assigned attributions, called *permissions,* that tells the web server three things about the folder or file. On a very simplistic level, these permissions include

- **Read:** This setting determines whether the file/folder is readable by the web server.

- **Write:** This setting determines whether the file/folder is writable by the web server.
- **Execute:** This setting determines whether the file/folder is executable by the web server.

Each set of permissions has a numeric code assigned to it, identifying what type of permissions are assigned to that file or folder. There are a lot of permissions available, so here are the most common ones that you run into when running a WordPress website:

- **644:** Files with permissions set to 644 are readable by everyone and writable only by the file/folder owner.
- **755:** Files with permissions set to 755 are readable and executable by everyone, but they're writable only by the file/folder owner.
- **777:** Files with permissions set to 777 are readable, writable, and executable by everyone. For security reasons, you shouldn't use this set of permissions on your web server unless absolutely necessary.

Typically, folders and files within your web server are assigned permissions of 644 or 755. Usually, you see PHP files — files that end with the `.php` extension — with permissions set to 644 if the web server is configured to use PHP Safe Mode.

TIP

This section gives you a very basic look at file permissions because usually, you won't need to mess with file permissions on your web server. In case you do need to dig further, you can find a great reference on file permissions from Elated.com at `www.elated.com/articles/understanding-permissions`.

You may find yourself in a situation in which you're asked to edit and change the permissions on a particular file on your web server. With WordPress sites, this situation usually happens when you're dealing with plugins or theme files that require files or folders to be writable by the web server. This practice is referred to as *CHMOD* (an acronym for Change Mode). When someone says, "You need to CHMOD that file to 755," you'll know what that person is talking about.

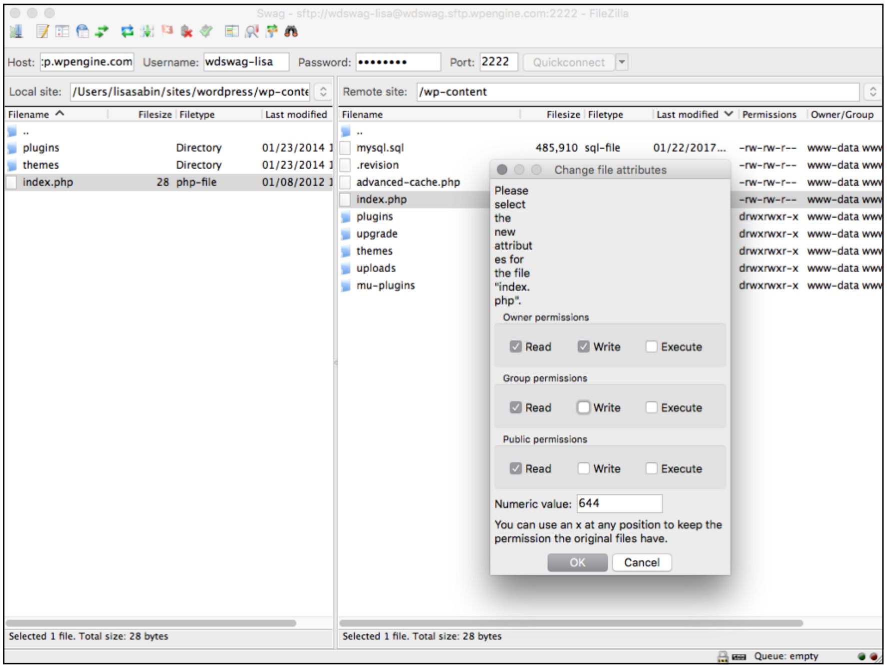
Here are some easy steps for using your SFTP program to CHMOD a file or edit its permissions on your web server:

1. **Connect the SFTP client to your web server.**
2. **Locate the file you want to CHMOD.**

3. **Open the file attributes for the file.**

   Right-click the file on your web server, and choose File Permissions from the shortcut menu. (Your SFTP client, if not FileZilla, may use different terminology.)

   The Change File Attributes window appears, as shown in Figure 2-6.



Swag - sftp://wdswag-lisa@wdswag.sftp.wpengine.com:2222 - FileZilla

Host: :p.wpengine.com Username: wdswag-lisa Password: •••••••• Port: 2222 Quickconnect

Local site: /Users/lisasabin/sites/wordpress/wp-conte

Filename	Filesize	Filetype	Last modified
..			
plugins		Directory	01/23/2014 1
themes		Directory	01/23/2014 1
index.php	28	php-file	01/08/2012 1

Selected 1 file. Total size: 28 bytes

Remote site: /wp-content

Filename	Filesize	Filetype	Last modified	Permissions	Owner/Group
..					
mysql.sql	485,910	sql-file	01/22/2017...	-rw-rw-r--	www-data www
.revision				-rw-rw-r--	www-data www
advanced-cache.php				-rw-rw-r--	www-data www
index.php				-rw-rw-r--	www-data www
plugins				drwxrwxr-x	www-data www
upgrade				drwxrwxr-x	www-data www
themes				drwxrwxr-x	www-data www
uploads				drwxrwxr-x	www-data www
mu-plugins				drwxrwxr-x	www-data www

Selected 1 file. Total size: 28 bytes

Queue: empty

Change file attributes

Please select the new attributes for the file "index.php".

Owner permissions

☑ Read ☑ Write □ Execute

Group permissions

☑ Read □ Write □ Execute

Public permissions

☑ Read □ Write □ Execute

Numeric value: 644

You can use an x at any position to keep the permission the original files have.

FIGURE 2-6: The Change File Attributes window in FileZilla.

4. **Type the correct file permissions number in the Numeric Value field.**

   This number is assigned to the permissions you want to give the file. Most often, the plugin or theme developer tells you which permissions number to assign to the file or folder — typically, 644 or 755. (The permissions in Figure 2-6 are assigned the value 644.)

5. **Click OK to save the file.**

IN THIS CHAPTER

- **Working with PHP and MySQL**
- **Creating a page with PHP**
- **Managing a database with MySQL**

Chapter 3
Getting to Know PHP and MySQL

In Book 6, you dig into the code necessary to create functions and features on your website. Many, if not all, of these functions and features use Hypertext Preprocessor (PHP) tags. When combined with the WordPress code, these tags make things happen (such as displaying post content, categories, archives, links, and more) on your website.

One of the reasons WordPress is the most popular content management system (CMS) is that you don't need to know PHP code to use it. That's to say, you can use WordPress easily without ever looking at any of the code or template files contained within it. If, however, you want to tweak the settings of your WordPress theme (flip to Book 6) or the code of a particular plugin (see Book 7), you need to understand the basics of how PHP works. But don't worry; you don't need to be a PHP programmer.

This chapter introduces you to the very basics of PHP and *MySQL,* which is the database system that stores your WordPress data. After you read this chapter, you'll understand how PHP and MySQL work together with the WordPress platform to serve up your website in visitors' browsers.

REMEMBER

This book doesn't turn you into a PHP programmer or MySQL database administrator, but it gives you a glimpse of how PHP and MySQL work together to help WordPress build your website. If you're interested in finding out how to program PHP or become a MySQL database administrator, check out *PHP & MySQL For Dummies*, 4th Edition, by Janet Valade (John Wiley & Sons, Inc.).

Understanding How PHP and MySQL Work Together

WordPress uses a PHP/MySQL platform, which provides everything you need to create your own website and publish your own content dynamically without knowing how to program those pages. In short, all your content is stored in a MySQL database in your hosting account.

TECHNICAL STUFF

PHP is a server-side scripting language for creating dynamic web pages. When a visitor opens a page built in PHP, the server processes the PHP commands and then sends the results to the visitor's browser. *MySQL* is an open-source relational database management system (RDBMS) that uses *Structured Query Language* (SQL), the most popular language for adding, accessing, and processing data in a database. If all that sounds like Greek to you, just think of MySQL as a big file cabinet where all the content on your blog is stored.

Every time a visitor goes to your blog to read your content, he makes a request that's sent to a host server. The PHP programming language receives that request, makes a call to the MySQL database, obtains the requested information from the database, and then presents the requested information to your visitor through his web browser.

Here, *content* refers to the data stored in the MySQL database — that is, your blog posts, pages, comments, links, and options that you set up on the WordPress Dashboard. But the *theme* (or design) you choose to use for your blog — whether it's the default theme, one you create, or one you've custom-designed — isn't part of the content in this case. Theme files are part of the file system and aren't stored in the database. Therefore, it's a good idea to create and keep backups of any theme files that you're currently using. See Book 6 for further information on WordPress theme management.

REMEMBER

Make sure your web host backs up your site daily so that your content (data) won't be lost in case something happens. Web hosting providers that offer daily backups as part of their services can save the day by restoring your site to its original form. Additionally, Book 2, Chapter 7 covers important information about backing up your website.

Exploring PHP Basics

WordPress requires PHP to work; therefore, your web hosting provider must have PHP enabled on your web server. If you already have WordPress up and running on your website, you know that PHP is running and working just fine. Currently, the PHP version required for WordPress is 5.6 or later.

Before you play around with template tags (covered in Book 6) in your WordPress templates or plugin functions, you need to understand what makes up a template tag and why, as well as the correct syntax, or function, for a template tag as it relates to PHP. Additionally, have a look at the WordPress files contained within the download files. Many of the files end with the `.php` file extension — an extension required for PHP files, which separates them from other file types, such as JavaScript (`.js`) and CSS (`.css`).

As I state earlier, WordPress is based in PHP (a scripting language for creating web pages) and uses PHP commands to pull information from the MySQL database. Every tag begins with the function to start PHP and ends with a function to stop it. In the middle of those two commands lives the request to the database that tells WordPress to grab the data and display it.

A typical template tag, or function, looks like this:

```
<?php get_info(); ?>
```

This example tells WordPress to do three things:

- **Start PHP:** `<?php`
- **Use PHP to get information from the MySQL database and deliver it to your blog:** `get_info();`
- **Stop PHP:** `?>`

In this case, `get_info();` represents the tag function, which grabs information from the database to deliver it to your blog. The information retrieved depends on what tag function appears between the two PHP commands.

REMEMBER

Every PHP command you start requires a stop command. For every `<?php`, you must include the closing `?>` command somewhere later in the code. PHP commands structured improperly cause ugly errors on your site, and they've been known to send programmers, developers, and hosting providers into loud screaming fits. You find a lot of starting and stopping of PHP throughout the WordPress templates and functions. The process seems as though it would be resource-intensive, if not exhaustive, but it really isn't.

WARNING

Always, always make sure that the PHP start and stop commands are separated from the function with a single space. You must have a space after `<?php` and a space before `?>`, because if you don't, the PHP function code doesn't work. Make sure that the code looks like this

```
<?php get_info(); ?>
```

and not like this:

```
<?phpget_info();?>
```

Trying Out a Little PHP

To test some PHP code, follow these steps to create a simple HTML web page with an embedded PHP function:

1. **Open a new blank file in your default text editor — Notepad (Windows) or TextEdit (Mac) — type** <html>**, and then press Enter.**

   The `<html>` tag tells the web browser that this file is an HTML document and should be read as a web page.

2. **Type** <head> **and then press Enter.**

   The `<head>` HTML tag contains elements that tell the web browser about the document; this information is read by the browser but hidden from the web-page visitor.

3. **Type** <title>This Is a Simple PHP Page</title> **and then press Enter.**

   The `<title>` HTML tag tells the browser to display the text between two tags as the title of the document in the browser title bar.

   Note: All HTML tags need to be opened and then closed, just like the PHP tags that I describe in the preceding section. In this case, the `<title>` tag opens the command and the `</title>` tag closes it, telling the web browser that you're finished dealing with the title.

4. **Type** </head> **to close the `<head>` tag from Step 2 and then press Enter.**

5. **Type** <body> **to define the body of the web page and then press Enter.**

   Anything that appears after this tag displays in the web browser's window.

6. **Type** <?php **to tell the web browser to start a PHP function and then press the spacebar.**

   See "Exploring PHP Basics" earlier in this chapter for details on starting and stopping PHP functions.

7. **Type** echo '<p>Testing my new PHP function</p>'; **and then press the spacebar.**

   This function is the one that you want PHP to execute on your web page. This particular function echoes the text *Testing my new PHP function* and displays it on your website.

8. **Type** ?> **to tell the web browser to end the PHP function and then press Enter.**

9. **Type** </body> **to close the `<body>` HTML tag from Step 5 and then press Enter.**

   This tag tells the web browser that you're done with the body of the web page.

10. **Type** </html> **to close the `<html>` tag from Step 1 and then press Enter.**

    This tag tells the web browser that you're at the end of the HTML document.

When you're done with Steps 1 through 10, double-check to make sure that the code in your text editor looks like this:

```
<html>
<head>
<title>This Is a Simple PHP Page</title>
   </head>
   <body>
   <?php echo '<p>Testing my new PHP function</p>'; ?>
   </body>
   </html>
```

After you write your code, follow these steps to save and upload your file:

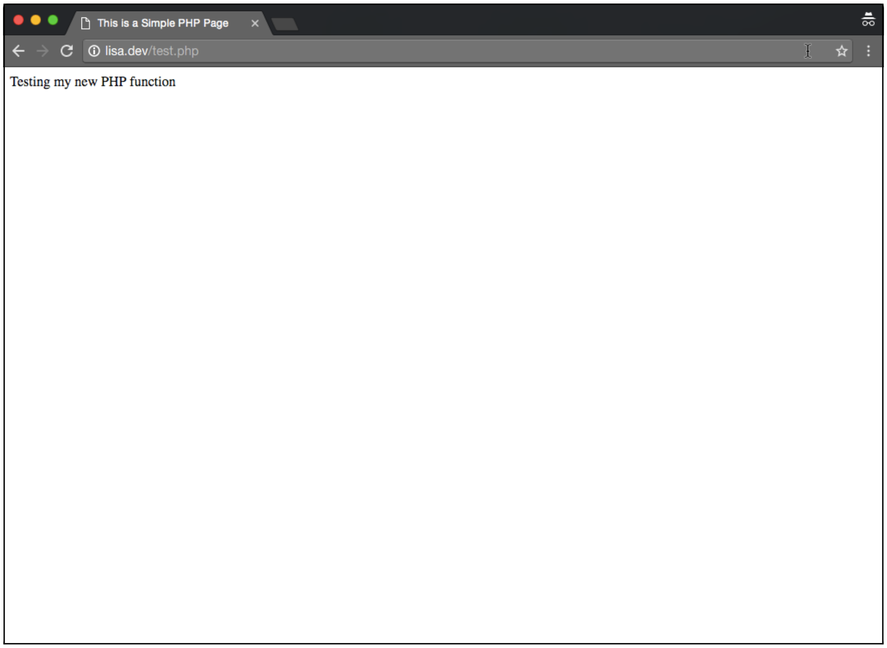
1. **Save the file to your local computer as `test.php`.**

2. **Upload the `test.php` file.**

   Via Secure File Transfer Protocol (SFTP), upload `test.php` to the root directory of your web server. If you need a review of how to use SFTP to transfer files to your web server, look through the information presented in Book 2, Chapter 2.

3. **Open a web browser, and type the address** `http://yourdomain.com/test.php` **in the web browser's address bar (where *yourdomain* is your actual domain name).**

   As shown in Figure 3-1, a single line of text displays: `Testing my new PHP function`.



Testing my new PHP function

FIGURE 3-1: A basic PHP page in a browser window.

If the `test.php` file displays correctly in your browser, congratulations! You've programmed PHP to work in a web browser!

TIP

If the `test.php` file doesn't display correctly in your browser, a PHP error message gives you an indication of the errors in your code. (Usually included with the error message is the line number where the error occurs in the file.)

Managing Your MySQL Database

Many new WordPress users are intimidated by the MySQL database, perhaps because it seems to be way above their technical skills or abilities. Truth be told, regular users of WordPress — those who use it just to publish content — don't ever have to dig into the database unless they want to. You need to explore the database only if you're dealing with theme or plugin development, or if you're contributing code to the WordPress project.

This section gives you a basic overview of the WordPress database stored in MySQL so that you have an understanding of the structure and know where items are stored.

TIP

Currently, WordPress requires MySQL version 5.6 or later to work correctly. If your web hosting provider doesn't have version 5.6 or later installed on your web server, kindly ask to upgrade. WordPress can also use MariaDB version 10.0 or later, but the typical usage is MySQL.

After WordPress is installed on your server (which I discuss in Book 2, Chapter 4), the database gets populated with 12 tables that exist to store different types of data from your WordPress blog. Figure 3-2 displays the structure of the tables, as follows:

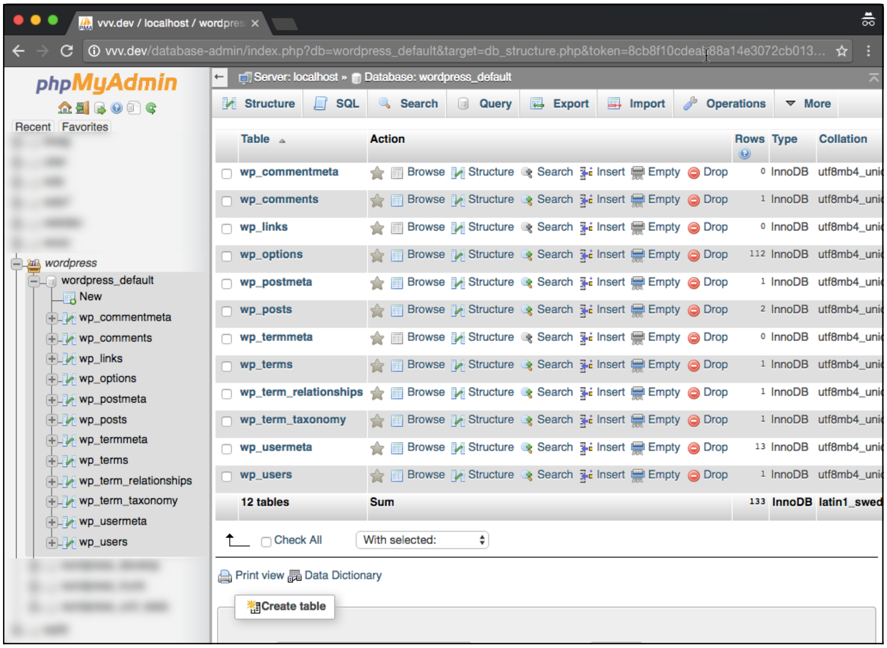


	Table	Action	Rows	Type	Collation
☐	wp_commentmeta	☆ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_uni
☐	wp_comments	☆ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_uni
☐	wp_links	☆ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_uni
☐	wp_options	☆ Browse Structure Search Insert Empty Drop	112	InnoDB	utf8mb4_uni
☐	wp_postmeta	☆ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_uni
☐	wp_posts	☆ Browse Structure Search Insert Empty Drop	2	InnoDB	utf8mb4_uni
☐	wp_termmeta	☆ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_uni
☐	wp_terms	☆ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_uni
☐	wp_term_relationships	☆ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_uni
☐	wp_term_taxonomy	☆ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_uni
☐	wp_usermeta	☆ Browse Structure Search Insert Empty Drop	13	InnoDB	utf8mb4_uni
☐	wp_users	☆ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_uni
	12 tables	Sum	133	InnoDB	latin1_swed

FIGURE 3-2: The WordPress database structure.

- **`wp_commentmeta`:** This table stores every comment published to your site and contains information, or *metadata,* that includes
  - A unique comment ID number
  - A comment meta key, meta value, and meta ID (unique numerical identifiers assigned to each comment left by you or visitors to your site)
- **`wp_comments`:** This table stores the body of the comments published to your site, including
  - A post ID that specifies which post the comment belongs to
  - The comment content
  - The comment author's name, URL, IP address, and email address
  - The comment date (day, month, year, and time)
  - The comment status (approved, unapproved, or spam)
- **`wp_links`:** This table stores the name, URL, and description of all links you create by using the WordPress Link Manager. It also stores all the advanced options for the links you created, if any.
- **`wp_options`:** This table stores all the option settings that you set for WordPress after you install it, including all theme and plugin option settings.
- **`wp_postmeta`:** This table includes all posts or pages published to your site and contains metadata that includes
  - The unique post ID number. (Each blog post has a unique ID number to set it apart from the others.)
  - The post meta key, meta value (unique numerical identifiers for each post created on your site), and any custom fields you've created for the post.
- **`wp_posts`:** This table features the body of any post or page you've published to your blog, including autosaved revisions and post option settings, such as
  - The post author, date, and time
  - The post title, content, and excerpt
  - The post status (published, draft, or private)
  - The post comment status (open or closed)
  - The post type (page, post, or custom post type)
  - The post comment count
- **`wp_termmeta`:** This table stores the metadata for terms (taxonomies and tags) for content.

- **`wp_terms`:** This table stores the categories you've created for posts and links, as well as tags that have been created for your posts.
- **`wp_term_relationships`:** This table stores the relationships among the posts, as well as the categories and tags that have been assigned to them.
- **`wp_term_taxonomy`:** WordPress has three types of taxonomies by default: category, link, and tag. This table stores the taxonomy associated for the terms stored in the `wp_terms` table.
- **`wp_usermeta`:** This table features metadata from every user with an account on your WordPress website. This metadata includes
  - A unique user ID
  - A user meta key, meta value, and meta ID, which are unique identifiers for users on your site
- **`wp_users`:** The list of users with an account on your WordPress website is maintained within this table and includes
  - The username, first name, last name, and nickname
  - The user login
  - The user password
  - The user email
  - The registration date
  - The user status and role (subscriber, contributor, author, editor, or administrator)

Most web hosting providers give you a *utility*, or an interface, to view your MySQL database; the most common one is phpMyAdmin (refer to Figure 3-2). If you're unsure how you can view your database on your hosting account, get in touch with your hosting provider to find out.

When the Multisite feature in WordPress is activated (check out Book 8 for information about the Multisite feature), WordPress adds six additional tables to the database:

- **`wp_blogs`:** This table stores information about each blog created in your network, including
  - A unique blog numerical ID
  - A unique site ID number (determines the ID of the site to which the blog belongs)

  - The blog domain
  - The blog server path
  - The date the blog was registered
  - The date the blog was updated
  - The blog status (public, private, archived, spam; see Book 8 for more information on blog status)
- **`wp_blog_versions`:** This table stores general information about each network blog ID, database version, and date of last update.
- **`wp_registration_log`:** This table stores information about registered users, including
  - Unique user numerical ID
  - User email address
  - User IP address
  - User blog ID
  - The date the user registered
- **`wp_signups`:** This table stores information about user sign-ups, including all the information from the `wp_registration_log` table, the date the user account was activated, and the unique activation key the user accessed during the sign-up process.
- **`wp_site`:** This table stores information about your main installation site, including the site ID, domain, and server path.
- **`wp_sitemeta`:** This table stores all the information about the multisite configurations set after you install the Multisite feature. (See Book 8.)

IN THIS CHAPTER

- Discovering preinstallations by your host
- Manually installing WordPress
- Running installation scripts

Chapter 4

Installing WordPress on Your Web Server

This chapter takes you through two installation methods for WordPress: an automatic, one-click installation with the Fantastico script installer, which is available from your web hosting provider, and a manual installation.

I also show you how to set up a MySQL database by using the cPanel web hosting management interface. By the time you're done reading this chapter, you'll be logged in to and looking at your brand-spanking-new WordPress Dashboard, ready to start publishing content right away. (If you already have WordPress installed, go ahead and skip to Book 2, Chapter 5, which contains great information about configuring WordPress for optimum performance and security.)

REMEMBER

Before you can install WordPress, you need to complete the following tasks:

- Purchase the domain-name registration for your account (Book 2, Chapter 1).
- Obtain a hosting service on a web server for your blog (Book 2, Chapter 1).
- Establish your hosting account username, password, and Secure File Transfer Protocol (SFTP) address (Book 2, Chapters 1 and 2).
- Acquire an SFTP client for transferring files to your hosting account (Book 2, Chapter 2).

If you omitted any of the preceding items, flip to the chapter listed to complete the step.

Exploring Preinstalled WordPress

The WordPress software has become such a popular publishing tool that almost all hosting providers available today provide WordPress for you in a couple of ways:

- Already installed on your hosting account when you sign up
- A user dashboard with a utility for installing WordPress from within your account management

TIP

If your hosting provider doesn't give you access to an installation utility, skip to "Installing WordPress Manually" later in this chapter for the steps to install WordPress manually via SFTP.

One of the most popular web hosts for managed WordPress hosting is a service called WP Engine, which you can find at `https://wpengine.com`. The service provides a handy, easy-to-use installation utility that's built right into your account dashboard at WP Engine to allow you to get up and running with WordPress right away.

You may not be using WP Engine, so your host may have a slightly different utility, but the basic concept is the same. Be sure to apply the same concepts to whatever kind of utility your hosting provider gives you.

To install the account dashboard of WP Engine, follow these steps:

1. **Log in to the WP Engine user dashboard.**

   a. *Browse to* `https://`my.wpengine.com *to bring up the login screen.*

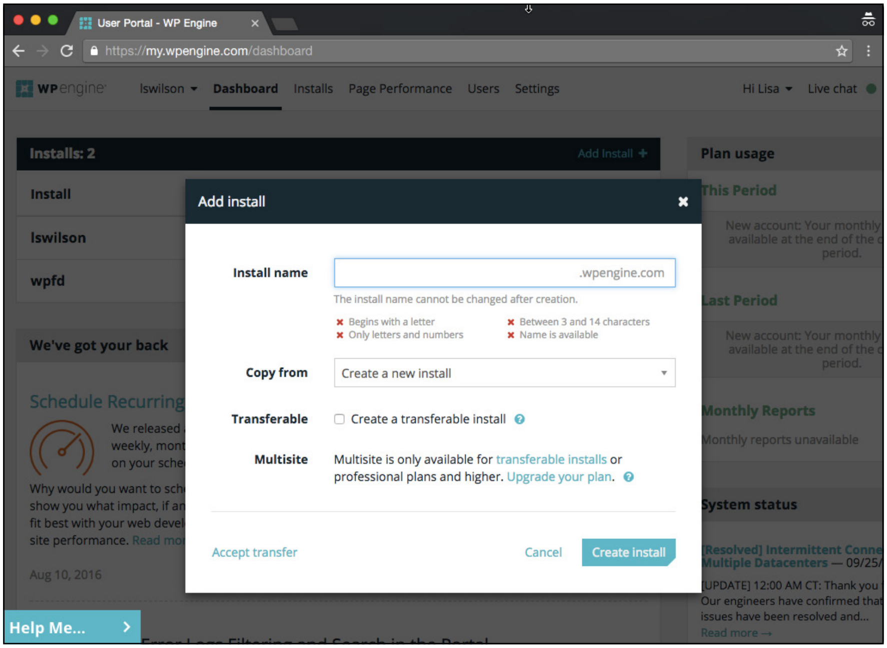
   b. *Enter the email address you used to sign up, enter your password, and then click Log In. The page refreshes and displays the dashboard for your account.*

2. **Click the Add Install link.**

   The Add Install page displays in your browser window, as shown in Figure 4-1.

3. **Type the name of your new WordPress installation in the Install Name field.**

   This name is the temporary domain name of your new website. As shown in Figure 4-2, I'm using *wpfd*, which stands for *WordPress For Dummies*. This step creates the domain name `wpfd.wpengine.com`.



Add install

Install name .wpengine.com

The install name cannot be changed after creation.

✗ Begins with a letter ✗ Between 3 and 14 characters
✗ Only letters and numbers ✗ Name is available

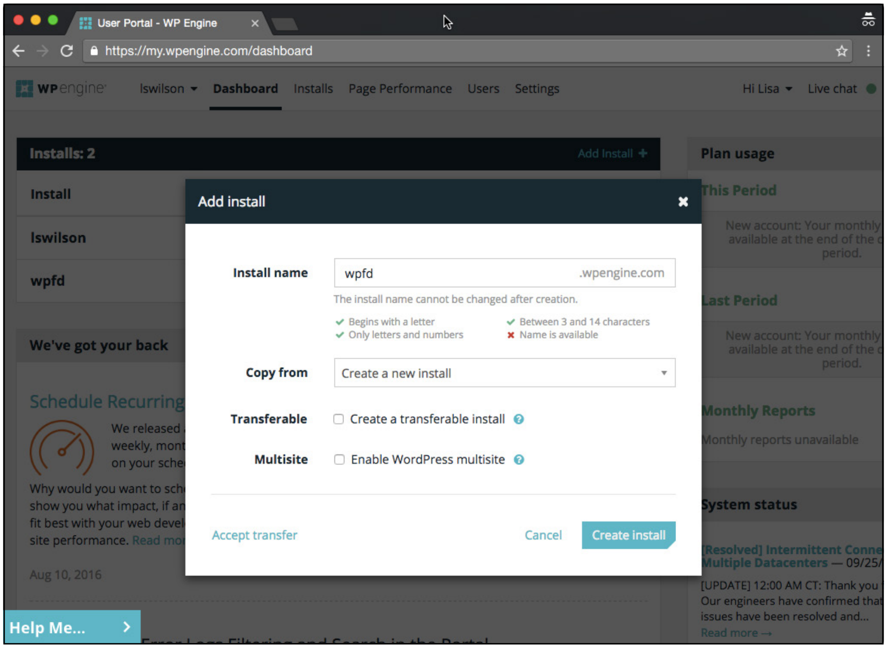
Copy from: Create a new install

Transferable: □ Create a transferable install

Multisite: Multisite is only available for transferable installs or professional plans and higher. Upgrade your plan.

Accept transfer | Cancel | Create install

FIGURE 4-1: The Add Install module within a WP Engine account dashboard.



Add install

Install name: wpfd .wpengine.com

The install name cannot be changed after creation.

✓ Begins with a letter ✓ Between 3 and 14 characters
✓ Only letters and numbers ✗ Name is available

Copy from: Create a new install

Transferable: □ Create a transferable install

Multisite: □ Enable WordPress multisite

Accept transfer | Cancel | Create install

FIGURE 4-2: The Add Install page at WP Engine.

4. **Choose Create a New Install from the Copy From drop-down list.**

   This step creates a new installation of WordPress in your account.

5. **Leave the Create a Transferable Install check box unselected.**

   There may come a day where you want to create a WordPress installation that can be transferred between two WP Engine accounts, but today is not that day. You can read about the process at `https://wpengine.com/support/billing-transfer-information-for-developers`.

6. **Leave the Enable WordPress Multisite check box unselected.**

   For the purposes of basic WordPress installation and setup, don't worry about Multisite for now. I cover WordPress Multisite features in depth in Book 8.

7. **Click the Create Install button.**

   This step creates the WordPress installation in your account and takes you to the Overview page, where a message states that your WordPress installation is being created. When the installation is ready to use, you receive an email from WP Engine.

TIP

In my experience, WP Engine always has the most up-to-date version of WordPress available for installation. Be sure to check that your hosting provider is supplying the latest version of WordPress with its installation utility.

Your WordPress installation via your provider's utility is complete, and you're ready to start using WordPress on your web server. If you installed WordPress by using your provider's utility method and don't want to review the steps to install WordPress manually, flip to Book 2, Chapter 5 for the steps to optimize your WordPress installation for performance and security.

Installing WordPress Manually

If you install WordPress manually, here's where the rubber meets the road — that is, where you're putting WordPress's famous five-minute installation to the test. Set your watch, and see whether you can meet the five-minute goal.

REMEMBER

The famous five-minute installation includes only the time it takes to install the software — not the time it takes to register a domain name; obtain and set up your web hosting service; or download, install, configure, and figure out how to use the SFTP software.

Setting up the MySQL database

The WordPress software is a personal publishing system that uses a PHP/MySQL platform, which provides everything you need to create your own blog and publish your own content dynamically without knowing how to program those pages. In short, all your content (options, posts, comments, and other pertinent data) is stored in a MySQL database in your hosting account.

Every time visitors go to your blog to read your content, they make a request that's sent to your server. The PHP programming language receives that request, obtains the requested information from the MySQL database, and then presents the requested information to your visitors through their web browsers.

Every web host is different in how it gives you access to set up and manage your MySQL database(s) for your account. In this section, I use cPanel, the popular hosting interface. If your host provides a different interface, the same basic steps apply, but the setup in the interface that your web host provides may be different.

To set up the MySQL database for your WordPress site with cPanel, follow these steps:

1. **Log in to the cPanel for your hosting account:**

   a. *Browse to* `http://`yourdomain`.com/cpanel` *(where* yourdomain.com *is your actual domain name) to bring up the login screen for your cPanel.*

   b. *Enter your specific hosting account username and password in the login fields, and then click OK.*

   The page refreshes and displays the cPanel for your account.

2. **Locate the MySQL Databases icon.**

   Click the MySQL Databases icon to load the MySQL Databases page in your cPanel.

3. **Enter a name for your database in the Name text box.**

   Be sure to make note of the database name, because you need it to install WordPress.

4. **Click the Create Database button.**

   A message appears, confirming that the database was created.

5. **Click the Back button on your browser toolbar.**

   The MySQL Databases page displays in your browser window.

6. **Locate MySQL Users on the MySQL Databases page.**

   Scroll approximately to the middle of the page to locate this section.

7. **Choose a username and password for your database, enter them in the Username and Password text boxes, and then click the Create User button.**

   A confirmation message appears, stating that the username was created with the password you specified.

   TIP

   For security reasons, make sure that your password isn't something that sneaky hackers can easily guess. Give your database a name that you'll remember later. This practice is especially helpful if you run more than one MySQL database in your account. If you name a database *WordPress* or *wpblog,* for example, you can be reasonably certain a year from now, when you want to access your database to make some configuration changes, that you know exactly which credentials to use.

   WARNING

   Make sure that you note the database name, username, and password that you set up during this process. You need them in the section "Running the installation script" later in this chapter before officially installing WordPress on your web server. Jot these details down on a piece of paper, or copy and paste them into a text editor window; either way, make sure that you have them handy.

8. **Click the Back button on your browser toolbar.**

   The MySQL Databases page displays in your browser window.

9. **In the Add Users to Database section of the MySQL Databases page, choose the user you just set up from the User drop-down list and then choose the new database from the Database drop-down list.**

   The MySQL Account Maintenance, Manage User Privileges page appears in cPanel.

10. **Assign user privileges by selecting the All Privileges check box.**

    Because you're the *administrator* (or owner) of this database, you need to make sure that you assign all privileges to the new user you just created.

11. **Click the Make Changes button.**

    The resulting page displays a message confirming that you've added your selected user to the selected database.

12. **Click the Back button on your browser toolbar.**

    You return to the MySQL Databases page.

The MySQL database for your WordPress website is complete, and you're ready to proceed to the final step of installing the software on your web server.

Downloading the WordPress software

Without further ado, get the latest version of the WordPress software at `https://wordpress.org/download`.

TIP

WordPress gives you two compression formats for the software: `.zip` and `.tar.gz`. Use the `.zip` file because it's the most common format for compressed files and because both Windows and Mac operating systems can use the format. Generally, the `.tar.gz` file format is used for Unix operating systems.

Download the WordPress software to your computer and then *decompress* (unpack or unzip) it to a folder on your computer's hard drive. These steps begin the installation process for WordPress. Having the program on your own computer isn't enough, however. You also need to *upload* (or transfer) it to your web server account (the one discussed in Book 2, Chapter 1).

Before you install WordPress on your web server, you need to make sure that you have the MySQL database set up and ready to accept the WordPress installation. Be sure that you've followed the steps to set up your MySQL database before you proceed.

Uploading the WordPress files via FTP

To upload the WordPress files to your host, return to the `/wordpress` folder (shown in Figure 4-3) on your computer, where you unpacked the WordPress software that you downloaded earlier. If you need a review on using SFTP (Secure File Transfer Protocol) to transfer files from your computer to your web server, see Book 2, Chapter 2.

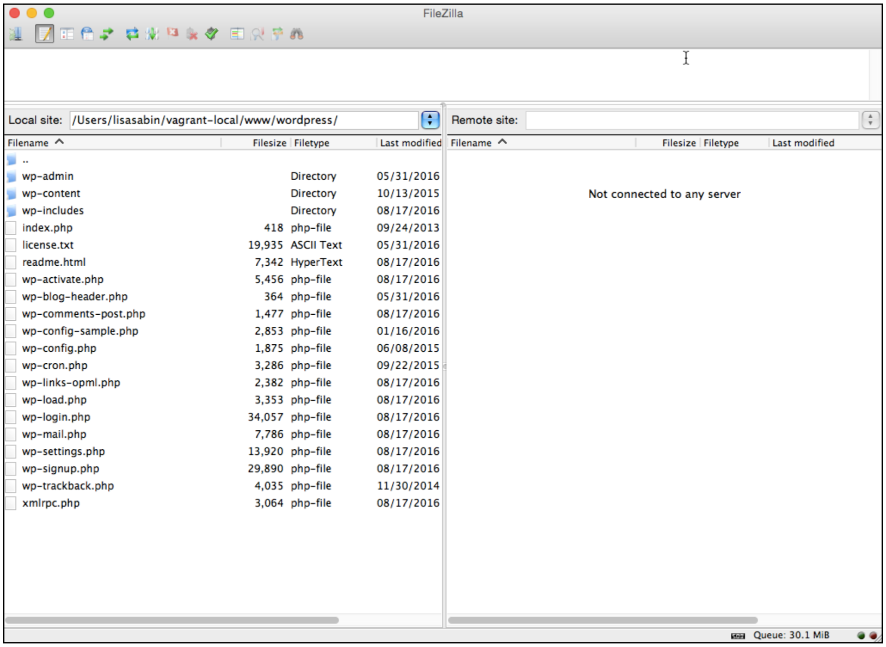
Using your SFTP client, connect to your web server and upload all these files to the root directory of your hosting account.

TIP

If you don't know what your root directory is, contact your hosting provider and ask, "What is my root directory for my account?" Every hosting provider's setup is different. The root directory is most likely the `public_html` folder, but you may find an `httpdocs` folder. The answer depends on what type of setup your hosting provider has. When in doubt, ask!

Here are a few things to keep in mind when you upload your files:

- **Upload the *contents* of the `/wordpress` folder to your web server — not the folder itself.** Most FTP client software lets you select all the files and drag and drop them to your web server. Other programs have you highlight the files and click a Transfer button.



FileZilla

Local site: /Users/lisasabin/vagrant-local/www/wordpress/

Filename	Filesize	Filetype	Last modified
..			
wp-admin		Directory	05/31/2016
wp-content		Directory	10/13/2015
wp-includes		Directory	08/17/2016
index.php	418	php-file	09/24/2013
license.txt	19,935	ASCII Text	05/31/2016
readme.html	7,342	HyperText	08/17/2016
wp-activate.php	5,456	php-file	08/17/2016
wp-blog-header.php	364	php-file	05/31/2016
wp-comments-post.php	1,477	php-file	08/17/2016
wp-config-sample.php	2,853	php-file	01/16/2016
wp-config.php	1,875	php-file	06/08/2015
wp-cron.php	3,286	php-file	09/22/2015
wp-links-opml.php	2,382	php-file	08/17/2016
wp-load.php	3,353	php-file	08/17/2016
wp-login.php	34,057	php-file	08/17/2016
wp-mail.php	7,786	php-file	08/17/2016
wp-settings.php	13,920	php-file	08/17/2016
wp-signup.php	29,890	php-file	08/17/2016
wp-trackback.php	4,035	php-file	11/30/2014
xmlrpc.php	3,064	php-file	08/17/2016

Remote site:

Filename	Filesize	Filetype	Last modified

Not connected to any server

Queue: 30.1 MiB

FIGURE 4-3: WordPress installation files to be uploaded to your web server.

- **Choose the correct transfer mode.** File transfers via SFTP have two forms: ASCII and binary. Most SFTP clients are configured to autodetect the transfer mode. Understanding the difference as it pertains to this WordPress installation is important so that you can troubleshoot any problems you have later:

  - *Binary transfer mode* is how images (such as JPG, GIF, BMP, and PNG files) are transferred via FTP.
  - *ASCII transfer mode* is for everything else (text files, PHP files, JavaScript, and so on).

  For the most part, it's a safe bet to make sure that the transfer mode of your SFTP client is set to autodetect. But if you experience issues with how those files load on your site, retransfer the files by using the appropriate transfer mode.

- **You can choose a different folder from the root.** You aren't required to transfer the files to the root directory of your web server. You can choose to run WordPress on a subdomain or in a different folder on your account. If you want your blog address to be `http://yourdomain.com/blog`, you transfer the WordPress files into a `/blog` folder (where *yourdomain* is your domain name).

- **Choose the right file permissions.** *File permissions* tell the web server how these files can be handled on your server — whether they're files that can be written to. Generally, PHP files need to have a permission (CHMOD is explained in Book 2, Chapter 2) of 666, whereas file folders need a permission of 755. Almost all SFTP clients let you check and change the permissions on the files, if you need to. Typically, you can find the option to change file permissions within the menu options of your FTP client.

TECHNICAL STUFF

Some hosting providers run their PHP software in a more secure format: *safe mode.* If this is the case with your host, you need to set the PHP files to 644. If you're unsure, ask your hosting provider what permissions you need to set for PHP files.

Running the installation script

The final step in the installation procedure for WordPress is connecting the WordPress software you uploaded to the MySQL database. Follow these steps:

1. **Type the URL of your website in the address bar of your web browser.**

   If you chose to install WordPress in a different folder from the root directory of your account, make sure you indicate that in the URL for the install script. If you transferred the WordPress software files to the `/blog` folder, for example, point your browser to the following URL to run the installation: `http://yourdomain.com/blog/wp-admin/install.php`. If WordPress is in the root directory, use the following URL to run the installation: `http://yourdomain.com/wp-admin/install.php` (where *yourdomain* is your domain name).

   Assuming that you did everything correctly, you should see the first step in the installation process that you see in Figure 4-4. (see Table 4-1 for help with common installation problems.)

2. **Select your preferred language from the list provided on the setup page, shown in Figure 4-4.**

   At this writing, WordPress is available in 87 languages. For these steps, I'm using English (United States).

3. **Click the Continue button.**

   You see a new page with a welcome message from WordPress and instructions that you need to gather the MySQL information you saved earlier in this chapter.

4. **Click the Let's Go button.**

   A new page loads and displays the fields you need to fill out in the next step, shown in Figure 4-5.

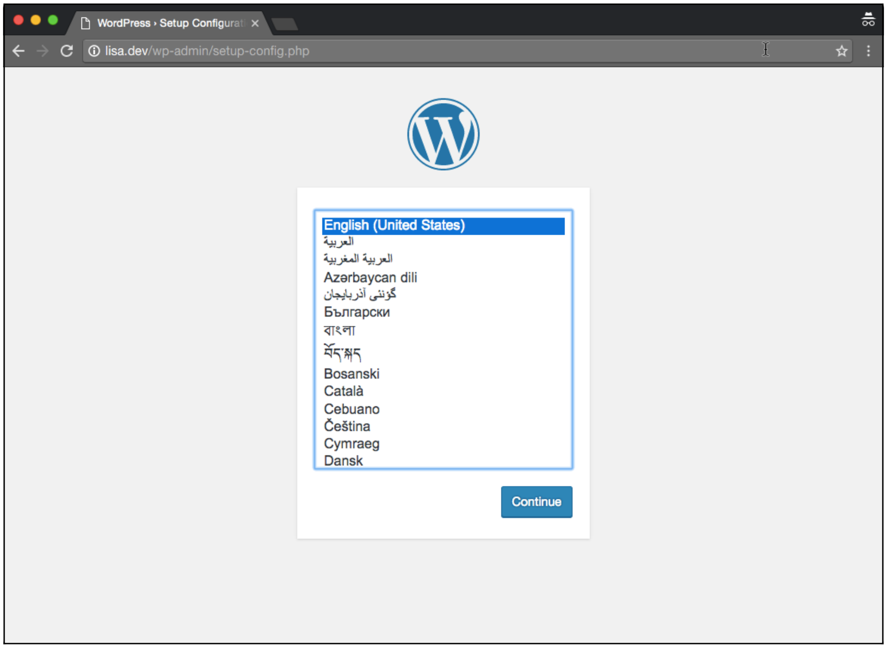
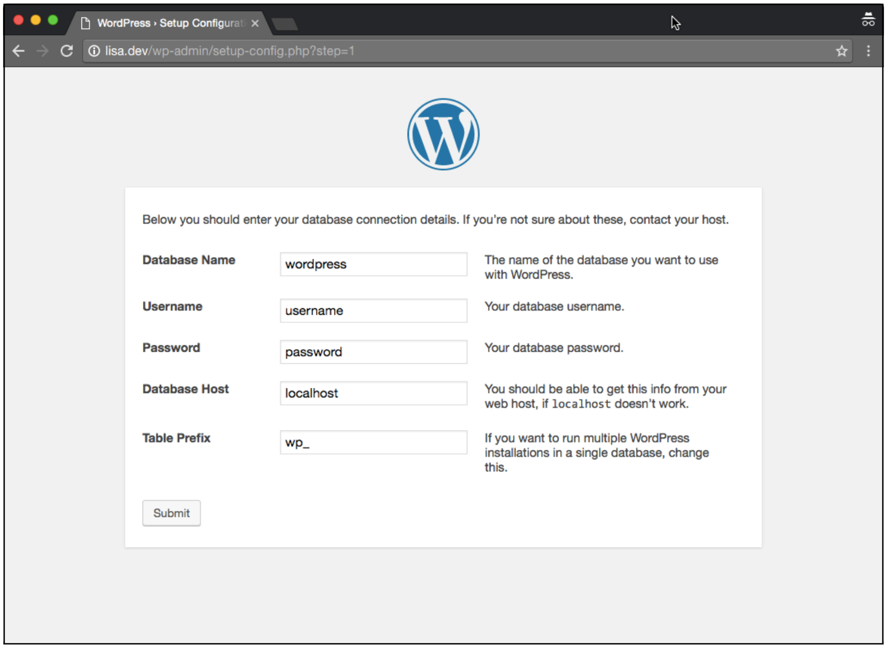


FIGURE 4-4: Choose the language for your installation.


WordPress › Setup Configurat
lisa.dev/wp-admin/setup-config.php?step=1

Below you should enter your database connection details. If you're not sure about these, contact your host.

Database Name	wordpress	The name of the database you want to use with WordPress.
Username	username	Your database username.
Password	password	Your database password.
Database Host	localhost	You should be able to get this info from your web host, if `localhost` doesn't work.
Table Prefix	wp_	If you want to run multiple WordPress installations in a single database, change this.

FIGURE 4-5: Entering the database name, username, and password.

5. **Dig out the database name, username, and password that you saved in the earlier section "Setting up the MySQL database," and use that information to fill in the following fields, as shown in Figure 4-5:**

   - *Database Name:* Type the database name you used when you created the MySQL database before this installation. Because hosts differ in configurations, you need to enter the database name by itself or a combination of your username and the database name, separated by an underscore (_).

     If you named your database *wordpress,* for example, you enter that in this text box. If your host requires you to append the database name with your hosting account username, you enter ***username*****_wordpress**, substituting your hosting username for *username.* My username is *lisasabin,* so I enter **lisasabin_wordpress**.

   - *Username:* Type the username you used when you created the MySQL database before this installation. Depending on what your host requires, you may need to enter a combination of your hosting account username and the database username separated by an underscore (_).

   - *Password:* Type the password you used when you set up the MySQL database. You don't need to append the password to your hosting account username here.

   - *Database Host:* Ninety-nine percent of the time, you leave this field set to `localhost`. Some hosts, depending on their configurations, have different hosts set for the MySQL database server. If `localhost` doesn't work, you need to contact your hosting provider to find out the MySQL database host.

   - *Table Prefix:* Leave this field set to `wp_`.

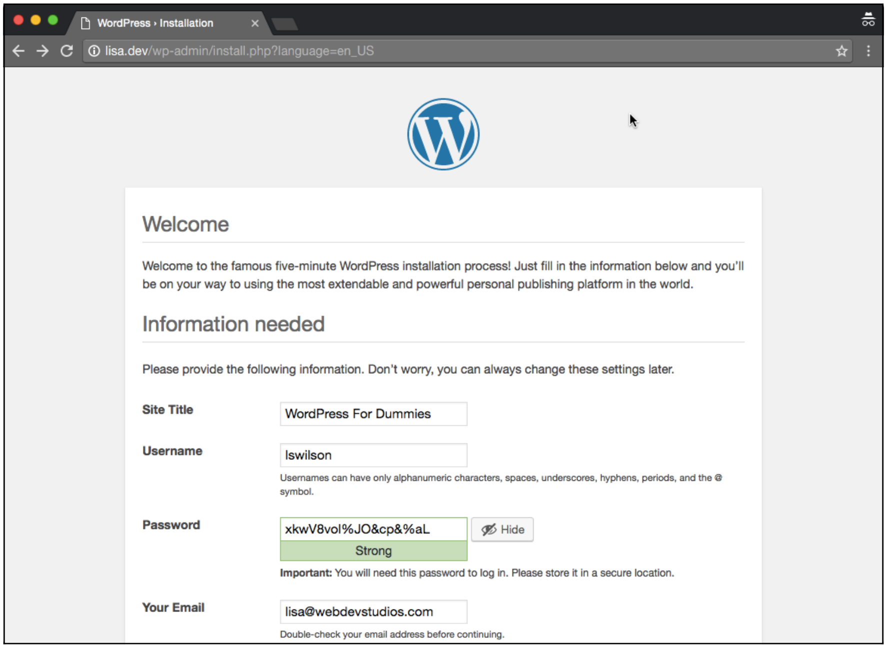
     You can change the table prefix to create an environment that's secure against outside access. See Book 2, Chapter 5 for more information.

6. **After you fill in the MySQL database information, click the Submit button.**

   You see a message that says, `All right, sparky! You've made it through this part of the installation. WordPress can now communicate with your database. If you're ready, time to run the install!`

7. **Click the Run the Install button.**

   Another page appears, welcoming you to the famous five-minute WordPress installation process, as shown in Figure 4-6.



Welcome

Welcome to the famous five-minute WordPress installation process! Just fill in the information below and you'll be on your way to using the most extendable and powerful personal publishing platform in the world.

Information needed

Please provide the following information. Don't worry, you can always change these settings later.

Site Title: WordPress For Dummies

Username: lswilson

Usernames can have only alphanumeric characters, spaces, underscores, hyphens, periods, and the @ symbol.

Password: xkwV8vol%JO&cp&%aL Hide

Strong

Important: You will need this password to log in. Please store it in a secure location.

Your Email: lisa@webdevstudios.com

Double-check your email address before continuing.

FIGURE 4-6: Finishing the WordPress installation.

8. **Enter the following information:**

- *Site Title:* Enter the title you want to give your site. The title you enter isn't written in stone; you can change it later, if you like. The site title also appears on your site.
- *Username:* Enter the name you use to log in to WordPress. By default, the username is *admin,* and you can leave it that way. For security reasons, however, I recommend that you change your username to something unique. This username is different from the one you set for the MySQL database in previous steps. You use this username when you log in to WordPress to access the Dashboard (which is covered in Book 3), so be sure to make it something you'll remember.
- *Password:* Type your desired password in the text box. If you don't enter a password, one is generated automatically for you. For security reasons, it's a good thing to set a different password here from the one you set for your MySQL database in the previous steps; just don't get the passwords confused.

TIP

For security reasons (and so other people can't make a lucky guess), passwords should be at least seven characters long and use as many different characters in as many combinations as possible. Use a mixture of uppercase and lowercase letters, numbers, and symbols (such as ! " ? $ % ^ &).

- *Your Email:* Enter the email address you want to use to be notified of administrative information about your blog. You can change this address later, too.

- *Allow Search Engines to Index This Site:* By default, this check box (not shown in Figure 4-6) is selected, which lets the search engines index the content of your blog and include your blog in search results. To keep your blog out of the search engines, deselect this check box. (See Book 5 for information on search engine optimization.)

9. **Click the Install WordPress button.**

   The WordPress installation machine works its magic and creates all the tables within the database that contain the default data for your blog. WordPress displays the login information you need to access the WordPress Dashboard. Make note of this username and password before you leave this page. Scribble them on a piece of paper or copy them into a text editor, such as Notepad.

   REMEMBER

   After you click the Install WordPress button, you're sent an email with the login information and login URL. This information is handy if you're called away during this part of the installation process. So go ahead and let the dog out, answer the phone, brew a cup of coffee, or take a 15-minute power nap. If you somehow get distracted away from this page, the email sent to you contains the information you need to log in to your WordPress blog.

10. **Click the Log In button to log in to WordPress.**

    TIP

    If you happen to lose this page before clicking the Log In button, you can always find your way to the login page by entering your domain followed by the call to the login file (such as `http://yourdomain.com/wp-login.php`, where *yourdomain* is your domain name).

You know that you're finished with the installation process when you see the login page, shown in Figure 4-7. Check out Table 4-1 if you experience any problems during this installation process; it covers some of the common problems users run into.

So do tell — how much time does your watch show for the installation? Was it five minutes? Stop by my blog sometime at `http://lisasabin-wilson.com` and let me know whether WordPress stood up to its famous five-minute installation reputation.

The good news is — you're done! Were you expecting a marching band? WordPress isn't that fancy . . . yet. Give it time, though. If anyone can produce it, the folks at WordPress can.

Let me be the first to congratulate you on your newly installed WordPress blog! When you're ready, log in and familiarize yourself with the Dashboard, which I describe in Book 3.

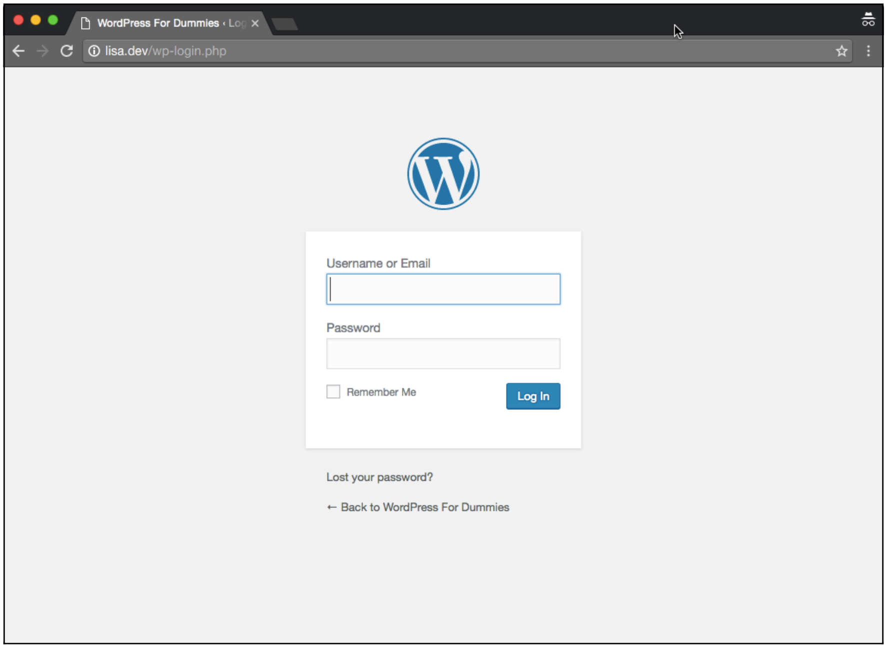


FIGURE 4-7: You know you've run a successful WordPress installation when you see the login page.

TABLE 4-1 Common WordPress Installation Problems

Error Message	Common Cause	Solution
Error Connecting to the Database	The database name, username, password, or host was entered incorrectly.	Revisit your MySQL database to obtain the database name, username, and password and then reenter that information.
Headers Already Sent	A syntax error occurred in the wp-config.php file.	Open the wp-config.php file in a text editor. The first line needs to contain only this line: <?php. The last line needs to contain only this line: ?>. Make sure that those lines contain nothing else — not even white space. Save the file changes.
500: Internal Server Error	Permissions on PHP files are set incorrectly.	Try setting the permissions (CHMOD) on the PHP files to 666. If that change doesn't work, set them to 644. Each web server has different settings for how it lets PHP execute on its servers.
404: Page Not Found	The URL for the login page is incorrect.	Double-check that the URL you're using to get to the login page is the same as the location of your WordPress installation (such as http://yourdomain.com/wp-login.php).
403: Forbidden Access	An index.html or index.htm file exists in the WordPress installation directory.	WordPress is a PHP application, so the default home page is index.php. Look in the WordPress installation folder on your web server. If an index.html or index.htm file is there, delete it.

IN THIS CHAPTER

- Introducing web security
- Understanding today's web threats
- Reducing the risk of attack
- Using sources you can trust
- Cleaning up to avoid a soup-kitchen server
- Hardening WordPress

Chapter 5

Configuring WordPress for Optimum Security

In this chapter, you deal with web security and how it pertains to WordPress. There are a lot of scary threats on the Internet, but with this chapter — and WordPress, of course — you'll have no problem keeping your website safe and secure.

TIP

Always have a reliable backup system in place so if something goes wrong with your website, you can reset it to the last version that you know worked. Book 2, Chapter 7 shows you how to back up your website.

Understanding the Basics of Web Security

Information security is the act of protecting information and information systems from unwanted or unauthorized use, access, modification, and disruption. Information security is built on principles of protecting confidentiality, integrity, and availability of information. The ultimate goal is managing your risk.

REMEMBER

No silver bullet can ensure that you're never compromised. Consider your desktop: The idea of running an operating system (whether it be Windows or Mac OS X) without antivirus software is highly impractical. The same principle applies to your website. You can never reduce the percentage of risk to zero, but you can implement controls to minimize impact and to take a proactive approach to threat preparedness.

You need to be familiar with six distinct types of risk (or threats):

- **Defacements:** The motivation behind most defacements is to change the appearance of a website. Defacements are often very basic and make some kind of social stance, such as supporting a cause or bringing attention to your poor security posture. If you visit your website, and it doesn't look anything like you expect it to, contact your host to find out whether it has been defaced, and if so, ask for assistance in restoring it.
- **Search engine optimization (SEO) spam:** This kind of attack sets out to ruin your search engine results; search engines can warn viewers away from your website. The most popular one is the Pharma hack, which injects code into your website and search engine links to redirect your traffic to pharmaceutical companies and their products. If you find that your website listing disappears from major search engines, such as Google, you should be concerned that your website has been a victim of SEO spam and contact your hosting provider for assistance.
- **Malicious redirects:** Malicious-redirect attacks direct your traffic somewhere else, most likely to another website. If your domain is `http://domain.com`, for example, a malicious redirect might redirect it to `http://adifferentdomain.com`. Malicious redirects are often integrated with other attacks (SEO spam being one). If you visit your website and discover that your domain redirects to a different domain that you don't recognize, your website has been a victim of a malicious-redirect attack, and you should contact your hosting provider for assistance.
- **iFrame injections:** This kind of attack embeds a hidden iFrame in your website that loads another website onto your visitor's browser (like a pop-up ad). These embedded websites or ads can lead to malicious websites that carry a multitude of infections.
- **Phishing scams:** Phishing scams used to belong only to the world of email: You get an email from your bank asking you to confirm your login information, but if you follow the instructions, your information actually goes to the attacker's servers rather than the legitimate site.

  WordPress websites are now used for the distribution of these attacks. Attackers develop malicious files and code that look like plugins and themes and then exploit credentials on a server or WordPress site, or the attackers use a known vulnerability to infect the plugins and themes. Then they use the bait-and-hook approach through ads or emails to redirect traffic to these fake pages stored on legitimate websites. Keep an eye out for abnormal behavior on your website, such as the display of ads that you didn't insert yourself or the redirect to domains you're not familiar with. If at any time you suspect that your website and underlying files have been tampered with, contact your web hosting provider for assistance.

- **Backdoor shells:** With a backdoor shell, an attacker uploads a piece of PHP code to your website, which allows him to take control of it, download your files, and upload his own. This kind of attack is more difficult to discover because it doesn't always change the appearance of your site or your experience with it. You typically discover this kind of attack by noticing new files in your file system or notice a marked increase in your bandwidth use.

The rest of this chapter shows you how you can prevent any of these nasty attacks against your WordPress website so that you can keep yourself and your visitors safe.

REMEMBER

Part of being a website owner is keeping your website and subscribers safe from hackers.

Preventing Attacks

You can't ever be 100 percent secure. But with a WordPress website, you're in good hands. The WordPress developers understand the importance of security, and they built a highly effective system to address any vulnerabilities you'll run across.

Updating WordPress

The first way to prevent hackers is to keep your WordPress website up to date. The quick-and-easy way to do so is through the automatic update feature. Book 2, Chapter 6 takes you through the process of updating WordPress step by step.

REMEMBER

The beauty of applying updates is that they often introduce new streamlined features, improve overall usability, and work to patch and close identified or known vulnerabilities.

As technology and concepts evolve, so do attackers and their methods for finding new vulnerabilities. The farther behind you get, the harder it is to update later and the more your risk increases, which in turn affects how vulnerable you are to attacks.

Installing patches

All WordPress updates are not created equally, but you should pay special attention to a few updates of the WordPress core software.

Updates include *major releases,* which contain feature additions, interface (UI) changes, bug fixes, and security updates. You can always tell what major release you're on by the first two numbers in the version number (as in 3.4). See Book 1, Chapter 3 for more information about the difference between major and minor releases.

Then you have *point releases,* which are minor releases that can be identified by the third number in the version number (as in 4.7.1). These releases contain bug fixes and security patches but don't introduce new features.

TIP

When you see a point release, apply it. Point releases rarely cause issues with your site, and they help close off vulnerabilities in a lot of cases.

Using a firewall

A firewall builds a wall between your website and the much larger Internet; a good firewall thwarts a lot of attacks.

Your web server should also have a good firewall protecting it. Every day, countless visits, good and bad, are made to every website. Some visits are by real visitors, but many are by automated bots. A web application firewall (WAF) helps protect your WordPress installation from those bad visitors.

REMEMBER

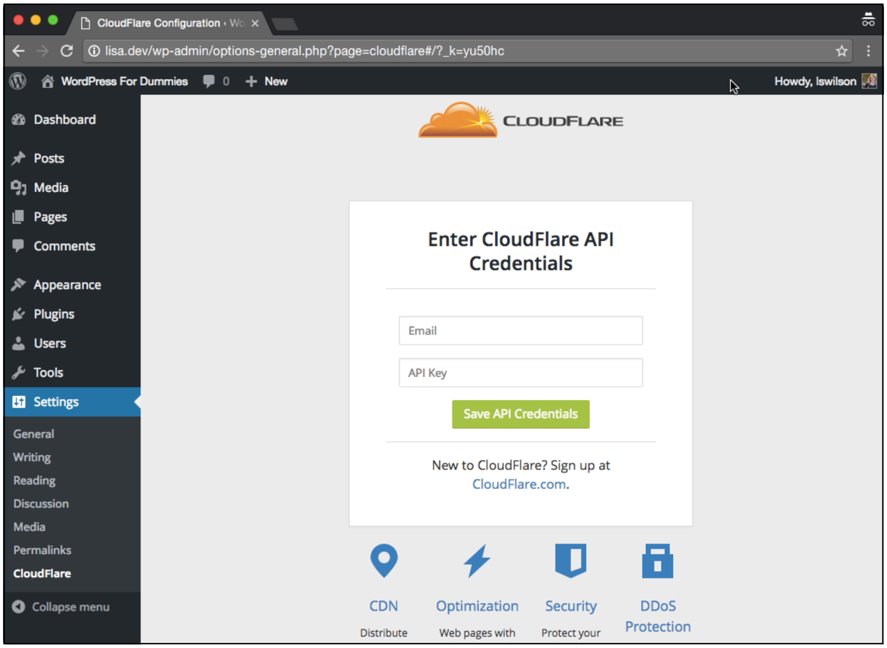
WAFs don't offer 100 percent protection, but they're good deterrents for everyday attacks.

TECHNICAL STUFF

If you plan to manage and administer your own server, install and configure a tool such as ModSecurity (`www.modsecurity.org`), an open-source, WAF-like solution that lives at the web server level as an Apache module.

If you're using a managed hosting solution, you're probably in luck, because most of these solutions offer built-in WAF-like features.

As a user, you can also install a WordPress plugin called Cloudflare, which you can find in the official WordPress Plugin Directory at `https://wordpress.org/plugins/cloudflare`. Cloudflare (see Figure 5-1) provides the best available WAF-like features for your WordPress website on a managed hosting solution. If you'd like to use the Cloudflare plugin on your WordPress website, you need to have a Cloudflare account at `https://www.cloudflare.com`. You can open a free account or upgrade to a paid account that includes more features. After you've installed the plugin on your website, follow the instructions on the Cloudflare configuration page to connect your WordPress blog to your Cloudflare account.



Enter CloudFlare API Credentials

New to CloudFlare? Sign up at CloudFlare.com.

FIGURE 5-1: The Cloudflare plugin for WordPress.

Using Trusted Sources

One of the simplest things you can do to keep your website secure is vet all the people who work on your website: website administrators, website designers, developers, and web hosts. Also be sure to use trusted plugins, themes, and applications. If you're running a self-hosted WordPress website, this could be quite a few people.

If you're using themes or plugins, use the WordPress.org Theme and Plugin directories (`https://wordpress.org/themes` and `https://wordpress.org/plugins`, respectively). Each plugin and theme you find in those directories has gone through a documented review process, which reduces the risk of your downloading dangerous code.

Engage the WordPress user community. The WordPress forums (`https://wordpress.org/support`) are great places to start. Ask for community references, and identify the support mechanisms in place to support the theme or plugin over the long term.

Managing Users

The concept of *least privilege* has been in practice for ages: Give someone the required privileges for as long as he needs it to perform his job or a task. When the task is complete, reduce the privileges.

REMEMBER

Apply these safeguards not just to your WordPress Dashboard, but also to your website host's control panels and server transfer protocols. (See Book 2, Chapter 2 for information on Secure File Transfer Protocol.)

Generating passwords

Password management is perhaps the simplest of tasks, yet it's the Achilles' heel of all applications, including desktop and web-based apps. You can keep your files and data on your web server safe and secure through these simple password-management techniques:

- **Length:** Create passwords that are more than 15 characters long to make it more difficult for harmful users to guess your password.
- **Uniqueness:** Don't use the same passwords across all services. If someone does discover the password for one of your applications or services, she won't be able to use it to log in to another application or service that you manage.
- **Complexity:** A strong password contains a minimum of 8 characters and is made up of upper- and lowercase letters, numbers, and symbols, making it hard to guess.

TIP

Use password managers and generators. Two of the most popular products right now are LastPass (`https://www.lastpass.com`) and 1Password (`https://1password.com`).

Limiting built-in user roles

Not all users of your website need administrator privileges. WordPress gives you five user roles to choose among, and those roles provide sufficient flexibility for your websites.

You can find detailed information on each of the roles in Book 3, Chapter 3. You can also discover more information on users and roles in the WordPress.org codex at `https://codex.wordpress.org/Roles_and_Capabilities`.

TIP

Create a separate account with a lower role (such as Author) and use that account for everyday posting. Reserve the Administrator account purely for administration of your website.

Establishing user accountability

The use of generic accounts should be the last thing you ever consider because the more generic accounts you have, the greater your risk of being compromised. If a compromise does happen, you want to have full accountability for all users and be able to quickly answer questions like these:

- Who was logged in?
- Who made what changes?
- What did the users do while logged in?

Generic accounts preclude you from doing appropriate incident handling in the event of a compromise. In Book 3, Chapter 3, you find all the information and step-by-step details on how to create new users in your WordPress Dashboard. Keep the principles of least privilege and user accountability in mind as you're creating users.

Staying Clear of Soup-Kitchen Servers

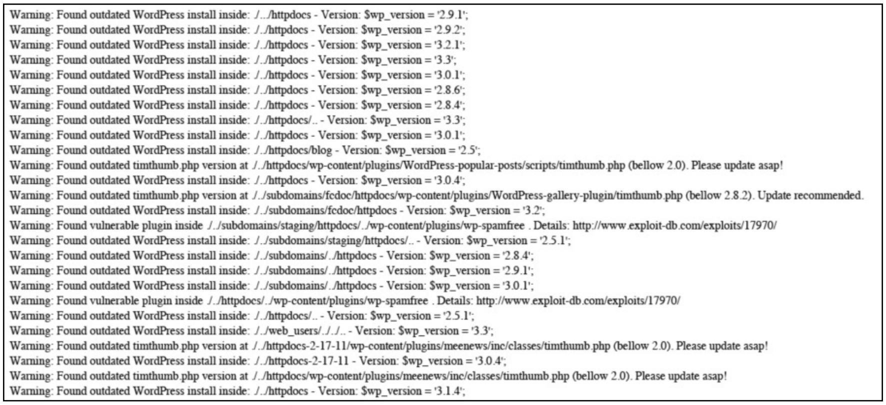
Among the regular issues plaguing website owners are soup-kitchen servers. A *soup-kitchen server* is one that has never been maintained properly and has a combination of websites, old software, archives, unneeded files, folders, email, and so on living on its hard drive.

The real problem comes into play with the "out of sight, out of mind" phenomenon. A server owner can forget about software installations on a server that may be outdated or insecure. Over time, this forgetfulness introduces new vulnerabilities to the environment:

- Disabled installations or websites that live on the server are as accessible and susceptible to external attacks as live sites.
- When a forgotten installation or website is infected, it leads to *cross-site contamination* — a wormlike effect in which the infection can jump and replicate itself across the server.

- In many instances, these forgotten installations or websites house the backdoor and engine of the infection. This means that as you try to rigorously clean your live website, you continuously get reinfected.

Figure 5-2 demonstrates what a soup-kitchen server looks like. `$wp_version` indicates the version of WordPress that is currently installed in the directory. The many listings for `$wp_version = 2.9` (at this writing, the most recent version of WordPress is 4.7) show how many out-of-date installations of WordPress this particular soup-kitchen server has.



```
Warning: Found outdated WordPress install inside: /.../httpdocs - Version: $wp_version = '2.9.1';
Warning: Found outdated WordPress install inside: /../httpdocs - Version: $wp_version = '2.9.2';
Warning: Found outdated WordPress install inside: /../httpdocs - Version: $wp_version = '3.2.1';
Warning: Found outdated WordPress install inside: /../httpdocs - Version: $wp_version = '3.3';
Warning: Found outdated WordPress install inside: /../httpdocs - Version: $wp_version = '3.0.1';
Warning: Found outdated WordPress install inside: /../httpdocs - Version: $wp_version = '2.8.6';
Warning: Found outdated WordPress install inside: /../httpdocs - Version: $wp_version = '2.8.4';
Warning: Found outdated WordPress install inside: /../httpdocs/.. - Version: $wp_version = '3.3';
Warning: Found outdated WordPress install inside: /../httpdocs - Version: $wp_version = '3.0.1';
Warning: Found outdated WordPress install inside: /../httpdocs/blog - Version: $wp_version = '2.5';
Warning: Found outdated timthumb.php version at /../httpdocs/wp-content/plugins/WordPress-popular-posts/scripts/timthumb.php (bellow 2.0). Please update asap!
Warning: Found outdated WordPress install inside: /../httpdocs - Version: $wp_version = '3.0.4';
Warning: Found outdated timthumb.php version at /../subdomains/fcdoc/httpdocs/wp-content/plugins/WordPress-gallery-plugin/timthumb.php (bellow 2.8.2). Update recommended.
Warning: Found outdated WordPress install inside: /../subdomains/fcdoc/httpdocs - Version: $wp_version = '3.2';
Warning: Found vulnerable plugin inside /../subdomains/staging/httpdocs/../wp-content/plugins/wp-spamfree . Details: http://www.exploit-db.com/exploits/17970/
Warning: Found outdated WordPress install inside: /../subdomains/staging/httpdocs/.. - Version: $wp_version = '2.5.1';
Warning: Found outdated WordPress install inside: /../subdomains/../httpdocs - Version: $wp_version = '2.8.4';
Warning: Found outdated WordPress install inside: /../subdomains/../httpdocs - Version: $wp_version = '2.9.1';
Warning: Found outdated WordPress install inside: /../subdomains/../httpdocs - Version: $wp_version = '3.0.1';
Warning: Found vulnerable plugin inside /../httpdocs/../wp-content/plugins/wp-spamfree . Details: http://www.exploit-db.com/exploits/17970/
Warning: Found outdated WordPress install inside: /../httpdocs/.. - Version: $wp_version = '2.5.1';
Warning: Found outdated WordPress install inside: /../web_users/../../.. - Version: $wp_version = '3.3';
Warning: Found outdated timthumb.php version at /../httpdocs-2-17-11/wp-content/plugins/meenews/inc/classes/timthumb.php (bellow 2.0). Please update asap!
Warning: Found outdated WordPress install inside: /../httpdocs-2-17-11 - Version: $wp_version = '3.0.4';
Warning: Found outdated timthumb.php version at /../httpdocs/wp-content/plugins/meenews/inc/classes/timthumb.php (bellow 2.0). Please update asap!
Warning: Found outdated WordPress install inside: /../httpdocs - Version: $wp_version = '3.1.4';
```

FIGURE 5-2: A file-server listing from a typical soup-kitchen server.

TIP

If you have more than one installation of WordPress on your current hosting account, try the following techniques to reduce your risk of running a soup-kitchen server:

- **Isolate each installation with its own user.** This action minimizes internal attacks that come from cross-site contamination.
- **Keep your installations up to date, and remove them when you no longer need them.** This action lessens the risk of attacks that result from outdated software on your server.

Hardening WordPress

When you *harden* (or, secure) your WordPress installation, you reduce your risk of being hacked by malicious attackers.

WEBSITE HARDENING RESOURCES

I recommend a few website resources to follow for your WordPress hardening and security needs:

- **Hardening WordPress:** `https://codex.wordpress.org/Hardening_WordPress`
- **The Definitive Guide to WordPress Security:** `https://moz.com/blog/the-definitive-guide-to-wordpress-security`
- **Sucuri:** `https://blog.sucuri.net`
- **WPsecure:** `http://wpsecure.net`

Hardening your website involves following these five steps:

1. **Enable multifactor authentication.**
2. **Limit login attempts.**
3. **Disable theme and plugin editors.**
4. **Filter by IP (Internet Protocol) address.**
5. **Kill PHP execution.**

I cover each of these steps in the following sections.

REMEMBER

Hardening your website doesn't guarantee your protection, but it definitely reduces your risk.

Enabling multifactor authentication

Authentication, in this case, refers to confirming the identity of the person who is attempting to log in and obtain access to your WordPress installation — just like when you log in to your WordPress website by using a username and password. The idea for multifactor authentication stems from the idea that one password alone isn't enough to secure access to any environment. *Multifactor authentication* (also called *strong authentication*) requires more than one user-authentication method. By default, WordPress requires only one: a username with password. Multifactor authentication adds layers of authentication measures for extra security of user logins.

To enable multifactor authentication, you can use a free plugin called Google Authenticator for WordPress, which provides two-factor user authentication through an application on your mobile or tablet device (iPhone, iPad, Droid, and so on). For this plugin to work, you need the following:

- **Google Authenticator app:** Find it at the App Store for iOS devices or the Google Play Store for Android devices.
- **Google Authenticator plugin:** You can find this plugin in the Plugin Directory at `https://wordpress.org/plugins/wp-google-authenticator`. See Book 7, Chapters 1 and 2 for details on finding, installing, and activating plugins.

Configuring Google Authenticator

When you have both of those tasks accomplished, you can configure the plugin for use on your website. Follow these steps to configure the plugin for each user on your site:

1. **Click the All Users link on the Users menu on your Dashboard.**

   The Users page opens.

2. **Select the user profile you'd like to edit by clicking the Edit link below the user's name in the Users list.**

   The Edit Users page opens.

3. **Select the Activate check box in the WP Google Authenticator Settings section, as shown in Figure 5-3.**
4. **Type a description in the Description text box.**

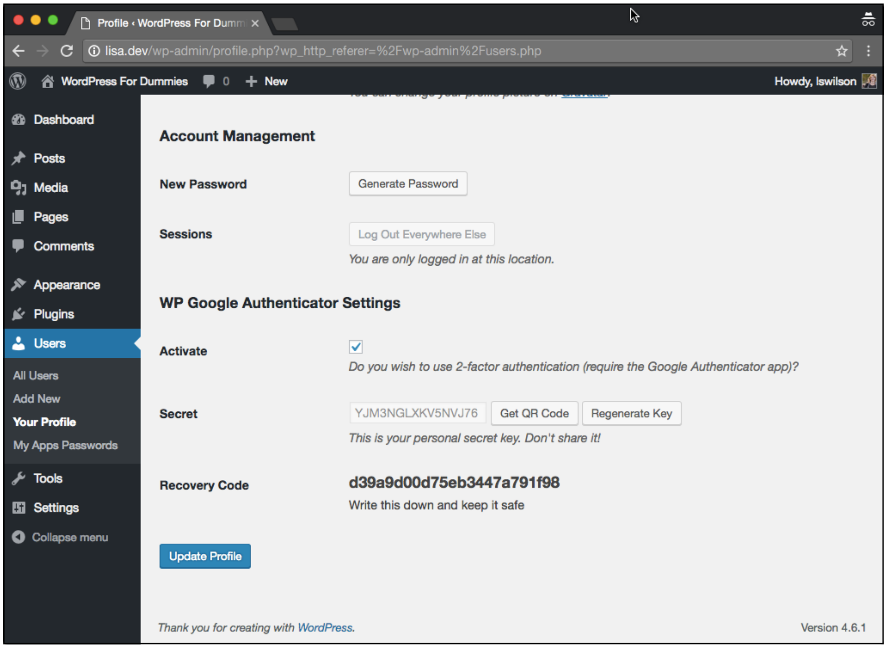
   This is the description you can see in the Google Authenticator application on your mobile device. I'm using my iPhone, so I typed in *Lisa's iPhone* as the description.

5. **Click the Get QR Code button.**

   In Figure 5-3, I have Google Authenticator activated, and you can see my Recovery Code, as well as a button that allows me to generate a QR code for my mobile app to use. (A *QR code* is a scannable bar code that is readable by a mobile or tablet device using the camera.)

   The QR code appears in a pop-up window.

6. **Open the Google Authenticator application on your mobile or tablet device.**



Account Management

New Password [Generate Password]

Sessions [Log Out Everywhere Else]

You are only logged in at this location.

WP Google Authenticator Settings

Activate ☑

Do you wish to use 2-factor authentication (require the Google Authenticator app)?

Secret YJM3NGLXKV5NVJ76 [Get QR Code] [Regenerate Key]

This is your personal secret key. Don't share it!

Recovery Code **d39a9d00d75eb3447a791f98**

Write this down and keep it safe

[Update Profile]

Thank you for creating with WordPress. Version 4.6.1

FIGURE 5-3: Google Authenticator Settings.

7. **On the Dashboard of your WordPress site, click the Regenerate Key button.**

   This step refreshes the secret key and QR code needed to connect your mobile or tablet device.

8. **In the Google Authenticator application on your mobile or tablet device, click the Scan Barcode button.**

   The camera on your device starts.

9. **Scan the bar code displayed on the Google Authenticator page of your WordPress Dashboard by taking a photo of it with your device.**

   Point your device camera at your computer screen, and line up the QR code within the camera brackets of your mobile device. The application automatically reads the QR code as soon as it's aligned correctly and displays a six-digit code identifying your blog. The six-digit code refreshes on a time-based interval. After the QR code is scanned, the user receives a message on her mobile device that contains a unique numeric code.

10. **Click the Update Profile button at the bottom of the Edit Users screen on your Dashboard.**

    This step refreshes the Edit Users page with a message at the top stating that the Google Authenticator settings have been successfully saved.

Now, with the Google Authenticator plugin in place, whenever anyone tries to log in to your WordPress Dashboard, he has to fill in his username and password, as usual, but with multifactor authentication in place, he also needs to enter the authentication code that was sent to his mobile device in Step 9. Without this unique code, the user can't log in to the WordPress Dashboard.

WARNING

The Google Authenticator application verification code is time-based, which is why it's very important that your mobile phone and your WordPress blog are set to the same time zone. If you get the message that the Google Authentication verification code you're using is invalid or expired, you need to delete the plugin and then go to your WordPress Dashboard and make sure that the time zone is set to the same time zone that your mobile or tablet device uses. See Book 3, Chapter 2 for information on time settings for your WordPress site.

Activating multifactor authentication

The following steps show you how the multifactor authentication is implemented on your blog:

1. **Log out of your WordPress Dashboard.**

   This step logs you out completely and displays the login page, shown in Figure 5-4.

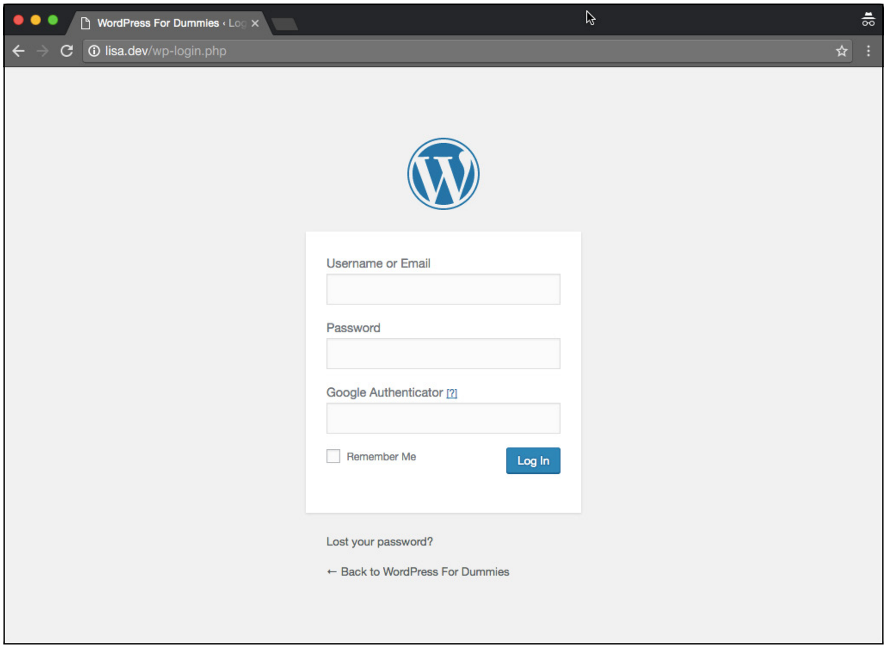


FIGURE 5-4: The WordPress login form with Google Authentication.

2. **Type your username in the Username or Email field.**
3. **Type your password in the Password field.**

   Do *not* click the Log In button yet. (If you're like me, you probably have an urge to click that button a split second after typing your password. For these steps, you have to resist that urge.)

4. **Open the Google Authenticator application on your mobile or tablet device, and locate the six-digit code assigned to your blog.**

   This six-digit code refreshes every 60 seconds. If you have more than one blog using the application, find the code that corresponds to the description you assigned to the site from Step 4 in "Configuring Google Authenticator" earlier in this chapter.

5. **Type the six-digit code in the Google Authenticator code field.**
6. **Click the Log In button.**

   You're now successfully logged in to your WordPress Dashboard via a two-factor authentication method.

The biggest shortcoming with this plugin is its inability to force all users to configure by default. For this reasons, it's important to employ the principle of least privilege on your site (see "Managing Users" earlier in this chapter). Give access only to the users who absolutely require it. In an ideal world, however, every single one of your user accounts requires two-factor authentication to log in on your site.

TIP

If you don't have access to a mobile device, WordPress has a couple of plugins you can use, including these two:

- **LaunchKey:** `https://wordpress.org/plugins/launchkey`
- **Loginizer:** `https://wordpress.org/plugins/loginizer`

Limiting login attempts

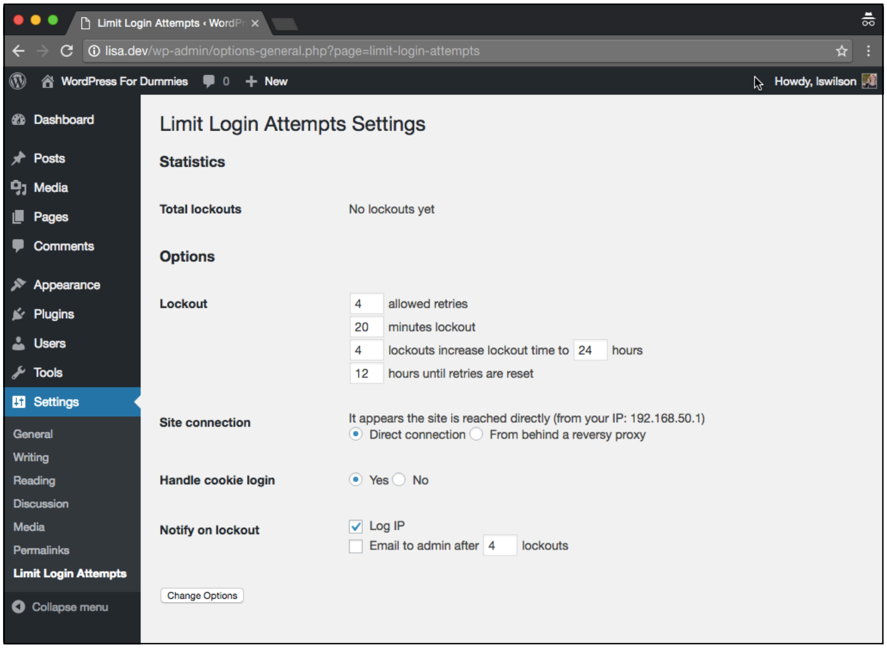
Limiting the number of times a user can attempt to log in to your WordPress site helps reduce the risk of brute-force attack. A *brute-force attack* happens when an attacker tries to gain access by guessing your username and password through the process of cycling through combinations.

To help protect against brute-force attacks, you want to limit the number of times any user can try to log in to your website. You can accomplish this task in WordPress easily enough by using the Limit Login Attempts plugin. You can find this plugin in the WordPress Plugin Directory: `https://wordpress.org/plugins/wp-limit-login-attempts/`. See Book 7, Chapters 1 and 2 for information on finding, installing, and activating it.

When you have the Limit Login Attempts plugin installed, follow these steps to configure the settings:

1. **Click the Limit Login Attempts link in the Settings menu of your Dashboard.**

   The Limit Login Attempts Settings page opens in your Dashboard, as shown in Figure 5-5.



Limit Login Attempts Settings

Statistics

Total lockouts: No lockouts yet

Options

Lockout:
4 allowed retries
20 minutes lockout
4 lockouts increase lockout time to 24 hours
12 hours until retries are reset

Site connection: It appears the site is reached directly (from your IP: 192.168.50.1)
● Direct connection ○ From behind a reversy proxy

Handle cookie login: ● Yes ○ No

Notify on lockout:
☑ Log IP
□ Email to admin after 4 lockouts

Change Options

FIGURE 5-5: Limit Login Attempts Settings page.

2. **Select a configuration.**

   In the Options section, you see these four Lockout options:

   - *4 allowed retries:* This setting is the maximum number of times users are allowed to retry failed logins.
   - *20 minutes lockout:* This setting is the amount of time a user is prevented from retrying a login after she reaches the maximum allowed number.

- *4 lockouts increase lockout time to 24 hours:* If a user is locked out four times after numerous failed login attempts, he gets locked out for 24 hours.
- *12 hours until retries are reset:* This setting is the amount of time before login retries are completely reset.

3. **Select the Direct Connection option in the Site Connection section.**

   This option limits site connection to a single Internet Protocol. Alternatively, you can select this plugin to limit site connection from behind a proxy if your users are using proxy IPs to connect to the site.

4. **Select Yes in the Handle Cookie Login section.**

   This option tells WordPress to set a cookie in the user's browser for further identification. Alternatively, you can set this option to No if you're not worried about it, but having Cookie Login Handling is a good extra security measure to have in place.

5. **Select the Log IP option in the Notify on Lockout section.**

   This option notifies the site administrator via email every time a user gets locked out. Alternatively, you can select the number of lockouts that happen for a single user before the administrator is notified.

6. **Click the Change Options button at the bottom of the Limit Login Attempts Settings page.**

   This page refreshes with a message telling you that the plugin settings have been successfully saved.

TIP

If you're managing your own server, monitor your login attempts to see whether a malicious attacker is making repeated attempts to obtain passwords and usernames. Keep track of those IP addresses, and if they repeatedly attempt to log in, add them to your server firewall to prevent them from burdening your server access points.

Disabling theme and plugin editors

By default, when you log in to the WordPress Dashboard, you have the ability to edit any theme and plugin file by using the Theme Editor (click the Appearance link on the Editor menu) and the Plugin Editor (click the Plugins link on the Editor menu). The idea makes a lot of sense; it gives you the ability to do everything within your Admin panel without having to worry about logging in to your server via SFTP to edit files.

Unfortunately, having the theme and plugin editors available also gives any attacker who gains access to the Dashboard full rights to modify any theme or plugin file, which is very dangerous, because even just one line of malware code embedded within any file can grant an attacker remote access to your environment without ever having to touch your Dashboard.

You can prevent this situation by disabling the Theme Editor and Plugin Editor. To do so, add a WordPress constant (or rule) to the WordPress configuration file (`wp-config.php`), which is in the installation folder on your web server. Download the `wp-config.php` via SFTP (see Book 2, Chapter 2), and open the file in a text editor, such as Notepad (PC) or TextEdit (Mac). Look for the following line of code:

```
define('DB_COLLAT', '');
```

Add the following constant (rule) on the line directly below the preceding line:

```
define('DISALLOW_FILE_EDIT',true);
```

Although adding this constant won't prevent an attack, it helps you when it comes to reducing the impact of a compromise. You can find information about other constants you can add to the `wp-config.php` file at `https://codex.wordpress.org/Editing_wp-config.php`.

TIP

You can also disable the automatic updates in WordPress (the system by which you're allowed to automatically update WordPress core and WordPress plugins) to include the administrator. If you do, you'd have to do everything manually, via SFTP. To do this, use the following constant in your `wp-config.php` file:

```
define('DISALLOW_FILE_MODS',true);
```

Filtering by IP address

Another option is to limit access to the Dashboard to specific IP addresses. This method is also referred to as *whitelisting* (allowing) access, which complements *blacklisting* (disallowing) solutions.

Everything that touches the Internet — such as your computer, a website, or a server network — has an IP address. An IP is like your home address; it uniquely identifies you so that the Internet knows where your computer is located. An example of an IP is 12.345.67.89 — a series of numbers that uniquely identifies the physical location of a computer or network.

You can edit the `.htaccess` file on your web server so that only IPs that you approve can access your Admin Dashboard, thereby blocking everyone else from having Dashboard access.

The lines of code that define the access rules get added to the .htaccess file located on your web server where WordPress is installed, in a folder called /wp-admin. Download that file to your computer via SFTP and open it using a text editor, such as Notepad (PC) or TextEdit (Mac), and add the following lines to it:

```
order allow,deny
deny from all
allow from 12.345.67.89
```

In this example, the order defines what comes first. An IP that follows the allow rules is given access; any IP that doesn't follow the allow rules is denied access. In this example, only the IP 12.345.67.89 can access the Admin Dashboard; all other IPs are denied.

TIP

If the /wp-admin folder in your WordPress installation doesn't contain a file called .htaccess, you can easily create one using your SFTP program by opening the /wp-admin folder and then right-clicking to open a shortcut menu; and choose New File. Give that new file the name .htaccess, and make sure to add the new rules from "Disabling theme and plugin editors" earlier in this chapter.

Limiting access via IP carries the following potential negatives:

- **This technique works only with static IP addresses.** A dynamic IP changes constantly. You have ways to make this technique work with dynamic IPs, but those methods are beyond the scope of this chapter.
- **The ability to use .htaccess is highly dependent on a web server that's running Apache.** This technique won't do you any good if your web server is Windows-based or IIS, or if you're using the latest NGINX web server.
- **Your Apache web server needs to be configured to allow directives to be defined by .htaccess files.** Ask your web host about configuration.

Killing PHP execution

For most backdoor intrusion attempts to function, a PHP file has to be executed. The term *backdoor* describes ways of obtaining access to a web server through means that bypass regular authentication methods, such as file injections through programming languages such as PHP or JavaScript. Disabling PHP execution prevents an attack or compromise from taking place because PHP can't executed at all.

To disable PHP execution, add four lines of code to the `.htaccess` file on your web server:

```
<Files *.php>
Order allow,deny
Deny from all
</Files>
```

By default, you have an `.htaccess` file in the WordPress directory on your web server. You can also create an `.htaccess` file in other folders — particularly the folders in which you want to disable PHP execution.

To disable PHP execution for maximum security, create an `.htaccess` file with those four lines of code in the following folders in your WordPress installation:

- `/wp-includes`
- `/wp-content/uploads`
- `/wp-content`

This WordPress installation directory (the directory WordPress is installed in) is important because it's the only directory that has to be writeable for WordPress to work. If an image is uploaded with a modified header, or if a PHP file is uploaded and PHP execution is allowed, an attacker could exploit this weakness to create havoc in your environment. When PHP execution is disabled, however, an attacker is unable to create any havoc.

IN THIS CHAPTER

- » Finding upgrades notifications
- » Backing up your database before upgrading
- » Deactivating plugins
- » Upgrading from the dashboard
- » Upgrading manually

Chapter 6

Updating WordPress

As discussed in Book 1, Chapter 3, the schedule of WordPress development and release cycles shows you that WordPress releases a new version (upgrade) of its platform roughly once every 120 days (or every 4 months). That chapter also explains why you need to keep your WordPress software up to date by using the most recent version — mostly for security purposes, but also to make sure you're taking advantage of all the latest features the WordPress developers pack within every major new release.

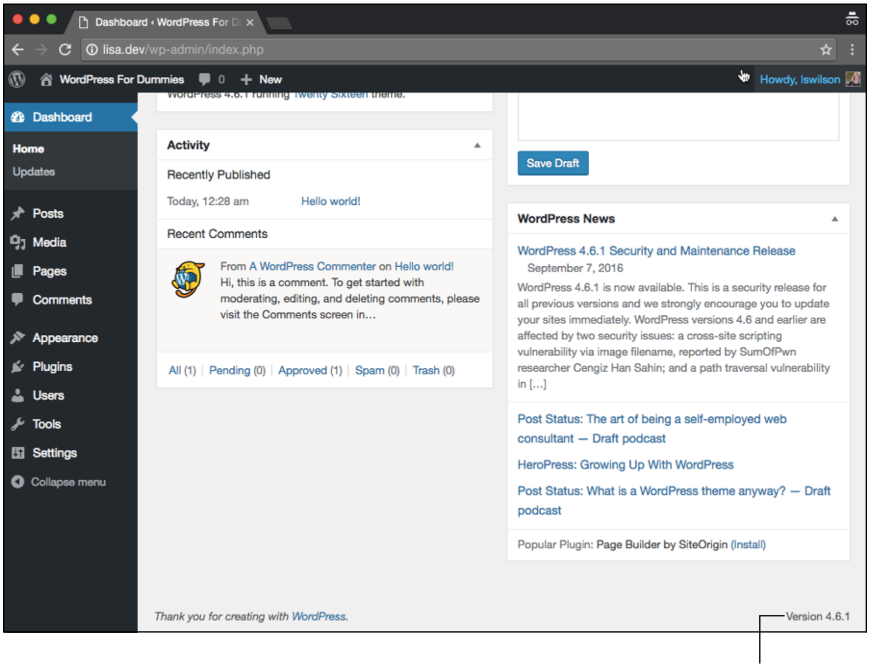
In this chapter, you discover the WordPress upgrade notification system and find out what to do when WordPress notifies you that a new version is available. This chapter also covers the best practices for upgrading the WordPress platform on your site to ensure the best possible outcome (that is, how not to break your website after a WordPress upgrade).

REMEMBER

The upgrade process occurs on a regular basis — at least three or four times per year. For some users, this process is a frustrating reality of using WordPress. This active development environment, however, is part of what makes WordPress the most popular platform available. Because WordPress is always adding great new features and functions to the platform, upgrading always ensures that you're on top of the game and using the latest tools and features.

Getting Notified of an Available Update

After you install WordPress and log in for the first time, you can see the version number on the WordPress Dashboard, as shown in Figure 6-1. (Note that I've scrolled down in the figure — you see the version number in the bottom-right corner.) Therefore, if anyone asks what version you're using, you know exactly where to look to find out.



WordPress 4.6.1 running Twenty Sixteen theme.

Activity

Recently Published

Today, 12:28 am Hello world!

Recent Comments

From A WordPress Commenter on Hello world!
Hi, this is a comment. To get started with moderating, editing, and deleting comments, please visit the Comments screen in…

All (1) | Pending (0) | Approved (1) | Spam (0) | Trash (0)

WordPress News

WordPress 4.6.1 Security and Maintenance Release
September 7, 2016
WordPress 4.6.1 is now available. This is a security release for all previous versions and we strongly encourage you to update your sites immediately. WordPress versions 4.6 and earlier are affected by two security issues: a cross-site scripting vulnerability via image filename, reported by SumOfPwn researcher Cengiz Han Sahin; and a path traversal vulnerability in […]

Post Status: The art of being a self-employed web consultant — Draft podcast

HeroPress: Growing Up With WordPress

Post Status: What is a WordPress theme anyway? — Draft podcast

Popular Plugin: Page Builder by SiteOrigin (Install)

Thank you for creating with WordPress.

Version 4.6.1

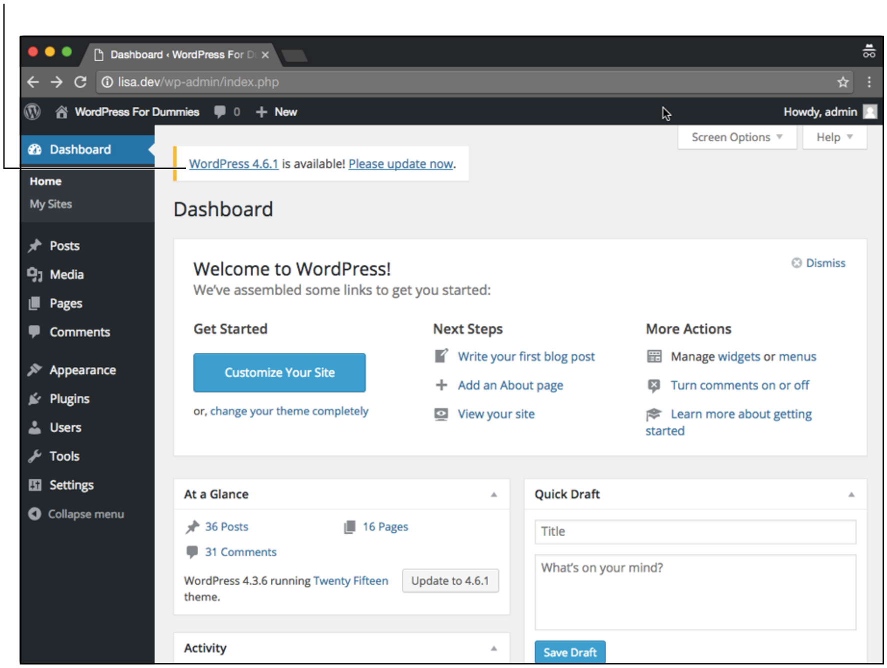
Find what version you're using.

FIGURE 6-1: The WordPress version displayed in the Dashboard.

Suppose that you have WordPress installed, and you've been happily publishing content to your website with it for several weeks, maybe even months. Then one day, you log in to your Dashboard and see a message at the top of your screen you've never seen before: "WordPress X.X.X is available! Please update now." Figure 6-2 displays the update message on the Dashboard, and Figure 6-3 displays a small bubble next to the Dashboard→Updates links that indicates how many updates are currently available.

Both the message at the top of the page and the notification bubble on the Dashboard menu are visual indicators that you're using an outdated version of WordPress and that you can (and need to) upgrade the software.

New version available



WordPress 4.6.1 is available! Please update now.

Dashboard

Welcome to WordPress!

We've assembled some links to get you started:

or, change your theme completely

WordPress 4.3.6 running Twenty Fifteen theme.

FIGURE 6-2: A Dashboard notification of an available WordPress upgrade.

The message at the top of your Dashboard includes two links that you can click for more information. (Refer to Figure 6-2.) The first is a link called WordPress 4.6.1. Clicking this link takes you to the WordPress Codex page titled Version *4.6.1*, which is filled with information about the version upgrade, including

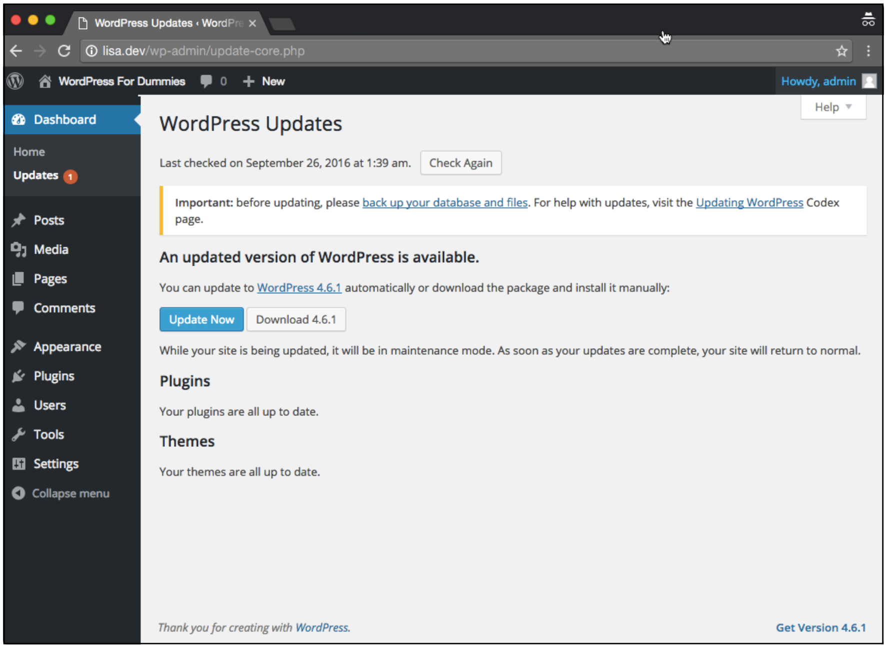
- Installation/upgrade information
- Summary of the development cycle for this version
- List of files that have been revised

The second link, Please Update Now, takes you to another page of the WordPress Dashboard: the WordPress Updates page, shown in Figure 6-3.

At the very top of the WordPress Updates page is another important message for you:

```
Important: before updating, please back up your database
    and files. For help with updates, visit the Updating
    WordPress Codex page.
```

Both links in the message take you to pages in the WordPress Codex that contain helpful information on creating backups and updating WordPress.



WordPress Updates

Last checked on September 26, 2016 at 1:39 am.

Important: before updating, please back up your database and files. For help with updates, visit the Updating WordPress Codex page.

An updated version of WordPress is available.

You can update to WordPress 4.6.1 automatically or download the package and install it manually:

While your site is being updated, it will be in maintenance mode. As soon as your updates are complete, your site will return to normal.

Plugins

Your plugins are all up to date.

Themes

Your themes are all up to date.

Thank you for creating with WordPress.

FIGURE 6-3: The WordPress Updates page.

TIP

Book 2, Chapter 7 has extensive information on how to back up your WordPress website, content, and files.

The WordPress Updates page tells you that an updated version of WordPress is available. You can update in two ways:

- Automatically, by using the built-in WordPress updater
- Manually, by downloading the files and installing them on your server

These ways to update are discussed later in the chapter.

Backing Up Your Database

Before upgrading your WordPress software installation, make sure that you back up your database. This step isn't required, of course, but it's a smart step to take to safeguard your website and ensure that you have a complete copy of your website data in the event that your upgrade goes wrong.

The best way to back up your database is to use the MySQL administration interface provided to you by your web hosting provider. (Book 2, Chapter 4 takes you through the steps of creating a new database by using the phpMyAdmin interface.)

TIP

cPanel is a web hosting interface, provided by many web hosts as a web hosting account management tool, that contains phpMyAdmin as the preferred tool for managing and administering databases. Not all web hosts use cPanel or phpMyAdmin, however, so if yours doesn't, you need to consult the user documentation for the tools that your web host provides. The instructions in this chapter use cPanel and phpMyAdmin.

Follow these steps to create a database backup by using the phpMyAdmin interface:

1. **Log in to the cPanel for your hosting account.**

   Typically, browse to `http://`*`yourdomain`*`.com/cpanel` to bring up the login screen for your cPanel. Enter your specific hosting account username and password in the login fields, and click OK to log in.

2. **Click the phpMyAdmin icon.**

   The phpMyAdmin interface opens and displays your database.

3. **Click the name of the database that you want to back up.**

   If you have more than one database in your account, the left-side menu in phpMyAdmin displays the names of all of them. Click the one you want to back up; the database loads in the main interface window.

4. **Click the Export tab at the top of the screen.**

   The page refreshes and displays the backup utility page.

5. **Select the SQL option in the Format drop-down menu.**
6. **Click the Go button.**

   A pop-up window appears, allowing you to select a location on your computer to store the database backup file.

7. **Click the Save button to download the backup file and save it to your computer.**

TIP

Book 2, Chapter 7 contains in-depth information on making a complete backup of your website, including all your files, plugins, themes, and images. For the purposes of upgrading, a database backup is sufficient, but be sure to check out that chapter for valuable information on extensive backups, including how to restore a database backup in case you ever need to go through that process.

Updating WordPress Automatically

WordPress provides you an easy, quick, and reliable method to update the core software from within your Dashboard. I recommend using this option whenever possible to make sure that you're accurately updating the WordPress software.

To update WordPress automatically, follow these steps:

1. **Back up your WordPress website.**

   REMEMBER

   Backing up your website before updating is an important step in case something goes wrong with the upgrade. Give yourself some peace of mind by knowing that you have a full copy of your website that can be restored, if needed. My advice is not to skip this step under any circumstances. If you're not sure how to back up, back up (pun intended!) to the preceding section.

2. **Deactivate all plugins.**

   This step prevents any plugin conflicts caused by the upgraded version of WordPress from affecting the upgrade process, and it ensures that your website won't break after the upgrade is completed. Find more information on working with and managing plugins in Book 7. For the purposes of this step, you can deactivate plugins by following these steps:

   a. *On the Dashboard, hover your pointer over Plugins on the navigation menu, and click the Installed Plugins link.*

      The Plugins page appears.

   b. *Select all plugins by selecting the check box to the left of the plugin names listed on that page. (See Figure 6-4.)*

   c. *From the drop-down list at the top, choose Deactivate.*

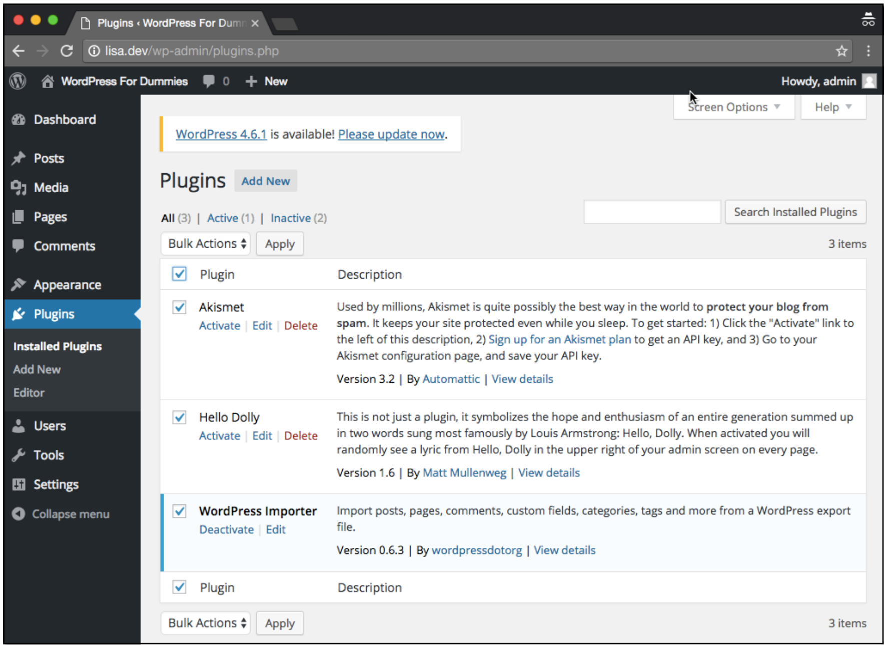
   d. *Click the Apply button.*

3. **Choose Dashboard ➪ Updates.**

   The WordPress Updates page appears. (Refer to Figure 6-3.)

4. **Click the Update Automatically button.**

   The Update WordPress page appears with a series of messages (as shown in Figure 6-5).



WordPress 4.6.1 is available! Please update now.

Plugins Add New

All (3) | Active (1) | Inactive (2)

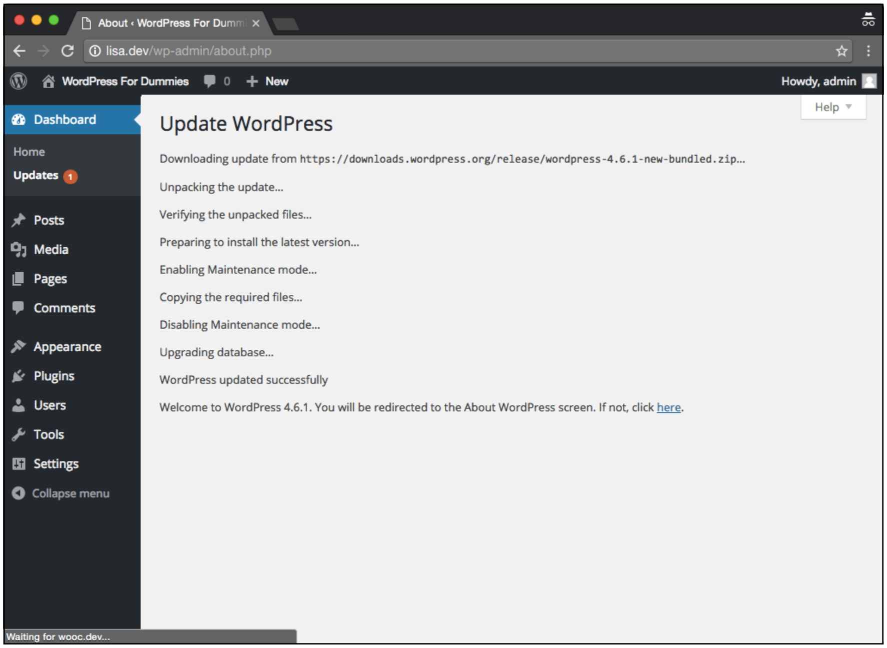
Search Installed Plugins

Bulk Actions ⬍ Apply 3 items

☑ Plugin	Description
☑ Akismet Activate | Edit | Delete	Used by millions, Akismet is quite possibly the best way in the world to **protect your blog from spam**. It keeps your site protected even while you sleep. To get started: 1) Click the "Activate" link to the left of this description, 2) Sign up for an Akismet plan to get an API key, and 3) Go to your Akismet configuration page, and save your API key. Version 3.2 | By Automattic | View details
☑ Hello Dolly Activate | Edit | Delete	This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page. Version 1.6 | By Matt Mullenweg | View details
☑ WordPress Importer Deactivate | Edit	Import posts, pages, comments, custom fields, categories, tags and more from a WordPress export file. Version 0.6.3 | By wordpressdotorg | View details
☑ Plugin	Description

Bulk Actions ⬍ Apply 3 items

FIGURE 6-4: The Plugins page with all plugins selected, ready to deactivate.



Update WordPress

Downloading update from `https://downloads.wordpress.org/release/wordpress-4.6.1-new-bundled.zip`…

Unpacking the update…

Verifying the unpacked files…

Preparing to install the latest version…

Enabling Maintenance mode…

Copying the required files…

Disabling Maintenance mode…

Upgrading database…

WordPress updated successfully

Welcome to WordPress 4.6.1. You will be redirected to the About WordPress screen. If not, click here.

FIGURE 6-5: WordPress update messages.

5. **Wait for the Dashboard to refresh, or click the link in the last update message to visit the main Dashboard screen.**

   The Dashboard page appears in your web browser. Notice that both the update alert message at the top of the site and the notification bubble on the Dashboard menu are no longer visible. Your WordPress installation is now using the latest version of WordPress.

After you complete the WordPress software upgrade, you can revisit the Plugins page and reactivate the plugins you deactivated in Step 2 of the preceding list. (Refer to Figure 6-4.)

Updating WordPress Manually

The second, less-used method of upgrading WordPress is the manual method. The method is less used mainly because the automatic method, discussed in the preceding section, is so quick and easy to accomplish. In certain circumstances, however — probably related to the inability of your hosting environment to accommodate the automatic method — you have to upgrade WordPress manually.

To upgrade WordPress manually, take these steps:

1. **Back up your WordPress website, and deactivate all plugins.**

   Refer to Steps 1 and 2 of "Upgrading WordPress Automatically" earlier in this chapter.

2. **Navigate to the WordPress Updates page by clicking the Please Update Now link.**
3. **Click the Download button.**

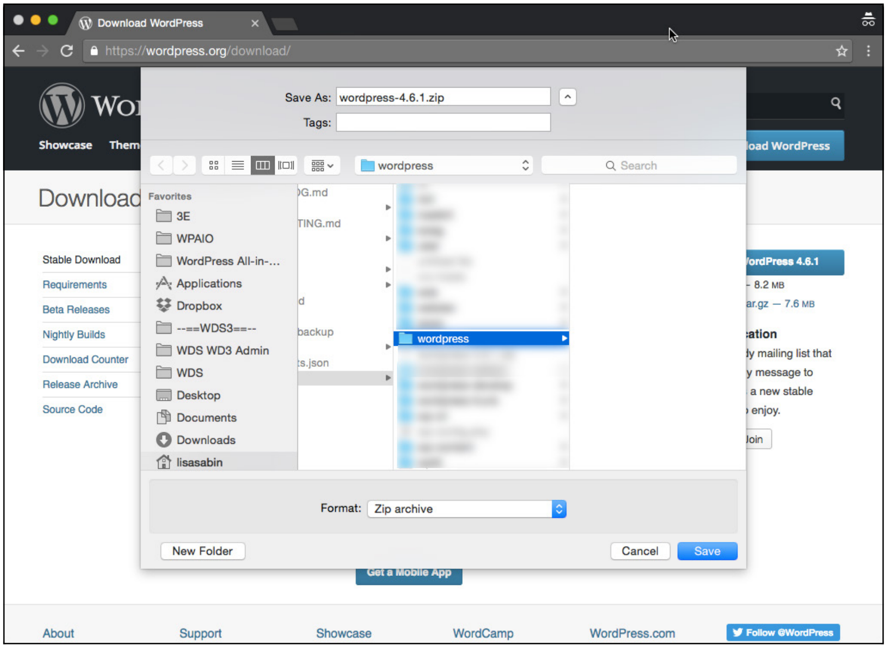
   A dialog box opens that allows you to save the `.zip` file of the latest WordPress download package to your local computer, as shown in Figure 6-6.

4. **Select a location to store the download package, and click Save.**

   The `.zip` file downloads to your selected location on your computer.

5. **Browse to the `.zip` file on your computer.**
6. **Unzip the file.**

   Use a program like WinZip (`www.winzip.com`).



Save As: wordpress-4.6.1.zip

Format: Zip archive

FIGURE 6-6: Downloading the WordPress files to your local computer.

7. **Connect to your web server via SFTP.**

   See Book 2, Chapter 2 for details on using SFTP.

8. **Delete all the files and folders in your existing WordPress installation directory *except* the following:**

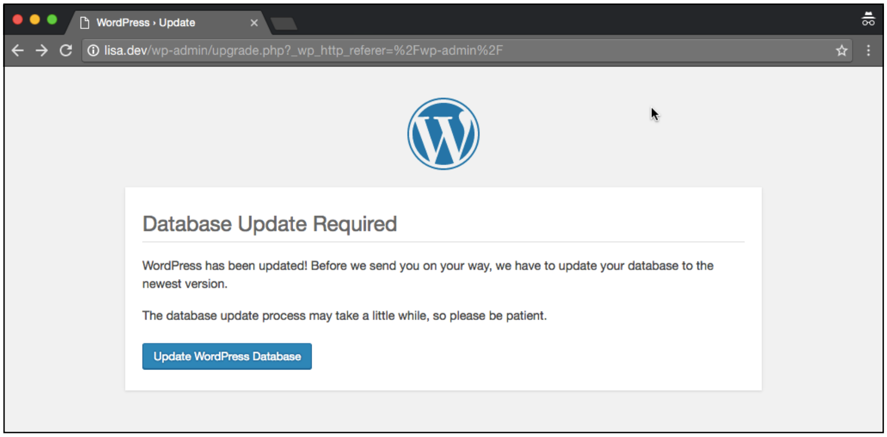
   - `/wp-content` folder
   - `.htaccess`
   - `wp-config.php`

9. **Upload the contents of the `/wordpress` folder to your web server — not the folder itself.**

   Most SFTP client software lets you select all the files to drag and drop them to your web server. Other programs have you highlight the files and click a Transfer button.

10. **Navigate to the following URL on your website: `http://`*`yourdomain`*`.com/wp-admin`.**

    Don't panic — your database still needs to be upgraded to the latest version, so instead of seeing your website on your domain, you see a message telling you that a database update is required, as shown in Figure 6-7.



WordPress › Update
lisa.dev/wp-admin/upgrade.php?_wp_http_referer=%2Fwp-admin%2F
Update WordPress Database

Database Update Required

WordPress has been updated! Before we send you on your way, we have to update your database to the newest version.

The database update process may take a little while, so please be patient.

FIGURE 6-7: Click the button to update your WordPress database.

11. **Click the Update WordPress Database button.**

    WordPress initiates the upgrade of the MySQL database associated with your website. When the database upgrade is complete, the page refreshes and displays a message that the process has finished.

12. **Click the Continue button.**

    Your browser loads the WordPress login page. The upgrade is complete, and you can continue using WordPress with the newly upgraded features.

TIP

If you're uncomfortable with performing administrative tasks, such as upgrading and creating database backups, you can hire someone to perform these tasks for you — either an employee of your company (if you run a business) or a WordPress consultant who's skilled in the practice of performing these tasks. Book 1, Chapter 4 includes a listing of experienced consultants who can lend a hand.

IN THIS CHAPTER

- » Moving to WordPress from a different platform
- » Handling the database backup management
- » Backing up plugins and themes
- » Storing images and media files
- » Exporting data from WordPress
- » Using plugins to make backups and moving easier

Chapter 7

Backing Up, Packing Up, and Moving to a New Host

As a WordPress website owner, you may need to move your site to a different home on the web, either to a new web host or into a different account on your current hosting account. Or maybe you're an owner who needs to move your site right now.

This chapter covers the best way to migrate a site that exists within a different platform (such as Movable Type or TypePad) to WordPress. This chapter also takes you through how to back up your WordPress files, data, and content and then move them to a new hosting provider or a different domain.

Migrating Your Existing Site to WordPress

So you have a site on a different content management system (CMS) and want to move your site to WordPress? This chapter helps you accomplish just that. WordPress makes it relatively easy to pack up your data and archives from one platform and move to a new WordPress site.

WordPress lets you move your site from such platforms as Blogger, TypePad, and Movable Type. It also gives you a nifty way to migrate from any platform via RSS feeds, as long as the platform you're importing from has an RSS feed available. Some platforms, such as Medium (`http://medium.com`), have some limitations on RSS feed availability, so be sure to check with your platform provider. In this chapter, you discover how to prepare your site for migration and how to move from the specific platforms for which WordPress provides importer plugins.

Movin' on up

TECHNICAL STUFF

For each platform, the WordPress.org platform provides a quick and easy way to install plugins so that you can import and use your content right away. The importers are packaged in a plugin format because most people use an importer just once, and some people don't use the importer tools at all. The plugins are there for you to use if you need them. WordPress.com, on the other hand, has the importers built into the software. Note the differences for the version you are using.

Website owners have a variety of reasons to migrate away from one system to WordPress:

- **Simple curiosity:** The use of WordPress — and the whole community of WordPress users — is generating a *lot* of buzz. People are naturally curious to check out something that all the cool kids are doing.
- **More control of your website:** This reason applies particularly to those who have a site on Blogger, TypePad, or any other hosted service. Hosted programs limit what you can do, create, and mess with. When it comes to plugins, add-ons, and theme creation, hosting a WordPress site on your own web server wins hands down. In addition, you have complete control of your data, archives, and backup capability when you host your site on your own server.
- **Ease of use:** Many people find the WordPress interface easier to use, more understandable, and a great deal more user-friendly than many of the other blogging platforms available today.

REMEMBER

In the WordPress software, the importers are added to the installation as plugins. The importer plugins included in the preceding list are the plugins packaged within the WordPress software; you can also find them by searching the Plugin Directory at `https://wordpress.org/plugins/tags/importer`. You can import content from several other platforms by installing other plugins that aren't available from the official WordPress Plugin Directory, but you may have to do an Internet search to find them.

Preparing for the big move

Depending on the size of your site (that is, how many posts and comments you have), the migration process can take anywhere from 5 to 30 minutes. As with any major change or update you make, no matter where your site is hosted, the very first thing you need to do is create a backup of your site. You should back up the following:

- **Archives:** Posts, comments, and trackbacks
- **Template:** Template and image files
- **Plugins:** Plugin files (do this by transferring the `/wp-content/plugins` folder from your hosting server to your local computer via SFTP)
- **Links:** Any links, banners, badges, and elements you have in your current site
- **Images:** Any images you use on your site

Table 7-1 gives you a few tips on creating the export data for your site in a few major blogging platforms. ***Note:*** This table assumes that you're logged in to your site software.

TABLE 7-1 Backing Up Your Website Data on Major Platforms

Blogging Platform	Backup Information
Movable Type	Click the Import/Export button on the menu of your Movable Type Dashboard and then click the Export Entries From link. When the page stops loading, save it on your computer as a `.txt` file.
TypePad	Click the name of the site you want to export and then click the Import/Export link on the Overview menu. Click the Export link at the bottom of the Import/Export page. When the page stops loading, save it on your computer as a `.txt` file.
Blogger	Back up your template by copying the text of your template to a text editor, such as Notepad. Save it on your computer as a `.txt` file.
LiveJournal	Browse to `http://livejournal.com/export.bml` and enter your information; choose XML as the format. Save this file on your computer.

(continued)

TABLE 7-1 ***(continued)***

Blogging Platform	Backup Information
Tumblr	Browse to `https://www.tumblr.com/oauth/apps` and follow the directions there to create a Tumblr app. When you're done, copy the OAuth Consumer Key and Secret Key, and paste them into a text file on your computer. Use these keys to connect your WordPress site to your Tumblr account.
WordPress	Choose Tools➪Export in the Dashboard, choose your options on the Export page, and then click the Download Export File button. Save this file on your computer.
RSS feed	Point your browser to the URL of the RSS feed you want to import. Wait until it loads fully. (You may need to set your feed to display all posts.) View the source code of the page, copy and paste that source code into a `.txt` file, and save the file on your computer.

TIP

The WordPress import script allows for a maximum file size of 128MB. If you get an "out of memory" error, try dividing the import file into pieces and uploading them separately. The import script is smart enough to ignore duplicate entries, so if you need to run the script a few times to get it to take everything, you can do so without worrying about duplicating your content. (You could also attempt to temporarily increase your PHP memory limit by making a quick edit of the `wp-config.php` file; for more information on this technique, see Book 2, Chapters 3 and 4.)

Converting templates

Every program has a unique way of delivering content and data to your site. Template tags vary from program to program; no two are the same. Also, each template file requires conversion if you want to use *your* template with your new WordPress site. In such a case, you have two options:

- **Convert the template yourself.** To accomplish this task, you need to know WordPress template tags and HTML. If you have a template that you're using on another platform and want to convert it for use with WordPress, you need to swap the original platform tags for WordPress tags. The information provided in Book 6 gives you the rundown on working with themes, as well as basic WordPress template tags; you may find that information useful if you plan to attempt a template conversion yourself.
- **Hire an experienced WordPress consultant to do the conversion for you.** See Book 1, Chapter 4 for a list of WordPress consultants.

To use your own template, make sure that you've saved *all* the template files, the images, and the stylesheet from your previous site setup. You need them to convert the template(s) for use in WordPress.

REMEMBER

Hundreds of free templates are available for use with WordPress, so it may be a lot easier to abandon the template you're currently working with and find a free WordPress template that you like. If you paid to have a custom design done for your site, contact the designer of your theme and hire him or her to perform the template conversion for you. Alternatively, you can hire several WordPress consultants to perform the conversion for you — including yours truly.

Moving your site to WordPress

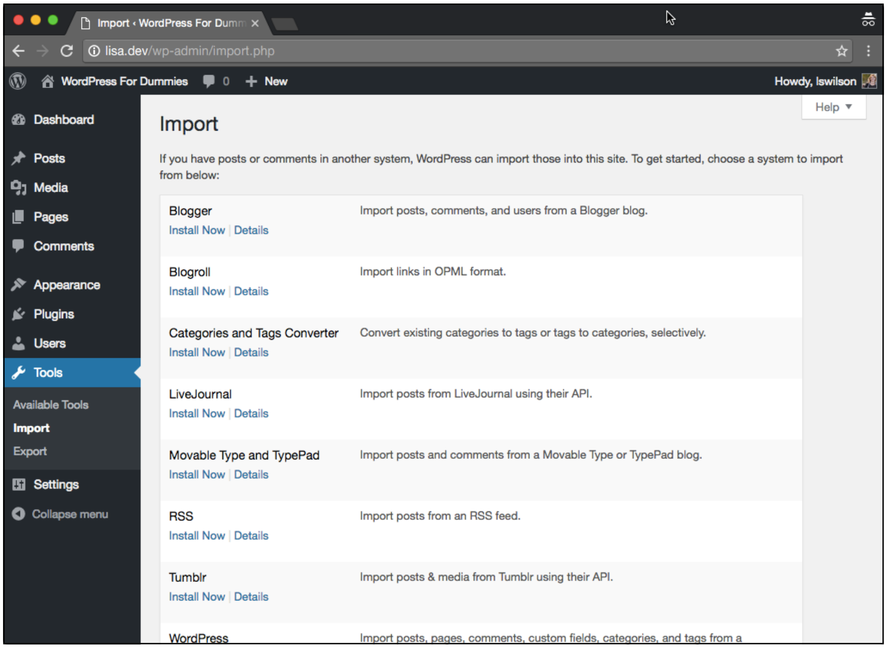
You've packed all your stuff, and you have your new place prepared. Moving day has arrived!

This section takes you through the steps for moving your site from one platform to WordPress. This section assumes that you already have the WordPress software installed and configured on your own domain.

Find the import function that you need by following these steps:

1. **In the Dashboard, choose Tools➪Import.**

   The Import page appears, listing blogging platforms such as Blogger and Movable Type from which you can import content. (See Figure 7-1.)



Import

If you have posts or comments in another system, WordPress can import those into this site. To get started, choose a system to import from below:

Blogger Install Now | Details	Import posts, comments, and users from a Blogger blog.
Blogroll Install Now | Details	Import links in OPML format.
Categories and Tags Converter Install Now | Details	Convert existing categories to tags or tags to categories, selectively.
LiveJournal Install Now | Details	Import posts from LiveJournal using their API.
Movable Type and TypePad Install Now | Details	Import posts and comments from a Movable Type or TypePad blog.
RSS Install Now | Details	Import posts from an RSS feed.
Tumblr Install Now | Details	Import posts & media from Tumblr using their API.
WordPress	Import posts, pages, comments, custom fields, categories, and tags from a

FIGURE 7-1: The Import feature of the (self-hosted) WordPress.org Dashboard.

2. **Find the blogging platform you're working with.**
3. **Click the Install Now link to install the importer plugin and begin using it.**

The following sections provide some import directions for a few of the most popular platforms (other than WordPress, that is). Each platform has its own content export methods, so be sure to check the documentation for the platform that you're using.

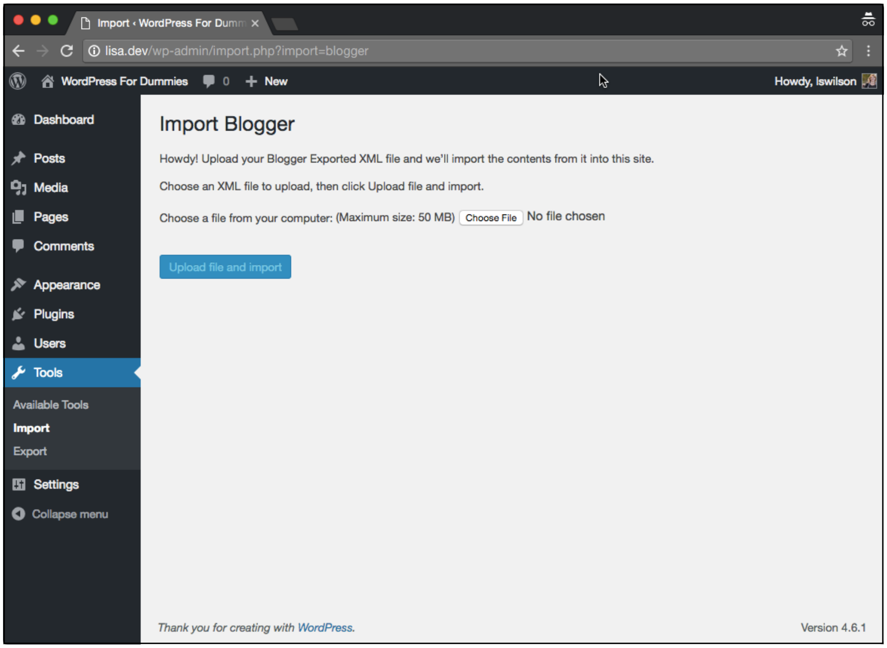
Importing from Blogger

Blogger (formerly called Blogspot) is the blogging application owned by Google.

To begin the import process, first complete the steps in the "Moving your site to WordPress" section, earlier in this chapter. Then follow these steps:

1. **Click the Install Now link below the Blogger heading on the Import page, and install the plugin for importing from Blogger.**
2. **Click the Run Importer link.**

   The Import Blogger page loads, with instructions for importing your file, as shown in Figure 7-2.



Import Blogger

Howdy! Upload your Blogger Exported XML file and we'll import the contents from it into this site.

Choose an XML file to upload, then click Upload file and import.

Choose a file from your computer: (Maximum size: 50 MB) Choose File No file chosen

Upload file and import

Thank you for creating with WordPress.

Version 4.6.1

FIGURE 7-2: Import Blogger page in the WordPress Dashboard.

3. **Login to your Blogger account.**

4. **In your Blogger account, click the blog you would like to import.**

5. **In your Blogger account, select Settings➪Other in your Blogger account.**

   This link is in the left menu.

6. **In your Blogger account, click Back Up Content➪Save to Your Computer.**

   Save the .xml file to your local computer.

7. **In your WordPress Dashboard, on the Import Blogger page, click the Choose File button to upload the Blogger XML file.**

8. **Click the Upload and Import button.**

   This uploads the file and the screen refreshes to the Import Blogger → Assign Authors screen.

9. **Click the Set Authors button to assign the authors to the posts.**

   The Blogger username appears on the left side of the page; a drop-down menu on the right side of the page displays the WordPress login name.

10. **Assign authors by using the drop-down menu.**

    If you have only one author on each blog, the process is especially easy: Use the drop-down menu on the right to assign the WordPress login to your Blogger username. If you have multiple authors on both blogs, each Blogger username is listed on the left side with a drop-down menu to the right of each username. Select a WordPress login for each Blogger username to make the author assignments.

11. **Click Save Changes.**

    You're done!

Importing from LiveJournal

Both WordPress.com and WordPress.org offer an import script for LiveJournal users, and the process of importing from LiveJournal to WordPress is the same for each platform.

To export your site content from LiveJournal, log in to your LiveJournal site and then type `www.livejournal.com/login.bml?returnto=%2Fexport.bml` in your browser's address bar.

LiveJournal lets you export the XML files by month, so if you have a site with several months' worth of posts, be prepared to be at this process for a while. First, you have to export the entries one month at a time; then you have to import them into WordPress — yep, you guessed it — one month at a time.

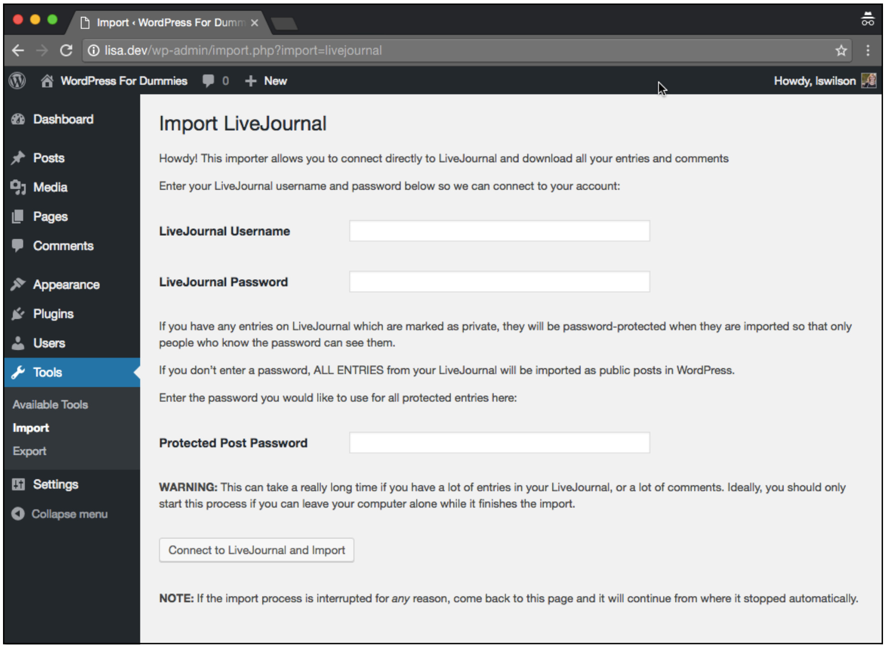
TIP

To speed the process a little, you can save all the exported XML LiveJournal files in one text document by copying and pasting each month's XML file into one plain-text file (created in a text editor such as Notepad), thereby creating one long XML file with all the posts from your LiveJournal blog. Then you can save the file as an XML file to prepare it for import into your WordPress blog.

After you export the XML file from LiveJournal, return to the Import page of your WordPress Dashboard and follow these steps:

1. **Click the Install Now link below the LiveJournal heading, and install the plugin for installing from LiveJournal.**
2. **Click the Run Importer link.**

   The Import LiveJournal page loads, with instructions for importing your file, as shown in Figure 7-3.



Import LiveJournal

Howdy! This importer allows you to connect directly to LiveJournal and download all your entries and comments

Enter your LiveJournal username and password below so we can connect to your account:

LiveJournal Username

LiveJournal Password

If you have any entries on LiveJournal which are marked as private, they will be password-protected when they are imported so that only people who know the password can see them.

If you don't enter a password, ALL ENTRIES from your LiveJournal will be imported as public posts in WordPress.

Enter the password you would like to use for all protected entries here:

Protected Post Password

WARNING: This can take a really long time if you have a lot of entries in your LiveJournal, or a lot of comments. Ideally, you should only start this process if you can leave your computer alone while it finishes the import.

Connect to LiveJournal and Import

NOTE: If the import process is interrupted for *any* reason, come back to this page and it will continue from where it stopped automatically.

FIGURE 7-3: Import LiveJournal page on the WordPress Dashboard.

3. **In the LiveJournal Username field, type the username for your LiveJournal account.**
4. **In the LiveJournal Password field, type the password for your LiveJournal account.**

5. **In the Protected Post Password field, enter the password you want to use for all protected entries in your LiveJournal account.**

   WARNING

   If you don't complete this step, every entry you import into WordPress will be viewable by anyone. Be sure to complete this step if any of your entries in your LiveJournal account are password-protected (or private).

6. **Click the Connect to LiveJournal and Import button.**

   This step connects your WordPress site to your LiveJournal account and automatically imports all entries from your LiveJournal into your WordPress installation. If your LiveJournal site has a lot of entries, this process could take a long time, so be patient.

Importing from Movable Type and TypePad

Six Apart created both Movable Type and TypePad. These two blogging platforms run on essentially the same code base, so the import/export procedure is the same for both. Refer to Table 7-1, earlier in this chapter, for details on how to run the export process in both Movable Type and TypePad. This import script moves all your site posts, comments, and trackbacks to your WordPress blog.

Go to the Import page of your WordPress Dashboard by following Steps 1 and 2 in the "Moving your site to WordPress" section, earlier in this chapter. Then follow these steps:

1. **Click the Install Now link below the Movable Type and TypePad heading, and install the plugin for importing from Movable Type and TypePad.**
2. **Click the Run Importer link.**

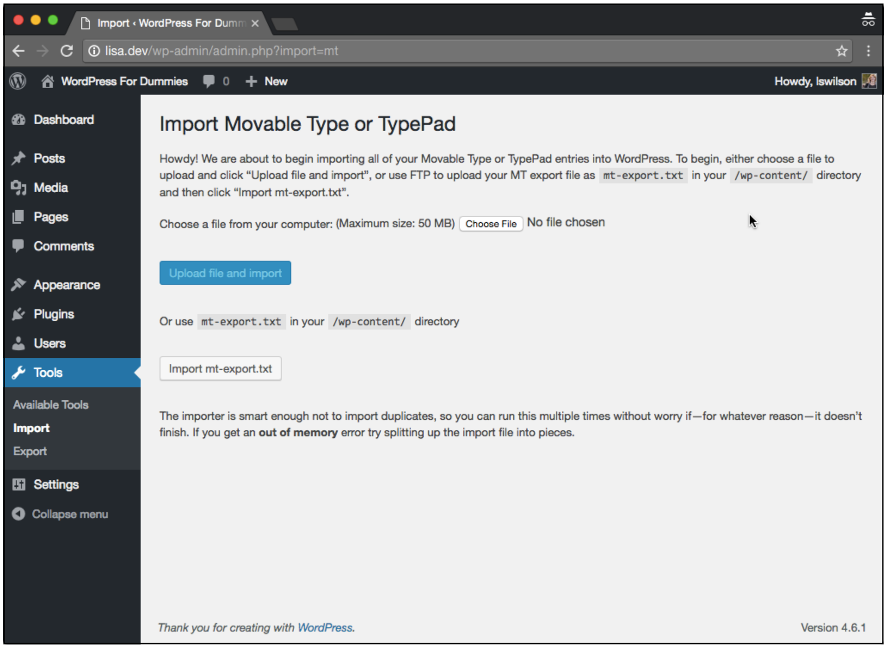
   The Import Movable Type or TypePad page, loads with instructions for importing your file, as shown in Figure 7-4.

3. **Click the Choose File button.**

   A window opens, listing your files.

4. **Double-click the name of the export file you saved from your Movable Type or TypePad blog.**
5. **Click the Upload File and Import button.**

   Sit back and let the import script do its magic. When the script finishes, it reloads the page with a message confirming that the process is complete.



Import Movable Type or TypePad

Howdy! We are about to begin importing all of your Movable Type or TypePad entries into WordPress. To begin, either choose a file to upload and click “Upload file and import”, or use FTP to upload your MT export file as `mt-export.txt` in your `/wp-content/` directory and then click “Import mt-export.txt”.

Choose a file from your computer: (Maximum size: 50 MB) Choose File No file chosen

Or use `mt-export.txt` in your `/wp-content/` directory

The importer is smart enough not to import duplicates, so you can run this multiple times without worry if—for whatever reason—it doesn't finish. If you get an **out of memory** error try splitting up the import file into pieces.

Thank you for creating with WordPress.

Version 4.6.1

FIGURE 7-4: Import Movable Type or TypePad page on the WordPress Dashboard.

6. **When the import script finishes, assign users to the posts, matching the Movable Type or TypePad usernames with WordPress usernames.**

   If you have only one author on each blog, this process is easy; you simply assign your WordPress login to the Movable Type or TypePad username by using the drop-down menu. If you have multiple authors on both blogs, match the Movable Type or TypePad usernames with the correct WordPress login names.

7. **Click Save Changes.**

Importing from Tumblr

With the Tumblr import script for WordPress, it’s easy to import the content from your Tumblr account to your WordPress blog. To complete the import, follow these steps:

1. **Go to `www.tumblr.com/oauth/apps`.**

   The Tumblr login page appears.

2. **Enter your email address and password to log in to your Tumblr account.**

   The Register Your Application page appears.

3. **Complete the Register Your Application form by filling in the following fields:**

   - *Application Name:* Type the name of your WordPress website in the text box.
   - *Application Website:* Type the URL of your WordPress website in the text box.
   - *Default Callback URL:* Type the URL of your WordPress website in the text box.

   Seven text fields are in this form, but you have to fill in these only these three fields; you can leave the rest blank.

4. **Click the Register button.**

   Make sure to select the check box that says `I'm not a robot`, to prove that you are human and not a spammer.

   The Applications page refreshes and displays your registered app information at the top.

5. **Copy the OAuth Consumer Key and paste it into a text file on your computer.**

6. **Copy the Secret Key and paste it into the same text file where you placed the OAuth Consumer Key in Step 5.**

7. **In your Dashboard, choose Tools➪Import and then click the Tumblr link.**

   The Import Tumblr page of your Dashboard opens.

8. **Insert the OAuth Consumer Key in the indicated text box.**

   Use the OAuth Consumer Key you saved to a text file in Step 5.

9. **Insert the Secret Key in the indicated text box.**

   Use the Secret Key you saved to a text file in Step 6.

10. **Click the Connect to Tumblr button.**

    The Import Tumblr page appears with a message instructing you to authorize Tumblr.

11. **Click the Authorize the Application link.**

    The Authorization page on the Tumblr website asks you to authorize your WordPress site access to your Tumblr account.

12. **Click the Allow button.**

    The Import Tumblr page opens in your WordPress Dashboard and displays a list of your sites from Tumblr.

13. **Click the Import This Blog button in the Action/Status section.**

    The content from your Tumblr account is imported into WordPress. Depending on how much content you have on your Tumblr site, this process may take several minutes to complete. The Import Tumblr page then refreshes with a message telling you that the import is complete.

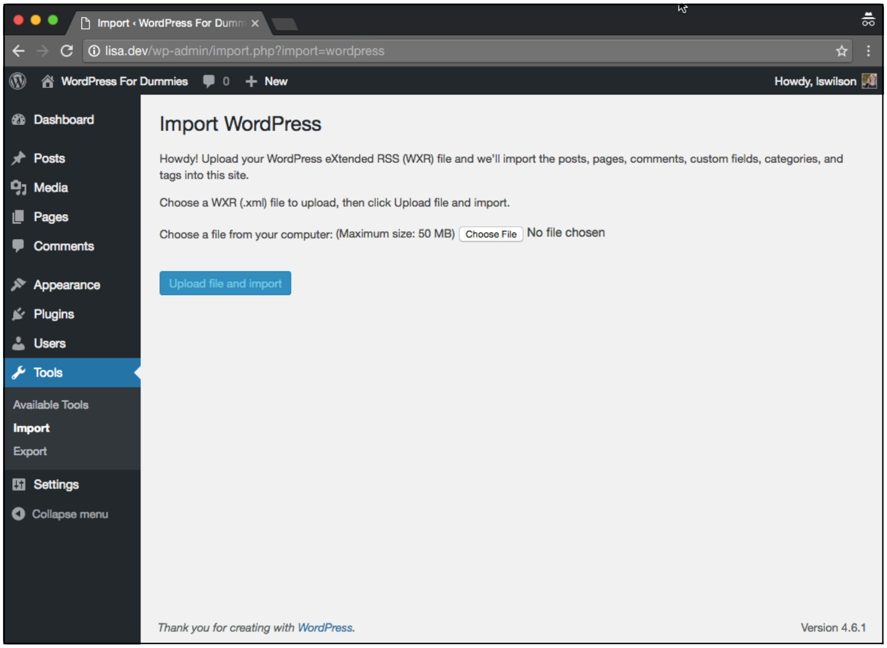
Importing from WordPress

With the WordPress import script, you can import one WordPress site into another; this is true for both the hosted and self-hosted versions of WordPress. WordPress imports all your posts, comments, custom fields, and categories into your blog. Refer to Table 7-1, earlier in this chapter, to find out how to use the export feature to obtain your site data.

When you complete the export, follow these steps:

1. **Click the Install Now link below the WordPress title on the Import page, and install the plugin to import from WordPress.**
2. **Click the Run Importer link.**

   The Import WordPress page loads, with instructions for importing your file, as shown in Figure 7-5.



Import WordPress

Howdy! Upload your WordPress eXtended RSS (WXR) file and we'll import the posts, pages, comments, custom fields, categories, and tags into this site.

Choose a WXR (.xml) file to upload, then click Upload file and import.

Choose a file from your computer: (Maximum size: 50 MB) Choose File No file chosen

Upload file and import

Thank you for creating with WordPress. Version 4.6.1

FIGURE 7-5: Import WordPress page on the WordPress Dashboard.

3. **Click the Choose File button.**

   A window opens, listing the files on your computer.

4. **Double-click the export file you saved earlier from your WordPress blog.**
5. **Click the Upload File and Import button.**

   The import script gets to work, and when it finishes, it reloads the page with a message confirming that the process is complete.

Importing from an RSS feed

If all else fails, or if WordPress doesn't provide an import script that you need for your current site platform, you can import your site data via the RSS feed for the site you want to import. With the RSS import method, you can import posts only; you can't use this method to import comments, trackbacks, categories, or users.

REMEMBER

WordPress.com currently doesn't let you import site data via an RSS feed; this function works only with the self-hosted WordPress.org platform.

Refer to Table 7-1, earlier in this chapter, for the steps to create the file you need to import via RSS. Then follow these steps:

1. **On the Import page of the WordPress Dashboard, click the Install Now link below the RSS heading, and install the plugin to import from an RSS feed.**
2. **Click the Run Importer link.**

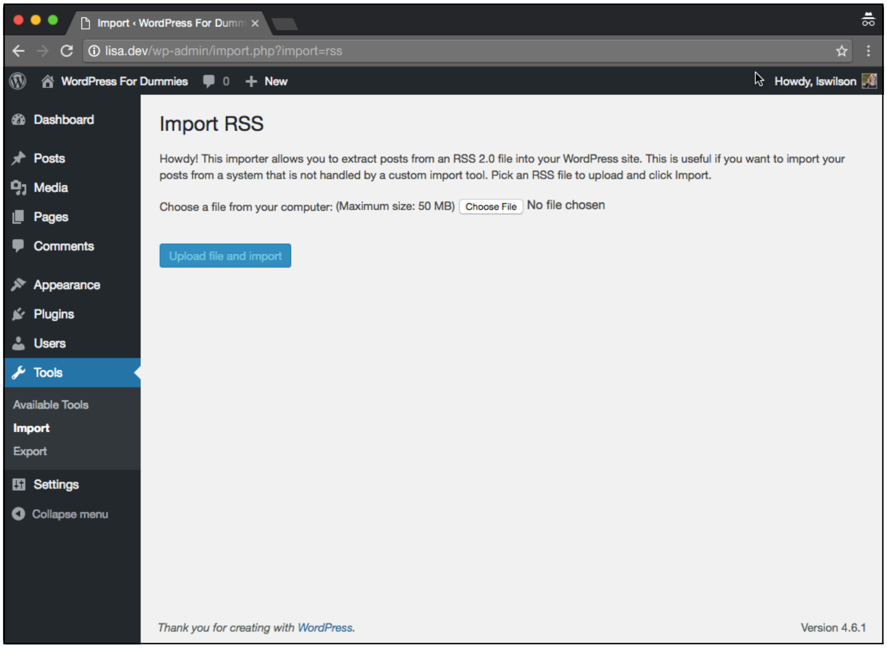
   The Import RSS page loads, with instructions for importing your RSS file, as shown in Figure 7-6.

3. **Click the Choose File button on the Import RSS page.**

   A window opens, listing the files on your computer.

4. **Double-click the export file you saved earlier from your RSS feed.**
5. **Click the Upload File and Import button.**

   The import script does its magic and then reloads the page with a message confirming that the process is complete.



Import RSS

Howdy! This importer allows you to extract posts from an RSS 2.0 file into your WordPress site. This is useful if you want to import your posts from a system that is not handled by a custom import tool. Pick an RSS file to upload and click Import.

Choose a file from your computer: (Maximum size: 50 MB) Choose File No file chosen

Thank you for creating with WordPress.

Version 4.6.1

FIGURE 7-6: The Import RSS page of the WordPress Dashboard.

Finding other import resources

The WordPress Codex has a long list of other available scripts, plugins, workarounds, and outright hacks for importing from other platforms. You can find that information at `https://codex.wordpress.org/Importing_Content`.

REMEMBER

Note, however, that volunteers run the WordPress Codex. When you refer to the codex, be aware that not everything listed in it is necessarily up to date or accurate, including import information (or any other information about running your WordPress blog).

Moving Your Website to a Different Host

There may come a time that you decide that you need to switch from your current hosting provider to a new one. There are numerous reasons why you'd have to do this. Perhaps you're unhappy with your current provider and want to move to a new one, or your current provider is going out of business and you're forced to move. Yet transferring an existing website, with all its content, files, and data, from one host to another can seem to be a very daunting task. This section of the chapter should make it easier for you.

You can go about it two ways:

- Manually, by backing up your database and downloading essential files
- Using a plugin to automate as much of the process as possible

Obviously, using a tool to automate the process for you is the more desirable way to go, but just in case you need to do it manually, in the next section of this chapter, I provide the instructions for doing it both ways.

Creating a backup and moving manually

Book 2, Chapter 6 provides step-by-step instructions on how to make a backup of your database by using phpMyAdmin. Follow the steps available in that chapter, and you'll have a backup of your database with all the recent content you've published to your site — *content* being what you (or someone else) wrote or type on your site via the WordPress Dashboard, including

- Blog posts, pages, and custom post types
- Links, categories, and tags
- Post and page options, such as excerpts, time and date, custom fields, post categories, post tags, and passwords
- WordPress settings you configured on the Settings menu of the Dashboard
- All widgets that you created and configured
- All plugin options that you configured for the plugins you installed

Other elements of your website aren't stored in the database, so you need to download those elements, via SFTP, from your web server. Following is a list of those elements, with instructions on where to find them and how to download them to your local computer:

- **Media files:** Media files are the files you uploaded by using the WordPress media upload feature, including images, videos, audio files, and documents. Media files are located in the `/wp-content/uploads` folder. Connect to your web server via SFTP, and download that folder to your local computer.
- **Plugin files:** Although all the plugin settings are stored in the database, the actual plugin *files* are not. The plugin files are located in the `/wp-content/plugins` folder. Connect to your web server via SFTP, and download that folder to your local computer.

- **Theme files:** Widgets and options you've set for your current theme are stored in the database, but the physical theme template files, images, and stylesheets are not. They're stored in the `/wp-content/themes` folder. Connect to your web server via SFTP, and download that folder to your local computer.

Moving the database and files to the new host

When you have your database and WordPress files stored safely on your local computer, moving them to a new host just involves reversing the process. Follow these steps:

1. **Create a new database in your new hosting account.**

   The steps for creating a database are in Book 2, Chapter 4.

2. **Import your database backup into the new database you just created:**

   a. *Log in to the cPanel for your hosting account.*

   b. *Click the phpMyAdmin icon, and click the name of your new database in the left menu.*

   c. *Click the Import tab at the top.*

   d. *Click the Browse button, and select the database backup from your local computer.*

   e. *Click the Go button. The old database imports into the new.*

3. **Install WordPress in your new hosting account.**

   The steps for installing WordPress are in Book 2, Chapter 4.

4. **Edit the `wp-config.php` file to include your new database name, username, password, and host.**

   Information on editing the information in the `wp-config.php` file is in Book 2, Chapters 3 and 4.

5. **Upload all that you downloaded from the `/wp-content` folder to your new hosting account.**

6. **Browse to your domain in your web browser.**

   Your website should work, and you can log in to the WordPress Dashboard by using the same username and password as before, because that information is stored in the database you imported.

BACKING UP AND MOVING WITH A PLUGIN

A plugin that I use on a regular basis to move a WordPress website from one hosting environment to another is aptly named BackupBuddy. This plugin isn't free or available in the WordPress Plugin Directory; you need to pay for it. But it's worth every single penny because it takes the entire backup and migration process and makes mincemeat out of it. In other words, it's very easy to use, and you can be done in minutes instead of hours.

You can purchase the BackupBuddy plugin from iThemes at `https://ithemes.com/purchase/backupbuddy`; at this writing, pricing starts at $80 per year. After you've purchased it, you can download the plugin and install it (see plugin installation instructions in Book 7), and follow the instructions given to you in the WordPress Dashboard to make a backup copy of your website and move it to another server.

3

Exploring the WordPress Dashboard

Contents at a Glance

IN THIS CHAPTER

- » Logging in to your WordPress Dashboard
- » Finding your way around the Dashboard
- » Configuring Dashboard modules
- » Getting some help

Chapter 1

Logging In and Taking a Look Around

With WordPress successfully installed, you can explore your new publishing software. This chapter guides you through the preliminary setup of your new WordPress website by using the Dashboard. When you publish with WordPress, you spend a lot of time in the Dashboard, which is where you make all the exciting behind-the-scenes stuff happen. In this Dashboard, you can find all the settings and options that enable you to set up your site just the way you want it. (If you still need to install and configure WordPress, check out Book 2, Chapter 4.)

Feeling comfortable with the Dashboard sets you up for successful entrance into the WordPress publishing world. You'll tweak your WordPress settings several times throughout the life of your site. In this chapter, as you go through the various sections, settings, options, and configurations available to you, understand that nothing is set in stone. You can set options today and change them at any time.

Logging In to the Dashboard

I find that the direct approach (also known as *jumping in*) works best when I want to get familiar with a new software tool. To that end, follow these steps to log in to WordPress and take a look at the guts of the Dashboard:

1. **Open your web browser, and type the WordPress login-page address (or URL) in the address box.**

   The login-page address looks something like this

   ```
   http://www.yourdomain.com/wp-login.php
   ```

   TIP

   If you installed WordPress in its own folder, include that folder name in the login URL. If you installed WordPress in a folder ingeniously named `wordpress`, the login URL becomes

   ```
   http://www.yourdomain.com/wordpress/wp-login.php
   ```

2. **Type your username or email address in the Username or Email Address text box and your password in the Password text box.**

   REMEMBER

   In case you forget your password, WordPress has you covered. Click the Lost Your Password link (located near the bottom of the page), enter your username or email address, and then click the Get New Password button. WordPress resets your password and emails the new password to you.

   After you request a password, you receive two emails from your WordPress site. The first email contains a link that you click to verify that you requested the password. After you verify your intentions, you receive a second email containing your new password.

3. **Select the Remember Me check box if you want WordPress to place a cookie in your browser.**

   The cookie tells WordPress to remember your login credentials the next time you show up. The cookie set by WordPress is harmless and stores your WordPress login on your computer. Because of the cookie, WordPress remembers you the next time you visit. Because this option tells the browser to remember your login, don't select Remember Me when you're using your work computer, other devices (such as a tablet or mobile phone), or a computer at an Internet café.

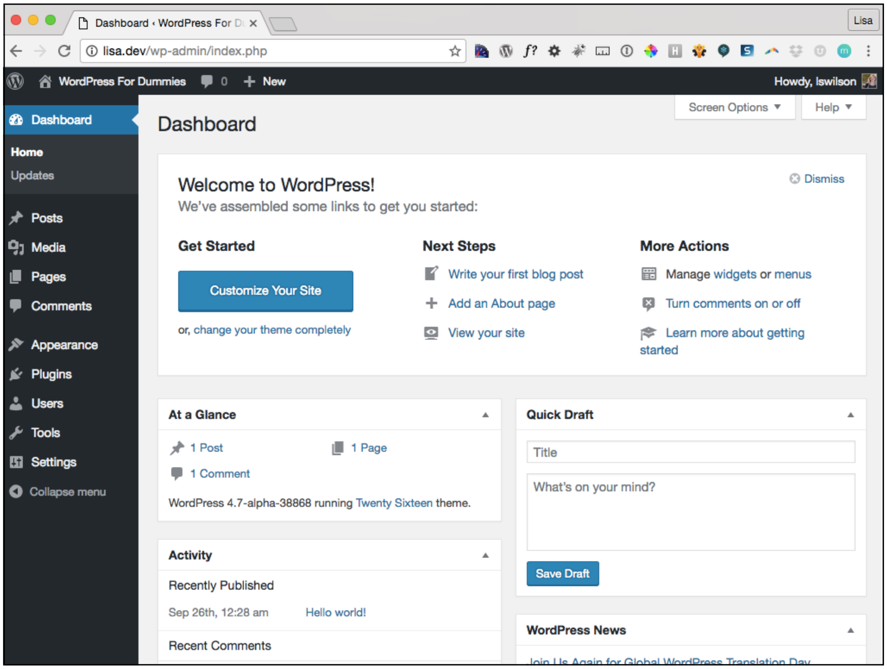
   Note: Before you set this option, make sure that your browser is configured to allow cookies. (If you aren't sure how to do this, check the help documentation of the Internet browser you're using.)

4. **Click the Log In button.**

After you log in to WordPress, you see the Dashboard page.

Navigating the Dashboard

You can consider the Dashboard to be a control panel of sorts because it offers several quick links and areas that provide information about your site, starting with the actual Dashboard page shown in Figure 1-1. When you view your Dashboard for the very first time, all the modules appear in the expanded (open) position by default.



Welcome to WordPress!
We've assembled some links to get you started:

or, change your theme completely

Write your first blog post
Add an About page
View your site

Manage widgets or menus
Turn comments on or off
Learn more about getting started

1 Post
1 Page
1 Comment
WordPress 4.7-alpha-38868 running Twenty Sixteen theme.

What's on your mind?

Recently Published
Sep 26th, 12:28 am Hello world!
Recent Comments

Join Us Again for Global WordPress Translation Day

FIGURE 1-1: Log in to the WordPress Dashboard.

You can change how the WordPress Dashboard looks by modifying the order in which the modules (for example, At a Glance and Activity) appear on it. You can expand (open) and collapse (close) the individual modules by clicking anywhere within the title bar of the module. This feature is really nice because it lets you use the Dashboard for just those modules that you use regularly. The concept is easy: Keep the modules you use all the time open, and close the ones that you use only occasionally; open the latter modules only when you really need them. You save screen space by customizing your Dashboard to suit your needs.

TIP

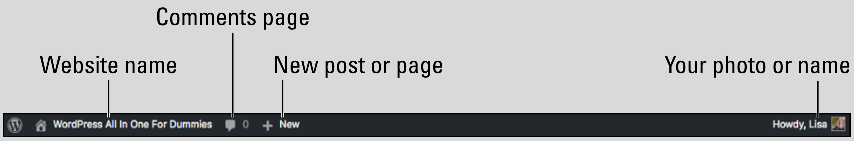
The navigation menu of the WordPress Dashboard appears on the left side of your browser window. When you need to get back to the main Dashboard page, click the Dashboard link at the top of the navigation menu on any of the screens within your WordPress Dashboard.

DISCOVERING THE ADMIN TOOL BAR

The admin toolbar is the menu you see at the top of the Dashboard (refer to Figure 1-1). The admin toolbar appears at the top of every page on your site by default, and it appears at the top of every page of the Dashboard if you set it to do so in your profile settings (see Book 3, Chapter 3). The nice thing is that the only person who can see the admin toolbar is you, because it displays only for the user who is logged in. The admin toolbar contains shortcuts that take you to the most frequently viewed areas of your WordPress Dashboard, from left to right:

- **WordPress links:** This provides you with links to various WordPress.org sites.
- **The name of your website:** This shortcut takes you to the front page of your website.
- **Comments page:** The next link is a comment balloon icon; click it to visit the Comments page of your Dashboard.
- **New:** Hover your mouse over this shortcut, and you find links titled Post, Media, Page, and User. Click these links to go to the Add New Post, Upload New Media, Add New Page, or Add New User pages, respectively.
- **Your photo and name display:** Hover your mouse pointer over this shortcut to open a drop-down menu that provides links to two areas of your Dashboard: Edit Your Profile and Log Out.

Again, the admin toolbar is visible at the top of your site only to you, no matter what page you're on, as long as you're logged in to your WordPress site.



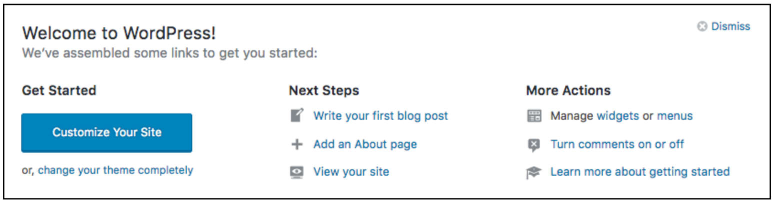
In the following sections, I cover the Dashboard page as it appears when you log in to your WordPress Dashboard for the first time. Later in this chapter, in the section "Arranging the Dashboard to Your Tastes," I show you how to configure the appearance of your Dashboard so that it best suits how you use the available modules.

Welcome to WordPress!

This module, shown in Figure 1-2, appears at the top of your Dashboard screen the first time you log in to your new WordPress installation. It can stay there, if you want it to. Also notice a small link on the right side of that module labeled Dismiss. That link allows you to remove this module if you'd rather not have it there.

The makers of the WordPress software have done extensive user testing to discover what items users want to do immediately when they log in to a new WordPress site. The result of that user testing is a group of links presented in the Welcome to WordPress! module, including

- **Get Started:** This section contains a button that, when clicked, opens the Customizer, where you can customize the active theme. Additionally, this section provides a link that takes you to the Themes page, where you can change your theme. Book 6 contains tons of information about choosing a theme, as well as customizing it to look the way you want it to.
- **Next Steps:** This section provides links to various areas within the WordPress Dashboard to get you started publishing content, including writing your first post and adding an About page. (Book 4, Chapter 1 provides information about publishing posts, and Book 4, Chapter 2 gives you information about publishing pages.) Additionally, the View Your Site link in this section opens your site, allowing you to view what it looks like to your visitors.
- **More Actions:** This section contains a few links that help you manage your site, including a link to manage widgets or menus (see Book 6, Chapter 1) and turning comments on or off (see Book 3, Chapter 4). This section also contains a link to the First Steps with WordPress link of the WordPress Codex, where you can read more information about how to start using your new WordPress site.



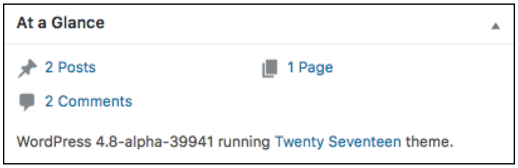
Welcome to WordPress!

We've assembled some links to get you started:

FIGURE 1-2: The Welcome to WordPress! module provides helpful links to get you started.

At a Glance

The At a Glance module of the Dashboard shows what's going on in your blog right now — this very second! Figure 1-3 shows the expanded At a Glance module in a brand-spanking-new WordPress blog.



WordPress 4.8-alpha-39941 running Twenty Seventeen theme.

FIGURE 1-3: The At a Glance module of the Dashboard, expanded so that you can see the available features.

The At a Glance module shows the following default information:

- **The number of posts you have:** This number reflects the total number of posts you currently have in your WordPress blog. The blog in Figure 1-3, for example, has two posts. The link is blue, which means that it's clickable. When you click the link, you go to the Posts screen, where you can view and manage the posts in your blog. (Book 4, Chapter 1 covers managing posts.)
- **The number of pages:** The number of pages in your blog, which changes when you add or delete pages. (*Pages,* in this context, refers to the static pages you create in your blog.) Figure 1-3 shows that the blog has one page.

  Clicking this link takes you to the Pages screen, where you can view, edit, and delete your current pages. (Find the difference between WordPress posts and pages in Book 4, Chapter 2.)
- **The number of comments:** The number of comments on your blog. Figure 1-3 shows that this blog has two comments.

  Clicking the Comments link takes you to the Comments screen, where you can manage the comments on your blog. Book 3, Chapter 4 covers comments.

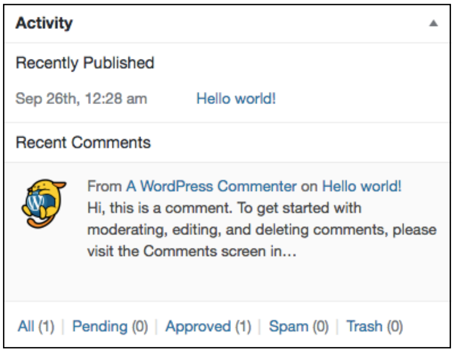
The last section of the Dashboard's At a Glance module shows the following information:

- **Which WordPress theme you're using:** Figure 1-3 shows that the blog is using the theme called Twenty Seventeen. The theme name is a link that, when clicked, takes you to the Manage Themes page, where you can view and activate themes on your blog.
- **The version of WordPress you're using:** Figure 1-3 shows that this blog is using WordPress version 4.8. This version announcement changes if you're using an earlier version of WordPress. When WordPress software is upgraded, this statement tells you that you're using an outdated version of WordPress and encourages you to upgrade to the latest version.

Activity

The module below the At a Glance module is the Activity module, shown in Figure 1-4. Within this module, you find

- **Posts most recently published:** WordPress displays a maximum five posts in this area. Each one is clickable and takes you to the Edit Post screen, where you can view and edit the post.
- **Most recent comments published to your blog:** WordPress displays a maximum of five comments in this area.
- **The author of each comment:** The name of the person who left the comment appears below it. This section also displays the author's picture (or avatar), if she has one.
- **A link to the post the comment was left on:** The post title appears to the right of the commenter's name. Click the link to go to that post in the Dashboard.
- **An excerpt of the comment:** This excerpt is a snippet of the comment this person left on your blog.
- **Comment management links:** When you hover your mouse pointer over the comment, six links appear below it. These links give you the opportunity to manage those comments right from your Dashboard: The first link is Unapprove, which appears only if you have comment moderation turned on. The other five links are Reply, Edit, Spam, Trash and View.
- **View links:** These links appear at the bottom of the Activity module. You can click All, Pending, Approved, Spam, and Trash.



Activity

Recently Published

Sep 26th, 12:28 am Hello world!

Recent Comments

From A WordPress Commenter on Hello world!
Hi, this is a comment. To get started with moderating, editing, and deleting comments, please visit the Comments screen in…

All (1) | Pending (0) | Approved (1) | Spam (0) | Trash (0)

FIGURE 1-4: The Activity module of the Dashboard.

TIP

You can find even more information on managing your comments in Book 3, Chapter 4.

Quick Draft

The Quick Draft module, shown in Figure 1-5, is a handy form that allows you to write, save, and publish a blog post right from your WordPress Dashboard. The options are similar to the ones I cover in Book 4, Chapter 1.

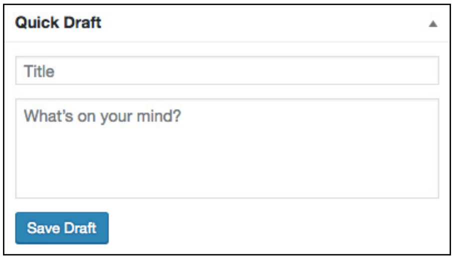


FIGURE 1-5: The Quick Draft module of the Dashboard.

WordPress News

The WordPress News module of the Dashboard pulls in posts from a site called WordPress Planet (`http://planet.wordpress.org`). By keeping the default setting in this area, you stay in touch with several posts made by folks who are involved in WordPress development, design, and troubleshooting. You can find lots of interesting and useful tidbits if you keep this area intact. Quite often, I find great information about new plugins or themes, problem areas and support, troubleshooting, and new ideas, so I tend to stick with the default setting.

Arranging the Dashboard to Your Tastes

One feature of WordPress that I'm really quite fond of allows me to create my own workspace within the Dashboard. In the following sections, you can find out how to customize your WordPress Dashboard to fit your individual needs, including modifying the layout, changing links and RSS feed information, and even rearranging the modules on different pages of the Dashboard. Armed with this information, you can open your Dashboard and create your very own workspace.

Changing the order of modules

You can arrange the order of the modules in your Dashboard to suit your tastes. WordPress places a great deal of emphasis on user experience, and a big part of that effort results in your ability to create a Dashboard that you find most useful. You can very easily change the modules to display and the order in which they display.

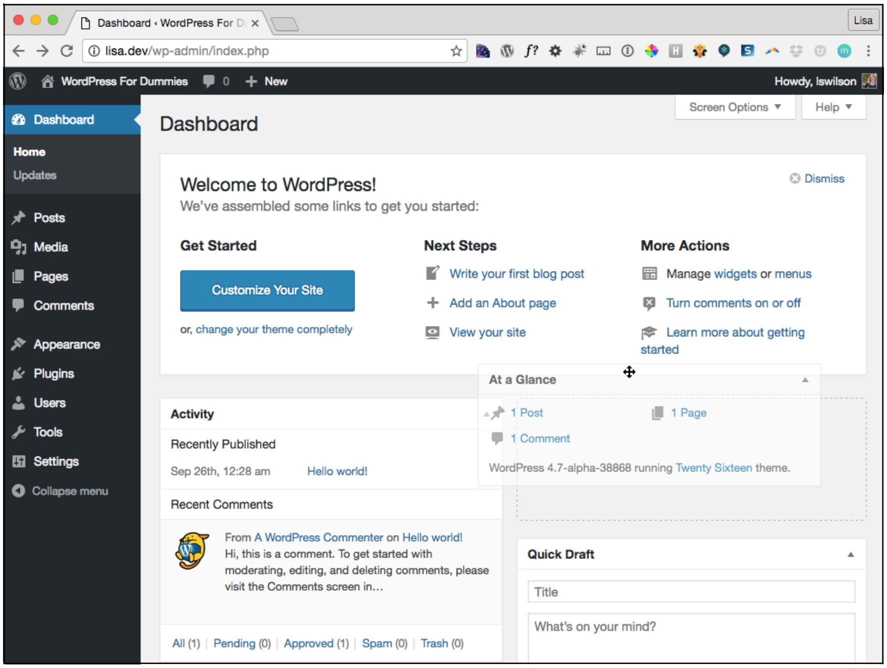
Follow these steps to move the At a Glance module so that it appears on the right side of your Dashboard page:

1. **Hover your mouse cursor on the title bar of the At a Glance module.**

   When the mouse is hovering over the title, your mouse cursor changes to the Move cursor (a cross with arrows).

2. **Click and hold your mouse button, and drag the At a Glance module to the right side of the screen.**

   While you drag the module, a light-gray box with a dotted border appears on the right side of your screen (see Figure 1-6). That gray box is a guide that shows you where you can drop the module.



Welcome to WordPress!

We've assembled some links to get you started:

or, change your theme completely

Write your first blog post

Add an About page

View your site

Manage widgets or menus

Turn comments on or off

Learn more about getting started

1 Post   1 Page

1 Comment

WordPress 4.7-alpha-38868 running Twenty Sixteen theme.

Recently Published

Sep 26th, 12:28 am   Hello world!

Recent Comments

From A WordPress Commenter on Hello world!
Hi, this is a comment. To get started with moderating, editing, and deleting comments, please visit the Comments screen in…

All (1) | Pending (0) | Approved (1) | Spam (0) | Trash (0)

FIGURE 1-6: A light gray box appears as a guide when you drag and drop modules in the WordPress Dashboard.

3. **Release the mouse button when you have the At a Glance module in place.**

   The At a Glance module is positioned on the right side of your Dashboard page.

   The other modules on the right side of the Dashboard have shifted down, and the Activity module is the module in the top-left corner of the Dashboard page.

4. **(Optional) Click the title bar of the At a Glance module.**

   The module collapses. Click the title bar again to expand the module. You can keep that module open or closed based on your preference.

Repeat these steps with each module that you want to move on the Dashboard by dragging and dropping them so that they appear in the order you prefer.

REMEMBER

When you navigate away from the Dashboard, WordPress remembers the changes you made. When you return, you still see your customized Dashboard, and you don't need to redo these changes in the future.

Removing Dashboard modules

If you find that your Dashboard contains a few modules that you never use, you can get rid of them by following these steps:

1. **Click the Screen Options button at the top of the Dashboard.**

   The Screen Options drop-down menu opens, displaying the title of each module with a check box to the left of each title.

2. **Deselect the check box for the module you want to hide.**

   The check mark disappears from the check box, and the module disappears from your Dashboard.

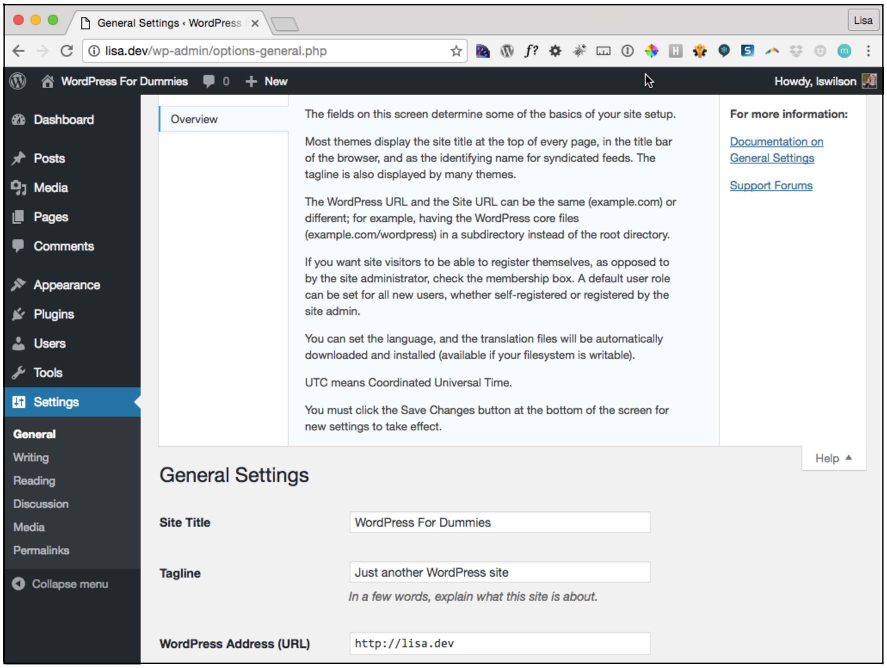
TIP

If you want a module that you hid to reappear, you can simply enable that module by selecting the module's check box on the Screen Options drop-down menu.

Finding Inline Documentation and Help

The developers of the WordPress software really put in time and effort to provide tons of inline documentation that gives you several tips and hints right inside the Dashboard. You can generally find inline documentation for nearly every WordPress feature you'll use.

Inline documentation refers to those small sentences or phrases that you see alongside or below a feature in WordPress, providing a short but very helpful explanation of the feature. Figure 1-7 shows the General Settings screen, where a lot of inline documentation and guiding tips correspond with each feature. These tips can clue you into what the features are, how to use those features, and what recommended settings to use for those features.



The fields on this screen determine some of the basics of your site setup.

Most themes display the site title at the top of every page, in the title bar of the browser, and as the identifying name for syndicated feeds. The tagline is also displayed by many themes.

The WordPress URL and the Site URL can be the same (example.com) or different; for example, having the WordPress core files (example.com/wordpress) in a subdirectory instead of the root directory.

If you want site visitors to be able to register themselves, as opposed to by the site administrator, check the membership box. A default user role can be set for all new users, whether self-registered or registered by the site admin.

You can set the language, and the translation files will be automatically downloaded and installed (available if your filesystem is writable).

UTC means Coordinated Universal Time.

You must click the Save Changes button at the bottom of the screen for new settings to take effect.

For more information:

Documentation on General Settings

Support Forums

General Settings

Site Title WordPress For Dummies

Tagline Just another WordPress site

In a few words, explain what this site is about.

WordPress Address (URL) `http://lisa.dev`

FIGURE 1-7: Inline documentation on the General Settings page in the WordPress Dashboard.

In addition to the inline documentation that you find scattered throughout the Dashboard, a useful Help tab is located in the top-right corner of your Dashboard. Click this tab to open a panel containing help text that's relevant to the screen you're currently viewing in your Dashboard. If you're viewing the General Settings screen, for example, the Help tab displays documentation relevant to the General Settings screen. Likewise, if you're viewing the Add New Post screen, the Help tab displays documentation with topics relevant to the settings and features you find on the Add New Post page of your Dashboard.

TIP

The inline documentation and the topics and text you find in the Help tab exist to assist you while you work with the WordPress platform, helping make the experience as easy to understand as possible. Another place you can visit to find help and useful support for WordPress is the WordPress Forums support page, at `http://wordpress.org/support`.

IN THIS CHAPTER

- » Configuring your WordPress general settings
- » Putting together your personal profile
- » Formatting your website

Chapter 2

Exploring Tools and Settings

As exciting as it is to dig right in and start publishing right away, you should attend to a few housekeeping items first, including adjusting the settings that allow you to personalize your website. I cover these settings first in this chapter because they create your readers' experience with your website.

In this chapter, you explore the Settings menu of the WordPress Dashboard and discover how to configure items such as date and time settings, site titles, and email notification settings. This chapter also covers important aspects of your website configuration, such as permalinks, discussion options, and privacy settings.

Some of the menu items, such as those for creating and publishing new posts, are covered in detail in other chapters, but they're well worth a mention here as well.

Configuring the Settings

At the very bottom of the navigation menu, you find the Settings option. Hover over the Settings link. A menu appears that contains the following links, which I discuss in the sections that follow:

- General
- Writing
- Reading
- Discussion
- Media
- Permalinks

General

After you install the WordPress software and log in, you can put a personal stamp on your site by giving it a title and description, setting your contact email address, and identifying yourself as the author of the blog. You take care of these and other settings on the General Settings screen.

To begin personalizing your site, start with your general settings by following these steps:

1. **Choose Settings⇨General.**

   The General Settings screen appears, as shown in Figure 2-1.

2. **Enter the name of your site in the Site Title text box.**

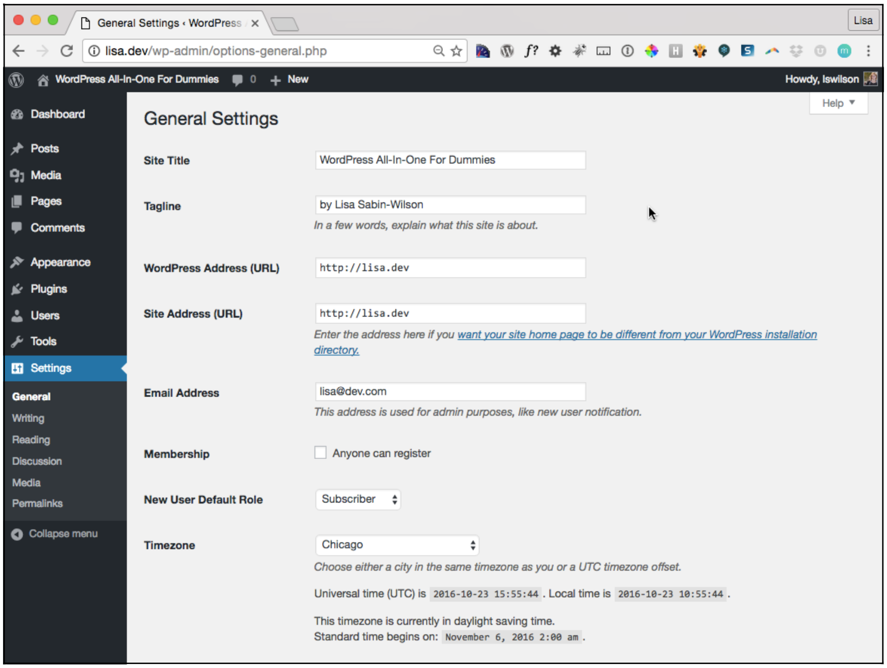
   The title you enter here is the one that you give your blog to identify it as your own. In Figure 2-1, I gave the new blog the title *WordPress All-In-One For Dummies,* which appears on my website, as well as in the title bar of the viewer's web browser.

   TIP

   Give your website an interesting and identifiable name. You can use *Fried Green Tomatoes,* for example, if you're blogging about the topic, the book, the movie, or even anything remotely related to the lovely Southern dish.

3. **In the Tagline text box, enter a five- to ten-word phrase that describes your blog.**

   Figure 2-1 shows that the tagline is *by Lisa Sabin-Wilson.* Therefore, this blog displays the blog title, followed by the tagline: *WordPress All-in-One For Dummies by Lisa Sabin-Wilson.*



General Settings

Site Title: WordPress All-In-One For Dummies

Tagline: by Lisa Sabin-Wilson

In a few words, explain what this site is about.

WordPress Address (URL): `http://lisa.dev`

Site Address (URL): `http://lisa.dev`

Enter the address here if you want your site home page to be different from your WordPress installation directory.

Email Address: lisa@dev.com

This address is used for admin purposes, like new user notification.

Membership: □ Anyone can register

New User Default Role: Subscriber

Timezone: Chicago

Choose either a city in the same timezone as you or a UTC timezone offset.

Universal time (UTC) is `2016-10-23 15:55:44`. Local time is `2016-10-23 10:55:44`.

This timezone is currently in daylight saving time.
Standard time begins on: `November 6, 2016 2:00 am`.

FIGURE 2-1: Personalize the settings of your WordPress blog on the General Settings screen.

REMEMBER

The general Internet-surfing public can view your site title and tagline, which various search engines (such as Google, Yahoo!, and Bing) grab for indexing, so choose your words with this fact in mind. (You can find more information about search engine optimization, or SEO, in Book 5.)

4. **In the WordPress Address (URL) text box, enter the location where you installed the WordPress software.**

   Be sure to include the `http://` portion of the URL and the entire path to your WordPress installation — for example, `http://`*`yourdomain.com`*. If you installed WordPress in a folder in your directory — in a folder called `wordpress`, for example — you need to make sure to include it here. If you installed WordPress in a folder called `wordpress`, the WordPress address would be `http://`*`yourdomain.com`*`/wordpress` (where *`yourdomain.com`* is your domain name).

5. **In the Site Address (URL) text box, enter the web address where people can find your blog by using their web browsers.**

   Typically, what you enter here is the same as your domain name (`http://`*`yourdomain.com`*). If you install WordPress in a subdirectory of your site, the WordPress installation URL is different from the Site Address (URL). If you install WordPress at `http://`*`yourdomain.com`*`/wordpress/` (WordPress Address (URL)), you need to tell WordPress that you want the blog to appear at `http://`*`yourdomain.com`* (the Site Address (URL)).

6. **Enter your email address in the Email Address text box.**

   WordPress sends messages about the details of your site to this email address. When a new user registers for your site, for example, WordPress sends you an email alert.

7. **Select a Membership option.**

   Select the *Anyone Can Register* check box if you want to keep registration on your site open to anyone. Leave the check box deselected if you'd rather not have open registration on your site.

8. **From the New User Default Role drop-down list, select the role that you want new users to have when they register for user accounts in your site.**

   You need to understand the differences among the user roles because each user role is assigned a different level of access to your site, as follows:

   - *Subscriber:* The default role. You may want to maintain this role as the one assigned to new users, particularly if you don't know who's registering. Subscribers have access to the Dashboard screen, and they can view and change the options in their profiles in the Profile screen. (They don't have access to your account settings, however — only to their own.) Each user can change his username, email address, password, bio, and other descriptors in his user profile. Subscribers' profile information is stored in the WordPress database, and your site remembers them each time they visit, so they don't have to complete the profile information each time they leave comments on your site.
   - *Contributor:* In addition to the access subscribers have, contributors can upload files and write, edit, and manage their own posts. Contributors can write posts, but they can't publish the posts; the administrator reviews all contributor posts and decides whether to publish them. This setting is a nice way to moderate content written by new authors.
   - *Author:* In addition to the access contributors have, authors can publish and edit their own posts.
   - *Editor:* In addition to the access authors have, editors can moderate comments, manage categories, manage links, edit pages, and edit other authors' posts.
   - *Administrator:* Administrators can edit all the options and settings in the WordPress site.

9. **From the Timezone drop-down list, select your UTC time.**

   This setting refers to the number of hours that your local time differs from Coordinated Universal Time (UTC). This setting ensures that all the posts and comments left on your blog are time-stamped with the correct time. If you're lucky enough, as I am, to live on the frozen tundra of Wisconsin, which is in the Central Standard Time (CST) Zone, you choose **–6** from the drop-down list because that time zone is 6 hours off UTC.

TIP

If you're unsure what your UTC time is, you can find it at the Greenwich Mean Time (`https://greenwichmeantime.com`) website. GMT is essentially the same thing as UTC. WordPress also lists some major cities in the Timezone drop-down list so that you can more easily choose your time zone if you don't know it. (Figure 2-1 displays Chicago in the drop-down menu because that's the major city closest to where I live.)

