7th Edition

MacBook®

For Dummies®

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Set up and configure your new MacBook

Use the latest macOS features and be productive with apps

Protect your files and essential maintenance tips

Mark L. Chambers

Bestselling author of all previous editions of *MacBook For Dummies*

MacBook

7th Edition

by Mark L. Chambers

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dummies®
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MacBook For Dummies®, 7th Edition

Contents at a Glance

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Introduction

Laptop owners are special people.

You see, a laptop owner demands everything from a computer that a desktop owner does: reliability, performance, expandability, and ease of use. Owners of Mac Pro, Mac mini, and iMac desktop computers can draw the line right there, because their computers are designed for a stationary existence. But you and I are laptop owners. We also need that same computer to be an inch thick (or less). We demand that it run for hours on a single battery charge. We require that it be light as a feather. We want to conquer the coffee shop, the library, and even a lecture hall or two!

Today's Apple laptops deliver all that and more. If you've bought one of these modern masterpieces — or you're thinking about it — I applaud your good taste, common sense, and discerning eye. Apple laptops have everything: super performance, a top-shelf LED screen, rugged reliability, and a trouble-free, powerful operating system. Heck, your Intel-based Apple laptop can even run — wait for it — Windows 10. (If you absolutely have to, the option is there.)

I wrote this book for myself — and for every other Apple laptop owner who wants to become a laptop techno-wizard. In these pages, you find a guide to both your laptop's hardware and macOS High Sierra, the latest version of Apple's superb operating system. After I cover the basics that every laptop owner should know, you find out how to accomplish all sorts of cutting-edge audio, visual, and Internet projects. (Oh, and if you already have another of my books, you know that I don't skimp on the power-user tips and tricks that save you time, effort, *and* money.)

Foolish Assumptions

So who is the target audience for this book? As in past editions, I make no assumptions about your previous knowledge of computers and software. I figure you've either just bought a MacBook or you're considering buying one. Perhaps you've found a bargain on a gently used older MacBook, and you need guidance as you learn the ropes. Those are the *only* assumptions I make. And unlike other books

that require a lot of technical expertise to understand, this book's only requirement is your desire to become a Mac laptop *power user* (someone who produces the best work in the least amount of time and has the most fun doing it)!

TIP

By the way, if your friends and family predicted that you'll spend half your life savings on software — or that no "decent" software is available for Mac computers — just smile quietly to yourself! The MacBook comes complete with more productivity software than any Windows box, and they're better than anything available on a PC!

REMEMBER

This book was written using one of the latest Intel quad-core MacBook models – because of changing hardware, owners of older Mac laptops might not be able to follow along with every feature I cover. However, if you've upgraded an older MacBook to macOS High Sierra, you should be able to use most of this book with no problem.

About This Book

In writing about the MacBook, I've kept one precept firmly in mind: macOS High Sierra, the operating system you'll run, is just as important as the laptop itself. Therefore, you'll find that *MacBook For Dummies* is just as much about familiarizing you with all the software you get as it is with introducing you to hardware features like the Touch Bar, the keyboard, and the trackpad. After all, it's relatively easy to connect a power cable and turn on *any* new computer. What comes next is the challenging part!

As in my other *For Dummies* titles, I respect and use the same everyday language you do, avoiding jargon, ridiculous computer acronyms, and confusing technobabble whenever possible.

If you're upgrading from a PC running the Windows operating system, I've got tips, tricks, and entire sections devoted to those hardy pioneers called *Switchers.* You discover both the similarities and differences between your MacBook running High Sierra and a PC running Windows. I also show you how to make the switch as easily and quickly as possible.

A word about the conventions I use: Even with an absolute minimum of technospeak, this book needs to cover the keys you have to press or menu commands you have to choose to make things work. Therefore, please keep in mind this short list of conventions as you read:

>> **Stuff you type:** If I ask you to type (or enter) something, such as in a text box or field, that text appears in bold, like this:

> **Type me.**

You usually have to press Return before anything happens.

>> **Menu commands:** I list menu paths and commands using another format. For example, this instruction indicates that you should click the Edit menu and then choose the Copy menu item:

> Edit ➪ Copy

>> **Web addresses:** No up-to-date book on a computer would be complete without a bag full of web addresses for you to check out. When you see these in the text, they look like this: `www.m1cbooks.com`. (By the way, that website does exist. You're always welcome to check out my little acre of Internet space!)

>> **For the technically curious:** Your MacBook is an elegant and sophisticated machine, and as easy to use as a computer can be. But from time to time, you may be curious about the technical details that surround your hardware and software. (Perhaps you disassembled alarm clocks as a kid, like I did.) Techie stuff is denoted with a margin icon, as discussed in the next section. You don't have to read the technical notes unless you want to know what makes things tick. (Pun by sheer accident.)

Icons Used in This Book

Like other technology authors, I firmly believe that important nuggets of wisdom should *stand out on the page!* With that in mind, this *For Dummies* book includes a number of margin icons for certain situations:

This is the most popular icon in the book. You find it parked next to suggestions I make to save you time and effort (and even cash!).

You don't have to know this information, but the technologically curious love high-tech details. (Of course, we're great fun at parties, too.)

Always **read this information before you take action!** I'm discussing something that could actually harm your hardware or throw a plumber's helper into your software.

REMEMBER

Consider these nuggets to be highlighter stuff — not quite as universally accepted (or as important to the author) as a Mark's Maxim (described next), but good reminders nonetheless. I use this icon to reinforce what you should remember.

MARK'S MAXIMS

These gold-plated, cream-of-the-crop truisms are *MFR*s (short for My Favorite Recommendations). In fact, I'll bet just about any MacBook power user would tell you the same. Follow my Maxims to avoid the quicksand and pitfalls I've encountered with all sorts of Macs for three decades.™

Beyond the Book

Thanks to my hard-working good friends at Wiley, a ton of extra content accompanies this book. Fire up your Safari browser, go to `www.dummies.com`, and search for **MacBook For Dummies** to find the following:

» **Cheat Sheet:** I've created a number of Cheat Sheet pages that cover things like common keystrokes and maintenance procedures that every MacBook owner should follow on a regular basis.