Note: The following options aren't shown in Figure 2-1; you need to scroll down to access them.

10. **For the Date Format option, select the format in which you want the date to appear in your site.**

    This setting determines the style of the date display. The default format displays time like this: January 1, 2017.

    Select a different format by selecting the radio button to the left of the option you want. You can also customize the date display by selecting the Custom option and entering your preferred format in the text box provided. If you're feeling adventurous, you can find out how to customize the date format at `https://codex.wordpress.org/Formatting_Date_and_Time`.

11. **For the Time Format option, select the format for how you want time to display on your site.**

    This setting is the style of the time display. The default format displays time like this: 12:00 a.m.

    Select a different format by selecting the radio button to the left of the option you want. You can also customize the date display by selecting the Custom option and entering your preferred format in the text box provided; find out how at `https://codex.wordpress.org/Formatting_Date_and_Time`.

TIP

You can format the time and date in several ways. Go to `http://us3.php.net/manual/en/function.date.php` to find potential formats at the PHP website.

12. **From the Week Starts On drop-down list, select the day on which the week starts in your calendar.**

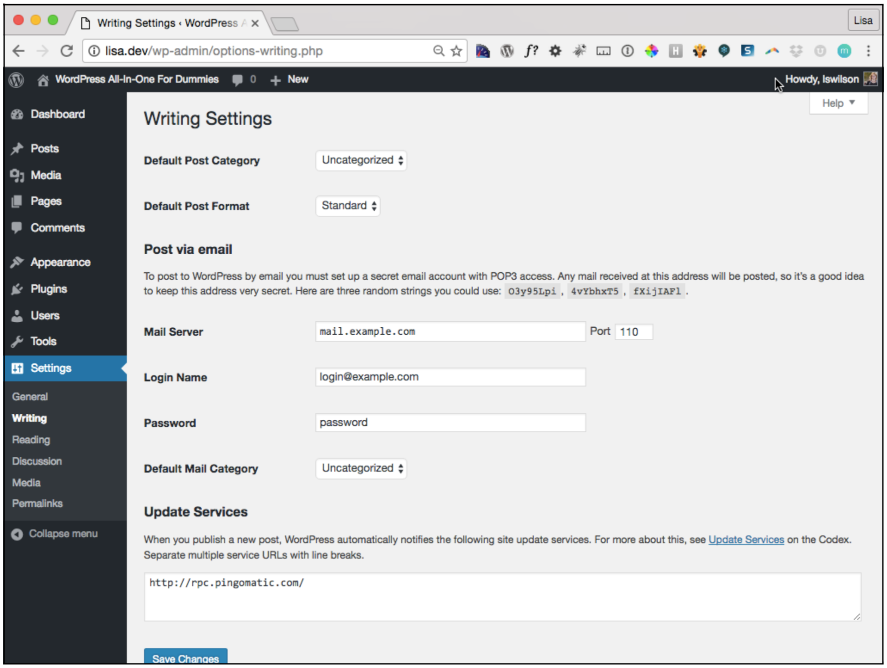
    Displaying the calendar in the sidebar of your site is optional. If you choose to display the calendar, you can select the day of the week on which you want your calendar to start.

REMEMBER

Click the Save Changes button at the bottom of any page where you set new options. If you don't click Save Changes, your settings aren't saved, and WordPress reverts to the preceding options. Each time you click the Save Changes button, WordPress reloads the current screen, displaying the new options that you just set.

Writing

Choose Settings➪Writing, and the Writing Settings screen opens. (See Figure 2-2.)



Writing Settings

Default Post Category: Uncategorized

Default Post Format: Standard

Post via email

To post to WordPress by email you must set up a secret email account with POP3 access. Any mail received at this address will be posted, so it's a good idea to keep this address very secret. Here are three random strings you could use: `O3y95Lpi`, `4vYbhxT5`, `fXijIAFl`.

Mail Server: mail.example.com Port: 110

Login Name: login@example.com

Password: password

Default Mail Category: Uncategorized

Update Services

When you publish a new post, WordPress automatically notifies the following site update services. For more about this, see Update Services on the Codex. Separate multiple service URLs with line breaks.

```
http://rpc.pingomatic.com/
```

FIGURE 2-2: The Writing Settings screen.

This screen of the Dashboard lets you set some basic options for writing your content. Table 2-1 gives you some information on choosing how your content looks and how WordPress handles some specific conditions.

After you set your options, be sure to click the Save Changes button; otherwise, the changes won't take effect.

TABLE 2-1 Writing Settings Options

Option	Function	Default
Default Post Category	Select the category that WordPress defaults to any time you forget to choose a category when you publish a post.	Uncategorized
Default Post Format	Select the format that WordPress defaults to any time you create a post and don't assign a post format. (This option is theme-specific; not all themes support post formats. See Book 6, Chapter 6.)	Standard
Post via Email	Publish content from your email account by entering the email and server information for the account you'll be using to send posts to your WordPress site.	N/A
Default Mail Category	Sets the category that posts via email get submitted to when these types of posts are published.	Uncategorized
Update Services ***Note:*** This option is available only if you allow your site to be indexed by search engines (covered in the Reading settings section).	Indicates which ping service you want to use to notify the world that you've made updates, or new posts, to your blog. The default, XML-RPC (`http://rpc.pingomatic.com`), updates all the popular services simultaneously.	`http://rpc.pingomatic.com`

TIP

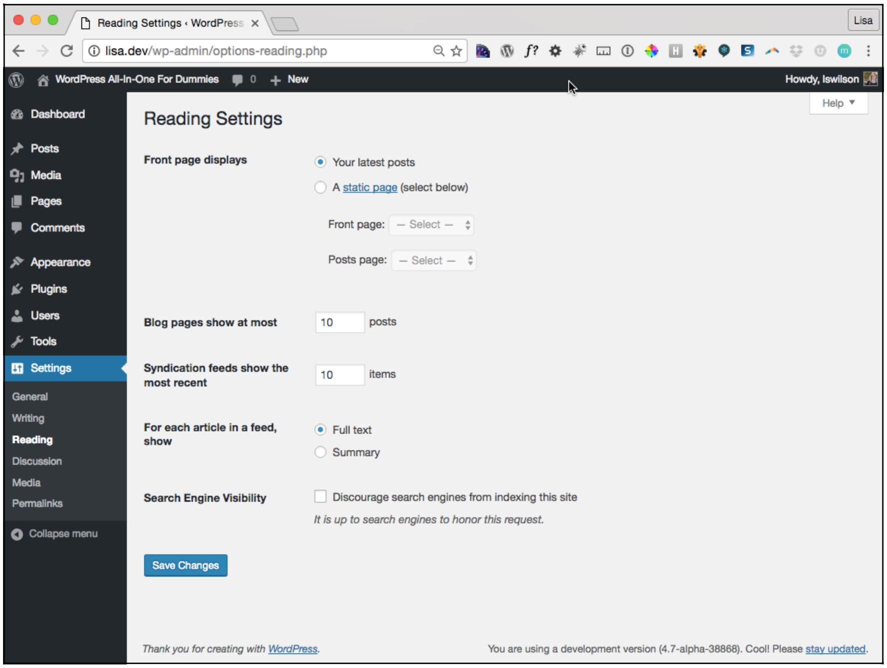
Go to `https://codex.wordpress.org/Update_Services` for comprehensive information on update services.

Reading

The third item in the Settings drop-down list is Reading. Choose Settings➪Reading to open the Reading Settings screen. (See Figure 2-3.)

You can set the following options on the Reading Settings screen:

- **Front Page Displays:** Select the radio button to show a page instead of your latest posts on the front page of your site. You can find detailed information about using a static page for your front page in Book 4, Chapter 2, including information on how to set it up by using the fields in this section that appear after you select the radio button.
- **Blog Pages Show at Most:** In the text box, enter the maximum number of posts you want to appear on each blog page (default: 10).



Reading Settings

Front page displays
● Your latest posts
○ A static page (select below)
Front page: — Select —
Posts page: — Select —

Blog pages show at most 10 posts

Syndication feeds show the most recent 10 items

For each article in a feed, show
● Full text
○ Summary

Search Engine Visibility □ Discourage search engines from indexing this site
It is up to search engines to honor this request.

Save Changes

Thank you for creating with WordPress.

You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

FIGURE 2-3: The Reading Settings screen.

- **Syndication Feeds Show the Most Recent:** In the text box, enter the maximum number of posts that you want to appear in your RSS feed at any time (default: 10).
- **For Each Article in a Feed, Show:** Select the Full Text or Summary radio button. Full Text publishes the entire post to your RSS feed, whereas Summary publishes an excerpt. (Check out Book 1, Chapter 1 for more information on WordPress RSS feeds.)
- **Search Engine Visibility:** By default, your website is visible to all search engines, such as Google and Yahoo!. If you don't want your site to be visible to search engines, select the check box labeled Discourage Search Engines from Indexing This Site.

TIP

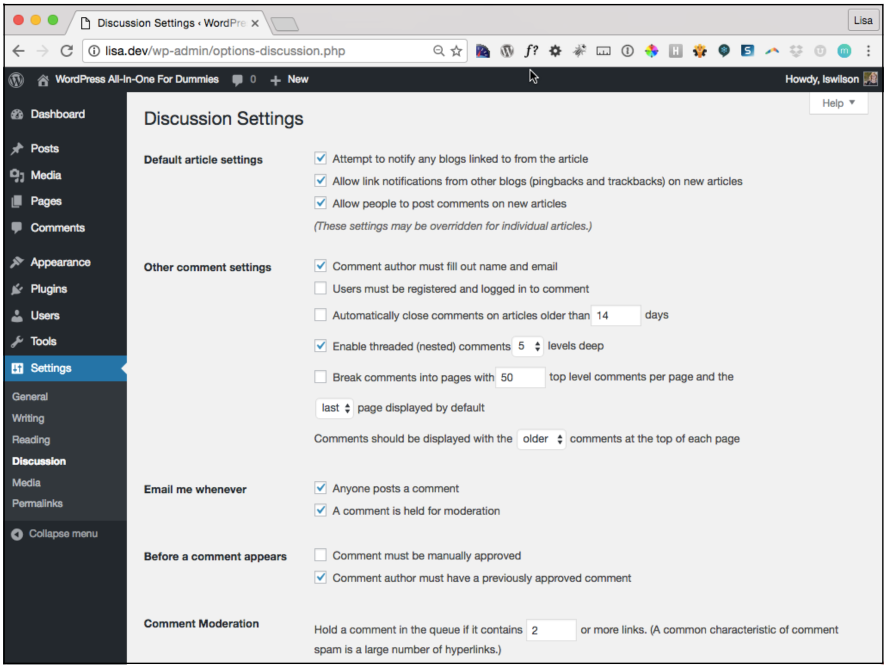
Generally, you want search engines to be able to find your site. If you have special circumstances, however, you may want to enforce privacy on your site. A friend of mine has a family blog, for example, and she blocks search engine access to it because she doesn't want search engines to find it. When you have privacy enabled, search engines and other content bots can't find your website.

REMEMBER

Be sure to click the Save Changes button after you set all your options on the Reading Settings screen to make the changes take effect.

Discussion

Discussion is the fourth item on the Settings menu list; choose Settings ➪ Discussion to open the Discussion Settings screen. (See Figure 2-4.) The sections of this screen let you set options for handling comments and publishing posts to your site.



Discussion Settings

Default article settings

☑ Attempt to notify any blogs linked to from the article
☑ Allow link notifications from other blogs (pingbacks and trackbacks) on new articles
☑ Allow people to post comments on new articles
(These settings may be overridden for individual articles.)

Other comment settings

☑ Comment author must fill out name and email
☐ Users must be registered and logged in to comment
☐ Automatically close comments on articles older than 14 days
☑ Enable threaded (nested) comments 5 levels deep
☐ Break comments into pages with 50 top level comments per page and the last page displayed by default
Comments should be displayed with the older comments at the top of each page

Email me whenever

☑ Anyone posts a comment
☑ A comment is held for moderation

Before a comment appears

☐ Comment must be manually approved
☑ Comment author must have a previously approved comment

Comment Moderation

Hold a comment in the queue if it contains 2 or more links. (A common characteristic of comment spam is a large number of hyperlinks.)

FIGURE 2-4: The Discussion Settings screen.

The following sections cover the options available to you on the Discussion Settings screen, which deals mainly with how comments and trackbacks are handled in your site.

Default Article Settings

With the Default Article Settings options, you can tell WordPress how to handle post notifications. Here are your options:

- **Attempt to Notify Any Blogs Linked to from the Article:** If you select this check box, your site sends a notification (or *ping*) to any site you've linked to in your posts. This notification is also commonly referred to as a *trackback.* (Find out more about trackbacks in Book 3, Chapter 4.) Deselect this check box if you don't want these notifications sent.

- **Allow Link Notifications from Other Blogs (Pingbacks and Trackbacks) on New Articles:** By default, this check box is selected, and your site accepts notifications via pings or trackbacks from other sites that have linked to yours. Any trackbacks or pings sent to your site appear on your site in the Comments section of the post. If you deselect this check box, your site doesn't accept pingbacks or trackbacks from other sites.
- **Allow People to Post Comments on New Articles:** By default, this check box is selected, and people can leave comments on your posts. If you deselect this check box, no one can leave comments on your content. (You can override these settings for individual articles. Find more information about this process in Book 4, Chapter 1.)

Other Comment Settings

The Other Comment Settings section tells WordPress how to handle comments:

- **Comment Author Must Fill Out Name and Email:** Enabled by default, this option requires all commenters on your site to fill in the Name and Email fields when leaving comments. This option can really help you combat comment spam. (See Book 3, Chapter 4 for information on comment spam.) Deselect this check box to disable this option.
- **Users Must Be Registered and Logged in to Comment:** Not enabled by default, this option allows you to accept comments on your site only from people who are registered and logged in as users on your site. If the user isn't logged in, she sees a message that reads `You must be logged in in order to leave a comment.`
- **Automatically Close Comments on Articles Older Than *X* Days:** Select the check box next to this option to tell WordPress you want comments on older articles to be closed automatically. Fill in the text box with the number of days you want to wait before WordPress closes comments on articles (default: 14).

  REMEMBER

  Many people use this very effective antispam technique to keep comment and trackback spam down on their sites.
- **Enable Threaded (Nested) Comments *X* Levels Deep:** From the drop-down list, you can select the level of threaded comments you want to have on your site. The default is five; you can choose up to ten levels. Instead of displaying all comments on your site in chronological order, nesting them allows you and your readers to reply to comments within the comment itself.
- **Break Comments into Pages with *X* Top Level Comments per Page and the Last/First Page Displayed by Default:** Fill in the text box with the number of comments you want to appear on one page (default: 50). This setting can really help sites that receive a large number of comments. It

provides you the ability to break the long string of comments into several pages, which makes them easier to read and helps speed the load time of your site because the page isn't loading such a large number of comments at once. If you want the last (most recent) or first page of comments to display, choose Last or First from the drop-down list.

- **Comments Should Be Displayed with the Older/Newer Comments at the Top of Each Page:** From the drop-down list, choose Older or Newer. Older displays the comments on your site in the order oldest to newest. Newer does the opposite: It displays the comments on your site in the order newest to oldest.

Email Me Whenever

The two options in the Email Me Whenever section are enabled by default:

- **Anyone Posts a Comment:** Enabling this option means that you receive an email notification whenever anyone leaves a comment on your site. Deselect the check box if you don't want to be notified by email about every new comment.
- **A Comment Is Held for Moderation:** This option lets you receive an email notification whenever a comment is awaiting your approval in the comment moderation queue. (See Book 3, Chapter 4 for more information about the comment moderation queue.) You need to deselect this option if you don't want to receive this notification.

Before a Comment Appears

The two options in the Before a Comment Appears section tell WordPress how you want WordPress to handle comments before they appear in your blog:

- **Comment Must Be Manually Approved:** Disabled by default, this option keeps every single comment left on your site in the moderation queue until you, as the administrator, log in and approve it. Select this check box to enable this option.
- **Comment Author Must Have a Previously Approved Comment:** Enabled by default, this option requires comments posted by all first-time commenters to be sent to the comment moderation queue for approval by the administrator of the site. After comment authors have been approved for the first time, they remain approved for every comment thereafter (and this setting can't be changed). WordPress stores each comment author's email address in the database, and any future comments that match any stored emails are approved automatically. This feature is another measure that WordPress has built in to combat comment spam.

Comment Moderation

In the Comment Moderation section, you can set options to specify what types of comments are held in the moderation queue to await your approval.

To prevent spammers from spamming your blog with a *ton* of links, enter a number in the Hold a Comment in the Queue If It Contains *X* or More Links text box. The default number of links allowed is 2. Try that setting, and if you find that you're getting a lot of spam comments that contain links, consider dropping that number to 1, or even 0, to prevent those comments from being published on your site. Sometimes, legitimate commenters include a link or two in the body of their comments; after a commenter is marked as approved, she's no longer affected by this method of spam protection.

The large text box in the Comment Moderation section (not shown in Figure 2-4 because it's at the bottom of the page) lets you type keywords, URLs, email addresses, and IP addresses so that if they appear in comments, you want to hold those comments in the moderation queue for your approval.

Comment Blacklist

In this section, type a list of words, URLs, email addresses, and/or IP addresses that you want to flat-out ban from your site. Items placed here don't even make it into your comment moderation queue; the WordPress system filters them as spam. I'd give examples of blacklist words, but the words I have in my blacklist aren't family-friendly and have no place in a nice book like this one.

WHAT ARE AVATARS, AND HOW DO THEY RELATE TO WORDPRESS?

An *avatar* is an online graphical representation of a person. It's a small icon that people use to represent themselves on the web in areas where they participate in conversations, such as discussion forums and blog comments.

Gravatars are globally recognized avatars; they're avatars that you can take with you wherever you go. They appear alongside comments, posts, and discussion forums as long as the site you're interacting with is Gravatar-enabled. In October 2007, Automattic, the core group behind the WordPress platform, purchased the Gravatar service and integrated it into WordPress so that everyone could enjoy and benefit from the service.

Gravatars aren't automatic; you need to sign up for an account with Gravatar so that you can receive an avatar via your email address. Find out more about Gravatar by visiting `http://gravatar.com`.

Avatars

The final section of the Discussion Settings screen is Avatars. (See the nearby sidebar "What are avatars, and how do they relate to WordPress?" for information about avatars.) In this section, you can select different settings for the use and display of avatars on your site, as follows:

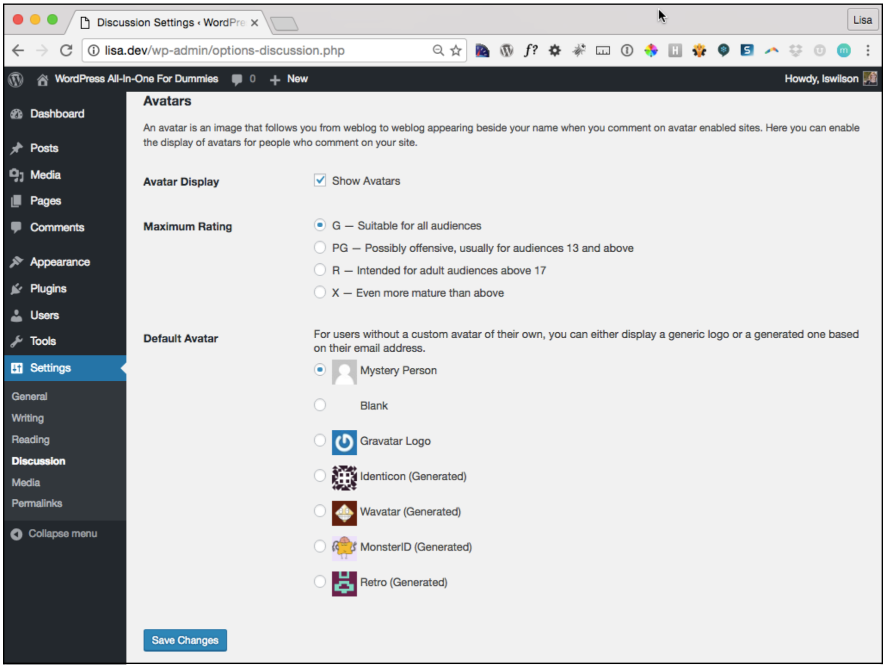
1. **For the Avatar Display option (see Figure 2-5), decide how to display avatars on your site.**

   Select the Show Avatars check box to have your blog display avatars.

2. **Next to the Maximum Rating option, select the radio button for the maximum avatar rating you want to allow for the avatars that do appear on your site.**

   This feature works much like the American movie-rating system. You can select G, PG, R, and X ratings for the avatars that appear on your site, as shown in Figure 2-5. If your site is family-friendly, you probably don't want it to display R- or X-rated avatars, so select G or PG.

3. **Select the radio button for a default avatar next to the Default Avatar option (see Figure 2-5).**



Avatars

An avatar is an image that follows you from weblog to weblog appearing beside your name when you comment on avatar enabled sites. Here you can enable the display of avatars for people who comment on your site.

Avatar Display ☑ Show Avatars

Maximum Rating
● G — Suitable for all audiences
○ PG — Possibly offensive, usually for audiences 13 and above
○ R — Intended for adult audiences above 17
○ X — Even more mature than above

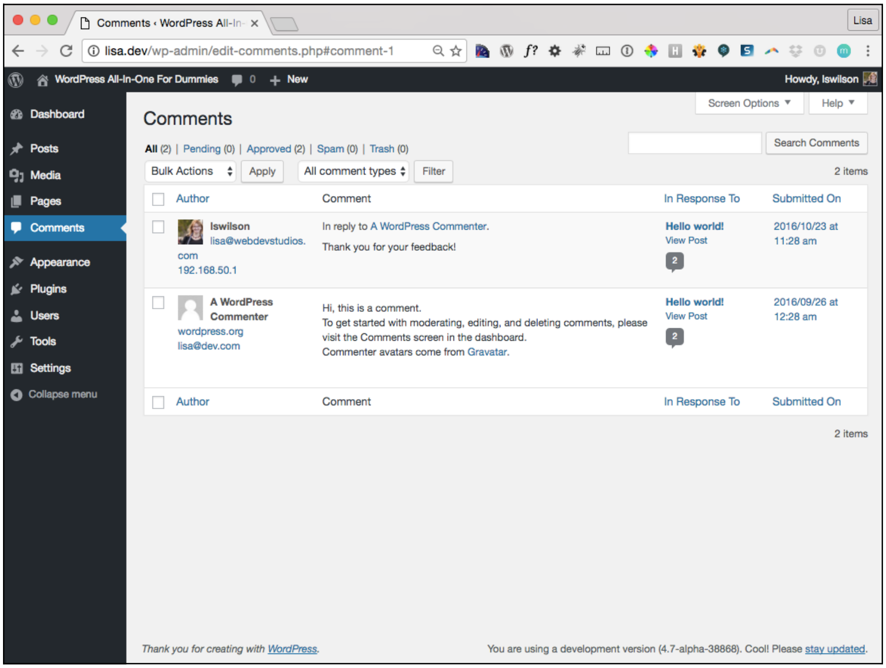
Default Avatar
For users without a custom avatar of their own, you can either display a generic logo or a generated one based on their email address.
● Mystery Person
○ Blank
○ Gravatar Logo
○ Identicon (Generated)
○ Wavatar (Generated)
○ MonsterID (Generated)
○ Retro (Generated)

Save Changes

FIGURE 2-5: Default avatars that you can display in your blog.

Avatars appear in a couple of places:

- **The Comments screen of the Dashboard:** In Figure 2-6, the first two comments display either the commenter's avatar or the default avatar if the commenter hasn't created his or her own.



Author	Comment	In Response To	Submitted On
lswilson lisa@webdevstudios.com 192.168.50.1	In reply to A WordPress Commenter. Thank you for your feedback!	Hello world! View Post 2	2016/10/23 at 11:28 am
A WordPress Commenter wordpress.org lisa@dev.com	Hi, this is a comment. To get started with moderating, editing, and deleting comments, please visit the Comments screen in the dashboard. Commenter avatars come from Gravatar.	Hello world! View Post 2	2016/09/26 at 12:28 am
Author	Comment	In Response To	Submitted On

2 items
Thank you for creating with WordPress.
You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

FIGURE 2-6: Comment authors' avatars appear in the Comments screen of the WordPress Dashboard.

- **The comments on individual blog posts in your blog:** Comments displayed on your website show the users' avatars. If a user doesn't have an avatar assigned from `http://gravatar.com/`, the default avatar appears.

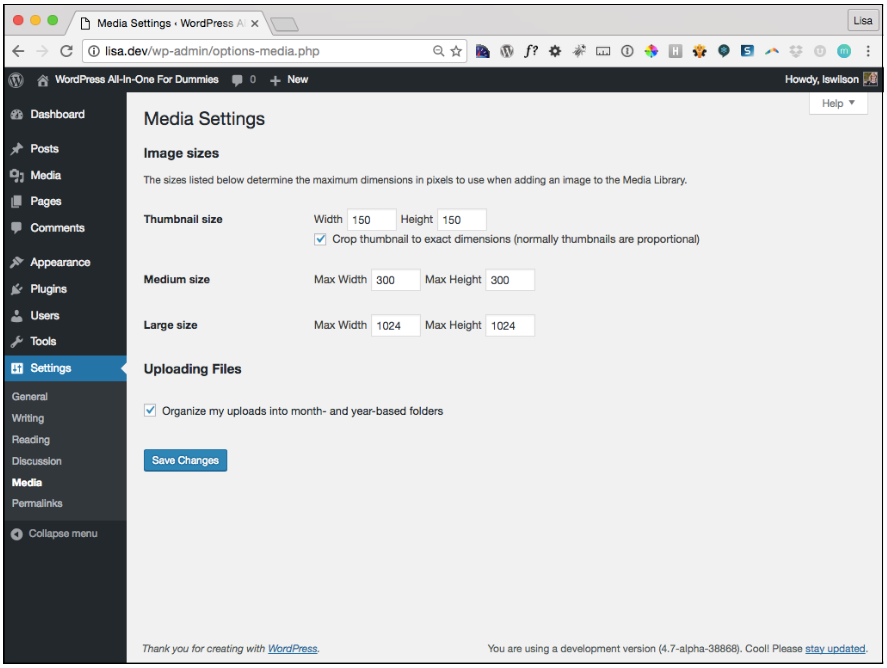
To enable the display of avatars in comments on your blog, the Comments template (`comments.php`) in your active theme has to contain the code to display them. Hop on over to Book 6 to find information about themes and templates, including template tags that allow you to display avatars in your comment list.

REMEMBER

Click the Save Changes button after you set all your options on the Discussion Settings screen to make the changes take effect.

Media

The next item on the Settings menu is Media. Choose Settings➪Media to make the Media Settings screen open. (See Figure 2-7.)



Media Settings

Image sizes

The sizes listed below determine the maximum dimensions in pixels to use when adding an image to the Media Library.

Thumbnail size: Width 150 Height 150

☑ Crop thumbnail to exact dimensions (normally thumbnails are proportional)

Medium size: Max Width 300 Max Height 300

Large size: Max Width 1024 Max Height 1024

Uploading Files

☑ Organize my uploads into month- and year-based folders

Save Changes

Thank you for creating with WordPress.

You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

FIGURE 2-7: The Media Settings screen.

On the Media Settings screen, you can configure the options for how your image files (graphics and photos) are resized for use in your site.

The first set of options on the Media Settings page deals with images. WordPress automatically resizes your images for you in three sizes. The dimensions are referenced in pixels first by width and then by height. (The setting 150 x 150, for example, means 150 pixels wide by 150 pixels high.)

- **Thumbnail Size:** The default is 150 x 150; enter the width and height of your choice. Select the Crop Thumbnail to Exact Dimensions check box to resize the thumbnail to the exact width and height you specify. Deselect this check box to make WordPress resize the image proportionally.
- **Medium Size:** The default is 300 x 300; enter the width and height numbers of your choice.
- **Large Size:** The default is 1024 x 1024; enter the width and height numbers of your choice.

TIP

Book 4 goes into detail about WordPress themes and templates, including how you can add image sizes other than just these three. You can use these additional image sizes in and around your website. There's also a feature called Featured Image, which you can use in posts and articles that display on archive and search results pages.

The last set of options on the Media Settings screen is the Uploading Files section. Here, you can tell WordPress where to store your uploaded media files. Select the Organize My Uploads into Month- and Year-Based Folders check box to have WordPress organize your uploaded files in folders by month and by year. Files you upload in February 2017, for example, would be in the following folder: `/wp-content/uploads/2017/02/`. Likewise, files you upload in January 2017 would be in `/wp-content/uploads/2017/01/`.

This check box is selected by default; deselect it if you don't want WordPress to organize your files by month and year.

REMEMBER

Be sure to click the Save Changes button to save your configurations!

Book 4, Chapter 3 details how to insert images into your WordPress posts and pages.

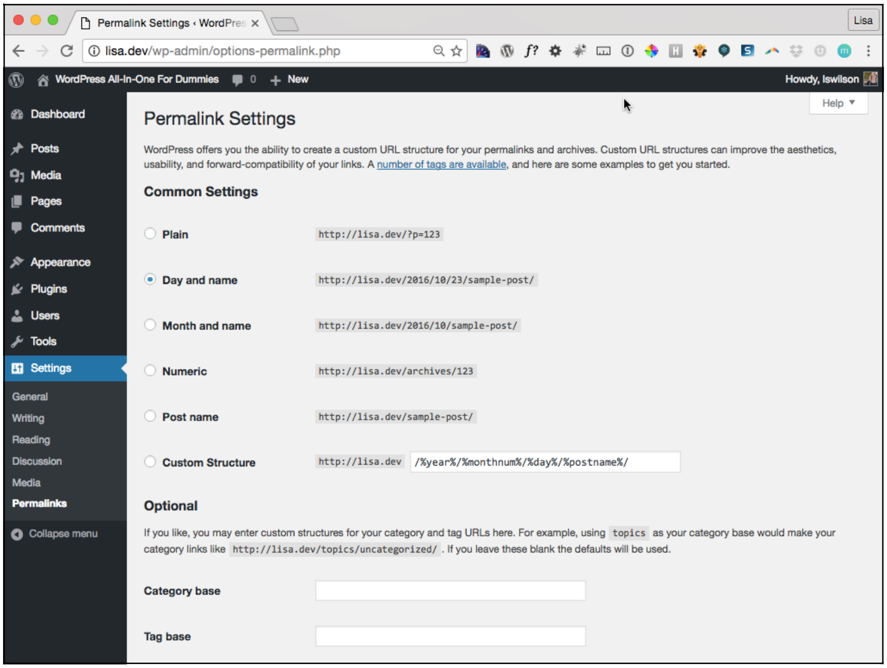
Permalinks

The next link on the Settings menu is Permalinks. Choose Settings➪Permalinks to view the Permalink Settings screen, shown in Figure 2-8.

Each WordPress post is assigned its own web page, and the address (or URL) of that page is called a *permalink.* Posts that you see in WordPress blogs usually have the post permalink in four typical areas:

- The title of the post
- The Comments link below the post
- A Permalink link that appears (in most themes) below the post
- The titles of posts appearing in a Recent Posts sidebar

Permalinks are meant to be permanent links to your posts (which is where the *perma* part of that word comes from, in case you're wondering). Ideally, the permalink of a post never changes. WordPress creates the permalink automatically when you publish a new post.



Permalink Settings

WordPress offers you the ability to create a custom URL structure for your permalinks and archives. Custom URL structures can improve the aesthetics, usability, and forward-compatibility of your links. A number of tags are available, and here are some examples to get you started.

Common Settings

○ Plain `http://lisa.dev/?p=123`

● Day and name `http://lisa.dev/2016/10/23/sample-post/`

○ Month and name `http://lisa.dev/2016/10/sample-post/`

○ Numeric `http://lisa.dev/archives/123`

○ Post name `http://lisa.dev/sample-post/`

○ Custom Structure `http://lisa.dev` `/%year%/%monthnum%/%day%/%postname%/`

Optional

If you like, you may enter custom structures for your category and tag URLs here. For example, using `topics` as your category base would make your category links like `http://lisa.dev/topics/uncategorized/` . If you leave these blank the defaults will be used.

Category base

Tag base

FIGURE 2-8: The Permalink Settings screen.

A plain post permalink in WordPress looks like this:

```
http://yourdomain.com/?p=100/
```

The `p` stands for *post*, and `100` is the ID assigned to the individual post. You can leave the permalinks in this format if you don't mind letting WordPress associate each post with an ID number.

WordPress, however, lets you take your permalinks to the beauty salon for a bit of makeover so that you can create pretty permalinks. You probably didn't know that permalinks could be pretty, did you?

WARNING

Changing the structure of your permalinks in the future affects the permalinks for all the posts on your site . . . new and old. Keep this fact in mind if you ever decide to change the permalink structure. An especially important reason: Search engines (such as Google and Yahoo!) index the posts on your site by their permalinks, so changing the permalink structure makes all those indexed links obsolete.

Making your post links pretty

Pretty permalinks are links that are more pleasing to the eye than standard links and, ultimately, more pleasing to search-engine spiders. (See Book 5 for an explanation of why search engines like pretty permalinks.) Pretty permalinks look something like this:

```
http://yourdomain.com/2017/01/01/pretty-permalinks
```

Break down that URL, and you see the date when the post was made, in year/month/day format. You also see the topic of the post.

To choose how your permalinks look, choose Settings➪Permalinks in the Dashboard. The Permalink Settings screen opens. (Refer to Figure 2-8.)

On this page, you can find several options for creating permalinks:

- **Plain** (ugly permalinks): WordPress assigns an ID number to each blog post and creates the URL in this format: `http://`*`yourdomain.com`*`/?p=100`.
- **Day and Name** (pretty permalinks): For each post, WordPress generates a permalink URL that includes the year, month, day, and post slug/title: `http://`*`yourdomain`*`.com/2017/01/01/sample-post/`.
- **Month and Name** (also pretty permalinks): For each post, WordPress generates a permalink URL that includes the year, month, and post slug/title: `http://`*`yourdomain.com`*`/2017/01/sample-post/`.
- **Numeric** (not so pretty): WordPress assigns a numerical value to the permalink. The URL is created in this format: `http://`*`yourdomain.com`*`/archives/123`.
- **Post Name** (my preferred): WordPress takes the title of your post or page and generates the permalink URL from those words. If I were to create a page that contains my bibliography of books and give it the title *Books,* with the Post Name permalink structure, WordPress would create the permalink URL `http://lisasabin-wilson.com/books`. Likewise, a post titled *WordPress Is Awesome* would get a permalink URL like this `http://lisasabin-wilson.com/wordpress-is-awesome`.
- **Custom Structure:** WordPress creates permalinks in the format you choose. You can create a custom permalink structure by using tags or variables, as I discuss in the next section.

To create the pretty-permalink structure, select the Day and Name radio button; then click the Save Changes button at the bottom of the page.

Customizing your permalinks

A *custom permalink structure* is one that lets you define which variables you want to see in your permalinks by using the tags in Table 2-2.

TABLE 2-2 **Custom Permalinks**

Permalink Tag	Results
`%year%`	Four-digit year (such as `2017`)
`%monthnum%`	Two-digit month (such as `01` for January)
`%day%`	Two-digit day (such as `30`)
`%hour%`	Two-digit hour of the day (such as `15` for 3 p.m.)
`%minute%`	Two-digit minute (such as `45`)
`%second%`	Two-digit second (such as `10`)
`%postname%`	Text — usually, the post name — separated by hyphens (such as `making-pretty-permalinks`)
`%post_id%`	The unique numerical ID of the post (such as `344`)
`%category%`	The text of the category name in which you filed the post (such as `books-i-read`)
`%author%`	The text of the post author's name (such as `lisa-sabin-wilson`)

If you want your permalink to show the year, month, day, category, and post name, select the Custom Structure radio button in the Customize Permalink Structure page, and type the following tags in the Custom Structure text box:

```
/%year%/%monthnum%/%day%/%category%/%postname%/
```

If you use this permalink format, a link for a post made on January 1, 2017, called WordPress All-in-One For Dummies and filed in the Books I Read category would look like this:

```
http://yourdomain.com/2017/01/01/books-i-read/wordpress-all-in-one-for-dummies/
```

REMEMBER

Be sure to include the slashes before tags, between tags, and at the very end of the string of tags. This format ensures that WordPress creates correct, working permalinks by using the correct rewrite rules located in the `.htaccess` file for your site. (See the following section for more information on rewrite rules and `.htaccess` files.)

REMEMBER

Don't forget to click the Save Changes button at the bottom of the Customize Permalink Structure screen; otherwise, your permalink changes aren't saved!

Making sure that your permalinks work with your server

After you set the format for the permalinks for your site by using any options other than the default, WordPress writes specific rules, or directives, to the .htaccess file on your web server. The .htaccess file in turn communicates to your web server how it should serve up the permalinks, according to the permalink structure you chose to use.

To use an .htaccess file, you need to know the answers to two questions:

- Does your web server configuration use and give you access to the .htaccess file?
- Does your web server run Apache with the mod_rewrite module?

If you don't know the answers, contact your hosting provider to find out.

If the answer to both questions is yes, proceed to the following section. If the answer is no, check out the "Working with servers that don't use Apache mod_rewrite" sidebar in this chapter.

Creating .htaccess files

You and WordPress work together in glorious harmony to create the .htaccess file that lets you use a pretty-permalink structure in your blog.

To create the .htaccess file, you need to be comfortable uploading files via SFTP and changing permissions. Turn to Book 2, Chapter 2 if you're unfamiliar with either of those tasks.

TIP

If .htaccess already exists, you can find it in the root of your directory on your web server — that is, the same directory where you find your wp-config.php file. If you don't see it in the root directory, try changing the options of your SFTP client to show hidden files. (Because the .htaccess file starts with a period [.], it may not be visible until you configure your SFTP client to show hidden files.)

If you don't already have an .htaccess file on your web server, follow these steps to create an .htaccess file on your web server and create a new permalink structure:

1. **Using a plain-text editor (such as Notepad for Windows or TextEdit for a Mac), create a blank file; name it `htaccess.txt` and upload it to your web server via SFTP.**

2. **After the file is uploaded to your web server, rename the file `.htaccess` (notice the period at the beginning), and make sure that it's writable by the server by changing permissions to either 755 or 777.**

3. **Create the permalink structure on the Customize Permalink Structure page of your WordPress Dashboard.**

4. **Click the Save Changes button at the bottom of the Customize Permalink Structure page.**

   WordPress inserts into the `.htaccess` file the specific rules necessary for making the permalink structure functional on your site.

If you follow the preceding steps correctly, you have an `.htaccess` file on your web server with the correct permissions set so that WordPress can write the correct rules to it. Your pretty-permalink structure works flawlessly. Kudos!

If you open the `.htaccess` file and look at it now, you see that it's no longer blank. It should have a set of code in it called *rewrite rules*, which looks something like this:

```
# BEGIN WordPress
<IfModule mod_rewrite.c>
RewriteEngine On
RewriteBase /
RewriteCond %{REQUEST_FILENAME} !-f
RewriteCond %{REQUEST_FILENAME} !-d
RewriteRule . /index.php [L]
</IfModule>

# END WordPress
```

TECHNICAL STUFF

I could delve deeply into `.htaccess` and all the things you can do with this file, but I'm restricting this chapter to how it applies to WordPress permalink structures. If you want to unlock more mysteries about `.htaccess`, check out "Comprehensive Guide to .htaccess" at `www.javascriptkit.com/howto/htaccess.shtml`.

WORKING WITH SERVERS THAT DON'T USE APACHE MOD_REWRITE

Using permalink structures requires your web hosting provider to have a specific Apache module option called `mod_rewrite` activated on its servers. If your web hosting provider doesn't have this item activated on its servers, or if you're hosting your site on a Windows server, the custom permalinks work only if you type **index.php** in front of any custom permalink tags.

Create the custom permalink tags like this:

```
/index.php/%year%/%month%/%date%/%postname%/
```

This format creates a permalink like this:

```
http://yourdomain.com/index.php/2017/01/01/wordpress-all-in-one-for-
      dummies
```

You don't need an `.htaccess` file to use this permalink structure.

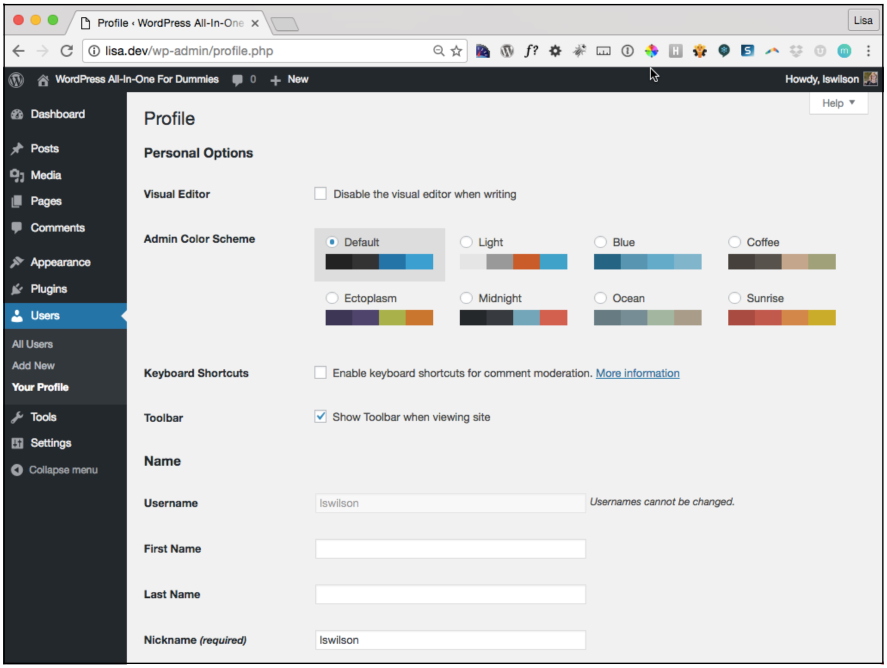
Creating Your Personal Profile

To personalize your blog, visit the Profile screen of your WordPress Dashboard.

To access the Profile screen, hover over the Users link in the Dashboard navigation menu, and click the Your Profile link. The Profile screen appears, as shown in Figure 2-9.

Here are the settings on this page:

- **Personal Options:** In the Personal Options section, you can set these preferences for your site:
  - *Visual Editor:* Select this check box to indicate that you want to use the Visual Editor when writing your posts. The Visual Editor refers to the formatting options you find on the Write Post screen (discussed in detail in Book 4, Chapter 1). By default, the check box is deselected, which means that the Visual Editor is off. To turn it on, select the check box.
  - *Admin Color Scheme:* These options set the colors for your Dashboard. The default is the Gray color scheme, but you have other color options: Light, Blue, Coffee, Ectoplasm, Midnight, Ocean, and Sunrise.



Profile

Personal Options

Visual Editor □ Disable the visual editor when writing

Admin Color Scheme ● Default ○ Light ○ Blue ○ Coffee ○ Ectoplasm ○ Midnight ○ Ocean ○ Sunrise

Keyboard Shortcuts □ Enable keyboard shortcuts for comment moderation. More information

Toolbar ☑ Show Toolbar when viewing site

Name

Username lswilson *Usernames cannot be changed.*

First Name

Last Name

Nickname *(required)* lswilson

FIGURE 2-9: Establish your profile details on the Profile screen.

- *Keyboard Shortcuts:* This check box enables you to use keyboard shortcuts for comment moderation. To find out more about keyboard shortcuts, click the More Information link; you're taken to the Keyboard Shortcuts page (`https://codex.wordpress.org/Keyboard_Shortcuts`) of the WordPress codex, which offers some helpful information

- *Toolbar:* This setting allows you to control the location of the admin toolbar (see Book 3, Chapter 1) on your site. By default, the admin toolbar displays at the top of every page of your site when you're viewing it in your browser. It's important to understand that the admin toolbar appears only to users who are logged in. Regular visitors who aren't logged in to your site can't see the admin toolbar.

» **Name:** Input personal information, such as your first name, last name, and nickname, and specify how you want your name to appear publicly. Fill in the text boxes with the requested information.

The rest of the options aren't shown in Figure 2-9; you have to scroll down to see them.

» **Contact Info:** In this section, provide your email address and other contact information to tell your visitors who you are and where they can contact you. Your email address is the only required entry in this section. This address is the one WordPress uses to notify you when you have new comments or new user registrations on your blog. Make sure to use a real email address so that you get these notifications. You can also insert your website URL into the website text field.

- **About Yourself:** Provide a little bio for yourself and change the password for your blog, if you want:
  - *Biographical Info:* Type a short bio in the Biographical Info text box. This information can appear publicly if you're using a theme that displays your bio, so be creative!

    REMEMBER

    When your profile is published to your website, anyone can view it, and search engines, such as Google and Yahoo!, can pick it up. Always be careful with the information in your profile. Think hard about the information you want to share with the rest of the world!
  - *Profile Picture:* Display the current photo that you've set in your Gravatar account. You can set up a profile picture or change your existing one, within your Gravatar account at `http://gravatar.com/`.
- **Account Management:** Manage your password and user sessions, as follows:
  - *New Password:* When you want to change the password for your blog, click the Generate Password button in the New Password section. You can use the password that WordPress generates for you or type your own password in the text field that appears.

    TIP

    Directly below the New Password text field is a password helper, where WordPress helps you create a secure password. It alerts you if the password you chose is too short or not secure enough by telling you that it's Weak or Very Weak. When creating a new password, use a combination of letters, numbers, and symbols to make it hard for anyone to guess (such as *b@Fmn2quDtnSLQblhml%jexA*). When you create a password that WordPress thinks is a good one, it lets you know by saying that the password is Strong.

    WARNING

    Change your password frequently. Some people on the Internet make it their business to attempt to hijack sites for their own malicious purposes. If you change your password monthly, you lower your risk by keeping hackers guessing.
  - *Sessions:* If you're logged into your site on several devices, you can log yourself out of those locations by clicking the Log Out Everywhere Else button. This option keeps you logged in at your current location but logs you out of any other location where you may be logged in. If you're not logged in anywhere else, the button is inactive, and a message appears that says `You are only logged in at this location`.

REMEMBER

When you finish setting all the options on the Profile screen, don't forget to click the Update Profile button to save your changes.

Setting Your Blog's Format

In addition to setting your personal settings in the Dashboard, you can manage the day-to-day maintenance of your site. The following sections take you through the links to these pages on the Dashboard navigation menus.

Posts

Hover your mouse over the Posts link on the navigation menu to reveal a submenu list with four links: All Posts, Add New, Categories, and Tags. Each link gives you the tools you need to publish content to your blog:

- **All Posts:** Opens the Posts screen, where a list of all the saved posts you've written on your site appears. On this screen, you can search for posts by date, category, or keyword. You can view all posts, only posts that have been published, or just posts that you've saved but haven't published *(drafts).* You can also edit and delete posts from this page. Check out Book 4, Chapter 1 for more information on editing posts on your site.
- **Add New:** Opens the Add New Post screen, where you can compose your posts, set the options for each post (such as assigning a post to a category, or making it a private or public post), and publish the post to your site. You can find more information on posts, post options, and publishing in Book 4, Chapter 1.

  TIP

  You can also get to the Add New Post screen by clicking the Add New button on the Posts screen or by clicking the +New link on the admin toolbar and selecting Post.
- **Categories:** Opens the Categories screen, where you can view, edit, add, and delete categories on your site. Find more information on creating categories in Book 3, Chapter 5.
- **Tags:** Opens the Tags screen in your WordPress Dashboard, where you can view, add, edit, and delete tags on your site. Book 3, Chapter 5 provides more information about tags and using them on your blog.

Media

Hover your mouse over the Media link on the navigation menu to reveal a submenu list with two links:

- **Library:** Opens the Media Library screen. On this screen, you can view, search, and manage all the media files you've ever uploaded to your WordPress site.
- **Add New:** Opens the Upload New Media screen, where you can use the built-in uploader to transfer media files from your computer to the media directory in WordPress. Book 4, Chapters 3 and 4 take you through the details of how to upload images, videos, and audio files by using the WordPress upload feature.

  TIP

  You can also get to the Upload New Media screen by clicking the Add New button on the Media Library screen or by clicking the +New link on the admin toolbar and selecting Media.

Pages

People use this feature to create pages on their sites such as About Me or Contact Me. Turn to Book 4, Chapter 2 for more information on pages. Hover your mouse over the Pages link on the navigation menu to reveal a submenu list with two links:

- **All Pages:** Opens the Pages screen, where you can search, view, edit, and delete pages in your WordPress site.
- **Add New:** Opens the Add New Page screen, where you can compose, save, and publish a new page on your site. Book 4, Chapter 2 describes the difference between a post and a page. The difference is subtle, but posts and pages are very different!

  You can also get to the Add New Page screen by clicking the Add New button on the Pages screen or by clicking the +New link on the admin toolbar and selecting Page.

Comments

Comments in the navigation menu don't have a submenu list of links. You simply click Comments to open the Comments screen, where WordPress gives you the options to view the following:

- **All:** Shows all comments that currently exist on your site, including approved, pending, and spam comments
- **Pending:** Shows comments that you haven't yet approved but are pending in the moderation queue
- **Approved:** Shows all comments that you previously approved
- **Spam:** Shows all the comments that are marked as spam
- **Trash:** Shows comments that you marked as Trash but haven't deleted permanently from your site

Book 3, Chapter 4 gives you details on how to use the Comments section of your WordPress Dashboard.

Appearance

When you hover your mouse over the Appearance link on the Dashboard navigation menu, a submenu list of links appears, displaying the following links:

- **Themes:** Opens the Themes screen, where you can manage the themes available on your site. Check out Book 6, Chapter 2 to find out about using themes on your WordPress site and managing themes on this page.
- **Customize:** Opens the Customizer screen, where you can edit various features available in the active theme on your site.
- **Widgets:** Opens the Widgets screen, where you can add, delete, edit, and manage the widgets that you use on your site.
- **Menus:** Opens the Menus screen, where you can build navigation menus that will appear on your site. Book 6, Chapter 1 provides information on creating menus by using this feature.
- **Header:** Opens the Header Image screen in the Customizer, where you can upload an image to use in the *header* (or top) of your WordPress site. This menu item and screen exist only if you're using a theme that has activated the Custom Header feature (covered in Book 6). The Twenty Seventeen theme is activated by default on all new WordPress sites, which is why I include this menu item in this list. Not all WordPress themes use the Custom Header feature, so you don't see this menu item if your theme doesn't take advantage of that feature.

- **Background:** Opens the Background Image screen in the Customizer, where you can upload an image to use as the background of your WordPress site design. Like the Custom Header option, the Custom Background option exists on the Appearances menu only if you have a theme that has activated the custom background feature (covered in Book 6).
- **Editor:** Opens the Edit Themes screen, where you can edit your theme templates. Book 6 has extensive information on themes and templates.

TIP

Uploading custom header and background images helps you individualize the visual design of your website. You can find more information on tweaking and customizing your WordPress theme in Book 6, as well as a great deal of information about how to use WordPress themes (including where to find, install, and activate them in your WordPress site) and detailed information about using WordPress widgets to display the content you want.

Book 6 provides information about WordPress themes and templates. You can dig deep into WordPress template tags and tweak an existing WordPress theme by using Cascading Style Sheets (CSS) to customize your theme a bit more to your liking.

Plugins

The next item in the navigation menu is Plugins. Hover your mouse over the Plugins link to view the submeu list:

- **Installed Plugins:** Opens the Plugins screen, where you can view all the plugins currently installed on your site. On this page, you also have the ability to activate, deactivate, and delete plugins on your blog. (Book 7 is all about plugins.)
- **Add New:** Opens the Add Plugins screen, where you can search for plugins from the official WordPress Plugin Directory by keyword, author, or tag. You can also install plugins directly to your site from the WordPress Plugin Directory; find out all about this exciting feature in Book 7, Chapter 2.
- **Editor:** Opens the Edit Plugins screen, where you can edit the plugin files in a text editor. Don't plan to edit plugin files unless you know what you're doing (meaning that you're familiar with PHP and WordPress functions). Head over to Book 7, Chapter 4 to read more information on editing plugin files.

Users

The Users submenu list has three links:

- **All Users:** Go to the Users screen, where you can view, edit, and delete users on your WordPress site. Each user has a unique login name and password, as well as an email address assigned to his account. You can view and edit a user's information on the Users page.
- **Add New:** Opens the Add New User screen, where you can add new users to your WordPress blog. Simply type the user's username, first name, last name, email (required), website, and a password in the fields provided, and click the Add User button. You can also select whether you want WordPress to send login information to the new user by email. If you want, you can also assign a new role for the new user. Turn to the section "Configuring the Settings" earlier in this chapter for more info about user roles.
- **Your Profile:** Turn to the "Creating Your Personal Profile" section earlier in this chapter for more information about creating a profile page.

Tools

The last item on the navigation menu (and subsequently in this chapter!) is Tools. Hover your mouse over the Tools link to view the submenu list of links that includes

- **Available Tools:** Opens the Tools screen on your Dashboard. WordPress comes packaged with two extra features that you can use on your site, if needed. The features are Press This and Category/Tag Converter.
- **Import:** Clicking this link opens the Import screen of your Dashboard. WordPress allows you to import from a different publishing platform. This feature is covered in depth in Book 2, Chapter 7.
- **Export:** Clicking this menu item opens the Export screen of your Dashboard. WordPress allows you to export your content from WordPress so that you can import it into a different platform or to another WordPress-powered site.

IN THIS CHAPTER

» Deciding what roles to assign users

» Allowing new users to register

» Adding a new user

» Making changes to user profiles

» Using tools to manage multiauthor sites

Chapter 3

Managing Users and Multiple Authors

A *multiauthor site* involves inviting others to coauthor, or contribute articles, posts, pages, or other content to your site. You can expand the offerings on your website by using multiauthor publishing because you can have several different people writing on different topics or offering different perspectives on the same topic. Many people use this type of site to create a collaborative writing space on the web, and WordPress doesn't limit you in the number of authors you can add to your site.

Additionally, you can invite other people to register as *subscribers,* who don't contribute content but are registered members of the site, which can have benefits, too. (You could make some content available to registered users only, for example.)

This chapter takes you through the process of adding users to your site, takes the mystery out of the different user roles and capabilities, and gives you some tools for managing a multiauthor website.

Understanding User Roles and Capabilities

Before you start adding new users to your site, you need to understand the differences among the user roles, because each user role is assigned a different level of access and grouping of capabilities to your site, as follows:

- **Subscriber:** Subscriber is the default role. Maintain this role as the one assigned to new users, particularly if you don't know who's registering. Subscribers get access to the Dashboard page, and they can view and change the options in their profiles on the Profile screen. (They don't have access to your account settings, however — only to their own.) Each user can change her username, email address, password, bio, and other descriptors in her user profile. The WordPress database stores subscribers' profile information, and your site remembers them each time they visit, so they don't have to complete the profile information each time they leave comments on your site.
- **Contributor:** In addition to the access subscribers have, contributors can upload files and write, edit, and delete their own posts. Contributors can write posts, but they can't publish the posts; the administrator reviews all contributor posts and decides whether to publish them. This setting is a nice way to moderate content written by new authors.
- **Author:** In addition to the access contributors have, authors can publish and edit their own posts.
- **Editor:** In addition to the access authors have, editors can moderate comments, manage categories, manage links, edit pages, and edit other authors' posts.
- **Administrator:** Administrators can edit all the options and settings in the WordPress blog.
- **Super Admin:** This role exists only when you have the multisite feature activated in WordPress. See Book 8 for more about the multisite feature.

Table 3-1 gives you an at-a-glance reference for the basic differences in roles and capabilities for WordPress users.

TABLE 3-1 WordPress User Roles and Capabilities

	Super Admin	Administrator	Editor	Author	Contributor	Subscriber
Manage multisite features	Yes	No	No	No	No	No
Add/edit users	Yes	Yes	No	No	No	No
Add/edit/install plugins	Yes	Yes	No	No	No	No
Add/edit/install themes	Yes	Yes	No	No	No	No
Manage comments	Yes	Yes	Yes	No	No	No
Manage categories, tags, and links	Yes	Yes	Yes	No	No	No
Publish posts	Yes	Yes	Yes	Yes	No (moderated)	No
Edit published posts	Yes	Yes	Yes	No	No	No
Edit others' posts	Yes	Yes	Yes	No	No	No
Edit own posts	Yes	Yes	Yes	Yes	Yes	No
Publish pages	Yes	Yes	Yes	No	No	No
Read	Yes	Yes	Yes	Yes	Yes	Yes

TIP

Table 3-1 doesn't offer exhaustive information, by any means, but it covers the basic user roles and capabilities for WordPress or the most common capabilities for each user role. For a full list of user roles and capabilities, check out the WordPress Codex at `https://codex.wordpress.org/Roles_and_Capabilities`.

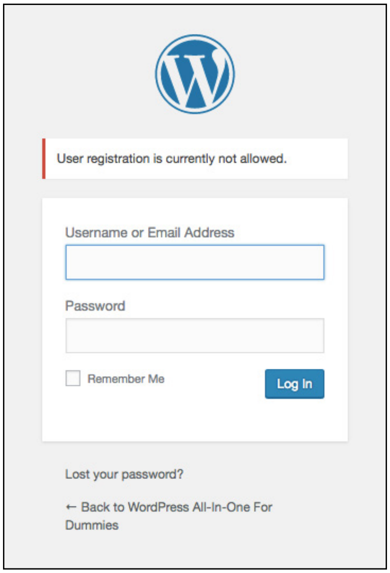
Allowing New User Registration

As you can see in Table 3-1, each user level has a different set of capabilities. Book 3, Chapter 2 discusses the General Settings of the WordPress Dashboard, in which you set the default role for users who register on your website. Keep the default role set to Subscriber because when you open registration to the public, you don't always know who's registering until after they register — and you don't want to arbitrarily hand out higher levels of access to the settings of your website unless you know and trust the user.

When users register on your website, you, as the Administrator, get an email notification (sent to the email address you set on the General Settings screen) so you always know when new users register, and you can then go to your Dashboard and edit the user to set his role any way you see fit.

REMEMBER

New users can register on your site only after you enable the Anyone Can Register option on the General Settings screen within your Dashboard (Book 3, Chapter 2). If you don't have this option enabled, users see a message on the Registration page telling them that registration isn't allowed, as shown in Figure 3-1.



User registration is currently not allowed.

Username or Email Address
Password
□ Remember Me
Log In
Lost your password?
← Back to WordPress All-In-One For Dummies

FIGURE 3-1: The message to users that registration isn't allowed.

By the way, the direct URL for registration on a blog that has registration enabled is `http://yourdomain.com/wp-login.php?action=register`. With registration enabled (in the General Settings), a user sees a form inviting her to input her desired username and email address. After she does, she gets a confirmation notice in her inbox including an authorization link that she must click to authenticate her registration.

After a user has registered, you, as the site Administrator, can manage her user account and assign a user role. (Refer to Table 3-1.)

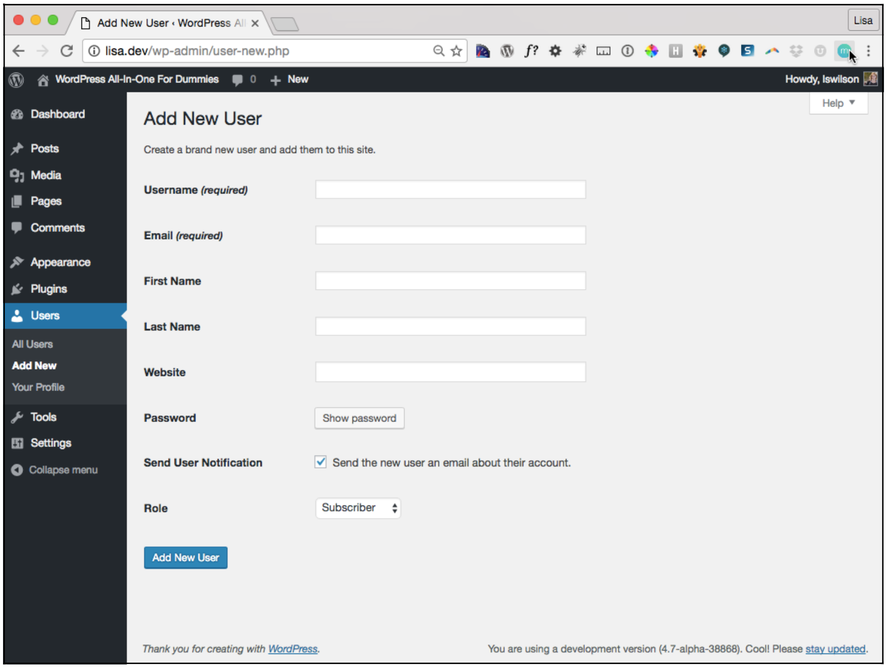
Adding New Users Manually

Allowing new users to register by using the WordPress registration interface is only one way to add users to your site. As the site Administrator, you have the ability to add new users manually by following these steps:

1. **Log in to your WordPress Dashboard by inputting your username and password in the form at `http://`*`yourdomain.com`*`/wp-admin`.**

2. **Click the Add New link in the Users submenu of the Dashboard.**

   The Add New User screen loads, as shown in Figure 3-2.



Add New User

Create a brand new user and add them to this site.

Username *(required)*

Email *(required)*

First Name

Last Name

Website

Password: Show password

Send User Notification: ☑ Send the new user an email about their account.

Role: Subscriber

Add New User

Thank you for creating with WordPress.

You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

FIGURE 3-2: The Add New User screen of the WordPress Dashboard.

3. **Enter the username in the Username text box.**

   You can't skip this text box. The new user types this username when he's prompted to log in to your site.

4. **Enter the user's email address in the Email text box.**

   You can't skip this text box, either. The user receives notifications from you and your site at this email address.

5. **Enter the user's first name in the First Name text box.**

6. **Enter the user's last name in the Last Name text box.**

7. **Enter the URL of the user's website in the Website text box.**

8. **Click the Show Password button.**

   WordPress provides a random, strong password for you — or you can type your own password in the text field. WordPress provides a strength indicator that gives you an idea of how *strong,* or secure, your chosen password is. You want secure passwords so that no one can easily guess them, so make the password at least seven characters long and use a combination of letters, numbers, and symbols (such as @, #, $, and ^).

9. **If you want the user to receive his password by email, select the Send the New User an Email about Their Account check box.**

10. **From the Role drop-down list, choose Subscriber, Contributor, Author, Editor, or Administrator.**

11. **Click the Add New User button.**

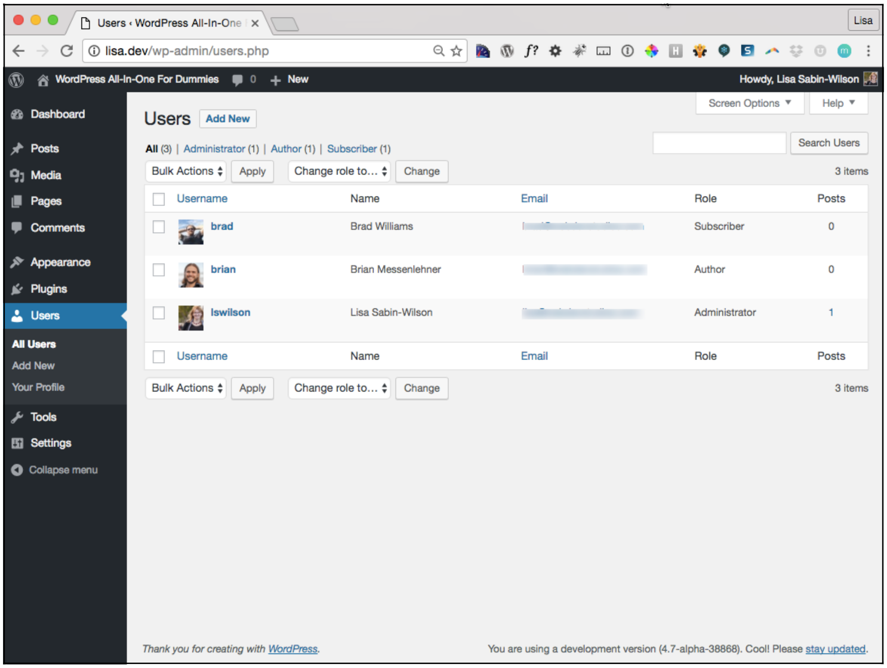
    The Add New User screen loads, and the email notification is sent to the user you just added. When the screen loads, all the fields are cleared, allowing you to add another new user if you want.

Editing User Details

After users register and settle into their accounts on your site, you, as the site Administrator, have the ability to edit their accounts. You may never have to edit user accounts at all, but you have the option to do so if you need to. Most often, users can access the details of their own accounts and change email addresses, names, passwords, and so on. Following are some circumstances under which you may need to edit user accounts:

- **Edit user roles.** When a user registers, you may want to increase her role, or level of access, on your site; promote an existing user to Administrator; or demote an existing Administrator or Editor a notch or two.
- **Edit user emails.** If a user loses access to the email account that she registered with, she may ask you to change her account email address so that she can access her account notifications again.
- **Edit user passwords.** If a user loses access to the email account with which she registered, she can't use WordPress's Lost Password feature, which allows users to gain access to their account password through email recovery. In that case, a user may ask you to reset her password for her so that she can log in and access her account again.

In any of these circumstances, you can make the necessary changes by clicking the Users link on the Users menu on your WordPress Dashboard, which loads the Users screen, shown in Figure 3-3.



☐	Username	Name	Email	Role	Posts
☐	brad	Brad Williams	[redacted]	Subscriber	0
☐	brian	Brian Messenlehner	[redacted]	Author	0
☐	lswilson	Lisa Sabin-Wilson	[redacted]	Administrator	1
☐	Username	Name	Email	Role	Posts

Thank you for creating with WordPress.

You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

FIGURE 3-3: The Users screen lets you manage all the users on your site.

Figure 3-3 shows the Users screen on a site that has multiple users who have different levels of access, or roles. (The email addresses are blurred in Figure 3-3 to protect the users' privacy.)

When you hover your mouse over the name of a user, an Edit link appears below the user listing. Click that Edit link to access the Edit User screen, where you can edit different pieces of information for that user, including

- **Personal Options:** These options include Visual Editor, Color Scheme, Keyboard Shortcuts, and Toolbar preferences.
- **Name:** Specify a user's role, first and last names, nickname, and display name.
- **Contact Info:** These options include the user's email address and website.
- **Biographical Info:** This section provides a few lines of biographical info for the user (optional, but some WordPress themes display authors' biographies). This section also displays the user's profile picture.
- **New Password:** Here, you can change the password for the user.

The Edit User screen looks the same, and has the very same features, as the Profile screen that you deal with in Book 3, Chapter 2. Feel free to visit that chapter to get the lowdown on the options and settings on this screen.

Managing a Multiauthor Site

You may love running a multiauthor site, but it has its challenges. The minute you become the owner of a multiauthor site, you immediately assume the role of manager for the authors you invited into your space. At times, those authors look to you for support and guidance, not only on their content management, but also for tips and advice about how to use the WordPress interface. It's a good thing you have this book at the ready so that you can offer up the gems of information you're finding within these pages!

You can find many tools to assist you in managing a multiauthor site, as well as making your site more interactive by adding some features, which can make it a more rewarding and satisfying experience not only for you and your readers, but for your authors as well.

The tools listed in the following sections come by way of plugins, which are add-ons that extend the scope of WordPress by adding different functionality and features. You can find information on the use and installation of plugins in Book 7.

Tools that help authors communicate

When you're running a multiauthor site, communication is crucial for sharing information, giving and receiving inspiration, and making certain that no two authors are writing the same article (or similar articles) on your site. Use the following tools to manage the flow of communication among everyone involved:

- **Post Status Notifications:** In "Understanding User Roles and Capabilities" earlier in this chapter, I mention that the role of Contributor can write and save posts to your site, but those posts don't get published to the site until an Administrator approves them. This plugin notifies the Administrator, via email, when a new post is submitted for review. Additionally, the contributing author gets an email notification when an Administrator has published the post to the site.

  `https://wordpress.org/plugins/wpsite-post-status-notifications`

- **Editorial Calendar:** This plugin gives you an overview of scheduled posts, post authors, and the dates when you scheduled the posts to publish to your site. This plugin can help you prevent multiple author posts from publishing too close together or, in some cases, right on top of one another; you simply reschedule posts by using a drag-and-drop interface.

  `https://wordpress.org/plugins/editorial-calendar`

- **Email Users:** This plugin allows you to send emails to all registered users of your site, and users can send emails back and forth to one another by using the plugin interface of the Dashboard. This tool enables the authors and users on your multiauthor site to keep in touch and communicate with one another.

  `https://wordpress.org/plugins/email-users`

- **Author Customization:** This plugin expands author management with features such as per-post author information and rich user-biography editing.

  `https://wordpress.org/plugins/author-customization`

- **Dashboard Notepad:** This plugin gives you a widget that appears on your main Dashboard page and allows you and other users (depending on the user roles that you set in the plugin options) to leave notes for one another. You can use this plugin to ask and answer questions and to create to-do lists for your authors.

  `https://wordpress.org/plugins/dashboard-notepad`

Tools to promote author profiles

One way to operate a successful multiauthor site involves taking every opportunity to promote your authors and their information. Authors often get involved in posting content on other websites, in addition to yours, for exposure. The plugins in this list give you tools to promote authors bios, links, social network feeds, and more:

- **Authors Widget:** This plugin gives you a widget you can place on your site that displays a list of authors along with the number of posts they've published, a link to the RSS feeds for their posts, and their names and photos (see Figure 3-4).

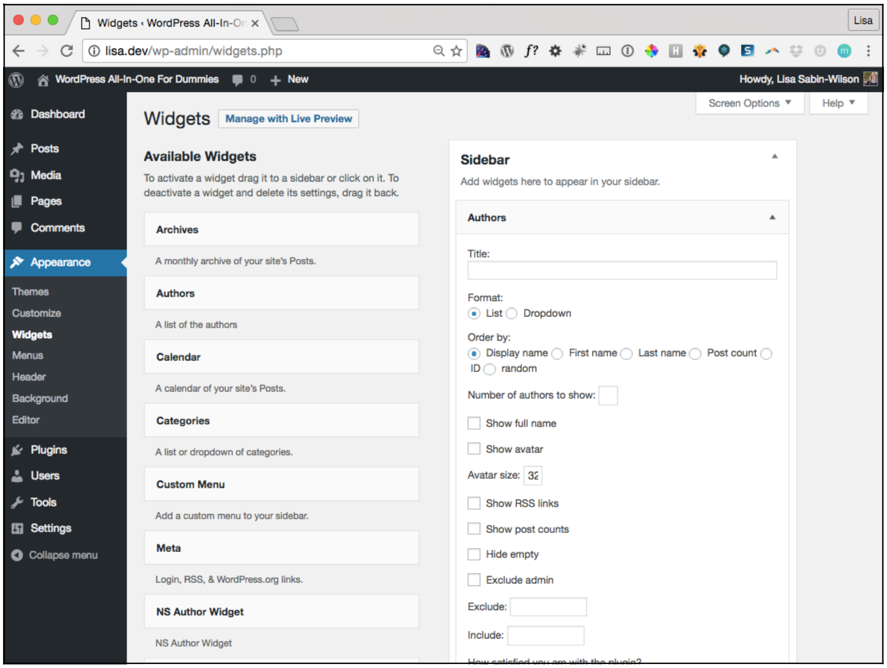
  `https://wordpress.org/plugins/authors`

- **NS Author Widget:** This plugin provides a widget you can use to display a single author's information on the page that displays a post he has written. The widget displays the author's name, photo, and description, as well as links to all his posts. The widget also allows the author to include links to his various social media profiles (such as Twitter, Facebook, and so on).

  `https://wordpress.org/plugins/ns-author-widget`

- **Author Spotlight:** This plugin provides a widget that you can place in your sidebar, displaying the profile of the author of the post being viewed. The author information automatically appears on a single post page and displays the profile of the author of the post.

  `https://wordpress.org/plugins/author-profile`



To activate a widget drag it to a sidebar or click on it. To deactivate a widget and delete its settings, drag it back.

A monthly archive of your site's Posts.

A list of the authors

A calendar of your site's Posts.

A list or dropdown of categories.

Add a custom menu to your sidebar.

Login, RSS, & WordPress.org links.

NS Author Widget

Add widgets here to appear in your sidebar.

Title:

Format:
● List ○ Dropdown

Order by:
● Display name ○ First name ○ Last name ○ Post count ○ ID ○ random

Number of authors to show:

□ Show full name

□ Show avatar

Avatar size: 32

□ Show RSS links

□ Show post counts

□ Hide empty

□ Exclude admin

Exclude:

Include:

How satisfied you are with the plugin?

FIGURE 3-4: The Authors Widget options.

- **Author Recent Posts:** This plugin gives you a widget that allows an author to display a listing of her recent posts in the sidebar of posts she's published on your site.

  `https://wordpress.org/plugins/author-recent-posts`

Tools to manage multiauthor blog posts

The plugins listed in this section can help you, the site Administrator, manage your group of authors and registered users by giving you some tools to track users' activity, list their posts, and stay up to date and notified when your authors publish new content:

- **Co-Authors Plus:** This plugin allows you to assign multiple authors to one post, which you may find especially helpful when you have several authors collaborating on one article, allowing those authors to share the byline and credit.

  `https://wordpress.org/plugins/co-authors-plus`

- **Authors Post Widget:** This plugin provides a very easy way to show a list of authors on a site with a count of the number of posts each author has published.

  `https://wordpress.org/plugins/authors-posts-widget/`

- **Co-Authors Plus:** This plugin provides you with a handy tool that allows you to assign multiple author bylines per post. It also allows you to create guest author bylines without having to create a full user profile for guest authors.

  `https://wordpress.org/plugins/co-authors-plus/`

- **Audit Trail:** This plugin records the actions of the registered users on your site, such as when they log in or log out, when they publish posts and pages, and when they visit pages within your site. As the site Administrator, you can keep track of the actions your authors and users take on your website.

  `https://wordpress.org/plugins/audit-trail`

IN THIS CHAPTER

- Making the decision to allow comments
- Using comments to interact with readers
- Working with comments and trackbacks
- Using Akismet to help combat spam

Chapter 4
Dealing with Comments and Spam

One of the most exciting aspects of publishing with WordPress is getting feedback from your readers on articles you publish to your site. Feedback, also known as *blog comments,* is akin to having a guestbook on your site.

People leave notes for you that are published to your site, and through these notes, you can respond to and engage your readers in conversation about the topic. Having this function on your site allows you to expand the thoughts and ideas you present in your posts by giving readers the opportunity to add their two cents' worth.

In this chapter, you can decide whether to allow comments on your site, figure out how to manage those comments, use trackbacks, and discover the negative aspects of allowing comments (such as spam).

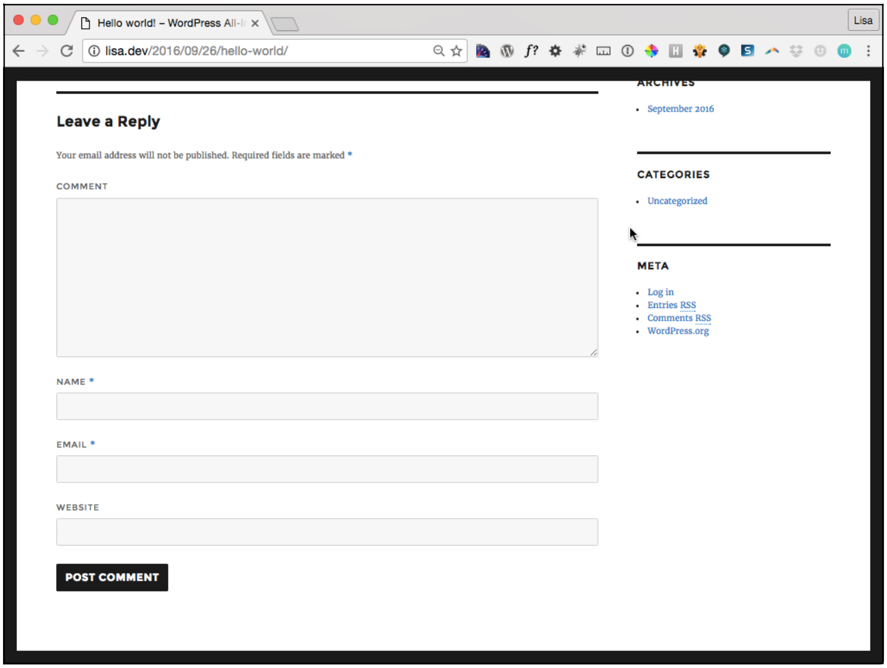
Deciding to Allow Comments on Your Site

Some publishers say that a blog without comments isn't a blog at all because the point of having a blog, in some minds, is to foster communication and interaction between the site authors and the readers. This belief is common in the publishing community because experiencing visitor feedback via comments is part of what's made Internet publishing so popular. Allowing comments is a personal choice, however, and you don't have to allow them if you don't want to.

Positive aspects of allowing comments

Allowing comments on your site lets audience members actively involve themselves in your site by creating a discussion and dialogue about your content. Mostly, readers find commenting to be a satisfying experience when they visit sites because comments make them part of the discussion.

Depending on the topic you write about, allowing comments sends the message that you, as the author/owner of the site, are open to the views and opinions of your readers. Having a comment form on your site that readers can use to leave their feedback on your articles (such as the one shown in Figure 4-1) is like having a great big Welcome to My Home sign on your site; it invites users in to share thoughts and participate in discussions.



Hello world! – WordPress All-i

Lisa

lisa.dev/2016/09/26/hello-world/

ARCHIVES

- September 2016

Leave a Reply

Your email address will not be published. Required fields are marked *

COMMENT

NAME *

EMAIL *

WEBSITE

POST COMMENT

CATEGORIES

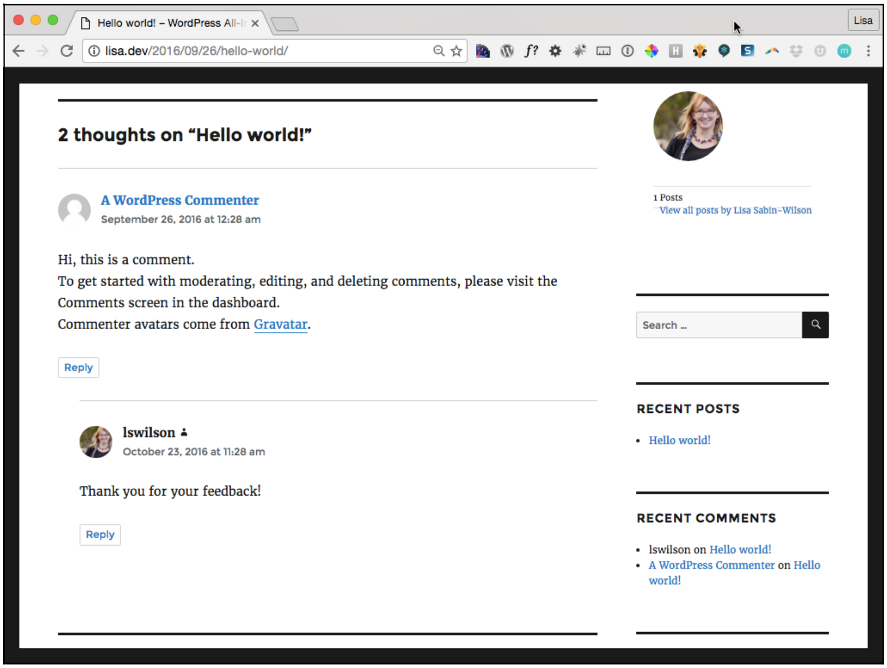
- Uncategorized

META

- Log in
- Entries RSS
- Comments RSS
- WordPress.org

FIGURE 4-1: Readers use the Leave a Reply form to share their comments.

If you want to build a community of people who come back to your site frequently, respond to as many comments that your readers leave on your posts as possible. When people take the time to leave you a comment on your content, they like to know that you're reading it, and they appreciate hearing your feedback to them. Also, open comments keep discussions lively and active on your site. Figure 4-2 illustrates what comments look like after they're published to your site. (***Note:*** The actual design and layout of the comments on sites varies from theme to theme; you can find information on theme design in Book 6.)


Hello world! – WordPress All-I
Lisa
lisa.dev/2016/09/26/hello-world/

2 thoughts on "Hello world!"

A WordPress Commenter
September 26, 2016 at 12:28 am

Hi, this is a comment.
To get started with moderating, editing, and deleting comments, please visit the Comments screen in the dashboard.
Commenter avatars come from Gravatar.

Reply

lswilson
October 23, 2016 at 11:28 am

Thank you for your feedback!

Reply

1 Posts
View all posts by Lisa Sabin-Wilson

Search ...

RECENT POSTS

- Hello world!

RECENT COMMENTS

- lswilson on Hello world!
- A WordPress Commenter on Hello world!

FIGURE 4-2: Visitors comment on a post.

Reasons to disallow comments

Under certain circumstances, you may not want to allow readers to leave comments freely on your site. If you wrote a post on a topic that's considered to be very controversial, for example, you may not want to invite comments, because the topic may incite flame wars or comments that are insulting to you or your readers. If you're not interested in the point of view or feedback of readers on your site, or if your content doesn't really lend itself to reader feedback, you may decide to disallow comments.

REMEMBER

In making the decision to have comments, you have to be prepared for the fact that not everyone is going to agree with what you write — especially if you're writing on a topic that invites a wide array of opinions, such as politics or religion. As a site owner, you make the decision ahead of time about whether you want readers dropping in and leaving their own views, or even disagreeing with you about yours (sometimes vehemently!).

If you're on the fence about whether to allow comments, the WordPress platform allows you to toggle that decision on a per-post basis. Therefore, each time you publish a post or article on your website, you can indicate in Post Options (on the Add New Post screen of your Dashboard) whether this particular post should allow discussion. You may choose to disallow all comments on your site (a setting that you can configure in Discussion Settings) or disallow them for only certain posts (a setting that you can configure on the Edit Post page, which I talk about in Book 4, Chapter 1).

Interacting with Readers through Comments

People can leave notes for you that are published to your site, and you can respond to and engage your readers in conversation about the topic at hand. (Refer to Figure 4-1 and Figure 4-2.) Having this function on your site creates the opportunity to expand the thoughts and ideas that you present in your blog post by giving your readers the opportunity to share their own thoughts.

The WordPress Dashboard gives you full administrative control of who can and can't leave comments. In addition, if someone leaves a comment that has questionable content, you can edit the comment or delete it. You're also free to disallow comments on your blog. The Discussion Settings screen of your Dashboard contains all the settings for allowing or disallowing comments on your site. See Book 3, Chapter 2 to dig into those settings, what they mean, and how you can use them to configure the exact interactive environment that you want for your site.

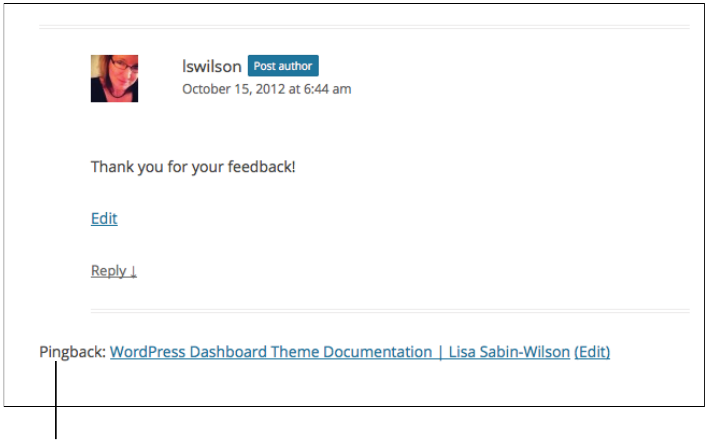
Tracking back

The best way to understand trackbacks is to think of them as comments except for one thing: *Trackbacks* are comments left on your blog by other blogs, not by actual people. Although this process may sound mysterious, it's actually perfectly reasonable.

A trackback happens when you make a post on your site and, within that post, you provide a link to a post made by another author on a different site. When you publish that post, your site sends a sort of electronic memo to the site you linked to. That site receives the memo and posts an acknowledgment of receipt in a comment within the post that you linked to on that site. Trackbacks work between most blogging platforms — between WordPress and Blogger, for example, as well as between WordPress and Typepad.

That memo is sent via a *network ping* (a tool used to test, or verify, whether a link is reachable across the Internet) from your site to the site you link to. This process works as long as both sites support trackback protocol. Trackbacks can also come to your site by way of a *pingback* — which really is the same thing as a trackback, but the terminology varies from platform to platform.

Sending a trackback to a site is a nice way of telling the author that you like the information she presented in her post. Every author appreciates the receipt of trackbacks to her posts from other authors. Figure 4-3 shows one trackback link.



lswilson Post author
October 15, 2012 at 6:44 am

Thank you for your feedback!

Edit

Reply ↓

Pingback: WordPress Dashboard Theme Documentation | Lisa Sabin-Wilson (Edit)

Trackbacks

FIGURE 4-3: Trackback links on a blog.

Enabling comment and trackback display

Almost every single WordPress theme displays comments at the bottom of each post published in WordPress. You can do custom styling of the comments so that they match the design of your site by using several items:

- **WordPress template tags:** Template tags are related to the display of comments and trackbacks. For more on these tags, see Book 6, Chapter 3.

- **Basic HTML:** Using HTML markup helps you provide unique styles to display content. For information about the use of basic HTML, check out Book 6.
- **CSS:** Every WordPress theme has a Cascading Style Sheet (CSS) template called `style.css`. Within this CSS template, you define the styles and CSS markup that creates a custom look and feel for the comment and trackback display on your site. You can find more information about using CSS in Book 6.
- **Graphics:** Using graphics to enhance and define your branding, style, and visual design is an integral part of web design. Because a single chapter isn't sufficient to fully cover graphic design, you may want to check out *WordPress Web Design For Dummies,* 3rd Edition (John Wiley & Sons, Inc.), which I wrote, for great information on graphic and website design with WordPress.
- **WordPress widgets:** WordPress has a built-in widget to display the most recent comments published to your site by your visitors. You also can find several plugins that display comments in different ways, including top comments, most popular posts based on the number of comments, and comments that display the author's photo. For information about widgets and plugins for these purposes, flip to Book 6, Chapter 1 and Book 7, Chapters 1 and 2, respectively.

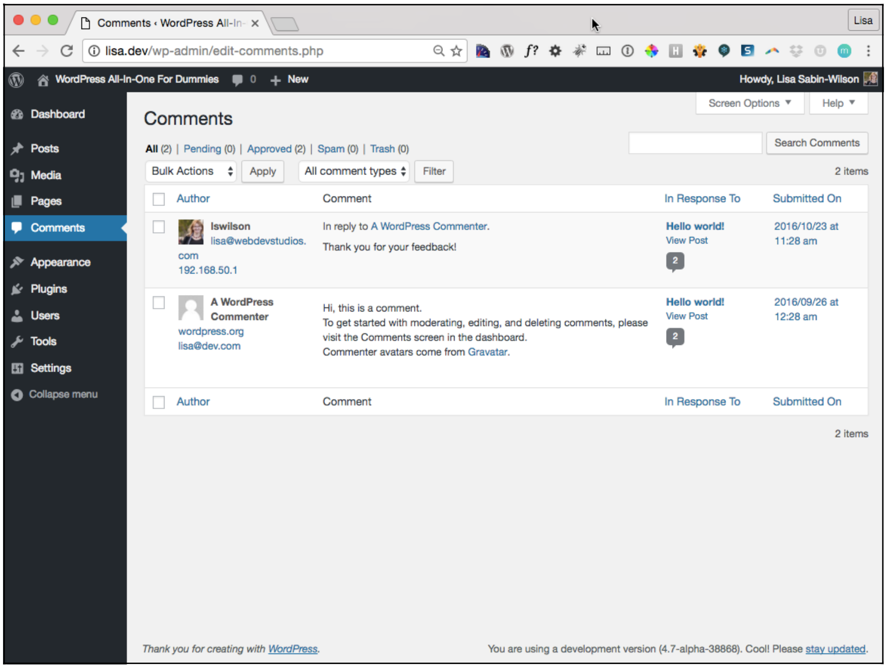
Managing Comments and Trackbacks

When you invite readers to comment on your site, you, as the site administrator, have full access to manage and edit those comments through the Comments page, which you can access in your WordPress Dashboard.

To find your comments, click the Comments link on the Dashboard navigation menu; the Comments screen opens. (See Figure 4-4.)

When you hover your mouse pointer over a comment, several links appear that give you the opportunity to manage the comment:

- **Unapprove:** This link appears only if you have comment moderation turned on. Also, it appears only on approved comments. The comment is placed in the moderation queue, which you can get to by clicking the Pending link that appears below the Comments page header. The moderation queue is kind of a holding area for comments that haven't yet been published to your site.



Comments

All (2) | Pending (0) | Approved (2) | Spam (0) | Trash (0)

2 items

□	Author	Comment	In Response To	Submitted On
□	lswilson lisa@webdevstudios.com 192.168.50.1	In reply to A WordPress Commenter. Thank you for your feedback!	Hello world! View Post 2	2016/10/23 at 11:28 am
□	A WordPress Commenter wordpress.org lisa@dev.com	Hi, this is a comment. To get started with moderating, editing, and deleting comments, please visit the Comments screen in the dashboard. Commenter avatars come from Gravatar.	Hello world! View Post 2	2016/09/26 at 12:28 am
□	Author	Comment	In Response To	Submitted On

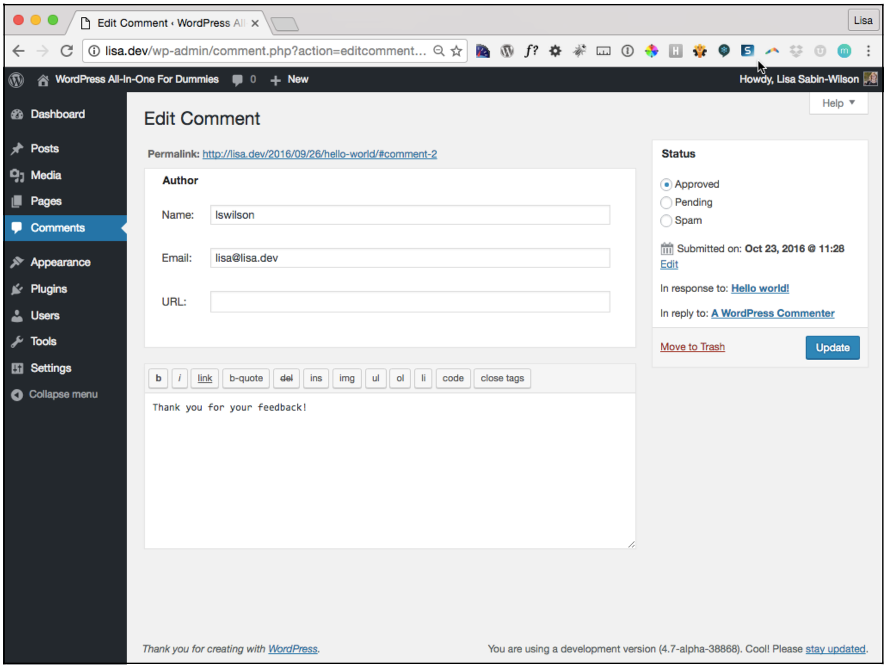
2 items

Thank you for creating with WordPress.

You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

FIGURE 4-4: The Comments screen contains all the comments and trackbacks on your site.

- **Reply:** This link makes a text box visible. In the text box, you can type and submit your reply to this person. This feature eliminates the need to load your live site to reply to a comment.
- **Quick Edit:** This link opens the comment options inline without leaving the Comments page. You can configure options such as name, email address, URL, and comment content. Click the Save button to save your changes.
- **Edit:** This link opens the Edit Comment screen, where you can edit the different fields, such as name, email address, URL, and comment content. (See Figure 4-5.)
- **Spam:** This link marks the comment as spam and marks it as spam in the database, where it will never be heard from again! (Actually, it's stored in the database as spam; you just don't see it in your comments list unless you click the Spam link at the top of the Comments screen.)
- **Trash:** This link does exactly what it says: sends the comment to the trash and deletes it from your blog. You can access comments that have been sent to the trash to permanently delete them from your blog or to restore them.



Edit Comment

Permalink: http://lisa.dev/2016/09/26/hello-world/#comment-2

Author

Name: lswilson

Email: lisa@lisa.dev

URL:

```
Thank you for your feedback!
```

Status

● Approved
○ Pending
○ Spam

Submitted on: Oct 23, 2016 @ 11:28 Edit

In response to: Hello world!

In reply to: A WordPress Commenter

Thank you for creating with WordPress.

You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

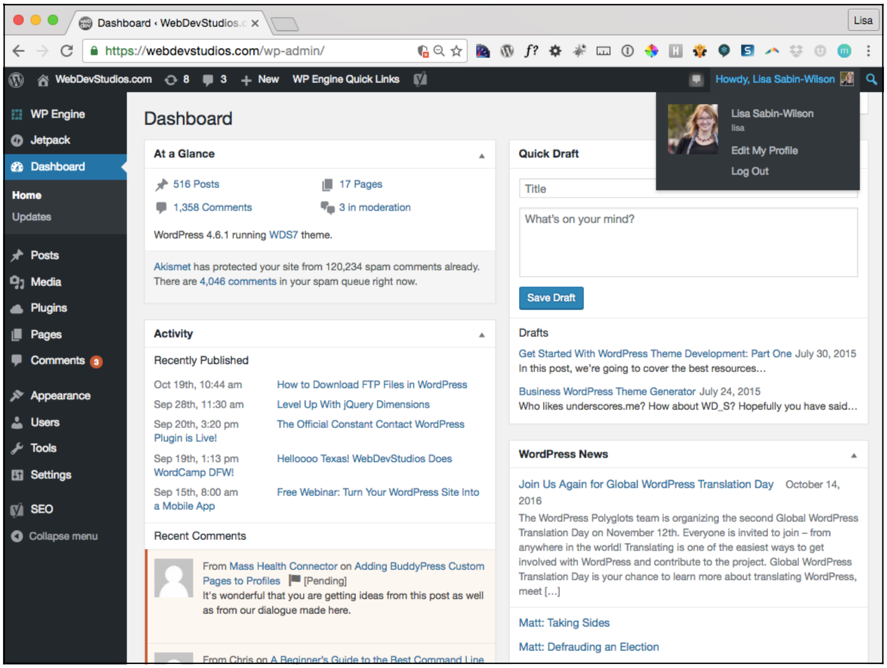
FIGURE 4-5: Edit a user's comment on the Edit Comment screen.

TIP

If you have a lot of comments listed in the Comments screen and want to edit them in bulk, select the check boxes to the left of all the comments you want to manage. Then choose one of the following from the Bulk Actions drop-down list in the upper-left corner of the page: Approve, Mark As Spam, Unapprove, or Delete.

If you have your options set so that comments aren't published to your site until you approve them, you can approve comments from the Comments screen as well. Just click the Pending link to list the comments that are pending moderation. If you have comments and/or trackbacks awaiting moderation, they appear on this page, and you can approve them, mark them as spam, or delete them.

WordPress immediately notifies you of any comments sitting in the moderation queue, awaiting your action. This notification, which appears on every single page, is a small circle, or bubble, on the left navigation menu, to the right of Comments. Figure 4-6 shows that I have three comments pending moderation.



Dashboard

At a Glance

516 Posts | 17 Pages
1,358 Comments | 3 in moderation

WordPress 4.6.1 running WDS7 theme.

Akismet has protected your site from 120,234 spam comments already. There are 4,046 comments in your spam queue right now.

Activity

Recently Published

Oct 19th, 10:44 am How to Download FTP Files in WordPress
Sep 28th, 11:30 am Level Up With jQuery Dimensions
Sep 20th, 3:20 pm The Official Constant Contact WordPress Plugin is Live!
Sep 19th, 1:13 pm Helloooo Texas! WebDevStudios Does WordCamp DFW!
Sep 15th, 8:00 am Free Webinar: Turn Your WordPress Site Into a Mobile App

Recent Comments

From Mass Health Connector on Adding BuddyPress Custom Pages to Profiles [Pending]
It's wonderful that you are getting ideas from this post as well as from our dialogue made here.

From Chris on A Beginner's Guide to the Best Command Line

Quick Draft

Title

What's on your mind?

Drafts

Get Started With WordPress Theme Development: Part One July 30, 2015
In this post, we're going to cover the best resources…

Business WordPress Theme Generator July 24, 2015
Who likes underscores.me? How about WD_S? Hopefully you have said…

WordPress News

Join Us Again for Global WordPress Translation Day October 14, 2016
The WordPress Polyglots team is organizing the second Global WordPress Translation Day on November 12th. Everyone is invited to join – from anywhere in the world! Translating is one of the easiest ways to get involved with WordPress and contribute to the project. Global WordPress Translation Day is your chance to learn more about translating WordPress, meet […]

Matt: Taking Sides

Matt: Defrauding an Election

FIGURE 4-6: A small circle tells me that I have three comments pending moderation.

Tackling Spam with Akismet

No one likes spam. In fact, services such as WordPress have spent untold hours in the name of stopping spammers in their tracks, and for the most part, the services have been successful. Occasionally, however, spammers sneak through. Many spammers are offensive, and all of them are frustrating because they don't contribute to the ongoing conversations that occur in blogs. (A spammer's only goal is to generate traffic to his website.)

All WordPress installations have one significant thing in common: Akismet, a WordPress plugin. It's my humble opinion that Akismet is the mother of all plugins and that no WordPress site is complete without a fully activated version of Akismet running on it.

Apparently, WordPress agrees, because the plugin has been packaged in every WordPress software release beginning way back with version 2.0. Akismet was created by the folks at Automattic, the same folks who brought you the WordPress.com hosted version.

Akismet is the answer to combating comment and trackback spam. The Akismet website (`https://akismet.com`) explains it quite well: "Akismet is an advanced hosted anti-spam service aimed at thwarting the underbelly of the web.

It efficiently processes and analyzes masses of data from millions of sites and communities in real time. To fight the latest and dirtiest tactics embraced by the world's most proficient spammers, it learns and evolves every single second of every single day. Because you have better things to do."

I started blogging in 2002 with the Movable Type platform and moved to WordPress in 2003. As blogging became more and more popular, comment and trackback spam became more and more of a nuisance. One morning in 2004, I found that 2,300 pieces of disgusting comment spam had been published to my blog. Something had to be done!

The folks at Automattic did a fine thing with Akismet. Since the emergence of Akismet, I've barely had to think about comment or trackback spam except for the few times a month I check my Akismet spam queue.

This chapter wouldn't be complete if I didn't show you how to activate and use the Akismet plugin on your site. Book 7 covers the use, installation, and management of other plugins for your WordPress site.

Activating Akismet

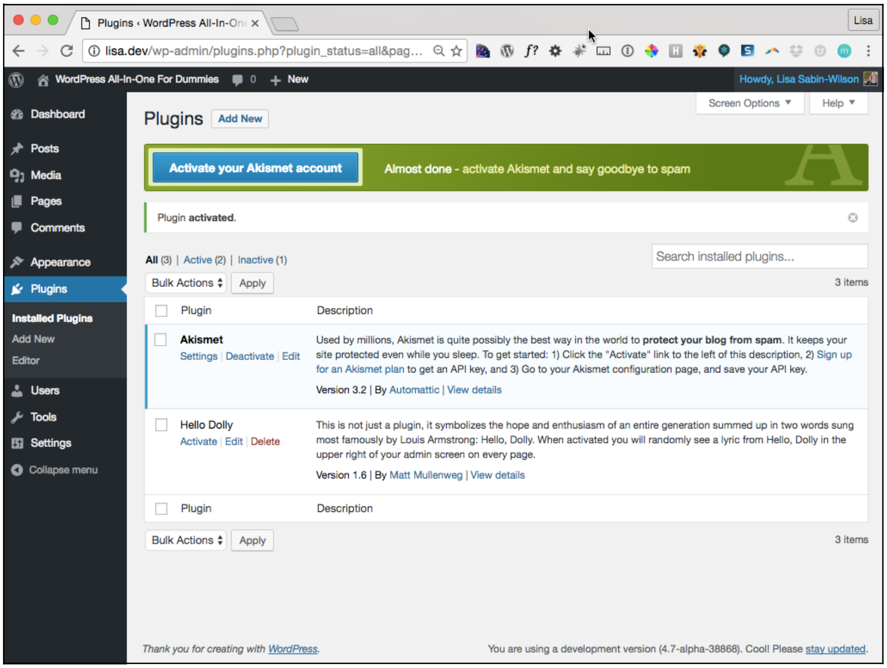
Akismet is already included in every WordPress installation; you don't have to worry about downloading and installing it, because it's already there. Follow these steps to activate and begin using Akismet:

1. **Click the Plugins link on the left navigation menu of the Dashboard to load the Plugins screen.**
2. **Click the Activate link below the Akismet plugin name and description.**

   A green box appears at the top of the page, saying `Almost done– activate Akismet and say goodbye to spam`. (See Figure 4-7.)
3. **Click the Activate Your Akismet Account button in the green box to navigate to the Akismet Configuration screen.**
4. **If you already have an API key, enter it in the Manually Enter an API Key text field; then click the Use This Key button to save your changes.**

   You can stop here if you already have a key, but if you don't have an Akismet key, keep following the steps in this section.

   An *API key* is a string of numbers and letters that functions like a unique password given to you by Akismet; it's the key that allows your WordPress.org application to communicate with your Akismet account.



Plugins

Almost done - activate Akismet and say goodbye to spam

Plugin **activated**.

All (3) | Active (2) | Inactive (1)

3 items

Plugin	Description
Akismet Settings | Deactivate | Edit	Used by millions, Akismet is quite possibly the best way in the world to **protect your blog from spam**. It keeps your site protected even while you sleep. To get started: 1) Click the "Activate" link to the left of this description, 2) Sign up for an Akismet plan to get an API key, and 3) Go to your Akismet configuration page, and save your API key. Version 3.2 | By Automattic | View details
Hello Dolly Activate | Edit | Delete	This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page. Version 1.6 | By Matt Mullenweg | View details
Plugin	Description

3 items

Thank you for creating with WordPress.

You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

FIGURE 4-7: After you activate Akismet, WordPress tells you that the plugin isn't quite ready to use.

5. **Click the Get Your API key button on the Akismet Configuration screen.**

   The WordPress page of the Akismet website opens (`https://akismet.com/wordpress`).

6. **Click the Get an Akismet API Key button.**

   The sign-up page of the Akismet website opens (`https://signup.wordpress.com/signup`).

7. **Enter your email address, desired username, and password in the provided text fields; then click the Sign Up button.**

   The Pick Your Plan page opens.

8. **Choose among these options for obtaining an Akismet key:**

   - *Premium:* $9 per month for people who own commercial or professional sites or blogs and want additional security screening and malware protection.
   - *Plus:* $5 per month for people who own a small commercial or professional site or blog.

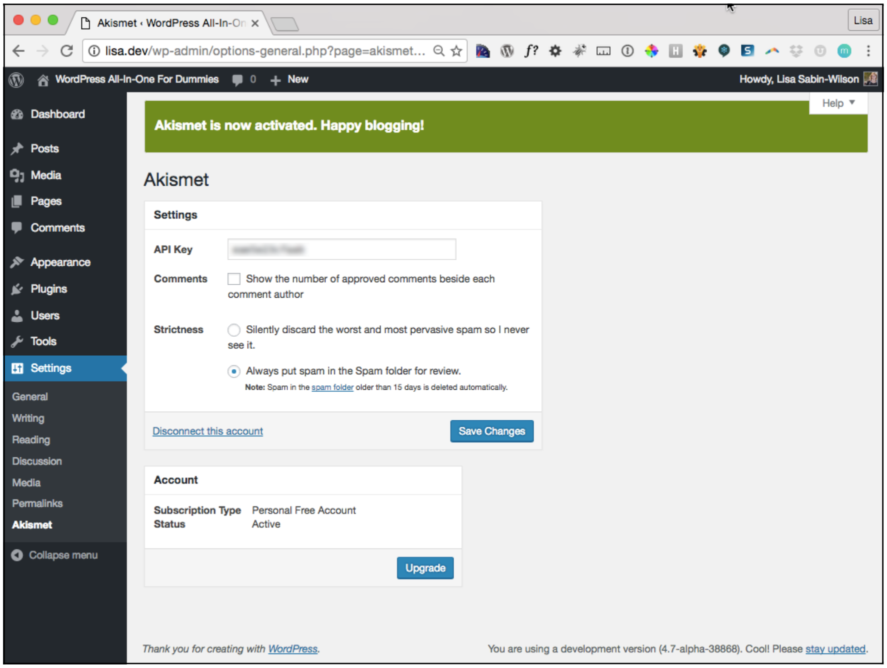
- *Basic:* Name your price. Type the amount you're willing to pay for the Basic plan. This option is for people who own one small, personal, WordPress-powered blog. You can choose to pay nothing ($0), but if you'd like to contribute a little cash toward the cause of combating spam, you can opt to spend up to $120 per year for your Akismet key subscription.

9. **Select and pay for (if needed) your Akismet key.**

   After you've gone through the sign-up process, Akismet provides you an API key. Copy that key by selecting it with your mouse pointer, right-clicking, and choosing Copy.

10. **Go to the Akismet Configuration screen by clicking the Akismet link on the Settings menu in your WordPress Dashboard.**

11. **Enter the API key in the API Key text box (see Figure 4-8), and click the Save Changes button to fully activate the Akismet plugin.**



Akismet is now activated. Happy blogging!

Akismet

Settings

API Key [redacted]

Comments □ Show the number of approved comments beside each comment author

Strictness ○ Silently discard the worst and most pervasive spam so I never see it.

● Always put spam in the Spam folder for review.

Note: Spam in the spam folder older than 15 days is deleted automatically.

Disconnect this account | Save Changes

Account

Subscription Type Personal Free Account
Status Active

Upgrade

Thank you for creating with WordPress.

You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

FIGURE 4-8: Akismet verification confirmation message on the Akismet Configuration screen.

Configuring Akismet

On the Akismet Configuration screen, after you've entered and saved your key, you can select two options to further configure your spam protection:

- **Comments:** Select this option to display the number of approved comments beside each comment author.
- **Strictness:** By default, Akismet puts spam in the Spam comment folder for you to review at your leisure. If you feel that this setting isn't strict enough, you can select the option to have Akismet silently delete the worst and most pervasive spam so that you never have to see it.

Akismet catches spam and throws it into a queue, holding the spam for 15 days and then deleting it from your database. It's probably worth your while to check the Akismet Spam page once a week to make sure that the plugin hasn't captured any legitimate comments or trackbacks.

Rescuing nonspam comments and trackbacks

You can rescue any nonspam captured comments and trackbacks by following these steps (after you log in to your WordPress Dashboard):

1. **Click Comments on the left navigation menu.**

   The Comments screen appears, displaying a list of the most recent comments on your blog.

2. **Click the Spam link.**

   The Comments screen displays all spam comments that the plugin caught.

3. **Browse the list of spam comments, looking for any comments or trackbacks that are legitimate.**

4. **If you locate a comment or trackback that's legitimate, click the Approve link directly below the entry.**

   The comment is marked as legitimate. In other words, WordPress recognizes that you don't consider this comment to be spam. WordPress then approves the comment and publishes it on your blog.

REMEMBER

Check your spam filter often. I just found four legitimate comments caught in my spam filter and was able to de-spam them, releasing them from the binds of Akismet and unleashing them upon the world.

Dealing with Comments and Spam

IN THIS CHAPTER

- » Exploring content archive options in WordPress
- » Creating and editing categories
- » Creating tags and editing them

Chapter **5**

Creating Categories and Tags

WordPress provides you many ways to organize, categorize, and archive content on your website. Packaged within the WordPress software is the capability to automatically maintain chronological, categorized archives of your publishing history, which provides your website visitors different ways to find your content. WordPress uses PHP and MySQL technology to sort and organize everything you publish in an order that you and your readers can access by date and category. This archiving process occurs automatically with every post you publish to your site.

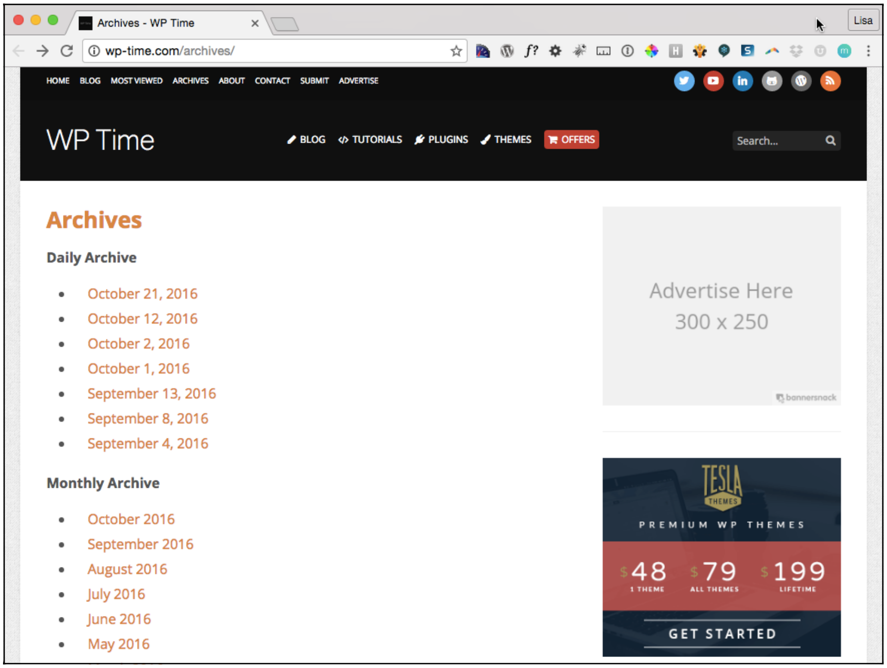
In this chapter, you find out all about WordPress archiving, from categories to tags and more. You also discover how to take advantage of the category description feature to improve your search engine optimization (SEO), how to distinguish between categories and tags, and how to use categories and tags to create topical archives of your site content.

Archiving Content with WordPress

When you create a post on your WordPress site, you can file that post in a category that you specify. This feature makes for a nifty archiving system in which you and your readers can find articles/posts that you've placed within a specific category.

Articles you post are also sorted and organized by date (day/month/year) so that you can easily locate articles that you posted at a certain time. A plugin called Archive Page gives you the ability to easily create a nicely formatted site map that displays the archives of a site on a page.

Visit `http://wp-time.com/archives` to see an example of an archive page. The example page contains chronological sections by day, month, and year. It also contains the latest posts and the different categories and tags found within that site. If you click a date, tag or category on that page, you're taken to a page with a full listing of articles from that date, tag, or category, and each article title is linked to that article. (See Figure 5-1.)



Archives

Daily Archive

- October 21, 2016
- October 12, 2016
- October 2, 2016
- October 1, 2016
- September 13, 2016
- September 8, 2016
- September 4, 2016

Monthly Archive

- October 2016
- September 2016
- August 2016
- July 2016
- June 2016
- May 2016

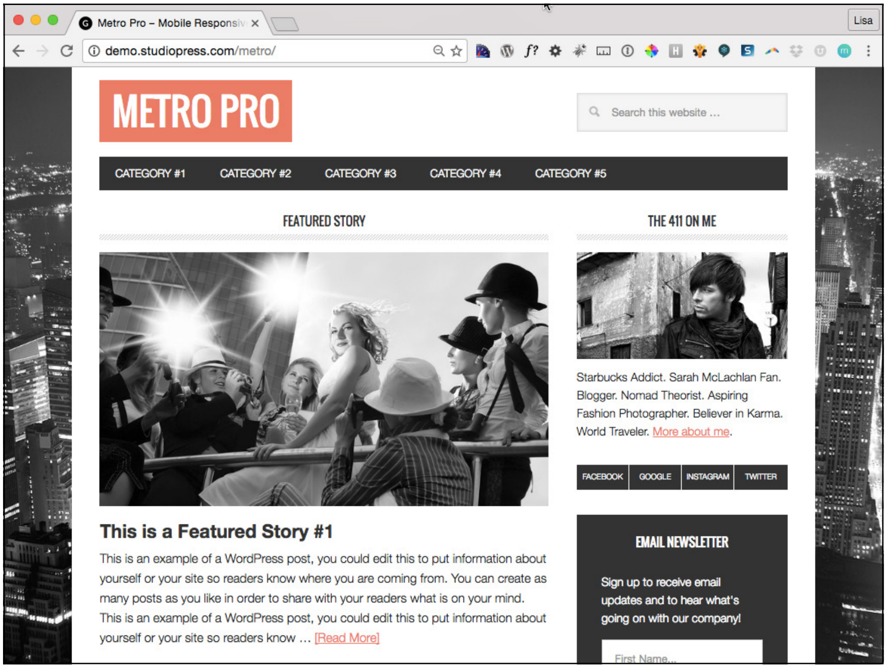
FIGURE 5-1: An archive listing of published posts by date, tag, or category.

TIP

You can easily create an archive listing like the one shown in Figure 5-1 by using a WordPress plugin called Archive Page, which you can find in the WordPress Plugin Directory at `https://wordpress.org/plugins/archive-page`. This plugin is easy to install and to use. You just need to create a page and add any of the short codes provided by the plugin to automatically build an archives page that links to all the content you've published on your site. Easy archives!

WordPress archives and organizes your content for you in more ways than by date and category. In this section, I give you an overview of the several other ways. The different types of archives and content include:

- **Categories:** Create categories of topics in which you can file your articles so that you can easily archive relevant topics. Many websites display content by category — typically referred to as a *magazine theme,* in which all content is displayed by topic rather than in a simple chronological listing. Figure 5-2 shows an example of a magazine theme. You can find out how to create one of your own by customizing your site (see Book 6). Also be sure to check out Book 6, Chapter 6 to discover how to use template tags and category templates to display category-specific content. Exciting stuff!



Starbucks Addict. Sarah McLachlan Fan. Blogger. Nomad Theorist. Aspiring Fashion Photographer. Believer in Karma. World Traveler. More about me.

This is a Featured Story #1

This is an example of a WordPress post, you could edit this to put information about yourself or your site so readers know where you are coming from. You can create as many posts as you like in order to share with your readers what is on your mind. This is an example of a WordPress post, you could edit this to put information about yourself or your site so readers know … [Read More]

Sign up to receive email updates and to hear what's going on with our company!

FIGURE 5-2: A magazine theme created with WordPress (Metro Pro by StudioPress).

- **Tags:** Tagging your posts with micro keywords, called *tags,* further defines related content within your site, which can improve your site for SEO purposes by helping the search engines find related and relevant content, as well as provide additional navigation to help your readers find relevant content on your site.
- **Date Based:** Your content is automatically archived by date based on the day, month, year, and time of day you publish it.

- **Author:** Content is automatically archived by author based on the author of the post and/or page. You can create an author archive if your site has multiple content contributors.
- **Keyword (or Search):** WordPress has a built-in search function that allows you and your readers to search for keywords, which presents an archive listing of content that's relevant to your chosen keywords.
- **Custom Post Types:** You can build custom post types based on the kind of content your site offers. You can find detailed information on custom post types and how to create them in Book 6, Chapter 7.
- **Attachments:** WordPress has a built-in media library where you can upload different media files, such as photos, images, documents, videos, and audio files (to name a few). You can build an archive of those files to create things such as photo galleries, eBook archives (PDFs), and video galleries.

Building categories

In WordPress, a *category* is what you determine to be the main topic of a post. By using categories, you can file your posts under topics by subject. To improve your readers' experiences in navigating your site, WordPress organizes posts by the categories you assign to them. Visitors can click the categories they're interested in to see the posts you've written on those particular topics. You can display the list of categories you set up on your site in a few places, including the following:

- **Body of the post:** In most WordPress themes, you see the title followed by a statement such as `Filed In:` *`Category 1, Category 2.`* The reader can click the category name to go to a page that lists all the posts you've made in that particular category. You can assign a single post to more than one category.
- **Navigation menu:** Almost all sites have a navigation menu that visitors can use to navigate your site. You can place links to categories on the navigation menu, particularly if you want to draw attention to particular categories.
- **Sidebar of your blog theme:** You can place a full list of category titles in the sidebar by using the Categories widget included in your WordPress installation. A reader can click any category to open a page on your site that lists the posts you made within that particular category.

Subcategories (also known as *category children*) can further refine the main category topic by listing specific topics related to the main *(parent)* category. In your WordPress Dashboard, on the Manage Categories page, subcategories appear directly below the main category. Here's an example:

Books I Enjoy (main category)

Fiction (subcategory)

Nonfiction (subcategory)

Trashy romance (subcategory)

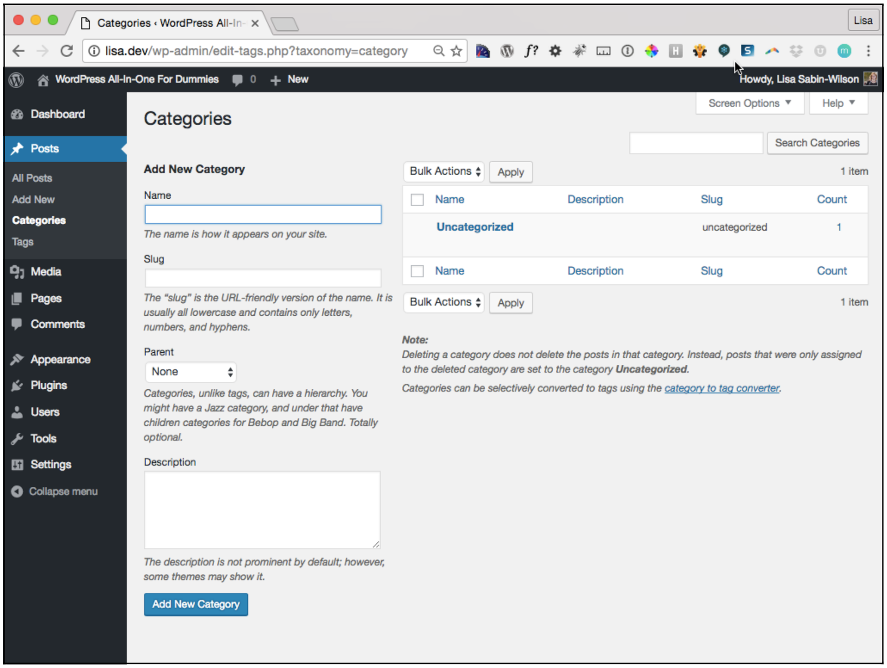
Biographies (subcategory)

For Dummies (subcategory)

You can create as many levels of categories as you like. Biographies and *For Dummies* could be subcategories of Nonfiction, for example, which is a subcategory of the Books I Enjoy category. You aren't limited to the number of category levels you can create.

Changing the name of a category

When you install WordPress, it gives you one default category called Uncategorized. (See the Categories screen shown in Figure 5-3.) This category name is pretty generic, so you definitely want to change it to one that applies to you and your blog. (On my site, I changed it to Life in General. Although that name's still a bit on the generic side, it doesn't sound quite so . . . well, uncategorized.)



Categories

Add New Category

Name

The name is how it appears on your site.

Slug

The "slug" is the URL-friendly version of the name. It is usually all lowercase and contains only letters, numbers, and hyphens.

Parent

None

Categories, unlike tags, can have a hierarchy. You might have a Jazz category, and under that have children categories for Bebop and Big Band. Totally optional.

Description

The description is not prominent by default; however, some themes may show it.

□ Name	Description	Slug	Count
Uncategorized		uncategorized	1
□ Name	Description	Slug	Count

Note:

*Deleting a category does not delete the posts in that category. Instead, posts that were only assigned to the deleted category are set to the category **Uncategorized**.*

Categories can be selectively converted to tags using the category to tag converter.

FIGURE 5-3: The Categories screen in the Dashboard of a brand-new WordPress site shows the default Uncategorized category.

REMEMBER

The default category also serves as kind of a fail-safe. If you publish a post to your site and don't assign that post to a category, the post is assigned to the default category automatically, no matter what you name the category.

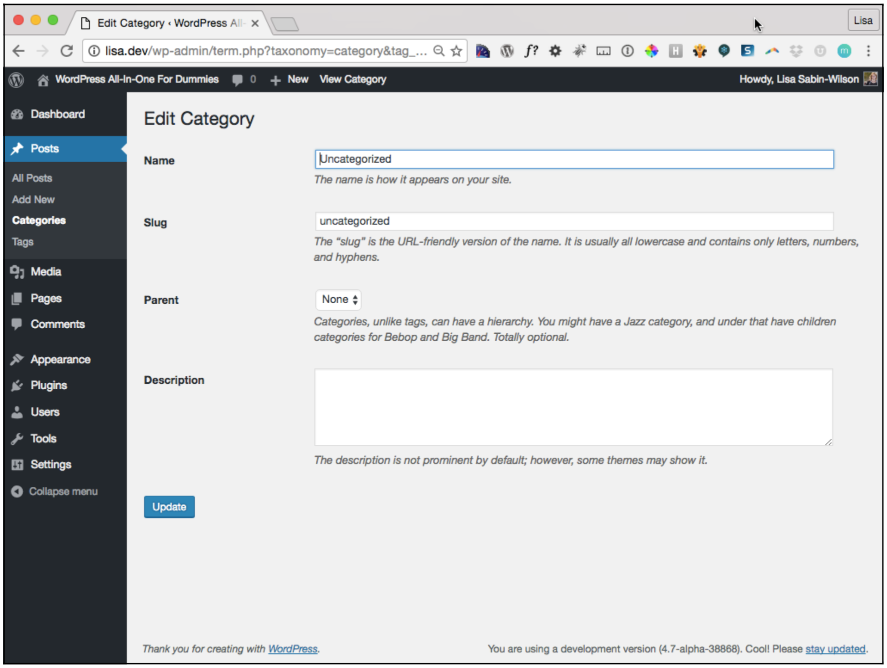
So how do you change the name of that default category? When you're logged in to your WordPress Dashboard, just follow these steps:

1. **Click the Categories link in the Posts submenu of the Dashboard navigation menu.**

   The Categories screen opens, containing all the tools you need to set up and edit category titles for your site.

2. **Click the title of the category that you want to edit.**

   If you want to change the Uncategorized category, click the word *Uncategorized* to open the Edit Category screen. (See Figure 5-4.)



Edit Category

Name: Uncategorized

The name is how it appears on your site.

Slug: uncategorized

The "slug" is the URL-friendly version of the name. It is usually all lowercase and contains only letters, numbers, and hyphens.

Parent: None

Categories, unlike tags, can have a hierarchy. You might have a Jazz category, and under that have children categories for Bebop and Big Band. Totally optional.

Description:

The description is not prominent by default; however, some themes may show it.

Thank you for creating with WordPress.

You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

FIGURE 5-4: Editing a category in WordPress on the Edit Category screen.

3. **Type the new name for the category in the Name text box.**

4. **Type the new slug in the Slug text box.**

   The term *slug* refers to the word(s) used in the web address for the specific category. The category Books, for example, has a web address of `http://`*`yourdomain`*`.com/category/books`; if you change the Category Slug to Books

I Like, the web address is `http://yourdomain.com/category/books-i-like`. (WordPress automatically inserts a dash between the slug words in the web address.)

5. **Choose a parent category from the Parent drop-down list.**

   If you want this category to be a main category, not a subcategory, choose None.

6. **(Optional) Type a description of the category in the Description text box.**

   Use this description to remind yourself what your category is about. Some WordPress themes display the category description right on your site, too, which your visitors may find helpful. (See Book 6 for more about themes.) You know that your theme is coded in this way if your site displays the category description on the category page(s).

7. **Click the Update button.**

   The information you just edited is saved, and the Categories screen reloads, showing your new category name.

Creating new categories

Today, tomorrow, next month, next year — while your blog grows in size and age, continuing to add new categories further defines and archives the history of your posts. You aren't limited in the number of categories and subcategories you can create for your site.

Creating a new category is as easy as following these steps:

1. **Click the Categories link on the Posts submenu, which is on the Dashboard navigation menu.**

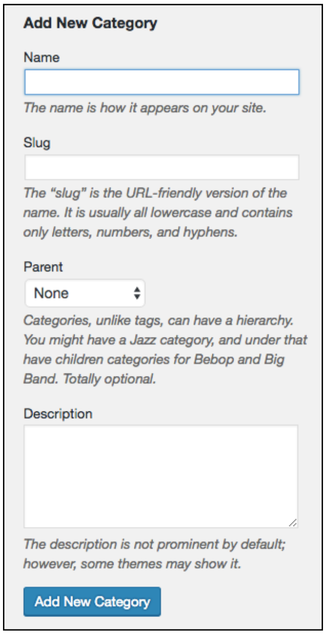
   The Categories screen opens. The left side of the Categories page displays the Add New Category section. (See Figure 5-5.)

2. **Type the name of your new category in the Name text box.**

   Suppose that you want to create a category in which you file all your posts about the books you read. In the Name text box, type something like **Books I Enjoy**.

3. **Type a name in the Slug text box.**

   The slug creates the link to the category page that lists all the posts you made in this category. If you leave this field blank, WordPress automatically creates a slug based on the category name. If the category is Books I Enjoy, WordPress automatically creates a category slug like `http://yourdomain.com/category/books-i-enjoy`. If you want to shorten it, however, you can! Type **books** in the Category Slug text box, and the link to the category becomes `http://yourdomain.com/category/books`.



Add New Category

Name

The name is how it appears on your site.

Slug

The "slug" is the URL-friendly version of the name. It is usually all lowercase and contains only letters, numbers, and hyphens.

Parent

None

Categories, unlike tags, can have a hierarchy. You might have a Jazz category, and under that have children categories for Bebop and Big Band. Totally optional.

Description

The description is not prominent by default; however, some themes may show it.

Add New Category

FIGURE 5-5: Create a new category on your site.

4. **Choose the category's parent from the Parent drop-down list.**

   Choose None if you want this new category to be a parent (or top-level) category. If you want to make this category a subcategory of another category, choose the category that you want to be the parent of this one.

5. **(Optional) Type a description of the category in the Description text box.**

   Some WordPress templates are set up to actually display the category description directly below the category name. (See Book 6.) Providing a description further defines the category intent for your readers. The description can be as short or as long as you want.

6. **Click the Add New Category button.**

   That's it! You've added a new category to your site. Armed with this information, you can add an unlimited number of categories to your new site.

You can delete a category by hovering your mouse pointer on the title of the category you want to delete and then clicking the Delete link that appears below the category title.

REMEMBER

Deleting a category doesn't delete the posts and links in that category. Instead, posts in the deleted category are reassigned to the Uncategorized category (or whatever you've named the default category).

TECHNICAL STUFF

If you have an established WordPress site that has categories already created, you can convert some or all of your categories to tags. To do so, look for the Category to Tag Converter link on the bottom right of the Category page of your WordPress Dashboard. Click it to convert your categories to tags. (See the nearby sidebar "What are tags, and how/why do I use them?" for more information on tags.)

Book 6, Chapter 6 shows you how to take advantage of categories in WordPress to build a dynamic theme that displays your content in a way that highlights the different topics available on your site. Book 6 describes how to use WordPress template tags to manipulate category archives for display and distribution on your website.

WHAT ARE TAGS, AND HOW/WHY DO I USE THEM?

Don't confuse tags with categories (as a lot of people do). *Tags* are clickable, comma-separated keywords that help you microcategorize a post by defining the topics in it. Unlike WordPress categories, tags don't have a hierarchy; you don't assign parent tags and child tags. If you write a post about your dog, for example, you can put that post in the Pets category — but you can also add some specific tags that let you get a whole lot more specific, such as *poodle* or *small dogs*. If someone clicks your *poodle* tag, he finds all the posts you ever made that contain the *poodle* tag.

Besides defining your post topics for easy reference, you have another reason to use tags: Search-engine spiders harvest tags when they crawl your site, so tags help other people find your site when they search for specific words.

You can manage your tags in the WordPress Administration panel by choosing Tags from the Pages drop-down list. The Tags page opens, allowing you to view, edit, delete, and add tags.

Creating and Editing Tags

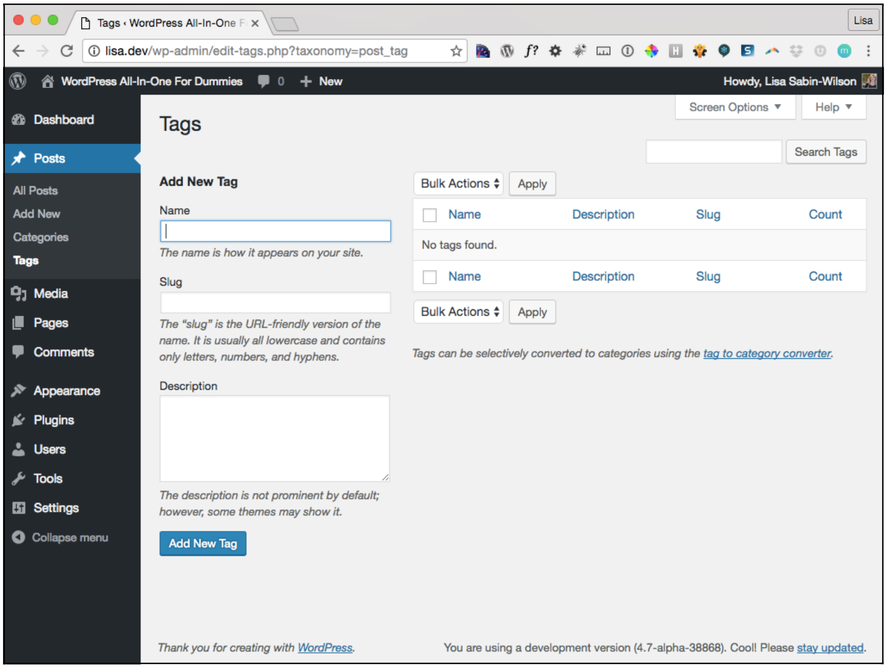
In Book 4, Chapter 1, you can find out all about publishing your posts in WordPress and assigning tags to your content. This section takes you through the steps of managing tags, which is similar to the way you manage categories. To create a new tag, follow these steps:

1. **Click the Tags link on the Posts submenu, which is on the Dashboard navigation menu.**

   The Tags screen opens, as shown in Figure 5-6. The left side of the screen displays the Add New Tag section.

   TIP

   Unlike what it does for categories and links, WordPress doesn't create a default tag for you, so when you visit the Tags page for the first time, no tags are listed on the right side of the page.



The name is how it appears on your site.

The "slug" is the URL-friendly version of the name. It is usually all lowercase and contains only letters, numbers, and hyphens.

The description is not prominent by default; however, some themes may show it.

No tags found.

Tags can be selectively converted to categories using the tag to category converter.

Thank you for creating with WordPress.

You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

FIGURE 5-6: The Tags screen of the Dashboard.

2. **Type the name of your new tag in the Name text box.**

   Suppose that you want to create a tag in which you file all your posts about the books you read. In the Name text box, type something like Fictional Books.

3. **Type a name in the Slug text box.**

   The *slug* is the permalink of the tag and can help identify tag archives on your site by giving them their own URL, such as `http://`*`yourdomain.com`*`/tag/fictional-books`. By default, the tag slug adopts the words from the tag name.

4. **(Optional) Type a description of the tag in the Description text box.**

   Some WordPress templates are set up to actually display the tag description directly below the tag name. Providing a description further defines the category intent for your readers. The description can be as short or as long as you want.

5. **Click the Add New Tag button.**

   That's it! You've added a new tag to your site. The Add New Tag screen refreshes in your browser window with blank fields, ready for you to add another tag to your site.

6. **Repeat Steps 1 through 5 to add an unlimited number of tags to your blog.**

TIP

You use the Tags and Categories pages of your Dashboard to manage, edit, and create new tags and categories to which you assign your posts when you publish them. Book 4, Chapter 1 contains a lot of information about how to go about assigning tags and categories to your posts, as well as a few good tips on how you can create new categories and tags right on the Edit Posts screen.

4

Publishing Your Site with WordPress

Contents at a Glance

IN THIS CHAPTER

- » Navigating the Add New Post page
- » Writing and publishing your posts
- » Creating a unique work space for writing

Chapter 1
Writing Your First Post

It's time to write your first post on your new WordPress site! The topic you choose to write about and the writing techniques you use to get your message across are all up to you; I have my hands full writing this book! I *can* tell you, however, all about the techniques you'll use to write the wonderful passages that can bring you fame. Ready?

This chapter covers everything you need to know about the basics of publishing a post on your site, from writing a post to formatting, categorizing, tagging, and publishing it to your site.

Composing Your Post

Composing a post is a lot like typing an email: You give it a title, you write the message, and you click a button to send your words into the world. This section covers the steps you take to compose and publish a post on your site. By using the different options that WordPress provides — discussion options, categories, and tags, for example — you can configure each post however you like.

TIP

You can collapse or reposition all the modules on the Add New Post screen to suit your needs. The only parts of the Add New Post screen that can't be collapsed and repositioned are the actual Title and Post text boxes (where you write your post).

Follow these steps to write a basic post:

1. **Click the Add New link on the Posts menu of the Dashboard.**

   The Add New Post screen opens, as shown in Figure 1-1.

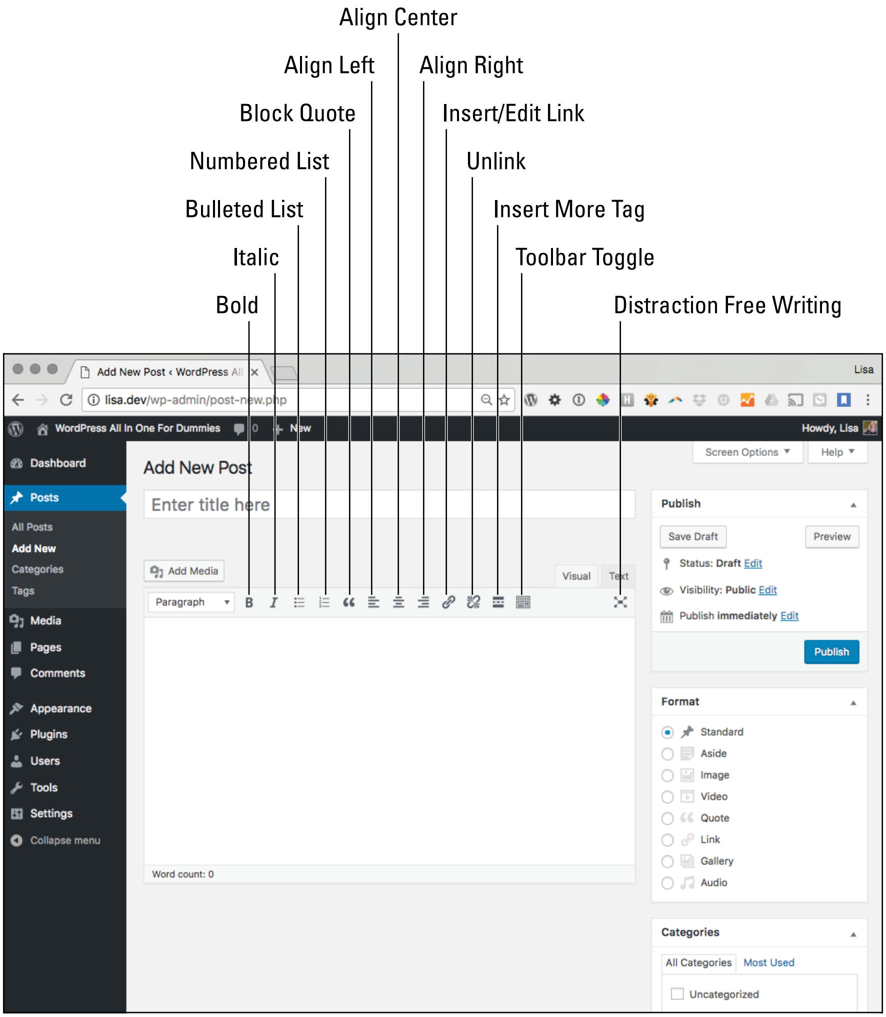


FIGURE 1-1: Give your post a title, and write your post body.

2. **Type the title of your post in the Enter Title Here text field at the top of the Add New Post screen.**

3. **Type the content of your post in the large text box below the Enter Title Here text box.**

   You can use the Visual Text Editor to format the text in your post. I explain the Visual Text Editor, and the buttons and options, later in this section.

4. **Click the Save Draft button in the Publish module, located in the top-right corner of the Add New Post screen.**

   The screen refreshes with your post title and content saved but not yet published to your site.

   At this point, you can skip to the "Publishing Your Post" section of this chapter for information on publishing your post to your site, or you can continue with the following sections to discover how to refine the options for your post.

By default, the area in which you write your post is in Visual Editing mode, as indicated by the Visual tab that appears above the text. Visual Editing mode provides WYSIWYG (What You See Is What You Get) options for formatting. Rather than having to embed HTML code in your post, you can simply type your post, highlight the text you want to format, and click the buttons (shown in Figure 1-1) that appear above the text box in which you type your post.

If you've ever used a word processing program, such as Microsoft Word, you'll recognize many of these buttons:

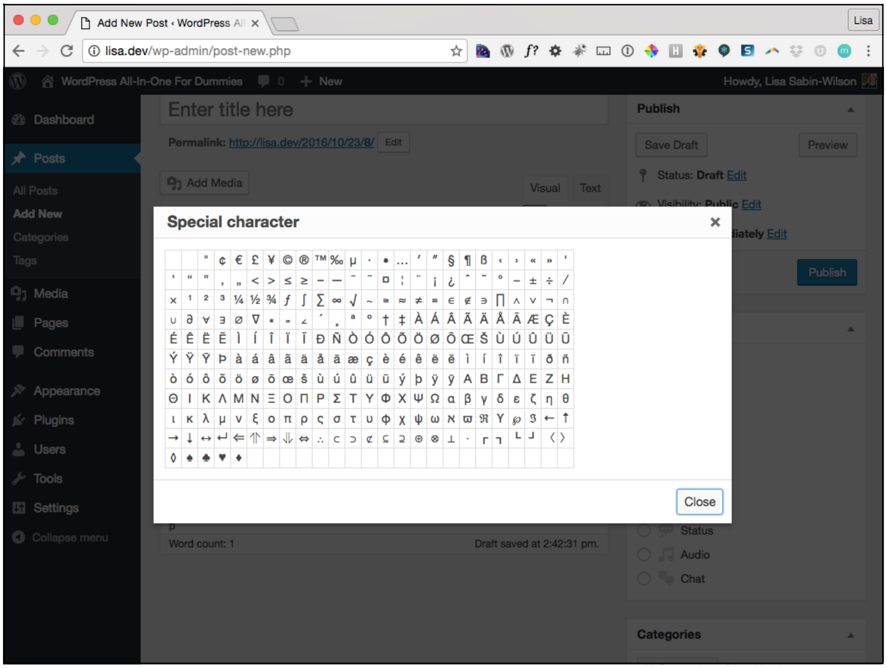
- **Bold:** Embeds the `<strong> </strong>` HTML tag to emphasize the text in bold. Example: **Bold Text.**
- **Italic:** Embeds the `<em> </em>` HTML tag to emphasize the text in italics. Example: *Italic Text.*
- **Strikethrough:** Embeds the `<strike> </strike>` HTML tag that puts a line through your text. Example: ~~Strikethrough Text~~.
- **Bulleted List:** Embeds the `<ul><li> </li></ul>` HTML tags that create an *unordered* (bulleted) list.
- **Numbered List:** Embeds the `<ol><li> </li></ol>` HTML tags that create an *ordered* (numbered) list.
- **Blockquote:** Inserts the `<blockquote> </blockquote>` HTML tag that indents the paragraph or section of text you've selected.
- **Horizontal Line:** Inserts the `<hr> </hr>` HTML tag that creates a horizontal line.
- **Align Left:** Inserts the `<p align="left"> </p>` HTML tag that lines up the selected text against the left margin.
- **Align Center:** Inserts the `<p align="center"> </p>` HTML tag that positions the selected text in the center of the page.

- **Align Right:** Inserts the `<p align="right"> </p>` HTML tag that lines up the selected text against the right margin.
- **Insert/Edit Link:** Inserts the `<a href=" "> </a>` HTML tag around the text you've selected to create a hyperlink.
- **Unlink:** Removes the hyperlink from the selected text, if it was previously linked.
- **Insert More Tag:** Inserts the `<!--more-->` tag, which lets you split the display on your blog page. It publishes the text written above this tag with a Read More link, which takes the user to a page with the full post. This feature is good for really long posts.
- **Toolbar Toggle:** Drops down additional formatting options, described in detail after this list.
- **Distraction Free Writing Mode:** Lets you focus purely on writing, without the distraction of all the other options on the page. Click this button, and the Post text box expands to fill the full height and width of your browser screen and displays only the barest essentials for writing your post. To bring the Post text box back to its normal state, click the Exit Full Screen link. Voilà — it's back to normal!

But wait — there's more! When you click the Toolbar Toggle icon, you see a lot more formatting options you can use for your posts. Click the Toolbar Toggle icon to see a new formatting list, which provides options for a veritable kitchen sink full of options, including underlining, font color, custom characters, undo, and redo:

- **Format:** This drop-down list allows you to select the different text formatting available:
  - *Paragraph:* Inserts the `<p> </p>` HTML tags around the text to indicate paragraph breaks.
  - *Headings 1, 2, 3, 4, 5, 6:* Inserts header HTML tags such as `<H1> </H1>` around text to indicate HTML headings. (H1 defines the largest, and H6 defines the smallest. Heading formats are usually defined in the CSS [see Book 6, Chapter 4] with font size and/or colors.)
  - *Preformatted:* Inserts the `<pre> </pre>` HTML tags around the text to indicate preformatted text and preserves both spaces and line breaks.
- **Underline:** Inserts the `<u> </u>` HTML tags around the text to display it as underlined.
- **Justify:** Inserts the `<p align="justify"> </p>` HTML , which aligns the selected text along both the left and right margins. Letter- and word-spacing is adjusted so each line stretches the full width of the text column.
- **Text Color:** Displays the text in the color chosen.

- **Paste As Text:** Useful if you copy text from another source. This option removes all formatting and special/hidden characters from the text and adds it to your post as unformatted text.
- **Clear Formatting:** Removes all formatting inside the post.
- **Special Character:** Opens a pop-up window appears (see Figure 1-2), offering characters such as $, %, &, and ©. In the pop-up window, click the symbol that you want to add to your post.



Permalink: http://lisa.dev/2016/10/23/8/ Edit

Status: Draft Edit

Visibility: Public Edit

…iately Edit

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×	¹	²	³	¼	½	¾	ƒ	∫	∑	∞	√	∼	≅	≈	≠	≡	∈	∉	∋	∏	∧	∨	¬	∩
∪	∂	∀	∃	∅	∇	∗	∝	∠	´	¸	ª	º	†	‡	À	Á	Â	Ã	Ä	Å	Ā	Æ	Ç	È
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Ý	Ÿ	Ȳ	Þ	à	á	â	ã	ä	å	ā	æ	ç	è	é	ê	ë	ē	ì	í	î	ï	ī	ð	ñ
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Θ	Ι	Κ	Λ	Μ	Ν	Ξ	Ο	Π	Ρ	Σ	Τ	Υ	Φ	Χ	Ψ	Ω	α	β	γ	δ	ε	ζ	η	θ
ι	κ	λ	μ	ν	ξ	ο	π	ρ	ς	σ	τ	υ	φ	χ	ψ	ω	ℵ	ϖ	ℜ	ϒ	℘	ℑ	←	↑
→	↓	↔	↵	⇐	⇑	⇒	⇓	⇔	∴	⊂	⊃	⊄	⊆	⊇	⊕	⊗	⊥	⋅	⌈	⌉	⌊	⌋	〈	〉
◊	♠	♣	♥	♦																				

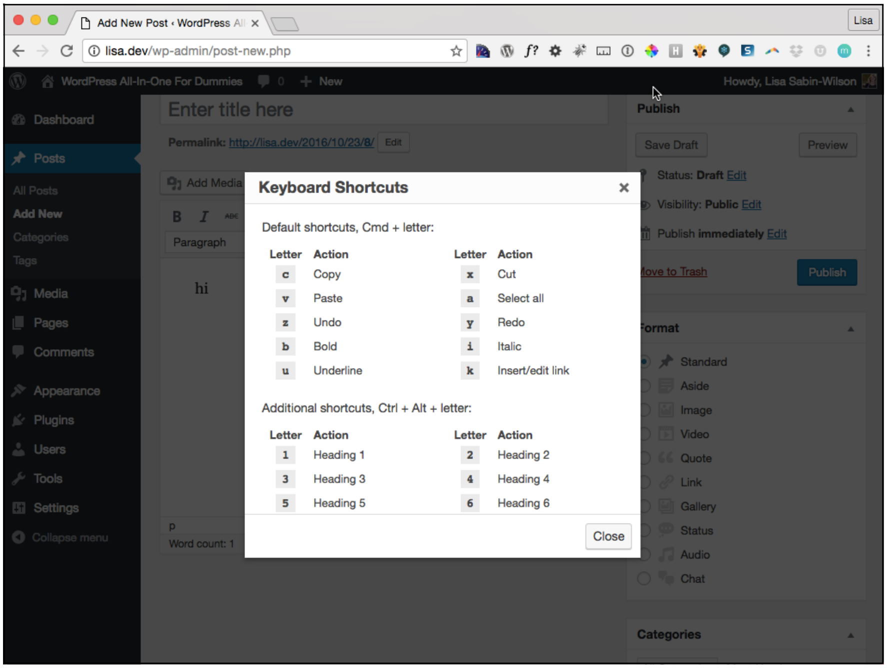
p

Word count: 1

Draft saved at 2:42:31 pm.

FIGURE 1-2: Insert custom characters into your post.

- **Decrease Indent:** Moves text to the left one preset level with each click.
- **Increase Indent:** Moves text to the right one preset level with each click.
- **Undo:** Undoes your last formatting action.
- **Redo:** Redoes the last formatting action that you undid.
- **Keyboard Shortcuts:** Pops open a window with helpful information about using timesaving keyboard shortcuts, as shown in Figure 1-3.



Keyboard Shortcuts ×

Default shortcuts, Cmd + letter:

Letter	Action	Letter	Action
c	Copy	x	Cut
v	Paste	a	Select all
z	Undo	y	Redo
b	Bold	i	Italic
u	Underline	k	Insert/edit link

Additional shortcuts, Ctrl + Alt + letter:

Letter	Action	Letter	Action
1	Heading 1	2	Heading 2
3	Heading 3	4	Heading 4
5	Heading 5	6	Heading 6

Close

FIGURE 1-3: Keyboard shortcuts.

You can turn off the Visual Text Editor by clicking the Your Profile link on the Users menu. Select the Disable the Visual Editor When Writing check box to turn off this editor if you'd rather insert the HTML code yourself in your posts.

TECHNICAL STUFF

If you'd rather embed your own HTML code and skip the Visual Text Editor, click the Text tab that appears to the right of the Visual tab. If you're planning to type HTML code in your post — for a table or video files, for example — you have to click the Text tab before you insert that code. If you don't, the Visual Text Editor formats your code, and it most likely will look nothing like you intended it to.

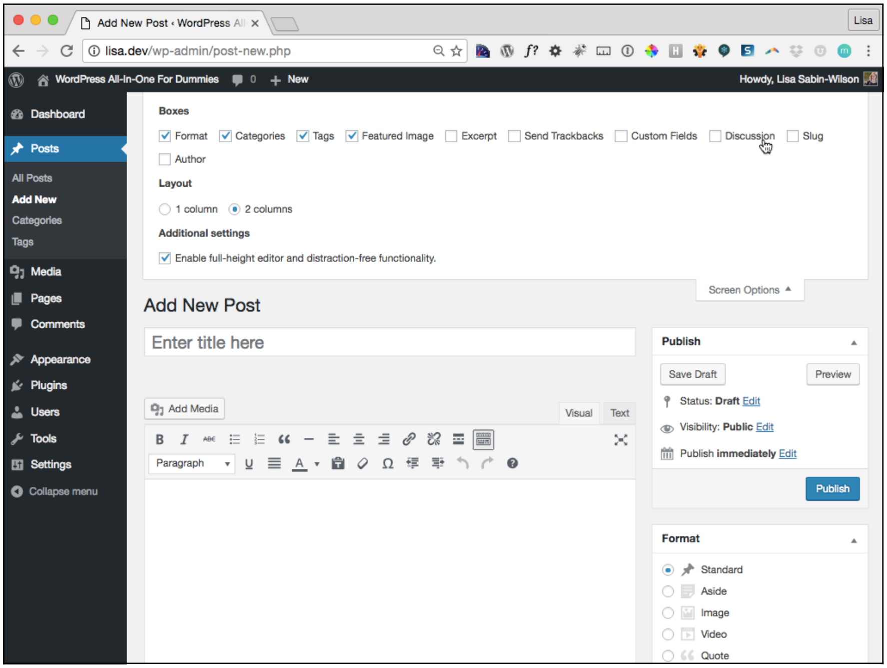
REMEMBER

WordPress has a nifty built-in autosave feature that saves your work while you're typing and editing a new post. If your browser crashes or you accidentally close your browser window before you've saved your post, it will be there for you when you get back. Those WordPress folks are so thoughtful!

Directly above the Visual Text Editor row of buttons, you see the Add Media button. Click this button if you want to insert images/photos, photo galleries, videos, and audio files into your posts. WordPress has an entire Media Library capability, which you can find out about in great detail in Book 4, Chapters 3 and 4.

Refining Your Post Options

After you write the post, you can choose a few extra options before you publish it for the entire world to see. By default, the Add New Post screen of the WordPress Dashboard displays only a few options because they're the minimum options you need to publish a post. Book 3, Chapter 1 explains the Screen Options tab, which contains additional options for the screen you're currently viewing in the Dashboard. On the Add New Post screen, click the Screen Options tab (shown in Figure 1-4) to reveal additional modules that you can activate on this screen, including



Boxes

☑ Format ☑ Categories ☑ Tags ☑ Featured Image □ Excerpt □ Send Trackbacks □ Custom Fields □ Discussion □ Slug □ Author

Layout

○ 1 column ● 2 columns

Additional settings

☑ Enable full-height editor and distraction-free functionality.

Add New Post

Status: Draft Edit

Visibility: Public Edit

Publish immediately Edit

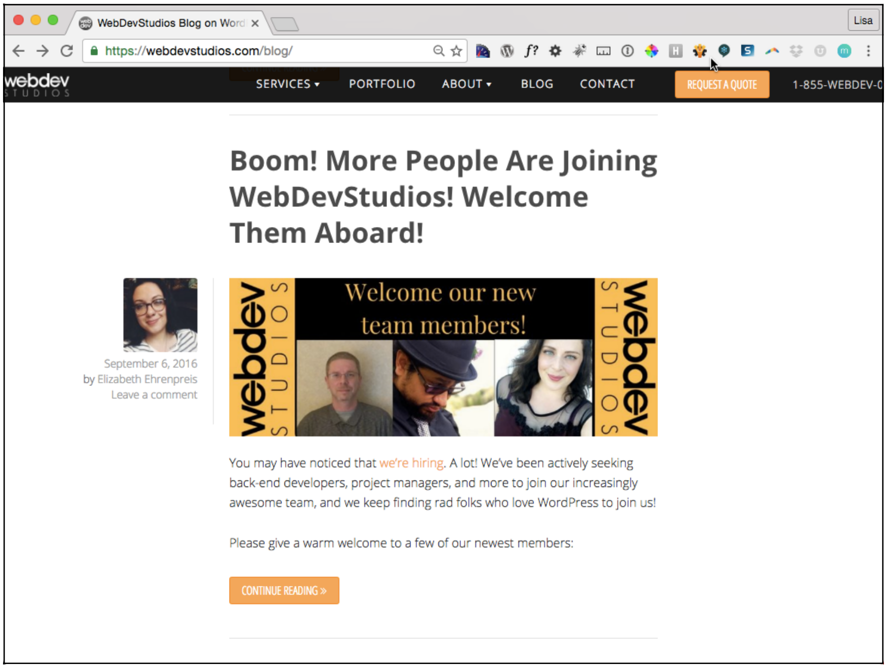
Format

● Standard
○ Aside
○ Image
○ Video
○ Quote

FIGURE 1-4: Several options are available for your blog posts.

- **Excerpt:** Excerpts are short summaries of your posts. Many authors use snippets to show teasers of their posts on their website, thereby encouraging the reader to click the Read More links to read the posts in their entirety. Type your short summary in the Excerpt box. Excerpts can be any length in terms of words, but the point is to keep them short and sweet to tease your readers into clicking the Read More link.

  Figure 1-5 shows a post published to my business site. It displays an excerpt of the post on the front page, requiring the reader to click the title link to view the post in its entirety. (Some blog themes include a Continue Reading link for readers to click to read the rest of the post.)



Boom! More People Are Joining WebDevStudios! Welcome Them Aboard!

September 6, 2016
by Elizabeth Ehrenpreis
Leave a comment

You may have noticed that we're hiring. A lot! We've been actively seeking back-end developers, project managers, and more to join our increasingly awesome team, and we keep finding rad folks who love WordPress to join us!

Please give a warm welcome to a few of our newest members:

FIGURE 1-5: A post excerpt.

- **Send Trackbacks:** If you want to send a trackback to another site, enter the site's trackback URL in the Send Trackbacks To text box. You can send trackbacks to more than one blog; just be sure to separate trackback URLs with spaces. For more on trackbacks, refer to Book 3, Chapter 4.
- **Custom Fields:** Custom fields add extra data to your posts, and you can fully configure them. You can read more about the Custom Fields feature in WordPress in Book 4, Chapter 5.
- **Discussion:** Decide whether to let readers submit comments through the comment system by selecting the Allow Comments on This Post check box. By default, the box is selected; deselect it to disallow comments on this post.
- **Slug:** A slug is part of the URL of your post, added onto your domain. For example, for a post titled "WordPress tips," WordPress automatically creates a URL from that title like `http://domain.com/wordpress-tips`. The Slug option allows you to set a different slug for your post (or page) than the one WordPress automatically creates for you. So, for example, you could shorten the slug for the post title "WordPress Tips" to just "wordpress" so that the URL for the post is `http://domain.com/wordpress`.
- **Author:** If you're running a multiauthor blog, you can select the name of the author who wrote this post. By default, your own author name is selected in the Author drop-down list.

These optional modules apply to the post you're currently working on — not to any future or past posts. You can find these options below and to the right of the Post text box after they're activated in Screen Options. (Refer to Figure 1-4.) Click the title of each option to make the settings for that specific option expand or collapse.

REMEMBER

You can reposition the various post option modules on the Add New Post page to fit the way you use this page by using the drag-and-drop method.

Here are the options that appear to the right of the Post text box:

- **Publish:** These options are covered in the "Publishing Your Post" section later in this chapter.
- **Format:** This module appears only when the theme that you're using on your site supports a WordPress feature called Post Formats (which I cover in detail in Book 6, Chapter 6). In the Format module, you can select the type of format you want to use for the post you're publishing.
- **Categories:** You can file your posts in different categories to organize them by subject. (See more about organizing your posts by category in Book 3, Chapter 5.) Select the check box to the left of the category you want to use. You can toggle between listing all categories or displaying just the categories you use most by clicking the All Categories or Most Used link, respectively.

  TIP

  Don't see the category you need? Click the Add New Category link, and add a category right there on the Add New Post page.
- **Tags:** Type your desired tags in the Add New Tag text box. Be sure to separate tags with a comma so that WordPress knows where each tag begins and ends. `Cats, Kittens, Feline` represent three different tags, for example, but without the commas, WordPress would consider those three words to be one tag. You can also click the Choose from the Most Used Tags link to see a listing of tags that you use most often in your content. Click any of the tags displayed, and WordPress adds it to the post you're editing. See Book 3, Chapter 5 for more information on tags and how to use them.
- **Featured Image:** Some WordPress themes are configured to use an image (photo) to represent each post that you have on your site. The image can appear on the home/front page, blog page, archives page, or anywhere within the content display on your website. If you're using a theme that has this option, you can easily define the post thumbnail by clicking Set Featured Image below the Featured Image module on the Add New Post page. You can find more information about using Featured Images in Book 6, Chapter 6.

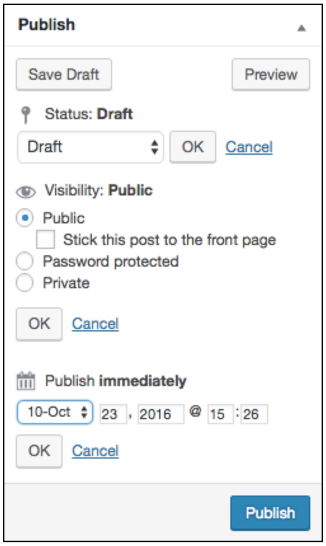
WARNING

When you finish setting the options for your post, don't navigate away from this page; you haven't yet fully saved your options. The following section on publishing your post covers all the options you need for saving your post settings!

Publishing Your Post

You've given your new post a title and written the content of the post. Maybe you've even added an image or other type of media file to the post (see Book 4, Chapters 3 and 4), and you've definitely configured the tags, categories, and other options. Now the question is this: To publish? Or not to publish (yet)?

WordPress gives you three options for saving or publishing your post when you're done writing it. The Publish module is located on the right side of the Add New (or Edit) Post screen. Just click the title of the Publish module to expand the settings you need. Figure 1-6 shows the available options in the Publish module.



Status: Draft

Visibility: Public

● Public

□ Stick this post to the front page

○ Password protected

○ Private

Publish immediately

10-Oct 23, 2016 @ 15 : 26

FIGURE 1-6: The publish status for your blog posts.

The Publish module has several options:

- **Save Draft:** Click this button to save your post as a draft. The Add New Post screen reloads with all your post contents and options saved. You can continue editing now, tomorrow, the next day, or next year; the post is saved as a draft until you decide to publish it or delete it. Posts saved as drafts can't be seen by visitors to your site. To access your draft posts, click the Posts link on the Posts menu.
- **Preview:** Click the Preview button to view your post in a new window, as it would appear on your live site if you'd published it. Previewing the post doesn't publish it to your site yet. Previewing simply gives you the opportunity

to view the post on your site and check it for any formatting or content changes you want to make.

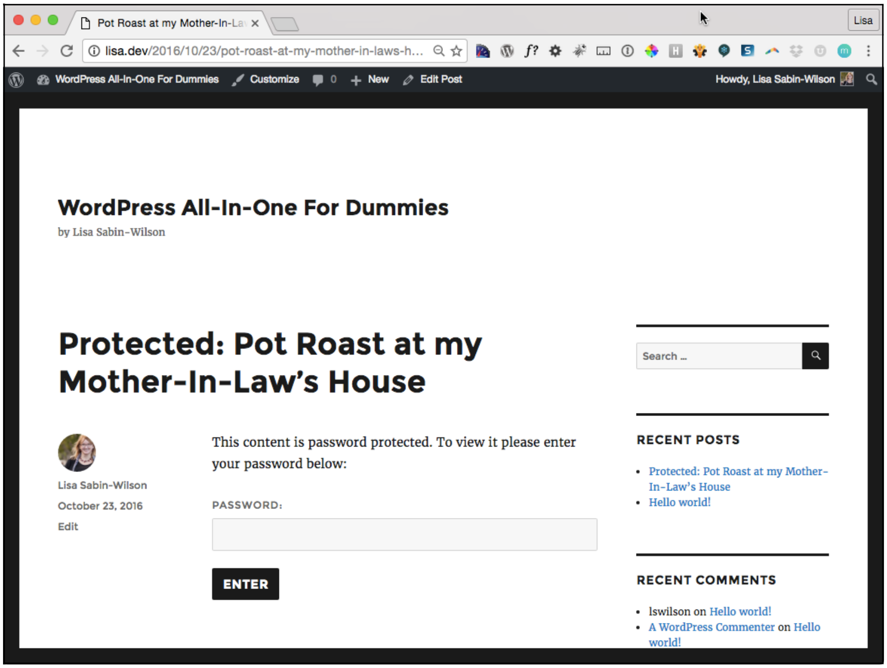
- **Status:** Click the Edit link (shown in the Publish module in Figure 1-4) to open the settings for this option. A drop-down list appears, from which you can choose one of two options:
  - *Draft:* Save the post in draft form but don't publish it to your site.
  - *Pending Review:* The post shows up in your list of drafts next to a Pending Review header. This option lets the administrator of the blog know that contributors have entered posts that are waiting for administrator review and approval (helpful for sites that have multiple authors). Generally, only contributors use the Pending Review option.

  Click the OK button to save your Status setting.
- **Visibility:** Click the Edit link to open the settings for this option:
  - *Public:* Select this option to make the post viewable to everyone who visits your site. Select the Stick This Post to the Front Page check box to have WordPress publish the post to your site and keep it at the very top of all posts until you change this setting for the post.

    REMEMBER

    This option is otherwise known as a *sticky post*. Typically, posts are displayed in chronological order on your site, displaying the most recent post on top. If you make a post sticky, it remains at the very top, no matter how many other posts you make after it. When you want to unstick the post, deselect the Stick This Post to the Front Page check box.
  - *Password Protected:* By assigning a password to a post, you can publish a post to your site that only you can see. You can also share the post password with a friend, who can see the content of the post after he or she enters the password. But why would anyone want to password-protect a post? Imagine that you just ate dinner at your mother-in-law's house, and she made the *worst* pot roast you've ever eaten. You can write all about it! Protect it with a password and give the password to your trusted friends so that they can read about it without offending your mother-in-law.

    Figure 1-7 shows a published post that's private; visitors see that a post exists, but they need to enter a password in the text box and then click Submit to view it.
  - *Private:* Publish this post to your blog so that only you can see it; no one else will be able to see it, ever. You may want to protect personal and private posts that you write only to yourself (if you're keeping a personal diary, for example).
- **Publish Immediately:** Click the Edit link to make the publish date options appear, where you can set the time stamp for your post. If you want the post to have the current time and date, ignore this setting.


Pot Roast at my Mother-In-La ×
Lisa
lisa.dev/2016/10/23/pot-roast-at-my-mother-in-laws-h...
WordPress All-In-One For Dummies
Customize
0
New
Edit Post
Howdy, Lisa Sabin-Wilson
Search …
Lisa Sabin-Wilson
October 23, 2016
Edit
PASSWORD:
ENTER

WordPress All-In-One For Dummies

by Lisa Sabin-Wilson

Protected: Pot Roast at my Mother-In-Law's House

This content is password protected. To view it please enter your password below:

RECENT POSTS

- Protected: Pot Roast at my Mother-In-Law's House
- Hello world!

RECENT COMMENTS

- lswilson on Hello world!
- A WordPress Commenter on Hello world!

FIGURE 1-7: A password-protected post.

If you want to future-publish this post, you can set the time and date for anytime in the future. If you have a vacation planned and don't want your site to go without updates while you're gone, for example, you can write a few posts and set the date for a time in the future. Those posts are published to your site while you're somewhere tropical, diving with the fishes.

- **Publish:** This button wastes no time! It bypasses all the previous draft, pending review, and sticky settings to publish your post immediately.

After you choose an option from the Publish drop-down list, click the OK button. The Write Post page saves your publishing-status option.

TIP

If you click Publish and for some reason don't see the post on your site, you probably left the Status drop-down list set to Draft. Your new post appears in the draft posts, which you can find on the Dashboard's Posts page. Just click the Posts link on the navigation menu.

Being Your Own Editor

While I write this book, I have editors and proofreaders looking over my shoulder, making recommendations, correcting typos and grammatical errors, and telling me when I get too long-winded. You, on the other hand, are not so lucky! You're your own editor and have full control of what you write, when you write it, and how you write it.

You can always go back and edit previous posts to correct typos, grammatical errors, and other mistakes by following these steps:

1. **Find the post that you want to edit by clicking the All Posts link on the Posts menu of the Dashboard.**

   The Posts screen opens and lists the 20 most recent posts you've created.

   TIP

   To filter that listing of posts by date, choose a date from the All Dates drop-down list at the top of the Posts screen (Dashboard⇨Posts). If you choose February 2017, the Posts page reloads, displaying only those posts that were published in the month of February 2017.

   You can also filter the post listing by category. Choose your desired category from the All Categories drop-down list.

2. **When you find the post you need, click its title.**

   Alternatively, you can click the Edit link that appears below the post title.

   The Edit Post screen opens. In this screen, you can edit the post and/or any of its options.

   TIP

   If you need to edit only the post options, click the Quick Edit link. A drop-down Quick Edit menu appears, displaying the post options that you can configure, such as title, status, password, categories, tags, comments, and time stamp. Click the Save button to save your changes.

3. **Edit your post; then click the Update Post button.**

   The Edit Post window refreshes with all your changes saved.

Creating Your Own Workspace for Writing

In Book 3, Chapter 1, you discover how to organize the Dashboard to create your own customized workspace by rearranging modules and screen options. The Add New Post screen, where you write, edit, and publish your post, has the same options available, allowing you to fully control the workspace arrangement to create your own custom space that suits your writing needs.

To start customizing your workspace, open the Add New Post page by clicking the Add New link on the Posts menu of the Dashboard.

Adjusting screen options

Several items appear on the Add New Post page, as described in "Publishing Your Post," earlier in this chapter. You may not use all these items; in fact, you may find that simply removing them from the Add New Post page (and the Edit Post page) makes writing your posts easier and more efficient. To remove an item, follow these steps:

1. **Click the Screen Options tab at the top of the screen.**

   The Screen Options panel drops down. (Refer to Figure 1-4.)

2. **Select or deselect items below the Boxes heading.**

   Select an item by placing a check mark in the check box to the left of its name; deselect it by removing the check mark. Selected items appear on the page, and deselected items are removed from the page.

   TIP

   If you deselect an item that you want to include again on the Add New Post screen, it's not gone forever! Revisit the Screen Options panel and reselect its check box to make that item appear on the page once again.

3. **Select your preferred Screen Layout.**

   You can choose whether your Dashboard appears in one column or two columns (the default option).

4. **Click the Screen Options tab when you're done.**

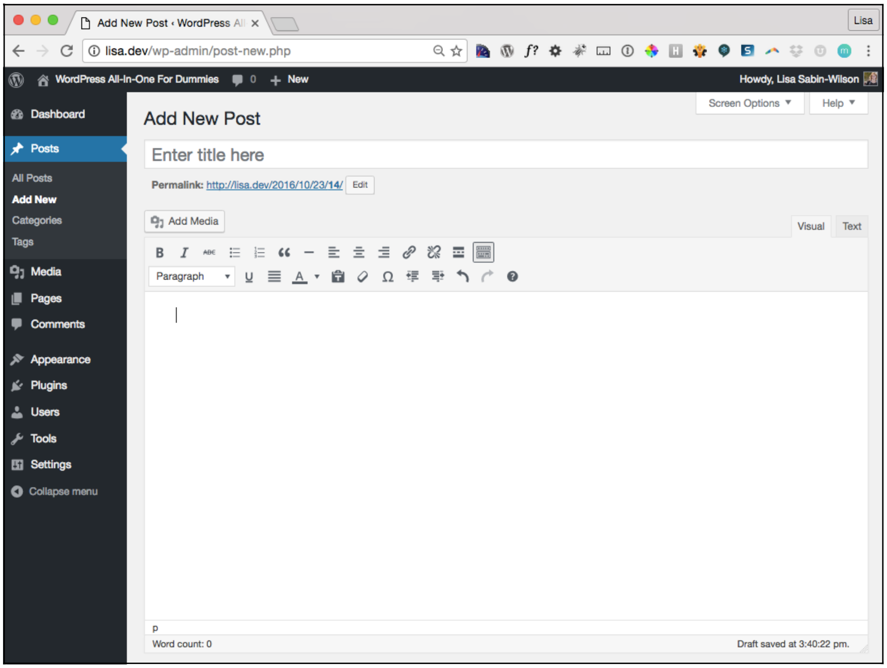
   The Screen Options panel closes, and the options you've chosen are saved and remembered by WordPress.

Figure 1-8 shows my Add New Post screen displayed with a one-column layout because I like to have as much of the editor box showing as possible on my computer screen.

Arranging post modules

Aside from being able to make the Post text box bigger (or smaller) by using options in the Screen Options tab, you can't edit the Post text box module. You can configure all other modules on the Add New Post screen (and the Edit Post page). You can remove them (in the Screen Options panel, as I discuss in the preceding section), expand and collapse them, and drag them around to place them in different spots on your screen.

Collapse (that is, close) any of the modules by clicking the down arrow that appears to the right of the module name, as shown in Figure 1-9 for the Categories module. Likewise, you can *expand* (or open) a module by doing the same when it's collapsed.



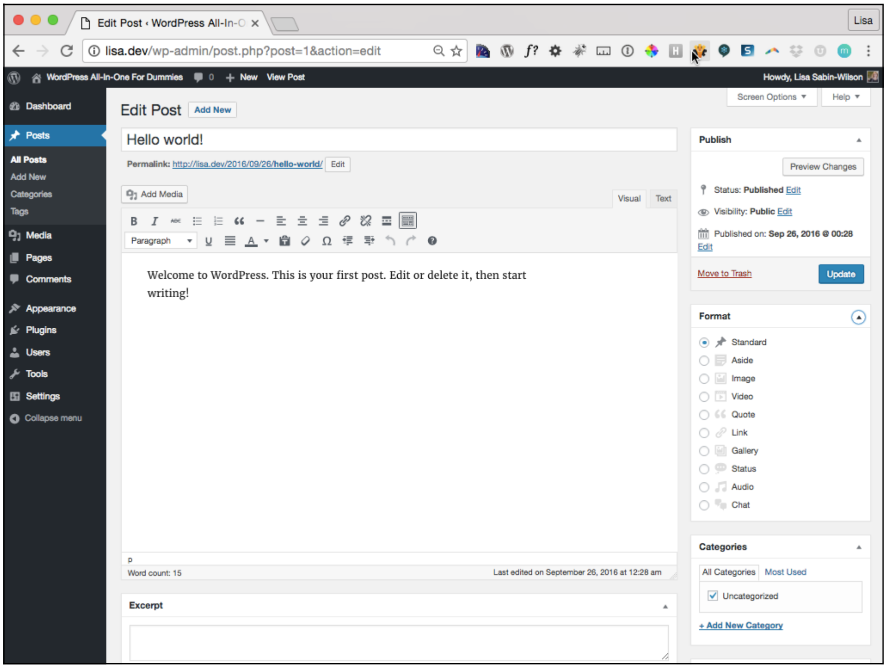
lisa.dev/wp-admin/post-new.php

Permalink: http://lisa.dev/2016/10/23/14/

Word count: 0

Draft saved at 3:40:22 pm.

FIGURE 1-8: The Add New Post screen with a one-column format



lisa.dev/wp-admin/post.php?post=1&action=edit

Hello world!

Permalink: http://lisa.dev/2016/09/26/hello-world/

Welcome to WordPress. This is your first post. Edit or delete it, then start writing!

Word count: 15

Last edited on September 26, 2016 at 12:28 am

Status: Published Edit

Visibility: Public Edit

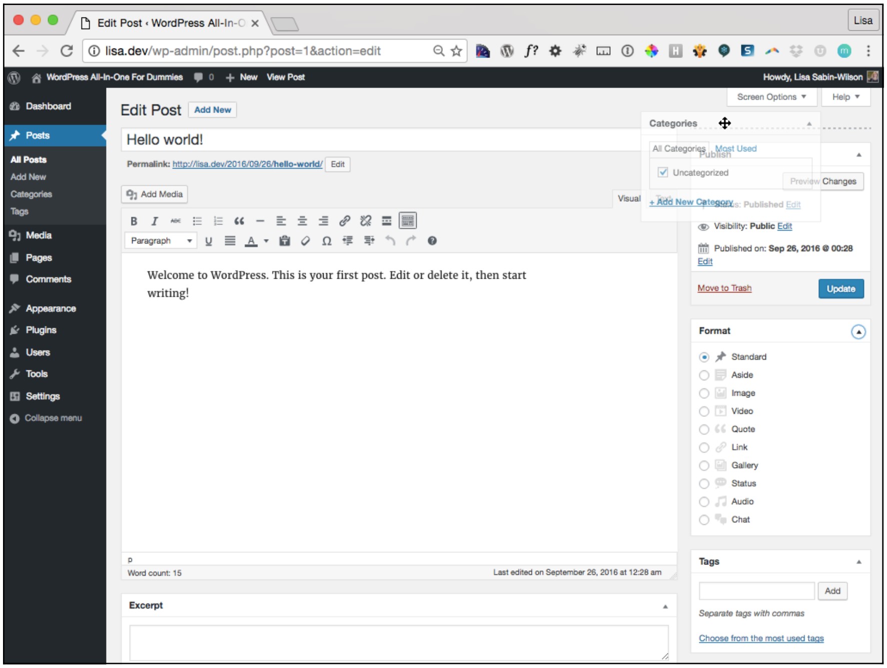
Published on: Sep 26, 2016 @ 00:28 Edit

● Standard

☑ Uncategorized

FIGURE 1-9: Expand or collapse modules.

You can also drag and drop a module on the Add New Post screen to position it wherever you want. Just click a module and, while holding down the mouse button, drag it to a different area of the screen. WordPress displays a dashed border around the area when you have the module hovering over a spot where you can drop it. Because I use the Categories module on every post I publish, I want that module at the top-right corner of my writing space. Figure 1-10 shows the action of dragging the Categories module to the top right of the Add New Post screen.



Hello world!

Permalink: http://lisa.dev/2016/09/26/hello-world/ Edit

Welcome to WordPress. This is your first post. Edit or delete it, then start writing!

Word count: 15

Last edited on September 26, 2016 at 12:28 am

FIGURE 1-10: Drag and drop modules on the Add New Post page.

On the Add New Post screen within your Dashboard, you can really configure a custom workspace that suits your style, work habits, and needs. WordPress remembers all the changes you make on this page, including the screen options and modules, so you have to set up this page only once. You can drag and drop modules on any Dashboard page in the same way you do on the main Dashboard page, as covered in Book 3, Chapter 1.

IN THIS CHAPTER

- » Differentiating posts and pages
- » Creating a new static page on your website
- » Adding a blog to your site

Chapter 2

Creating a Static Page

In Book 3, Chapter 5, I discuss the different ways that content gets archived by WordPress, and in Book 3, Chapter 1, I give you a very brief introduction to the concept of pages and where to find them on the WordPress Dashboard.

This chapter takes you through the full concept of pages in WordPress, including how to write and publish them. This chapter also fully explains the difference between posts and pages in WordPress so that you know which to publish for different situations.

Understanding the Difference between Posts and Pages

Pages, in WordPress, are different from posts because they don't get archived the way your posts do. They aren't categorized or tagged, don't appear in your listing of recent posts or date archives, and aren't syndicated in the RSS feeds available on your site — because content within pages generally doesn't change. (Book 3, Chapter 5 gives you all the details on how the WordPress archives work.)

REMEMBER

Use pages for static or stand-alone content that exists separately from the archived post content on your site.

With the page feature, you can create an unlimited amount of static pages separate from your posts. People commonly use this feature to create About Me or Contact Me pages, among other things. Table 2-1 illustrates the differences between posts and pages by showing you the different ways the WordPress platform handles them.

TABLE 2-1 Differences between a Post and a Page

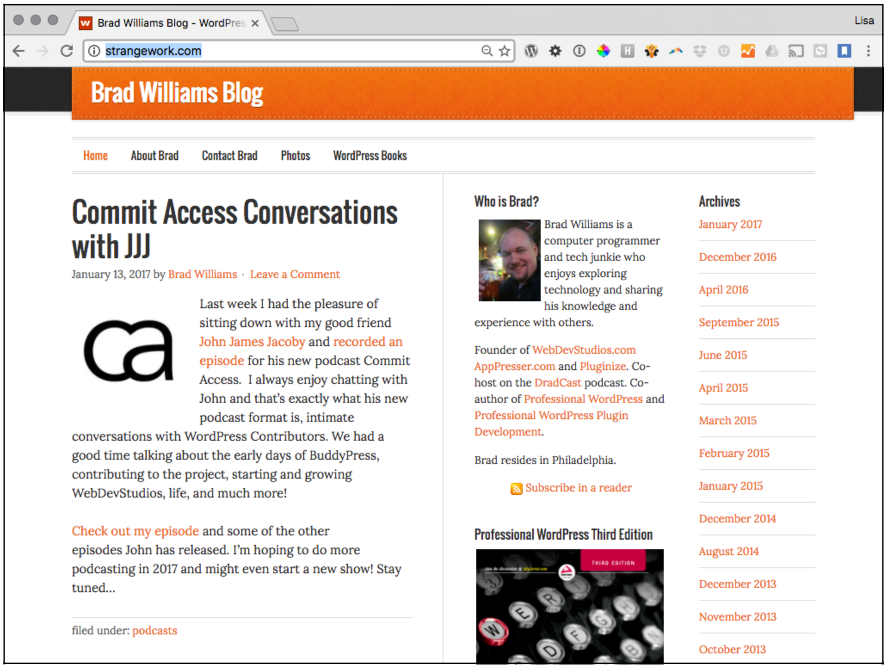
WordPress Options	Page	Post
Appears in blog post listings	No	Yes
Appears as a static page	Yes	No
Appears in category archives	No	Yes
Appears in monthly archives	No	Yes
Appears in Recent Posts listings	No	Yes
Appears in site RSS feed	No	Yes
Appears in search results	Yes	Yes
Uses tags and/or categories	No	Yes

Creating the Front Page of Your Website

For the most part, when you visit a site powered by WordPress, the blog can appear on the main page or as a separate page of the site. My business partner, Brad Williams, keeps a personal blog at `http://strangework.com/`, powered by WordPress (of course). His blog shows his latest posts on the front page, along with links to the post archives (by month or by category) in the sidebar. This setup is typical of a site run by WordPress. (See Figure 2-1.)

But the front page of our business site at `http://webdevstudios.com`, also powered by WordPress, contains no blog and displays no blog posts. (See Figure 2-2.) Instead, it displays the contents of a static page that we created in the WordPress Dashboard. This static page serves as a portal that displays pieces of content from other sections within the entire site. The site does include a blog but also serves as a full-blown business website with all the sections I need to provide my clients the information they want.

Both of my sites are powered by the self-hosted version of WordPress.org, so how can they differ so much in what they display on the front page? The answer lies in the templates in the WordPress Dashboard.



Commit Access Conversations with JJJ

January 13, 2017 by Brad Williams · Leave a Comment

Last week I had the pleasure of sitting down with my good friend John James Jacoby and recorded an episode for his new podcast Commit Access. I always enjoy chatting with John and that's exactly what his new podcast format is, intimate conversations with WordPress Contributors. We had a good time talking about the early days of BuddyPress, contributing to the project, starting and growing WebDevStudios, life, and much more!

Check out my episode and some of the other episodes John has released. I'm hoping to do more podcasting in 2017 and might even start a new show! Stay tuned...

filed under: podcasts

Who is Brad?

Brad Williams is a computer programmer and tech junkie who enjoys exploring technology and sharing his knowledge and experience with others.

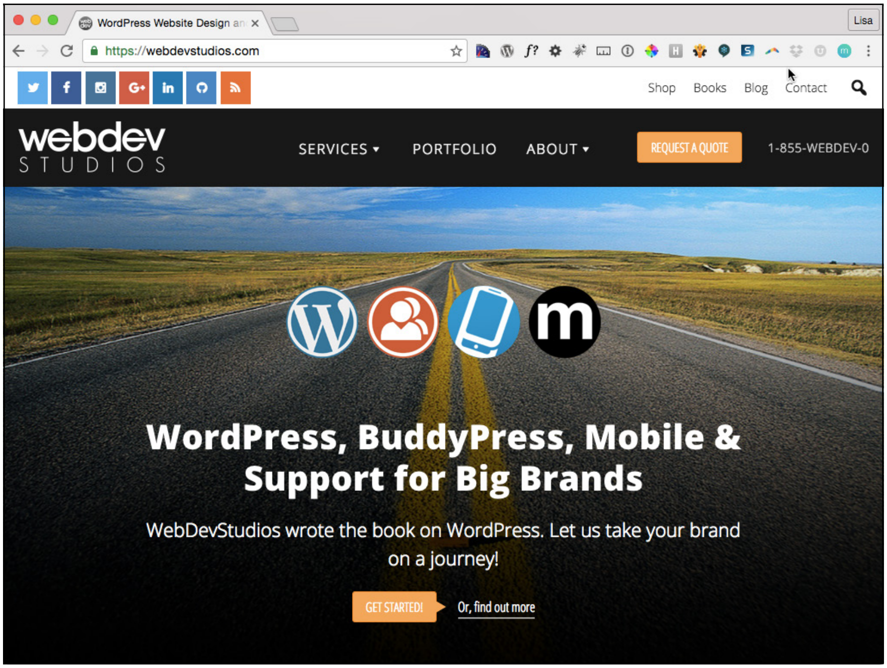
Founder of WebDevStudios.com AppPresser.com and Pluginize. Co-host on the DradCast podcast. Co-author of Professional WordPress and Professional WordPress Plugin Development.

Brad resides in Philadelphia.

Subscribe in a reader

Professional WordPress Third Edition

FIGURE 2-1: A personal blog, set up like a standard blog powered by WordPress.



WordPress, BuddyPress, Mobile & Support for Big Brands

WebDevStudios wrote the book on WordPress. Let us take your brand on a journey!

FIGURE 2-2: My business site, set up as a business website rather than a blog.

You use static pages in WordPress to create content that you don't want to appear as part of your blog but do want to appear as part of your overall site (such as a bio page, a page of services, and so on).

Creating a front page is a three-step process:

1. **Create a static page.**
2. **Designate that static page as the front page of your site.**
3. **Tweak the page to look however you like.**

REMEMBER

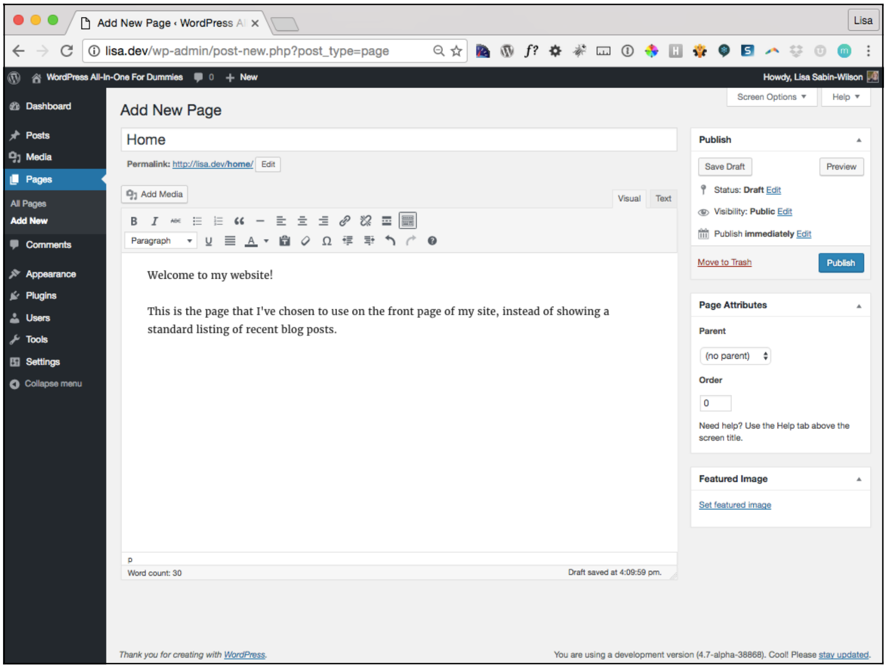
By using this method, you can create unlimited numbers of static pages to build an entire website. You don't even need to have a blog on this site unless you want one.

Creating the static page

To have a static page appear on the front page of your site, you need to create that page. Follow these steps:

1. **Click the Add New link on the Pages menu of the Dashboard.**

   The Add New Page screen opens, allowing you to write a new page for your WordPress site, as shown in Figure 2-3.



Home

Permalink: http://lisa.dev/home/

Welcome to my website!

This is the page that I've chosen to use on the front page of my site, instead of showing a standard listing of recent blog posts.

p

Word count: 30

Draft saved at 4:09:59 pm.

Status: Draft Edit

Visibility: Public Edit

Publish immediately Edit

Parent

(no parent)

Order

0

Need help? Use the Help tab above the screen title.

Thank you for creating with WordPress.

You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

FIGURE 2-3: Create the static page that you want to use as your front page.

2. **Type a title for your page in the text box at the top.**
3. **Type the content of your page in the large text box.**
4. **Set the options for this page.**

   I explain the options on this page in the following section.

5. **Click the Publish button.**

   The page is saved to your database and published to your WordPress site with its individual URL (or *permalink*). The URL for the static page consists of your blog URL and the title of the page. If you titled your page About Me, for example, the URL of the page is `http://`*`yourdomain`*`.com/about-me`. (See Book 3, Chapter 2 for more information about permalinks.)

TECHNICAL STUFF

The Page Template option is set to Default Template. This setting tells WordPress that you want to use the default page template (`page.php` in your theme template files) to format the page you're creating. The default page template is the default setting for all pages you create; you can assign a different page template to pages you create if your theme has made different page templates available for use. In Book 6, Chapter 6, you can find extensive information on advanced WordPress themes, including information on page templates and how to create and use them on your site.

Setting page options

Before you publish a new page to your site, you can change options to use different features available in WordPress. These features are similar to the ones available for publishing posts, which you can read about in Book 4, Chapter 1:

- **Custom Fields:** Custom fields add extra data to your page, and you can fully configure them. You can read more about the Custom Fields feature in Book 4, Chapter 5.
- **Discussion:** Decide whether to let readers submit comments through the comment system by selecting or deselecting the Allow Comments text box. By default, the box is selected; deselect it to disallow comments on this page.

  TIP

  Typically, you don't see a lot of static pages that have the Comments feature enabled because pages offer static content that generally doesn't lend itself to a great deal of discussion. There are exceptions, however, such as a Contact page, which might use the Comments feature as a way for readers to get in touch with you through that specific page. Of course, the choice is yours to make based on the specific needs of your website.

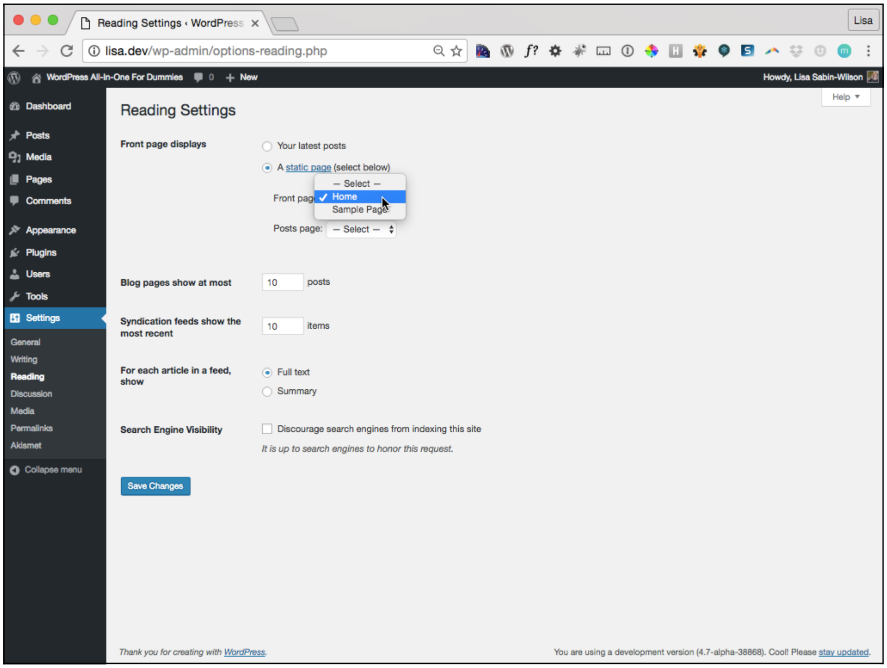
- **Author:** If you're running a multiauthor site, you can select the name of the author you want to be attributed to this page. By default, your own author name is selected here.
- **Publish:** The publishing options for your post are covered in Book 4, Chapter 1.
- **Parent:** Select a parent for the page you're publishing. Book 3, Chapter 5 covers the different archiving options, including the ability to have a hierarchical structure for pages that create a navigation of main pages and subpages (called parent and child pages).
- **Template:** You can assign the page template if you're using a template other than the default one. (Book 6, Chapter 6 contains more information about themes and templates, including using page templates on your site.)
- **Order:** By default, this option is set to 0 (zero). You can enter a number, however, if you want this page to appear in a certain spot on the page menu of your site.

  If you're using the built-in menu feature in WordPress, you can use this option. You don't have to use it, however, because you can define the order of pages and how they appear on your menu by assigning a number to the page order. A page with the page order of 1 appears first on your navigation menu, a page with the page order of 2 appears second, and so on. Book 6, Chapter 1 covers the Menu feature in greater detail.
- **Featured Image:** Some WordPress themes are configured to use an image (photo) to represent each post that you have on your site. The image can appear on the home/front page, blog page, archives, or anywhere within the content display on your website. If you're using a theme that has this option, you can easily define a post's thumbnail by clicking the Set Featured Image link below the Featured Image module on the Add New Post screen. Then you can assign an image that you've uploaded to your site as the featured image for a particular post.

Assigning a static page as the front page

After you create the page you want to use for the front page of your website, tell WordPress that you want the static page to serve as the front page of your site. Follow these steps:

1. **Click the Reading link on the Settings menu of the Dashboard to display the Reading Settings screen.**
2. **Select the option A Static Page in the Front Page Displays section to indicate you'd like to use a static page on the front page.**
3. **From the drop-down list, choose the page you want to use for the front page of your site (see Figure 2-4).**



Reading Settings

Front page displays ○ Your latest posts
● A static page (select below)
Front page: — Select — / ✓ Home / Sample Page
Posts page: — Select —

Blog pages show at most 10 posts

Syndication feeds show the most recent 10 items

For each article in a feed, show ● Full text ○ Summary

Search Engine Visibility □ Discourage search engines from indexing this site
It is up to search engines to honor this request.

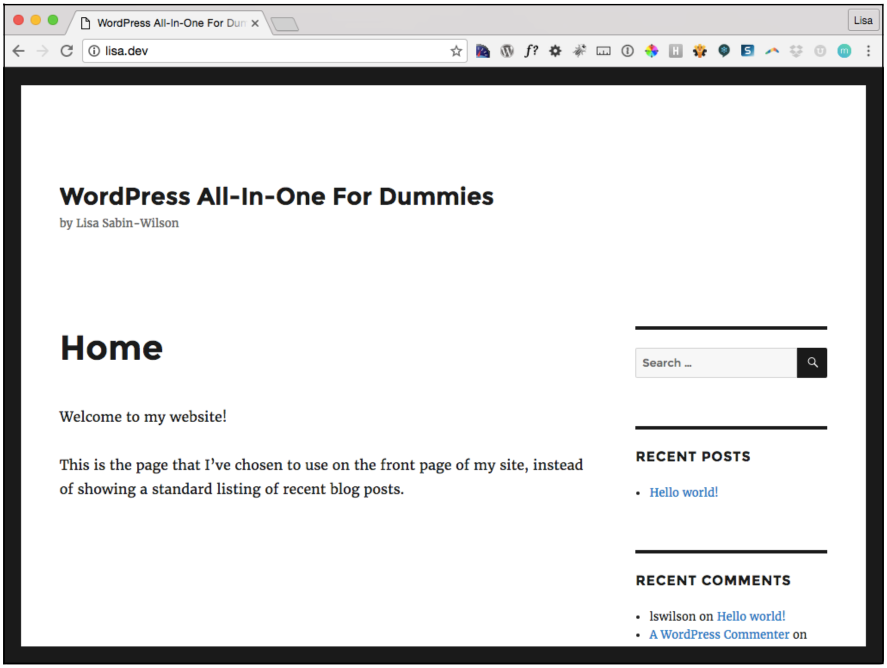
Thank you for creating with WordPress.

You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

FIGURE 2-4: Choosing which page to display as the front page.

4. **Click the Save Changes button at the bottom of the Reading Settings screen.**

   WordPress displays the page you selected in Step 3 as the front page of your site. Figure 2-5 shows my site displaying a static page.



WordPress All-In-One For Dummies

by Lisa Sabin-Wilson

Home

Welcome to my website!

This is the page that I've chosen to use on the front page of my site, instead of showing a standard listing of recent blog posts.

RECENT POSTS

- Hello world!

RECENT COMMENTS

- lswilson on Hello world!
- A WordPress Commenter on

FIGURE 2-5: WordPress displays the page you selected as your front page.

Adding a Blog to Your Website

If you want a blog on your site but don't want to display the blog on the front page, you can add one from the WordPress Dashboard. To create the blog for your site, first follow these steps:

1. **Click the Add New link on the Pages menu of the Dashboard.**

   The page where you can write a new page to your WordPress site opens.

2. **Type** Blog **in the Title text box.**

   The page slug is automatically set to `/blog`. (Read more about slugs in Book 3, Chapter 5.)

3. **Leave the Page Content text box blank.**

4. **Click the Publish button.**

   The page is saved to your database and published to your WordPress site. Now you have a blank page that redirects to `http://`*`yourdomain`*`.com/blog`.

   Next, you need to assign the page you just created as your blog page.

5. **Click the Reading link on the Settings menu of the Dashboard.**

   The Reading Settings screen opens.

6. **Select the Blog page in the drop-down menu labeled Posts Page.**
7. **Click the Save Changes button.**

   The options you just set are saved, and your blog is now at http://*yourdomain.com*/blog (where *yourdomain.com* is the actual domain name of your site). When you navigate to http://*yourdomain.com*/blog, your blog appears.

REMEMBER

This method of using the /blog page slug works only if you're using custom permalinks with your WordPress installation. (See Book 3, Chapter 2 if you want more information about permalinks.) If you're using the default permalinks, the URL for your blog page is different; it looks something like http://*yourdomain.com*/?p=4 (where 4 is the ID of the page you created for your blog).

IN THIS CHAPTER

- Using the built-in image-upload feature
- Inserting a photo into your post
- Creating photo galleries in WordPress

Chapter 3

Uploading and Displaying Photos and Galleries

Adding images and photos to your posts can really dress up the content. By using images and photos, you give your content a dimension that you can't express in plain text. Through visual imagery, you can call attention to your post and add depth to it. With WordPress, you can insert single images or photographs, or you can use a few nifty plugins to turn some of the pages in your site into a full-fledged photo gallery.

In this chapter, you discover how to add some special touches to your site posts by adding images and photo galleries, all by using the built-in image-upload feature and image editor in WordPress.

Inserting Images into Your Posts

You can add images to a post pretty easily by using the WordPress image uploader. Jump right in and give it a go: From the Dashboard, click the Add New link on the Posts menu, and then, on the Add New Post screen, click the Add Media button.

The Insert Media window that appears lets you choose images from your hard drive or from a location on the web. (See Figure 3-1.)

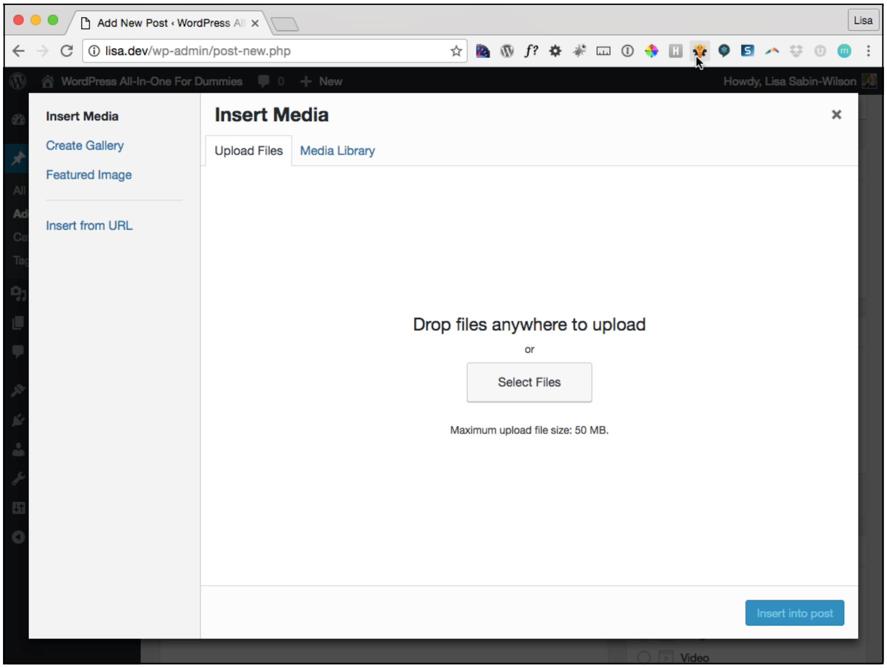


FIGURE 3-1: The WordPress Insert Media window.

Adding an image from your computer

To add an image from your own hard drive, follow these steps:

1. **Click the Add Media button on the Add New Post screen.**

   The Insert Media window appears. (Refer to Figure 3-1.)

2. **Click the Upload Files tab at the top and then click the Select Files button.**

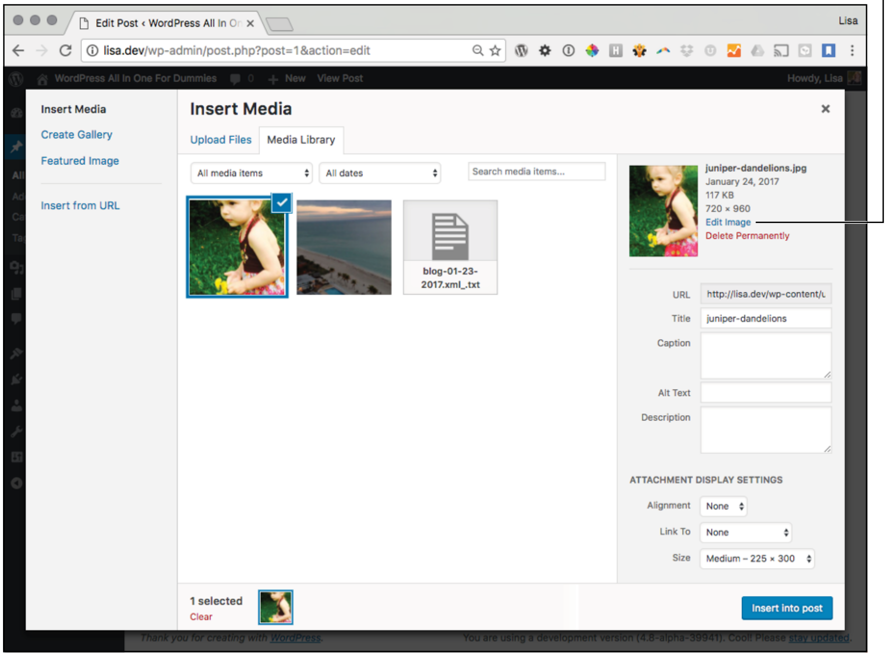
   A dialog box, from which you can select an image (or multiple images) from your hard drive, opens.

3. **Select your image(s) and then click Open.**

   The image is uploaded from your computer to your web server, and the Insert Media window displays your uploaded image selected and ready for editing.

4. **Edit the details for the image(s) in the Attachment Details section of the Insert Media window (see Figure 3-2).**

Change how your image looks



juniper-dandelions.jpg
January 24, 2017
117 KB
720 × 960

URL: http://lisa.dev/wp-content/u
Title: juniper-dandelions
Alignment: None
Link To: None
Size: Medium – 225 × 300

FIGURE 3-2: You can set several options for your images after you upload them.

The Attachment Details section provides several image options:

- *URL:* This isn't a configurable option; WordPress does not allow you to change the URL of uploaded media.
- *Title:* Type a title for the image.
- *Caption:* Type a caption for the image (such as **Little Miss Sunshine**).
- *Alt Text:* Type the alternative text for the image. More information on alternative text is in Book 4, Chapter 6.
- *Description:* Type a description of the image.
- *Alignment:* Select None, Left, Center, or Right. (See Table 3-1, later in this chapter, for styling information regarding image alignment.)
- *Link To:* If you want the image to be linked to a URL, type that URL in this text box. Alternatively, select the appropriate option button to determine where your readers go when they click the image you uploaded: Selecting None means the image isn't clickable, Media File URL directs readers to the image itself, Attachment URL directs readers to the post in which the image appears, and Custom URL allows you to enter whatever URL you like.
- *Size:* Select Thumbnail, Medium, or Full Size.

TIP

WordPress automatically creates small and medium-size versions of the original images you upload through the built-in image uploader. A thumbnail is a smaller version of the original file. You can edit the size of the thumbnail by clicking the Settings link and then clicking the Media menu link. In the Image Sizes section of the Media Settings page, designate the desired height and width of the small and medium thumbnail images generated by WordPress.

If you're uploading more than one image, skip to the "Inserting a Photo Gallery" section later in this chapter.

5. **Click the Edit Image link (shown in Figure 3-2) to edit the appearance of the image.**

   The Edit Image page opens (see Figure 3-3). Its options are represented by icons shown above the image and include

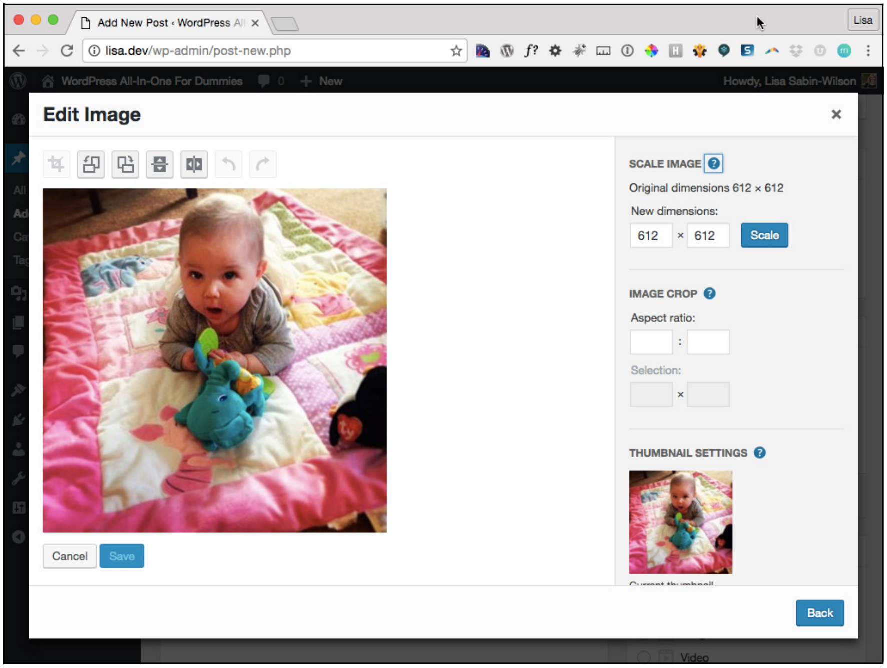
   - *Crop:* Cut the image down to a smaller size.
   - *Rotate Counterclockwise:* Rotate the image to the left.
   - *Rotate Clockwise:* Rotate the image to the right.
   - *Flip Vertically:* Flip the image upside down and back again.
   - *Flip Horizontally:* Flip the image from right to left and back again.
   - *Undo:* Undo any changes you made.
   - *Redo:* Redo images edits that you've undone.
   - *Scale Image:* Set a specific width and height for the image.

6. **Click the Save button on the Edit Image page when you're done editing the image.**
7. **Return to the post into which you'd like to insert the image by clicking the All Posts link on the Posts menu and then clicking the title of the post you need.**
8. **Click the Add Media button.**
9. **Click the Media Library tab in the Insert Media Window.**

   This step loads all the images you've ever uploaded to your site.

10. **Select the image you'd like to use by clicking it.**
11. **Click the Insert into Post button.**

    The Add an Image window closes, and the Add New Post screen (or the Add New Page screen, if you're writing a page) reappears. WordPress has inserted the HTML to display the image in your post, as shown in Figure 3-4. You can continue editing your post, save it, or publish it.


Add New Post ‹ WordPress All
Lisa
lisa.dev/wp-admin/post-new.php
WordPress All-In-One For Dummies
0
New
Howdy, Lisa Sabin-Wilson
Edit Image
×
Cancel
Save
Back
Current thumbnail
Video

SCALE IMAGE

Original dimensions 612 × 612

New dimensions:

612 × 612 Scale

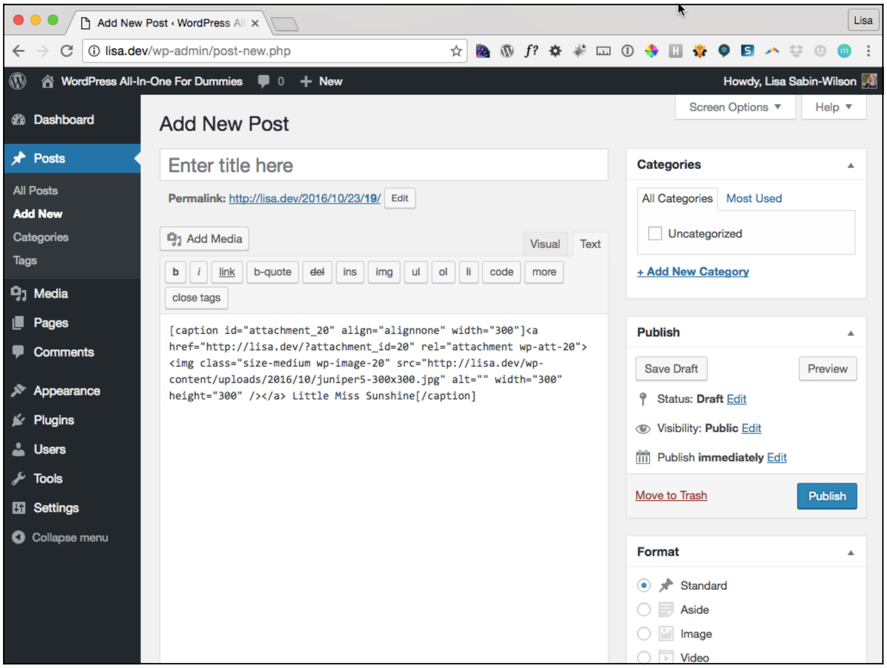
IMAGE CROP

Aspect ratio:

Selection:

THUMBNAIL SETTINGS

FIGURE 3-3: The WordPress image editor options.



Permalink: http://lisa.dev/2016/10/23/19/

```
[caption id="attachment_20" align="alignnone" width="300"]<a
href="http://lisa.dev/?attachment_id=20" rel="attachment wp-att-20">
<img class="size-medium wp-image-20" src="http://lisa.dev/wp-
content/uploads/2016/10/juniper5-300x300.jpg" alt="" width="300"
height="300" /></a> Little Miss Sunshine[/caption]
```

□ Uncategorized

Status: Draft Edit

Visibility: Public Edit

Publish immediately Edit

● Standard
○ Aside
○ Image
○ Video

FIGURE 3-4: WordPress inserts the correct HTML code for your uploaded image into your post.

TIP

To see the actual image, not the code, click the Visual tab just above the Post text box.

Aligning your images through the stylesheet

When you upload your image, you can set its alignment as None, Left, Center, or Right. The WordPress theme you're using, however, may not have these alignment styles accounted for in its stylesheet. If you set the alignment to Left, for example, but the image on your blog doesn't appear to be aligned at all, you may need to add a few styles to your theme's stylesheet.

Themes and templates are discussed in greater detail in Book 6. For purposes of making sure that you have the correct image alignment for your newly uploaded images, follow these steps for a quick-and-dirty method:

1. **Click the Customize link on the Appearance submenu.**

   The Customizer screen opens.

2. **Click the Additional CSS link.**

   The Customizing Additional CSS screen opens.

3. **Add your desired styles to the text box.**

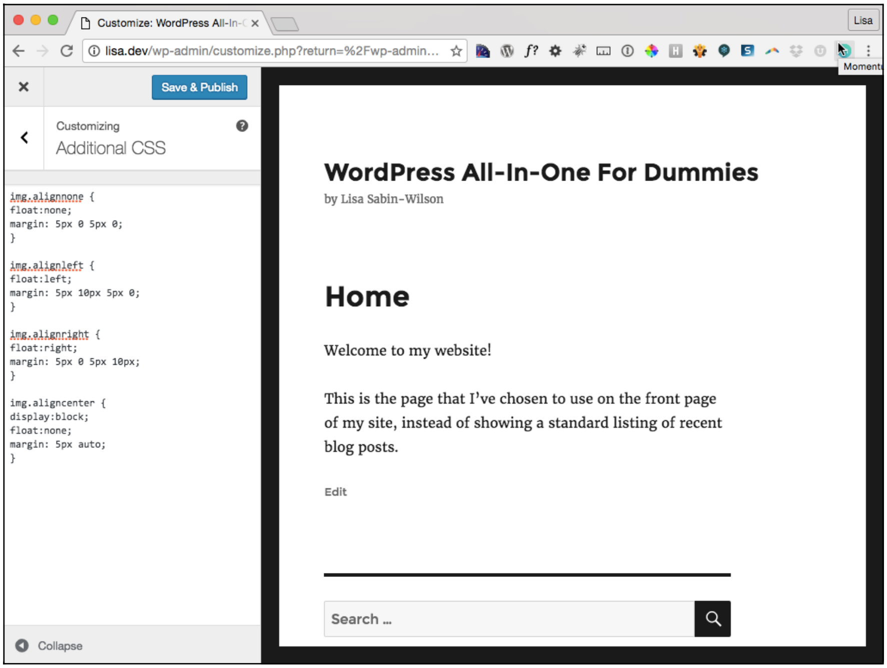
Table 3-1 shows the styles you can add to your stylesheet to make sure that image-alignment styling is present and accounted for in your theme.

TABLE 3-1 Styling Techniques for Image Alignment

Image Alignment	Add This to Your Stylesheet (style.css)
None	`img.alignnone {float:none; margin: 5px 0 5px 0;}`
Left	`img.alignleft {float:left; margin: 5px 10px 5px 0;}`
Center	`img.aligncenter {display:block; float:none; margin: 5px auto;}`
Right	`img.alignright {float:right; margin: 5px 0 5px 10px;}`

These styles are just examples of what you can do. Get creative with your own styling. You can find more information about using CSS (Cascading Style Sheets) to add style to your theme(s) in Book 6, Chapter 4.

Figure 3-5 displays the WordPress Customizer open with the additional CSS shown on the left side.


Customize: WordPress All-In-
lisa.dev/wp-admin/customize.php?return=%2Fwp-admin…
Lisa
Moment
Save & Publish
Customizing
Additional CSS
Collapse
Edit
Search …

```
img.alignnone {
float:none;
margin: 5px 0 5px 0;
}

img.alignleft {
float:left;
margin: 5px 10px 5px 0;
}

img.alignright {
float:right;
margin: 5px 0 5px 10px;
}

img.aligncenter {
display:block;
float:none;
margin: 5px auto;
}
```

WordPress All-In-One For Dummies

by Lisa Sabin-Wilson

Home

Welcome to my website!

This is the page that I've chosen to use on the front page of my site, instead of showing a standard listing of recent blog posts.

FIGURE 3-5: Additional CSS in the WordPress Customizer.

Inserting a Photo Gallery

You can also use the Insert Media window to insert a full photo gallery into your posts. Upload all your images and then, instead of clicking the Insert into Post button, click the Create Gallery link on the left side of the Insert Media window. The Create Gallery window opens and displays all the images you've uploaded to your site.

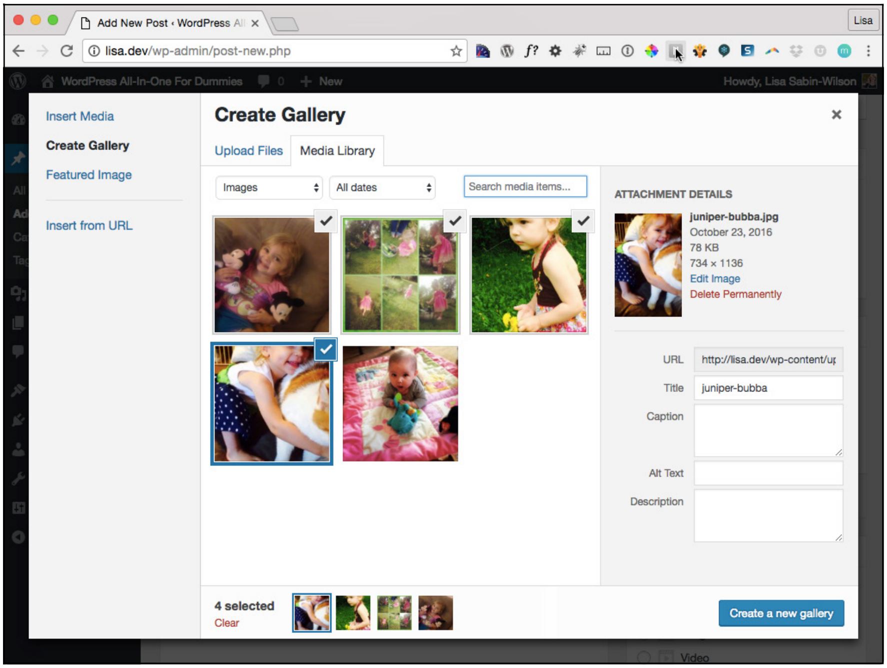
Follow these steps to insert a photo gallery into a blog post:

1. **In the Create Gallery window, select the images you want to use in your gallery.**

   Click each image once to select it for use in the gallery. A selected image displays a small check mark in its top-right corner. (See Figure 3-6.)

2. **Click the Create a New Gallery button.**

   The Edit Gallery screen opens, shown in Figure 3-7.

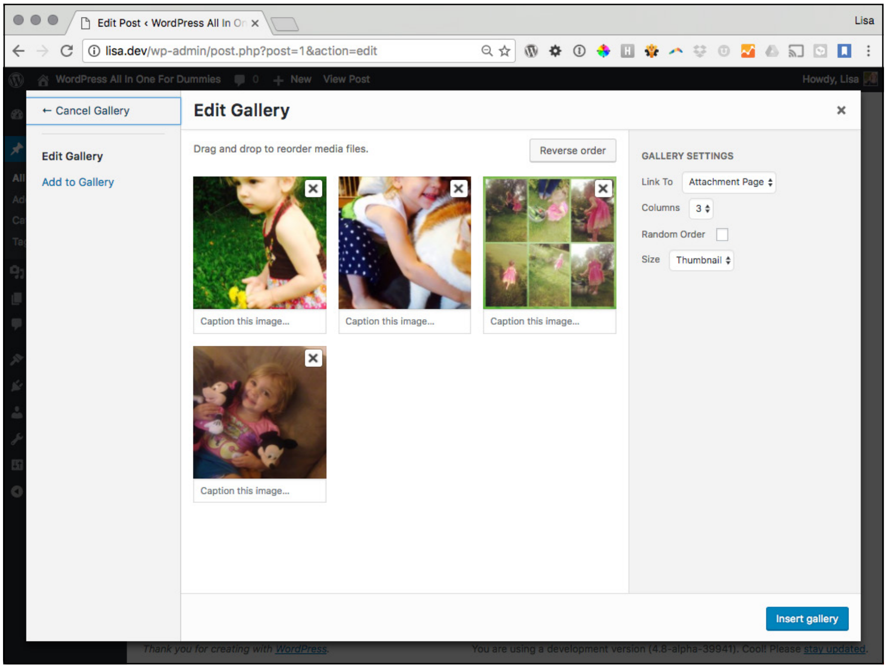


ATTACHMENT DETAILS

juniper-bubba.jpg
October 23, 2016
78 KB
734 × 1136
Edit Image
Delete Permanently

URL: http://lisa.dev/wp-content/up
Title: juniper-bubba
Caption:
Alt Text:
Description:

FIGURE 3-6: The Create Gallery window.



Drag and drop to reorder media files.

GALLERY SETTINGS

Link To: Attachment Page
Columns: 3
Random Order: ☐
Size: Thumbnail

Thank you for creating with WordPress.

You are using a development version (4.8-alpha-39941). Cool! Please stay updated.

FIGURE 3-7: The Edit Gallery screen.

3. **(Optional) Add a caption for each image by clicking the Caption This Image area and typing a caption or short description for the image.**

4. **(Optional) Set the order in which the images appear in the gallery by using the drag-and-drop option on the Edit Gallery page.**

   Click and then drag and drop images to change the order.

5. **(Optional) Specify the following options in the Gallery Settings section on the right side of the Edit Gallery page:**

   - *Link To:* Select either Attachment Page, Media File, or None to tell WordPress what you'd like the images in the gallery to link to.
   - *Random Order:* Select to randomize the order in which the images are displayed in the gallery.
   - *Gallery Columns:* Select how many columns of images you want to appear in your gallery.

6. **Click the Insert Gallery button.**

   WordPress inserts into your post a piece of shortcode that looks like this: `[gallery ids”1,2,3”]`. A shortcode is a small piece of WordPress-specific code that allows you to do big things with little effort, such as embed photo galleries and media files.

7. **(Optional) Change the order of appearance of the images in the gallery, as well as the markup (HTML tags or CSS selectors).**

   Use the WordPress gallery shortcode (see Table 3-2) to change different aspects of the display of the gallery in your post:

   - *`captiontag:`* Changes the markup that surrounds the image caption by altering the gallery shortcode. `[gallery captiontag=“div”]`, for example, places `<div></div>` tags around the image caption. (The `<div>` tag is considered to be a block-level element and creates a separate container for the content. For more about `<div>` tags and CSS, see Book 6, Chapter 4.) If you want to have the gallery appear on a line of its own, the `[gallery captiontag=“p”]` code places `<p class=“gallery-caption”></p>` tags around the image caption. The default markup for the `captiontag` option is `dd`.
   - *`icontag:`* Defines the HTML markup around each individual thumbnail image in your gallery. Change the markup around the `icontag` (thumbnail icon) of the image by altering the gallery shortcode to something like `[gallery icontag=“p”]`, which places `<p class=“gallery-icon”></p>` tags around each thumbnail icon. The default markup for `icontag` is `dt`.

- *`itemtag`:* Defines the HTML markup around each item in your gallery. Change the markup around the `itemtag` (each item) in the gallery by altering the gallery shortcode to something like `[gallery itemtag= “span”]`, which places `<span class=“gallery-item”></span>` tags around each item in the gallery. The default markup for the `itemtag` is `dl`.
- *`orderby`:* Defines the order in which the images are displayed within your gallery. Change the order used to display the thumbnails in the gallery by altering the gallery shortcode to something like `[gallery orderby= “menu_order ASC”]`, which displays the thumbnails in ascending menu order. Another parameter you can use is `ID_order ASC`, which displays the thumbnails in ascending order according to their IDs.

8. **Define the style of the `<span>` tags in your CSS stylesheet.**

   The `<span>` tags create an inline element. An element contained within a `<span>` tag stays on the same line as the element before it; there’s no line break. You need a little knowledge of CSS to alter the `<span>` tags. Click the Customize link on the Appearance submenu in your WordPress Dashboard and then click the Additional CSS link to add CSS to your theme. Here’s an example of what you can add to the stylesheet (`style.css`) for your current theme:

   ```
   span.gallery-icon img {
   padding: 3px;
   background: white;
   border: 1px solid black;
   margin: 0 5px;
   }
   ```

   Placing this bit of CSS in the stylesheet (`style.css`) of your active theme automatically places a 1-pixel black border around each thumbnail, with 3 pixels of padding and a white background. The left and right margins are 5 pixels wide, creating nice spacing between images in the gallery.

9. **Click the Save and Publish button to save the CSS changes in the Customizer.**

Figure 3-8 shows my post with a photo gallery displayed, using the preceding steps and CSS example in the default WordPress theme: Twenty Seventeen. I used the gallery shortcode for the gallery shown in Figure 3-8 — `[gallery columns="2" link="file" ids="11,10,9,8" orderby="rand"]`.

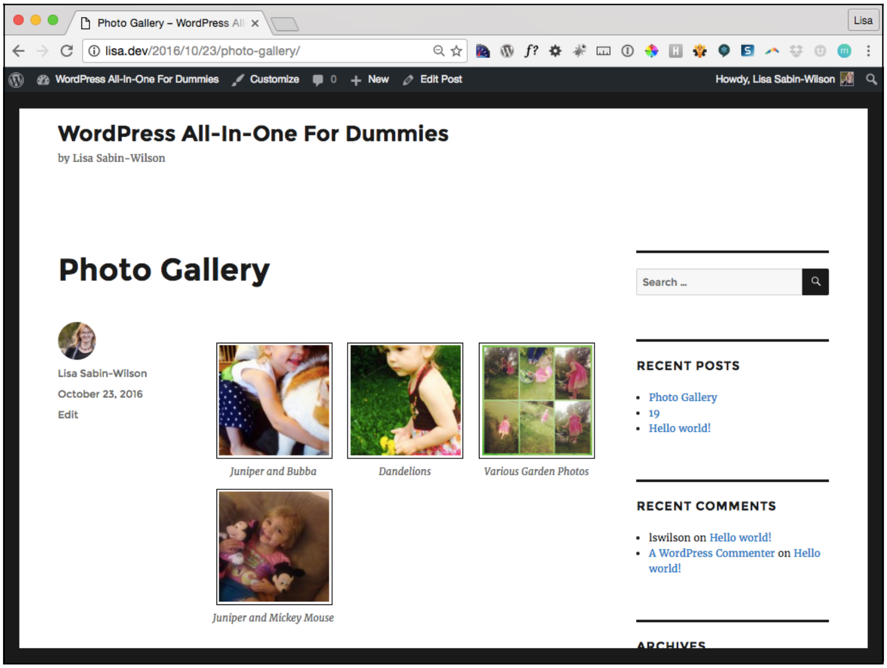


Photo Gallery – WordPress All
Lisa
lisa.dev/2016/10/23/photo-gallery/
WordPress All-In-One For Dummies
Customize
0
New
Edit Post
Howdy, Lisa Sabin-Wilson
Search …

WordPress All-In-One For Dummies

by Lisa Sabin-Wilson

Photo Gallery

Lisa Sabin-Wilson

October 23, 2016

Edit

Juniper and Bubba

Dandelions

Various Garden Photos

Juniper and Mickey Mouse

RECENT POSTS

- Photo Gallery
- 19
- Hello world!

RECENT COMMENTS

- lswilson on Hello world!
- A WordPress Commenter on Hello world!

ARCHIVES

FIGURE 3-8: A photo gallery displayed in a post.

TABLE 3-2 Gallery Shortcode Examples

Gallery Shortcode	Output
`[gallery columns="4" size="medium"]`	A four-column gallery containing medium-size images
`[gallery columns="10" id="215" size="thumbnail"]`	A ten-column gallery containing thumbnail images pulled from the blog post with the ID 215
`[gallery captiontag="p" icontag="span"]`	A three-column (default) gallery in which each image is surrounded by `<span></span>` tags and the image caption is surrounded by `<p></p>` tags

TIP

Matt Mullenweg, cofounder of the WordPress platform, created a very extensive photo gallery by using the built-in gallery options in WordPress. Check out the fabulous photo gallery at `https://matt.blog`, shown in Figure 3-9.

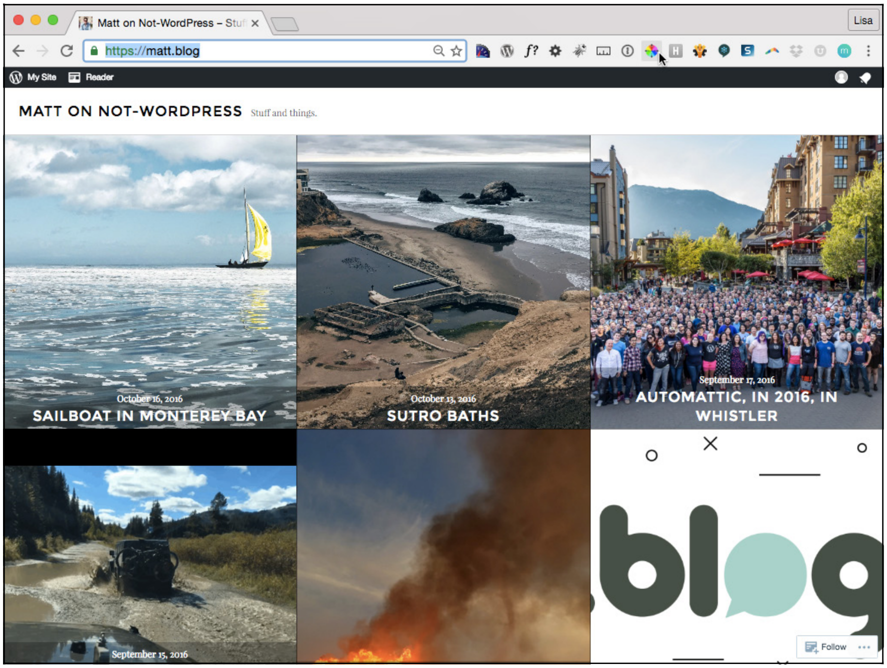


FIGURE 3-9: A photo gallery created with WordPress by founder Matt Mullenweg.

WORDPRESS GALLERY PLUGINS

Here are a few great gallery plugins:

- **NextGEN Gallery by Photocrati (`https://wordpress.org/plugins/nextgen-gallery`):** Creates sortable photo galleries and more
- **Image Widget by Modern Tribe (`https://wordpress.org/plugins/image-widget`):** Uses the WordPress media library to add image widgets to your site
- **Image Viewer Made Easy by Rakhitha Nimesh Ratnayake (`https://wordpress.org/plugins/image-viewer-made-easy`):** Creates image galleries within a few minutes while providing advanced features such as rotation, zooming, scaling, flipping, and playing as a slideshow

IN THIS CHAPTER

- » Uploading and embedding videos in posts
- » Adding audio files to posts
- » Exploring podcasting and vlogging
- » Using the Media Library

Chapter 4

Exploring Podcasting and Video Blogging

Many website owners want to go beyond just offering written content for the consumption of their visitors by offering different types of media, including audio and video files. WordPress makes it pretty easy to include these different types of media files in your posts and pages by using the built-in file-upload feature.

The audio files you add to your site can include music or voice in formats such as `.mp3`, `.midi`, or `.wav` (to name just a few). Some website owners produce their own audio files in regular episodes, called *podcasts,* to create an Internet radio show. Often, you can find these audio files available for syndication through RSS and can subscribe to them in a variety of audio programs, such as iTunes.

You can include videos in posts or pages by embedding code offered by popular third-party video providers such as YouTube (`www.youtube.com`) and Vimeo (`www.vimeo.com`). Website owners can also produce and upload their own video shows, an activity known as *vlogging* (video blogging).

This chapter takes you through the steps to upload and embed audio and video files within your content, and it provides some tools that can help you embed those files without having to use elaborate coding techniques.

WARNING

When dealing with video and audio files on your site, remember to upload and use only media that you own or have permission to use. Copyright violation is a very serious offense, especially on the Internet, and using media that you don't have permission to use can have serious consequences, such as having your website taken down, facing heavy fines, and even going to jail. I'd really hate to see that happen to you. So play it safe, and use only those media files that you have permission to use.

Inserting Video Files into Your Content

Whether you're producing your own videos for publication or embedding other people's videos, placing a video file in a post or page has never been easier with WordPress.

TIP

Check out a good example of a video blog at `http://www.tmz.com/videos`. TMZ is a popular celebrity news website that produces and displays videos for the web and for mobile devices.

Several video galleries on the web today allow you to add videos to blog posts. Google's YouTube service (`www.youtube.com`) is a good example of a third-party video service that allows you to share its videos.

Adding a link to a video from the web

TIP

Adding a video from the web, in these steps, adds only a hyperlink to the video. Use these steps if all you want to do is link to a page that has the video on it, rather than embed the video in your blog post or page (covered in the "Adding video with Auto-Embed" section later in this chapter.)

To add a link to a video from the web, follow these steps:

1. **Click the Add Media button on the Add New Post screen to open the Insert Media window.**
2. **Click the Insert from URL link on the left side.**

   The Insert from URL page appears, as shown in Figure 4-1.
3. **Type the URL (Internet address) of the video in the text box.**

   Type the full URL, including the `http://` and `www` portions of the address. Video providers, such as YouTube, usually list the direct links for the video files on their sites; you can copy and paste one of those links into the text box.

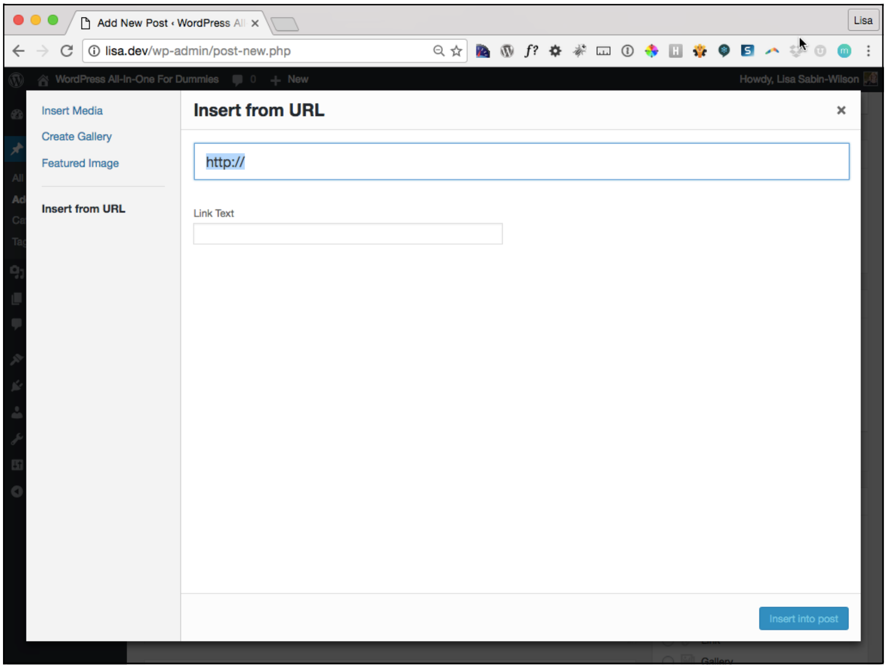


FIGURE 4-1: Add a video by linking to a URL.

4. **(Optional) Type the title of the video in the text box at the top of the Insert from URL screen.**

   Giving a title to the video allows you to provide a bit of a description. Provide a title if you can so that your readers know what the video is about.

5. **Click the Insert into Post button.**

   A link to the video is inserted into your post. WordPress doesn't embed the actual video in the post; it inserts only a link to the video. Your site visitors click the link to load another page on which the video plays.

Adding video with Auto-Embed

The preceding steps enable you to insert a hyperlink that your readers can click to view the video on another website (such as YouTube). If you use WordPress's nifty Auto-Embed feature, however, WordPress automatically embeds many of these videos within your posts and pages.

With this feature, WordPress automatically detects that a URL you typed in your post is a video (from YouTube, for example) and wraps the correct HTML embed code around that URL to make sure that the video player appears in your post (in a standard, XHTML-compliant way). The Auto-Embed feature is automatically enabled on your WordPress site; all you need to do is type the video URL within the content of your post or page.

TIP

Currently, WordPress automatically embeds videos from several sources — including YouTube, Vimeo, DailyMotion, Blip, Flickr, Hulu, Viddler, Qik, Revision3, Photobucket, and Vine— as well as VideoPress-type videos from WordPress.tv. Find the full list of supported video embeds in the WordPress Codex at `https://codex.wordpress.org/Embeds#Okay.2C_So_What_Sites_Can_I_Embed_From.3F`.

Adding video from your computer

To upload and post to your blog a video from your computer, follow these steps:

1. **Click the Add Media button on the Edit Post or Add New Post screen.**

   The Insert Media window appears.

2. **Click the Upload Files tab at the top and then click the Select Files button.**
3. **Select the video file you want to upload and then click Open.**

   The video is uploaded from your computer to your web server, and the Insert Media window displays your uploaded video selected and ready for editing.

4. **In the Attachment Details section, type a title for the file in the Title text box, a caption in the Caption text box, and a description in the Description text box.**
5. **Still in the Attachment Details section, select the Link To option.**

   You can link to a custom URL, the attachment page, or the media file, or you can link to nothing at all.

6. **Click the Insert into Post button.**

   WordPress doesn't embed a video player in the post; it inserts only a link to the video. If you have the Auto-Embed feature activated, however, WordPress attempts to embed the video within a video player. If WordPress can't embed a video player, it displays the link that your visitors can click to open the video in a new window.

TIP

I don't really recommend uploading your own videos directly to your WordPress site. Many video service providers, such as YouTube and Vimeo, give you free storage for your videos. Embedding videos in a WordPress page or post from one of those services is so easy, and by using those services, you're not using your own storage space or bandwidth limitations to provide these videos on your site.

Inserting Audio Files into Your Blog Posts

Audio files can be music files or voice recordings, such as recordings of you speaking to your readers. These files add a nice personal touch to your blog. You can easily share audio files on your blog by using the Add Media feature of WordPress. After you insert an audio file into a blog post, your readers can listen to it on their computers or download it to an MP3 player and listen to it while driving to work, if they want.

To upload an audio file to your site, follow the same steps outlined in the preceding section for uploading a video.

REMEMBER

WordPress doesn't automatically include an audio-player interface for playing your file. Instead, WordPress inserts a link that your readers can click to listen to the audio file.

Some great WordPress plugins for handling audio can enhance the functionality of the file uploader and help you manage audio files in your blog posts. Check out Book 7 for information on how to install and use WordPress plugins in your blog.

Podcasting with WordPress

When you provide regular episodes of an audio show that visitors can download to a computer and listen to on an audio player, you're *podcasting.* Think of a podcast as a weekly radio show that you tune into, except that it's hosted on the Internet rather than on a radio station.

In the sidebar "WordPress video and audio plugins" in this chapter, you can find a few plugins that allow you to easily insert audio files in your WordPress posts and pages. The plugins that are dedicated to podcasting provide features that go beyond embedding audio files in a website. Some of the most important of these features include

- **Archives:** You can create an archive of your audio podcast files so that your listeners can catch up on your show by listening to past episodes.
- **RSS Feed:** An RSS feed of your podcast show gives visitors the opportunity to subscribe to your syndicated content so that they can be notified when you publish future episodes.
- **Promotion:** A podcast isn't successful without listeners, right? You can upload your podcast to iTunes (`www.apple.com/itunes`) so that when people search iTunes for podcasts by subject, they find your podcast.

These plugins go beyond just audio-file management. They're dedicated to podcasting and all the features you need:

- **PowerPress (`https://wordpress.org/plugins/powerpress`):** PowerPress includes full iTunes support; audio players; multiple file-format support (`.mp3`, `.m4a`, `.ogg`, `.wma`, `.ra`, `.mp4a`, `.m4v`, `.mp4v`, `.mpg`, `.asf`, `.avi`, `.wmv`, `.flv`, `.swf`, `.mov`, `.divx`, `.3gp`, `.midi`, `.wav`, `.aa`, `.pdf`, `.torrent`, `.m4b`, `.m4r`, `.epub`, `.mp4`, `.oga`, `.ogv`); statistics to track the popularity of your different podcast offerings; and tagging, categorizing, and archiving of podcast files.
- **Seriously Simple Podcasts (`https://wordpress.org/plugins/seriously-simple-podcasting`):** This plugin uses the native WordPress interface with minimal settings to make it as easy as possible to podcast with WordPress. You can run multiple podcasts; obtain stats on who's listening; do both audio- and videocasting; and publish to popular services such as iTunes, Google Play, and Stitcher.

TIP

I discuss web hosting requirements in Book 2. If you're a podcaster who intends to store audio files in your web hosting account, you may need to increase the storage and bandwidth for your account so that you don't run out of space or incur higher fees from your web hosting provider. Discuss these issues with your web hosting provider to find out up front what you have to pay for increased disk space and bandwidth needs.

Keeping Media Files Organized

If you've been running your blog for any length of time, you can easily forget what files you've uploaded by using the WordPress uploader. The WordPress Media Library allows you to conveniently and easily discover which files are in your Uploads folder.

To find an image, a video, or an audio file you've already uploaded by using the file uploader and to use that file in a new post, follow these steps:

1. **Click the Add Media icon on the Add New Post screen to open the Insert Media window.**
2. **Click the Media Library tab at the top of the window.**

   All the files you've ever uploaded to your site appear because of the File Uploader feature. (See Figure 4-2.) Files you uploaded through other methods, such as SFTP, don't appear in the Media Library.

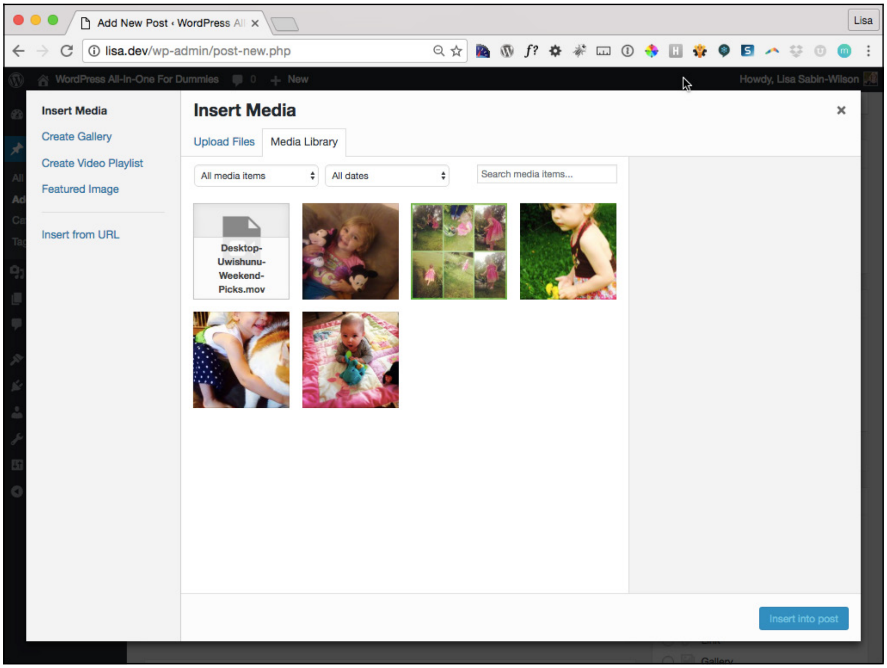


FIGURE 4-2: The Media Library shows all the files you've ever uploaded to your site.

3. **Select the file that you want to reuse.**
4. **On the settings menu that appears, set the options for that file: Title, Caption, Description, Link URL, Order, Alignment, and Size.**
5. **Click the Insert into Post button.**

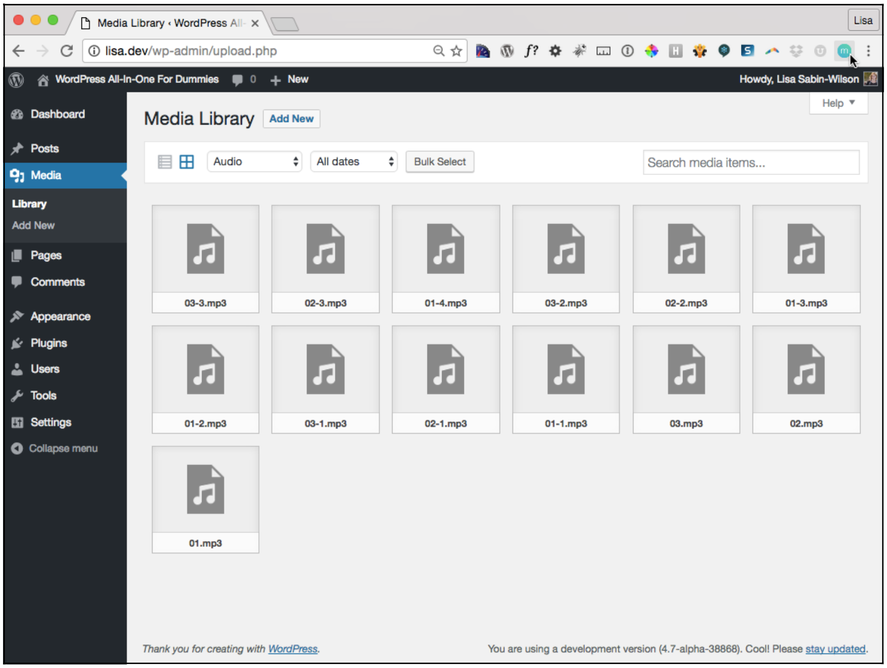
   The correct HTML code is inserted into the Post text box.

TIP

If you want to view only the files you've uploaded, click the Library link on the Media menu (on the left navigation menu of the Dashboard), which opens the Media Library screen. The Media Library screen lists all the files you've ever uploaded to your WordPress site. By default, the page displays all types of files, but you can quickly navigate to see just the Images, Audio, or Video by using the All Media Items drop-down menu to specify which file type you want to see (as shown in Figure 4-3).

You can do the following tasks on the Media Library page:

- **Filter media files by date.** If you want to view all media files that were uploaded in January 2017, choose that date from the drop-down list and click the Filter button. The page reloads and displays only the media files uploaded in the month of January 2017.



Thank you for creating with WordPress.

You are using a development version (4.7-alpha-38868). Cool! Please stay updated.

FIGURE 4-3: The WordPress Media Library, displaying only audio files.

- **Search media files by using a specific keyword.** If you want to search your Media Library for all files that reference kittens, type the word **kittens** in the Search box in the top-right corner of the Media Library screen. Then click the Search Media button. The page reloads and displays only media files that contain the keyword or tag *kittens.*
- **Delete media files.** To delete files, click the small white box that appears to the left of the file's thumbnail on the Media Library screen (on the Dashboard, hover your pointer over Media and click the Library link); then click the Delete button, which appears in the top-left corner of the page. The page reloads, and the media file you just deleted is gone.
- **View media files.** On the Media Library screen, click the thumbnail of the file you want to view. The actual file opens in your web browser. If you need the URL of the file, you can copy the permalink of the file from your browser's address bar.

WORDPRESS VIDEO AND AUDIO PLUGINS

You can find some great WordPress plugins for handling audio and video. Check out Book 7 for information on how to install and use WordPress plugins.

Here are a few great plugins for audio:

- **Simple Audio Player (`https://wordpress.org/plugins/simple-audio-player`):** Gives you a configurable audio player with several options
- **Html5 Audio Player (`https://wordpress.org/plugins/html5-audio-player`):** Integrates an HTML5 audio player into your WordPress website
- **Playlist Audio Player (`https://wordpress.org/plugins/playlist-audio-player`):** Quick and easy-to-use music player allows you to create playlists of five tracks each.

Here are a few great plugins for video:

- **Automatic Featured Images from Videos by WebDevStudios (`https://wordpress.org/plugins/automatic-featured-images-from-videos`):** Grabs an image from a YouTube or Vimeo video to create an image and set it as the featured image
- **Smart YouTube PRO by Vladimir Prelovac (`https://wordpress.org/plugins/smart-youtube`):** Inserts YouTube videos into blog posts, comments, and RSS feeds
- **Video Sidebar Widgets (`https://wordpress.org/plugins/video-sidebar-widgets`):** Embeds video from various sources

IN THIS CHAPTER

- » Understanding what Custom Fields can do for you
- » Working with the Custom Fields interface
- » Adding custom field codes to your templates
- » Using custom fields in a variety of ways

Chapter 5
Working with Custom Fields

In Book 4, Chapter 1, I discuss all the different elements you can add to your blog posts and pages when you publish them. By default, WordPress allows you to give your posts and pages titles and content, to categorize and tag posts, to select a date and time for publishing, and to control the discussion options on a per-post or per-page basis.

Sometimes, however, you may want to add extra items to your posts — items you may not want to add to every post, necessarily, but that you add often enough to make manually adding them each time you publish a nuisance. These items can include a multitude of things, from telling your readers your current mood to what you're currently listening to or reading — pretty much anything you can think of.

WordPress gives you the ability to create and add *metadata* (additional data that can be added to define you and your post) to your posts by using a feature called Custom Fields. In Book 4, Chapter 2, I briefly touch on the Custom Fields interface on the Add New Post screen of the Dashboard. In this chapter, I go through Custom Fields in depth by explaining what they are and how to implement them, as well as offering some cool ideas for using Custom Fields on your site.

Understanding Custom Fields

A WordPress template contains static pieces of data that you can count on to appear on your site. These static items include elements such as the title, the content, the date, and so on. But what if you want more? Suppose that you write a weekly book-review post on your site and want to include a listing of recent reviews and accompanying thumbnails of the books. Through the use of Custom Fields, you can do all that without having to retype the list each time you do a review.

REMEMBER

You can add thousands of autoformatted pieces of data (such as book reviews or movie reviews) by adding Custom Fields to your WordPress site. Okay, thousands of Custom Fields would be pretty difficult, if not impossible, to manage; my point here is that the Custom Fields feature doesn't limit the number of fields you can add to your site.

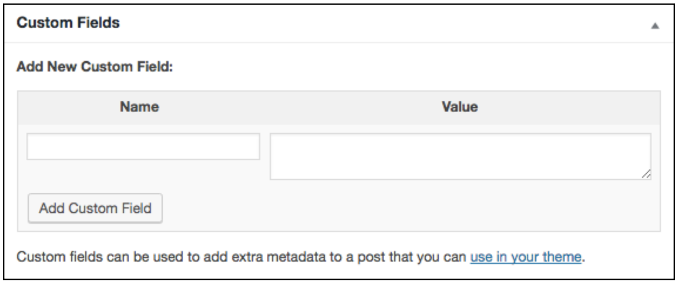
You create Custom Fields on a per-post or per-page basis, which means that you can create an unlimited amount of them and add them only to certain posts. They help you create extra data for your posts and pages by using the Custom Fields interface, which is covered in the following section.

So what can you do with Custom Fields? Really, the only right answer is this: anything you want. Your imagination is your only limit when it comes to the different types of data you can add to your posts by using Custom Fields. Custom Fields allow you the flexibility of defining certain pieces of data for each post.

To use Custom Fields, you do need a bit of knowledge about how to navigate WordPress theme templates, because you have to insert a WordPress function tag, with specific parameters, into the body of the template file. Book 6 takes you through all the information you need to understand WordPress themes, templates, and template tags — so you may want to hit that minibook before you attempt to apply what I discuss in the rest of this chapter. If you're already comfortable and familiar with WordPress templates and tags, you probably won't have any trouble with this chapter at all.

Exploring the Custom Fields Interface

The Custom Fields module appears on both the Add New Post and Add New Page (see Book 4, Chapters 1 and 2) screens on the WordPress Dashboard, below the Post text box, as shown in Figure 5-1.

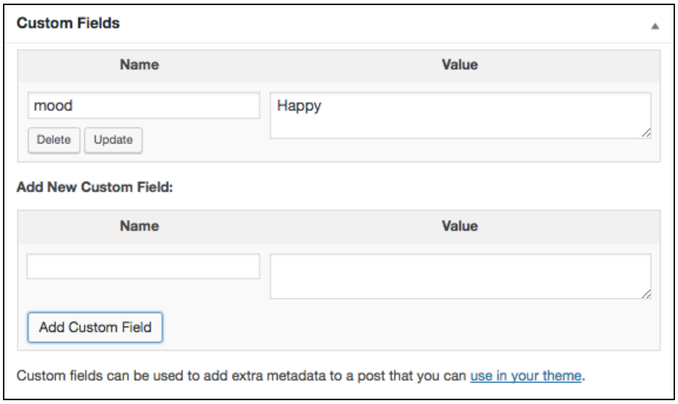


Custom fields can be used to add extra metadata to a post that you can use in your theme.

FIGURE 5-1: The Custom Fields module on the Add New Post screen of the Dashboard.

The Custom Fields module has two text boxes:

- **Name:** Also known as the Key. You give this name to the Custom Field you're planning to use. The name needs to be unique: It's used in the template tag that you can read about in the section "Adding Custom Fields to Your Template File" later in this chapter. Figure 5-2 shows a Custom Field with the name `mood`.
- **Value:** Assigned to the Custom Field name and displayed in your blog post on your site if you use the template tag that you can also read about in the section "Adding Custom Fields to Your Template File" later in this chapter. In Figure 5-2, the value assigned to the `mood` (the Custom Field name) is `Happy`.



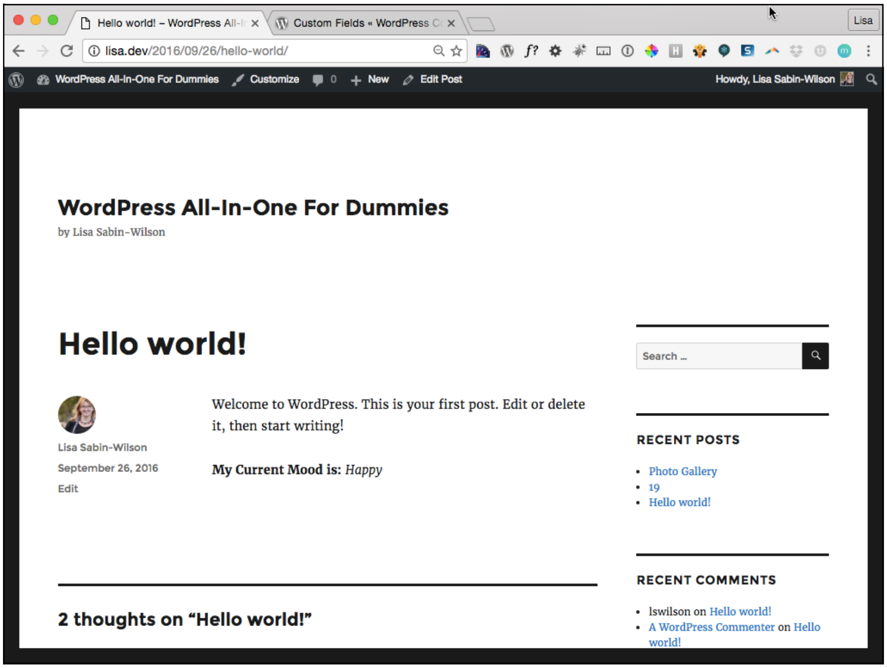
Name: mood

Value: Happy

Custom fields can be used to add extra metadata to a post that you can use in your theme.

FIGURE 5-2: A Custom Field that have name and value assigned.

Simply fill out the Name and Value text boxes and then click the Add Custom Field button to add the data to your post or page. Figure 5-2 shows a Custom Field that I added to my post with the Name of `mood` and with the assigned value `Happy`. In the section "Adding Custom Fields to Your Template File" later in this chapter, I show you the template tag you need to add to your WordPress theme template to display this Custom Field, which appears in my post like this: `My Current Mood is: Happy`, shown in Figure 5-3, where the Custom Field appears at the end of my post.


Hello world! – WordPress All-I
Custom Fields « WordPress C
Lisa
lisa.dev/2016/09/26/hello-world/
WordPress All-In-One For Dummies
Customize
0
New
Edit Post
Howdy, Lisa Sabin-Wilson

WordPress All-In-One For Dummies

by Lisa Sabin-Wilson

Hello world!

Lisa Sabin-Wilson

September 26, 2016

Edit

Welcome to WordPress. This is your first post. Edit or delete it, then start writing!

My Current Mood is: *Happy*

2 thoughts on “Hello world!”

RECENT POSTS

- Photo Gallery
- 19
- Hello world!

RECENT COMMENTS

- lswilson on Hello world!
- A WordPress Commenter on Hello world!

FIGURE 5-3: A Custom Field output appears in a published post.

You can add multiple Custom Fields to one post. To do so, simply add the name and the value of the Custom Field in the appropriate text boxes on the Add New Post page; then click the Add Custom Field button to assign the data to your post. Do this for each Custom Field you want to add to your post.

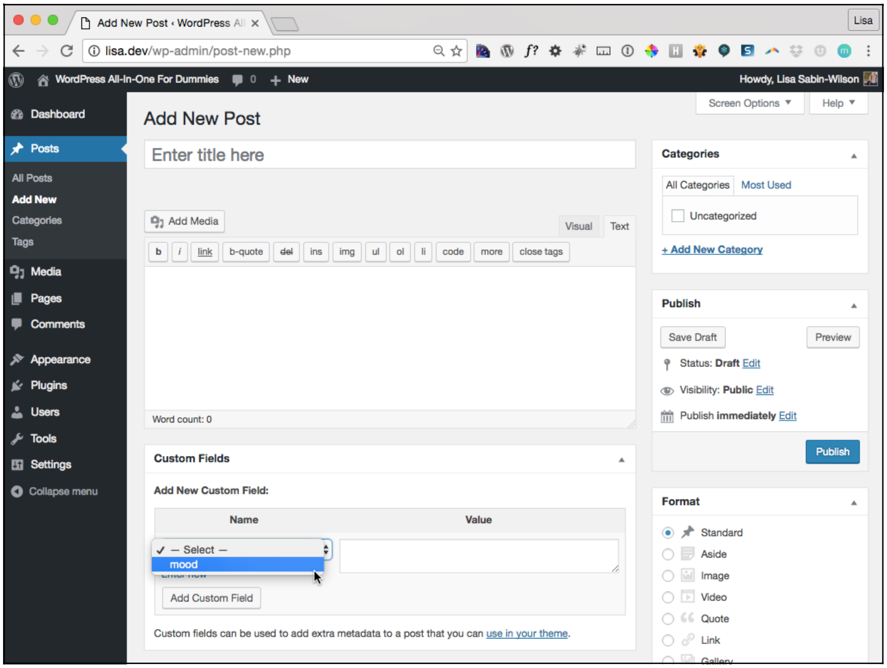
TIP

After you add a particular Custom Field (such as the `mood` Custom Field in Figure 5-2), you can always add it to future posts. So you can make a post tomorrow and use the `mood` Custom Field but assign a different value to it. If tomorrow, you assign the value `Sad`, your post displays `My Current Mood is: Sad`. You can easily use just that one Custom Field on subsequent posts.

You can access your Custom Fields from the drop-down list below the Name field, as shown in Figure 5-4. You can easily select it again and assign a new value to it in the future, because WordPress saves that Custom Field Key, assuming that you may want to use it again sometime in the future.

TECHNICAL STUFF

Custom Fields are considered to be extra data, separate from the post content itself, for your blog posts. WordPress refers to Custom Fields as *metadata*. The Custom Field name and value get stored in the database in the `wp_postmeta` table, which keeps track of which names and values are assigned to each post. See Book 2, Chapter 7 for more information about the WordPress database structure and organization of data.



Custom fields can be used to add extra metadata to a post that you can use in your theme.

FIGURE 5-4: Custom Field names are saved and displayed in a drop-down list for future use.

REMEMBER

You can find a Custom Fields module on the Add New Page screen of the Dashboard as well, so you can add Custom Fields to either your posts or pages as needed.

Adding Custom Fields to Your Template File

If you followed along in the preceding sections and added the `mood` Custom Field to your own site, notice that the data didn’t appear on your site the way it did on mine. To get the data to display properly, you must open the template files and dig into the code a little bit. If the idea of digging into the code of your template files intimidates you, you can put this section aside and read up on WordPress themes, template files, and template tags in Book 6.

You can add Custom Fields to your templates in several ways to display the output of the fields you’ve set. The easiest way involves using the `get_post_meta();` template tag function, which looks like this:

```
<?php $key="NAME"; echo get_post_meta($post->ID, $key, true); ?>
```

Here's how that function breaks down:

- `<?php`: Starts the PHP function. Every template tag or function needs to start PHP with `<?php`. You can read more about basic PHP in Book 2, Chapter 3.
- `$key="`*`NAME`*`";`: Defines the name of the key that you want to appear. You define the name when you add the Custom Field to your post.
- `echo get_post_meta`: Grabs the Custom Field data and displays it on your site.
- `$post->ID,`: A parameter of the `get_post_meta` function that dynamically defines the specific ID of the post being displayed so that WordPress knows which metadata to display.
- `$key,`: A parameter of the `get_post_meta` function that gets the value of the Custom Field based on the name, as defined in the `$key="`*`NAME`*`";` setting earlier in the code string.
- `true);`: A parameter of the `get_post_meta` function that tells WordPress to return a single result rather than multiple results. (By default, this parameter is set to `true`; typically, don't change it unless you're using multiple definitions in the Value setting of your Custom Field.)
- `?>`: Ends the PHP function.

Based on the preceding code, to make the `mood` Custom Field example, you define the `key` name as `mood` (replace the *`NAME`* in the preceding code with the word `mood`). It looks like this:

```
<?php $key="mood"; echo get_post_meta($post->ID, $key, true); ?>
```

The part of the function that says `$key="mood";` tells WordPress to return the value for the Custom Field with the Name field of `mood`.

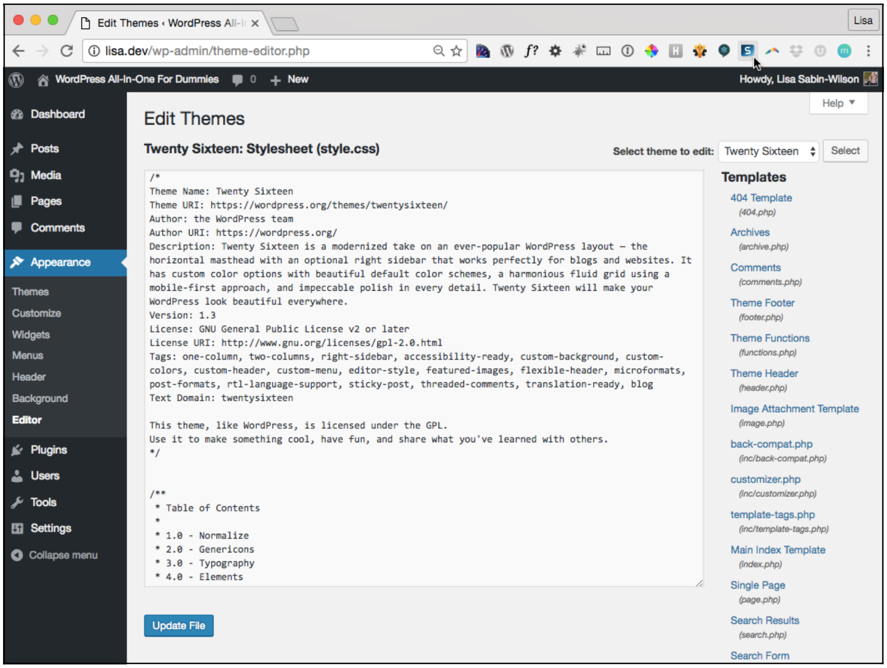
Entering the code in the template file

So that you can see how to enter the code in your template file, I use a WordPress theme called Twenty Sixteen in this section. If you're using a different theme (thousands of WordPress themes are available), you need to adapt these instructions to your particular theme.

Follow these steps to add the template tag to your theme, along with a little HTML code to make it look nice. (These steps assume that you've already added the `mood` Custom Field to your blog post and assigned a value to it.)

1. **Log in to your WordPress Dashboard.**
2. **Click the Editor link on the Appearances menu.**

   The Edit Themes screen loads in the Dashboard, as shown in Figure 5-5.



Twenty Sixteen: Stylesheet (style.css)

```
/*
Theme Name: Twenty Sixteen
Theme URI: https://wordpress.org/themes/twentysixteen/
Author: the WordPress team
Author URI: https://wordpress.org/
Description: Twenty Sixteen is a modernized take on an ever-popular WordPress layout — the
horizontal masthead with an optional right sidebar that works perfectly for blogs and websites. It
has custom color options with beautiful default color schemes, a harmonious fluid grid using a
mobile-first approach, and impeccable polish in every detail. Twenty Sixteen will make your
WordPress look beautiful everywhere.
Version: 1.3
License: GNU General Public License v2 or later
License URI: http://www.gnu.org/licenses/gpl-2.0.html
Tags: one-column, two-columns, right-sidebar, accessibility-ready, custom-background, custom-
colors, custom-header, custom-menu, editor-style, featured-images, flexible-header, microformats,
post-formats, rtl-language-support, sticky-post, threaded-comments, translation-ready, blog
Text Domain: twentysixteen

This theme, like WordPress, is licensed under the GPL.
Use it to make something cool, have fun, and share what you've learned with others.
*/


/**
 * Table of Contents
 *
 * 1.0 - Normalize
 * 2.0 - Genericons
 * 3.0 - Typography
 * 4.0 - Elements
```

FIGURE 5-5: The Edit Themes screen of the Dashboard.

3. **Locate the template files for your theme (in this case, Twenty Twelve).**

   The available templates are listed on the right side of the Edit Themes page, as shown in Figure 5-5.

4. **Click `content-single.php` in the list of templates.**

   The `content-single.php` template opens in the text editor on the left side of the screen, where you can edit the template file.

5. **Scroll down and locate the template tag that looks like this: `</div> <!-- .entry-content -->`.**

6. **On the new line directly above the line in Step 5, type this:**

   ```
   <p><strong>My Current Mood is:</strong><em>
   ```

   `<p>` and `<strong>` open the HTML tags for paragraph and bold text, respectively, followed by the words to display in your template (`My Current Mood is:`). `<em>` opens the HTML tag for italic-style text, which gets applied to the value. (The `</strong>` HTML tag closes the bold text display.)

7. **Type the PHP that makes the Custom Field work:**

   ```
   <?php $key="mood"; echo get_post_meta($post->ID, $key, true); ?>
   ```

8. **Type** `</em></p>`**.**

   This code closes the HTML tags you opened in Step 6.

9. **Click the Update File button.**

   Located at the bottom of the Edit Themes screen, this step saves the changes you made to the `content.php` file and reloads the page with a message that says your changes have been successfully saved.

10. **View your post on your site to see your Custom Field data displayed.**

    The data should look just like the `My Current Mood is: Happy` message shown earlier in Figure 5-3.

WordPress now displays your current mood at the bottom of the posts to which you've added the `mood` Custom Field.

The entire code, put together, should look like this in your template:

```
<p><strong>My Current Mood is:</strong> <em><?php $key="mood"; echo
    get_post_meta($post->ID, $key, true); ?></em></p>
```

WARNING

The code is case-sensitive, which means that the words you input for the key in your Custom Field need to match case with the `$key` in the code. If you input `mood` in the Key field, for example, the code needs to be lowercase as well: `$key="mood"`. If you attempt to change the case to `$key="Mood"`, the code won't work.

You have to add this code for the `mood` Custom Field only one time. After you add the template function code to your template for the `mood` Custom Field, you can define your current mood in every post you publish to your site by using the Custom Fields interface.

REMEMBER

This example is just one type of Custom Field that you can add to your posts.

Getting WordPress to check for your Custom Field

The previous sections show you how to add the necessary code to your template file to display your Custom Field. But what if you want to publish a post in which you *don't* want the `mood` Custom Field to appear? If you leave your template file as you set it up by following the steps in the preceding sections, even if you don't add the `mood` Custom Field, your blog post displays `My Current Mood is:` without a mood because you didn't define one.

But you can easily make WordPress check first to see whether the Custom Field is added. If it finds the Custom Field, WordPress displays your mood; if it doesn't find the Custom Field, WordPress doesn't display the Custom Field.

Working with Custom Fields

If you followed along in the preceding sections, the code in your template looks like this:

```
<p><strong>My Current Mood is:<strong> <em><?php $key="mood"; echo
   get_post_meta($post->ID, $key, true); ?></em></p>
```

To make WordPress check to see whether the `mood` Custom Field exists, add this code to the line above your existing code:

```
<?php if ( get_post_meta($post->ID, 'mood', true) ) : ?>
```

Then add this line of code to the line below your existing code:

```
<?php endif; ?>
```

Put together, the lines of code in your template should look like this:

```
<?php if ( get_post_meta($post->ID, 'mood', true) ) : ?>
<p><strong>My Current Mood is:</strong> <em><?php $key="mood"; echo
     get_post_meta($post->ID, $key, true); ?></em></p>
<?php endif; ?>
```

The first line is an `IF` statement that basically asks "Does the `mood` key exist for this post?" If it does, the value gets displayed. If it doesn't, WordPress skips the code, ignoring it so that nothing gets displayed for the `mood` Custom Field. The final line of code simply puts an end to the `IF` question. See the nearby "IF, ELSE" sidebar to find out about some everyday situations that explain the `IF` question. Apply this statement to the code you just added to your template, and you get this: `IF` the `mood` Custom Field exists, then WordPress will display it, or `ELSE` it won't.

IF, ELSE

In your daily life, you probably deal with `IF, ELSE` situations every day, as in these examples:

- **IF** I have a dollar, then I'll buy coffee, or **ELSE** I won't.
- **IF** it's warm outside, then I'll take a walk, or **ELSE** I won't.
- **IF** I understand this code, then I'll be happy, or **ELSE** I won't.

REMEMBER

You can find extensive information on working with WordPress template files within your theme in Book 6.

Exploring Different Uses for Custom Fields

In this chapter, I use the example of adding your current mood to your site posts by using Custom Fields. But you can use Custom Fields to define all sorts of data on your posts and pages; you're limited only by your imagination when it comes to what kind of data you want to include.

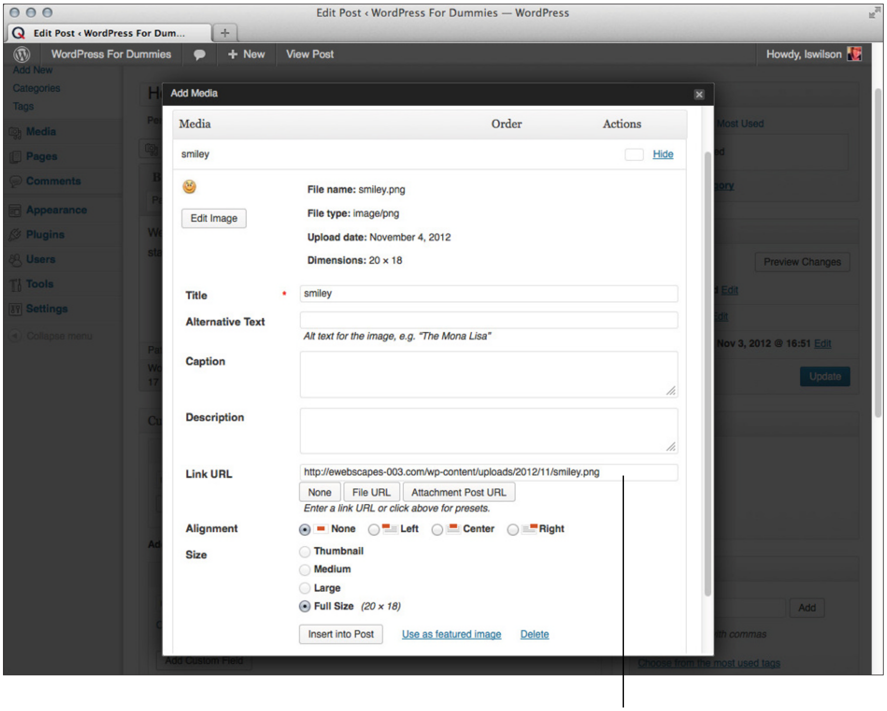
Obviously, I can't cover every possible use for Custom Fields, but I can give you some ideas that you may want to try on your own site. At the very least, you can implement some of these ideas to get yourself into the flow of using Custom Fields, and they may spark your imagination on what types of data you want to include on your site:

- **Music:** Display the music you're currently listening to. Use the same method I describe in this chapter for your current mood, except create a Custom Field named music. Use the same code template, but define the key as `$key="music";` and alter the wording from *My Current Mood is:* to *I am Currently Listening to:.*
- **Books:** Display what you're currently reading by creating a Custom Field named book, defining the key in the code as `$key="book";`, and then altering the wording from *My Current Mood is:* to *I Am Currently Reading:.*
- **Weather:** Let your readers know what the weather is like in your little corner of the world by adding your current weather conditions to your published blog posts. Create a Custom Field named `weather`, and use the same code for the template. Just define the key as `$key="weather";` and alter the wording from *My Current Mood is:* to *Current Weather Conditions:.*

If you want to get really fancy with your Custom Fields, you can also define an icon for the different metadata displays. Using the mood Custom Field, for example, you can add little *emoticons* (smiley-face icons that portray mood) after your mood statement to give a visual cue of your mood, as well as a textual one. Follow these steps to add an emoticon to the `mood` Custom Field from earlier sections of this chapter:

1. **Visit the Posts screen on the Dashboard by clicking the Posts link on the left navigation menu.**
2. **Click the title of the post that you want to edit.**
3. **Add a new Custom Field by choosing Enter New link from the drop-down list and entering** mood-icon **in the Name text box.**
4. **Click the Add Media button above the Post text box to open the Add Media window.**

   The Add Media window opens, as shown in Figure 5-6.



smiley

File name: smiley.png

File type: image/png

Upload date: November 4, 2012

Dimensions: 20 × 18

Title * smiley

Alternative Text

Alt text for the image, e.g. "The Mona Lisa"

Caption

Description

Link URL http://ewebscapes-003.com/wp-content/uploads/2012/11/smiley.png

None | File URL | Attachment Post URL

Enter a link URL or click above for presets.

Alignment ● None ○ Left ○ Center ○ Right

Size ○ Thumbnail ○ Medium ○ Large ● Full Size (20 × 18)

Insert into Post | Use as featured image | Delete

Copy the URL.

FIGURE 5-6: The Link URL in the Add Media window.

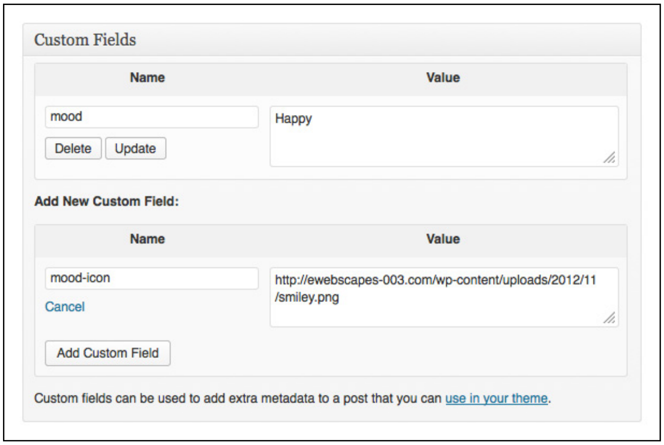
5. **Click the Select Files button, and upload an image from your computer.**

   See Book 4, Chapter 3 for information on uploading images.

6. **From the Link URL text box, copy the file URL of the image you uploaded.**

7. **Click the X in the top-right corner to close the Add Media window.**

8. **Paste the Link URL in the Value text box for the mood-icon Name (see Figure 5-7).**



Custom Fields

Name	Value
mood	Happy

Add New Custom Field:

Name	Value
mood-icon	http://ewebscapes-003.com/wp-content/uploads/2012/11 /smiley.png

Custom fields can be used to add extra metadata to a post that you can use in your theme.

FIGURE 5-7: Adding a mood icon.

9. **Click the Add Custom Field button.**

   The Name and Key values are saved.

10. **Click the Update button in the Publish module.**

    The changes in your post are saved and updated on your site.

11. **Update the function code in your template file to include the new mood icon.**

    Follow these steps to add that code:

    a. *Click the Editor link on the Appearance menu of your Dashboard.*

    b. *Click the `content-single.php` file.*

       The `content-single.php` template displays in the text box on the left side of the page.

    c. *Locate the code you added for the `mood` Custom Field.*

d. *Before the closing* `</strong>` *HTML tag, add the following line of code:*

```
<img src="<?php $key="mood-icon"; echo get_post_meta($post->ID, $key, true); ?>"/>
```

The `<img src="` that precedes the Custom Field code is the HTML tag used to display an image on your site. The `" />` code that appears after the Custom Field code is part of the HTML tag, and it closes the `<img src="` HTML tag. I changed the $key to indicate that I'm calling the `mood-icon` Custom Field.

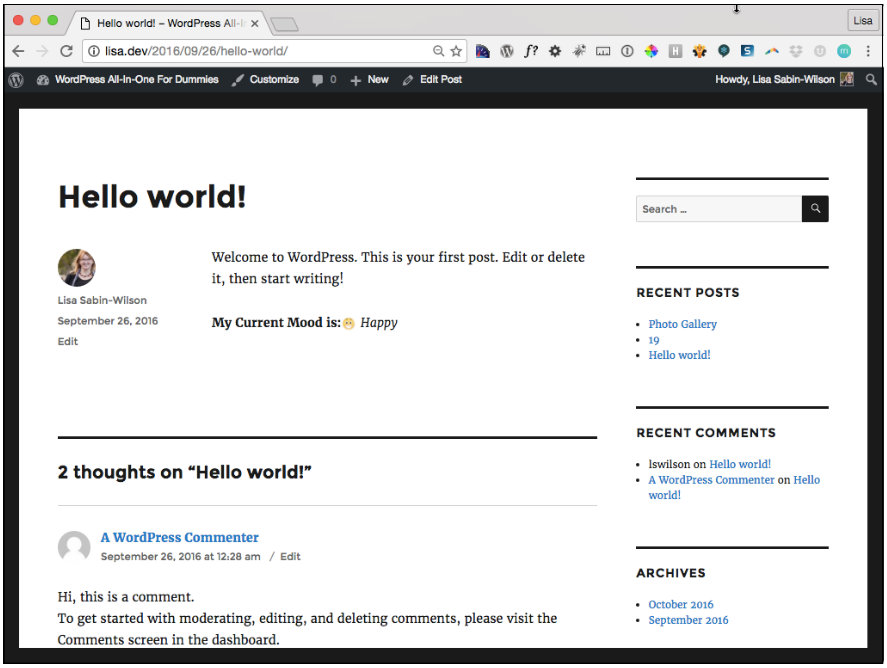
e. *Click the Update File button to save your changes.*

f. *Visit the post on your site to view your new mood icon.*

You can see my mood icon in Figure 5-8.

The entire snippet of code you added in the preceding steps should look like this when put together (be sure to double-check your work!):

```
<?php if ( get_post_meta($post->ID, 'mood', true) ) : ?>
<p><strong>My Current Mood is:</strong> <em><?php $key="mood"; echo get_post_
    meta($post->ID, $key, true); ?></em> <img src="<?php $key="mood-icon"; echo
    get_post_meta($post->ID, $key, true); ?>"/></strong></p>
<?php endif; ?>
```


Hello world! – WordPress All-I
Lisa
lisa.dev/2016/09/26/hello-world/
WordPress All-In-One For Dummies
Customize
0
New
Edit Post
Howdy, Lisa Sabin-Wilson
Search ...

Hello world!

Lisa Sabin-Wilson
September 26, 2016
Edit

Welcome to WordPress. This is your first post. Edit or delete it, then start writing!

My Current Mood is: *Happy*

2 thoughts on "Hello world!"

A WordPress Commenter
September 26, 2016 at 12:28 am / Edit

Hi, this is a comment.
To get started with moderating, editing, and deleting comments, please visit the Comments screen in the dashboard.

RECENT POSTS

- Photo Gallery
- 19
- Hello world!

RECENT COMMENTS

- lswilson on Hello world!
- A WordPress Commenter on Hello world!

ARCHIVES

- October 2016
- September 2016

FIGURE 5-8: Displaying my current mood with a mood icon.

IN THIS CHAPTER

- » Defining a content management system
- » Creating a template for each static page, post category, and sidebar
- » Working with custom styles for sticky posts, categories, and tags
- » Using Custom Post Types
- » Optimizing for search engine success

Chapter 6

Using WordPress as a Content Management System

If you've avoided using WordPress as a solution for building your own website because you think it's only a blogging platform and you don't want to have a blog (not every website owner does, after all), it's time to rethink your position. WordPress is a powerful content management system that's flexible and extensible enough to run an entire website — with no blog at all, if you prefer.

A *content management system* (CMS) is a system used to create and maintain your entire site. It includes tools for publishing and editing, as well as for searching and retrieving information and content. A CMS lets you maintain your website with little or no knowledge of HTML. You can create, modify, retrieve, and update your content without ever having to touch the code required to perform those tasks.

This chapter shows you a few ways that you can use the WordPress platform to power your entire website, with or without a blog. It covers different template configurations that you can use to create separate sections of your site. This chapter also dips into a feature in WordPress called Custom Post Types, which lets you control how content is displayed on your website.

TIP

This chapter touches on working with WordPress templates and themes, a concept that's covered in depth in Book 6. If you find templates and themes intimidating, check out Book 6 first.

You can do multiple things with WordPress to extend it beyond the blog. I use the Twenty Sixteen theme to show you how to use WordPress to create a fully functional website that has a CMS platform — anything from the smallest personal site to a large business site.

Creating Different Page Views Using WordPress Templates

As I explain in Book 4, Chapter 2, a *static page* contains content that doesn't appear on the blog page, but as a separate page within your site. You can have numerous static pages on your site, and each page can have a different design, based on the template you create. (Flip to Book 6 to find out all about choosing and using templates on your site.) You can create several static-page templates and assign them to specific pages within your site by adding code to the top of the static-page templates.

Here's the code that appears at the top of the static-page template we use for our About page at `https://webdevstudios.com/about`:

```
<?php
/*
Template Name: About
*/
?>
```

Using a template on a static page is a two-step process: Upload the template and then tell WordPress to use the template by tweaking the page's code.

TIP

In Book 6, you can discover information about Custom Menus, including how to create different navigation menus for your website. You can create a menu of links that includes all the pages you created on your WordPress Dashboard. You can display that menu on your website by using the Custom Menus feature.

Uploading the template

To use a page template, you have to create one. You can create this file in a text-editor program, such as Notepad. (To see how to create a template, flip to Book 6, which gives you extensive information on WordPress templates and themes.) To create an About page, for example, you can save the template with the name about.php.

TIP

For beginners, the best way to get through this step is to make a copy of your theme's page.php file, rename the file about.php, and then make your edits (outlined below) in the new about.php file. As you gain more confidence and experience with WordPress themes and template files, you'll be able to create these files from scratch without having to copy other files to make them — or you can keep copying from other files. Why re-create the wheel?

When you have your template created, follow these steps to make it part of WordPress:

1. **Upload the template file to your WordPress theme folder.**

   You can find that folder on your web server in /wp-content/themes. (See Book 2, Chapter 2 for more information about SFTP.)

2. **Log in to your WordPress Dashboard, and click the Editor link on the Appearance menu.**

   The Edit Themes screen opens.

3. **Click the about.php template link located on the right side of the page.**

4. **Type the Template Name tag directly above the get_header() template tag.**

   The header tag looks like this: get_header(); ?>.

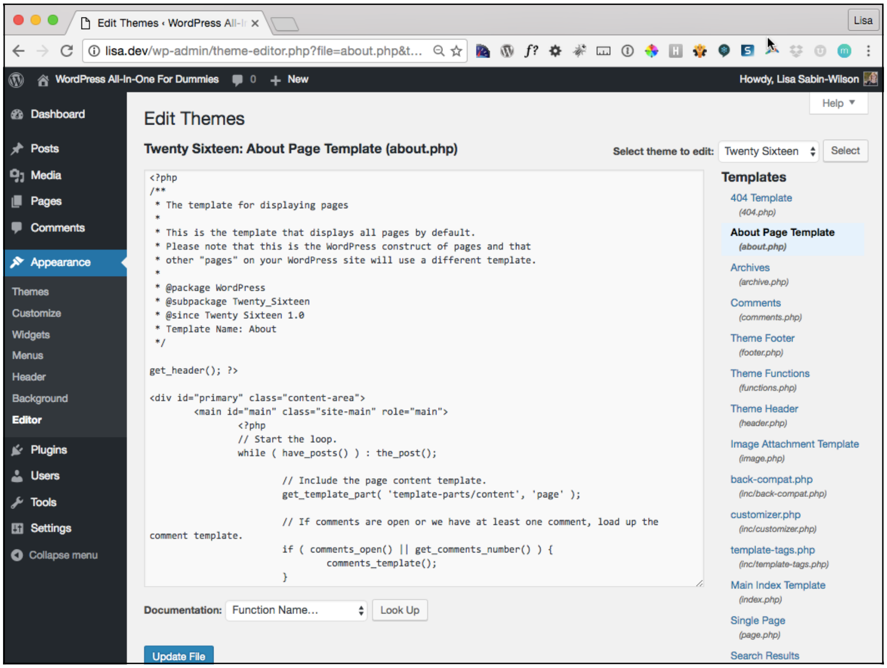
   If you're creating an About Page, the code to create the Template Name contains code that looks like this:

```
<?php
/*
Template Name: About
*/
get_header();
?>
```

5. **Click the Update File button.**

   The file is saved, and the page refreshes. If you created an About page template, the `about.php` template is now called About Page in the template list on the right side of the page.

Figure 6-1 shows the Page template and displays the code needed to define a specific name for the template.



Edit Themes ‹ WordPress All-I
Lisa
lisa.dev/wp-admin/theme-editor.php?file=about.php&t...
WordPress All-In-One For Dummies
0
New
Howdy, Lisa Sabin-Wilson
Dashboard
Posts
Media
Pages
Comments
Appearance
Themes
Customize
Widgets
Menus
Header
Background
Editor
Plugins
Users
Tools
Settings
Collapse menu
Help
Select theme to edit:
Twenty Sixteen
Select
Templates
404 Template (404.php)
About Page Template (about.php)
Archives (archive.php)
Comments (comments.php)
Theme Footer (footer.php)
Theme Functions (functions.php)
Theme Header (header.php)
Image Attachment Template (image.php)
back-compat.php (inc/back-compat.php)
customizer.php (inc/customizer.php)
template-tags.php (inc/template-tags.php)
Main Index Template (index.php)
Single Page (page.php)
Search Results
Documentation:
Function Name...
Look Up
Update File

Edit Themes

Twenty Sixteen: About Page Template (about.php)

```
<?php
/**
 * The template for displaying pages
 *
 * This is the template that displays all pages by default.
 * Please note that this is the WordPress construct of pages and that
 * other "pages" on your WordPress site will use a different template.
 *
 * @package WordPress
 * @subpackage Twenty_Sixteen
 * @since Twenty Sixteen 1.0
 * Template Name: About
 */

get_header(); ?>

<div id="primary" class="content-area">
        <main id="main" class="site-main" role="main">
                <?php
                // Start the loop.
                while ( have_posts() ) : the_post();

                        // Include the page content template.
                        get_template_part( 'template-parts/content', 'page' );

                        // If comments are open or we have at least one comment, load up the
comment template.
                        if ( comments_open() || get_comments_number() ) {
                                comments_template();
                        }
```

FIGURE 6-1: Naming a static-page template.

Assigning the template to a static page

After you create the template and name it the way you want, assign that template to a page by following these steps:

1. **Click the Add New link on the Pages menu of the Dashboard.**

   The Add New Page screen opens, allowing you to write a new page for your WordPress site.

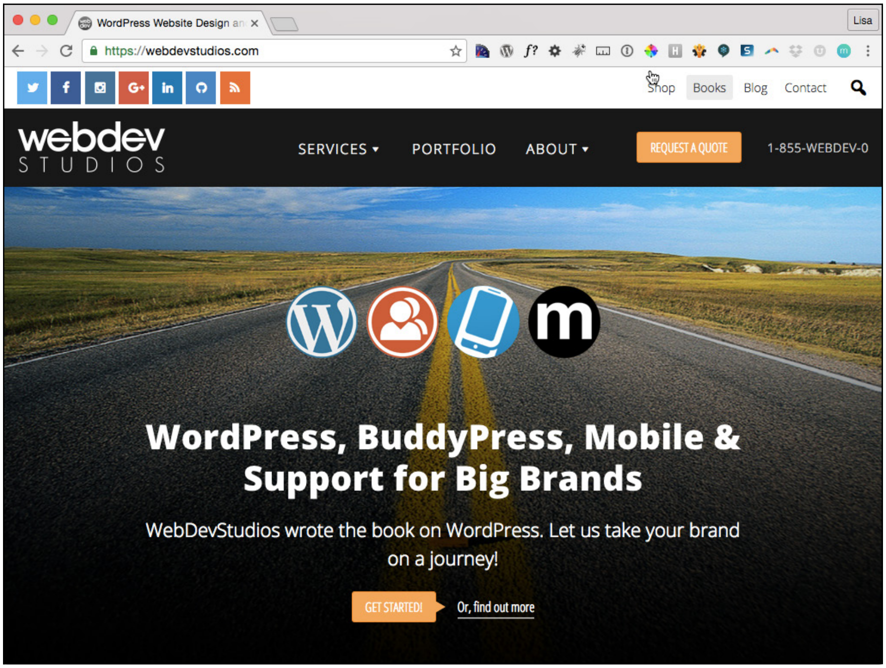
2. **Type the title in the Title text box and the page content in the large text box.**

3. **Choose the page template from the Template drop-down list.**

   By default, the Template drop-down list in the Page Attributes module appears on the right side of the page. You can reposition the modules on this page; see Book 3, Chapter 1 for more information.

4. **Click the Publish button to save and publish the page to your site.**

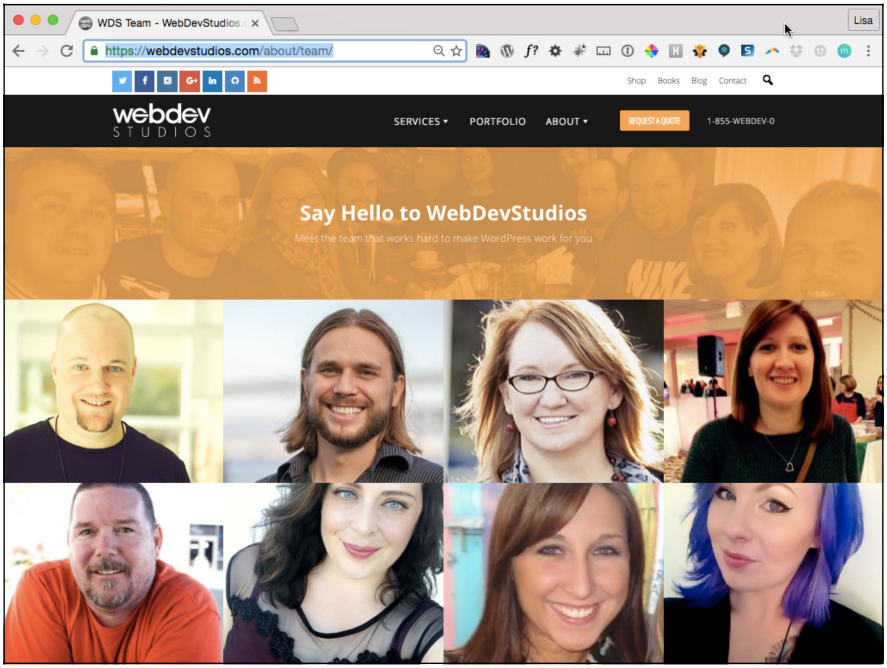
Figure 6-2 shows the layout of my home page on my business site at `http://webdevstudios.com` and the information it contains, whereas Figure 6-3 shows the layout and information provided on the About page at `https://webdevstudios.com/about/team`. Both pages are on the same site, in the same WordPress installation, with different page templates to provide different looks, layouts, and sets of information.



WordPress, BuddyPress, Mobile & Support for Big Brands

WebDevStudios wrote the book on WordPress. Let us take your brand on a journey!

FIGURE 6-2: Lisa's business home page at WebDev Studios.com.



Say Hello to WebDevStudios

Meet the team that works hard to make WordPress work for you

FIGURE 6-3: The About page at WebDev Studios.com.

Creating a Template for Each Post Category

You don't have to limit yourself to creating a static-page template for your site. You can use specific templates for the categories you've created on your blog (which I talk about in Book 3, Chapter 5) and create unique sections for your site.

Figure 6-4 shows my company's design portfolio. Portfolio is the name of a category that we created in the WordPress Dashboard. Instead of using a static page for the display of the portfolio, we're using a category template to handle the display of all posts made to the Portfolio category.

You can create category templates for all categories in your site simply by creating template files that have filenames that correspond to the category slug and then upload those templates to your WordPress `themes` directory via SFTP. (See Book 2, Chapter 2.) Here's the logic to creating category templates:

- A template that has the filename `category.php` is a catch-all for the display of categories.
- Add a dash and the category slug to the end of the filename (shown in Table 6-1) to specify a template for an individual category.

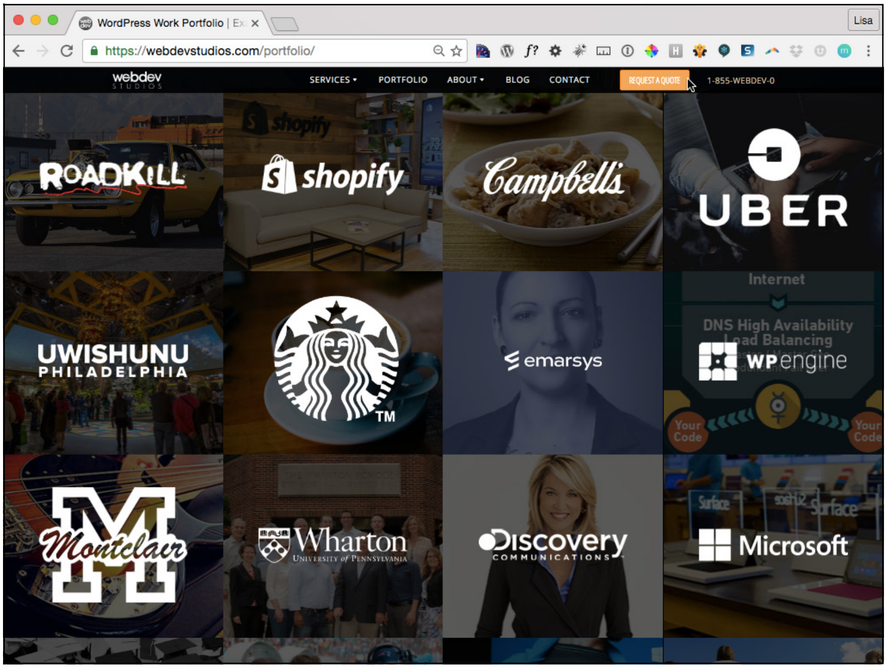


FIGURE 6-4: The Portfolio page, which uses a category template.

> » If you don't have a `category.php` or `category-`*`slug`*`.php` file, the category display gets defined from the Main Index template (`index.php`).

Table 6-1 shows three examples of the category template naming requirements.

TABLE 6-1 WordPress Category Template Naming Conventions

If the Category Slug Is . . .	The Category Template Filename Is . . .
portfolio	`category-portfolio.php`
books	`category-books.php`
music-i-like	`category-music-i-like.php`

Pulling in Content from a Single Category

WordPress makes it possible to pull in very specific types of content on your website through the use of the `WP_Query` class. If you include `WP_Query` before The Loop (see Book 6, Chapter 3), it lets you specify which category you want to pull information from. If you have a category called *WordPress* and want to display the last three posts from that category — on your front page, in your sidebar, or somewhere else on your site — you can use this template tag.

TIP

The WP_Query class accepts several parameters that let you display different types of content, such as posts in specific categories and content from specific pages/posts or dates in your blog archives. The WP_Query class lets you pass so many variables and parameters that I just can't list all the possibilities. Instead, you can visit the WordPress Codex and read about the options available with this tag: https://codex.wordpress.org/Class_Reference/WP_Query%23Parameters.

Here are two parameters that you can use with WP_Query:

- posts_per_page=*X*: This parameter tells WordPress how many posts you want to display. If you want to display only three posts, enter **posts_per_page=3**.
- category_name=*slug*: This parameter tells WordPress that you want to pull posts from the category with a specific slug. If you want to display posts from the WordPress category, this would be category_name=wordpress.

Follow these steps to filter posts by category using WP_Query:

1. **Click the Editor link on the Appearance menu of the Dashboard.**

   The Edit Themes screen opens.

2. **Click the template in which you want to display the content.**

   If you want to display content in a sidebar, for example, choose the Sidebar template: sidebar.php.

3. **Locate the ending </aside> tag at the bottom of the template for the theme you're using.**

   In the Twenty Sixteen theme, the ending </aside> tag is the last line.

4. **Type the following code directly above the ending </aside> tag:**

```
<section id="query" class="widget widget_meta"><h2 class="widget-
   title">Category Posts</h2>

<?php $query = new WP_Query( array( 'category_name' => 'wordpress' ) ); ?>
<?php while ( $query->have_posts() ) : $query->the_post(); ?>
<ul>
<li><strong><a href="<?php the_permalink() ?>" rel="bookmark"
   title="Permanent Link to <?php the_title_attribute(); ?>"><?php
   the_title(); ?></a></strong><br/>
<?php the_excerpt(); ?> </li>
</ul>
```

```
<?php endwhile; wp_reset_postdata(); ?>
</section>
```

5. **Click the Update File button.**

   The changes you just made are saved to the `sidebar.php` template.

TECHNICAL STUFF

In past versions of WordPress, you used the `query_posts();` tag to pull content from a specific category, but the `WP_Query` class is more efficient. Although the `query_posts();` tag provides the same result, it increases the number of calls to the database and also increases page load and server resources, so please don't use `query_posts();` (no matter what you see written on the Internet!).

Using Sidebar Templates

You can create separate sidebar templates for different pages of your site by using a simple `include` statement. When you write an `include` statement, you're simply telling WordPress that you want it to include a specific file on a specific page.

The code that pulls the usual Sidebar template (`sidebar.php`) into all the other templates, such as the Main Index template (`index.php`), looks like this:

```
<?php get_sidebar(); ?>
```

What if you create a page and want to use a sidebar that has different information from what you have in the Sidebar template (`sidebar.php`)? Follow these steps:

1. **Create a new sidebar template in a text editor such as Notepad.**

   See Book 6 for information on template tags and themes. My recommendation is to make a copy of the existing `sidebar.php` file in the Twenty Sixteen theme and rename it.

2. **Save the file as `sidebar2.php`.**

   In Notepad, choose File➪Save. When you're asked to name the file, type **sidebar2.php** and then click Save.

3. **Upload `sidebar2.php` to your Themes folder on your web server.**

   See Book 2, Chapter 2 for SFTP information, and review Book 6, Chapter 2 for information on how to locate the Themes folder.

   The template is now in your list of theme files on the Edit Themes screen. (Log in to your WordPress Dashboard and click the Editor link on the Appearance drop-down menu.)

4. **To include the `sidebar2.php` template in one of your page templates, replace `<?php get_sidebar(); />` with this code:**

```
<?php get_template_part('sidebar2'); ?>
```

This code calls in a template you've created within your theme.

TIP

By using that `get_template_part` function, you can include virtually any file in any of your WordPress templates. You can use this method to create footer templates for pages on your site, for example. First, create a new template that has the filename `footer2.php`. Then locate the following code in your template

```
<?php get_footer(); ?>
```

and replace it with this code:

```
<?php get_template_part('footer2'); ?>
```

Creating Custom Styles for Sticky, Category, and Tag Posts

In Book 6, you can find the method for putting together a very basic WordPress theme, which includes a Main Index template that uses the WordPress Loop. You can use a custom tag to display custom styles for sticky posts, categories, and tags on your blog. That special tag looks like this:

```
<div <?php post_class() ?> id="post-<?php the_ID(); ?>">
```

The `post_class()` section is the coolest part of the template. This template tag tells WordPress to insert specific HTML markup in your template that allows you to use CSS to make custom styles for sticky posts, categories, and tags.

REMEMBER

In Book 4, Chapter 1, I tell you all about how to publish new posts to your blog, including the different options you can set for your blog posts, such as categories, tags, and publishing settings. One of the settings is the Stick This Post to the Front Page setting. In this chapter, I show you how to custom-style those sticky posts. It's not as messy as it sounds!

Suppose that you publish a post with the following options set:

- Stick this post to the front page.

- File it in a category called WordPress.
- Tag it News.

When the `post_class()` tag is in the template, WordPress inserts HTML markup that allows you to use CSS to style *sticky posts,* or posts assigned to specific tags or categories, with different styling from the rest of your posts. WordPress inserts the following HTML markup for your post:

```
<div class="post sticky category-wordpress tag-news">
```

In Book 6, you can discover CSS selectors and HTML markup, and see how they work together to create style and format for your WordPress theme. With the `post_class()` tag in place, you can go to your CSS file and define styles for the following CSS selectors:

- `.post`: Use this tag as the generic style for all posts on your site. The CSS for this tag is

  ```
  .post {background: #ffffff; border: 1px solid silver; padding: 10px;}
  ```

  A style is created for all posts that have a white background with a thin silver border and 10 pixels of padding space between the post text and the border of the post.
- `.sticky`: You stick a post to your front page to call attention to that post, so you may want to use different CSS styling to make it stand out from the rest of the posts on your site:

  ```
  .sticky {background: #ffffff; border: 4px solid red; padding: 10px;}
  ```

  This code creates a style for all posts that have been designated as sticky in the post options on the Write Post page to appear on your site with a white background, a thick red border, and 10 pixels of padding space between the post text and border of the post.
- `.category-wordpress`: Because I blog a lot about WordPress, my readers may appreciate it if I give them a visual cue as to which posts on my blog are about that topic. I can do that through CSS by telling WordPress to display a small WordPress icon in the top-right corner of all my posts in the WordPress category:

  ```
  .category-wordpress {
  background: url(wordpress-icon.jpg) top right no-repeat;
  height: 100px; width: 100px;
  }
  ```

This code inserts a graphic — wordpress-icon.jpg — that's 100 pixels in height and 100 pixels in width in the top-right corner of every post I assign to the WordPress category on my site.

- .tag-news: I can style all posts tagged with News the same way I style the WordPress category:

```
.tag-news {
background: #f2f2f2;
border: 1px solid black;
padding: 10px;
}
```

This CSS styles all posts tagged with News with a light gray background and a thin black border with 10 pixels of padding between the post text and border of the post.

You can easily use the post-class() tag, combined with CSS, to create dynamic styles for the posts on your blog!

Working with Custom Post Types

A nice feature of WordPress (as of version 3.0) is Custom Post Types. This feature allows you, the site owner, to create different content types for your WordPress site that give you more creative control of how different types of content are entered, published, and displayed on your WordPress website.

REMEMBER

Personally, I wish that WordPress had called this feature Custom Content Types so that people didn't incorrectly think that Custom Post Types pertain to posts only. Custom Post Types aren't really the posts that you know as blog posts. Custom Post Types are a way of managing your blog content by defining what type of content it is, how it's displayed on your site, and how it operates — but they're not necessarily posts.

By default, WordPress already has different post types built into the software, ready for you to use. These default post types include

- Blog posts
- Pages
- Navigation menus (see Book 6, Chapter 6)

- Attachments
- Revisions

Custom Post Types give you the ability to create new and useful types of content on your website, including a smart and easy way to publish those content types to your site.

You really have endless possibilities for using Custom Post Types, but here are a few ideas that can kick-start your imagination. (They're some of the most popular and useful ideas that others have implemented on their sites.)

- Photo gallery
- Podcast or video
- Book reviews
- Coupons and special offers
- Events calendar

To create and use Custom Post Types on your site, you need to be sure that your WordPress theme contains the correct code and functions. In the following steps, I create a very basic Custom Post Type called Generic Content. Follow these steps to create the Generic Content basic Custom Post Type:

1. **Click the Editor link on the Appearance menu of the Dashboard to open the Theme Editor screen.**
2. **Click the Theme Functions template link to open the `functions.php` file in the text editor on the left side of the page.**
3. **Add the Custom Post Types code to the bottom of the Theme Functions template file.**

   Scroll down to the bottom of the `functions.php` file, and include the following code to add a Generic Content Custom Post Type to your site:

```
add_action( 'init', 'create_my_post_types' );
 function create_my_post_types() {
     register_post_type( 'generic_content', array(
        'label' => __( 'Generic Content' ),
        'singular_label' => __( 'Generic Content' ),
        'description' => __( 'Description of the Generic Content type' ),
         'public' => true,
         )
     );

 }
```

4. **Click the Update File button to save the changes you made in the `functions.php` file.**

TECHNICAL STUFF

The function `register_post_type` can accept several arguments and parameters, which are detailed in Table 6-2. You can use a variety and combination of different arguments and parameters to create a specific post type. You can find more information on Custom Post Types and using the `register_post_type` function in the official WordPress Codex at `https://codex.wordpress.org/Function_Reference/register_post_type`.

After you complete the preceding steps to add the Generic Content Custom Post Type to your site, a new post type labeled Generic appears on the left navigation menu of the Dashboard.

You can add and publish new content by using the new Custom Post Type, just as you do when you write and publish blog posts. (See Book 4, Chapter 1.) The published content isn't added to the chronological listing of blog posts; rather, it's treated like separate content from your blog (just like static pages).

View the permalink for the published content, and you see that it adopts the custom post type name Generic Content and uses it as part of the permalink structure, creating a permalink that looks like `http://`*`yourdomain.com`*`/generic-content/new-article`.

TABLE 6-2 Arguments and Parameters for register_post_type();

Parameter	Information	Default	Example
`label`	The name of the post type.	None	`'label' => __( 'Generic Content' ),`
`singular_label`	Same as label, but singular. If your label is "Movies," the singular label would be "Movie."	None	`'singular_label' => __( 'Generic Content' ),`
`description`	The description of the post type; displayed in the Dashboard to represent the post type.	None	`'description' => __( 'This is a description of the Generic Content type' ),`

Parameter	Information	Default	Example
public show_ui publicly_queryable exclude_from_search	Sets whether the post type is public. There are three other arguments: show_ui: whether to show admin screens. publicly_queryable: whether to query for this post type from the front end. exclude_from_search: whether to show post type in search results.	true or false Default is false	'public' => true, 'show_ui' => true, 'publicly_queryable' => true, 'exclude_from_search' => false,
menu_position	Sets the position of the post type menu item on the Dashboard navigation menu.	Default: 20 By default, appears after the Comments menu on the Dashboard Set integer in intervals of 5 (5, 10, 15, 20, and so on)	'menu_position' => 25,
menu_icon	Defines a custom icon (graphic) to the post type menu item in the Dashboard navigation menu. Creates and uploads the image to the images directory of your theme folder.	None	'menu_icon' => get_stylesheet_directory_uri() . '/images/generic-content.png',
hierarchical	Tells WordPress whether to display the post type content list in a hierarchical manner.	true or false Default is true	'hierarchical' => true,

(continued)

TABLE 6-2 ***(continued)***

Parameter	Information	Default	Example
`query_var`	Controls whether this post type can be used with a query variable such as `query_posts` (see the "Adding `query_posts` Tag" section) or `WP_Query`.	`true` or `false` Default is false	`'query_var' => true,`
`capability_type`	Defines permissions for users to edit, create, or read the Custom Post Type.	`post` (default) Gives the same capabilities for those users who can edit, create, and read blog posts	`'query_var' => post,`
`supports`	Defines what meta boxes, or modules, are available for this post type in the Dashboard.	`title`: Text box for the post title `editor`: Text box for the post content `comments`: Check boxes to toggle comments on/off `trackbacks`: Check boxes to toggle trackbacks and pingbacks on/off `revisions`: Allows post revisions to be made `author`: Drop-down list to define post author `excerpt`: Text box for the post excerpt `thumbnail`: The featured image selection `custom-fields`: Custom fields input area `page-attributes`: The page parent and page template drop-down lists	`'supports' => array( 'title', 'editor', 'excerpt', 'custom-fields', 'thumbnail' ),`

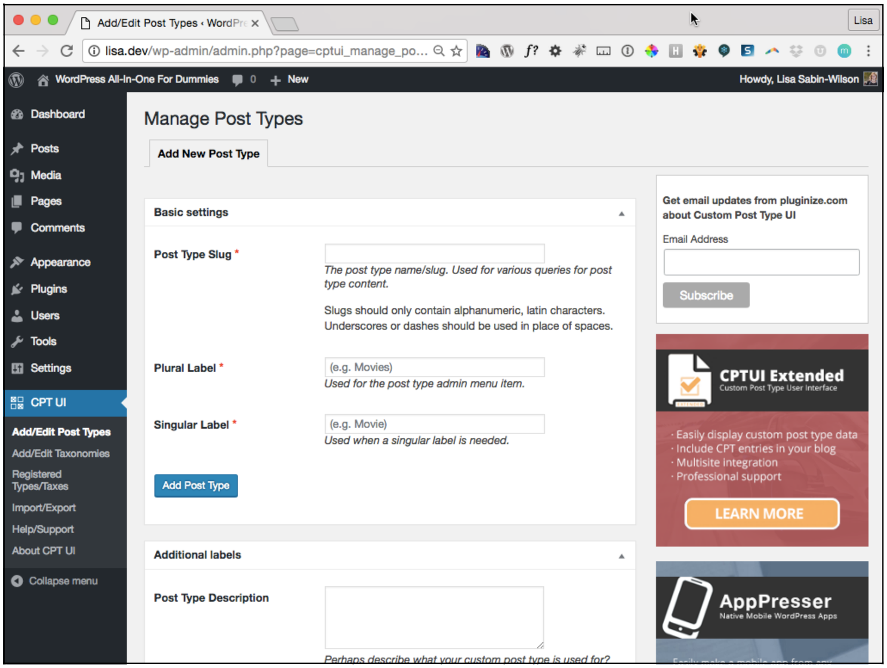
Parameter	Information	Default	Example

`rewrite`	Rewrites the permalink structure for the post type.	`true` or `false`
		Two other arguments are available:
		`slug`: Permalink slug to use for your Custom Post Types
		`with_front`: If you've set your permalink structure with a specific prefix, such as `/blog`
			`'rewrite' => array( 'slug' => 'my-content', 'with_front' => false ),`

`taxonomies`	Uses existing WordPress taxonomies (category and tag).	Category `post_tag`	`'taxonomies' => array( 'post_tag', 'category'),`

Two helpful plugins for building Custom Post Types quickly in WordPress are

- **Custom Post Type UI:** Written by our team at WebDevStudios, this plugin (`https://wordpress.org/plugins/custom-post-type-ui`) gives you a clean interface within your WordPress Dashboard that can help you easily and quickly build Custom Post Types on your website. It eliminates the need to add the code to your `functions.php` file by giving you options and settings so that you can configure and build the Custom Post Type that you want. Figure 6-5 shows the Custom Post Type UI options page on the Dashboard.
- **Betta Boxes CMS:** Available in the WordPress Plugin Directory (`http://wordpress.org/extend/plugins/betta-boxes-cms`), this plugin provides an interface in your Dashboard that you can use to create *meta boxes,* or special Custom Fields (see Book 4, Chapter 5) for the Custom Post Types that you build. As an example, Figure 6-6 shows some custom meta boxes built by using this plugin. This website features theater productions and the Custom Post Types for those shows. On the right side of Figure 6-6, the Purchase Link box (created by using custom meta boxes) gives the website owner a quick and easy field to fill out so that he or she can include information on where to purchase show tickets in every show post published.



Manage Post Types

Add New Post Type

Basic settings

Post Type Slug *

The post type name/slug. Used for various queries for post type content.

Slugs should only contain alphanumeric, latin characters. Underscores or dashes should be used in place of spaces.

Plural Label * (e.g. Movies)

Used for the post type admin menu item.

Singular Label * (e.g. Movie)

Used when a singular label is needed.

Add Post Type

Additional labels

Post Type Description

Perhaps describe what your custom post type is used for?

Get email updates from pluginize.com about Custom Post Type UI

Email Address

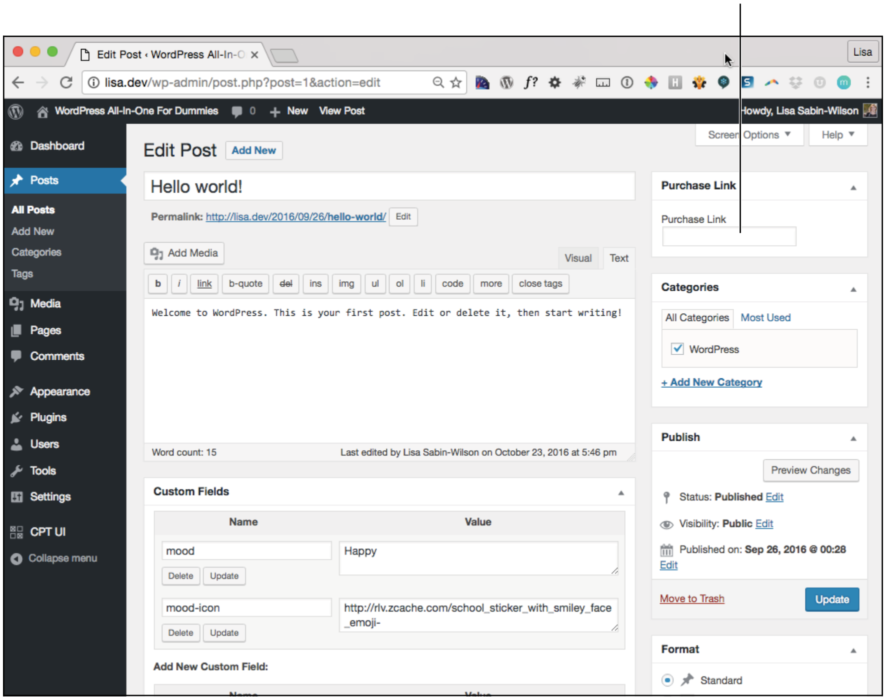
CPTUI Extended
Custom Post Type User Interface

- Easily display custom post type data
- Include CPT entries in your blog
- Multisite integration
- Professional support

AppPresser
Native Mobile WordPress Apps

FIGURE 6-5: The Custom Post Type UI plugin options page.

A custom meta box



Edit Post Add New

Hello world!

Permalink: http://lisa.dev/2016/09/26/hello-world/ Edit

```
Welcome to WordPress. This is your first post. Edit or delete it, then start writing!
```

Word count: 15 Last edited by Lisa Sabin-Wilson on October 23, 2016 at 5:46 pm

Custom Fields

Name	Value
mood	Happy
mood-icon	http://rlv.zcache.com/school_sticker_with_smiley_face_emoji-

Add New Custom Field:

Purchase Link

Purchase Link

Categories

All Categories | Most Used

☑ WordPress

+ Add New Category

Publish

Status: Published Edit

Visibility: Public Edit

Published on: Sep 26, 2016 @ 00:28 Edit

Format

● Standard

FIGURE 6-6: Purchase Link meta box created for this Custom Post Type.

Optimizing Your WordPress Site

Search engine optimization (SEO) is the practice of preparing your site to make it as easy as possible for the major search engines to crawl and cache your data in their systems so that your site appears as high as possible in the search returns. Book 5 contains more information on search engine optimization, as well as information about marketing your site and tracking its presence in search engines and social media by using analytics. This section gives you a brief introduction to SEO practices with WordPress. From here, you can move on to Book 5 to take a hard look at some of the things you can do to improve and increase traffic to your website.

If you search for the keywords *WordPress website design and development* in Google, my business site at WebDevStudios is in the top-ten search results for those keywords (at least, it is while I'm writing this chapter). Those results can change from day to day, so by the time you read this book, someone else may very well have taken over that coveted position. The reality of chasing those high-ranking search engine positions is that they're here today, gone tomorrow. The goal of SEO is to make sure that your site ranks as high as possible for the keywords that you think people will use to find your site. After you attain those high-ranking positions, the next goal is to keep them.

WordPress is equipped to create an environment that's friendly to search engines, giving them easy navigation through your archives, categories, and pages. WordPress provides this environment with a clean code base, content that's easily updated through the WordPress interface, and a solid navigation structure.

To extend SEO even further, you can tweak five elements of your WordPress posts, pages, and templates:

- **Custom permalinks:** Use custom permalinks, rather than the default WordPress permalinks, to fill your post and page URLs with valuable keywords. Check out Book 3, Chapter 2 for information on WordPress permalinks.
- **Posts and page titles:** Create descriptive titles for your posts and pages to provide rich keywords in your site.
- **Text:** Fill your posts and pages with keywords for search engines to find and index. Keeping your site updated with descriptive text and phrases helps the search engines find keywords to associate with your site.
- **Category names:** Use descriptive names for the categories you create in WordPress to place great keywords right in the URL for those category pages, if you use custom permalinks.

- **Images and `<ALT>` tags:** Place `<ALT>` tags in your images to further define and describe the images on your site. You can accomplish this task easily by using the description field in the WordPress image uploader.

Planting keywords in your website

If you're interested in a higher ranking for your site, use custom permalinks. By using custom permalinks, you're automatically inserting keywords into the URLs of your posts and pages, letting search engines include those posts and pages in their databases of information on those topics. If a provider that has the Apache `mod_rewrite` module enabled hosts your site, you can use the custom permalink structure for your WordPress-powered site.

Keywords are the first step on your journey toward great search engine results. Search engines depend on keywords, and people use keywords to look for content.

The default permalink structure in WordPress is pretty ugly. When you're looking at the default permalink for any post, you see a URL something like this:

```
http://yourdomain.com/p?=105
```

This URL contains no keywords of worth. If you change to a custom permalink structure, your post URLs automatically include the titles of your posts to provide keywords, which search engines absolutely love. A custom permalink may appear in this format:

```
http://yourdomain.com/2017/01/01/your-post-title
```

I explain setting up and using custom permalinks in full detail in Book 3, Chapter 2.

Optimizing your post titles for search engine success

Search engine optimization doesn't completely depend on how you set up your site. It also depends on you, the site owner, and how you present your content.

You can present your content in a way that lets search engines catalog your site easily by giving your blog posts and pages titles that make sense and coordinate with the actual content being presented. If you're doing a post on a certain topic, make sure that the title of the post contains at least one or two keywords about that particular topic. This practice gives the search engines even more ammunition to list your site in searches relevant to the topic of your post.

REMEMBER

As your site's presence in the search engines grows, more people will find your site, and your readership will increase as a result.

A post with the title A Book I'm Reading doesn't tell anyone *what* book you're reading, making it difficult for people searching for information on that particular book to find the post. If you give the post the title *WordPress All-in-One For Dummies: My Review*, however, you provide keywords in the title, and (if you're using custom permalinks) WordPress automatically inserts those keywords into the URL, giving the search engines a triple keyword play:

- Keywords exist in your blog post title.
- Keywords exist in your blog post URL.
- Keywords exist in the content of your post.

Writing content with readers in mind

When you write your posts and pages and want to make sure that your content appears in the first page of search results so that people will find your site, you need to keep those people in mind when you're composing the content.

When search engines visit your site to crawl through your content, they don't see how nicely you've designed your site. They're looking for words to include in their databases. You, the site owner, want to make sure that your posts and pages use the words and phrases that you want to include in search engines.

If your post is about a recipe for fried green tomatoes, for example, you need to add a keyword or phrase that you think people will use when they search for the topic. If you think people would use the phrase *recipe for fried green tomatoes* as a search term, you may want to include that phrase in the content and title of your post.

A title such as A Recipe I Like isn't as effective as a title such as A Recipe for Fried Green Tomatoes. Including a clear, specific title in your post or page content gives the search engines a double-keyword whammy.

Creating categories that attract search engines

One little-known SEO tip for WordPress users: The names you give the categories you create for your site provide rich keywords that attract search engines like honey attracts bees. Search engines also see your categories as keywords that are relevant to the content on your site. So make sure that you're giving your categories names that are relevant to the content you're providing.

If you sometimes write about your favorite recipes, you can make it easier for search engines to find your recipes if you create categories specific to the recipes you're blogging about. Instead of having one Favorite Recipes category, you can create multiple category names that correspond to the types of recipes you blog about: Casserole Recipes, Dessert Recipes, Beef Recipes, and Chicken Recipes, for example.

REMEMBER

Creating specific category titles not only helps search engines, but also helps your readers discover content that's related to topics they're interested in.

You can also consider having one category called Favorite Recipes and creating subcategories (also known as *child categories*) that give a few more details on the types of recipes you've written about. (See Book 3, Chapter 5 for information on creating categories and child categories.)

Categories use the custom permalink structure, just like posts do. So links to your WordPress categories also become keyword tools within your site to help the search engines — and, ultimately, search engine users — find the content. Using custom permalinks creates category page URLs that look something like this:

```
http://yourdomain.com/category/category_name
```

The *category_name* portion of that URL puts the keywords right into the hands of search engines.

Using the <ALT> tag for images

When you use the WordPress media uploader to include an image in your post or page, a Description text box appears; in it, you can enter a description of the image. (I cover using the WordPress image uploader in detail in Book 4, Chapter 3.) This text automatically becomes what's referred to as the <ALT> tag, or alternative text.

The <ALT> tag's real purpose is to provide a description of the image for people who, for some reason or another, can't actually see the image. In a text-based browser that doesn't display images, for example, visitors see the description, or <ALT> text, telling them what image would be there if they could see it. Also, the tag helps people who have impaired vision and rely on screen-reading technology because the screen reader reads the <ALT> text from the image. You can read more about website accessibility for people with disabilities at https://www.w3.org/WAI/intro/people-use-web/Overview.html.

An extra benefit of <ALT> tags is that search engines gather data from them to further classify the content of your site. The following code inserts an image with the <ALT> tag of the code in bold to demonstrate what I'm talking about:

```
<img src="http://yourdomain.com/image.jpg" alt="This is an ALT tag"/>
```

Search engines harvest those <ALT> tags as keywords. The WordPress image uploader gives you an easy way to include those <ALT> tags without having to worry about inserting them into the image code yourself. Just fill out the Description text box before you upload and add the image to your post. Book 4, Chapter 3 provides in-depth information on adding images to your site content, including how to add descriptive text for the <ALT> tag and keywords.

5

Examining SEO and Social Media

Contents at a Glance

IN THIS CHAPTER

- Making your content easy for readers to share
- Figuring out when to interact with readers
- Using Twitter through WordPress
- Connecting Facebook to your WordPress blog

Chapter 1 Exposing Your Content

After you launch your website, getting your content in front of an interested audience is one of the most important strategic decisions you make, and this chapter focuses on how to get your content in front of potential new readers. The idea that people will eventually find any content you write is a pretty big falsehood. You might have the best rock band in the world, but if you don't leave your garage and get your music in front of potential fans, you can't ever sell out arenas.

By creating good content, making it easily shareable, and then participating within groups of interested people, you can establish expertise and build a community around your content. A community is much more powerful than a bunch of empty visitors; people in a community often become advocates and cheerleaders for your site.

REMEMBER

You want to gain readers, not random visitors. There's a big difference between a reader and a visitor: *Readers* visit your site on a consistent basis, and *visitors* check out your site and then move on to the next page that grabs their attention.

Understanding the Three Cs of the Social Web

Before I dive into the technical how-to stuff, I should talk about general social media philosophy. Technical tips without philosophy are meaningless. If you don't have the general philosophy down, your results are going to be poor because your interactions are going to be very one-sided affairs.

You can concentrate your daily actions on the web on the three Cs: content, communication, and consistency. The next few sections go into detail about each topic. By applying the three Cs, you can avoid a lot of mistakes and have success with your website and blog.

Content

The first pillar of the social web is content. Although the web has seen a growing shift from content to community, content is still king. Communities based on common interests fall flat unless they have the content for people to gravitate to. Facebook groups, for example, dominate because of the wealth of content they offer: the posts, links, videos, and other media that people create within that group. Without the content, the group wouldn't exist.

Content for the sake of content isn't necessarily in your best interest, however. To ensure that you provide the best content possible, make sure that you do these things:

- **Focus your content.** People expect tailored content. If you write about just anything, people won't know what to expect and will visit less often or stop coming to your site altogether. People will come back to your site for certain reasons, and they want content tailored to what they expect. The most successful publishers have a narrow focus, and they write for a niche.

CONSIDERING SOCIAL-VOTING TOOLS

A lot of online vendors recommend that you drive as many eyeballs as possible to your site by using social-voting tools (such as Facebook's Like button and Twitter's Tweet button) and other methods. Although this strategy increases your traffic numbers and may temporarily boost your confidence, it's a short-term solution. Most of your new visitors won't have a lot of interest in your content and therefore won't return to your site.

When Problogger.net author Darren Rowse (`www.problogger.net`), an authority on professional online publishing, began blogging, he tried a wide-ranging approach but discovered it didn't work. Rowse said:

> "My blog had four main themes and different readers resonated differently with each one. A few readers shared my diverse interests in all four areas, but most came to my blog to read about one of the (or at most a couple of) topics. A number of regular loyal readers became disillusioned with my eclectic approach to blogging and gave up coming."

Stick to two or three related topics (such as WordPress and related technology topics); you can still cover and talk about a wide variety of subjects that you excel in. People will know what they're coming to your site for and what to expect from you.

- **Have a voice that people want to hear.** Some people don't necessarily care about the mechanics of your writing as much as they care about your voice. Publishers, especially ones that post large amounts of content, often have typos and errors in their posts. Tucker Max (`http://tuckermax.com`), one of the most popular comedy bloggers, switches between past and present tense often — a grammar no-no. He's aware of this problem and doesn't care, and neither do his readers.

  Max knows that he's developing his own style:

  > "I know, I know. The whole concept of tense in speech has always given me problems. In undergrad and law school, I never really took any creative writing or English courses; it was pretty much all econ, law, history, etc, so some of the basic things that most writers get right, I fail. Of course I could learn tenses, but I have never really made an effort to get it right for a reason: I want to write in my own voice, regardless of whether or not it is 'correct' grammar or not. By switching tenses, I write the way I speak, and by alternating between past and present I put the reader into the story, instead of just recounting it."

  Max says that the only time people complain about his grammar mistakes is when they want to argue about the content of his site. They use the grammar mistakes as a plank in their attack. This attempt to belittle him hasn't slowed his growth or success, however. His voice, after all, is what has made him successful.

  REMEMBER

  Your grammar and spelling don't always have to be perfect, but you should always ensure that your posts are readable. Just don't let perfect grammar get in the way of your individual voice.

- **Present your content well.** The actual look of your presentation matters greatly. Adding images, for example, enhances your posts in several ways, including
  - Giving posts a visual point of interest
  - Grabbing attention (really making your casual readers stop and read)
  - Drawing people's eyes down beyond the first few lines of a post
  - Illustrating examples
  - Giving your site a personal touch
  - Engaging the emotions and senses of readers
  - Giving posts a professional feel, which can lead to an air of authority

  REMEMBER

  Be sure that the only images you use on your website are those images you have permission to use. The best-case scenario is that you use images that you, yourself, own the copyright to. Outside of that, be sure that you've obtained permission from the owner of the image before using it on your website. Alternatively, you can purchase images for use through reputable, commercial, stock-photography sites such as iStockPhoto (`www.istockphoto.com`) and Getty Images (`www.gettyimages.com`) or free image sources such as FreeImages (`www.freeimages.com`) or Pixabay (`https://pixabay.com`).

  If you write long, poorly formatted articles, people most likely won't comment or interact with your content — not because of the length of those postings per se, but because of the way that you displayed them, as long paragraphs of endless text. Pictures, highlighted words, bullet points, and other such tricks give the reader's eye a break and can make your published content more attractive and more professional-looking.
- **Write often.** The more you write, the more people will spread the word about your writing, and you can grow your audience. Successful publishers tend to publish content multiple times per week.

All these publishing elements are extremely important on the social web. People want to read and view information that they find interesting, content that's well presented, and content that's specific to their needs. Make sure that you consider all these facets of a website when you create content for your site.

Communication

Communication is the second pillar of the social web. The more you write, the more comments you'll get, assuming that you have comments enabled on your site. Use these tips to manage communication with commenters:

- **Respond to those comments!** The whole point of the social web is communication, and people expect to engage you in a conversation. Successful publishers engage readers in the comment section and create conversations; they use articles as jumping-off points for larger discussions.

  WordPress guru Lorelle VanFossen (`http://lorelle.wordpress.com`) expresses the true value of comments and how they changed how she uses the web:

  > "Comments change how you write and what you write. I suddenly wasn't writing static information. People could question what I said. They could make me think and reconsider my point of view. They could offer more information to add value to my words. And most of all, they could inspire me to write more. Comments made writing come alive."

- **Develop a community.** When you participate in the conversation, you'll retain more readers, who times will revisit your page many during the day to see the new comments and replies in the discussion. The evolution into community discussion can result in a drastic increase in traffic and comments on your site. VanFossen writes of her site:

  > "My site isn't about 'me' or 'my opinion' any more. It's about what I have to say and you say back and I say, and then she says, and he says, and he says to her, and she reconsiders, and I jump in with my two shekels, and then he responds with another view . . . and it keeps going on. Some of these conversations never end. I'm still having discussions on topics I wrote 11 months ago."

- **Don't ignore a person's comments on multiple posts.** You can offend a commenter and lose him. Reply to most comments that your site receives, even if it's only to say thanks for the comments.

REMEMBER

Having the approach that you only want to take from the social web ultimately leaves you unsuccessful. No matter how great your content is, you need to participate and make people feel that you're communicating with them, not just speaking at them.

Consistency

The final pillar of the social web is consistency. When you produce and offer any type of content multiple times a week or on a daily basis, people begin to expect consistency. Many online publishers don't post consistently, and as a result, they frustrate their readers.

COMMENTING ON OTHER SITES

In addition to responding to comments on your site, you should go to different sites and take part in the discussions there. Choose sites that are similar to yours; you can be part of the larger publishing community beyond just your own. (Visitors of those sites will see your witty comments and most likely follow you to your site, thereby building your audience.)

Understanding the social aspect of the social web is vital to your success. People use the social web as a major mode of communication. The communication aspects of your site and others play into the overall online conversation that's going on — a conversation that can get started by an article, which a writer covers in a post on her site about that topic, which a reader comments on, which prompts another person to compose a response to those comments or that article, which gets its own set of comments. Having a grasp of this concept and seeing how it operates not only brings you better success on the social web, but also makes you a better participant.

TIP

Although consistency applies to online publishing, in general, it really matters on social networks such as Twitter and Facebook, where interconnectivity between the author and the audience reaches new heights. If you have large followings on Facebook and Twitter, and use those services as your main point of contact with your readers, be sure to post on a regular basis there as well.

Build good habits by following these consistency guidelines:

- **Set a schedule, and stick to it.** As a site owner, you have to give people a pattern to expect so that eventually, they know when to look for your posts. This idea is like knowing when a favorite TV program is on; you come to expect it and maybe even plan around it. If you miss a day on which you usually post, you just might hear from readers wondering where your post is for that day.

  If you plan to write five days a week, actually write five days a week, and try not to deviate from that schedule. If you plan to post only two to three times a week, stick to the days that you usually post (unless you want to cover some important breaking news).

WARNING

- **Don't let the increasing number of readers and comments affect your posting schedule.** The last thing you want to do is overpost. Although some people would argue that you should keep momentum on a particularly popular post, you run the risk of overexposing yourself and burning yourself out. Also, your content can quickly become watered down. The quality of the content — what the people are there for — quickly begins to erode, and you can lose the audience you've built.

By sticking with a routine and establishing consistency in your posting, you let readers know what to expect, and your site becomes a part of their routine. If you ingrain yourself in someone's life, he or she is going to return to your site frequently and become an advocate for what you're doing.

Plan. You also need to account for long breaks in your posting schedule. You can prewrite posts when you have a lot to say and save them as drafts so that you can post them at times when you aren't inspired to write.

WARNING

Some online publishers take a month off from writing or post very sporadically. But if you really want to build an audience, you can't suddenly decide to take a month off because you're tired of it. Taking a long stretch of time off can kill your site's momentum and audience.

You can explore other options instead of leaving your site dormant. If you've built an audience, you can easily find a guest author to step in for a bit to publish content on your site.

- **Keep the quality consistent.** Take pains to ensure that the quality content you produce doesn't suffer for any reason. Sites often capitalize on a popular post, gain an audience, and then become inconsistent with the quality of their content. They either shift away from their original niche or begin to post poorly thought-out or poorly put-together articles. When their content quality suffers, those sites begin to lose their audience, and sometimes, they never recover.
- **Expect some ups and downs.** You can't easily judge which articles are going to be successful and which aren't. You might write articles in five minutes that get more views and have a better reception than articles you take hours to craft. But readers can really tell when you're posting for the sake of posting. If you repeatedly have to force yourself to post, and if that goes on for too long, the quality of your content and your consistency can go out the window.

Making It Easy for Users to Share Your Content

When I was a child, I loved to go to a country store on a lake near where I lived. One time, my mother and I went to the store to pick up a few things, but my mother didn't have any cash (this was before ATMs were everywhere) and wanted to pay by check or credit card. The store owner told her that they accepted cash only. We put the items back on the shelves and headed to a large supermarket.

When we got into the car, my mother said to me, "I wanted to give them money, but they made it too hard for me to do it." That sentiment has stuck with me my entire life: Never put up barriers to actions that will ultimately benefit you. I'm sure that the store had reasons for not taking checks or credit cards, but it ultimately lost a sale and probably a customer.

Think of your site as the store and your content as the products. When people want to take your content and give it to someone, you put up a barrier if you make it hard for them to pass that content along. Make it as easy as possible for people to share your content with their friends, family members, and co-workers.

One of the best things about the social web is that you can share what you find with other people. Sharing is a basic concept — an easy, thoughtful, and fun thing to do. You find content that you like and share it with your friends on the web, who might find what you shared helpful or interesting and pass it on to their friends. But a lot of sites do a very poor job of allowing users to share content. While you set up your WordPress site, think about how you want readers to share your content.

REMEMBER

Test, test, and test some more. How to best lay out your sharing options on your site takes continual testing. You can't get it right the first time — or the first five times. Sometimes, it takes months to find the right mix.

The following sections give you some simple tips that make sharing content from your website easy.

Enable the user to share content

Enabling sharing is the first thing you want to do. If people don't have the ability to share your content, that content isn't going to go anywhere.

TIP

Sharing content doesn't mean just social media sharing; your content can get spread through other methods. Allow readers to email or print your posts. Although you may feel that email and printing are outdated features, your users may not.

Don't overwhelm the user with choices

Sites can include too many sharing options. The reader becomes overwhelmed and probably also has trouble finding the network that he or she uses.

ADDTOANY VERSUS SHARETHIS

WordPress offers a multitude of plugins (see Book 7) that blend social sharing with more traditional options, such as individual share icons, printing, and emailing. The AddToAny plugin (`https://wordpress.org/plugins/add-to-any`) provides share buttons for almost all the popular social networks (Facebook, Twitter, Google Plus, Pinterest, WhatsApp, and more than 100 other sites), as well as universal email sharing and Google Analytics integration that allows you to track your content-sharing analytics.

Other popular plugins offer similar options, with some drawbacks. The ShareThis plugin (`www.sharethis.com`), for example, provides a green button that, when clicked, expands so that users can select the networks on which they want to share your content, or print or email that content. Making users click an additional button to see their sharing options adds an extra step to the process. The AddToAny plugin (`https://www.addtoany.com/`) puts individual icons on your posts, getting rid of the extra step that users must take to share your content through ShareThis.

Just remember that when you use the ShareThis button, a reader can easily overlook it. The individual buttons are more visible and not as easily overlooked. Test both plugins and see which method gets more shares.

Pick a few sharing sites to which you want to link, test them, and cycle in new ones that people may use. Offer a low number of sharing options at a time so that people can share your content easily. Determine which of these networks your content applies to. If you write celebrity gossip, your content may do better being distributed on sites where people can share quickly with their friends, such as Facebook (`www.facebook.com`) and Twitter (`https://twitter.com`). If you write in-depth technical resources, a social bookmarking site such as Reddit (`https://www.reddit.com`) may be a better place to share your content and bring your blog additional traffic. If you write about fashion and beauty, perhaps providing a sharing button to Pinterest (`https://www.pinterest.com`) can get you traffic from people who are interested in those topics.

Make sure that the sharing options you give visitors apply to sites where your content makes sense. Don’t be afraid to try different sites. Study your statistics to see where readers are discovering your content. Many of these sites allow you to search by domain, so you can check to see how often people are sharing your website and what specific content they’re sharing.

Put sharing buttons in the right place

Where you present the sharing buttons really depends on the type of content you’re posting and the audience reading it. If you post a picture and include a comment below it, the content could push your sharing buttons below the fold, so make sure that your major sharing options appear next to or above the content. Some of the most popular places to display sharing buttons are the top of the post, the bottom of the post, and the left and right margins of the website.

TECHNICAL STUFF

Below the fold refers to what doesn't appear in a user's web browser unless the user scrolls down to view it. The term is taken from newspaper printing, in which some items appear below the fold on the front page.

TIP

To get some ideas about how best to deploy your sharing buttons, check out sites that are similar to yours, and see where some of the most successful site publishers place their buttons.

Think about the user, not yourself

Take this major lesson away from this section. Too many times, people get excited about the latest gadget or tool for their sites. They get eager to try it out and excited to deploy it, but in the end, they aren't thinking about whether it can help the user and whether the user is going to enjoy it.

REMEMBER

How you use the web and how you navigate a site can be completely different from how most other people use it. Review button use and where people are sharing your blog posts. Also use tools such as Google Analytics to see how people interact with your page.

TIP

By using its site-overlay feature, Google Analytics (see Book 5, Chapter 3) allows you to see how often someone clicks various items on your website. You can sign up for Google Analytics for free and deploy it very easily. (You just need to paste the tracking code in your WordPress footer.)

The site-overlay feature currently works in the Google Chrome browser on either a Mac or PC. To access the site-overlay feature from your Google Analytics Dashboard, follow these steps:

1. **Go to the Page Analytics (by Google) page in the Chrome Webstore.**

   It is available at `https://chrome.google.com/webstore/detail/page-analytics-by-google/fnbdnhhicmebfgdgglcdacdapkcihcoh`.

2. **Click the Add to Chrome button.**

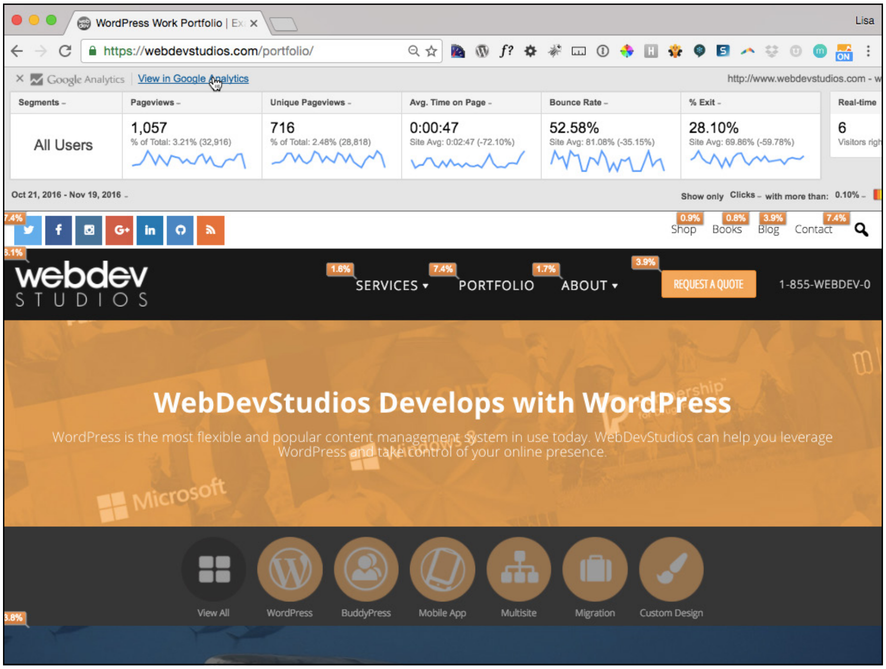
   This installs and adds the extension to your Chrome browser by adding a Page Analytics icon to the browser toolbar.

3. **Visit your website in your browser window.**

4. **Click the Page Analytics button in your browser toolbar.**

   The page analytics using the site-overlay feature is shown in Figure 1-1.

Now, on the home page of your site, little text boxes for the various links on your home page appear, displaying percentages. (See Figure 1-1.) The percentages within these text boxes reflect how popular the various links are within your site. If you navigate your site while using the site-overlay feature, you can see, page by page, how people are interacting with your navigation, content, sharing features, and other content.



Segments	Pageviews	Unique Pageviews	Avg. Time on Page	Bounce Rate	% Exit	Real-time
All Users	1,057 % of Total: 3.21% (32,916)	716 % of Total: 2.48% (28,818)	0:00:47 Site Avg: 0:02:47 (-72.10%)	52.58% Site Avg: 81.08% (-35.15%)	28.10% Site Avg: 69.86% (-59.78%)	6 Visitors righ

Oct 21, 2016 - Nov 19, 2016

Show only Clicks with more than: 0.10%

WordPress Work Portfolio | Ex
Lisa
https://webdevstudios.com/portfolio/
Google Analytics
View in Google Analytics
http://www.webdevstudios.com - w
7.4%
0.9% Shop
0.8% Books
3.9% Blog
7.4% Contact
6.1%
webdev STUDIOS
1.6% SERVICES
7.4% PORTFOLIO
1.7% ABOUT
3.9% REQUEST A QUOTE
1-855-WEBDEV-0
WebDevStudios Develops with WordPress
WordPress is the most flexible and popular content management system in use today. WebDevStudios can help you leverage WordPress and take control of your online presence.
Microsoft
3.8%
View All
WordPress
BuddyPress
Mobile App
Multisite
Migration
Custom Design

FIGURE 1-1: The Site Overlay feature in Google Analytics.

Determining Where You Need to Participate

Communication is an important part of social media, and communication is a two-way street. In social media, communication isn't a bullhorn; you need to interact with people. If you want the rewards of participation, you need to listen as well as talk. This idea often gets lost when people start using social media to promote their content.

Determining whom you want to interact with and where to interact with them are large parts of using social media in your marketing strategy. Finding the best communities in which to participate and actively engage in conversations is the quickest way to build a loyal audience.

TIP

Although reaching out to audiences who are known to be receptive to your site's content is a good strategy, you may find that you're following a well-trod path. Other publishers may have already found success there. Don't be afraid to try areas where others who have sites similar to yours aren't participating. If you think the audience is there, go for it. Be original; trail-blaze a little.

As a writer online, you often work as the marketing person for your own site. To gain readership, you need to participate with your potential audience members in communities where they are already participating. Additionally, you can really leverage participating in these communities if you understand the authors in your niche, work with them to possibly get a guest-author slot, or even get links from them on their sites.

Taking the time to create a list of potential audiences goes a long way toward creating your own marketing strategy. Your list should include social networks and message boards where you think your content will be greeted with open arms, authors who publish content in the niche you participate in that you want to monitor, and users who have influence on other social networks (such as someone who has a large Twitter following in your niche or your particular area of interest/expertise).

The most important thing you can do while constructing a list is understand the niche in which you're building a readership. Here are some items of interest to look for when finding out about a niche:

- **Who's in the niche?** Check out the links in a post. Start with a major site in your niche, and see where the links lead, including the links to commenters' sites, and the sites they mention in their content, to get a wide view of the niche. Knowing who associates with whom and what circles people run in can help you discover a lot about a niche. You can determine who the power players are, as well as whether the niche is competitive or has a collegial atmosphere. This information helps you determine how you want to approach your outreach.
- **Is there a niche social media site or group that acts as a connecting point for the community?** Often, in various groups, you can find one or more niche social media sites that connect websites. These sites can be great resources for discovering some of the top sites, and they may help you flesh out your list of writers quickly. Additionally, see whether you can get your site listed on

these sites. Most of these kinds of sites allow free submittals and offer forms to fill out or email addresses to which you can submit your content.

This kind of online community might be a directory with social features, a Facebook community, or a group on a large social network. Whatever the case may be, you can often find large groups that have discussions within a niche. These niche sites can tell you what people in the niche you are targeting find important, what the hot topics are, and what other people are doing in this niche, such as pitches people have made to other site owners. The site TastyKitchen.com (`http://tastykitchen.com`) is a great example of a small niche community — in this case, a community of people who like to cook and share recipes.

TIP

Additionally, these sites feature the type of content that people in your niche may find interesting. Keep a Microsoft Word document open to write down content ideas based on the conversations on these sites.

- **Are common discussions occurring throughout the community?** You can often discover opportunities to get your site in front of new people or for topics to cover by looking for common threads within a niche. Maybe the community is talking about how public-relations people are pitching them, a charity cause that they all support, or an event that they regard as important. A common theme may give you information, opportunity, or direction on how you should approach this niche.
- **Do they use other media to have discussions?** Find out what other social media sites people in this niche use. Maybe they use Twitter a lot, or maybe you see high use of Facebook, LinkedIn, Pinterest, FriendFeed, or YouTube. You may find secondary ways to reach this niche where you can build a following for your site.

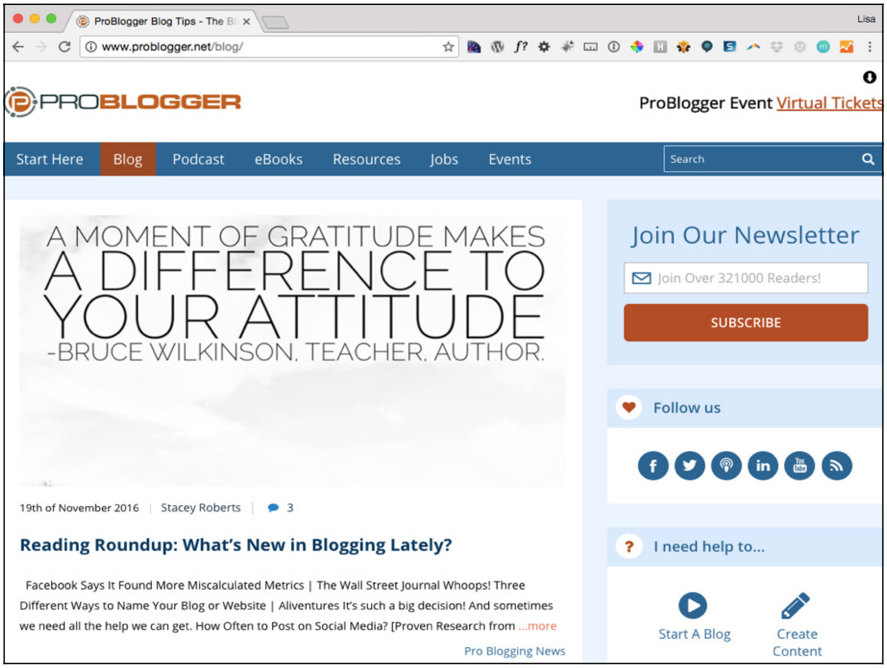
  It pays to determine the social media sites your niche prefers. Certain niches (such as wine sites) have taken to Twitter; others have strong ties to Facebook or other social networking sites. Make the most of these sites when you pitch your blog to people. They may prefer that method of connection.

You may think you can simply buy a list, slam together a bunch of search results into a spreadsheet, and then mass-email everyone whom you want to contact. Without studying how your niche operates, however, you can't create mutually beneficial relationships, you can't become a voice in the community, and you probably won't see a lot of success. Instead, you come off as an outsider just trying to push your message down the throats of these publishers, and your campaign will have very poor results.

Finding Influencers

After you compile lists of sites you want to target, you can begin to break the list down and determine who are the influencers in your niche, including the hidden influencers. *Hidden influencers* are people who have a large social imprint that doesn't necessarily show up on their sites. Some people don't have a lot of commenters on their articles, for example, but their Twitter feeds are followed by tens of thousands of people. Here are some ways to determine whether a blogger is an influencer:

- **Subscriber count:** A lot of sites that have large audiences display their subscriber numbers on their websites. (See Figure 1-2.)



Reading Roundup: What's New in Blogging Lately?

Facebook Says It Found More Miscalculated Metrics | The Wall Street Journal Whoops! Three Different Ways to Name Your Blog or Website | Alventures It's such a big decision! And sometimes we need all the help we can get. How Often to Post on Social Media? [Proven Research from ...more

FIGURE 1-2: Subscriber count on Problogger.net.

- **Comment count:** An active community and commentary group on a blog usually shows that the blog has a large readership. Be wary of a site whose author interacts with only two or three people. When an author pays attention to only a couple of commenters, she usually has a pretty narrow vision. You want to target authors who participate with more people in their audience.

- **Alexa score:** Alexa (`www.alexa.com`) measures traffic to a site. It isn't 100 percent accurate, but it does a decent job of giving you a picture of the amount of traffic a site gets. Add a column to your list of sites where you can record the Alexa score, and see how the scores compare with yours.
- **Klout score:** Klout (`https://klout.com`) helps you evaluate the influence of Twitter, Facebook, and LinkedIn users. Sometimes, publishers have a very large reach on those social networks and are more active there than on their own sites.

After you identify the influencers, you want to attract them to your site. If influencers read your site, they may offer you guest-author spots, share your content, recommend your site to their readers, and form a mutually beneficial relationship with you.

To turn these influencers into readers, you can try multiple tactics, including the following:

- **Comment on their content.** Reading and commenting on a popular site can help you start to build your name in your niche — if you leave quality, well-thought-out comments, of course. Most sites allow your username to link back to a website; make sure that you use this link as a way for people to find your site.

  You can get the attention of a popular writer by engaging in conversation on his or her site, and also get the attention of that author's reader. If the readers and commentators like your contribution, you can get additional traffic, new readers, and even potentially high-ranking backlinks into your website, all because you left a comment on the site.
- **Email them.** Depending on the niche, top influencers may get slammed with email, so this approach may not be the best way to reach out to them. But it doesn't hurt to write a personal note that lets the author know about you and your site, and perhaps offer to guest-write if he or she ever accepts posts from other people. Make sure that the email isn't all about you, which is the quickest way to turn someone off. Talk about the person's site, and show that you have knowledge about what he's writing about. Show that you have actually read his site, and demonstrate genuine interest in what he's doing.
- **Interact with them on their platforms of choice.** Sometimes, influencers and popular writers participate in areas other than their sites. They might use message boards, forums, Twitter, Facebook, or other types of social media sites. Interacting with an author on his or her platform of choice can help you differentiate yourself from other sites.
- **Link to them.** Linking to sites in the content you create — especially if you're posting rebuttals to their posts — can really get influencers' attention.

REMEMBER

When you use any of the tactics in the preceding list, the three Cs (see "Understanding the Three Cs of the Social Web" earlier in this chapter) come into effect. When you communicate with other site authors, you need to make sure that you have consistent content on your own site. Trying to reach out to another author when you have only three posts total doesn't present the most credibility. After you've worked at it for a few months, doing outreach can provide a good way to grow your audience.

Leveraging Twitter for Social Media Success

Twitter has become one of the most effective ways for site owners to build an audience. You can use Twitter to find people who have the same interests that you do, communicate with them, and steer a ton of traffic to your site.

Building a Twitter profile into a successful tool to generate traffic is pretty straightforward. Just follow these steps in your account at `https://twitter.com`:

1. **Make sure that your profile is completely filled out, including your picture.**
2. **Follow the three Cs — content, communication, and consistency — when you post to Twitter.**

   By posting quality content consistently on Twitter, you *will* build an audience. Period. When you mix in the communication aspect and retweet the quality content of others, answer questions, and interact with other Twitter users, your profile will grow that much more.
3. **Find people who are interested in what you're writing about, and interact with them.**
4. **Use a tool such as Twitter Search (`https://twitter.com/search-home`) to search for specific keywords related to content that you're writing about — then discover the people who follow that content as well.**

   You may want to follow and interact with these people.

Building your Twitter account by using automated tools

I hesitate to include this section, because using automated tools is a fast way to get your account deleted by Twitter. Automated tools allow you to do mass additions or removals to your account. You can remove people who aren't active or who aren't following you, as well as target the friends list of other users to add them to your account. Using these mass adding-and-removal tools goes against the spirit of Twitter, where you're supposed to be discovering cool content and not just mass-promoting. So I'm warning you right now: If you go down this path, you need to see losing your account as an acceptable risk. If you use the Twitter tool that I discuss in a logical and nonaggressive way, it can help you target and build an audience quickly.

I include automated tools in my discussion of building your social media accounts because a lot of people use this technique, including people who shun them. (A lot of social media experts who deride these tools have used them to get where they are.) I don't believe in giving you half the information; you need to make this choice on your own.

WARNING

If you hyperaggressively add people and then unfollow them, Twitter probably will quickly ban you.

To target users on Twitter, here are the steps you can take:

1. **Go to Refollow (`www.re-follow.com`).**

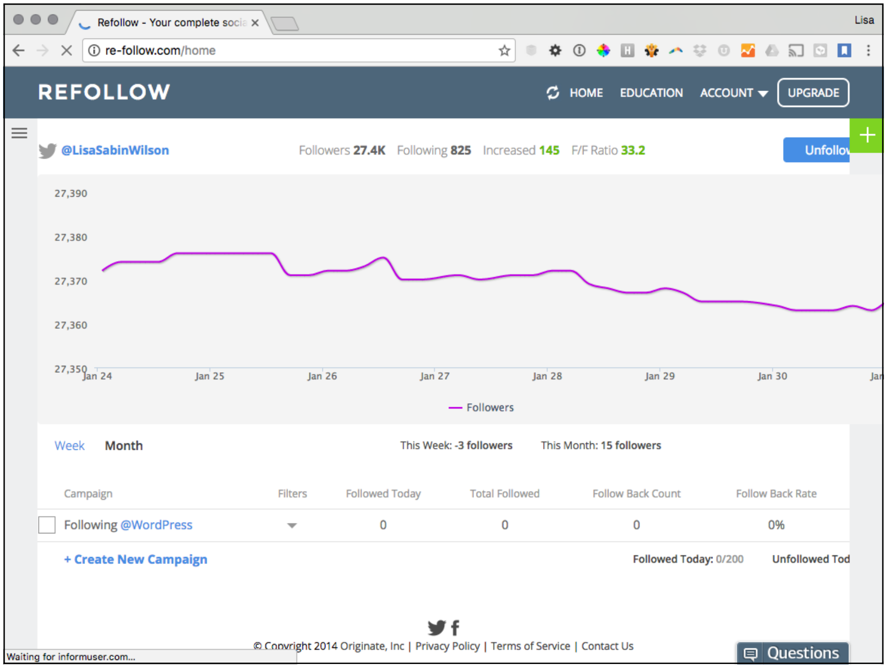
   Refollow.com is a great service, but it isn't free. You can sign up for a free six-day trial; then, if you want to pay for the service, click the Upgrade button at the top of the site to upgrade. Prices range from $20 to $150 per month.

2. **Log in to Refollow by using your Twitter account login information.**

   This step loads the Refollow Control Panel page, shown in Figure 1-3.

3. **Click the link labeled Create New Campaign.**
4. **From the Find Users Who drop-down menu, select Follow.**
5. **Type** WordPress **in the next text field.**
6. **Select the search options of your choice, such as**
   - Language Preferences
   - People Who Have Actively Tweeted within the Past Week
   - People Who Already Follow You
   - People Who Have a Photo
7. **Click the Save Settings button.**

   The page refreshes and displays the Twitter users who follow the account you specified in Step 4. On this page, you can follow these users on Twitter or remove them from your Dashboard.



Followers **27.4K** Following **825** Increased **145** F/F Ratio **33.2**

This Week: -3 followers This Month: 15 followers

	Campaign	Filters	Followed Today	Total Followed	Follow Back Count	Follow Back Rate
□	Following @WordPress	▾	0	0	0	0%

Followed Today: 0/200 Unfollowed Tod

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FIGURE 1-3: The Refollow Dashboard.

WARNING

Don't follow more than 100 to 200 people a day. This tool allows you to follow up to 500, but if you follow that many people each day, Twitter will probably ban you after a few days.

You can use Refollow to find people who are following people within your niche and add them to your Twitter account so that they may notice your content. I advise adding people in bulk only once in a 24-hour period so you don't look like you're gaming the system. Once a week, unfollow everyone who isn't following you back to balance your following ratio. You should not be following more people than are following you.

Updating Twitter from your WordPress blog

Getting back to WordPress (that's why you bought the book, right?), you can find tons of plugins to integrate Twitter into your WordPress site. From how the tweets show up on your sidebar to how tweets are integrated into your comments, the WordPress community has tons of solutions to help you show off your Twitter account on your site.

These plugins change often, so try different ones, depending on how you want to integrate Twitter into your site. But if you want to turn your WordPress Dashboard into more of a social media command center, you can tweet right from your WordPress Dashboard.

Although tools such as TweetDeck (`https://tweetdeck.twitter.com`), Buffer (`https://buffer.com`), and Hootsuite (`https://hootsuite.com`) are better designed for an active and strategic Twitter presence, having the ability to tweet from your WordPress Dashboard allows you to update all your social media from one spot. If you're getting started in social media, this integration makes your social media use efficient and continually reminds you to participate.

TIP

One of the best WordPress integration plugins for this purpose is the Jetpack for WordPress plugin by Automattic (`https://jetpack.com`). This plugin can update your Twitter feed whenever you publish a new post. You can update Twitter about new posts by using Hootsuite, FeedBurner, and other free tools, but going with the Jetpack plugin allows you to automatically post your new content to Twitter.

Engaging with Facebook

Facebook integration is another key strategy to consider when you're setting up your website. First, integrate the Facebook-sharing feature within your website, which you can do with the ShareThis (`https://wordpress.org/plugins/share-this`) or AddThis plugin (`https://wordpress.org/plugins/addthis`). With more than 1.86 billion users, Facebook is a must-have sharing option for any website.

Next, decide how you want your website to interact with Facebook. Are you running a personal site? Then you may want to use a Facebook profile as your connecting place on Facebook. Some WordPress plugins (such as the Facebook Dashboard Widget) integrate a Facebook profile so that you can update your status right from the WordPress Dashboard.

If you don't want your Facebook account attached to your website, you may want to consider creating a Facebook Page. A Facebook Page doesn't have the Dashboard controls that a profile does, but it allows you to leverage your social media presence. By setting up a Facebook Page, you can deeply integrate the Facebook Like option, which allows users to Like your site and become followers of your page with a couple of clicks. Integrating the Like feature allows you to get exposure for your website through each of your followers' friends on Facebook.

When you have a Facebook Page, you can display a community widget on the side of your WordPress blog, letting everyone know who your followers are on Facebook. If a Facebook user clicks the Like button on your page, he can show up in this widget. Facebook offers a lot of badges and Like-button integration features in its Developers section at `https://developers.facebook.com/docs/plugins/like-button`.

In this Developers section, you can dig deep into integrating Facebook into your blog. You can display the friends of a visitor who likes your site, recommendations based on what the visitor's friends have liked, and numerous other combinations.

IN THIS CHAPTER

- » Understanding why you need to monitor your brand
- » Finding out which monitoring tools are right for you
- » Cleaning and aggregating your monitoring data
- » Turning your WordPress Dashboard into a listening post

Chapter 2

Creating a Social Media Listening Hub

This chapter focuses on the importance of listening to social media, using the free monitoring services available to you, and integrating these sources into your WordPress installation so that you can turn your run-of-the-mill WordPress installation into a social media listening hub.

A *social media listening hub* is a collection of information from several sources, including mentions of your site, keywords, or topics that you write about, and even information about competitors. You can sign up for services that monitor these topics, such as Salesforce Marketing Cloud (`https://www.salesforce.com/products/marketing-cloud/overview`) and Gigya (`www.gigya.com`). But most of these services cost money and give you another place to log in to — and you may not use these kinds of services to their full capacity. For a small business or an independent site owner, the investment (both time and financial) doesn't always make sense. By leveraging the power of the WordPress platform, you can easily cut down on both the time and financial commitment of monitoring platforms.

In this chapter, I walk you through determining what sources you should pull your data from, determining and searching for the keywords you deem important, and integrating your search results into your WordPress Dashboard. Additionally, I look at some other tools that can help you expand your monitoring practices.

Exploring Reasons for a Social Media Listening Hub

When you begin to engage in the world of social media, one of the most important things you can do is monitor what Internet users are saying about your company, your site, you, or your products. By investigating what Internet users are saying, you can find and participate in discussions about your site or company and come to an understanding about the way your community views your blog (or company). With this information, you can participate by responding to comments on other blogs, Twitter, or message boards or by creating targeted content on your own site.

The conversations happening about your area of interest or niche amount to really great intelligence. For a business, regardless of whether you participate in social media, social media users are talking about your company, so you need to be aware of what they're saying. If you're blogging about a particular topic, you can evolve your content by tracking what members of your niche are saying about it.

Eavesdropping on yourself

By monitoring your niche, you can eavesdrop on thousands of conversations daily and then choose the ones in which you want to participate. The social media listening hub you create allows you to follow various conversations going on through microblogging services such as Twitter, Facebook, blogs, news sites, message boards, and even comments on YouTube. If someone says something negative about you, you can respond quickly to fix the situation. You can attempt to step in and make sure that people are informed about what you're doing.

Keeping tabs on your brand

Think about what keywords or phrases you want to monitor. You want to monitor your name and your blog/company name, of course, as well as other keywords that are directly associated with you.

TIP

Monitor common misspellings and permutations of the name of your brand. The Bing Ads Intelligence tool (`https://advertise.bingads.microsoft.com/en-us/solutions/tools/bing-ads-intelligence`) can help you determine all the common spellings and uses of the keywords you're monitoring. You can also find common misspellings for your brand by examining some of the terms people used to find your page with Google Analytics (`https://www.google.com/analytics`) or a paid tool such as Trellian Keyword Discovery Tool (`www.keyworddiscovery.com/search.html`).

If Aaron Rodgers, Green Bay Packers quarterback, wanted to set up a monitoring service, for example, he might use the keywords *Aaron Rodgers, Arron Rodgers, Aaron Rogers, Green Bay Packers Quarterback,* and perhaps even the phrase associated with his touchdown celebration: *discount double check.* If he wanted to expand this service past direct mentions of him or his team, he could also include more general terms such as *NFL Football* or even *NFC Teams.* The general term *NFL Football* may be *too* general, though, producing too many results to monitor.

Additionally, you may want to view your site or company through the lens of your customers. What terms do they associate with your company? Looking at your site from other points of view can provide good ideas for keywords, but not always. Although you don't always want your company to be known for these terms and may not see yourself that way, getting the perspective of other people can open your eyes to how users view your website.

Don't think of this process as just pulling in keywords, either. You can pull in multiple feeds, just as you do with an RSS reader, which allows you to monitor specific sites. So if you concentrate on an industry, and a website deals specifically with your industry and has an active news flow pushed through an RSS feed, you mat want to consider adding specific websites to the mix of feeds you run through WordPress.

The setup in WordPress that I describe in this chapter gives you the convenience of having everything in one place and can help you monitor your brand, company, or blog. The limitations of the WordPress platform mean that you can monitor only five groupings, so you can't use this method as a replacement for an enterprise-monitoring tool for a large company. Additionally, if you own a restaurant, hotel, or bar and want to pick up review sites such as Yelp and Trip Advisor, these tools can't do the job. Most social media monitoring tools don't count review sites as social media. Tools such as Reputation Ranger (`http://reputationranger.com`) can monitor ratings sites for a nominal monthly fee if you want to pay attention to those types of sites.

REMEMBER

When your content changes, change what you're monitoring to match the evolution of what you're writing about.

Exploring Different Listening Tools

You can find tons of monitoring and listening tools that oversee the social media space. If you work for a large company, you can use large, paid tools such as Salesforce Marketing Cloud (`https://www.salesforce.com/products/marketing-cloud/overview`), Gigya (`www.gigya.com`), Alterian (`www.alterian.com`), and Lithium (www.lithium.com). Pricing for these tools runs from a few hundred dollars to tens of thousands per month. Most individuals and small businesses can't make that investment. If you're one of the smaller guys, you can create your own monitoring service right in WordPress by importing free monitoring tools into your Dashboard to create a social media listening hub.

Some monitoring tools pick up site coverage, Twitter remarks, and message board comments. Other tools pick up content created with video and pictures. Try the monitoring services mentioned in the following sections, and determine which give you the best results and which make you feel the most comfortable. Then choose the best tools to create a good monitoring mix. One solution probably can't cover everything, so experiment with different combinations of tools.

TIP

Most, but not all, of these tools use Boolean search methods, so you need to understand how to narrow your searches. If you want to combine terms, put an AND between two items (*cake AND pie*). If you use OR, you can broaden your search, such as to track common misspellings *(MacDonalds OR McDonalds)*. Finally, if you want to exclude terms, you can use the NOT operator to exclude items from your search. Use NOT if you want to search for a term that could have an alternative meaning that's irrelevant to what you're actually looking for (*Afghan NOT blanket*, for example, if you're blogging about Afghanistan).

Although some of the monitoring tools in the following sections don't apply to every type of website, I'd include them in most monitoring setups.

For each search that you do on a monitoring service, you need to log the feed address. To make recording these addresses easy, open a spreadsheet or a document into which you can paste the various feeds. You can collect them in one place before you begin to splice them together (which you do in the "Creating Your Own Personal Monitoring Mix" section later in this chapter). Think of this document as a holding area.

Monitoring with Google Alerts

Most social media experts consider Google Alerts (www.google.com/alerts) to be a must-use monitoring source for anyone dabbling in social media. Google Alerts allows you to set up monitoring on news sites, blogs, pictures, videos, and groups. You can toggle the amount of results you see, from 20 to 50, and you can choose how often they come in (in real time, daily, or weekly). You can also have Google deliver your alerts to your email or via RSS.

Google Alerts isn't perfect, but it doesn't have many drawbacks. Some of the specialized searches (such as Boardreader, which targets message boards; see "Searching communities with Boardreader" later in this chapter) pick up more in their areas of expertise than Google Alerts does, but in general, and compared with other tools, Google Alerts covers the widest range of content.

You can easily set up Google Alerts by following these steps:

1. **Navigate to `www.google.com/alerts` in your web browser.**

   The Alerts page loads, welcoming you to the Google Alerts website.

2. **In the search text box, type the keyword or phrase that you want to monitor.**

   If you enter a phrase in which the words have to go in that particular order, put the phrase in quotation marks.

3. **From the Show Options drop-down list, choose the type of monitoring that you want to use.**

   The options send you different kinds of alerts:

   - *How Often:* Determine how often you'll receive these notices. Because you'll receive the updates via RSS and not email (which you set up in Step 4), you want the highest frequency possible, so choose the As-It-Happens option. Other options include a daily, weekly, and monthly digest.
   - *Sources:* Select the type of sources you want Google Alerts to search in (news, blogs, video, and so on).
   - *Language:* Select the language you want Google Alerts to search.
   - *Region*: Select the region you want Google Alerts to search.
   - *How Many:* Select how many results you want to receive. If you choose As-It-Happens for How Often, for example, you receive items in real time, so you don't need to specify the number of items; choose Only the Best Results or All Results.

4. **Choose your delivery type from the Deliver To drop-down list.**

   To make the delivery source an RSS feed, as opposed to an email, choose Feed.

5. **Click the Create Alert button.**

   You see your Google Alert Management screen, where you can get the RSS feeds for all your Google Alerts.

6. **To get the URL of the RSS feed, right-click the RSS Feed icon and choose Copy Link Address from the shortcut menu that appears.**
7. **Paste the copied link location into a document in which you list all the feeds that you plan to aggregate later.**
8. **Repeat Steps 2 through 7 for all the terms you want to monitor.**

TIP

Before you start importing the feed into your WordPress Dashboard, you may want to receive the update via email for a few days to test the quality of the results you're getting. If your results aren't quite right, you can always narrow your search criteria. Doing this saves you the time of parsing all your RSS feeds, blending them, and then having to go back and edit everything because your RSS feeds are set up wrong. Using email as a test is a massive timesaver.

Tracking conversations on Twitter with RSS

Tracking mentions on Twitter via RSS is relatively simple. You just need to know what you're looking for and how to build the RSS links so you can monitor them. You can look for several items to monitor your brand and reputation via the Twitter social network, including the following:

- **Username:** Monitor when your Twitter name is mentioned and by whom.
- **Hashtags:** Monitor specific Twitter hashtags (such as #wordpress).
- **Keywords:** Monitor Twitter for a specific word.

Twitter doesn't make it easy to locate the native RSS feed URL on its website, but you can find the feeds by using a URL such as this example: `http://search.twitter.com/search.atom?q=XXX`, where *XXX* is the keyword, hashtag, or username you want to monitor. The following examples can help you build various RSS links for Twitter:

- **Twitter RSS URL for a username:** `https://twitter.com/search?f=tweets&q=Lisa+Sabin-Wilson`
- **Twitter RSS URL for a keyword:** `https://twitter.com/search?f=tweets&q=wordpress`
- **Twitter RSS URL for a hashtag:** `https://twitter.com/search?f=tweets&q=%23wordpress`

Build the Twitter RSS URLs that you want to monitor and include them in the document where you're listing all the RSS feeds you want to aggregate later.

Searching communities with Boardreader

Boardreader (`http://boardreader.com`) is a must-add tool because its niche focuses on groups and message boards, where conversations have been happening much longer than on Facebook and Twitter. Many other monitoring tools overlook these areas when talking about monitoring the web, but you can find many vibrant communities that are worth being part of, in addition to monitoring what's being said about your blog or company.

To set up your Boardreader tracking, follow these steps:

1. **Navigate to `http://boardreader.com`.**
2. **In the text box, type the search term that you want to monitor; then click the Search button.**
3. **Copy the URL from your browser address bar.**
4. **Paste this URL into a document in which you list all the feeds that you plan to aggregate later.**
5. **Repeat Steps 2 through 4 to search for and monitor as many search terms as you want.**

Microblog searching with Twingly

Twingly Blog Search (`https://www.twingly.com/search`) deals with real-time search microblogging and traditional blog search. This microblog service monitors conversations only on Twitter.

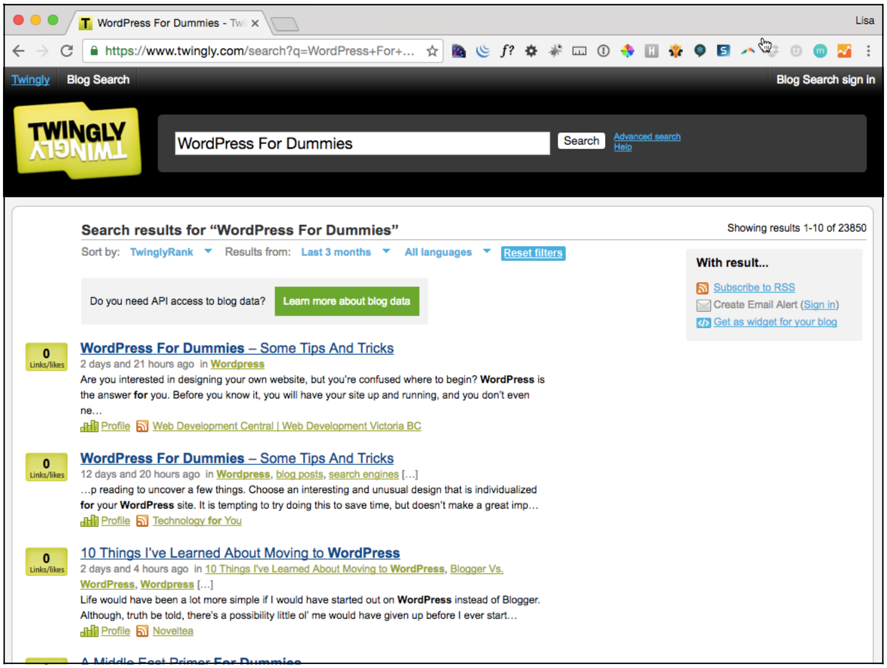
TIP

Compare the results you get from Twingly with Twitter Search, just to make sure that Twingly is picking up everything on Twitter.

To monitor conversations by using Twingly, follow these steps:

1. **Navigate to `https://www.twingly.com/search`.**
2. **In the text box, type the search term that you want to monitor; then click the Search button.**

   All the relevant search results appear, as shown in Figure 2-1.
3. **On the right sidebar, right-click the Subscribe to RSS link next to the orange RSS icon, and choose Copy Link Location from the shortcut menu that appears.**
4. **Paste this link into a document in which you list all the feeds that you plan to aggregate later.**
5. **Repeat Steps 2 through 4 for all the terms you want to monitor.**


WordPress For Dummies - Tw
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Twingly
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TWINGLY
WordPress For Dummies
Search
Advanced search
Help
With result...
Subscribe to RSS
Create Email Alert (Sign in)
Get as widget for your blog

Search results for "WordPress For Dummies"

Showing results 1-10 of 23850

Sort by: TwinglyRank Results from: Last 3 months All languages Reset filters

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…p reading to uncover a few things. Choose an interesting and unusual design that is individualized **for** your **WordPress** site. It is tempting to try doing this to save time, but doesn't make a great imp…
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2 days and 4 hours ago in 10 Things I've Learned About Moving to **WordPress**, Blogger Vs. **WordPress**, **Wordpress** […]
Life would have been a lot more simple if I would have started out on **WordPress** instead of Blogger. Although, truth be told, there's a possibility little ol' me would have given up before I ever start…
Profile Noveltea

A Middle East Primer **For Dummies**

FIGURE 2-1: Searching for WordPress For Dummies on Twingly.