» **Bonus chapters:** If you're dying to find out how to share data among wireless devices via Bluetooth technology, check out the handy Bluetooth bonus chapter at `www.dummies.com` or at my website (`www.mlcbooks.com`).

» **Updates to this book, if we have any.**

Where to Go from Here

Each chapter is a reference for a specific hardware or software topic. As fruit of the hard work of my editors, you can begin reading anywhere you like, because each chapter is self-contained. However, if you want to get the most out of this tome (and your MacBook experience), there's nothing wrong with reading this book from front to back. I warn you, however, that J. K. Rowling and Stephen King have nothing to fear from my no-frills prose!

Time for the first Mark's Maxim in this book:

MARK'S MAXIMS

Take your time. After all, learning how to use your MacBook isn't a race. And don't worry if you're not a graphic artist, professional photographer, or video editor. With your Mac laptop and its software, you don't have to be!™

1

Tie Myself Down with a Desktop? Preposterous!

Tour the features of your MacBook and macOS High Sierra.

Compare the different MacBook models.

Unpack and set up your MacBook.

Maintain your laptop's battery *the right way*.

Familiarize yourself with the basics of macOS.

IN THIS CHAPTER

» **Identifying the important parts of your Mac laptop**

» **Comparing the different MacBook models**

» **Finding the best location for your computer**

» **Unpacking, plugging in stuff, and getting hooked up**

» **Playing with your bundled software**

» **Buying additional stuff you might need**

Chapter **1**

Hey, It Really Does Have Everything I Need

Most action films have one scene in common: I call it "gearing up," because the good guys strap on their equipment in preparation for battle. (The era doesn't matter: You see "gearing up" scenes in *Gladiator*, *Aliens*, and virtually every movie Arnold has made.) You're sure to see lots of clicking straps and equipping of offensive weapons (and sometimes even a dash of war paint). The process usually takes a minute or so, all told with whiplash camera work and stirring martial music in the background.

Well, fellow Mac road warrior, it takes only *two seconds* and *one move* — closing the lid — for you to gear up. That's because your MacBook is a self-contained world, providing virtually all the essentials you'll find on a desktop iMac or Mac mini. This is indeed the second "decade of the laptop," meshing nicely with your smartphone and that wireless connection at your local coffee shop. You have selected the right companion for the open road.

Unlike Apple's other designs, such as the Mac mini, the Mac Pro and the iMac, your MacBook looks like a PC laptop running Windows. (In fact, an Intel-based Mac laptop can run Windows if you absolutely must.) But your laptop holds a number of pleasant surprises that no PC laptop or tablet can offer — and, with the MacBook, MacBook Air, and MacBook Pro, you'll lose pounds and inches from your chassis! In this chapter, I introduce you to the hardware and all the major parts of the machine. You even find out how to unpack and connect your computer. And, as frosting on the cake, I preview the software of which Apple is so proud, as well as the accessories you should buy now rather than later.

Welcome to your Mac laptop, good reader. Gear up!

An Overview of Your Mac Laptop

Sure, your MacBook Pro might be about half an inch thin (a MacBook is even more svelte than that — I get to that later in the chapter), but a lot of superb design lives inside. You encounter the same parts you'd find in a desktop machine. In the following sections, I discuss those important parts — both the stuff you can see and the stuff shoehorned within.

The parts you probably recognize

Every laptop requires some of the same gizmos. Figure 1-1 helps you track them down. Of course, as you'd expect, a computer has a body of sorts in which all the innards and brains are stored, a display screen, a keyboard, a trackpad or other pointing device, and ports for powering and exchanging data with outside toys.

That magnificent screen

What a view you have! Today's Mac laptops feature a 12-, 13-, or 15-inch LED display. LED screens use far less electricity than their antique CRT ancestors, and they emit practically no radiation.

FEELING OUTDATED? NEVER!

Are you using an older MacBook? It seems that Apple's product line changes every time you tear a page from your 12-month calendar. In addition, every new generation of laptops includes new whiz-bang features. Sometimes you can add those features separately to your older machine, such as an external video camera, but you can't update some things, such as your MacBook's motherboard. Sigh.

Here's my take on this situation: If your older laptop does what you need at a pace you can accept, *there's no need to upgrade it.*

Skeptical? Here's the proof: Before my upgrade to a MacBook Air, yours truly was lugging around a pristine iBook G3, which booted macOS Tiger and did absolutely everything I demanded. (A little more patience was required, certainly, but technology authors are simply *brimming* with patience.) The moral: Avoid upgrade fever unless you really **need** a new companion.

If you're the proud owner of an older MacBook, as long as it can run macOSmacOS High Sierra you can still enjoy this book and discover new tips and tricks from it. Unless the current breed of Intel-based Mac laptops has a feature you absolutely can't use on your mature MacBook (such as Thunderbolt 3 support), you can sail on with your current computer, fiercely proud of The Bitten Apple that appears on the cover. (In fact, older MacBooks have features that no longer appear on some current models, such as Firewire ports, optical drives, and built-in Ethernet ports.) Although this book was written with the current MacBook, MacBook Pro, and MacBook Air lines in mind, virtually everything you read here still applies to your older laptop. Unless it's steam-powered, of course.

Apple's laptop screens offer a *widescreen* aspect ratio (the screen is considerably wider than it is tall), which augurs well for those who enjoy watching movies. (A favorite editor of mine loves it when I use the antique word *augur,* meaning *to predict or foretell.*)

TIP

That reminds me: Throw away your printed dictionary! You won't need it, because macOS High Sierra includes the fantastic Dictionary widget. It uses the Internet to retrieve definitions from the online Oxford American Dictionary site (and, yes, it does contain *augur*). More on widgets in general in Chapter 3.