Creating Your Own Personal Monitoring Mix

After trying out the various monitoring services, you can create a mix of services to import into your WordPress Dashboard. You import the results of these monitoring services with the help of RSS (Really Simple Syndication). You can combine different single RSS feeds into one RSS feed and create an organized setup for all the information you have to manage. If you have various RSS feeds from different sources around the keyword *cookies*, for example, you can combine them into one RSS feed. Or if you want to combine various feeds based on sources such as all your Twitter RSS feeds, you can do that as well.

Look for the orange RSS icon that's usually located on the URL bar of your browser. Additionally, some sites offer an RSS export link on the right sidebar or the search bar. Grab the address of all these feeds by clicking the feed name and copying the feed URL from the browser.

After you copy the locations for all your RSS feeds in one document, you need to group those RSS feeds. Grouping your RSS feeds keeps your monitoring system nice and tidy, and allows you to set up the WordPress Dashboard easily. After you group these feeds, you splice them together to make one master feed per grouping (see the following section). If you're tracking a variety of keywords, you may want to put your feeds into groups. Wendy's Restaurants, for example, could make these keyword groupings:

- **Grouping 1:** Your brand, products, and other information about your company
  - Wendy's (the company name)
  - Frosty (a prominent product name)
  - Wendy Thomas (a prominent person in the company)
- **Grouping 2:** Competitors
  - McDonald's
  - Burger King
  - In-N-Out
- **Grouping 3:** Keyword-based searches (Burgers)
  - Hamburgers
  - Cheeseburgers
- **Grouping 4:** Keyword-based searches (Fast Food)
  - Fast food
  - Drive-through
- **Grouping 5:** Keyword-based searches (Chicken)
  - Chicken sandwiches
  - Chicken salad
  - Chicken nuggets

In each of these groups, you place your Google Alerts feed, Twingly feed, and whatever other feeds you feel will provide information about that subject area. You can blend each group of feeds into one master feed for that group and bring them into WordPress.

REMEMBER

WordPress limits you to five groups. Any more than five groups slows the Dashboard and is more than WordPress can handle.

Grouping all your various feeds gives you the most complete monitoring solution by covering multiple monitoring tools and blending them. You get more coverage of your brand or blog than you would by using Google Alerts alone. On the down side, you may see some duplicates because of overlaps between the services.

If you feel overwhelmed by duplicate search results, you can blend one feed that covers only your brand, or you can simplify setting up your monitoring even more by keeping one feed for each item, as follows:

- **General overview:** Google Alerts or Social Mention
- **Message boards:** Boardreader
- **Microblogging:** Twitter Search

Editing the Dashboard to Create a Listening Post

After you choose your data sources, clean up your feeds, and put them all in individual RSS feeds, you can finally bring them into WordPress and set up your social media listening hub.

You can bring these RSS feeds into your Dashboard through a plugin called Dashboard Widgets Suite, which you can find in the WordPress Plugin Directory at the following page:

```
https://wordpress.org/plugins/dashboard-widgets-suite
```

Follow these steps to set up the Dashboard Widgets Suite plugin and configure it to create a social-listening Dashboard in WordPress:

1. **From the Plugins menu on the left side of your WordPress installation, choose Add New.**

   This step takes you to the form where you can search for new plugins.

2. **In the Search text box, type** Dashboard Widgets Suite**; then click the Search Plugins button.**

   The search results page appears.

3. **Search for the Dashboard Widgets Suite plugin, and click the Install Now link, which installs the plugin on your site.**
4. **When the installation is complete, activate the plugin by clicking the Activate button on the Add Plugins screen that appears to the right of the Dashboard Widgets Suite plugin name.**

5. **Choose Dashboard Widgets from the Dashboard Settings menu.**

   The Dashboard Widgets screen appears.

6. **Ensure that the Enable the Control Panel Widget check box is selected (as it should be by default).**

7. **Leave all the rest of the default settings in place, and click the Save Changes button.**

8. **Choose Widgets from the Appearance menu.**

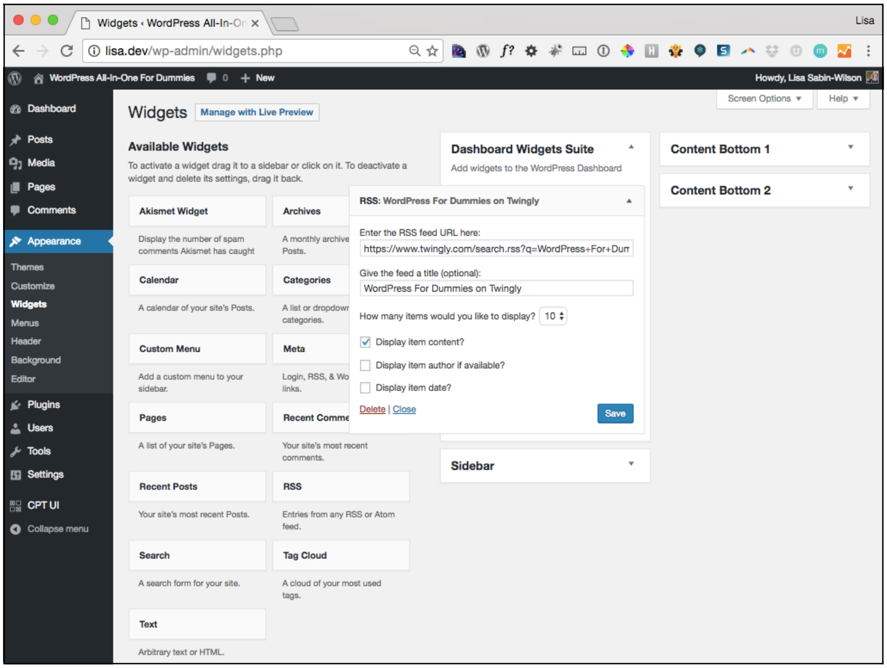
   The Widget Settings page appears.

9. **Add the RSS Widget to the Dashboard Widgets Suite widget area.**

   Drag the RSS Widget into the Dashboard Widgets Suite widget.

10. **Configure the RSS Widget to display information from your selected RSS feed (see Figure 2-2):**

    - Enter the RSS feed URL.
    - Optionally, give the RSS feed a title by typing a title in the text field.



Widgets

Available Widgets

To activate a widget drag it to a sidebar or click on it. To deactivate a widget and delete its settings, drag it back.

Akismet Widget — Display the number of spam comments Akismet has caught

Archives — A monthly archive of your site's Posts.

Calendar — A calendar of your site's Posts.

Categories — A list or dropdown of categories.

Custom Menu — Add a custom menu to your sidebar.

Meta — Login, RSS, & Wo... links.

Pages — A list of your site's Pages.

Recent Comme... — Your site's most recent comments.

Recent Posts — Your site's most recent Posts.

RSS — Entries from any RSS or Atom feed.

Search — A search form for your site.

Tag Cloud — A cloud of your most used tags.

Text — Arbitrary text or HTML.

Dashboard Widgets Suite

Add widgets to the WordPress Dashboard

RSS: WordPress For Dummies on Twingly

Enter the RSS feed URL here: https://www.twingly.com/search.rss?q=WordPress+For+Dum

Give the feed a title (optional): WordPress For Dummies on Twingly

How many items would you like to display? 10

☑ Display item content?

☐ Display item author if available?

☐ Display item date?

Delete | Close

Save

Sidebar

Content Bottom 1

Content Bottom 2

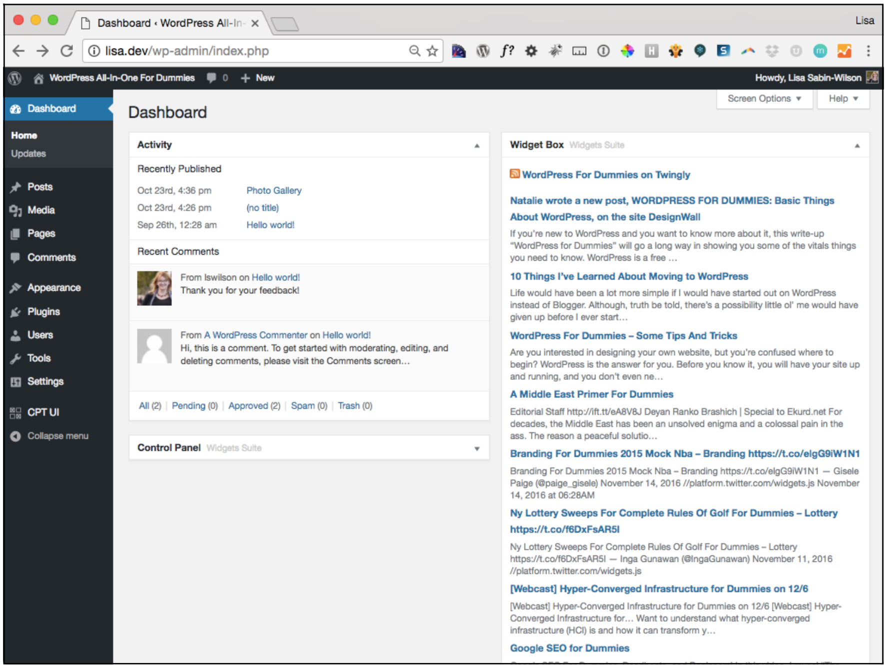
FIGURE 2-2: Configuring the Feed Box Widget.

11. **Repeat Steps 8 through 10 for the other widgets on your Dashboard by using your other selected feeds.**

    After you have your feeds set up, you can configure the appearance of your WordPress Dashboard.

12. **Drag and drop the new widget boxes where you want them on your Dashboard.**

Figure 2-3 displays my Dashboard with the RSS feed from the search I found on Twingly for the term *WordPress For Dummies*, shown in the top-right corner.



Recently Published

Oct 23rd, 4:36 pm Photo Gallery
Oct 23rd, 4:26 pm (no title)
Sep 26th, 12:28 am Hello world!

Recent Comments

From lswilson on Hello world!
Thank you for your feedback!

From A WordPress Commenter on Hello world!
Hi, this is a comment. To get started with moderating, editing, and deleting comments, please visit the Comments screen…

All (2) | Pending (0) | Approved (2) | Spam (0) | Trash (0)

WordPress For Dummies on Twingly

Natalie wrote a new post, WORDPRESS FOR DUMMIES: Basic Things About WordPress, on the site DesignWall

If you're new to WordPress and you want to know more about it, this write-up "WordPress for Dummies" will go a long way in showing you some of the vitals things you need to know. WordPress is a free …

10 Things I've Learned About Moving to WordPress

Life would have been a lot more simple if I would have started out on WordPress instead of Blogger. Although, truth be told, there's a possibility little ol' me would have given up before I ever start…

WordPress For Dummies – Some Tips And Tricks

Are you interested in designing your own website, but you're confused where to begin? WordPress is the answer for you. Before you know it, you will have your site up and running, and you don't even ne…

A Middle East Primer For Dummies

Editorial Staff http://ift.tt/eA8V8J Deyan Ranko Brashich | Special to Ekurd.net For decades, the Middle East has been an unsolved enigma and a colossal pain in the ass. The reason a peaceful solutio…

Branding For Dummies 2015 Mock Nba – Branding https://t.co/elgG9iW1N1

Branding For Dummies 2015 Mock Nba – Branding https://t.co/elgG9iW1N1 — Gisele Paige (@paige_gisele) November 14, 2016 //platform.twitter.com/widgets.js November 14, 2016 at 06:28AM

Ny Lottery Sweeps For Complete Rules Of Golf For Dummies – Lottery https://t.co/f6DxFsAR5I

Ny Lottery Sweeps For Complete Rules Of Golf For Dummies – Lottery https://t.co/f6DxFsAR5I — Inga Gunawan (@IngaGunawan) November 11, 2016 //platform.twitter.com/widgets.js

[Webcast] Hyper-Converged Infrastructure for Dummies on 12/6

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Google SEO for Dummies

FIGURE 2-3: WordPress For Dummies search term displayed in the WordPress Dashboard.

IN THIS CHAPTER

- » Understanding how analytics can tell you about your site
- » Choosing an analytics-tracking option
- » Deciphering analytics terminology
- » Working with Google Analytics

Chapter 3

Understanding Analytics

Every business on the face of the Earth needs to figure out what works and what doesn't if it wants to succeed. Site owners often know basic statistics about their sites, such as the current number on their hit counters or how many people visit their site daily or weekly. These stats may give you the big picture, but they don't really address why something is or isn't working.

You need to get at least a basic understanding of analytics if you want to make the most of your site. The data provided by free programs such as Google Analytics can really help you grow as a content publisher. In this chapter, you discover how to incorporate various data-measuring tools into your WordPress installation, decipher what the data is telling you, and determine how to act on it.

Google Analytics provides you a tremendous amount of information about your content. The goal of this chapter is to help you interpret the data, understand where your traffic is coming from, understand which of your content is the most popular among your visitors, know how to draw correlations between various data sets, and use this information to shape the content you write. This process may sound very geeky and accountant-like, but in reality, it gives you a road map that helps you improve your business.

Understanding the Importance of Analytics

Personally, I avoid math like my nephew avoids vegetables. Most people's eyes glaze over when they hear the word *analytics* followed by *stats,* any type of *percentages,* and anything that sounds like accountant-speak.

You should view analytics not as a bunch of numbers, however, but as a tool set that tells a story. It can tell you how people are finding your content, what content is most popular, and where users are sharing that content. Knowing what type of content is popular, where your site is popular (in which time zones, countries, and states, for example), and even what time of day your posts get more readers is all valuable information. Understanding your audience's interest in your content, as well as their preferences on when and how they read your content, is important.

At one point in my life, I had a pretty popular political blog. Through studying analytics and reactions to my content, I figured out that if I posted my blog between 9:30 a.m. and 10 a.m. EST, my posts garnered the most comments and got the most traffic throughout the day. When I posted after noon, my blog got about half as many comments and half as much traffic over a 24-hour period. Additionally, I saw that my site was getting shared and voted for on the social news site Reddit (`https://www.reddit.com`) more often than on Digg (`http://digg.com`), another social news site, so I replaced the Digg button with a Reddit button. This change increased the amount of traffic I received from Reddit because people had the visual reminder to share the post with their friends and vote for posts as favorites.

I was able to continue to drill down from there. Not only did I have the information on where my content was being shared, but also, I was able to garner more information for analytics. Posts that had a picture mixed in with the first three paragraphs often had a lower *bounce rate* (the interval of time it takes for a visitor to visit a site and then bounce away to a different site) than posts that had no picture at all. If I wrote the post while elevating my left leg and wearing a tinfoil helmet, I saw a 25 percent bump in traffic. (Okay, maybe that last one isn't true.)

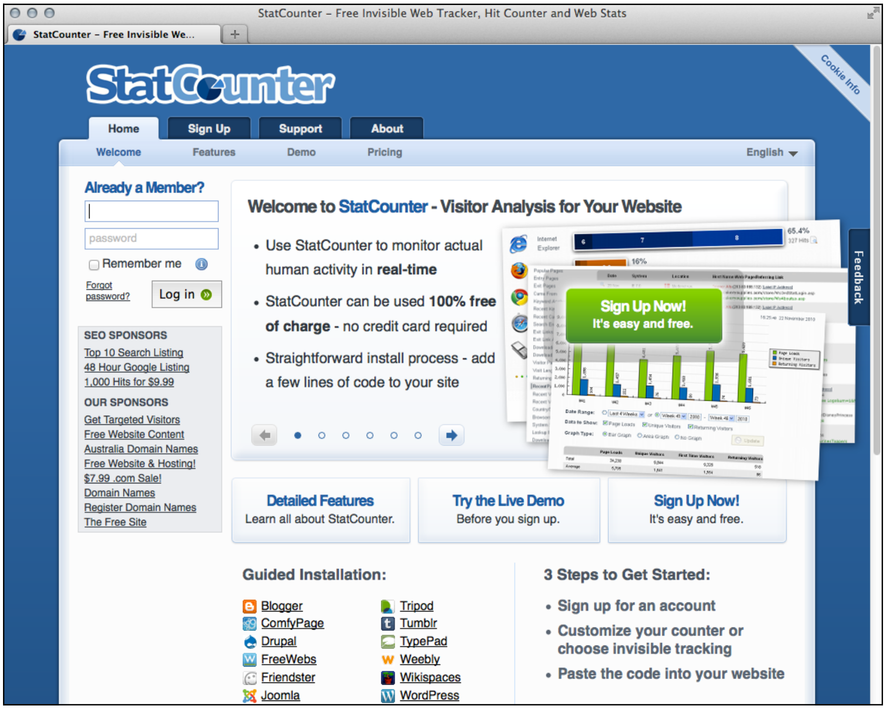
Exploring the Options for Tracking Data

You have a lot of options when it comes to tracking data on your site. Google Analytics is the most popular tool, but several options are available. Analytics is popular because of its widespread use, the amount of content written on how to maximize it, and the fact that it's free.

Here are three popular tools:

- **StatCounter (`http://statcounter.com`):** StatCounter has both a free and a paid service. The paid service doesn't kick in until you get to 250K page views a month.

  StatCounter (shown in Figure 3-1) uses the log generated by your server and gives you the ability to configure the reports to fit your needs. If you want to use a log file, you need to have a self-hosted blog and to know where your log file is stored. StatCounter requires a little more technical knowledge than your average analytics app because you have to deal with your log file instead of cutting and pasting a line of code into your site. The main advantage of StatCounter is that it reports in real time, whereas Google Analytics always has a little bit of lag in its reporting.



SEO SPONSORS
Top 10 Search Listing
48 Hour Google Listing
1,000 Hits for $9.99

OUR SPONSORS
Get Targeted Visitors
Free Website Content
Australia Domain Names
Free Website & Hosting!
$7.99 .com Sale!
Domain Names
Register Domain Names
The Free Site

Welcome to StatCounter - Visitor Analysis for Your Website

- Use StatCounter to monitor actual human activity in **real-time**
- StatCounter can be used **100% free of charge** - no credit card required
- Straightforward install process - add a few lines of code to your site

Detailed Features
Learn all about StatCounter.

Try the Live Demo
Before you sign up.

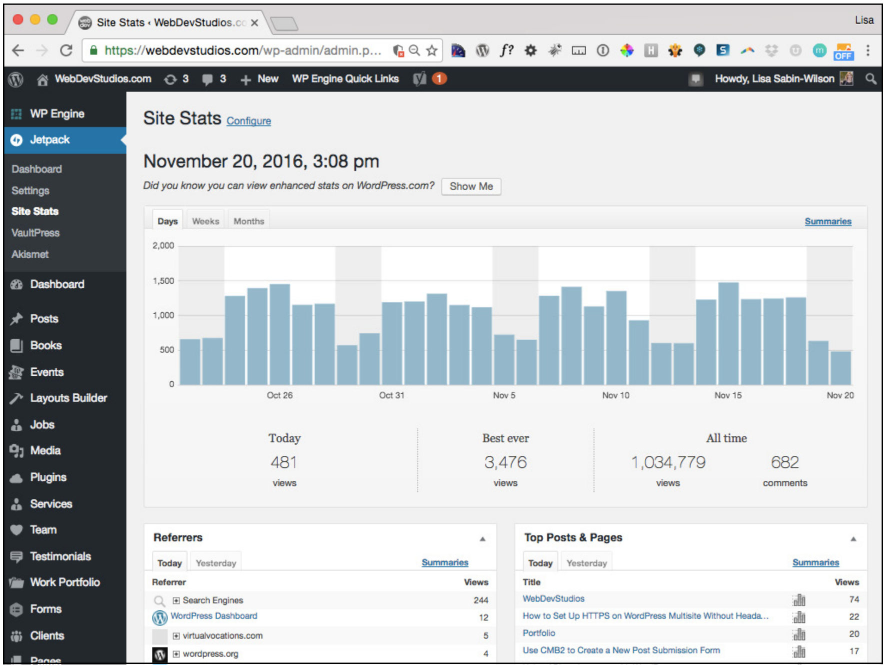
Sign Up Now!
It's easy and free.

Guided Installation:
Blogger
ComfyPage
Drupal
FreeWebs
Friendster
Joomla
Tripod
Tumblr
TypePad
Weebly
Wikispaces
WordPress

3 Steps to Get Started:
- Sign up for an account
- Customize your counter or choose invisible tracking
- Paste the code into your website

FIGURE 3-1: StatCounter offers real-time stats.

- **Jetpack (`https://wordpress.org/plugins/jetpack`):** The Jetpack plugin provides a pretty good stat package for its hosted-blog users. Shortly after launching, WordPress.com provided a WordPress Stats plugin that self-hosted users can use. (See Figure 3-2.) If you use this package, your stats appear on the WordPress Dashboard, but to drill down deeper into them, you need to access the stats on WordPress.com. The advantages of WordPress stats are that they are pretty easy to install and present a very simplified overview of your data. On the downside, they don't drill as deep as Google Analytics, and the reporting isn't as in-depth. Neither can you customize reports.



November 20, 2016, 3:08 pm

Did you know you can view enhanced stats on WordPress.com?

Today	Best ever	All time	
481 views	3,476 views	1,034,779 views	682 comments

Referrers

Today | Yesterday | Summaries

Referrer	Views
Search Engines	244
WordPress Dashboard	12
virtualvocations.com	5
wordpress.org	4

Top Posts & Pages

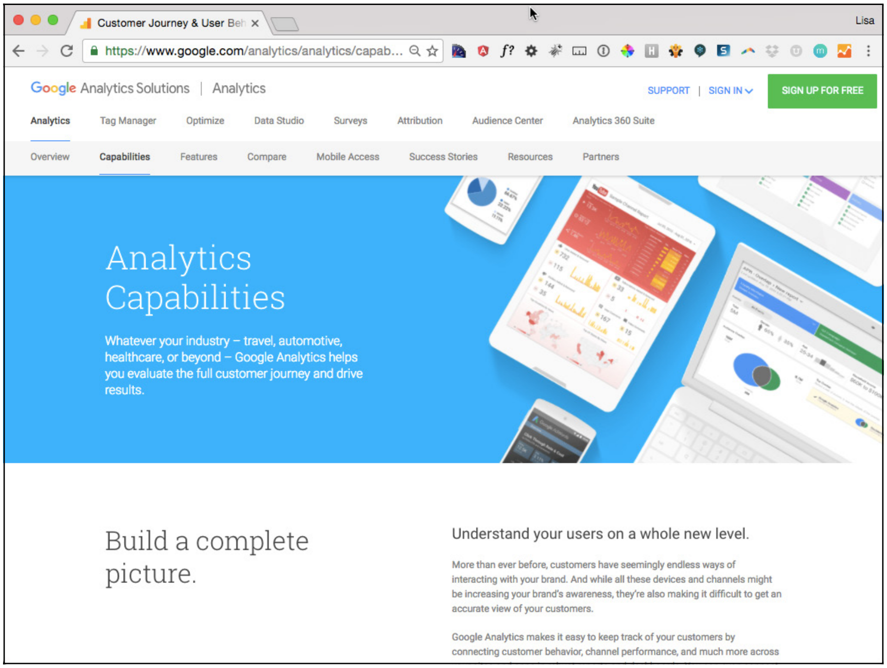
Today | Yesterday | Summaries

Title	Views
WebDevStudios	74
How to Set Up HTTPS on WordPress Multisite Without Heada...	22
Portfolio	20
Use CMB2 to Create a New Post Submission Form	17

FIGURE 3-2: Try the Jetpack plugin.

» **Google Analytics (`www.google.com/analytics`):** Google Analytics can seem overwhelming when you sit in front of it for the first time, but it has the most robust stats features this side of Omniture. (Omniture is an enterprise-level stats package, which is overkill if you're a personal or small-business site owner.)

  WordPress plugins (covered in "Adding Google Analytics to Your WordPress Site" later in this chapter) bring a simplified version of Google Analytics (see Figure 3-3) to your WordPress Dashboard, much like the WordPress.com Stats plugin. If you feel overwhelmed by Google Analytics and prefer to have your stats broken down in a much more digestible fashion, this plugin is for you: It provides a good overview of analytics information, including goals that you can set up. Although the plugin doesn't offer everything that Google Analytics brings to the table, it provides more than enough so that you can see the overall health of your website and monitor where your traffic is coming from, what posts are popular, and how people are finding your website. Besides the Dashboard Stats Overview, this plugin gives you a breakdown of traffic to each post, which is a nice bonus.



Analytics Capabilities

Whatever your industry – travel, automotive, healthcare, or beyond – Google Analytics helps you evaluate the full customer journey and drive results.

Build a complete picture.

Understand your users on a whole new level.

More than ever before, customers have seemingly endless ways of interacting with your brand. And while all these devices and channels might be increasing your brand's awareness, they're also making it difficult to get an accurate view of your customers.

Google Analytics makes it easy to keep track of your customers by connecting customer behavior, channel performance, and much more across

FIGURE 3-3: Google Analytics is a powerful tool.

Understanding Key Analytics Terminology

One of the reasons why people find analytics programs so overwhelming is that they use obscure terminology and jargon. Here, I've taken the time to define some of the more popular terms. (I even spent the time putting them in alphabetical order for you; you can thank me later.)

- **Bounce rate:** The percentage of single-page visits or visits in which the person leaves your site from the entrance page. This metric measures visit quality. A high bounce rate generally indicates that visitors don't find your site entrance pages relevant to them.

  The more compelling your landing pages are, the more visitors stay on your site and convert to purchasers or subscribers, or complete whatever action you want them to complete. You can minimize bounce rates by tailoring landing pages to each ad that you run (in the case of businesses) or to the audience based on the referring site (a special bio page for your Twitter profile, for example). Landing pages should provide the information and services that the ad promises.

When it comes to site content, a high bounce rate from a social media source (such as a social news site like Digg) can tell you that users didn't find the content interesting, and a high bounce rate from search engines can mean that your site isn't what users thought they were getting. In blogging, having a low bounce rate really speaks to the quality of the content on your site. If you get a lot of search and social media traffic, a bounce rate below 50 percent is a number you want to strive for.

- **Content:** The different pages within the site. (The Content menu of Google Analytics breaks down these pages so that they have their own statistics.)
- **Dashboard:** The interface with the overall summary of your analytics data. It's the first page you see when you log in to Google Analytics.
- **Direct traffic:** Traffic generated when web visitors reach your site by typing your web address directly in their browsers' address bars. (Launching a site by clicking a bookmark also falls into this category.) You can get direct-traffic visitors because of an offline promotion, repeat readers or word of mouth, or simply from your business card.
- **First-time unique visitor:** A visitor to your website who hasn't visited before the time frame you're analyzing.
- **Hit:** Any request to the web server for any type of file, not just a post on your site, including a page, an image (JPEG, GIF, PNG, and so on), a sound clip, or any of several other file types. An HTML page can account for several hits: the page itself, each image on the page, and any embedded sound or video clips. Therefore, the number of hits a website receives doesn't give you a valid popularity gauge, but indicates server use and how many files have been loaded.
- **Keyword:** A database index entry that identifies a specific record or document. (That definition sounds way fancier than a keyword actually is.) Keyword searching is the most common form of text search on the web. Most search engines do text query and retrieval by using keywords. Unless the author of the web document specifies the keywords for his or her document (which you can do by using meta tags), the search engine has to determine them. (So you can't guarantee how Google indexes the page.) Essentially, search engines pull out and index words that it determines are significant. A search engine is more likely to deem words important if those words appear toward the beginning of a document and are repeated several times throughout the document.
- **Meta tag:** A special HTML tag that provides information about a web page. Unlike normal HTML tags, meta tags don't affect how the page appears in a

user's browser. Instead, meta tags provide information such as who created the page, how often it's updated, the title of the page, a description of the page's content, and keywords that represent the page's content. Many search engines use this information when they build their indexes, although most major search engines rarely index the `keywords` meta tag anymore because it has been abused by people trying to fool search results.

- **Pageview:** Refers to the number of unique views a web page has received. A *page* is defined as any file or content delivered by a web server that would generally be considered a web document, which includes HTML pages (`.html`, `.htm`, `.shtml`), posts or pages within a WordPress installation, script-generated pages (`.cgi`, `.asp`, `.cfm`), and plain-text pages. It also includes sound files (`.wav`, `.aiff`, and so on), video files (`.mov`, `.mpeg`, and so on), and other nondocument files. Only image files (`.jpeg`, `.gif`, `.png`), JavaScript (`.js`), and Cascading Style Sheets (`.css`) are excluded from this definition. Each time a file defined as a page is served or viewed in a visitor's web browser, a *pageview* is registered by Google Analytics. The pageview statistic is more important and accurate than a hit statistic because it doesn't include images or other items that may register hits on your site.
- **Path:** A series of clicks that results in distinct pageviews. A path can't contain nonpages, such as image files.
- **Referrals:** Occur when a user clicks any hyperlink that takes him or her to a page or file in another website, which could be text, an image, or any other type of link. When a user arrives at your site from another site, the server records the referral information in the hit log for every file requested by that user. If the user found the link by using a search engine, the server records the search engine's name and any keywords used as well. Referrals give you an indication of what social-media site, as well as links from other websites, are directing traffic to your blog.
- **Referrer:** The URL of an HTML page that refers visitors to a site.
- **Traffic sources:** A metric that tells you how visitors found your website, such as via direct traffic, referring sites, or search engines.
- **Unique visitors:** The number of unduplicated (counted only once) visitors to your website over the course of a specified time period. The server determines a unique visitor by using *cookies,* which are small tracking files stored in your visitors' browsers that keep track of the number of times they visit your site.
- **Visitor:** A stat designed to come as close as possible to defining the number of distinct people who visit a website. The website, of course, can't really determine whether any one "visitor" is really two people sharing a computer, but a good visitor-tracking system can come close to the actual number. The most accurate visitor-tracking systems generally employ cookies to maintain tallies of distinct visitors.

Adding Google Analytics to Your WordPress Site

In the following sections, you sign up for Google Analytics, install it on your blog, and add the WordPress plugin to your site.

Signing up for Google Analytics

To sign up for Google Analytics, follow these steps:

1. **Go to `https://www.google.com/analytics/analytics`, and click the Sign Up For Free button, which is located in the top-right corner of the page.**

   A page where you can sign up for a Google account or sign in via an existing Google account appears. If you don't have a Google account, follow the link to sign up for one.

2. **Sign in via your Google account by entering your email address and password in the text boxes and then clicking Sign In.**

   The first of a series of walk-through pages appears.

3. **Click the Sign Up button.**

4. **On the page that appears (see Figure 3-4), fill in this information:**

   - A name to identify your account (which really doesn't matter; you can call it your website's name)
   - The URL of your website
   - The industry category of your website
   - The country and time zone you're in

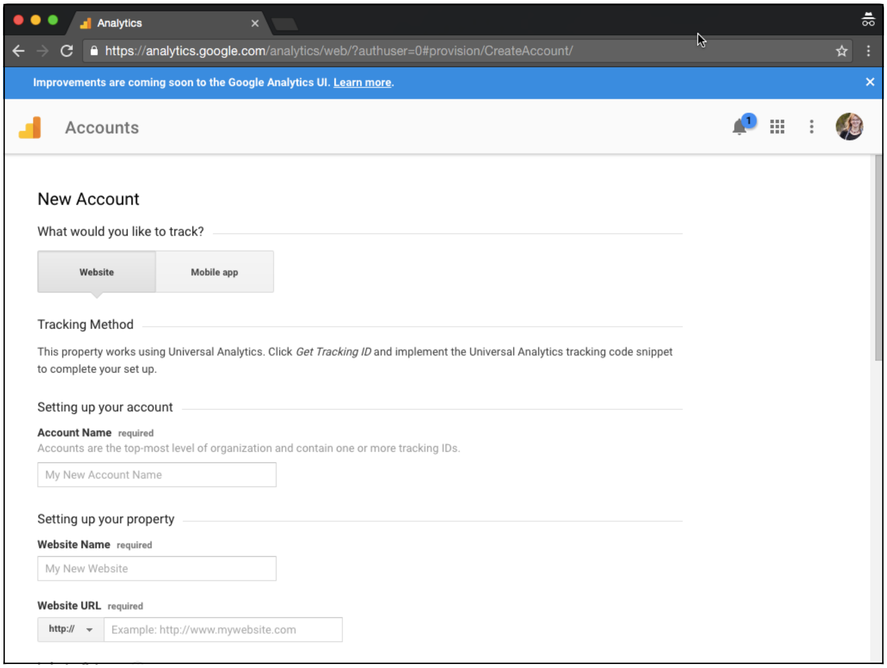
5. **Click the Get Tracking ID button.**

   Scroll down to see this button.

   The Tracking Code page appears. (See Figure 3-5.)

   At the bottom of the page, Google Analytics provides your Google tracking code, as shown in Figure 3-6.

6. **Copy the tracking code by selecting it and pressing Ctrl+C on a PC or Command+C on a Mac.**



Analytics
https://analytics.google.com/analytics/web/?authuser=0#provision/CreateAccount/
Accounts

Improvements are coming soon to the Google Analytics UI. Learn more.

New Account

What would you like to track?

Website | Mobile app

Tracking Method

This property works using Universal Analytics. Click *Get Tracking ID* and implement the Universal Analytics tracking code snippet to complete your set up.

Setting up your account

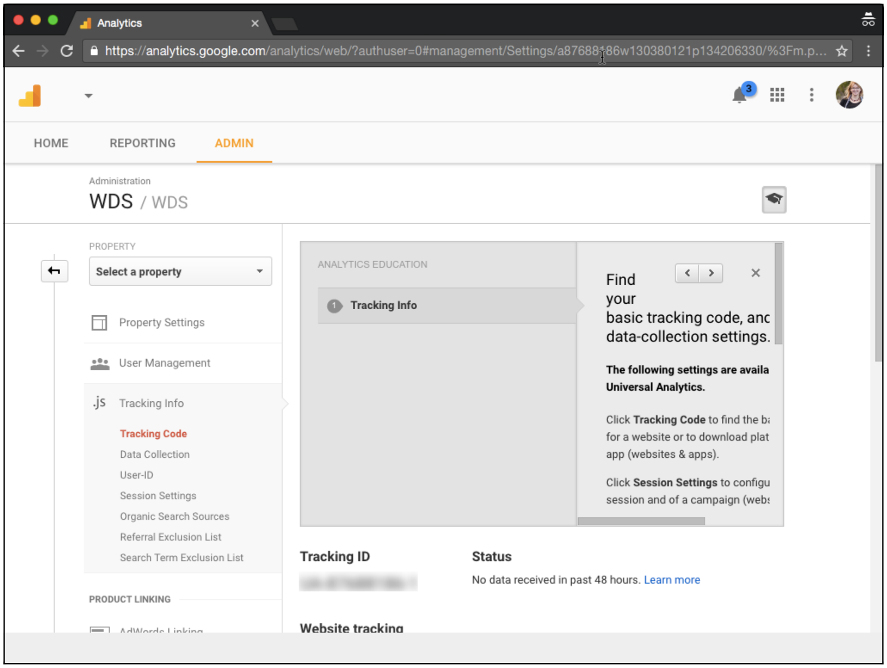
Account Name required
Accounts are the top-most level of organization and contain one or more tracking IDs.
My New Account Name

Setting up your property

Website Name required
My New Website

Website URL required
http:// | Example: http://www.mywebsite.com

FIGURE 3-4: Accounts page in Google Analytics.



Analytics
https://analytics.google.com/analytics/web/?authuser=0#management/Settings/a87688186w130380121p134206330/%3Fm.p...
HOME
REPORTING
ADMIN

Administration
WDS / WDS

PROPERTY
Select a property

- Property Settings
- User Management
- Tracking Info
  - Tracking Code
  - Data Collection
  - User-ID
  - Session Settings
  - Organic Search Sources
  - Referral Exclusion List
  - Search Term Exclusion List

PRODUCT LINKING
AdWords Linking

ANALYTICS EDUCATION
1 Tracking Info

Find your basic tracking code, anc data-collection settings.

The following settings are availa Universal Analytics.

Click **Tracking Code** to find the ba for a website or to download plat app (websites & apps).

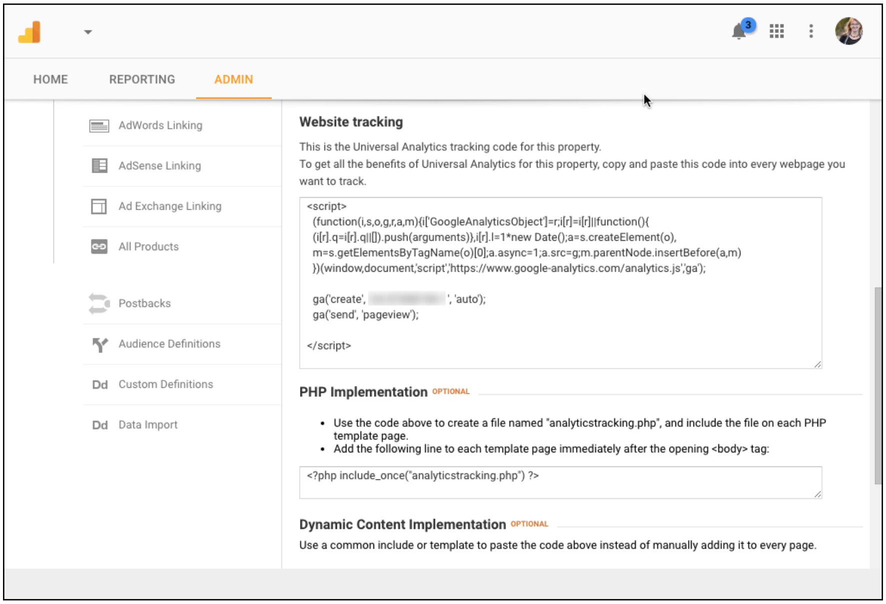
Click **Session Settings** to configu session and of a campaign (webs

Tracking ID [redacted]

Status
No data received in past 48 hours. Learn more

Website tracking

FIGURE 3-5: The Tracking Code page.



Website tracking

This is the Universal Analytics tracking code for this property.
To get all the benefits of Universal Analytics for this property, copy and paste this code into every webpage you want to track.

```
<script>
  (function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){
  (i[r].q=i[r].q||[]).push(arguments)},i[r].l=1*new Date();a=s.createElement(o),
  m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m)
  })(window,document,'script','https://www.google-analytics.com/analytics.js','ga');

  ga('create', [redacted] ', 'auto');
  ga('send', 'pageview');

</script>
```

PHP Implementation OPTIONAL

- Use the code above to create a file named "analyticstracking.php", and include the file on each PHP template page.
- Add the following line to each template page immediately after the opening <body> tag:

```
<?php include_once("analyticstracking.php") ?>
```

Dynamic Content Implementation OPTIONAL

Use a common include or template to paste the code above instead of manually adding it to every page.

FIGURE 3-6: Get your Google Analytics code.

7. **Paste the Google tracking code into your WordPress blog.**

   If you're not sure how to complete this step, see "Installing the tracking code" later in this chapter.

8. **Click the Save and Finish button.**

Installing the tracking code

After you set up your Google Analytics account and obtain the tracking ID to install in your WordPress site, you're ready for the installation. The easiest way to accomplish this task is to use the Google Analytics plugin for WordPress (`https://wordpress.org/plugins/googleanalytics`) by following these steps:

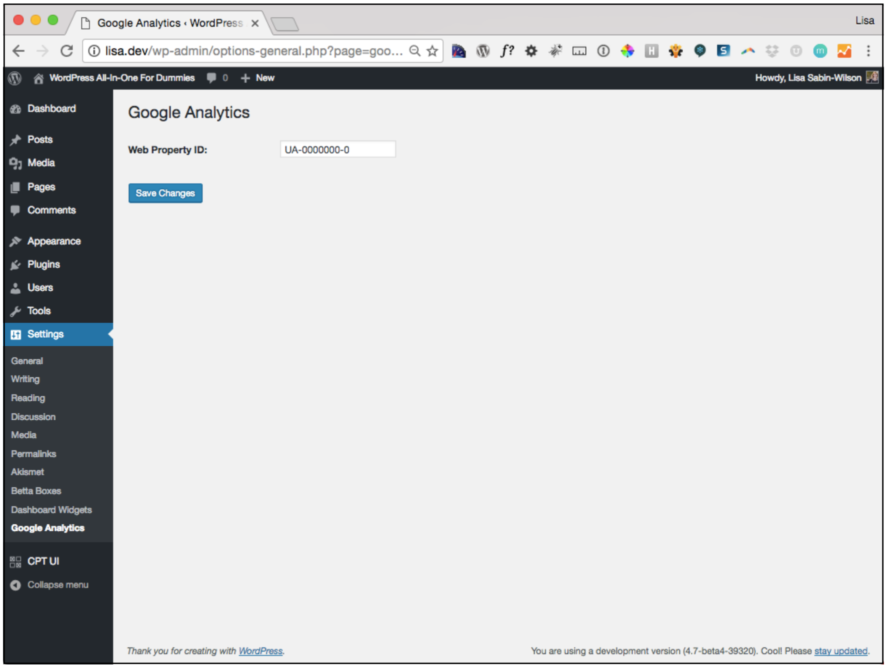
1. **Log in to your WordPress Dashboard.**
2. **Click the Add New link on the Plugins menu.**

   The Add Plugins screen appears.

3. **Search for the Google Analytics plugin, and install and activate it.**
4. **Click the Google Analytics link on the Settings menu.**

   The Google Analytics screen appears.

5. **In the Web Property ID text field, enter the tracking ID given to you in your Google Analytics account (see Figure 3-7).**



Google Analytics

Web Property ID: UA-0000000-0

Thank you for creating with WordPress.

You are using a development version (4.7-beta4-39320). Cool! Please stay updated.

FIGURE 3-7: Google Analytics plugin screen.

6. **Click the Save Changes button.**

   This step saves your settings and inserts the correct JavaScript snippet into your site. Now Google is tracking your website analytics.

Verifying that you installed the code properly

After you install your code, check whether you installed it correctly. When you log back in to Google Analytics, your Dashboard appears. (See Figure 3-8.) The Dashboard shows the tracking data obtained from your website so far. Because your account is new, your tracking data will likely be a big fat zero, much like what you see in Figure 3-8.

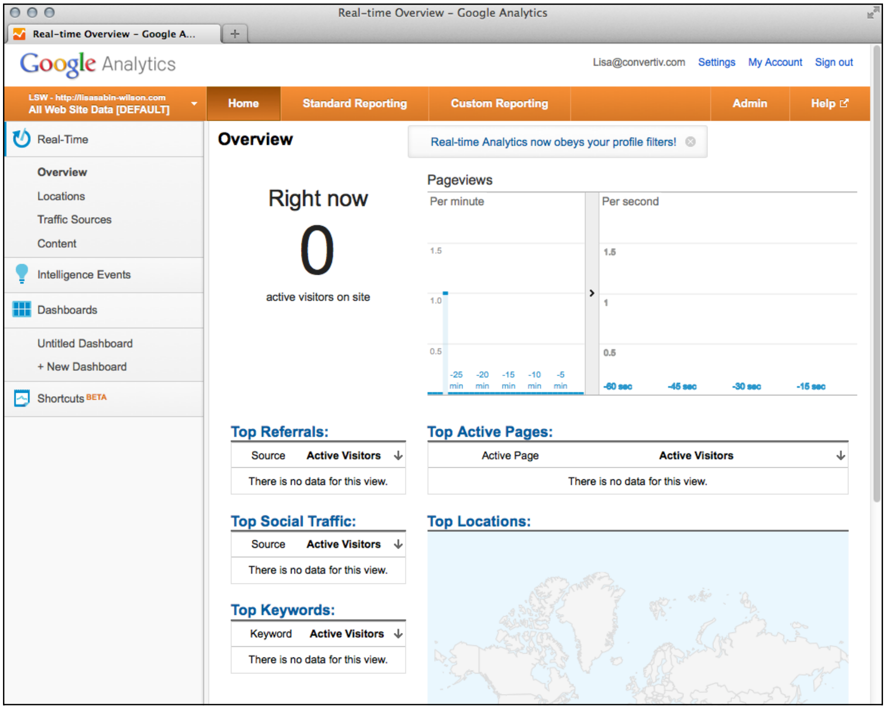


FIGURE 3-8: Tracking code in place and collecting data.

Installing and configuring the Analytics plugin

After you install Google Analytics on your WordPress site and make sure that the tracking code is working properly, you can install the plugin so that you can get a basic version of your stats right on your WordPress Dashboard. Just follow these steps:

1. **Log in to your WordPress Dashboard.**
2. **On the Plugins menu, click the Add New link.**

   A search box appears.
3. **In the Search text box, type** google analytics dashboard **and then click the Install Now link.**

   This step takes you to the Installing Plugin page.
4. **Activate the plugin by clicking the Activate button.**

5. **Click the Google Analytics link on the WordPress Dashboard menu.**

   You see the Google Analytics Settings – Plugin Authorization screen.

6. **Click the Authorize Plugin button.**

   You see a page where you log in to your Google account; then the Google Analytics Settings screen reloads.

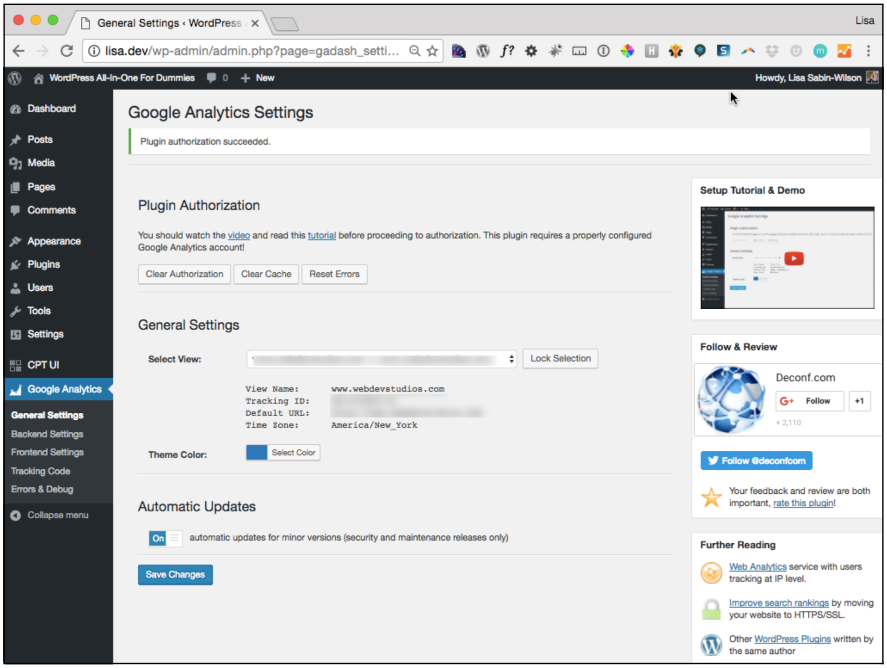
7. **Click the Get Access Code link.**

   You see a page where Google gives you an access code; copy that code.

8. **Enter the access code from Step 7 in the Access Code text box on the Google Analytics screen in your Dashboard.**

9. **Click the Save Access Code button.**

   The Google Analytics Settings screen appears. (See Figure 3-9.)



Google Analytics Settings

Plugin authorization succeeded.

Plugin Authorization

You should watch the video and read this tutorial before proceeding to authorization. This plugin requires a properly configured Google Analytics account!

General Settings

Select View: [redacted]

```
View Name:     www.webdevstudios.com
Tracking ID:   [redacted]
Default URL:   [redacted]
Time Zone:     America/New_York
```

Theme Color: 🟦 Select Color

Automatic Updates

On automatic updates for minor versions (security and maintenance releases only)

Your feedback and review are both important, rate this plugin!

Further Reading

Web Analytics service with users tracking at IP level.

Improve search rankings by moving your website to HTTPS/SSL.

Other WordPress Plugins written by the same author

FIGURE 3-9: The Google Analytics Settings screen.

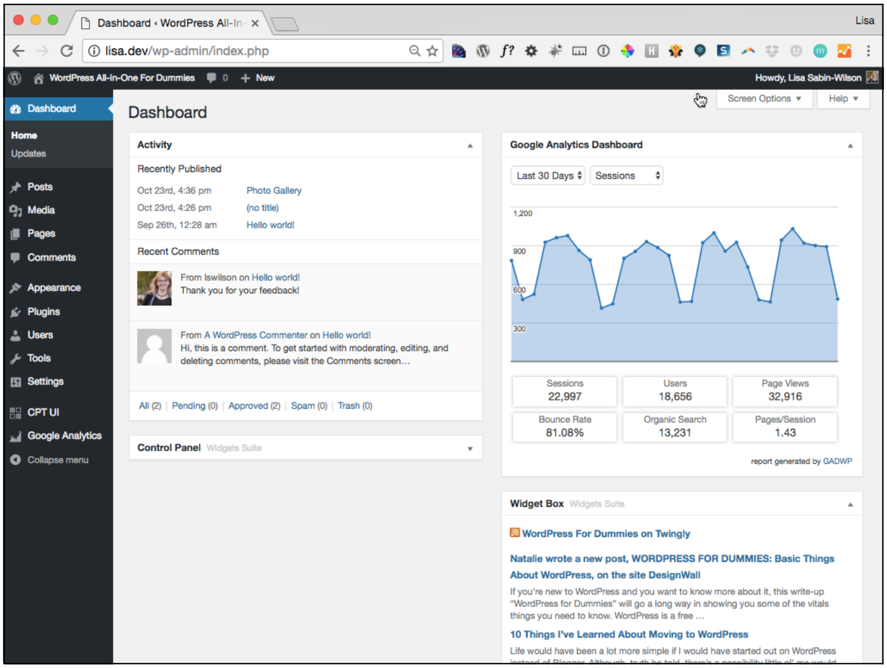
10. **From the Select View drop-down menu, choose the analytics account from which you want to pull your stats.**

11. Click the Save Changes button.

The plugin appears on your Dashboard.

12. Drag and drop the plugin to the position you prefer.

Figure 3-10 shows a WordPress Dashboard with the Google Analytics plugin displayed in the top-right corner.



Recently Published

Oct 23rd, 4:36 pm Photo Gallery

Oct 23rd, 4:26 pm (no title)

Sep 26th, 12:28 am Hello world!

Recent Comments

From lswilson on Hello world!
Thank you for your feedback!

From A WordPress Commenter on Hello world!
Hi, this is a comment. To get started with moderating, editing, and deleting comments, please visit the Comments screen…

All (2) | Pending (0) | Approved (2) | Spam (0) | Trash (0)

Sessions	Users	Page Views
22,997	18,656	32,916
Bounce Rate	**Organic Search**	**Pages/Session**
81.08%	13,231	1.43

report generated by GADWP

WordPress For Dummies on Twingly

Natalie wrote a new post, WORDPRESS FOR DUMMIES: Basic Things About WordPress, on the site DesignWall

If you're new to WordPress and you want to know more about it, this write-up "WordPress for Dummies" will go a long way in showing you some of the vitals things you need to know. WordPress is a free …

10 Things I've Learned About Moving to WordPress

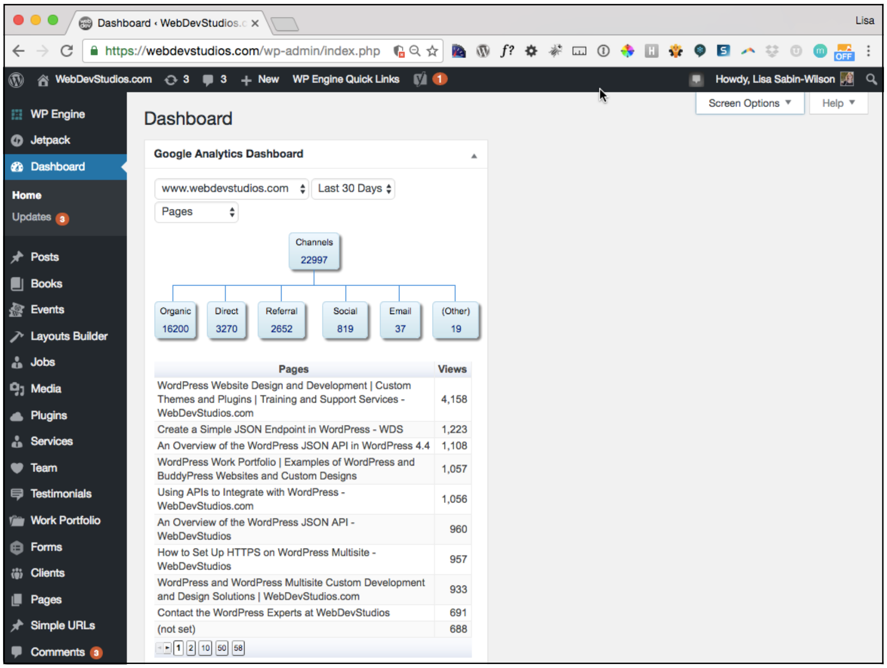
Life would have been a lot more simple if I would have started out on WordPress

FIGURE 3-10: Google Analytics on a WordPress Dashboard.

Using the data from the plugin

After you install Google Analytics on your WordPress Dashboard, you can examine the data that it provides. Your Dashboard displays analytics stats, such as Sessions, Users, Page Views, Bounce Rate, Organic Search, Pages/Session, Time on Page, Page Load Time, and Session Duration. These stats can be filtered by timeframe options such as Real-Time, Today, Yesterday, Last 7 Days, Last 14 Days, Last 30 Days, Last 90 Days, One Year, and Three Years.

These stats show you the most popular content on your site, the ways people are finding your site, and the sources of your traffic. If you want even more detailed information on high-performing individual pages, you can configure the Dashboard widget to display the number of views on Pages (see Figure 3-11), where you can find per-page stats for on your site.



Pages	Views
WordPress Website Design and Development | Custom Themes and Plugins | Training and Support Services - WebDevStudios.com	4,158
Create a Simple JSON Endpoint in WordPress - WDS	1,223
An Overview of the WordPress JSON API in WordPress 4.4	1,108
WordPress Work Portfolio | Examples of WordPress and BuddyPress Websites and Custom Designs	1,057
Using APIs to Integrate with WordPress - WebDevStudios.com	1,056
An Overview of the WordPress JSON API - WebDevStudios	960
How to Set Up HTTPS on WordPress Multisite - WebDevStudios	957
WordPress and WordPress Multisite Custom Development and Design Solutions | WebDevStudios.com	933
Contact the WordPress Experts at WebDevStudios	691
(not set)	688

FIGURE 3-11: A per-page breakdown by Google Analytics for WordPress.

By examining the two data sets, you can get a handle on the traffic that's coming to your blog. Pay attention to the data and use it to answer the following questions:

- What posts are popular?
- Do the popular posts have a unique theme or type?
- Do long posts or short posts help increase traffic?
- Do videos, lists, or any other specific types of posts give you more traffic than the rest?

The answers to these questions can help you draw various conclusions and adapt your publishing schedule, content type, and writing style to optimize the popularity of your blog.

IN THIS CHAPTER

- Appreciating search engine optimization (SEO) benefits
- Improving your SEO with WordPress
- Getting your blog into good SEO shape
- Finding information about your niche
- Creating SEO-improvement strategies

Chapter 4
Search Engine Optimization

Google, Yahoo!, Bing, and other search engines have a massive impact on a website. Search engines can easily refer the largest amount of traffic to your site and, if dealt with properly, can help you grow a large audience over time. Often, bloggers don't discover the importance of search engine optimization (SEO) until their sites have been around for a while. By taking the time to make sure that you're following SEO best practices from the get-go, you can reap the rewards of a consistent flow of search engine traffic.

If you've been publishing content on the web for a while and haven't been following the practices in this chapter, roll up your sleeves and dive back into your site to fix some of the SEO practices that you may have overlooked (or just didn't know about) over the history of your website. If you've been publishing content on your website for only a few months, this process doesn't take long. If you have a large backlog of content . . . well, pull up a chair; this fix is going to take a while. But don't worry. You're in safe hands. This chapter helps you through the difficult task of optimizing your site for search engines.

Understanding the Importance of Search Engine Optimization

Talk about SEO usually puts most people to sleep. I'm not going to lie: Hardcore SEO is a time-consuming job that requires a strong analytical mind. Casual bloggers, or even most small-business owners, don't need to understand all the minute details that go into SEO. Everyone with a website who desires traffic, however, needs to get familiar with some of the basic concepts and best practices. Why, you ask?

One thousand pageviews. That's why.

You're not going to get 1,000 page views right off the bat by changing your SEO, of course.

SEO deals with following best practices when it comes to writing content on the web. By following these simple guidelines and by using WordPress, you can increase search engine traffic to your site. Period. To be honest, you probably won't rank number one in really tough categories just by following SEO best practices. But you definitely can increase your traffic significantly and improve your rank for some long-tail keywords. *Long-tail keywords* are keywords that aren't searched for often, but when you amass ranking for a lot of them over a period of time, the traffic adds up.

REMEMBER

You want as many search results as possible on the first two pages of Google and other search engines to be from your site(s). (Most search-engine visitors don't go past the first two pages of Google.) This search-results aim is a more reasonable goal than trying to rank number one for a highly competitive keyword.

TIP

If you really do want to rank number one in a competitive space, check out sites such as SEOBook (`www.seobook.com`) and Moz (`https://moz.com/`), which can help you achieve that difficult goal.

Outlining the Advantages That WordPress Presents for SEO

Using WordPress as your content management system comes with some advantages, including the fact that WordPress is designed to function well with search engines. Search engines can crawl the source code of a WordPress site pretty easily, which eliminates issues that a lot of web programmers face when optimizing a site. The following list outlines some of WordPress's SEO advantages:

- **Permalinks:** URLs where your content is permanently housed. As your site grows and you add more content, the items on your front page get pushed and replaced by recent content. Visitors can easily bookmark and share permalinks so that they can return to that specific post on your site, so these old articles can live on. One of the technical benefits of WordPress is that it uses the Apache `mod_rewrite` module to establish the permalink system, which allows you to create and customize your permalink structure. (See Book 3, Chapter 2 for more information on custom permalinks.)
- **Pinging:** When you post new content, WordPress has a built-in pinging system that notifies major indexes automatically so that they can come crawl your site again. This system helps speed the indexing process and keeps your search results current and relevant.
- **Plugins:** The fact that WordPress is so developer-friendly allows you to use the latest SEO plugins. Do you want to submit a site map to Google? There's a plugin for that. Do you want to edit the metadata of a post? There's a plugin for that. Do you want to alert Google News every time you post? Guess what . . . there's a plugin for that, too. More than 10,000 plugins were available at press time, which means that you can use an advanced plugin ecosystem to help power your blog. Book 5, Chapter 5 covers a few key plugins that can help you with SEO.
- **Theme construction:** SEO, social media, and design go hand in hand. You can push a ton of people to your web page by using proper SEO and robust social media profiles, but if your site has a confusing or poorly done design, visitors aren't going to stay. Likewise, a poorly designed site prevents a lot of search engines from reading your content.

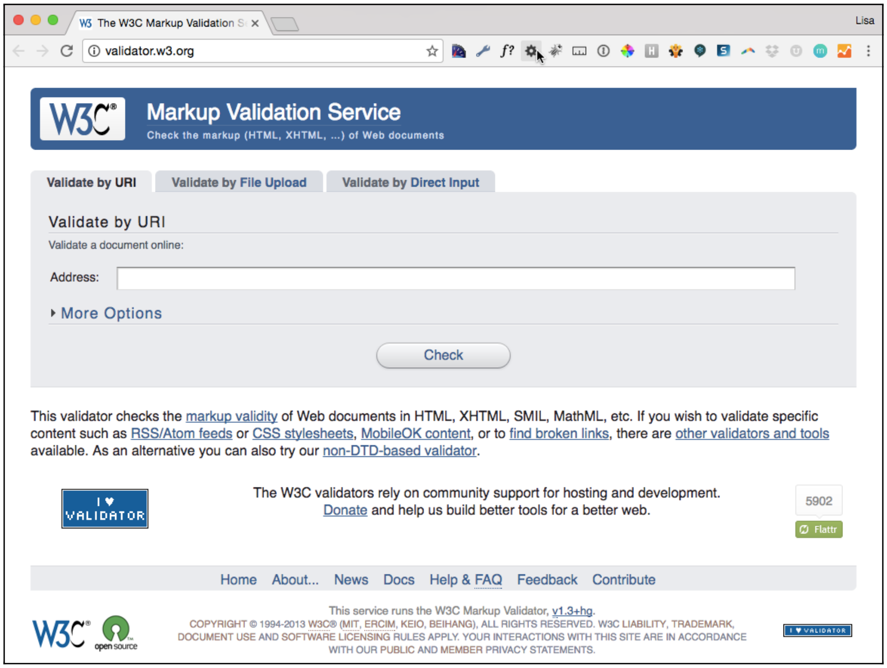
  In this situation, *poorly designed* doesn't refer to aesthetics — how your site looks to the eye. Search engines ignore the style of your site and your CSS, for the most part. But the structure — the coding — of your site can affect search engines that are attempting to crawl your site. WordPress is designed to accommodate search engines: It doesn't overload pages with coding so that search engines can easily access the site. Most WordPress themes have valid code, which is code that's up to standards based on the recommendations of the World Wide Web Consortium (`www.w3.org`). Right from the start, having valid code allows search engines to access your site much more easily.

REMEMBER

When you start changing your code or adding a lot of plugins to your site, check to see whether your code validates. Validated code means that the code on your website fits a minimum standard for browsers. Otherwise, you could be preventing search engines from easily crawling your sites.

TIP

If you want to check out whether your site validates, use the free validator tool at `http://validator.w3.org`. (See Figure 4-1.)



Markup Validation Service

Check the markup (HTML, XHTML, ...) of Web documents

Validate by URI

Validate a document online:

Address:

This validator checks the markup validity of Web documents in HTML, XHTML, SMIL, MathML, etc. If you wish to validate specific content such as RSS/Atom feeds or CSS stylesheets, MobileOK content, or to find broken links, there are other validators and tools available. As an alternative you can also try our non-DTD-based validator.

The W3C validators rely on community support for hosting and development. Donate and help us build better tools for a better web.

This service runs the W3C Markup Validator, v1.3+hg.
COPYRIGHT © 1994-2013 W3C® (MIT, ERCIM, KEIO, BEIHANG), ALL RIGHTS RESERVED. W3C LIABILITY, TRADEMARK, DOCUMENT USE AND SOFTWARE LICENSING RULES APPLY. YOUR INTERACTIONS WITH THIS SITE ARE IN ACCORDANCE WITH OUR PUBLIC AND MEMBER PRIVACY STATEMENTS.

FIGURE 4-1: The W3C Markup Validation Service.

Understanding How Search Engines See Your Content

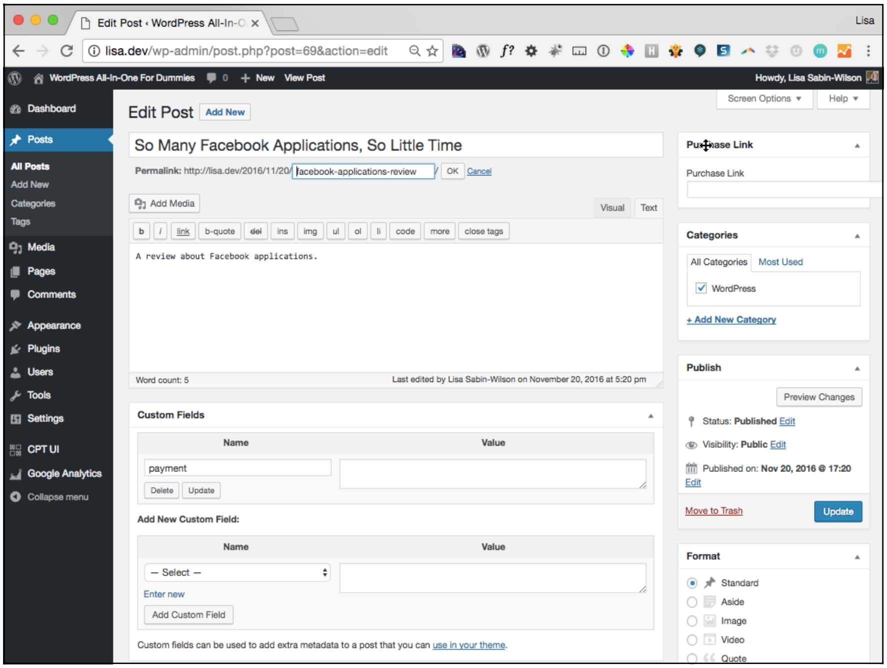
Search engines don't care what your site looks like because they can't see what your site looks like; their crawlers care only about the content. The crawlers care about the material on your site, the way it's titled, the words you use, and the way you structure those words.

You need to keep this focus in mind when you create the content of your site. Your URL structure and the keywords, post titles, and images you use in posts all have an effect on how your blog ranks. Having a basic understanding of how search engines view your content can help you write content that's more attractive to search engines. Here are a few key areas to think about when you craft your content:

- **Keywords in content:** Search engines take an intense look at the keywords or combination of keywords you use. Keywords are often compared with the words found within links that guide people to the post and in the title of the post itself to see whether they match. The better these keywords align, the better ranking you get from the search engine.

- **Post title:** Search engines analyze the title of your post or page for keyword content. If you're targeting a specific keyword in your content, and that keyword is mentioned throughout the post, mention it in the post title as well. Also, both people and search engines place a lot of value on the early words of a title.
- **URL structure:** One of the coolest things about WordPress is the way it allows you to edit permalinks for a post or page. (See Figure 4-2.) You can always edit the URL to be slightly different from the automated post title so that it contains relevant keywords for search terms, especially if you write a cute title for the post.

  Suppose that you write a post about reviewing Facebook applications and title it "So Many Facebook Applications, So Little Time." You can change the URL structure to something much more keyword-based — perhaps something like `facebook-applications-review`. This reworking removes a lot of the fluff words from the URL and goes right after keywords you want to target.



So Many Facebook Applications, So Little Time

Permalink: http://lisa.dev/2016/11/20/ facebook-applications-review / OK Cancel

A review about Facebook applications.

Word count: 5

Last edited by Lisa Sabin-Wilson on November 20, 2016 at 5:20 pm

payment

Custom fields can be used to add extra metadata to a post that you can use in your theme.

☑ WordPress

Status: Published Edit

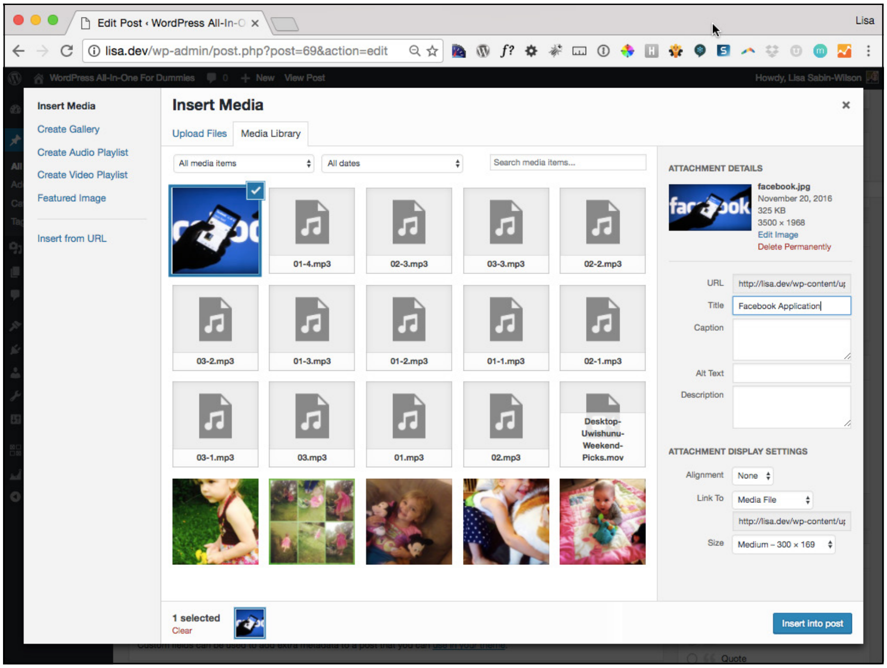
Visibility: Public Edit

Published on: Nov 20, 2016 @ 17:20 Edit

● Standard
○ Aside
○ Image
○ Video
○ Quote

FIGURE 4-2: Editing a permalink.

- **Image titles and other image information:** This item is probably the most-missed item when it comes to SEO. You need to fill out the image information for your posts because this information is a powerful way for people to discover your content and an additional piece of content that can tie keywords to your posts. (See Figure 4-3.) This information includes the filename of your image. Saving an image file to your site as `DS-039.jpg`, for example, offers nothing for readers or search engines and thus has no value to search engines or for you because it doesn't contain a real keyword. Name a picture of a Facebook application, for example, as `Facebook-application.jpg`. Leverage the keyword title and alt tags (alternative text added to the image within the HTML markup that tells search engines what the picture is) because they provide extra content for the search engines to see, and using them can help you get a little more keyword saturation within your posts.



ATTACHMENT DETAILS

facebook.jpg
November 20, 2016
325 KB
3500 × 1968
Edit Image
Delete Permanently

URL: http://lisa.dev/wp-content/u
Title: Facebook Application
Caption:
Alt Text:
Description:

ATTACHMENT DISPLAY SETTINGS

Alignment: None
Link To: Media File
http://lisa.dev/wp-content/u
Size: Medium – 300 × 169

FIGURE 4-3: The Insert Media window.

Using links as currency

If content is king, links are the currency that keeps the king in power. No matter how good a site you have, how great your content is, and how well you optimize that content, you need links. Search engines assess the links flowing into your site for number and quality, and they evaluate your website accordingly.

If a high-quality site that has a high Google Page Rank (a value from 0 to 10) features a link to your page, search engines take notice and assume that you have authority on a subject. Search engines consider these high-quality links to be more important than low-quality links. Having a good amount of mid-quality links, however, can help as well. (This tactic, like many well-known approaches to improving site rank, is based only on trial and error. Google keeps its algorithm a secret, so no one knows for sure.)

Being included in a listing of links on a site, having a pingback or trackback when other authors mention your content in their articles, or even leaving a comment on someone's site can provide links back to your site. If you want to check out how many links you currently have coming to your site, go to Google, type **link:www.*yoursite*.com** in the search text box, and click Google Search. You can also search for competitors' sites to see where they're listed and to what sites they're linked.

Although you do need to try to get other sites to link to your site (called outside links) because outside links factor into search engine algorithms, you can help your own ranking by adding internal links. If you have an authoritative post or page on a particular subject, you should link internally to it within your site. Take ESPN.com (`http://www.espn.com/`), for example. The first time this site mentions an athlete in an article, it links to the profile of that athlete on the site. It essentially tells the search engines each time they visit ESPN.com that the player profile has relevancy, and the search engine indexes it. If you repeatedly link some of your internal pages that are gaining page rank to a profile page over a period of time, that profile page is going to garner a higher search engine ranking (especially if external sites are linking to it too).

This internal and external linking strategy uses the concept of pillar posts (authoritative or popular), in which you have a few pages of content that you consider to have high value and try to build external and internal links to them so that you can get these posts ranked highly in search results.

Submitting to search engines and directories

After you get some content on your website (ten posts or so), submit your website to some search engines. Plenty of sites out there charge you to submit your site to search engines, but honestly, you can submit your site easily yourself. Also, with the help of some plugins (described in Book 5, Chapter 5), you can get your information to search engines even more easily than you may think.

After you submit your website or site map, a search engine reviews it for search engine crawling errors; if everything checks out, you're on your way to having your site crawled and indexed. This process — from the submission of your site through its first appearance in search engine results — can easily take four to six weeks. So be patient. Don't resubmit, and don't freak out that search engines are never going to list your site. Give the process time.

Not to be confused with search engines are website and blog directories. Directories can lead to a small amount of traffic, and some directories, such as DMOZ (`www.dmoz.org`), actually supply information to search engines and other directories. The main benefit of getting listed in directories isn't really traffic but the amount of backlinks (links to your site from other websites) that you can build into your site.

TIP

Although submitting your site to directories may not be as important as submitting to search engines, you may still want to do it. Because filling out 40 or more forms is pretty monotonous, create a single document in which you prewrite all the necessary information: site title, URL, description, contact information, and your registration information. This template helps speed the submission process to these sites.

Optimizing Your Site under the Hood

Some optimization concepts really happen under the hood. You can't readily see these adjustments on your page, but they have an effect on how search engines deal with your content.

Metadata

The metadata on a website contains the information that describes to search engines what your site is about. Additionally, the information often contained in the metadata shows up as the actual search engine results in Google. The search engine pulls the page title and page description that appear in search results from the header of your site. If you do nothing to control this information, Google and other search engines often pull their description from the page title and the first few sentences of a post or page.

Although the title and the first few sentences sound good in principle, they probably don't represent what your site is actually about. You probably don't sum up your topic in the first two sentences of a post or page. Those first few lines likely aren't the best ad copy or the most enticing information. Fortunately, some plugins (such as the All in One SEO Pack plugin, which is in the WordPress Plugin Directory at `https://wordpress.org/plugins/all-in-one-seo-pack`) allow you to control these details on a post and page level. Additionally, theme frameworks (see Book 6, Chapter 7) such as Genesis offer you more control of your SEO information.

Include descriptive page titles, descriptions, and targeted keywords for each post via these plugins or frameworks. This information has an effect on your results and often helps people decide to click the link to your website.

The robots.txt file

When a search engine goes to your website, it first looks at your `robots.txt` file to get the information about what it should and shouldn't be looking for and where to look.

You can alter your `robots.txt` file to direct search engines to the information that they should crawl and to give specific content priority over other content. Several plugins allow you to configure your `robots.txt` file.

Researching Your Niche

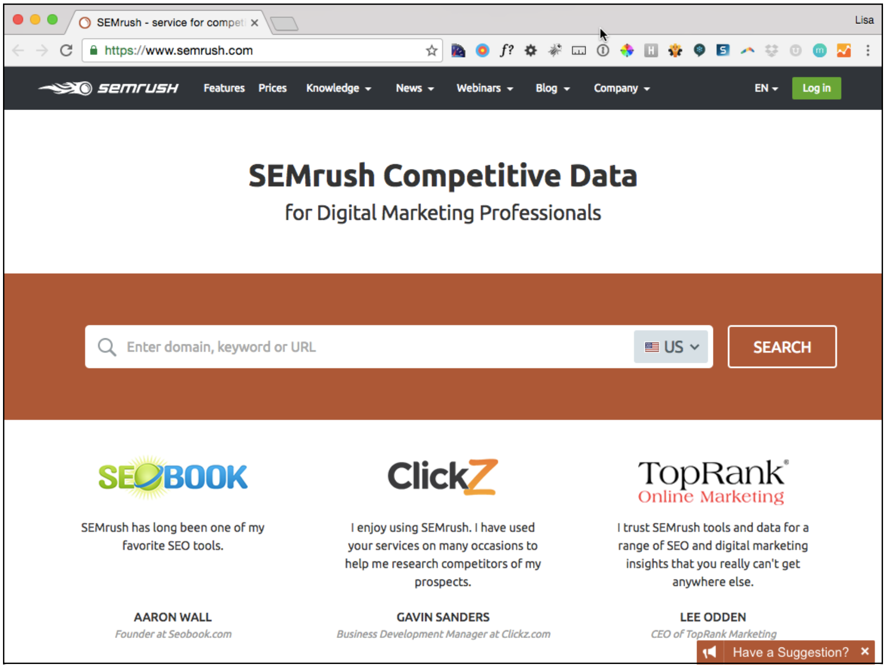
When you're working to improve your SEO, you can use a lot of publicly available data. This data can help you determine where you should try to get links and what type of content you may want to target. These two sites can help you get a general picture of the niche you're working in:

- **Google (`www.google.com`):** You can find what types of links are flowing into a website by typing **link: `www.`*`yoursite`*`.com`** in the Google search text box and clicking Google Search. (Replace *yoursite.com* with the domain you want to target.) Google gives you a list of the sites linking to your site. By doing this search for other websites in your niche, you can find out the sources of their links — industry-specific directories you may not know about, places where they've guest-authored, or other resource sites that you may be able to get listed on.

  This data gives you information about what to target for a link-building campaign.

- **SEMrush (`https://www.semrush.com`):** SEMrush (see Figure 4-4) offers both paid and free versions, and spending a few dollars for a month's access to the light version of the product can be a good investment. (The free version lets you look up only ten results at a time.) SEMrush allows you to see the terms for which other websites rank. Use this information to judge the health of the competitor's domain, the number of terms for which it ranks in Google's top 20, and the terms themselves.

You can use this information in a lot of different ways. You can see what terms you may want to work into your content, for example. SEMrush provides not only information about what terms search engines use to rank these sites, but also information about how competitive some of those keywords are with other websites using the same keywords as yours.



SEMrush Competitive Data

for Digital Marketing Professionals

SEMrush has long been one of my favorite SEO tools.

AARON WALL

Founder at Seobook.com

I enjoy using SEMrush. I have used your services on many occasions to help me research competitors of my prospects.

GAVIN SANDERS

Business Development Manager at Clickz.com

I trust SEMrush tools and data for a range of SEO and digital marketing insights that you really can't get anywhere else.

LEE ODDEN

CEO of TopRank Marketing

FIGURE 4-4: SEMrush helps you evaluate your competition.

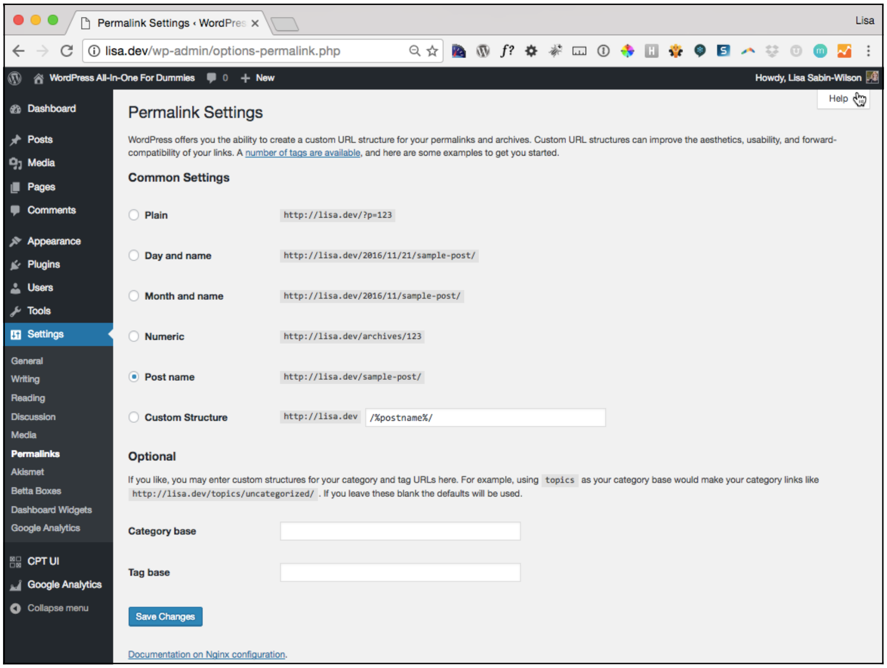
Creating Search Engine Strategies

You can use the techniques discussed in previous sections of this chapter when you set up your site, write strategic content, and begin to build links into your website. The next section deals with setting up your website so that it's optimized for search engines.

Setting up your site

When setting up your site, you're going to want to follow some best practices to make sure that your site is optimized for search engines. Some of these best practices include

- **Permalinks:** First, set up your permalink structure. Log in to your WordPress account, and on the sidebar, select Permalinks in the Settings section. The Permalink Settings page appears. (See Figure 4-5.) Select the Post Name radio button.



Permalink Settings

WordPress offers you the ability to create a custom URL structure for your permalinks and archives. Custom URL structures can improve the aesthetics, usability, and forward-compatibility of your links. A number of tags are available, and here are some examples to get you started.

Common Settings

○ Plain `http://lisa.dev/?p=123`

○ Day and name `http://lisa.dev/2016/11/21/sample-post/`

○ Month and name `http://lisa.dev/2016/11/sample-post/`

○ Numeric `http://lisa.dev/archives/123`

● Post name `http://lisa.dev/sample-post/`

○ Custom Structure `http://lisa.dev` `/%postname%/`

Optional

If you like, you may enter custom structures for your category and tag URLs here. For example, using `topics` as your category base would make your category links like `http://lisa.dev/topics/uncategorized/` . If you leave these blank the defaults will be used.

Category base

Tag base

Save Changes

Documentation on Nginx configuration.

FIGURE 4-5: The WordPress Permalinks Settings page.

Making this change gives you a URL that contains just your domain and the title of your blog post. If you use a focused category structure in which you've carefully picked out keywords, you may want to add the category to the URL. In that case, you enter ***/%category%/%postname%/*** in the text box.

Avoid using the default URL structure, which includes just the number of your post, and don't use dates in the URL. These numbers have no real value when doing SEO. WordPress by default numbers all your posts and pages with specific ID numbers. If you haven't set up a custom permalink structure in WordPress, permalinks for your posts end up looking something like this:

`http://`*`yourdomain`*`.com/?p=12` (where 12 is the specific post ID number). Although these numbers are used for many WordPress features, including exclusions of data and customized RSS feeds, you don't want these numbers in your URLs because they don't contain any keywords that describe the post.

Also, if you already have an established site and are just now setting up these permalinks, you must take the time to install a redirection plugin. You can find several of these plugins available in the Plugin Directory on WordPress.org. You must establish redirection for your older content so that you don't lose the links that search engines, such as Google and Yahoo!, have already indexed for your site. One good redirection plugin to use is simply called Redirection; you can find it at `https://wordpress.org/plugins/redirection`.

- **Privacy:** You don't want your site to fail to be indexed because you didn't set the correct privacy settings. On the WordPress Settings menu, click the Reading link. On the resulting Reading Settings screen, make sure that the check box titled Discourage Search Engines from Indexing This Site is cleared.

Improving your site's design

After improving your setup on the back end of your site, you'll want to make some changes in your design so your site works better with search engines. Some improvements you can make to your theme templates include

- **Breadcrumbs:** Breadcrumbs, often overlooked during website creation, provide the valuable navigation usually seen above on a page above the title. (See Figure 4-6.) Breadcrumbs are pretty valuable for usability and search engine navigation. They allow the average user to navigate the site easily, and they help search engines determine the structure and layout of your site. A good plugin to use to create breadcrumb navigation is Breadcrumb NavXT, which is in the WordPress Plugin Directory at `https://wordpress.org/plugins/breadcrumb-navxt`.
- **Validated code and speed:** If you're not a professional web designer, you probably don't do a lot of coding on your site. But if you make some small edits to your WordPress installation or add a lot of code through widgets, do it properly by putting it directly in your CSS rather than coding into your site. Coding these features properly helps improve the speed of your site and the way search engines crawl it. Book 6 contains a great deal of information about coding the templates in your theme; check out that minibook for more information about correct coding.

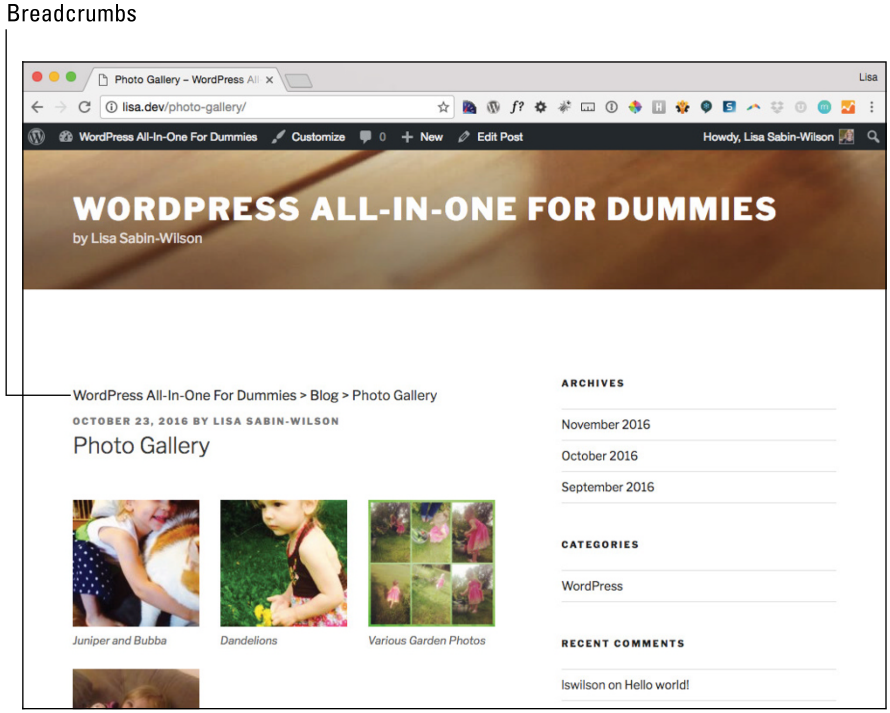


FIGURE 4-6: Users and search engines can follow the breadcrumbs.

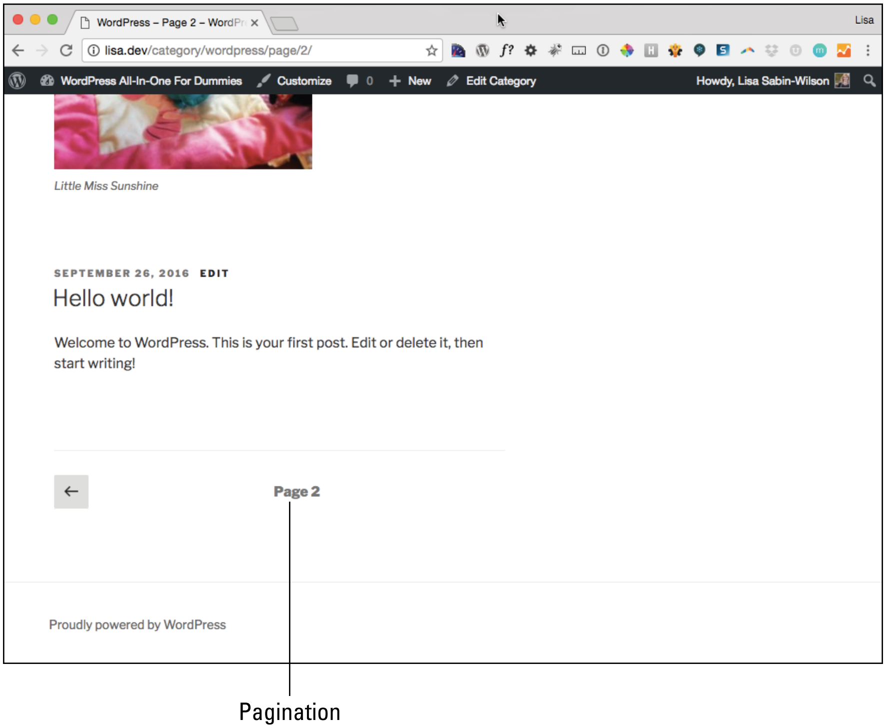
When it comes to improving site speed, proper code has a lot to do with performance. You can take other steps to help improve the speed of your site, such as installing caching plugins, including the W3 Total Cache plugin (`https://wordpress.org/plugins/w3-total-cache`). The quality of your hosting (Book 2, Chapter 1), the size of your image files (make sure that you set image-file quality to web standards), the number of images you're using, and third-party widgets or scripts (such as installing a widget provided by Twitter or Facebook) can all affect the speed and performance of your site.

- **Pagination:** Another basic design feature that's often overlooked during site setup, *pagination* creates bottom navigation that allows people and search engines to navigate to other pages. (See Figure 4-7.) Pagination can really help both people and search engines navigate your category pages.

  Some themes don't have built-in pagination, so you may need to add a plugin to accomplish this effect. A few of these kinds of plugins are on the market; check out Book 5, Chapter 5.

REMEMBER

Links pass on authority. When you link to a site or a site links to you, the link is saying that your site has value for the keyword in the link. So evaluate the links that you have, and think about whether you really want to link to those websites.


WordPress – Page 2 – WordPr
Lisa
lisa.dev/category/wordpress/page/2/
WordPress All-In-One For Dummies
Customize
0
New
Edit Category
Howdy, Lisa Sabin-Wilson

Little Miss Sunshine

SEPTEMBER 26, 2016 EDIT

Hello world!

Welcome to WordPress. This is your first post. Edit or delete it, then start writing!

Page 2

Proudly powered by WordPress

Pagination

FIGURE 4-7: Pagination in action.

Dealing with duplicate content

WordPress does have one major problem when it comes to SEO: It creates so many places for your content to live that duplicate content can confuse search engines. Fortunately, plugins and some basic editing easily take care of these issues. Here's what to do:

- **Take care of your archive page on your site.** This page displays archives such as category, date-based archives, and so on. You don't want your archive page to present full posts — only truncated versions (short excerpts) of your posts. Check your theme to see how your archive is presented. If your archive shows complete posts, see whether your theme has instructions about how to change your archive presentation. (Each theme is unique, but check out the information in Book 6; it's full of great information about tweaking and altering theme template files.)
- **Make sure that search engines aren't indexing all your archives by using a robots plugin.** You want robots going through only your category archive, not the author index and other archives.

Creating an editorial SEO list/calendar

Planning your posts from now until the end of time can take some of the fun out of publishing. Still, it doesn't hurt to create a list of keywords that your competitors rank for and some of the content they've discussed. Take that list and apply it to new posts, or write *evergreen content* (topics that aren't time-sensitive) centered on what you want to say. Planning your content can really help in figuring out what keywords you want to target when you want to write content to improve for ranking for targeted keywords.

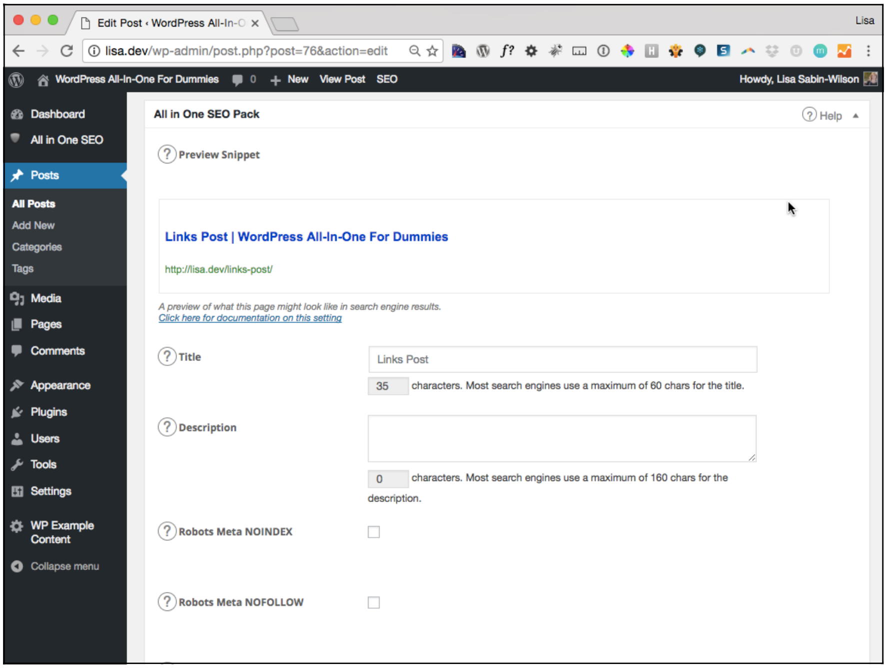
TIP

If you feel that your site content is more news- or current events–oriented, create a reference list of keywords to incorporate into your newer posts so that you can rank for these targeted terms.

Establishing a routine for publishing on your site

Although you can't really call this high strategy, getting into the habit of posting content regularly on your site helps you get the basics down. Here are some things to keep in mind:

- **Properly title your post.** Make sure that your post includes the keyword or phrase for which you're trying to rank.
- **Fix your URL.** Get rid of stop words or useless words from your URL, and make sure that the keywords you want to target appear in the URL of your post. *Stop words* are filler words such as *a*, *so*, *in*, *an*, and so on. For a comprehensive list of stop words, check out `www.link-assistant.com/seo-stop-words.html`.
- **Choose a category.** Make sure that you have your categories set up and that you place your posts in the proper categories. Whatever you do, don't use the uncategorized category; it brings no SEO value to the table.
- **Fill out metadata.** If you're using a theme framework, the form for metadata often appears right below the post box. If you aren't using a theme framework, you can use the All in One SEO Pack plugin (see Figure 4-8). When activated, this plugin usually appears toward the bottom of your posting page. Make sure that you completely fill out the title, description, keywords, and other information that the plugin or theme framework asks for.
- **Tag posts properly.** You may want to get into the habit of taking the keywords from the All in One SEO Pack plugin and pasting them into the tags section of the post.



All in One SEO Pack

Preview Snippet

Links Post | WordPress All-In-One For Dummies

http://lisa.dev/links-post/

A preview of what this page might look like in search engine results.
Click here for documentation on this setting

Title: Links Post

35 characters. Most search engines use a maximum of 60 chars for the title.

Description:

0 characters. Most search engines use a maximum of 160 chars for the description.

Robots Meta NOINDEX □

Robots Meta NOFOLLOW □

FIGURE 4-8: The All in One SEO Pack's metadata form.

- **Fill out image info.** Take the time to completely fill out your image info whenever you upload pictures to your posts. Every time you upload an image to WordPress, you see a screen in which you can fill in the URL slug, description, and alt text for the image you've uploaded.

Creating a link-building strategy

In previous sections of this chapter, I tackle most of the onsite SEO strategy and concepts. In this section, I explain how you can start working on your off-page strategy. Here are some things to keep in mind:

- **Fill out your social media profiles.** As I discuss in Book 5, Chapter 1, a lot of social media sites pass on page rank through their profiles. Take the time to fill out your social media profile properly and list your site in these profiles.

  Social media sites allow you to link to your site with a descriptive word. Industry professionals say that this link has value to search engines, which is debatable, but adding it can never hurt.

- **Use forum signatures.** If you participate in forums, you can easily generate traffic and earn some links to your website from other websites by including your site URL in your forum signature.
- **Examine your competitor's links.** See where your competitors or other people in your niche are getting links — such as directories, lists, guest blogs, and friends' sites — and then try to get links on those sites. Try to determine the relationships, and figure out whether you can establish a relationship with those sites as well.
- **Guest-author.** Find some of the top sites in your niche and then ask them whether you can guest-author. Guest-authoring gives you a link from a respected source and builds a relationship with other content creators. Also, guest-authoring can't hurt your subscriber numbers; often, you see a bump after you guest-author on a large site.
- **Use website directory registration.** Directory registration, albeit a time-consuming affair, can often provide a large number of backlinks to your site from respected sources.
- **Comment on other sites.** A lot of sites pass on page rank because the links in their comment section are live. Make sure that when you engage other people, you properly fill out your information before you post, including the URL to your site. Don't start posting inane comments on random sites to get links. Doing so is considered to be rude and can lead to your site being marked as spam in various commenting systems.
- **Participate in social bookmarking.** Getting involved in Reddit, Digg, and other social-bookmarking communities allows you to participate in social media with people who have similar interests, and you can build links to your site by submitting content to social news and bookmarking sites.

IN THIS CHAPTER

- » Using plugins for SEO best practices
- » Breaking down your SEO configuration options
- » Generating site maps
- » Using redirect plugins
- » Adding pagination

Chapter 5

Exploring Popular SEO Plugins

When you have the concepts of search engine optimization (SEO) down and the beginnings of your strategy properly mapped out, you can install the tools you need. In this chapter, I go through some of the most popular SEO-related plugins. All these plugins have good developers behind them and good track records.

Several plugins in the WordPress Plugin Directory assist with SEO, so it's hard to decide which ones to use. In Book 7, I cover plugins in detail, but in this chapter, I discuss the most common plugins, as well as the ones that I use myself, because they're solid, reliable plugins that deliver good SEO results.

Exploring Must-Use Plugins for SEO Best Practices

Here are the plugins that this chapter covers:

- » **Yoast SEO:** Gives you complete control of the search-engine optimization of your site.

- **Google XML Sitemaps:** Generates an XML site map that's sent to Google, Yahoo!, Bing, and Ask.com. When your site has a site map, site crawlers can more efficiently crawl your site. One of the bonuses of the site map is that it notifies search engines every time you post.
- **Redirection:** Helps when you move from an old site to WordPress or when you want to change the URL structure of an established site. It allows you to manage 301 redirections (when the web address of a page has changed, a 301 redirect tells search engines where they can find the new web address of the page), track any 404 errors (errors that are displayed when you try to load a page that does not exist) that occur on the site, and manage any possible incorrect web address (URL) issues with your website.
- **WP-PageNavi:** Helps you achieve pagination for your WordPress site by allowing you to display page links at the bottom of each archive page and/or category page.

TIP

Check out Book 7, Chapter 2 for information on plugin installation.

Yoast SEO

The Yoast SEO plugin (`https://wordpress.org/plugins/wordpress-seo`) makes your life so much easier because it automates many SEO tasks for you. Of all the plugins I cover, this one is an absolute must for your site. It gives you a lot of control of your SEO, and it's very flexible.

This plugin breaks down each option on the configuration page, which allows you to preselect options right off the bat or make some changes to the plugin.

After you install this plugin, click the SEO link on the Dashboard to open the Yoast SEO Dashboard page, shown in Figure 5-1. Then click the General tab and follow these steps:

1. **Click the Open the Configuration Wizard button.**

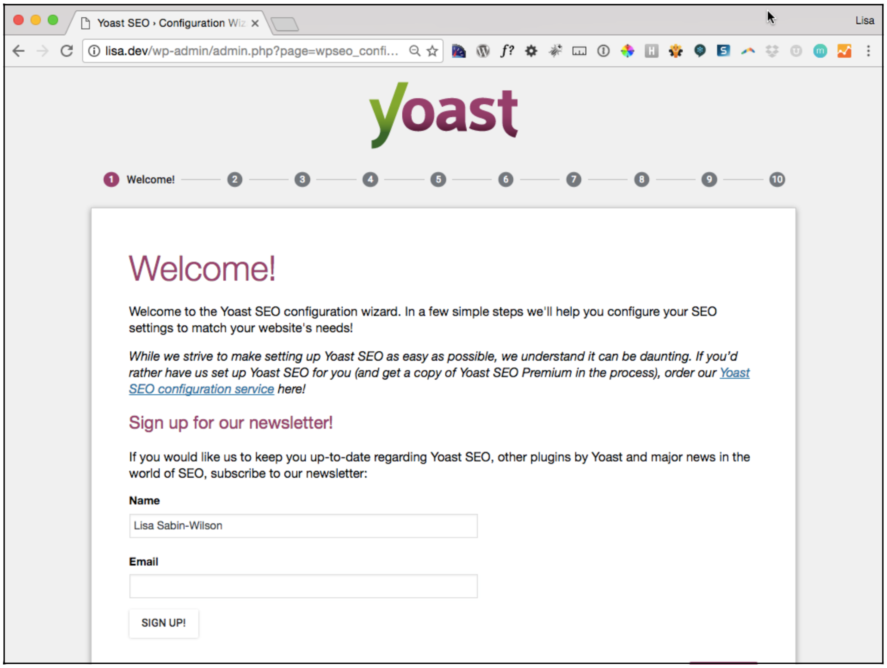
   This step opens the welcome page (see Figure 5-1) and starts the configuration process.

2. **(Optional) Enter your name and email address to sign up for the Yoast email newsletter.**

   If you do not wish to subscribe to the newsletter, leave the text fields blank.

3. **Click the Next button.**

   This takes you to the Environment screen.



Yoast SEO › Configuration Wiz
lisa.dev/wp-admin/admin.php?page=wpseo_confi...
Lisa
yoast
1 Welcome! 2 3 4 5 6 7 8 9 10

Welcome!

Welcome to the Yoast SEO configuration wizard. In a few simple steps we'll help you configure your SEO settings to match your website's needs!

While we strive to make setting up Yoast SEO as easy as possible, we understand it can be daunting. If you'd rather have us set up Yoast SEO for you (and get a copy of Yoast SEO Premium in the process), order our Yoast SEO configuration service here!

Sign up for our newsletter!

If you would like us to keep you up-to-date regarding Yoast SEO, other plugins by Yoast and major news in the world of SEO, subscribe to our newsletter:

Name

Lisa Sabin-Wilson

Email

SIGN UP!

FIGURE 5-1: The Yoast SEO Welcome page.

4. **Select Production on the Environment page, and then click the Next button.**

   The options on this page include

   - *Production:* This site is a live site with real traffic.
   - *Staging:* This site is a copy of a live site used only for testing purposes.
   - *Development:* This site is running on a local computer and used only for development purposes.

5. **Select the type of site you're building on the Site Type page, and then click the Next button.**

   Available options on this page include

   - Blog
   - Webshop
   - News Site
   - Small Business Site
   - Other Corporate Site
   - Other Personal Site

6. **Select Company or Person on the Company or Person page and then click the Next button.**

   This data is shown as metadata on your site and is intended to appear in Google's Knowledge Graph, a knowledgebase used by Google to enhance its search results. Your site can be a company or a person.

7. **(Optional) Add your social media profile URLs on the Social Profiles page, and click the Next button.**

8. **Select the options for your post visibility on the Post Type Visibility page and click the Next button.**

   WordPress automatically generates a URL for each media item in the library. Enabling visibility here allows for Google to index the generated URL. Select Visible or Hidden options for the following post types:

   - Posts
   - Pages
   - Media

9. **Select your desired option on the Multiple Authors page, and click the Next button.**

   Does your site have (or will it have) multiple authors? Select Yes or No.

10. **(Optional) Enter your authentication code on the Google Search Console page, and click the Next button.**

    This step allows Yoast SEO to fetch your Google Search Console information. You can skip this section if you don't use Google Search Console.

11. **Enter your website name in the Title Settings page, select the character you'd like to use to separate your site title and content title in the Title Separator section, and click the Next button.**

    Type the title of your website in the Website Name text box. (This title is the same one that you entered in the General Settings page, as I discuss in Book 3, Chapter 2.)

    The Title Separator displays, for example, between your post title and site name. Symbols, such as a dash or an arrow, are shown in the size in which they'll appear in the search results.

12. **Click the Close button on the Success page.**

If you find that you need to change any of the settings in the configuration wizard, click any of the links on the SEO menu in your WordPress Dashboard to change the Title tags, Meta tags, and Social Media profile URLs.

Most of the remaining options that are selected by default should work fine for your site. Make sure, however, that Noindex is selected for the Archives pages (to find this setting, choose SEO➪Titles & Metas➪Archives) to make sure that the search engines are not indexing your archive pages. Indexing archive pages would provide the search engines with duplicate content that they have already indexed and that is one of the top ways of getting penalized by Google, which means you run the risk of having your site removed from Google's search engine results completely.

After you make all your selections, click the Save Changes button at the bottom of any of the Yoast SEO settings pages where you make any changes.

TIP

You can use the Yoast SEO plugin right out of the box without changing any of the default options. If you aren't confident in fine-tuning it, you don't have to. But don't forget to put in the proper information for your home page, including title, description, and keywords.

The Yoast SEO plugin also gives you full control of SEO settings for each individual page and post on your site by allowing you to configure the following:

- Facebook and Twitter share title, description, and image
- Title
- Slug (or permalink)
- Meta description (the short snippet of text that appears in search engine listings)
- Preferred focus keywords

Another nice feature of the Yoast SEO plugin is that it gives you real-time analysis of your content by rating its readability and keyword analysis. It also makes recommendations for improving both before you publish your content.

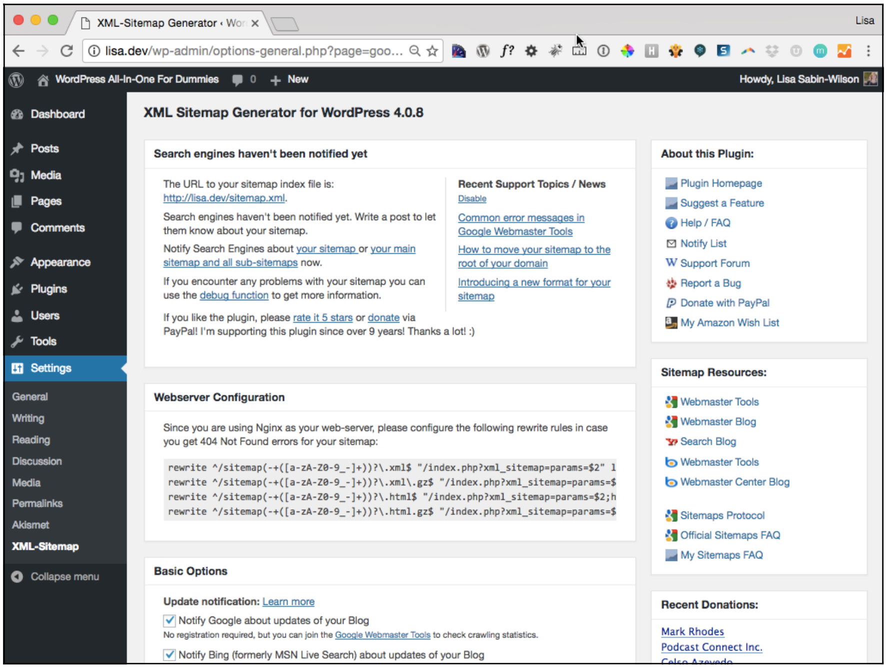
Yoast SEO creates Google XML site maps for you, which you can configure by choosing Dashboard➪SEO➪XML Sitemaps. Don't worry, though — if you decide not to use the Yoast SEO plugin, the next section has you covered with a plugin that creates XML site maps for you as well.

Google XML Sitemaps for WordPress

You can use Google XML Sitemaps (`https://wordpress.org/plugins/google-sitemap-generator`) right out of the box with very little configuration. After you install it, you need to tell the plugin to create your site map for the first time. You can accomplish this easy task by following these steps:

1. **Click the XML-Site map link on the Settings menu on your Dashboard.**

   The XML Sitemap Generator for WordPress options page appears in your browser window. (See Figure 5-2.)



XML Sitemap Generator for WordPress 4.0.8

Search engines haven't been notified yet

The URL to your sitemap index file is: http://lisa.dev/sitemap.xml.

Search engines haven't been notified yet. Write a post to let them know about your sitemap.

Notify Search Engines about your sitemap or your main sitemap and all sub-sitemaps now.

If you encounter any problems with your sitemap you can use the debug function to get more information.

If you like the plugin, please rate it 5 stars or donate via PayPal! I'm supporting this plugin since over 9 years! Thanks a lot! :)

Recent Support Topics / News

Disable

Common error messages in Google Webmaster Tools

How to move your sitemap to the root of your domain

Introducing a new format for your sitemap

About this Plugin:

Webserver Configuration

Since you are using Nginx as your web-server, please configure the following rewrite rules in case you get 404 Not Found errors for your sitemap:

```
rewrite ^/sitemap(-+([a-zA-Z0-9_-]+))?\.xml$ "/index.php?xml_sitemap=params=$2" l
rewrite ^/sitemap(-+([a-zA-Z0-9_-]+))?\.xml\.gz$ "/index.php?xml_sitemap=params=$
rewrite ^/sitemap(-+([a-zA-Z0-9_-]+))?\.html$ "/index.php?xml_sitemap=params=$2;h
rewrite ^/sitemap(-+([a-zA-Z0-9_-]+))?\.html.gz$ "/index.php?xml_sitemap=params=$
```

Sitemap Resources:

Basic Options

Update notification: Learn more

☑ Notify Google about updates of your Blog

No registration required, but you can join the Google Webmaster Tools to check crawling statistics.

☑ Notify Bing (formerly MSN Live Search) about updates of your Blog

Recent Donations:

Mark Rhodes
Podcast Connect Inc.
Celso Azevedo

FIGURE 5-2: XML Sitemap Generator for WordPress settings.

2. **In the top module, titled Search Engines Haven't Been Notified Yet, click the Your Sitemap link in the option that begins with the words *Notify Search Engines*.**

   The XML Sitemap Generator for WordPress page refreshes, and the Search Engines Haven't Been Notified Yet module is replaced by the Result of the Last Ping module, showing the date when your site map was last generated.

3. **(Optional) View your site map in your browser.**

   Click the first site-map link in the top module or visit `http://`*yourdomain*.com/sitemap.xml (where *yourdomain*.com is your actual domain).

You never need to visit your site map or maintain it. The XML Sitemap Generator maintains the file for you. Every time you publish a new post or page on your website, the plugin automatically updates your site map with the information and notifies major search engines — such as Google, Bing, and Ask.com — that you've updated your site with new content. Basically, the plugin sends an invitation to the search engines to come to your site and index your new content in their search engines.

TIP

Having a Google Webmaster account can further assist Google in finding and indexing new content on your site. If you don't already have one of these accounts, visit `www.google.com`, click the Sign In link in the top-right corner, click the Create an Account Now link, and follow the onscreen steps to create a new Google account. After you sign in to the account, you can set up the Google Webmaster tools and add your site map to Google.

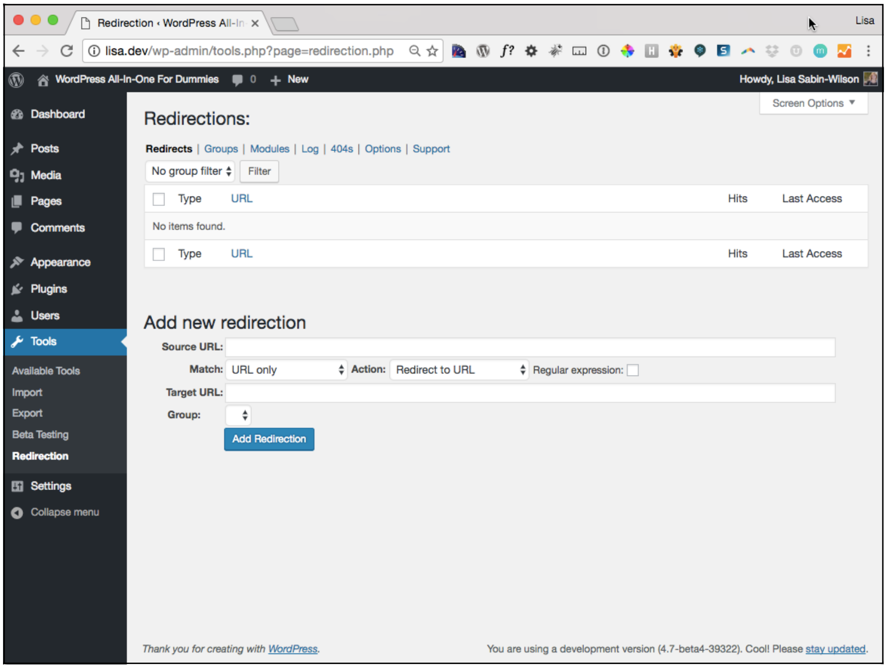
In the Basic Options section of the XML Sitemap Generator for WordPress plugin page (refer to Figure 5-2), select every check box you see.

All the other default settings are fine for you to use, so leave those as they are. In the Sitemap Content section, which is in the middle of the XML Sitemap Generator for WordPress page, select the following check boxes: Include Homepage, Include Posts, Include Static Pages, Include Categories, and Include the Last Modification Time. Making these selections allows search engines to crawl your site in the most efficient way.

Redirection

If you're redoing the URL (permalink) structure of your site or moving a site to WordPress from another blogging platform, such as Blogger or Tumblr, you really need to use the Redirection plugin (`https://wordpress.org/plugins/redirection`). Redirection allows you to maintain the links that are currently coming into your site by rerouting (or redirecting) people coming in through search engines and other existing links going to the new permalink. If you change URLs, you need to reroute/redirect old links to maintain the integrity of incoming traffic from websites and search engines that are still using the old URL.

Using Redirection is a pretty simple process. After you visit the Redirections page in your Dashboard, you find the Redirection link in the Tools menu: Once there, enter the old URL in the Source URL text box, enter the new URL in the Target URL text box, and then click the Add Redirection button. (See Figure 5-3.)



Redirections:

□	Type	URL	Hits	Last Access
No items found.				
□	Type	URL	Hits	Last Access

Add new redirection

Source URL:

Match: URL only Action: Redirect to URL Regular expression: □

Target URL:

Group:

Thank you for creating with WordPress.

You are using a development version (4.7-beta4-39322). Cool! Please stay updated.

FIGURE 5-3: The Redirection plugin allows you to redirect traffic from your old URL.

WP-PageNavi

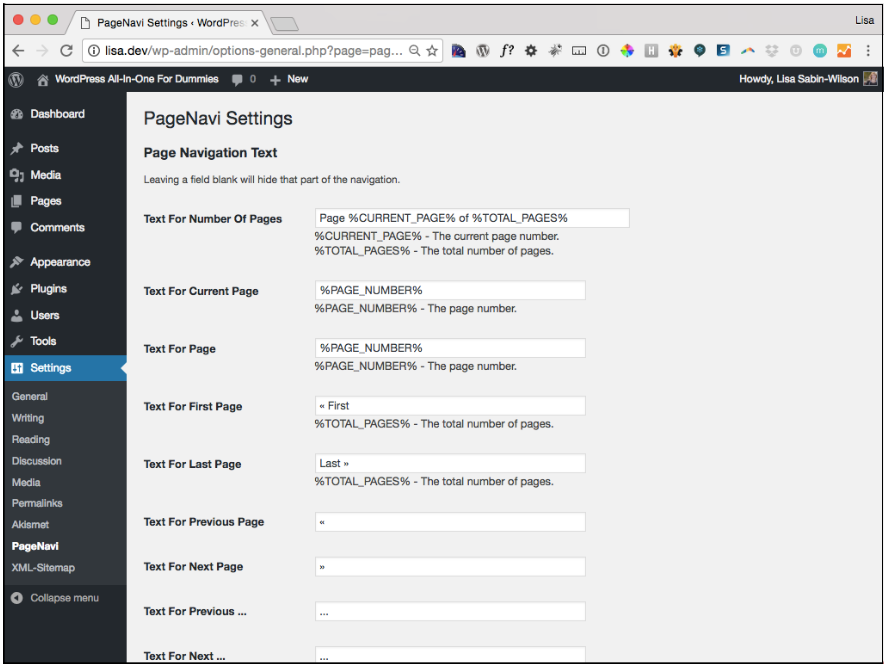
To create page navigation links below your site posts and archive listings for sites that have numbered pages, you need to install the WP-PageNavi plugin (`https://wordpress.org/plugins/wp-pagenavi`). Adjust the WP-PageNavi plugin settings to your liking. The default settings are shown in Figure 5-4.

This plugin provides a better user experience for your readers by making it easier for them to navigate through your content; it also allows search engines to go through your web page easily to index your pages and posts. After you install and activate the plugin, you need to insert the following code into your Main Index template (`index.php`) or any template your theme uses to display archives (such as a blog page, category page, or search page):

```
<?php wp_pagenavi(); ?>
```

TECHNICAL STUFF

The `wp_pagenavi();` template tag needs to be added on a line directly after The Loop. See Book 6, Chapter 3 for extensive discussion of The Loop in the Main Index template file to find out where to add this line of code.



PageNavi Settings

Page Navigation Text

Leaving a field blank will hide that part of the navigation.

Text For Number Of Pages: Page %CURRENT_PAGE% of %TOTAL_PAGES%
%CURRENT_PAGE% - The current page number.
%TOTAL_PAGES% - The total number of pages.

Text For Current Page: %PAGE_NUMBER%
%PAGE_NUMBER% - The page number.

Text For Page: %PAGE_NUMBER%
%PAGE_NUMBER% - The page number.

Text For First Page: « First
%TOTAL_PAGES% - The total number of pages.

Text For Last Page: Last »
%TOTAL_PAGES% - The total number of pages.

Text For Previous Page: «

Text For Next Page: »

Text For Previous ...: ...

Text For Next ...: ...

FIGURE 5-4: Adjust the WP-PageNavi settings.

You can experiment with where you want to place the `wp_pagenavi()` code in your template file to give you the look and feel you want. Additionally, you can control the look of the plugin by providing styling in your CSS (`style.css`) theme file for the WP-PageNavi plugin display, or you can have the plugin insert its default CSS into your regular CSS by deselecting the Use Pagenavi.css? option.

6

Customizing the Look of Your Site

Contents at a Glance

IN THIS CHAPTER

- » Discovering Twenty Seventeen's layout features
- » Tweaking your header media
- » Customizing color options
- » Installing custom navigation menus
- » Exploring widgets on your website

Chapter 1
Examining the Default Theme: Twenty Seventeen

Bundled with the release of WordPress 4.7 in December 2016 is the new default theme, Twenty Seventeen. The goal of the core development team for WordPress is to release a new default theme every year, which is why, with every new installation of WordPress, you find themes called Twenty Ten through Seventeen (each named to correspond with the year for which it was created).

With the release of WordPress version 4.7 at the end of 2016, the resulting community effort was Twenty Seventeen, a powerful theme with drop-down menu navigation, header and background image uploaders, multiple-page templates, widget-ready areas, parent-child theme support, and built-in mobile and tablet support.

The members of the WordPress team who worked on Twenty Seventeen describe it as follows:

"Twenty Seventeen brings your site to life with immersive featured images and subtle animations. With a focus on business sites, it features multiple

sections on the front page as well as widgets, navigation and social menus, a logo, and more. Personalize its asymmetrical grid with a custom color scheme and showcase your multimedia content with post formats. Our default theme for 2017 works great in many languages, for any abilities, and on any device."

These features make Twenty Seventeen an excellent base for many of your theme customization projects. This chapter shows you how to manage all the features of the default Twenty Seventeen theme, such as handling layouts, editing the header graphic and background colors, installing and using custom navigation menus, and using widgets on your site to add some great features.

Exploring the Layout and Structure

If you just want a simple look for your site, look no further than Twenty Seventeen. This theme offers a clean design style that's highly customizable. As such, the font treatments are sharp and easy to read. Many of the new built-in theme features allow you to make simple yet elegant tweaks to the theme, including uploading new feature images and adjusting the background colors. Figure 1-1 shows the Twenty Seventeen WordPress default theme, out of the box — that is to say, without any customizations.

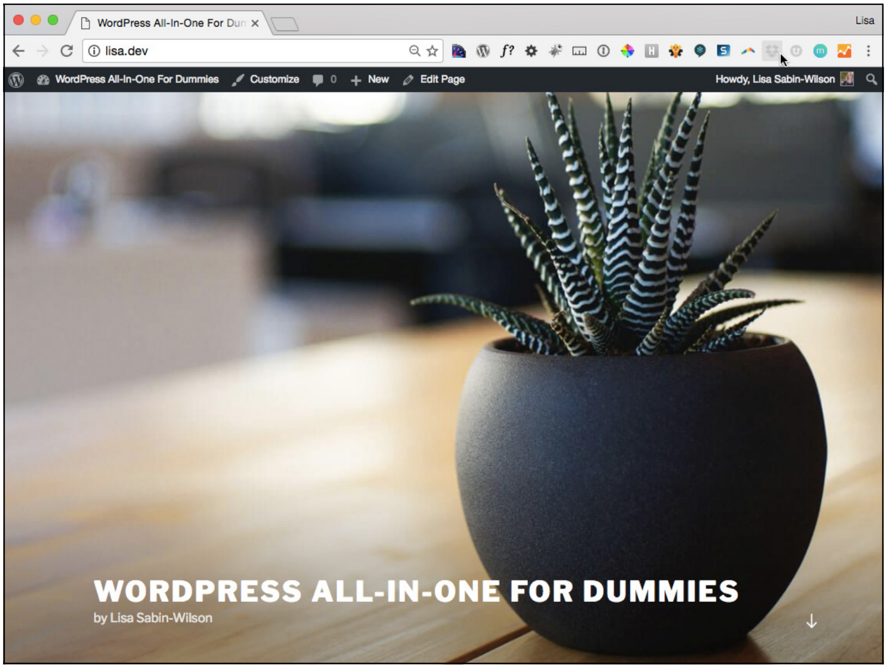
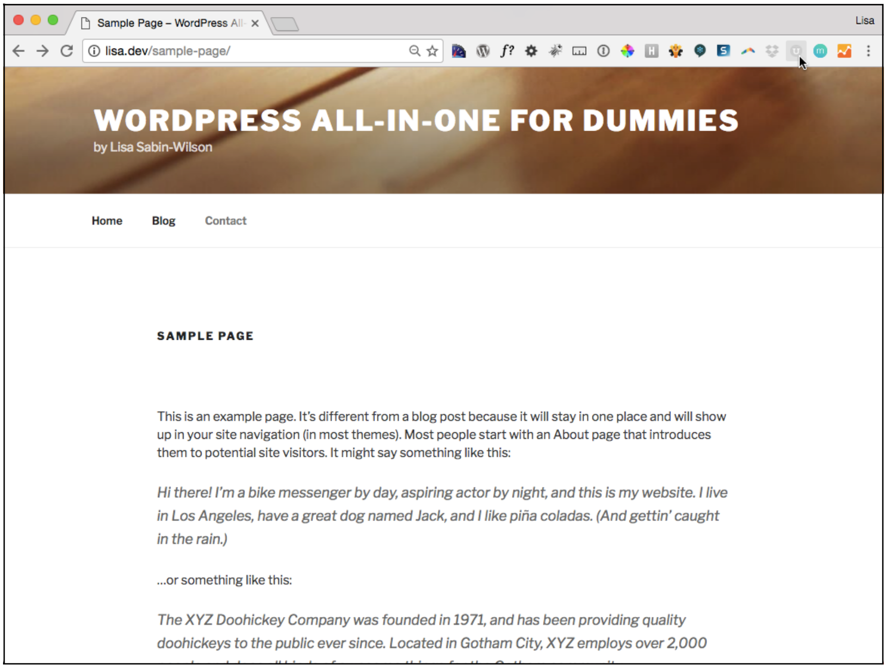

WordPress All-In-One For Dum
Lisa
lisa.dev
WordPress All-In-One For Dummies
Customize
0
New
Edit Page
Howdy, Lisa Sabin-Wilson
WORDPRESS ALL-IN-ONE FOR DUMMIES
by Lisa Sabin-Wilson

FIGURE 1-1: The default theme for WordPress, Twenty Seventeen, with only the title and byline changed.

The Twenty Seventeen theme's distinctive layout features include

- **Header media:** Twenty Seventeen uses trendy design for the header of your site by allowing you to upload a large feature image to display as a full-screen image with the site title displayed at the top (refer to Figure 1-1). Alternatively, you can use a video for the header area of the site with a fall-back image while the video loads.
- **Theme options:** The Theme Options section allows you to use published static page content to display modular content on your home page, making it easier than ever to build small content boxes that contain text, images, or any media that enables you to call attention to your site's offerings and content.
- **One-column page layout:** Twenty Seventeen's one-column layout for WordPress , shown in Figure 1-2, comes in very handy for such pages as product sales pages, email subscription form pages, photography or portfolio pages, and other content that you don't want to be upstaged by distractions on the sidebar.


Sample Page – WordPress All-
Lisa
lisa.dev/sample-page/
WORDPRESS ALL-IN-ONE FOR DUMMIES
by Lisa Sabin-Wilson
Home
Blog
Contact

SAMPLE PAGE

This is an example page. It's different from a blog post because it will stay in one place and will show up in your site navigation (in most themes). Most people start with an About page that introduces them to potential site visitors. It might say something like this:

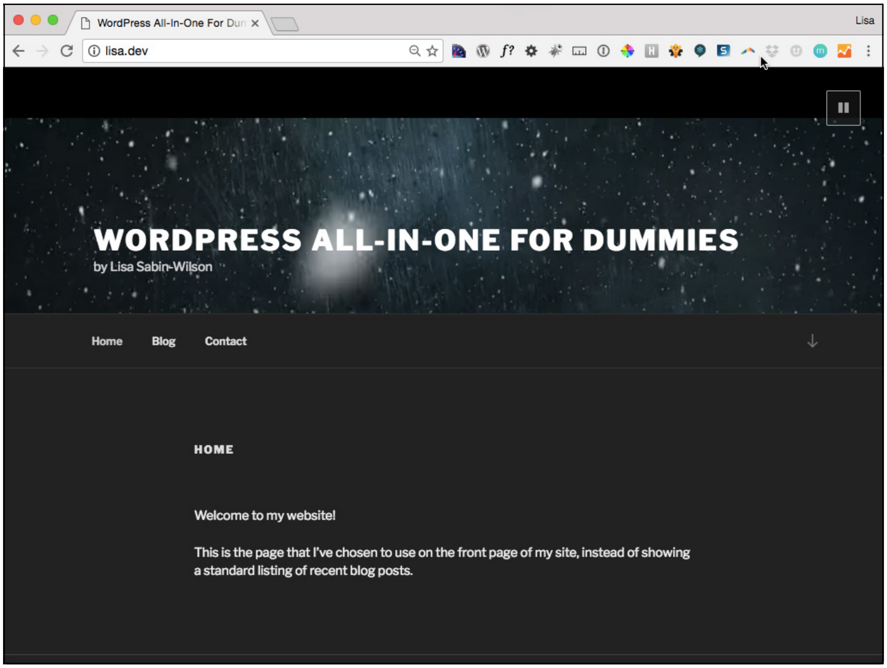
Hi there! I'm a bike messenger by day, aspiring actor by night, and this is my website. I live in Los Angeles, have a great dog named Jack, and I like piña coladas. (And gettin' caught in the rain.)

...or something like this:

The XYZ Doohickey Company was founded in 1971, and has been providing quality doohickeys to the public ever since. Located in Gotham City, XYZ employs over 2,000

FIGURE 1-2: The Twenty Seventeen theme's one-column layout.

- **Color adjustment:** By default, the color scheme for the Twenty Seventeen theme is a white background with black text and content. You can easily change the colors of the header text and site background by using the theme customizer to select the light or dark theme, or you can even use a custom color by using a color picker. Figure 1-3 shows the Twenty Seventeen theme with the dark color scheme.


WordPress All-In-One For Dum
Lisa
lisa.dev
WORDPRESS ALL-IN-ONE FOR DUMMIES
by Lisa Sabin-Wilson
Home
Blog
Contact
HOME

Welcome to my website!

This is the page that I've chosen to use on the front page of my site, instead of showing a standard listing of recent blog posts.

FIGURE 1-3: The Twenty Seventeen theme with custom colors.

Customizing the Header Media

Twenty Seventeen's Header Media options allow you to upload new, unique custom header graphics or a header video for your WordPress site. The option is called Header Media because you can configure an image or a video (or both) for the design of your site.

The recommended dimensions for your customized header media are at least 2,000 pixels wide by 1,200 high. If your photo or video is larger than that, you can crop it after you've uploaded it to WordPress, although for images, cropping with a graphics program (such as Adobe Photoshop) is the best way to get exact results.

Uploading a header image

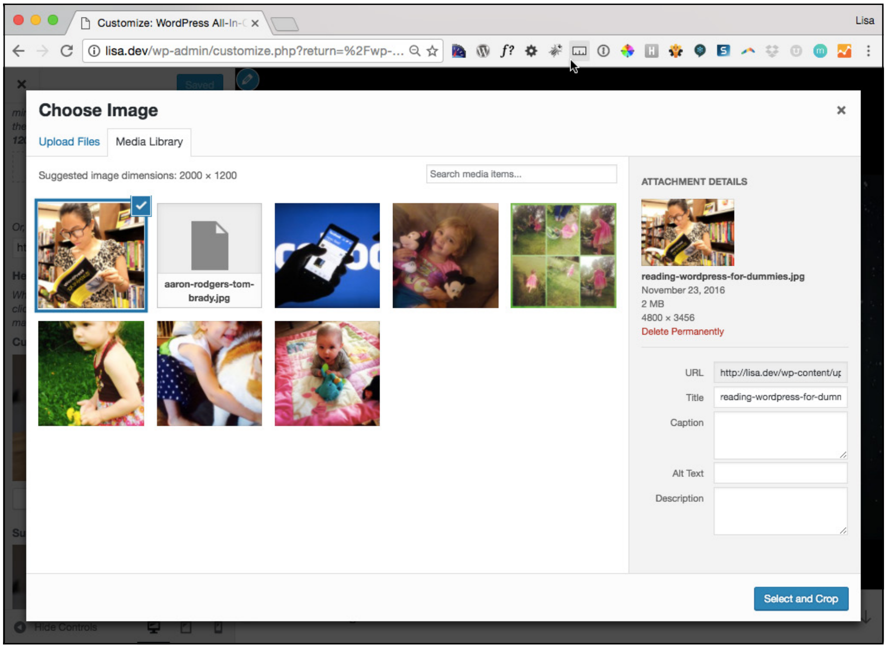
Twenty Seventeen comes preloaded with one default header image, but WordPress allows you to upload one of your own. To install a custom header image, follow these steps with the Twenty Seventeen theme activated (read Book 6, Chapter 2 for information on activating themes):

1. **On the WordPress Dashboard, click the Header link on the Appearance menu.**

   The Custom Header page appears, with the Customizing Header Media panel displayed on the left side of the screen.

2. **In the Header Image section, click the Add New Image button.**

   This opens the Choose Image screen shown in Figure 1-4.



Suggested image dimensions: 2000 × 1200

reading-wordpress-for-dummies.jpg
November 23, 2016
2 MB
4800 × 3456

URL: http://lisa.dev/wp-content/up
Title: reading-wordpress-for-dumm

FIGURE 1-4: Selecting an image to use as a header image.

3. **Click the Select and Crop button.**

   This step opens the Crop Image screen, shown in Figure 1-5.

4. **(Optional) Crop the image to your liking.**

   To resize and crop your image, drag one of the eight tiny boxes located at the corners and the middle of the image. You can also click within the image and move the entire image up or down to get the placement and cropping effect that you want.

5. **Click the Crop Image button to crop your header image.**

6. **Click the Save & Publish button in the top-right corner of the Customizing Header Media screen to save your changes.**

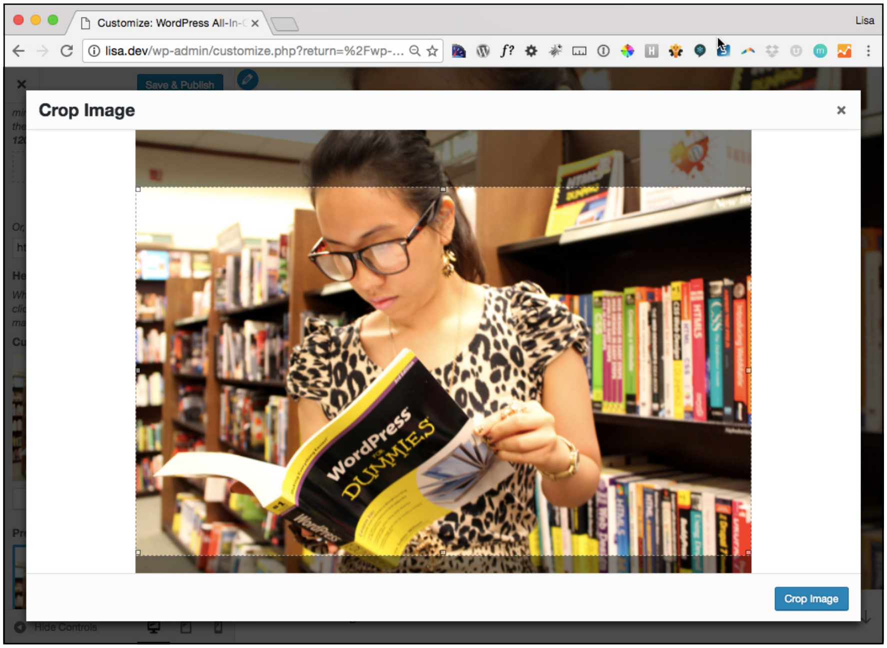

Customize: WordPress All-In-O
lisa.dev/wp-admin/customize.php?return=%2Fwp-...
Lisa
Save & Publish
Crop Image
Crop Image

FIGURE 1-5: Using the crop tool.

Figure 1-6 shows the Twenty Seventeen theme with a custom header image.

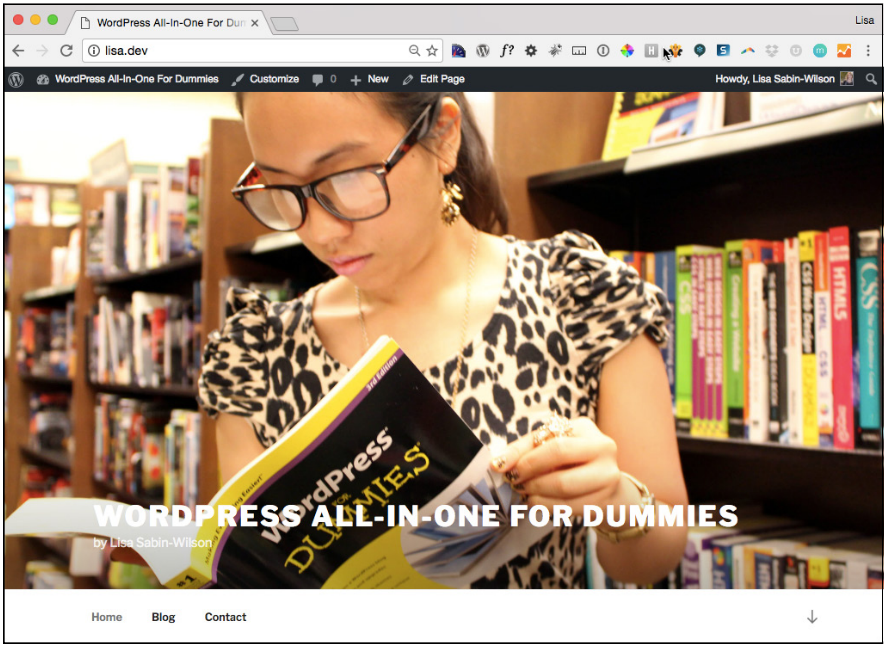


FIGURE 1-6: The Twenty Seventeen theme with new header image.

TIP

You can upload multiple images to use in the header image area and click the Randomize Uploaded Headers button in the Customizing Header Media panel to tell the Twenty Seventeen theme that you'd like to see a different header on each new page load. This option adds a little variety to your site!

Including a header video

The Twenty Seventeen theme comes with a default header image but not with a video for you to use as a header. One small text field, however, allows you to include a video from YouTube (`http://youtube.com`) so that visitors to your site see a video in the background of your header.

Follow these steps to configure a header video:

1. **On the WordPress Dashboard, click the Header link on the Appearance menu.**

   The Custom Header page appears, with the Customizing Header Media panel displayed on the left side of your screen.

2. **To upload your video file, click the Select Video button in the Header Video section.**

   The Select Video screen opens so you can select a video from the WordPress Media Library or upload a video file from your computer's hard drive. The Header Video supports the .mp4 file format for videos.

   If you would rather use a video from a service like YouTube, skip this step and proceed to Step 3.

3. **To use a video from YouTube, copy and then paste the link to that video in the Enter a YouTube video URL text field.**

4. **Click the Save & Publish button in the top-right corner of the Customizing Header Media panel.**

   This action saves and publishes any changes you made in the header media.

Customizing the Colors

After you explore the header image settings, you may want to pick a background color or change the color of the header text. The default background color in the Twenty Seventeen theme is white, but you can change the color scheme. Here's how:

1. **On the WordPress Dashboard, click the Customize link on the Appearance menu.**

   The Customizer panel opens on the left side of your screen.

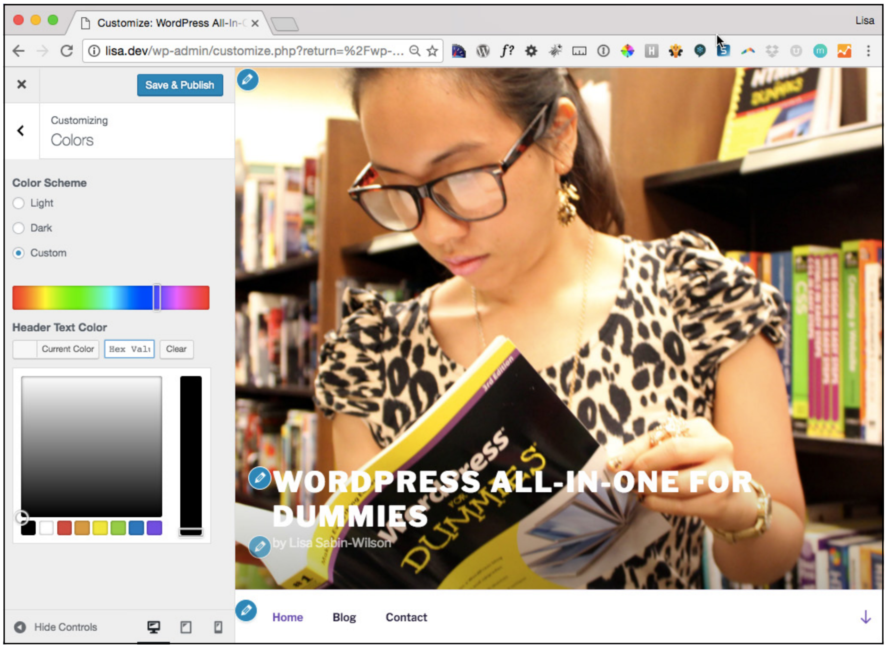
2. **Click the Colors link.**

   The Customizing Colors screen opens.

3. **Select the Dark option to change your color scheme to a prebuilt dark palette.**

4. **Select the Custom option to configure your own color.**

   Selecting this option displays a color-palette bar, shown in Figure 1-7.



Color Scheme

○ Light

○ Dark

● Custom

FIGURE 1-7: The Twenty Seventeen theme's color options.

5. **On the color bar, select your preferred color.**

   Click anywhere on the color bar to set your preferred background color.

6. **Click the Select Color button in the Header Text Color section to change the color of the text that appears in your header.**

   The Select Color button changes to Current Color after you click it to set the color value. You can click anywhere on the color palette that appears (refer to Figure 1-7) or you can type a six-digit hexadecimal code (*hex code,* for short) if you already know your preferred color.

TIP

Color values are defined in HTML and CSS by six-digit hexadecimal codes starting with the # sign, such as #000000 for black or #FFFFFF for white. (As noted in Book 6, Chapter 4, adjusting hexadecimal colors is one of the easiest ways to tweak the colors in your theme for a new look.)

7. **When you finalize your selections, click the Save & Publish button.**

TIP

The WordPress Customizer displays on the left side of your computer screen while a preview of your site displays on the right side. As you're making changes in the Customizer, you see a preview of what changes those options make on your site so you can preview before you publish.

Including Custom Navigation Menus

Navigational menus are vital parts of your site's design. They tell your site visitors where to go and how to access important information or areas of your site.

Similar to the WordPress Widgets feature, which lets you drag and drop widgets, the Menus feature offers an easy way to add and reorder a variety of navigational links to your site, as well as create secondary menu bars (if your theme offers multiple menu areas).

TIP

Additionally, the Menus feature improves WordPress by allowing you to easily create more traditional websites, which sometimes need multiple and more diverse navigational areas than a typical website layout uses or needs.

Twenty Seventeen comes with the appropriate code in the navigation menus to make use of this robust feature. (By default, Twenty Seventeen offers two menu navigation areas to include custom menus.)

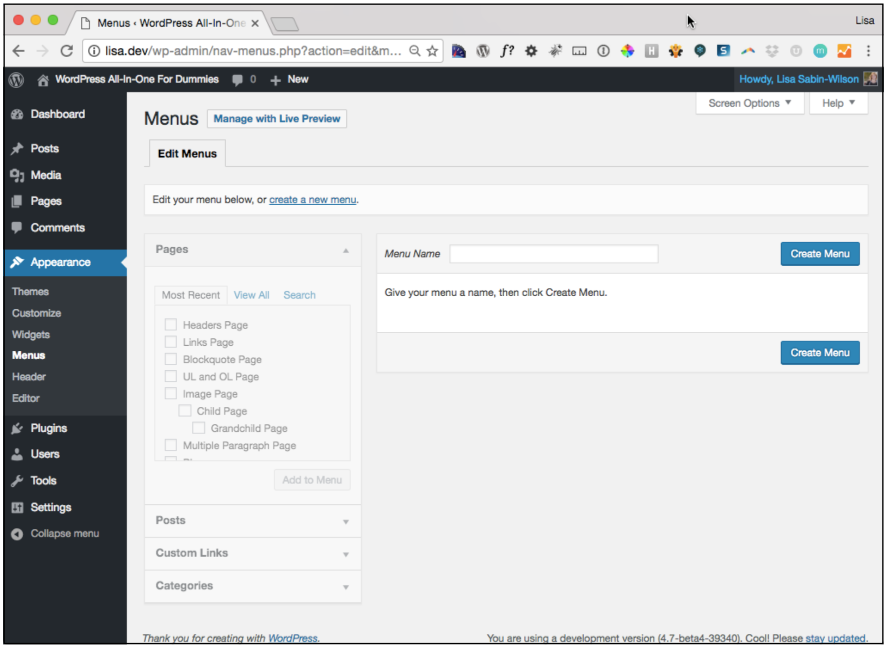
To create a new navigation menu in Twenty Seventeen, follow these steps:

1. **On the WordPress Dashboard, click the Menus link on the Appearance menu.**

   The Menus screen loads, as shown in Figure 1-8.

2. **Enter a menu name in the Menu Name field and then click Create Menu.**

   After you create your new custom menu, the gray modules to the left become active, allowing you to add new links to your custom menu.



Edit your menu below, or create a new menu.

Give your menu a name, then click Create Menu.

Thank you for creating with WordPress.

You are using a development version (4.7-beta4-39340). Cool! Please stay updated.

FIGURE 1-8: The WordPress Menus page.

3. **In the Manage Locations module at the top of the Menus screen, choose your new menu from the Top Menu drop-down menu and then click Save.**

   Your new menu is activated for display in your site's header.

4. **Repeat Steps 1 through 3 to configure a second menu for the Social Links Menu location.**

   The Twenty Seventeen theme is programmed to recognize links to Facebook, Twitter, and other social media services, so when you add social media links to the Social Links menu, Twenty Seventeen automatically adds social media icons in the footer area of your site. These icons are linked to the social media profile links you add to the menu.

5. **Click the Edit Menus tab of the Menus screen.**

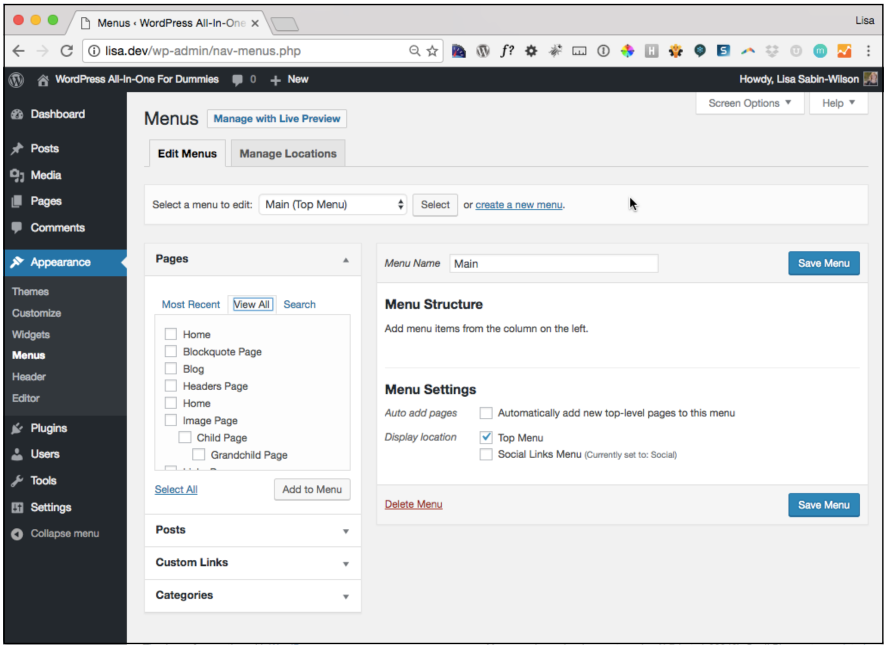
6. **From the drop-down menu at the top of the Menus screen, choose the menu you want to edit.**

   For this section of the chapter, I created a menu called Main and assigned it to the Top Menu location. The following steps and images reflect those options.

7. **Add items to your new menu, such as custom links, pages, and categories.**

   Items that you can add to your menu include the following:

- *Pages:* To include existing pages on your menu, locate the Pages module (shown in Figure 1-9) and click the pages you want to include. After you do that, click the Add to Menu button and then click the Save Menu button.



Select a menu to edit: Main (Top Menu)

☐ Home
☐ Blockquote Page
☐ Blog
☐ Headers Page
☐ Home
☐ Image Page
☐ Child Page
☐ Grandchild Page

Menu Name: Main

Add menu items from the column on the left.

Auto add pages ☐ Automatically add new top-level pages to this menu

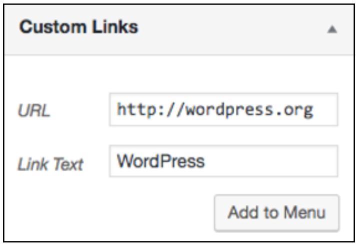
Display location ☑ Top Menu
☐ Social Links Menu (Currently set to: Social)

FIGURE 1-9: Selecting pages to add to the custom menu.

- *Categories:* To include existing categories on your menu, click the Categories link to open the Categories menu module; then click the categories you want to include. After you do that, click the Add to Menu button and then click the Save Menu button.
- *Custom Links:* You can add links to other websites, such as your Twitter or Facebook profile pages. Scroll to the Custom Links module (shown in Figure 1-10). In the URL field, type the web address you want to direct people to. In the Label field, add the word or phrase the menu displays for people to click. Then click the Add to Menu button, and then click the Save Menu button.

TIP

If you're using custom post types (covered in Book 6, Chapter 6), click the Screen Options tab in the top-right corner of the Dashboard screen (refer to Figure 1-9) and choose Custom Post Types under the Boxes heading. This option makes custom post type links available for addition to the menu.



Custom Links

URL http://wordpress.org

Link Text WordPress

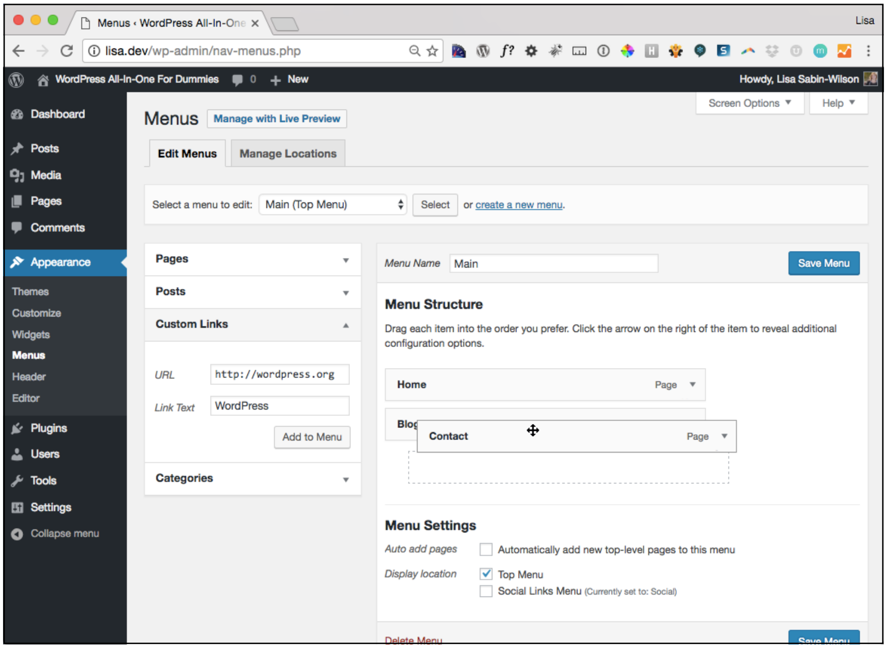
FIGURE 1-10: Adding links to a custom menu.

8. **Click Save Menu to add your custom menu to your theme.**

   REMEMBER

   Always click Save Menu after you make any significant change in a custom menu, such as reordering or adding new items.

After you save your navigation menu, you can use the drag-and-drop interface to rearrange it, as shown in Figure 1-11. Additionally, you can create submenus below top-level menu items by moving menu items slightly to the right below the top-level items.



Select a menu to edit: Main (Top Menu) Select or create a new menu.

URL http://wordpress.org

Link Text WordPress

Menu Name Main

Menu Structure

Drag each item into the order you prefer. Click the arrow on the right of the item to reveal additional configuration options.

Menu Settings

Auto add pages □ Automatically add new top-level pages to this menu

Display location ☑ Top Menu

□ Social Links Menu (Currently set to: Social)

FIGURE 1-11: The drag-and-drop interface of the WordPress Menus screen.

TIP

Use the submenus feature to avoid cluttering the navigation bar. By organizing content logically, you can help readers find what they want faster even if you have lots of content for them to look through.

You can also create multiple custom menus and add them to your theme through widget areas by using any one of the following:

- Custom Menu widget (using widgets is covered in Book 6, Chapter 3)
- Multiple menu areas, providing the theme you are using supports the use of multiple menus (see Book 6, Chapter 6)
- Inserting the menu template tag in one of your theme's template files (information on working with theme template tags is found in Book 6, Chapter 6)

Enhancing Your Website with Widgets

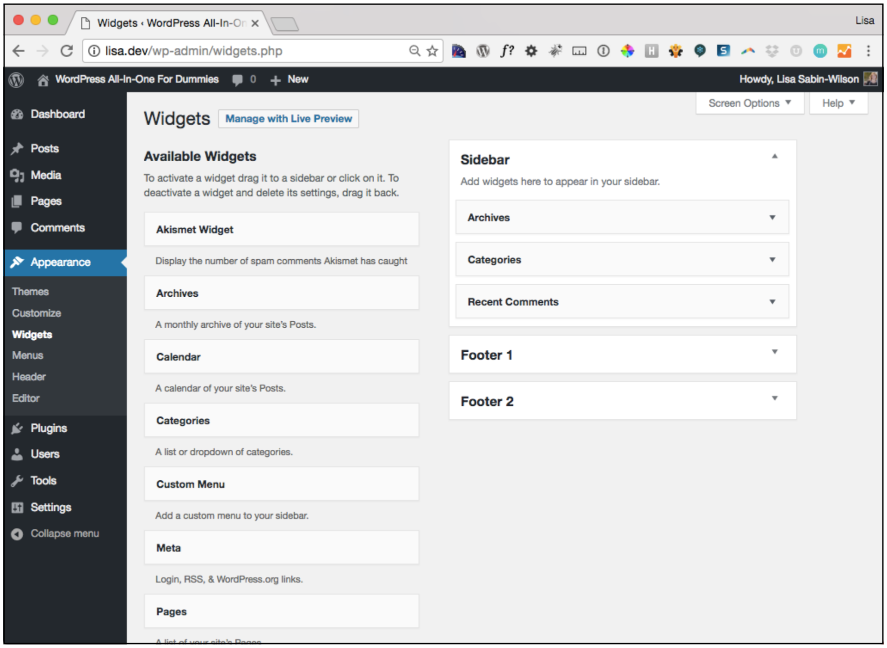
WordPress widgets are helpful tools built into the WordPress application. They allow you to arrange the display of content on your blog sidebar, such as recent posts and archive lists. With widgets, you can arrange and display the content of the sidebar of your site without having to know a single bit of PHP or HTML.

Widget areas are the regions of your theme where you can insert and arrange content (such as a list of your recent blog posts or links to your favorite sites) or custom menus by dragging and dropping (and editing) available widgets (shown on the Dashboard's Widget page) into those corresponding areas. You can find more information on widget areas in Book 6, Chapter 3.

Many widgets offered by WordPress (and those added by some WordPress themes and plugins) provide drag-and-drop installation of more advanced functions that normally are available only if you write code directly into your theme files.

Click the Widgets link on the Appearance menu on the Dashboard to see the available widgets on the Widgets screen. This feature is a big draw because it lets you control what features you use and where you place them without having to know a lick of code.

To explore the Twenty Seventeen theme's widget-ready areas, include Sidebar, Footer 1 and Footer 2, as shown in Figure 1-12.



Widgets

Available Widgets

To activate a widget drag it to a sidebar or click on it. To deactivate a widget and delete its settings, drag it back.

Akismet Widget

Display the number of spam comments Akismet has caught

Archives

A monthly archive of your site's Posts.

Calendar

A calendar of your site's Posts.

Categories

A list or dropdown of categories.

Custom Menu

Add a custom menu to your sidebar.

Meta

Login, RSS, & WordPress.org links.

Pages

A list of your site's Pages

Sidebar

Add widgets here to appear in your sidebar.

Archives

Categories

Recent Comments

Footer 1

Footer 2

FIGURE 1-12: This page displays available widgets and widget-ready areas.

Adding widgets to your sidebar

The Widgets screen lists all the widgets that are available for your WordPress site. On the right side of the Widgets screen is the sidebar area designated in your theme. You drag your selected widget from the Available Widgets section to your chosen widget area on the right. To add a Search box to the right sidebar of the default layout, for example, drag the Search widget from the Available Widgets section to the Sidebar widget area.

To add a new widget to your sidebar, follow these steps:

1. **Find the widget you want to use.**

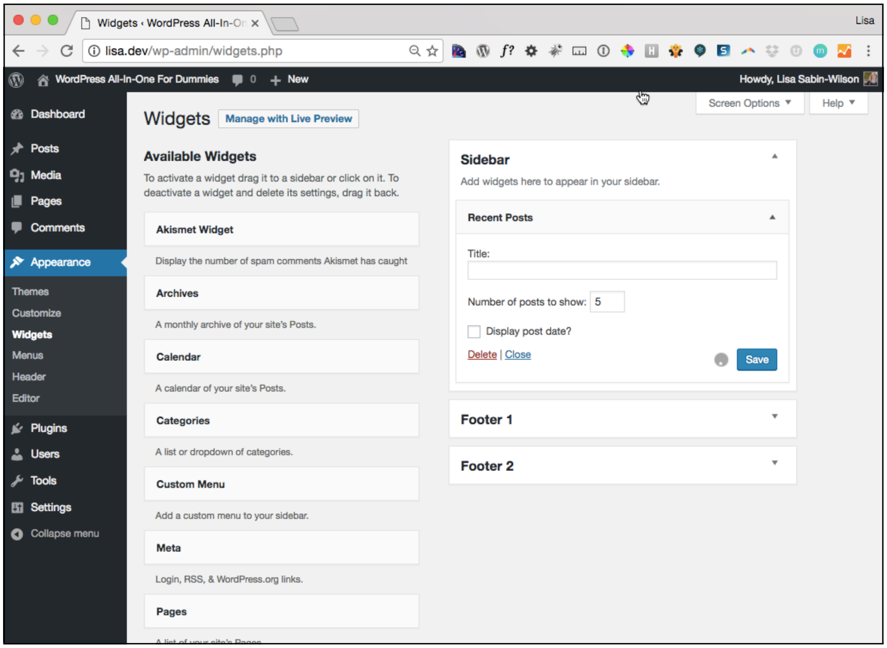
   The widgets are listed in the Available Widgets section. For the purpose of these steps, choose the Recent Posts widget.

2. **Drag and drop the widget to the Sidebar widget section on the right side of the page.**

   The widget is now located in the Sidebar widget section, and the content of the widget now appears on your site's sidebar.

3. **Click the arrow to the right of the widget title.**

   Options for the widget appear. Each widget has different options that you can configure. The Recent Posts widget, for example, lets you configure the title, the number of recent posts you want to display (the default is 5; the maximum is 15), and the date. (See Figure 1-13.)


Widgets ‹ WordPress All-In-On
Lisa
lisa.dev/wp-admin/widgets.php
WordPress All-In-One For Dummies
0
New
Howdy, Lisa Sabin-Wilson
Dashboard
Posts
Media
Pages
Comments
Appearance
Themes
Customize
Widgets
Menus
Header
Editor
Plugins
Users
Tools
Settings
Collapse menu
Screen Options
Help
Widgets
Manage with Live Preview
Available Widgets
To activate a widget drag it to a sidebar or click on it. To deactivate a widget and delete its settings, drag it back.
Akismet Widget
Display the number of spam comments Akismet has caught
Archives
A monthly archive of your site's Posts.
Calendar
A calendar of your site's Posts.
Categories
A list or dropdown of categories.
Custom Menu
Add a custom menu to your sidebar.
Meta
Login, RSS, & WordPress.org links.
Pages
A list of your site's Pages
Sidebar
Add widgets here to appear in your sidebar.
Recent Posts
Delete | Close
Save
Footer 1
Footer 2

Title:

Number of posts to show: 5

□ Display post date?

FIGURE 1-13: Editing the Recent Posts widget.

4. **Select your options, and click the Save button.**

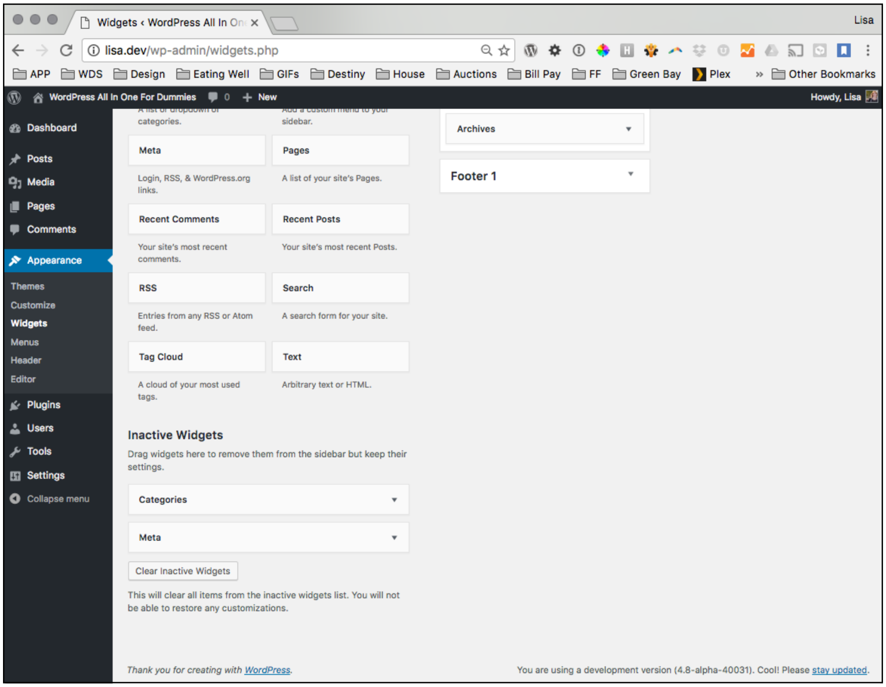
   The options you've set are saved.

5. **Arrange your widgets in the order in which you want them to appear on your site by dragging and dropping them in the list.**

   Repeat this step until your widgets are arranged the way you want them.

TIP

To remove a widget from your sidebar, click the arrow to the right of the widget title to open the widget options; then click the Delete link. WordPress removes the widget from the right side of the page and places it back in the Available Widgets list. If you want to remove a widget but want WordPress to remember the settings that you configured for it, instead of clicking the Delete link, simply drag the widget into the Inactive Widgets area, shown in Figure 1-14, on the bottom of the Widgets screen. The widget and all your settings are stored for future use.



A list or dropdown of categories.

Add a custom menu to your sidebar.

Meta

Login, RSS, & WordPress.org links.

Pages

A list of your site's Pages.

Recent Comments

Your site's most recent comments.

Recent Posts

Your site's most recent Posts.

RSS

Entries from any RSS or Atom feed.

Search

A search form for your site.

Tag Cloud

A cloud of your most used tags.

Text

Arbitrary text or HTML.

Inactive Widgets

Drag widgets here to remove them from the sidebar but keep their settings.

Categories ▾

Meta ▾

Clear Inactive Widgets

This will clear all items from the inactive widgets list. You will not be able to restore any customizations.

Archives ▾

Footer 1 ▾

Thank you for creating with WordPress.

You are using a development version (4.8-alpha-40031). Cool! Please stay updated.

FIGURE 1-14: The Inactive Widgets area on the Widgets screen.

After you select and configure your widgets, click the Visit Site button at the top of your WordPress Dashboard (to the right of your site name). Your site's sidebar reflects the content (and order of the content) of the Widgets screen sidebar. How cool is that? You can go back to the Widgets screen and rearrange items, as well as add and remove items, to your heart's content.

REMEMBER

The number of options available for editing a widget depend on the widget. Some widgets have several editable options; others simply let you write a title. The Recent Posts widget (refer to Figure 1-13), for example, has three options: one for editing the title of the widget, one for setting how many recent posts to display, and one for specifying whether to display the post date.

Using the Text widget

The Text widget is one of the most popular and useful WordPress widgets because it enables you to add text and even HTML code to widget areas without editing the theme's template files. Therefore, you can designate several types of information on your site by including your desired text within it.

Here are some examples of how you can use the Text widget:

- **Add an email newsletter subscription form.** Add a form that allows site visitors to sign up for your email newsletter. Because adding an email newsletter subscription form often involves HTML, the Text widget is especially helpful.
- **Display business hours of operation.** Display the days and hours of your business operation where everyone can easily see them.
- **Post your updates from social networks.** Many social networking sites, such as Twitter and Facebook, offer embed codes that let you display your updates on those sites directly on your website. Social networking embed codes often include JavaScript, HTML, and CSS, which you can easily embed with the Text widget.
- **Announce special events and notices.** If your organization has a special sale, an announcement about a staff member, or an important notice about weather closings, for example, you can use the Text widget to post this information to your site in a few seconds.

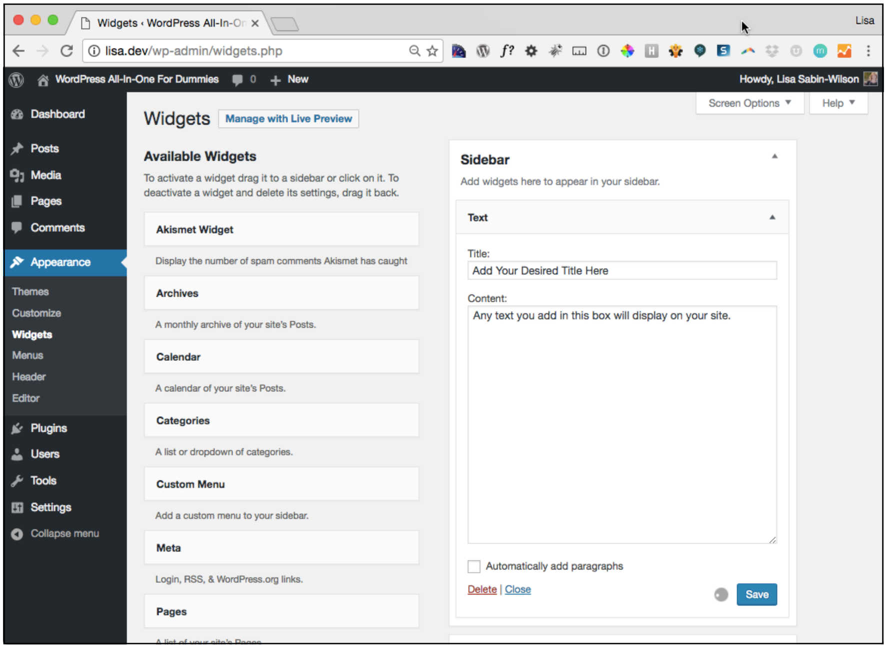
WARNING

The WordPress Text widget doesn't allow you to include PHP code of any kind. This widget doesn't execute PHP code, such as special WordPress template tags or functions (like the ones you find in Book 6, Chapter 3). A great plugin called Advanced Text Widget, however, allows you to insert PHP code within it. You can download the Advanced Text Widget from the WordPress Plugin Directory at `https://wordpress.org/plugins/advanced-text-widget`. (You can find more information about using and installing WordPress plugins in Book 7.)

To add the Text widget, follow these steps:

1. **On the WordPress Dashboard, click the Widgets link on the Appearance menu.**
2. **Find the Text widget in the Available Widgets section.**
3. **Drag the Text widget to the desired widget area.**

   The Text widget opens, as shown in Figure 1-15.
4. **Add a widget headline in the Title field and any desired text in the Content box.**
5. **Click the Save button.**
6. **Click the Close link at the bottom of the Text widget box.**



To activate a widget drag it to a sidebar or click on it. To deactivate a widget and delete its settings, drag it back.

Akismet Widget

Display the number of spam comments Akismet has caught

Archives

A monthly archive of your site's Posts.

Calendar

A calendar of your site's Posts.

Categories

A list or dropdown of categories.

Custom Menu

Add a custom menu to your sidebar.

Meta

Login, RSS, & WordPress.org links.

Pages

A list of your site's Pages.

Add widgets here to appear in your sidebar.

Title: Add Your Desired Title Here

Content: Any text you add in this box will display on your site.

□ Automatically add paragraphs

FIGURE 1-15: The Text widget.

Using the RSS widget

The RSS widget allows you to pull headlines from almost any RSS feed, including recent headlines from your other WordPress sites. You can also use it to pull in headlines from news sites or other sources that offer RSS feeds. This practice is commonly referred to as *aggregation*, which means that you're gathering information from a syndicated RSS feed source to display on your site.

After you drag the RSS widget to the appropriate widget area, the widget opens, and you can enter the RSS Feed URL you want to display. Additionally, you can easily tweak other settings, as shown in Figure 1-16, to add information to the widget area for your readers.

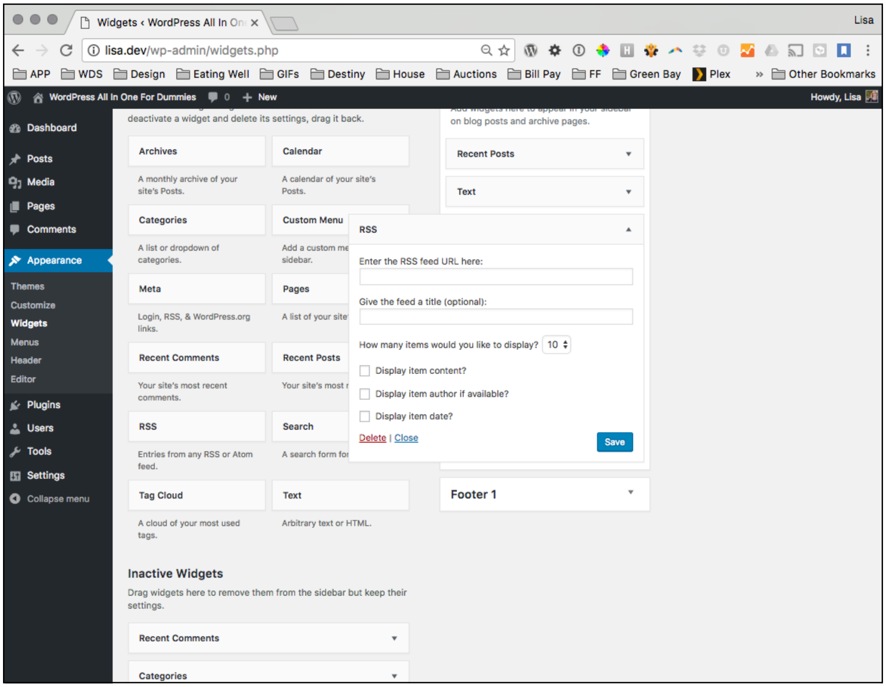
Follow these steps to add the RSS widget to your blog:

1. **Add the RSS widget to your sidebar on the Widgets screen.**

   Follow the steps in "Adding widgets to your sidebar" earlier in this chapter to add the widget.

2. **Click the arrow to the right of the RSS widget's name.**

   The widget opens, displaying options you can configure.



deactivate a widget and delete its settings, drag it back.

Archives: A monthly archive of your site's Posts.

Calendar: A calendar of your site's Posts.

Categories: A list or dropdown of categories.

Custom Menu: Add a custom me sidebar.

Meta: Login, RSS, & WordPress.org links.

Pages: A list of your site

Recent Comments: Your site's most recent comments.

Recent Posts: Your site's most r

RSS: Entries from any RSS or Atom feed.

Search: A search form for

Tag Cloud: A cloud of your most used tags.

Text: Arbitrary text or HTML.

Add widgets here to appear in your sidebar on blog posts and archive pages.

Enter the RSS feed URL here:

Give the feed a title (optional):

How many items would you like to display? 10

□ Display item content?

□ Display item author if available?

□ Display item date?

Inactive Widgets

Drag widgets here to remove them from the sidebar but keep their settings.

FIGURE 1-16: The RSS widget.

3. **In the Enter the RSS Feed URL Here text box, type the RSS URL of the site you want to add.**

   You can usually find the RSS Feed URL of a site listed on the sidebar.

4. **Type the title of the RSS widget.**

   This title appears in your site above the links from this site. If I wanted to add the RSS feed from my business site, for example, I'd type **WebDevStudios Feed**.

5. **Select the number of items from the RSS feed to display on your site.**

   The drop-down menu gives you a choice of 1–20.

6. **(Optional) Select the Display the Item Content check box.**

   Selecting this check box tells WordPress that you also want to display the content of the feed (usually, the content of the post from the feed URL). If you want to display only the title, leave the check box deselected.

7. **(Optional) Select the Display Item Author If Available check box.**

   Select this option if you want to display the author's name with the item's title.

8. **(Optional) Select the Display Item Date check box.**

   Select this option if you want to display the date when the item was published along with the item's title.

9. **Click the Save button.**

   WordPress saves all the options and reloads the Widgets page with your RSS widget intact.

IN THIS CHAPTER

- » Understanding free theme options
- » Exploring things to avoid with free themes
- » Installing, previewing, and activating your new theme
- » Discovering premium theme options

Chapter 2

Finding and Installing WordPress Themes

WordPress themes are simply a group of bundled files called *templates*, which, when activated in WordPress, determine the look and basic function of your site. (See Book 6, Chapter 3 for more about template files.)

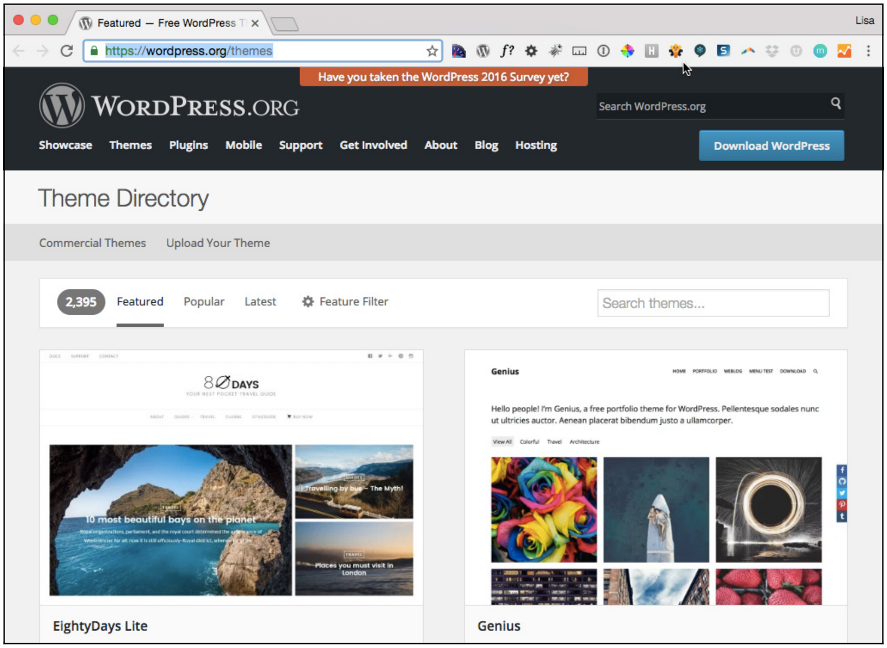
Because themes set the design style of your site, including how content displays on it, they're the first and most basic tools you can use to customize your site to fit your unique needs. One of the most amazing benefits of the WordPress community is the thousands of free themes that are available — and the new ones released each week.

Although finding one WordPress theme among thousands of options can be challenging, it's a fun adventure. You can explore the various designs and features to ultimately find the right theme for yourself and your site. In this chapter, you discover the options for finding and installing free themes on your WordPress site. I also discuss premium theme options and tell you a few things to avoid.

Getting Started with Free Themes

With thousands of free WordPress themes available and new ones appearing all the time, your challenge is to find the right one for your site. Here are a few things to remember while you explore. (Also see the nearby sidebar "Are all WordPress themes free?" for information about free versus commercial themes.)

- **Free themes are excellent starting places.** Find a couple of free themes and use them as starting points for understanding how themes work and what you can do with them. Testing free themes, their layouts, and their options helps you identify what you want in a theme.
- **You'll switch themes frequently.** Typically, you'll find a WordPress theme that you adore, and then, a week or two later, you'll find another theme that fits you or your site better. Don't expect to stay with your initial choice. Something new will pop up on your radar screen. Eventually, you'll want to stick with one that fits your needs best and doesn't aggravate visitors because of continual changes.
- **You get what you pay for.** Although a plethora of free WordPress themes exists, you receive limited or no support for them. Free themes are often labors of love. The designers have full-time jobs and responsibilities, and they release these free projects for fun, passion, and a desire to contribute to the WordPress community. Therefore, you shouldn't expect (or demand) support for these themes. Some designers maintain very active and helpful forums to help users, but those forums are rare. Just be aware that with free themes, you're on your own.
- **Download themes from reputable sources.** Themes are essentially pieces of software. Therefore, they can contain things that could be scammy, spammy, or potentially harmful to your site or computer. Therefore, it's vital that you do your homework by reading online reviews and downloading themes from credible, trusted sources. The best place to find free WordPress themes is the WordPress Theme Directory (see Figure 2-1) at `https://wordpress.org/themes`.



Hello people! I'm Genius, a free portfolio theme for WordPress. Pellentesque sodales nunc ut ultricies auctor. Aenean placerat bibendum justo a ullamcorper.

FIGURE 2-1: The most trusted resource for free themes.

ARE ALL WORDPRESS THEMES FREE?

Not all WordPress themes are created equal, and it's important for you, the user, to know the difference between free and commercial themes:

- **Free:** These themes are free, period. You can download and use them on your website at absolutely no cost. It's a courtesy to include a link to the designer in the footer of your website, but you can remove that link if you want to.
- **Commercial:** These themes cost money. Commercial themes usually are available for download only after you've paid anywhere from $10 to $500. The designer feels that these themes are a cut above the rest and, therefore, are worth the money you spend for them. Generally, you aren't allowed to remove any designer credits that appear in these themes, and you aren't allowed to redistribute the themes. ***Note:*** You *don't* find premium themes in the WordPress Theme Directory. I provide information on where to find premium themes at the end of this chapter.

Understanding What to Avoid with Free Themes

Although free themes are great, you want to avoid some things when finding and using them. As with everything on the web, themes have the potential to be abused. Although free themes were conceived to allow people (namely, designers and developers) to contribute work to the WordPress community, they've also been used to wreak havoc for users. As a result, you need to understand what to watch out for and what to avoid.

Here are some things to avoid when searching for free themes:

- **Spam links:** Many free themes outside the WordPress Theme Directory include links in the footer or sidebars that can be good or bad. The good uses of these links are designed to credit the original designer and possibly link to her website or portfolio. This practice — a nice reward to the creators — should be observed because it increases the designer's traffic and clients. Spam links, however, aren't links to the designer's site; they're links to sites you may not ordinarily associate with or endorse on your site. The best example is a link in the footer that links to odd, off-topic, and uncharacteristic keywords or phrases, such as *weight loss supplement* or *best flower deals.* Mostly, this spam technique is used to increase the advertised site's search engine ranking for that particular keyword by adding another link from your site — or, worse, to take a site visitor who clicks it to a site unrelated to the linked phrase.
- **Hidden and malicious code:** Unfortunately, the WordPress community has received reports of hidden, malicious code within a theme. This hidden code can produce spam links, security exploits, and abuses on your WordPress site. Hackers install code in various places that run this type of malware. Unscrupulous theme designers can, and do, place code in theme files that inserts hidden malware, virus links, and spam. Sometimes, you see a line or two of encrypted code that looks like it's just part of the theme code. Unless you have a great deal of knowledge of PHP, you may not know that the theme is infected with dangerous code.
- **Lack of continued development:** WordPress software continues to improve with each new update. Two or three times a year, WordPress releases new software versions, adding new features, security patches, and numerous other updates. Sometimes, a code function is superseded or replaced, causing a theme to break because it hasn't been updated for the new WordPress version. Additionally, because software updates add new features, the theme needs to be updated accordingly. Because free themes typically come without any warranty or support, one thing you should look for — especially if a

theme has many advanced back-end options — is whether the developer is actively maintaining the theme for current versions of WordPress. Active maintenance typically is more an issue with plugins than it is with themes, but the topic is worth noting.

- **Endlessly searching for free themes:** Avoid searching endlessly for the perfect theme. Trust me — you won't find it. You may find a great theme and then see another with a feature or design style you wish the previous theme had, but the new theme may lack certain other features. Infinite options can hinder you from making a final decision. Peruse the most popular themes in the WordPress Theme Directory, choose five that fit your criteria, and then move on. You always have the option to change a theme later, especially if you find the vast amount of choices in the directory to be overwhelming.

The results of these unsafe theme elements can range from simply annoying to downright dangerous, affecting the integrity and security of your computer and/or hosting account. For this reason, the WordPress Theme Directory is considered to be a safe place from which to download free themes. WordPress designers develop these themes and upload them to the directory, and the folks behind the WordPress platform vet each theme. In the official directory, themes that contain unsafe elements simply aren't allowed.

REMEMBER

The WordPress Theme Directory isn't the only place on the web to find free WordPress themes, but it's the place to find the most functional and *safest* themes available. Safe themes contain clean code and fundamental WordPress functions to ensure that your WordPress blog functions with the minimum requirements. The WordPress.org website lists the basic requirements that theme designers have to meet before their themes are accepted into the directory; you can find that listing of requirements at `https://wordpress.org/themes/about`. I highly recommend that you stick to the WordPress Theme Directory for free themes to use on your site; you can be certain that those themes don't contain any unsafe elements or malicious code.

Installing a Theme

After you find a WordPress theme, you can install the theme on your WordPress site via SFTP or the WordPress Dashboard.

To install a theme via SFTP, follow these steps:

1. **Download the theme file from the Theme Directory.**

   Typically, theme files are provided in a compressed format (`.zip` file).

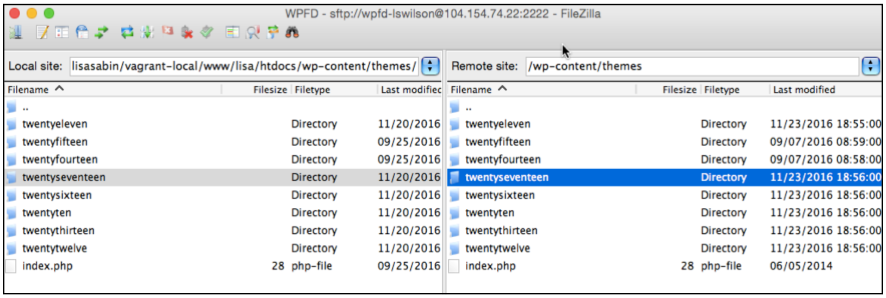
I discuss how you can peruse the WordPress Theme Directory from your WordPress installation in the next section.

2. **Unzip or extract the theme's `.zip` file.**

   You see a new folder on your desktop, typically labeled with the corresponding theme name. (Visit Book 2, Chapter 2 if you need to refresh yourself on how to use SFTP.)

3. **Upload the theme folder to your web server.**

   Connect to your hosting server via SFTP, and upload the extracted theme folder to the `/wp–content/themes` folder on your server. (See Figure 2-2.)



WPFD - sftp://wpfd-lswilson@104.154.74.22:2222 - FileZilla

Local site: lisasabin/vagrant-local/www/lisa/htdocs/wp-content/themes/

Filename ^	Filesize	Filetype	Last modifiec
..			
twentyeleven		Directory	11/20/2016
twentyfifteen		Directory	09/25/2016
twentyfourteen		Directory	09/25/2016
twentyseventeen		Directory	11/20/2016
twentysixteen		Directory	11/20/2016
twentyten		Directory	11/20/2016
twentythirteen		Directory	11/20/2016
twentytwelve		Directory	11/20/2016
index.php	28	php-file	09/25/2016

Remote site: /wp-content/themes

Filename ^	Filesize	Filetype	Last modified
..			
twentyeleven		Directory	11/23/2016 18:55:00
twentyfifteen		Directory	09/07/2016 08:59:00
twentyfourteen		Directory	09/07/2016 08:58:00
twentyseventeen		Directory	11/23/2016 18:56:00
twentysixteen		Directory	11/23/2016 18:56:00
twentyten		Directory	11/23/2016 18:56:00
twentythirteen		Directory	11/23/2016 18:56:00
twentytwelve		Directory	11/23/2016 18:56:00
index.php	28	php-file	06/05/2014

FIGURE 2-2: Upload and download panels in SFTP.

To install a theme via the Dashboard's theme installer, follow these steps:

1. **Download the theme file from the Theme Directory to your desktop.**

   Typically, theme files are provided in a compressed format (`.zip` file). When you use this method, you don't extract the `.zip` file, because the theme installer does that for you.

2. **Log in to your WordPress Dashboard.**
3. **Click the Themes link on the Appearance menu.**

   The Themes screen appears.

4. **Click the Add New button.**

   The Add Themes screen appears, displaying a submenu of links.

5. **Click the Upload Theme button.**

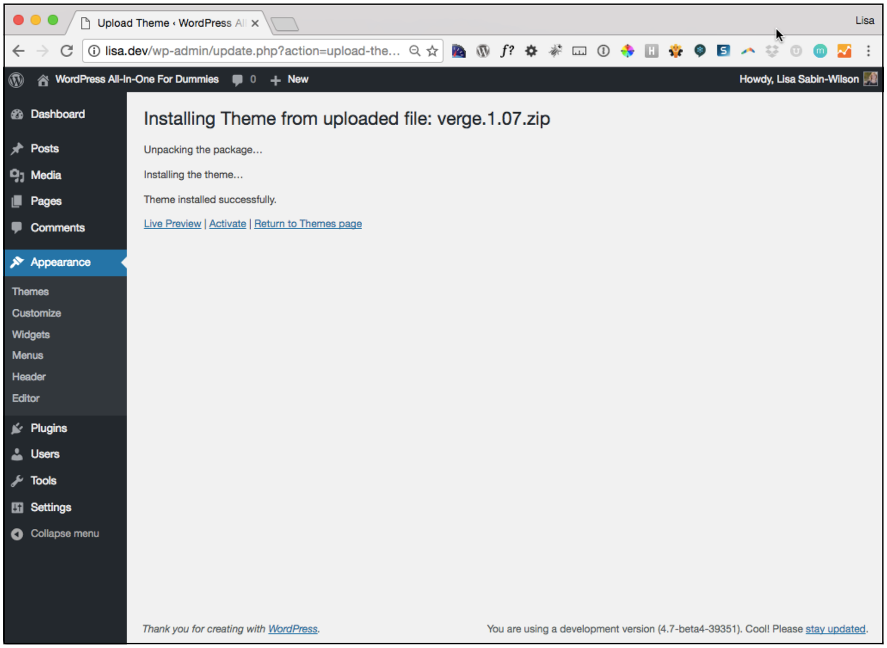
   The panel displays a utility to upload a theme in `.zip` format.

6. **Upload the `.zip` file you downloaded in Step 1.**

   Click the Choose File button and then locate and select the `.zip` file you stored on your computer.

7. **Click the Install Now button.**

WordPress unpacks and installs the theme in the appropriate directory for you. Figure 2-3 shows the result of installing a theme via this method.



Installing Theme from uploaded file: verge.1.07.zip

Unpacking the package…

Installing the theme…

Theme installed successfully.

Live Preview | Activate | Return to Themes page

Thank you for creating with WordPress.

You are using a development version (4.7-beta4-39351). Cool! Please stay updated.

FIGURE 2-3: Installing a theme via the Dashboard's theme installer.

Browsing the free themes

Finding free themes via the Add Themes screen is extremely convenient because it lets you search the Theme Directory from your WordPress site. Start by clicking the Themes link on the Appearance menu of the WordPress Dashboard and then click the Add New button to open the Add Themes screen. (See Figure 2-4.)

After you navigate to the Add Themes screen, you see the following menu links:

- **Featured:** The themes shown in the Featured link have been selected by WordPress.org for you. The themes in this section are favorites of the members of the Themes team.
- **Popular:** If you don't have a theme in mind, the themes in this section are some of the most popular themes. I recommend that you install and test-drive one of these for your site's first theme.

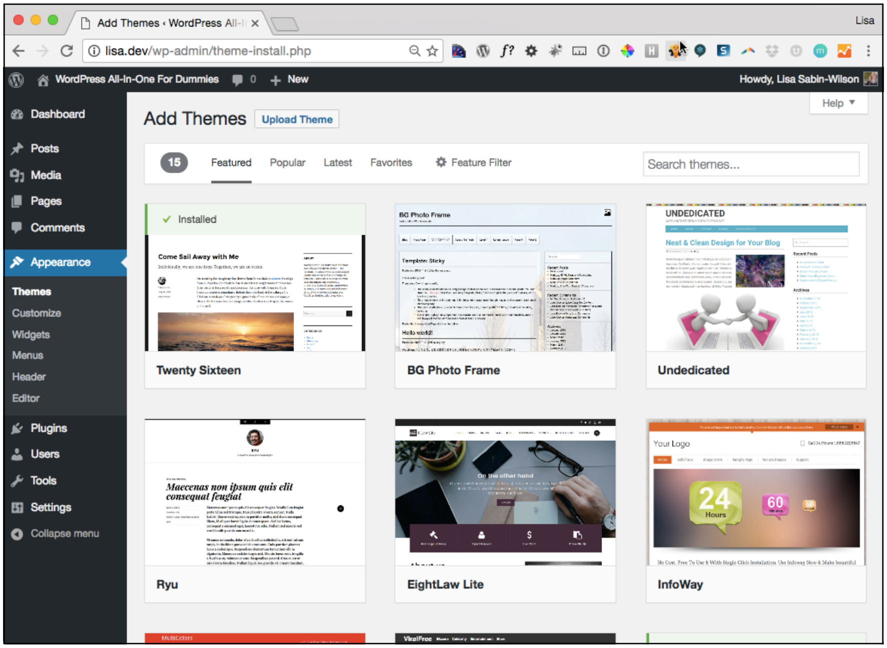


FIGURE 2-4: The Add Themes screen, where you can find free themes from your Dashboard.

- **Latest:** As WordPress improves and changes, many themes need updating to add new features. Themes in the Latest category are themes that have been updated recently.
- **Favorites:** If you marked themes as favorites on the WordPress website, you can find those themes on the Add Themes screen. Type your WordPress.org username in the text field, and click the Get Favorites button.
- **Feature Filter:** This link gives you a variety of filters to choose among to find a theme you're looking for. You can filter by Layout, Features, and Subject. After you select your desired filters, click the Apply Filters button to view the themes that match your set filters.
- **Search:** If you know the name of a free theme, you can easily search for it here by keyword, author, or tag. You can also refine your search based on specific features within the themes, including color, layout, and subject (such as Holiday).

After you find the theme that you want, click the Install button that appears when you hover your cursor over the theme thumbnail.

Previewing and activating a theme

After you upload a theme via SFTP or the theme installer, you can preview and activate your desired theme.

TIP

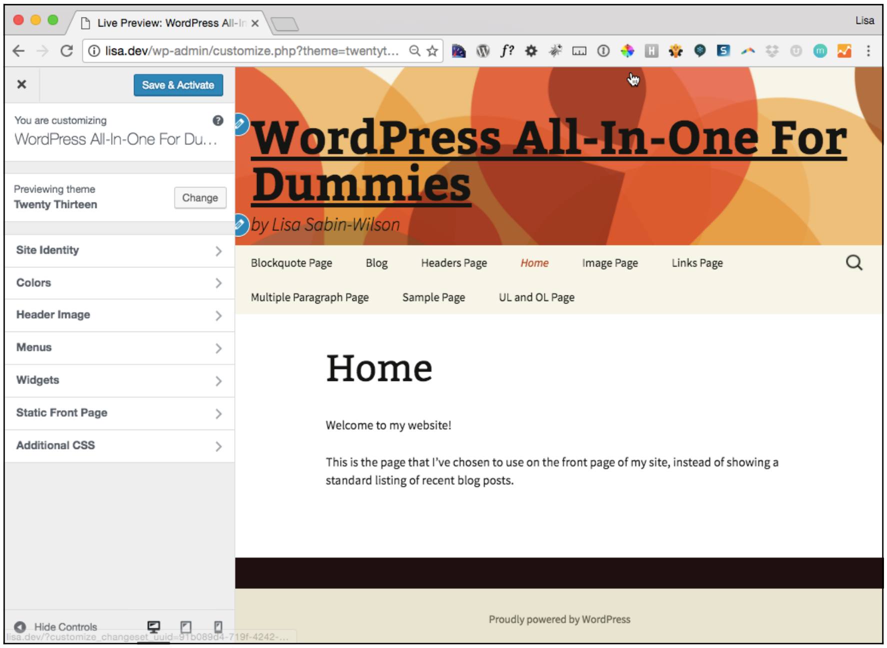
The WordPress Theme Preview option allows you to see how the theme would look on your site without actually activating it. If you have a site that's receiving traffic, it's best to preview any new theme before activating it to ensure that you'll be happy with its look and functionality. If you're trying to decide among several new theme options, you can preview them all before changing your live site.

To preview your new theme, follow these steps:

1. **Log in to your WordPress Dashboard.**
2. **Click the Themes link on the Appearance menu.**

   The Themes screen appears, displaying your current (activated) theme and any themes that are installed in the `/wp-content/themes` directory on your web server.
3. **Preview the theme you want to use.**

   Click the Live Preview button that appears when you hover your cursor over the theme thumbnail. A preview of your site with the theme appears in a pop-up window, as shown in Figure 2-5.



Welcome to my website!

This is the page that I've chosen to use on the front page of my site, instead of showing a standard listing of recent blog posts.

FIGURE 2-5: A WordPress theme preview.

4. **(Optional) Configure theme customization features.**

   Some, but not all, themes are developed to provide customization features. Figure 2-5 shows these customization options for the Twenty Thirteen theme:

   - Site Identity
   - Colors
   - Header Image
   - Menus
   - Widgets
   - Static Front Page
   - Additional CSS

5. **Choose whether to activate the theme.**

   Click the Save & Activate button in the top-right corner of the configuration panel to activate your new theme with the options you set in Step 4, or close the preview by clicking the Cancel (X) button in the top-left corner of the panel.

To activate a new theme without previewing it, follow these steps:

1. **Log in to your WordPress Dashboard.**
2. **Click the Themes link on the Appearance menu.**

   The Themes screen appears, displaying your current (activated) theme and any themes that are installed in the `/wp-content/themes` directory on your web server.

3. **Find the theme you want to use.**
4. **Click the Activate button that appears when you hover your mouse over the theme thumbnail.**

   The theme immediately becomes live on your site.

Exploring Premium Theme Options

Thousands of free WordPress themes are available, but you may also want to consider premium (for purchase) themes for your site. Remember the adage "You get what you pay for" when considering free services or products, including WordPress and free themes.

Typically, when you download and use something free, you get no assistance with the product or service. Requests for help generally go unanswered. Therefore, your expectations should be lower because you aren't paying anything. When you pay for something, you usually assume that you have support or service for your purchase and that the product is of high (or acceptable) quality.

WordPress, for example, is available free. Except for the active WordPress support forum, however, you have no guarantee of support while using the software. Moreover, you have no right to demand service.

Here are some things to consider when contemplating a premium theme. (I selected the commercial companies listed later in this chapter based on these criteria.)

- **Selection:** Many theme developers offer a rich, diverse theme selection, including themes designed for specific niche industries, topics, or uses (such as video, blogging, real estate, or magazine themes). Generally, you can find a good, solid theme to use for your site from one source.
- **Innovation:** To differentiate them from their free counterparts, premium themes include innovative features, such as theme settings or advanced options that extend WordPress to help you do more.
- **Great design with solid code:** Although many beautiful free themes are available, premium themes are professionally coded and beautifully designed, cost thousands of dollars, and require dozens of hours to build, which simply isn't feasible for many free theme developers.
- **Support:** Most commercial companies have full-time support staff to answer questions, troubleshoot issues, and point you to resources beyond their support. Often, premium theme developers spend more time helping customers troubleshoot issues outside the theme products. Therefore, purchasing a premium theme often provides a dedicated support community to question about advanced issues and upcoming WordPress features; otherwise, you're on your own.
- **Stability:** No doubt you've purchased a product or service from a company only to find later that the company has gone out of business. If you choose to use a premium theme, purchase a theme from an established company with a solid business model, a record of accomplishment, and a dedicated team devoted to building and supporting quality products.

REMEMBER

Although some free themes have some or all of the features in the preceding list, for the most part, they don't. Keep in mind that just because a designer calls a theme "premium" doesn't mean that the theme has passed through any kind of quality review. The view of what constitutes a premium theme can, and will, differ from one designer to the next.

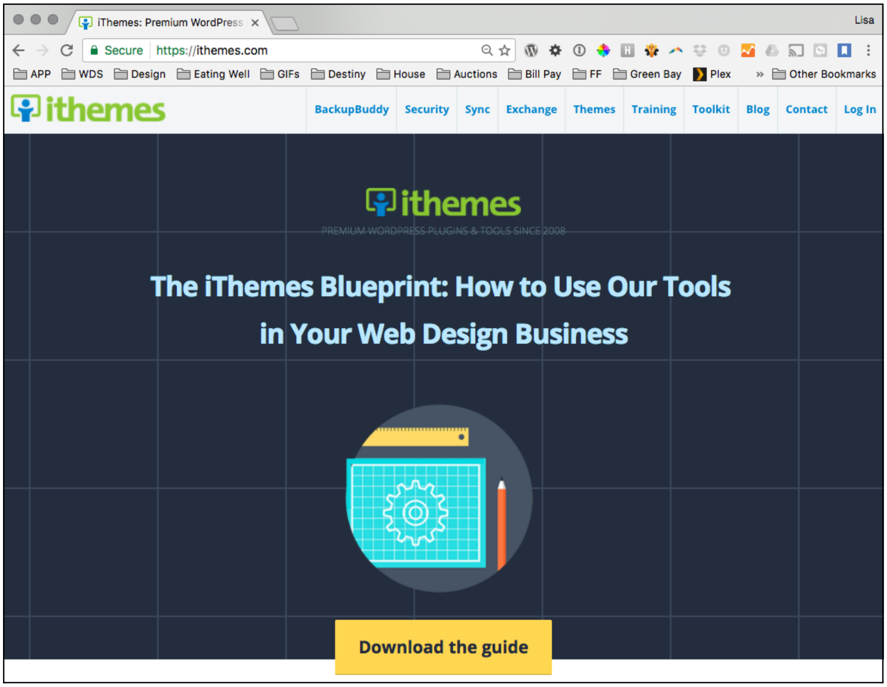
TIP

Fully investigate any theme before you spend your money on it. Here are some things to check out before you pay:

- Email the designer who's selling the premium theme, and ask about a support policy.
- Find people who've purchased the theme, and contact them to ask about their experiences with the theme and the designer.
- Carefully read any terms that the designer has published on his site to find any licensing restrictions that exist.
- If the premium theme designer has a support forum, ask whether you can browse the forum to find out how actively the designer answers questions and provides support. Are users waiting weeks to get their questions answered, for example, or does the designer seem to be on top of support requests?
- Search online for the theme and the designer. Often, users of premium themes post about their experiences with the theme and the designer. You can find both positive and negative information about the theme and the designer before you buy.

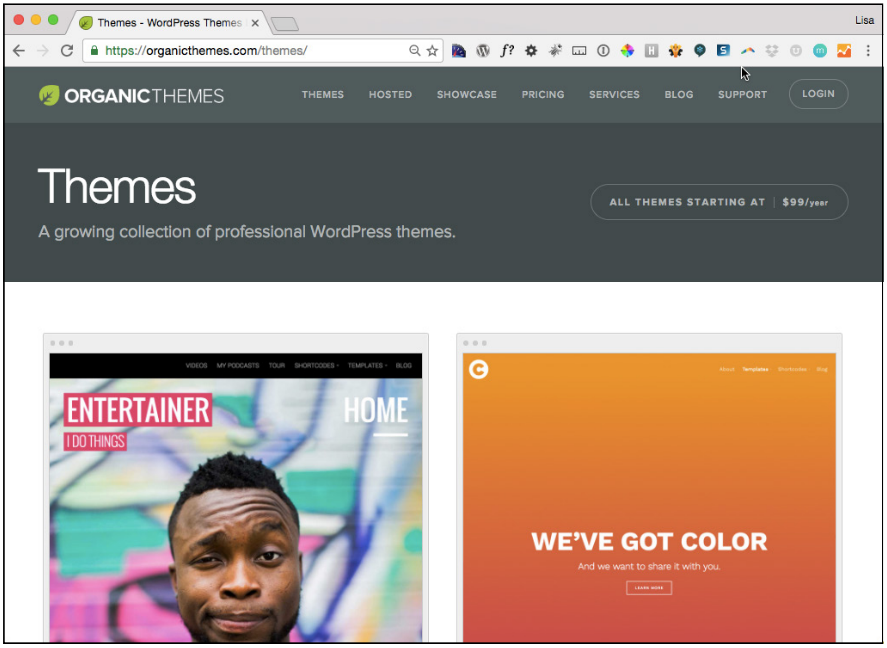
These developers are doing some amazingly innovative things with WordPress themes, and I highly recommend that you explore their offerings:

- **iThemes (`https://ithemes.com`):** iThemes (see Figure 2-6) emphasizes business WordPress themes that use WordPress as a full-fledged, powerful content management system. The site's pride and joy is iThemes Builder, which is more a build-a-WordPress website tool than a typical theme.
- **Organic Themes (`https://organicthemes.com`):** Organic Themes (see Figure 2-7) has a great team, paid support moderators, and WordPress themes that are as solid, from a code standpoint, as they are beautiful.
- **WooThemes (`https://woocommerce.com/woothemes`):** WooThemes (see Figure 2-8) has a wide selection of high-quality themes with excellent options and support. Their most popular theme is Canvas, a highly customizable theme with more than 100 options you can use to personalize your site via a theme options panel.
- **Press75 (`http://press75.com`):** Press75 (see Figure 2-9) offers niche themes for photography, portfolios, and video. Check out the Video Elements theme for a great example.



The iThemes Blueprint: How to Use Our Tools in Your Web Design Business

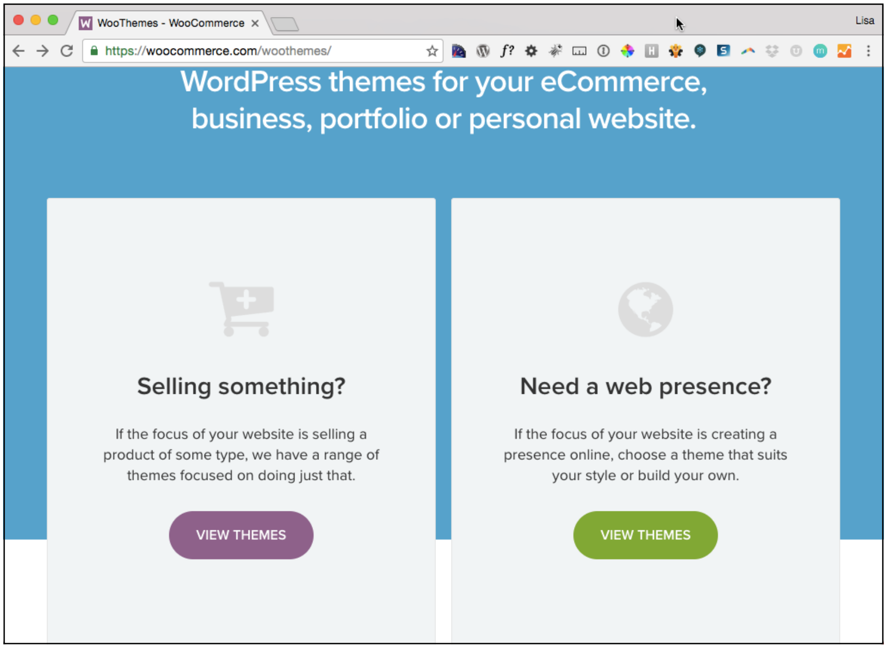
FIGURE 2-6: iThemes.com, provider of commercial WordPress themes.


Themes - WordPress Themes
Lisa
https://organicthemes.com/themes/
ORGANICTHEMES
THEMES
HOSTED
SHOWCASE
PRICING
SERVICES
BLOG
SUPPORT
LOGIN
ALL THEMES STARTING AT | $99/year
ENTERTAINER
I DO THINGS
HOME
WE'VE GOT COLOR
And we want to share it with you.

Themes

A growing collection of professional WordPress themes.

FIGURE 2-7: Organic Themes, another provider of commercial WordPress themes.



WordPress themes for your eCommerce, business, portfolio or personal website.

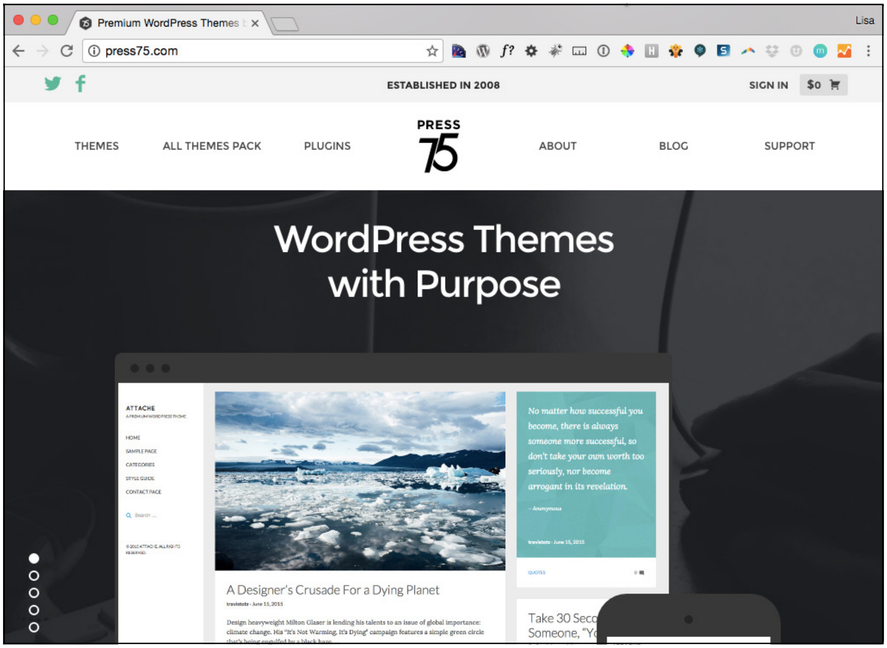
Selling something?

If the focus of your website is selling a product of some type, we have a range of themes focused on doing just that.

Need a web presence?

If the focus of your website is creating a presence online, choose a theme that suits your style or build your own.

FIGURE 2-8: WooThemes has premium themes, community, and support.



WordPress Themes with Purpose

No matter how successful you become, there is always someone more successful, so don't take your own worth too seriously, nor become arrogant in its revelation.

- Anonymous

A Designer's Crusade For a Dying Planet

Design heavyweight Milton Glaser is lending his talents to an issue of global importance: climate change. His "It's Not Warming. It's Dying" campaign features a simple green circle

Take 30 Seco
Someone, "Yo

FIGURE 2-9: Press75 offers premium themes, demos, and theme packages.

TIP

You can't find, preview, or install premium themes by using the Add Themes feature on your WordPress Dashboard (covered in an earlier section of this chapter). You can find, purchase, and download premium themes only from third-party websites. After you find a premium theme you like, you need to install it via the SFTP method or by using the Dashboard upload feature. (See the earlier "Installing a Theme" section.) You can find a very nice selection of premium themes on the WordPress website at `https://wordpress.org/themes/commercial`.

IN THIS CHAPTER

- Examining the theme's stylesheet
- Exploring template tags
- Making widget areas
- Understanding the main template files

Chapter 3

Exploring the Anatomy of a Theme

This chapter breaks down the parts that make up your WordPress theme. Understanding your theme allows you greater flexibility when you customize it. Many of the problems people encounter with themes, such as not knowing which files edit certain functions of a site, comes from lack of understanding all the pieces.

There are those who like to get their hands dirty (present company included!). If you're one of them, you need to read this chapter. WordPress users who create their own themes do so in the interest of

- **Individuality:** Having a theme that no one else has. (If you use one of the free themes, you can pretty much count on the fact that at *least* a dozen other WordPress blogs have the same look as yours.)
- **Creativity:** Displaying your own personal flair and style.
- **Control:** Having full control of how the blog looks, acts, and delivers your content.

Many of you aren't at all interested in creating your own theme for your WordPress blog, however. Sometimes, it's just easier to leave matters to the professionals and hire an experienced WordPress theme developer to create a custom look for your WordPress website or to use one of the thousands of free themes provided by WordPress designers. (See Book 6, Chapter 2 for more on free themes.)

Creating themes does require you to step into the code of the templates, which can be a scary place sometimes — especially if you don't really know what you're looking at. A good place to start is understanding the structure of a WordPress website. Separately, the parts won't do you any good, but when you put them together, the real magic begins! This chapter covers the basics of doing just that, and near the end of the chapter, you find specific steps for putting your own theme together.

TIP

You don't need to know HTML to use WordPress. If you plan to create and design WordPress themes, however, you need some basic knowledge of HTML and Cascading Style Sheets (CSS). For assistance with HTML, check out *HTML, XHTML, and CSS For Dummies,* 7th Edition by Ed Tittel and Jeff Noble (published by John Wiley & Sons, Inc.).

Starting with the Basics

A WordPress theme is a collection of WordPress templates made up of WordPress template tags. When I refer to a WordPress *theme,* I'm talking about the group of templates that makes up the theme. When I talk about a WordPress *template,* I'm referring to only one of the template files that contain WordPress template tags. WordPress template tags make all the templates work together as a theme (more about this topic later in the chapter). These files include

- **The theme's stylesheet (`style.css`):** The stylesheet provides the theme's name, as well as the CSS rules that apply to the theme. (Later in this chapter, I go into detail about how stylesheets work.)
- **The Main Index template (`index.php`):** The index file is the first file that loads when a visitor comes to your site. It contains the HTML as well as any PHP code needed on your home page.
- **An optional functions file (`functions.php`):** This optional file is a place where you can add additional functionality to your site via PHP functions.

Template and functions files end with the `.php` extension. *PHP* is the scripting language used in WordPress, which your web server recognizes and interprets as such. (Book 2, Chapter 3 covers additional details on the PHP language that you'll find helpful.) These files contain more than just scripts, though. The PHP files also contain HTML, which is the basic markup language of web pages.

Within this set of PHP files is all the information your browser and web server need to make your website. Everything from the color of the background to the layout of the content is contained in this set of files.

REMEMBER

The difference between a template and a theme can cause confusion. *Templates* are individual files. Each template file provides the structure in which your content will display. A *theme* is a set of templates. The theme uses the templates to make the whole site.

Understanding where the WordPress theme files are located on your web server gives you the ability to find and edit them, as needed. You can use two different methods to view and edit WordPress theme files by following these steps:

1. **Connect to your web server via SFTP, and have a look at the existing WordPress themes on your server.**

   The correct location is `/wp-content/themes/`. When you open this folder, you find the `/twentyseventeen` theme folder.

   REMEMBER

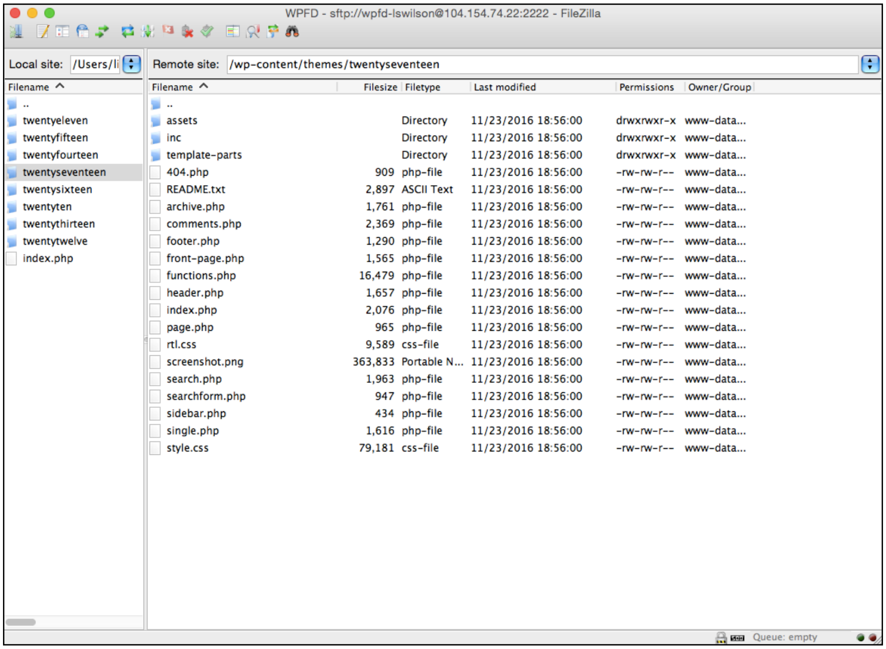
   If a theme is uploaded to any folder other than `/wp-content/themes`, it won't work.

2. **Open the folder for the Twenty Seventeen theme (`/wp-content/themes/twentyseventeen`), and look at the template files inside.**

   When you open the Twenty Seventeen theme folder (see Figure 3-1), you see several files. At *minimum*, you find these five templates in the default theme:

   - *Stylesheet* (`style.css`)
   - *Header* (`header.php`)
   - *Main Index* (`index.php`)
   - *Sidebar* (`sidebar.php`)
   - *Footer* (`footer.php`)

   These files are the main WordPress template files, which I discuss in more detail in this chapter. There are several template files, however, and you should try to explore all of them if you can. Take a peek inside to see the template functions they contain. These filenames are the same in every WordPress theme.



WPFD - sftp://wpfd-lswilson@104.154.74.22:2222 - FileZilla

Local site: /Users/li

Remote site: /wp-content/themes/twentyseventeen

Filename
..
twentyeleven
twentyfifteen
twentyfourteen
twentyseventeen
twentysixteen
twentyten
twentythirteen
twentytwelve
index.php

Filename	Filesize	Filetype	Last modified	Permissions	Owner/Group
..					
assets		Directory	11/23/2016 18:56:00	drwxrwxr-x	www-data...
inc		Directory	11/23/2016 18:56:00	drwxrwxr-x	www-data...
template-parts		Directory	11/23/2016 18:56:00	drwxrwxr-x	www-data...
404.php	909	php-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
README.txt	2,897	ASCII Text	11/23/2016 18:56:00	-rw-rw-r--	www-data...
archive.php	1,761	php-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
comments.php	2,369	php-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
footer.php	1,290	php-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
front-page.php	1,565	php-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
functions.php	16,479	php-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
header.php	1,657	php-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
index.php	2,076	php-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
page.php	965	php-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
rtl.css	9,589	css-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
screenshot.png	363,833	Portable N...	11/23/2016 18:56:00	-rw-rw-r--	www-data...
search.php	1,963	php-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
searchform.php	947	php-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
sidebar.php	434	php-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
single.php	1,616	php-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...
style.css	79,181	css-file	11/23/2016 18:56:00	-rw-rw-r--	www-data...

Queue: empty

FIGURE 3-1: Twenty Seventeen theme in the /wp-content/themes/twentyseventeen folder on your web server.

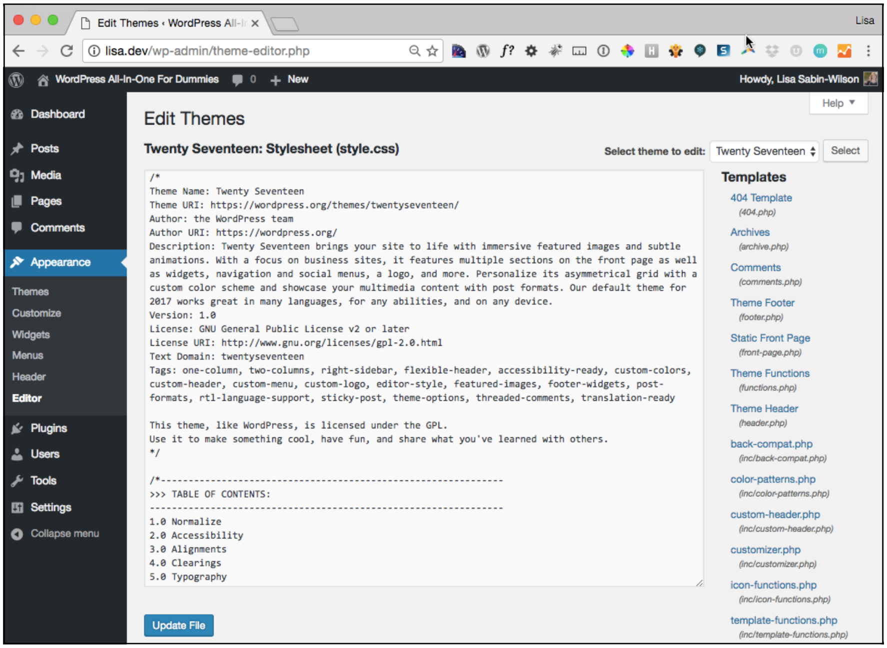
3. **Log in to your WordPress Dashboard in your web browser window, and click the Editor link on the Appearance menu to look at the template files within a theme.**

   This page lists the various templates available within the active theme. (Figure 3-2 shows the templates in the default Twenty Seventeen theme.) A text box on the left side of the screen displays the contents of each template, and this box is also where you can edit the template file(s). To view and edit a template file, click the template name in the list on the right side of the page.

The Edit Themes screen also shows the template tags within the template file. These tags make all the magic happen on your site; they connect all the templates to form a theme. The "Exploring Template Tags, Values, and Parameters" section of this chapter discusses these template tags in detail, showing you what they mean and how they function.

TIP

Click the Documentation drop-down menu on the Themes screen to see all the template tags used in the template you're currently viewing. This list is helpful when you edit templates, and it gives you some insight into some of the different template tags used to create functions and features within your WordPress theme. (*Note:* The Documentation drop-down menu on the Themes screen doesn't appear when you view the stylesheet because no template tags are used in the `style.css` template — only CSS.)



```
/*
Theme Name: Twenty Seventeen
Theme URI: https://wordpress.org/themes/twentyseventeen/
Author: the WordPress team
Author URI: https://wordpress.org/
Description: Twenty Seventeen brings your site to life with immersive featured images and subtle
animations. With a focus on business sites, it features multiple sections on the front page as well
as widgets, navigation and social menus, a logo, and more. Personalize its asymmetrical grid with a
custom color scheme and showcase your multimedia content with post formats. Our default theme for
2017 works great in many languages, for any abilities, and on any device.
Version: 1.0
License: GNU General Public License v2 or later
License URI: http://www.gnu.org/licenses/gpl-2.0.html
Text Domain: twentyseventeen
Tags: one-column, two-columns, right-sidebar, flexible-header, accessibility-ready, custom-colors,
custom-header, custom-menu, custom-logo, editor-style, featured-images, footer-widgets, post-
formats, rtl-language-support, sticky-post, theme-options, threaded-comments, translation-ready

This theme, like WordPress, is licensed under the GPL.
Use it to make something cool, have fun, and share what you've learned with others.
*/

/*--------------------------------------------------------------
>>> TABLE OF CONTENTS:
----------------------------------------------------------------
1.0 Normalize
2.0 Accessibility
3.0 Alignments
4.0 Clearings
5.0 Typography
```

FIGURE 3-2: A list of templates available in the default Twenty Seventeen WordPress theme.

Understanding the Stylesheet

Every WordPress theme includes a `style.css` file. A browser uses this file, commonly known as the *stylesheet,* to style the theme. Style can include text colors, background images, and spacing between elements on the site. The stylesheet targets areas of the site to style by using CSS IDs and classes. *CSS IDs* and *classes* are simply means of naming a particular element of the site. IDs are used for elements that appear only once on a page, but classes can be used as many times as necessary. Although this file references *style,* it contains much more information about the theme.

At the beginning of the `style.css` file, a comment block known as the *stylesheet header* passes information about your theme to WordPress. *Comments* are code statements included only for programmers, developers, and any others who read the code. Computers ignore comment statements, but WordPress uses the stylesheet header to get information about your theme. In CSS, comments always begin with a forward slash followed by a star (`/*`) and end with a star followed by a forward slash (`*/`). The following code shows an example of the stylesheet header for the Twenty Seventeen theme:

```
./*
Theme Name: Twenty Seventeen
Theme URI: https://wordpress.org/themes/twentyseventeen/
Author: the WordPress team
```

```
Author URI: https://wordpress.org/
Description: Twenty Seventeen brings your site to life with immersive
   featured images and subtle animations. With a focus on business sites,
   it features multiple sections on the front page as well as widgets,
   navigation and social menus, a logo, and more. Personalize its
   asymmetrical grid with a custom color scheme and showcase your multimedia
   content with post formats. Our default theme for 2017 works great in many
   languages, for any abilities, and on any device.
Version: 1.0
License: GNU General Public License v2 or later
License URI: http://www.gnu.org/licenses/gpl-2.0.html
Text Domain: twentyseventeen
Tags: one-column, two-columns, right-sidebar, flexible-header, accessibility-
   ready, custom-colors, custom-header, custom-menu, custom-logo, editor-style,
   featured-images, footer-widgets, post-formats, rtl-language-support,
   sticky-post, theme-options, threaded-comments, translation-ready

This theme, like WordPress, is licensed under the GPL.
Use it to make something cool, have fun, and share what you've learned with
   others.
*/
```

Figure 3-3 shows how the Themes page of the Dashboard looks with the Twenty Seventeen theme activated. The title and information are taken directly from the `style.css` header.

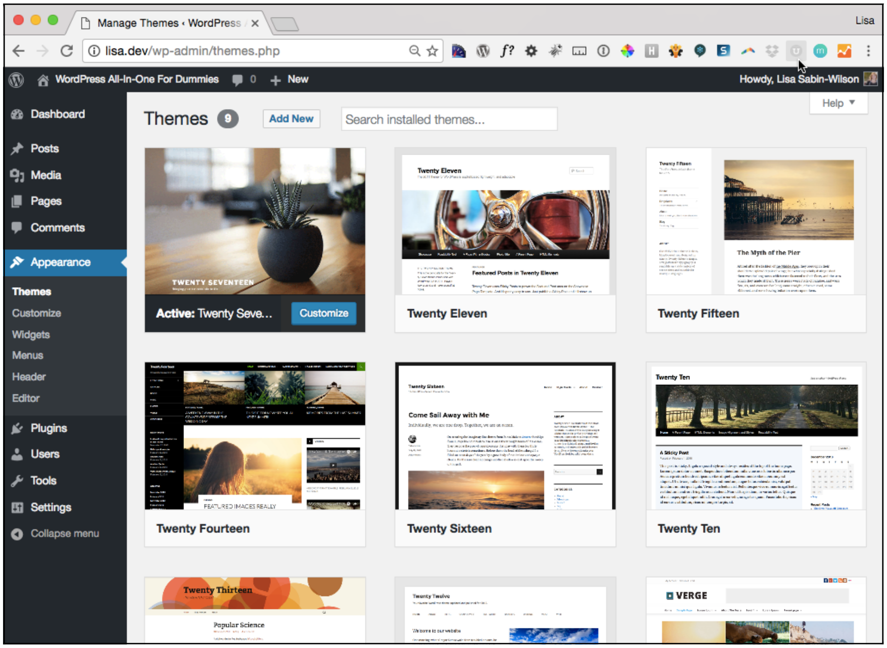


FIGURE 3-3: This page shows the currently active theme, Twenty Seventeen.

If you make modifications in the stylesheet header, the changes are reflected in the WordPress Dashboard on the Themes screen.

WARNING

Themes must provide this information in the stylesheet header, and no two themes can have the same information. Two themes with the same name and details would conflict in the theme-selection page. If you create your own theme based on another theme, make sure that you change this information first.

Below the stylesheet header are the CSS styles that drive the formatting and styling of your theme.

TIP

Book 6, Chapter 4 goes into detail about CSS, including some examples that you can use to tweak the style of your existing WordPress theme. Check it out!

Exploring Template Tags, Values, and Parameters

Some people are intimidated when they look at template tags. Really, template tags are just simple bits of PHP code that you can use inside a template file to display information dynamically. Before starting to play around with template tags in your WordPress templates, it's important to understand what makes up a template tag and why.

WordPress is based in PHP (a scripting language for creating web pages) and uses PHP commands to pull information from the MySQL database. Every tag begins with the function to start PHP and ends with a function to stop PHP. In the middle of those two commands lives the request to the database that tells WordPress to grab the data and display it.

A typical template tag looks like this:

```
<?php get_info(); ?>
```

This example tells WordPress to do three things:

- Start PHP (<?php).
- Use PHP to get information from the MySQL database and deliver it to your blog (get_info();).
- Stop PHP (?>).

In this case, get_info represents the tag function, which grabs information from the database to deliver it to your site. What information is retrieved depends on what tag function appears between the two PHP commands. As you may notice, there's a lot of starting and stopping of PHP throughout the WordPress templates. The process seems as though it would be resource-intensive, if not exhaustive — but it really isn't.

REMEMBER

For every PHP command you start, you need a stop command. Every time a command begins with <?php, somewhere later in the code is the closing ?> command. PHP commands that aren't structured properly cause really ugly errors on your site, and they've been known to send programmers, developers, and hosting providers into loud screaming fits.

Understanding the basics

If every piece of content on your site were *hard-coded* (manually added to the template files), the content wouldn't be easy to use and modify. Template tags allow you to add information and content to your site dynamically. One example of adding information by using a template tag involves the the_category tag. Instead of typing all the categories and links that each post belongs in, you can use the the_category() tag in your template to automatically display all the categories as links.

Using template tags prevents duplication of effort by automating the process of adding content to your website.

When you use a template tag, you're really telling WordPress to do something or retrieve some information. Often, template tags are used to fetch data from the server and even display it on the front end. More than 100 template tags are built into WordPress, and the tags vary greatly in terms of what they can accomplish. You can find a complete list of template tags in the WordPress Codex (documentation for WordPress) at https://codex.wordpress.org/Template_Tags.

Template tags can be used only inside PHP blocks. The PHP blocks can be opened and closed as many times as necessary in a template file. When a PHP block is opened, the server knows that anything contained in the block is to be translated as PHP. The opening tag (<?php) must be followed at some point by the closing tag (?>). All blocks must contain these tags. A template tag is used in the same way that PHP functions are. The tag is always text with no spaces (may be separated by underscores or dashes), opening and closing brackets, and a semicolon. The following line of code shows you how it all looks:

```
<?php template_tag_name(); ?>
```

PHP is a fairly advanced coding language and has many built-in functions for you to use. If you aren't a PHP developer, keep it simple when you're attempting to add custom PHP. All code must be semantically perfect; otherwise, it won't work. Always read your code to make sure that you entered it correctly.

REMEMBER

Some template tags can be used only inside The Loop, so check the codex for details. You can find out more about The Loop in "Examining the Main Index and The Loop" later in this chapter.

Using parameters

Because a template tag is a PHP function, you can pass parameters to the tag. A *parameter* is a variable that allows you to change or filter the output of a template tag. WordPress has three types of template tags:

- **Tags without parameters:** Some template tags don't require any options, so they don't need any parameters passed to them. The `is_user_logged_in()` tag, for example, doesn't accept any parameters because it returns only `true` or `false`.
- **Tags with PHP function–style parameters:** Template tags with PHP function–style parameters accept parameters that you pass to them by placing one or more values inside the function's parentheses. If you're using the `bloginfo()` tag, for example, you can filter the output to just the description by using

  ```
  <?php bloginfo('description'); ?>
  ```

  REMEMBER

  If there are multiple parameters, the order in which you list them is very important. Each function sets the necessary order of its variables, so double-check the order of your parameters.

  Always place the value in single quotes, and separate multiple parameters with commas.
- **Tags with query string–style parameters:** Template tags with query string–style parameters allow you to change the values of just the parameters you require. This ability to cherry-pick only those parameters you need to change is useful for template tags that have a large number of options. The `wp_list_pages()` tag, for example, has 18 parameters. Instead of using the PHP function–style parameters, you can use this function to get to the source of what you need and give it a value. If you want to list all your WordPress pages except page 24, for example, you use

  ```
  <?php wp_list_pages('exclude=24'); ?>
  ```

Query string–style parameters can be the most difficult to work with because they generally deal with the template tags that have the most possible parameters.

Table 3-1 helps you understand the three variations of parameters that WordPress uses.

TABLE 3-1 **Three Variations of Template Parameters**

Variation	Description	Example
Tags without parameters	These tags have no additional options available. Tags without parameters have nothing within the parentheses.	`the_tag();`
Tags with PHP function–style parameters	These tags have a comma-separated list of values placed within the tag parentheses.	`the_tag('1,2,3');`
Tags with query string–style parameters	These types of tags generally have several available parameters. This tag style enables you to change the value for each parameter without being required to provide values for all available parameters for the tag.	`the_tag('parameter= true');`

REMEMBER

The WordPress Codex, located at `https://codex.wordpress.org`, has every conceivable template tag and possible parameter known to the WordPress software. The tags and parameters in this chapter are the ones used most often by WordPress users.

Customizing common tags

Because template tags must be used inside the PHP template files, they can easily be customized with HTML. If you're using the PHP tag `wp_list_pages()`, for example, you could display it in an HTML unordered list so that the pages are easily accessible to users, like this:

```
<ul>
<?php wp_list_pages(); ?>
</ul>
```

This code displays all the pages that you created in WordPress as an unordered list. If you had the pages About, Blog, and Content, the list of pages would be displayed like this:

- About
- Blog
- Contact

Another example is titles. For proper search engine optimization (SEO), you should always put page titles in H1 HTML tags, like this:

```
<h1 class="pagetitle">
<?php the_title(); ?>
</h1>
```

Creating New Widget Areas

Many themes are *widget-ready*, meaning that you can insert widgets into them easily. Widgets allow you to add functionality to your sidebar without having to use code. Some common widget functionalities include displaying recent posts, displaying recent comments, adding a search box for searching content on a site, and adding static text. Even widget-ready themes have their limitations, however. You may find that the theme you chose doesn't have widget-ready areas in all the places you want them. You can make your own, however.

Registering your widget

To add a widget-ready area to the WordPress Dashboard Widget interface, first register the widget in your theme's `functions.php` file as follows:

```
function my_widgets_init() {
   register_sidebar( array (
    'name' => __( 'Widget Name'),
    'id' => 'widget-name',
    'description' => __( 'The primary widget area'),
    'before_widget' => '<li id="%1$s" class="widget-container %2$s">',
    'after_widget' => "</li>",
    'before_title' => '<h3 class="widget-title">',
    'after_title' => '</h3>',
    ) );
  }
add_action('widgets_init', 'my_widgets-init');
```

You can insert this code directly below the first opening PHP tag (<?php). Sometimes, it's to add a few extra lines when you're adding code. The extra empty lines around your code are ignored by the browser but can greatly increase readability of the code.

Within that code, you see seven *arrays* (sets of values that tell WordPress how you want your widgets to be handled and displayed):

- **name:** This name is unique to the widget and is displayed on the Widgets page on the Dashboard. It's helpful to register several widgetized areas on your site.
- **id:** This array is the unique ID given to the widget.
- **description:** This array is a text description of the widget. The text that gets placed here displays on the Widgets page on the Dashboard.
- **before_widget:** This array is the HTML markup that gets inserted directly before the widget. It's helpful for CSS styling purposes.
- **after_widget:** This array is the HTML markup that gets inserted directly after the widget.
- **before_title:** This array is the HTML markup that gets inserted directly before the widget title.
- **after_title:** This array is the HTML markup that gets inserted directly after the widget title.

REMEMBER

Even though you use register_sidebar to register a widget, widgets don't have to appear on a sidebar. Widgets can appear anywhere you want them to. The example code snippet earlier in this section registers a widget named Widget Name on the WordPress Dashboard. Additionally, it places the widget's content in an element that has the CSS class widget and puts <h4> tags around the widget's title.

Widgets that have been registered on the WordPress Dashboard are ready to be populated with content. On the Appearance menu of your site's Dashboard, you see a link titled Widgets. When you click the Widgets link, you see the new widget area you registered.

Displaying new widgets on your site

When a widget-ready area is registered with the WordPress Dashboard, you can display the area somewhere on your site. A common place for widget-ready areas is the sidebar.

To add a widget-ready area to your sidebar, pick a location within the sidebar and then locate that area in the HTML, which can vary from theme to theme. Many times, theme authors create their own sidebar.php file, and you can add this code there. After you find the area in the HTML, add the following code to the template:

```
<?php dynamic_sidebar('Widget Name'); ?>
```

This code displays the contents of the widget that you previously registered in the admin area.

Simplifying customization with functions

You may find that the simple code doesn't accomplish all the functionality that you need. You may want to style the widget's title separately from the content, for example. One solution is to create a custom PHP function that gives you a few more options. Open functions.php, and insert the following code directly below the opening <?php tag to create a function:

```
function add_new_widget_location( $name ) {
if ( ! function_exists( 'dynamic_sidebar' ) || ! dynamic_sidebar(
$name ) ) : ?>
<div class="widget">
<h4><?php echo $name; ?></h4>
<div class="widget">
<p>This section is widgetized. If you would like to
add content to this section, you may do so by using the Widgets
panel from within your WordPress Admin Dashboard. This Widget
Section is called "<strong><?php echo $name; ?></strong>"</p>
</div>
</div>
<?php endif; ?>
<?php
}
```

In this function, the first part checks to see whether a widget is assigned to this area. If so, the widget displays. If not, a message with the name of the widget area displays, which allows users to distinguish the widget area they want to add widgets to. Now if you want to display a widget by using this method, you go to the desired template file and insert the following code where you want the widget to appear:

```
<?php add_new_widget_location('Widget-Name'); ?>
```

Exploring common problems

A common problem in creating widget areas is forgetting the admin side. Although people successfully create a widget in the PHP template where they want it, they often fail to make it to the `functions.php` to register the new widget area.

Another common problem is omitting the widget code from the `functions.php` file. If you're adding widget areas to an existing site, you need to add the widget code to the bottom of the list of widgets in the `functions.php` file. Failure to do so causes the widget areas to shift their contents, which places your widgets out of order, causing you to have to redo them on the Widgets page of the WordPress Dashboard.

Examining the Main Index and The Loop

Your theme is required to have only two files: `style.css` and a main index file, known in WordPress as `index.php`. The `index.php` file is the first file WordPress tries to load when someone visits your site. Extremely flexible, `index.php` can be used as a stand-alone file, or it can include other templates. The Main Index template drags your blog posts out of the MySQL database and inserts them into your blog. This template is to your blog what the dance floor is to a nightclub: It's where all the action happens.

The filename of the Main Index template is `index.php`. You can find it in the `/wp-content/themes/twentyseventeen/` folder.

The first template tag in the Main Index template calls in the Header template, meaning that it pulls the information from the Header template into the Main Index template, as follows:

```
<?php get_header(); ?>
```

Your theme can work without calling in the Header template, but it will be missing several essential pieces — the CSS and the blog name and tagline, for starters.

The Main Index template in the Twenty Seventeen theme calls in three other files in a similar fashion:

```
get_template_part( 'template-parts/post/content',
get_post_format() );
```

This function includes the Post-Format-specific template for the content. If you want to override this function in a child theme, include a file called content-XXX.php (where XXX is the Post Format name, for example: content-audio.php or content-video.php) instead.

`get_sidebar();`

This function calls in the template file named `sidebar.php`.

`get_footer();`

This function calls in the template file named `footer.php`.

I cover each of these three functions and template files in upcoming sections of this chapter.

REMEMBER

The concept of *calling in* a template file by using a function or template tag is exactly what the Main Index template does with the four functions for the header, loop, sidebar, and footer templates explained later in this section.

Generally, one of the important functions of the main index is to contain The Loop. In WordPress, *The Loop* displays posts and pages on your site. Any PHP or HTML that you include in The Loop repeats for each of your posts that it displays. The Loop has a starting point and an ending point; anything placed between them is used to display each post, including any HTML, PHP, or CSS tags and codes.

Here’s a look at what the WordPress Codex calls “The World’s Simplest Index”:

```
<?php
get_header();
if (have_posts()) :
  while (have_posts()) :
    the_post();
    the_content();
  endwhile;
endif;
get_sidebar();
get_footer();
?>
```

Here’s how it works:

1. The template opens the php tag.
2. The Loop includes the header, meaning that it retrieves anything contained in the `header.php` file and displays it.

3. The Loop begins with the `while (have_posts()) :` bit.
4. Anything between the `while` and the `endwhile` repeats for each post that displays.

   The number of posts that displays is determined in the settings section of the WordPress Dashboard.
5. If your site has posts (and most blogs do, even when you first install them), WordPress proceeds with The Loop, starting with the piece of code that looks like this:

   ```
   if (have_posts()) :
     while (have_posts()) :
   ```

   This code tells WordPress to grab the posts from the MySQL database and display them on your page.
6. The Loop closes with this tag:

   ```
     endwhile;
   endif;
   ```

   Near the beginning of The Loop template is a template tag that looks like this:

   ```
   if (have_posts()) :
   ```

   To read that template tag in plain English, it says `If [this blog] has posts`.
7. If your site meets that condition (that is, if it has posts), WordPress proceeds with The Loop and displays your posts. If your site doesn't meet that condition (that is, doesn't have posts), WordPress displays a message that no posts exist.
8. When The Loop ends (at the `endwhile`), the index template goes on to execute the files for the sidebar and footer.

Although it's simple, The Loop is one of the core functions of WordPress.

WARNING

Misplacement of the `while` or `endwhile` statements causes The Loop to break. If you're having trouble with The Loop in an existing template, check your version against the original to see whether the `while` statements are misplaced.

REMEMBER

In your travels as a WordPress user, you may run across plugins or scripts with instructions that say something like this: "This must be placed within The Loop." That's The Loop that I discuss in this section, so pay particular attention. Understanding The Loop arms you with the knowledge you need to tackle and understand your WordPress themes.

The Loop is no different from any other template tag, in that it must begin with a function to start PHP and end with a function to stop PHP. The Loop begins with PHP and then makes a request: “While there are posts in my blog, display them on this page.” This PHP function tells WordPress to grab the blog post information from the database and return it to the blog page. The end of The Loop is like a traffic cop with a big red stop sign telling WordPress to stop the function.

REMEMBER

You can set the number of posts displayed per page on the Reading Settings page of the WordPress Dashboard. The Loop abides by this rule and displays only the number of posts per page that you’ve set.

WordPress uses other template files besides the main index, such as the header, sidebar, and footer templates. The next sections give you a closer look at a few of them.

Header template

The Header template for your WordPress themes is the starting point for every WordPress theme because it tells web browsers the following:

- The title of your site
- The location of the CSS
- The RSS-feed URL
- The site URL
- The tagline (or description) of the site

In many themes, the first elements in the header are a main image and the navigation. These two elements are usually in the `header.php` because they load on every page and rarely change. The following statement is the built-in WordPress function to call the header template:

```
<?php get_header(); ?>
```

TIP

Every page on the web has to start with a few pieces of code. In every `header.php` file in any WordPress theme, you can find these bits of code at the top:

- The `DOCTYPE` (which stands for *document type declaration*) tells the browser which type of XHTML standards you’re using. The Twenty Seventeen theme uses `<!DOCTYPE html>`, which is a declaration for W3C standards compliance mode and covers all major browser systems.

- The `<html>` tag (HTML stands for *Hypertext Markup Language*) tells the browser which language you're using to write your web pages.
- The `<head>` tag tells the browser that the information contained within the tag shouldn't be displayed on the site; rather, it's information about the document.

In the header template of the Twenty Seventeen theme, these bits of code look like this, and you should leave them intact:

```
<!DOCTYPE html>
<html <?php language_attributes(); ?> class="no-js no-svg">
<head>
```

TIP

On the Edit Themes page, click the Header template link to display the template code in the text box. Look closely, and you see that the `<!DOCTYPE html>` declaration, `<html>` tag, and `<head>` tag show up in the template.

The `<head>` tag needs to be closed at the end of the Header template, which looks like this: `</head>`. You also need to include a fourth tag, the `<body>` tag, which tells the browser where the information you want to display begins. Both the `<body>` and `<html>` tags need to be closed at the end of the template files (in `footer.php`), like this: `</body></html>`.

Using bloginfo parameters

The Header template makes much use of one WordPress template tag in particular: `bloginfo();`.

What differentiates the type of information that a tag pulls in is a *parameter.* Parameters are placed inside the parentheses of the tag, enclosed in single quotes. For the most part, these parameters pull information from the settings on your WordPress Dashboard. The template tag to get your site title, for example, looks like this:

```
<?php bloginfo('name'); ?>
```

Table 3-2 lists the various parameters you need for the `bloginfo();` tag and shows you what the template tag looks like. The parameters in Table 3-2 are listed in the order of their appearance in the Twenty Seventeen `header.php` and `template-parts/header/site/site-branding.php` template file (called into the `header.php` file through the use of the `get_template_part();` function), and pertain only to the `bloginfo();` template tag.

TABLE 3-2 Tag Values for bloginfo();

Parameter	Information	Tag
`charset`	Character settings set in the General Settings screen	`<?php bloginfo( ‘charset’ ); ?>`
`name`	Blog title, set in Settings/General	`<?php bloginfo( ‘name’ ); ?>`
`description`	Tagline for your blog, set in Settings/General	`<?php bloginfo ( ‘description’ ); ?>`

Creating title tags

Here’s a useful tip about your blog’s `<title>` tag: Search engines pick up the words used in the `<title>` tag as keywords to categorize your site in their directories.

The `<title></title>` tags are HTML tags that tell the browser to display the title of your website on the title bar of a visitor’s browser. Figure 3-4 shows how the title of my business website sits on the title bar of the browser window.

Website title

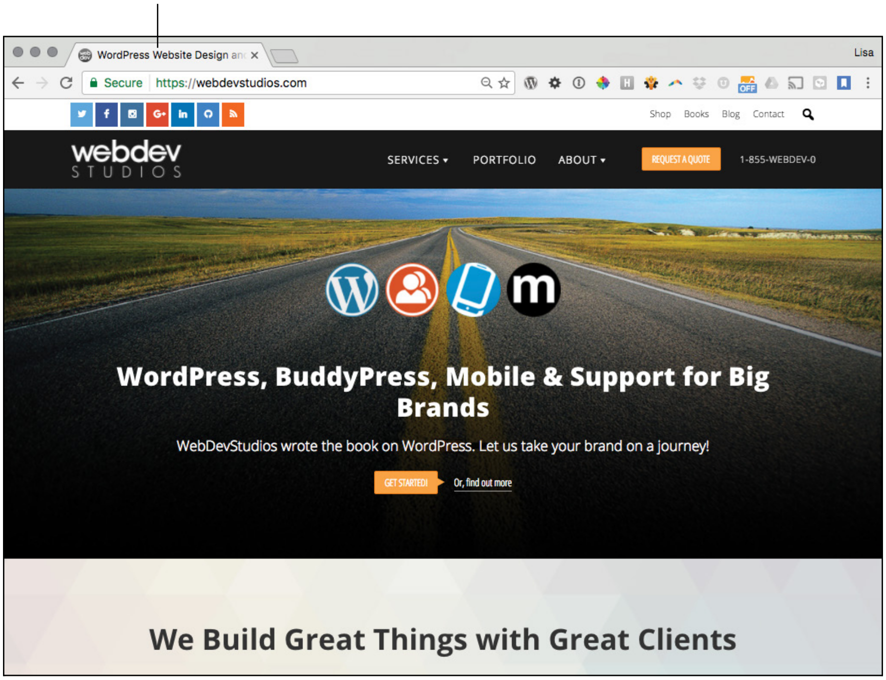

WordPress Website Design an
Lisa
Secure
https://webdevstudios.com
Shop
Books
Blog
Contact
webdev
STUDIOS
SERVICES ▾
PORTFOLIO
ABOUT ▾
REQUEST A QUOTE
1-855-WEBDEV-0
WordPress, BuddyPress, Mobile & Support for Big Brands
WebDevStudios wrote the book on WordPress. Let us take your brand on a journey!
GET STARTED!
Or, find out more
We Build Great Things with Great Clients

FIGURE 3-4: The title displayed on the browser.

Search engines love the title bar. The more you can tweak that title to provide detailed descriptions of your site (otherwise SEO), the more the search engines love your site. Browsers show that love by giving your site higher rankings in their results.

The `<title>` tag is the code that lives in the Header template between these two tag markers: `<title></title>`. In the default Twenty Seventeen theme, this bit of code is located in the `functions.php` template file of the theme and looks like this:

```
add_theme_support( 'title-tag' );
```

The `add_theme_support( 'title-tag' );` function in the `functions.php` template tells WordPress to place the `<title>` tag in the `<head>` section of the website.

It may help for me to put this example in plain English. The way that the `add_theme_support( 'title-tag' );` function displays the title is based on the type of page that's being displayed — and it shrewdly uses SEO to help you with the browser powers that be.

REMEMBER

The title bar of the browser window always displays your site's name unless you're on a single post page. In that case, it displays your site's title plus the title of the post on that page.

Displaying your blog name and tagline

Most WordPress themes show your site name and tagline in the header of the site, which means that this information is displayed in easy, readable text for all visitors (not just search engines) to see. My site name and tagline, for example, are

- **Site name:** Lisa Sabin-Wilson
- **Site tagline:** Designer, Author: WordPress For Dummies

You can use the `bloginfo();` tag, found in the header.php template, plus a little HTML code to display your site name and tagline. Most sites have a clickable title that takes you back to the main page when the visitor clicks it. No matter where your visitors are on your site, they can always go back home by clicking the title of your site on the header.

To create a clickable title, use the following code:

```
<a href="<?php bloginfo('url'); ?>"><?php bloginfo('name'); ?></a>
```

The bloginfo(‘url’); tag is your main Internet address, and the bloginfo(‘name’); tag is the name of your site (refer to Table 3-2). So the code creates a link that looks something like this:

```
<a href="http://yourdomain.com">Your Site Name</a>
```

The tagline generally isn't linked back home. You can display it by using the following tag:

```
<?php bloginfo('description'); ?>
```

This tag pulls the tagline directly from the one that you set up on the General Settings screen of your WordPress Dashboard.

This example shows that WordPress is intuitive and user-friendly; you can do things such as change the blog name and tagline with a few keystrokes on the Dashboard. Changing your options on the Dashboard creates the change on every page of your site, with no coding experience required. Beautiful, isn't it?

In the Twenty Seventeen templates, these tags are surrounded by tags that look like these: <h1 class–“site–title”></h1> or <p class=”site–description”></p>. These tags are HTML tags, which define the look and layout of the blog name and tagline in the CSS of your theme. Book 6, Chapter 4 covers CSS.

Sidebar template

The Sidebar template in WordPress has the filename sidebar.php. The sidebar is usually located on the left or right side of the main content area of your WordPress theme. (In the Twenty Seventeen theme, the sidebar is displayed to the right of the main content area.) The sidebar is a good place to put useful information about your site, such as a summary, advertisements, or testimonials.

Many themes use widget areas in the sidebar template. This practice allows you to display content easily on your WordPress pages and posts. In the default Twenty Seventeen theme, the index.php template file also includes the sidebar.php template file, which means that it tells WordPress to execute and display all the template functions included in the Sidebar template (sidebar.php). The line of code from the Main Index template (index.php) that performs this task looks like this:

```
<?php get_sidebar(); ?>
```

This code calls the Sidebar template and all the information it contains into your page.

Footer template

The Footer template in WordPress has the filename `footer.php`. The footer is generally at the bottom of the page and contains brief reference information about the site, such as copyright information, template design credits, and a mention of WordPress. Similarly to the Header and Sidebar templates, the Footer template gets called into the Main Index template through this bit of code:

```
<?php get_footer(); ?>
```

This code calls the Footer template and all the information it contains into your website.

The default Twenty Seventeen theme shows the site title and the statement `Proudly powered by WordPress`. You can use the footer to include all sorts of information about your site; for example, you can display a photograph or a list of links to other pages in your site — you don't have to restrict the footer to small bits of information.

Examining Other Template Files

To make your website work properly, WordPress uses all the theme files together. Some files, such as the header and footer, are used on every page; others, such as the Comments template (`comments.php`), are used only at specific times to pull in specific functions.

When someone visits your site, WordPress uses a series of queries to determine which templates to use.

Many more theme templates can be included in your theme. Here are some of the other template files you may want to use:

- **Comments template (`comments.php`):** The Comments template is required if you plan to host comments on your site; it provides all the template tags you need to display those comments. The template tag used to call the comments into the template is `<?php comments_template(); ?>`.
- **Single Post template (`single.php`):** When your visitors click the title or permalink of a post you published to your site, they're taken to that post's individual page. There, they can read the entire post, and if you have comments enabled, they see the comments form and can leave comments.

- **Page template (`page.php`):** You can use a Page template for static pages of your WordPress site.
- **Search Results (`search.php`):** You can use this template to create a custom display of search results on your site. When someone uses the search feature to search your site for specific keywords, this template formats the return of those results.
- **404 template (`404.php`):** Use this template to create a custom 404 page, which is the page visitors get when the browser can't find the page requested and returns that ugly `404 Page Cannot Be Found` error.

REMEMBER

The templates in the preceding list are optional. If these templates don't exist in your WordPress `themes` folder, nothing breaks. The Main Index template handles the display of these items (the single post page, the search results page, and so on). The only exception is the Comments template. If you want to display comments on your site, you must include that template in your theme.

Customizing Your Posts with Template Tags

This section covers the template tags that you use to display the body of each post you publish. The body of a post includes information such as the post date and time, title, author name, category, and content. Table 3-3 lists the common template tags you can use for posts, available in any WordPress theme template. The tags in Table 3-3 work only if you place them within The Loop (covered in "Examining the Main Index and The Loop" earlier in this chapter and located in the `loop.php` template file).

The last two tags in Table 3-3 aren't like the others. You don't place these tags in The Loop; instead, you insert them after The Loop but before the `if` statement ends. Here's an example:

```
<?php endwhile; ?>
<?php next_posts_link('&laquo; Previous Entries') ?>
<?php previous_posts_link('Next Entries &raquo;') ?>
<?php endif; ?>
```

TABLE 3-3 **Template Tags for Posts**

Tag	Function
`get_the_date();`	Displays the date of the post.
`get_the_time();`	Displays the time of the post.
`the_title();`	Displays the title of the post.
`the_permalink();`	Displays the permalink (URL) of the post.
`get_the_author();`	Displays the post author's name.
`the_author_link();`	Displays the URL of the post author's site.
`the_content('Read More...');`	Displays the content of the post. (If you use an excerpt [see next entry], the words *Read More* appear and are linked to the individual post page.)
`the_excerpt();`	Displays an excerpt (snippet) of the post.
`the_category();`	Displays the category (or categories) assigned to the post. If the post is assigned to multiple categories, commas separate them.
`comments_popup_link('No Comments', 'Comment (1)', 'Comments(%)');`	Displays a link to the comments, along with the comment count for the post in parentheses. (If no comments exist, the tag displays a *No Comments* message.)
`next_posts_link('&laquo; Previous Entries')`	Displays the words *Previous Entries* linked to the preceding page of post entries.
`previous_posts_link('Next Entries &raquo;')`	Displays the words *Next Entries* linked to the next page of post entries.

Putting It All Together

Template files can't do a whole lot by themselves. The real power comes when they're put together.

Connecting the templates

WordPress has built-in functions to include the main template files (such as `header.php`, `sidebar.php`, and `footer.php`) in other templates. An `include` function is a custom PHP function that is built into WordPress, allowing you to retrieve the content of another template file and display it along with the content of another template file. Table 3-4 shows the templates and the functions you use to include them.

TABLE 3-4 Template Files and Include Functions

Template Name	Include Function
header.php	`<?php get_header(); ?>`
sidebar.php	`<?php get_sidebar(); ?>`
footer.php	`<?php get_footer(); ?>`
search.php	`<?php get_search_form(); ?>`
comments.php	`<?php comments_template(); ?>`

If you want to include a file that doesn't have a built-in `include` function, you need a different piece of code. To add a unique sidebar to a certain page template, for example, you could name the sidebar file `sidebar-page.php`. To include that sidebar in another template, you use the following code:

```
<?php get_template_part('sidebar', 'page'); ?>
```

In this statement, the PHP `get_template_part` function looks through the main theme folder for the `sidebar_page.php` file and displays the sidebar.

In this section, you put together the guts of a basic Main Index template by using the information on templates and tags provided so far in this chapter. There seem to be endless lines of code when you view the `index.php` template file in the Twenty Seventeen theme, so I've simplified it for you with the following steps. These steps should give you a basic understanding of The Loop and common template tags and functions that you can use to create your own.

You create a new WordPress theme by using some of the basic WordPress templates. The first steps in pulling everything together are as follows:

1. **Connect to your web server via SFTP, click the `wp-content` folder, and then click the `themes` folder.**

   This folder contains the themes that are currently installed on your WordPress site. (See Book 2 if you need more information on SFTP.)

2. **Create a new folder, and call it `mytheme`.**

   In most SFTP programs, you can right-click and choose New Folder from the shortcut menu. (If you aren't sure how to create a folder, refer to your SFTP program's help files.)

3. In your favored text editor (such as Notepad for the PC or TextEdit for the Mac), create and save the following files with the lines of code I've provided for each:

- *Header template:* Create the file with the following lines of code and then save with the filename `header.php`:

```
<!DOCTYPE html>
  <html <?php language_attributes(); ?> class="no-js">
   <head>
     <meta charset="<?php bloginfo( 'charset' ); ?>">
    <link rel="stylesheet" type="text/css" media="all" href="<?php
    bloginfo( 'stylesheet_url' ); ?>"/>

     <?php wp_head(); ?>
   </head>
   <body <?php body_class() ?>>
     <header class="masthead">
       <h1><a href="<?php bloginfo( 'url' ); ?>"><?php bloginfo(  'name' );
       ?></a></h1>
       <h2><?php bloginfo( 'description' ); ?></h2>
     </header>
     <div id="main">
```

- *Theme Functions:* Create the file with the following lines of code and then save it using the filename `functions.php`:

```
<?php
add_theme_support( 'title-tag' );

if ( function_exists( 'register_sidebar' ) ) register_sidebar( array(
'name'=>'Sidebar',
));
?>
```

The Theme Functions file registers the widget area for your site so that you're able to add widgets to your sidebar by using the WordPress widgets available on the Widgets page of the Dashboard.

- *Sidebar template:* Create the file with the following lines of code and then save it with the filename `sidebar.php`:

```
<aside class="sidebar">
<ul>
<?php if ( !function_exists( 'dynamic_sidebar ') || !dynamic_sidebar(
'Sidebar' ) ) : ?>
```

```
<?php endif; ?>
</ul>
</aside>
```

The code tells WordPress where you want the WordPress widgets to display in your theme. In this case, widgets are displayed on the sidebar of your site.

- *Footer template:* Create the file with the following lines of code and then save with the filename `footer.php`:

```
<footer>
<p>&copy; Copyright <a href="<?php bloginfo( 'url' ); ?>"><?php
bloginfo( 'name' ); ?></a>. All Rights Reserved</p>
</footer>
<?php wp_footer(); ?>
</body>
</html>
```

- *Stylesheet:* Create the file with the following lines of code and then save it with the filename `style.css`:

```
/*
Theme Name: My Theme
Description: Basic Theme from WordPress For Dummies example
Author: Lisa Sabin-Wilson
Author URI: http://lisasabin-wilson.com
*/

body {
font-family: verdana, arial, helvetica, sans-serif;
font-size: 16px;
color: #555;
background: #ffffff;
}

header.masthead {
width: 950px;
margin: 0 auto;
background: black;
color: white;
padding: 5px;
text-align:center;
}
header.masthead h1 a {
color: white;
font-size: 28px;
font-family: Georgia;
text-decoration: none;
}

header.masthead h2 {
font-size: 16px;
font-family: Georgia;
color: #eee;
}

header.masthead nav {
background: #ffffff;
text-align: left;
height: 25px;
padding: 4px;
}


header.masthead nav ul {
list-style:none;
margin:0;
}

#main {
width: 950px;
margin: 0 auto;
padding: 20px ;
}

#main section {
width: 500px;
float:left;
}

#main .hentry {
margin: 10px 0;
}

aside.sidebar {
width: 290px;
margin: 0 15px;
float:right;
}
```

```
aside.sidebar ul {
list-style:none;
}

footer {
clear:both;
width: 960px;
height: 50px;
background: black;
color: white;
margin: 0 auto;
}

footer p {
text-align:center;
padding: 15px 0;
-}

footer a {
color:white;
}
```

(More CSS is covered in Chapter 4 of this book; this example gives you just some *very* basic styling to create your sample theme.)

Using the tags provided in Table 3-3, along with the information on The Loop and the calls to the Header, Sidebar, and Footer templates provided in earlier sections, you can follow the next steps for a bare-bones example of what the Main Index template looks like when you put the tags together.

WARNING

When typing templates, be sure to use a text editor such as Notepad or TextEdit. Using a word processing program such as Microsoft Word opens a whole slew of problems in your code. Word processing programs insert hidden characters and format quotation marks in a way that WordPress can't read.

Now that you have the basic theme foundation, the last template file you need to create is the Main Index template. To create a Main Index template to work with the other templates in your WordPress theme, open a new window in a text-editor program and then follow these steps. (Type the text in each of these steps on its own line. Press the Enter key after typing each line so that each tag starts on a new line.)

1. **Type** `<?php get_header(); ?>`.

   This template tag pulls the information in the Header template of your WordPress theme.

2. **Type** `<section>`.

   This tag is HTML markup that tells the browser that it's a grouping of content (in this case, blog posts).

3. **Type** `<?php if (have_posts()) : ?>`.

   This template tag is an `if` statement that asks, "Does this blog have posts?" If the answer is yes, the tag grabs the post content information from your MySQL database and displays the posts in your blog.

4. **Type** `<?php while (have_posts()) : the_post(); ?>`.

   This template tag starts The Loop.

5. **Type** `<article <?php post_class() ?> id="post-<?php the_ID(); ?>">`.

   This tag is HTML markup that tells the browser that it's the start of a new, single article, along with the `post_class` CSS designation.

6. **Type** `<h1><a href="<?php the_permalink(); ?>"><?php the_title(); ?></a></h1>`.

   This tag tells your blog to display the title of a post that's clickable (linked) to the URL of the post, surrounded by HTML Header tags.

7. **Type** `Posted on <?php the_date(); ?> at <?php the_time(); ?>`.

   This template tag displays the date and time when the post was made. With these template tags, the date and time format are determined by the format you set on the Dashboard.

8. **Type** `Posted in <?php the_category( ',' ); ?>`.

   This template tag displays a comma-separated list of the categories to which you've assigned the post, such as *Posted in: category 1, category 2*.

9. **Type** `<?php the_content( 'Read More..' ); ?>`.

   This template tag displays the actual content of the blog post. The `'Read More..'` portion of this tag tells WordPress to display the words *ReadMore,* which are clickable (hyperlinked) to the post's permalink, where the reader can read the rest of the post in its entirety. This tag applies when you're displaying a post excerpt, as determined by the actual post configuration on the Dashboard.

10. **Type** `Posted by: <?php the_author(); ?>`.

    This template tag displays the author of the post in this manner: *Posted by: Lisa Sabin-Wilson.*

11. **Type** `</article>`.

    This tag is HTML markup that tells the browser that the article has ended.

12. **Type** `<?php endwhile; ?>`.

    This template tag ends The Loop and tells WordPress to stop displaying posts here. WordPress knows exactly how many times The Loop needs to work, based on the setting on the WordPress Dashboard. That's exactly how many times WordPress will execute The Loop.

13. **Type** `<?php next_posts_link('&laquo; Previous Entries'); ?>`.

    This template tag displays a clickable link to the preceding page of entries, if any.

14. **Type** `<?php previous posts link('&raquo; Next Entries'); ?>`.

    This template tag displays a clickable link to the next page of entries, if any.

15. **Type** `<?php else : ?>`.

    This template tag refers to the `if` question asked in Step 3. If the answer to that question is no, this step provides the `else` statement: IF this blog has posts, THEN list them here (Steps 3 and 4), or ELSE display the following message.

16. **Type** `Not Found. Sorry, but you are looking for something that isn't here`.

    This tag is the message followed by the template tag displayed after the `else` statement from Step 15. You can reword this statement to have it say whatever you want.

17. **Type** `<?php endif; ?>`.

    This template tag ends the `if` statement from Step 3.

18. **Type** `</section>`.

    This tag is HTML5 markup that closes the `<section>` tag opened in Step 2 and tells the browser that this grouping of content has ended.

19. **Type** `<?php get_sidebar(); ?>`.

    This template tag calls in the Sidebar template and pulls that information into the Main Index template.

20. **Type** `</div>`.

    This tag is HTML markup closing the `<div id="main">` that was opened in the `header.php` file.

21. **Type** `<?php get_footer(); ?>`.

    This template tag calls in the Footer template and pulls that information into the Main Index template. ***Note:*** The code in the `footer.php` template ends the `<body>` and `<html>` tags that were started in the Header template (`header.php`).

When you're done, the display of the Main Index template code looks like this:

```
<?php get_header(); ?>
<section>
<?php if (have_posts()) : ?>

<?php while (have_posts()) : the_post(); ?>
 <article <?php post_class() ?> id="post-<?php the_ID(); ?>">
    <h1><a href="<?php the_permalink(); ?>"><?php the_title(); ?></a></h1>
    Posted on: <?php the_date(); ?> at <?php the_time(); ?>
    Posted in: <?php the_category(','); ?>
    <?php the_content('Read More..'); ?>
    Posted by: <?php the_author(); ?>
</article>

<?php endwhile; ?>
<?php next_posts_link( '&laquo; Previous Entries' ) ?>
<?php previous_posts_link( 'Next Entries &raquo;' ) ?>
<?php else : ?>
<p>Not Found
Sorry, but you are looking for something that isn't here.</p>
<?php endif; ?>
</section>
<?php get_sidebar(); ?>
</div>
<?php get_footer(); ?>
```

22. **Save this file as `index.php` , and upload it to the `mythemes` folder.**

    In Notepad, you can save the file by choosing File⇨Save As. Type the name of the file in the File Name text box and then click Save.

23. **Activate the theme on the WordPress Dashboard, and view your site to see your handiwork in action!**

TIP

My Main Index template code has one template tag that I explain in Chapter 4 of this book; that template tag is `<article <?php post_class() ?> id="post-<?php the_ID(); ?>">`. This tag helps you create some interesting styles in your template by using CSS.

The simple, basic Main Index template that you just built doesn't have the standard HTML markup in it, so you'll find that the visual display of your site differs from the default Twenty Seventeen theme. This example gives you the bare-bones basics of the Main Index template and The Loop in action.

TIP

If you’re having a hard time typing the code provided in this section, I’ve made this sample theme available for download on my website. The `.zip` file contains the files discussed in this chapter so you can compare your efforts with mine, electronically. You can download the theme `.zip` file here: `http://lisasabin-wilson.com/wpfd/my-theme.zip`.

Using additional stylesheets

Often, a theme uses multiple stylesheets for browser compatibility or consistent organization. If you use multiple stylesheets, the process for including them in the template is the same as for any other stylesheet.

To add a new stylesheet, create a directory in the root theme folder called `css`. Next, create a new file called `mystyle.css` within the `css` folder. To include the file, you must edit the `header.php` file. This example shows the code you need to include in the new CSS file:

```
<link rel="stylesheet" href="<?php bloginfo('stylesheet_directory');
?>/css/mystyle.css" type="text/css" media="screen"/>
```

IN THIS CHAPTER

- **Personalizing your header and background graphics**
- **Customizing your site with CSS**
- **Modifying your theme with CSS and HTML**
- **Customizing basic elements for uniqueness**
- **Exploring additional resources**

Chapter 4

Customizing Your Theme

Customizing your WordPress theme's overall look with unique graphics and colors is one of the most fun and exciting aspects of using WordPress themes. You can take one of your favorite, easily customizable themes and personalize it with some simple changes to make it unique. (For more information on finding an existing theme, read Book 6, Chapter 2.)

After you find an existing free (or premium) WordPress theme that suits your needs, the next step is personalizing the theme through some of the following techniques:

- **Plugging in your own graphics:** The easiest way to make a theme your own is to add a graphical header that includes your logo and matching background graphics.
- **Adjusting colors:** You may like the structure and design of your theme but want to adjust the colors to match your own tastes or brand look. You can do this in the CSS (Cascading Style Sheets), too.
- **Adding/changing fonts:** You may want to change the font, or *typography,* on your site by using different font types, sizes, or colors. You can edit these display properties in the CSS.

Often, the customization process is one of trial and error. You have to mix and match different elements, tweaking and tinkering with graphics and CSS until you achieve design perfection. In this chapter, you explore the easiest ways to customize your WordPress theme through graphics and CSS.

Changing Your Background Graphic

Using background graphics is an easy way to set your site apart from others that use the same theme. Finding a background graphic for your site is much like finding just the right desktop background for your computer. You can choose among a variety of background graphics for your site, such as photography, abstract art, and repeatable patterns.

You can find ideas for new and different background graphics by checking out some of the CSS galleries on the web, such as `www.cssdrive.com` and `http://csselite.com`. Sites like these should be used only for inspiration, not theft. Be careful when using images from outside sources.

WARNING

You want to use only graphics and images that you have been given the right (through express permission or licenses that allow you to reuse) to use on your site). For this reason, always purchase graphics from reputable sources, such as these three online graphic sites:

- **iStockphoto (`www.istockphoto.com`):** iStockphoto has an extensive library of stock photography, vector illustrations, video and audio clips, and Adobe Flash media. You can sign up for an account and search libraries of image files to find the one that suits you or your client best. The files that you use from iStockphoto aren't free; you do have to pay for them. Be sure that you read the license for each image you use. The site has several licenses. The cheapest one is the Standard License, which has some limitations. You can use an illustration from iStockphoto in one website design, for example, but you can't use that same illustration in a theme design that you intend to sell multiple times (say, in a premium theme marketplace). Be sure to read the fine print!
- **Dreamstime (`https://www.dreamstime.com`):** Dreamstime is a major supplier of stock photography and digital images. Sign up for an account and search the huge library of digital image offerings. Dreamstime does offer free images at times, so keep your eyes out for those! Also, Dreamstime has different licenses for its image files, and you need to pay close attention to them. One nice feature is the Royalty Free licensing option, which allows you to pay for the image one time and then use the image as many times as you like. You can't redistribute the image in the same website theme repeatedly, however, such as in a template that you sell to the public.

- **GraphicRiver (`https://graphicriver.net`):** GraphicRiver offers stock graphic files such as Adobe Photoshop images, design templates, textures, vector graphics, and icons, to name just a few. The selection is vast, and the cost to download and use the graphic files is minimal. As with all graphic and image libraries, be sure to read the terms of use or any licensing attached to each of the files to make sure you're legally abiding by the terms.

TIP

Another great resource for free graphics and more is *Smashing Magazine* at `https://www.smashingmagazine.com` (click the Freebies link under Graphics in the left navigation menu). You can find hundreds of links and resources to free and often reusable graphics, such as textures and wallpapers for your site.

To best use background graphics, you must answer a few simple questions:

- **What type of background graphic do you want to use?** Do you want a repeatable pattern or texture, for example, or a black-and-white photograph of something in your business?
- **How do you want the background graphic to display in your browser?** Do you want to tile or repeat your background image in the browser window or pin it to a certain position no matter what size your guest's browser is?

The answers to those questions determine how you install a background graphic in your theme design.

REMEMBER

When working with graphics on the web, use GIF, JPG, or PNG image formats. For images with a small number of colors (such as charts, line art, and logos), GIF format works best. For other image types (screen shots with text and images, blended transparency, and so on), use JPG (also called JPEG) or PNG.

For web design, the characteristics of each image file format can help you decide which file format you need to use for your site. The most common image file formats and characteristics include the following:

- **JPG:** Suited for use with photographs and smaller images used in your web design projects. Although the JPG format compresses with lossy compression, you can adjust compression when you save a file in JPG a format. That is, you can choose the degree, or amount, of compression that occurs, from 1 to 100. Usually, you won't see a great deal of image quality loss with compression levels 1 through 20.
- **PNG:** Suited for larger graphics used in web design, such as the logo or main header graphic that helps brand the overall look of the website. A `.png` file uses lossless image compression; therefore, no data loss occurs during compression, so you get a cleaner, sharper image. You can also create and

save a .png file on a transparent canvas; .jpg files must have a white canvas or some other color that you designate.

- **GIF:** Compression of a .gif file is lossless; therefore, the image renders exactly the way you design it, without loss of quality. These files compress with lossless quality when the image uses 256 colors or fewer, however. For images that use more colors (higher quality), GIF isn't the greatest format to use. For images with a lot of colors, go with PNG format instead.

Uploading an image for background use

If you want to change the background graphic in your theme, follow these steps:

1. **Upload your new background graphic via SFTP to the images folder in your theme directory.**

   Typically, the images folder is at `wp-content/themes/themename/images`.

2. **On the WordPress Dashboard, click the Editor link on the Appearance menu.**

   The Edit Themes screen displays.

3. **Click the Stylesheet (`style.css`) link on the right side of the page.**

   The `style.css` template opens in the text-editor box on the left side of the Edit Themes screen.

4. **Scroll down to find the `body` CSS selector.**

   I discuss CSS selectors later in this chapter. The following code segment is a sample CSS snippet you can use to define the background color of your site:

   ```
   body {
       background: #f1f1f1;
   }
   ```

5. **(Optional) Modify the background property values from the code in Step 4.**

   Change

   ```
   background: #f1f1f1;
   ```

   to

   ```
   background #FFFFFF url('images/newbackground.gif');
   ```

   With this example, you added a new background image (`newbackground.gif`) to the existing code and changed the color code to white (`#FFFFFF`).

6. **Click the Update File button to save the stylesheet changes you made.**

   Your changes are saved and applied to your theme.

Positioning, repeating, and attaching images

After you upload a background graphic, you can use CSS background properties to position it how you want it. The main CSS properties — `background-position`, `background-repeat`, and `background-attachment` — help you achieve the desired effect. Table 4-1 describes the CSS background properties and the available values for changing them in your theme stylesheet. If you're a visual person, you'll enjoy testing and tweaking values to see the effects on your site.

TABLE 4-1 CSS Background Properties

Property	Description	Values	Example

`background-position`	Determines the starting point of your background image on your web page	`bottom center`
		`bottom right`
		`left center`
		`right center`
		`center center`
			`background-position: bottom center;`

`background-repeat`	Determines whether your background image will repeat or tile	`repeat` (repeats infinitely) `repeat-y` (repeats vertically) `repeat-x` (repeats horizontally) `no-repeat` (doesn't repeat)	`background-repeat: repeat-y;`

`background-attachment`
`background-origin`
`background-clip`
	Determines whether your background image is fixed or scrolls with the browser window
	Specifies the positioning area of the background images
	Specifies the painting area of the background images
		fixed
		scroll
		padding-box
		border-box
		content-box
		initial
		inherit
		border-box
		padding-box
		content-box
		initial
		inherit
			`background-attachment: scroll;`
			`background-origin: content-box;`
			`background-clip: padding-box;`

Suppose that your goal is to *tile,* or repeat, the background image so that it scales with the width of the browser on any computer. To achieve this, open the stylesheet again, and change

```
background: #f1f1f1;
```

to

```
background: #FFFFFF;
background-image: url(images/newbackground.gif);
background-repeat: repeat;
```

If your goal is to display a fixed image that doesn't scroll or move when your site visitor moves the browser, you can use the `background-position`, `background-repeat`, and `background-attachment` properties to display it exactly how you want it to appear.

You can tile (repeat) an image so that it covers the entire background space no matter how wide or long the website display is. To achieve this look, change `background: #f1f1f1` in your stylesheet to

```
background: #FFFFFF;
background-image: url(images/newbackground.gif);
background-position: top left;
background-repeat: repeat;
```

TIP

As you become more comfortable with CSS properties, you can start using shortening methods to make your CSS coding practice more efficient. The preceding block of code, for example, looks like this with CSS shortcode practice:

```
background: #fff url(images/newbackground.gif) repeat top left;
```

As you can see from these examples, changing the background graphic by using CSS involves options that depend on your creativity and design style more than anything else. But when you leverage these options properly, you can use CSS to take your design to the next level.

Changing Your Header Graphic

Creating a header graphic is one of the fastest ways to personalize a site and make it unique. The header graphic typically is the strongest graphic design element. Positioned at the top of your theme, a header graphic often includes a logo or other information about your site or business.

Here are some elements you might include in your header graphic:

- **Business name or logo:** This sounds obvious, but the header graphic is the prime way to identify the site. If you don't have a logo, you can simply stylize your business name for your header graphic, but your brand identity needs to be prominent and polished in the header graphic.
- **Profile photos:** If it's for a blog or an independent professional's site (say, for a real estate agent), you may want to include a studio-quality profile photo of the person to help your site guests know whom they're dealing with and to add a touch of warmth.
- **Taglines, important slogans, and keywords:** Use the header area to tell your visitors something about your site or business.
- **Contact information:** If you're doing a small-business website, including phone and address information is vital.
- **Background images:** Be creative with the header image behind all this information. Use a pattern or graphic that matches your brand colors and doesn't distract attention from the vital information you want to communicate.

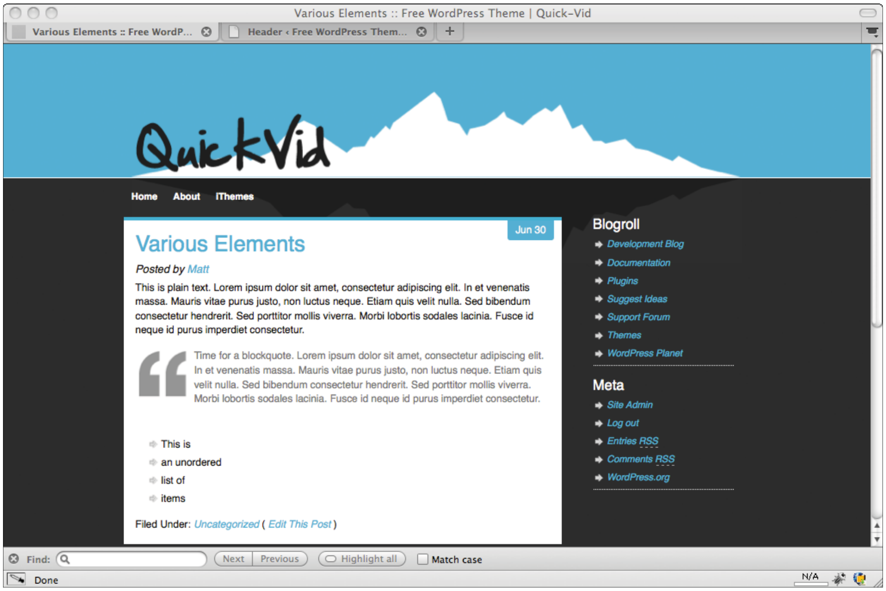
REMEMBER

Most WordPress themes, particularly premium themes, allow you to upload new header graphics over existing ones from the WordPress Dashboard. Sometimes, the ability to upload a new header graphic is called a Custom Header Uploader script or feature. This feature allows you to turn off HTML overlay text and use only graphics for your header, too.

You can personalize your header graphic in the following ways:

- Replace or overwrite the theme's existing header image with an appropriate image of your choosing.
- Use a repeating graphic pattern.

Using a repeating graphic pattern is similar to using a repeating background image, which I discuss in "Positioning, repeating, and attaching images" earlier in this chapter. In the following sections, you replace your existing header image (in the free Quick-Vid theme from iThemes: `https://wordpress.org/themes/quick-vid/`) by using the Custom Header feature of many WordPress themes. Figure 4-1 shows the Quick-Vid theme's default header image.



Various Elements

Posted by Matt

This is plain text. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In et venenatis massa. Mauris vitae purus justo, non luctus neque. Etiam quis velit nulla. Sed bibendum consectetur hendrerit. Sed porttitor mollis viverra. Morbi lobortis sodales lacinia. Fusce id neque id purus imperdiet consectetur.

> Time for a blockquote. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In et venenatis massa. Mauris vitae purus justo, non luctus neque. Etiam quis velit nulla. Sed bibendum consectetur hendrerit. Sed porttitor mollis viverra. Morbi lobortis sodales lacinia. Fusce id neque id purus imperdiet consectetur.

- This is
- an unordered
- list of
- items

Filed Under: Uncategorized (Edit This Post)

FIGURE 4-1: The default header of the free Quick-Vid theme from iThemes.

Considering the image dimensions

Generally, you want to replace the existing header image with an image that has exactly the same dimensions. To determine the dimensions of the existing image, find the default header graphic, and open it in an image-editing program, such as Photoshop. Create (or crop) your new header graphic to the same dimensions (in pixels) to minimize problems when adding the image to your theme.

TIP

Adobe Photoshop Elements is a handy design software tool for basic image editing. It has significantly fewer features than its bigger and older brother, Photoshop, but for most image editing jobs, it does great work for a fraction of the price.

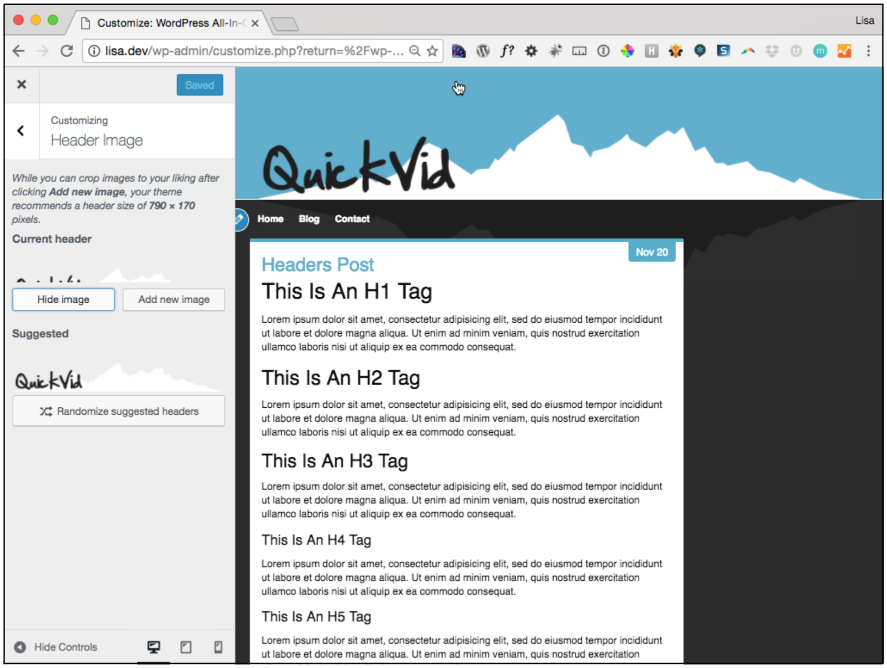
Uploading a header image

Depending on your theme, replacing an existing header image is a fast and efficient way to make changes; you simply upload the graphic and refresh your site.

The Header feature is included in many popular themes. To add a new header graphic in your theme with the Custom Header feature, follow these steps:

1. **On the WordPress Dashboard, click the Header link on the Appearance menu.**

   The Customizing Header Image screen appears, as shown in Figure 4-2. Here, you can adjust your header area, add or remove text, and upload new graphics.



*While you can crop images to your liking after clicking **Add new image**, your theme recommends a header size of **790 × 170** pixels.*

Headers Post

This Is An H1 Tag

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

This Is An H2 Tag

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

This Is An H3 Tag

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

This Is An H4 Tag

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

This Is An H5 Tag

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation

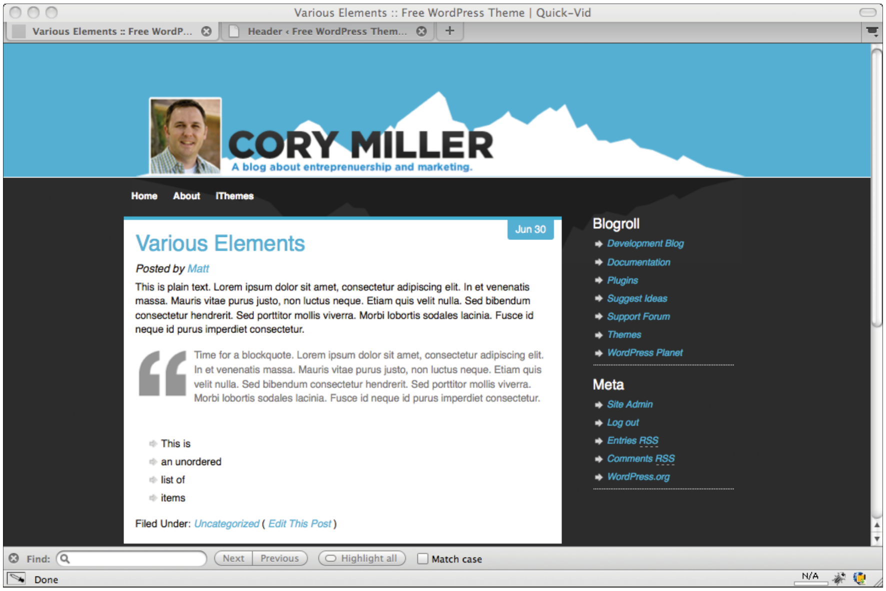
FIGURE 4-2: The WordPress Customizing Header Image screen.

2. **Upload your new header graphic by clicking the Add New Image button in the Current Header section.**

   If your image isn't sized to the specifications given, you'll be asked to crop it to fit.

3. **Click the Save & Publish button to save your changes.**

   The Save & Publish button changes to Saved once your changes have been updated. Figure 4-3 shows a new header graphic.



Various Elements

Posted by *Matt*

This is plain text. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In et venenatis massa. Mauris vitae purus justo, non luctus neque. Etiam quis velit nulla. Sed bibendum consectetur hendrerit. Sed porttitor mollis viverra. Morbi lobortis sodales lacinia. Fusce id neque id purus imperdiet consectetur.

> Time for a blockquote. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In et venenatis massa. Mauris vitae purus justo, non luctus neque. Etiam quis velit nulla. Sed bibendum consectetur hendrerit. Sed porttitor mollis viverra. Morbi lobortis sodales lacinia. Fusce id neque id purus imperdiet consectetur.

- This is
- an unordered
- list of
- items

Filed Under: *Uncategorized* (*Edit This Post*)

FIGURE 4-3: The Quick-Vid theme with a new header image.

Personalizing Your Theme with CSS

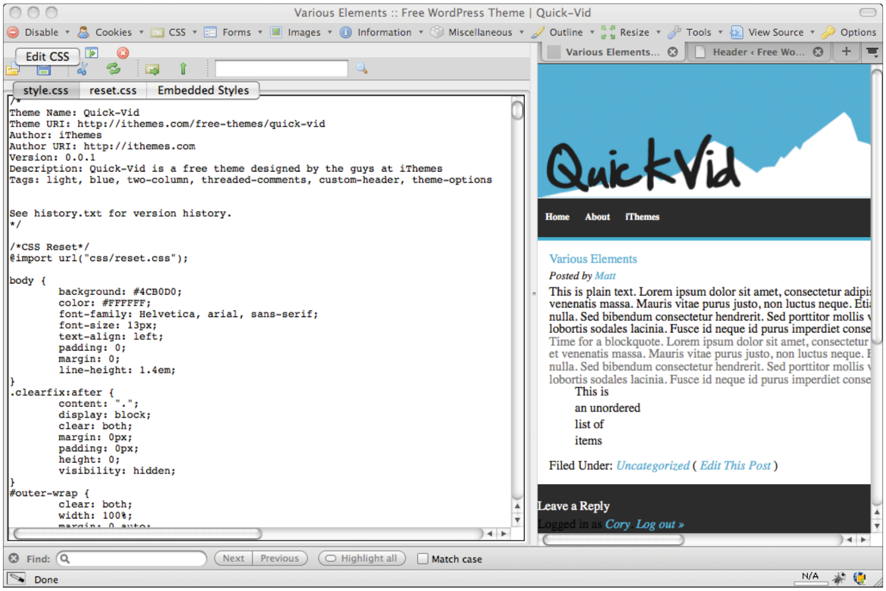
Cascading Style Sheets (CSS) are part of every WordPress theme. The primary way to personalize your theme with CSS is through your theme's default stylesheet (`style.css`). Through a comment block (shown in Figure 4-4), your theme's `style.css` file tells WordPress the theme name, the version number, and the author, along with other information.

By making CSS changes in your theme's stylesheet, you can apply unique styling (such as different fonts, sizes, and colors) to headlines, text, links, and borders, and adjust the spacing between them, too. With all the CSS options available, you can fine-tune the look and feel of different elements with simple tweaks.

To explore your theme's stylesheet, click the Editor link on the Appearance menu of the WordPress Dashboard. By default, your theme's main stylesheet (`style.css`) should appear. If not, look at the far-right side of the WordPress Dashboard below the Templates heading; scroll down to find the Styles heading; and click the Stylesheet file, shown in Figure 4-5.

WARNING

Making changes in the stylesheet or any other theme file can cause your site to load the theme improperly. Be careful what you change. When you make changes, ensure that you're on a playground or sandbox site so that you can easily restore your original file and don't permanently affect a live or important site. Always save an original copy of the stylesheet in a text program, such as Notepad (for the PC) or TextEdit (for the Mac), so you can find the original CSS and copy and paste it back into your stylesheet if necessary.


Various Elements :: Free WordPress Theme | Quick-Vid
Disable ▾ Cookies ▾ CSS ▾ Forms ▾ Images ▾ Information ▾ Miscellaneous ▾ Outline ▾ Resize ▾ Tools ▾ View Source ▾ Options
Edit CSS
Various Elements… Header ‹ Free Wo…
style.css reset.css Embedded Styles
Home About iThemes
Find: Next Previous Highlight all □ Match case
Done
N/A

```
/*
Theme Name: Quick-Vid
Theme URI: http://ithemes.com/free-themes/quick-vid
Author: iThemes
Author URI: http://ithemes.com
Version: 0.0.1
Description: Quick-Vid is a free theme designed by the guys at iThemes
Tags: light, blue, two-column, threaded-comments, custom-header, theme-options


See history.txt for version history.
*/

/*CSS Reset*/
@import url("css/reset.css");

body {
        background: #4CB0D0;
        color: #FFFFFF;
        font-family: Helvetica, arial, sans-serif;
        font-size: 13px;
        text-align: left;
        padding: 0;
        margin: 0;
        line-height: 1.4em;
}
.clearfix:after {
        content: ".";
        display: block;
        clear: both;
        margin: 0px;
        padding: 0px;
        height: 0;
        visibility: hidden;
}
#outer-wrap {
        clear: both;
        width: 100%;
        margin: 0 auto;
```

QuickVid

Various Elements

Posted by Matt

This is plain text. Lorem ipsum dolor sit amet, consectetur adipi venenatis massa. Mauris vitae purus justo, non luctus neque. Eti nulla. Sed bibendum consectetur hendrerit. Sed porttitor mollis lobortis sodales lacinia. Fusce id neque id purus imperdiet conse

Time for a blockquote. Lorem ipsum dolor sit amet, consectetur et venenatis massa. Mauris vitae purus justo, non luctus neque. nulla. Sed bibendum consectetur hendrerit. Sed porttitor mollis lobortis sodales lacinia. Fusce id neque id purus imperdiet conse

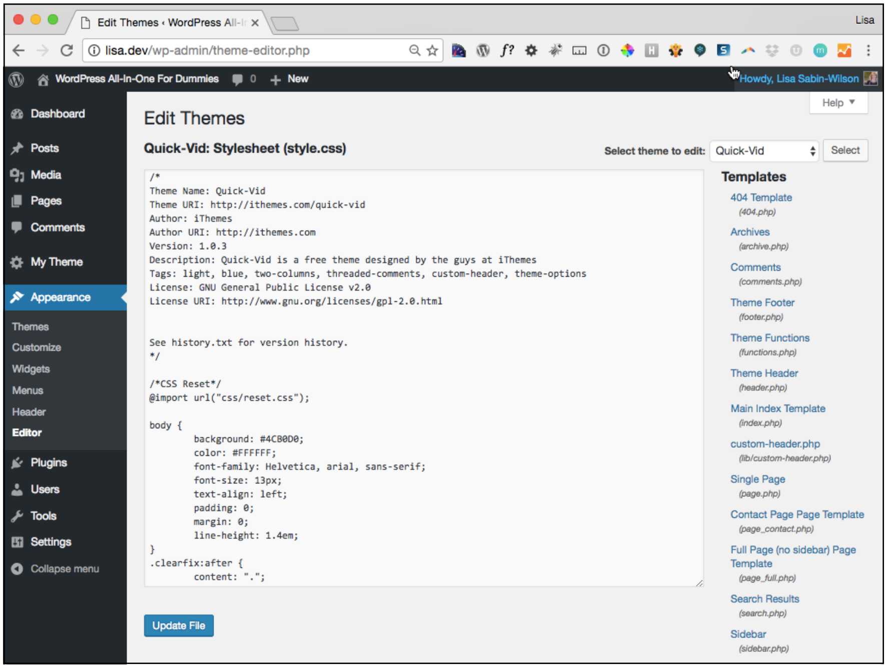
This is
an unordered
list of
items

Filed Under: *Uncategorized* (*Edit This Post*)

Leave a Reply

Logged in as *Cory*. *Log out »*

FIGURE 4-4: The comment block of a typical WordPress stylesheet.



Edit Themes

Quick-Vid: Stylesheet (style.css)

Select theme to edit: Quick-Vid

```
/*
Theme Name: Quick-Vid
Theme URI: http://ithemes.com/quick-vid
Author: iThemes
Author URI: http://ithemes.com
Version: 1.0.3
Description: Quick-Vid is a free theme designed by the guys at iThemes
Tags: light, blue, two-columns, threaded-comments, custom-header, theme-options
License: GNU General Public License v2.0
License URI: http://www.gnu.org/licenses/gpl-2.0.html


See history.txt for version history.
*/

/*CSS Reset*/
@import url("css/reset.css");

body {
        background: #4CB0D0;
        color: #FFFFFF;
        font-family: Helvetica, arial, sans-serif;
        font-size: 13px;
        text-align: left;
        padding: 0;
        margin: 0;
        line-height: 1.4em;
}
.clearfix:after {
        content: ".";
```

Templates

404 Template
(404.php)
Archives
(archive.php)
Comments
(comments.php)
Theme Footer
(footer.php)
Theme Functions
(functions.php)
Theme Header
(header.php)
Main Index Template
(index.php)
custom-header.php
(lib/custom-header.php)
Single Page
(page.php)
Contact Page Page Template
(page_contact.php)
Full Page (no sidebar) Page Template
(page_full.php)
Search Results
(search.php)
Sidebar
(sidebar.php)

FIGURE 4-5: The list of template files contained in the Quick-Vid theme. Scroll down to see the Styles heading.

Knowing some key CSS concepts can help you personalize your theme's stylesheet. CSS is simply a set of commands that allows you to customize the look and feel of your HTML markup. Some common commands and tools are selectors, IDs, classes, properties, and values. You use these commands to customize HTML to display your design customizations.

CSS selectors

Typically, CSS *selectors* are named for the corresponding HTML elements, IDs, and classes that you want to style with CSS properties and values. Selectors are very important in CSS because they're used to select elements on an HTML/PHP page so that they can be styled appropriately.

With CSS, you can provide style (such as size, color, and placement) to the display of elements on your site (such as text links, header images, font size and colors, paragraph margins, and line spacing). *CSS selectors* contain names, properties, and values that define which HTML elements in the templates are to be styled with CSS. Table 4-2 lists some basic global CSS selectors.

TABLE 4-2 Basic Global CSS Selectors

CSS Selector	Description	HTML	CSS Example
body	Contains the elements of the overall site style	`<body>`	`body {font-family: Georgia}`
a	Sets the attributes for hyperlinks within your site	`<a href=”http://wordpress.org”>WordPress</a>`	`a {color:blue}`
h1, h2, h3, h4, h5, h6	Contains headings or headlines	`<h1>My main title</h1>`	`h1 {color:black}`
blockquote	Defines how indented text is styled	`<blockquote> "A journey of a thousand miles begins with a single step."</blockquote>`	`blockquote {font-style: italic}`
p	Sets formatting for paragraphs	`<p>My first paragraph says to keep writing</p>`	`p {color: #000}`

If you assign a style to the `h1` selector, for example, it affects all `<h1>` tags in your HTML. Sometimes you want this behavior, but at other times, you want to affect a smaller subset of elements.

CSS IDs and classes

With CSS IDs and classes, you can define more elements to style. Generally, you use IDs to style one broader specific element (such as your header section) on your page. Classes style, define, and categorize more specifically grouped items (such as images and text alignment, widgets, or links to posts). The difference between CSS IDs and classes are

- **CSS IDs** are identified with the hash mark (#). #header, for example, indicates the header ID. Only one element can be identified with an ID.
- **CSS classes** are identified with a period (.); .alignleft, for example, indicates aligning an element to the left.

Table 4-3 lists some CSS IDs and classes.

TABLE 4-3 CSS IDs and Classes Examples

CSS IDs and Classes	Description	HTML	CSS Example
#header	Identifies the header section of your theme	<div id="header">	#header {background: #000}
#footer	Identifies the footer section of your theme	<div id="footer">	#footer {background: #ccc}
.wp-caption-text	Identifies the WordPress image caption	<p class="wp-caption-text">This is a caption</p>	.wp-caption-text {color: #000}
.alignleft	Identifies the left alignment feature in WordPress	<img class="alignleft" src="http://yourdomain.com/photo.jpg" />	.alignleft {float:left}

CSS properties and values

CSS properties are assigned to the CSS selector name. You also need to provide values for the CSS properties to define the style elements for the particular CSS selector you're working with.

The body selector that follows defines the overall look of your web page. background is a property and #DDDDDD is its value, and color is a property and #222222 is its value.

```
body {
background: #DDDDDD;
color: #222222;
}
```

REMEMBER

Every CSS property needs to be followed by a colon (:), and each CSS value needs to be followed by a semicolon (;).

Understanding that properties are assigned to selectors, as well as your options for the values, makes CSS a fun playground for personalizing your site. You can experiment with colors, fonts, font sizes, and more to tweak the appearance of your theme.

Understanding Basic HTML Techniques

HTML can help you customize and organize your theme. To understand how HTML and CSS work together, consider this example: If a website were a building, HTML would be the structure (the studs and foundation), and CSS would be the paint.

HTML contains the elements that CSS provides the styles for. All you have to do to apply a CSS style is use the right HTML element. Here’s a very basic block of HTML:

```
<body>
<div id="content">
<h1>Headline Goes Here</h1>
<p>This is a sample sentence of body text. <blockquote>The journey
of a thousand miles starts with the first step.</blockquote> I’m
going to continue on this sentence and end it here.</p>
<p>Click <a href="http://corymiller.com">here</a> to visit my
website.</p>
</div>
</body>
```

All HTML elements must have opening and closing tags. Opening tags are contained in less-than (<) and greater-than (>) symbols. Closing tags are the same except that they’re preceded by a forward slash (/).

Here is an example:

```
<h1>Headline Goes Here</h1>
```

Note that the HTML elements must be properly nested. In line 4 of the example HTML block, a paragraph tag is opened (`<p>`). Later in that line, a block quote is opened (`<blockquote>`) and nesting inside the paragraph tag. When you're editing this line, you can't end the paragraph (`</p>`) before you end the block quote (`</blockquote>`). Nested elements must close before the elements they're nested within close.

REMEMBER

Proper *tabbing*, or indenting, is important when you're writing HTML, mainly for readability so you can quickly scan code to find what you're looking for. A good rule is that if you didn't close a tag in the preceding line, indent one tab over. This practice allows you to see where each element begins and ends, and it can be very helpful in diagnosing problems.

For more in-depth tutorials on HTML, see the HTML section of w3schools.com at `http://www.w3schools.com/html/default.asp`.

Changing Basic Elements for a Unique Look

When you understand the basic concepts of personalizing your site with graphics and CSS, you begin to see how easy changing the look and feel of your site is with these tools. The next few sections explore some ways to accomplish an interesting design presentation or a unique and creative look.

Background colors and images

Changing the background image can completely change the feel of your site. You can also use background colors and images for other elements in your theme.

Background techniques include using solid colors and repeating gradients or patterns to achieve a subtle yet polished effect. (***Note:*** Use colors that accent the colors of your logo and don't hamper text readability.)

You can add CSS background colors and image effects to the following areas of your theme:

- Post and page content sections
- Sidebar widgets
- Comment blocks
- Footer area

Font family, color, and size

You can change the fonts in your theme for style or for readability purposes. Typographic (or font) design experts use simple font variations to achieve amazing design results. You can use fonts to separate headlines from body text (or widget headlines and text from the main content) to be less distracting. Table 4-4 lists some examples of often-used font properties.

TABLE 4-4 Fonts

Font Properties	Common Values	CSS Examples
`font-family`	`Georgia, Times, serif`	`body {font-family: Georgia; serif;}`
`font-size`	`px, %, em`	`body {font-size: 14px;}`
`font-style`	`Italic, underline`	`body {font-style: italic;}`
`font-weight`	`bold, bolder, normal`	`body {font-weight: normal}`

The web is actually kind of picky about how it displays fonts, as well as what kind of fonts you can use in the `font-family` property. Not all fonts display correctly. To be safe, here are some commonly used font families that display correctly in most browsers:

- **Serif fonts:** Times New Roman, Georgia, Garamond, Bookman Old Style
- **Sans-serif fonts:** Verdana, Arial, Tahoma, Trebuchet MS

REMEMBER

Serif fonts have little tails, or curlicues, at the edges of letters. (This book's text is in a serif font.) Sans-serif fonts have straight edges and no fancy styling. (The heading in Table 4-4 uses a sans-serif font. Look, Ma, no tails!)

Font color

With more than 16 million HTML color combinations available, you can find just the right shade of color for your project. After some time, you'll memorize your favorite color codes. Knowing codes for different shades of gray can help you quickly add an extra design touch. You can use the shades of gray listed in Table 4-5 for backgrounds, borders of design elements, and widget headers.

TABLE 4-5 My Favorite CSS Colors

Color	Value
White	#FFFFFF or #FFF
Black	#000000 or #000
Gray	#CCCCCC or #CCC #DDDDDD or #DDD #333333 or #333 #E0E0E0

You can easily change the color of your font by changing the `color` property of the CSS selector you want to tweak. You can use hexadecimal codes to define the colors.

You can define the overall font color in your site by defining it in the body CSS selector, like this:

```
body {
color: #333;
}
```

Font size

To tweak the size of your font, change the `font-size` property of the CSS selector you want to tweak. Generally, the following units of measurement determine font sizes:

- **px (pixel):** Increasing or decreasing the number of pixels increases or decreases the font size. `12px` is larger than `10px`.
- **pt (point):** As with pixels, increasing or decreasing the number of points affects the font size. `12pt` is larger than `10pt`.

- **em**: An em is a scalable unit of measurement that's equal to the current font size. If the font size of the body of the site is defined as 12px, 1em is equal to 12px; likewise, 2em is equal to 24px.
- **% (percentage):** Increasing or decreasing the percentage number affects the font size. 50% is equivalent to 7 pixels, and 100% is equivalent to 14 pixels.

In the default template CSS, the font size is defined in the <body> tag in pixels, like this:

```
font-size: 12px;
```

Putting all three elements (font-family, color, and font-size) together in the <body> tag styles the font for the entire body of your site. Here's how the elements work together in the <body> tag of the default template CSS:

```
body {
font-size: 12px;
font-family: Georgia, "Bitstream Charter", serif;
color: #666;
}
```

When you want to change a font family in your CSS, open the stylesheet (style.css), search for property: font-family, change the values for that property, and then save your changes.

In the default template CSS, the font is defined in the <body> tag, like this:

```
font-family: Georgia, "Bitstream Charter", serif;
```

Borders

CSS borders can add flair to elements of your theme design. Table 4-6 illustrates common properties and CSS examples for borders in your theme design.

TABLE 4-6 Common Border Properties

Border Properties	Common Values	CSS Examples
border-size	px, em	body {border-size: 1px;}
border-style	solid, dotted, dashed	body {border-style: solid}
border-color	Hexadecimal values	body {border-color: #CCCCCC}

Finding Additional Resources

There may come a time when you want to explore customizing your theme further. Here are some recommended resources:

- **WordPress Codex (`https://codex.wordpress.org`):** Official WordPress documentation
- **W3Schools (`www.w3schools.com`):** Free, comprehensive HTML and CSS reference
- ***Smashing Magazine* (`https://www.smashingmagazine.com`):** Numerous tips and tricks for customizing a WordPress theme

IN THIS CHAPTER

- » Defining the relationship between parent and child themes
- » Tweaking child themes with styles
- » Customizing child themes with images
- » Modifying child themes with template files

Chapter 5

Understanding Parent and Child Themes

Using a theme exactly how the theme author released it is great. If a new version is released that fixes a browser compatibility issue or adds features offered by a new version of WordPress, a quick theme upgrade is very easy to do.

There's a good chance, however, that you'll want to tinker with the design, add features, or modify the theme structure. If you modify the theme, you won't be able to upgrade to a newly released version without modifying the theme again.

If only you could upgrade customized versions of themes with new features when they're released! Fortunately, child themes give you this best-of-both-worlds theme solution.

This chapter explores what child themes are, how to create a child theme–ready parent theme, and how to get the most out of using child themes.

Customizing Theme Style with Child Themes

A WordPress theme consists of a collection of template files, stylesheets, images, and JavaScript files. The theme controls the layout and design that your visitors see on the site. When such a theme is properly set up as a parent theme, it allows a *child theme*, or a subset of instructions, to override its files. This ensures that a child theme can selectively modify the layout, styling, and functionality of the parent theme.

The quickest way to understand child themes is by example. In this section, you create a simple child theme that modifies the style of the parent theme.

Currently, the default WordPress theme is Twenty Seventeen. Figure 5-1 shows how the Twenty Seventeen theme appears on a sample site.

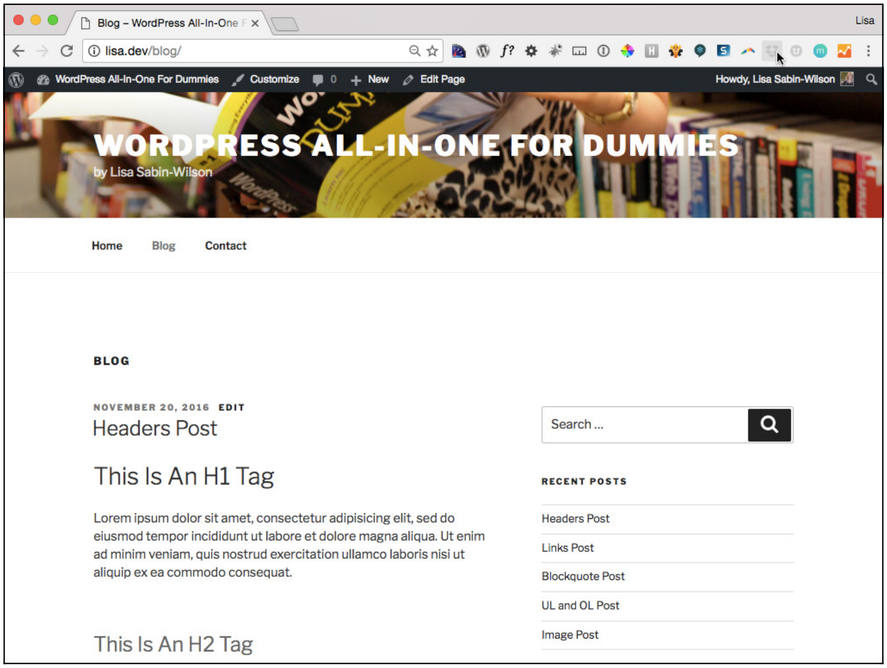


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FIGURE 5-1: The Twenty Seventeen theme.

You likely have Twenty Seventeen on your WordPress site, and Twenty Seventeen is child theme–ready; therefore, it's a great candidate for creating a child theme.

Creating a child theme

Like regular themes, a child theme needs to reside in a directory inside the /wp-content/themes directory. The first step in creating a child theme is adding the directory that will hold it. For this example, connect to your hosting account via SFTP, and create a new directory called twentyseventeen-child inside the /wp-content/themes directory.

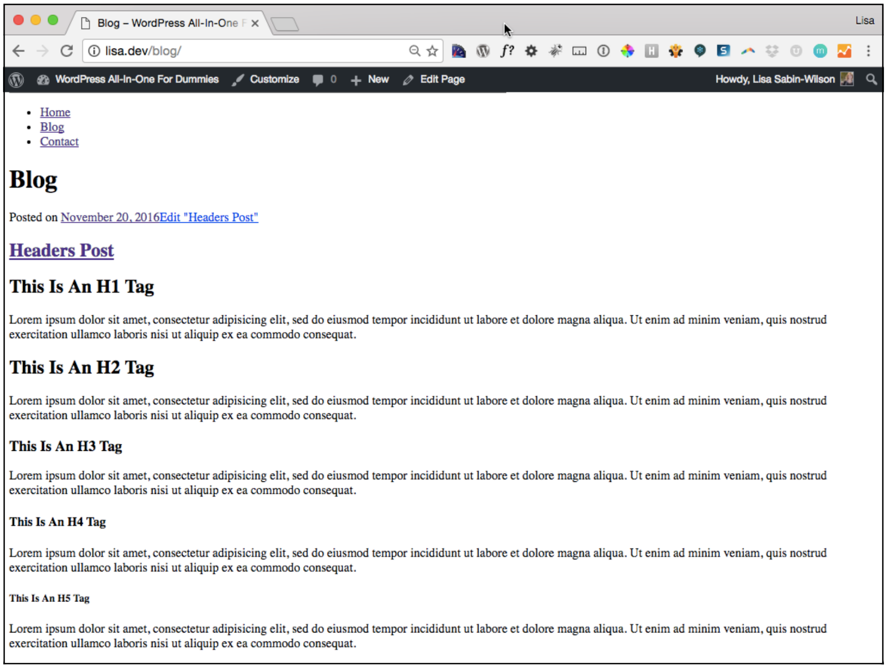
To register the twentyseventeen-child directory as a theme and to make it a child of the Twenty Seventeen theme, create a style.css file, and add the appropriate theme headers. To do this, type the following code in your favorite code or plain-text editor (such as Notepad for the PC or TextEdit for the Mac), and save the file as style.css:

```
/*
Theme Name: Twenty Seventeen Child
Description: My magnificent child theme
Author: Lisa Sabin-Wilson
Version: 1.0
Template: twentyseventeen
*/
```

Typically, you find the following headers in a WordPress theme:

- **Theme Name:** The theme user sees this name in the back end of WordPress.
- **Description:** This header provides the user any additional information about the theme. Currently, it appears only on the Manage Themes page (accessed by clicking the Themes link on the Appearance menu).
- **Author:** This header lists one or more theme authors. Currently, it appears only on the Manage Themes page (accessed by clicking the Themes link on the Appearance menu).
- **Version:** The version number is very useful for keeping track of outdated versions of the theme. It's always a good idea to update the version number when modifying a theme.
- **Template:** This header changes a theme into a child theme. The value of this header tells WordPress the directory name of the parent theme. Because your child theme uses Twenty Seventeen as the parent, your style.css needs to have a Template header with a value of twentyseventeen (the directory/folder name of the Twenty Seventeen theme).

Now activate the new Twenty Seventeen Child theme as your active theme. (If you need a reminder on how to activate a theme on your site, check out Book 6, Chapter 2.) You should see a site layout similar to the one shown in Figure 5-2.



- Home
- Blog
- Contact

Blog

Posted on November 20, 2016Edit "Headers Post"

Headers Post

This Is An H1 Tag

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This Is An H2 Tag

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FIGURE 5-2: The Twenty Seventeen Child theme.

Figure 5-2 shows that the new theme doesn't look quite right. The problem is that the new child theme replaced the `style.css` file of the parent theme, yet the new child theme's `style.css` file is empty.

You could just copy and paste the contents of the parent theme's `style.css` file, but that would waste some of the potential of child themes.

Loading a parent theme's style

REMEMBER

One of the great things about CSS is how rules can override one another. If you list the same rule twice in your CSS, the rule that comes last takes precedence.

For example:

```
a {
color: blue;
}

a {
color: red;
}
```

This example is overly simple, but it nicely shows what I'm talking about. The first rule says that all links (`a` tags) should be blue, whereas the second rule says that links should be red. With CSS, the last instruction takes precedence, so the links will be red.

Using this feature of CSS, you can inherit all the styling of the parent theme and selectively modify it by overriding the rules of the parent theme. But how can you load the parent theme's `style.css` file so that it inherits the parent theme's styling?

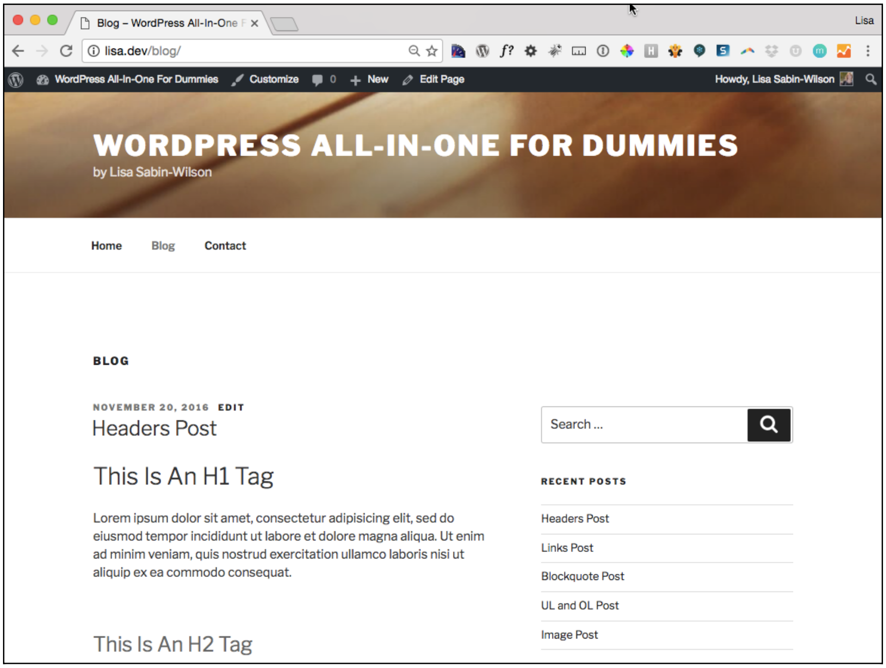
Fortunately, CSS has another great feature that helps you do this with ease. Just add one line to the Twenty Seventeen Child theme's `style.css` file (in bold in the following example):

```
/*
Theme Name: Twenty Seventeen Child
Description: My magnificent child theme
Author: Lisa Sabin-Wilson
Version: 1.0
Template: twentyseventeen
*/
@import url('../twentyseventeen/style.css');
```

Several things are going on here, so let me break the code down piece by piece:

- **`@import`:** This code tells the browser to load another stylesheet. Using this code allows you to pull in the parent stylesheet quickly and easily.
- **`url`:** This code indicates that the value is a location, not a normal value.
- **`('../twentyseventeen/style.css');`:** This code is the location of the parent stylesheet. Notice the `/twentyseventeen` directory name. This name needs to be changed to match the `Template` value in the header so that the appropriate stylesheet is loaded.

Figure 5-3 shows how the site appears after the child theme's `style.css` file is updated to match the listing.



WORDPRESS ALL-IN-ONE FOR DUMMIES

by Lisa Sabin-Wilson

BLOG

NOVEMBER 20, 2016 EDIT

Headers Post

This Is An H1 Tag

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This Is An H2 Tag

FIGURE 5-3: The updated child theme.

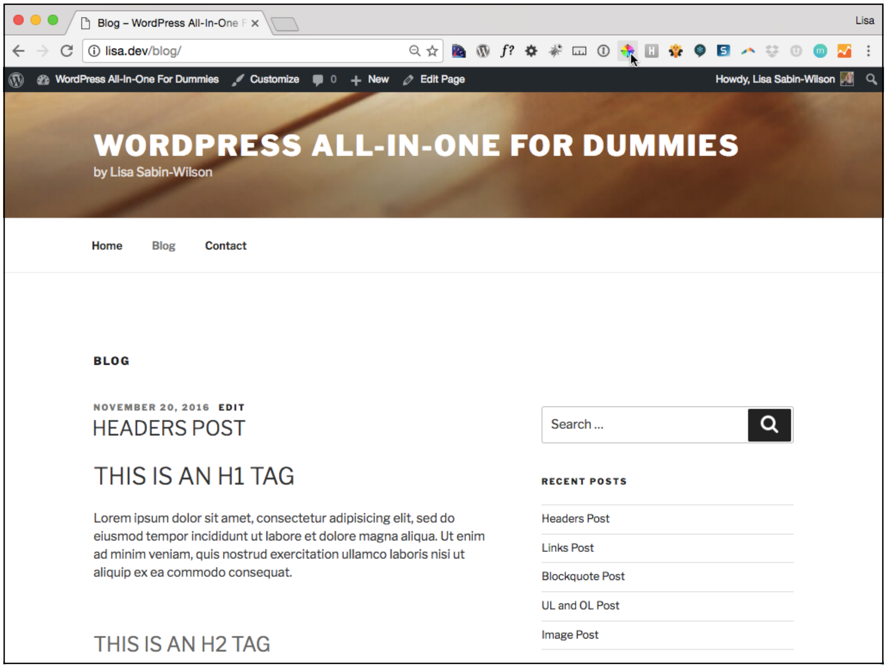
Customizing the parent theme's styling

Your Twenty Seventeen Child theme is set up to match the parent Twenty Seventeen theme. Now you can add new styling to the Twenty Seventeen Child theme's `style.css` file. To see a simple example of how customizing works, add a style that converts all h1, h2, and h3 headings to uppercase, like so:

```
/*
Theme Name: Twenty Seventeen Child
Description: My magnificent child theme
Author: Lisa Sabin-Wilson
Version: 1.0
Template: twentyseventeen
*/
@import url('../twentyseventeen/style.css');

h1, h2, h3 {
text-transform: uppercase;
}
```

Figure 5-4 shows how the child theme looks with the code additions applied. Getting better, isn't it? (*Hint:* The site title and post titles are all uppercase, unlike in Figure 5-3.)



WORDPRESS ALL-IN-ONE FOR DUMMIES

by Lisa Sabin-Wilson

BLOG

NOVEMBER 20, 2016 EDIT

HEADERS POST

THIS IS AN H1 TAG

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

THIS IS AN H2 TAG

RECENT POSTS

- Headers Post
- Links Post
- Blockquote Post
- UL and OL Post
- Image Post

FIGURE 5-4: The updated child theme with uppercase headings.

As you can see, with just a few lines in a `style.css` file, you can create a new child theme that adds specific customizations to an existing theme. The change was quick and easy to make, and you didn't have to modify anything in the parent theme to make it work.

TIP

When upgrades to the parent theme are available, you can upgrade the parent to get the additional features, but you don't have to make your modifications again because you made your modifications in the child theme, not the parent theme.

Customizations that are more complex work the same way. Simply add the new rules after the import rule that adds the parent stylesheet.

Using images in child theme designs

Many themes use images to add nice touches to the design. Typically, these images are added to a directory named `images` inside the theme.

Just as a parent theme may refer to images in its `style.css` file, your child themes can have their own images directory. The following sections show how you can use these images.

Using a child theme image in a child theme stylesheet

Including a child theme image in a child theme stylesheet is common. To do so, you simply add the new image to the child theme's `images` directory and refer to it in the child theme's `style.css` file. To get a feel for the mechanics of this process, follow these steps:

1. **Create an `images` directory inside the child theme's directory.**
2. **Add an image to use into the directory.**

   For this example, add an image called body-bg.png.
3. **Add the necessary styling to the child theme's `style.css` file, as follows:**

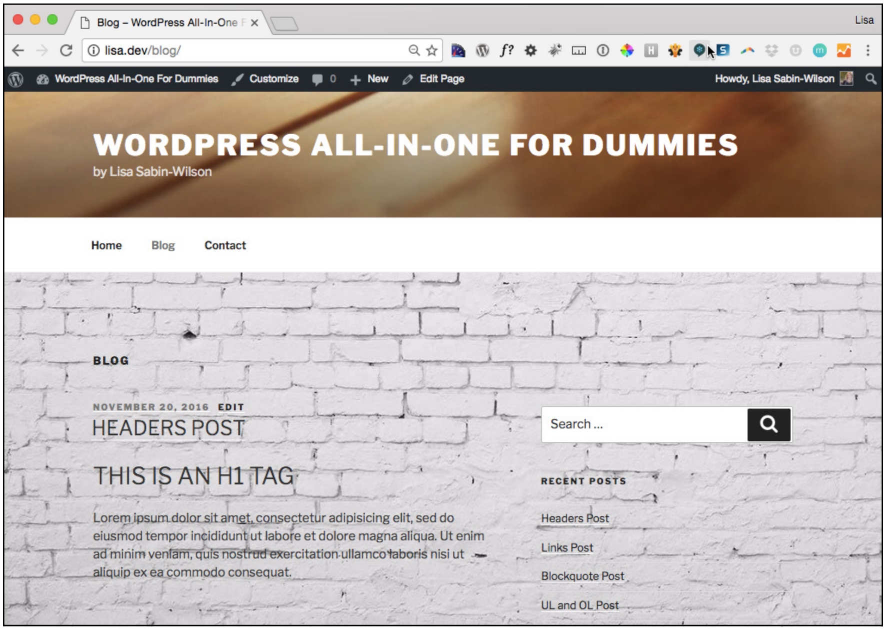
```
/*
Theme Name: Twenty Seventeen Child
Description: My magnificent child theme
Author: Lisa Sabin-Wilson
Version: 1.0
Template: twentyseventeen
*/
@import url('../twentyseventeen/style.css');
body {
  background: url('images/body-bg.jpg');
}
.site-content-contain {
  background-color: transparent;
}
```

With a quick refresh of the site, you see that the site now has a new brick background. Figure 5-5 shows the results clearly.

Using images in a child theme

Child theme images are acceptable for most purposes. You can add your own images to the child theme even if the image doesn't exist in the parent theme folder — and you can accomplish that task without changing the parent theme at all.

In the footer of the Twenty Seventeen Child theme, I added a WordPress logo to the left of the phrase *Proudly powered by WordPress*, as shown in Figure 5-6. The logo doesn't appear in the footer of the Twenty Seventeen theme by default.



Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

FIGURE 5-5: The Twenty Seventeen Child theme after the background image is edited.

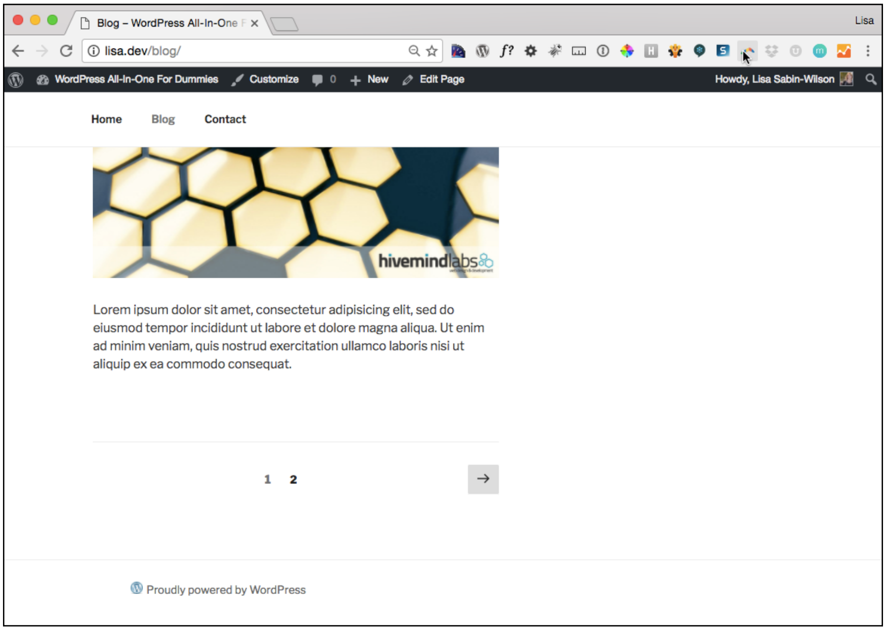


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FIGURE 5-6: The WordPress logo in the Twenty Seventeen Child footer.

Create a folder in your child theme called `/images`, and add your selected images to that folder. Then you can call those images into your child theme by using the stylesheet (`style.css`) file in your child theme folder.

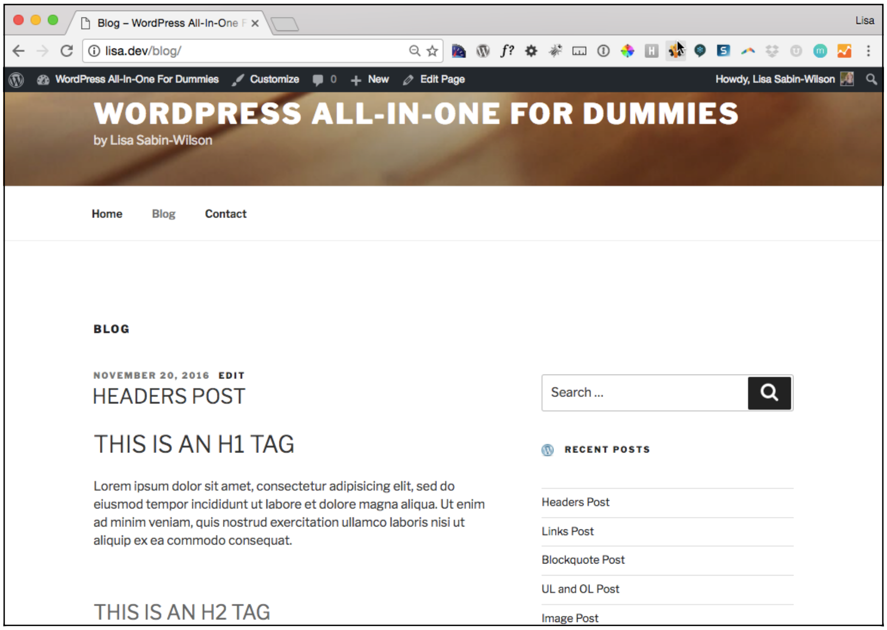
In this next example, I add the same WordPress logo in front of each widget title in the sidebar. Because the logo image already exists inside the child theme images folder (from the preceding example), I can simply add a customization to the child theme's `style.css` file to make this change, as follows:

```
/*
Theme Name: Twenty Seventeen Child
Description: My magnificent child theme
Author: Lisa Sabin-Wilson
Version: 1.0
Template: twentyseventeen
*/

@import url('../twentyseventeen/style.css');

.widget-title {
background: url(images/wp-blue.png) no-repeat left top;
padding: 20px 30px;
}
```

Save the file and refresh the site. Now you're showing WordPress pride. (See Figure 5-7.)



WORDPRESS ALL-IN-ONE FOR DUMMIES

by Lisa Sabin-Wilson

BLOG

NOVEMBER 20, 2016 EDIT

HEADERS POST

THIS IS AN H1 TAG

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

THIS IS AN H2 TAG

RECENT POSTS

Headers Post

Links Post

Blockquote Post

UL and OL Post

Image Post

FIGURE 5-7: Showing the WordPress logo before each widget title.

Modifying Theme Structure with Child Themes

The preceding section shows how to use a child theme to modify the stylesheet of an existing theme. This feature is tremendously powerful. A talented CSS developer can use this technique to create an amazing variety of layouts and designs.

This example is just the beginning of the power of child themes. Although every child theme overrides the parent theme's `style.css` file, the child theme can override the parent theme's template files, too. Child themes aren't limited to overriding just template files; when necessary, child themes can also supply their own template files.

Template files are PHP files that WordPress runs to render different views of your site. A *site view* is the type of content being looked at. Examples of views are home, category archive, individual post, and page content.

Some examples of common template files are `index.php`, `archive.php`, `single.php`, `page.php`, `attachment.php`, and `search.php`. (You can read more about available template files, including how to use them, in Book 6, Chapter 3.)

You may wonder what purpose modifying template files of a parent theme serves. Although modifying the stylesheet of a parent theme can give you very powerful control of the design, it can't add new content, modify the underlying site structure, or change how the theme functions. To get that level of control, you need to modify the template files.

Overriding parent template files

When both the child theme and parent theme supply the same template file, the child theme file is used. The process of replacing the original parent template file is referred to as *overriding.*

REMEMBER

Although overriding each of the theme's template files can defeat the purpose of using a child theme (updates to those template files won't enhance the child theme), sometimes, producing a needed result makes doing so necessary.

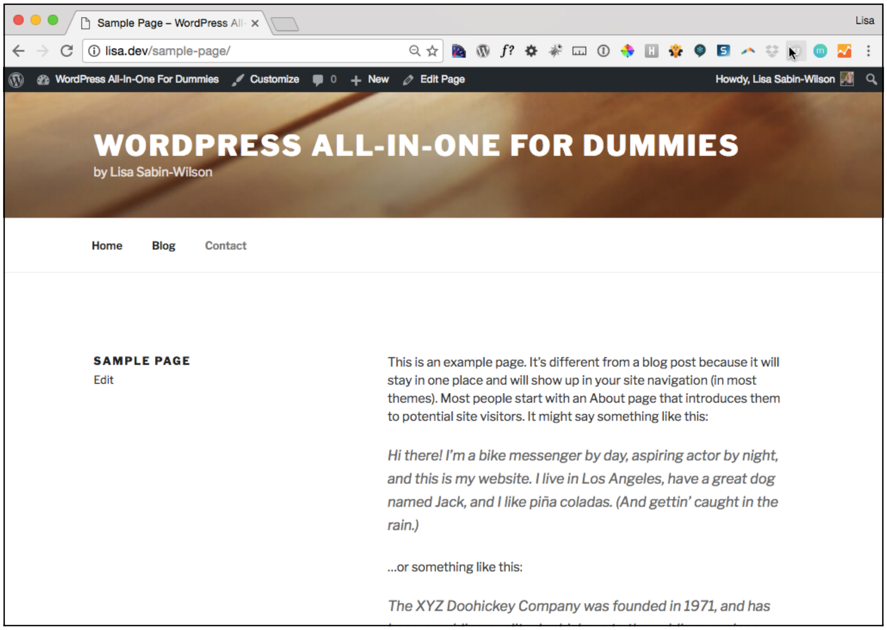
The easiest way to customize a specific template file in a child theme is to copy the template file from the parent theme folder to the child theme folder. After the file is copied, it can be customized as needed, and the child theme reflects the changes.

A good example of a template file that can be overridden is the `footer.php` file. Customizing the footer allows for adding site-specific branding.

Adding new template files

A child theme can override existing parent template files, but it can supply template files that don't exist in the parent. Although you may never need your child themes to do this, this option can open possibilities for your designs.

This technique proves most valuable with page templates. The Twenty Seventeen theme has a page template named `page.php`. This page template creates a full-width layout for the content and removes the sidebar, as shown in Figure 5-8.



SAMPLE PAGE

Edit

This is an example page. It's different from a blog post because it will stay in one place and will show up in your site navigation (in most themes). Most people start with an About page that introduces them to potential site visitors. It might say something like this:

Hi there! I'm a bike messenger by day, aspiring actor by night, and this is my website. I live in Los Angeles, have a great dog named Jack, and I like piña coladas. (And gettin' caught in the rain.)

...or something like this:

The XYZ Doohickey Company was founded in 1971, and has

FIGURE 5-8: Page Template in the Twenty Seventeen theme.

The layout was intentionally set up this way to improve readability on pages where you may not want the distraction of other content in a sidebar. Sometimes, I like to have a full-width layout option so that I can embed a video, add a forum, or add other content that works well at full width; at other times, I want a static page that displays the sidebar. If you want to customize that template and override what the Twenty Seventeen theme currently has available, simply create a new page template with the same filename as the one you're replacing (in this case, `page.php`), and add the code to display the sidebar (`get_sidebar();`). Thereafter, WordPress uses the `page.php` template file in your child theme by default, ignoring the one in the Twenty Seventeen parent theme folder.

Removing template files

You may be asking why you'd want to remove a parent's template file. That's a good question. Unfortunately, the Twenty Seventeen theme doesn't provide a good example of why you'd want to do this. Therefore, you must use your imagination a bit.

Imagine that you're creating a child theme built from a parent theme called Example Parent. Example Parent is well designed, and a great child theme was quickly built from it. The child theme looks and works exactly the way you want it to, but there's a problem.

The Example Parent theme has a `home.php` template file that provides a highly customized non-blog home page. However, what you want is a standard blog home page. If the `home.php` file didn't exist in Example Parent, everything would work perfectly.

You can't remove the `home.php` file from Example Parent without modifying the theme, so you have to use a trick. Instead of removing the file, override the `home.php` file, and have it emulate `index.php`.

You may think that simply copying and pasting the Example Parent `index.php` code into the child theme's `home.php` file is a good approach. Although this technique works, there's a better way: You can tell WordPress to run the `index.php` file so that to `index.php` are respected. This single line of code inside the child theme's `home.php` is all that's needed to replace `home.php` with `index.php`:

```
<?php locate_template( array( 'index.php' ), true ); ?>
```

The `locate_template` function does a bit of magic. If the child theme supplies an `index.php` file, that file is used. If not, the parent `index.php` file is used.

This technique produces the same result that removing the parent theme's `home.php` file does. The `home.php` code is ignored, and the changes to `index.php` are respected.

Modifying the functions.php file

Like template files, child themes can provide a Theme Functions template, or `functions.php` file. Unlike template files, the `functions.php` file of a child theme doesn't override the file of the parent theme.

When a parent theme and a child theme each have a `functions.php` file, both the parent and child `functions.php` files run. The child theme's `functions.php` file runs first, and then the parent theme's `functions.php` file runs. This sequence is intentional, because it allows the child theme to replace functions defined in the parent theme.

The Twenty Seventeen `functions.php` file defines a function called `twentyseventeen_setup`. This function handles the configuration of many theme options and activates some additional features. Child themes can replace this function to change the default configuration and features of the theme, too.

The following lines of code summarize how the `functions.php` file allows the child theme to change the default configuration and features of the theme:

```
if ( ! function_exists( 'twentyseventeen_setup' ) ):
function twentyseventeen_setup() {
// removed code
}
endif;
```

REMEMBER

Wrapping the function declaration in the `if` statement protects the site from breaking in the event of a code conflict and allows a child theme to define its own version of the function.

In the Twenty Seventeen Child theme, you can see how modifying this function affects the theme. Add a new `twentyseventeen_setup` function that adds post thumbnails support to the Twenty Seventeen Child theme's `functions.php` file, as follows:

```
<?php
function twentyseventeen_setup() {
add_theme_support( 'post-thumbnails' );
}
```

As a result of this change, the child theme no longer supports other special WordPress features, such as custom editor styling, automatic feed link generation, internationalization and location, and so on.

The takeaway from this example is that a child theme can provide its own custom version of the function, because the parent theme wraps the function declaration in an `if` block that checks for the function first.

Preparing a Parent Theme

WordPress makes it very easy for you to make parent themes. WordPress does most of the hard work, but you must follow some rules for a parent theme to function properly.

The words *stylesheet* and *template* are used numerous times in many contexts. Typically, *stylesheet* refers to a CSS file in a theme, and *template* refers to a template file in the theme. But these words also have specific meaning in the context of parent and child themes. You must understand the difference between a stylesheet and a template when working with parent and child themes.

REMEMBER

In WordPress, the active theme is the stylesheet, and the active theme's parent is the template. If the theme doesn't have a parent, the active theme is both the stylesheet and the template.

TECHNICAL STUFF

Originally, child themes could replace only the `style.css` file of a theme. The parent provided all the template files and `functions.php` code. Thus, the child theme provided style, and the parent theme provided the template files. The capabilities of child themes expanded in subsequent versions of WordPress, making the use of these terms for parent and child themes somewhat confusing.

Imagine two themes: Parent and Child. The following code is in the Parent theme's `header.php` file and loads an additional stylesheet provided by the theme:

```
<link type="text/css" rel="stylesheet" media="all" href="<?php
bloginfo('stylesheet_directory') ?>/reset.css"/>
```

The `bloginfo` function prints information about the blog configuration or settings. This example uses the function to print the URL location of the stylesheet directory. The site is hosted at `http://example.com`, and the Parent is the active theme. It produces the following output:

```
<link type="text/css" rel="stylesheet" media="all"
href="http://example.com/wp-content/themes/Parent/reset.css"/>
```

If the Child theme is activated, the output would be

```
<link type="text/css" rel="stylesheet" media="all"
href="http://example.com/wp-content/themes/Child/reset.css"/>
```

The location now refers to the `reset.css` file in the Child theme. This code could work if every child theme copies the `reset.css` file of the Parent theme, but requiring child themes to add files to function isn't good design. The solution is simple, however. Instead of using the `stylesheet_directory` in the `bloginfo` call, use `template_directory`. The code looks like this:

```
<link type="text/css" rel="stylesheet" media="all" href="<?php
bloginfo('template_directory') ?>/reset.css"/>
```

Now all child themes properly load the parent `reset.css` file.

When developing, use `template_directory` in stand-alone parent themes and `stylesheet_directory` in child themes.

IN THIS CHAPTER

- » Customizing themes
- » Creating new templates
- » Activating custom menus
- » Exploring custom post types
- » Understanding post formats
- » Using post thumbnails for feature images
- » Building a theme options page

Chapter 6

Digging Into Advanced Theme Development

The previous chapters of this minibook describe WordPress themes and discuss using their structure to build your site. Delving into deeper topics can help you create flexible themes that offer users options for controlling the theme.

Whether you're building a theme for a client, the WordPress.org theme directory, or yourself, adding advanced theme features can make theme development easier and faster with a high-quality result. With these advanced theme concepts and tools, you can build robust, dynamic themes that allow for easier design customization and offer a variety of layout options.

Beyond just tools and methods of advanced theme development, this chapter provides some development practices that help projects succeed.

Getting Started with Advanced Theming

Before themes were added to WordPress, customizing the design of a site meant modifying the main WordPress `index.php` file and the default `print.css` file. Version 1.5 added the first theme support and rudimentary child theme support. Over time, WordPress began to support other features, such as custom headers, custom backgrounds, and featured images.

Additionally, the capabilities of themes have grown steadily. Incremental improvement — beginning with a small, simple starting point and improving it over time — works very well in theme development. By developing incrementally, you can build a theme from start to completion from an existing, well-tested theme (most themes are part of a larger incremental improvement process) and maximize your development time. I can't think of a single theme I've developed that wasn't built on another theme.

TIP

You don't need to develop each theme from scratch. Choosing a good starting point makes a big difference in how quickly you can get your project off the ground.

Finding a good starting point

Choosing a solid starting point on which to build your latest and greatest theme design can be time-consuming. Although exploring all the available themes in detail is tempting, I find that exhaustive searches waste more time than they save.

Begin with the most current theme unless you find a more suitable one. Because the design and capabilities of the theme were recently implemented, modifying it to meet your current project's needs is faster than rediscovering all the nuances of an older, unfamiliar theme.

You may wonder whether I ever build themes off other designers' themes. I do. These days, if a new theme comes out that shows how to integrate some new feature, I play around with the theme to understand the concept but always go back to one of my themes to implement the modification. The reason for this practice is simple: If I can implement the feature into my own design, I have a much better appreciation of how it works. Allowing someone else's code or design to do the heavy lifting can place a limitation on how I use that feature.

TIP

If you're new to theme development and haven't produced a theme of your own, start with the WordPress default theme, Twenty Seventeen. (See Book 6, Chapter 1 for a full analysis of the Twenty Seventeen theme.) This theme was developed to help new theme developers discover how themes work.

Note: All the examples in this chapter are built off the WordPress default Twenty Seventeen theme unless noted otherwise.

Customizing the theme to your needs

After you select a theme for your project, you should create a copy of the theme. This way, you can look at the unmodified version in case you accidentally remove something that causes the theme or design to break.

When you find code and styling that you don't need anymore, comment it out rather than delete it. This practice removes the functionality but still allows you to add it back if you change your mind.

You can comment out a line of PHP code by adding `//` in front of it, as in this example:

```
// add_editor_style();
```

To comment out CSS (Cascading Style Sheets) code, wrap a section in `/*` and `*/`, as follows:

```
/**#content {
 margin: 0 280px 0 20px;
}
*/
#primary,
#secondary {
 float: right;
/* overflow: hidden;
*/
 width: 220px;
}
```

You comment out HTML code by using brackets starting with `<!--` and ending with `-->` surrounding the code, like this:

```
<!--<div id="content">this is a content area</div>-->
```

TIP

When you start finalizing the theme, go through the files and remove any blocks of commented styling and code to clean up your files.

Adding New Template Files

Book 6, Chapter 3 introduces the concept of template files and gives you an overview of the template files available to you. Book 6, Chapter 5 explains the idea of overriding template files with child themes. The following sections explore some advanced uses of template files.

Although you rarely need to use all these techniques, being fluent in your options gives you flexibility to address specific needs quickly when they come up.

Creating named templates

WordPress recognizes three special areas of a theme: header, footer, and sidebar. The `get_header`, `get_footer`, and `get_sidebar` functions default to loading `header.php`, `footer.php`, and `sidebar.php`, respectively. Each of these functions also supports a name argument to allow you to load an alternative version of the file. Running `get_header('main')`, for example, causes WordPress to load `header-main.php`.

You may wonder why you'd use a name argument when you could just create a template file named whatever you like and load it directly. The reasons for using the `get_header`, `get_footer`, or `get_sidebar` functions with a name argument are

- Holding to a standard naming convention that other WordPress developers can easily understand
- Automatically providing support for child themes to override the parent theme's template file
- Offering a fallback that loads the unnamed template file if the named one doesn't exist

REMEMBER

In short, use the name argument feature if you have multiple, specialized header, footer, or sidebar template files.

You can use this named template feature along with theme options (discussed in "Exploring Theme Options" later in this chapter) to allow users to easily switch among different header, footer, and sidebar styles. On the Theme Options page, you can give users the ability to choose the specific header, footer, or sidebar template file they want, which is an easy way to change the layout or design of the site. For a good example of content you could add to a different sidebar file, see the nearby sidebar "WP_Query posts for category content," which discusses displaying a list of recent posts and filing them in a specific category on the sidebar of your site.

WP_QUERY POSTS FOR CATEGORY CONTENT

WordPress makes it possible to pull in very specific types of content on your website through the WP_Query(); template class. You place this template tag before The Loop (see Book 6, Chapter 3), and it lets you specify which category you want to pull information from. If you have a category called WordPress, and you want to display the last three posts from that category on your front page, on your blog sidebar, or somewhere else on your site, you can use this template tag.

The WP_Query(); template class has several parameters that let you display different types of content, such as posts in specific categories, content from specific pages/posts, or dates in your blog archives. The WP_Query(); class lets you pass many variables and parameters. It's not limited to categories, either; you can also use it for pages, posts, tags, and more. Visit the WordPress Codex at https://codex.wordpress.org/Class_Reference/WP_Query to read about this feature.

To query the posts on your blog to pull out posts from just one specific category, you can use the following tag with the associated arguments for the available parameters. This example tells WordPress to query all posts that exist on your site and list the last five posts in the Books category:

```
<?php $the_query = new WP_Query('posts_per_page=5&category_name=books'); ?>
```

Simply place this code on a line above the start of The Loop; you can use it on a sidebar to display clickable titles of the last five posts in the Books category. (When the reader clicks a title, he or she is taken to the individual post page to read the full post.)

```
<?php $the_query = WP_Query('posts_per_page=5&category_name=books'); ?>
<?php while ($the_query->have_posts()) : $the_query->the_post(); ?>
<strong><a href="<?php the_permalink() ?>" rel="bookmark" title="Permanent
   Link to
<?php the_title_attribute(); ?>"><?php the_title(); ?></a></strong>
<?php the_excerpt(); endwhile; ?>
```

Creating and using template parts

A template part is very similar to the header, footer, and sidebar templates except that its use isn't limited to header, footer, and sidebar.

The get_header, get_footer, and get_sidebar functions allow for code that's duplicated in many of the template files to be placed in a single file and loaded by means of a standard process. The purpose of template parts is to offer a standardized function that can be used to load sections of code specific to an individual theme. Sections of code that add a specialized section of header widgets or display a block of ads can be placed in individual files and easily loaded as a template part.

You load template parts by using the `get_template_part` function. The `get_template_part` function accepts two arguments: `slug` and `name`. The `slug` argument is required and describes the generic type of template part to be loaded, such as `loop`. The `name` argument is optional and selects a specialized template part, such as `post`.

A call to `get_template_part` with just the `slug` argument tries to load a template file with the filename *slug*`.php`. Thus, a call to `get_template_part('loop')` tries to load `loop.php`, and a call to `get_template_part('header-widgets')` tries to load `header-widgets.php`. See a pattern here? The *slug* part of the filename refers to the name of the template file, minus the `.php` extension, because WordPress already assumes that the file is a `.php` file.

A call to `get_template_part` with both the `slug` and `name` arguments tries to load a template file with the filename *slug-name*`.php`. If a template file with the filename *slug-name*`.php` doesn't exist, WordPress tries to load a template file with the filename *slug*`.php`. Thus, a call to `get_template_part('loop', 'post')` first tries to load `loop-post.php` followed by `loop.php` if `loop-post.php` doesn't exist; a call to `get_template_part('header-widgets', 'post')` first tries to load `header-widgets-post.php` followed by `header-widgets.php` if `header-widgets-post.php` doesn't exist.

The Twenty Seventeen theme offers a good example of the template part feature in use. It uses a template part called `content` to allow the page or post content, within The Loop, to get pulled into individual files.

REMEMBER

The Loop is the section of code in most theme template files that uses a PHP `while` loop to loop through the set of post, page, and archive content (to name a few content examples) and display it. The presence of The Loop in a template file is crucial for a theme to function properly. Book 6, Chapter 3 examines The Loop in detail.

Twenty Seventeen's `index.php` template file shows a template part for the `content` template part in action:

```
<?php
  if ( have_posts() ) :

  /* Start the Loop */
  while ( have_posts() ) : the_post();
```

```
    /*
    * Include the Post-Format-specific template for the content.

    * If you want to override this in a child theme, include a
     file

    * called content-___.php (where ___ is the Post Format name)
     and that will be used instead.

    */
     get_template_part( 'template-parts/post/content', get_post_
     format() );

    endwhile;

  the_posts_pagination( array(
     'prev_text' => twentyseventeen_get_svg( array( 'icon' =>
      'arrow-left' ) ) . '<span class="screen-reader-text">' .
      __( 'Previous page', 'twentyseventeen' ) . '</span>',
     'next_text' => '<span class="screen-reader-text">' . __(
      'Next page', 'twentyseventeen' ) . '</span>' .
      twentyseventeen_get_svg( array( 'icon' => 'arrow-right' ) ),
     'before_page_number' => '<span class="meta-nav screen-reader-
      text">' . __( 'Page', 'twentyseventeen' ) . ' </span>',

  ) );

  else :

     get_template_part( 'template-parts/post/content', 'none' );

  endif;
  ?>
```

Loading the content by using a template part, Twenty Seventeen cleans up the `index.php` code considerably compared with other themes. This cleanup of the template file code is just the icing on the cake; the true benefits are the improvements in theme development.

Twenty Seventeen's `index.php` template file calls for a template part with a `slug` of `content` and a `name` of `get_post_format()`. The `get_post_format();` tag pulls in the defined format for the post (check out "Adding support for post formats" later in this chapter), such as asides, image, and link. If a post format exists, the `get_template_part();` calls it in. If the post format is defined as aside, the `get_template_part();` pulls in the `content-aside.php` template. If no post format has been defined, Twenty Seventeen simply uses the content.php template. A child theme (child themes are discussed at length in Book 6, Chapter 5) could supply a content.php file to customize just The Loop for index.php. Because of Twenty Seventeen's use of template parts and using both arguments of the get_template_part function, the child theme can do this without having to supply a customized index.php file.

With Twenty Seventeen's code for the header, The Loop, sidebar, and footer placed in separate files, the template files become much easier to customize for specific uses. You can see the difference by comparing index.php with the page.php template files.

The index.php listing:

```
<?php get_header(); ?>

<div class="wrap">
<?php if ( is_home() && ! is_front_page() ) : ?>
<header class="page-header">
<h1 class="page-title"><?php single_post_title(); ?></h1>
</header>
<?php else : ?>
<header class="page-header">
<h2 class="page-title"><?php _e( 'Posts', 'twentyseventeen' ); ?></h2>
</header>
<?php endif; ?>

<div id="primary" class="content-area">
<main id="main" class="site-main" role="main">

<?php
if ( have_posts() ) :

/* Start the Loop */
while ( have_posts() ) : the_post();

/*
 * Include the Post-Format-specific template for the content.
 * If you want to override this in a child theme, include a file
 * called content-___.php (where ___ is the Post Format name), and that will
     be used instead.
 */
get_template_part( 'template-parts/post/content', get_post_format() );

endwhile;
```

```
the_posts_pagination( array(
  'prev_text' => twentyseventeen_get_svg( array( 'icon' => 'arrow-left' ) ) .
     '<span class="screen-reader-text">' . __( 'Previous page',
     'twentyseventeen' ) . '</span>',
   'next_text' => '<span class="screen-reader-text">' . __( 'Next page',
     'twentyseventeen' ) . '</span>' . twentyseventeen_get_svg( array(
     'icon' => 'arrow-right' ) ),
  'before_page_number' => '<span class="meta-nav screen-reader-text">' . __(
     'Page', 'twentyseventeen' ) . ' </span>',
) );

else :

get_template_part( 'template-parts/post/content', 'none' );

endif;
?>

</main><!-- #main -->
</div><!-- #primary -->
<?php get_sidebar(); ?>
</div><!-- .wrap -->

<?php get_footer(); ?>
```

The page.php listing:

```
<?php get_header(); ?>
<div class="wrap">
<div id="primary" class="content-area">
<main id="main" class="site-main" role="main">

<?php
while ( have_posts() ) : the_post();

get_template_part( 'template-parts/page/content', 'page' );

// If comments are open or we have at least one comment, load up the comment
    template.
if ( comments_open() || get_comments_number() ) :
comments_template();
endif;

endwhile; // End of the loop.
?>
```

```
</main><!-- #main -->
</div><!-- #primary -->
</div><!-- .wrap -->

<?php get_footer();?>
```

Before template parts, the full Loop code was duplicated in the `index.php` and `page.php` files. As a result, a modification in the `index.php` file's Loop code required the same modification in the `page.php` file. Imagine having to make the same modification in five template files. Repeatedly making the same modifications quickly becomes tiring, and each modification increases the chance of making mistakes. Using a template part means that the modification needs to be made only one time.

In the `index.php` and `page.php` example, the `get_template_part` call allows you to easily create as many customized page templates as needed without having to duplicate The Loop code. Without the duplicate code, the code for The Loop can be easily modified in one place.

TIP

When you start duplicating sections of code in numerous template files, place the code in a separate file and use the `get_template_part` function to load it where needed.

Exploring content-specific standard templates

The template files discussed so far span a wide scope of site views specific to the view and not the content. The `category.php` template file, for example, applies to all category archive views but not to a specific category, and the `page.php` template file applies to all page views but not to a specific page. You can create template files for specific content and not just the view, however.

Four content-specific template types are available: author, category, page, and tag. Each one allows you to refer to specific content by the term's ID (an individual author's ID, for example) or by the slug.

REMEMBER

The slug discussed in this section differs from the `slug` argument of the `get_template_part` function described in the preceding section. For this section, *slug* refers to a post, page, or category slug (to name a few types of slugs), such as a Press Releases category with a slug of `press-releases` or a post titled "Hello World" with a slug of `hello-world`.

Suppose that you have an About Us page with an id of 138 and a slug of about-us. You can create a template for this specific page by creating a file named either page-138.php or page-about-us.php. In the same way, if you want to create a template specific to an awesome author named Lisa with an id of 7 and a slug of lisa, you can create a file named author-7.php or author-lisa.php.

Creating a template by using the slug can be extremely helpful for making templates for sites that you don't manage. If you want to share a theme that you created, you could create a category-featured.php template, and this template would automatically apply to any category view that has a slug of featured.

When you use categories as the example, the file-naming convention is as follows:

- A template with the filename category.php is a catch-all (default) for the display for all categories. (Alternatively, a template with the filename archives.php will display categories if a category.php doesn't exist.)
- Add a dash and the category ID number to the end of the filename (as shown in Table 6-1) to specify a template for an individual category.
- Alternatively, add a dash and the category slug to the end of the filename (as shown in Table 6-1) to define it as a template for that particular category. If you have a category called Books, for example, the category slug is books; the individual category template file would be named category-books.php.
- If you don't have a category.php, an archives.php, or category-#.php file, the category display pulls from the Main Index template (index.php).

Table 6-1 gives you some examples of file-naming conventions for category templates.

TABLE 6-1 Category Template File-Naming Conventions

If the Category ID or Slug Is . . .	The Category Template Filename Is . . .
1	category-1.php
2	category-2.php
3	category-3.php
books	category-books.php
movies	category-movies.php
music	category-music.php

REMEMBER

Because creating a template by using slugs is so useful (and because an ID is relevant only to a specific site), you may wonder why the `id` option exists. The short answer is that the `id` option existed before the slug option did, but it's still valuable in specific instances. You can use the `id` option for a content-specific template without worrying about the customization breaking when the slug changes, for example. This option is especially helpful if you set up the site for someone else and can't trust him or her to leave the slugs alone (such as changing a category with a slug of `news` to `press-releases`).

Using page templates

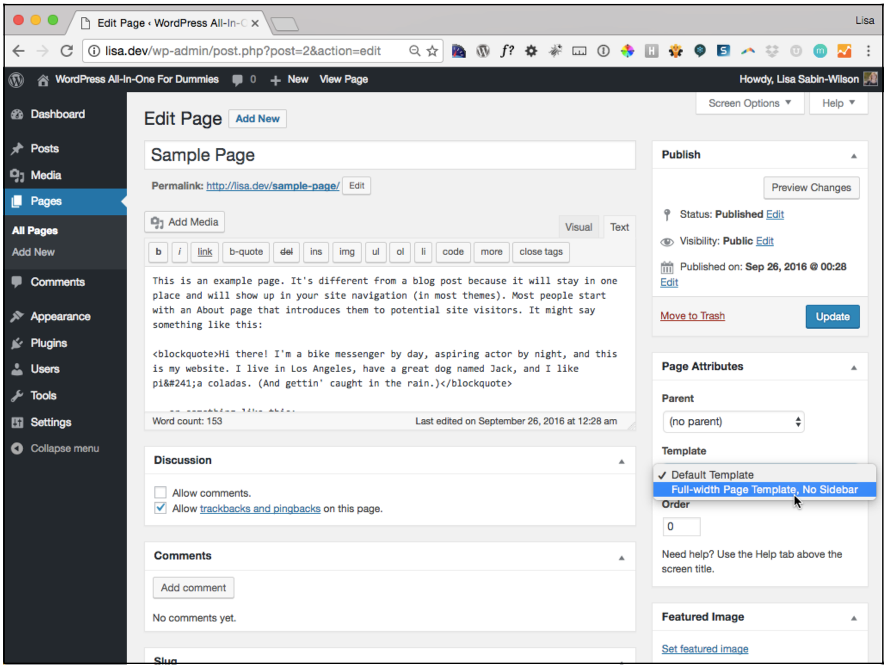
Although the page-*slug*.php feature is very helpful, sometimes, requiring the theme's user to use the name you choose for a specific feature is too difficult or unnecessary. Page templates allow you to create a stand-alone template (just like `page.php` or `single.php`) that the user can selectively use on any specific page he or she chooses. As opposed to the page-*slug*.php feature, a page template can be used on more than one page. The combined features of user selection and multiple uses make page templates much more powerful theme tools than page-*slug*.php templates.

For more on page templates, see Chapters 1, 3, and 5 of this minibook (Book 6).

To make a template a page template, simply add `Template Name:` *Descriptive Name* to a comment section at the top of the template file. The following code is a page template created with the name "Full-width Page Template, No Sidebar" in the Twenty Seventeen theme:

```
<?php
/**
 * Template Name: Full-Width Page Template, No Sidebar
 *
 * Description: Twenty Seventeen loves the no-sidebar look as much as
 * you do. Use this page template to remove the sidebar from any page.
 *
 * Tip: To remove the sidebar from all posts and pages simply remove
 * any active widgets from the Main Sidebar area, and the sidebar will
 * disappear everywhere.
 *
 * @package WordPress
 * @subpackage Twenty_Twelve
 * @since Twenty Seventeen 1.0
 */
```

This registers the template file as a page template and adds Full-width Page Template, No Sidebar to the Page Attributes module's Template drop-down list, as shown in Figure 6-1. (Check out Book 4, Chapters 1 and 2 for information on publishing pages.) Using a template on a static page is a two-step process: Upload the template, and tell WordPress to use the template by tweaking the page's code.



Sample Page

Permalink: http://lisa.dev/sample-page/ Edit

```
This is an example page. It's different from a blog post because it will stay in one
place and will show up in your site navigation (in most themes). Most people start
with an About page that introduces them to potential site visitors. It might say
something like this:

<blockquote>Hi there! I'm a bike messenger by day, aspiring actor by night, and this
is my website. I live in Los Angeles, have a great dog named Jack, and I like
pi&#241;a coladas. (And gettin' caught in the rain.)</blockquote>
```

Word count: 153 Last edited on September 26, 2016 at 12:28 am

Status: Published Edit

Visibility: Public Edit

Published on: Sep 26, 2016 @ 00:28 Edit

Parent

(no parent)

Template

✓ Default Template

Full-width Page Template, No Sidebar

Order

0

Need help? Use the Help tab above the screen title.

□ Allow comments.

☑ Allow trackbacks and pingbacks on this page.

No comments yet.

FIGURE 6-1: The Dashboard showing page attributes.

By providing a robust set of page templates, you can offer users of your theme an easy-to-use set of options for formatting their pages. These options can be used only for pages, but named header, footer, sidebar, and template parts can be used to offer users options on other site views.

Adding Theme Support for Built-In Features

The WordPress core offers several great tools that you can easily add to a theme to give the it more customization options. WordPress provides several built-in features that enable you to enhance your site and theme. This section covers five of the most popular features:

- Custom navigation menus
- Custom post types

- Custom taxonomies
- Post formats
- Post thumbnails

These features are part of the WordPress core, but they aren't activated by default. When you add theme support, you're activating a built-in feature of your theme. Therefore, when you're traveling around the WordPress community, whether you're in a support forum or at a WordCamp event, and you hear someone say that the theme supports a certain feature, you can smile, because you know exactly what he's talking about.

Activating support for these features in the theme you're using involves a few steps:

- **Core function:** Add support for the feature in your theme by including the core function in your theme's Theme Functions template file (`functions.php`).
- **Template function:** Add the necessary function tags in your theme template(s) to display the features on your website.
- **Templates:** In some cases, create feature-specific templates to create enhancements on your site.

The following sections take you through the five features. You add the core function to your theme, add the function tags to your templates and, if indicated, create a feature-specific template in your theme to handle the added options.

Adding support for custom menus

The WordPress menu-building feature is a great tool for theme developers. Before the addition of this tool, theme developers implemented their own menu solutions, creating a huge number of themes with navigation customization requiring coding and a small set of themes with very different ways of handling navigation. Creating complex, multiple-level menus on your WordPress site takes just a few steps, as outlined in this section.

A *navigation menu* is a listing of links that displays on your site. These links can be links to pages, posts, or categories within your site, or they can be links to other sites. You can define navigation menus on your site with the built-in Custom Menus feature in WordPress.

It's to your advantage to provide at least one navigation menu on your site so that readers can see everything your site has to offer. Providing visitors a link — or several links — is in keeping with the point-and-click spirit of the web.

The Twenty Seventeen theme already supports menus. Looking at Twenty Seventeen's `functions.php` file, you can see that the following lines of code handle registering the theme's menu:

```
// This theme uses wp_nav_menu() in two locations.
    register_nav_menus( array(
    'top'    => __( 'Top Menu', 'twentyseventeen' ),
    'social' => __( 'Social Links Menu', 'twentyseventeen' ),
    ) );
```

This code registers two navigation areas, called Top Menu and Social Links Menu, with a theme location name of `top` and `social`. With the Twenty Seventeen theme active, click the Menus link on the Appearance menu to load the Menus screen on the Dashboard and view the Top Menu location.

Core menu function and template tags

The Custom Menu feature is already built into the default Twenty Seventeen WordPress theme, so you don't have to worry about preparing your theme for it. If you're using a different theme, however, adding this functionality is easy:

1. **Click the Editor link on the Appearance menu and then click the Theme Functions template file (`functions.php`).**

   The Theme Functions template opens in the text editor on the left side of the Edit Themes page.

2. **Add a new line to the Theme Functions template file and then type the following function:**

   ```
   // ADD MENU SUPPORT

   add_theme_support( 'nav-menus' );
   ```

3. **Click the Update File button to save the changes to the template.**

   This template tag tells WordPress that your theme can use the Custom Menu feature, and a Menus link now appears on the Appearance menu of the Dashboard.

4. **Open the Header template (`header.php`).**

   Click the Header link on the Edit Themes page to open the Header template in the text editor on the left side of the Edit Themes page.

5. **Add the following template tag by typing it on a new line in the Header template (`header.php`):**

   ```
   <?php wp_nav_menu(); ?>
   ```

This template tag is needed so the menu you build by using the Custom Menu feature displays at the top of your website. Table 6-2 gives the details on the different parameters you can use with the `wp_nav_menu();` template tag to further customize the display to suit your needs.

6. **Click the Update File button at the bottom of the page to save the changes you made in the Header template.**

TABLE 6-2 Common Tag Parameters for wp_nav_menu();

Parameter	Information	Default	Tag Example
`id`	The unique ID of the menu (because you can create several menus, each has a unique ID number)	Blank	`wp_nav_menu( array ( 'id' => '1' ) );`
`slug`	The menu name in slug form (for example, nav-menu)	Blank	`wp_nav_menu( array ( 'slug' => 'nav-menu' ) );`

`menu`	The menu name	Blank	`wp_nav_menu( array ( 'menu' => 'Nav Menu' ) );`
			or
			`wp_nav_menu(‘Nav Menu’);`

`menu_class`	The CSS class used to style the menu list	Menu	`wp_nav_menu( array ( ‘menu_class' => 'mymenu' ) );`
`format`	The HTML markup used to style the list (an unordered list [`ul/li`] or a `div` class)	`Div`	`wp_nav_menu( array ( 'format' => ‘ul’ ) );`
`fallback_cb`	The parameter that creates a fallback if a custom menu doesn't exist	wp_page_menu (the default list of page links)	`wp_nav_menu( array ( ' fallback_cb' => ’wp_page_menu’) );`
`before`	The text that displays before the link text	None	`wp_nav_menu( array ( 'before' => ‘Click Here’ ) );`
`after`	The text that displays after the link text	None	`wp_nav_menu( array ( 'after' => ‘&raquo;’ ) );`

Figure 6-2 shows the default Twenty Seventeen theme with a navigation menu (Home, Blog, and Contact) below the theme's header graphic.

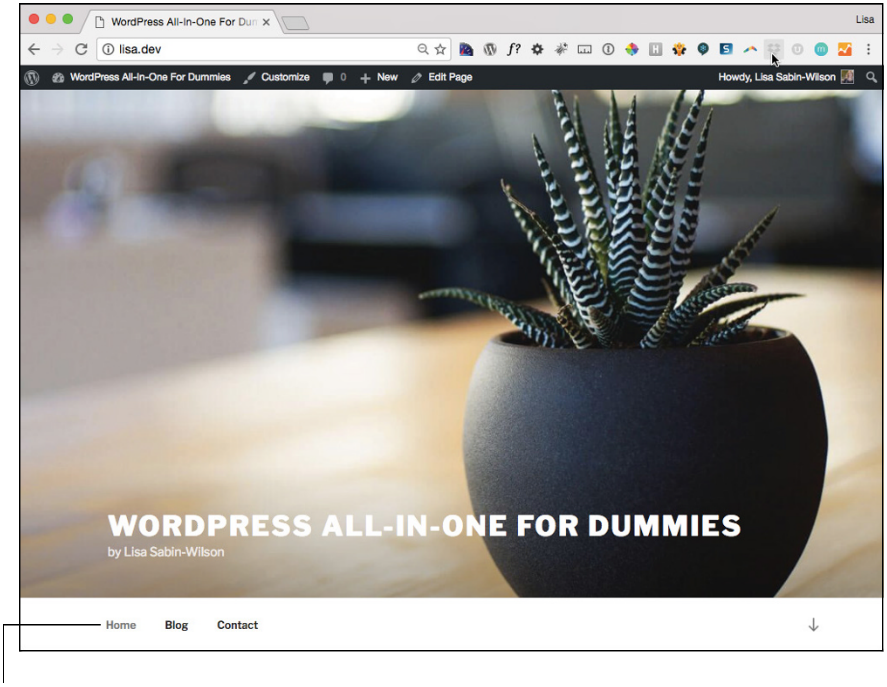


FIGURE 6-2: The Twenty Seventeen theme with a navigation menu below the header.

A menu called Main was created in the WordPress Dashboard. (See Book 6, Chapter 1 for details on creating menus in the WordPress Dashboard.) The template tag used in the theme to display the menu looks like this:

```
<?php wp_nav_menu('Main'); ?>
```

The HTML markup for the menu is generated as an unordered list, by default, and looks like this:

```
<ul id="top-menu" class="menu">
<li id="menu-item-110" class="menu-item menu-item-type-post_type menu-item-
   object-page menu-item-home current-menu-item page_item page-item-15
   current_page_item menu-item-110"><a href="http://lisa.dev/">Home</a></li>
<li id="menu-item-111" class="menu-item menu-item-type-post_type menu-item-
   object-page menu-item-111"><a href="http://lisa.dev/blog/">Blog</a></li>
<li id="menu-item-112" class="menu-item menu-item-type-post_type menu-item-
   object-page menu-item-112"><a href="http://lisa.dev/sample-page/">
   Contact</a></li>
</ul>
```

Notice that in the HTML markup, the `<ul id="top-menu" class="menu">` line defines the CSS ID and class.

The ID reflects the name that you give your menu. Because the menu is named Top Menu, the CSS ID is `top-menu`. If the menu were named Foo, the ID would be `foo`. WordPress allows you to use CSS to create different styles and formats for your different menus by assigning menu names in the CSS and HTML markup.

When developing themes for yourself or others to use, make sure that the CSS you define for the menus can do things like account for subpages by creating drop-down menus. You can accomplish this task in several ways. Listing 6-1 gives you just one example: a block of CSS that you can use to create a nice style for your menu. (This CSS example assumes that you have a menu named Main; therefore, the HTML and CSS markups use `menu-main`.)

LISTING 6-1: Sample CSS for Drop-Down Menu Navigation

```
#menu-main {
....width: 960px;
....font-family: Georgia, Times New Roman, Trebuchet MS;
....font-size: 16px;
....color: #FFFFFF;
....margin: 0 auto 0;
....clear: both;
....overflow: hidden;
....}

#menu-main ul {
....width: 100%;
....float: left;
....list-style: none;
....margin: 0;
....padding: 0;
....}

#menu-main li {
....float: left;
....list-style: none;
....}

#menu-main li a {
....color: #FFFFFF;
....display: block;
....font-size: 16px;
....margin: 0;
....padding: 12px 15px 12px 15px;
....text-decoration: none;
....position: relative;
....}

#menu-main li a:hover, #menu-main li a:active, #menu-main .current_page_item a,
   #menu-main .current-cat a, #menu-main .current-menu-item {
....color: #CCCCCC;
....}

#menu-main li li a, #menu-main li li a:link, #menu-main li li a:visited {
....background: #555555;
....color: #FFFFFF;
....width: 138px;
....font-size: 12px;
....margin: 0;
....padding: 5px 10px 5px 10px;
....border-left: 1px solid #FFFFFF;
....border-right: 1px solid #FFFFFF;
....border-bottom: 1px solid #FFFFFF;
....position: relative;
....}

#menu-main li li a:hover, #menu-main li li a:active {
....background: #333333;
....color: #FFFFFF;
....}

#menu-main li ul {
....z-index: 9999;
....position: absolute;
....left: -999em;
....height: auto;
....width: 160px;
....}

#menu-main li ul a {
....width: 140px;
....}
```

(continued)

LISTING 6-1: ***(continued)***

```
#menu-main li ul ul {
....margin: -31px 0 0 159px;
....}

#menu-main li:hover ul ul, #menu-main li:hover ul ul ul {
....left: -999em;
....}


#menu-main li:hover ul, #menu-main li li:hover ul, #menu-main li li li:hover ul
   {
....left: auto;
....}

#menu-main li:hover {
....position: static;
....}
```

REMEMBER

The CSS you use to customize the display of your menus will differ. The example in Listing 6-1 is just that: an example. After you get the hang of using CSS, you can try different methods, colors, and styling to create a custom look. (You can find additional information about basic HTML and CSS in Book 6, Chapter 4.)

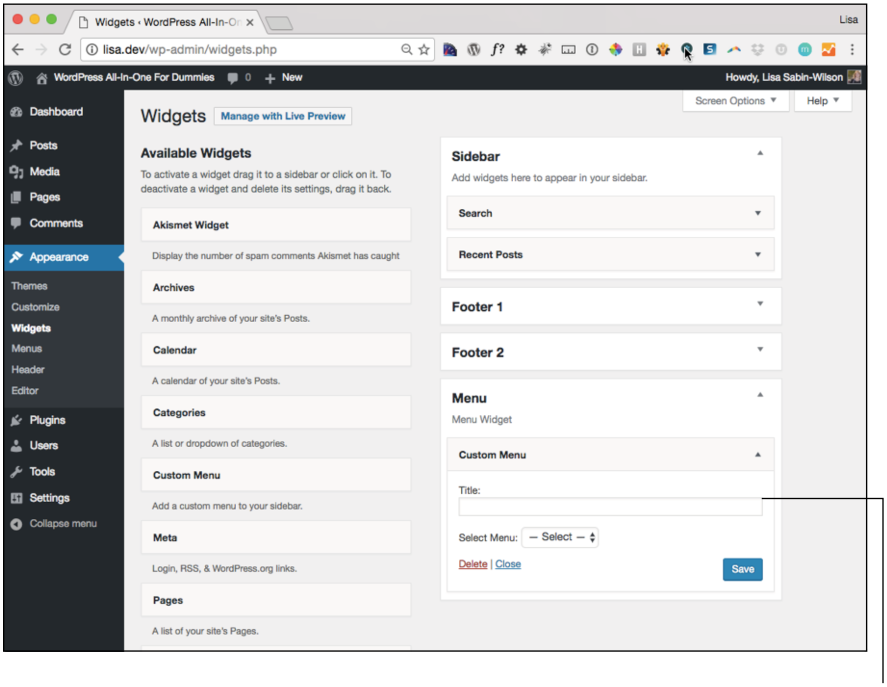
Custom menus using widgets

You don't have to use the `wp_nav_menu();` template tag to display the menus on your site because WordPress also provides a Custom Menu widget that you can add to your theme. As a result, you can use widgets instead of template tags to display the navigation menus on your site. This widget is especially helpful if you've created multiple menus for use on your site in various different places. Have a look at Book 6, Chapter 4 for more information on using WordPress widgets.

Your first step is to register a special widget area for your theme to handle the Custom Menu widget display. Open your theme's `functions.php` file, and add the following lines of code:

```
// ADD MENU WIDGET
if ( function_exists('register_sidebar') )
    register_sidebar(array('name'=>'Menu',));
```

These few lines of code create a new Menu widget area on the Widgets page of your Dashboard. You can drag the Custom Menu widget into the Menu widget to indicate that you want to display a custom menu in that area. Figure 6-3 shows the Menu widget area with the Custom Menu widget added.



To activate a widget drag it to a sidebar or click on it. To deactivate a widget and delete its settings, drag it back.

Display the number of spam comments Akismet has caught

A monthly archive of your site's Posts.

A calendar of your site's Posts.

A list or dropdown of categories.

Add a custom menu to your sidebar.

Login, RSS, & WordPress.org links.

A list of your site's Pages.

Add widgets here to appear in your sidebar.

Custom Menu widget

FIGURE 6-3: Widgets page displaying a Menu widget area with a Custom Menu widget.

To add the widget area to your theme, open the Theme Editor (click the Editor link on the Appearance menu), open the `header.php` file, and add these lines of code in the area in which you want to display the Menu widget:

```
<ul>
<?php if ( !function_exists('dynamic_sidebar') || !dynamic_sidebar('Menu') ) : ?>
<?php endif; ?>
</ul>
```

These lines of code tell WordPress that you want information contained in the Menu widget area to display on your site.

Adding support for custom post types

Custom post types and custom taxonomies have expanded the content management system (CMS) capabilities of WordPress and are likely to become a big part of plugin and theme features as more developers become familiar with their use. *Custom post types* allow you to create new content types separate from posts and pages, such as movie reviews or recipes. *Custom taxonomies* allow you to create new types of content grouping separate from categories and tags, such as genres for movie reviews or seasons for recipes.

Posts and pages are nice generic containers of content. A *page* is timeless content that has a hierarchal structure; it can have a parent, forming a nested, or hierarchal, structure of pages. A *post* is content that's listed in linear (not hierarchal) order based on when it was published and organized in categories and tags. What happens when you want a hybrid of these features? What if you want content that doesn't show up in the post listings, displays the posting date, and doesn't have either categories or tags? Custom post types are created to satisfy this desire to customize content types.

By default, WordPress already has different post types built in to the software, ready for you to use. The default post types include

- Blog posts
- Pages
- Menus
- Attachments
- Revisions

Custom post types give you the ability to create new and useful types of content on your website, including a smart and easy way to publish those content types on your site.

The possibilities for the use of custom post types are endless. To kick-start your imagination, here are some of the most popular, useful ideas that others have implemented on sites:

- Photo gallery
- Podcast or video
- Book reviews
- Coupons and special offers
- Events calendar

Core custom post type function

To create and use custom post types on your site, you need to be sure that your WordPress theme contains the correct code and functions. This section shows you how to create a very basic, generic custom post type called Generic Content. Follow these steps to create the same basic custom post type:

1. **Open the Theme Functions template file (`functions.php`).**

   Click the Editor link on the Appearance menu to open the Theme Editor screen. Then click the Theme Functions template link to open the `functions.php` file in the text editor.

2. **Add the custom post types code to the bottom of the Theme Functions template file.**

   Scroll to the bottom of the `functions.php` file, and include the following code to add a Generic Content custom post type to your site:

   ```
   // ADD CUSTOM POST TYPE
   add_action( 'init', 'create_post_type' );
   function create_post_type() {
     register_post_type( 'generic-content',
       array(
         'labels' => array(
           'name' => __( 'Generic Content' ),
           'singular_name' => __( 'Generic Content' )
         ),
         'public' => true
       )
     );
   }
   ```

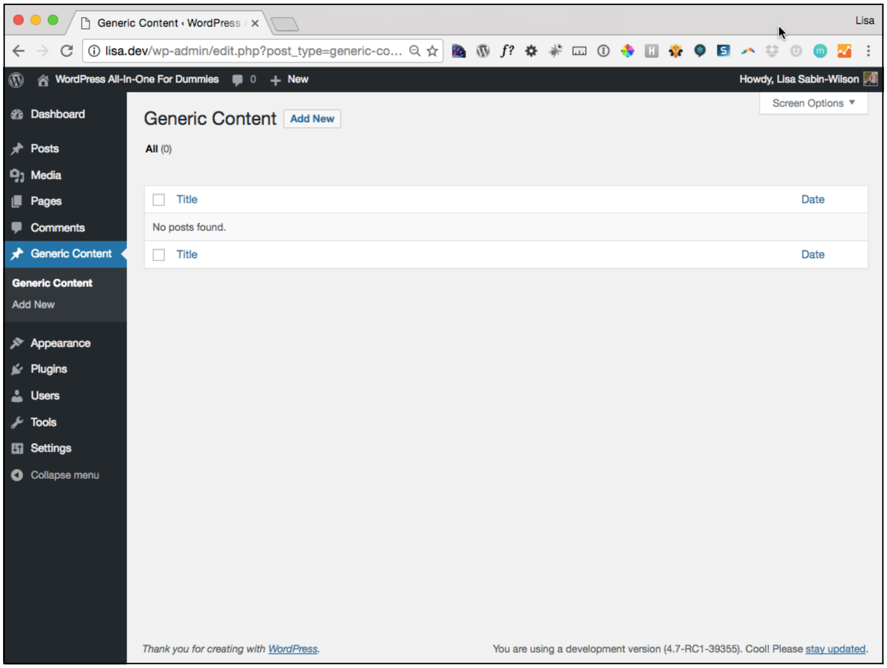
3. **Click the Update File button to save the changes you made in the `functions.php` file.**

The `register_post_type` function can accept several arguments and parameters, which are detailed in Table 6-3. You can use a variety and combination of different arguments and parameters to create a specific post type. You can find more information on Custom Post Types and using the `register_post_type` function in the WordPress codex at `http://codex.wordpress.org/Function_Reference/register_post_type`.