FaceTime HD camera

LED screen
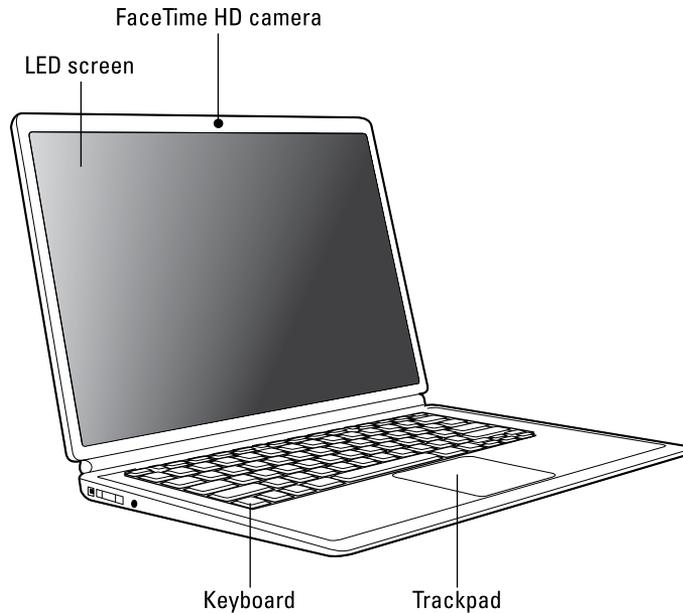
FIGURE 1-1:
The charismatic
form of a typical
Mac laptop.

Keyboard   Trackpad

The keyboard and trackpad

Hey, here's something novel for your laptop. Unlike the external input devices on a standard desktop computer, your MacBook has a built-in keyboard and trackpad (which does the job of a mouse). The illuminated keyboard is a particular favorite of mine, offering special keys for activing all sorts of features within macOS High Sierra (as well as keys for adjusting brightness and volume).

The latest crop of Mac laptops feature a great trackpad design as well. The Force Touch trackpad can sense the amount of pressure you apply with your fingers, activating features in macOS High Sierra that used to require a right-click (like displaying the definition of a word in a Pages document, or displaying a map of an address in Contacts). The Force Touch trackpad can even provide tactile feedback to your fingertips while you're using some applications!

REMEMBER

The MacBook, MacBook Air, and the MacBook Pro do not have an internal optical drive (more on all three models later in this chapter). You can use the CD & DVD Sharing feature in High Sierra to read discs remotely (from another Mac or PC on your network), or you can pick up an external optical drive from Apple for about $80. (Such is the price you pay for super-thin and super-light.)

Food for your ears

A machine this nice had better have great sound, and the Mac doesn't disappoint. You have a couple of options for Mac laptop audio:

>> All Mac laptops sport built-in stereo speakers and two microphones to boot (the 13-inch MacBook Pro with Touch Bar even has three microphones).

>> Use the built-in headphone jack to connect your Mac's audio to a pair of headphones, a more powerful (and expensive) external speaker system, or a home stereo system. (There are also portable USB and Bluetooth speaker systems that can provide better-quality audio.)

The power cable

Sorry, you can't get a wireless power system — yet. (Apple's working hard on this one.) However, the MacBook Pro was the first major release of a laptop with a magnetic power connector; the MacBook Air followed suit soon after. The MagSafe 2 connector on the MacBook Air reduces the chances of your pride and joy being yanked off a desk when someone trips over the power cord, because the magnetic closure pops off under significant strain. Now that's *sassy.*

When you connect your power cable, an amber light on the cable connector indicates that your battery is charging; a green light indicates that the battery is fully charged.

The MacBook Pro and MacBook use a different connector, called a USB-C, as a power cable. The USB-C cable also does double-duty as a port for Thunderbolt and USB-C compatible devices.

REMEMBER

Many MacBook owners ask me whether they should disconnect the power after the battery is fully charged or leave it connected. I leave the cable connected. It won't cause any damage to your MacBook, and you can continue to use your laptop while it's charging. (Oh, and road warriors prefer a laptop battery that's always topped off when it's time to go mobile!)

The power button

The latest MacBook Pro with Touch Bar actually turns on whenever you open it – to turn this model off, you press and hold the Touch ID button at the far right side of the Touch Bar.

Owners of the MacBook and MacBook Air, you still have a power button. It's at the upper-right corner of the keyboard, bearing the familiar "circle with a vertical line" logo.

The FaceTime HD camera

Check out that tiny square lens above your screen. That's a built-in FaceTime HD camera, which allows you to chat with others in a videoconferencing environment by using the Messages and FaceTime applications that come with High Sierra.

You can even take photos with the camera, using the Photo Booth software that comes with your laptop, or set up a travelin' webcam. (If you need a higher-resolution camera — or one that can be easily turned or tilted — check out the discussion of a favorite of mine later in this chapter.)

Note that a green light appears next to the lens when the camera is on — handy information that could prevent visual embarrassment! As my Technical Editor points out, you can also cover the lens for guaranteed privacy. (Some companies even offer plastic clips especially designed for covering the lens.)

The battery

All of Apple's current laptop computers do not include user-replaceable batteries. The battery is sealed inside the case and can be replaced only by an Apple technician. However, you should get several years of trouble-free operation from your MacBook's battery.

The holes called ports

The next stop on your tour of Planet Laptop is Port Central — those rows of holes on the sides of your computer. Each port connects a different type of cable or device, allowing you to easily add all sorts of functionality to your computer.

Each of these stellar holes has an icon to help you identify it. Here's a list of what you'll find and a quick rundown of what these ports do.

The following connections are used for external devices and networking:

» **Thunderbolt/Thunderbolt 2/Thunderbolt 3 port:** The Thunderbolt port (and its faster descendents, Thunderbolt 2 and Thunderbolt 3) is the expansion racehorse of today's MacBooks. It offers the fastest data transfer rates and the ability to add all sorts of peripherals, from external hard drives to monitors to wired Ethernet connections. (A *peripheral* is another silly techno-nerd term that means a separate device you connect to your computer.) Thunderbolt 3 devices are somewhat more expensive than their Thunderbolt 2 and USB cousins, but prices are dropping as more Thunderbolt 3 peripherals arrive on the market.