TIP

If you really don't feel up to writing this code in the Theme Functions template file, check out a nifty plugin developed for WordPress called Custom Post Type UI by WebDevStudios (`https://webdevstudios.com`). This plugin provides an interface for your WordPress Dashboard that simplifies the creation of custom post types on your site and bypasses the need to create the code in the Theme Functions template file (`functions.php`). You can find the plugin at `https://wordpress.org/plugins/custom-post-type-ui`.

After you complete the steps to add the generic content post type to your site, the Generic Content post type appears on the left navigation menu of the Dashboard, as shown in Figure 6-4.



No posts found.

Thank you for creating with WordPress.

You are using a development version (4.7-RC1-39355). Cool! Please stay updated.

FIGURE 6-4: A new custom post type menu appears on the Dashboard.

You add and publish new content by using the new custom post type the same way you do when you write and publish blog posts. The published content isn't added to the chronological listing of blog posts; it's treated as separate content, just like static pages.

Generic Content is part of the permalink structure, and the permalink looks similar to `http://`*`yourdomain`*`.com/generic-content/new-article`.

TABLE 6-3 Arguments and Parameters for register_post_type();

Parameter	Information	Parameters	Example
label	A plural descriptive name for the post type.	None.	'label' => __('Generic Content'),
labels	An array of descriptive labels for the post type.	Default is empty and set to the label value. name singular_name add_new add_new_item edit_item new_item view_item view_items search_items not_found not_found_in_trash parent_item_colon all_items archives attributes insert_into_item uploaded_into_item uploaded_to_this_item featured_image set_featured_image remove_featured_image use_featured_image menu_name filter_items_list	’name’ => __('Generic Content'),

(continued)

TABLE 6-3 ***(continued)***

Parameter	Information	Parameters	Example
		items_list_navigation items_list name_admin_bar	
description	The description of the post type; displayed on the Dashboard to represent the post type.	None.	'description' => __('This is a description of the Generic Content type'),
public show_ui publicly_queryable exclude_from_search show_in_nav_menus	Sets whether the post type is public. The three other arguments are show_ui: Show admin screens publicly_queryable: Query for this post type from the front end exclude_from_search: Show post type in search results	true or false: Default is false.	'public' => true, 'show_ui' => true, 'publicly_queryable' => true, 'exclude_from_search' => false, ‘show_in_nav_menus’ => true
menu_position	Sets the position of the post type menu item on the Dashboard navigation menu.	Default: 20; By default, custom post types appear after the Comments menu of the Dashboard. Set integer in intervals of five (5, 10, 15, 20, and so on).	'menu_position' => 25,
menu_icon	Defines a custom icon (graphic) to the post type menu item on the Dashboard navigation menu. Creates and uploads the image into the images directory of your theme folder.	None.	'menu_icon' => get_stylesheet_directory_uri() . '/images/generic-content.png',

Parameter	Information	Parameters	Example
`hierarchical`	Tells WordPress whether to display the post type content list in a hierarchical manner.	`true` or `false`: Default is true.	`'hierarchical' => true,`
`query_var`	Controls whether this post type can be used with a query variable such as `query_posts` (see preceding section) or `WP_Query`.	`true` or `false`: Default is false.	`'query_var' => true,`
`capability_type`	Defines permissions for users to edit, create, or read the custom post type.	`post` (default): Gives the same capabilities to those who can edit, create, and read blog posts.	`'query_var' => post,`
`capabilities`	Tells WordPress what capabilities are accepted for this post type.	Default: empty, the `capability_type` value is used. `edit_post`: allows post type to be edited `read_post`: allows post type to be read `delete_post`: allows post type to be deleted	`‘capabilities’ => edit_post,`
`map_meta_cap`	Tells WordPress whether to use the default internal meta capabilities.	`true` or `false`: Default is false.	`‘map_meta_cap’ => true,`
`supports`	Defines what meta boxes, or modules, are available for this post type in the Dashboard.	`title`: Text box for the post title `editor`: Text box for the post content `comments`: Check boxes to toggle comments on/off `trackbacks`: Check boxes to toggle trackbacks and pingbacks on/off	`'supports' => array( 'title', 'editor', 'excerpt', 'custom-fields', 'thumbnail' ),`

(continued)

TABLE 6-3 ***(continued)***

Parameter	Information	Parameters	Example
		`revisions`: Allows post revisions `author`: Drop-down box to define post author `excerpt`: Text box for the post excerpt `thumbnail`: The featured image selection `custom-fields`: Custom fields input area `page-attributes`: The page parent and page template drop-down menus	
`rewrite`	Rewrites the permalink structure for the post type.	`true` or `false`; Two other arguments are available: `slug`: Permalink slug to prepend to your custom post types `with_front`: If you've set your permalink structure with a specific prefix such as `/blog`	`'rewrite' => array( 'slug' => 'my-content', 'with_front' => false ),`
`has_archive`	Tells WordPress whether to enable post archives for this post type.	`true` or `false`: Default is false. (If true, WordPress uses the post type name as its slug in the permalink URL.)	`‘has_archive’ => true,`
`can_export`	Tells WordPress whether this post type can be exported by using the built-in content exporter.	`true` or `false`: Default is true.	`‘can_export’ => false,`
`taxonomies`	Uses existing WordPress taxonomies (category and tag).	Category `post_tag`	`'taxonomies' => array( 'post_tag', 'category'),`

TIP

The three modules WordPress gives you to add navigation menus are Custom Links, Pages, and Categories. On the Menus screen of the WordPress Dashboard, click the Screen Options tab in the top-right corner. The check box next to the post types you've created enables your custom post types on the menus you create.

Custom post type templates

By default, custom post types use the `single.php` template in your theme — that is, they do unless you create a specific template for your custom post type if you find the regular WordPress `single.php` template to be too limiting for your post type.

The preceding section has the code for building a simple Generic Content custom post. After that code is added, a Generic Content menu appears on the WordPress Dashboard. Click the Add New link on the Generic Content menu and publish a new post to add some content for testing. In this example, a new Generic Content type with a title of Test and a slug of `test` is added. Because the Generic Content type doesn't have a specific template, it uses the `single.php` template, and resulting posts look no different from a standard one.

TIP

If you get a Not Found page when you try to go to a new custom post type entry, reset your permalink settings. Click the Permalinks link on the Settings menu of the WordPress Dashboard and then click the Save Changes button. WordPress resets the permalinks, which adds the new custom post type link formats in the process.

To build a template specific for the Generic Content post type, add a new template named single-*posttype*.php, where *posttype* is the first argument passed to the `register_post_type` function from the preceding section. For this example, the single template file specific to Sample Post Type is `single-generic-content.php`. Any modifications made in this template file appear only for instances of the Generic Content post type.

A basic structure for `single-generic-content.php` looks like this:

```
<?php get_header(); ?>
<div id="container">
    <div id="content" role="main">
        <?php get_template_part( 'template-parts/post/content', single-
     generic-content );?>
    </div><!-- #content -->
</div><!-- #container -->
<?php get_sidebar(); ?>
<?php get_footer(); ?>
```

When you use the template part, creating a file called `loop-generic-content.php` allows for easy customization of The Loop for the Generic Content post type entry.

Adding support for custom taxonomies

There are times when being limited to categories and tags just is not enough for a site. A movie review custom post type, for example, might need a variety of new taxonomies or grouping options. Organizing movie reviews by director, star, review rating, film genre, and Motion Picture Association of America (MPAA) rating allows visitors to the site to view different groupings of reviews that may interest them. Like the custom post type example, this example creates a very simple taxonomy to test custom taxonomy–specific templates. For this example, a new post taxonomy called Sample Taxonomy is created.

To register this new taxonomy, use the register_taxonomy function. Adding the following code to the bottom of your theme's functions.php file registers the new sample taxonomy custom taxonomy specifically for WordPress built-in posts, adds a Sample Taxonomy link to the Posts menu entry to manage the Sample Taxonomy entries, and adds sample taxonomy options to the editor for posts.

```
register_taxonomy( 'sample-taxonomy', 'post', array( 'label' => 'Sample
     Taxonomy' ) );
```

This function call gives the new custom taxonomy an internal name of sample-taxonomy, assigns the new taxonomy to Posts, and gives the taxonomy a human-readable name of Sample Taxonomy.

After adding this code to your theme, you can create and assign Sample Taxonomies when creating a new post or editing an existing post. For this example, you could add a sample taxonomy with a name of Testing to an existing post and update the post.

With the Testing taxonomy added, you can visit example.com/sample-taxonomy/testing to get the archive page for the new sample taxonomy.

TIP

If you get a Not Found page or don't get an archive listing when you try to go to a specific sample taxonomy entry's archive, resave your permalink settings. Click the Permalinks link on the Settings menu of the WordPress Dashboard and then click Save Changes. This step forces WordPress to reset the permalinks, which adds the new custom taxonomy link formats in the process.

Adding a new template file called taxonomy-sample-taxonomy.php allows you to add a template that's specific to this new custom taxonomy. As you can with categories and tags, you can add a template that's specific to a single custom taxonomy entry. Therefore, a template specific to a sample taxonomy with a slug of testing would have the filename taxonomy-sample-taxonomy-testing.php.

REMEMBER

Custom taxonomies appeal only to owners of specific types of sites that deal mainly in niche areas of content: owners who want to really drill down in navigation and grouping options for their content. You can find more about custom taxonomies in the WordPress Codex at `https://codex.wordpress.org/Function_Reference/register_taxonomy`.

Adding support for post formats

Introduced in Version 3.1 of WordPress, the Post Formats feature allows you to designate a different content display and style for certain types of designated posts. Unlike with custom post types, you can't create different post formats because WordPress has already assigned them for you. It's up to you what post format, if any, you want to use in your theme.

Here are the nine types of WordPress post formats:

- **Aside:** A very short post that shares a random thought or idea. Typically, an aside is shared without a post title or any category/tag designations. It's simply a random, one-off thought — not a full post — shared on your site.
- **Audio:** A post that shares audio files or podcasts. Usually, audio posts have very little text and include a built-in audio player that visitors can click to listen to the content.
- **Chat:** A transcript of an online conversation that can be formatted to look like a chat (or instant-message) window.
- **Gallery:** A gallery of clickable images, in which clicking an image opens a larger version of the photo. Often, galleries don't contain text (but may have titles) and are used only for the display of images.
- **Image:** A post that shares a single image. The image may or may not have text or a caption.
- **Link:** A post that provides a link you find useful and want to share with your readers. These post formats often contain a title and sometimes a short bit of text that describes the link.
- **Quote:** A post that displays a quotation on your site. Often, users include a byline or the quote's source.
- **Status:** A short status update, usually limited to 140 characters or less. (Think Twitter!)
- **Video:** A post that displays a video, usually embedded within a video player (such as YouTube) so that your readers can play the video without leaving your site.

You have only these nine designated post formats to work with. You can use one or all of them in your theme, depending on your specific needs.

TIP

If you find that your site needs a type of post format that currently isn't available, consider adding it as a custom post type.

Core post format function

To add support for post formats to your theme, you need to add the core function call to your Theme Functions template file (`functions.php`). After you do, you'll see the magic that occurs on the Add New Post page of your WordPress Dashboard! Here's how to add post formats support to your theme:

1. **Click the Editor link on the Appearance menu of your Dashboard.**

   The Edit Themes screen appears.

2. **Open the Themes Function file in the text editor.**

   The link for the Theme Functions template file is on the right side of the Edit Themes page. Clicking this link opens the Theme Functions template file (`functions.php`) in the text editor on the left side of the Edit Themes page.

3. **Add the following function on a new line:**

   ```
   add_theme_support( 'post-formats', array( 'aside', 'chat', 'gallery', 'image',
       'link', 'quote', 'status', 'video', 'audio' ) );
   ```

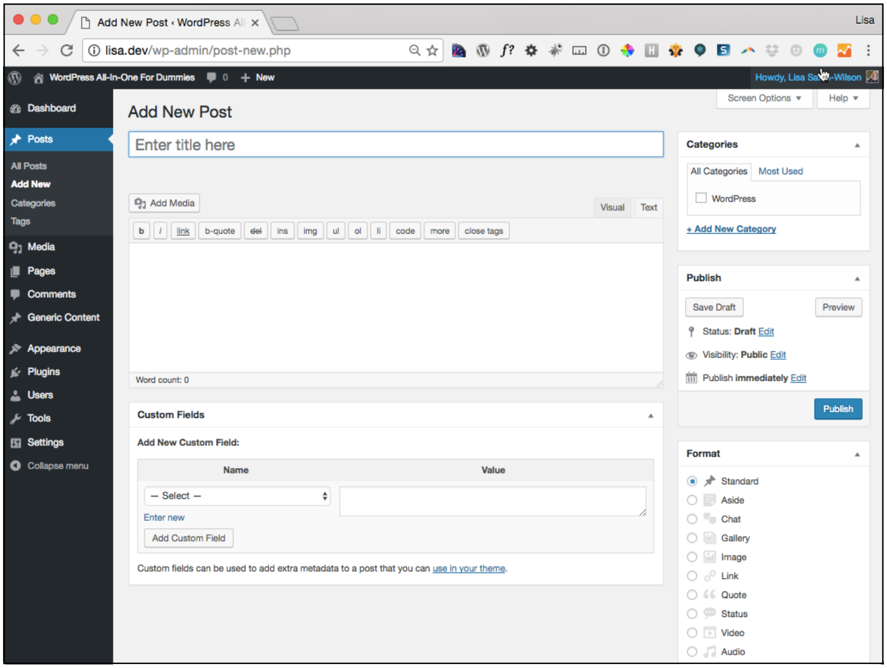
   TIP

   This code sample adds all nine post formats to the theme. You don't have to use all nine; you can include only the formats that you need in your theme and leave the rest alone.

4. **Click the Update File button to save the changes you made in the `functions.php` file.**

You won't notice an immediate change on your site when you save your new Theme Functions template file with the Post Formats support added. To see what WordPress added to your site, you need to visit the Add New Post page (which you access by clicking the Add New link on the Posts menu).

The change is subtle, but if you follow the steps to add post format support, you see a Format module on the right side of the page, as shown in Figure 6-5. Choose your desired format to designate a format for your post. In Figure 6-5, all nine post format options are listed. You also see a tenth format option, Standard (or Default), which is used when you don't select a specific format for your post.



Status: Draft Edit

Visibility: Public Edit

Publish immediately Edit

Format: ● Standard ○ Aside ○ Chat ○ Gallery ○ Image ○ Link ○ Quote ○ Status ○ Video ○ Audio

Custom fields can be used to add extra metadata to a post that you can use in your theme.

FIGURE 6-5: The Format module of the Add New Post screen.

Template tags for post formats

Adding Post Format support to your theme isn't enough. If you're going to add post format support, you really should provide some unique styling for each type of format; otherwise, your post formats will look like your blog posts, and the point of adding them to your theme will be lost.

You can display your post format in two ways:

- **Content:** For each format, you can designate what content you want to display. If you don't want to display a title for your Asides format, for example, leave out the template tag that calls it, but leave the tag in for your Video post format.
- **Style:** When you use the HTML markup that's provided by the `post_class();` tag, each of your formats has a CSS class assigned to it. Use those CSS classes to provide unique styles for fonts, colors, backgrounds, and borders to each of your post formats. The nearby sidebar "Post class defined" discusses how to use HTML and CSS to create custom styles in your template.

POST CLASS DEFINED

In the default Twenty Seventeen theme, examine the code for the content.php template (in the folder /template-parts/post/). About three fourths of the way in, you see a line of code that looks like this:

```
<article id="post-<?php the_ID(); ?>" <?php post_class(); ?>>
```

The cool part of that template tag is the post_class() section. This template tag tells WordPress to insert specific HTML markup into your template that allows you to use CSS to make custom styles for sticky posts, categories, tags, and post formats.

Suppose that a post has the following options set:

- Stick this post to the front page
- Filed in a category called WordPress
- Tagged with News

When the post_class() tag is used in the template, WordPress inserts HTML markup that allows the use of CSS to style posts assigned to specific tags, categories, logged-in status, or post formats, differently. WordPress inserts the following HTML markup for the post:

```
<article class="post sticky category-wordpress tag-news">
```

Likewise, for post formats, if a post is published via the Images post format, the post_class() tag in the template contains the following HTML markup, indicating that this post should be formatted for an image display:

```
<article class="post type-post format-image">
```

Add this information to the CSS and HTML information provided in Book 6, Chapter 3, and you see how you can use CSS along with the post_class(); tag to provide custom styles for each post type on your site and unique styles for the categories and tags you use in your posts.

Adding unique styles for your post formats starts with creating the content designations you want to display for each format. Earlier in this section, I provide a list of nine post formats and some ideas about what you can do to display them on your site. The possibilities are endless; the use of post formats is really up to you. See Book 6, Chapter 3 for more information on the content-related template tags you can use in these areas. The following steps take you through the creation of a very simple, stripped-down Main Index file (`index.php`):

1. **Open your favorite text editor, such as Notepad (for PC) or TextEdit (for Mac).**

2. **Type** `<?php get_header(); ?>`**.**

   This function includes all the code from your theme's `header.php` file.

3. **Type the following two lines:**

   ```
   <?php if (have_posts()) : ?>

   <?php while (have_posts()) : the_post(); ?>
   ```

   These two lines of code indicate the beginning of The Loop (discussed in Book 6, Chapter 3).

4. **Type** `<div id="post-<?php the_ID(); ?>" <?php post_class(); ?>>`**.**

   This line provides HTML and CSS markup, using the `post_class();` function that provides unique CSS classes for each of your post formats. (See the nearby sidebar "Post class defined.")

5. **Type** `<?php`**.**

   This part initiates the start of a PHP function.

6. **Type the following lines to provide content for the Asides post format:**

   ```
   if ( has_post_format( 'aside' )) {
   echo the_content();

   }
   ```

7. **Type the following lines to provide content for the Gallery post format:**

   ```
   elseif ( has_post_format( 'gallery' )) {
   echo '<h3>';
   echo the_title();
   echo '</h3>';
   echo the_content();

   }
   ```

8. **Type the following lines to provide content for the Image post format:**

```
elseif ( has_post_format( 'image' )) {
echo '<h3>';
echo the_title();
echo '</h3>';
echo the_post_thumbnail('image-format');
echo the_content();
}
```

9. **Type the following lines to provide content for the Link post format:**

```
elseif ( has_post_format( 'link' )) {
echo '<h3>';
echo the_title();
echo '</h3>';
echo the_content();
}
```

10. **Type the following lines to provide content for the Quote post format:**

```
elseif ( has_post_format( 'quote' )) {
echo the_content();
}
```

11. **Type the following lines to provide content for the Status post format:**

```
elseif ( has_post_format( 'status' )) {
echo the_content();
}
```

12. **Type the following lines to provide content for the Video post format:**

```
elseif ( has_post_format( 'video' )) {
echo '<h3>';
echo the_title();
echo '</h3>';
echo the_content();
}
```

13. **Type the following lines to provide content for the Audio post format:**

```
elseif ( has_post_format( 'audio' )) {
echo '<h3>';
echo the_title();
echo '</h3>';
echo the_content();

}
```

14. **Type the following lines to provide content for all other (Default) posts:**

```
else {
echo '<h3>';
echo the_title();
echo '</h3>';
echo the_content();

}
```

15. **Type** `?>`**.**

    This line ends the PHP function.

16. **Type** `</div>`**.**

    This line closes the HTML `div` tag you opened in Step 4.

17. **Type** `<?php endwhile; else: ?> <?php endif; ?>`**.**

    This line closes the `while` and `if` statements that were opened in Step 3.

18. **Type** `<?php get_sidebar(); ?>`**.**

    This function calls in the code included in the `sidebar.php` file of your theme.

19. **Type** `<?php get_footer(); ?>`**.**

    This function calls in the code included in the `footer.php` file of your theme.

20. **Save your file as** `index.php`**.**

    Upload it to your theme folder, replacing your existing `index.php` file.

Listing 6-2 displays the full code for your new `index.php` file.

LISTING 6-2: A Simple Post Formats Template

```
<?php get_header(); ?>
<?php if (have_posts()) : ?>
<?php while (have_posts()) : the_post(); ?>
<div id="post-<?php the_ID(); ?>" <?php post_class(); ?>>
<?php

if ( has_post_format( 'aside' )) {
....echo the_content();
}

elseif ( has_post_format( 'gallery' )) {
....echo '<h3>';
....echo the_title();
....echo '</h3>';
....echo the_content();
}

elseif ( has_post_format( 'gallery' )) {
....echo '<h3>';
....echo the_title();
....echo '</h3>';
....echo the_content();
}

elseif ( has_post_format( 'image' )) {
....echo '<h3>';
....echo the_title();
....echo '</h3>';
....echo the_post_thumbnail('image-format');
....echo the_content();
}

elseif ( has_post_format( 'link' )) {
....echo '<h3>';
....echo the_title();
....echo '</h3>';
....echo the_content();
}

elseif ( has_post_format( 'quote' )) {
....echo the_content();
}

elseif ( has_post_format( 'status' )) {
....echo the_content();
}
```

```
elseif ( has_post_format( 'video' )) {
....echo '<h3>';
....echo the_title();
....echo '</h3>';
....echo the_content();
}

elseif ( has_post_format( 'audio' )) {
....echo '<h3>';
....echo the_title();
....echo '</h3>';
....echo the_content();
}

else {
....echo '<h3>';
....echo the_title();
....echo '</h3>';
....echo the_content();
}
?>
</div>
<?php endwhile; else: ?>
<?php endif; ?>
<?php get_sidebar(); ?>
<?php get_footer(); ?>
```

The example in Listing 6-2 is a very simple one that doesn't include a whole lot of HTML markup or CSS classes. Therefore, you can focus on the code bits that are required to designate and define different content displays for your post formats. You can see in Listing 6-2 that some of the formats contain the template tag to display the title, `the_title();`, and others don't, but they all contain the template tag to display the content of the post: `the_content();`. As I mention previously, you can play with different content types and markup that you want to add to your post formats.

By coupling your template additions for post formats with the `post_class();` tag, which adds special CSS classes and markup for each post format type, you can customize the display of each post format to your heart's content.

Adding support for post thumbnails

The WordPress feature called Post Thumbnails (also known as Featured Images) takes a lot of the work out of associating an image with a post and using the correct size each time. A popular way to display content in WordPress themes involves using thumbnail images with snippets (excerpts) of text; the thumbnail images are consistent in size and placement within your theme. Before the inclusion of post thumbnails in WordPress, users had to open their images in an image-editing program (such as Adobe Photoshop) and crop and resize their images to the desired sizes, or they had to use fancy scripts that resized images on the fly, which tended to be resource-intensive on web servers and weren't optimal solutions. How about using a CMS that crops and resizes your images to the exact dimensions that you specify? Yep, WordPress does that for you with just a few adjustments.

By default, when you upload an image, WordPress creates three versions of your image based on dimensions that are set on your Dashboard (click the Media link on the Settings menu):

- **Thumbnail size:** Default dimensions are 150px x 150px.
- **Medium size:** Default dimensions are 300px x 300px.
- **Large size:** Default dimensions are 1024px x 1024px.

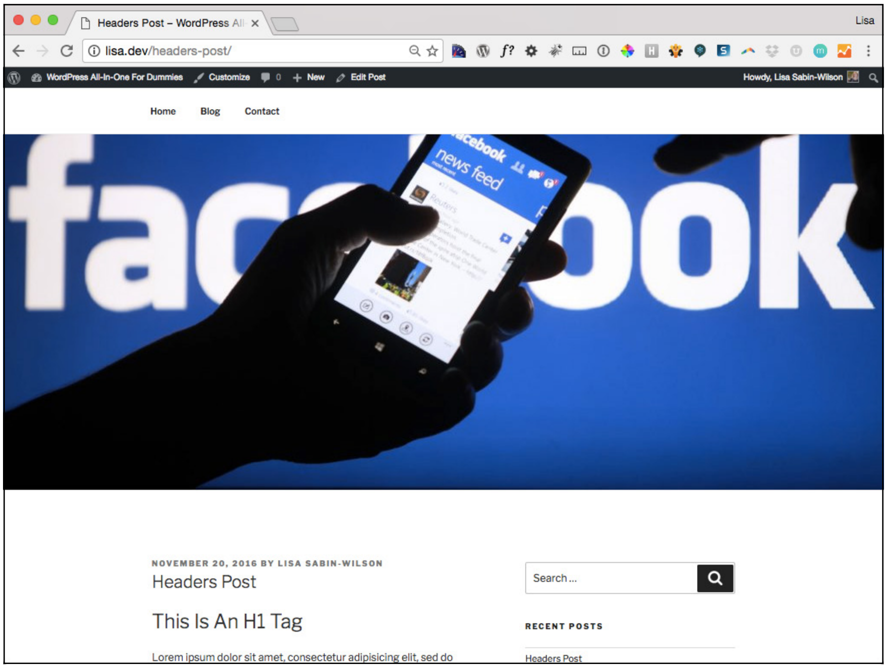
Therefore, when you upload an image, you actually end up with four sizes of that image stored on your web server: thumbnail, medium, large, and the original image. Images are cropped and resized proportionally, and when you use them in your posts, you can designate which size to use in the image options of the Add Image page. (See Book 4, Chapter 3 for details on uploading images in WordPress.)

In the Twenty Seventeen theme, specifically, you see the following in the `functions.php` file, which define image sizes:

- `add_image_size( 'twentyseventeen-featured-image', 2000, 1200, true );`
- `add_image_size( 'twentyseventeen-thumbnail-avatar', 100, 100, true );`

Within the WordPress image uploader, you can designate a particular image as the featured image of the post (see Figure 6-6), and then — using the Featured Images function that you add to your theme — you can include template tags to display your chosen featured image with your post. This technique is helpful for creating the magazine- or news-style themes that are popular on WordPress sites.

In the following sections, I also cover adding support for image sizes other than the default image sizes set on the Media Settings page of your Dashboard. This technique is helpful on sections of your site where you want to display much smaller thumbnails or larger versions of medium-size thumbnails.



NOVEMBER 20, 2016 BY LISA SABIN-WILSON

Headers Post

This Is An H1 Tag

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do

FIGURE 6-6: Featured Image in use with the Twenty Seventeen theme.

Core post thumbnails function and template tags

Adding support for post thumbnails includes adding one line of code to your Theme Functions template file (`functions.php`):

```
add_theme_support( 'post-thumbnails' );
```

After you add this line of code to your Theme Functions template file, you can use the Featured Image feature for your posts. You can designate featured images by using the function in the WordPress image uploader. The function is also an option on the Add New Post page, where you write and publish your posts.

After you add featured images to your posts, make sure that you add the correct tag in your template(s) so that the featured images display on your site in the areas where you want them to display. Open your `index.php` template, and include the following line of code to include the default thumbnail-size version of your chosen featured image in your posts:

```
<?php if ( has_post_thumbnail() ) { the_post_thumbnail('thumbnail'); ?>
```

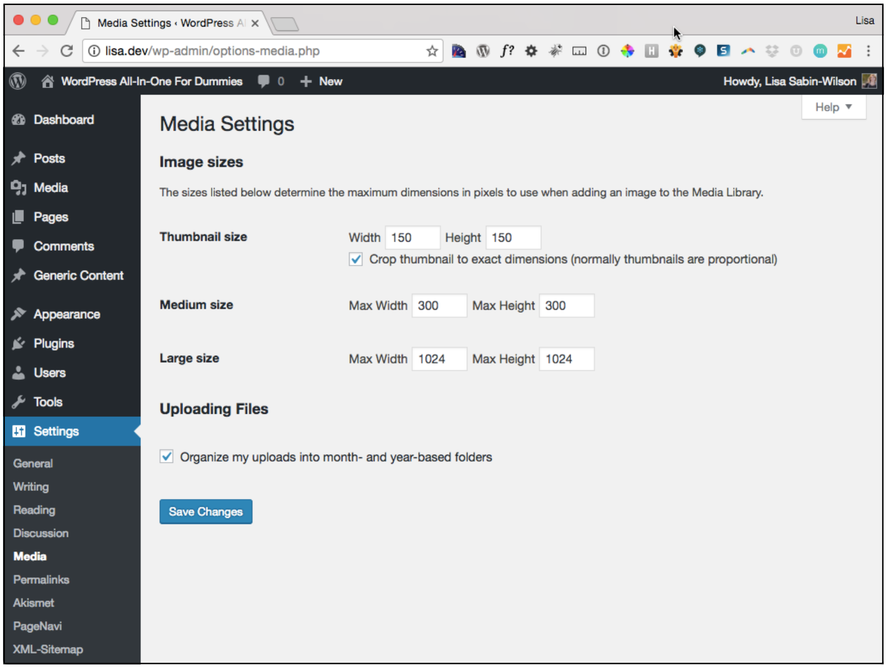
The first part of that line of code checks whether a featured image is associated with the post. If so, the image displays; if not, the code returns nothing. You can also include the other default image sizes (set in the Media Settings screen of the

Dashboard, shown in Figure 6-7) for medium-, large-, and full-size images by using these tags:

```
<?php if ( has_post_thumbnail() ) { the_post_thumbnail('medium'); ?>
```

```
<?php if ( has_post_thumbnail() ) { the_post_thumbnail('large'); ?>
```

```
<?php if ( has_post_thumbnail() ) { the_post_thumbnail('full'); ?>
```



Media Settings

Image sizes

The sizes listed below determine the maximum dimensions in pixels to use when adding an image to the Media Library.

Thumbnail size Width 150 Height 150

☑ Crop thumbnail to exact dimensions (normally thumbnails are proportional)

Medium size Max Width 300 Max Height 300

Large size Max Width 1024 Max Height 1024

Uploading Files

☑ Organize my uploads into month- and year-based folders

FIGURE 6-7: The Media Settings page of the Dashboard.

Custom image sizes for post thumbnails

If the default image sizes in WordPress (thumbnail, medium, large, and full) don't satisfy you, and you want to display images with different dimensions, WordPress makes it relatively easy to add custom image sizes to your Theme Functions template file. Then you use the `the_post_thumbnail` function to display the post thumbnail in your theme.

You can add unlimited sizes for your images. The following example shows how to add a new image size of 600px x 300px. Add this line to your Theme

Functions template file (functions.php) below the add_theme_support('post-thumbnails') function you added:

```
add_image_size( 'custom', 600, 300, true);
```

This code tells WordPress to create an additional version of the images you upload and to crop and resize them to 600px x 300px. Notice the four parameters in the add_image_size function:

- **Name ($name):** Gives the image size a unique name that you can use in your template tag. The image size in this example uses the name 'custom'.
- **Width ($width):** Gives the image size a width dimension in numbers. In this example, the width is defined as 600.
- **Height ($height):** Gives the image size a height dimension in numbers. In this example, the height is defined as 300.
- **Crop ($crop):** This parameter (which is optional) tells WordPress whether to crop the image to exact dimensions or do a soft proportional resizing of the image. In this example, the parameter is set to true (accepted arguments: true or false).

Adding the custom image size to your template to display the featured image is the same as adding default image sizes. The only difference is the name of the image set in the parentheses of the template tag. The custom image size in this example uses the following tag:

```
<?php if ( has_post_thumbnail() ) { the_post_thumbnail('custom'); ?>
```

Exploring Theme Options

One of the key features of an advanced theme is a Theme Options page. A Theme Options page allows the theme user to supply information to the theme without having to modify the theme files. Although a single-use theme could have this information hard-coded into the theme, that solution is an inelegant one. If the theme is used more than once or is managed by a nondeveloper, having an easy-to-change setting on the back end allows changes to be made quickly and easily.

Use a Theme Options page when the information is specific to the user and not to the theme design. Web analytics code (such as visitor-tracking JavaScript from Google Analytics or Woopra) is a good example of this user-specific information.

Because hundreds of analytics providers exist, most analytics providers require the JavaScript code to be customized for the specific site. The theme could have several different header and footer files, providing easy-to-use theme options. Adding JavaScript code to the header and the footer rather than requiring theme file modifications can make using your theme much easier.

TIP

Early in the design process, consider what a user may want to modify. Advanced uses of a Theme Options page vary widely and include design editors, color pickers, font options, and settings that modify the theme layout (switch a sidebar from one side of the theme to another, for example). The options offered depend on the project and the design.

Understanding theme-options basics

Before jumping into the code, you should understand the basic concepts of how theme options work.

Before WordPress Version 2.8, adding options to your theme required the developer to code the entire process, including providing an input form to accept the options, storing the options in the database, and retrieving the options from the database to use them. Fortunately, things have gotten much better. Some work is still required, but adding options is much easier now.

To let the user access the theme options, an input form is required. This process requires the most work because the form still needs to be manually created and managed. The form will need to be added to the back end so that the user can access it. Adding a new option to the Appearance menu allows the user to find the Theme Options page. Fortunately, WordPress offers an easy-to-use function called `add_theme_page`. To have WordPress manage as much as possible for you, the code needs to tell WordPress to store the data. The `register_setting` function can handle this task.

Building a simple theme-options page

Now that you know what pieces you need to build the Theme Options page, you can jump into the code. Open a plain-text editor, and enter the code shown in Listing 6-3.

LISTING 6-3:

The Theme Options Page

```
<?php
function cm_theme_options_init()
 register_setting( 'cm_theme_options', 'theme_options' );
}
add_action( 'admin_init', 'cm_theme_options_init' );
function cm_theme_options_menu() {
 add_theme_page( 'Theme Options', 'Theme Options', 'manage_options',
   'cm_theme_options', 'cm_theme_options_page' );
}
add_action( 'admin_menu', 'cm_theme_options_menu' );
function cm_theme_options_page() {
 ?>
 <div class="wrap">
 <?php screen_icon(); ?>
 <h2>Theme Options</h2>
 <form method="post" action="options.php">
 <?php settings_fields( 'cm_theme_options' ); ?>
 <?php $options = get_option( 'theme_options' ); ?>
 <Table class="form-table">
 <tr valign="top">
<th scope="row">Checkbox</th>
 <td><input name="theme_options[checkbox]" type="checkbox"
   value="1" <?php checked('1', $options['checkbox']); ?>/></td>
 </tr>
 <tr valign="top"><th scope="row">Text</th>
 <td><input type="text" name="theme_options[text]" value="<?php echo
   $options['text']; ?>"/></td>
 </tr>
 <tr valign="top">
<th scope="row">Text Area</th>
 <td><textarea name="theme_options[text_area]"><?php echo $options
   ['text_area']; ?></textarea></td>
 </tr>
 </table>
 <p class="submit"><input type="submit" class="button-primary"
   value="<?php _e( 'Save Changes' ); ?>"/></p>
 </form>
 </div>
 <?php
}
?>
```

Here's a brief explanation of what the various lines do:

→2 This line creates a new function that calls `register_setting`, the function that tells WordPress about the need to store data.

→3 This line tells WordPress that you're creating a new settings group called `cm_theme_options`. The `theme_options` argument sets the WordPress options name used to store and retrieve the theme options. You'll want to change these option to be unique to your theme so that you don't accidentally load or save over settings from other themes or plugins.

→5 The new `cm_theme_options_init` function needs to be called to work. This line causes the function to be called during the `admin_init` action, which is a good action to use to run functions that need to be called on each admin page load.

→6 This new function handles registering the new menu entry that will show your form.

→7 The `add_theme_page` function adds a new menu entry on the Appearance menu. In order, the arguments are page title (appears on the title bar of the browser), menu entry name, required access level to visit the page, the variable name of the page (this needs to be unique for the page to work), and the function that should be run when visiting the menu location. This last argument (`cm_theme_options_page` in this example) is the name of the function that holds the options form.

→9 The new `cm_theme_options_menu` function needs to be called to work. This line causes the function to be called during the `admin_menu` action, which is when new menu entries should be added.

→10 This new function produces the input form for editing the theme options.

→12 Wrapping a form in the `wrap` class applies WordPress's default formatting.

→13 This line outputs the Appearance icon in front of the heading that follows.

→14 This line adds a title to the Theme Options page.

→15 This line starts the HTML form with an action that points to `options.php` and handles saving the data.

→16 The `settings_fields` is a function that adds some hidden inputs that allow the options to save properly. The `cm_theme_options` argument must match the first argument passed to the register_setting function. If this function is missing or if the argument doesn't match the first argument of the register_setting function, the options won't save properly.

→17 This line loads the saved theme options into the $options variable. The theme_options argument must match the second argument passed to the register_setting function.

→18 This line gives the table a class of form-table that applies WordPress's default form styling.

→19–20 These lines start a new row to hold the first option and add a description row header (the content inside the th tag). As indicated by the description, this option is a generic check-box input.

→21 This line adds the check-box input. The checked function from WordPress handles outputting the required HTML if a checked state was previously saved. The theme_options[checkbox] portion matches the second argument passed to the register_setting function, followed by the name of the specific option (in this case, checkbox). The $options['checkbox'] loads the specific option from the $options array.

→23 This line starts a new row to hold another option and adds a description row header (the content inside the th tag). As indicated by the description, this option is a generic text input.

→24 This line adds the text input. The echo outputs the existing value so that it prepopulates the input. The theme_options[text] portion matches the second argument passed to the register_setting function, followed by the name of the specific option (in this case, text). The $options['text'] loads the specific option from the $options array.

→26–27 These lines start a new row to hold another option and add a description row header (the content inside the th tag). As indicated by the description, this option is a generic text-area input.

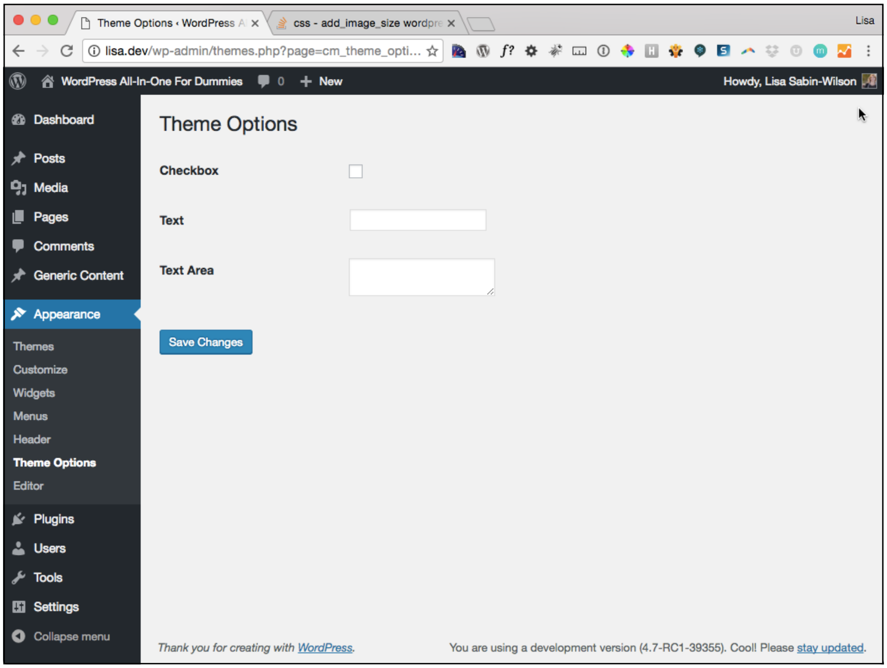
→28 This line adds the text area input. The echo outputs the existing value so that it prepopulates the input. The theme_options[text_area] portion matches the second argument passed to the register_setting function, followed by the name of the specific option (in this case, text_area). The $options['text_area'] loads the specific option from the $options array.

→31 This line adds a button with a label of Save Changes. Giving the input a class of button-primary and wrapping it in a p tag with a class of submit applies WordPress's default button styling.

To load this file, you need to add a line of code to the theme's `functions.php` file. Edit the `functions.php` file, and add the following line at the bottom of the file:

```
require_once( 'theme-options.php' );
```

Click the Themes Options link on the Appearance menu. The Theme Options screen appears, as shown in Figure 6-8.



Thank you for creating with WordPress.

You are using a development version (4.7-RC1-39355). Cool! Please stay updated.

FIGURE 6-8: The new Theme Options page in the WordPress back end.

Using theme options in the theme

Compared with setting up a Theme Options page, using the stored options is very easy. To make it easier, add the following code (a quick function that makes using the options as simple as making a single function call) to your theme's `functions.php` file:

```
<?php
function get_theme_option( $option_name ) {
    global $theme_options;
        if ( ! isset( $theme_options ) )
            $theme_options = get_option( 'theme_options' );
        if ( isset( $theme_options[$option_name] ) )
            return $theme_options[$option_name];
    return '';
}
?>
```

The `get_theme_option` function takes an option name as its only argument and returns that option's value. To get the check-box option value, for example, simply call `get_theme_option('checkbox')`.

If your theme has a section that can be enabled and disabled by a theme option check box, a section of code such as the following works very well:

```
<?php if ( get_theme_option('checkbox') ) : ?>
    <!-- example code -->
<?php endif; ?>
```

Typically, text or text area options output user-provided content. By using a check to see whether an option has a value, your theme can offer a default set of text that can be overridden by text entered in a theme option:

```
<div class="footer-right">
    <?php if ( get_theme_option('text') ) : ?>
        <?php echo get_theme_option('text'); ?>
    <?php else : ?>
        <p>Sample Theme by Lisa Sabin-Wilson</p>
    <?php endif; ?>
    <p>Powered by <a
href="http://wordpress.org">WordPress</a></p>
</div>
```

IN THIS CHAPTER

- » Getting familiar with theme frameworks
- » Exploring popular theme frameworks
- » Recognizing common framework features

Chapter 7 Using Theme Frameworks to Simplify Customization

As theme development for WordPress became a more complex task, theme designers began to realize that they were using the same snippets of code and functions repeatedly to accomplish the same tasks in every theme they built. When it came time for them to upgrade their themes (such as when WordPress released a new version with new features), they found themselves updating the same functions and adding the same features over and over to several themes they had developed. This situation is why theme frameworks were born. Essentially, a *theme framework* is a single theme that's a foundation for other themes to be built on.

Book 6, Chapter 5 discusses child themes, including how to build them. With theme frameworks, the parent theme (the framework) contains all the WordPress functions and template tags, and you can build child themes on top of them. The nice thing about this setup is that the original theme developer has to update only one theme — the framework — to upgrade all his theme offerings (the child themes).

Frameworks come with the tools developers can use to make a custom theme with great efficiency. Using a framework that provides these tools is much faster than building your own tools every time you want to modify a standard theme.

In this chapter, I explore some popular theme frameworks and the tools these frameworks contain, which make them appealing to developers who want to create custom themes.

Understanding Theme Frameworks

Many theme frameworks are available on the WordPress market. The goal of these frameworks is to allow you to create custom websites and themes without requiring you to be an expert programmer. Creating custom layouts, designs, and functionality can be difficult, and theme frameworks bridge the gap.

At its core, a theme framework is still just a WordPress theme. You install it and activate it just as you do any other theme. The real power of theme frameworks usually comes in theme options, child themes, and layout customization. One of the most important aspects of using theme frameworks is starting with the right one for your project.

When you install a theme framework, you may be surprised to find limited or no styling in the theme. Generally, theme frameworks are meant to be blank canvases that you fill with your own styles. The goal for a framework is to get out of your way while you're developing. By doing so, it allows you to use the provided tools instead of having to remove a lot of unnecessary elements and styling.

Think of a framework as being like a toolbox. All the tools you need are packaged nicely inside. You take out only the tools that you need for a given project.

Discovering Popular Frameworks

Many theme frameworks are available from a variety of sources. Here's a look at a few of the most popular theme frameworks.

Hybrid Core

The Hybrid Core framework features 15 custom page templates and 8 widget-ready areas. Additionally, six child themes are available from the Hybrid Core website at http://themehybrid.com/hybrid-core. Figure 7-1 displays the Spring Song theme, which is available as a Hybrid Core child theme. Hybrid Core also supports a series of add-on plugins specific to this theme. These add-ons include such features as a Tabs plugin, Hooks plugin, and Page Template packs.

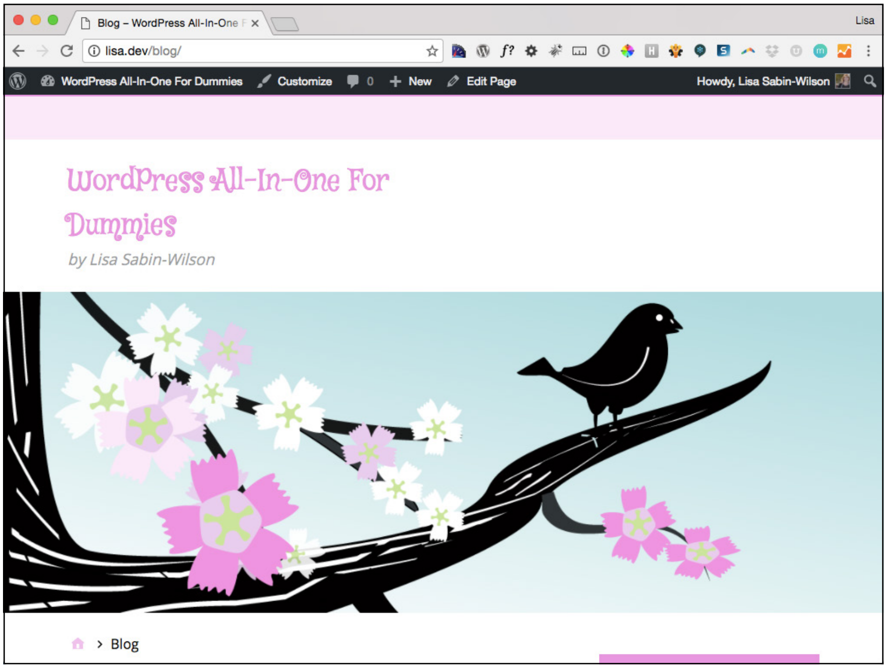

Blog – WordPress All-In-One F
Lisa
lisa.dev/blog/
WordPress All-In-One For Dummies
Customize
0
New
Edit Page
Howdy, Lisa Sabin-Wilson
WordPress All-In-One For Dummies
by Lisa Sabin-Wilson
Blog

FIGURE 7-1: Spring Song child theme for Hybrid Core.

TIP

The Hooks plugin in particular can be very handy if you're unfamiliar with PHP programming because it provides a graphical interface to latch into hooks, which I explore later in this chapter.

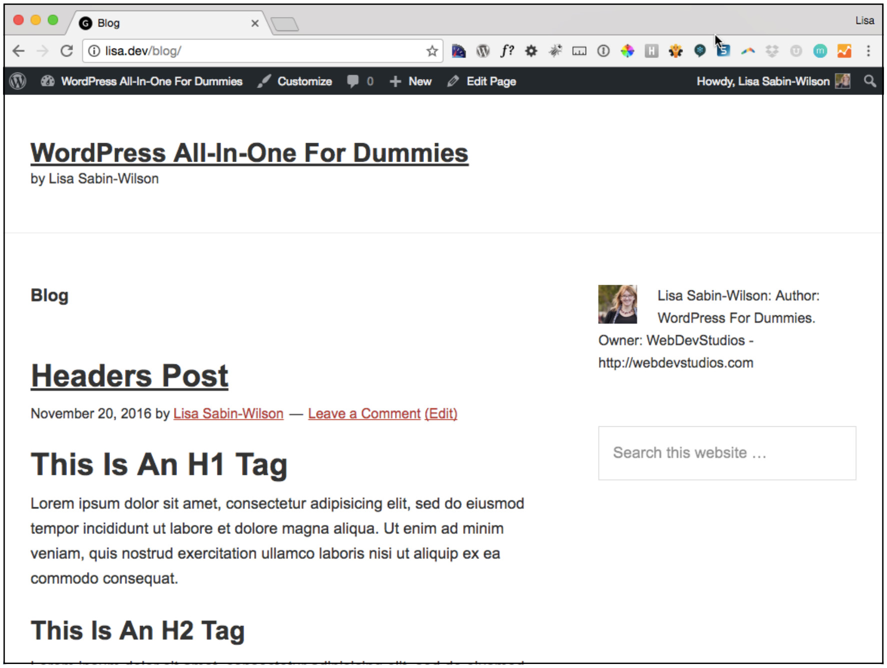
Hybrid Core, its child themes, and all its add-on plugins are available free. You can download them from http://themehybrid.com.

Key features of Hybrid Core include

- Theme Options menu
- Support for child themes
- Add-on plugins that extend functionality

Genesis

Genesis (see Figure 7-2) includes six default layout options, a prerelease security audit from WordPress lead developer Mark Jaquith, and a comprehensive array of search engine optimization (SEO) settings. Another great feature of Genesis is a built-in theme store on the WordPress Dashboard that allows you to easily choose, purchase, and activate more than 18 child themes. Like other frameworks, Genesis has some theme-specific plugins that add functionality. You can purchase Genesis from StudioPress (`www.studiopress.com`) for $59.95; it includes one child theme. Additional child themes are available for anywhere from $99.95 to $129.95 each.



WordPress All-In-One For Dummies

by Lisa Sabin-Wilson

Blog

Headers Post

November 20, 2016 by Lisa Sabin-Wilson — Leave a Comment (Edit)

This Is An H1 Tag

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

This Is An H2 Tag

Lisa Sabin-Wilson: Author: WordPress For Dummies. Owner: WebDevStudios - http://webdevstudios.com

Search this website …

FIGURE 7-2: A home page with a new installation of iThemes Builder.

Key features are

- Theme Options menu
- Support for child themes
- Style manager for customization
- SEO Options
- Add-on plugins that extend functionality

Using Common Framework Features

Theme frameworks offer a host of features that make your life easier when it comes to building a website. Individual frameworks offer many unique features but also a common set of features. These common features generally allow for faster and easier development of your WordPress website.

Theme functions

Most themes include a `functions.php` file that contains functions for the theme, but some theme frameworks take this file to the next level by offering customization options with these functions that rival many plugins.

In the Genesis theme, a custom function allows you to create new widget areas. The `genesis_register_sidebar()` function, which takes care of the heavy lifting for widgetizing a new area, gives you some options that let you customize it easily. The following example shows how you might use this function in your theme's `functions.php` file:

```
genesis_register_sidebar(array(
   'name'=>'My New Widget',
   'description' => 'This widget is new.',
   'before_title'=>'<h4 class="mywidget">',
   'after_title'=>'</h4>'
));
```

This function allows you to enter a few customizations into the function, such as a name for your widget, a description, and any HTML that you want to appear before and after your widget.

Many standard themes also provide functions that are used in the theme, but theme frameworks offer many additional custom functions that the theme doesn't. The custom functions help you make the theme do exactly what you need for a specific site.

REMEMBER

Theme functions can vary greatly, so most theme authors have ample documentation through their site or forums where you can get more information about available functions.

Hooks

Many theme frameworks provide *hooks* to allow you to access and modify features of the theme. Hooks are small functions in WordPress that allow you to "hook into" other functions within WordPress and its themes or plugins. Hooks may seem to be a little advanced, but with a little practice, hooks are quite efficient at modifying a theme. Theme frameworks provide hooks that allow you to latch into functions of the theme and then call or modify them at a specific time.

The two types of hooks are

- **Action:** Performs during the loading of the theme when you can latch in a specific function. If you want one of your functions to execute at the same time a file in the theme is loaded, you can use an action to hook the function to that file's load.
- **Filter:** Modifies data while it passes to the theme or to the browser screen. Some theme frameworks allow you to filter the classes that the theme applies to elements.

You can find an example of modifying your theme with hooks in iThemes Builder. Consider the hook to add meta data: `builder_add_meta_data`. This hook can be useful for SEO in your theme.

To add custom meta output, you can replace the default function with a custom one. To do that, remove the existing action and add your own, like this:

```
<?php
remove_action('builder_add_meta_data','builder_seo_options');
add_action('builder_add_meta_data','my_custom_builder_seo_options');
?>
```

The default SEO options were removed with `remove_action` and replaced with a new function called `my_custom_builder_seo_options`. Next, you need to define what `my_custom_builder_seo_options` will do, as follows:

```
<?php
function my_custom_builder_seo_options() {
   /*Add custom seo options here.*/
}
?>
```

This code creates a basic PHP function where you can define what custom SEO options you want to use in the theme.

Because many frameworks have 100 or more hooks, most frameworks provide documentation (through their websites or forums) stating what hooks are available, what each hook does, and what parameters are available to modify how each hook works.

Child themes

Some frameworks allow you to modify the theme by using child themes. (Find out more about the parent/child theme relationship in Book 6, Chapter 5.) Child themes can be as simple as stylesheets, but they derive their power from the parent theme's template and function files.

A huge advantage of using a child theme is that it protects any customizations you make from being overwritten if a newer version of the theme comes out. For frameworks, this protection is especially important because changes in the core theme may be more frequent than regular themes due to the need to add more hooks, functions, or options over time.

Hybrid Core, Genesis, and iThemes Builder all extend their frameworks through child themes. Many frameworks provide child themes for free; others build child themes to sell.

Layout options

The ability to change the layout of a framework is important for many users. Different frameworks use different methods for this purpose. Some frameworks use template files to allow layouts to be reorganized; others provide an interface to allow layouts to be created from scratch.

Styling

Many theme frameworks incorporate methods that let you customize the style of the website without needing to know CSS (Cascading Style Sheets). (See Book 6, Chapter 4.) Frameworks that use a what-you-see-is-what-you-get (or WYSIWYG) style editor, allow you to easily match your theme's colors and design to your branding. Additionally, many editors include color pickers so that you don't have to use hexadecimal values to choose colors.

Other common elements that can be styled are borders, fonts, and headers.

Customizing Theme Frameworks

You may find that you're changing the same elements every time you set up a website by using a theme framework. Here is a list of where to start when customizing a theme framework for a website:

TIP

- **Add a custom header or logo image.** Adding a nice header graphic to a site makes it look unique from the beginning. If graphics aren't your specialty, use a good designer for your header graphic. This crucial element will catch your visitors' eyes as soon as they hit the page.
- **Change the colors of the background and links to match the header and branding of the site.** Many frameworks provide a simple interface for this task; others require you to open the `style.css` file to change the color. Either way, changing the background and link colors to match the site adds cohesiveness throughout the branding of the site.
- **Consider the home page layout.** This consideration is based on what the site is trying to achieve. If you want the site to focus on the blog, for example, you might place it on the front page with a left or right sidebar. If your site is more static, you might create a layout with many widget areas on the home page that display things from around the site. The home page is the landing point for many of your site's visitors, so it's important to consider its layout early in the process.
- **Decide how to lay out the inside pages and blog post pages.** These pages are just as important as the home page. The form and function of the page and blog post layouts need to be well planned to accommodate the parts of the site that you want every user to see, such as ads on the sidebar or an email newsletter sign-up form at the bottom of every post. In the case of pages, you might include information about your products and services in the sidebars and feature areas.
- **Add a contact form to the site.** Don't overlook installing one of those vital items on almost every site. Some frameworks offer built-in contact forms that you can add to any page.

If your theme framework doesn't offer a built-in contact form, many free plugins include this functionality, including Contact Form 7 from `http://contactform7.com`. If you're looking for a more robust form plugin, Gravity Forms by Rocket Genius (`www.gravityforms.com`) is one of the best form-creation plugins. It's a premium plugin but, at $39 per year, well worth the price.

7

Using and Developing Plugins

Contents at a Glance

IN THIS CHAPTER

- » Extending WordPress with plugins
- » Comparing plugins to themes
- » Finding plugins
- » Evaluating the trustworthiness of plugins

Chapter 1

Introducing WordPress Plugins

Half the fun of running a WordPress-powered website is playing with the hundreds of plugins that you can install to extend your site's functions and options. WordPress plugins are like those really cool custom rims you put on your car: Although they don't come with the car, they're awesome accessories that make your car better than all the rest.

By itself, WordPress is a very powerful program for web publishing, but by customizing WordPress with *plugins* — add-on programs that give WordPress almost limitless ways to handle web content — you can make it even more powerful. You can choose any plugins you need to expand your online possibilities. Plugins can turn your WordPress installation into a full-featured gallery for posting images on the web, an online store to sell your products, a user forum, or a social networking site. WordPress plugins can be simple, adding a few minor features, or complex enough to change your entire WordPress site's functionality.

To help you use plugins to customize your site, this chapter introduces you to plugins: what they are, how to find and install them, and how to use them to enhance your site and make it unique. Using plugins can also greatly improve your visitors' experiences by providing them various tools to interact and participate — just the way you want them to!

DEVELOPING PLUGINS — A COMMUNITY ACTIVITY

Although plugins are written and developed by people who have the skills required to do so, the WordPress user community is also largely responsible for the ongoing development of plugins. Ultimately, the end users are the ones who put those plugins to the true test on their own sites. Those same users are also the first to speak up and let the developers know when something isn't working right, helping the developers troubleshoot and fine-tune their plugins.

The most popular plugins are created by developers who encourage open communication with the user base. Overall, WordPress is one of those great open-source projects in which the relationship between developers and users fosters a creative environment that keeps the project fresh and exciting every step of the way.

Finding Out What Plugins Are

A *plugin* is a small program that, when added to WordPress, interacts with the software to provide some extensibility to the software. Plugins aren't part of the core software; neither are they software programs themselves. They typically don't function as stand-alone software. They do require the host program (WordPress, in this case) to function.

Plugin developers are the people who write these gems and share them with the rest of us — usually for free. As is WordPress, many plugins are free to anyone who wants to further tailor and customize a site to meet specific needs.

Thousands of plugins are available for WordPress — certainly way too many for me to list in this chapter alone. I could, but then you'd need heavy machinery to lift this book off the shelf! Here are just a few examples of things that plugins let you add to your WordPress site:

- **Email notification:** Your biggest fans can sign up to have an email notification sent to them every time you update your website.
- **Social media integration:** Allow your readers to submit your content to some of the most popular social networking services, such as Digg, Twitter, Facebook, and Reddit.

- **Stats program:** Keep track of where your traffic is coming from; which posts on your site are most popular; and how much traffic is coming through your website on a daily, monthly, and yearly basis.

This chapter takes you through the process of finding plugins, installing them on your WordPress site, and managing and troubleshooting them.

Extending WordPress with Plugins

WordPress by itself is an amazing tool. The features built into WordPress are meant to be the ones that you'll benefit from most. All the desired site features that fall *outside* what is built into WordPress are considered to be the territory of plugins.

There's a popular saying among WordPress users: "There's a plugin for that." The idea is that if you want WordPress to do something new, you have a good chance of finding an existing plugin that can help you do what you want. Currently, more than 48,000 plugins are available in the WordPress Plugin Directory (`https://wordpress.org/plugins`), and this number is growing at a rate of a few new plugins each day. In addition, thousands of additional plugins that are outside the Plugin Directory are available for free or for a fee. So if you have an idea for a new feature for your site, you just may find a plugin for that feature.

Suppose that you want to easily add recipes to your site. A Google search for *wordpress plugin recipes* results in links to the EasyRecipe plugin (`https://wordpress.org/plugins/easyrecipe`) and the ZipList Recipe Plugin (`https://wordpress.org/plugins/ziplist-recipe-plugin`). You can find even more recipe-related plugins with a more in-depth search.

Identifying Core Plugins

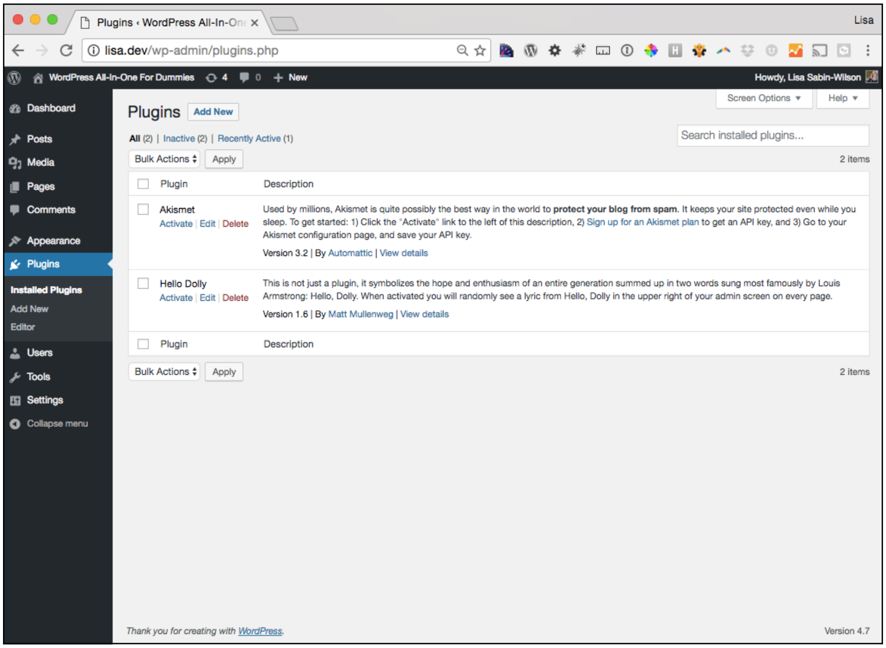
Some plugins hold a very special place in WordPress, in that they ship with the WordPress software and are included by default in every WordPress installation.

For the past few years, two plugins have held this special position:

- **Akismet:** The Akismet plugin has the sole purpose of protecting your blog from comment spam. Although other plugins address the issue of comment spam, the fact that Akismet is packaged with WordPress and works quite well means that most WordPress users rely on Akismet for their needs. Book 3, Chapter 4 covers how to activate and configure Akismet on your site.

- **Hello Dolly:** The Hello Dolly plugin helps you get your feet wet in plugin development, if you're interested. It was first released with WordPress version 1.2 and is considered to be the oldest WordPress plugin. When the plugin is active, the tops of your Dashboard pages show a random lyric from the song "Hello, Dolly!"

Figure 1-1 shows the core plugins you find in WordPress when you first install it.



□ Plugin	Description
□ Akismet Activate | Edit | Delete	Used by millions, Akismet is quite possibly the best way in the world to **protect your blog from spam**. It keeps your site protected even while you sleep. To get started: 1) Click the "Activate" link to the left of this description, 2) Sign up for an Akismet plan to get an API key, and 3) Go to your Akismet configuration page, and save your API key. Version 3.2 | By Automattic | View details
□ Hello Dolly Activate | Edit | Delete	This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page. Version 1.6 | By Matt Mullenweg | View details
□ Plugin	Description

FIGURE 1-1: Core plugins in WordPress.

REMEMBER

The idea of core plugins is to offer a base set of plugins to introduce you to the concept of plugins while also providing a benefit. The Akismet plugin is useful because comment spam is a big issue for websites. The Hello Dolly plugin is useful as a nice starting point for understanding what plugins are and how they're coded.

Although WordPress automatically includes these plugins, your site doesn't have to run them. Plugins are disabled by default and must be manually activated to be used. Core plugins can be deleted, just as any other plugins can, and they won't be replaced when you upgrade WordPress. (If you need to install or delete a plugin, turn to Book 7, Chapter 2.)

Future versions of WordPress may offer different sets of core plugins. It's possible that one or both of the current core plugins will cease being core plugins and that other plugins will be included. Although this topic has been much discussed in WordPress development circles over the past few years, at this writing, no definitive decisions have been made. So the current set of core plugins is likely to stay for a while longer.

Distinguishing between Plugins and Themes

Because themes can contain large amounts of code and add new features or other modifications to WordPress, you may wonder how plugins are different from themes. In reality, only a few technical differences exist between plugins and themes, but the ideas of what plugins and themes are supposed to be are quite different. (For more about themes, see Book 6.)

At the most basic level, the difference between plugins and themes is that they reside in different directories. Plugins are in the `wp-content/plugins` directory of your WordPress site. Themes are in the `wp-content/themes` directory.

TECHNICAL STUFF

The `wp-content/plugins` and `wp-content/themes` directories are set up this way by default. You can change both of these locations, but this change is very rarely made. The possibility is something to be aware of if you're working on a WordPress site and are having a hard time locating a specific plugin or theme directory.

The most important difference that separates plugins from themes is that a WordPress site always has one, and only one, active theme, but it can have as many active plugins as you want — even none. This difference is important because it means that switching from one theme to another prevents you from using the features of the old theme. By contrast, activating a new plugin doesn't prevent you from making use of the other active plugins.

REMEMBER

Plugins are capable of changing nearly every aspect of WordPress. The Multiple Themes plugin, for example (available at `https://wordpress.org/plugins/jonradio-multiple-themes`), allows you to use different themes for specific parts of your WordPress site. Thus, you can overcome even the limitation of having only one active theme on a site by using a plugin.

Because WordPress can have only one theme but many plugins activated at one time, it's important that the features that modify WordPress are limited to just plugins, whereas themes should remain focused on the appearance of the site.

For you, this separation of functionality and appearance is the most important difference between plugins and themes.

TIP

This separation of functionality into plugins and appearance into themes isn't enforced by WordPress, but it's a good practice to follow. You can build a theme that includes too much functionality, and you may start to rely on those functions to make your site work, which ultimately makes switching to another theme difficult.

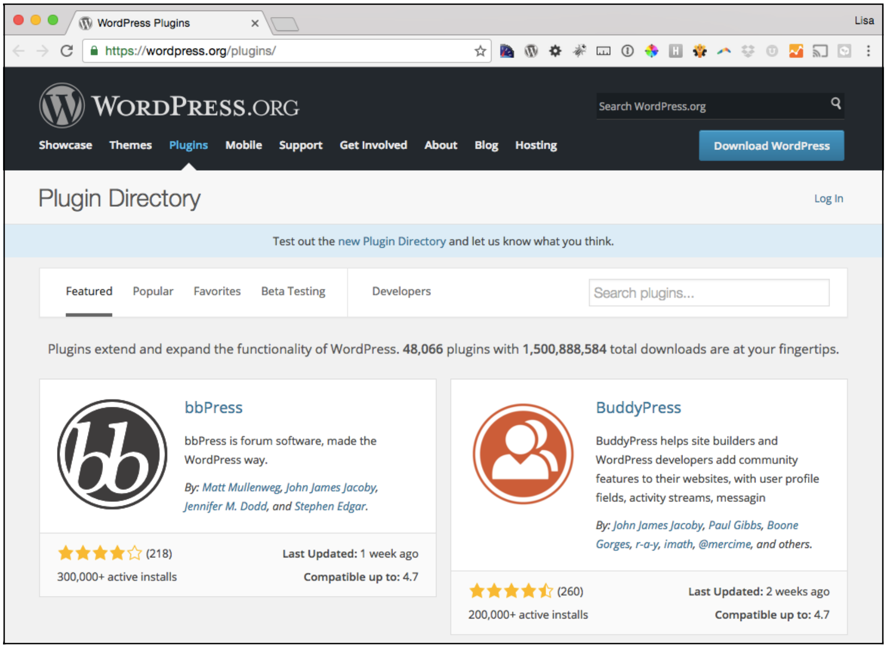
The functionality role of plugins doesn't mean that control of the appearance of a WordPress site is limited to themes. Plugins are just as capable of modifying the site's appearance as a theme is. The WPtouch Mobile Plugin, for example (available at `https://wordpress.org/plugins/wptouch`), can provide a completely different version of your site to mobile devices such as smartphones by replacing the functionality of the theme when the user visits the site on a mobile device.

TECHNICAL STUFF

Other technical differences separate plugins and themes. The differences matter mostly to developers, but it could be important for you to know these differences as a nondeveloper WordPress user. Plugins load before the theme, which gives plugins some special privileges over themes and can even result in one or more plugins preventing the theme from loading. The built-in WordPress functions in the `wp-includes/pluggable.php` file can be overridden with customized functions, and only plugins load early enough to override these functions. Themes support a series of structured template files and require a minimum set of files to be valid. By comparison, plugins have no structured set of files and require only a single `.php` file with a comment block at the top to tell WordPress that the file is a plugin. One of the final technical differences is that themes support a concept called child themes, wherein one theme can require another theme to be present to function; no such feature is available to plugins.

Finding Plugins in the WordPress Plugin Directory

The largest and most widely used source of free WordPress plugins is the WordPress Plugin Directory (`http://wordpress.org/extend/plugins`), shown in Figure 1-2. This directory is filled with more than 48,000 plugins that cover an extremely broad range of features. Due to the large number of plugins that are freely available, as well as the fact that each plugin listing includes ratings and details such as user-reported compatibility with WordPress versions, the Plugin Directory should be your first stop when you're looking for a new plugin to fill a specific need.



Plugin Directory

Test out the new Plugin Directory and let us know what you think.

Plugins extend and expand the functionality of WordPress. **48,066** plugins with **1,500,888,584** total downloads are at your fingertips.

bbPress

bbPress is forum software, made the WordPress way.

By: Matt Mullenweg, John James Jacoby, Jennifer M. Dodd, and Stephen Edgar.

★★★★☆ (218) **Last Updated:** 1 week ago

300,000+ active installs **Compatible up to:** 4.7

BuddyPress

BuddyPress helps site builders and WordPress developers add community features to their websites, with user profile fields, activity streams, messagin

By: John James Jacoby, Paul Gibbs, Boone Gorges, r-a-y, imath, @mercime, and others.

★★★★½ (260) **Last Updated:** 2 weeks ago

200,000+ active installs **Compatible up to:** 4.7

FIGURE 1-2: The WordPress Plugin Directory.

Plugins in the Plugin Directory should not be considered to be "official" or "supported" by WordPress. Anyone can submit plugins to the directory. Some restrictions exist on what can be listed in the Plugin Directory, but these restrictions mainly focus on licensing guidelines and blatant attempts to exploit users.

WARNING

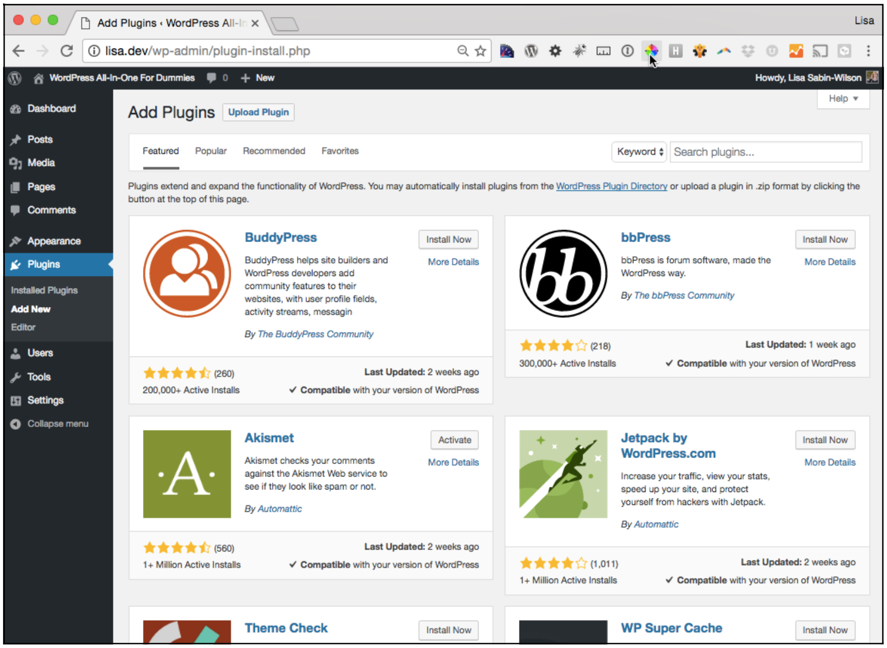
Be critical of anything that you add to your site. Plugins receive very little code review after they're added to the Plugin Directory, and adding buggy code to your site can cause your site to crash. Also, adding malicious code to your site can enable other people to gain access to your site without your authorization. This isn't to say that plugins in the Plugin Directory shouldn't be trusted; rather, you should never add anything to your site without doing some checking-up on the plugin, theme, or code.

Although you can search for plugins on the Plugin Directory site, WordPress has a built-in feature for searching the Plugin Directory. This feature even allows you to install the Plugin Directory from WordPress without having to download the plugin and upload it to your site.

The following sections show you how to find plugins.

Searching for plugins from the Dashboard

After logging in to your WordPress Dashboard, click the Add New link on the Plugins menu. You see the Add Plugins screen, which you use to install plugins from the Dashboard; it's also where you can search for plugins. Figure 1-3 shows the Add Plugins screen.



Plugins extend and expand the functionality of WordPress. You may automatically install plugins from the WordPress Plugin Directory or upload a plugin in .zip format by clicking the button at the top of this page.

BuddyPress

BuddyPress helps site builders and WordPress developers add community features to their websites, with user profile fields, activity streams, messagin

By The BuddyPress Community

★★★★½ (260) Last Updated: 2 weeks ago
200,000+ Active Installs ✓ Compatible with your version of WordPress

bbPress

bbPress is forum software, made the WordPress way.

By The bbPress Community

★★★★☆ (218) Last Updated: 1 week ago
300,000+ Active Installs ✓ Compatible with your version of WordPress

Akismet

Akismet checks your comments against the Akismet Web service to see if they look like spam or not.

By Automattic

★★★★½ (560) Last Updated: 2 weeks ago
1+ Million Active Installs ✓ Compatible with your version of WordPress

Jetpack by WordPress.com

Increase your traffic, view your stats, speed up your site, and protect yourself from hackers with Jetpack.

By Automattic

★★★★☆ (1,011) Last Updated: 2 weeks ago
1+ Million Active Installs ✓ Compatible with your version of WordPress

Theme Check

WP Super Cache

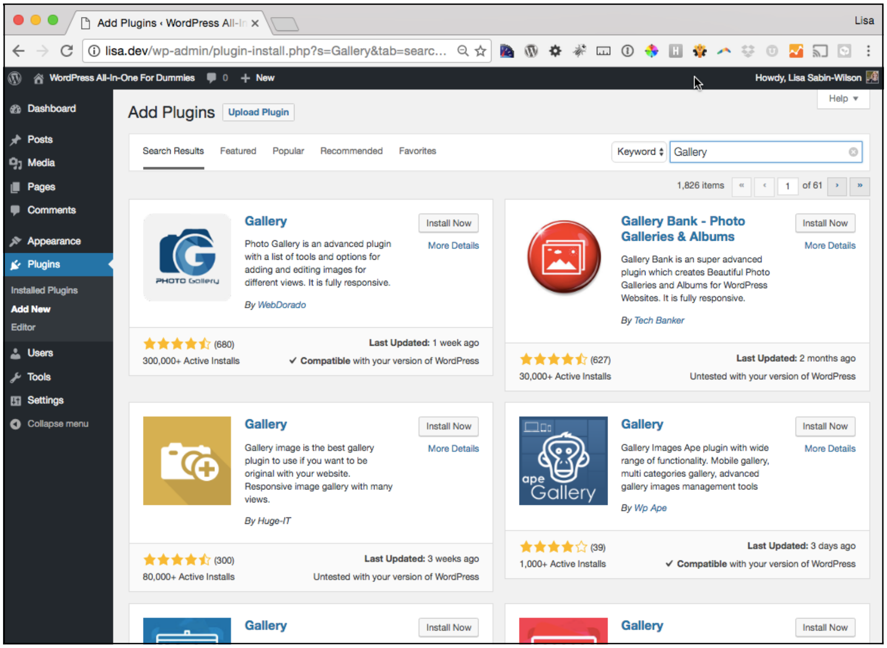
FIGURE 1-3: The Add Plugins screen.

At the top of the Add Plugins page is a series of links that provide ways to find plugins. (If you're looking to install a plugin, turn to Book 7, Chapter 2.)

Add Plugin

Figure 1-3 shows the Add Plugin screen, which allows you to search the WordPress Plugin Directory by typing terms in the Search box or by clicking the Featured, Popular, or Recommended tag links to narrow the list of plugins.

After you use either of the search options, the screen changes to a search-results page, which lists plugins that match the search query. As shown in Figure 1-4, the search results provide a wealth of information about each found plugin.



Gallery

Photo Gallery is an advanced plugin with a list of tools and options for adding and editing images for different views. It is fully responsive.

By WebDorado

★★★★☆ (680) 300,000+ Active Installs

Last Updated: 1 week ago ✓ Compatible with your version of WordPress

Gallery Bank - Photo Galleries & Albums

Gallery Bank is an super advanced plugin which creates Beautiful Photo Galleries and Albums for WordPress Websites. It is fully responsive.

By Tech Banker

★★★★☆ (627) 30,000+ Active Installs

Last Updated: 2 months ago Untested with your version of WordPress

Gallery

Gallery image is the best gallery plugin to use if you want to be original with your website. Responsive image gallery with many views.

By Huge-IT

★★★★☆ (300) 80,000+ Active Installs

Last Updated: 3 weeks ago Untested with your version of WordPress

Gallery

Gallery Images Ape plugin with wide range of functionality. Mobile gallery, multi categories gallery, advanced gallery images management tools

By Wp Ape

★★★★☆ (39) 1,000+ Active Installs

Last Updated: 3 days ago ✓ Compatible with your version of WordPress

Gallery

Gallery

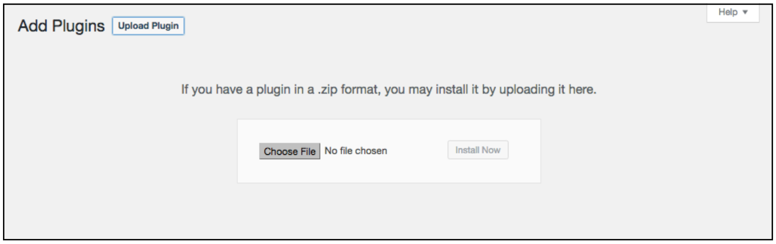
FIGURE 1-4: Plugin search results after a search for the term *Gallery*.

For each plugin listed on the page, the search results show the plugin's name, description, rating, time of last update, and compatibility with the version of WordPress you're using. Click the More Details link to read and discover more information about the plugin or the Install Now button to install the plugin on your site. (I describe these options in detail in "Evaluating plugins before installing" later in this chapter.)

Upload Plugin

Click the Upload Plugin button at the top of the Add Plugins screen (refer to Figure 1-3) to display the Upload Plugin screen, shown in Figure 1-5. The Upload section allows for easy installation of downloaded plugin .zip files without using SFTP or some other method to upload the files to the server. This feature makes it very quick and easy to install downloaded plugin .zip files. Although you can do this with plugins you find in the WordPress Plugin Directory, this feature is mostly used to install plugins that aren't available in the Plugin Directory because they can't be installed via a search in the Add Plugins screen.

After you upload your desired plugin file, the Add Plugins screen appears, and the options that activate the newly installed plugin become available.



If you have a plugin in a .zip format, you may install it by uploading it here.

FIGURE 1-5: The Upload section of the Add Plugins page.

Featured, Popular, and Recommended

The Featured, Popular, and Recommended screens of the Dashboard are very similar. The Featured page shows just the plugins listed as Featured in the WordPress Plugin Directory. The Popular page includes a list of all the plugins sorted by popularity. The Recommended page lists all the plugins recommended by the WordPress plugins team.

Beyond these differences, each page is identical to the search-results page. Each of the listed plugins provides options for viewing more details about the plugin and for quickly install the plugin.

Finding plugins through WordPress.org

In the following sections, I show you how to find, upload, and install the popular Twitter plugin, developed by Twitter. I'm using the Twitter plugin as a real-world example to take you through the mechanics involved in downloading, unpacking, uploading, activating, and using a plugin in WordPress.

The Twitter plugin gives your readers the opportunity to share your content on the Twitter social networking site.

REMEMBER

Installing the Twitter plugin takes you through the process, but keep in mind that every plugin is different. Reading the description and installation instructions for each plugin you want to install is very important.

Finding and downloading the files

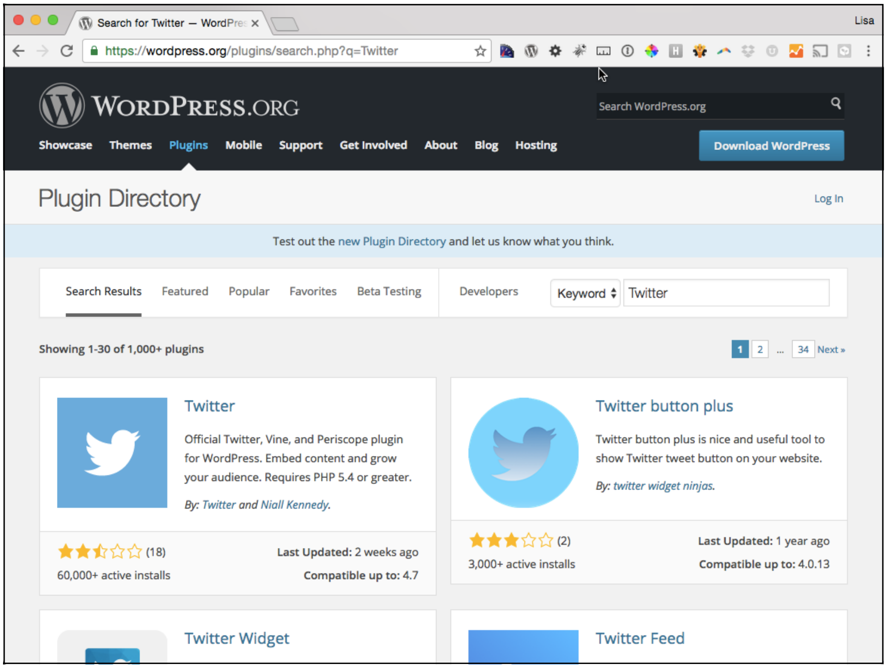
The first step in using plugins is locating the one you want to install. The absolutely best place to find WordPress plugins is the official WordPress Plugins Directory at `https://wordpress.org/plugins`, where, at this writing, you can find more than 48,000 plugins available for download.

To find the Twitter plugin, follow these steps:

1. **Go to the official WordPress Plugin Directory, located at `http://wordpress.org/plugins`.**
2. **In the Search box at the top of the Plugin Directory home page, enter the keyword** Twitter **and then click the Search button or press Enter.**
3. **Locate the Twitter plugin on the search-results page (see Figure 1-6), and click the plugin's name.**

   The Twitter plugin page opens in the WordPress Plugin Directory, where you find a description of the plugin as well as other information about the plugin (see Figure 1-7). In Figure 1-7, take note of the important information on the right side of the page:

   - *Download Version xx:* This button is the button that you click to download the plugin. The number represents the most recent version number of the plugin.
   - *Requires:* This line tells you what version of WordPress you need to use this plugin successfully. Figure 1-7 shows that the Twitter plugin requires WordPress version 3.9 or later, which means that this plugin doesn't work with WordPress versions earlier than 3.9. Helpful!
   - *Compatible Up To:* This line tells you what version of WordPress this plugin is compatible up to. If this section tells you that the plugin is compatible up to version 4.2, for example, you usually can't use the plugin with versions later than 4.2. I say *usually* because the plugin developer may not update the information in this section — especially if the plugin files themselves haven't changed. The best way to check is to download the plugin, install it, and see whether it works! (Figure 1-7 shows that the Twitter plugin is compatible up to WordPress version 4.7.)
   - *Last Updated:* This line displays the date when the plugin was last updated by the author.
   - *Active Installs:* This number tells you how many times this plugin has been downloaded and installed by other WordPress users.
   - *Ratings:* With a rating system of 1 to 5 stars (1 being the lowest and 5 being the highest), you can see how other WordPress users have rated this plugin.



Plugin Directory

Test out the new Plugin Directory and let us know what you think.

Showing 1-30 of 1,000+ plugins

Twitter

Official Twitter, Vine, and Periscope plugin for WordPress. Embed content and grow your audience. Requires PHP 5.4 or greater.

By: Twitter and Niall Kennedy.

(18) **Last Updated:** 2 weeks ago

60,000+ active installs **Compatible up to:** 4.7

Twitter button plus

Twitter button plus is nice and useful tool to show Twitter tweet button on your website.

By: twitter widget ninjas.

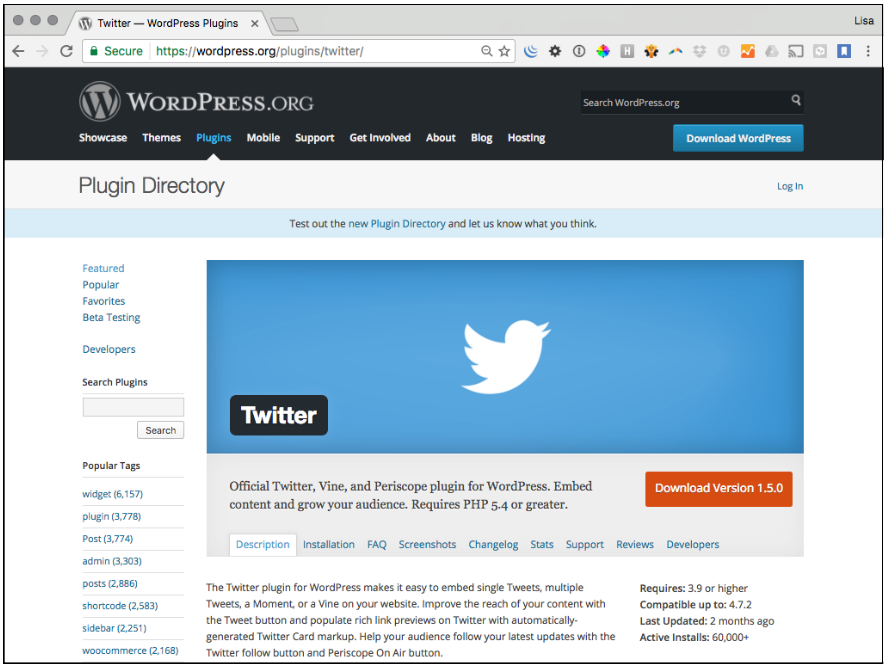
(2) **Last Updated:** 1 year ago

3,000+ active installs **Compatible up to:** 4.0.13

Twitter Widget

Twitter Feed

FIGURE 1-6: Use the search feature of the WordPress Plugin Directory to find the plugin you need.



Plugin Directory

Test out the new Plugin Directory and let us know what you think.

Popular Tags

widget (6,157)
plugin (3,778)
Post (3,774)
admin (3,303)
posts (2,886)
shortcode (2,583)
sidebar (2,251)
woocommerce (2,168)

Official Twitter, Vine, and Periscope plugin for WordPress. Embed content and grow your audience. Requires PHP 5.4 or greater.

The Twitter plugin for WordPress makes it easy to embed single Tweets, multiple Tweets, a Moment, or a Vine on your website. Improve the reach of your content with the Tweet button and populate rich link previews on Twitter with automatically-generated Twitter Card markup. Help your audience follow your latest updates with the Twitter follow button and Periscope On Air button.

Requires: 3.9 or higher
Compatible up to: 4.7.2
Last Updated: 2 months ago
Active Installs: 60,000+

FIGURE 1-7: The download page for the Twitter plugin.

4. **Click the Download button for the plugin version you want to download.**

   If you're using Internet Explorer, click the Download button, and a dialog box opens, asking whether you want to open or save the file. Click Save to save the `.zip` file to your hard drive, and *remember where you saved it.*

   If you're using Mozilla Firefox, click the Download button, and a dialog box opens, asking what Firefox should do with the file. Select the Save File radio button and then click OK to save the file to your hard drive. Again, *remember where you saved it.*

   For other browsers, follow the download instructions in the resulting dialog box.

5. **Locate the file on your hard drive and open it with your favorite decompression program.**

   If you're unsure how to use your decompression program, refer to the documentation available with the program.

6. **Unpack (decompress) the plugin files you downloaded for the Twitter plugin.**

Evaluating plugins before installing

When you've found a plugin via the Dashboard's Install Plugins page, you can find a wealth of information about that plugin to help you decide whether to download it or go on to the next one.

The methods for evaluating plugins described in this section are no substitute for thoroughly testing a plugin. Testing a plugin is good practice unless you're familiar enough with the code and the developers that bugs or security issues seem to be unlikely. To test a plugin, set up a stand-alone site to be used just for testing, install the plugin, and check for any issues before trusting the plugin on your main site.

TIP

Look at the version number of the plugin. If the version number includes *Alpha* or *Beta*, the plugin is being tested and may have bugs that could affect your site. You may want to wait until the plugin has been thoroughly tested and released as a full version. Generally, the higher the version number, the more *mature* (that is, tested and stable) the plugin is.

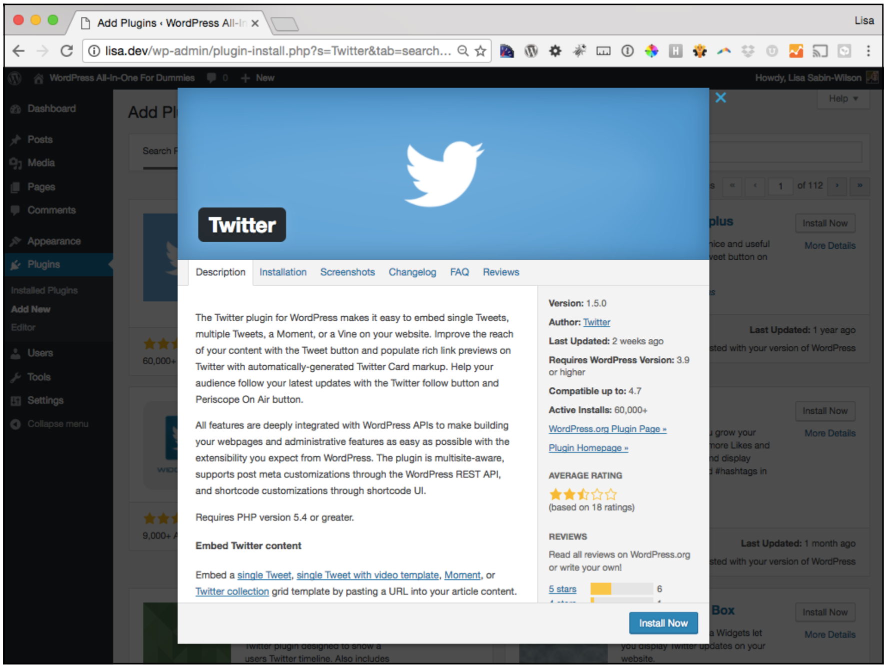
Don't rely on just one of these methods to assess the trustworthiness of a plugin. Combine them to get a sense of what other users think about the plugin. If the plugin has a five-star rating from 500 users but also has dozens of negative feedback comments with little positive commentary, don't trust the plugin very much. If a plugin has a three-star rating from 10 users but has nothing but positive comments, however, the plugin may have some issues yet may still work very well for some users.

REMEMBER

As with many things in life, you have no guarantees with plugins. The best thing you can do is find information about the plugin to determine whether it is trustworthy.

Details

In the WordPress Dashboard Add Plugins screen (refer to Figure 1-3), click a plugin's More Details link to find information taken from the plugin's page in the WordPress Plugin Directory. Figure 1-8 shows the details that are available for the Twitter plugin, including tabs of information about the plugin, such as Description, Installation, Screenshots, and Changelog.



The Twitter plugin for WordPress makes it easy to embed single Tweets, multiple Tweets, a Moment, or a Vine on your website. Improve the reach of your content with the Tweet button and populate rich link previews on Twitter with automatically-generated Twitter Card markup. Help your audience follow your latest updates with the Twitter follow button and Periscope On Air button.

All features are deeply integrated with WordPress APIs to make building your webpages and administrative features as easy as possible with the extensibility you expect from WordPress. The plugin is multisite-aware, supports post meta customizations through the WordPress REST API, and shortcode customizations through shortcode UI.

Requires PHP version 5.4 or greater.

Embed Twitter content

Embed a single Tweet, single Tweet with video template, Moment, or Twitter collection grid template by pasting a URL into your article content.

Version: 1.5.0

Author: Twitter

Last Updated: 2 weeks ago

Requires WordPress Version: 3.9 or higher

Compatible up to: 4.7

Active Installs: 60,000+

WordPress.org Plugin Page »

Plugin Homepage »

AVERAGE RATING

★★⯪☆☆
(based on 18 ratings)

REVIEWS

Read all reviews on WordPress.org or write your own!

5 stars 6

FIGURE 1-8: Details for the Twitter plugin.

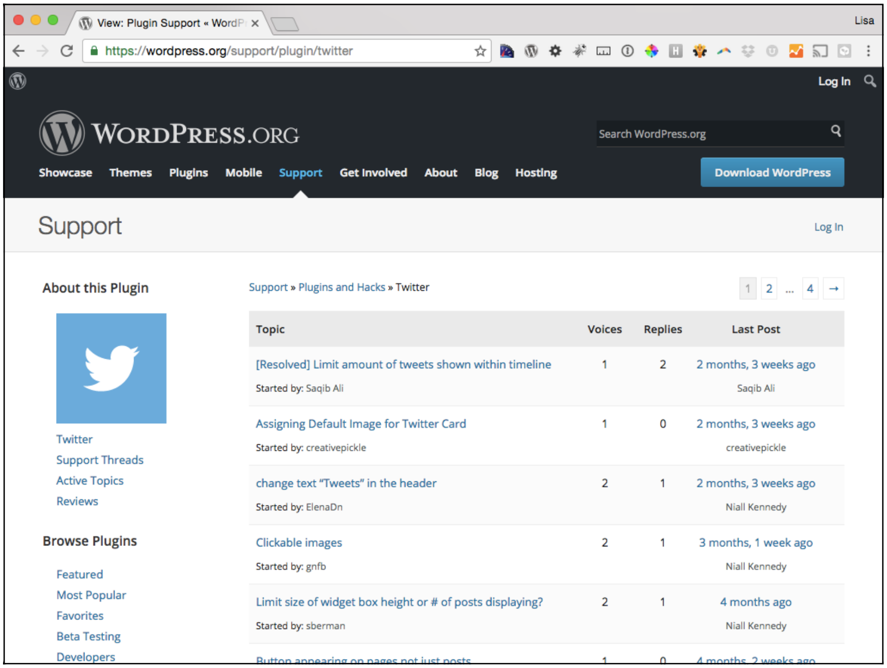
TIP

Make sure to check out each plugin's Description page. You can find important information on this page that isn't present on the search-results page. When you're considering a plugin that you don't have experience with, this information can help you determine how reliable and trustworthy the plugin is.

Ratings

Consider the plugin's rating and the number of people who submitted a rating. The more people who rated the plugin, the more you can trust the rating; the fewer people who rated the plugin, the less you can trust the rating. A plugin that has fewer than 10 ratings probably isn't very trustworthy, or it's relatively new. A plugin that has more than 100 ratings is very trustworthy. Any plugin rated between 15 and 100 times is acceptably trustworthy.

If a plugin has a large percentage of one- or two-star ratings, treat the plugin very suspiciously. Take the extra step of visiting the plugin's page in the Plugin Directory to see what other people are saying about the plugin. You can do this by clicking the WordPress.org Plugin Page link on the right side of the Description page. On the plugin's page, as shown in Figure 1-9, click the View Support Forum link or the Support link at the top of the page to see the information posted by users, both positive and negative. You can determine whether the issues that other people experienced are likely to affect you.



Topic	Voices	Replies	Last Post
[Resolved] Limit amount of tweets shown within timeline Started by: Saqib Ali	1	2	2 months, 3 weeks ago Saqib Ali
Assigning Default Image for Twitter Card Started by: creativepickle	1	0	2 months, 3 weeks ago creativepickle
change text "Tweets" in the header Started by: ElenaDn	2	1	2 months, 3 weeks ago Niall Kennedy
Clickable images Started by: gnfb	2	1	3 months, 1 week ago Niall Kennedy
Limit size of widget box height or # of posts displaying? Started by: sberman	2	1	4 months ago Niall Kennedy
Button appearing on pages not just posts	1	0	4 months, 2 weeks ago

FIGURE 1-9: The Support page for the Twitter plugin.

Downloads

The next detail to consider is the number of downloads. The higher the number of downloads, the more likely the plugin is to work well; plugins that don't work very well typically don't pick up enough popularity to get many downloads. If a plugin has hundreds of thousands of downloads or more, it's extremely popular. Plugins with tens of thousands of downloads are popular and may grow even more popular. If the plugin has fewer than 10,000 downloads, you can't determine anything just by looking at the download count.

REMEMBER

A low download count doesn't necessarily count against a plugin. Some plugins simply provide a feature that has a very limited audience. Thus, the download count is an indicator but not proof of quality (or lack thereof).

You should take the Compatible Up To and Last Updated information very lightly. If a plugin indicates that the compatible-up-to version is for a very old WordPress version, it may have issues in the latest versions of WordPress, but plenty of plugins work just fine with current versions of WordPress even though they don't explicitly indicate support. Many people see an up-to-date plugin as a sign of quality and upkeep. This reasoning is flawed, however, because some plugins are very simple and don't require updating often. Plugins shouldn't be updated just to bump that number; thus, a plugin that hasn't been updated for a while may be functioning perfectly well without any updates.

Stats

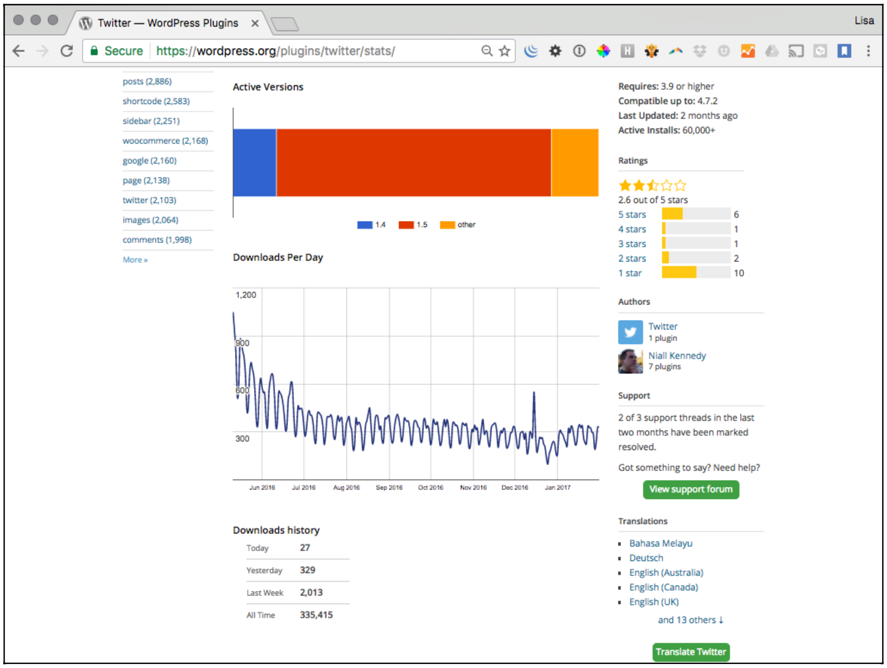
Listed on the Stats tab of the plugin's page, as shown in Figure 1-10, the number of downloads per day isn't a foolproof method of getting a trusted plugin, but the Downloads Per Day graph may indicate that people are using the plugin with some success.

Support

Click the Support tab below the plugin's banner (shown in Figure 1-9) to view the support forum for that plugin. This forum is where users of the plugin request help and assistance. By browsing the support forum for the plugin, you can get a good feel for how responsive the plugin's developer is to users, and you can see what types of problems other people are having with the plugin.

Reading the instructions

Frequently, the plugin developer includes a `readme` file inside the `.zip` file. Do what the title of the file says: Read it. Often, it contains the exact documentation and instructions that you can find on the plugin developer's website.


Twitter — WordPress Plugins
Lisa
Secure
https://wordpress.org/plugins/twitter/stats/

posts (2,886)
shortcode (2,583)
sidebar (2,251)
woocommerce (2,168)
google (2,160)
page (2,138)
twitter (2,103)
images (2,064)
comments (1,998)
More »

Active Versions

Downloads Per Day

Downloads history

Today	27
Yesterday	329
Last Week	2,013
All Time	335,415

Requires: 3.9 or higher
Compatible up to: 4.7.2
Last Updated: 2 months ago
Active Installs: 60,000+

Ratings

2.6 out of 5 stars

5 stars	6
4 stars	1
3 stars	1
2 stars	2
1 star	10

Authors

Twitter
1 plugin

Niall Kennedy
7 plugins

Support

2 of 3 support threads in the last two months have been marked resolved.

Got something to say? Need help?

Translations

- Bahasa Melayu
- Deutsch
- English (Australia)
- English (Canada)
- English (UK)

and 13 others ↓

FIGURE 1-10: The download history for a plugin within the Plugin Directory.

Make sure that you read the instructions carefully and follow them correctly. Ninety-nine percent of WordPress plugins have great documentation and instructions from the plugin developers. If you don't follow the instructions correctly, the best scenario is that the plugin just won't work on your site. At worst, the plugin may create all sorts of ugly errors, requiring you to restart plugin installation from step one.

TIP

You can open `readme.txt` files in any text-editor program, such as Notepad or WordPad on a PC, or TextEdit on a Mac.

In the case of the Twitter plugin, the `readme.txt` file contains information regarding the requirements of the plugin and useful information on how to use the plugin after you have it installed and activated on your site.

REMEMBER

Every plugin is different in terms of where the plugin files are uploaded and what configurations and setup are necessary to make the plugin work on your site. Read the installation instructions very carefully, and follow those instructions to the letter to install the plugin correctly on your site.

Finding Plugins outside the Plugin Directory

The exact number of plugins outside the Plugin Directory is unknown. There are easily more than 1,000, which means that a great variety of plugins exists outside in the Plugin Directory. These outside plugins can be difficult to discover, but you can find some good starting places.

Many of the plugins that aren't listed in the Plugin Directory are paid plugins, and the official WordPress Plugin Directory allows only free plugins. If a plugin is for sale (costs more than a penny), it can't be listed in the Plugin Directory, so the author needs to find other methods of listing and promoting his or her products.

Over the past few years, the market for commercial plugins has grown tremendously. It wouldn't be possible to list all the companies that currently offer WordPress plugins in this chapter, so the following list is a sampling. It's a way of introducing you to the world of plugins outside the Plugin Directory.

Each of the following sites offers WordPress plugins:

- **CodeCanyon (`https://codecanyon.net`):** With thousands of plugins, this online marketplace is the paid plugin version of the Plugin Directory. Just as the Plugin Directory contains plugins from a large number of developers, CodeCanyon is a collection of plugins from various developers rather than plugins created by a single company.
- **Gravity Forms (`www.gravityforms.com`):** For many WordPress users, Gravity Forms is the plugin to pay for. Typically, it's the first and last recommendation people give to someone who wants to create forms in WordPress.
- **iThemes (`https://ithemes.com`):** Starting as a theme developer, iThemes branched out into developing plugins as well. The most popular offering is BackupBuddy, a plugin for backing up and restoring your sites.
- **WooCommerce (`https://woocommerce.com`):** WooCommerce is a popular plugin with a full-featured e-commerce solution that you can integrate into your WordPress site. Essentially, this plugin turns your WordPress site into an online store.

Although these sites give you a taste of what commercial plugin sites have to offer, having other sources of information about new, exciting plugins can also be very helpful. Many popular WordPress news sites talk about all things WordPress, including reviews and discussions of specific plugins. Check out the following sites if you want to know more about what plugins are being talked about:

- **WPBeginner (`www.wpbeginner.com`):** This site is dedicated to helping new WordPress users get up and running quickly. It features a very active blog on a variety of topics. The site often features posts about how to use plugins to create specific types of solutions for your site.
- **Post Status (`https://poststatus.com`):** Post Status is an all-things-WordPress news site. If there's buzz on a topic in the WordPress world, you're likely to find discussions about it here.

TIP

One of the great things about using a community or news site to discover new plugins is that you aren't alone in deciding whether to trust a plugin. You can get some outside opinions before you take a chance on a plugin.

If you aren't finding what you want in the Plugin Directory, don't know anyone who offers the solution you're looking for, and aren't seeing anything on community sites, it's time to go to a trusty search engine (such as Google) and see what you can find.

A good way to start is to search for the words *wordpress* and *plugin* along with one to a few words describing the feature you want. If you want a plugin that provides advanced image-gallery features, for example, search for *wordpress plugin image gallery.* As long as your search isn't too specific, you're likely to get many results. The results often contain blog posts that review specific plugins or list recommended plugins.

WARNING

Some developers include malware, viruses, and other unwanted executables in their plugin code. Your best bet is to use plugins from the official WordPress Plugin Directory or to purchase plugins from a reputable seller. Do your research first. Read up on plugin security in Book 2, Chapter 5.

Comparing Free and Commercial Plugins

Thousands of plugins are available for free, and thousands of plugins have a price. What are the benefits of a free plugin versus a paid plugin? This question is a tough one to answer.

It's tempting to think that some plugins are better than others, which is why they cost money. Unfortunately, things aren't that simple. Some amazing plugins that I would gladly pay for are free, and some terrible plugins that I wouldn't pay for have a cost.

Often, a paid plugin includes support, which means that the company or individual selling the plugin is offering assurance that if you have problems, you'll receive support and updates to address bugs and other issues.

Free plugins typically list places to make support requests or to ask questions, but nothing ensures that the developer will respond to your requests within a certain period — or at all. Even though developers have no obligation to help with support requests from their plugin's users, many developers work hard to help users with reported issues and other problems. Fortunately, because many free plugins are in the Plugin Directory, and the Plugin Directory includes a built-in support forum and rating score, you can easily see how responsive a plugin author is to support issues.

Personally, I believe that the commercial plugin model works in an environment of tens of thousands of free plugins because many WordPress users want the assurance that when they have problems, they have a place to ask questions and get help.

So if people can get paid to produce plugins, why are so many plugins free? This question is another great one.

One reason why so many plugins are available for free is that many WordPress developers are generous people who believe in sharing their plugins with the community. Other developers feel that having their plugins available to the millions of WordPress users via the Plugin Directory is a great way to market their talents, which can lead to contract work and employment. Buzzwords on a résumé are far less valuable than a plugin you wrote that was downloaded thousands or millions of times.

Another reason to release a free plugin is to entice people to pay for upgrades — a model often referred to as *freemium*. Freemium plugins often have paid plugins that add features to the free plugin. Thus, the freemium model is a mix of the free and paid plugin models, and gets the best of both worlds. The free plugin can be listed in the Plugin Directory, giving the plugin a large amount of exposure. You can get a feel for how the plugin functions, and if you want the additional features, you can purchase the paid plugin.

An example of the freemium model is the WooCommerce plugin (`https://woocommerce.com`). The main plugin is available for free in the Plugin Directory (`https://wordpress.org/plugins/woocommerce`), yet it supports a large number of paid plugins to add more features. By itself, the WooCommerce plugin turns the site into a shopping cart. To extend this functionality, paid plugins are available to add payment processing for specific credit-card processors, shipping, download managers, and many other features.

The biggest difference between free and paid plugins is that sometimes, you won't find what you need in a free plugin and have to go with a paid plugin. In the end, what you download is up to you. Many great free plugins are available, and so are many great paid plugins. If you want the features offered by a paid plugin and are willing to pay the price, paid plugins can be very good investments for your site.

TIP

Many free plugins have links to donation pages. If you find a free plugin to be valuable, please send a donation to the developer. Most developers of free plugins say that they rarely, if ever, receive donations. Even a few dollars can really encourage the developer to keep updating old plugins and releasing new free plugins.

IN THIS CHAPTER

- » Installing WordPress plugins via the Dashboard
- » Manually installing WordPress plugins
- » Updating plugins
- » Activating and deactivating plugins
- » Taking plugins out of WordPress
- » Using the core plugins

Chapter **2**

Installing and Managing Plugins

With more than 48,000 plugins available, you have a huge number of options for customizing your site. Book 7, Chapter 1 details the types of plugins available and where to find them. In this chapter, you start putting these plugins to use. This chapter is dedicated to helping you install, activate, deactivate, update, and delete plugins.

Installing Plugins within the WordPress Dashboard

When you've found a plugin in the WordPress Plugin Directory (see Book 7, Chapter 1) that you want to install, you can install it directly from the Dashboard. (If you found a plugin that isn't in the Directory, you have to install it manually. See the later section "Installing Plugins Manually.")

WordPress makes it super-easy to find, install, and then activate plugins for use on your site. Just follow these simple steps:

1. **Click the Add New link on the Plugins menu.**

   The Install Plugins page opens, allowing you to browse the official WordPress Plugin Directory from your WordPress Dashboard.

2. **Search for a plugin to install on your site.**

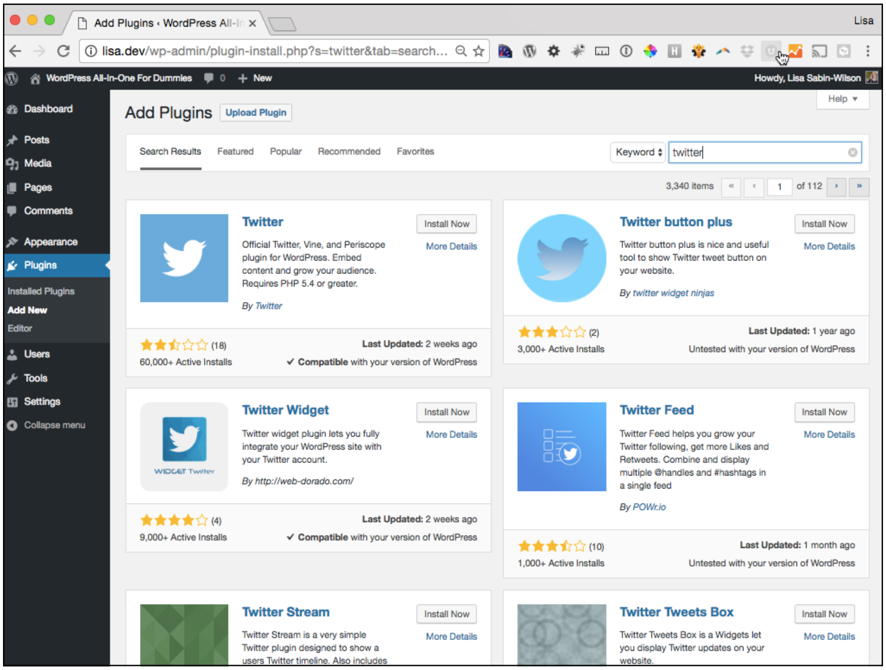
   Enter a keyword for a plugin you'd like to search for. If you want to search for plugins that allow you to add features for integration with Twitter on your site, for example, enter the word **Twitter** in the Search Plugins text box to return a list of plugins that deal specifically with the social network called Twitter.

   TIP

   You can also discover new plugins by clicking any of the provided categories at the top of the Add Plugins screen: Featured, Popular, and Recommended, to name a few.

   For this example, you want to install a plugin that will integrate your site with the social network Twitter. To find it, enter **Twitter** in the Search text box on the Install Plugins page; then click the Search button.

   Figure 2-1 shows the results page for the Twitter search phrase. The first plugin listed, called simply Twitter, is a plugin developed by the developers at Twitter. This plugin the one you want to install.



Add Plugins

Keyword: twitter

3,340 items « ‹ 1 of 112 › »

Twitter
Official Twitter, Vine, and Periscope plugin for WordPress. Embed content and grow your audience. Requires PHP 5.4 or greater.
By Twitter
★★⯪☆☆ (18)
60,000+ Active Installs
Last Updated: 2 weeks ago
✓ **Compatible** with your version of WordPress

Twitter button plus
Twitter button plus is nice and useful tool to show Twitter tweet button on your website.
By twitter widget ninjas
★★★☆☆ (2)
3,000+ Active Installs
Last Updated: 1 year ago
Untested with your version of WordPress

Twitter Widget
Twitter widget plugin lets you fully integrate your WordPress site with your Twitter account.
By http://web-dorado.com/
★★★★☆ (4)
9,000+ Active Installs
Last Updated: 2 weeks ago
✓ **Compatible** with your version of WordPress

Twitter Feed
Twitter Feed helps you grow your Twitter following, get more Likes and Retweets. Combine and display multiple @handles and #hashtags in a single feed
By POWr.io
★★★⯪☆ (10)
1,000+ Active Installs
Last Updated: 1 month ago
Untested with your version of WordPress

Twitter Stream
Twitter Stream is a very simple Twitter plugin designed to show a users Twitter timeline. Also includes

Twitter Tweets Box
Twitter Tweets Box is a Widgets let you display Twitter updates on your website.

FIGURE 2-1: The Add Plugin screen's search results for the Twitter plugin.

3. **Click the More Details link.**

   A Description window opens, giving you information about the Twitter plugin, including a description, version number, author name, and Install Now button.

4. **Click the Install Now button.**

   You go to the Installing Plugins page within your WordPress Dashboard, where you find a confirmation message that the plugin has been downloaded, unpacked, and successfully installed.

5. **Specify whether to activate the plugin or proceed to the Plugins page.**

   Two links are shown below the confirmation message:

   - *Activate Plugin:* Click this link to activate the plugin you just installed on your blog.
   - *Return to Plugin Installer:* Click this link to go to the Install Plugins page without activating the plugin.

WARNING

Autoinstallation of plugins from your WordPress Dashboard works in most web-hosting configurations. Some web-hosting services, however, don't allow the kind of access that WordPress needs to complete the autoinstallation. If you get any errors or find that you're unable to use the plugin autoinstallation feature, get in touch with your web-hosting provider to find out whether it can assist you.

TIP

If the Dashboard displays any kind of error message after you install the plugin, copy the message and paste it into a support ticket in the WordPress.org support forum (`http://wordpress.org/support`) to elicit help from other WordPress users about the source of the problem and the possible solution. When you post about the issue, provide as much information about the issue as possible, including a screen shot or pasted details.

Installing Plugins Manually

Installing plugins from the Dashboard is so easy that you'll probably never need to know how to install a plugin manually via SFTP. (Book 2, Chapter 2 explains how to use SFTP.) But the technique is still helpful to know in case the WordPress Plugin Directory is down or unavailable.

Follow these steps to install a plugin by using SFTP:

1. **Go to the plugin's page in the WordPress Plugin Directory.**

   For this example, go to the Twitter plugin's page at `https://wordpress.org/plugins/twitter`.

2. **Click the red Download button to transfer the plugin's .zip file to your computer.**

3. **Unzip the plugin files.**

   All plugins that you download from the Plugin Directory are in `.zip` format. Most operating systems (Windows, Mac, and so on) have built-in tools to open `.zip` files. After opening the `.zip` file, extract the directory contained inside, and put it in a directory on your computer that's easily accessible.

4. **Connect to your site's server by using SFTP.**

   For details on how to use SFTP, see Book 2, Chapter 2. If you have any difficulty connecting to your server, contact your hosting provider and ask for assistance in connecting to your server via SFTP.

5. **Navigate to the `wp-content` folder within the WordPress installation for your website or blog.**

   REMEMBER

   The location of your WordPress installation can differ with every hosting provider. Make sure that you know the location before you proceed. Check out Book 2, Chapters 2 and 4 for information on where the WordPress installation is located on your web server.

6. **Navigate to the `/wp-content/plugins` directory.**

   First, navigate to `wp-content`. Inside this directory are the `plugins` and `themes` directories, along with a few others. Navigate to the `plugins` directory, which is where all plugins reside.

7. **Upload the plugin's folder to the `/wp-content/plugins` directory on your web server.**

   The plugin folder is named for the plugin (if you're uploading the Twitter plugin, for example, the folder is `/twitter`) and contains all the files for that plugin.

Go to the Dashboard's Plugins page, and you see the new plugin listed. If you make a mistake, delete all the newly uploaded files and begin again.

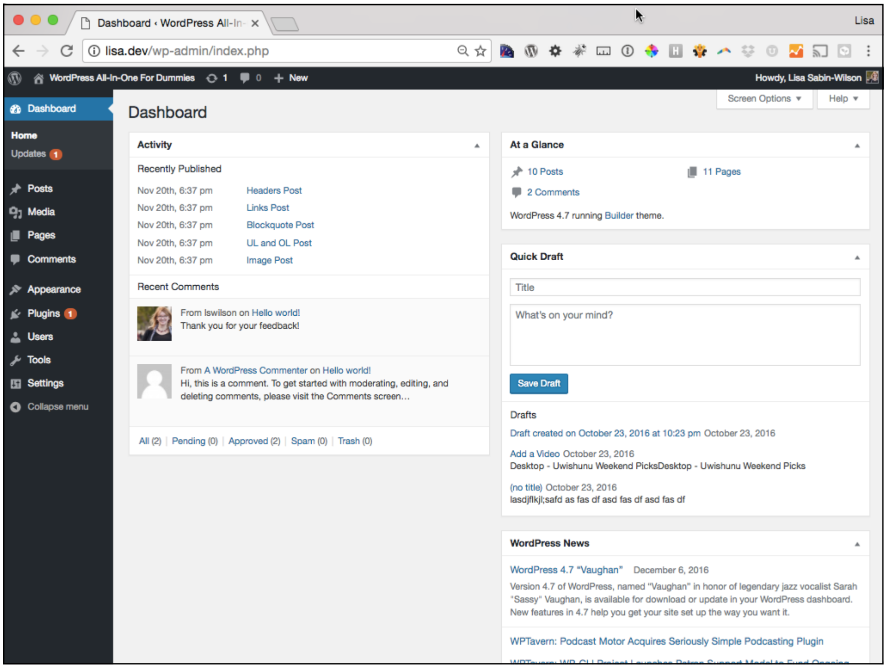
Upgrading Plugins

For a lot of reasons, mainly related to security and feature updates, always use the most up-to-date versions of the plugins in your blog. But with everything you have to do every day, how can you possibly keep up with knowing whether the plugins you're using have been updated?

You don't have to. WordPress does it for you.

Figure 2-2 shows that an out-of-date version (3.1.1) of Akismet is installed. WordPress notifies you when a new update is available for a plugin in four ways, as shown in Figure 2-2 and Figure 2-3:

- **Dashboard Updates link:** The Updates link below the Dashboard menu displays a red circle with a white number. The number indicates how many plugins have updates available. (In Figure 2-2, one plugin on my site has an update available.) Click the Updates link to see which plugins have updates available.
- **Toolbar:** When a new update is available, a small icon appears on the toolbar at the top of your Dashboard, to the right of your site title, as shown in Figure 2-2.
- **Plugins menu's title:** The Plugins menu's title also displays a red circle with a white number. As with the Updates link, the number indicates how many plugins have updates available, as shown in Figure 2-2.



Dashboard

Activity

Recently Published

Nov 20th, 6:37 pm	Headers Post
Nov 20th, 6:37 pm	Links Post
Nov 20th, 6:37 pm	Blockquote Post
Nov 20th, 6:37 pm	UL and OL Post
Nov 20th, 6:37 pm	Image Post

Recent Comments

From lswilson on Hello world!
Thank you for your feedback!

From A WordPress Commenter on Hello world!
Hi, this is a comment. To get started with moderating, editing, and deleting comments, please visit the Comments screen…

All (2) | Pending (0) | Approved (2) | Spam (0) | Trash (0)

At a Glance

10 Posts 11 Pages
2 Comments
WordPress 4.7 running Builder theme.

Quick Draft

Title
What's on your mind?

Drafts
Draft created on October 23, 2016 at 10:23 pm October 23, 2016
Add a Video October 23, 2016
Desktop - Uwishunu Weekend PicksDesktop - Uwishunu Weekend Picks
(no title) October 23, 2016
lasdjflkjl;safd as fas df asd fas df asd fas df

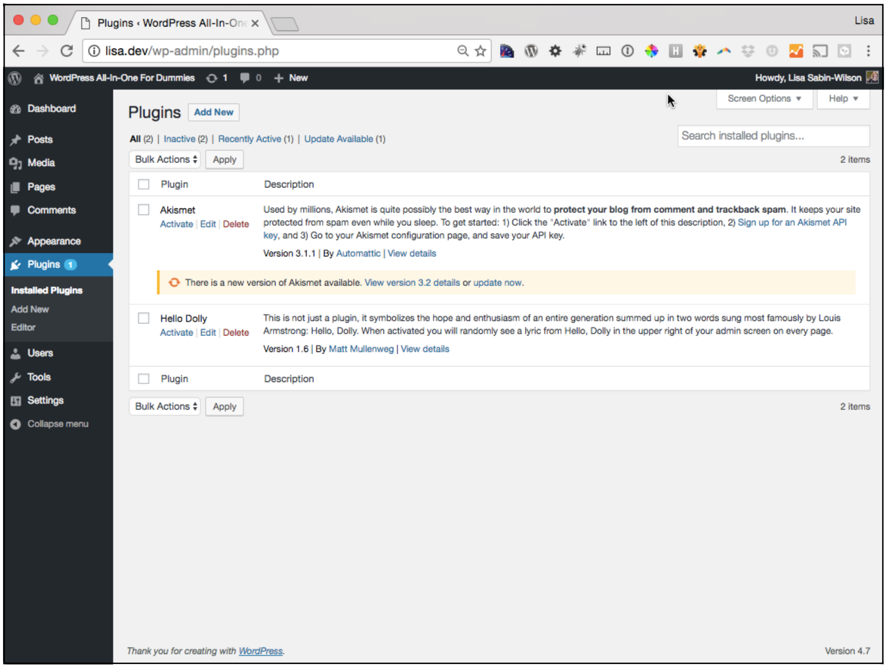
WordPress News

WordPress 4.7 "Vaughan" December 6, 2016
Version 4.7 of WordPress, named "Vaughan" in honor of legendary jazz vocalist Sarah "Sassy" Vaughan, is available for download or update in your WordPress dashboard. New features in 4.7 help you get your site set up the way you want it.

WPTavern: Podcast Motor Acquires Seriously Simple Podcasting Plugin

FIGURE 2-2: Various plugin update indicators displayed on the Dashboard.

- **Plugins page:** Figure 2-3 shows the Plugins page. Below the Akismet plugin is a message that says `There is a new version of Akismet available. View version 3.2 details or update now.`



Used by millions, Akismet is quite possibly the best way in the world to **protect your blog from comment and trackback spam**. It keeps your site protected from spam even while you sleep. To get started: 1) Click the "Activate" link to the left of this description, 2) Sign up for an Akismet API key, and 3) Go to your Akismet configuration page, and save your API key.

Version 3.1.1 | By Automattic | View details

There is a new version of Akismet available. View version 3.2 details or update now.

This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page.

Version 1.6 | By Matt Mullenweg | View details

Thank you for creating with WordPress.

FIGURE 2-3: The Akismet plugin with an available update.

In the message about the new version of the plugin are two links. One link takes you to a page where you can download the new version, and the other link enables you to update the plugin right there and then. Click the Update Now link, and WordPress grabs the new files off the WordPress.org server, uploads them to your `plugins` directory, deletes the old plugin, and activates the new one. (If a plugin is deactivated at the time it's updated, WordPress gives you the option to activate the plugin when the update process is complete.) Figure 2-4 shows the `Updated` message that you see on the Plugins page after the plugin has been upgraded.

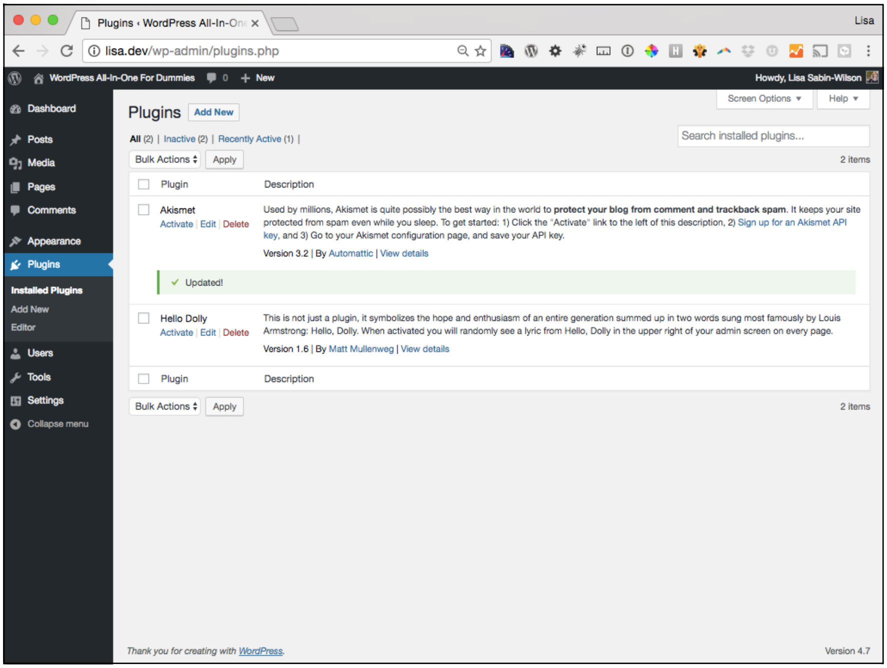
TIP

To update all your plugins from the Plugins page at the same time, select the check mark next to each plugin, choose Update from the Bulk Actions drop-down list, and click the Apply button.

You have two other ways to update a plugin: Update it from the Updates submenu of the Dashboard menu, or update manually via SFTP.

Updating from the Updates screen

The Updates screen, accessible as a submenu of the Dashboard menu, provides a quick way to update WordPress, plugins, and themes in one place. As shown in Figure 2-5, the Updates screen is a one-stop shop for all the updates across your site.



Akismet

Used by millions, Akismet is quite possibly the best way in the world to **protect your blog from comment and trackback spam**. It keeps your site protected from spam even while you sleep. To get started: 1) Click the "Activate" link to the left of this description, 2) Sign up for an Akismet API key, and 3) Go to your Akismet configuration page, and save your API key.

Version 3.2 | By Automattic | View details

✓ Updated!

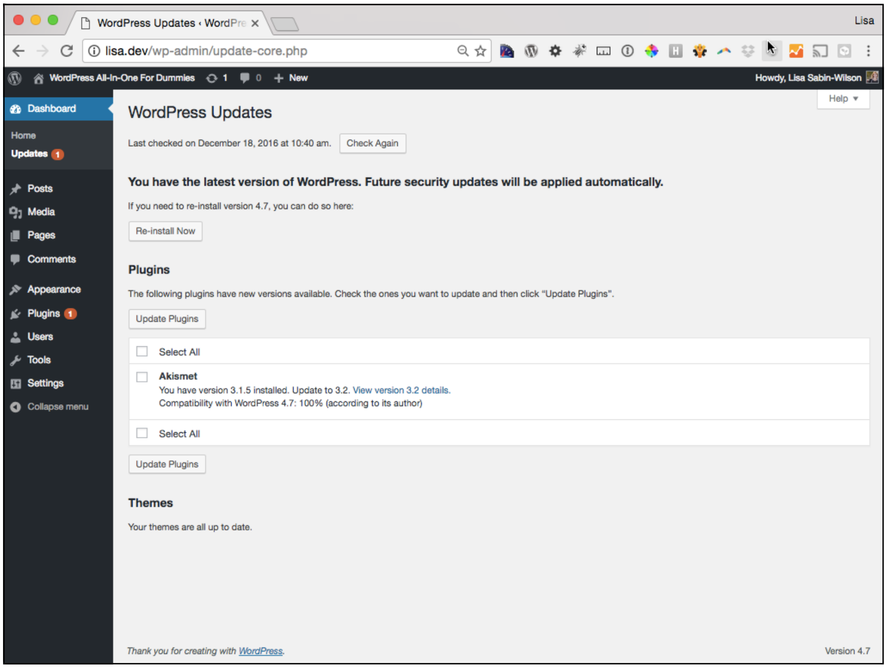
Hello Dolly

This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page.

Version 1.6 | By Matt Mullenweg | View details

Thank you for creating with WordPress. Version 4.7

FIGURE 2-4: Updated message appears after you successfully update a plugin.



WordPress Updates

Last checked on December 18, 2016 at 10:40 am.

You have the latest version of WordPress. Future security updates will be applied automatically.

If you need to re-install version 4.7, you can do so here:

Plugins

The following plugins have new versions available. Check the ones you want to update and then click "Update Plugins".

□ Select All

□ **Akismet**
You have version 3.1.5 installed. Update to 3.2. View version 3.2 details.
Compatibility with WordPress 4.7: 100% (according to its author)

□ Select All

Themes

Your themes are all up to date.

Thank you for creating with WordPress. Version 4.7

FIGURE 2-5: The WordPress Updates screen.

To update all the plugins, simply choose a Select All check box next to one of the headers (as shown in Figure 2-5), and click the Update Plugins button. All your selected plugins are updated. (Refer to Figure 2-4.)

Updating manually

The process of updating a plugin manually is nearly identical to the process of installing a plugin manually, as detailed earlier in this chapter. The only change is deleting the plugin's directory before uploading the new files. Follow these steps:

1. **Download the latest version of the plugin from the WordPress Plugin Directory or the plugin developer's website.**
2. **Connect to your server via an SFTP application, and go to the `plugins` directory inside the `wp-content` directory.**

   You should see a folder with the same name as the plugin you want to upgrade.
3. **Rename this folder so that you have a backup if you need it.**

   Any memorable name, such as *plugin*`-old`, should suffice.
4. **Upload the new version of your plugin via SFTP to your server so that it's in the `wp-content/plugins` folder.**
5. **Log in to the WordPress Dashboard, and activate your upgraded plugin.**

REMEMBER

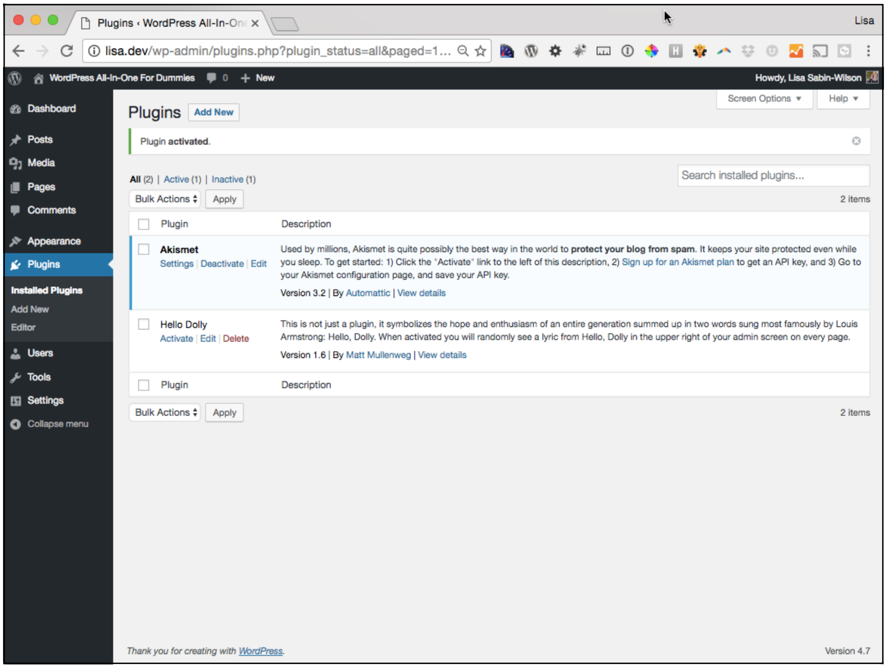
If you made any changes in the configuration files of your plugin before your upgrade, make those changes again after the upgrade. If you need to back out of the upgrade, you can just delete the new plugin's directory and rename the folder from *plugin*`-old` to *plugin.*

Activating and Deactivating Plugins

After a plugin is on your site, activating it is extremely simple. To activate a plugin, do the following:

1. **Log in to the WordPress Dashboard.**
2. **Navigate to the Plugins screen by clicking the Plugins menu link.**
3. **Find the plugin you want to activate on the Plugins screen.**
4. **Click the Activate link just below the plugin's name.**

If everything goes well, the links below the plugin change from Activate, Edit, and Delete to Settings, Deactivate, and Edit, as shown in Figure 2-6. These changes indicate that the plugin has been activated successfully.



Plugin activated.

All (2) | Active (1) | Inactive (1)

□ Plugin	Description
□ **Akismet** Settings | Deactivate | Edit	Used by millions, Akismet is quite possibly the best way in the world to **protect your blog from spam**. It keeps your site protected even while you sleep. To get started: 1) Click the "Activate" link to the left of this description, 2) Sign up for an Akismet plan to get an API key, and 3) Go to your Akismet configuration page, and save your API key. Version 3.2 | By Automattic | View details
□ Hello Dolly Activate | Edit | Delete	This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page. Version 1.6 | By Matt Mullenweg | View details
□ Plugin	Description

Thank you for creating with WordPress.

Version 4.7

FIGURE 2-6: An activated plugin on the Plugins screen in the Dashboard.

TIP

If a long error message appears in the activation notice, the plugin has an issue that's preventing it from activating. Copy the message that appears in the notice, and send the details to the plugin's author for help fixing the issue.

Deactivating a plugin involves the same process as activating a plugin. Simply follow the same steps, but click the Deactivate link for the plugin that should be deactivated. You get a message at the top of your Dashboard telling you that the plugin has been successfully deactivated.

WARNING

Whatever you do, do *not* ignore the plugin update messages that WordPress gives you. Plugin developers usually release new versions because of security problems or vulnerabilities that require an upgrade. If you notice that an upgrade is available for a plugin you're using, stop what you're doing and upgrade it. The process takes only a few seconds.

Deleting Plugins

Sometimes, it's simply time to let go of a plugin and remove it from the site. You could have many reasons for deleting a plugin:

- You no longer need the feature offered by the plugin.
- You want to replace the plugin with a different one.
- You're retiring the plugin because its functionality has been replaced by features built into a new version of WordPress.
- You're removing it due to performance issues because the plugin simply requires too many resources to run.

It may be tempting to simply deactivate undesired plugins and leave them sitting in your `plugins` directory, but take the extra step to delete plugins that you no longer need. The plugin's `.php` files can still be run manually if someone (or some automated computer program) directly requests those files. If the plugin had a security flaw that could allow direct execution of the code to compromise the security of the server, having old code lying around is simply a problem waiting to happen.

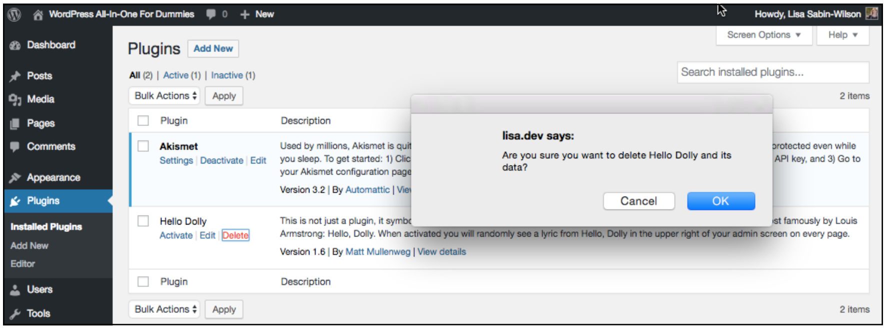
REMEMBER

If you accidentally delete a plugin, you can always reinstall it.

Deleting via the Dashboard

You handle deleting plugins from the Plugins page. Before you delete a plugin, however, you must deactivate it. (See the earlier section "Activating and Deactivating Plugins.")

Ready to delete the plugin? Click the Delete link just below the plugin's name. As shown in Figure 2-7, you have to confirm that you want to delete a plugin before that action takes place.



Akismet

Settings | Deactivate | Edit

Used by millions, Akismet is quit … protected even while you sleep. To get started: 1) Clic … API key, and 3) Go to your Akismet configuration page

Version 3.2 | By Automattic | Vie

Hello Dolly

Activate | Edit | Delete

This is not just a plugin, it symbo … st famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page.

Version 1.6 | By Matt Mullenweg | View details

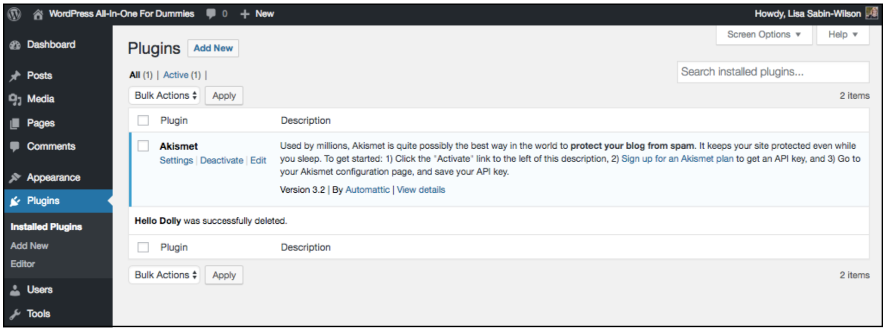
lisa.dev says:

Are you sure you want to delete Hello Dolly and its data?

Cancel OK

FIGURE 2-7: The confirmation message for deleting a plugin.

After confirming the deletion of a plugin, you return to the Plugins page, which displays a notice confirming that the plugin was deleted, as shown in Figure 2-8.



Plugins

All (1) | Active (1) |

2 items

□ Plugin	Description
□ **Akismet** Settings | Deactivate | Edit	Used by millions, Akismet is quite possibly the best way in the world to **protect your blog from spam**. It keeps your site protected even while you sleep. To get started: 1) Click the "Activate" link to the left of this description, 2) Sign up for an Akismet plan to get an API key, and 3) Go to your Akismet configuration page, and save your API key. Version 3.2 | By Automattic | View details

Hello Dolly was successfully deleted.

□ Plugin	Description

2 items

FIGURE 2-8: A notice confirming the deletion of a plugin.

Deleting manually

You can delete a plugin manually by removing the plugin's directory from the `wp-content/plugins` directory. Because the files no longer exist, the plugin simply stops running. It may be helpful to deactivate the plugin first, but doing so isn't required.

Deleting a plugin manually can be very helpful when a plugin has a fatal error that causes the site to crash. If you can't gain control of the site again, deleting the plugin's directory manually could quickly return control of your site.

Because this process involves using SFTP, as upgrading a plugin manually does, this process is very similar to installing a plugin manually. The main difference is that rather than uploading the plugin's directory, you're deleting it.

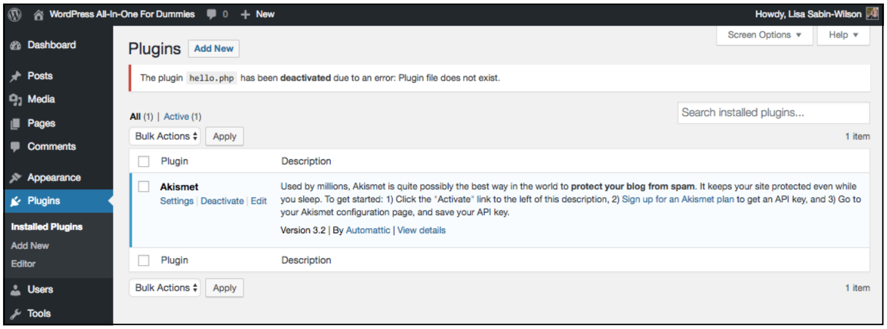
TIP

Before deleting a plugin, download the directory to a local system first, just so you don't lose any data that would be difficult to get back later. If the goal is to force the plugin to deactivate, you can rename the plugin's directory rather than delete it. Renaming prevents WordPress from locating the plugin, thereby disabling it.

The process works as follows:

1. **Connect to your site's server by using SFTP.**
2. **Navigate to the site's directory.**
3. **Navigate to the `wp-content/plugins` directory.**
4. **Delete the plugin's directory.**

The Plugins screen shows a message confirming that the plugin is deactivated due to an error (missing files). (See Figure 2-9.) Note that this message is shown only when you go to the Plugins screen after deleting the plugin manually and that WordPress shows this message only once.



The plugin `hello.php` has been **deactivated** due to an error: Plugin file does not exist.

All (1) | Active (1)

1 item

□ Plugin	Description
□ **Akismet** Settings | Deactivate | Edit	Used by millions, Akismet is quite possibly the best way in the world to **protect your blog from spam**. It keeps your site protected even while you sleep. To get started: 1) Click the "Activate" link to the left of this description, 2) Sign up for an Akismet plan to get an API key, and 3) Go to your Akismet configuration page, and save your API key. Version 3.2 | By Automattic | View details
□ Plugin	Description

1 item

FIGURE 2-9: The message shown after an active plugin is deleted manually.

Exploring the Plugins Included with WordPress

At this writing, WordPress packages two plugins with the installation files, as mentioned in Book 7, Chapter 1:

- **Akismet:** This plugin is essential.
- **Hello Dolly:** This plugin isn't necessary to make your site run smoothly, but it adds some fun.

Incorporating Akismet

It's my humble opinion that Akismet is the mother of all plugins and that no WordPress site is complete without a fully activated version. Apparently, WordPress agrees, because the plugin has been packaged in every WordPress software release since version 2.0. Akismet was created by the folks at Automattic — the same folks who bring you the Jetpack plugin. Akismet is the answer to comment and trackback spam.

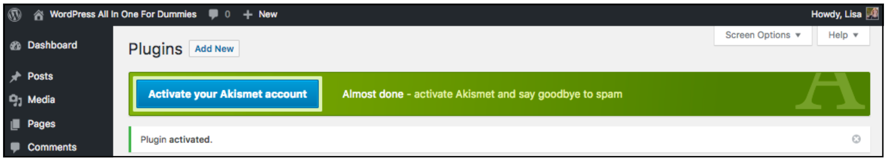
Matt Mullenweg of Automattic says that Akismet is a "collaborative effort to make comment and trackback spam a nonissue and restore innocence to blogging, so you never have to worry about spam again."

To use the plugin, follow these steps:

1. **On the Plugins page, click the Activate link below the Akismet plugin's name.**

   A message appears at the top of the page, saying `Activate your Akismet account. Almost done – activate your account and say goodbye to comment spam`. (See Figure 2-10.)

FIGURE 2-10: After you activate Akismet, WordPress tells you that the plugin isn't quite ready to use yet.



Almost done - activate Akismet and say goodbye to spam

Plugin activated.

2. **Click the Activate Your Akismet Account button.**

   Clicking this link takes you to the Akismet screen of your WordPress Dashboard, where you can create an API key, which is required for the Akismet plugin.

3. **Click the Get Your API Key button.**

   This step opens the Akismet website (at `https://akismet.com/wordpress`) in your browser window

4. **Click the Get an Akismet API Key button.**

   This step opens the sign-up page on the Akismet website. Because Akismet is hooked to the WordPress.com service, if you already have a WordPress.com account, click the I Already Have a WordPress.com Account! link.

   Otherwise, fill in the text fields, and provide your email address, desired username, and password. After you have do this, Akismet requests that you authorize your account. Click OK to authorize.

5. **Enter the URL of the site where you'll use Akismet, and select a plan:**

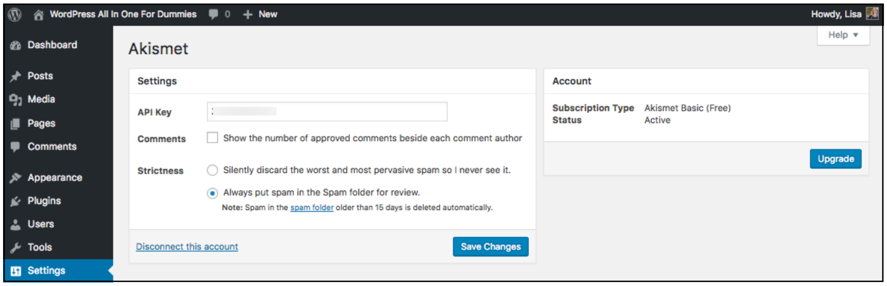
   - *Basic:* Free for people who own one small, personal, WordPress-powered site. You can choose to pay nothing ($0), or if you'd like to contribute a little cash toward the cause of combatting spam, you can opt to spend up to $48 per year for your Akismet key subscription.
   - *Plus:* $5 per month for people who own one small, nonpersonal (or business) WordPress-powered site.
   - *Premium:* $9 per month per site for people who run multiple sites and want to cover each site under one Akismet account. This plan offers everything that the Basic and Plus plans offer, plus additional security protection.

6. **Select and pay for (if needed) your Akismet key.**

   After you've gone through the sign-up process, Akismet provides your API key. Copy that key by right-clicking it and choosing Copy from the shortcut menu.

7. **When you have your API key, go to the Akismet screen of your Dashboard (see Figure 2-11) by clicking the Akismet link on the Settings menu.**

8. **Enter your Akismet API key in the text box labeled Manually Enter an API Key and then click the Use This Key button to fully activate the Akismet plugin.**



Akismet

Settings

API Key

Comments □ Show the number of approved comments beside each comment author

Strictness ○ Silently discard the worst and most pervasive spam so I never see it.

● Always put spam in the Spam folder for review.

Note: Spam in the spam folder older than 15 days is deleted automatically.

Account

Subscription Type Akismet Basic (Free)

Status Active

FIGURE 2-11: The Akismet screen of the WordPress Dashboard.

On the Akismet configuration page, after you've entered and saved your key, you can select two options to further manage your spam protection:

- **Comments:** Select the check box titled Show the Number of Approved Comments Beside Each Comment Author to tell Akismet to display the number of approved comments each comment author has on your blog.
- **Strictness:** By default, Akismet always puts detected spam email in the spam folder for your review. You can, however, select the radio button titled Silently Discard the Worst and Most Pervasive Spam So I Never See It.

Akismet catches spam and throws it into a queue, holding the spam for 15 days and then deleting it from your database. It's probably worth your while to check the Akismet Spam page once a week to make sure that the plugin hasn't captured any legitimate comments or trackbacks.

You can rescue those nonspam-captured comments and trackbacks by following these steps (after you've logged in to your WordPress Dashboard):

1. **Click the Comments menu.**

   The Comments page appears, displaying a list of the most recent comments on your site.

2. **Click the Spam link.**

   The Comments page displays all comments that the plugin caught.

3. **Browse the list of spam comments, looking for any legitimate comments or trackbacks.**

4. **If you locate a comment or trackback that's legitimate, click the Not Spam link that appears directly below the entry when you hover your cursor over it.**

   The comment is marked as legitimate. In other words, you don't consider this comment to be spam. The comment is then approved and published on your site.

REMEMBER

Check your spam filter often. While writing this chapter, I found four legitimate comments caught in my spam filter and was able to de-spam them, releasing them from the binds of Akismet and unleashing them upon the world.

The folks at Automattic did a fine thing with Akismet. Since the emergence of Akismet, I've barely had to think about comment or trackback spam, except for the few times a month I check my Akismet spam queue.

Saying Hello Dolly

Matt Mullenweg, co-founder of WordPress, developed the Hello Dolly plugin. Anyone who follows the development of WordPress knows that Mullenweg is a huge jazz fan. How do we know this? Every single release of WordPress is named after some jazz great. One of the most recent releases of the software, for example, is named Vaughn, after legendary jazz vocalist Sarah Vaughn; another, earlier, release was named Coltrane, after the late American jazz saxophonist and composer John Coltrane.

So it isn't surprising that Mullenweg developed a plugin named Hello Dolly. Here's the description of the plugin that you see on the Plugins screen of your Dashboard:

> This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: "Hello, Dolly." When activated, you will randomly see a lyric from "Hello, Dolly" in the upper right of your admin screen on every page.

Is it necessary? No. Is it fun? Sure!

Activate the Hello Dolly plugin from the Plugins screen of your WordPress Dashboard. When you've activated it, your WordPress blog greets you with a different lyric from the song "Hello, Dolly!" each time.

If you want to change the lyrics in this plugin, you can edit them by clicking the Edit link to the right of the Hello Dolly plugin on the Plugins screen. The Plugin Editor opens, allowing you to edit the file in a text editor. Make sure that each line of the lyric has its own line in the plugin file. This plugin may not seem to be very useful to you — in fact, it may not be useful to the majority of WordPress users — but the real purpose of the plugin is to provide WordPress plugin developers a simple example of how to write a plugin.

IN THIS CHAPTER

- Exploring activate-and-go plugins
- Discovering settings pages
- Using widgets and shortcodes

Chapter 3

Configuring and Using Plugins

The types of features offered by WordPress plugins are extremely diverse. Similarly, the ways of interacting with plugins are also extremely diverse. Some plugins don't have an interface and can be activated or deactivated only, whereas others provide one or more settings screens to control how the plugins behaves. Other plugins offer widgets and *shortcodes* (short, easy-to-remember codes used to execute PHP functions) to add new features to sidebars and content.

This chapter digs into the topic of how to interact with plugins. Although this topic is a big one, the examples in this chapter prepare you for the different ways of interacting with plugins.

Exploring Activate-and-Go Plugins

Certain plugins are easy to use because they don't have any settings or features to interact with; I call them *activate-and-go* plugins. You simply activate them, and they do what they're intended to do.

Like WordPress plugins as a whole, activate-and-go plugins offer a wide variety of features. The following list offers a sampling of activate-and-go plugins that you'll find useful on your website:

- **JC Ajax Comments (`https://wordpress.org/plugins/jc-ajax-comment/`):** When pages and posts get large numbers of comments, they sometimes load more slowly, making the site seem sluggish. The JC Ajax Comments plugin makes such pages and posts load much more quickly by having the content load first without the comments and then quietly pulling down the comments separately.
- **BBQ: Block Bad Queries (`https://wordpress.org/plugins/block-bad-queries`):** The BBQ plugin helps protect your site against attackers trying to exploit specific security vulnerabilities. This plugin doesn't require any configuration; it automatically scans all requests coming to the site and protects against bad ones.
- **Disable WordPress Core Updates (`https://wordpress.org/plugins/disable-wordpress-core-update`):** The capability of WordPress to update itself automatically has been a tremendous help to WordPress users. Keeping WordPress updated not only offers new features and enhancements, but also helps keep your site safe from attackers. For some users, notifications to update WordPress can become distractions, especially if the site is run by many people but a single person is responsible for handling site updates. The Disable WordPress Core Updates plugin disables automatic checks for new WordPress versions and also disables any notifications that a new version is available. WordPress can still be updated from the Dashboard (as described in Book 2, Chapter 6), but the notifications no longer appear.

To use any of these plugins, simply install and activate them as discussed in Book 7, Chapter 2. When a plugin is activated, it starts doing its job.

REMEMBER

For some plugins, such as BBQ or JC Ajax Comments, the result of activating the plugin may be underwhelming; the plugin simply does its work behind the scenes and doesn't change anything that's visible to you. But just because you don't see any immediate change doesn't mean that plugins aren't doing their jobs.

Discovering Settings Pages

Many popular plugins have settings pages where you tweak the functionality of the plugin and tailor it to the specific needs of your site. Often, these settings need to be configured once and updated only when the plugin changes.

The following sections explore a selection of the most popular WordPress plugins, show you how to access settings pages, and describe what you can expect from them.

Typically, you access settings pages from submenus of the Dashboard's Settings page. Another common place to access plugin settings pages — especially for plugins that provide advanced features such as site caching — is the Dashboard's Tools menu.

TIP

If you have a hard time finding the settings page for a plugin, check the plugin's page for details on how to access the settings. For plugins in the WordPress Plugin Directory, check the installation and FAQ tabs. If the Plugin Directory page has a screen-shots tab, one of the screen shots usually shows the settings page.

Akismet

Akismet is bundled with WordPress and likely is already installed on your WordPress site. After you activate Akismet, a notice appears, saying that the plugin requires additional configuration before it will function.

TIP

Check for an activation notice after you install any plugin. Although most plugins don't offer such a notice, if one is available, it lets you know how to get started with the plugin. The Akismet plugin always has an activation notice after installation. (Information about the Akismet plugin, including installation instructions, is in Chapter 2 of this minibook.)

Google XML Sitemaps

The Google XML Sitemaps plugin is a good next step for diving into plugin settings pages. Google XML Sitemaps has several options and shows you just how intricate settings pages can get.

Google XML Sitemaps is one of WordPress's most popular plugins, with more than 9 million downloads. You can find it in the Plugin Directory at `https://wordpress.org/plugins/google-sitemap-generator`.

Google XML Sitemaps makes it easy to automatically add support for site maps to your WordPress site. Although most WordPress sites can be scanned easily by search engines, adding site maps adds a level of safety to ensure that all the content on the site can be found.

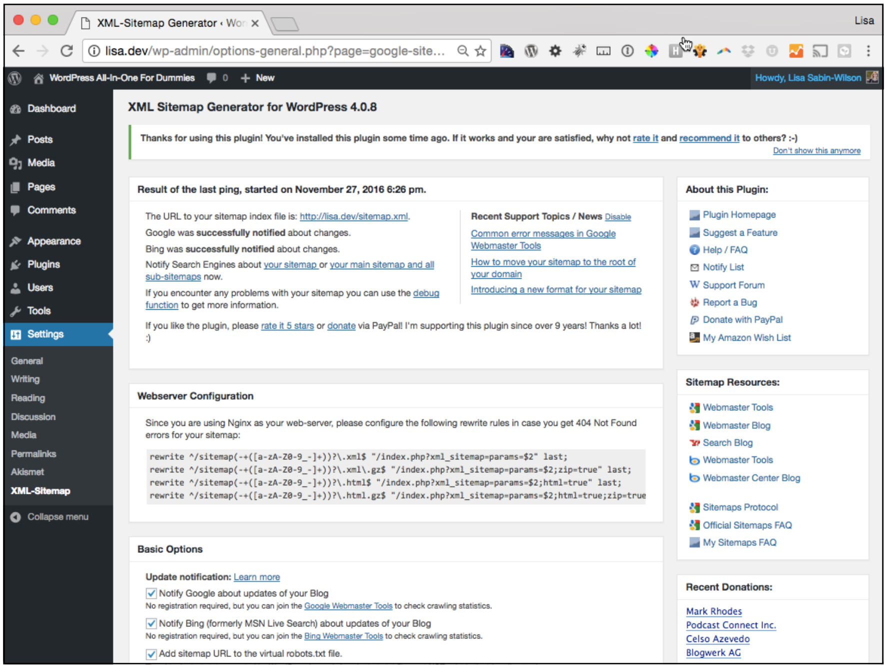
With default settings, the plugin automatically generates site maps as content is added to or modified on the site. In addition, it notifies Google and Bing of these updates so that it can update the search engine cache with this new data. (Book 5, Chapter 5 covers Google XML Sitemaps in depth.)

The Google XML Sitemaps plugin settings page is available from the XML-Sitemap submenu of the Dashboard's Settings menu. Notice that the menu name is different from the plugin name.

REMEMBER

Submenu names are limited in length, which means that longer plugin names are shortened to fit properly.

Figure 3-1 shows a portion of the Google XML Sitemaps plugin's settings page.



XML Sitemap Generator for WordPress 4.0.8

Thanks for using this plugin! You've installed this plugin some time ago. If it works and your are satisfied, why not rate it and recommend it to others? :-)

Don't show this anymore

Result of the last ping, started on November 27, 2016 6:26 pm.

The URL to your sitemap index file is: http://lisa.dev/sitemap.xml.

Google was **successfully notified** about changes.

Bing was **successfully notified** about changes.

Notify Search Engines about your sitemap or your main sitemap and all sub-sitemaps now.

If you encounter any problems with your sitemap you can use the debug function to get more information.

If you like the plugin, please rate it 5 stars or donate via PayPal! I'm supporting this plugin since over 9 years! Thanks a lot! :)

Recent Support Topics / News Disable

Common error messages in Google Webmaster Tools

How to move your sitemap to the root of your domain

Introducing a new format for your sitemap

About this Plugin:

- Plugin Homepage
- Suggest a Feature
- Help / FAQ
- Notify List
- Support Forum
- Report a Bug
- Donate with PayPal
- My Amazon Wish List

Webserver Configuration

Since you are using Nginx as your web-server, please configure the following rewrite rules in case you get 404 Not Found errors for your sitemap:

```
rewrite ^/sitemap(-+([a-zA-Z0-9_-]+))?\.xml$ "/index.php?xml_sitemap=params=$2" last;
rewrite ^/sitemap(-+([a-zA-Z0-9_-]+))?\.xml\.gz$ "/index.php?xml_sitemap=params=$2;zip=true" last;
rewrite ^/sitemap(-+([a-zA-Z0-9_-]+))?\.html$ "/index.php?xml_sitemap=params=$2;html=true" last;
rewrite ^/sitemap(-+([a-zA-Z0-9_-]+))?\.html.gz$ "/index.php?xml_sitemap=params=$2;html=true;zip=true
```

Sitemap Resources:

- Webmaster Tools
- Webmaster Blog
- Search Blog
- Webmaster Tools
- Webmaster Center Blog
- Sitemaps Protocol
- Official Sitemaps FAQ
- My Sitemaps FAQ

Basic Options

Update notification: Learn more

☑ Notify Google about updates of your Blog
No registration required, but you can join the Google Webmaster Tools to check crawling statistics.

☑ Notify Bing (formerly MSN Live Search) about updates of your Blog
No registration required, but you can join the Bing Webmaster Tools to check crawling statistics.

☑ Add sitemap URL to the virtual robots.txt file.

Recent Donations:

Mark Rhodes
Podcast Connect Inc.
Celso Azevedo
Blogwerk AG

FIGURE 3-1: The settings page for Google XML Sitemaps.

Like the Akismet plugin, Google XML Sitemaps requires an additional step to be fully functional. Unlike Akismet, Google XML Sitemaps is very quiet about how to get set up; it doesn't provide that Dashboard-wide notification message. For this reason, it's very important to carefully read settings pages and plugin documentation. You can easily miss something extremely important.

Below the information box used to generate and regenerate site maps are the settings for the plugin. Along the right side are resources about the plugin and about site maps. This type of format isn't uncommon for plugin settings pages.

Scrolling through the page reveals just how exhaustive the available settings are. The settings range from basic options (such as enabling or disabling automatic site map generation when the site's content is changed) to options that control the information in the generated site map to advanced options that control how many server resources the plugin can consume when generating the site map. Nearly every aspect of the plugin's functionality is represented as an option on the settings screen, offering a large amount of flexibility in how the plugin functions on the site.

Many popular plugins have this type of settings page. Although the settings can be excessive for some people, most users can get very good results simply by using the default settings. The settings of plugins such as Google XML Sitemaps are available for people who desire extra control of functionality. I recommend reading the settings to get an idea of what options are available.

REMEMBER

If you don't understand a setting, leave it in its default state.

All in One SEO Pack

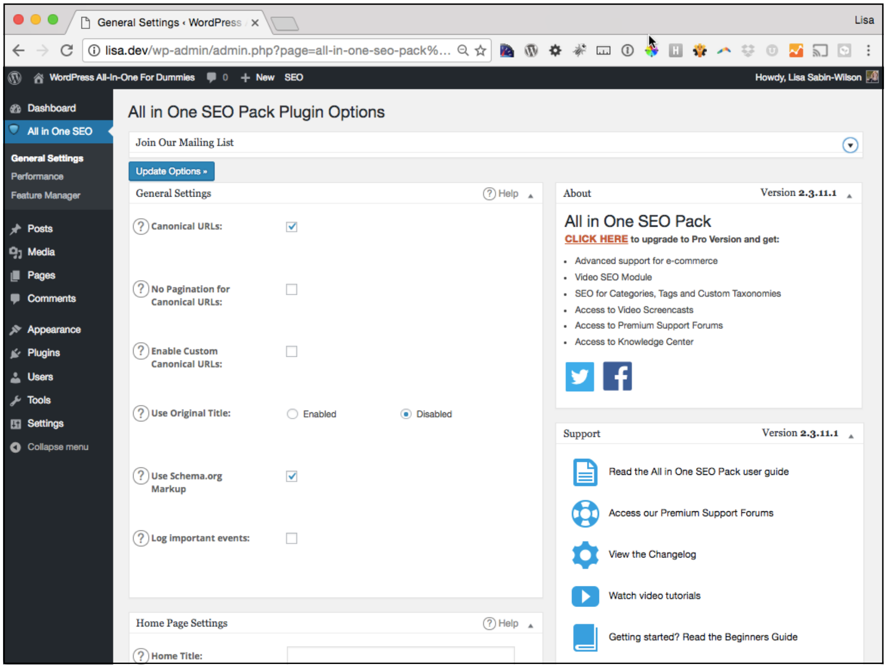
The All in One SEO Pack plugin, also known as AIOSEOP or AIO SEO, focuses on improving the SEO (search engine optimization) of your WordPress site. If you're unfamiliar with SEO, see Book 5, Chapter 4.

With more than 13 million downloads, All in One SEO Pack is one of the most-downloaded plugins on the WordPress Plugin Directory. You can find it in the Plugin Directory at `https://wordpress.org/plugins/all-in-one-seo-pack`.

After activation, the All In One SEO plugin inserts links into the left navigation menu of your WordPress Dashboard. Click the General Settings link to load the All in One SEO Pack Plugin Options screen, which is shown in Figure 3-2.

This settings page has a variety of settings to control many features of the plugin. The portion of the page shown in Figure 3-2 doesn't display title settings; you have to scroll down the screen to find those settings. Typically, titles are controlled by the theme and are modifiable only through code changes. Opening control of titles without requiring code modifications is one of the primary reasons why plugins such as All in One SEO are so popular.

Many other settings go beyond control of titles. Some of the most-often-used settings on this page are the ones that control automatic generation of keywords and description metadata, integrate the site with Google+ and Google Analytics, and determine what content is marked as `noindex`.



All in One SEO Pack Plugin Options

Join Our Mailing List

Update Options »

General Settings — Help

- Canonical URLs: ☑
- No Pagination for Canonical URLs: □
- Enable Custom Canonical URLs: □
- Use Original Title: ○ Enabled ● Disabled
- Use Schema.org Markup ☑
- Log important events: □

Home Page Settings — Help

- Home Title:

About — Version 2.3.11.1

All in One SEO Pack

CLICK HERE to upgrade to Pro Version and get:

- Advanced support for e-commerce
- Video SEO Module
- SEO for Categories, Tags and Custom Taxonomies
- Access to Video Screencasts
- Access to Premium Support Forums
- Access to Knowledge Center

Support — Version 2.3.11.1

- Read the All in One SEO Pack user guide
- Access our Premium Support Forums
- View the Changelog
- Watch video tutorials
- Getting started? Read the Beginners Guide

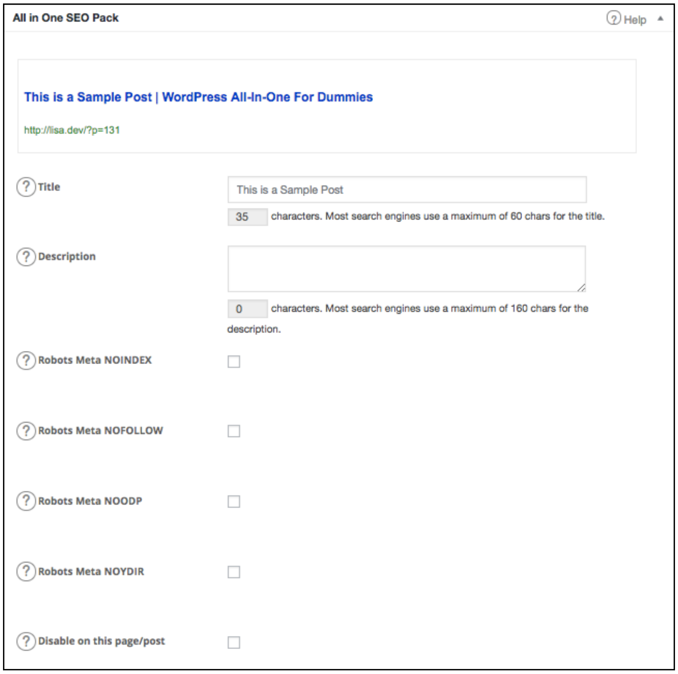
FIGURE 3-2: The settings page for All in One SEO.

TECHNICAL STUFF

When you mark a specific page with `noindex`, search engines ignore the content of the page and don't return search results that link to it.

Like the settings for Akismet and Google XML Sitemaps, the settings for the All in One SEO Pack plugin affect the whole site. Although some of the settings apply only to specific parts of the site, the settings page as a whole focuses on the entire site (which is true of most plugin settings pages). If the plugin creates a stand-alone settings page, the settings on that page typically apply to the whole site unless the setting specifies otherwise.

Being able to customize the title, description, and keywords on each page or post is very helpful. Because managing such customizations for the site's content would be difficult to control in one settings page, All in One SEO Pack provides additional settings in the editors for posts and pages. Figure 3-3 shows the settings box added to the editor by All in One SEO Pack.



All in One SEO Pack

This is a Sample Post | WordPress All-In-One For Dummies

http://lisa.dev/?p=131

Title: This is a Sample Post

35 characters. Most search engines use a maximum of 60 chars for the title.

Description:

0 characters. Most search engines use a maximum of 160 chars for the description.

Robots Meta NOINDEX □

Robots Meta NOFOLLOW □

Robots Meta NOODP □

Robots Meta NOYDIR □

Disable on this page/post □

FIGURE 3-3: All in One SEO Pack settings that control SEO features for a specific post.

Using Widgets

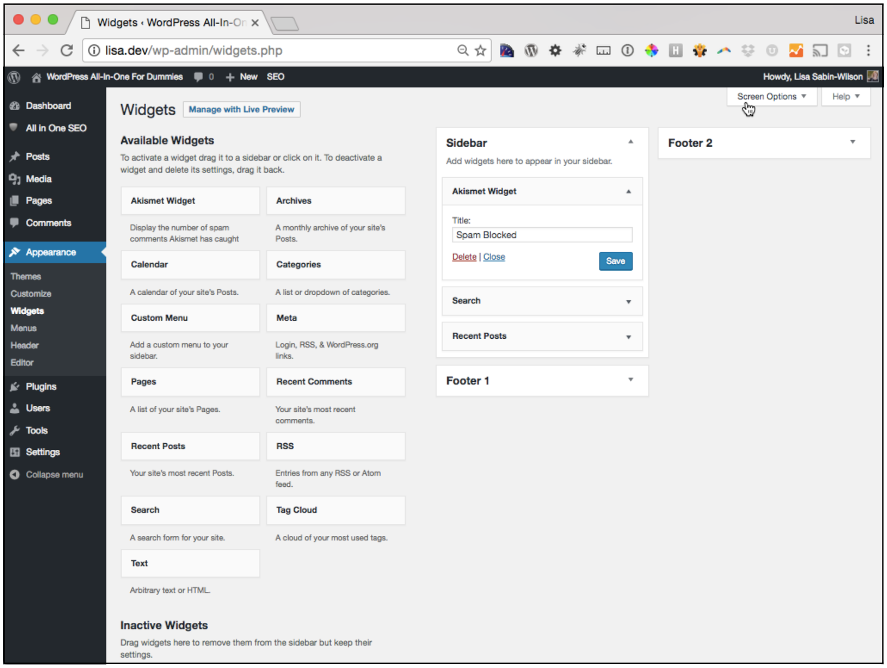
Widgets offer a very powerful, flexible way to add specific kinds of content to your site's sidebars. WordPress comes with several widgets, such as a calendar, a list of pages on the site, a list of recent comments, and a site-search tool. Plugins can expand this set of default widgets by adding their own. The following sections review plugins that add their own widgets to show you how plugin-provided widgets offer new options to enhance your site.

TIP

You manage widgets on the Widgets screen in the Dashboard. After logging in to your site's Dashboard, hover your mouse over the Appearance menu and then click the Widgets link to access the Widgets page.

Akismet

After you activate and set up a valid application programming interface (API) key for the Akismet Widget, a new widget named Akismet Widget appears on your Widgets page, as shown in Figure 3-4. (You can find more about the Akismet API key in Book 7, Chapter 2.)



Available Widgets

To activate a widget drag it to a sidebar or click on it. To deactivate a widget and delete its settings, drag it back.

Akismet Widget Display the number of spam comments Akismet has caught	**Archives** A monthly archive of your site's Posts.
Calendar A calendar of your site's Posts.	**Categories** A list or dropdown of categories.
Custom Menu Add a custom menu to your sidebar.	**Meta** Login, RSS, & WordPress.org links.
Pages A list of your site's Pages.	**Recent Comments** Your site's most recent comments.
Recent Posts Your site's most recent Posts.	**RSS** Entries from any RSS or Atom feed.
Search A search form for your site.	**Tag Cloud** A cloud of your most used tags.
Text Arbitrary text or HTML.	

Inactive Widgets

Drag widgets here to remove them from the sidebar but keep their settings.

Sidebar

Add widgets here to appear in your sidebar.

Akismet Widget

Title: Spam Blocked

FIGURE 3-4: The Widgets page, showing the addition of the Akismet Widget.

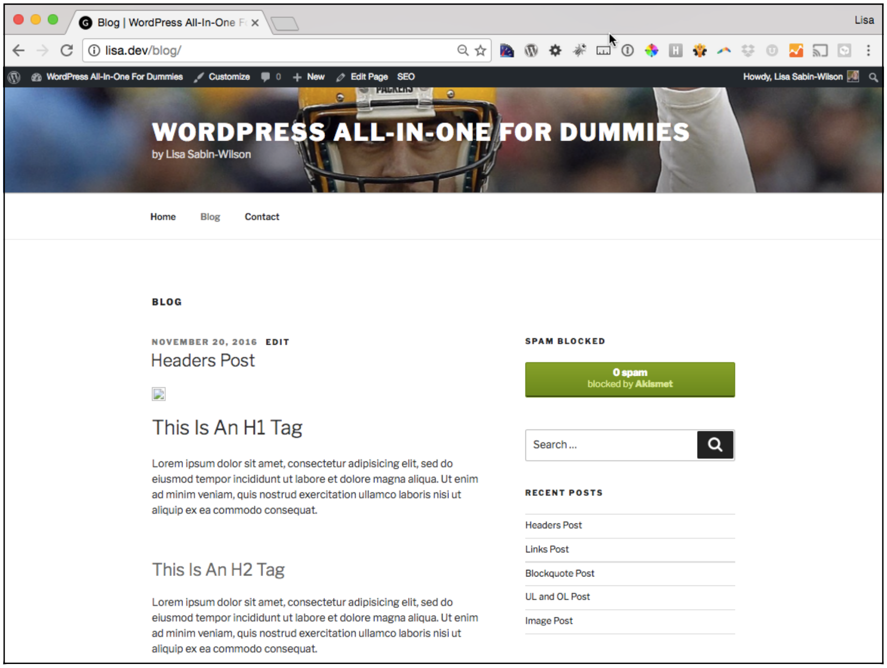
To use the Akismet Widget, drag it from the Available Widgets section and drop it into one of the sidebars on the right side of the Widgets page. As shown in Figure 3-4, after you drop the widget into a sidebar, the settings for the widget become available. The settings are quite simple because only the title of the widget can be modified. At a minimum, most widgets offer a title setting. Although some exceptions exist, most widgets treat the title as optional and simply don't show a title if the setting is empty.

Now the Akismet Widget appears on your site, displaying a counter that shows how many spam comments the Akismet plugin has blocked on the site. Figure 3-4 shows that the widget has blocked no comments.

Twitter Widget Pro

The Twitter Widget Pro plugin serves a single purpose: making it easy to add a Twitter stream to your site. This feature takes the form of a widget, meaning that you can add the Twitter stream to any sidebar on your site. Twitter Widget Pro is available from the Plugin Directory at `https://wordpress.org/plugins/twitter-widget-pro`.

As shown in Figure 3-6, the Twitter Widget Pro Widget provides a large number of settings that control its output.



WORDPRESS ALL-IN-ONE FOR DUMMIES

by Lisa Sabin-Wilson

BLOG

NOVEMBER 20, 2016 EDIT

Headers Post

This Is An H1 Tag

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

This Is An H2 Tag

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

SPAM BLOCKED

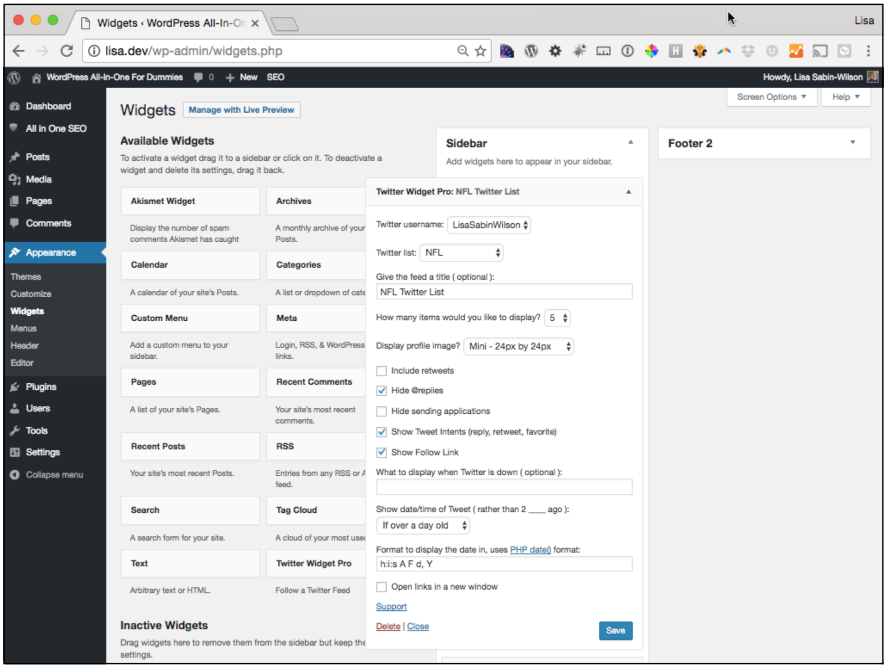
0 spam
blocked by Akismet

Search ...

RECENT POSTS

- Headers Post
- Links Post
- Blockquote Post
- UL and OL Post
- Image Post

FIGURE 3-5: The Akismet Widget running on the site.



Widgets

Available Widgets

To activate a widget drag it to a sidebar or click on it. To deactivate a widget and delete its settings, drag it back.

Akismet Widget
Display the number of spam comments Akismet has caught

Archives
A monthly archive of your Posts.

Calendar
A calendar of your site's Posts.

Categories
A list or dropdown of cate

Custom Menu
Add a custom menu to your sidebar.

Meta
Login, RSS, & WordPress links.

Pages
A list of your site's Pages.

Recent Comments
Your site's most recent comments.

Recent Posts
Your site's most recent Posts.

RSS
Entries from any RSS or A feed.

Search
A search form for your site.

Tag Cloud
A cloud of your most use

Text
Arbitrary text or HTML.

Twitter Widget Pro
Follow a Twitter Feed

Inactive Widgets

Drag widgets here to remove them from the sidebar but keep the settings.

Sidebar

Add widgets here to appear in your sidebar.

Twitter Widget Pro: NFL Twitter List

Twitter username: LisaSabinWilson

Twitter list: NFL

Give the feed a title (optional): NFL Twitter List

How many items would you like to display? 5

Display profile image? Mini - 24px by 24px

□ Include retweets
☑ Hide @replies
□ Hide sending applications
☑ Show Tweet Intents (reply, retweet, favorite)
☑ Show Follow Link

What to display when Twitter is down (optional):

Show date/time of Tweet (rather than 2 ____ ago): If over a day old

Format to display the date in, uses PHP date() format: h:i:s A F d, Y

□ Open links in a new window

Support

Delete | Close

Save

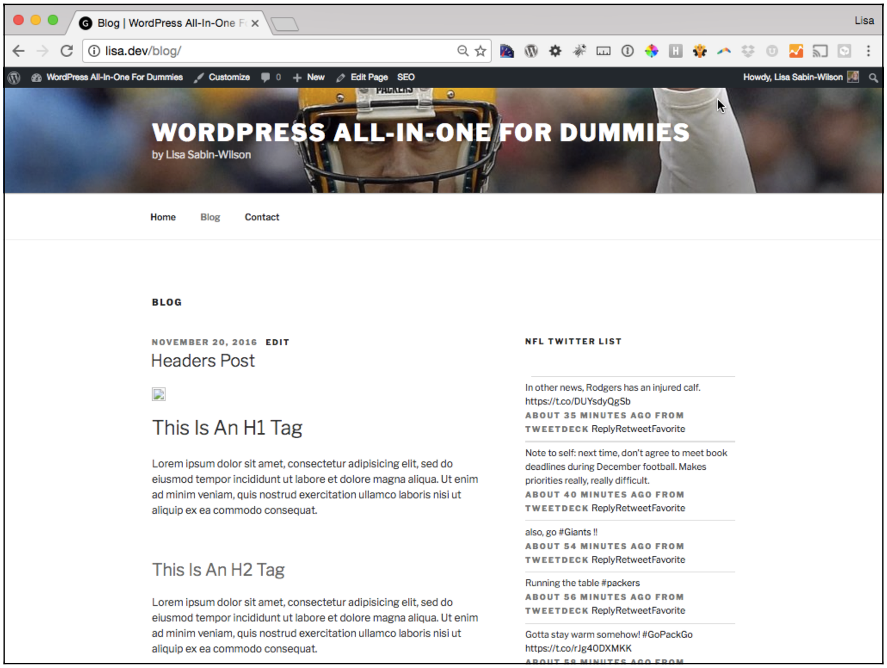
Footer 2

FIGURE 3-6: The settings for Twitter Widget Pro.

The most important setting is Twitter Username. Without a valid Twitter username, the widget won't produce any output. If the widget fails to render anything on your site, double-check the username to ensure that it's a valid Twitter username.

The What to Display When Twitter Is Shown setting is interesting because it allows you to show a message when the Twitter stream can't be accessed. If this setting is left blank, nothing is shown when data from Twitter can't be retrieved. If visitors to the site expect to see the Twitter feed, adding a simple message indicating that the feed is temporarily unavailable could help reduce visitor confusion.

Figure 3-7 shows the result of setting up the widget.



BLOG

NOVEMBER 20, 2016 EDIT

Headers Post

This Is An H1 Tag

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

This Is An H2 Tag

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

NFL TWITTER LIST

In other news, Rodgers has an injured calf. https://t.co/DUYsdyQgSb
ABOUT 35 MINUTES AGO FROM TWEETDECK ReplyRetweetFavorite

Note to self: next time, don't agree to meet book deadlines during December football. Makes priorities really, really difficult.
ABOUT 40 MINUTES AGO FROM TWEETDECK ReplyRetweetFavorite

also, go #Giants !!
ABOUT 54 MINUTES AGO FROM TWEETDECK ReplyRetweetFavorite

Running the table #packers
ABOUT 56 MINUTES AGO FROM TWEETDECK ReplyRetweetFavorite

Gotta stay warm somehow! #GoPackGo https://t.co/rJg40DXMKK
ABOUT 58 MINUTES AGO FROM

FIGURE 3-7: The widget in the Twitter Widget Pro plugin showing the latest from a Twitter feed.

REMEMBER

If you're active on Twitter, using the Twitter Widget Pro plugin is an easy way to inform or remind your visitors that you're on Twitter.

Additional widgets to try

Akismet and Twitter Widget Pro just scratch the surface of what's possible with widgets offered by plugins. Following are additional widgets that can help fill in your sidebars:

- **List Custom Taxonomy Widget:** This plugin is available in the Plugin Directory at `https://wordpress.org/plugins/list-custom-taxonomy-widget/`. The widget in this plugin provides you with a way to display custom taxonomies on your site. (Book 6, Chapter 6 covers custom taxonomies.)
- **Image Widget:** Sometimes, you just want to add an image to a sidebar. Although the built-in Text Widget and some HTML can provide this functionality, some users don't know how to create the HTML for the image or want a simpler solution for adding images. The Image Widget plugin provides a widget that allows you to easily upload an image and display it on the site without writing or copying and pasting HTML markup. You can find the plugin in the Plugin Directory at `https://wordpress.org/plugins/image-widget`.
- **Yet Another Related Posts Plugin:** This plugin (also known as YARPP) is available in the Plugin Directory at `https://wordpress.org/plugins/yet-another-related-posts-plugin`. The plugin provides a variety of methods to display links to content on your site that are related to the current page, post, or other type of content that is currently being viewed. One of these methods is to use the provided widget so you can easily see a list of links to similar content on your site's sidebar. Because these lists are automatically generated and updated, the site's related content starts to cross-link with other related content without requiring you to manage those lists manually.

With more than 3,000 plugins currently listed with the *widget* tag in the Plugin Directory (`https://wordpress.org/plugins/tags/widget`), a wealth of new widgets for use in your sidebars is at your fingertips. One of those plugins may offer the perfect widget for adding value to your sidebars.

Enhancing Content with Shortcodes

Widgets can add functionality, navigational aids, and other useful bits of information to your sidebars. What if you want to add dynamic elements (such as automatically generated lists of related content or embedded videos) without having to switch to the HTML editor and deal with complex embed codes? In this situation, shortcodes come to the rescue.

Just as widgets allow code to generate content for use on a sidebar, shortcodes allow code to generate additional content inside a post, page, or other content type. Shortcodes always appear between brackets, like the shortcode used for the insertion of a photo gallery on your website (explained in the "Gallery shortcode" section in this chapter): `[gallery]`. In the following sections, you find out about a few useful shortcodes.

Gallery shortcode

One of the shortcodes built into WordPress is `gallery`. (See Book 4, Chapter 3 for more about the `[gallery]` shortcode.)

The most basic gallery shortcode is `[gallery]`. In this form, all the default arguments are used. (Shortcodes can also support optional arguments that allow customization.) By default, a gallery is arranged into three columns and uses thumbnail-size images. The following shortcode displays the gallery in two columns and uses medium-size images:

```
[gallery columns="2" size="medium"]
```

In many ways, shortcodes are similar to HTML tags. The `gallery` shortcode looks like an opening HTML tag that swaps the < and > characters with `[` and `]`.

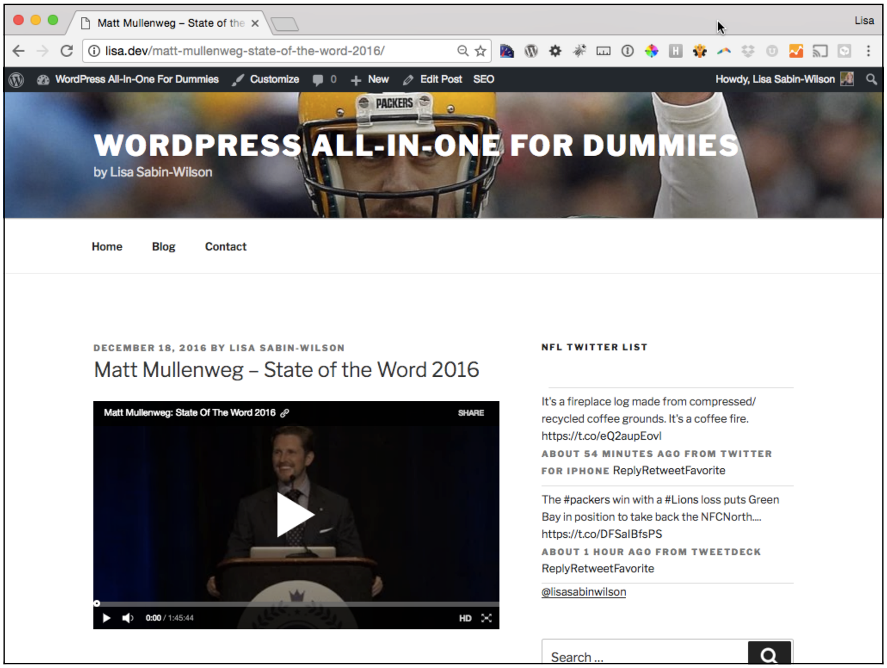
Embed shortcode

Shortcodes can also surround text by using an opening and closing shortcode. The `embed` shortcode, another shortcode provided by WordPress, is one example of a shortcode that is used before and after a video link to tell WordPress to embed it in a video player.

WordPress, by default, automatically changes video links to embedded videos in a player for videos from a defined list of allowed video sites. (See Book 4, Chapter 4 for details on which sites are supported.) Although the automatic embedding happens when supported video links are left on a line on their own, supported video links can be surrounded by the `embed` shortcode to explicitly indicate that the link is to be changed into an embedded video, as in this example:

```
[embed] http://wordpress.tv/2016/12/07/matt-mullenweg-state-of-the-
    word-2016/[/embed]
```

When you add this shortcode to your post or page content, Matt Mullenweg's 2016 State of the Word video displays in place of the shortcode, as shown in Figure 3-8.