Although Thunderbolt-compatible monitors are available, they're significantly more expensive than a standard display. Luckily, you can also buy an adapter for this port that allows you to send the video signal from your laptop to another VGA, DVI, or HDMI monitor.

» **USB port(s):** Short for *universal serial bus,* the familiar USB port is the jack-of-all-trades in today's world of computer add-ons. Most external devices you

want to connect to your laptop (such as portable hard drives, scanners, and digital cameras) use a USB port, including the iPod. (Today's PCs also include USB ports, allowing you to share external USB peripherals like optical drives and scanners between your MacBook and your desktop PC.) USB 3.0 connections are much faster than the old USB 2.0 standard, but they still accept USB 2.0 devices running at the slower speed.

Get the lowdown on Thunderbolt, Thunderbolt 2 and 3, and USB ports in Chapter 21.

The MacBook and the MacBook Pro with Touch Bar use a unique USB-C port that allows you to charge the laptop, connect a Thunderbolt 3 or USB 3.0 device, or connect an external monitor or projector — all from one port! However, to make the USB 3.0 connection you'll need a USB-C to USB adapter (about $20), and a USB-C AV Multiport adapter (about $70) to connect an external display.

- **Ethernet port:** Older MacBook Pro laptops include a standard gigabit (10/100/1000) Ethernet port, so the laptop is ready to join your existing wired Ethernet network. (Alternatively, you can go wireless for your network connection; more on that in the next section and in Chapter 12.) Because today's MacBook, MacBook Air, and MacBook Pro are designed to be completely wireless, they don't have a built-in wired Ethernet port. If a wired connection is a necessity, you can add a Thunderbolt-to-Gigabit-Ethernet (or USB-to-Gigabit Ethernet) adapter to add a wired network port to your laptop. (Apple sells one for about $35.) Or you can invest in a laptop dock with a wired Ethernet port (which I discuss at the end of this chapter).

- **SD/SDXC card slot:** The MacBook Air includes an SD (Secure Digital) or SDXC (Secure Digital Extended Capacity) card slot, allowing you to plug SD or SDXC memory cards from digital cameras, cellphones, and portable devices directly into your laptop.

- **Headphone/optical output port:** Last (but certainly not least), you can send the high-quality audio from your rectangular beast to a set of standard headphones or an optical digital audio device such as a high-end home theater system.

Don't forget the parts you can't see

When you bought your new digital pride and joy, you probably noticed a number of subtle differences between the MacBook, MacBook Air and the pricier MacBook Pro models. I call these differences the *Important Hidden Stuff* (or IHS, if you're addicted to acronyms). They're just as important as the parts and ports you can see.

Internal storage devices are as follows:

>> **CPU:** Today's Mac laptops feature the latest Intel Core i5 and i7 processors. Of course, the faster the processor, the better. (Definitely *not* rocket science.)

>> **Storage:** Today's MacBook models are equipped with solid-state drives that use memory chips. The drive capacities are different across the entire MacBook product line.

Solid-state drives have a number of advantages over traditional magnetic hard drives: You'll find no moving parts in a solid-state drive, and it offers better performance than a standard hard drive. Think of the solid-state drive as an internal USB flash drive that uses RAM chips rather than magnetic platters to hold your data.

Wireless communications devices include the following:

>> **Wireless Ethernet:** "Look, Ma, no wires!" As mentioned earlier, you can connect your laptop to an existing wireless Ethernet network. All current Mac laptops have built-in AirPort Extreme hardware. With wireless connectivity, you can share documents with another computer in another room, share a single high-speed Internet connection between several computers, or enjoy wireless printing. Truly *sassy!*

Although Apple would want you to build your wireless wonderland with an Apple AirPort Extreme Base Station or an AirPort Time Capsule unit — go figure — you can use your Mac with any standard 802.11b/g/n/ac wireless network. And, yes, PCs and Macs can intermingle on the same wireless network without a hitch. (Scandalous, ain't it?)

>> **Bluetooth:** Let's get the old "digital pirate" joke out of the way: "Arrgh, matey, I needs me a wireless parrot." (Engineers again . . . sheesh.) Although strangely named, Bluetooth is another form of wireless connectivity. This time, however, the standard was designed for accessories such as your keyboard and mouse and devices like wireless headphones and your smartphone. (The latest Macs support version 4.2 Bluetooth hardware.)

Here's the hidden display device:

>> **Video card:** The standard Intel video hardware that's built in to today's MacBooks is fine for typical home and business laptop applications. However, if your applications rely heavily on high-speed 3D graphics or digital video, you'll be pleased as punch to discover that today's 15-inch MacBook Pro model can be ordered with the muscle-bound AMD Radeon Pro 560. This card is well suited to high-end mobile 3D modeling, video editing on the road, and, well, honestly, blasting the latest video game enemies into small smoking pieces with aplomb.

Meet the MacBooks

So far in this chapter, I've discussed the common hardware shared by today's MacBook models. Now it's time to compare the MacBook, MacBook Air, and MacBook Pro with an eye toward selecting the right one for you. (Unless you decide to pick up one of each. Certainly an elegant choice, but not everyone has that option!)

For example, consider the least expensive MacBook: The MacBook Air, shown in Figure 1-2, is unique for both its size and weight. And yet the Air is just like the MacBook and MacBook Pro. Well, mostly.

FIGURE 1-2:
Behold the MacBook Air.

"Hold on, Mark. How can it be so singular and yet share so much with its road warrior siblings?" I answer that question in the following sections, which discuss the many similarities and the handful of striking differences between the three laptop models in the MacBook line. If you're considering buying an Apple laptop, these sections can help you decide whether you'd like to go ultra-thin or stick with the more traditional (and slightly thicker) laptop crowd.

One thing's for sure: Apple *never* creates a mundane design!

Comparing the MacBooks

Do you remember when Apple introduced the first iMacs? Although they shared the same basic components as any computer — a monitor, keyboard, ports, speakers, and cables — the iMac was revolutionary because it was completely self-contained. And it came in colors. And it didn't have a floppy drive. In fact, Apple had redesigned the common computer with the focus on *style* and *ease of use* and had scrapped the floppy drive (and rightly so, seeing as how floppies had become practically useless and were unreliable to boot).