Matt Mullenweg – State of the
Lisa
lisa.dev/matt-mullenweg-state-of-the-word-2016/
WordPress All-In-One For Dummies
Customize
0
New
Edit Post
SEO
Howdy, Lisa Sabin-Wilson
WORDPRESS ALL-IN-ONE FOR DUMMIES
by Lisa Sabin-Wilson
Home
Blog
Contact
DECEMBER 18, 2016 BY LISA SABIN-WILSON
Matt Mullenweg – State of the Word 2016
Matt Mullenweg: State Of The Word 2016
SHARE
0:00 / 1:45:44
HD
NFL TWITTER LIST
Search ...

It's a fireplace log made from compressed/recycled coffee grounds. It's a coffee fire. https://t.co/eQ2aupEovl
ABOUT 54 MINUTES AGO FROM TWITTER FOR IPHONE ReplyRetweetFavorite

The #packers win with a #Lions loss puts Green Bay in position to take back the NFCNorth.... https://t.co/DFSalBfsPS
ABOUT 1 HOUR AGO FROM TWEETDECK ReplyRetweetFavorite

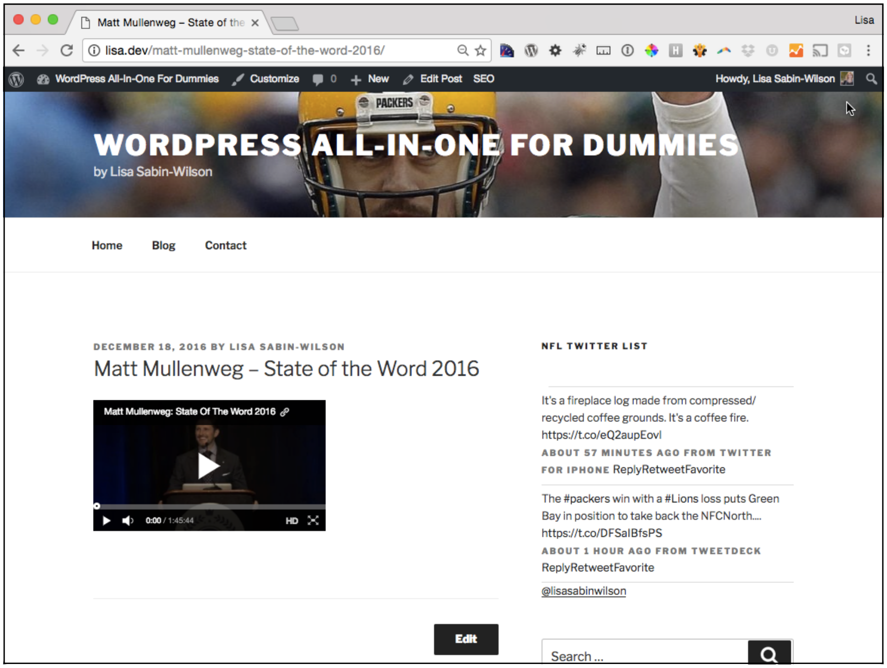
@lisasabinwilson

FIGURE 3-8: An embedded video replacing embed shortcode.

You may wonder why you'd want to use the embed shortcode instead of simply putting the link on its own line. The reason is that like the gallery shortcode, the embed shortcode supports arguments that allow you to customize the display of the video. The supported arguments are width and height. The following shortcode modifies the embedded video to have a width of 400 pixels:

```
[embed width="400"] http://wordpress.tv/2016/12/07/matt-mullenweg-state-of-
    the-word-2016/[/embed]
```

Figure 3-9 shows the result of this change. Notice that the entire video is smaller, is because reducing the width to 400 pixels automatically scales down the height as well.


Matt Mullenweg – State of the
Lisa
lisa.dev/matt-mullenweg-state-of-the-word-2016/
WordPress All-In-One For Dummies
Customize
0
New
Edit Post
SEO
Howdy, Lisa Sabin-Wilson
PACKERS
WORDPRESS ALL-IN-ONE FOR DUMMIES
by Lisa Sabin-Wilson
Home
Blog
Contact
Matt Mullenweg: State Of The Word 2016
0:00 / 1:45:44
HD
Edit
Search ...

DECEMBER 18, 2016 BY LISA SABIN-WILSON

Matt Mullenweg – State of the Word 2016

NFL TWITTER LIST

It's a fireplace log made from compressed/ recycled coffee grounds. It's a coffee fire. https://t.co/eQ2aupEovl

ABOUT 57 MINUTES AGO FROM TWITTER FOR IPHONE ReplyRetweetFavorite

The #packers win with a #Lions loss puts Green Bay in position to take back the NFCNorth.... https://t.co/DFSalBfsPS

ABOUT 1 HOUR AGO FROM TWEETDECK ReplyRetweetFavorite

@lisasabinwilson

FIGURE 3-9: The embedded video with the width reduced to 400 pixels.

TIP

If both the width and height arguments are used, the video is scaled down to fit inside a box of those dimensions, so you won't be able to distort the aspect ratio of the video if you don't get the dimensions exactly right. In practice, it's often easiest to supply the width argument and not the height argument.

Twitter Widget Pro shortcode

The Twitter Widget Pro plugin provides more than just a widget; it also adds support for the twitter-widget shortcode. This shortcode provides the same functionality as the widget, but it can be added to content and uses the shortcode method of controlling arguments rather than a widget editor.

At its most basic, the twitter-widget shortcode looks like this:

```
[twitter-widget username="lisasabinwilson"]
```

Notice that the username argument is set to my Twitter username, lisasabinwilson. When you use this shortcode, replace the lisasabinwilson username with the Twitter username that you want to use.

The FAQ page for Twitter Widgets Pro in the Plugin Directory includes a list of the arguments that are available for the shortcode. For example, you can display a title for the widget included in the Twitter Widgets Pro plugin by using this shortcode:

```
[twitter-widget username="lisasabinwilson" title=
    "Twitter Feed"]
```

The title is modified, and replies are hidden, which means that you can easily produce the same results whether you decide to use Twitter Widget Pro's widget or the shortcode feature.

WP Google Maps shortcode

The WP Google Maps plugin offers both a widget and shortcode that allows to add a Google map to your site. You can find the plugin in the Plugin Directory at `https://wordpress.org/plugins/wp-google-maps`.

The WP Google Maps Plugin is noteworthy because its shortcodes can quickly become very complex and long. Consider the following embed code provided by Google Maps, which displays a map of Lambeau Field in Green Bay, Wisconsin:

```
<iframe src="https://www.google.com/maps/d/embed?mid=1UC_qvy-WGYOWOtv-
     mZ_3Jg7IYXQ&hl=en_US" width="640" height="480"></iframe>
```

That code would be quite difficult to type without making any errors. Fortunately, the WP Google Maps plugin provides a shortcode tool that makes it easy to have the code generate such complex shortcodes.

After activating the plugin, follow these steps to use the shortcode:

1. **Click the Maps link on the Dashboard menu.**

   The My Maps screen loads on your Dashboard.

2. **Click the Edit link below My First Map.**

   The Create Your Map screen loads on your Dashboard.

3. **In the Address/GPS text field, type the address of the location that you want to display on your map.**

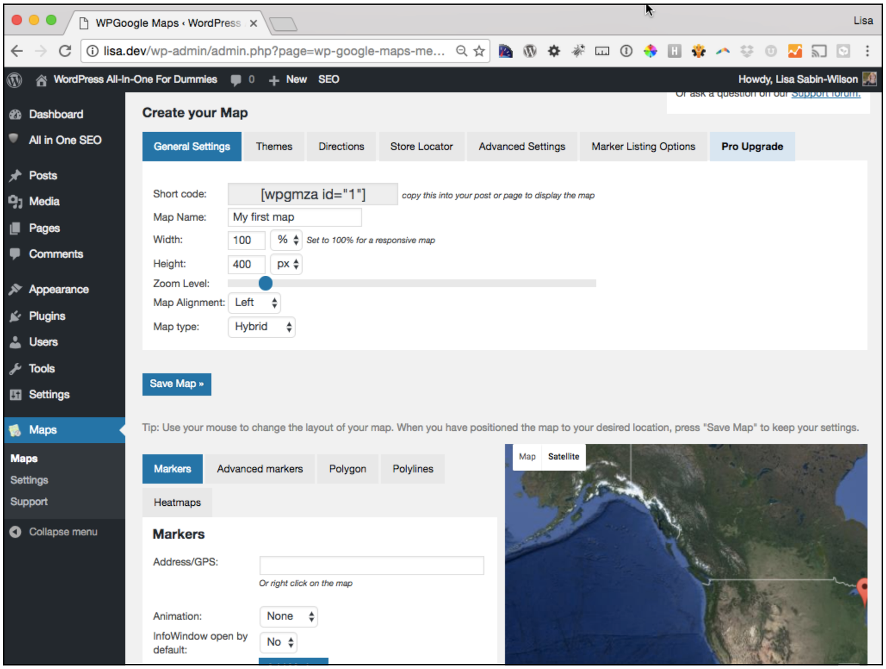
   This location can be a city, state, country, or street address.

4. **Click the Add Marker button to add the location to the map.**

5. **Click the Save Map button.**

6. **Copy the text displayed in the Short Code text box.**

   This code looks something like [wpgmza id="1"], as shown in Figure 3-10.



Create your Map

Short code: [wpgmza id="1"] *copy this into your post or page to display the map*

Map Name: My first map

Width: 100 % *Set to 100% for a responsive map*

Height: 400 px

Zoom Level:

Map Alignment: Left

Map type: Hybrid

Tip: Use your mouse to change the layout of your map. When you have positioned the map to your desired location, press "Save Map" to keep your settings.

Markers

Address/GPS:

Or right click on the map

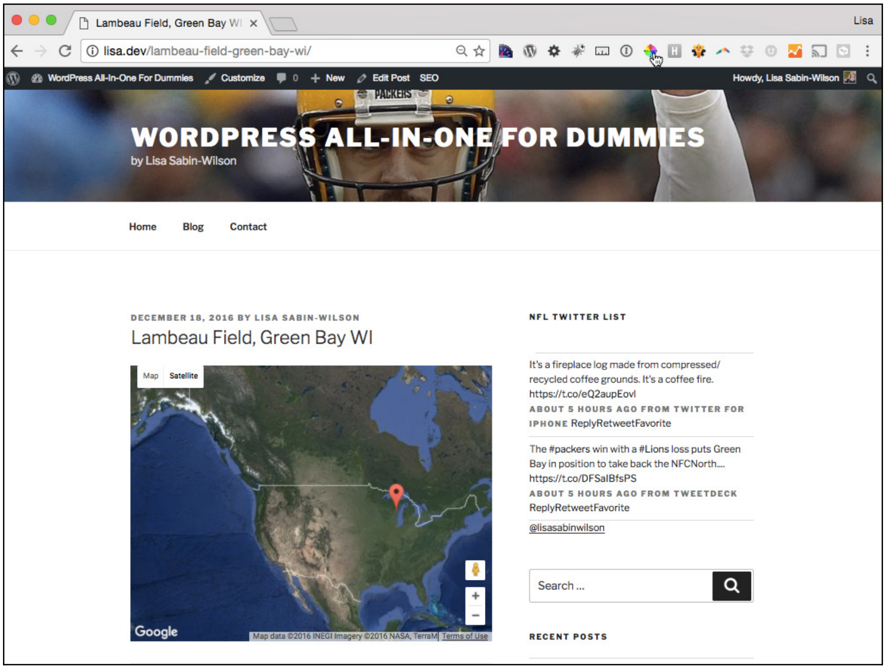
Animation: None

InfoWindow open by default: No

FIGURE 3-10: The WP Google Maps plugin's settings page displays the shortcode.

7. **Paste the copied code into a new page or post.**

   When you publish the post, you see the map embedded in that page on your live website. As shown in Figure 3-11, the shortcode produces an interactive map that visitors can easily navigate. By clicking the marker, visitors can access options to get directions to or from the location. Although you should always give an address, the map gives visitors a much better understanding of where a location is, which means that they don't have to leave the site to look up the address elsewhere.


Lambeau Field, Green Bay WI
Lisa
lisa.dev/lambeau-field-green-bay-wi/
WordPress All-In-One For Dummies
Customize
0
New
Edit Post
SEO
Howdy, Lisa Sabin-Wilson
WORDPRESS ALL-IN-ONE FOR DUMMIES
by Lisa Sabin-Wilson
Home
Blog
Contact
Map
Satellite
Google
Map data ©2016 INEGI Imagery ©2016 NASA, TerraM
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Search ...
RECENT POSTS

DECEMBER 18, 2016 BY LISA SABIN-WILSON

Lambeau Field, Green Bay WI

NFL TWITTER LIST

It's a fireplace log made from compressed/recycled coffee grounds. It's a coffee fire. https://t.co/eQ2aupEovl
ABOUT 5 HOURS AGO FROM TWITTER FOR IPHONE ReplyRetweetFavorite

The #packers win with a #Lions loss puts Green Bay in position to take back the NFCNorth.... https://t.co/DFSalBfsPS
ABOUT 5 HOURS AGO FROM TWEETDECK ReplyRetweetFavorite

@lisasabinwilson

FIGURE 3-11: The map generated by the WP Google Maps plugin's shortcode.

IN THIS CHAPTER

- » Avoiding problems with plugin modifications
- » Removing plugin features
- » Modifying plugin output
- » Changing shortcode names

Chapter 4
Modifying Existing Plugin Code

WordPress has more than 48,000 plugins in the Plugin Directory, so you'd think that you could find a plugin to do everything you could possibly need on your WordPress website. But not even the best plugins can meet the needs of every user.

This chapter explores the idea of taking an existing plugin and tweaking it to meet your specific needs. With a little bit of programming knowledge and some determination, modifying existing plugin code is very possible. Although you won't become a full-fledged developer overnight, making changes to existing plugins can definitely get the mental gears spinning, figuring out how to do more and more with your programming knowledge.

The examples in this chapter are simple, offering a basic introduction to modifying plugins. Chapter 5 of this minibook goes into much more depth with regard to plugin development.

Setting the Foundation for Modifying Plugins

Before you start modifying plugins, you should do the following:

TIP

- **Set up a development site.** That way, if you accidentally break your site, no harm is done.
- **Display error messages.** By default, most WordPress sites hide error messages. You want to see those messages when developing plugins, however, because they can provide valuable feedback.

  Find the `wp-config.php` file (it's in the main WordPress installation on your web server), and change `WP_DEBUG define` (scroll to the bottom of the file) from `false` to `true`. Now your error-message information will display.

  For more details about `WP_DEBUG`, see the WordPress Codex page on the topic: `https://codex.wordpress.org/WP_DEBUG`.
- **Set up a non-WordPress editor.** You don't want to use the editors built into WordPress. Although they're convenient, they can introduce bugs in the PHP code that can cause your entire site to break, including the ability to edit the `.php` file. Thus, you should use an editor on your own computer or on the server to modify the files so that problems can be fixed quickly without large amounts of work.

REMEMBER

All code is covered by copyright. For a plugin to be added to the Plugin Directory, the code needs to use the GPLv2 license or above. Any code in the Plugin Directory is available for you to use, modify, and even redistribute; the only limitation is that your modified code must use the same licensing as the original code. Book 1, Chapter 2 covers licensing and the General Public License (GPL).

It's important to know that when you start making changes, you're on your own. You can no longer just update the plugin to gain access to bug fixes or new features. To update to a newer version of the plugin, you'd have to download the latest version of the code and modify it again to make your desired changes.

Because WordPress supports updating plugins automatically, you want to ensure that you don't accidentally update a modified plugin and lose your modifications. To prevent such a situation from happening, do the following:

- **Change the name of the plugin's directory.** The directory name is used as the basis for determining what to sync the plugin to for update purposes. If you change the directory name, the plugin is no longer a candidate for automatic updates. Make sure that you pick a name that doesn't exist in the Plugin Directory. You can verify that you have a unique name by trying to go to

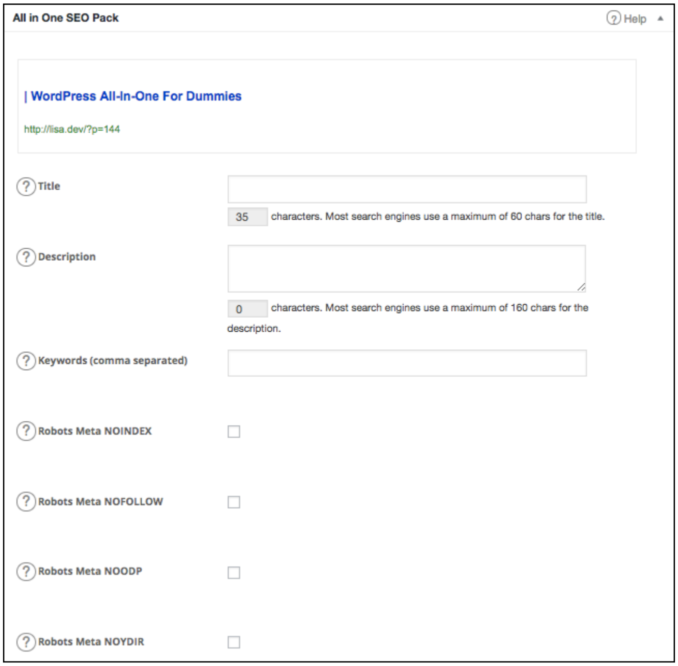
  ```
  https://wordpress.org/plugins/new-directory-name
  ```

  where *new-directory-name* is replaced by the name you want to use for your directory. Note that after you change the name of the directory, the plugin needs to be activated again.
- **Modify the name of the plugin.** Although this step isn't strictly necessary, it does help ensure that the plugin stands out on its own. Even simply adding `(modified)` to the name helps ensure that the modified version is kept separate from the normal version of the plugin. It also serves as a reminder to you that the plugin is modified and shouldn't be treated as a normal plugin. In other words, it's a reminder to take care when deciding to update or delete the plugin.
- **Add your name to the listing of plugin authors.** This step tells people where to send questions about the plugin — especially important if the modified plugin is redistributed or used in an environment with many users.

Removing Part of a Form

One of the easiest modifications to make is to remove something from an existing plugin.

The All in One SEO Pack plugin, available at `https://wordpress.org/plugins/all-in-one-seo-pack`, provides a large number of settings that control search engine optimization (SEO) features for each post and page. Suppose that you manage a site, with several editors and authors who frequently ask questions about how to use the keywords input fields that are on all post and page editors (as shown in Figure 4-1). You've decided that the keywords aren't important to the site, and you'd like to avoid all the questions from the editors and authors. So you want to remove the input that appears in the page editors.



All in One SEO Pack

? Help ▲

| WordPress All-In-One For Dummies

http://lisa.dev/?p=144

? Title

35 characters. Most search engines use a maximum of 60 chars for the title.

? Description

0 characters. Most search engines use a maximum of 160 chars for the description.

? Keywords (comma separated)

? Robots Meta NOINDEX □

? Robots Meta NOFOLLOW □

? Robots Meta NOODP □

? Robots Meta NOYDIR □

FIGURE 4-1: The All in One SEO Pack's post-/page-specific settings before modifications.

Follow these steps:

1. **Search the plugin's files for a match for *Keywords (comma separated)*.**

   I searched for "Keywords (comma separated)" because this string (a portion of code contained inside quotes) is a unique string inside the plugin's code. After digging around in the files, I found the section responsible for this form on lines 987 to 990 of the plugin's `aioseop_class.php` file.

2. **Remove the necessary lines.**

   The section of code that adds that setting looks like this:

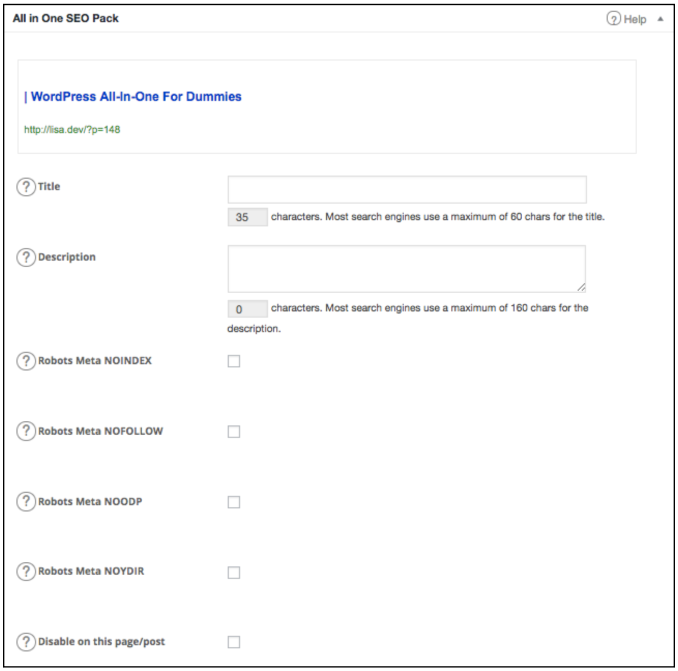
```
'keywords' => array(
  'name' => __( 'Keywords (comma separated)', 'all-in-one-
  seo-pack' ),
  'type' => 'text',
),
```

   To make the modification properly, you can comment out those four lines with double slashes in front of each line, like this:

```
// 'keywords' => array(
// 'name' => __( 'Keywords (comma separated)', 'all-in-
  one-seo-pack' ),
// 'type' => 'text',
// ),
```

3. **Save the modification, and upload the change to the server.**

   The editor page looks like Figure 4-2.



All in One SEO Pack

| WordPress All-In-One For Dummies

http://lisa.dev/?p=148

Title

35 characters. Most search engines use a maximum of 60 chars for the title.

Description

0 characters. Most search engines use a maximum of 160 chars for the description.

Robots Meta NOINDEX □

Robots Meta NOFOLLOW □

Robots Meta NOODP □

Robots Meta NOYDIR □

Disable on this page/post □

FIGURE 4-2: The All in One SEO Pack's post-/page-specific settings after the Keywords setting is removed.

After making this change, load your website into your browser to make sure that your site still loads with no error messages displayed, to ensure that nothing has broken due to this modification. Save a variety of settings for the SEO feature, and ensure that the modifications still take effect after the settings are saved.

Modifying the Hello Dolly Plugin's Lyrics

The Hello Dolly plugin is included with WordPress and is an easy plugin to modify. If you don't have this plugin installed on your site, you can find it in the Plugin Directory at `https://wordpress.org/plugins/hello-dolly`.

In the `hello.php` file of the plugin is a variable named `$lyrics` that stores the lyric lines of the “Hello, Dolly” song. By replacing this text with your own text, you can change the random selection of a “Hello, Dolly” lyric line to anything you desire.

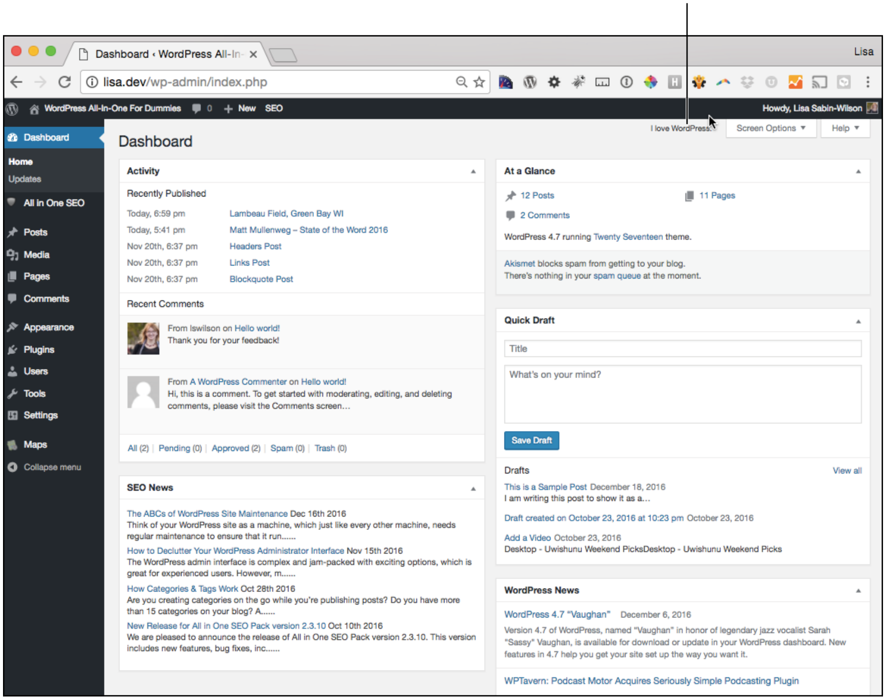
The `$lyrics` variable can be replaced in its entirety by new text, such as this:

```
$lyrics = "I love WordPress.
   There's a plugin for that.";
```

REMEMBER

When changing the lyrics, ensure that you replace all the lyrics text; otherwise, you can accidentally introduce an error into the code.

After the modification is in place, the Hello Dolly plugin says either `I love WordPress` or `There’s a plugin for that`. Figure 4-3 shows the result of this modification. Notice the message toward the top-right corner of the screen.


Hello Dolly plugin displays a custom quote.

I love WordPress.

Dashboard

Activity

Recently Published

Today, 6:59 pm Lambeau Field, Green Bay WI
Today, 5:41 pm Matt Mullenweg – State of the Word 2016
Nov 20th, 6:37 pm Headers Post
Nov 20th, 6:37 pm Links Post
Nov 20th, 6:37 pm Blockquote Post

Recent Comments

From lswilson on Hello world!
Thank you for your feedback!

From A WordPress Commenter on Hello world!
Hi, this is a comment. To get started with moderating, editing, and deleting comments, please visit the Comments screen…

All (2) | Pending (0) | Approved (2) | Spam (0) | Trash (0)

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The WordPress admin interface is complex and jam-packed with exciting options, which is great for experienced users. However, m......

How Categories & Tags Work Oct 28th 2016
Are you creating categories on the go while you’re publishing posts? Do you have more than 15 categories on your blog? A......

New Release for All in One SEO Pack version 2.3.10 Oct 10th 2016
We are pleased to announce the release of All in One SEO Pack version 2.3.10. This version includes new features, bug fixes, inc......

At a Glance

12 Posts 11 Pages
2 Comments

WordPress 4.7 running Twenty Seventeen theme.

Akismet blocks spam from getting to your blog.
There’s nothing in your spam queue at the moment.

Quick Draft

Title

What’s on your mind?

Drafts

This is a Sample Post December 18, 2016
I am writing this post to show it as a…

Draft created on October 23, 2016 at 10:23 pm October 23, 2016

Add a Video October 23, 2016
Desktop - Uwishunu Weekend PicksDesktop - Uwishunu Weekend Picks

WordPress News

WordPress 4.7 “Vaughan” December 6, 2016
Version 4.7 of WordPress, named "Vaughan" in honor of legendary jazz vocalist Sarah "Sassy" Vaughan, is available for download or update in your WordPress dashboard. New features in 4.7 help you get your site set up the way you want it.

WPTavern: Podcast Motor Acquires Seriously Simple Podcasting Plugin

FIGURE 4-3: The modified Hello Dolly plugin now declares “I love WordPress.”

When a *string* is used just for output, it's typically safe to modify the text without creating any bugs or other issues with the plugin. By changing a string's text, you can change the output of the plugin without much effort.

TIP

WordPress has a built-in mechanism to replace strings in code with new strings. This feature is called *localization* and is typically used to change text into another language. As long as the plugin properly uses the localization functions for all its output strings, you can use this feature to change specific strings as desired, even if you simply change the words used rather than the language. This feature is discussed in Book 7, Chapter 6.

Changing a Shortcode's Name

Sometimes, shortcodes have hard-to-remember names. This problem typically comes up because the plugin author is trying to avoid creating conflicts with other plugins by using the same shortcode name. Although doing so is good practice because it helps prevent code conflicts, looking up a shortcode's name each time you want to use it can be annoying.

The Posts in Page plugin (available at `https://wordpress.org/plugins/posts-in-page/installation`) provides an example of how shortcodes can be hard to remember. It comes with two shortcodes: `ic_add_post` and `ic_add_posts`. From a developer standpoint, these names make sense, because the plugin author is IvyCat. Thus, the initials `ic` prefix each shortcode name, helping ensure that the shortcode names are unique. From a user standpoint, however, the names just cause frustration.

A nice feature of shortcodes is that the code that handles the shortcode can be connected to multiple names, which means that you can add extra names for a shortcode rather than simply change the old name to a new name. Adding a second name is helpful because it prevents any existing uses of the old shortcode name from breaking after the change.

Searching the plugin's files for `add_shortcode` — the function that creates new shortcodes — shows that the shortcodes are created in the `posts_in_page.php` file. The two lines of code that create the current shortcodes are on lines 45 and 46 and look like this:

```
add_shortcode( 'ic_add_posts', array( &$this, 'posts_in_page' ) );
add_shortcode( 'ic_add_post', array( &$this, 'post_in_page' ) );
```

The new name for ic_add_posts will be show-posts. The new name for ic_add_post will be show-post. To add these shortcodes, simply copy and paste the original two add_shortcode function calls and then modify each shortcode name to be the new name. After you make the changes, lines 45 and 46 look like the following:

```
add_shortcode( 'show-posts', array( &$this, 'posts_in_page' ) );
add_shortcode( 'show-post', array( &$this, 'post_in_page' ) );
```

The functionality is exactly the same as the ic_add_posts shortcode; it simply has a name that you can remember more easily.

TIP

It's possible to register additional names for a specific shortcode without modifying the shortcode's plugin code. You can accomplish this registration by creating a custom plugin that simply has the add_shortcode function call that connects the new shortcode name with the callback function name (the second argument of the function). Creating new plugins is discussed in Book 7, Chapter 5.

IN THIS CHAPTER

- » Creating a valid plugin
- » Filtering content
- » Adding shortcodes and widgets
- » Creating a plugin settings page

Chapter 5

Creating Simple Plugins from Scratch

You can extend WordPress functionality through plugins and themes without modifying any WordPress core files. This method allows customizing WordPress while still permitting easy upgrades when new versions of WordPress are released. By using the WordPress software's built-in *action hooks* (placeholder functions that allow plugin developers to execute code hooked into them) and *filter hooks* (other placeholder functions that you can use to apply parameters to filter results), you can create just about any functionality you can imagine.

This chapter takes you on a crash course in creating plugins. The plugins I show you how to build start simple and iteratively introduce new concepts as the functionality gets deeper and more complex. Having a foundational knowledge of PHP is helpful for getting the most out of this chapter, but even beginning PHP developers should be able to get value out of each project.

REMEMBER

This book doesn't turn you into a PHP programmer or MySQL database administrator; Book 2, Chapter 3 gives you a glimpse of how PHP and MySQL work together to help WordPress build your website. If you're interested in finding out how to program PHP or becoming a MySQL database administrator, check out *PHP, MySQL, JavaScript & HTML5 All-in-One For Dummies* by Steve Suehring and Janet Valade (John Wiley & Sons, Inc.).

WARNING

You may be tempted to edit the core code of WordPress rather than write a plugin to achieve the desired functionality. This method isn't recommended; it makes upgrading difficult and can cause various problems, including serious security issues.

To make plugin development safer, use a test site so that you don't introduce bugs that can break your site. Breaking an active site while developing a plugin is an easy way to annoy visitors.

When writing a plugin, use a simple text editor such as Notepad (Windows) or TextEdit (Mac). Don't use the editors built into WordPress to edit code; they can introduce bugs that can break the site.

Understanding Plugin Structure

All that's required for WordPress to see a plugin is a PHP file in the `wp-content/plugins` directory of the site, with some special information at the top of the file. This information at the top of a plugin file, typically referred to as the plugin's *file header*, is what WordPress looks for when determining which plugins are installed on the site. A freshly installed WordPress site makes a good starting point to understand how this structure works in practice.

Inspecting WordPress's core plugins

As discussed in Book 7, Chapter 1, WordPress includes two core plugins: Akismet and Hello Dolly. Looking at the files for each of these plugins helps you understand how you can structure your own plugins.

Inside a fresh WordPress site's `wp-content/plugins` directory, you find a directory named `/akismet` and two files named `hello.php` and `index.php`. The `hello.php` file is for the Hello Dolly plugin and has the following text at the top of the file:

```
<?php
/**
 * @package Hello_Dolly
 * @version 1.6
 */
/*
Plugin Name: Hello Dolly
Plugin URI: https://wordpress.org/plugins/hello-dolly/
```

```
Description: This is not just a plugin, it symbolizes the hope and enthusiasm
    of an entire generation summed up in two words sung most famously by
    Louis Armstrong: Hello, Dolly. When activated you will randomly see a
    lyric from <cite>Hello, Dolly</cite> in the upper right of your admin
    screen on every page.
Author: Matt Mullenweg
Version: 1.6
Author URI: http://ma.tt/
*/
```

This section is the file header, which tells WordPress about the plugin. The Plugin Name, Plugin URI, and Description sections of the file header are referred to as *fields.* I discuss the fields and their uses in Book 7, Chapter 6.

WARNING

If you remove the file header, the Hello Dolly plugin becomes unavailable, because WordPress no longer recognizes it as a plugin.

Open the `index.php` file in the `/wp-content/plugins/` folder, and you see the following few lines of code:

```
<?php
// Silence is golden.
?>
```

Because this file doesn't have a file header, it isn't a plugin. The file is in the `plugins` directory to prevent people from going to *domain.com*`/wp-content/plugins` (where *domain.com* is your site's domain name) to get a full listing of all the plugins on your site. Because the `index.php` file doesn't output anything, people who are trying to get a list of your plugins simply see a blank screen.

All that remains in the `/wp-content/plugins` directory is the `/akismet` directory. Inside this directory are three files: `admin.php`, `akismet.php`, and `legacy.php`. If you open each file, you can see that only the `akismet.php` file contains the file header:

```
/**
 * @package Akismet
 */
/*
Plugin Name: Akismet
Plugin URI: https://akismet.com/
Description: Used by millions, Akismet is quite possibly the best way in the
    world to <strong>protect your blog from spam</strong>. It keeps your site
    protected even while you sleep. To get started: 1) Click the "Activate"
    link to the left of this description, 2) <a href="https://akismet.com/
    get/">Sign up for an Akismet plan</a> to get an API key, and 3) Go to
    your Akismet configuration page, and save your API key.
```

```
Version: 3.2
Author: Automattic
Author URI: https://automattic.com/wordpress-plugins/
License: GPLv2 or later
Text Domain: akismet
*/
```

Because the `akismet.php` file has the file header, WordPress recognizes the `/akismet` directory as a plugin. If the `akismet.php` file is removed, the Akismet plugin disappears from the listing of available plugins in your WordPress installation. (On the Dashboard, click the Plugins link to see the Plugins page.)

Knowing the requirements

Looking at the way the default plugins are set up gives you an idea of how to set up your plugins, but knowing all the requirements is nice so that you don't make mistakes. The reality is that WordPress has very few requirements for plugin setup.

Requirement 1: File header

The file header allows WordPress to recognize your plugin. Without this key piece of information, your plugin won't show up as an available plugin, and you won't be able to activate it.

Although the file header has many fields, only Plugin Name is required. The following is a valid file header, for example:

```
/*
Plugin Name: Example Plugin
*/
```

Providing additional information can be very helpful, of course, but if you're making a plugin for yourself quickly, the plugin name is all that's required. See Book 7, Chapter 6 for more information about the file header.

Requirement 2: Correct placement of main plugin file

The main plugin file (the one with the file header) must be in the `/wp-content/plugins` directory or inside a directory immediately inside the `/wp-content/plugins` directory.

Here are some examples of valid locations for the main plugin `.php` file:

- `wp-content/plugins/example.php`
- `wp-content/plugins/example/example.php`

Here are some examples of invalid locations for the main plugin `.php` file:

- `wp-content/example.php`
- `wp-content/plugins/example/lib/example.php`

WARNING

You can place the main plugin file too deep. WordPress looks only in the `/wp-content/plugins` directory and inside the first level of the directories contained in `/wp-content/plugins` — no deeper. If you place the file too deep within the plugin directory, it won't work.

Following best practices

WordPress's requirements for plugins are very lax, allowing you to set up your plugin any way you want. You can name the main plugin file and plugin directory anything you like. You can even put multiple main plugin files inside a single directory. Just because you can, however, doesn't mean that you should. Following are some best practices that create some consistency.

Best Practice 1: Always use a plugin directory

Hello Dolly doesn't reside in a directory because it's simple enough to need only one file. Each plugin should reside in its own directory, however, even if it needs only one file.

When you create a plugin, a single file may be enough to do what you need, but further development may require adding more files. It's better to put the plugin in a directory from the start than to restructure it later.

WARNING

Moving or renaming a main plugin file deactivates the plugin, because WordPress stores the plugin's activation state based on the path to the main plugin file.

Do yourself and any users of your plugin a favor: Always place your plugins inside a directory.

Best Practice 2: Use meaningful, unique names

When doing any WordPress development (whether for a plugin or theme), keep in mind that your code shares space with code written by other people (other plugin developers, WordPress core developers, theme developers, and so on). This fact means that you should never use simple names for anything; the names of your plugins should be unique.

You might think that naming a plugin Plugin allows you to move past the boring stuff and on to development, but it just makes everything difficult to keep track of. If your plugin produces a widget that displays a list of recent movie reviews, for example, Lisa Sabin-Wilson's Movie Reviews Widget Plugin is much more meaningful than Widget Plugin.

Best Practice 3: Match the plugin and plugin directory names

Make sure that your plugin's directory name makes it easy to find the plugin in the `/wp-content/plugins` directory.

Going with the preceding example, having Lisa Sabin-Wilson's Movie Reviews Widget in a `widget` directory makes finding the widget difficult. The directory name doesn't have to match, but it should make sense. Some good directory names for this example would be `/movie-reviews-widget`, `/lsw-movie-reviews-widget`, and `/movie-reviews`.

Best Practice 4: Don't use spaces in directory or filenames

Although modern desktop operating systems can handle directories and files that have spaces in the names, some web servers can't. A good practice is to use a hyphen (-) in place of a space when naming files and directories. In other words, use `movie-reviews-widget` rather than `movie reviews widget`.

Avoiding using spaces in file and directory names will save you many headaches.

Best Practice 5: Use consistent main plugin filenames

Although you can name the plugin's main file anything, coming up with a consistent naming scheme for plugins is a good idea.

The most popular naming scheme matches the main plugin `.php` filename with the plugin directory name. The main plugin file for a plugin directory called `/movie-reviews`, for example, might be is `movie-reviews.php`. The problem with this naming scheme is that it doesn't mean anything. A plugin filename should always indicate that file's purpose. The purpose of the `movie-reviews.php` file is clear only when you know that many developers name the main plugin file the same as the plugin directory.

Another naming scheme uses a consistent filename for all plugins. A main plugin file called `init.php`, for example, indicates that the file is used to initialize the plugin. (`init` is the abbreviation for *initialize*.) The name `init.php` makes the purpose of the file clear regardless of the plugin name or purpose.

Creating Your First Plugin

When you're developing something new, taking very small steps usually is the best approach. That way, if something breaks, the problem is clear. Doing multiple new things at the same time makes finding where something went wrong difficult.

Sticking with this concept, the first plugin you create in this chapter is a plugin that can be activated and deactivated but doesn't do anything. In other words, it's a fully functional plugin shell that's ready for code to be added.

Because this plugin is an example that doesn't do anything, I named it Example: Do Nothing.

Uploading the plugin file to a directory

For this plugin, all you need is a main plugin file. Follow these steps to upload the plugin file to its own directory:

1. **Connect to your web server via SFTP.**

   Check out Book 2, Chapter 2 for details on using SFTP.

2. **Browse to the `/wp-content/plugins` directory in your WordPress installation directory.**

   If you're unsure where your WordPress installation directory is located, see Book 2, Chapter 4, where I cover installing WordPress on your web server.

3. **Create a new directory within `/wp-content/plugins` called `/example-do-nothing`.**

   Most SFTP programs allow you to right-click within the folder and choose Add New Folder or Add New Directory from the contextual menu.

4. **Create an empty `.php` file with the filename `init.php`.**

   Use your favorite text editor, such as Notepad for PC or TextEdit for Mac, to open a new file; then save it with the filename `init.php`.

5. **Upload your blank `init.php` file to `/wp-content/plugins/example-do-nothing`.**

   Your plugin directory and plugin file are set up. In the next section, you add code to the `init.php` plugin file.

Adding the file header

Open the `init.php` file you created in "Uploading the plugin file to a directory" earlier in this chapter. (Most SFTP programs have built-in text editors that allow you to right-click the file and choose Edit from the contextual menu.) Add the following lines of code to create the file header:

```
<?php
/*
Plugin Name: Example: Do Nothing
Description: This plugin does nothing. It is an example of how to create a
   valid WordPress plugin.
*/
```

TIP

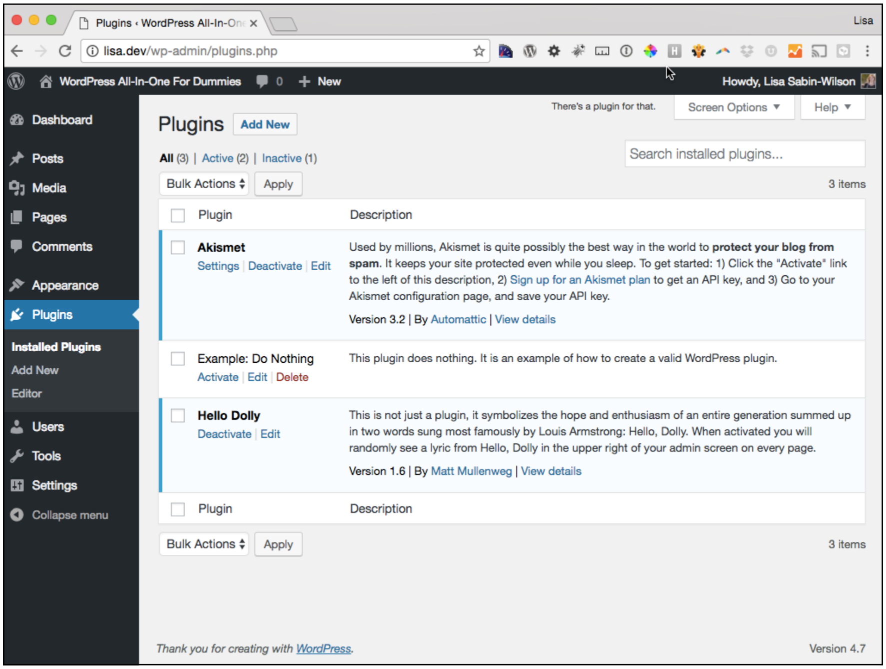
Adding the `?>` tag at the end of a `.php` file is optional at this point. Leaving the tag out is helpful because it prevents you from accidentally adding code after it, which may cause the PHP code to break.

Adding a plugin description isn't necessary, but a description makes the purpose of the plugin clear to anyone who reads your code. Additionally, the plugin description displays on the Plugins page on your Dashboard to give users a good idea of the purpose of your plugin. When developing, you wind up with many plugins that you used for simple tests or didn't finish. Having solid names and descriptions imposes order on the chaos so that you don't forget important code or accidentally delete it.

Be sure to save the `init.php` file and upload it to the `/wp-content/plugins/example-do-nothing` directory on your web server.

Testing the plugin

After modifying the `init.php` file and saving it in the `/wp-content/plugins/example-do-nothing` directory, visit your WordPress Dashboard, and click the Plugins link on the navigation menu to view the Plugins screen. Your new plugin is listed with the title Example: Do Nothing, as shown in Figure 5-1.



Plugins Add New

All (3) | Active (2) | Inactive (1)

Bulk Actions Apply 3 items

Plugin	Description
□ **Akismet** Settings | Deactivate | Edit	Used by millions, Akismet is quite possibly the best way in the world to **protect your blog from spam**. It keeps your site protected even while you sleep. To get started: 1) Click the "Activate" link to the left of this description, 2) Sign up for an Akismet plan to get an API key, and 3) Go to your Akismet configuration page, and save your API key. Version 3.2 | By Automattic | View details
□ Example: Do Nothing Activate | Edit | Delete	This plugin does nothing. It is an example of how to create a valid WordPress plugin.
□ **Hello Dolly** Deactivate | Edit	This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page. Version 1.6 | By Matt Mullenweg | View details
□ Plugin	Description

Bulk Actions Apply 3 items

Thank you for creating with WordPress. Version 4.7

FIGURE 5-1: The Plugins page, showing the sample plugin in the list.

Click the Activate link directly below the title. The Plugins page displays a `Plugin activated` message, which indicates that the Example: Do Nothing plugin was activated in your WordPress installation. Although your new plugin doesn't do anything, you have a simple WordPress plugin with the correct file structure, naming conventions, and headers.

Fixing Problems

Potentially, several things could go wrong. If you're having problems, delete the plugin file from its directory and start over. If you still have problems, the following sections cover some common issues and give you possible solutions that you can try.

White screen of nothingness

A common problem in plugin development is making a change and finding that every attempt to load the site in your browser window results in a blank white screen. A code error is breaking WordPress when it tries to run your plugin code.

A quick way to fix this problem is to rename the /wp-content/plugins/example-do-nothing plugin directory on your web server to something like /wp-content/plugins/old.example-do-nothing. This change causes automatic deactivation of the plugin, because WordPress won't be able to locate it.

Before changing the name back, go to the Plugins page of your Dashboard. A message at the top of the page states The plugin example-do-nothing/init.php has been deactivated due to an error: Plugin file does not exist. This message confirms that WordPress fully deactivated the broken plugin; now you should be able to load your website successfully without seeing the dreaded white screen of nothingness. After that, you can change the filename back, fix your problem, and try again. If the plugin is still broken, WordPress prevents the plugin from activating and gives you details about the error.

Unexpected output error

When you activate a plugin from your Dashboard and see an error message about unexpected output on the Plugins page, you have code or text within the main plugin .php file that is outside a <?php ?> code block. Every PHP function must start with a command that tells your web server to initiate (or start) PHP. If your plugin file is missing the <?php line, an unexpected-output error occurs, and WordPress doesn't activate your plugin.

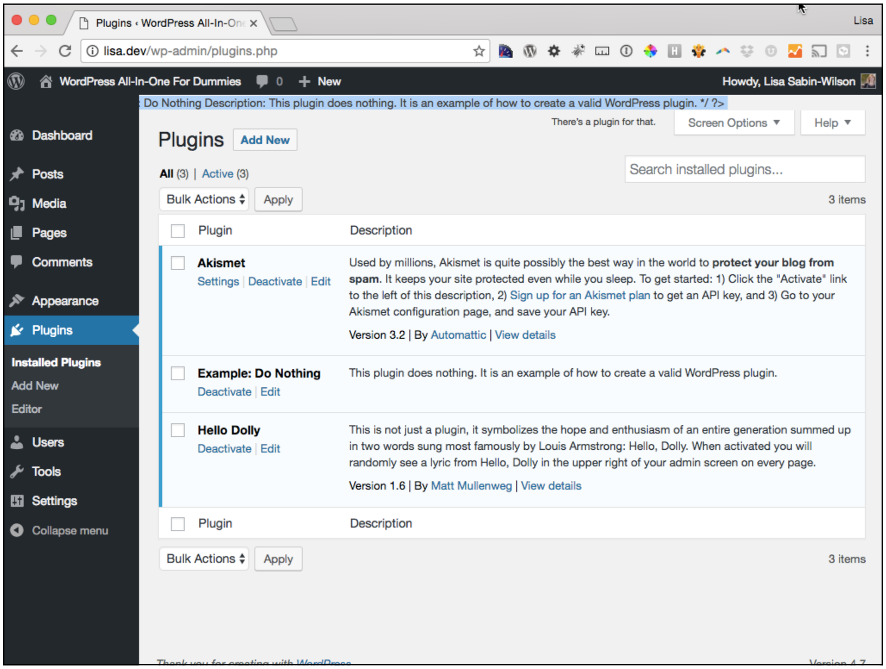
Have some fun; try to create this error so that you'll know it when you see it. You can intentionally create the error by following these steps:

1. **Connect to your web server via SFTP.**
2. **Browse to the /wp-content/plugins/example-do-nothing directory.**
3. **Open the init.php file in your text editor.**
4. **Remove the <?php line from the top of the init.php file.**
5. **Save the init.php file.**
6. **Upload the file to the /wp-content/plugins/example-do-nothing directory.**

When you try to activate the Example: Do Nothing plugin, the text of the plugin header displays at the top of the Plugins page, as shown in Figure 5-2:

```
/* Plugin Name: Example: Do Nothing Description: This plugin does
nothing. It is an example of how to create a valid WordPress
plugin. */.
```

All this fuss occurs because of a missing <?php line.



```
Do Nothing Description: This plugin does nothing. It is an example of how to create a valid WordPress plugin. */ ?>
```

□ Plugin	Description
□ **Akismet** Settings | Deactivate | Edit	Used by millions, Akismet is quite possibly the best way in the world to **protect your blog from spam.** It keeps your site protected even while you sleep. To get started: 1) Click the "Activate" link to the left of this description, 2) Sign up for an Akismet plan to get an API key, and 3) Go to your Akismet configuration page, and save your API key. Version 3.2 | By Automattic | View details
□ **Example: Do Nothing** Deactivate | Edit	This plugin does nothing. It is an example of how to create a valid WordPress plugin.
□ **Hello Dolly** Deactivate | Edit	This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page. Version 1.6 | By Matt Mullenweg | View details
□ Plugin	Description

FIGURE 5-2: An output error message displayed on the Plugins page.

Filtering Content

It's time to create a WordPress plugin that actually does something and, in the process, discover more basics of WordPress plugin development.

A powerful feature of WordPress is its numerous filters. By latching code to a filter, you can modify information as it flows through WordPress; therefore, you can modify the information that WordPress displays or stores.

Suppose that you have a habit of using contractions far too often. Your readership mocks you and your penchant for the practice of merging words. At night, you worry about whether you missed an instance of *it's, we're,* or *I'll.*

This habit is causing you to lose sleep. You tried listening to the self-help tapes; you reviewed every word and went to therapy to find the deep-seated cause of your craving for contractions. Despite your best efforts and the continuous ridicule, you can't help but sound like an etiquette contrarian.

Fortunately, a cure is available. With a simple filter and a bit of code, you can create a simple WordPress plugin that disguises your grammatical ailment — as you do in the next section of this chapter, "Creating a plugin that filters content."

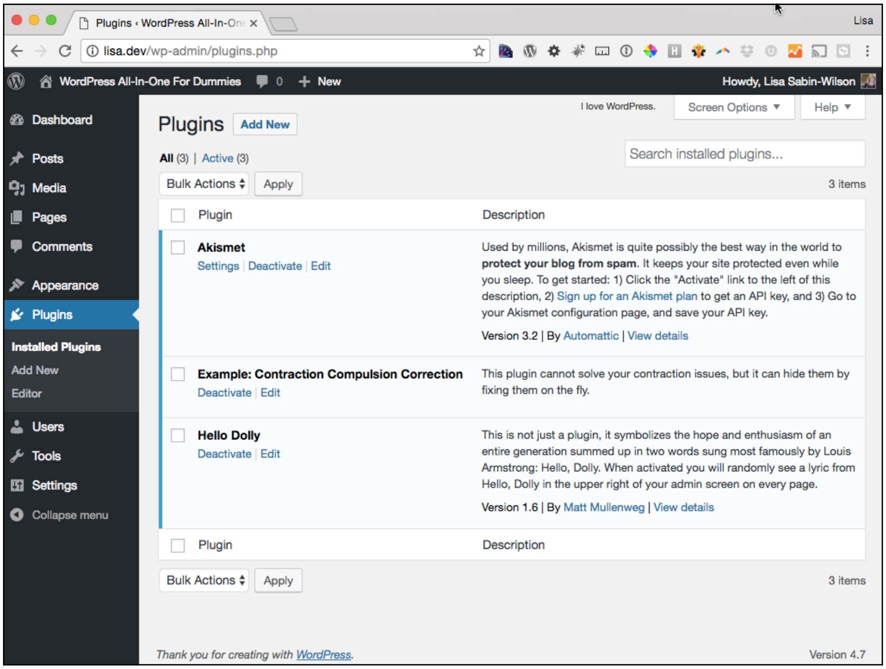
Creating a plugin that filters content

The plugin that you create in this section is Example: Contraction Compulsion Correction; it resides in a directory called `/example-contraction-compulsion-correction` with a main plugin file named `init.php`. To create the directory and main plugin file, follow the procedures in “Creating Your First Plugin” earlier in this chapter.

Add the following file header to the top of the main plugin (`init.php`) file:

```
<?php
/*
Plugin Name: Example: Contraction Compulsion Correction
Description: This plugin cannot solve your contraction issues, but it can
   hide them by fixing them on the fly.
*/
?>
```

Save the `init.php` file and then visit the Plugins page on your Dashboard. The Example: Contraction Compulsion Correction plugin appears there, as shown in Figure 5-3.



Plugins Add New

All (3) | Active (3)

Search installed plugins...

Bulk Actions Apply 3 items

□ Plugin	Description
□ **Akismet** Settings | Deactivate | Edit	Used by millions, Akismet is quite possibly the best way in the world to **protect your blog from spam**. It keeps your site protected even while you sleep. To get started: 1) Click the "Activate" link to the left of this description, 2) Sign up for an Akismet plan to get an API key, and 3) Go to your Akismet configuration page, and save your API key. Version 3.2 | By Automattic | View details
□ **Example: Contraction Compulsion Correction** Deactivate | Edit	This plugin cannot solve your contraction issues, but it can hide them by fixing them on the fly.
□ **Hello Dolly** Deactivate | Edit	This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page. Version 1.6 | By Matt Mullenweg | View details
□ Plugin	Description

Bulk Actions Apply 3 items

Thank you for creating with WordPress. Version 4.7

FIGURE 5-3: The Plugins page showing your new plugin in the list.

Testing the filter

The filter you use in this section is the_content, which replaces all the content in your site's posts and pages with a simple message. If the filter works as expected, you can expand it to hide the contractions that you published in your posts (or pages).

TIP

the_content is just one of hundreds of filters in WordPress. You can find information about filters in the WordPress.org Codex (https://codex.wordpress.org/Plugin_API/Filter_Reference).

Include the the_content filter in your plugin to replace all the content on your website (posts and pages) with a single phrase. (You change the content that gets filtered in the following section to filter the contractions out of your published content.) Follow these steps:

1. **Connect to your web server via SFTP.**
2. **Browse to this directory:**

```
/wp-content/plugins/example-contraction-compulsion-correction
```

3. **Open the init.php file in your text editor.**
4. **Type the following lines of code at the end of the file (after the file header) but before the closing ?>:**

```
add_filter('the_content','my_filter_the_content');

function my_filter_the_content($content) {
  $content = "Test content replacement.";
  return $content;
}
```

5. **Save your init.php file, and upload it to the /wp-content/plugins/example-contraction-compulsion-correction folder.**

The first line of code in Step 4 tells WordPress to apply the filter after the plugin is activated. The next few lines of code define the function (function my_filter_the_content ($content)) with a variable ($content), define the $content variable ($content = “Test content replacement.”;), and tell WordPress to return $content within the body of your published posts and pages. Check out the nearby sidebar "Using curly brackets (complex syntax)" for information about using correct PHP syntax.

USING CURLY BRACKETS (COMPLEX SYNTAX)

You see curly brackets within code. Curly brackets (referred to as *complex syntax* in the PHP Manual (`http://www.php.net/manual/en/language.types.string.php`) serve to open and then close the function definition, or expression. The code samples in "Testing the filter" name the function `function my_filter_the_content ($content)`. An open curly bracket, indicating the start of the function expression, follows that line. Immediately after the two lines `$content="Test content replacement.";` and `return $content`, which are the expression for the function, you see the closing curly bracket that indicates the end of the function expression. Without these curly brackets, your code won't work correctly.

Check out the entire PHP manual online at `http://php.net/manual/en/index.php` to brush up on correct PHP code syntax, such as when to use single quotation marks instead of double quotation marks and how to use the semicolon (`;`).

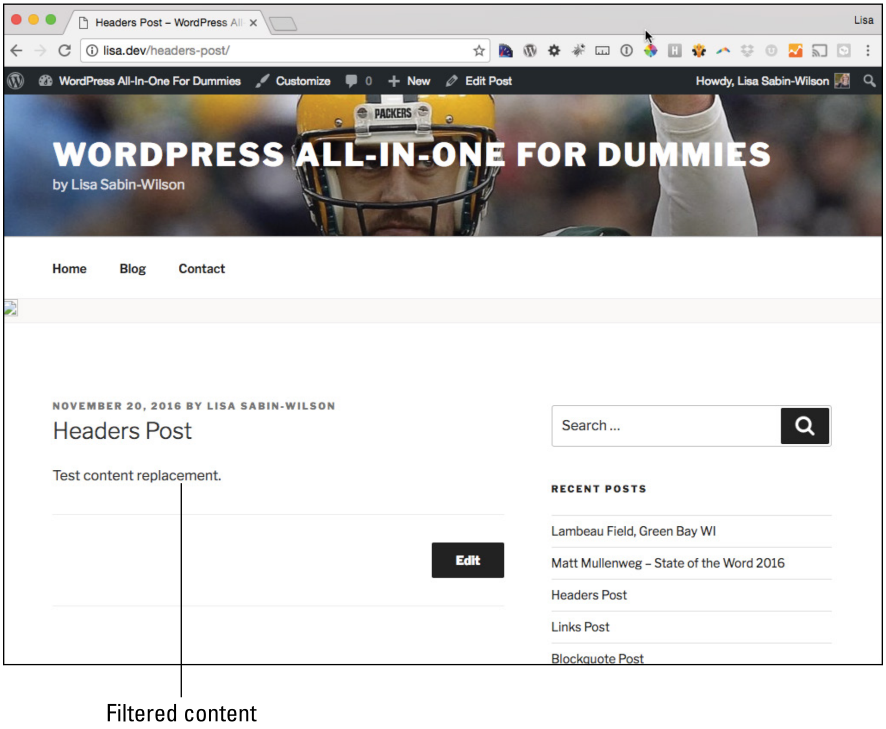
With the `the_content` filter in place in your plugin, visit the Plugins page of your Dashboard, and activate the Example: Contraction Compulsion Correction plugin. After you activate the plugin, view any post or page on your website. The result: `Test content replacement` replaces the content of that entry. Your new plugin is filtering content on your website. (See Figure 5-4.) In the next section, "Replacing contractions in your content," you apply the real filter that fulfills the purpose of the plugin you're creating.

Replacing contractions in your content

To replace all the contractions in your content with full phrases or words, change the code in the `init.php` plugin file. Follow these steps:

1. **Connect to your web server via SFTP.**
2. **Browse to the `/wp-content/plugins/example-contraction-compulsion-correction` directory.**
3. **Open the `init.php` file in your text editor.**
4. **Remove the following lines of code:**

```
add_filter('the_content','my_filter_the_content');
function my_filter_the_content($content) {
  $content = "Test content replacement.";
  return $content;
}
```



Test content replacement.

FIGURE 5-4: Filtered content on your website.

5. **Type the following lines of code at the end of the file (after the file header):**

```
add_filter('the_content','my_filter_the_content');
function my_filter_the_content($content) {
  $replacements = array(
    "isn't" => "is not",
    "we'll" => "we will",
    "you'll" => "you will",
    "can't" => "cannot",
    );
  foreach($replacements as $search => $replace) {
    $search = str_replace("'","’",$search);
    $content = str_replace(ucfirst($search),ucfirst($replace),$content);
    $content = str_ireplace($search,$replace,$content);
  }
  return $content;
}
```

6. **Save your `init.php` file, and upload it to the `/wp-content/plugins/-contraction-compulsion-correction` folder.**

An array holds the text to search for and to use as the replacement. The array defines the words you're replacing within your content and loops to make all the replacements. In this example, *isn't* is replaced by *is not*, *we'll* is replaced by *will not*, and so on. This example covers only a small subset of the contractions, however. You have to modify the example to fit your specific contraction compulsions.

TIP

You may notice that much more than just a simple replacement is going on in The Loop. The code also uses the `str_replace` function, which replaces all occurrences of the search string with the replacement string.

The first replacement (`$search = str_replace("'","’",$search);`) is needed because WordPress changes single quotes to a fancy version represented by “’”. `$search = str_replace("'","’",$search);` searches for the instances of the single quote, and then `$content = str_replace("’","’",$content);` replaces the single quote in the content. `$search = str_replace("'","’",$search);` allows the replacements array to have normal-looking searches with regular single quotes.

The third search and replace statement (`$content = str_replace(ucfirst ($search),ucfirst($replace),$content);`) replaces content matches that have an uppercase first letter with a replacement that also has an uppercase first letter.

The last search and replace statement: (`$content = str_ireplace($search, $replace,$content);`) does a non-case-sensitive search to replace all remaining matches with the lowercase version of the replacement.

To test your contraction replacement plugin, follow these steps:

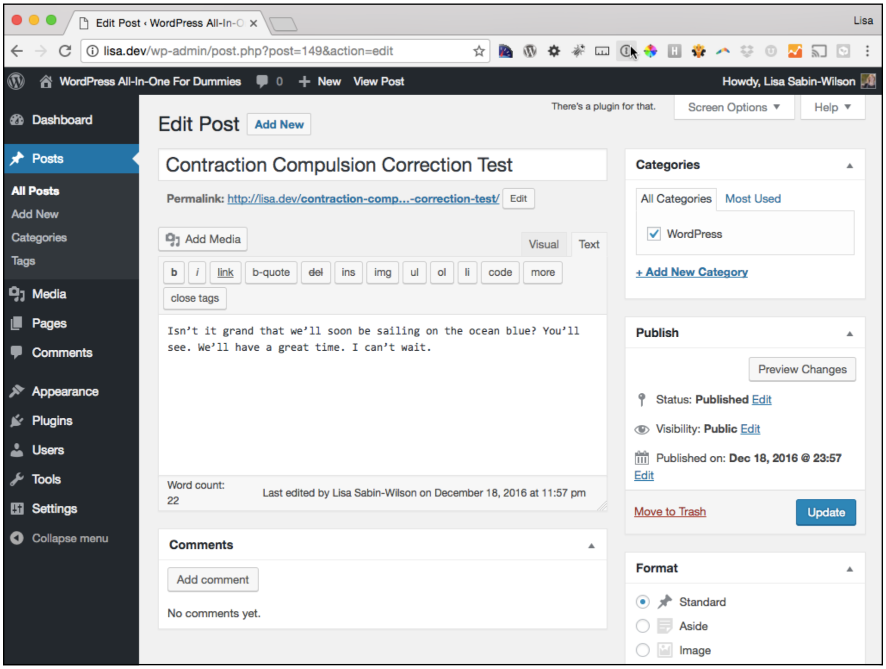
1. **Log in to your Dashboard.**
2. **Visit the Add New Post page (by hovering your cursor over Posts and then clicking the Add New link).**

   The Add New Post page loads on your Dashboard so that you can write and publish a new post. (See Book 4, Chapter 1.)
3. **Type a title for your post in the Title text field.**
4. **Type the following text in the post editor:**

   Isn't it grand that we'll soon be sailing on the ocean blue? You'll see. We'll have a great time. I can't wait.

   Notice the contractions *Isn't, we'll, You'll, We'll,* and *can't.* Figure 5-5 shows an Add New Post page that contains these phrases.
5. **Publish your post by clicking the Publish button.**

   Figure 5-6 displays the post on a website with the contractions replaced by the appropriate words, as defined in the plugin function.



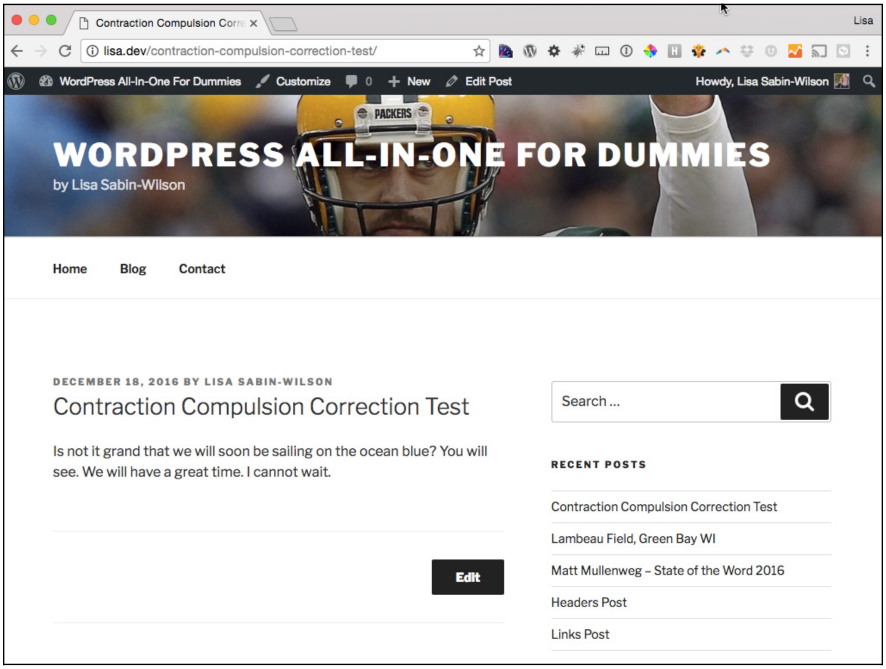
Contraction Compulsion Correction Test

```
Isn’t it grand that we’ll soon be sailing on the ocean blue? You’ll
see. We’ll have a great time. I can’t wait.
```

Word count: 22

Last edited by Lisa Sabin-Wilson on December 18, 2016 at 11:57 pm

FIGURE 5-5: The Add New Post page with the contractions in place.



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lisa.dev/contraction-compulsion-correction-test/
WordPress All-In-One For Dummies
Customize
New
Edit Post
Howdy, Lisa Sabin-Wilson
WORDPRESS ALL-IN-ONE FOR DUMMIES
by Lisa Sabin-Wilson
Home
Blog
Contact
Search ...
RECENT POSTS
Contraction Compulsion Correction Test
Lambeau Field, Green Bay WI
Matt Mullenweg – State of the Word 2016
Headers Post
Links Post
Edit

DECEMBER 18, 2016 BY LISA SABIN-WILSON

Contraction Compulsion Correction Test

Is not it grand that we will soon be sailing on the ocean blue? You will see. We will have a great time. I cannot wait.

FIGURE 5-6: The published post with contractions replaced.

Creating Shortcodes

You can use the the_content filter to add new sections of content to posts and pages, such as a form that visitors can use to subscribe to new posts. This type of all-or-nothing method of adding content often adds content where it isn't wanted, however. Using a shortcode is often a much better solution; it offers flexibility and ease of use because shortcode is a shorthand version of fully executable code.

You can employ shortcodes for a wide variety of uses. WordPress includes a [gallery] shortcode, for example, that you can add to any post to display a gallery of images assigned to that post in place of the shortcode. (See Book 4, Chapter 3 for details on adding photo galleries to your posts.) Many plugins (such as those for a forum or contact form) use shortcodes to allow plugin users to designate specific pages where the plugin front end should appear. These shortcodes can surround sections of content, allowing the code that powers the shortcode to modify the content.

Shortcodes can

- **Stand alone:** The [gallery] shortcode built into WordPress is a good example. Simply adding [gallery] to the content of a page or post is all you need to do to allow the shortcode to insert a gallery of uploaded images and display them within the body of a post or page.
- **Support arguments that pass specific information to the shortcode:** This shortcode gives the default WordPress gallery a width of 400 pixels and the caption My Venice Vacation:

  ```
  [gallery width="400" caption="My Venice Vacation"
  ```

- **Surround a section of content the way HTML tags can:** This shortcut allows the shortcode to modify specific sections of content, such as [code lang="php"]<?php the_title(); ?>[/code]. (The "code" shortcode doesn't exist by default in WordPress. You build it in the upcoming section "Building a simple shortcode.")

Setting up the shortcode plugin

This plugin, Example: My Shortcodes, resides in a directory called /example-my-shortcodes with a main plugin file named init.php.

The reason for the relatively generic name is that you can use this plugin to create multiple shortcodes. To start, create the directory and main plugin file (see “Creating Your First Plugin” earlier in this chapter for instructions), and add the following file header to the init.php file:

```
<?php
/*
Plugin Name: Example: My Shortcodes
Description: This plugin provides the digg and code shortcodes.
*/
?>
```

Building a simple shortcode

In many ways, shortcodes are coded like filters (similar to the the_content filter) except that with shortcodes, the content to be filtered is optional. For this shortcode, you won’t worry about content filtering or shortcode attributes; the shortcode is simple enough that it doesn’t need either.

The shortcode you create in this section is named [digg]. Adding this shortcode to a post displays a Digg This Post link, which allows that post to be submitted to http://digg.com (a site for keeping track of interesting links).

Creating a shortcode requires two things:

- **Shortcode function:** This function handles the creation of the shortcode and a call to the add_shortcode function.
- **Shortcode arguments:** The add_shortcode function accepts two arguments: the name of the shortcode and the function used by the shortcode.

To get started with your shortcode, add the following code to the end of the Example: My Shortcodes plugin’s init.php file, before the closing ?>:

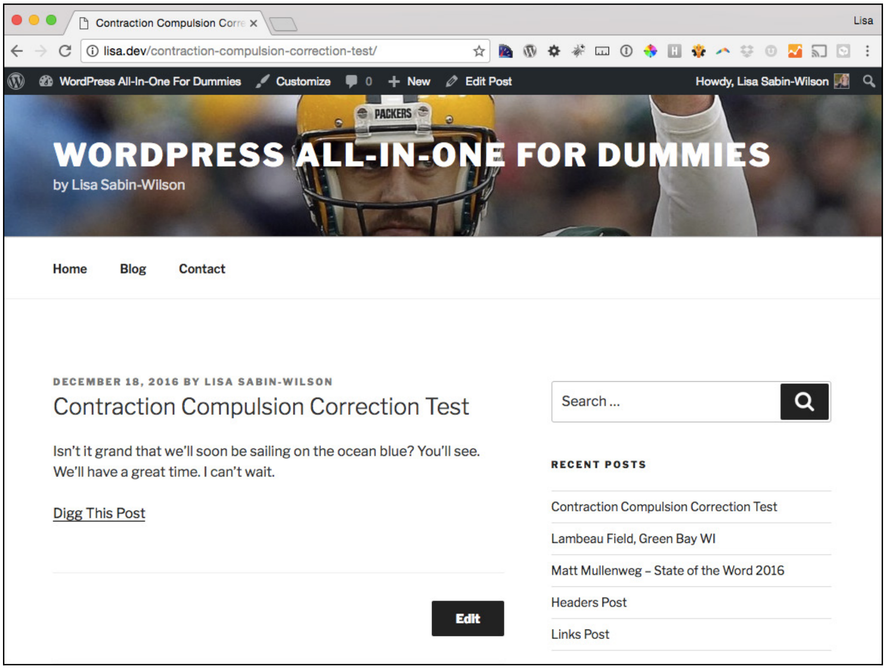
```
add_shortcode('digg','my_digg_shortcode');

function my_digg_shortcode() {
return "<p><a href='http://digg.com/submit?url=".urlencode(get_permalink()).
   "&bodytext=".urlencode(get_the_title())."'>Digg This Post</a></p>";
}
```

REMEMBER

HTML links have to follow some rules because only certain characters are permitted. The urlencode function used for both get_permalink and get_the_title, for example, ensures that the information added to the link results in the creation of a valid link.

Save the changes, make sure that the plugin is active, and then add a post that has `[digg]` in the content. If everything works properly, you should see a Digg This Post link in place of the shortcode when you view the post on your website. (See Figure 5-7.)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lisa.dev/contraction-compulsion-correction-test/
WordPress All-In-One For Dummies
Customize
0
New
Edit Post
Howdy, Lisa Sabin-Wilson
PACKERS
WORDPRESS ALL-IN-ONE FOR DUMMIES
by Lisa Sabin-Wilson
Home
Blog
Contact
Search ...
RECENT POSTS
Contraction Compulsion Correction Test
Lambeau Field, Green Bay WI
Matt Mullenweg – State of the Word 2016
Headers Post
Links Post
Edit

DECEMBER 18, 2016 BY LISA SABIN-WILSON

Contraction Compulsion Correction Test

Isn't it grand that we'll soon be sailing on the ocean blue? You'll see. We'll have a great time. I can't wait.

Digg This Post

FIGURE 5-7: Digg This Post link added to a post.

Shortcodes can display depending on specific criteria. It's easy to modify the `[digg]` shortcode to display the Digg This Post link if an individual post is being viewed rather than a list, such as the home page or a category archive. The following code shows an updated `my_digg_shortcode` function that uses the `is_single` template tag function to return an empty string if an individual post isn't being viewed:

```
add_shortcode('digg','my_digg_shortcode');

function my_digg_shortcode() {
  if(!is_single()) return '';

  return "<p><a href='http://digg.com/submit?url=".urlencode(get_
    permalink()). "&bodytext=".urlencode(get_the_title())."'>Digg This Post
    </a></p>";
  }
```

Notice the exclamation point (!) in front of the is_single function call. In PHP language, the exclamation point means *not.* Therefore, the if statement translates to "If the current view is not a single post, return an empty string." Because the if statement fails when the view is a single post, the original functionality of returning the Digg This Post link is used. The function fires only when a visitor is viewing a single, individual post page, not when the visitor is viewing any other type of page (such as a static page or a category archive page).

Using shortcode attributes

By using attributes, you can customize the shortcode output to meet specific needs without having to rewrite an existing shortcode or create a new one.

The [digg] shortcode is a good example of how you can use an attribute to customize the shortcode output. Notice that the generated link to Digg includes bodytext=. The text added after bodytext= is the default description text for the submitted link, which is the text that displays on your site. The shortcode sends the title of the post (get_the_title). Via an attribute, this behavior can be made default behavior while allowing the user to supply a customized description.

To add the attribute support, you need to update the my_digg_shortcode function again. Update the function to match the following:

```
add_shortcode('digg','my_digg_shortcode');

function my_digg_shortcode($attributes=array()) {
if(!is_single()) return '';

$attributes=shortcode_atts(
array('description'=>get_the_title()),
$attributes
);
extract($attributes);

return "<p><a href='http://digg.com/submit?url=".urlencode(get_permalink()).
   "&bodytext=".urlencode($description)."'>Digg This Post</a></p>";
}
```

Note the following:

- The $attributes argument is added to the my_digg_shortcode function declaration. Without this argument, the shortcode function can't receive any of the attributes set on the shortcode. The =array() ensures that the

$attributes variable is set to an empty array if the shortcode doesn't have any attributes set.

- The call to the shortcode_atts function passes in an array of default attribute values and merges these defaults with the attributes used in the actual shortcode. Then the code stores this resulting array back in the $attributes variable. Without this section, the attributes won't have a default value.

  TIP

  It's a good idea to set the defaults even if the default is an empty string.
- The extract function takes the array of attributes and breaks the information into individual plugins. In this example, the function creates the $description variable because that variable is the used attribute. If a shortcode uses title and id attributes, using extract creates $title and $id variables.
- Because the $description variable holds the description that should be used, the get_the_title function call in the returned string is replaced by the $description variable.

Update your shortcode in the body of your test post to use this new description attribute:

```
[digg description="Shortcodes are awesome!"]
```

After saving the post changes, view the updated post, and hover your mouse over the Digg This Post link. You should see a link with the following format:

```
http://digg.com/submit?url=http://domain.com/
     testing-shortcodes/&bodytext=Shortcodes+are+awesome!
```

Adding content to shortcodes

The final piece of the shortcodes puzzle is content. When you wrap a shortcode around a section of content, the shortcode function can modify the content in creative ways.

The example in this section creates a new shortcode called [code], which allows designated sections of content to be formatted as code.

To get the new [code] shortcode running, add the code shown in Listing 5-1 to the bottom of your plugin init.php file. (***Note:*** The arrows and numbers aren't part of the actual code; I include them for purposes of explanation.)

LISTING 5-1: **The Code Shortcode**

```
function my_code_shortcode($attributes=array(),$content='') {
if(empty($content)) return '';

$attributes=shortcode_atts(
array('lang'=>''),
$attributes
);
extract($attributes);

$content=str_replace("</p>\n<p>","\n\n",$content);
$content=str_replace('<p>','',$content);
$content=str_replace('</p>','',$content);
$content=str_replace('<br />','',$content);

$style='white-space:pre;overflow:auto;';
$style.='font:"Courier New",Courier,Fixed;';

if('php'==$lang) {
$style.='background-color:#8BD2FF;color:#FFF;';
}
else if('css'==$lang) {
$style.='background-color:#DFE0B0;color:#333;';
}
else {
$style.='background-color:#EEE;color:#000;';
}

return "<pre class='$lang' style='$style'>$content</pre>";
}
add_shortcode('code','my_code_shortcode');
```

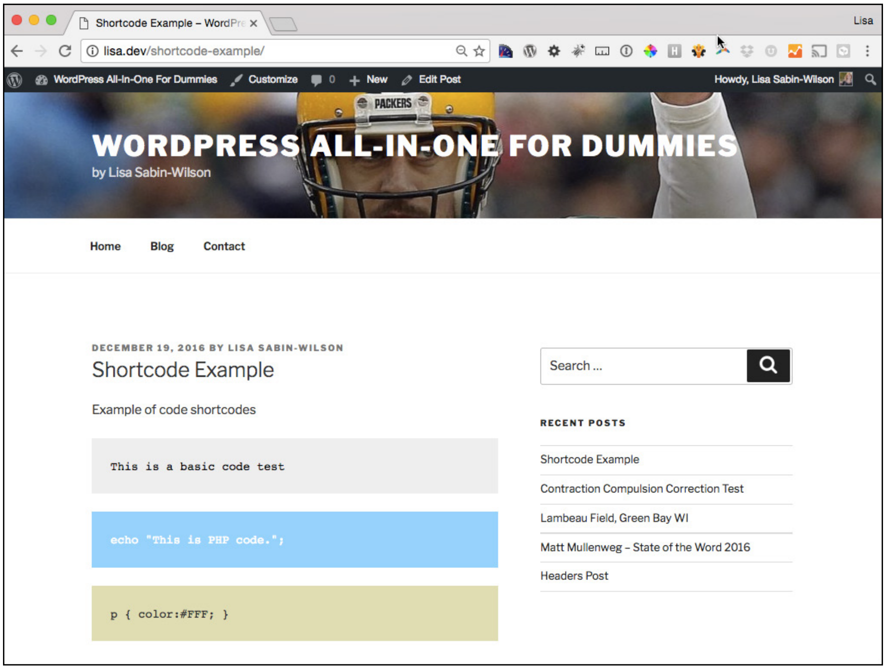
Before digging into how everything works, save the changes to the plugin, and add the following shortcodes to a post:

```
[code]This is a basic code test[/code]

[code lang="php"]echo "This is PHP code.";[/code]

[code lang="css"]p { color:#FFF; }[/code]
```

Figure 5-8 shows that these shortcodes produce some fixed-space boxes with different background colors and styling to contain the code.


Shortcode Example – WordPr
Lisa
lisa.dev/shortcode-example/
WordPress All-In-One For Dummies
Customize
0
New
Edit Post
Howdy, Lisa Sabin-Wilson
PACKERS
WORDPRESS ALL-IN-ONE FOR DUMMIES
by Lisa Sabin-Wilson
Home
Blog
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Search ...
RECENT POSTS
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DECEMBER 19, 2016 BY LISA SABIN-WILSON

Shortcode Example

Example of code shortcodes

```
This is a basic code test
```

```
echo "This is PHP code.";
```

```
p { color:#FFF; }
```

FIGURE 5-8: Code added to a post via the [code] shortcode.

Now that it's clear what the shortcode is doing, you can dissect the way it works:

→1 Just as it's important to add the `$attributes` variable to the function declaration to get access to the shortcode attributes, the `$content` variable is needed to access the content of the shortcode.

→2 If the `$content` variable is empty, the function returns an empty string because going any further with empty content is unnecessary.

→3–7 As with the `[digg]` shortcode from the preceding section, the `shortcode_atts` function establishes base defaults. By default, the `lang` attribute is an empty string. The extract function fills out the `$lang` variable.

→8–11 This set of `str_replace` function calls allows for proper handling of multiline content by the `[code]` shortcode. The problem is that WordPress always tries to add the `<p>` (paragraph) and `<br />` (line break) HTML markup tags even when it shouldn't. The `str_replace` replaces the separation of two `<p>` tag sections with two new lines (a new line is represented by the `\n` code) and then removes all the remaining `<p>` and `<br />` tags inserted by WordPress, allowing the content to display properly when it's wrapped in a `<pre>` (preformat for code) tag.

→**12–13** The $style variable stores the basic CSS (Cascading Style Sheet; see Book 6, Chapter 4 for more information) styling for the [code] shortcode output.

→**14–21** This set of conditional code determines the background and text color based on the lang attribute. The php receives a blue background with white text, the css receives a khaki background with dark text, and the default is a gray background with black text.

→**22** The last line of the function returns the shortcode output by wrapping the content in a <pre> HTML markup tag. The <pre> tag uses the generated style and adds the $lang as a class. The addition of the class allows for more customization through a stylesheet.

→**24** This line adds the shortcode to the WordPress code action hook and is required for the shortcode to *fire* (execute) properly.

Adding Widgets

Widgets are individual features you can add to theme sidebars. Widgets can add a simple site search, display a calendar, list the most recent posts, and show RSS feed updates. These features just scratch the surface of what widgets offer and what widgets are capable of doing. WordPress has a handy widget API that makes widget creation very easy.

Coding a simple widget

Widgets are a bit different from filters and shortcodes. Instead of creating one function and registering it, widgets are collections of functions packaged in a container called a *class.* A class is registered as a widget by means of the `register_widget` function.

Like shortcodes, multiple plugins can be housed in a single plugin file. Because the code for some of these widgets gets lengthy, however, each widget is its own plugin.

The widget plugin that you build in this section creates a widget that you can use on the Widgets page of your Dashboard (hover your mouse over Appearance and then click the Widgets link). This plugin, called Example: My User Widget, places a widget on your sidebar that displays `You are logged in as` *Name* or `Welcome Guest` depending on whether you're logged in. This widget is called My User Widget.

As you did in the preceding examples, create a plugin directory in the /wp-content/plugins directory by adding a new folder called /example-my-user-widget, and add an empty init.php file that will serve as your main plugin .php file. Then follow these steps to create the sample plugin:

1. **Open the init.php file in your text editor.**
2. **Add the file header to the top of the init.php file:**

   ```
   <?php
   /*
   Plugin Name: Example: My User Widget
   Description: This plugin provides a simple widget that shows the name of the logged
       in user
   */
   ```

3. **Press the Enter key, and type the next line of code:**

   ```
   class My_User_Widget extends WP_Widget {
   ```

   This code creates a new class called My_User_Widget, which is based on (and extends) the structure of the existing WP_Widget class.

   A class is a way of collecting a set of functions and a set of data in a logical group. In this case, everything that's in the My_User_Widget class is specific to the My User Widget widget. Modifying this class doesn't affect any other widgets on your site.

   TECHNICAL STUFF

   The WP_Widget class is the central feature of WordPress's Widget API. This class provides the structure and most of the code that powers widgets. When the My_User_Widget class extends the WP_Widget class, the My_User_Widget class automatically gains all the features of the WP_Widget class. This situation means that only the code that needs to be customized for the specific widget needs to be defined, because the WP_Widget class handles everything else.

4. **Press Enter, and type the following lines of code in the init.php file:**

   ```
   function My_User_Widget() {
     parent::WP_Widget(false,'My User Widget');
   }
   ```

   The My_User_Widget function has the same name as the My_User_Widget class. A PHP class function that has the same name as the class is a *constructor.* This function is called automatically when the class code is run. (For widgets, WordPress automatically runs the registered widget code behind the scenes.) Constructors run necessary initialization code so that the class behaves properly.

By calling `parent::WP_Widget`, the `My_User_Widget` class can tell WordPress about the new widget. In this instance, the `My_User_Widget` says that the default base ID should be used (this is the `false` argument you see in the function code, and it defaults to the lowercase version of the class name, `my_user_widget`, in this case) and that the widget's name is My User Widget.

5. **Press Enter, and type the following line of code in the `init.php` file:**

```
function widget($args) {
```

The `widget` function displays the widget content. This function accepts two parameters: `$args` and `$instance`. For this example, only `$args` is needed. You use `$instance` when you create the next widget.

6. **Press Enter, and type the following lines of code in the `init.php` file:**

```
$user=wp_get_current_user();
  if(!isset($user->user_nicename)) {
  $message='Welcome Guest';
  }
else {
  $message="You are logged in as {$user->user_nicename}";
}
```

This code finds information about the current user and sets a message to display that depends on whether the user is logged in. This status is determined by checking the `$user` variable. If the `$user->user_nicename` variable isn't set, the user isn't logged in.

7. **Press Enter, and type the following lines of code in the `init.php` file:**

```
extract($args);
  echo $before_widget;
  echo "<p>$message</p>
";
  echo $after_widget;
}
}
```

The `$args` variable contains several important details about how the sidebar wants widgets to be formatted. The variable is passed into the `extract` function to pull the settings into stand-alone variables. The four main variables used are `$before_widget`, `$after_widget`, `$before_title`, and `$after_title`. Because this widget doesn't have a title, the title variables aren't used. The `$before_widget` variable should always be included before any widget content, and the `$after_widget` variable should always be included after the widget content.

8. **Press Enter, and type the following lines of code in the `init.php` file:**

```
function register_my_user_widget() {
  register_widget('My_User_Widget');
}
add_action('widgets_init','register_my_user_widget');
```

   To register a widget with WordPress (so that WordPress recognizes it as a widget), use the `register_widget` function, and pass it the name of the `widget` class.

   Although calling the `register_widget` immediately after the class definition would be nice, the process isn't that simple. The code of the widget that includes the different functions must run before the widget can be registered. When code needs to run at specific times, the code is placed in a function, and the `add_action` function is used to have WordPress run the function at a specific time.

   These specific points in time are *actions.* For widget registration, you want to use the `widget_init` action. This action happens after WordPress finishes setting up the code necessary to handle widget registrations, yet occurs early enough for the widget to be registered in time.

REMEMBER

Don't forget to add the closing `?>` tag, which tells WordPress that the PHP execution in this plugin has come to an end.

When this final piece is in place, the widget is ready for use. When you're done, the entire code block looks like this:

```
<?php
/*
Plugin Name: Example: My User Widget
Description: This plugin provides a simple widget that shows the name of the
    logged in user
*/
class My_User_Widget extends WP_Widget {
  function My_User_Widget() {
    parent::WP_Widget(false,'My User Widget');
  }
  function widget($args) {
    $user=wp_get_current_user();
    if(!isset($user->user_nicename)) {
      $message='Welcome Guest';
  }
    else {
      $message="You are logged in as {$user->user_nicename}";
    }
  extract($args);
    echo $before_widget;
    echo "<p>$message</p>";
    echo $after_widget;
  }
}

function register_my_user_widget() {
  register_widget('My_User_Widget');
}

add_action('widgets_init','register_my_user_widget');
?>
```

TECHNICAL STUFF

Before WordPress 2.8, widget code had to manage everything by itself. For a widget to be used more than once, complex and bug-prone code needed to be produced and maintained. Fortunately, the `WP_Widget` class handles this task seamlessly. You no longer need to worry about single-use or multiple-use widgets, because all widgets coded to use the `WP_Widget` class automatically become multiple-use widgets.

Open the Widgets page on your Dashboard (hover your cursor over Appearance and click the Widgets link). You see a new widget called My User Widget.

Adding an options editor to a widget

Although some widgets work properly without any type of customization, most widgets need to allow the user to supply a title. Thanks to the `WP_Widget` class, adding options to a widget is easy.

The My User Widget example uses the `widget` function to display the widget's content. This addition to the widget code uses two additional functions to handle the widget options: `form` and `update`. The `form` function displays the HTML form inputs that allow the user to configure the widgets options. The `update` function allows the widget code to process the submitted data to ensure that only valid input is saved.

In this section, you create a basic clone of WordPress's Text Widget. Although the process is a bit simple, this cloning allows you to focus on using widget options without getting caught up in the details of a complex widget concept.

To start coding, set up the plugin environment by creating a new directory inside your `/wp-content/plugins` directory, call it `/example-my-text-widget`, and include a blank `init.php` file as your main plugin `.php` file. The plugin you're creating is Example: My Text Widget, which creates a widget called My Text Widget.

Follow these steps to create the `init.php` file for your Example: My Text Widget plugin:

1. **Open the `init.php` file in your text editor.**
2. **Create the file header by adding this code to the top of the `init.php` file:**

   ```
   <?php
   /*
   Plugin Name: Example: My Text Widget
   Description: This plugin provides a basic Text Widget clone complete with widget
      options
   */
   ```

3. **Press Enter, and type the following line of code in the `init.php` file:**

   ```
   class My_Text_Widget extends WP_Widget {
   ```

   As with the My User Widget in the preceding section, this widget is created by extending WordPress's `WP_Widget` class. This new widget's class is `My_Text_Widget`.

4. **Press Enter, and type the following lines of code in the `init.php` file:**

   ```
   function My_Text_Widget() {
     $widget_ops=array('description'=>'Simple Text Widget clone');
     $control_ops=array('width'=>400);
     parent::WP_Widget(false,'My Text Widget',$widget_ops,$control_ops);
   }
   ```

   The constructor for this plugin is a bit different this time. The `parent::WP_Widget` function is still called to set up the widget, but two more arguments are given: `$widget_ops` and `$control_ops`. These two arguments allow a variety of widget options to be set. The `$widget_ops` argument can set two options: `description` and `classname`. The description appears below the name of the widget in the widgets listing. The `classname` option sets the class that the rendered widget uses.

5. **Press Enter, and type the following line of code in the `init.php` file:**

   ```
   function form($instance) {
   ```

   The `form` class function displays an HTML form that allows the user to set the options used by the widget. The `$instance` variable is an array containing the current widget options. When the widget is new, this `$instance` variable is an empty array.

6. **Press Enter, and type the following line of code in the `init.php` file:**

```
$instance=wp_parse_args($instance,array('title'=>'','text'=>''));
```

Shortcode plugins used the `shortcode_atts` function to merge default options with ones from the shortcode, as explained previously in this chapter in the "Using shortcode attributes" section. In this example, `wp_parse_args` performs the same task by merging the existing `$instance` options with default option values.

7. **Press Enter, and type the following line of code in the `init.php` file:**

```
extract($instance);
```

The `extract` function pulls the title and text options in the `$instance` variable into the stand-alone variables `$title` and `$text`.

8. **Press Enter, and type `?>`.**

By using the close tag, `?>`, you can more easily display a large amount of HTML without having to echo out each line.

9. **Press Enter, and type the following lines of code in the `init.php` file:**

```
<p>
  <label for="<?php echo $this->get_field_id('title'); ?>">
    <?php _e('Title:'); ?>
    <input
      class="widefat"
      type="text"
      id="<?php echo $this->get_field_id('title'); ?>"
      name="<?php echo $this->get_field_name('title'); ?>"
      value="<?php echo esc_attr($title); ?>"
/>
</label>
</p>
```

The block of HTML displays the title input.

Notice the `$this->get_field_id` and `$this->get_field_name` function calls. These functions, provided by the `WP_Widget` class, produce the needed `id` and `name` values specific to this widget instance. To use these functions, simply pass in the name of the option that is used — `title`, in this case.

The `_e('Title:');` section simply prints `Title:`. This section is wrapped in a call to the `_e` function because the `_e` function allows the text to be translated into other languages.

The value attribute of the input tag sets the default value of the field. Because this widget will be populated with the current title, the $title variable is included in this attribute. First, however, the $title variable is passed through the esc_attr function, which allows the text to be formatted properly for use as an attribute value. If the esc_attr isn't used, some values in the title, such as double quotation marks, could break the HTML.

10. **Press Enter, and type the following lines of code in the init.php file:**

```
<textarea
  class="widefat"
  rows="16"
  id="<?php echo $this->get_field_id('text'); ?>"
  name="<?php echo $this->get_field_name('text'); ?>"
>
<?php echo esc_attr($text); ?>
</textarea>
```

This block of HTML displays the textarea input that allows the user to input the text that she wants to display. There are only two differences between this input and the preceding one: The textarea and text inputs have a different format, and this input doesn't have a description.

11. **Press Enter, and type** <?php**.**

The form HTML is complete, so the open tag, <?php, is used to switch back to PHP code.

12. **Press Enter, and type** }**.**

The form function closes.

13. **Press Enter, and type the following line of code in the init.php file:**

```
function update($new_instance,$old_instance) {
```

The update class function processes the submitted form data. The $new_instance argument provides the data submitted by the form. The $old_instance argument provides the widget's old options.

14. **Press Enter, and type the following line of code in the init.php file:**

```
$instance=array();
```

A new empty array variable, $instance, is created. This variable stores the final options values.

15. **Press Enter, and type the following lines of code in the `init.php` file:**

```
$instance['title']=strip_tags($new_instance['title']);
$instance['text']=$new_instance['text'];
```

Store the title and text options from the `$new_instance` variable in the `$instance` variable. The title option is run through the `strip_tags` function so that no HTML tags are stored in the title option.

16. **Press Enter, and type the following line of code in the `init.php` file:**

```
return $instance;
```

The `update` function works like a `filter` function. The data is passed in and is manipulated as desired; then the final value is returned.

After seeing how this function works, you may wonder why the `$instance` variable was needed. Even though using `$new_instance` directly would be simpler, it also could produce unexpected results. It's possible for unexpected data to come through as part of the `$new_instance` variable. By creating the `$instance` variable and assigning only known options to it, you can be assured that you know exactly what data is stored for the widget and that your code has had a chance to clean up that data.

17. **Press Enter, and type `}`.**

Close the `update` function.

18. **Press Enter, and type the following line of code in the `init.php` file:**

```
function widget($args,$instance) {
```

The `widget` class function is the same as before but now has the `$instance` argument. The `$instance` argument stores the options set for the widget.

19. **Press Enter, and type the following lines of code in the `init.php` file:**

```
extract($args);
extract($instance);
```

Use the `extract` function on both `$args` and `$instance` to populate easy-to-use variables for each.

20. **Press Enter, and type the following line of code in the `init.php` file:**

```
$title=apply_filters('widget_title',$title,$instance,$this->id_base);
```

In "Creating a plugin that filters content" earlier in this chapter, which discusses the Example: Contraction Compulsion Correction plugin, the `add_filter` function adds a function to be used as a filter. The `apply_filters` in this example function are how those filter functions are used. This line of code translates to “Store the result of the `widget_title` filters in the `$title` variable.” Each filter is passed the `$title`, `$instance`, and `$this->id_base` variables. Every widget that has a title should have this line of code so that filters have a chance to filter all widget titles.

21. **Press Enter, and type the following lines of code in the `init.php` file:**

```
echo $before_widget;
if(!empty($title)) echo $before_title . $title . $after_title;
echo $text;
echo $after_widget;
```

As with the previous Example: My User widget, the `$before_widget` variable is included before the rest of the widget content ,and the `$after_widget` variable is included after all the other widget content. Because this widget supports a title, the code adds the `$before_title` and `$after_title` variables, which, like the `$before_widget` and `$after_widget` variables, come from the `$args` argument passed to the function. The `if` statement ensures that the title appears only if the title isn’t empty.

REMEMBER

`!` means *not.*

22. **Press Enter, and type `}`.**

The widget function class closes.

23. **Press Enter, and type `}`.**

The `My_Text_Widget` class closes.

24. **Press Enter, and type the following lines of code in the `init.php` file:**

```
function register_my_text_widget() {
  register_widget('My_Text_Widget');
}

add_action('widgets_init','register_my_text_widget');
```

Register the widget. Notice that the `My_Text_Widget` argument of the `register_widget` function matches the name of this widget’s class.

When you finish the preceding steps, the entire block of code in your `init.php` file looks like Listing 5-2.

LISTING 5-2: The init.php File for the Example: My Text Widget Plugin

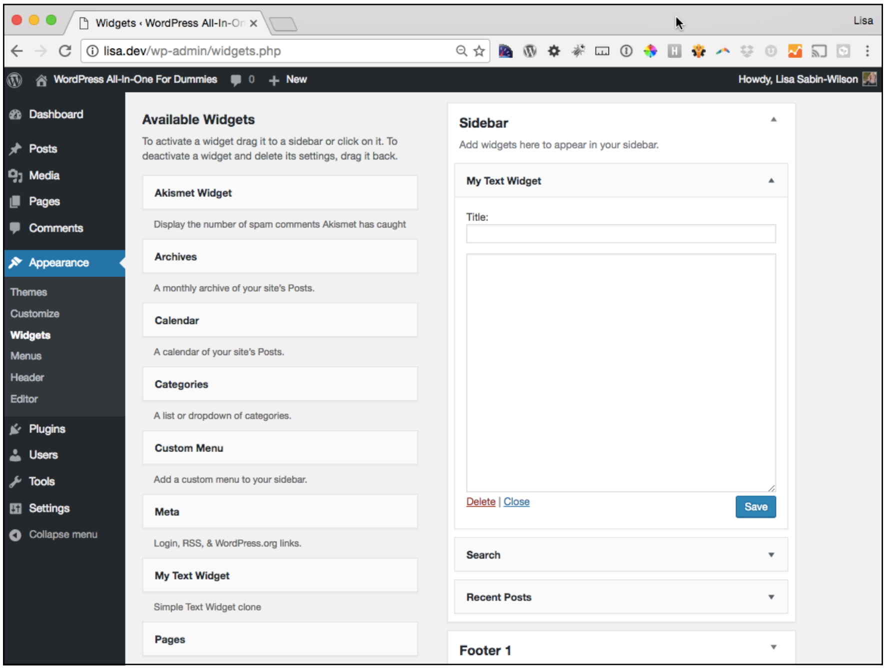
```
<?php
/*
Plugin Name: Example: My Text Widget
Description: This plugin provides a basic Text Widget clone complete with widget
   options
*/

class My_Text_Widget extends WP_Widget {
  function My_Text_Widget() {
    $widget_ops=array('description'=>'Simple Text Widget clone');
    $control_ops=array('width'=>400);
    parent::WP_Widget(false,'My Text Widget',$widget_ops,$control_ops);
  }
  function form($instance) {
    $instance=wp_parse_args($instance,array('title'=>'','text'=>''));
    extract($instance);
?>
<label for="<?php echo $this->get_field_id('title'); ?>">
<?php _e('Title:'); ?>
<input
  class="widefat"
  type="text"
  id="<?php echo $this->get_field_id('title'); ?>"
  name="<?php echo $this->get_field_name('title'); ?>"
  value="<?php echo esc_attr($title); ?>"
/>
</label>
</p>

<textarea
  class="widefat"
  rows="16"
  id="<?php echo $this->get_field_id('text'); ?>"
  name="<?php echo $this->get_field_name('text'); ?>"
>
<?php echo esc_attr($text); ?>
</textarea>

<?php
}
  function update($new_instance,$old_instance) {
    $instance=array();
    $instance['title']=strip_tags($new_instance['title']);
    $instance['text']=$new_instance['text'];
    return $instance;
  }
```

(continued)

LISTING 5-2: ***(continued)***

```
  function widget($args,$instance) {
    extract($args);
    extract($instance);
    $title=apply_filters('widget_title',$title,$instance,$this->id_base);
      echo $before_widget;
      if(!empty($title)) echo $before_title . $title . $after_title;
      echo $text;
      echo $after_widget;
  }
}
  function register_my_text_widget() {
    register_widget('My_Text_Widget');
  }

add_action('widgets_init','register_my_text_widget');}
?>
```

Now the widget is ready for use. Open the Widgets page of your Dashboard (hover your cursor over Appearance and click the Widgets link). You see a new widget called My Text Widget. When expanded, the widget has a Title field and text box for the user to configure and add content to, as shown in Figure 5-9.



Widgets ‹ WordPress All-In-On ×

Lisa

lisa.dev/wp-admin/widgets.php

WordPress All-In-One For Dummies 0 + New

Howdy, Lisa Sabin-Wilson

Dashboard
Posts
Media
Pages
Comments
Appearance
Themes
Customize
Widgets
Menus
Header
Editor
Plugins
Users
Tools
Settings
Collapse menu

Available Widgets

To activate a widget drag it to a sidebar or click on it. To deactivate a widget and delete its settings, drag it back.

Akismet Widget
Display the number of spam comments Akismet has caught

Archives
A monthly archive of your site's Posts.

Calendar
A calendar of your site's Posts.

Categories
A list or dropdown of categories.

Custom Menu
Add a custom menu to your sidebar.

Meta
Login, RSS, & WordPress.org links.

My Text Widget
Simple Text Widget clone

Pages

Sidebar
Add widgets here to appear in your sidebar.

My Text Widget

Title:

Delete | Close

Save

Search

Recent Posts

Footer 1

FIGURE 5-9: The My Text Widget.

Building a Settings Page

Many plugins offer a settings page that allows the user to customize plugin options. The options offered by a settings page vary from a few check boxes, drop-down lists, or text inputs to multiple advanced editors that allow the user to build data sets, set up forums, or do advanced content management. Although the following sections focus on building a simple settings page, you can expand the concept to fill any type of plugin need.

Reduced to a bare minimum, a basic settings page consists of code that displays the page, stores the settings, and adds the page to the WordPress admin menu. The plugin you create in this section gives you a solid foundation that you can use to build your own plugin settings pages.

Setting up a plugin with a settings page

The plugin that you create in this section is Example: Settings Page. To get started with this plugin, create a new plugins directory named `/example-settings-page`. All the files for this plugin go in this new directory. That's right: *files.* You add multiple plugin files to the plugin directory.

TIP

Separate different functionality into separate files because as plugins get larger, having everything in one file quickly becomes hard to manage. Similar to the way that you name the `init.php` file (because it *initializes* the plugin), you should name the other files that the plugin uses so that you can easily discern the purpose of each file by looking at the filenames.

This new plugin has five files, so create five blank files and name them as follows:

- `init.php`: Contains the file header and loads the other needed plugin files
- `settings-page.php`: Holds the settings page code
- `default-settings.php`: Sets the default values used for the settings
- `msp-form-class.php`: Provides a class that makes adding form inputs easy
- `settings-functions.php`: Provides functions that load and save the settings

By dividing the plugin code into logical groups, each of which has its own file, you make the code much easier to maintain. With this type of setup, as you add new features to the plugin, you can easily isolate the features in their own files.

You must create all the files before the plugin can function. To start, add the following code to your plugin's init.php file:

```
<?php
/*
Plugin Name: Example: Settings Page
Description: This plugin offers a solid starting point for building settings
   pages
*/

require_once(dirname(__FILE__).'/default-settings.php');
require_once(dirname(__FILE__).'/msp-form-class.php');
require_once(dirname(__FILE__).'/settings-functions.php');
require_once(dirname(__FILE__).'/settings-page.php');
```

The require_once function loads another .php file. If the file isn't found, a fatal error occurs, and the plugin doesn't function. Therefore, trying to activate the plugin at this point causes the plugin to fail. This situation is good, because it prevents the plugin from activating when needed files are missing, which can happen if an incomplete upload of the plugin files occurs.

Four primary functions load other PHP code: include, include_once, require, and require_once. The include functions don't cause a fatal error if a problem occurs in loading the requested file, but the require functions do. The functions that add _once don't load the file if the file has already been loaded. This situation helps prevent the code from accidentally loading a file multiple times, which can break the code or cause unexpected behavior.

Directly below the require_once functions, add the following line:

```
dirname(__FILE__).'/default-settings.php'
```

This section of code finds the full path to the default-settings.php file. Refer to the file's full path to prevent issues with some server setups.

That's all the code that the init.php file needs for this plugin. Save and upload the file to your plugin directory at /wp-content/plugins/example-settings-page. When you add new features to the plugin, you need to add new files to hold these features and use a require_once call to load each one.

Adding a new Admin menu entry

Add the following lines of code to the settings-page.php file from the preceding section:

```
<?php

function msp_add_admin_menu() {
  add_options_page(
    'Example Settings Page',
    'Example Settings',
    'manage_options',
    'msp-example-settings-page',
    'msp_display_settings_page'
  );
  if(isset($_POST['msp_save'])) {
    add_action("admin_head-$page",'msp_save_settings_handler');
  }
}
add_action('admin_menu','msp_add_admin_menu');
```

This code adds a new Example Setting link to the Dashboard's Settings menu. The `add_options_page` function is the key to adding this new menu. The following list describes what each argument in this function does:

- **Example Settings Page:** The first argument sets the title of the page. The browser, not the settings page, displays this title.
- **Example Settings:** The second argument is the name of the menu. The space is limited, so keep the name short.
- **manage_options:** The third argument is the capability that the user must have to see and access the menu. For settings pages, the `manage_options` capability typically is the best choice, as only administrators have this capability by default. You can use `edit_others_posts` to give access to administrators and editors, and you can use `edit_published_posts` for administrators, editors, and authors.
- **msp-example-settings-page:** The fourth argument is a name that WordPress uses internally to navigate to the page. Make sure that this name is unique; otherwise, you may run into problems with other plugins. The `msp` at the front of the name stands for *My Settings Page.* Consistently using a prefix in this manner helps prevent duplicate name issues.
- **msp_display_settings_page:** The fifth argument is the name of the function that's called when the page is viewed. As with the fourth argument, make sure that this name is unique to your plugin. Notice that the `msp` prefix is used here, too.

Just as the `register_widget` function can't be called when a plugin first loads, the `add_options_page` function must wait until WordPress is ready before it can be called. To call the function when WordPress is ready, the `add_options_page` function is wrapped in a function that's called when the `admin_menu` action is run.

Other than registering the new admin menu, this code adds a page-specific action if form data with a `msp_save` variable has been submitted. When this action fires, the `msp_save_settings_handler` function processes and saves the submitted form data.

Creating a settings form

There are as many ways to set up a settings form as there are hot dogs in Chicago. Well, maybe not quite that many, but I'm sure that the numbers are close. Most of these methods use large sections of repeated code for each input.

This form shows how you can integrate each HTML form input type into your settings form. Instead of coding each input manually — a time-consuming, error-prone process — you can use a set of functions that WordPress provides to make adding new inputs easy.

Open your plugin `settings-page.php` file, and follow these steps to add the code that handles the HTML form input for your settings page:

1. **Open the `settings-page.php` file in your text editor.**
2. **Add the following line of code at the bottom of the `settings-php` file:**

   ```
   function msp_display_settings_page() {
   $form=new MSP_Form(msp_get_settings());
   ?>
   ```

   The `msp-form-class.php` file, which you create later in the "Creating the MSP_Form class" section of this chapter, contains a new class called `MSP_Form`. This class accepts an array of settings to assign the initial values of the form inputs. The settings come from the `msp_get_settings` function, which is defined in the `settings-functions.php` file (covered in the next section, "Configuring default settings").

   When you use a class like this one, a variable stores an *object.* In this case, the object is stored in a variable called `$form`. Later in this form code, the `$form` variable adds new form inputs by using the functions provided by `MSP_Form`.
3. **Press Enter, and type the following lines of code:**

   ```
   <?php if(isset($_GET['updated'])) : ?>
   <div id="message" class="updated fade">
     <p><strong>Settings saved.</strong></p>
   </div>
   <?php endif; ?>
   ```

When the form data is saved, the page redirects to a new settings-page link that contains a variable named updated. This section of code displays a Settings saved message when this redirect happens, confirming to the user that the settings changes are saved.

4. **Press Enter, and type the following lines of code:**

```
<div class="wrap">
<?php screen_icon(); ?>
<h2>Example Settings Page</h2>
```

This section simply follows the page structure used by WordPress's built-in editors so that your settings page fits the style of WordPress.

5. **Press Enter, and type the following line of code:**

```
<form method="post" action="<?php echo $_SERVER['REQUEST_URI']; ?>">
```

Many settings pages use code that submits the form data to the options.php page built into WordPress. This settings-page form sends the data back to itself, allowing this plugin's code to have full control of how the data is stored.

6. **Press Enter, and type the following line of code:**

```
<?php wp_nonce_field('msp-update-settings'); ?>
```

The wp_nonce_field function is part of the nonce system of WordPress. nonce — which stands for *number used once* or *number once* — protects a site from attackers and increases security by validating the contents of a form field. All your WordPress-managed forms should use nonces — and use them properly. The key is to have the wp_nonce_field function call (with a unique attribute to identify the form's purpose) inside the HTML form tags and a call to check_admin_referer (that uses a matching attribute) before any action is taken with the form data. The check_admin_referer call is in the msp_save_settings_handler function at the end of this file's code.

7. **Press Enter, and type the following code:**

```
<table class="form-table">
<tr valign="top">
<th scope="row"><label for="text">Text</label></th>
<td>
<?php $form->add_text('text'); ?>
</td>
</tr>
<tr valign="top">
<th scope="row"><label for="textarea">Text Area</label></th>
<td>
```

```
<?php $form->add_textarea('textarea'); ?>
</td>
</tr>
```

This code is the table structure commonly used in editors throughout WordPress, employing the HTML markup to create tables. This structure is simple and easy to expand by adding options.

TIP

When you want to expand your forms, copy a single row, paste a few copies, and then modify each copy to have a new input.

The call to the `$form->add_text` function adds the text input to the form. This function accepts an argument that defines the name of the setting (`text`, in this case). The `textarea` section of the code follows the same format as this section.

8. **Press Enter, and type the following lines of code:**

```
<tr valign="top">
<th scope="row">Multi-Checkbox</th>
<td>
<label title="1">
<?php $form->add_multicheckbox('multicheckbox','1'); ?> 1
</label><br/>
<label title="2">
<?php $form->add_multicheckbox('multicheckbox','2'); ?> 2
</label><br/>
<label title="3">
<?php $form->add_multicheckbox('multicheckbox','3'); ?> 3
</label><br/>
<label title="4">
<?php $form->add_multicheckbox('multicheckbox','4'); ?> 4
</label>
</td>
</tr>
```

This section uses the `MSP_Form` class's `add_multicheckbox` function to create a form input that allows multiple values to be stored in a single setting. The second argument used for this function sets the value of the specific check box. When data is loaded from this type of setting, the values of the checked inputs are stored in an array.

9. **Press Enter, and type the following lines of code:**

```
<tr valign="top">
<th scope="row">Radio</th>
<td>
<label title="Option 1">
<?php $form->add_radio('radio','1'); ?>
Option 1
</label>
<br/>
<label title="Option 2">
<?php $form->add_radio('radio','2'); ?>
Option 2
</label>
<br/>
<label title="Option 3">
<?php $form->add_radio('radio','3'); ?>
Option 3
</label>
</td>
</tr>
```

This section uses the `MSP_Form` class's `add_radio` function to create a form input by using radio buttons. The radio button uses the same format as the `multicheckbox` inputs in Step 8. The second argument sets the value of the individual input. The data loaded for a radio setting is a string, not an array.

10. **Press Enter, and type the following lines of code:**

```
<tr valign="top">
<th scope="row"><label for="select">Select</label></th>
<td>
<?php
$options = array(
  '1'=>'Option 1',
  '2'=>'Option 2',
  '3'=>'Option 3',
);
?>
<?php $form->add_select('select',$options); ?>
</td>
</tr>
</table>
```

Select inputs can be difficult to code by hand, but the MSP_Form class makes adding a select input easy. First, create an associative, or *named,* array. A named array sets the key to be used for each value. In other words, each array input looks like '1'=>'Option 1', where 1 is the value to be stored for that setting and Option 1 is the description to show for that value. Then the named array is passed in as the second argument to the add_select function.

11. **Press Enter, and type the following lines of code:**

```
<p class="submit">
<input type="submit" name="msp_save" class="button-primary" value="Save Changes"/>
</p>
```

Note the msp_save value used for the Submit button's name. WordPress uses this name to check for a settings-form submission toward the top of this file.

12. **Press Enter, and type the following lines of code:**

```
<?php $form->add_used_inputs(); ?>
</form>
</div>
```

This call to add_used_inputs is important for handling the submitted form data.

13. **Press Enter, and type the following lines of code:**

```
<?php
}
function msp_save_settings_handler() {
check_admin_referer('msp-update-settings');
$settings=MSP_Form::get_post_data();
msp_update_settings($settings);
}
```

The msp_save_settings_handler completes the settings-page.php code. First, the nonce set inside the form is checked with the check_admin_referer to ensure that the nonces are used properly. The MSP_Form class function get_post_data is used to store the submitted settings in the $settings variable. Then these settings are passed to the msp_update_settings function (defined in the settings-functions.php file) to save the settings.

When you finish, the code in your entire settings-page.php file looks like Listing 5-3.

LISTING 5-3: HTML Form Input Code for the Settings Page

```
<?php

function msp_add_admin_menu() {
add_options_page(
  'Example Settings Page',
  'Example Settings',
  'manage_options',
  'msp-example-settings-page',
  'msp_display_settings_page'
);
if(isset($_POST['msp_save'])) {
  add_action("admin_head-$page",'msp_save_settings_handler');
}
}
add_action('admin_menu','msp_add_admin_menu');

function msp_display_settings_page() {
$form=new MSP_Form(msp_get_settings());
?>
<?php if(isset($_GET['updated'])) : ?>
<div id="message" class="updated fade">
  <p><strong>Settings saved.</strong></p>
</div>
<?php endif; ?>
<div class="wrap">
<?php screen_icon(); ?>
<h2>Example Settings Page</h2>
<form method="post" action="<?php echo $_SERVER['REQUEST_URI']; ?>">
<?php wp_nonce_field('msp-update-settings'); ?>
<table class="form-table">
<tr valign="top">
<th scope="row"><label for="text">Text</label></th>
<td>
<?php $form->add_text('text'); ?>
</td>
</tr>
<tr valign="top">
<th scope="row"><label for="textarea">Text Area</label></th>
<td>
<?php $form->add_textarea('textarea'); ?>
</td>
</tr>
<tr valign="top">
<th scope="row"><label for="checkbox">Checkbox</label></th>
<td>
```

(continued)

LISTING 5-3: *(continued)*

```
<?php $form->add_checkbox('checkbox'); ?>
</td>
</tr>
<tr valign="top">
<th scope="row">Multi-Checkbox</th>
<td>
<label title="1">
<?php $form->add_multicheckbox('multicheckbox','1'); ?> 1
</label><br/>
<label title="2">
<?php $form->add_multicheckbox('multicheckbox','2'); ?> 2
</label><br/>
<label title="3">
<?php $form->add_multicheckbox('multicheckbox','3'); ?> 3
</label><br/>
<label title="4">
<?php $form->add_multicheckbox('multicheckbox','4'); ?> 4
</label>
</td>
</tr>
<tr valign="top">
<th scope="row">Radio</th>
<td>
<label title="Option 1">
<?php $form->add_radio('radio','1'); ?>
Option 1
</label>
<br/>
<label title="Option 2">
<?php $form->add_radio('radio','2'); ?>
Option 2
</label>
<br/>
<label title="Option 3">
<?php $form->add_radio('radio','3'); ?>
Option 3
</label>
</td>
</tr>
<tr valign="top">
<th scope="row"><label for="select">Select?> </th>
<td>
<?php
$options = array(
  '1'=>'Option 1',
  '2'=>'Option 2',
  '3'=>'Option 3',
);
?>
<?php $form->add_select('select',$options); ?>
</td>
</tr>
</table>
<p class="submit">
<input type="submit" name="msp_save" class="button-primary" value="Save Changes"/>
</p>
<?php $form->add_used_inputs(); ?>
</form>
</div>
<?php
}
function msp_save_settings_handler() {
check_admin_referer('msp-update-settings');
$settings=MSP_Form::get_post_data();
msp_update_settings($settings);
}
```

Configuring default settings

A nice feature of this settings-form code allows you to make default settings easily. These default settings are loaded even if the settings form hasn't been saved, allowing for reliable use of the defaults.

To set up the defaults, add the following code to a new file, and save it as `default-settings.php` in your `/example-settings page` plugin directory:

```
<?php
function msp_get_default_settings() {
  $defaults=array(
   'text'  => 'Sample Text',
   'textarea' => 'Sample Textarea Text',
   'checkbox' => '1',
   'multicheckbox' => array('2','3'),
   'radio'    => '2',
   'select'   => '3',
  );
  return $defaults;
}
```

By modifying the `$defaults` array, you can add new default values, remove them, or modify them easily. The format for this type of array is '*setting_name*'=>'*setting_value*', where *setting_name* is the name of the setting and *setting_value* is the default value you want to use for that setting.

Adding settings functions

The settings functions manage loading and saving settings. Both functions are optimized for performance and reliability. Add the following code to a new file, and save it as `settings-functions.php` in your `/example-settings-page` plugin directory to add the settings function:

```
<?php
function msp_get_settings($name=null) {
static $settings=null;

if(is_null($settings)) {
$settings=get_option('msp-example-settings');
if(!is_array($settings)) $settings=array();

$defaults=msp_get_default_settings();
$settings=array_merge($defaults,$settings);
}

if(is_null($name)) return $settings;
if(isset($settings[$name])) return $settings[$name];
return '';
}

function msp_update_settings($settings) {
update_option('msp-example-settings',$settings);

$redirect_url=array_shift(explode('?',$_SERVER['REQUEST_URI']));
$redirect_url.='?page='.$_REQUEST['page'].'&updated=true';

wp_redirect($redirect_url);
}

$all_settings=msp_get_settings();
$text=msp_get_settings('text');
```

Because you call the function with no argument, WordPress returns all the settings. When you pass a setting name, WordPress returns the value of just that setting.

The msp_update_settings function accepts a new array of settings to be saved. When the settings are saved, a new redirect link with the updated variable is built and displays the Settings saved message. Then WordPress's wp_redirect function redirects the site to this new link.

Creating the MSP_Form class

The MSP_Form class code is quite lengthy but well worth the effort of creating because it makes form building so easy.

Add the code in Listing 5-4 to a new file, and save it as msp-form-class.php in your /example-settings-page plugin directory.

LISTING 5-4: The MSP_Form Class Code

```
<?php
class MSP_Form {
var $inputs=array();
var $settings=array();
function MSP_Form($settings=array()) {
if(is_array($settings)) $this->settings=$settings;
}
function add_used_inputs() {
$value=implode(',',array_unique($this->inputs));
$this->add_hidden('___msp_form_used_inputs',$value);
}
function get_post_data() {
if(!isset($_POST['___msp_form_used_inputs'])) {
return $_POST;
}
$data=array();
$inputs=explode(',',$_POST['___msp_form_used_inputs']);
foreach((array)$inputs as $var) {
$real_var=str_replace('[]','',$var);
if(isset($_POST[$real_var])) {
$data[$real_var]=stripslashes_deep($_POST[$real_var]);
}
else if ($var!=$real_var) {
$data[$real_var]=array();
}
else {
$data[$real_var]='';
}
}
return $data;
}
```

(continued)

LISTING 5-4: ***(continued)***

```
// $form->add_text('name');
function add_text($name,$options=array()) {
if(!isset($options['class'])) $options['class']='regular-text';
$this->_add_input('text',$name,$options);
}
function add_textarea($name,$options=array()) {
$this->_add_input('textarea',$name,$options);
}
function add_checkbox($name,$options=array()) {
if($this->_get_setting($name)) $options['checked']='checked';
$this->_add_input('checkbox',$name,$options);
}
function add_file($name,$options=array()) {
$this->_add_input('file',$name,$options);
}
function add_password($name,$options=array()) {
$this->_add_input('password',$name,$options);
}

// $form->add_select('num',array('1'=>'One','2'=>'Two'));
function add_select($name,$values,$options=array()) {
$options['values']=$values;
$this->_add_input('select',$name,$options);
}

// $form->add_radio('type','extended');
function add_radio($name,$value,$options=array()) {
if($this->_get_setting($name)==$value) $options['checked']='checked';
$options['value']=$value;
$this->_add_input('radio',$name,$options);
}
function add_multicheckbox($name,$value,$options=array()) {
$setting=$this->_get_setting($name);
if(is_array($setting) && in_array($value,$setting)) {
$options['checked']='checked';
}
$options['value']=$value;
$this->_add_input('checkbox',"{$name}[]",$options);
}
function add_hidden($name,$value,$options=array()) {
$options['value']=$value;
$this->_add_input('hidden',$name,$options);
}

// $form->add_submit('save','Save');
function add_submit($name,$description,$options=array()) {
```

```
$options['value']=$description;
$this->_add_input('submit',$name,$options);
}
function add_button($name,$description,$options=array()) {
$options['value']=$description;
$this->_add_input('button',$name,$options);
}
function add_reset($name,$description,$options=array()) {
$options['value']=$description;
$this->_add_input('reset',$name,$options);
}

// $form->add_image('imagemap','http://domain.com/img.gif');
function add_image($name,$image_url,$options=array()) {
$options['src']=$image_url;
$this->_add_input('image',$name,$options);
}

// This function should not be called directly.
function _add_input($type,$name,$options=array()) {
$this->inputs[]=$name;
$settings_var=str_replace('[]','',$name);
$css_var=str_replace('[','-',str_replace(']','',$settings_var));

if(!is_array($options)) $options=array();
$options['type']=$type;
$options['name']=$name;
if(!isset($options['value']) && 'checkbox'!=$type) {
$options['value']=$this->_get_setting($settings_var);
}

if('radio'==$type || $settings_var!=$name) {
if(empty($options['class'])) $options['class']=$css_var;
}
else {
if(empty($options['id'])) $options['id']=$css_var;
}

$scrublist=array($type=>array());
$scrublist['textarea']=array('value','type');
$scrublist['file']=array('value');
$scrublist['dropdown']=array('value','values','type');

$attributes = '';
foreach($options as $var => $val) {
  if(!is_array($val) && !in_array($var,$scrublist[$type]))
  $attributes.="$var='".esc_attr($val)."' ";
}
```

(continued)

LISTING 5-4: *(continued)*

```
if('textarea'==$options['type']) {
  echo "<textarea $attributes>";
  echo format_to_edit($options['value']);
  echo "</textarea>\n";
}
else if('select'==$options['type']) {
  echo "<select $attributes>\n";
  if(is_array($options['values'])) {
  foreach($options['values'] as $val=>$name) {
  $selected=($options['value']==$val)?' selected="selected"':'';
  echo "<option value=\"$val\"$selected>$name</option>\n";
  }
  }
  echo "</select>\n";
}
else {
  echo "<input $attributes/>\n";
}

}

// This function should not be called directly.
function _get_setting($name) {
if(isset($this->settings[$name])) {
return $this->settings[$name];
}
return '';
}

}
```

You can use 13 functions to add inputs to a form. Following are examples of how to use them:

```
$form->add_text('setting_name');
$form->add_textarea('setting_name');
$form->add_checkbox('setting_name');
$form->add_file('setting_name');
$form->add_password('setting_name');
$form->add_select('setting_name',array('1'=>'One','2'=>'Two'));
$form->add_radio('setting_name','value_1');
$form->add_radio('setting_name','value_2');
$form->add_multicheckbox('setting_name','value_1');
$form->add_multicheckbox('setting_name','value_2');
$form->add_hidden('setting_name','value');
```

```
$form->add_submit('setting_name','value');
$form->add_button('setting_name','value');
$form->add_reset('setting_name','value');
$form->add_image('imagemap','http://domain.com/img.gif');
```

A feature that all the form input functions support is an optional last parameter to set additional HTML tag attributes in the final output. Here's an example block of code that sets additional HTML markup in the final output:

```
$form->add_text('setting_name',array('class'=>'regular-text code'));
$form->add_text('setting_name',array('style'=>'width:250px;font-size:2em;'));
$form->add_textarea('setting_name',array('rows'=>'10','cols'=>'30'));
$form->add_checkbox('setting_name',array('checked'=>'checked'));
```

This code adds the class `regular-text` and `code` to the first text input, adds inline styling to control the width and font size of the second text input, uses 10 rows and 30 columns for the `textarea` input, and forces the `checkbox` to always be selected on page load for the last input.

You can use the last optional argument on any of the form inputs to set needed tag attributes. By using this argument in creative ways, you can always use the input form functions rather than code inputs from scratch.

Making sure the settings page works

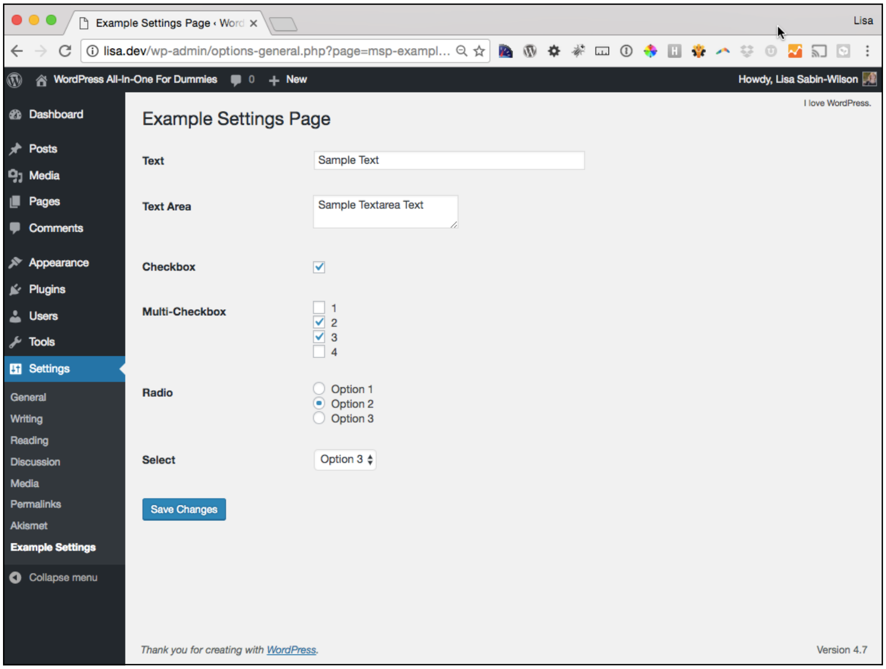
After you have the files entered, you're ready to activate the Example: Settings Page plugin.

TIP

Because the code is divided, if WordPress displays an error message saying that the plugin could not be activated, note which file and line number had the error. This information help you find and fix your error quickly.

After activating the plugin, visit your Dashboard, hover your cursor over Settings, and click the Example Settings link to see the settings form in action, as shown in Figure 5-10. Notice that the form is populated by the default values you set. These default values are set the first time the `msp_get_settings` function is called. Therefore, even if the user has never gone to your settings page, the defaults are available. In addition, when you add new settings and update the defaults to the new settings, those new defaults also become available automatically.

After testing the settings options, go into the `settings-page.php` file, and add new settings. When you have the new settings, make sure to update the `$defaults` array in `default-settings.php`.



Example Settings Page

Text	Sample Text
Text Area	Sample Textarea Text
Checkbox	☑
Multi-Checkbox	□ 1 ☑ 2 ☑ 3 □ 4
Radio	○ Option 1 ● Option 2 ○ Option 3
Select	Option 3

FIGURE 5-10: The Example Settings page.

You can extend this plugin with code from another example plugin. To load the settings, simply use the `msp_get_settings` function.

You could update the `widget` function from the Example: My User Widget plugin (see " Coding a simple widget" earlier in this chapter) to use two settings: `guest_message` and `user_message`. Enter the following code:

```
function widget($args) {
$user=wp_get_current_user();
if(!isset($user->user_nicename))
$message=msp_get_settings('guest_message');
else
$message=msp_get_settings('user_message').$user->user_nicename;
extract($args);
echo $before_widget;
echo "<p>$message</p>";
echo $after_widget;
}
```

IN THIS CHAPTER

- » Exploring best practices
- » Naming, filing, and locating your plugin
- » Internationalizing your plugin

Chapter 6

Exploring Plugin Development Best Practices

Starting to develop WordPress plugins is relatively easy. Developing WordPress plugins well is much more difficult.

The key to doing development well is sticking with a set of standards to ensure that your plugin is well designed and implemented. A set of standards that many people can agree upon is typically referred to as *best practices.* By adopting best practices as your own personal development standard, you ensure that other developers can easily understand your plugin's structure and code. Doing so makes collaboration much smoother. In other words, if all WordPress plugin developers followed best practices, the WordPress development world would be a happier, more productive place.

This chapter delves deeper into best practices and is dedicated to taking your plugin's quality to the next level.

Adding a File Header

The most fundamental best practice in creating WordPress plugins is ensuring that your plugin has a *file header* at the top of the main plugin file. As discussed in Book 7, Chapter 5, the file header is the part of a plugin file that identifies the file as a plugin. Without the file header, the plugin isn't actually a plugin and can't be enabled on the WordPress Dashboard.

TIP

Even if you don't distribute your plugin in the WordPress Plugin Directory (`https://wordpress.org/plugins`), take the time to fill in the file header with the name, description, author, version, and license. This info is helpful to all your plugin users.

Use the following header names to supply information about your plugin:

- **Plugin Name:** The value of this entry is listed as the name of the plugin on the Dashboard's Plugins page. The Plugin Name is the only required entry in a plugin's file header. If this entry isn't present, WordPress ignores the plugin.

  When giving your plugin a name, make sure that you choose a name that is

  - *Unique:* WordPress uses the name to check for plugin updates. If you name the plugin *Akismet,* for example, WordPress could offer to let the user automatically upgrade the plugin, resulting in your plugin code's being replaced by the actual Akismet plugin. Starting all your plugin names with your own name is a good way to achieve unique names. Following are some unique plugin names: Lisa's Twitter Widget, Lisa's Amazon Affiliate Shortcodes, and Lisa's Really Cool Plugin.
  - *Descriptive:* Use a name that describes the plugin's purpose. Lisa's Twitter Widget and Lisa's Amazon Affiliate Shortcodes both describe what the plugin offers quite well, but Lisa's Really Cool Plugin doesn't identify its purpose.

  REMEMBER

  Even if you use the plugin only on your own site, by using a nondescriptive name, you may end up having to look at the plugin's code just to remember what the plugin actually does.

- **Description:** This entry is meant to be a brief explanation of what features the plugin offers. The description entry appears next to each plugin listed on the Dashboard's Plugins page. Because the plugin's listing shares space with other plugins, don't add a large description. Limit the description to one to three sentences.

  You can put HTML in the description, as well as add links for plugin documentation and other resources.

WARNING

Don't abuse this feature to make your plugin stand out from all the others. If your plugin is installed, you've already won over the user and motivated him to install the plugin. Don't lose a user by spamming his plugin listing.

- **Version:** If you share the code for your plugin, the version entry of the plugin could be one of the most important entries in the plugin's file header. If the version number is updated properly, when a user reports an issue, you quickly know exactly what code the user is running, whether the plugin is outdated, and whether the current code has a bug. The version entry is simple but very powerful.
- **Plugin URI:** Enter the address of the website where you talk in depth about the plugin. At minimum, provide information about what the plugin is and any necessary instructions on using it. Also, it's a good idea to allow comments so that people can provide feedback, both good and bad. Feedback works as a simple support system for your plugin.
- **Author:** List the name(s) of the plugin author(s). Sometimes, a company's name is used instead of a specific developer's.
- **Author URI:** List the address of the plugin author's website.
- **License:** This entry is the name of the license under which your plugin is released. For most plugins, this entry should be GPLv2, because it matches the license under which WordPress is released. When you submit a plugin to the Plugin Directory, that plugin must be licensed under GPL version 2 or later. For more information on GPL licensing, including how it pertains to your plugin development practices, see Book 1, Chapter 2.
- **Text Domain:** Creates a unique identifier that later allows the plugin to accept translations for other languages (other than English). The value of this entry is used as the domain for translating the other entries and should match the domain used in the `load_plugin_textdomain` function. For details about translating, see "Internationalizing or Localizing Your Plugin" later in this chapter.

  This entry is rarely used in plugins, but it's available to allow translators to supply translations for the details in the file header.
- **Domain Path:** This entry is used with the Text Domain entry to offer file-header translations. The value of this entry is the name of the directory inside the plugin's directory (such as `/language/` or `/translations/`) where the translation files are located. The directory must begin with a forward slash for the translation files to be found. If this entry isn't used, the plugin's directory is searched for the translation files.

  Like Text Domain, the Domain Path entry is rarely used.

- **Network:** When WordPress is running as a network (as discussed in Book 8), this entry allows plugins to indicate that they must be active for the entire network rather than a single site. The only accepted value for this entry is `true`; any other value is treated the same as a blank or missing entry. If WordPress isn't running as a network, this entry is ignored.

  Using this entry is helpful if your plugin provides very low-level features, such as advanced caching. Because such a feature could create problems if it's active on only some sites in the network, this entry forces an all-or-nothing activation of the plugin. Either all the sites in the network run the plugin, or no site does.

- **Site Wide Only:** This deprecated entry is superseded by the Network entry and is supported only for backward compatibility. If the Network entry is supplied, this entry is ignored. As with Network, the only recognized value is `true`. You shouldn't use this entry as support, however, because it may be removed in future versions.

Although you may not need all the entry options, a file header that uses all the options looks like the following. (The Site Wide Only option is left out because it is replaced by the Network option.)

```
<?php
/*
  Plugin Name: Lisa’s Twitter Widget
  Description: Display Twitter feeds in any sidebar on your site.
  Version: 1.0.0
  Plugin URI: http://example.com/twitter-widget
  Author: Lisa Sabin-Wilson
  Author URI: http://example.com
  License: GPLv2
  Text Domain: lsw-twitter-widget
  Domain Path: /language/
  Network: true
*/
?>
```

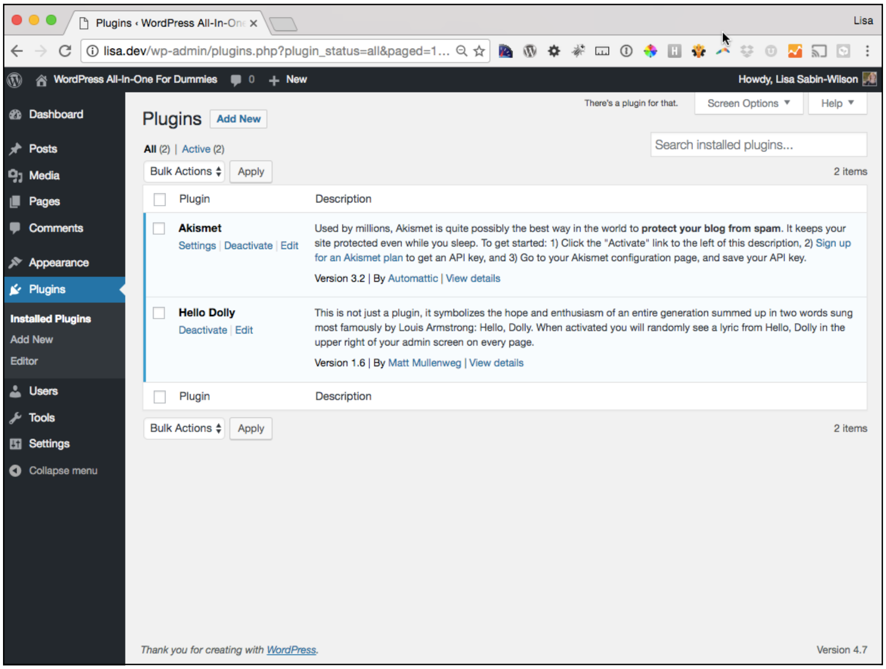
TIP

It's customary to include a licensing statement in the header of your plugin to indicate adherence to the GPLv2 license. This statement is easy to include and is formatted as follows:

```
<?php
/*

This program is free software; you can redistribute it and/or
modify it under the terms of the GNU General Public License
as published by the Free Software Foundation; either version 2
of the License, or (at your option) any later version.
```

```
This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA.
*/
?>
```

Figure 6-1 shows the Plugins page, displaying information pulled from each plugin's file header.



□ Plugin	Description
□ **Akismet** Settings | Deactivate | Edit	Used by millions, Akismet is quite possibly the best way in the world to **protect your blog from spam**. It keeps your site protected even while you sleep. To get started: 1) Click the "Activate" link to the left of this description, 2) Sign up for an Akismet plan to get an API key, and 3) Go to your Akismet configuration page, and save your API key. Version 3.2 | By Automattic | View details
□ **Hello Dolly** Deactivate | Edit	This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page. Version 1.6 | By Matt Mullenweg | View details
□ Plugin	Description

FIGURE 6-1: The WordPress Plugins page displays plugin information.

Creating a readme.txt File

Before you submit a plugin to the WordPress Plugin Directory, make sure that your plugin includes a `readme.txt` file. WordPress won't accept your plugin without a `readme.txt` file, which is included with the rest of your plugin's files when a user downloads the plugin. The file should contain the information the user needs to use the plugin properly.

The information contained in the readme.txt file is much more elaborate than the information in the file header. All the plugin pages in the Plugin Directory are generated from information in the readme.txt files of the plugins. Thus, this information is very important if you want people to take your plugin seriously.

TECHNICAL STUFF

The file is formatted in a slightly modified version of Markdown format. *Markdown* is a simple syntax for formatting content to contain headings, text styling (such as underline and bold), links, and so on. The main difference between the format used for WordPress plugin readme.txt files and regular Markdown is that the readme.txt files use a different format for headings (as you see in the following example), and a WordPress-specific section similar to the file header of the main plugin file appears at the top of readme.txt files.

Before digging into the details, look through the following example readme.txt file contents:

```
=== Lisa's Twitter Widget ===
Contributors: lisasabinwilson
Stable tag: 1.0.0
Tags: twitter, widget, social media
Requires at least: 3.3
Tested up to: 4.7

Display Twitter feeds in any sidebar on your site.

== Description ==

Lisa's Twitter Widget uses the power of WordPress's widget system to allow
you to quickly and easily add a Twitter feed to your site. After adding the
Twitter Widget to one of your sidebars, enter the desired Twitter username in
the widget's options, save the changes, and the Twitter feed will show up on
your site.

== Installation ==

Extract the zip file and just drop the contents in the wp-content/plugins/
directory of your WordPress installation and then activate the Plugin from
the Plugins page in your WordPress Dashboard.
```

Notice that the lines with the equal signs separate the file into sections. When the plugin's page is generated, the text on the topmost line with the three equal signs on each side (which I refer to as the *header section*) is used as the plugin's name, and the text after the Description and Installation sections is used to populate the Description and Installation tabs on the plugin's page.

You can do much more with a readme.txt file than I show here. This example is a small, simplified version of what you see in active plugins with well-crafted readme.txt files.

TIP

If you're concerned about whether your plugin's readme.txt file adheres to the expectations of the WordPress Plugin Directory, use the WordPress validator tool (https://wordpress.org/plugins/about/validator). This tool tells you whether your readme.txt file contains all the necessary components and information. If you're still having problems, the handy readme.txt file generator at http://sudarmuthu.com/wordpress/wp-readme helps you generate a valid readme.txt file for your plugin by making sure that the file meets the basic requirements.

Setting up the header section

The header section at the top of the file is similar to the file header in the actual plugin file because like the file header, the header section is parsed by code to format the data in specific ways. The format of the header section is as follows:

```
=== Plugin Name ===
entry: value
entry: value
entry: value

Brief description of the plugin.
```

The plugin name and short description are required and should be unique to the plugin and description. Like the description of the file header, this description should be brief (one to three sentences).

You can add several entries to the header section. Table 6-1 lists the available entries for the header section. Unless otherwise noted, each entry is required and should be included in the header section.

TABLE 6-1 Entries for the readme.txt File Header Section

Component	Description
Contributors	Comma-separated list of contributors' wordpress.org usernames. If valid usernames aren't used, the plugin page won't link properly to each contributor's other plugins.
Donation Link	Web address for a page that accepts donations for the plugin. This entry is optional.
License	How the plugin is licensed — typically, GPLv2.
License URI	The web address that contains the full details of the license — typically, `www.gnu.org/licenses/gpl-2.0.html`.
Requires At Least	The earliest version of WordPress with which your plugin is known to be compatible. If you haven't tested the plugin with older versions of WordPress or don't test updated versions of the plugin with older versions of WordPress, set this entry to the latest version of WordPress to ensure that you don't indicate nonexistent compatibility.
Stable Tag	Indicates the subversion tag of the latest stable version of your plugin. If no stable tag is provided, trunk is assumed to be stable.
Tags	A comma-separated list of descriptive tags related to the plugin. You can find a list of existing tags at `https://wordpress.org/plugins/tags`.
Tested Up To	The latest version of WordPress in which you've successfully tested your plugin. You can use prerelease versions of WordPress (such as 3.5-beta3) if the plugin is compatible with the development version.

Adding other sections

After the header section, the rest of the `readme.txt` file is dedicated to providing information used to create the plugin's Plugin Directory page. This information is divided into sections that display on the plugin's page as tabs. The following list describes the tabs and what they're meant to be used for, and also provides any special details:

- **Description:** This tab appears by default, so put the information that you want people to see when they first visit the plugin's page in this section. Focus on providing information about what features the plugin offers, what makes the plugin different from other plugins with similar features, and what requirements may prevent people from using the plugin successfully.
- **Installation:** In this section, you should include any special instructions on how to install and configure the plugin properly.
- **Frequently Asked Questions:** Are users asking you the same questions over and over? Do you expect certain questions? This tab is the place for you to answer your users' questions.
- **Changelog:** This section is helpful for listing the changes in each version. Be sure to include details about new features, enhancements, and bug fixes so that

current users who are curious about the reason for the new release can easily find what to expect after the upgrade. It's common to remove older listings, because this section gets long. The number of listings to keep is up to you.

- **Screenshots:** This section is for listing pictures and videos that show the plugin in action. The screen shots follow a specific format:
  - They must be added to the plugin's subversion repository in the `/assets` directory.
  - The names should be `screenshot-1.png`, `screenshot-2.png`, `screenshot-3.png`, and so on.
  - The supported formats are PNG, JPEG, and GIF.

  TIP

  Add a description for each screen shot by using a numbered list. The description is displayed below the image with the matching number.
- **Other Notes:** The Other Notes tab is special in that it's created by merging all other sections, so you can create as many custom sections as you like and have each of the custom sections appear on the Other Notes tab.

The following example shows a `readme.txt` with each of these sections:

```
=== Lisa's Twitter Widget ===
Contributors: lisasabinwilson
Stable tag: 1.0.0
Donation link: http://example.com
Tags: twitter, widget, social media
Requires at least: 3.3
Tested up to: 4.7
License: GPLv2
License URI: http://www.gnu.org/licenses/gpl-2.0.html

Display Twitter feeds in any sidebar on your site.

== Description ==

Lisa's Twitter Widget uses the power of WordPress's widget system to allow
you to quickly and easily add a Twitter feed to your site. After adding the
Twitter Widget to one of your sidebars, enter the desired Twitter username in
the widget's options, save the changes, and the Twitter feed will show up on
your site.

== Installation ==

Extract the zip file and just drop the contents in the wp-content/plugins/
directory of your WordPress installation and then activate the Plugin from
the Plugins page in your WordPress Dashboard.
```

```
== Frequently Asked Questions ==

= Can the widget combine the feeds from more than one username? =

Not at this time. Such a feature may be added in a future version. For now,
you will simply have to use more than one widget.

= Can I load a feed for a hashtag? =

Yes. Rather than supplying a username, a hashtag can be used (ensure that you
add the # before the hashtag) to show the latest feed for that hashtag.

== Changelog ==

= 1.0.0 =
* Release-ready version
* Fixed issue with feed caching not working properly, causing site slowdowns.

= 0.0.1 =
* Development version. It still has some bugs.

== Screenshots ==
1. Configuration options for the Twitter Widget.
2. The Twitter Widget showing a feed on the site.

== Thanks ==

My thanks to Twitter and its fantastic API. If it wasn't for the API,
     this plugin would not be possible.
```

TIP

The Markdown format has many options for formatting the content. Go to http://daringfireball.net/projects/markdown/syntax for full details on the options available in Markdown.

Besides setting up plugin pages in the Plugin Directory, the readme.txt file serves two important purposes: controlling the released version of the plugin and offering content to the search function in the Plugin Directory.

The readme.txt file in your plugin's repository controls the released version of the plugin. After you update the plugin with a new version number, update the stable version value in the /trunk/readme.txt file to reflect the new version number. If you don't update this value, the new version won't be released.

Internationalizing or Localizing Your Plugin

WordPress users exist across the United States, Russia, Japan, Germany, and all points between. Therefore, the next person to download and use your plugin may not speak the same language that you do. If you write and distribute your plugin only in English, it may be useless to the next person if he speaks only German. The WordPress software has internationalization built into it, however, which means it can be *localized*, or translated, into different languages.

REMEMBER

You aren't translating the file into different languages (unless you want to). Rather, you're providing a mechanism of support for people who want to provide translation for your plugin through the creation of `.mo` (machine object) files. People in many countries have created `.mo` files that translate WordPress into different languages; by providing localization for your plugin, you're enabling them to translate your plugin text as well. If you're interested in translating WordPress into a different language, check out the resource page at `https://make.wordpress.org/polyglots/handbook`.

Using GetText functions for text strings

WordPress provides two main localization functions: `__` and `_e`. These functions use the `GetText` translation utility installed on your web server. These two functions let you wrap plain text into strings of text to be translated. You need to account for two types of text strings in your plugin file:

- **HTML:** Example: `<h1>`*Plugin Name*`</h1>`

  To wrap HTML text strings within the `GetText` function call, wrap it by using the _e function like this:

  ```
  <h1><?php _e('Plugin Name', 'plugin-name'); ?></h1>
  ```

  This function tells PHP to echo (_e) or display the string of text on your web browser screen but adds the benefit of using the `GetText` function, which allows that string of text to be translated.

- **PHP:** Example: `<?php comments_number( 'No Responses', 'One Response', '% Responses' );?>`

To wrap PHP text strings with the GetText function, wrap it by using the __ function, like this:

```
<?php comments_number(__('No Responses',plugin-name),('One Response', 'plugin-
   name'),( '% Responses', 'plugin-name') );?>
```

Unlike the echo function (_e), the __ function is used when you need to add a string of text to an existing function call (in this case, comments_number()).

REMEMBER

Avoid slang when writing your text strings in your plugin file. Slang is significant to only a certain demographic (age, geographic location, and so on) and may not translate well in other languages.

The second argument within the GetText string for the PHP text string example is plugin-name. This argument defines the domain of the text and tells GetText to return the translations only from the dictionary supplied with that domain name. This domain is the *plugin text domain,* and most plugin authors use the name of the plugin (separated by hyphens) as the definer. Because some of the text you provide in your plugin is unique and, most likely, doesn't exist within the WordPress core language files, use the text domain in your GetText functions to ensure that the GetText function pulls the language dictionary in your plugin, instead of attempting to pull the text from the core WordPress language files.

In a plugin file, you define the text domain like this:

```
$my_translator_domain = PLUGIN-NAME;
$my_translator_is_setup = 0;
function fabfunc_setup(){
  global $my_translator_domain, $my_translator_is_setup;
  if($my_translator_is_setup) {
    return;
  }
  load_plugin_textdomain($my_translator_domain,
       PLUGINDIR.'/'.dirname(plugin_basename(__FILE__)),

       dirname(plugin_basename(__FILE__)));
}
```

TIP

If you do not want to add the load_plugin_textdomain(); to your plugin and the plugin requires at least version 4.6 of the WordPress software, you do have the option of using translate.wordpress.org to translate your plugin into different languages. To do this, make sure your Readme.txt file contains this line in the header Requires at least: 4.6.

These lines of code simply tell WordPress where your plugin file is located (the text domain), which in turn informs WordPress where to find the .pot, or translation file, for your plugin.

Creating the POT file

After you create your plugin and include all text strings within the GetText functions __ and _e, you need to create a .pot (portable object template) file, which contains translations for all the strings of text that you wrapped in the GetText functions. Typically, you create the .pot file in your own language, in a special format, thereby allowing other translators to create their own .po (portable object) file or .mo (machine object) file in their language, using yours as the guide to translate by.

The .pot file is the original translation file, and the .po file is a text file that includes your original text (from the .pot) along with the translation for the text. Alternatively, you can use an .mo file, which is basically the same as a .po file. Although .po files are written in plain text meant to be human-readable, .mo files are compiled to make it easy for computers to read. Most web servers use .mo files to provide translations for .pot files.

TIP

WordPress has an extensive .pot file that you can use as a template for your own. Download it at http://svn.automattic.com/wordpress-i18n/pot/trunk/wordpress.pot.

Additionally, you can translate .pot files into .mo files by using translation tools such as Poedit (https://poedit.net), a free tool that takes the original .pot file and the provided translations in a .po file and merges them into a compiled .mo file for your web server to deliver the translated text.

The .pot file begins with a *header* section, which contains required information about what your translation is for. The .pot header section looks like this:

```
# Copyright (C) 2017 WordPress
# This file is distributed under the same license as the WordPress package.
msgid ""
msgstr ""
"Project-Id-Version: WordPress 4.8-alpha-40038\n"
"Report-Msgid-Bugs-To: https://make.wordpress.org/polyglots/\n"
"POT-Creation-Date: 2017-02-01 22:13:18+00:00\n"
"MIME-Version: 1.0\n"
"Content-Type: text/plain; charset=UTF-8\n"
```

```
"Content-Transfer-Encoding: 8bit\n"
"PO-Revision-Date: 2017-MO-DA HO:MI+ZONE\n"
"Last-Translator: FULL NAME <EMAIL@ADDRESS>\n"
"Language-Team: LANGUAGE <LL@li.org>\n"
```

All the capitalized, italicized terms in this code example are placeholders. Replace these terms with your own information.

The format of the .pot file is specific and needs to contain the following information:

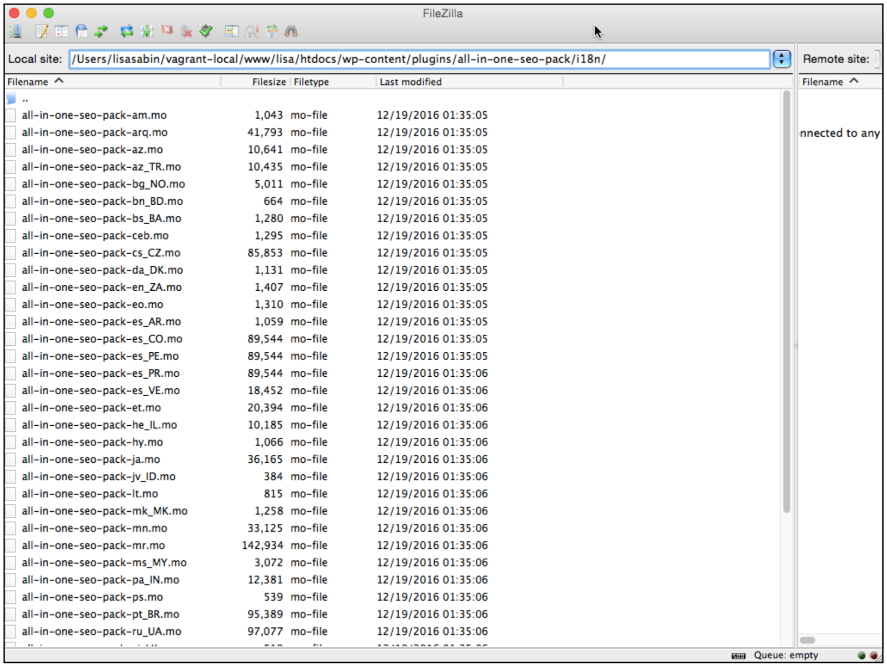
- **Filename:** The name of the file in which the text string exists. If the plugin file is wordpress-twitter-connect.php, for example, you need to include that filename in this section.
- **Line of code:** The line number of the text string in question.
- **msgid:** The source of the message, or the exact string of text that you included within one of the GetText functions: __ or _e.
- **msgstr:** A blank string where the translation (in the subsequent .pot files) is inserted.

For your default .pot file, to format a text string by using the GetText function (<h1><?php _e('WordPress Twitter Connect'); ?></h1>), which exists on the second line of the wordpress-twitter-connect.php plugin file, you include three lines in the .pot file that look like this:

```
#: wordpress-twitter-connect.php:2
msgid: "WordPress Twitter Connect"
msgstr: ""
```

You need to go through all the text strings in your plugin file that you wrapped in the GetText functions and define them in the .pot file in the format provided. Now if anyone wants to create a .po file for your plugin in a different language, he or she simply copies his or her language translation of your .pot file between the quotation marks for the msgstr: section for each text string included in the original .pot file.

You need to include all .pot and .po (or .mo) files need in your plugin folder for the translations to be delivered to your website. Have a look at the directory structure of the popular WordPress All in One SEO Pack plugin in Figure 6-2. You see the original .pot file along with the translated .mo files listed within the /wp-content/plugins/all-in-one-seo-pack/ plugin folder.



FileZilla

Local site: /Users/lisasabin/vagrant-local/www/lisa/htdocs/wp-content/plugins/all-in-one-seo-pack/i18n/

Remote site:

Filename	Filesize	Filetype	Last modified
..			
all-in-one-seo-pack-am.mo	1,043	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-arq.mo	41,793	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-az.mo	10,641	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-az_TR.mo	10,435	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-bg_NO.mo	5,011	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-bn_BD.mo	664	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-bs_BA.mo	1,280	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-ceb.mo	1,295	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-cs_CZ.mo	85,853	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-da_DK.mo	1,131	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-en_ZA.mo	1,407	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-eo.mo	1,310	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-es_AR.mo	1,059	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-es_CO.mo	89,544	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-es_PE.mo	89,544	mo-file	12/19/2016 01:35:05
all-in-one-seo-pack-es_PR.mo	89,544	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-es_VE.mo	18,452	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-et.mo	20,394	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-he_IL.mo	10,185	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-hy.mo	1,066	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-ja.mo	36,165	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-jv_ID.mo	384	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-lt.mo	815	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-mk_MK.mo	1,258	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-mn.mo	33,125	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-mr.mo	142,934	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-ms_MY.mo	3,072	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-pa_IN.mo	12,381	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-ps.mo	539	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-pt_BR.mo	95,389	mo-file	12/19/2016 01:35:06
all-in-one-seo-pack-ru_UA.mo	97,077	mo-file	12/19/2016 01:35:06

Filename
nnected to any

Queue: empty

FIGURE 6-2: The .pot and .mo files for the WordPress All in One SEO Pack plugin.

You, or other translators, can create unlimited `.mo` files for several languages. Make sure that you name the language file according to the standardized naming conventions for the language. The naming convention is `language_`*COUNTRY*`.mo`. The French `.mo` file for the `wordpress-twitter-connect.php` plugin, for example, is `wordpress-twitter-connect-fr_FR.mo`.

TIP

You can find a full list of language codes at `www.w3schools.com/tags/ref_language_codes.asp`. For a full list of country codes, visit the Online Browsing Platform, where you can search for specific country codes: `www.iso.org/obp/ui`.

IN THIS CHAPTER

- Working with a plugin template
- Plugifying your plugins
- Enhancing plugins
- Using custom post types and shortcodes
- Enhancing editors
- Fixing links

Chapter 7

Plugin Tips and Tricks

When you have a WordPress plugin or two under your belt, you'll discover that you want to interact with many more parts of WordPress. WordPress is always coming out with new functionality and, along with it, new application programming interface (API) hooks, known as *action* and *filter hooks,* covered in Book 7, Chapter 5. This chapter discusses some of this functionality and offers you ways to extend your use of WordPress plugins. Because this functionality involves some simple programming skills, I assume (for the purposes of this chapter) that you have some basic PHP and WordPress plugin development knowledge.

Using a Plugin Template

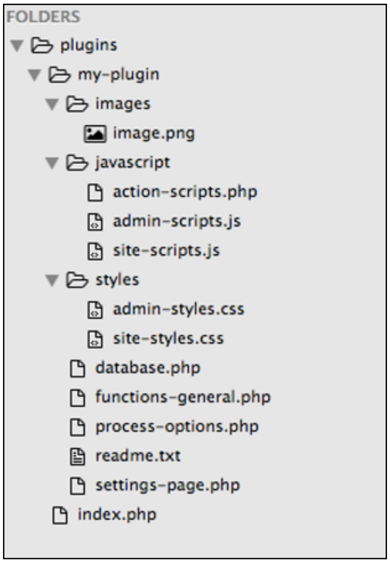
When you start writing WordPress plugins, you find that you spend a significant amount of time rewriting the same things. Most plugins have the same basic structure and are set up the same way, meaning that they all deal with creating settings pages, storing options, and interacting with particular plugins, among other things. You can save hours of work each time you start a new plugin if you create a template.

Such a template varies from person to person, depending on programming styles, preferences, and the types of plugins to include. If you often write plugins that use your own database tables, for example, you should include tables in your template. Similarly, if your plugins almost never require options pages, leave those pages out of your template.

To create your own template, determine what functionality and structure your plugins usually contain. Then follow these steps:

1. **Create your file structure.**

   As you write more plugins, you'll find yourself repeating the same general filenames. If you find that you're including enough JavaScript and Cascading Style Sheets (CSS) in your plugins to necessitate their own files or directories, include them in your template. If you're using a lot of JavaScript or CSS, you could modify the file structure of your plugin template to look something like the one shown in Figure 7-1.



```
FOLDERS
▼ plugins
  ▼ my-plugin
    ▼ images
        image.png
    ▼ javascript
        action-scripts.php
        admin-scripts.js
        site-scripts.js
    ▼ styles
        admin-styles.css
        site-styles.css
      database.php
      functions-general.php
      process-options.php
      readme.txt
      settings-page.php
    index.php
```

FIGURE 7-1: The recommended file structure for a plugin.

2. **Determine what functionality you generally have in your plugins.**

   If your plugins usually contain masses of code in a class, you can set up a basic class for your plugin template. Likewise, if your plugins typically have a single options page or a system of top-level and submenu pages, you can set up a general template.

3. **Create your primary plugin .php file.**

   Usually, this file contains some general add_action calls, includes to other files, and other general initializations. (Check out Book 7, Chapter 5 for information on add_action calls and other plugin functions.) If you always call certain actions, set them up in your primary plugin .php file template. If you always register a plugin function to be run when the plugin is activated (register_activation_hook), for example, and add a menu item for the plugin on the Dashboard (admin_menu), add those calls to your primary template, as follows:

```
<?php
$myInstance = new myPlugin();

add_action('register_activation_hook','my_activation_plugin');
add_action('admin_menu',array($myInstance, 'admin_menu'));

?>
```

4. **Set up the functions you use most often in the body of your primary plugin .php file.**

   The line of code used here — function my_activation_plugin — was added in Step 3 through the add_action hook. In your plugin template, you define any scripts your plugin uses by adding this function, which fires when a user activates the plugin:

```
<?php

function my_activation_plugin(){
//plugin activation scripts here
}
?>
```

5. **(Optional) Create your basic class structure.**

   You might add a few lines of code that resemble the following:

```
<?php
class myPlugin {
    var $options = ;
    var $db_version = '1';
    function myPlugin() {
    add_action('admin_init',array($this,'admin_init');
    }
    function admin_init(){
        //admin initializations
    }
    function process_options($args,$data){
        //process our options here
    }
    function admin_menu(){
        //code for admin menu
    }
    function __construct(){
        //PHP 5 Constructor here
    }
} //end class
?>
```

Obviously, your class template may be more detailed than this example, depending on your particular coding styles and the types of plugins you like to write.

In addition, you may want to set up a basic plugin options page along with plugin options management scripts. Everyone uses different techniques for such things as processing plugin options. When you determine your particular type, include the basic format in your template.

REMEMBER

As your programming style, WordPress, or your interest in different types of plugins changes over time, you'll find that your template needs change, too. Make sure that you update your templates.

Making Your Plugin Pluggable

The WordPress API provides a great solution for hooking in and extending or modifying functionality. Sometimes, however, you may find it useful to hook into another plugin rather than WordPress itself and to extend or modify that plugin's functionality instead.

Here's an example of making your plugin pluggable: interaction (or lack of) between WooCommerce (`https://woocommerce.com`) and the All in One SEO Pack plugin. All in One SEO Pack, among other things, adds a custom document title, description, keywords, and canonical URL to each page of a WordPress site. People often ask how to have their plugins modify this information before it appears onscreen. Forum plugins and shopping-cart plugins particularly need this function, which All in One SEO Pack could easily satisfy if it would just provide a method of accessing its functionality. It has. Read on.

WooCommerce (and plugins with similar functionality) creates its own virtual pages for things like product listings, all contained on a single WordPress page. If you define `http://mywebstore.com/shop` as the WordPress page WooCommerce uses, for example, http://mywebstore.com/shop/product-name and all other product pages are created dynamically by the WooCommerce plugin and are outside the reach of other WordPress plugins. So WordPress and the All in One SEO Pack plugin don't know about them. You can see the problem for purposes of search engine optimization (SEO): WordPress and All in One SEO Pack think that all these product pages are the same as the shop page, with the same titles, canonical URL, and so on. Code could have been written into the plugin to compensate for the needs of the WooCommerce plugin, but that coding would be never-ending; an infinite number of other plugins might need to hook into the All in One SEO Pack functions. To solve this problem, the All in One SEO Pack API was born.

The WooCommerce plugin has an important need to hook into the document title, meta description, meta keywords, and canonical URL that the All in One SEO Pack plugin produces. Because WordPress and All in One SEO Pack weren't aware of the generated product pages, they had the same canonical URL, which is detrimental for SEO purposes. The fix was simple. In the All in One SEO Pack plugin, after the canonical URL is generated and immediately before printing it to the screen, the apply_filters function is used on the variable. This solution allows WooCommerce to use add_filter to hook in and filter the canonical URL, returning the appropriate URL for that page. That is, developers added the following code to the All in One SEO Pack plugin:

```
function prepare_canonical_url(){
     $canonical_url = my_determine_canonical_url_function();
     $new_canonical_url = apply_filters( 'aioseop_canonical_url',
   $canonical_url);

     return $new_canonical_url;
}
```

This code returns the value of the canonical URL and lets another plugin filter it, if desired, before returning the final value.

The part you can add in the primary WooCommerce plugin file (at the end of the file before the closing ?>) is just as simple. It works the same way add_filter does for hooking into the WordPress API:

```
add_filter('aioseop_canonical_url','wooc_change_canonical_url');

function wooc_change_canonical_url($old_url){
     $new_url = determine_current_product_page_url($old_url);
     return $new_url;
}
```

This filter provides a simple solution that allows other plugins (and themes) to hook into a plugin without the need to add specific code for any plugin.

Enhancing Plugins with CSS and JavaScript

You can add functionality to a plugin in many ways. The following sections look at two methods: CSS styling and JavaScript. You may never develop a plugin that uses either method, but chances are good that you, as a budding plugin developer, may need this information at some point.

Calling stylesheets within a plugin

Controlling how your plugin's output looks onscreen (on the WordPress Dashboard or the front end of the website or blog) is best done through a stylesheet. If you've been around web design and HTML, you're probably familiar with CSS. Nearly every styling aspect of a website is controlled by a stylesheet, and WordPress websites are no exceptions. If you want to read the authoritative guide to stylesheets, visit the W3C.org website at `www.w3.org/Style/CSS`. (For more on CSS, see Book 6.)

You can use a single stylesheet to control how your Plugin Options page looks on the Dashboard, how your plugin widget looks on the Dashboard, or how your plugin displays information on the front-end website.

TIP

Create and use separate stylesheets for the plugin on the Dashboard and the plugin's display on the front end, because the stylesheets are called at different times. The back-end stylesheet is called when you're administering your site on the WordPress Dashboard, whereas the front-end stylesheet is called when a user visits the website. Additionally, using separate stylesheets makes style management easier and cleaner.

The best practice for adding stylesheets within your plugin is to create a `/styles` directory, such as `/my-plugin/styles`. Place your stylesheets for the back end and front end inside this directory (refer to Figure 7-1 earlier in this chapter). To call a stylesheet from your plugin, you should use the built-in WordPress `wp_enqueue_style` function, which creates a queuing system in WordPress for loading stylesheets only when they're needed instead of on every page. Additionally, this function supports dependencies, so you can specify whether your stylesheet depends on another that should be called first. This queuing system is used for scripts, too. The `wp_enqueue_scripts` function does the same for scripts as I discuss a little later in this section.

Suppose that you're creating a gallery plugin to display images on your website. You want your gallery to look nice, so you want to create a stylesheet that controls how the images display. You can call that stylesheet in your plugin by using a simple function and action hook. These lines of code get added to your primary plugin .php file at the end, just before the closing ?> tag. Follow these steps:

1. **Create a function in your primary plugin .php file to register your stylesheet and invoke wp_enqueue_style, as follows:**

```
function add_my_plugin_stylesheet() {
   wp_register_style('mypluginstylesheet', '/wp-content/plugins/ my-plugin/
    styles/site-style.css');
   wp_enqueue_style('mypluginstylesheet');
}
```

2. **Use the wp_print_styles action hook, and call your function:**

```
add_action( 'wp_print_styles', 'add_my_plugin_stylesheet' );
```

Here's a breakdown of the hooks in the function:

- **The wp_register_style function registers your stylesheet for later use by wp_enqueue_style, as follows:**

```
wp_register_style( $handle, $src, $deps, $ver, $media )
```

The function has several parameters; the first is $handle, which is the name of your stylesheet.

WARNING

$handle must be unique. You can't have multiple stylesheets with the same name in the same directory.

The second parameter is $src, the path to your stylesheet from the root of WordPress — in this case, the full path to the file within the plugin's styles directory.

The remaining parameters are optional. To find out more about them, read the WordPress documentation for this function at https://codex.wordpress.org/Function_Reference/wp_register_style.

- **The wp_enqueue_style function queues the stylesheet, as follows:**

```
wp_enqueue_style( $handle, $src, $deps, $ver, $media )
```

The $handle parameter is the name of your stylesheet as registered with wp_register_style. The $src parameter is the path, but you don't need this parameter because you already registered the stylesheet path. The remaining parameters are optional and explained in the WordPress documentation for this function at https://developer.wordpress.org/reference/functions/wp_enqueue_style.

- **The action hook that calls the function uses `wp_print_styles` to output the stylesheet to the browser.**

  In the source code, the line of code that shows the stylesheet being included looks like this:

  ```
  <link rel='stylesheet' id='twentyseventeen-style-css'  href='http://lisa.dev/
     wp-content/themes/twentyseventeen/style.css?ver=4.8-alpha-40031' type='text/css'
     media='all'/>
  ```

Another example uses a stylesheet for the plugin's admin interface, which controls how your plugin option page within the Dashboard appear. These lines of code also get added to your plugin's primary `.php` file just before the closing `?>` tag:

```
add_action('admin_init', 'myplugin_admin_init');

function myplugin_admin_init() {
   wp_register_style('mypluginadminstylesheet', '/wp-content/plugins/
   my-plugin/admin-styles.css');
    add_action('admin_print_styles' 'myplugin_admin_style');
    function myplugin_admin_style() {
      wp_enqueue_style('mypluginadminstylesheet');
   }
}
```

This example uses some hooks that are specific to the WordPress Dashboard:

- The action hook calls `admin_init`. This hook makes sure that the function is called when the Dashboard is accessed. The callback function is `myplugin_admin_init`.
- The function registers the stylesheet, using `wp_register_style`.
- An action hook calls the `myplugin_admin_style` function. The `admin_print_styles` hook is used because it's specific to the WordPress Dashboard display.
- The function queues the stylesheet, using `wp_enqueue_style`.

  In the source code, the line of code that shows the stylesheet being included looks like this:

  ```
  <link rel='stylesheet' id='aioseop-module-style-css'  href='http://lisa.dev/
     wp-content/plugins/all-in-one-seo-pack/css/modules/aioseop-module.css'
     type='text/css' media='all'/>
  ```

Calling JavaScript within a plugin

After using the wp_register_style and wp_enqueue_style functions to call stylesheets within a plugin, you see how similar functions can call JavaScript, which has many uses within a plugin.

JavaScript can control functionality within a form or display something with an effect. WordPress comes with some JavaScript in the core that you can call in your plugin, or you can write your own. As with stylesheets, it's best to store JavaScript in a separate subdirectory within your plugin, such as /my-plugin/javascript.

Instead of using wp_register_style and wp_enqueue_style to register and queue JavaScript, you must use wp_register_script and wp_enqueue_script. These functions work in much the same way and have much the same parameters. Here's an example to add to your plugin's primary .php file, before the closing ?> tag:

```
if ( !is_admin() ) {
   wp_register_script('custom_script','/wp-content/plugins/ my-plugin/
   javascript/custom-script.js',);
   wp_enqueue_script('custom_script');
}
```

Immediately, you notice that the wp_enqueue_script function loads scripts in the front end of your website and on the Dashboard. Because this situation can cause conflicts with other scripts that WordPress uses on the Dashboard display, the "if is not" (!is_admin) instruction tells the plugin to load JavaScript only if it's not being loaded on the Dashboard. This code loads custom-script.js only on the front end of the website (that is, what your site visitors see). You could add a more specific conditional if instruction to load JavaScript only on a certain page.

If you want to load the JavaScript in wp-admin, the action hook admin_init loads your callback function when wp-admin is accessed and the admin_print_script function outputs the script to the browser, just like the stylesheet example.

Working with Custom Post Types

One of the most confusing features of WordPress is custom post types. The feature is also useful, powerful, and easy to implement and use when you understand how it works. WordPress has five default post types:

- **Post:** The most commonly used post type. Content appears in a blog in reverse sequential time order.

- **Page:** Similar to posts except for not using the time-based structure of posts. Pages can be organized in a hierarchy and have their own URLs off the main site URL.
- **Attachment:** A special post type that holds information about files uploaded through the WordPress Media upload system.
- **Revisions:** A post type that holds past revisions of posts and pages as well as drafts.
- **Nav Menus:** A post type that holds information about each item on a navigation menu.

A post type is really a type of content stored in the `wp_posts` table inside the WordPress database. The post type is stored in the `wp_posts` table's `post_type` column. The information in the `post_type` column differentiates each type of content so that WordPress, a theme, or a plugin can treat the specific content types differently.

When you understand that a post type is just a method to distinguish how different content types are used, you can investigate custom post types.

Suppose that you have a website about movies. Movies have common attributes, such as actors, directors, writers, and producers. But perhaps you don't want to store your movie information in a post or a page because it doesn't fit any content type. In this situation, custom post types are useful. You can create a custom post type for movies and apply the common attributes (actors, directors, and so on). You can use a theme to handle movies differently from a post or a page by using a custom template for the `movies` post type and then creating different styling attributes and templates for the `movies` post type. You can search and archive movies differently with a custom post type.

One method of creating a simple custom post type in WordPress is to add the following lines of code to the Theme Functions template file (located in the theme file and called `functions.php`):

```
add_action('init','create_post_type');                              →1
function create_post_type() {
  register_post_type( 'movies',                                     →3
    array(                                                          →4
      'labels' => array(                                            →5
        'name' => ('Movies'),
        'singular_name' => ('Movie'),
        'rewrite' => array('slug' => 'movies'),
      ),
      'public' => true,                                              →10
    )
  );
}
```

Here's what's going on in the code:

- →1 The first line is the action hook, which uses `'init'` so that it's called on the front end and on the Dashboard to display the custom post type in both.
- →3 The callback function starts with the `register_post_type` function and the custom post type name. This function creates the custom post type and gives it properties.
- →4 Next is an array of arguments that are the custom post type properties.
- →5 The `'labels'` arguments include the name that appears on the Dashboard menu, the name to be used (Movies), and the slug in the URL of the posts (`http://yourdomain.com/movies`, for example) in this custom post type.
- →10 The `'public'` argument controls whether the custom post type displays on the Dashboard.

Figure 7-2 shows how the Custom Post Type page and menu item look on the Dashboard. Figure 7-3 shows a custom post type on a website.

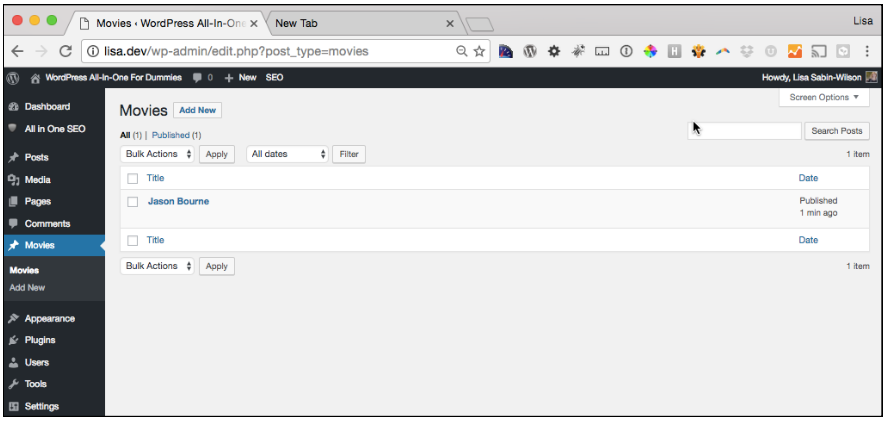
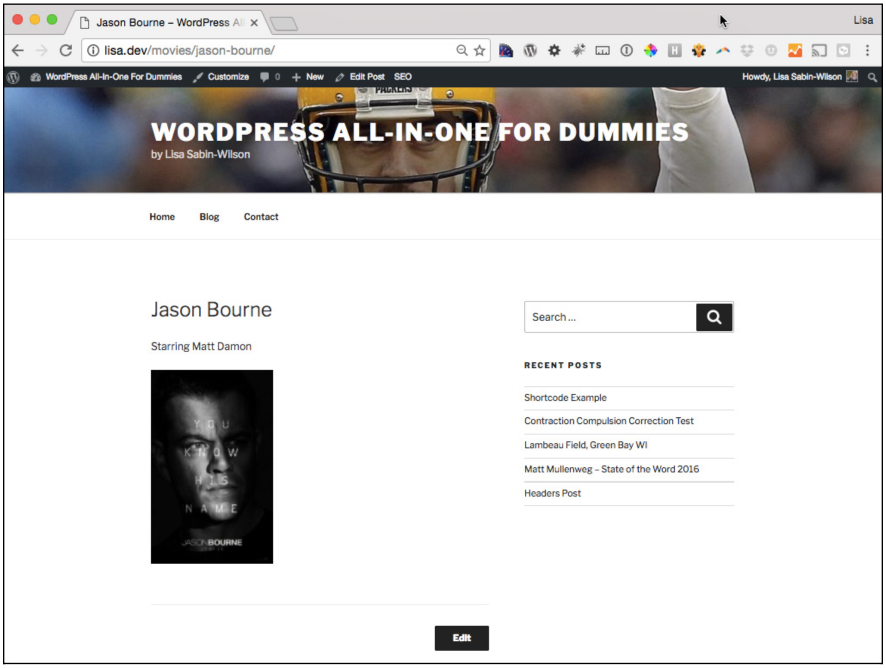


FIGURE 7-2: A custom post type on the WordPress Dashboard.


Jason Bourne – WordPress A
Lisa
lisa.dev/movies/jason-bourne/
WordPress All-In-One For Dummies
Customize
0
New
Edit Post
SEO
Howdy, Lisa Sabin-Wilson
WORDPRESS ALL-IN-ONE FOR DUMMIES
by Lisa Sabin-Wilson
Home
Blog
Contact
Search ...
Edit

Jason Bourne

Starring Matt Damon

RECENT POSTS

- Shortcode Example
- Contraction Compulsion Correction Test
- Lambeau Field, Green Bay WI
- Matt Mullenweg – State of the Word 2016
- Headers Post

FIGURE 7-3: A custom post type shown on a website.

Many other arguments associated with register_post_type give this function its real power. For full documentation of all the arguments and the use of this function, check out https://codex.wordpress.org/Function_Reference/register_post_type.

Custom post types are also discussed in detail in Book 6, Chapter 6.

Using Custom Shortcodes

One of the most common inefficiencies in plugins occurs when a plugin wants to add information within the body of a post or page. The plugin developer manually creates a bloated filtering function, hooks into the_content (the function tag that calls the body of the content from the database and delivers it to your website), and filters it in an attempt to find the appropriate spot to display the information. Fortunately, WordPress has a built-in solution for this problem. When you use the shortcode API, your users can easily choose where in a given post to display the information that your plugin provides.

Suppose that you have a string of data that your plugin generates dynamically, and you want your users to determine where in each post and page that string displays. Users type a shortcode like this within the body of their content to display information from a plugin:

```
[myshortcode]
```

On the developer side, you use the `add_shortcode` function and add it to your primary plugin `.php` file, as follows:

```
<?php add_shortcode($tag, $func); ?>
```

The `add_shortcode` function accepts two parameters:

- The `$tag` parameter is the string that users type within the body of their content to make a call to the plugin shortcode. (In the preceding example, `[myshortcode]` is what users type, so your `$tag` parameter would be `myshortcode`.)
- The `$func` parameter is your callback function (a function that you still need to define in the body of your primary plugin `.php` file, as covered in the next section) that returns the output of the called shortcode.

The shortcode function gets added to your primary plugin `.php` code before the closing `?>` tag:

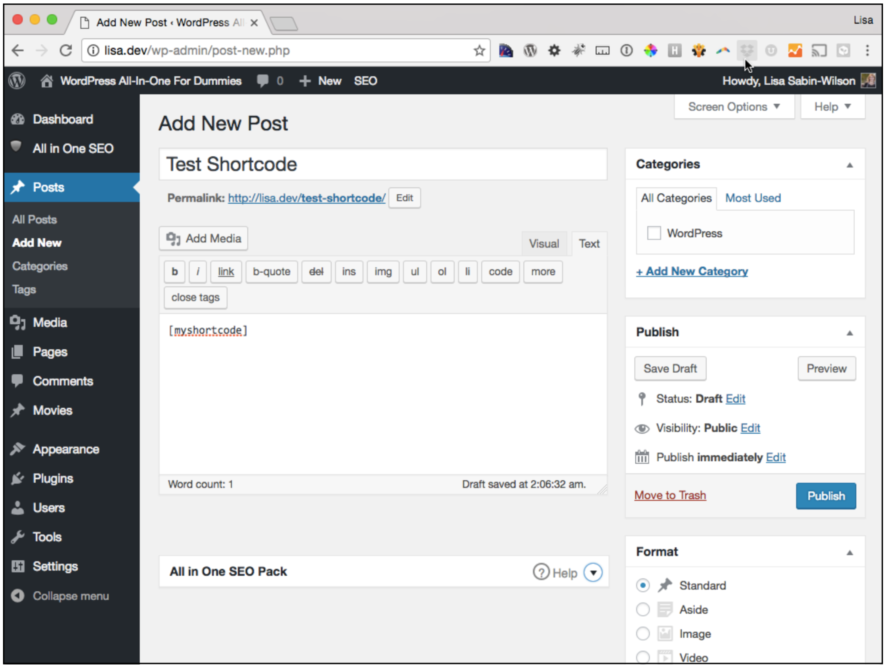
```
add_shortcode('myshortcode','my_shortcode');

function my_shortcode(){
     return “this is the text displayed by the shortcode”;
}
```

In this example, you add the shortcode hook `add_shortcode('myshortcode','my_shortcode');` and then give definition to the function (`$func`) called `my_shortcode` by telling WordPress to output the text `this is the text displayed by the shortcode`.

All your user has to do is type **[myshortcode]** somewhere in the body of his post/page editor (on the Dashboard, hover the cursor over Post and then click the Add New link), as shown in Figure 7-4. When users view the site, the shortcode that the user entered in the body of his post is translated by WordPress to display the returned value, or *output,* of the shortcode function, as shown in Figure 7-5.

WARNING

Shortcode names must be unique to your own plugin, so you should use a name that is specific to your plugin. If your plugin is called Super SEO Plugin, you could name your shortcode `[superseoplugincode]` in an attempt to make sure that no other plugin uses your shortcode. Another plugin that uses a shortcode with the same name will cause a conflict.



Add New Post

Test Shortcode

Permalink: http://lisa.dev/test-shortcode/ Edit

```
[myshortcode]
```

Word count: 1 Draft saved at 2:06:32 am.

□ WordPress

Status: Draft Edit

Visibility: Public Edit

Publish immediately Edit

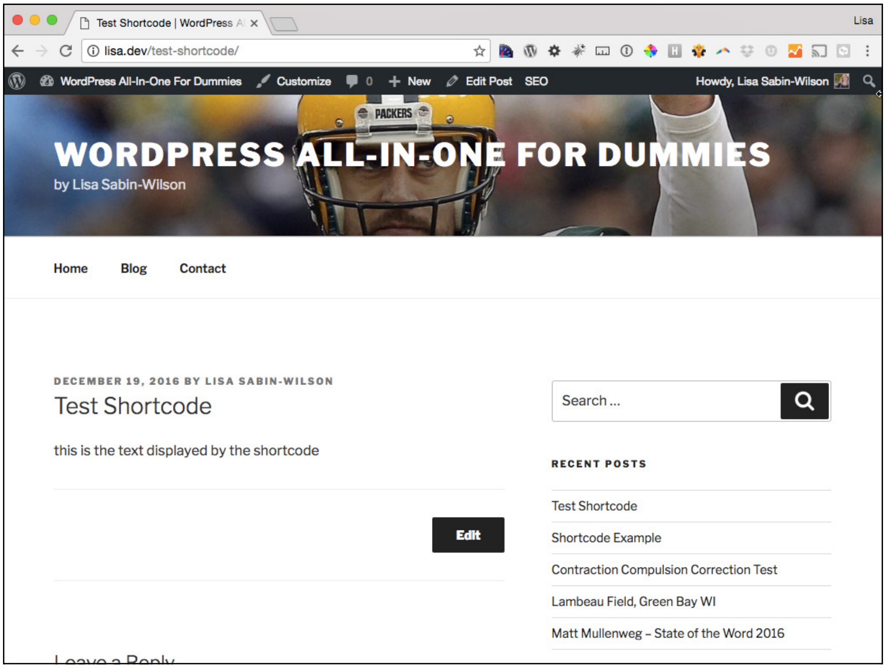
● Standard

○ Aside

○ Image

○ Video

FIGURE 7-4: The post editor showing a simple shortcode.



Test Shortcode | WordPress A
lisa.dev/test-shortcode/
WordPress All-In-One For Dummies
Customize
0
New
Edit Post
SEO
Howdy, Lisa Sabin-Wilson
WORDPRESS ALL-IN-ONE FOR DUMMIES
by Lisa Sabin-Wilson
Home
Blog
Contact
Edit
Search ...
RECENT POSTS
Test Shortcode
Shortcode Example
Contraction Compulsion Correction Test
Lambeau Field, Green Bay WI
Matt Mullenweg – State of the Word 2016
Leave a Reply

DECEMBER 19, 2016 BY LISA SABIN-WILSON

Test Shortcode

this is the text displayed by the shortcode

FIGURE 7-5: The shortcode is replaced by the returned value of the shortcode function.

Shortcodes can include arguments to be passed into the shortcode function:

```
<?php
add shortcode('myshortcode','my_shortcode');

function my_shortcode($attr, $content){
     return 'My name is ' . $attr['first'] . $attr['last'];
}
```

Calling this code with

```
[myshortcode first="John" last="Smith"]
```

outputs `My name is John Smith.`

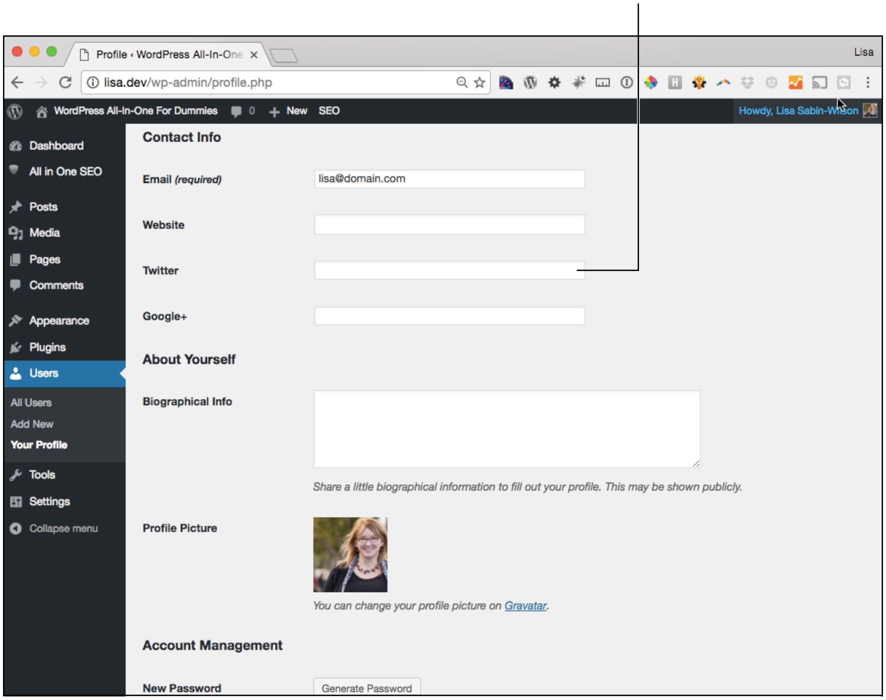
Adding Functionality to Profile Filters

WordPress provides three contact settings in the Profile screen of the WordPress Dashboard by default: Email, Website, and Google+. These settings are extensible, of course, which means that you can easily add new contact methods by using filters. Adding more settings is painless, and you can even add a little extra functionality while you're at it.