I consider the MacBook, MacBook Air, and the MacBook Pro to be extensions of the iMac revolution. With these designs, Apple has focused this time on *physical dimensions* and *weight* and has tossed out anything that isn't absolutely necessary for the lecture hall, boardroom, or city park. However, I'm happy to note that

these ultra-light MacBooks are neither toys nor bare-bones netbooks. In fact, both the MacBook and the MacBook Air share some of the features of the high-end MacBook Pro.

What are the similarities?

Consider the similarities between the different models:

- » **Widescreen display:** Each model sports a widescreen LED backlit display. The MacBook sports a 12-inch display, the MacBook Air offers a 13-inch display, and the MacBook Pro is the star of the show, with the highest resolution available on any Apple laptop. (It's available in a 13-inch or 15-inch display.)

- » **Intel processor power:** All three models can be ordered from Apple with Core i5 or i7 power, while the MacBook also offers a lower-cost Intel Core m3 processor option.

- » **Keyboard and trackpad:** All three MacBook models offer a backlit keyboard. The MacBook and MacBook Pro offer the Force Touch trackpad, while the MacBook Air features the older Multi-Touch trackpad. The new Touch Bar available on the MacBook Pro offers a number of nifty features within your favorite applications. (Read more about Multi-Touch and the Touch Bar in Chapter 3.)

- » **High Sierra:** All current laptops from Apple naturally run the latest version of macOS with aplomb.

- » **FaceTime:** Every MacBook is video ready, using a built-in FaceTime camera. You can record audio with the built-in microphones as well.

- » **Sealed battery:** You can't swap batteries with any of Apple's current MacBook line, because the battery is sealed inside. (Think iPad and iPhone.)

- » **Wireless support:** The MacBook, MacBook Air, and MacBook Pro each have built in the latest AirPort Extreme hardware (802.11ac). All three models feature built-in Bluetooth hardware. (Read more about AirPort Extreme in Chapter 11.)

I think most Apple laptop owners would agree that these major MacBook features show there's no underpowered pushover in the lineup!

So what's so flippin' radical?

I'm glad you asked! Here's the checklist of striking differences that set the MacBook and MacBook Air apart from the MacBook Pro:

- » **Physical dimensions:** You need a thin laptop? You've come to the right place! The current Air laptop measures a mere 0.68 inches in height (at its tallest

point) when closed. (If you think that's mind-blowing, the MacBook is even thinner, measuring just 0.52 inches in height when closed!) Oh, and hold on to your chair for this one: The MacBook is also the lightweight champ at 2.03 pounds! (That's a couple of pounds you won't be carrying around all day at that convention expo. Take it from this traveler: You *will* feel the refreshing difference in just an hour or two.) By comparison, the 13-inch MacBook Pro weighs 3.02 pounds, and the 15-inch MacBook Pro is a (comparatively) hefty 4.02 pounds.

>> **Cost:** At the time of this writing, an entry-level 13-inch MacBook Air will set you back $999. The 12-inch MacBook is slightly more expensive at $1299. By comparison, the 13-inch MacBook Pro is $1499, while the 15-inch MacBook Pro model starts pricier at $2399.

>> **Ports:** As I mentioned earlier in this chapter, the MacBook offers only two ports, the USB-C (which requires adapters for use as a USB 3.0 and external video port) and a headphone jack. The MacBook Air offers two conventional USB 3.0 ports, a headphone jack, a SDXC card slot, and a Thunderbolt 2 port for connecting an external monitor or high-speed drive. The MacBook Pro includes either two or four USB-C/Thunderbolt 3 ports and a headphone jack.

As I mentioned earlier, all current MacBooks lack a wired Ethernet port. The latter two models can use a Thunderbolt-to-Gigabit Ethernet adapter from Apple, while the MacBook will require a USB-C to Gigabit Ethernet adapter. (Rats.)

>> **Sealed case:** You can't add or replace RAM modules on the MacBook, MacBook Air, or the MacBook Pro. If you haven't ordered your laptop yet, it's a *very* good idea to configure your MacBook with the maximum RAM it can carry, because you won't be able to add more in the future.

>> **No built-in optical drive:** *Whoa, Nellie!* This difference is a big one, and it applies to all current MacBook models. Apple decided that owners of these slimmer, trimmer laptops are likely to use a wireless connection for transferring files and media. But what if you have to reinstall applications available only on disc? If you need to read or burn discs, you can buy a separate external USB SuperDrive for about $80, or you can use the Remote Disc feature and share the drive on another computer. (More on Remote Disc in the later section "Sharing a CD or DVD drive.")

As you can see, these striking differences make the choice between a MacBook, MacBook Air, and a MacBook Pro easy indeed. To wit:

>> The MacBook and MacBook Air models are designed for the traveler who appreciates minimum weight and size. These folks see a laptop as a race car: nimble, with reduced weight and no unnecessary frills. (Think of a typical NASCAR entry: Who needs an expensive stereo or air conditioning?)

>> The MacBook Pro is all about the brilliant Retina display, of course, and it's considerably faster than either the MacBook or the MacBook Air. The MacBook Pro appeals to presenters, graphics professionals, and video editors, who appreciate the higher-resolution display and the better performance.

Look, Ma, no moving parts!

You're probably familiar with the common species of *usbius flashimus*, more commonly called the USB Flash drive. With one of these tiny devices, you get the equivalent of a 4–512GB hard drive that plugs into a USB 2.0 or 3.0 port, allowing you to carry your data with you as you jet across the continents. But have you ever asked yourself, "Self, why don't they make internal drives that use this same technology?"

Actually, dear reader, solid-state drives have been around for a number of years (think iPod shuffle and iPod nano). Unfortunately, however, the solid-state memory used in today's flash drives gets pretty expensive as capacity increases. In fact, cost has been the limiting factor, because a solid-state drive offers a number of advantages that set it apart from a conventional magnetic hard drive:

>> **No moving parts:** Unlike a typical magnetic hard drive, you find no read-write heads and no magnetic platter — just gobs of happy silicon memory chips. In effect, a solid-state drive works along the same lines as your MacBook's system RAM. Unlike your Mac's RAM, though, a solid-state drive doesn't lose the data it stores when you turn off your laptop. As you can imagine, no moving parts on a computer in motion is superior on two levels:

- The solid-state drive never wears out or needs replacing.

- If your laptop is accidentally abused (gets knocked off your desk), it's far less likely that you'll lose a hard drive's worth of priceless data when it hits the ground.

>> **Speed:** Oh my goodness, is this thing fast! Your MacBook will boot, restart, or awaken in far less time, and everything you do on your laptop will benefit from the speed boost. A solid-state drive can read data far faster than a conventional magnetic hard drive.

>> **Power usage:** Forget your hard drive spinning up from sleep mode. The solid-state drive uses far less power than a conventional hard drive, resulting in significantly longer battery life.

>> **Blessed silence:** The solid-state drive is completely silent. (No more of that gargling noise while the disk is accessed. *Sweet.*)

What if I need that pesky optical drive?

Can a laptop survive in the jungle that is Real Life without a DVD drive? The terse answer is *no.* I'll be honest: Ripping an audio CD or watching a DVD movie without an optical drive is impossible. (Rather like a cheap sports car.) And the wonders of digital media are a big part of the iWorld. So what was Apple thinking?

First, a bit of explanation. Today's DVD drives are thin, but not MacBook thin. To create these stunning designs with truly revolutionary dimensions, Apple engineers had to leave out the drive. However, if you own a current Mac laptop, you have two choices when it comes to reading the contents of a CD or DVD: Go external, or find out how to share.

The external USB route

I have no problem toting around an external USB DVD burner with a MacBook Air. Heck, half the time you're likely to leave it at home, because you don't install software every day. The folks at Cupertino want you to download your movies from the iTunes Store and your software from the App Store, so if you follow the Apple Path, you still don't need an optical drive!

A USB SuperDrive from Apple costs a mere $80, and it can read and write DVDs as well as any built-in drive.

You can also use any third-party USB DVD drive that's compatible with Apple's laptops and macOS High Sierra.

Sharing a CD or DVD drive

The other option for installing software or reading a DVD on your MacBook is the CD/DVD Sharing feature within High Sierra. Sharing is an option if you have a wired or wireless network (see Chapter 11) with at least one of the following computers available:

>> A Mac running OS X Tiger or later

>> A PC running Windows 7 through Windows 10 (and a Windows application supplied by Apple with your MacBook)

WARNING

You can *only read from a shared optical drive.* You can't write data to the remote drive, even if that drive is a DVD recorder.

On the Mac computer with the optical drive, open System Preferences, click the Sharing icon, and select the DVD or CD Sharing check box. Note that you can set whether the Mac will request your permission when another computer attempts to share the drive.

On a PC, display the Control Panel, click the DVD or CD Sharing icon, and then select the Enable DVD or CD Sharing check box. Again, you can specify that permission is required if security is a concern.

After you set up the shared drive, just load the disc and select the Remote Disc item in any Finder sidebar. (Remote Disc appears under the Devices heading in the sidebar.) Now you can access the drive as if it were directly connected to your MacBook, MacBook Air, or MacBook Pro. Ah, technology!

Location, Location, Location!

If you choose the wrong spot to park your new laptop, I *guarantee* you'll regret it. Some domiciles and office cubicles don't offer a choice. You have one desk at work, for example, and nobody will hand over another one. But if you can select a home for your MacBook, consider the important placement points in this section:

» **Keep things cool.** Your new laptop is silent, but that super-fast Intel processor generates heat. Make sure that the location you choose is far from heating vents and shielded from direct sunlight. I also recommend a laptop cooling pad, which elevates the base of your laptop to allow air to circulate underneath (some are even equipped with their own fans). Although you can stow your MacBook in the close confines of a bag or backpack while it's in Sleep mode, avoid putting that laptop away while it's hot! Let your MacBook Pro cool off first.

» **Outlets are key!** Your computer needs at least one nearby outlet, and perhaps as many as two:

- A standard AC outlet (using a current adapter if you're traveling abroad, if necessary)

- A nearby Ethernet jack (if you use a built-in Ethernet port for connecting to a wired Ethernet network, or an Ethernet adapter)

  If you prefer to send your data over the airwaves, consider wireless networking for your Mac. I discuss everything you need to know in Chapter 11.

» **Don't forget the lighting.** Let me act as your mom. (I know that's a stretch, but bear with me.) She'd say, "You can't possibly expect to work without decent lighting! You'll go blind!" She's right, you know. You need a desk lamp or floor lamp at a minimum if you need to refer to books or documents often in your work.

» **Plan to expand.** If your laptop hangs out on a desk, allow an additional foot of space on each side. That way, you have room for external peripherals, more powerful speakers, and an external keyboard and mouse if you need one.

If you want to keep an external keyboard handy, consider using a laptop shelf. These Plexiglas or metal stands elevate your laptop several inches above the desk, putting the screen at a better ergonomic position and allowing you to park your keyboard and external mouse underneath.

Unpacking and Connecting Your Laptop

You'll love the following sections. They're short and sweet because configuring a laptop on your desktop is a piece of cake. (Sorry about the cliché overload, but this really *is* easy.)

Unpacking for the road warrior

Follow these guidelines when unpacking your system:

» **Check for damage.** I've never had a box arrive from Apple with shipping damage, but I've heard horror stories from others (who claim that King Kong must have been working for That Shipping Company).

Check all sides of the box before you open it. If you find significant damage, take a photograph (just in case).

» **Search for all the parts.** When you're removing those chunks o' foam, make certain that you've checked all sides of each foam block for parts snuggled therein or taped for shipment.

» **Keep all packing materials.** Do *not* put the box and packing materials in the trash. Keep the box and all packing materials for at least a year, until the standard Apple warranty runs out. If you have to ship your laptop to an Apple service center, the box and the original packing are the only way for your machine to fly.