Users fill out their profile data on the WordPress Dashboard by hovering the mouse over Users and then clicking the Your Profile link. (See Book 3, Chapter 2.) User profile fields are stored in the WordPress database inside the `user_metadata` table; you can easily fetch them by using `get_the_author_meta('url')` and print them with `the_author_meta('url')`. If you add a Twitter Contact Info field, it appears in profiles, and you can use `the_author_meta('twitter')` template tags in your theme to print the account name.

Figure 7-6 shows the Twitter Contact Info field in a profile within the WordPress Dashboard.

`the_author_meta()` template tag has a hook called `the_author_{$field}`, where the PHP variable `$field` is the requested meta field assigned to each contact type in the user profile files, such as `aim` in the preceding example. These dynamic hooks are powerful because they allow you to narrow your target.



Twitter contact field

Contact Info

Email *(required)* lisa@domain.com

Website

Twitter

Google+

About Yourself

Biographical Info

Share a little biographical information to fill out your profile. This may be shown publicly.

Profile Picture

You can change your profile picture on Gravatar.

Account Management

New Password

FIGURE 7-6: Custom Twitter profile field shown on the Dashboard.

In this example, I use the dynamic `the_author_twitter` hook to change the result from `"lisasabinwilson"` to `<a href="http://twitter.com/lisasabinwilson">@lisasabinwilson</a>`. When you call `the_author_meta('twitter')` in your theme, you get a clickable link to my Twitter profile. Start by entering the following lines of code in your Theme Functions file (`functions.php`) in your active theme folder (add this code toward the bottom of the file, before the closing `?>` tag):

```
/**
 * Add Twitter to the list of contact methods captured via profiles.
 */
function my_add_twitter_author_meta( $contact_methods ) {
  $contact_methods['twitter'] = 'Twitter';
return $contact_methods;
}

add_filter( 'user_contactmethods', 'my_add_twitter_author_meta' );

/**
 * Convert staff Twitter accounts to links to twitter.com.
 */
```

```
function my_link_author_twitter_accounts( $value ) {
  if ( strlen( $value ) ) {
    $url = esc_url( 'http://twitter.com/' . $value );
    $value = '<a href="' . $url . '">@' . esc_html( $value ) . '</a>';
  }
return $value;
}
add_filter( 'the_author_twitter', 'my_link_author_twitter_accounts' );
```

Correcting Hyperlink Problems

Most websites use underline to style hyperlinks. When you're producing content in WordPress, highlighting words and phrases quickly to add hyperlinks can lead to hyperlinking (and underlining) the spaces before and after your anchor text.

For some people, this situation is enough to convince them to hide underlines for hyperlinks, even though that practice may not be desirable.

Here's a snippet that filters blog post content to ensure that you don't have any spaces on the wrong sides of a tag or between a closing tag and punctuation. Add this code to your Theme Functions (`functions.php`) file:

```
/**
 * Prevents underlined spaces to the left and right of links.
 *
 * @param string $content Content
 * @return string Content
 */

function my_anchor_text_trim_spaces( $content ) {
  // Remove spaces immediately after an <a> tag.
  $content = preg_replace( '#<a([^>]+)>\s+#', ' <a$1>', $content );
  // Remove spaces immediately before an </a> tag.
  $content = preg_replace( '#\s+</a>#', '</a> ', $content );
  // Remove single spaces between an </a> tag and punctuation.
  $content = preg_replace( '#</a>\s([.,!?;])#', '</a>$1', $content );
  return $content;
}

add_filter( 'the_content', 'my_anchor_text_trim_spaces' );
```

REMEMBER

HTML ignores more than one space in a row (also more than one tab character and line break) unless you're using the `pre` element or nonbreaking space entities (`&nbsp;`). Therefore, even if your converted text contains two consecutive spaces, the browser won't show the text any differently.

8

Running Multiple Sites with WordPress

Contents at a Glance

IN THIS CHAPTER

- Discovering where multiple sites began
- Exploring what you can do with multiple sites
- Configuring your web server

Chapter 1 An Introduction to Multiple Sites

This chapter introduces you to the network feature that is built into the WordPress software. The network feature allows you, the site owner, to add and maintain multiple sites within one installation of WordPress. In this chapter, you discover how to set up the WordPress network feature, explore settings and configurations, gain an understanding of the Network Administrator role, determine which configuration is right for you, and find some great resources to help you on your way.

When you enable the network features, users of your network can run their own sites within your installation of WordPress. They also have access to their own Dashboards, which have the same options and features that I discuss in the past several chapters. Heck, it probably would be a great idea to buy a copy of this book for every member of your network so that everyone can become familiar with the WordPress Dashboard and features, too. At least have a copy on hand so people can borrow yours!

Deciding When to Use the Multisite Feature

Usually, for multiple users to post to one site, the default WordPress set up, is sufficient. The *Multi* part of the WordPress Multisite feature's name doesn't refer to how many users were added to your WordPress website; it refers to the ability to run multiple sites in one installation of the WordPress software. *Multisite* is a bit of a misnomer and an inaccurate depiction of what the software actually does. A *network of sites* is a much closer description.

Determining whether to use the Multisite feature depends on user access and publishing activity. Each site in the network shares a codebase and users but is a self-contained unit. Users still have to access the back end of each site to manage options or post to that site. A limited number of general options is available networkwide, and posting is not one of those options.

You can use multiple sites in a network to give the appearance that only one site exists. Put the same theme on each site, and the visitor doesn't realize that the sites are separate. This technique is a good way to separate sections of a magazine site, using editors for complete sections (sites) but not letting them access other parts of the network or the back ends of other sites.

Another factor to consider is how comfortable you are with editing files directly on the server. Setting up the network involves accessing the server directly, and ongoing maintenance and support for your users often leads to the network owner doing the necessary maintenance, which is not for the faint of heart.

Generally, you should use a network of sites in the following cases:

- **You want multiple sites and one installation.** You're a blogger or site owner who wants to maintain another site, possibly with a subdomain or a separate domain, all on one web host. You're comfortable with editing files, you want to work with one codebase to make site maintenance easier, and most of your plugins and themes are accessible to all the sites. You can have one login across the sites and manage each site individually.
- **You want to host blogs or sites for others.** This process is a little more involved. You want to set up a network in which users sign up for their own sites or blogs below (or on) your main site and you maintain the technical aspects.

Because all files are shared, some aspects are locked down for security purposes. One of the most puzzling security measures for new users is suppression of errors. Most PHP errors (such as those that occur when you install a faulty plugin or incorrectly edit a file) don't output messages to the screen. Instead, WordPress displays what I like to call the White Screen of Death.

Finding and using error logs and doing general debugging are necessary skills for managing your own network. Even if your web host sets up the ongoing daily or weekly tasks for you, managing a network can involve a steep learning curve.

REMEMBER

When you enable the Multisite feature, the existing WordPress site becomes the main site in the installation.

Although WordPress can be quite powerful, in the following situations, managing multiple sites has limitations:

- **One web account is used for the installation.** You can't use multiple hosting accounts.
- **You want to post to multiple blogs at the same time.** WordPress doesn't allow this practice by default.
- **If you choose subdirectory sites, the main site regenerates permalinks with `/blog/` in them to prevent collisions with subsites.** Plugins are available that prevent this regeneration.

The best example of a large blog network with millions of blogs and users is the hosted service at WordPress.com (`https://wordpress.com`). At WordPress.com, people are invited to sign up for an account and start a blog by using the Multisite feature within the WordPress platform on the WordPress server. When you enable this feature in your own domain and enable the user registration feature, you're inviting users to do the following:

- Create an account
- Create a blog in your WordPress installation (on your domain)
- Create content by publishing blog posts
- Upload media files such as photos, audio, and video
- Invite friends to view their blog or to sign up for their own accounts

Understanding the Difference between Sites and Blogs

Each additional blog in a WordPress Multisite network is a *site* instead of a *blog.* What's the difference?

Largely, the difference is one of perception. Everything functions the same way, but people see greater possibilities when they no longer think of each site as being "just" a blog. WordPress can be much more:

- With the addition of the Domain Mapping plugin (see Book 8, Chapter 6), you can manage multiple sites that have different, unique domain names. None of these sites even has to be a blog. The sites can have blog elements, or they can be static sites that use only pages.
- The built-in options let you choose between subdomains and subfolder sites when you install the network. If you install WordPress in the root of your web space, you get `subdomain.`*`yourdomain.com`* (if you choose subdomains) or *`yourdomain.com`*`/subfolder` (if you choose subfolders). Book 8, Chapter 2 discusses the differences and advantages.

  REMEMBER

  After you choose the kind of sites you want to host and create those sites, you can't change them. These sites are served virtually, meaning that they don't exist as files or folders anywhere on the server; they exist only in the database. The correct location is served to the browser by means of rewrite rules in the `.htaccess` file. (See Book 2, Chapter 5.)
- The main, or parent, site in the network can also be a landing page for the entire network of sites, showcasing content from other sites in the network and drawing in visitors further.

Setting Up the Optimal Hosting Environment

This chapter assumes that you already have the WordPress software installed and running correctly on your web server and that your web server meets the minimum requirements to run WordPress. (See Chapter 2 in this minibook.)

Before you enable the WordPress network feature, you need to determine how you're going to use the feature. You have a couple of options:

- Manage just a few of your own WordPress websites.
- Run a full-blown content network with several hundred sites and multiple users.

If you're planning to run just a few of your own sites with the WordPress network feature, your current hosting situation probably is well suited to the task. (See Chapter 3 of this minibook for information on web-hosting services.) If you plan to host a large network with hundreds of blogs and multiple users, however, you should consider contacting your host and increasing your bandwidth.

WARNING

In addition to the security measures, time, and administrative tasks that go into running a community of websites, you've got a few things to worry about. Creating a community increases the resource use, bandwidth, and disk space on your web server. In many cases, if you go over the limits allotted to you by your web host, you incur great cost. Make sure that you anticipate your bandwidth and disk-space needs before running a large network on your website! (Don't say that I didn't warn you.)

Checking out shared versus dedicated hosting

Many WordPress network communities start with grand dreams of being large, active communities. Be realistic about how your community will operate so that you can make the right hosting choice for yourself and your community.

A small multisite community is easy to handle with a shared-server solution, whereas a large, active community should operate on a dedicated server. The difference between the two types of communities lies in the servers:

- **Shared-server solution:** You have one account on one server that has several other accounts on it. Think of this arrangement as apartment living. One apartment building has several apartments where multiple people live under one roof.
- **Dedicated server:** You have one account. You have one server. That server is dedicated to your account, and your account is dedicated to the server. Think of this arrangement as owning a home and not sharing your living space with anyone else.

A dedicated server solution is a more expensive investment for your community, whereas a shared-server solution is more economical. Base your decision on your realistic estimates of how big and how active your community will be. You can move from a shared-server solution to a dedicated server solution if your community gets larger than you expected, but it's easier to start with the right solution for your community from Day One.

Exploring subdomains versus subdirectories

The WordPress Multisite feature gives you two ways to run a network of sites on your domain: the subdomain option and the subdirectory option. The more popular option (and recommended structure) sets up subdomains for the sites created in a WordPress network. In the subdomain option, the username of the site appears first, followed by your domain name. In the subdirectory option, your domain name appears first, followed by the username of the site.

Which option should you choose? You can see the differences in the URLs of these two options:

- A subdomain looks like this: `http://`*`username.yourdomain.com`*.
- A subdirectory looks like this: `http://`*`yourdomain.com/username`*.

While the network is being set up, tables of information about the network — including the main site URL — are added to the database. If you're developing a site or want to change the domain, you need to change every reference to the domain name in the database. See Book 2, Chapter 3 for information about the WordPress database structure, including how data is stored in tables, as well as how to use a popular database administration tool called phpMyAdmin to manage, view, and edit database tables.

Choosing Linux, Apache, MySQL, and PHP server environments

A network of sites works best on a LAMP (Linux, Apache, MySQL, and PHP) server with the `mod_rewrite` Apache module enabled. `mod_rewrite` is an Apache module that builds URLs that are easier to read than standard URLs. (See the nearby "Apache `mod_rewrite`" sidebar for more information.) In WordPress, this Apache module is used for permalinks. If your installation uses any permalink other than the default, `?p=123`, you're okay. Your web host can help you determine whether your web server allows Apache `mod_rewrite`, which is a requirement for setting up the WordPress Multisite feature. (You can find more information on permalink structure in Book 3, Chapter 2.)

APACHE MOD_REWRITE

The Apache Software Foundation supplies th3e Apache software for free at `https://www.apache.org/free/`. Apache is loaded and running on your web server. Usually, the only person who has access to Apache files is the web server administrator (generally, your web host). Depending on your own web server account and configuration, you may not have access to the Apache software files.

The Apache module that's necessary for the WordPress network to create nice permalink URLs is called `mod_rewrite`. This module must be configured so that it's active and installed on your server.

You (or your web host) can make sure that the Apache `mod_rewrite` is activated on your server. To do so, open the `httpd.conf` file, and verify that it includes the following line:

```
LoadModule rewrite_module /libexec/mod_rewrite.so
```

If not, type this code on its own line in the `httpd.conf` file, and save the file. You probably need to restart Apache before the change takes effect.

For the purposes of this chapter, I stick to the LAMP server setup, because it's most similar to the average web host and is most widely used.

WARNING

The Apache `mod_rewrite` module is required for WordPress multisites. If you don't know whether your current hosting environment has this module in place, drop an email to your hosting provider and ask. The provider can answer that question for you (in addition to installing the module for you in the event that your server doesn't have it).

TECHNICAL STUFF

Networks also work well on Nginx and Lightspeed servers, but many users have reported having great difficulty on IIS (Windows) servers. Therefore, I don't recommend setting up WordPress with multisite features in a Windows server environment.

Subdomain sites work by way of a virtual host entry in Apache, also known as a wildcard subdomain. On shared hosts, your web hosting provider support team has to enable this entry for you, or the provider may already have done so for all accounts. It's best to ask your hosting provider before you begin. In these situations, the domain you use for your installation must be the default domain in your account. Otherwise, the URLs of your subsites won't work properly or will contain a folder name.

WARNING

Some hosts may require you to have a dedicated IP address, but this address isn't a software requirement for a WordPress network to function.

Before proceeding with the final steps in enabling the WordPress multisite feature, you need to get a few items in order on your web server. You also need to decide how to handle the multiple blogs in your network. The configurations in the next section, *"Adding a virtual host to the Apache configuration,"* need to be in place to run the WordPress network successfully.

Adding a virtual host to the Apache configuration

You need to add a hostname record that points to your web server. To add this record, you use the domain name server (DNS) configuration tool available in your web server administration software, such as Web Host Manager (`https://cpanel.com/products/`).

WARNING

In this section, you edit and configure Apache server files. If you can perform the configurations in this section yourself (and if you have access to the Apache configuration files), this section is for you. If you don't know how, are uncomfortable with adjusting these settings, or don't have access to the configurations in your web server software, you need to ask your hosting provider for help or hire a consultant to perform the configurations for you. I can't stress enough that you shouldn't edit the Apache server files yourself if you aren't comfortable with it or don't fully understand what you're doing. Web hosting providers have support staff to help you with these things; take advantage of the help if you need it!

The hostname record looks like this: `*.`*`yourdomain.com`* (where *`yourdomain.com`* is your actual domain name). Follow these steps to enable the wildcard subdomains in Apache:

1. **Log in to your server as the root user.**
2. **Open the `httpd.conf` file or the `vhost include` file for your current web account.**
3. **Find the virtual host section for your domain.**
4. **Add the wildcard subdomain record next to the domain name.**

   The record looks like this:

   ```
   ServerAlias yourdomain.com *.yourdomain.com
   ```
5. **Save the file.**
6. **Restart Apache.**

You also need to add a wildcard subdomain DNS record. Depending on how your domain is set up, you can add this record in your registrar or your web hosting account. If you simply point the domain record to your web host's name servers, you can add more DNS records at your web host in the web server administration interface, such as Web Host Manager.

You also should add a `CNAME` record with a value of `*`. CNAME (which stands for *canonical name*) is a record stored in the DNS settings of your Apache web server that tells Apache to associate a new subdomain with the main account domain. Applying the value `*` tells Apache to send any subdomain requests to your main domain; from there, WordPress looks up that subdomain in the database to see whether it exists.

Networks require a great deal more server memory (RAM) than typical WordPress sites do (those that don't use the Multisite feature), simply because multisites are bigger, have more traffic, and use more database space and resources because multiple sites are running. You aren't simply adding instances of WordPress; you're multiplying the processing and resource use of the server when you run the WordPress multisite feature. Although smaller instances of a network run well enough on most web hosts, you may find that when your network grows, you need more memory. I generally recommend starting with a hosting account that has access to at least 256MB of RAM.

For each site created, nine tables are added to the single database. Each table has a prefix similar to `wp_ ID_tablename` (where `ID` is a unique ID number assigned to the site).

The only exception is the main site; its tables remain untouched and remain the same. (Book 2, Chapter 3 shows how the main site's tables look.) With WordPress multisites, all new installations leave the main blog tables untouched and number additional site tables sequentially for every site that's added to the network.

Much discussion about the database layout has occurred in Trac, the WordPress bug tracking system, and in the WordPress.org forums. Although Trac may seem to be unwieldy, it scales appropriately. The average user builds a small to medium-size network, which usually needs no more than a virtual private server (VPS) account.

IN THIS CHAPTER

- » Enabling multisite
- » Configuring the multisite installation
- » Disabling multisite
- » Correcting errors

Chapter 2

Setting Up and Configuring Multisite Features

This chapter covers how to find the files you need to edit multiple sites, how to enable multiple sites in the network, and how to remove multiple sites when you no longer want to have multiple sites in your WordPress install.

By default, access to multisite settings is disabled to ensure that users don't set up their networks without researching all that the setup entails. Setting up the Multisite feature is more than configuring options or turning on a feature. Before enabling and setting up a network, be sure that you read Book 8, Chapter 1.

Here's what you need:

- » Backups of your site (explained in Book 2, Chapter 7)
- » Access to the `wp-config.php` file for editing (see Book 2, Chapter 5)

- Enabled wildcard subdomains (covered in Book 8, Chapter 1) if you're using subdomains

Enabling the Multisite Feature

You need to enable access to the Multisite menu so that you can set up the network and allow the creation of multiple sites.

TIP

Before you begin your edits, make a copy of your `wp-config.php` file, and keep it in a safe place on your computer.

Follow these steps:

1. **Connect to your web server via SFTP.**

   For details on SFTP, see Book 2, Chapter 2.

2. **Locate the `wp-config.php` file in the root or `/public_html` directory of your website.**

   This file is with the main WordPress files.

3. **Open the `wp-config.php` file for editing in your favorite text editor.**

   For Windows users, Notepad does the trick. For Macs, use TextEdit.

4. **Click at the end of the line that reads `define('DB_COLLATE', '');` and press Enter to create a new blank line.**

   TIP

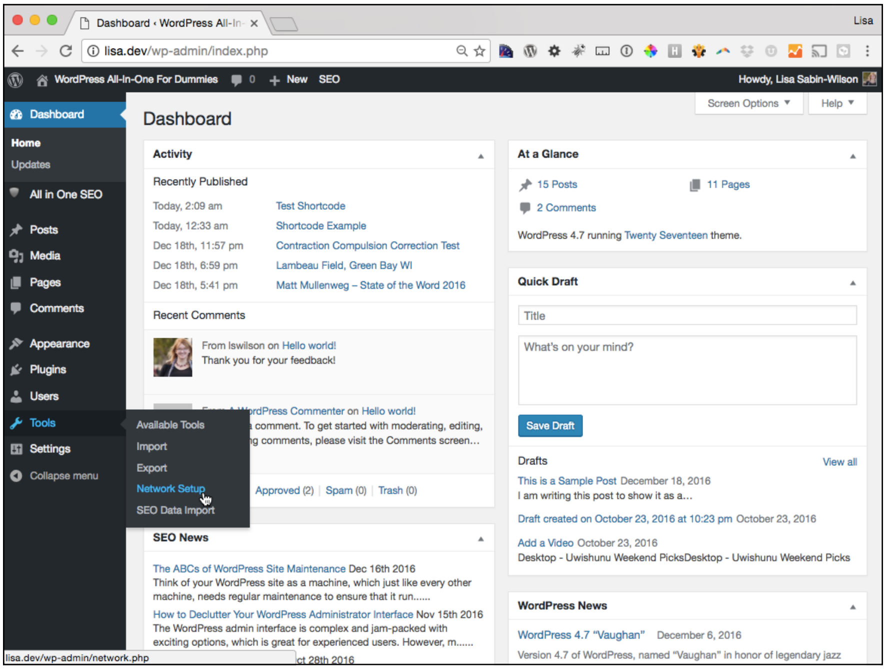
   Some SFTP clients let you right-click the filename on the server and choose Edit from the contextual menu to edit the file within your SFTP program.

5. **Type** define('WP_ALLOW_MULTISITE', true);**.**

   This line of code tells WordPress that you intend to use the multisite feature; additionally, it activates the Network option on the Tools menu of your WordPress Dashboard (covered later in this chapter).

6. **Save the `wp-config.php` file, and upload it to your website.**

When you log in to the Dashboard of WordPress, you see a Network Setup link on the Tools menu, as shown in Figure 2-1.



Today, 2:09 am	Test Shortcode
Today, 12:33 am	Shortcode Example
Dec 18th, 11:57 pm	Contraction Compulsion Correction Test
Dec 18th, 6:59 pm	Lambeau Field, Green Bay WI
Dec 18th, 5:41 pm	Matt Mullenweg – State of the Word 2016

From lswilson on Hello world!
Thank you for your feedback!

From A WordPress Commenter on Hello world!
comment. To get started with moderating, editing, g comments, please visit the Comments screen…

WordPress 4.7 running Twenty Seventeen theme.

This is a Sample Post December 18, 2016
I am writing this post to show it as a…

Draft created on October 23, 2016 at 10:23 pm October 23, 2016

Add a Video October 23, 2016
Desktop - Uwishunu Weekend PicksDesktop - Uwishunu Weekend Picks

The ABCs of WordPress Site Maintenance Dec 16th 2016
Think of your WordPress site as a machine, which just like every other machine, needs regular maintenance to ensure that it run……

How to Declutter Your WordPress Administrator Interface Nov 15th 2016
The WordPress admin interface is complex and jam-packed with exciting options, which is great for experienced users. However, m……

ct 28th 2016

WordPress 4.7 "Vaughan" December 6, 2016
Version 4.7 of WordPress, named "Vaughan" in honor of legendary jazz

FIGURE 2-1: The Network Setup link on the Tools menu.

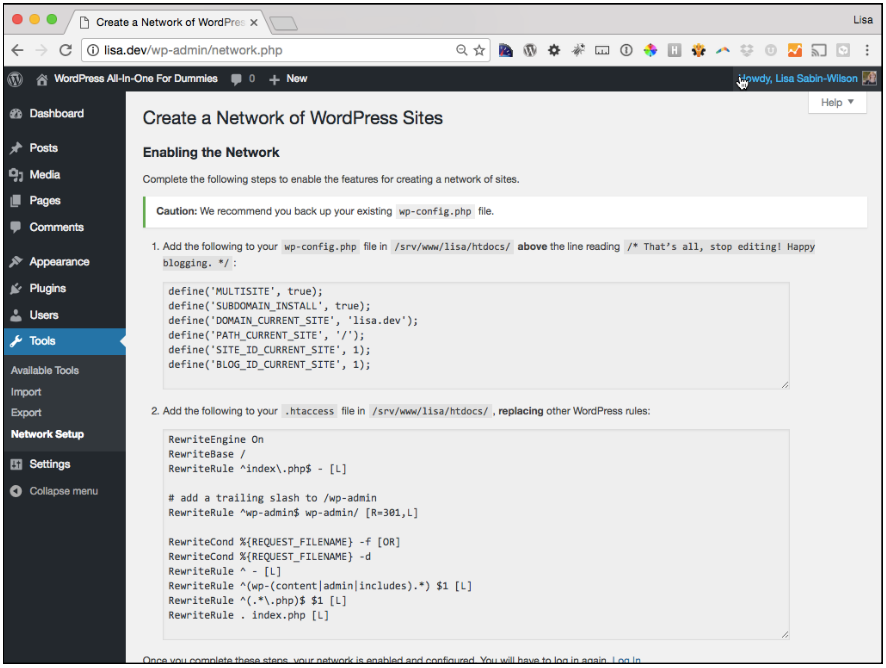
Clicking this menu item displays the Create a Network of WordPress Sites page, which is covered in the next section, "Installing the Network on Your Site."

TIP

If you have any plugins installed and activated on your WordPress installation, deactivate them before you proceed with the network setup. WordPress won't allow you to continue until you deactivate all your plugins.

Installing the Network on Your Site

The Network Details heading on the Create a Network of WordPress Sites page has options filled in automatically. The server address, for example, is pulled from your installation and can't be edited. The Network Title and Administrator E-Mail Address are pulled from your installation database, too, because your initial WordPress site is the main site in the network. Click the Install button, and WordPress creates new network tables in the database. The page refreshes, and the Enabling the Network page appears, as shown in Figure 2-2.



Create a Network of WordPress Sites

Enabling the Network

Complete the following steps to enable the features for creating a network of sites.

Caution: We recommend you back up your existing `wp-config.php` file.

1. Add the following to your `wp-config.php` file in `/srv/www/lisa/htdocs/` **above** the line reading `/* That’s all, stop editing! Happy blogging. */`:

```
define('MULTISITE', true);
define('SUBDOMAIN_INSTALL', true);
define('DOMAIN_CURRENT_SITE', 'lisa.dev');
define('PATH_CURRENT_SITE', '/');
define('SITE_ID_CURRENT_SITE', 1);
define('BLOG_ID_CURRENT_SITE', 1);
```

2. Add the following to your `.htaccess` file in `/srv/www/lisa/htdocs/`, **replacing** other WordPress rules:

```
RewriteEngine On
RewriteBase /
RewriteRule ^index\.php$ - [L]

# add a trailing slash to /wp-admin
RewriteRule ^wp-admin$ wp-admin/ [R=301,L]

RewriteCond %{REQUEST_FILENAME} -f [OR]
RewriteCond %{REQUEST_FILENAME} -d
RewriteRule ^ - [L]
RewriteRule ^(wp-(content|admin|includes).*) $1 [L]
RewriteRule ^(.*\.php)$ $1 [L]
RewriteRule . index.php [L]
```

Once you complete these steps, your network is enabled and configured. You will have to log in again. Log In

FIGURE 2-2: The Enabling the Network page.

From the Enabling the Network page, follow these steps to install the multisite feature after you install the network. *Note:* These steps require you to edit web server files, so be sure to have your text-editor program handy.

1. **Add the network-related configuration lines to the `wp-config.php` file.**

   On the Create a Network of WordPress Sites page, WordPress lists up to seven lines of configuration rules that need to be added to the `wp-config.php` file. The first line includes the line discussed in “Enabling the Multisite Feature” earlier in this chapter: `define('multisite', true );`. You can skip that line, copy the rest of the lines, and then paste them below the `define('multisite', true);` line in your `wp-config.php` file. The lines of code you add look like this:

   ```
   define('MULTISITE', true);
   define('SUBDOMAIN_INSTALL', true);
   define('DOMAIN_CURRENT_SITE', 'domain.com');
   define('PATH_CURRENT_SITE', '/');
   define('SITE_ID_CURRENT_SITE', 1);
   define('BLOG_ID_CURRENT_SITE', 1);
   ```

   These lines of code provide configuration settings for WordPress by telling it whether it’s using subdomains, what the base URL of your website is, and what your site’s current path is. This code also assigns a unique ID of `1` to your website and blog for the main installation site of your WordPress Multisite network. By default, WordPress sets up your network to use subdomains instead of subdirectories. If you want to use subdirectories, make sure that you have the VHost and Apache `mod_rewrite` configurations in place on your server. (See Book 8, Chapter 1 for details on Apache mod_rewrite.) Then change this line of code

```
define('SUBDOMAIN_INSTALL', true);
```

to

```
define('SUBDOMAIN_INSTALL', false);
```

WARNING

The lines of code that appear on the Create a Network of WordPress Sites page are unique to *your* installation of WordPress. Make sure that you copy the lines of code on this page to *your* installation, because this code is specific to your site's setup.

2. **Add the rewrite rules to the `.htaccess` file on your web server.**

WordPress lists up to 13 lines of code that you need to add to the `.htaccess` file on your web server in the WordPress installation directory. The lines look something like this:

```
RewriteEngine On
RewriteBase /
RewriteRule ^index\.php$ - [L]

# add a trailing slash to /wp-admin
RewriteRule ^wp-admin$ wp-admin/ [R=301,L]

RewriteCond %{REQUEST_FILENAME} -f [OR]
RewriteCond %{REQUEST_FILENAME} -d
RewriteRule ^ - [L]
RewriteRule ^(wp-(content|admin|includes).*) $1 [L]
RewriteRule ^(.*\.php)$ $1 [L]
RewriteRule . index.php [L]
RewriteBase /
RewriteRule ^index\.php$ - [L]
```

REMEMBER

Book 8, Chapter 1 discusses the Apache `mod_rewrite` module. You must have this module installed on your web server to run the WordPress multisite feature. The rules you add to the `.htaccess` file on your web server are `mod_rewrite` rules, and they need to be in place so that your web server tells WordPress how to handle things, such as permalinks for blog posts and pages, media, and other uploaded files. If these rules aren't in place, the WordPress multisite feature won't work correctly.

3. **Copy the lines of code from the Enabling the Network page, open the `.htaccess` file, and paste the lines of code there.**

   Replace the rules that already exist in that file.

4. **Save the `.htaccess` file, and upload it to your web server.**

5. **Click the login link at the bottom of the Enabling the Network page.**

   You're logged out of WordPress because by following these steps, you changed some of the browser cookie-handling rules in the `wp-config.php` and `.htaccess` files.

Completing the installation steps activates a Network Admin menu item on the top-right menu of links on your WordPress Dashboard. The Network Admin Dashboard is where you, as the site owner, administer and manage your multisite WordPress network. (See Book 8, Chapter 3.)

Disabling the Network

At some point, you may decide that running a network of sites isn't for you, and you want to disable the multisite feature. Before disabling the network, save any content from the other sites by making a full backup of your site. Book 2, Chapter 7 has detailed information about backing up your site.

The first step is restoring the original `wp-config.php` file and `.htaccess` files. This step causes your WordPress installation to stop displaying the Network Admin menu and the extra sites.

You may also want to delete the tables that were added, permanently removing the extra sites from your installation. Book 2, Chapter 3 takes you through the WordPress database, including the use of a popular database administration tool called phpMyAdmin. You can use that tool to delete the multisite tables from your WordPress database when you want to deactivate the feature. The extra database tables that are no longer required when you aren't running the WordPress multisite feature include

- **`wp_blogs`:** This database table contains one record per site and is used for site lookup.
- **`wp_blog_versions`:** This database table is used internally for upgrades.
- **`wp_registration_log`:** This database table contains information on sites created when a user signs up, if the user chose to create a site at the same time.

- **`wp_signups`:** This database table contains information on users who signed up for the network.
- **`wp_site`:** This database table contains one record per WordPress network.
- **`wp_sitemeta`:** This database table contains network settings.

Additionally, you can delete any database tables that have blog IDs associated with them. These tables start with prefixes that look like `wp_1_`, `wp_2_`, `wp_3_`, and so on.

REMEMBER

WordPress adds new tables each time you add a site to your network. Those database tables are assigned unique numbers incrementally.

Dealing with Common Errors

Occasionally, you may enter a configuration setting incorrectly or change your mind about the kind of network you require. If you installed WordPress, enabled the network, and then decide to move the network to a new location, you encounter errors when changing the URL. The proper method is to move WordPress first, disable the network if you installed it, and then enable the network at the new location.

To change from subdomains to subdirectories, or vice versa, follow these steps:

1. **Delete the extra sites, if any were created.**
2. **Edit `wp-config.php`, changing the value of `define( 'SUBDOMAIN_INSTALL', true );` to `define( 'SUBDOMAIN_INSTALL', false );`.**

   To switch from subdomains to subdirectories, change `false` to `true`:

   ```
   define (‘SUBDOMAIN_INSTALL’, true);
   ```
3. **Save the `wp-config.php` file, and upload it to your website.**
4. **Visit the Dashboard of WordPress, click the Permalink link on the Settings menu, and click the Save Changes button.**

   This step saves and resets your permalink structure settings and flushes the internal rewrite rules, which are slightly different in subdomains than they are in subdirectories.

REMEMBER

You can’t complete this process if you want to keep extra sites.

IN THIS CHAPTER

- » Getting familiar with the Network Admin Dashboard
- » Handling network management
- » Preventing spam and splogs

Chapter 3

Becoming a Network Admin

When you enable the WordPress network option and become a network admin, you can examine the various settings that are available to you and review the responsibilities of running a network.

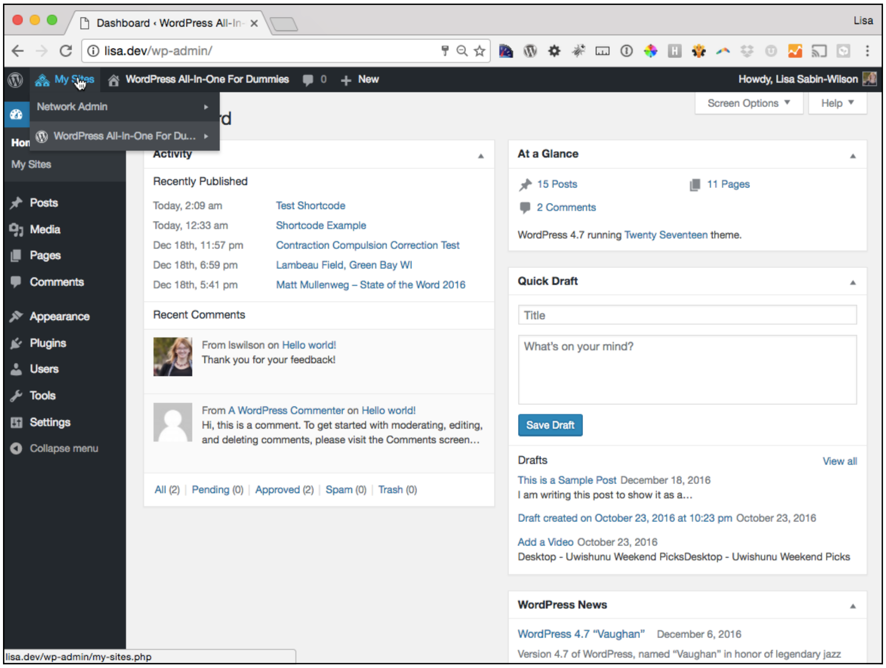
As a network admin, you can access the Network Admin Dashboard, which includes several submenus, as well as the overall settings for your network. This chapter discusses the menu items and options on the Network Admin page, guides you in setting network options, and discusses the best ways to prevent spam and spam blogs (splogs).

Exploring the Network Admin Dashboard

When the WordPress network is fully enabled and configured, you see a new My Sites link on the menu in the top-right corner of your WordPress Dashboard. In this section, I show you how to become a Network Admin and explain everything you need to know about being Network Admin of your new WordPress network.

If you hover your cursor over that link, the Network Admin link appears in the drop-down menu in the top-left section of the Dashboard, as shown in Figure 3-1.

WordPress separated the Network Admin menu features from the regular (Site Admin) Dashboard menu features to make it easier for you to see which part of your site you're managing. If you're performing actions that maintain your main website — such as publishing posts or pages, creating or editing categories, and so on — you work on the regular Dashboard (Site Admin). If, however, you're managing any of the network sites, plugins, and themes for the network sites or registered users, you work in the Network Admin section of the Dashboard.



Recently Published

Today, 2:09 am	Test Shortcode
Today, 12:33 am	Shortcode Example
Dec 18th, 11:57 pm	Contraction Compulsion Correction Test
Dec 18th, 6:59 pm	Lambeau Field, Green Bay WI
Dec 18th, 5:41 pm	Matt Mullenweg – State of the Word 2016

Recent Comments

From lswilson on Hello world!
Thank you for your feedback!

From A WordPress Commenter on Hello world!
Hi, this is a comment. To get started with moderating, editing, and deleting comments, please visit the Comments screen…

All (2) | Pending (0) | Approved (2) | Spam (0) | Trash (0)

15 Posts 11 Pages
2 Comments
WordPress 4.7 running Twenty Seventeen theme.

Title
What's on your mind?

Drafts View all
This is a Sample Post December 18, 2016
I am writing this post to show it as a…
Draft created on October 23, 2016 at 10:23 pm October 23, 2016
Add a Video October 23, 2016
Desktop - Uwishunu Weekend PicksDesktop - Uwishunu Weekend Picks

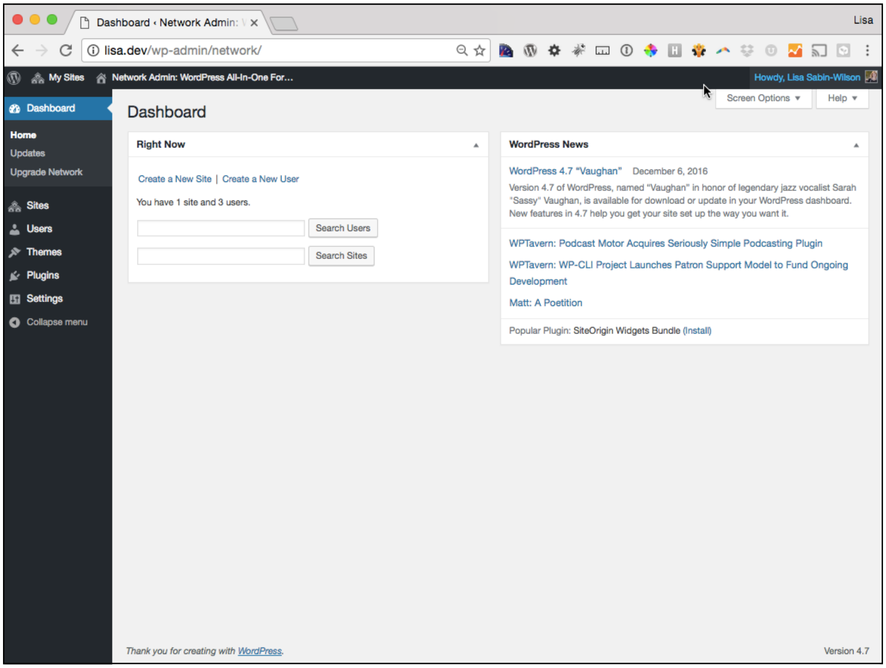
WordPress 4.7 "Vaughan" December 6, 2016
Version 4.7 of WordPress, named "Vaughan" in honor of legendary jazz

FIGURE 3-1: The Network Admin link.

REMEMBER

Keep in mind the distinct difference between the Site Admin and Network Admin Dashboards, as well as their menu features. WordPress does its best to know which features you're attempting to work with, but if you find yourself getting lost on the Dashboard or not finding a menu or feature that you're used to seeing, make sure you're working in the correct section of the Dashboard.

The Network Admin Dashboard (see Figure 3-2) is similar to the regular WordPress Dashboard, but as you may notice, the modules pertain to the network of sites. Options include creating a site, creating a user, and searching existing sites and users. Obviously, you won't perform this search if you don't have any users or sites yet. This function is extremely useful when you have a community of users and sites within your network, however.



Dashboard

Right Now

You have 1 site and 3 users.

WordPress News

WordPress 4.7 "Vaughan" December 6, 2016

Version 4.7 of WordPress, named "Vaughan" in honor of legendary jazz vocalist Sarah "Sassy" Vaughan, is available for download or update in your WordPress dashboard. New features in 4.7 help you get your site set up the way you want it.

WPTavern: Podcast Motor Acquires Seriously Simple Podcasting Plugin

WPTavern: WP-CLI Project Launches Patron Support Model to Fund Ongoing Development

Matt: A Poetition

Popular Plugin: SiteOrigin Widgets Bundle (Install)

Thank you for creating with WordPress. Version 4.7

FIGURE 3-2: The Network Admin Dashboard.

TIP

The Network Admin Dashboard is configurable, just like the regular Dashboard; you can move the modules around and edit their settings. See Book 3, Chapter 1 for more information about arranging the Dashboard modules to suit your tastes.

The Search Users feature allows you to search usernames and user email addresses. If you search for the user *Lisa*, for example, your results include any user whose username or email address contains *Lisa*, so you can receive multiple results when using just one search word or phrase. The Search Sites feature returns any blog content within your community that contains your search term, too.

The Network Admin Dashboard has two useful links near the top-left corner:

- **Create a New Site:** Click this link to create a site within your network. The Add New Site page appears, allowing you to add the site. Find out how to add a site in the upcoming "Sites" section.
- **Create a New User:** Click this link to create a new user account within your community. The Add New User page appears, allowing you to add a user to your community. Find out how to add a new user in the "Users" section later in the chapter.

Additionally, the Network Admin Dashboard gives you a real-time count of how many sites and users you have in your network, which is nice-to-know information for any network admin.

Managing Your Network

As mentioned earlier in this chapter, the Network Admin Dashboard has its own set of unique menus separate from those on the regular Site Admin Dashboard. Those menus are located on the left side of the Network Admin Dashboard. This section goes through the menu items, providing explanations; instructions on working with the settings; and configurations to help you manage your network, sites, and users.

The menus on the Network Admin Dashboard are

- **Sites:** View a list of the sites in your network, along with details about them.
- **Users:** See detailed info about current users in your network.
- **Themes:** View all the currently available themes to enable or disable them for use in your network.
- **Plugins:** Manage (activate/deactivate) plugins for use on all sites within your network.
- **Settings:** Configure global settings for your network.
- **Updates:** Upgrade all sites in your network with one click.

All the items on the Network Admin Dashboard are important, and you'll use them frequently throughout the life of your network. Normally, I'd take you through each of the menu items in order so that you can follow along on your Dashboard, but it's important to perform some preliminary configurations on your network. Therefore, I start the following sections with the Settings menu; then I take you through the other menu items in order of their appearance on the Network Admin Dashboard.

Settings

When you click the Settings menu link on the Network Admin Dashboard, the Network Settings page appears. The Settings page contains several sections of options for you to configure to set up your network the way you want to.

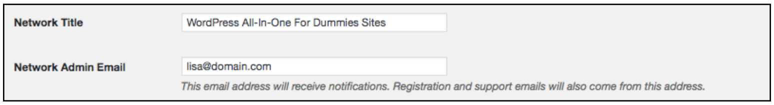
REMEMBER

When you finish configuring the settings on the Network Settings page, don't forget to click the Save Changes button at the bottom of the page, below the final Menu Settings section. (See "Menu Settings" later in the chapter.) If you navigate away from the Network Settings page without clicking the Save Changes button, your configurations aren't saved, and you need to go through the entire process again.

Operational Settings

The Operational Settings section, shown in Figure 3-3, has Network Title and Network Admin Email settings:

- **Network Title:** This setting is the title of your overall network of sites. This name is included in all communications regarding your network, including emails that new users receive when they register a new site within your network. Type your desired network title in the text box.
- **Network Admin Email:** This setting is the email address that all correspondence from your website is addressed from, including all registration and sign-up emails that new users receive when they register a new site and/or user account within your network. In the text box, type the email that you want to use for these purposes.

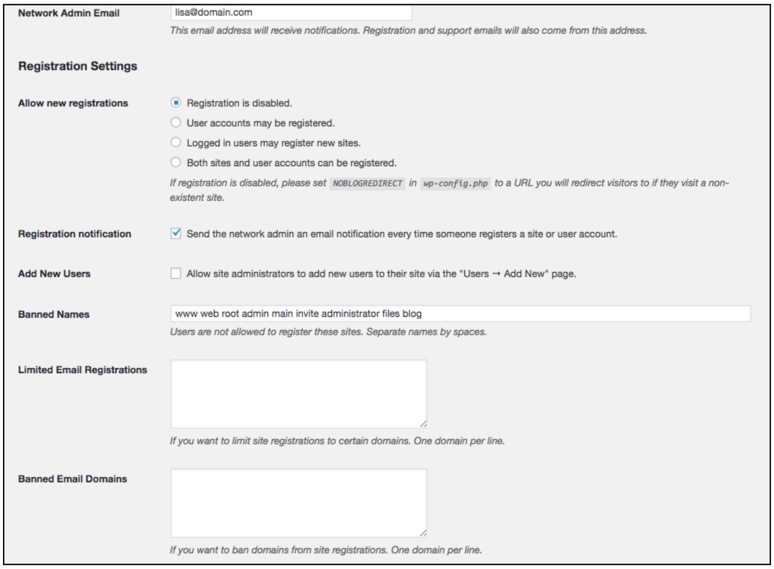


Network Title	WordPress All-In-One For Dummies Sites
Network Admin Email	lisa@domain.com *This email address will receive notifications. Registration and support emails will also come from this address.*

FIGURE 3-3: The Operational Settings section of the Network Settings page.

Registration Settings

The Registration Settings section (see Figure 3-4) allows you to control various aspects of allowing users to sign up to your network. The most important option specifies whether to allow open registration.



Network Admin Email	lisa@domain.com *This email address will receive notifications. Registration and support emails will also come from this address.*

Registration Settings

Allow new registrations	● Registration is disabled. ○ User accounts may be registered. ○ Logged in users may register new sites. ○ Both sites and user accounts can be registered. *If registration is disabled, please set* `NOBLOGREDIRECT` *in* `wp-config.php` *to a URL you will redirect visitors to if they visit a non-existent site.*
Registration notification	☑ Send the network admin an email notification every time someone registers a site or user account.
Add New Users	□ Allow site administrators to add new users to their site via the "Users → Add New" page.
Banned Names	www web root admin main invite administrator files blog *Users are not allowed to register these sites. Separate names by spaces.*
Limited Email Registrations	*If you want to limit site registrations to certain domains. One domain per line.*
Banned Email Domains	*If you want to ban domains from site registrations. One domain per line.*

FIGURE 3-4: The Registration Settings section of the Network Settings page.

Decide how you want to handle registration on your network, and set one of the following options by selecting its radio button:

- **Registration Is Disabled:** Disallows new user registration. When selected, this option prevents people who visit your site from registering for a user account. Registration is disabled by default.
- **User Accounts May Be Registered:** Allows people to create only user accounts; they won't be able to create blogs within your network.
- **Logged In Users May Register New Sites:** Allows only existing users — those who are already logged in — to create new blogs within your network. This option also disables new user registration. Select this option if you don't want just anyone to register for an account. Instead, you (as the site administrator) can add users at your discretion.
- **Both Sites and User Accounts Can Be Registered:** Allows users to register an account and a site on your network during the registration process.

These options apply only to outside users. As a network admin, you can create new sites and users any time you want by setting the necessary options on the Network Admin Dashboard. (For information about creating users, see the upcoming "Users" section.)

The remaining options in the Registration Settings section are as follows:

- **Registration Notification:** When this option is selected, an email is sent to the network admin every time a user or a site is created on the system, even if the network admin creates the new site.
- **Add New Users:** Select this check box if you want to allow your community blog owners (individual site admins) to add new users to their own community blog via the Users page within their individual Dashboards.
- **Banned Names:** By default, WordPress bans several usernames from being registered within your community, including *www, web, root, admin, main, invite,* and *administrator*. This ban is for good reason. You don't want a random user to register a username such as *admin,* because you don't want that person misrepresenting himself as an administrator of your site. In the Banned Names text box, you can enter an unlimited number of usernames that you don't want to allow on your site.
- **Limited Email Registrations:** You can limit sign-ups based on email domains by filling in this text box, entering one email domain per line. If you have open registrations but limited email addresses, only the people who have email domains that are in the list can register. This option is an excellent one to use in a school or corporate environment where you're providing email addresses and sites to students or employees.

- **Banned Email Domains:** This feature, which is the reverse of Limited Email Registration, blocks all sign-ups from a particular domain and can be useful in stopping spammers. You can enter **gmail.com** in the text box, for example, to ban anyone who tries to sign up with a Gmail address.

New Site Settings

The New Site Settings section (you need to scroll down to see it) is a configurable list of items that populates default values when a new site is created. The list includes the values that appear in welcome emails, on a user's first post page, and on a new site's first page, as shown in Figure 3-5:

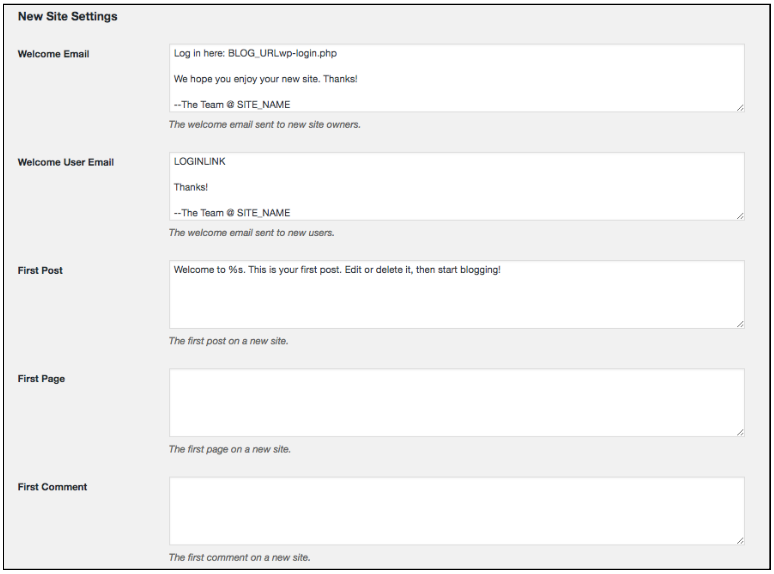
- **Welcome Email:** The email text that owners of newly registered sites in your network receive when their registration is complete. You can leave the default message in place, if you like, or you can type the text of a email you want new site owners to receive when they register a site within your network.

  A few variables you can use in this email aren't explained entirely on the Site Options page, including the following:

  - `SITE_NAME`: Inserts the name of your WordPress site
  - `BLOG_URL`: Inserts the URL of the new member's blog
  - `USERNAME`: Inserts the new member's username
  - `PASSWORD`: Inserts the new member's password
  - `BLOG_URLwp-login.php`: Inserts the hyperlinked login URL for the new member's blog
  - `SITE_URL`: Inserts the hyperlinked URL for your WordPress site
- **Welcome User Email:** The email text that is automatically sent to a new user when she registers for an account in your network. You can use the variables from the preceding item to personalize the email a bit rather than use the default text shown in Figure 3-5.
- **First Post:** The first, default post that appears on every newly created site in your network. WordPress provides some default text that you can leave in place, or you can type your desired text in the text box.

  You can use this area to provide useful information about your site and services. This post also serves as a nice guide for new users; they can view it on the Dashboard's Edit Post page to see how it was entered and formatted, and then use that page as a guide for creating their own blog posts. You can also use the variables mentioned for the Welcome Email item to have WordPress add some information for you automatically.

- **First Page:** Like the First Post setting, displays default text on every newly created site in your network. The First Page text box doesn't include default text, however; if you leave it blank, no default page is created.
- **First Comment:** Displays on the first default post on every newly created site within your network. Type the text that you want to appear in the first comment on every site that's created in your community.
- **First Comment Author:** The name of the author of the first comment on new sites in your network. This option isn't shown in Figure 3-5; you need to scroll down to see it.
- **First Comment URL:** The web address (URL) for the author of the first comment. This URL links the first comment author's name to the URL you type here. (This option doesn't appear in Figure 3-5.)



New Site Settings

Welcome Email

Log in here: BLOG_URLwp-login.php

We hope you enjoy your new site. Thanks!

--The Team @ SITE_NAME

The welcome email sent to new site owners.

Welcome User Email

LOGINLINK

Thanks!

--The Team @ SITE_NAME

The welcome email sent to new users.

First Post

Welcome to %s. This is your first post. Edit or delete it, then start blogging!

The first post on a new site.

First Page

The first page on a new site.

First Comment

The first comment on a new site.

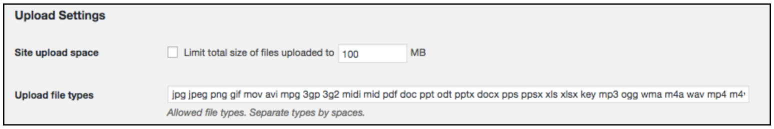
FIGURE 3-5: New Site Settings section of the Network Settings page.

Upload Settings

Scrolling down the Network Settings page, you get to the Upload Settings section (see Figure 3-6). These settings define the types of files that site owners within your network can upload by using the media upload feature on the WordPress Write Posts and Write Page areas. (See Book 3, Chapter 3.) The options in the Upload Settings section have default settings that are already filled in for you:

- **Site Upload Space:** If you leave this check box deselected, users are allowed to use all the space they want for uploads; no limits apply. Select the check box to limit the available space per site and then enter the amount in megabytes; default storage space is 100MB. You give users this amount of hard-drive space to store the files that they upload to their blogs. If you want to change the default storage space, type a new number in the text box.

- **Upload File Types:** This setting defines the types of files that site owners can upload to their sites from their Dashboards. Users can't upload any file types that don't appear in this text box. By default, WordPress allows the following file types: `.jpg`, `.jpeg`, `.png`, `.gif`, `.mp3`, `.mov`, `.avi`, `.wmv`, `.midi`, `.mid`, `.mt2s`, and `.pdf`. You can remove any default file types and replace them with new ones.
- **Max Upload File Size:** This amount is in kilobytes (KB), and the default setting is 1500KB, which means that a user can't upload a file larger than 1500KB. Adjust this number as you see fit by typing a new number in the text box.



Upload Settings

Site upload space □ Limit total size of files uploaded to 100 MB

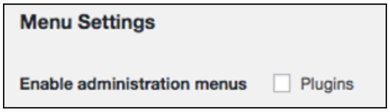
Upload file types jpg jpeg png gif mov avi mpg 3gp 3g2 midi mid pdf doc ppt odt pptx docx pps ppsx xls xlsx key mp3 ogg wma m4a wav mp4 m4

Allowed file types. Separate types by spaces.

FIGURE 3-6: Upload Settings section of the Network Settings page.

Menu Settings

The Plugins administration menu is disabled on the Dashboard for all network sites (except for the network admin). The network admin always has access to the Plugins menu. If you leave this option unselected, the Plugins page is visible to users on their own site's Dashboards. Select the check box to enable the Plugins administration menu for your network users (see Figure 3-7). For more information about using plugins with WordPress, see Book 7.



Menu Settings

Enable administration menus □ Plugins

FIGURE 3-7: The Network Settings page's Menu Settings section.

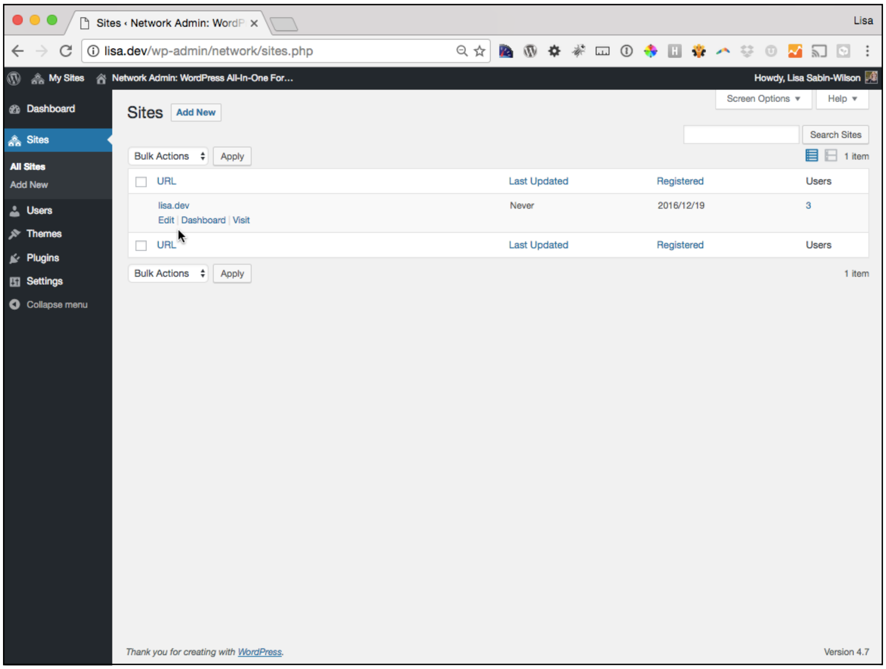
Sites

Clicking the Sites link on the Network Admin Dashboard takes you to the Sites page, where you can manage your individual sites. Although each site in the network has its own Dashboard for basic tasks — posting, changing themes, and so on — the Sites page is where you create sites, delete sites, and edit the properties of the sites within your network. Editing information from this page is handy when you have problems accessing a site's back-end Dashboard.

The Sites page also lists all the sites within your network. The list shows the following statistics about each community site:

- **Path:** The site's path in your network. This setting means that the site's domain is `newsite`.*yourdomain.com* if you're using a subdomain setup or *yoursite.com*/`newsite` if you're using a subdirectory setup.
- **Last Updated:** The date when the site was last updated (or published to).
- **Registered:** The date when the site was registered in your network.
- **Users:** The username and email address associated with the user(s) of that site.

When you hover your pointer over the pathname of a site in your network, you see a handy list of links that helps you manage the site. Figure 3-8 shows the options that appear below a site listing when you hover your cursor over a site name.



Sites

□ URL	Last Updated	Registered	Users
lisa.dev Edit | Dashboard | Visit	Never	2016/12/19	3
□ URL	Last Updated	Registered	Users

Thank you for creating with WordPress.

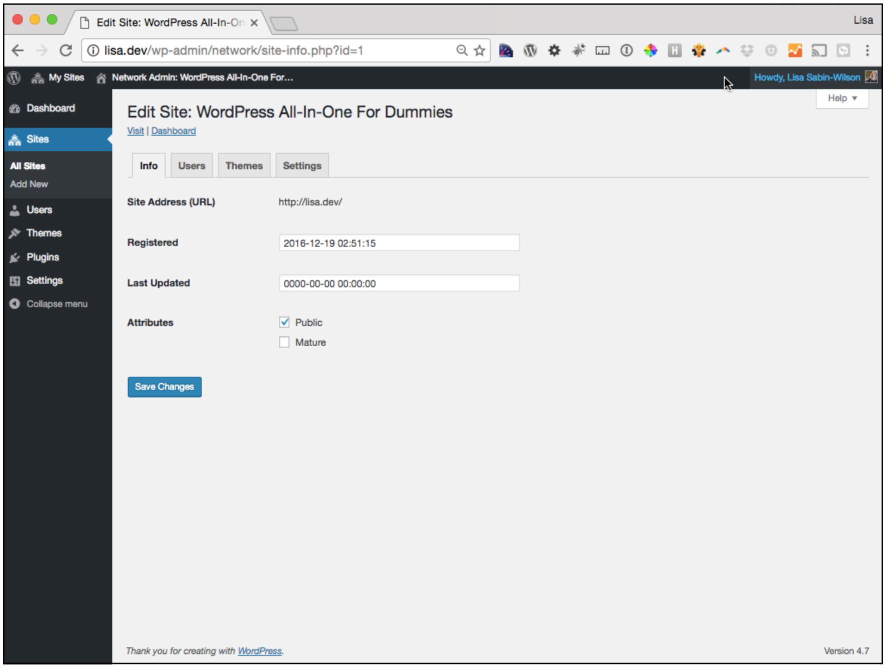
Version 4.7

FIGURE 3-8: Individual site-management options on the Sites page.

The management options for network sites, some of which appear in Figure 3-8, are as follows:

- **Edit:** Click this link to go to the Edit Site page (see Figure 3-9), where you can change aspects of each site.
- **Dashboard:** Click this link to go to the site's Dashboard.

- **Visit:** Click this link to visit the live site in your web browser.
- **Deactivate:** Click this link to mark the site for deletion from your network. A pop-up window asks you to confirm your intention to deactivate the site. Click the Yes button to confirm. The user's site displays a message stating that the site has been deleted. You can reverse this action by revisiting the Sites page and clicking the Activate link that appears below the site pathname. (The Activate link appears only for sites that are marked as Deactivated.)
- **Archive:** Click this link to archive the site on your network, which prevents visitors from viewing it. The user's site displays the message `This site has been archived or suspended`. You can reverse this action by revisiting the Sites page and clicking the Unarchive link that appears below the site's pathname. (The Unarchive link appears only for sites that are marked as Archived.)
- **Spam:** Click this link to mark the site as spam and block users from accessing it via the Dashboard. Users see the message `This site has been archived or suspended`. You can reverse this action by revisiting the Sites page and clicking the Not Spam link that appears below the site's pathname. (The Not Spam link appears only for sites that are marked as Spam.)
- **Delete:** Click this link to delete the site from your network of sites. Although you see a confirmation screen that asks you to confirm your intention to delete the site, after you've done it, you can't reverse this decision.



Edit Site: WordPress All-In-One For Dummies

Site Address (URL) http://lisa.dev/

Registered 2016-12-19 02:51:15

Last Updated 0000-00-00 00:00:00

Attributes ☑ Public □ Mature

FIGURE 3-9: The Edit Site page.

Generally, you use the Edit Site page only when the settings are unavailable on the Dashboard of that particular site. Configure the options that appear on the four tabs of the Edit Sites page:

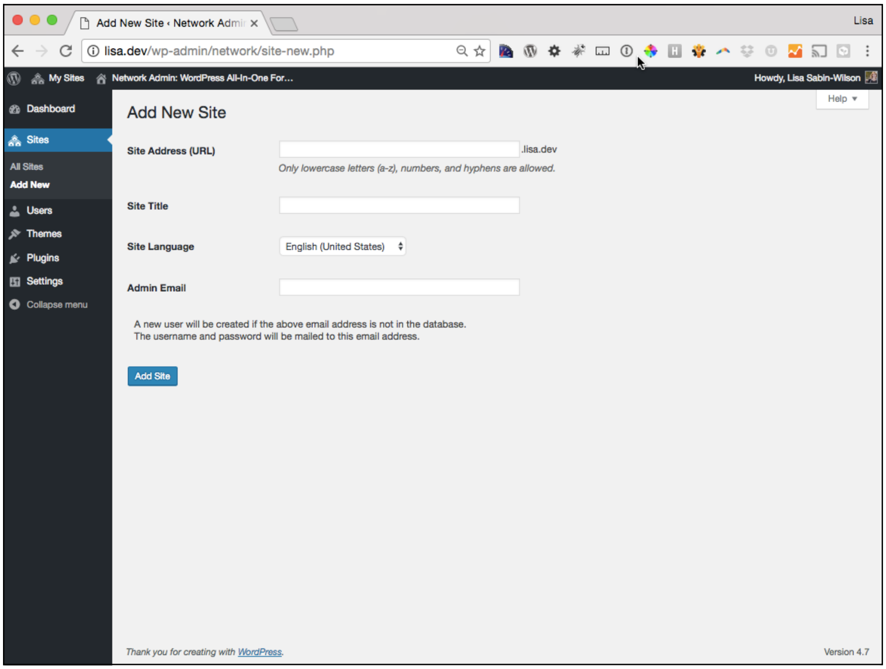
- **Info:** You can edit the site's domain, path, registered date, updated date, and attributes (Public, Archived, Spam, Deleted, Mature).
- **Users:** You can manage the users who are assigned to the site, as well as add users to the site in the Add New User section.
- **Themes:** You can enable themes for this site — particularly useful if you have themes that aren't network-enabled (see the upcoming "Themes" section). All the themes that aren't enabled within your network are listed on the Themes tab, which allows you to enable themes on a per-site basis.
- **Settings:** The settings on this tab cover all the database settings for the site that you're editing. You rarely need to edit these settings because you, as the network admin, have access to each user's Dashboard and can make any changes in the site's configuration settings there.

Also on the Sites menu of the Network Admin Dashboard, you see an Add New link; click it to load the Add New Site page on your Network Admin Dashboard. You can create a new site from the Add New Site page, shown in Figure 3-10. Fill in the Site Address (URL), Site Title, Site Language and Admin Email text boxes, and click the Add Site button to add the new site to your network. If the admin email address you enter is associated with an existing user, the new site is assigned to that user in your network. If the user doesn't exist, WordPress creates a new user, and an email is sent with a notification. The site is immediately accessible. The email that the user receives contains a link to the site, a login link, username, and password.

Users

Clicking the Users link on the Network Admin Dashboard takes you to the Users page, where you see a full list of members, or users, within your network. The Users page (see Figure 3-11) lists the following information about each user:

- **Username:** The login name the member uses when she logs in to her account in your community.
- **Name:** The user's real name, taken from her profile. If the user hasn't provided her name in her profile, this column is blank.
- **Email:** The email address the user entered when she registered on your site.
- **Registered:** The date when the user registered.
- **Sites:** Any sites of which the user is a member.



Add New Site

Site Address (URL) .lisa.dev

Only lowercase letters (a-z), numbers, and hyphens are allowed.

Site Title

Site Language English (United States)

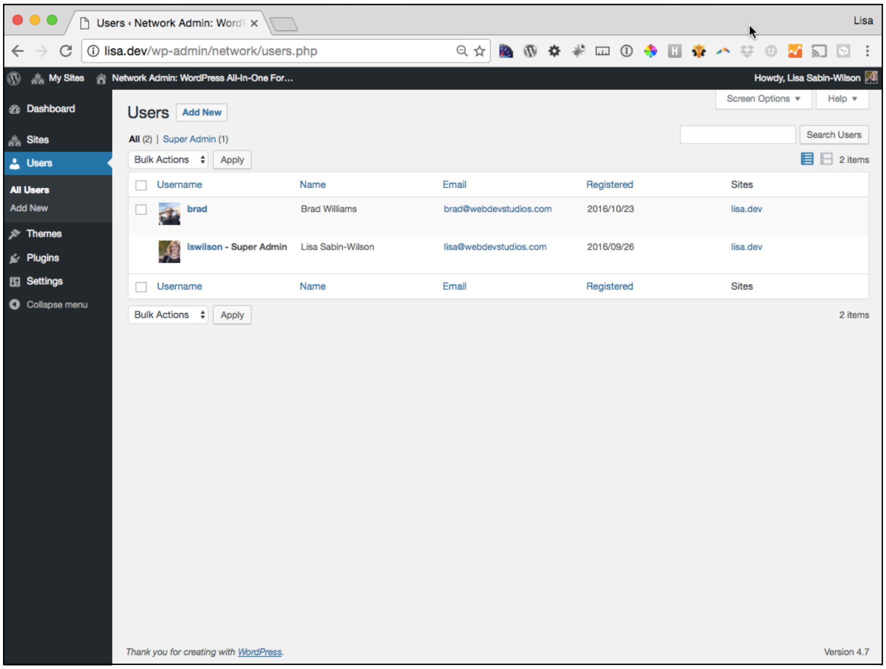
Admin Email

A new user will be created if the above email address is not in the database.
The username and password will be mailed to this email address.

Add Site

Thank you for creating with WordPress. Version 4.7

FIGURE 3-10: The Add New Site page of the Network Admin Dashboard.



Users Add New

All (2) | Super Admin (1)

Search Users

Bulk Actions Apply 2 items

□	Username	Name	Email	Registered	Sites
□	brad	Brad Williams	brad@webdevstudios.com	2016/10/23	lisa.dev
	lswilson - Super Admin	Lisa Sabin-Wilson	lisa@webdevstudios.com	2016/09/26	lisa.dev
□	Username	Name	Email	Registered	Sites

Bulk Actions Apply 2 items

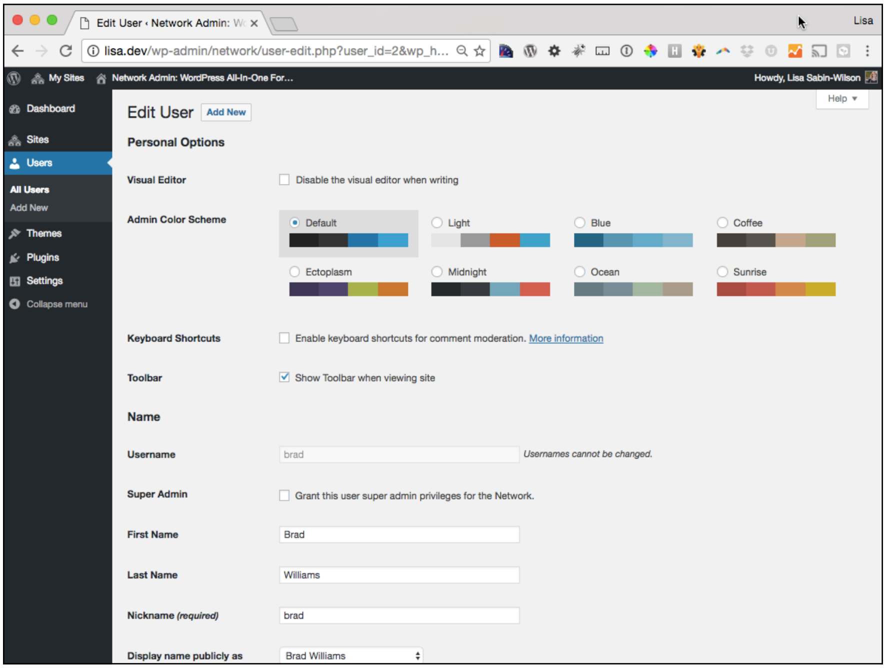
Thank you for creating with WordPress. Version 4.7

FIGURE 3-11: The Users page of the Network Admin Dashboard.

You can add users to the network, manage users, and even delete users by clicking the links that appear below their names when you hover over them with your mouse (the same way you do with sites on the Sites page).

To delete a user, simply hover your mouse over the username and click the Delete link. A new page appears, telling you to transfer this user's posts and links to another user account (most likely, your account). Then click the Confirm Deletion button. WordPress removes the user from the network. This action is irreversible, so be certain about your decision before you click that button!

You can also edit a user's profile information by clicking the Edit link that appears when you hover your mouse over his name on the Users page. Clicking that link takes you to the Edit User page, shown in Figure 3-12. The options on this page are (mostly) the same options and settings that you configured for your own profile (see Book 3, Chapter 2). The only difference is the Super Admin setting, which is deselected by default. If you select this check box, however, you grant this user network admin privileges for your network, which means that the user has exactly the same access and permissions as you.


Edit User ‹ Network Admin: W
Lisa
lisa.dev/wp-admin/network/user-edit.php?user_id=2&wp_h...
My Sites
Network Admin: WordPress All-In-One For...
Howdy, Lisa Sabin-Wilson
Help ▾
Dashboard
Sites
Users
All Users
Add New
Themes
Plugins
Settings
Collapse menu

Edit User Add New

Personal Options

Visual Editor	□ Disable the visual editor when writing
Admin Color Scheme	● Default ○ Light ○ Blue ○ Coffee ○ Ectoplasm ○ Midnight ○ Ocean ○ Sunrise
Keyboard Shortcuts	□ Enable keyboard shortcuts for comment moderation. More information
Toolbar	☑ Show Toolbar when viewing site

Name

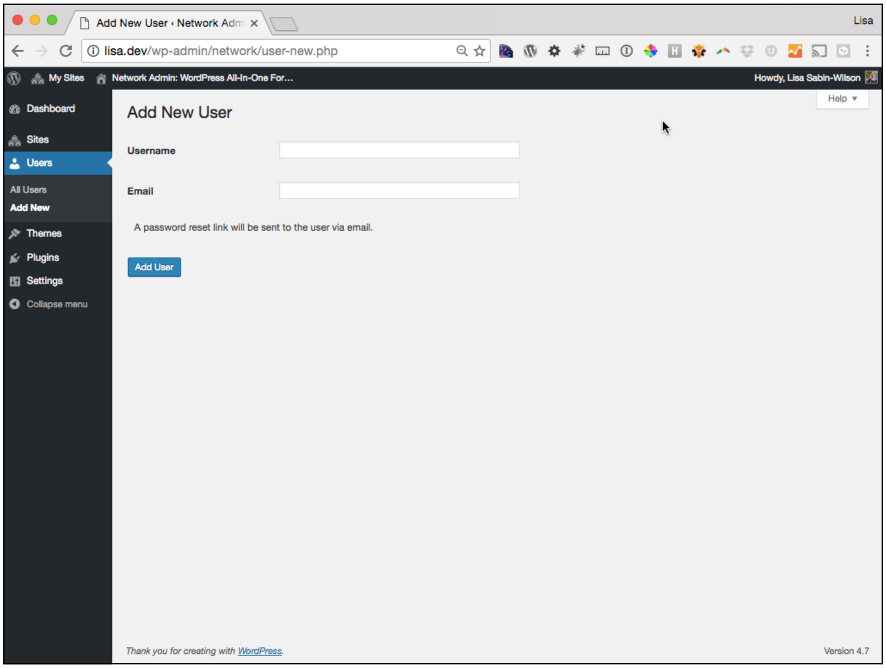
Username	brad *Usernames cannot be changed.*
Super Admin	□ Grant this user super admin privileges for the Network.
First Name	Brad
Last Name	Williams
Nickname *(required)*	brad
Display name publicly as	Brad Williams

FIGURE 3-12: The Edit User page.

TIP

At this writing, the terms *Super Admin* and *Network Admin* are interchangeable. When WordPress first merged the WordPress MU (multi-user) code base with the regular WordPress software, the term used to describe the Network Admin was Super Admin. Right now, Network Admin is the standard term, but Super Admin is still used in some areas of both the Network Admin Dashboard and the regular Dashboard. This situation will mostly likely change in the near future, when the folks at WordPress realize the discrepancy and make the updates in later versions of the software.

Also on the Users menu of the Network Admin Dashboard, you see a link called Add New. Click that link to load the Add New User page on your Network Admin Dashboard (shown in Figure 3-13).



Add New User

Username

Email

A password reset link will be sent to the user via email.

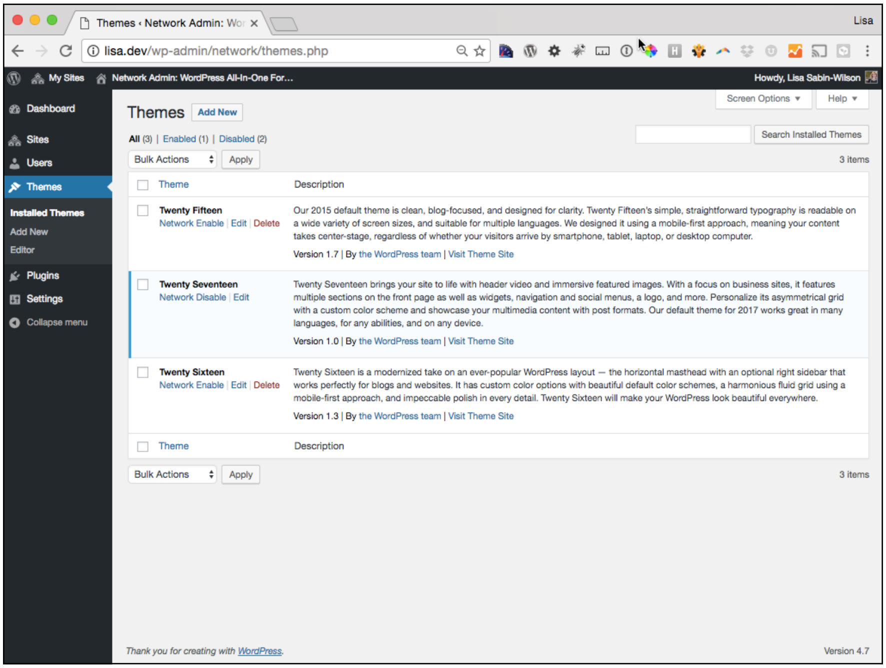
Add New User ‹ Network Adm
Lisa
lisa.dev/wp-admin/network/user-new.php
My Sites
Network Admin: WordPress All-In-One For…
Howdy, Lisa Sabin-Wilson
Help ▾
Dashboard
Sites
Users
All Users
Add New
Themes
Plugins
Settings
Collapse menu
Add User
Thank you for creating with WordPress.
Version 4.7

FIGURE 3-13: The Add New User page of the Network Admin Dashboard.

You can add a new user from the Add New User page by typing the username and email address of the user you want to add and then clicking the Add User button. The new user is sent an email alerting him to the new account, along with the site URL, his username, and his password. (WordPress randomly generates the password when the user account is created.)

Themes

When the multisite feature is enabled, only users who have network admin access have permission to install themes, which are shared across the network. For details on how to find, install, and activate new themes in your WordPress installation, see Book 6, Chapters 1 and 2. After you install a theme, you must enable it in your network; then the theme appears on the Appearance menu of each site, and users in your network can activate it on their sites. To access the Themes page (shown in Figure 3-14), click the Installed Themes link on the Themes menu of the Network Admin Dashboard.



Themes

All (3) | Enabled (1) | Disabled (2)

Bulk Actions | Apply — 3 items

□ Theme	Description
□ **Twenty Fifteen** Network Enable | Edit | Delete	Our 2015 default theme is clean, blog-focused, and designed for clarity. Twenty Fifteen's simple, straightforward typography is readable on a wide variety of screen sizes, and suitable for multiple languages. We designed it using a mobile-first approach, meaning your content takes center-stage, regardless of whether your visitors arrive by smartphone, tablet, laptop, or desktop computer. Version 1.7 | By the WordPress team | Visit Theme Site
□ **Twenty Seventeen** Network Disable | Edit	Twenty Seventeen brings your site to life with header video and immersive featured images. With a focus on business sites, it features multiple sections on the front page as well as widgets, navigation and social menus, a logo, and more. Personalize its asymmetrical grid with a custom color scheme and showcase your multimedia content with post formats. Our default theme for 2017 works great in many languages, for any abilities, and on any device. Version 1.0 | By the WordPress team | Visit Theme Site
□ **Twenty Sixteen** Network Enable | Edit | Delete	Twenty Sixteen is a modernized take on an ever-popular WordPress layout — the horizontal masthead with an optional right sidebar that works perfectly for blogs and websites. It has custom color options with beautiful default color schemes, a harmonious fluid grid using a mobile-first approach, and impeccable polish in every detail. Twenty Sixteen will make your WordPress look beautiful everywhere. Version 1.3 | By the WordPress team | Visit Theme Site
□ Theme	Description

Bulk Actions | Apply — 3 items

Thank you for creating with WordPress. — Version 4.7

FIGURE 3-14: The Themes page.

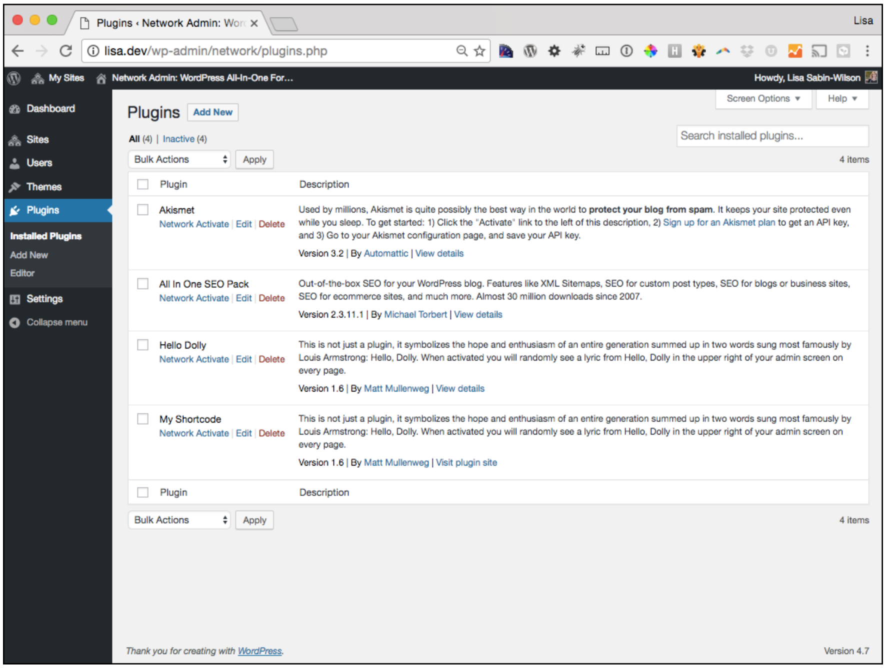
TIP

See Book 8, Chapter 5 for details on enabling a theme on a per-site basis.

Plugins

Most WordPress plugins can work on your network. There are, however, some special plugins and some special considerations for using plugins in a network. (For details on finding, installing, and activating plugins in WordPress, see Book 7, Chapters 1 and 2.)

Browse to the Plugins page of your Network Admin Dashboard by clicking the Plugins link on the Plugins menu. The Plugins page is almost the same as described in Book 7, but if you don't know where to look, you can easily miss one very small, subtle difference. Check out Figure 3-15, and look below the name of the plugin. Do you see the Network Activate link? That link is the big difference between plugins listed on the regular Dashboard and those listed on the Network Admin Dashboard. As the Network Admin, you can enable certain plugins to be activated globally (across your entire network). All sites in your network can use the network-activated plugin's features. By contrast, plugins that you activate on the regular Dashboard (Site Admin) are activated and available only for *your* main website.



□ Plugin	Description
□ Akismet Network Activate | Edit | Delete	Used by millions, Akismet is quite possibly the best way in the world to **protect your blog from spam**. It keeps your site protected even while you sleep. To get started: 1) Click the "Activate" link to the left of this description, 2) Sign up for an Akismet plan to get an API key, and 3) Go to your Akismet configuration page, and save your API key. Version 3.2 | By Automattic | View details
□ All In One SEO Pack Network Activate | Edit | Delete	Out-of-the-box SEO for your WordPress blog. Features like XML Sitemaps, SEO for custom post types, SEO for blogs or business sites, SEO for ecommerce sites, and much more. Almost 30 million downloads since 2007. Version 2.3.11.1 | By Michael Torbert | View details
□ Hello Dolly Network Activate | Edit | Delete	This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page. Version 1.6 | By Matt Mullenweg | View details
□ My Shortcode Network Activate | Edit | Delete	This is not just a plugin, it symbolizes the hope and enthusiasm of an entire generation summed up in two words sung most famously by Louis Armstrong: Hello, Dolly. When activated you will randomly see a lyric from Hello, Dolly in the upper right of your admin screen on every page. Version 1.6 | By Matt Mullenweg | Visit plugin site
□ Plugin	Description

FIGURE 3-15: The Plugins page.

TIP

In the list of plugins, you see the plugins that you have network activated. From here you can activate and deactivate those plugins as you desire.

Network admins are the only people who can install new plugins on the site; regular users don't have that kind of access (unless you made them network admins in their User settings).

Also located on the Plugins menu of the Network Admin Dashboard are two other links: Add New and Editor. The Add New link takes you to the Add New Plugins page, where you can add and install new plugins by searching the WordPress Plugin Directory within your Dashboard (see Book 7, Chapters 1 and 2), and the Editor link gives you access to the Plugin Editor.

Updates

Clicking the Updates link on the Network Admin Dashboard gives you access to the WordPress Updates page, which takes you through the process of upgrading your WordPress installation (see Book 2, Chapter 6). For a network site, however, WordPress takes the extra step of upgrading all sites in your network so that they all use the upgraded feature sets.

If the process of upgrading network sites stalls or stops, the URL of the last site upgraded appears on the WordPress Updates page. The network admin can access the Dashboard of the site where the upgrade stopped, which usually clears up the issue. A user accessing his site Dashboard after an upgrade also triggers the update process.

Stopping Spam Sign-Ups and Splogs

If you choose to have open sign-ups, in which any member of the public can register and create a new site on your network, at some point, automated bots run by malicious users and spammers will visit your network sign-up page and attempt to create a site, or multiple sites, in your network. They do so by automated means, hoping to create links to their own sites or fill their sites on your network with spam posts. This kind of spam blog or site is a *splog.*

Spam bloggers don't hack your system to take advantage of this situation; they call aspects of the sign-up page directly. You can do a few simple things to slow them considerably or stop them altogether.

Diverting sploggers with settings and code

In the Registration Settings section of the Network Settings page (refer to Figure 3-4 earlier in this chapter), deselect the check box for the Add New Users setting to stop many spammers. When spammers access the system to set up a spam site, they often use the Add New Users feature to create many other blogs via programs built into the bots.

Spammers often find your site via Google Search for the link to the sign-up page. You can stop Google and other search engines from crawling your sign-up page by adding `rel=nofollow,noindex` to the sign-up page link. Wherever you add a link to your sign-up page, inviting new users to sign up, the HTML code you use to add the `nofollow,noindex` looks like this:

```
<a href="http://yoursite.com/wp-signup.php" rel="nofollow,noindex ">Get your
   own site here</a>
```

TIP

Add a link to any page or widget area to instruct legitimate visitors to sign up for a site in your network.

Preventing spam with plugins

Plugins can help stop spam blogs, too. The Moderate New Blogs plugin interrupts the user sign-up process and sends you (the network admin) an email notification that a user has signed up for a site. Then you can determine whether the site is legitimate. Download the plugin at `https://wordpress.org/plugins/moderate-new-blogs`.

The WangGuard/Sploghunter plugin was written mainly to stop sploggers and prevent spam signups on a WordPress site — with or without the network feature activated. You can get the plugin at `https://wordpress.org/plugins/wangguard`. This plugin is free for personal use or if you have less than 5,000 registrations or make less than $200 per month of income on your site.

The Cookies for Comments plugin (available at `https://wordpress.org/plugins/cookies-for-comments`) leaves a cookie in a visitor's browser. If the sign-up page is visited, the plugin checks for the cookie. If no cookie exists, the sign-up fails. Be sure to check the installation directions for this plugin, because it requires an `.htaccess` file edit.

IN THIS CHAPTER

- » Understanding default user management
- » Changing default user behavior
- » Exploring user access to site features

Chapter 4

Managing Users and Access Control

In Book 8, Chapter 3, I discuss the Network Admin menu you have access to on your Dashboard to manage aspects of your network. In this chapter, I explain how to manage users across the network, including how to change some of the default management options to suit your needs.

One of the hardest things for new network admins to understand is that although each site is managed separately, users are global. That is, after a user logs in, he is logged in across the entire network and has the ability to comment on any site that has commenting enabled. (See Book 3, Chapter 2.) The user can visit the Dashboard of the main site to manage his profile information and access the Dashboard's My Sites menu to reach sites that he administers. The user also registers at the main site — not at individual sites in the network.

Setting Default User Permissions

When you enable the multisite feature, new site and new user registrations are turned off by default. You can add new sites and users from the Network Admin Dashboard, however. To let users sign up for your network, follow these steps:

1. **Log in to the Network Admin Dashboard and then click the Settings menu link.**

   The Settings page loads in your browser window.

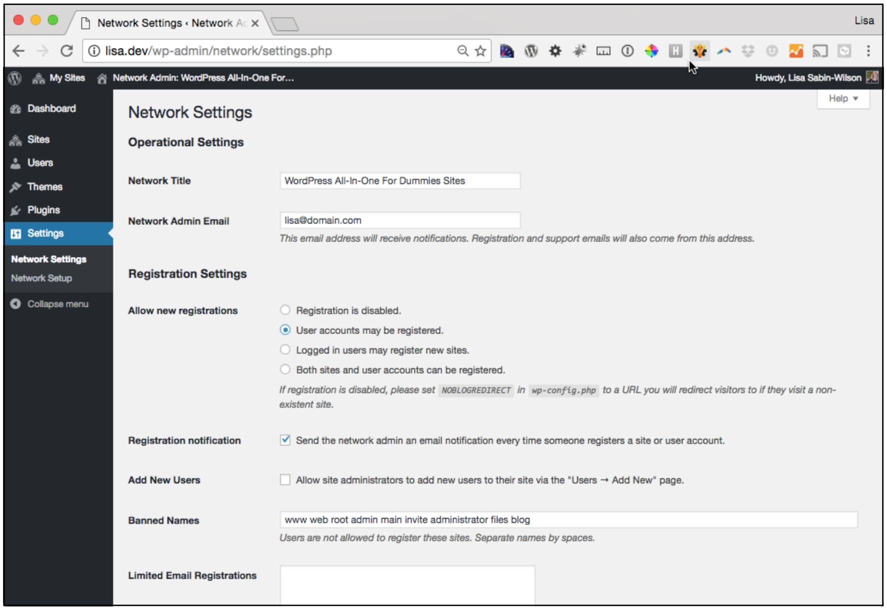
2. **In the Registration Settings section, select the User Accounts May Be Registered option (as shown in Figure 4-1).**

   This setting allows users to register on your network. It also assigns them to the main site as Subscribers but doesn't allow them to create new sites.

3. **Click the Save Changes button at the bottom of the page (not shown in Figure 4-1).**

TIP

By selecting the User Accounts May Be Registered option on the Network Admin Settings page, you not only allow users to register a new account, but also give them the option to create a new site on your network.



Network Settings

Operational Settings

Network Title: WordPress All-In-One For Dummies Sites

Network Admin Email: lisa@domain.com

This email address will receive notifications. Registration and support emails will also come from this address.

Registration Settings

Allow new registrations:
○ Registration is disabled.
● User accounts may be registered.
○ Logged in users may register new sites.
○ Both sites and user accounts can be registered.

If registration is disabled, please set `NOBLOGREDIRECT` in `wp-config.php` to a URL you will redirect visitors to if they visit a non-existent site.

Registration notification: ☑ Send the network admin an email notification every time someone registers a site or user account.

Add New Users: □ Allow site administrators to add new users to their site via the "Users → Add New" page.

Banned Names: www web root admin main invite administrator files blog

Users are not allowed to register these sites. Separate names by spaces.

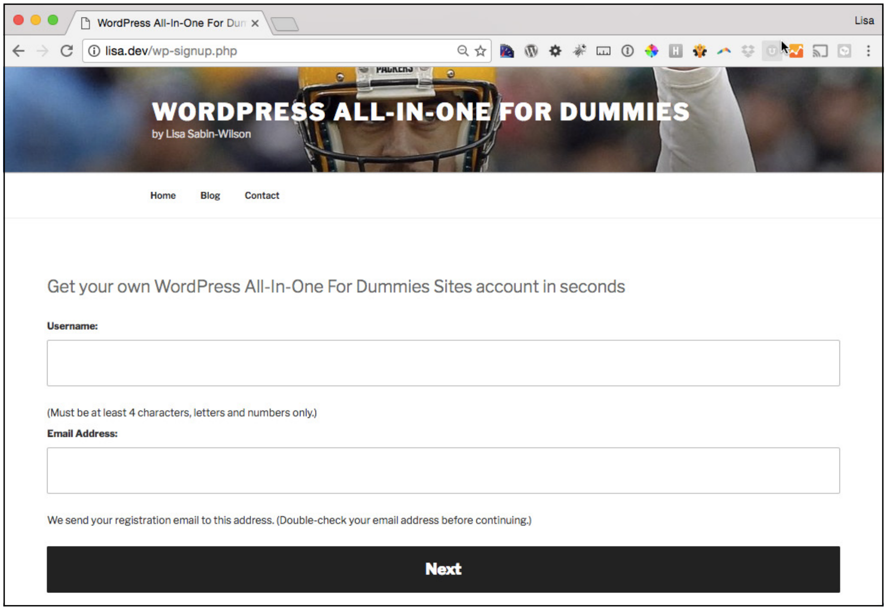
Limited Email Registrations

FIGURE 4-1: User registration options.

Registering users

When signing up, the user is directed to the main site of the installation and then added to one of the subsites. The subsite may be her site (if she chose to have a site when registering) or an existing site. If the site is any existing site other than the main site, you, as the network admin, must manually add the user to that site. The user who owns the site can manually add users as well if you enabled the option in Network Admin settings that allows site admins to add new users to their sites.

The registration page (see Figure 4-2) is located at `http://yourdomain.com/wp-signup.php`. This sign-up page bypasses the regular WordPress registration page. (See Book 3, Chapter 3.)



Get your own WordPress All-In-One For Dummies Sites account in seconds

Username:

(Must be at least 4 characters, letters and numbers only.)

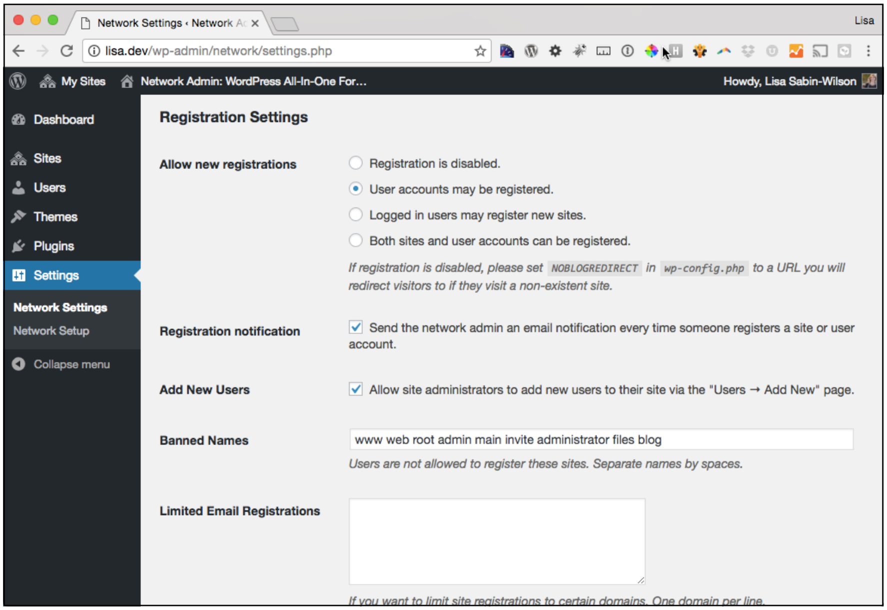
Email Address:

We send your registration email to this address. (Double-check your email address before continuing.)

FIGURE 4-2: The network sign-up page.

After filling out the form, the user receives an email with a link to activate her account. When she does, she can immediately log in and manage her details; she's directed to her primary site, which is the main site or Dashboard site if she has no site to administer.

Users can also be added to existing sites in the network. You can always assign users to specific sites on a per-case basis. When you set up a network and enable the option titled Allow Site Administrators to Add New Users to Their Site via the Users → Add New Page (shown in Figure 4-3), you allow site admins to add other users in the network to their sites. Although the Add New Users setting is turned off by default, you can enable it by selecting the Allow Site Administrators option on the Settings page of the Network Admin Dashboard.



Registration Settings

Allow new registrations
○ Registration is disabled.
● User accounts may be registered.
○ Logged in users may register new sites.
○ Both sites and user accounts can be registered.
If registration is disabled, please set `NOBLOGREDIRECT` in `wp-config.php` to a URL you will redirect visitors to if they visit a non-existent site.

Registration notification
☑ Send the network admin an email notification every time someone registers a site or user account.

Add New Users
☑ Allow site administrators to add new users to their site via the "Users → Add New" page.

Banned Names
www web root admin main invite administrator files blog
Users are not allowed to register these sites. Separate names by spaces.

Limited Email Registrations

If you want to limit site registrations to certain domains. One domain per line.

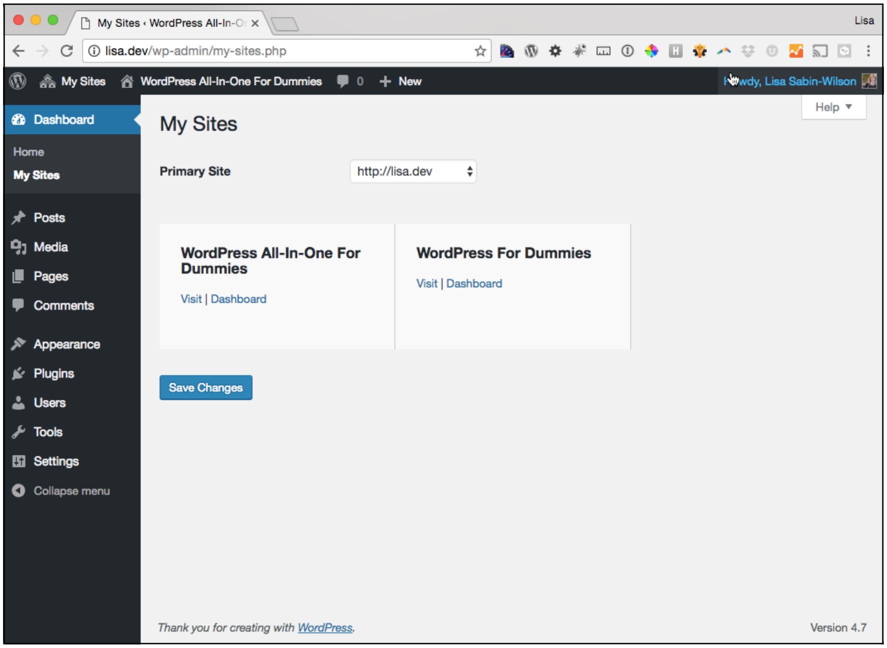
FIGURE 4-3: Allowing users to add other users to their site.

Controlling access to sites

You have a list of all the sites on the network; by default, other users can't find other sites on the network. Unless you, the network admin, add such ability via plugins, a user can't navigate from one subsite to the next. The only list provided to a user is the Dashboard's My Sites menu, shown in Figure 4-4.

The My Sites page lists only sites for which the user is administrator, not sites on which the user has a lesser role. Additionally, the My Sites menu has a link that permits the user to create more sites (if the network admin has allowed that function via the Settings menu of the Network Admin Dashboard).

By default, users can create no sites or an unlimited number of sites. You can limit the number of sites that a user can create by installing the Limit Blogs Per User plugin (`https://github.com/toddnestor/wp_limit_blogs_per_user`).



My Sites

Primary Site http://lisa.dev

WordPress All-In-One For Dummies
Visit | Dashboard

WordPress For Dummies
Visit | Dashboard

Save Changes

Thank you for creating with WordPress.

Version 4.7

FIGURE 4-4: The My Sites page shows sites that the user administers.

Follow these steps to limit the number of sites that your users can create:

1. **Click the Network Admin link located in the top-left corner of your Dashboard, below My Sites.**
2. **Hover your cursor over the Plugins menu, and click the Add New link.**

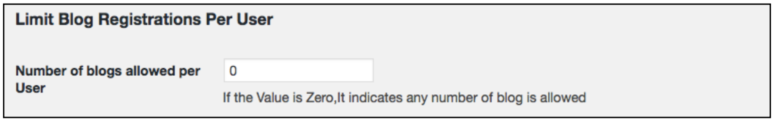
   The Add Plugins page of your Network Admin Dashboard opens.
3. **In the Search field, type the name of the plugin:** Limit Blogs Per User**.**
4. **Be sure that the Keyword option is selected in the drop-down menu next to the search field so that WordPress knows to search by keywords (not by Author or Tag).**
5. **Click the Search Plugins button.**
6. **On the search results page, click the Install Now button for the Limit Blogs Per User plugin.**
7. **Click the Network Activate button on the Add Plugin page.**

   The Limit Blogs Per User plugin is now active on your network.
8. **Click the Settings link of the Network Admin Dashboard.**

9. **Scroll to the bottom of the Settings page to the Limit Blog Registrations Per User heading (shown in Figure 4-5), and enter the number of sites to which you want to limit your network users.**

   The value 1 allows users to create no more than one site, and so on. Entering the value 0, or leaving the field empty, allows users to create an unlimited number of sites on your network.

10. **Click the Save Changes button at the bottom of the page to save all the settings you've configured.**



Limit Blog Registrations Per User

Number of blogs allowed per User: 0

If the Value is Zero,It indicates any number of blog is allowed

FIGURE 4-5: The Limit Blog Registrations Per User option.

Changing Defaults

Depending on your specific needs, you may find yourself wanting to change how users are added to sites, as subscribers, within your network. By default, for example, users can't add themselves to a random network site without making the request to the network admin or the administrator of the site to which they want to be added. This setup may work fine for most sites, but if you want your users to be able to register with existing sites within your network, read on; these sections are for you.

Making sign-up site-specific

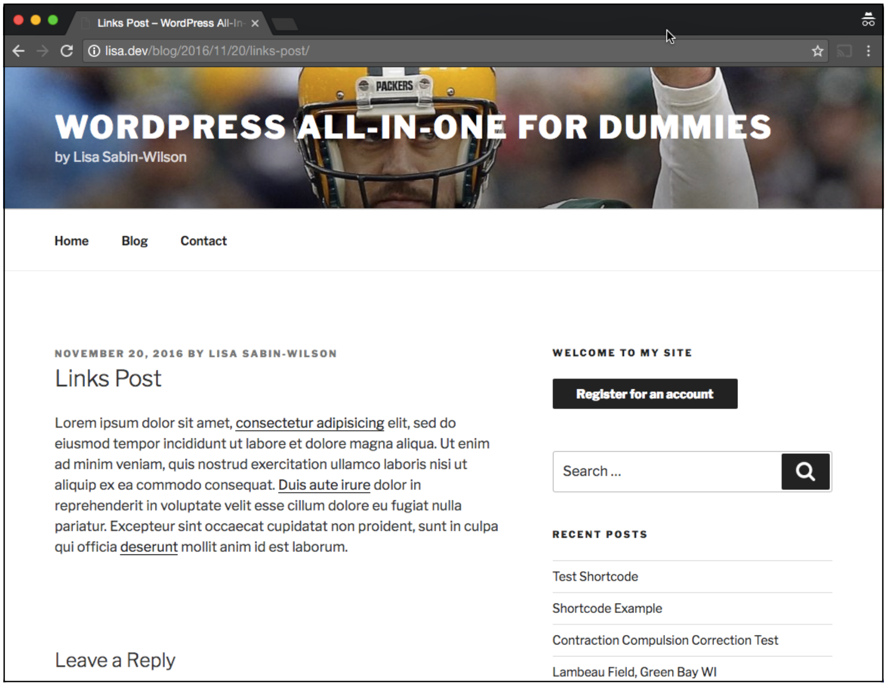
For many people, signing up on the main site and then needing to be added to a child site can be confusing. Plugins, however, can make the process easier and less confusing for everyone.

If you want existing users to add themselves to existing sites on the network, the Join My Multisite widget plugin (available in the WordPress Plugin Directory at `https://wordpress.org/plugins/join-my-multisite`) allows them to do so. Install this plugin as a regular plugin, as I outline in Book 7, Chapters 1 and 2.

When the network is activated, the plugin adds a widget on the Widgets page of every user's Dashboard. (Hover your mouse over Appearance and then click the Widgets link.) The new widget is called Join My Site. The user must drag the widget to the appropriate sidebar to display the Join My Multisite widget in the sidebar. (For details on using widgets, see Book 6, Chapter 1.) The site displays a welcome message on the sidebar and a Register for an Account button that users can click to register on the site. (See Figure 4-6.)

REMEMBER

If the user isn't logged in to the network, the welcome message is `If you want to add yourself to this site, please log in.`, so only users who are already network members and are logged in can add themselves to network sites by using the Join My Site widget.


Links Post – WordPress All-In
lisa.dev/blog/2016/11/20/links-post/
WORDPRESS ALL-IN-ONE FOR DUMMIES
by Lisa Sabin-Wilson
Home
Blog
Contact
WELCOME TO MY SITE
Register for an account
Search ...
RECENT POSTS
Test Shortcode
Shortcode Example
Contraction Compulsion Correction Test
Lambeau Field, Green Bay WI

NOVEMBER 20, 2016 BY LISA SABIN-WILSON

Links Post

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Leave a Reply

FIGURE 4-6: The Add Users widget on a site.

Changing roles on sign-up

When he's added to a network or a site, a user is assigned the role of Subscriber by default. You may want to assign a different role to the user and automatically add him to your other sites on the network. (Book 3, Chapter 3 explains roles and permissions.)

When a user signs up for his own site, for example, you may want to assign him a nonadministrator role. You may want to set his role to Editor to restrict the Dashboard menus he can access and to prevent him from using some of the functionality of WordPress. You may want to have new site owners sign up as Editors of the sites, a role that gives them fewer permissions on the Dashboard.

The Multisite User Role Manager plugin at `https://wordpress.org/plugins/multisite-user-role-manager/` allows you to set a role other than administrator for new users who choose to have sites of their own. This plugin also allows you to set new user roles on other sites on your network (such as the default Subscriber role).

Locking down menus

Certain user roles have certain permissions (which I outline in Book 3, Chapter 3) that give users access to various menus of the Dashboard. You may want to close areas that you don't want users to access, however.

You can limit access to menus via the Menus plugin, available at `https://wordpress.org/plugins/menus`. Once installed, this plugin gives you a settings page to control which menus can be accessed by specific user roles. You find this settings page in the Network Admin Dashboard at Settings➪Menu Settings.

Exploring Default Site Settings

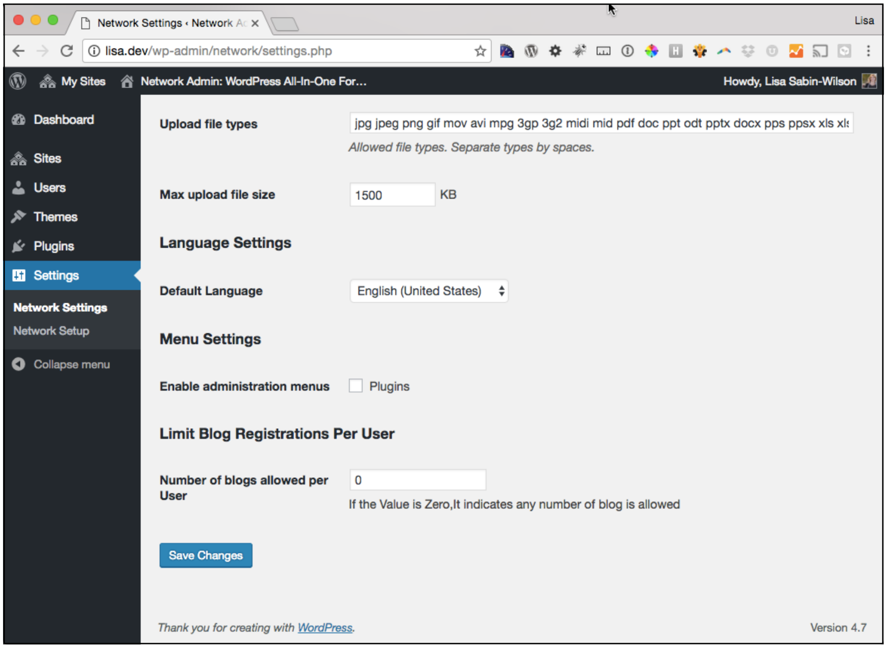
Default settings can control user access to various things, such as menus, themes, and the Dashboard. The next few sections discuss the network settings in detail.

Because users can't add or edit plugins, the Plugins menu is disabled by default. You can still access the Plugins page via the Network Admin Dashboard Plugins menu, but other administrators can't.

To enable the Plugins menu for site administrators, follow these steps:

1. **On the Network Admin Dashboard, click the Settings menu link.**
2. **Scroll down to the Menu Settings section.**

   The check box for the Plugins menu is deselected, which means that users can't see the menu regardless of their roles.
3. **Select the Plugins check box to make the Plugins menu available to site administrators, as shown in Figure 4-7.**
4. **Save your selection by clicking the Save Changes button.**



Upload file types: jpg jpeg png gif mov avi mpg 3gp 3g2 midi mid pdf doc ppt odt pptx docx pps ppsx xls xls

Allowed file types. Separate types by spaces.

Max upload file size: 1500 KB

Language Settings

Default Language: English (United States)

Menu Settings

Enable administration menus: □ Plugins

Limit Blog Registrations Per User

Number of blogs allowed per User: 0

If the Value is Zero,It indicates any number of blog is allowed

Save Changes

Thank you for creating with WordPress.

Version 4.7

FIGURE 4-7: Enabling the Plugins menu for site administrators.

REMEMBER

Similarly, you must enable any themes installed on the network before a site administrator can choose the theme from the Appearance menu. I explain how to do so in Book 8, Chapter 3.

IN THIS CHAPTER

- » Understanding theme management
- » Understanding networkwide plugins
- » Finding networkwide and Must-Use plugins

Chapter 5

Using Network Plugins and Themes

When you add new plugins and themes to your WordPress installation, you add new functionality and aesthetics. You don't just multiply your choices, however; the possibilities become endless. You can gather and display information from across the network, for example, or have the same features available to everyone. You can choose to have the same theme on all sites or different themes. You can not only manage plugins and themes on a global level, but also have site-specific control.

In this chapter, I show you how certain functionality appears across the network and how certain plugins look by default on all sites for all users. I also cover controlling access to different themes for different sites.

One of the interesting features of a network is the extensive use of the `mu-plugins` folder. In this chapter, I describe exactly how this folder processes plugin code. I also cover the Network Activate link on the Plugins page, which is similar to the Activate link but has important differences.

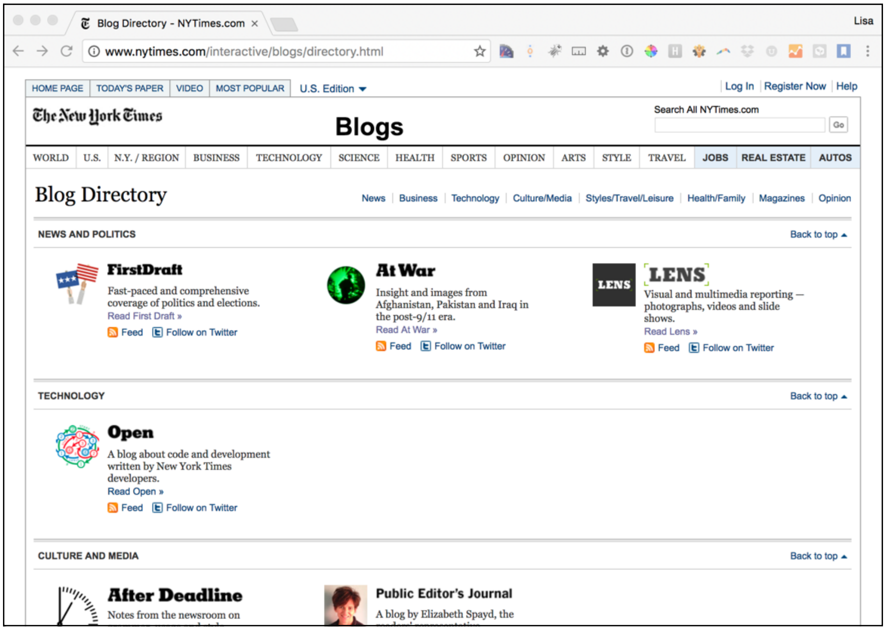
REMEMBER

This chapter doesn't cover installing plugins and themes. I cover plugins in Book 7, Chapter 2 and themes in Book 6, Chapter 2.

Using One Theme on Multiple Sites

In certain situations (when you want consistent branding and design across your entire network, for example), each site in a network is used as a subsection of the main site. You could set up WordPress networks as a magazine-style design on your main site and populate the content with different posts from sites within your network, aggregating all the content to the main site. You can see an example on a site on the New York Times network site (`www.nytimes.com/interactive/blogs/directory.html`), which is shown in Figure 5-1.

The New York Times Blogs site is run by the New York Times, a media company in the United States. The goal is create a directory of blogs in the New York Times network, organized by topic. On the New York Times Blog site, all the titles link to different blogs within the site's network. The New York Times allows the administrators of its network sites to use different logos in the header of each site; however, each site uses the same basic theme so the branding across sites is consistent with the main Blogs site.



Blog Directory

NEWS AND POLITICS

FirstDraft

Fast-paced and comprehensive coverage of politics and elections.

Read First Draft »

At War

Insight and images from Afghanistan, Pakistan and Iraq in the post-9/11 era.

Read At War »

LENS

Visual and multimedia reporting — photographs, videos and slide shows.

Read Lens »

TECHNOLOGY

Open

A blog about code and development written by New York Times developers.

Read Open »

CULTURE AND MEDIA

After Deadline

Notes from the newsroom on

Public Editor's Journal

A blog by Elizabeth Spayd, the

FIGURE 5-1: The New York Times Blogs site.

Although each site on the network operates separately from the main (network admin) site, you may want each site to look the same as the main site to tie into the main site visually, through design and branding, and to provide a consistent experience for visitors to all sites within a network. You may have a custom theme specially made for the main site, with added features to display networkwide content. If consistency and network branding are your goals, you may want to create a single theme that's used on all sites within your network (other than your main site).

REMEMBER

Book 6 discusses how WordPress accesses themes stored on the web server. When the network is enabled, these themes are shared among all sites and are available on the site administrator's Dashboard. If a change is made in a theme file, every site on the network using that theme experiences the change, because only one copy of the theme is being served. When a theme is enabled, it appears on the Manage Themes page of the administrator's Dashboard (which the users access by hovering the pointer over the Appearance menu on the Network Admin Dashboard and clicking the Themes link). Users can choose to activate this theme so that it displays on the front side of the site. You must activate a theme for use across all sites on a network by clicking the Network Enable link below the Theme name on the Network Admin Dashboard. (Access this Themes page by clicking the Themes menu link on the Network Admin Dashboard.)

The main network site could have 20 themes installed in the main WordPress installation, but if you haven't enabled them for use across the entire network, site administrators can't see network-disabled themes on their Dashboards and, therefore, can't use them on their sites.

DEFAULT THEME PLUGIN

A wonderful plugin called Default Theme adds a simple item to the Network Admin Dashboard, which you can access by clicking the Settings menu link. Simply, the Default Theme setting gives you the option to assign a default theme for new sites.

The Default Theme plugin isn't free, unfortunately. It's available from the development group at WPMU DEV at `https://premium.wpmudev.org/project/default-theme`. To access the plugin, you need to purchase membership on the site, but don't let that requirement deter you.

The WPMU DEV membership gives you access to hundreds of WordPress network-related plugins and themes for one monthly membership. I recommend it highly and feel that it's worth every penny it costs. After you have your WPMU DEV membership, you can begin downloading hundreds of plugins and themes for your WordPress network. You can purchase a membership by visiting `https://premium.wpmudev.org`.

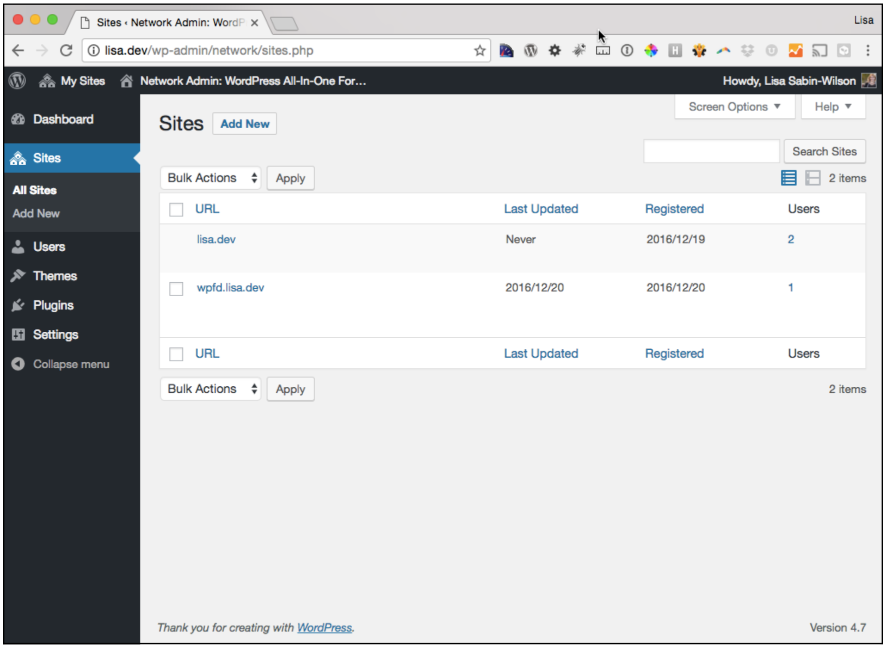
If a consistent network design is what you're after, you'll run into a few troubles with the WordPress network because, by default, no matter what themes you've activated, the default WordPress Twenty Seventeen theme gets activated whenever new sites are created within your network. It would be nice for WordPress to provide a global setting in the Network Admin Dashboard that allows you to assign the default theme to every site on your network, but that currently isn't the case unless you want to edit some code in the WordPress configuration file (which I cover in "Setting the default theme for sites" later in this chapter).

Enabling themes for individual sites

You may have a customized theme for one member site that you don't want other sites within the network to use or have access to. As the network admin, you can edit each site on the network. You can perform some basic tasks, such as enabling or disabling themes, or add new themes to the network without leaving your own Dashboard. If you want to have a theme available for use on only one site, not available for other sites to choose, follow these steps:

1. **Click the Network Admin link on the My Sites menu (in the top-left corner of your Dashboard) and then click the Sites menu link.**

   The Sites screen appears, showing a list of all sites across the network, sorted by creation date, as shown in Figure 5-2.



□ URL	Last Updated	Registered	Users
lisa.dev	Never	2016/12/19	2
□ wpfd.lisa.dev	2016/12/20	2016/12/20	1
□ URL	Last Updated	Registered	Users

Thank you for creating with WordPress.

Version 4.7

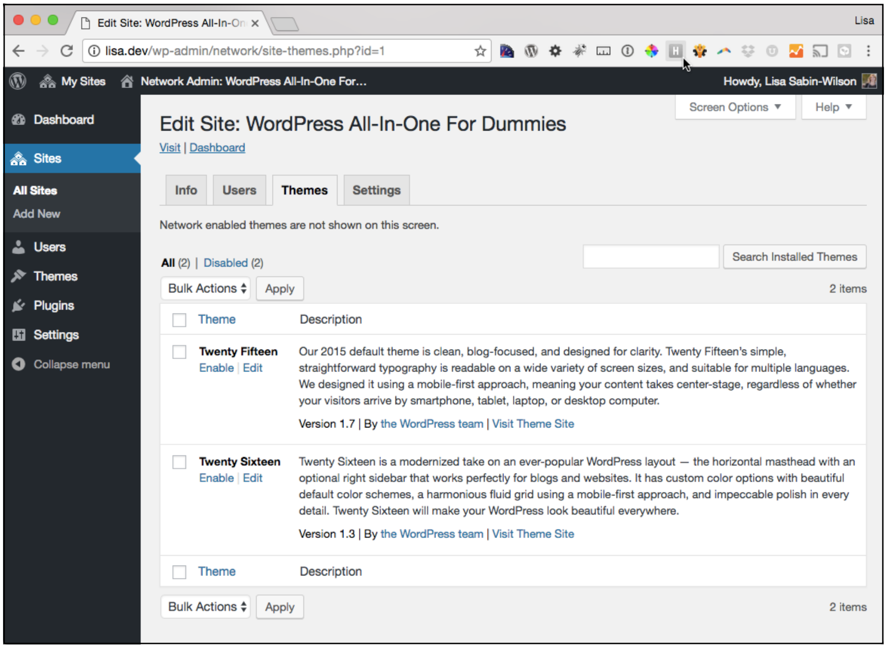
FIGURE 5-2: A list of sites on the network.

2. **Hover your cursor over the site you want to enable a theme for and then click the Edit link.**

   The Edit Site screen appears.

3. **Click the Themes tab.**

   The Edit Sites screen changes to show a list of themes that you can enable for the site you're editing. (See Figure 5-3.)



Edit Site: WordPress All-In-One For Dummies

Network enabled themes are not shown on this screen.

□ Theme	Description
□ **Twenty Fifteen** Enable | Edit	Our 2015 default theme is clean, blog-focused, and designed for clarity. Twenty Fifteen's simple, straightforward typography is readable on a wide variety of screen sizes, and suitable for multiple languages. We designed it using a mobile-first approach, meaning your content takes center-stage, regardless of whether your visitors arrive by smartphone, tablet, laptop, or desktop computer. Version 1.7 | By the WordPress team | Visit Theme Site
□ **Twenty Sixteen** Enable | Edit	Twenty Sixteen is a modernized take on an ever-popular WordPress layout — the horizontal masthead with an optional right sidebar that works perfectly for blogs and websites. It has custom color options with beautiful default color schemes, a harmonious fluid grid using a mobile-first approach, and impeccable polish in every detail. Twenty Sixteen will make your WordPress look beautiful everywhere. Version 1.3 | By the WordPress team | Visit Theme Site
□ Theme	Description

FIGURE 5-3: The Edit Site screen with the Themes tab active.

4. **Click the Enable link for the theme you want to enable on the site you're editing.**

   The Edit Site screen refreshes with the Theme tab still active and displays a message stating that the theme has been enabled. Your selected theme is now enabled on the site.

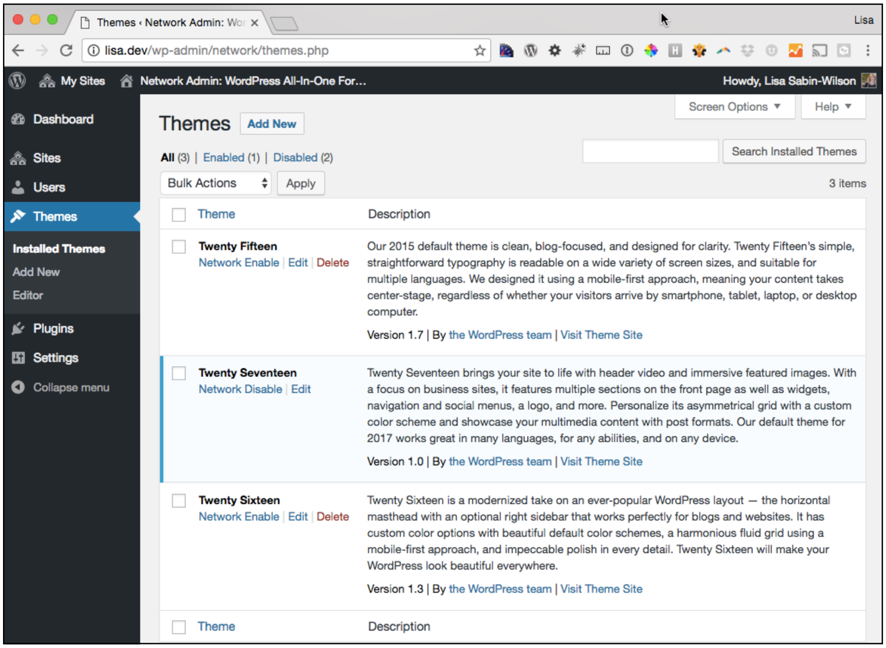
5. **Repeat these steps for any other sites on which you want to enable a theme.**

Installing themes for network use

Installing a theme for use on your network involves the same process you use to install a theme on your individual site (see Book 6, Chapter 2), but with an extra step: You have to enable each theme on the Network Admin Dashboard to activate it on the Appearance menu of the individual site administrators' Dashboards for sites within your network. Here's how to enable a theme so that all your site owners can use it on their sites:

1. **Click the Network Admin link on the My Sites menu (in the top-left corner of your Dashboard) and then click the Themes menu link.**

   The Themes screen appears, displaying a list of installed themes, as shown in Figure 5-4. Each theme installed in the `/wp-content/themes` folder is listed on this screen.



Themes

All (3) | Enabled (1) | Disabled (2)

3 items

□ Theme	Description
□ **Twenty Fifteen** Network Enable | Edit | Delete	Our 2015 default theme is clean, blog-focused, and designed for clarity. Twenty Fifteen's simple, straightforward typography is readable on a wide variety of screen sizes, and suitable for multiple languages. We designed it using a mobile-first approach, meaning your content takes center-stage, regardless of whether your visitors arrive by smartphone, tablet, laptop, or desktop computer. Version 1.7 | By the WordPress team | Visit Theme Site
□ **Twenty Seventeen** Network Disable | Edit	Twenty Seventeen brings your site to life with header video and immersive featured images. With a focus on business sites, it features multiple sections on the front page as well as widgets, navigation and social menus, a logo, and more. Personalize its asymmetrical grid with a custom color scheme and showcase your multimedia content with post formats. Our default theme for 2017 works great in many languages, for any abilities, and on any device. Version 1.0 | By the WordPress team | Visit Theme Site
□ **Twenty Sixteen** Network Enable | Edit | Delete	Twenty Sixteen is a modernized take on an ever-popular WordPress layout — the horizontal masthead with an optional right sidebar that works perfectly for blogs and websites. It has custom color options with beautiful default color schemes, a harmonious fluid grid using a mobile-first approach, and impeccable polish in every detail. Twenty Sixteen will make your WordPress look beautiful everywhere. Version 1.3 | By the WordPress team | Visit Theme Site
□ Theme	Description

FIGURE 5-4: A list of themes on the network.

2. **Click the Network Enable link for the theme you want to use.**

   Enabling a theme on the Themes screen causes it to appear in the list of available themes on each network site's Dashboard (but doesn't change any user's active theme; it merely makes the theme available for use).

3. **Repeat these steps to enable more themes on your network.**

REMEMBER

Installing a new theme in your main WordPress installation doesn't mean that it's available for use networkwide. As the network admin, you always have to enable the theme before your site owners can use it.

Setting the default theme for sites

When a new site is created on the network, by default, it displays the Twenty Seventeen theme provided within WordPress. If you want to use a different theme as the default for all new sites created, add a `define` statement to the `wp-config.php` file of your WordPress installation. (Check out Book 2, Chapter 5 to familiarize yourself with the `wp-config.php` file you're modifying in this section.)

Install your theme on the server, as I outline in Book 6, Chapters 1 and 2. You may also want to enable the theme networkwide, as outlined in the preceding section. This step isn't necessary, but if you have other themes available, and if the active theme is disabled, a user who switches away from that theme won't be able to switch back to it.

Because the Twenty Seventeen WordPress theme is already the default, use the theme from 2016 called (funnily enough) Twenty Sixteen as the theme you want to set as the default for all sites within the network. Follow these steps:

1. **Log in to your web server via SFTP.**

   See Book 2, Chapter 2 for details on using SFTP.

2. **Open the `wp-config.php` file in your favorite text editor.**

   See Book 2, Chapter 5 for details about where you can find the `wp-config.php` file on your web server.

   TIP

   Save a copy of your original `wp-config.php` file to your desktop before editing it in case you make any mistakes or typos in the next few steps.

3. **Locate the following line of code in the `wp-config.php` file:**

   ```
   define ('WPLANG', '');
   ```

   You can find this line toward the bottom of the file; scroll until you locate it.

4. **Add a new blank line below it.**

5. **Type** define(‘WP_DEFAULT_THEME’, ‘twentysixteen’);**.**

   This one line of code tells WordPress to use the Twenty Sixteen theme as the default theme for all new sites within your network.

6. **Save the `wp-config.php` file, and upload it to your web server.**

   The `twentysixteen` in quotes refers to the theme's folder name on the web server. The name within the quotes should be identical to the name of the folder where the theme files reside. All new sites created now display the Twenty Sixteen theme.

Gathering and Displaying Networkwide Content

Depending on your needs, you may want to gather content from sites across your network to display on the front page of the main site (as the New York Times Blogs site does). Although some plugins can do this for you, you can accomplish the same thing by placing a few lines of code in your theme template file.

The main page of your network is controlled by the theme that's active on the Themes page of your regular Dashboard (which you access by hovering your pointer over Appearance and clicking the Themes link). You can customize this theme with some code samples in the next section to suit your particular needs.

Adding posts from network sites

One of the best ways to pull visitors to your site is to display a short list of headlines from posts made on other sites within your network. For a single WordPress site, the Recent Posts widget can handle this task. When you're running a network, you have no built-in way to pull a list of posts from across all the sites in your network. But the Network Posts Extended plugin, available in the WordPress Plugin Directory at `https://wordpress.org/plugins/network-posts-extended`, can do this job for you quickly and efficiently. The plugin includes a handy widget that makes it easy for you to add recent posts from across your network of sites to your main website.

Listing network sites

To list all the sites in the network, use the Multisite Directory plugin, available free from the WordPress Plugin Directory at `https://wordpress.org/plugins/multisite-directory`. You install this plugin just as you do any other plugin in WordPress; see Book 7, Chapters 1 and 2 for information on installing WordPress plugins.

To use the features that this plugin provides, create Categories in the Sites menu in the Network Admin Dashboard under Sites➪Categories; then assign each site within your network to a category. If you're running a network of sites about books, you might create categories of genres such as Mystery, Romance, and Biography. Then you can assign each site in your network to the appropriate genre, or category. When you use the Multisite Directory widget, included in the plugin, you can display a directory of sites in your book network by genre to help your visitors find the sites that interest them most.

Displaying most-commented posts

When you're running multiple sites, you may want to display a listing of the most-commented posts across the network. The WP Multisite Most Commented Posts widgets plugin (available at `https://wordpress.org/plugins/wp-multisite-popular-posts`) lets you do just that.

Install the plugin as outlined in Book 7, and click the Network Activate link. Hover your pointer over Appearance, and click the Widgets link on the Dashboard of your site to load the Widgets page. A new widget is added, called WP Multisite Popular Posts.

If you drag this widget to the sidebar of your choosing, it displays a list of the most popular posts on every site across the network. With this plugin, popular posts are determined by the posts that have the greatest number of comments. If you expand the WP Multisite Popular Posts widget, you see the following configurable options (shown in Figure 5-5):

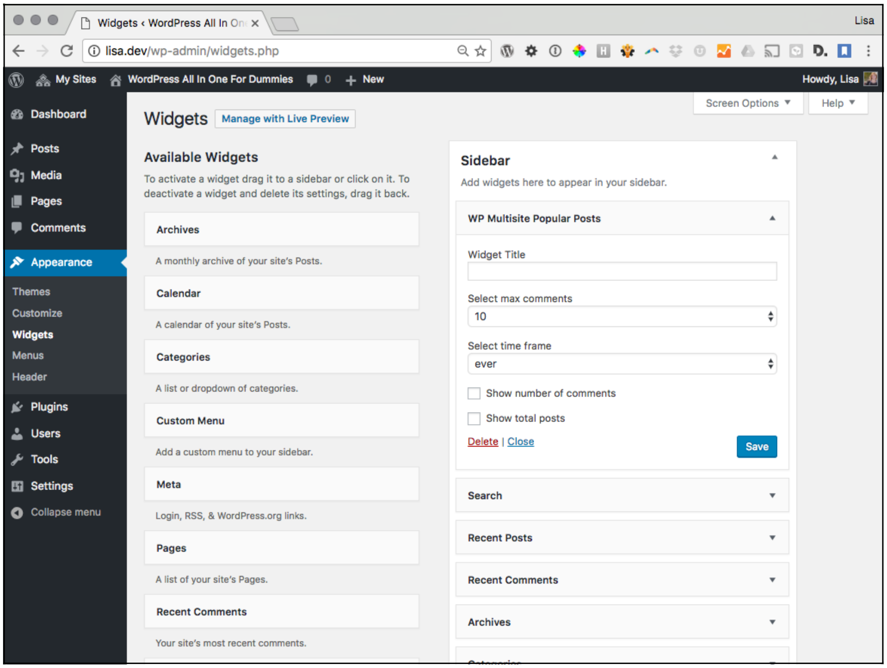
- **Widget Title:** This title is displayed on your site, above the widget information.
- **Select Max Comments:** This option lets you set 1 to 10 comments.
- **Select Time Frame:** This option sets the time frame for the posts. You can display the most popular posts of all time, for example, or just the ones posted over the past month.
- **Show Number of Comments:** Select this box to tell the widget to show the number of comments left for each post displayed.
- **Show Total Posts:** Select this box to tell the widget to display the total number of posts on your network.

REMEMBER

Be sure to click the Save button within the widget to save all the settings you create here.

Using sitewide tags and categories

The WordPress MU Sitewide Tags plugin pulls information from every new post on each site and reproduces it on a site that the plugin creates on your network. This site, called Tags Blog, aggregates the posts from every site. You may also set Tags Blog as the main site of your network so that all new posts appear on the front page.



Widgets

Available Widgets

To activate a widget drag it to a sidebar or click on it. To deactivate a widget and delete its settings, drag it back.

Archives

A monthly archive of your site's Posts.

Calendar

A calendar of your site's Posts.

Categories

A list or dropdown of categories.

Custom Menu

Add a custom menu to your sidebar.

Meta

Login, RSS, & WordPress.org links.

Pages

A list of your site's Pages.

Recent Comments

Your site's most recent comments.

Sidebar

Add widgets here to appear in your sidebar.

WP Multisite Popular Posts

Widget Title

Select max comments: 10

Select time frame: ever

☐ Show number of comments

☐ Show total posts

FIGURE 5-5: The WP Multisite Popular Posts widget options.

The plugin pulls and reposts almost all content from a post on another network site, including the title, content, tags, categories, and author information. At this time, however, it doesn't pull the post thumbnail or the comments.

By default, this plugin is set to create a new site called Tags Blog and saves up to 5,000 posts before it starts to remove older ones. Each post it aggregates retains its original permalink (the full URL to the post) and all post meta information (the post's original author, the date and time it was published, and any categories and tags assigned to it).

All the aggregated posts from across the network are saved and published on one site; the posts on the Tags Blog get displayed on one page as if the network posts were posted to a single site. Each new post is saved to the Tags Blog site when it's created. Then users or visitors can search the Tags Blog site and see tags from across the network, search aggregated posts across the network, and see posts by all network authors, among other things. The possibilities for networkwide aggregation and display are endless.

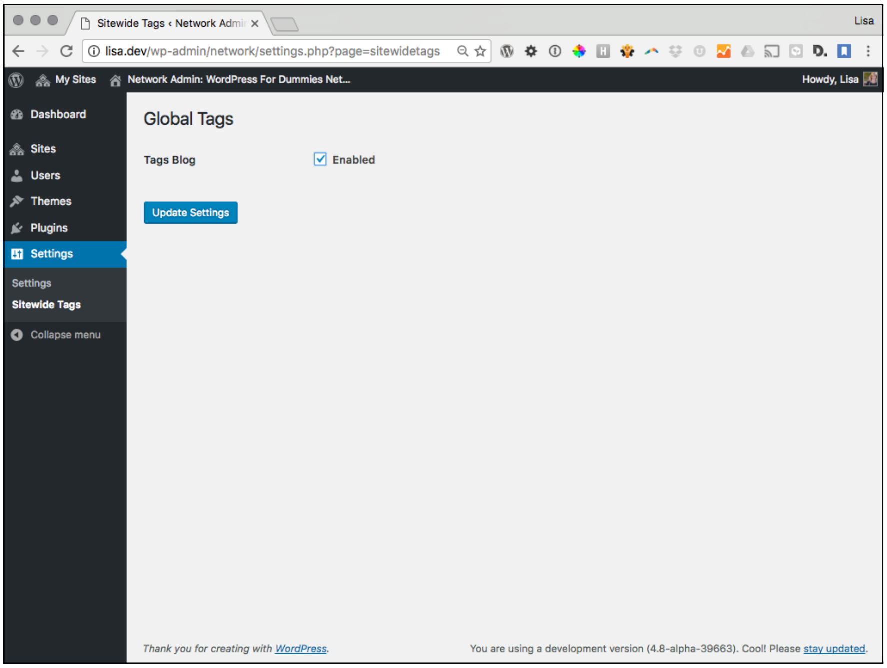
REMEMBER

Because the original permalink of the post is retained, search engines don't read these aggregated posts as duplicate content; therefore, each site retains any page rankings or search engine optimization (SEO) juice.

In order to install the plugin, you can can find and download the Sitewide Tags plugin at `https://wordpress.org/plugins/wordpress-mu-sitewide-tags` to install manually on your site, or you may install it by using the built-in plugin installer in your WordPress Dashboard.

After you install the plugin, activate it on the network by moving it to the `mu-plugins` folder (discussed later in this chapter in "Using and Installing Networkwide Plugins"). When you move the plugin to this folder on the server, it's activated automatically and starts working.

When the plugin is active, you need to enable it. Visit the Global Tags page on your Network Admin Dashboard (click the Sitewide Tags link on the Settings menu). Figure 5-6 shows the Global Tags page, where you enable the Tags Blog on your network by selecting the Enabled check box on the Global Tags page.



Global Tags

Tags Blog ☑ Enabled

Update Settings

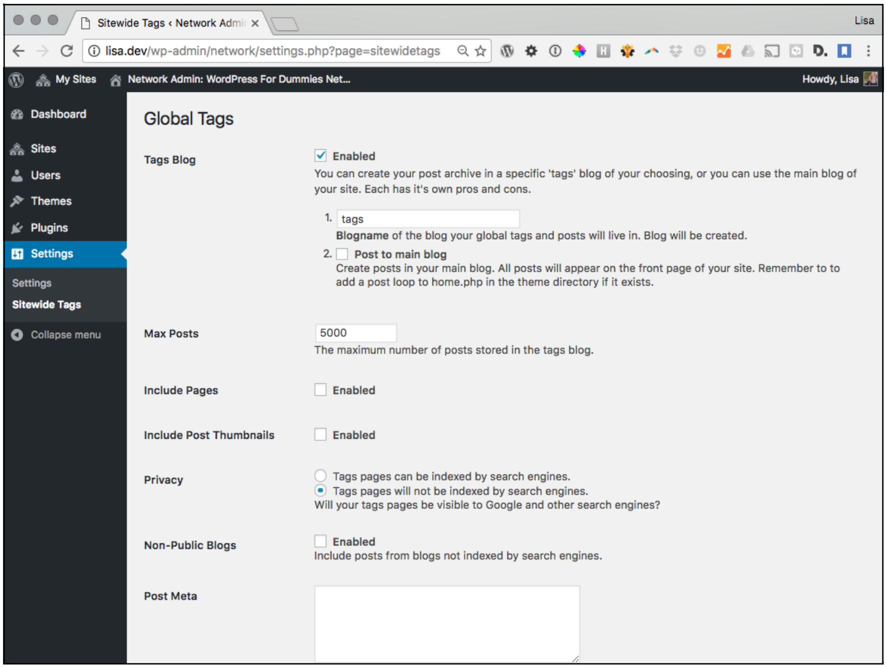
Sitewide Tags ‹ Network Admi ×
Lisa
lisa.dev/wp-admin/network/settings.php?page=sitewidetags
My Sites
Network Admin: WordPress For Dummies Net...
Howdy, Lisa
Dashboard
Sites
Users
Themes
Plugins
Settings
Settings
Sitewide Tags
Collapse menu
Thank you for creating with WordPress.
You are using a development version (4.8-alpha-39663). Cool! Please stay updated.

FIGURE 5-6: Enabling Tags Blog.

After you click the Update Settings button on the Global Tags page, the page refreshes. You see that the Global Tags section has changed and provides new options (see Figure 5-7), including the following:

- **Tags Blog:** In the text field, type the name of the blog to which you want to aggregate all posts on the network, or select the option to aggregate all the posts to the main blog.

- **Max Posts:** This option is set to 5,000 by default. Beyond that number, the plugin automatically deletes older posts from the Tags Blog site.
- **Include Pages:** Select this box to enable the option, which includes any pages that users create on their network sites and pushes those pages to the assigned tags blog.
- **Include Post Thumbnails:** Select this option to have WordPress include thumbnail images from across the network.
- **Privacy:** This option determines whether the Tags Blog site can be indexed by search engines.
- **Non-Public Blogs:** When enabled, this feature aggregates posts from sites that have changed their privacy settings (hover the pointer over Settings, and click the Privacy link) to nonpublic.
- **Post Meta:** If you're using a plugin or a theme on some or all of the network sites that create custom files, enter the specific field names in use on your site here so that those values are also pulled to the tags blog.


Sitewide Tags ‹ Network Admi
Lisa
lisa.dev/wp-admin/network/settings.php?page=sitewidetags
My Sites
Network Admin: WordPress For Dummies Net...
Howdy, Lisa
Dashboard
Sites
Users
Themes
Plugins
Settings
Settings
Sitewide Tags
Collapse menu

Global Tags

Tags Blog ☑ Enabled

You can create your post archive in a specific 'tags' blog of your choosing, or you can use the main blog of your site. Each has it's own pros and cons.

1. tags

Blogname of the blog your global tags and posts will live in. Blog will be created.

2. □ Post to main blog

Create posts in your main blog. All posts will appear on the front page of your site. Remember to to add a post loop to home.php in the theme directory if it exists.

Max Posts 5000

The maximum number of posts stored in the tags blog.

Include Pages □ Enabled

Include Post Thumbnails □ Enabled

Privacy ○ Tags pages can be indexed by search engines.
● Tags pages will not be indexed by search engines.
Will your tags pages be visible to Google and other search engines?

Non-Public Blogs □ Enabled

Include posts from blogs not indexed by search engines.

Post Meta

FIGURE 5-7: Global Tags options.

Using and Installing Networkwide Plugins

Networkwide plugins perform an action globally on all sites on the network. Because you're working with one code base, you need only one copy of a plugin. All sites within the network use the same copy.

When you have a single installation of WordPress on a single site, the Activate link on the Plugins page turns on that plugin for that site. (See Book 7, Chapters 1 and 2.) When you have multiple sites on a network using the Multisite feature, the Activate link works the same way for the site on which you activate the plugin.

You see a Network Activate link on the Plugins page of the Network Admin Dashboard, which activates the plugin on all sites on the network. This option simply turns on the plugin for all network sites; it doesn't allow you to manage plugin options globally unless the plugin itself is coded to do so. You can see a list of network-activated plugins on the Plugins page of the Network Admin Dashboard (which you access by clicking the Plugins menu link).

REMEMBER

Any changes made in this copy affect every site within your network.

A special breed of plugins — the Must-Use plugins — gets installed in the `/wp-content/mu-plugins` folder on your web server. Any plugin file placed inside this folder runs as though it were part of WordPress. The plugins in this folder execute automatically, without the need for activation from your Dashboard.

WARNING

In fact, you *can't* access the files in this folder from the WordPress Dashboard. If you use the Install Plugins page (hover your pointer over Plugins, and click the Add New link) to find and install a Must-Use plugin, you may be required to move the plugin files from the `plugins` folder to the `mu-plugins` folder. The plugin's `readme.txt` file always states whether the plugin needs to be moved into the Must-Use (`mu-plugins`) folder.

Generally, plugins placed in the `/wp-content/mu-plugins` folder are for networkwide features or customizations that users can't disable. An example is a custom-branded login page on each site on your network. If a plugin design adds a new menu item, the menu item appears as soon as the plugin is placed in the `/wp-content/mu-plugins` folder, without further need for activation on the Dashboard.

Not all plugins placed in the `/wp-content/mu-plugins` folder appear in the plugins list (hover your pointer over Plugins, and click the Plugins link), because not all of them require activation.

Place the main Must-Use plugin file in the `/wp-content/mu-plugins` folder, not in a subfolder. If multiple files exist within the plugin, some plugins use a file with a command to include the subfolder so that the code executes.

REMEMBER

You still control plugin settings on a per-site basis; you must visit the back end of each site if you want to alter any settings provided by the plugin.

Here's how to create the `/wp-content/mu-plugins` folder and install a network-wide plugin:

1. **Connect to your web server via SFTP.**
2. **Navigate to the `/wp-content` folder.**

   You see the subdirectories `plugins` and `themes`.
3. **Using your SFTP program, create a `mu-plugins` subdirectory.**

   Most SFTP programs allow you to right-click and choose to add a new folder.
4. **Upload the plugin file — not the plugin folder — to the `/wp-content/mu-plugins` folder on your web server.**

   The plugin immediately runs on your installation. Generally speaking, the only plugins that go in this folder are ones in which the plugin's instructions (typically located in the `readme.txt` file) explicitly state to put it in the `/mu-plugins` folder.

Discovering Handy Multisite Plugins

You can find multisite plugins that take advantage of WordPress's multisite functionality in the WordPress Plugin Directory at `https://wordpress.org/plugins`. Usually, multisite plugins are tagged with certain keywords that help you find them, such as *wpmu, wordpressmu, multisite,* and *network.*

When you click the linked tags for these terms in the directory, you're taken to a page that lists the related plugins, such as `https://wordpress.org/plugins/tags/multisite` or `https://wordpress.org/plugins/tags/network`.

Additionally, you can find more plugins by searching for them in search engines and by asking about them on the WordPress Forums page (`https://wordpress.org/support`).

IN THIS CHAPTER

- Discovering domain mapping
- Understanding how to map domains
- Mapping many domains
- Establishing multiple domains

Chapter 6

Using Multiple Domains within Your Network

With a network of multiple sites readily available in WordPress, many people have expressed the desire to run multiple sites on their own separate domain names through one installation. Before the network feature was added to the WordPress software, you could run only one site per installation of the software. Now it's possible to run several sites under one installation of WordPress by activating the network feature, which I discuss in Book 8, Chapters 4 and 5.

In this chapter, I discuss using multiple domains and a feature called *domain mapping*, which enables you to run not only multiple sites, but also multiple sites with unique domain names that are not tied to the main.

Note: To tackle this chapter, you need to understand domains (Book 2, Chapter 1) and domain name server (DNS) records.

Finding Your Way with Domain Mapping

Domain mapping means telling your web server which domains you want WordPress to answer to and which site you want visitors to see when they request that domain. This process is more than domain forwarding or masking, because the

URLs for your posts have the full domain name in them. Instead of the child site's being in `secondsite.`*yourdomain*`.com` format, it can be *myotherdomain*`.com`.

Domain mapping isn't possible in certain instances, however. If your WordPress install is in a subfolder, and this folder is part of the URL, any mapped domain also contains this folder name. In that case, it would be better to move the installation so that it isn't in a subfolder.

You also need to access your web host's control panel (where you manage DNS records on your web server) and the control panel for your domain name registrar, which may be a different company.

REMEMBER

The network install, by default, lets you choose between a subfolder setup and a subdomain setup. This step is still required before you can specify a domain for that site. I cover how to enable the network in Book 8, Chapter 2. Be sure to set up the network and ensure that it's functioning properly before you attempt to map domains.

Adding domains

You need to set up your web server to accept any incoming requests for the domain you want to map and the location to send them to. I use the cPanel control panel (Book 2, Chapter 2) in this section (with the HostGator hosting provider; your cPanel may look a little different) because it's quite popular and available on many web hosts. On cPanel-based web hosts, this task is referred to as *domain parking.*

Follow these steps to add on a domain on your web hosting account via cPanel:

1. **Log in to your website's cPanel.**

   The address is provided by your web host and usually available at `http://yourdomain.com/cpanel`.

2. **In the Domains section, click the Addon Domains icon, shown in Figure 6-1.**

   The Addon Domains page displays in your browser window and lists any domains you have parked (if you previously parked any) and provides a form where you can enter a new domain.

3. **In the Create an Addon Domain section, enter the domain name you want to map.**

   The domain is directed to the root folder of your website, which is where your WordPress installation should be located. If it isn't, follow the steps in the next section.

4. **Click the Add Domain button.**

   The screen refreshes and shows a message saying that your add-on domain has been created. (See Figure 6-2.)

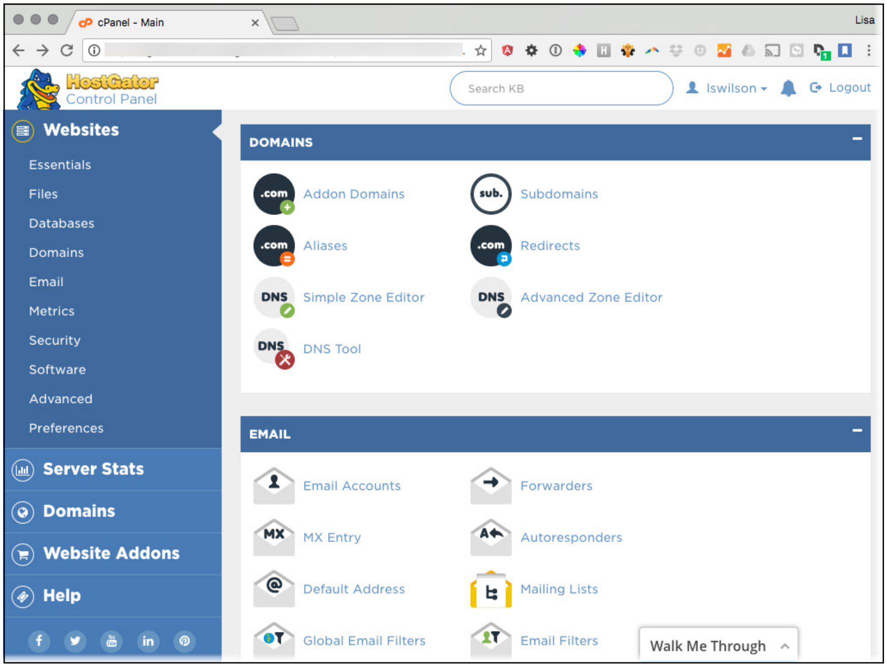
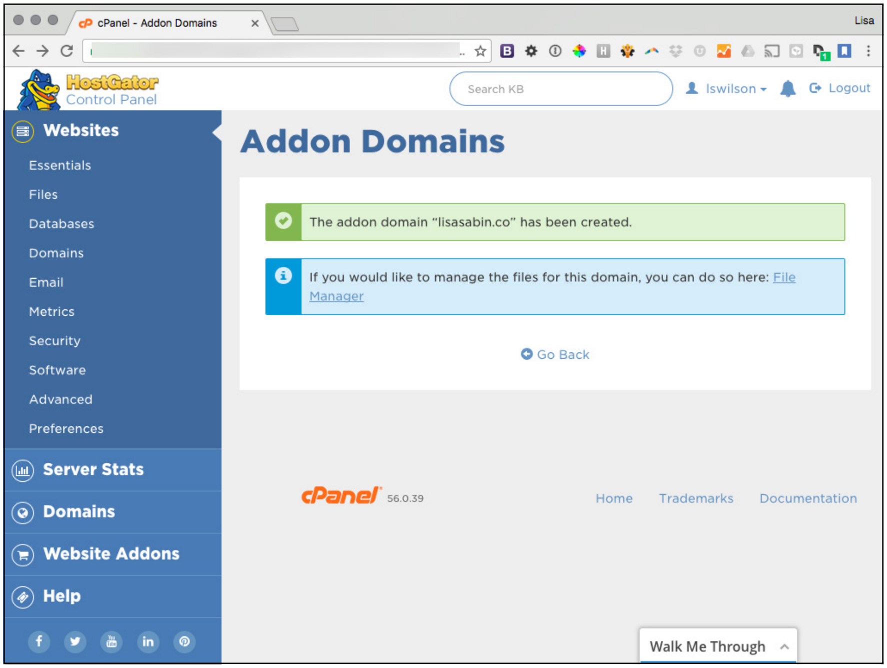


FIGURE 6-1: The Addon Domains icon in cPanel.



Addon Domains

The addon domain “lisasabin.co” has been created.

If you would like to manage the files for this domain, you can do so here: File Manager

FIGURE 6-2: The Addon Domains page, showing a successfully created add-on domain.

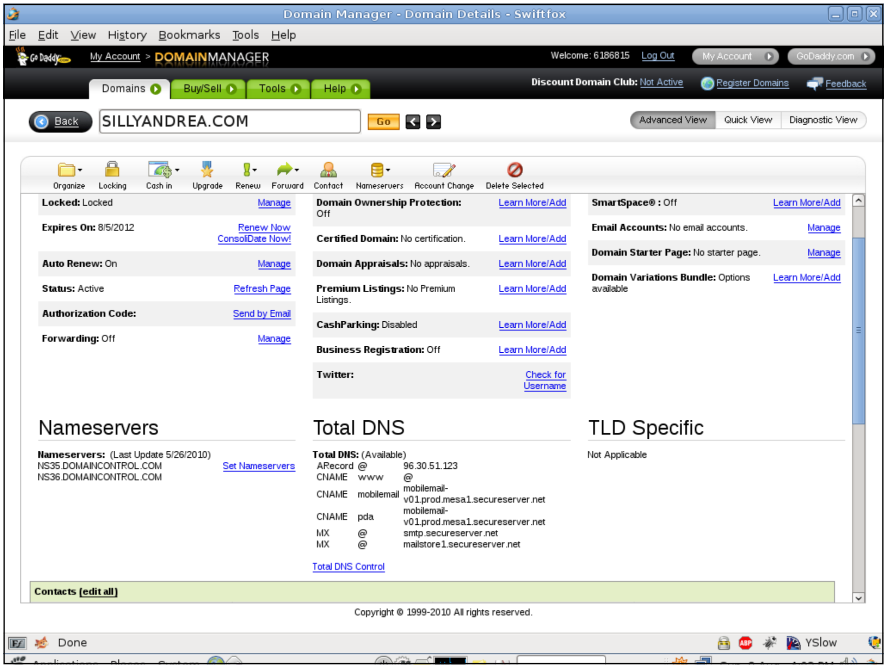
You’re using a `ServerAlias` directive for the mapped domains, telling the web server to send all requests for the mapped domain to the domain where WordPress is installed.

Editing domain name server records

To instruct the domain name registrar where to send the domain name, you need to edit the DNS records. A common domain name registrar is GoDaddy; I use its domain registration account interface in the following steps. To edit the name server records, follow these steps:

1. **Log in to your domain name registrar.**
2. **Click the domain name management tools.**

   Figure 6-3 shows the information for the domain to map.
3. **Click the Set Nameservers link in the Nameservers section.**


Domain Manager - Domain Details - Swiftfox
File Edit View History Bookmarks Tools Help
My Account > DOMAINMANAGER
Welcome: 6186815 Log Out My Account GoDaddy.com
Domains Buy/Sell Tools Help
Discount Domain Club: Not Active Register Domains Feedback
Back Go
Advanced View Quick View Diagnostic View
Organize Locking Cash in Upgrade Renew Forward Contact Nameservers Account Change Delete Selected
Done YSlow

SILLYANDREA.COM

Locked: Locked — Manage
Expires On: 8/5/2012 — Renew Now / ConsoliDate Now!
Auto Renew: On — Manage
Status: Active — Refresh Page
Authorization Code: — Send by Email
Forwarding: Off — Manage

Domain Ownership Protection: Off — Learn More/Add
Certified Domain: No certification. — Learn More/Add
Domain Appraisals: No appraisals. — Learn More/Add
Premium Listings: No Premium Listings. — Learn More/Add
CashParking: Disabled — Learn More/Add
Business Registration: Off — Learn More/Add
Twitter: — Check for Username

SmartSpace® : Off — Learn More/Add
Email Accounts: No email accounts. — Manage
Domain Starter Page: No starter page. — Manage
Domain Variations Bundle: Options available — Learn More/Add

Nameservers

Nameservers: (Last Update 5/26/2010)
NS35.DOMAINCONTROL.COM
NS36.DOMAINCONTROL.COM
Set Nameservers

Total DNS

Total DNS: (Available)

```
ARecord  @           96.30.51.123
CNAME    www         @
CNAME    mobilemail  mobilemail-
                     v01.prod.mesa1.secureserver.net
CNAME    pda         mobilemail-
                     v01.prod.mesa1.secureserver.net
MX       @           smtp.secureserver.net
MX       @           mailstore1.secureserver.net
```

Total DNS Control

TLD Specific

Not Applicable

Contacts (edit all)

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FIGURE 6-3: The domain name records of a mapped domain.

4. **Type the name servers for your web host where your WordPress install is located and then save your changes by clicking the Save Changes button.**

   The servers around the world now know that your domain "lives" at this web server location. Name server changes may take up to 24 hours to propagate across the Internet.

Installing the Domain Mapping Plugin

Before you can add your mapped domains to WordPress, you need to install the WordPress MU Domain Mapping plugin to help handle this task in WordPress. The Domain Mapping plugin doesn't do any setup on the server side; it helps rename the site and takes care of any login issues. To install this plugin, follow these steps:

1. **Download the plugin from `https://wordpress.org/plugins/wordpress-mu-domain-mapping`.**
2. **Unzip the plugin on your local computer.**

   Inside are two PHP files: `domain-mapping.php` and `sunrise.php`.
3. **Open your SFTP program, and navigate to your website's `wp-content` folder.**

   For details on how to do this, see Book 2, Chapter 2.
4. **Upload the `sunrise.php` file directly into the `/wp-content` folder.**
5. **Download a copy of your `wp-config.php` file by using your SFTP program.**
6. **Open `wp-config.php` on your computer with a text editor, and add the following line below the `define( 'MULTISITE', true );` line.**

   ```
   define( 'SUNRISE', 'on' );
   ```
7. **Save the file, and upload it to your website.**

   The plugin is immediately available (and running) on your network. All you need to do is set up the options and map a domain to a site. Two new items are added to the Super Admin menu: Domain Mapping and Domains. On the user administrator side, a new Domain Mapping item appears on the Tools menu.

REMEMBER

The network admin needs to activate domain mapping on the Domain Mapping page (by choosing Network Admin➪Domain Mapping) before a user can map a domain by enabling the Domain Mapping feature.

Obtaining your IP address

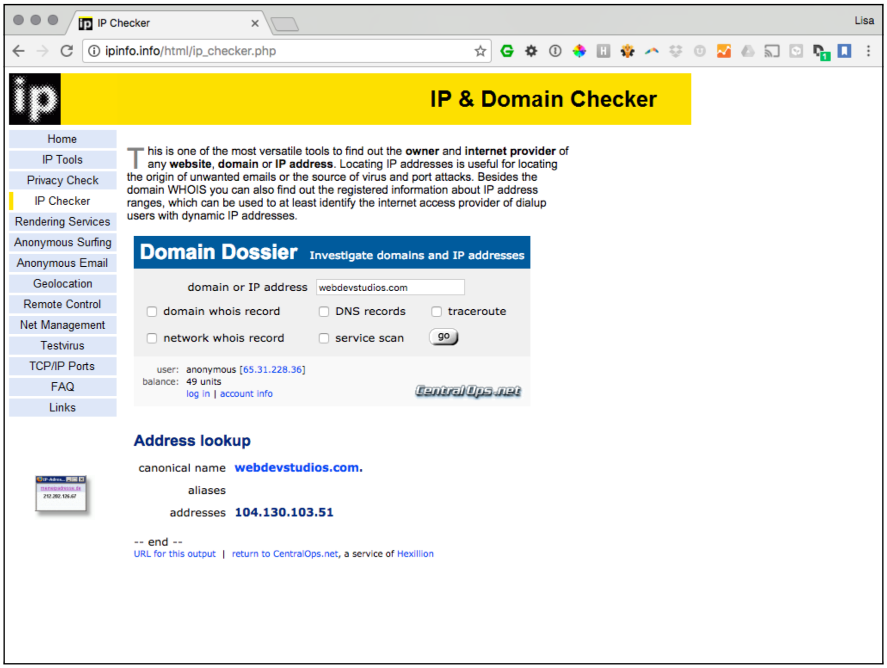
An *IP address* is a number assigned to every website and computer connected to the Internet. This number is used in domain mapping to help direct Internet traffic to the appropriate site on your network. You can find the IP address of your website three ways:

- Your web host provider can tell you.
- The address may appear within the web host's control panel.
- You can visit an IP lookup website. Such websites can tell you the IP of your website when you provide your domain name.

To find your address on an IP lookup website, follow these steps:

1. **Visit the handy online IP checker located at `http://ipinfo.info/html/ip_checker.php`.**
2. **Enter the domain name of your website and then click Go.**
3. **Write down the IP address that appears.**

   Figure 6-4 displays the IP address of my business site, `https://webdevstudios.com`.



This is one of the most versatile tools to find out the **owner** and **internet provider** of any **website**, **domain** or **IP address**. Locating IP addresses is useful for locating the origin of unwanted emails or the source of virus and port attacks. Besides the domain WHOIS you can also find out the registered information about IP address ranges, which can be used to at least identify the internet access provider of dialup users with dynamic IP addresses.

Domain Dossier Investigate domains and IP addresses

domain or IP address: webdevstudios.com

□ domain whois record □ DNS records □ traceroute

□ network whois record □ service scan go

user: anonymous [65.31.228.36]
balance: 49 units
log in | account info

Address lookup

canonical name **webdevstudios.com.**
aliases
addresses **104.130.103.51**

-- end --
URL for this output | return to CentralOps.net, a service of Hexillion

FIGURE 6-4: IP address lookup record revealing the IP address of webdevstudios.com.

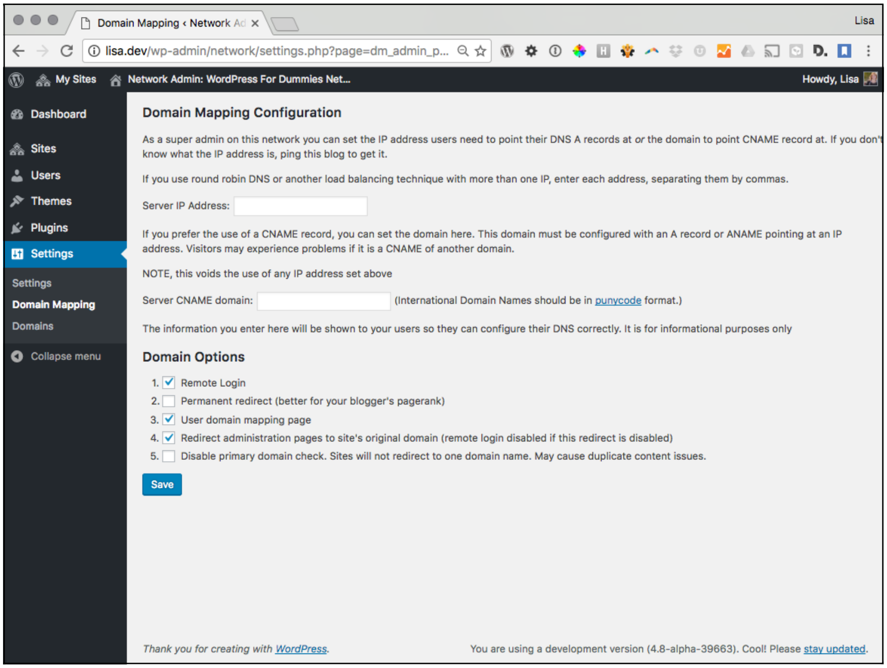
4. **On your WordPress Dashboard, choose Network Admin➪Domain Mapping, enter your IP address, and click Save.**

Mapping a domain to a site

To map a domain to a site in your network, here's what you need to do:

1. **Navigate to the Network Admin Dashboard.**
2. **Click the Domain Mapping link on the Settings menu.**

   The Domain Mapping Configuration screen appears, as shown in Figure 6-5.


Domain Mapping ‹ Network Ad
Lisa
lisa.dev/wp-admin/network/settings.php?page=dm_admin_p...
My Sites
Network Admin: WordPress For Dummies Net...
Howdy, Lisa
Dashboard
Sites
Users
Themes
Plugins
Settings
Settings
Domain Mapping
Domains
Collapse menu

Domain Mapping Configuration

As a super admin on this network you can set the IP address users need to point their DNS A records at *or* the domain to point CNAME record at. If you don't know what the IP address is, ping this blog to get it.

If you use round robin DNS or another load balancing technique with more than one IP, enter each address, separating them by commas.

Server IP Address:

If you prefer the use of a CNAME record, you can set the domain here. This domain must be configured with an A record or ANAME pointing at an IP address. Visitors may experience problems if it is a CNAME of another domain.

NOTE, this voids the use of any IP address set above

Server CNAME domain: (International Domain Names should be in punycode format.)

The information you enter here will be shown to your users so they can configure their DNS correctly. It is for informational purposes only

Domain Options

1. ☑ Remote Login
2. □ Permanent redirect (better for your blogger's pagerank)
3. ☑ User domain mapping page
4. ☑ Redirect administration pages to site's original domain (remote login disabled if this redirect is disabled)
5. □ Disable primary domain check. Sites will not redirect to one domain name. May cause duplicate content issues.

Thank you for creating with WordPress.

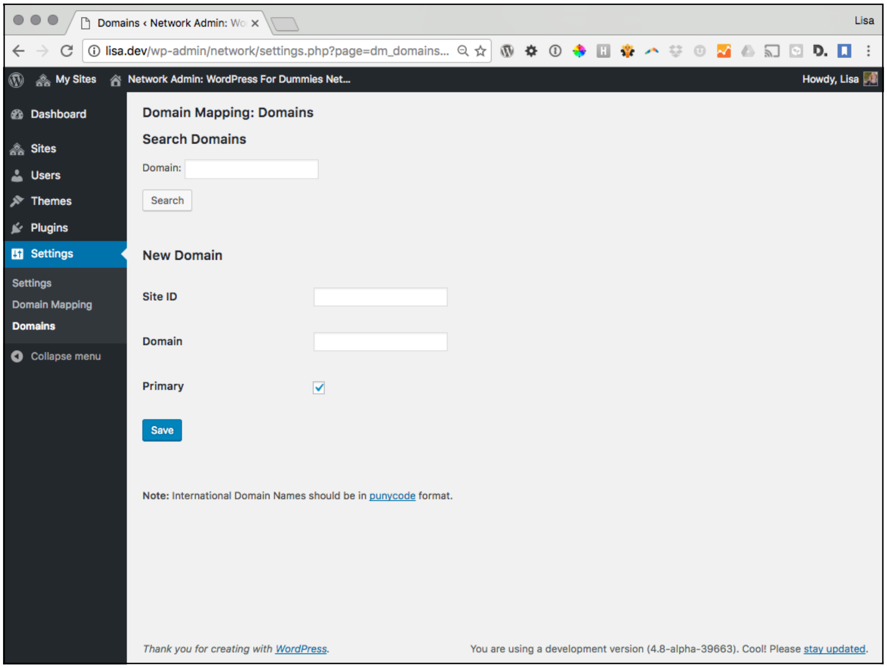
You are using a development version (4.8-alpha-39663). Cool! Please stay updated.

FIGURE 6-5: Domain Mapping Configuration screen of the Network Admin Dashboard.

3. **Enter the IP address of your web server.**
4. **Leave the rest of the default settings unchanged.**
5. **Click the Save button to save your changes.**

   The site now appears when you enter the mapped domain URL in your web browser's address bar.

With this plugin configured, you can map a domain to a site by choosing Network Admin➪Domains. (See Figure 6-6.) *Note:* You need to know the ID number of the site you want to map.



Primary ☑

Note: International Domain Names should be in punycode format.

Thank you for creating with WordPress.

You are using a development version (4.8-alpha-39663). Cool! Please stay updated.

FIGURE 6-6: The Domain Mapping: Domains page maps domains from a single location.

Mapping a Large Volume of Domains

For some enterprises, you may need to map a large volume of domains (10 or more) to the WordPress network. Adding each domain to the server with a `ServerAlias` directive is time-consuming. Also, as the list grows, the server slows while reading all the domains.

The time necessary to add these domains can be shortened considerably by using a wildcard host. To use a wildcard host, you need to access your website via a terminal or via Secure Shell (SSH) with the root user. The Secure Shell is available only on a virtual private server (VPS) or a dedicated host. The ideal situation for using a wildcard host is when the main installation of WordPress is the default domain on the server. A quick way to check whether your WordPress main installation domain is the default domain on your web server is to type your IP address in your browser's address bar. If your main WordPress site displays in your browser, you can proceed with using a wildcard host. If not, you need to obtain a dedicated IP address from your web hosting provider; contact your provider to set one up for you.

Configuring Apache

Adding a wildcard host to your web server requires that you access the Apache configuration files on your web server. This section assumes that you have access to those files; if not, ask your web hosting provider either to provide the access you need or to complete the steps for you to add the wildcard host to your account.

Here’s how you set this feature up:

1. **Log in to your website with the root user via a terminal.**
2. **Navigate to the configuration files in the folder located at `/etc/httpd/` by typing**

   ```
   cd /etc/httpd/
   ```

3. **Open the `httpd.conf` file by typing**

   ```
   vi httpd.conf
   ```

   Page down in the file until you see the vhost section. Find the vhost section that contains the information about your WordPress installation and the main domain of your network. (Depending on the number of domains hosted on your server, the `httpd.conf` file may contain several vhost entries; be sure that you’re editing the vhost that contains the main domain of your WordPress install.)

4. **Press the Insert key to begin editing the file.**
5. **Comment out the lines, and place the wildcard as follows:**

   ```
   <VirtualHost *:80>
   ```

6. **Save the changes by pressing the Esc key, typing** :wq**, and then pressing Enter.**
7. **On the command line, restart Apache by typing**

   ```
   /etc/init.d/apache restart
   ```

Now you can map domains in volume by following these steps:

1. **Log in to your domain name registrar.**
2. **Click the domain name management tools for the domain you want to map.**

3. **Click Total DNS records.**

4. **Locate the A records at the top of the page, and insert the IP address of your WordPress network.**

   (I show you how to obtain this address in “Obtaining your IP address” earlier in this chapter.)

   Figure 6-7 shows an A record and the web-server IP address it points to. The domain is sent to that IP address regardless of name server.

5. **Choose Network Admin➪Domains from your WordPress Dashboard.**

   The Domain Mapping: Domains page appears, as shown in Figure 6-7.

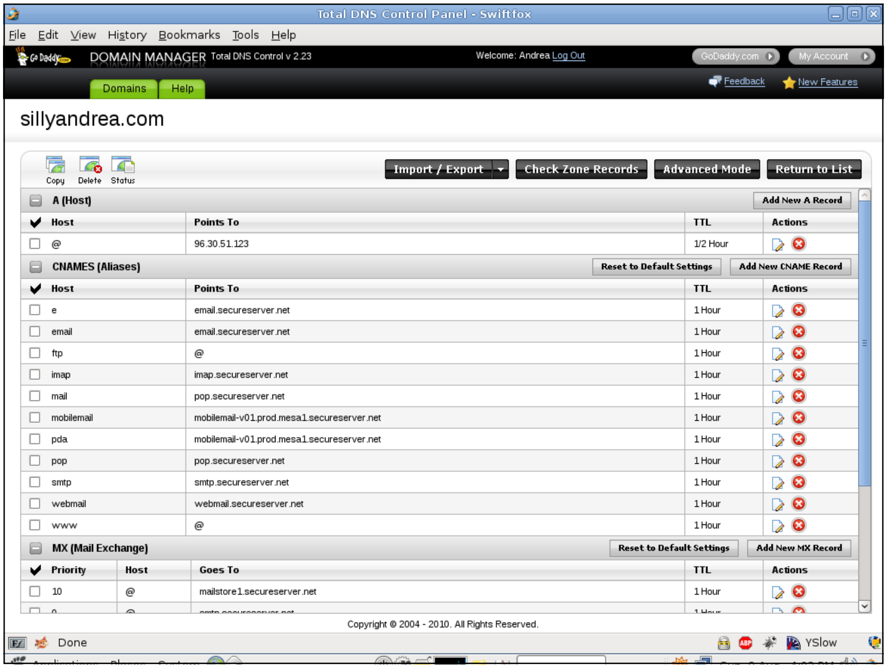
6. **Enter the ID of the site you want to map.**

   You can get the ID number from the Sites page (choose Super Admin➪Sites).

7. **Enter the domain name you want to map to this site.**

8. **Click Save.**

   The page refreshes and shows you a list of mapped domains.



sillyandrea.com

A (Host) — Add New A Record

✓	Host	Points To	TTL	Actions
□	@	96.30.51.123	1/2 Hour	✎ ✖

CNAMES (Aliases) — Reset to Default Settings — Add New CNAME Record

✓	Host	Points To	TTL	Actions
□	e	email.secureserver.net	1 Hour	✎ ✖
□	email	email.secureserver.net	1 Hour	✎ ✖
□	ftp	@	1 Hour	✎ ✖
□	imap	imap.secureserver.net	1 Hour	✎ ✖
□	mail	pop.secureserver.net	1 Hour	✎ ✖
□	mobilemail	mobilemail-v01.prod.mesa1.secureserver.net	1 Hour	✎ ✖
□	pda	mobilemail-v01.prod.mesa1.secureserver.net	1 Hour	✎ ✖
□	pop	pop.secureserver.net	1 Hour	✎ ✖
□	smtp	smtp.secureserver.net	1 Hour	✎ ✖
□	webmail	webmail.secureserver.net	1 Hour	✎ ✖
□	www	@	1 Hour	✎ ✖

MX (Mail Exchange) — Reset to Default Settings — Add New MX Record

✓	Priority	Host	Goes To	TTL	Actions
□	10	@	mailstore1.secureserver.net	1 Hour	✎ ✖
□	0	@	smtp.secureserver.net	1 Hour	✎ ✖

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FIGURE 6-7: Domain A records.

There is no longer any need to add or point domains at the web host. The server is instructed to take any domain name request and send it to the WordPress network. WordPress associates the mapped domain with the correct site.

Hiding the original installation domain

The domain mapping plugin, mentioned in "Installing the Domain Mapping Plugin" earlier in this chapter, lets you access the subsite by the original location regardless of whether it's a subdomain site or a subfolder site, so you can use domain mapping no matter which setup you chose for your network (subdomains or subdirectories). The domain mapped for the child site is also the domain used on all uploaded media files, which maintains consistency for the site.

In some cases, you may want to hide the original installation domain. If your main installation domain is an obscure-looking domain such as `http://00954-yourvpsdomain-ba.com`, for example, you want to hide that domain because your site visitors can't easily remember or use it. If you want to hide the original installation domain, here's how you can do so:

1. **Choose Network Admin➪Sites.**

   The Edit Site screen appears on your Network Admin Dashboard.

2. **Hover your pointer over the name of the site you want to edit and click the Edit link that appears, as shown in Figure 6-8.**

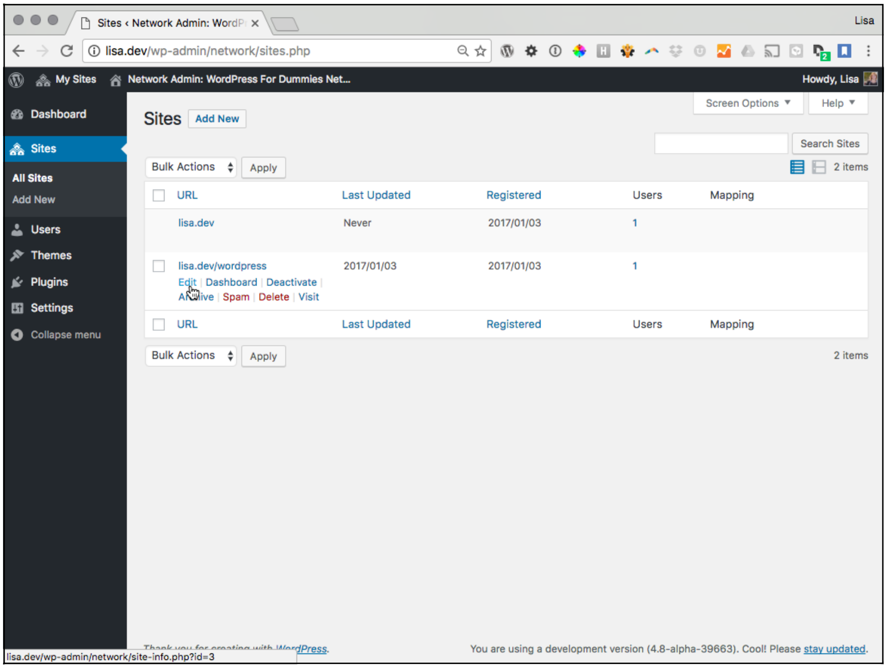
   The Edit Site page displays in your browser window.

3. **Find all instances of the original domain name, and change them to the new mapped domain.**

   Be sure to click each tab on the Edit Site page (Info, Users, Themes, and Settings) to change the original domain name to the new mapped domain wherever it appears on the Edit Site page. Keep any folder names intact.

4. **Save your changes by clicking the Save Changes button, as shown in Figure 6-9.**

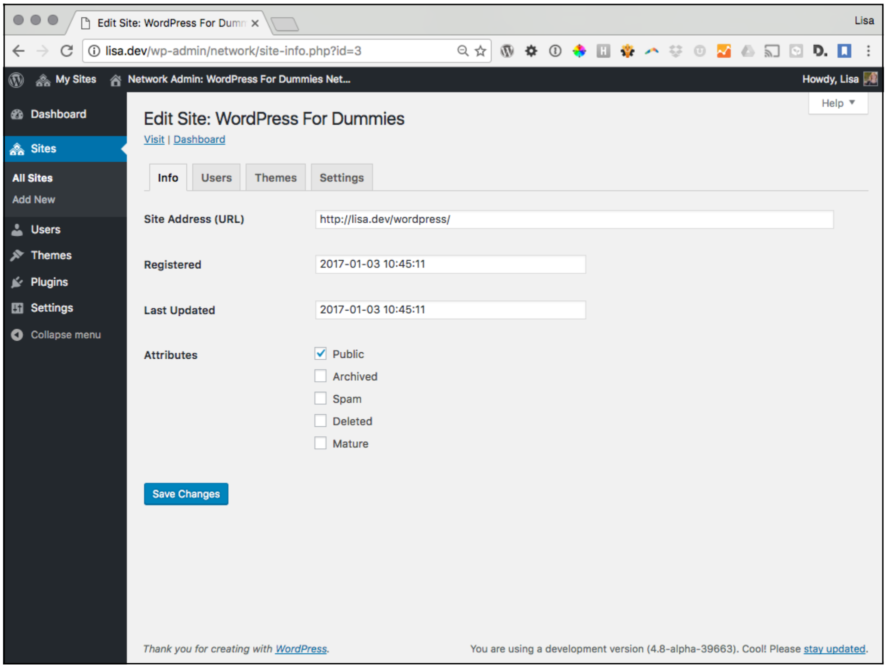
Your mapped site is now inaccessible at the original subsite name (the subdomain or subfolder), and any references to it have been changed. Previous links within the body of posts, however, aren't updated automatically, so you need to edit the posts manually to change the links to reflect your newly mapped domain.


Sites ‹ Network Admin: WordP
Lisa
lisa.dev/wp-admin/network/sites.php
My Sites
Network Admin: WordPress For Dummies Net...
Howdy, Lisa
Dashboard
Sites
All Sites
Add New
Users
Themes
Plugins
Settings
Collapse menu
Screen Options ▾
Help ▾
Sites
Add New
Search Sites
Bulk Actions
Apply
2 items

URL	Last Updated	Registered	Users	Mapping
lisa.dev	Never	2017/01/03	1	
lisa.dev/wordpress Edit | Dashboard | Deactivate | Archive | Spam | Delete | Visit	2017/01/03	2017/01/03	1	

Thank you for creating with WordPress.
You are using a development version (4.8-alpha-39663). Cool! Please stay updated.
lisa.dev/wp-admin/network/site-info.php?id=3

FIGURE 6-8: The Edit link for individual sites.


Edit Site: WordPress For Dumm
Lisa
lisa.dev/wp-admin/network/site-info.php?id=3
My Sites
Network Admin: WordPress For Dummies Net...
Howdy, Lisa
Dashboard
Sites
All Sites
Add New
Users
Themes
Plugins
Settings
Collapse menu
Help ▾
Edit Site: WordPress For Dummies
Visit | Dashboard
Info
Users
Themes
Settings

Site Address (URL) http://lisa.dev/wordpress/

Registered 2017-01-03 10:45:11

Last Updated 2017-01-03 10:45:11

Attributes
☑ Public
□ Archived
□ Spam
□ Deleted
□ Mature

Save Changes
Thank you for creating with WordPress.
You are using a development version (4.8-alpha-39663). Cool! Please stay updated.

FIGURE 6-9: The Edit Site page of the Network Admin Dashboard.

Setting Up Multiple Networks

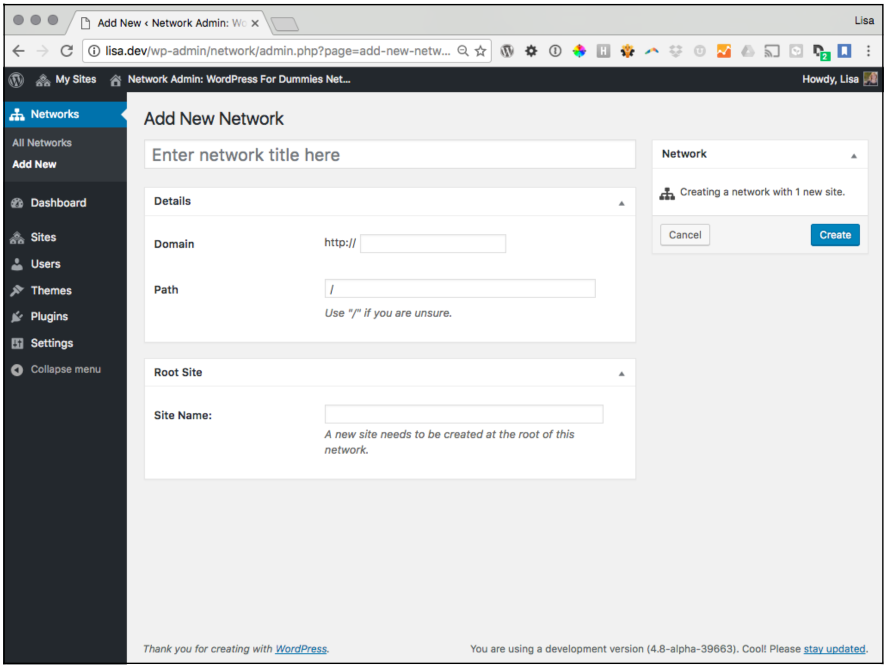
Multiple networks are supported in the WordPress code base, but WordPress has no built-in menu or interface for them on the Dashboard. Running multiple networks in one installation is an advanced feature that allows you to have another network in the same installation acting as a second independent network of sites. The new network can use its fully qualified domain name or a subdomain. The extra networks inherit the same type of sites. If you installed your original network by using subdomain sites, the extra network will also have subdomain sites. The network admin carries over to the new network, too. Additionally, you can add other network admins to the second network who will not have network admin access on the original network.

The plugin that helps you do all these things is WP Multi Network (available at `https://wordpress.org/plugins/wp-multi-network`). You install and manage the WP Multi Network plugin in a way that's similar to how you install and manage the Domain Mapping plugin. The domain for the new network still needs to be parked on the install, but the creation of the network is done on the Network options page after you install the WP Multi Network plugin. You can't take an existing site on the network and turn it into a second network; you must set up a new site when the new network is created.

To create a new network, fill in the fields of the Add New Network page in Figure 6-10:

- **Network title:** The name of the network you're creating (example: My New Network)
- **Domain:** The domain name you'll use for this new network (example: *mynewnetwork*`.com`)
- **Path:** The server path your new network will use (example: `/home/`*mynewnetwork*`/public_html/`)
- **Site Name:** The name of the site that will serve as the main site in this network (example: Network Main Site)

When you're done, click the Create Network button at the bottom of the Add New Network page. WordPress creates your new network, and you can assign child sites to it.



Add New ‹ Network Admin: Wo
Lisa
lisa.dev/wp-admin/network/admin.php?page=add-new-netw...
My Sites
Network Admin: WordPress For Dummies Net...
Howdy, Lisa
Networks
All Networks
Add New
Dashboard
Sites
Users
Themes
Plugins
Settings
Collapse menu
Cancel
Create

Add New Network

Enter network title here

Details

Domain http://

Path /

Use "/" if you are unsure.

Root Site

Site Name:

A new site needs to be created at the root of this network.

Network

Creating a network with 1 new site.

Thank you for creating with WordPress.

You are using a development version (4.8-alpha-39663). Cool! Please stay updated.

FIGURE 6-10: The Add New Network page in the Network Admin Dashboard.

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About the Author

Lisa Sabin-Wilson *(WordPress For Dummies*, *WordPress Web Design For Dummies)* has 14 years' experience working with the WordPress platform, having adopted it early in its first year of release in 2003. Lisa is the owner of a successful WordPress design and development agency, WebDevStudios (`http://webdevstudios.com`) and is a regular speaker on topics related to design and WordPress at several national conferences. Additionally, she hosts WordPress workshops around the country, teaching people how to use the WordPress platform to publish their own sites on the World Wide Web. You can find Lisa online on Twitter at `@LisaSabinWilson`.

Dedication

To WordPress . . . and all that entails from the developers, designers, forum helpers, bug testers, educators, consultants, plugin makers, and theme bakers.

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