And now, a dramatic Mark's Maxim about cardboard containers:

Smart computer owners keep their boxes far longer than a year. If you sell your laptop or move across the country, for example, you'll want that box. *Trust me on this one.*™

» **Store the invoice for safekeeping.** Your invoice is a valuable piece of paper.

Save your original invoice in a plastic bag, along with your computer's manuals, original software, and other assorted hoo-hah. Keep the bag on a shelf or stored safely in your desk, and enjoy a little peace of mind.

» **Read the Mac's manual.** "Hey, wait a minute, Mark. Why do I have to read the manual from Apple along with this tome?" Good question, and here's the answer: The documentation from Apple might contain new and updated instructions that override what I tell you here. (For example, "*Never* cut the red wire. Cut the blue wire instead." Or something to that effect.) Besides, Apple manuals are rarely thicker than a restaurant menu.

You can always download the latest updated manuals for Apple computers in electronic format from Apple's website. (Adobe's PDF format is the standard for reading documents on your computer. You can open and display any PDF document in High Sierra by using the Preview application or the Quick Look feature.) I always keep a copy of the PDF manual for my MacBook Air on my drive, just in case.

Connecting Cables 101

Your laptop makes all its connections simple, but your computer depends on you to get the outside wires and thingamabobs where they go.

The absolutely essential connection

After your new Mac is resting comfortably in its assigned spot (I assume that's a desktop), you need to make just one required connection: the power cable. First plug the cable into the corresponding MagSafe 2 or USB-C port on the MacBook, and then plug 'er into that handy AC outlet. After your battery is completely charged, you can go mobile at a moment's notice.

Adding the Internet to the mix

If you have high-speed Internet service, or if you're in an office or school with a local computer network, you can probably connect through your older MacBook's built-in Ethernet port (or by using an adapter with your Thunderbolt or USB-C port). You make two connections:

1. **Plug one end of the Ethernet cable into the Ethernet port (or the adapter on a current MacBook, MacBook Air, or MacBook Pro).**

2. **Plug the other end of the Ethernet cable into the Ethernet port from your network.**

   Your network port is probably one of the following: an Ethernet wall jack, an Ethernet hub or switch, or a cable or DSL Internet router (or sharing device).

Will you be joining a wireless network? If so, you can find the information you need about configuring High Sierra for wireless networking in Chapter 11.

Great, a Lecture about Handling My Laptop

Proper handling of your laptop is important, so take a moment to read the Rules of Proper Laptop Deportment. Okay, perhaps I'm lecturing a bit, but a little common sense goes a long way when handling *any* computer equipment, and your laptop is no different. (Scolding mode off.)

Keep these rules in mind while opening and carrying your laptop:

» **The cover is your friend.** Open your laptop's cover slowly, without jerking or bending it.

» **Close it before you move it.** By closing your laptop, you put your macOS operating system into sleep mode, and (if your older MacBook uses a magnetic hard drive for storage) the hard drive automatically spins down, making it safer to move. The laptop is still on; it will spring back to life after you open the cover.

» **Don't stack stuff on your laptop.** You'd be surprised how many horror stories I've heard about laptop owners piling a stack of books or other heavy stuff on their computers. Remember that LED display? Made of glass?

» **Be nice to your keyboard.** Don't press those keys too hard! Use the same amount of pressure you use with a desktop computer keyboard.

» **Keep food and drinks far away.** Care to turn your laptop into an expensive doorstop? Go ahead and park your soda next to it. (Oh, and crumbs are perfect if you're interested in buying replacement keyboards.)

» **Keep your laptop as level as possible.** Using your older Mac laptop while it's tilted too far in any direction can eventually cause problems with your magnetic hard drive. I kid you not. (If your MacBook uses a solid-state hard drive, of course, this rule does not apply.)

An Overview of Mac Software Goodness

The following sections answer the most common novice computer question: "What the heck will I *do* with this thing?" You find additional details and exciting factoids about the software you get for free, software you'll want to buy, and stuff you can do on the Internet.

What comes with my laptop?

Currently, Apple laptops ship with the following major software applications installed and ready to use:

» **macOS High Sierra:** Naturally, your MacBook comes preloaded with High Sierra.

» **Apple's digital lifestyle suite:** You know you want these applications! They turn your Mac into a digital hub for practically every kind of high-tech device, including camcorders, digital cameras, tablets, portable music players, and even smartphones.

   Chapters 12 through 15 focus on the major applications that will appeal to MacBook owners: iTunes, Photos, iMovie, and GarageBand.

» **Apple's digital productivity suite:** Owners of new MacBooks can download all three of Apple's great productivity applications — Pages, Numbers, and Keynote — for free, using the App Store. Pages is a desktop publishing jewel, Numbers is a great spreadsheet tool, and Keynote is a superb slideshow/presentation application. Chapters 16 through 18 are your guides to the basic functions of all three applications. 'Nuff said.

REMEMBER

The installed software on your MacBook might change as new programs become available.

Connecting to the Internet from your lap

What is a modern computer without the Internet? Apple gives you great tools to take full advantage of every road sign and off-ramp on the Information Super-highway right out of the box:

» **Web surfing:** I use Apple's Safari web browser every day. It's fast and well-designed, with features such as tabbed browsing and Facebook and Twitter sharing.

   If *tabbed browsing* sounds like ancient Aztec to you, don't worry. Chapter 8 is devoted to Safari.

» **Quick information:** Dashboard widgets can search the entire Internet for stocks, movie listings, airline schedules, dictionaries, and foreign language translations. I explain the Dashboard in Chapter 3.

» **Instant messaging:** *Messages* lets you use your MacBook to chat with others around the world for free on the Internet — by keyboard, voice, or full-color video. This is awesome stuff straight out of Dick Tracy and Buck Rogers. If you've never seen a video chat, you'll be surprised just how good your friends

and family look! You can also use the FaceTime application to video chat with folks who have an iPhone, iPad, or iPod touch, as well as another Mac.

Always wear a shirt when videoconferencing.

» **Email:** Soldier, Apple has you covered. The Apple Mail application is a full-featured email system, complete with defenses against the torrent of junk mail awaiting you. (Imagine a hungry digital predator with an appetite for spam.) Send pictures and attached files to everyone on the planet, and look doggone good doing it.

Applications that rock

Dozens of small applications are also supplied with macOS High Sierra. I mention many of them in later chapters, but here are three good examples to whet your appetite:

» **DVD Player:** If your MacBook has an internal or external DVD drive, put all that widescreen beauty to work and watch your favorite DVD movies with DVD Player! You have all the features of today's most expensive stand-alone DVD players, including a spiffy onscreen control that looks like a remote.

» **Contacts:** Throw away that well-thumbed collection of fading addresses on paper. Use the High Sierra Contacts application to store, search, and recall just about any piece of information on your friends, family, and acquaintances.

» **Chess:** This isn't the chessboard your dad used! Play the game of kings against a tough (and configurable) opponent — your MacBook — on a beautiful 3D board. Heck, your Mac even narrates the game by speaking the moves!

You can use the data you store in your Contacts in other Apple applications included with High Sierra, such as Apple Mail and Messages.

Boot Camp For Dummies

macOS High Sierra includes one particularly exciting feature for Windows switchers: You can use the Apple Boot Camp utility and your licensed copy of Windows 8 or 10 to install and boot Windows on your Intel-based Mac laptop!

Boot Camp creates a Windows-specific *partition* (or section) on your drive, where all your Windows files are stored. Other than the slightly strange key assignments you have to remember, Boot Camp is reliable and easy to use. However, I strongly urge you to back up your laptop on a regular basis; inviting Windows onto your Mac laptop invites potential viruses as well.

Apple's Boot Camp Assistant provides step–by–step instructions, making it easy to configure your laptop for Windows. To run the Boot Camp Assistant, click the Launchpad icon in the Dock, click the Utilities folder icon, and then click the Boot Camp Assistant application icon. You'll find more detailed information on using Boot Camp in Chapter 19.

Other Stuff That Nearly Everyone Wants

No man is an island, and no computer is either. I always recommend the same set of stuff for new PC and Mac laptop owners. These extras help keep your new com– puter clean and healthy (and some make sure *you're* happy as well):

» **A laptop sleeve or case:** Most laptop owners eschew the traditional bulky laptop bag because a bag broadcasts the fact that you're carrying a valuable MacBook (and adds yet another item to carry on your trip). On the other hand, if you pack your MacBook in a briefcase, book bag, or backpack, you need to provide protection from bumps and scratches (make sure that any sleeve or case you buy provides padding around the entire computer, and not just on the top surface). That's where a laptop sleeve or thin case comes in. I use the very cool *BookBook* hardback leather case from Twelve South (`www.twelvesouth.com`), which looks — you guessed it — like an old-fashioned leather-bound book. (I think it makes me appear scholarly while disguising my MacBook.) The BookBook (shown in Figure 1-3) is available for all sizes of MacBooks, costs about $80, and provides long-lasting, cushioned protection for your expensive road warrior computer.

» **An external camera:** Your MacBook has a built-in FaceTime camera, but many folks prefer a stand-alone external camera they can pan, tilt, and point where they like (especially moviemakers who need high-resolution video clips of whatever's happening around them). I carry the stylish steel aGent V6 HD webcam from Liquid Digital Solutions (`www.liquiddigital.com.au`), shown in Figure 1-4, with my MacBook Air. It provides full 1080p high-definition recording in iMovie and connects to a USB port. You can choose to clip the webcam to your MacBook or use the desktop stand on any flat surface. The video quality is excellent, with auto exposure and low-light compensation for environments with less-than-perfect illumination. The aGent V6 HD webcam costs about $100.

» **Surge suppressor:** Even an all-in-one computer like your laptop can fall prey to a power surge. I recommend using one of these:

● *A basic surge suppressor* with a fuse can help protect your MacBook from an overload.

- *A UPS (uninterruptible power supply)* costs a little more but does a better job of filtering your AC line voltage to prevent brownouts or line interference from reaching your computer.

  Of course, your laptop's battery immediately kicks in if you experience a blackout, so a UPS is less important for your MacBook. However, any computer tech will tell you that filtered AC current is far better for your laptop, and your UPS can also provide backup power for external devices that *don't* have a battery.

TECHNICAL STUFF

» **A laptop docking station:** Will your MacBook often do double duty as both a desktop computer and a mobile powerhouse? If so, a laptop docking station will prevent you from disconnecting a bird's nest of USB and Thunderbolt cables each time you hit the road. In essence, you need to unplug only one connection between your MacBook and the docking station, and *all* your external desktop peripherals — monitor, backup hard drive, USB trackball, and such — remain blissfully in place. When your MacBook returns to the desktop, you simply reconnect that one Thunderbolt cable, and you're back in business.

My docking station of choice is the excellent Thunderbolt Express Dock from Belkin (`www.belkin.com`), shown in Figure 1-5. It requires only one Thunderbolt cable connection to your MacBook. In turn, it provides two Thunderbolt ports, three USB 3.0 ports, a wired Ethernet jack (perfect for MacBooks), a FireWire 800 port, and even microphone and headphone/speaker jacks! The Thunderbolt Express Dock is about $200 online. As a MacBook owner who likes to "grab and go," I say it's worth every penny.

» **Screen wipes:** Invest in a box of premoistened screen wipes to keep your screen pristine. Your MacBook's screen can pick up dirt, fingerprints, and other unmentionables faster than you think.

Make sure your wipes are especially meant for LED, LCD, or laptop computer screens.

WARNING

» **Blank CDs and DVDs:** If you're using a MacBook with an internal or external optical drive, you'll want blank discs. Your choices are

- CD-R (record once) and CD-RW (record multiple times)

- DVD-R (record once) and DVD+RW (record multiple times)

» **Cables:** Depending on the external devices and wired network connectivity you'll be using, these are

- A standard Ethernet cable (for wired networks or high-speed Internet)

- Thunderbolt or USB 3/USB-C cables for devices you already have

» **Wrist rest:** You might have many reasons to buy a new Mac laptop, but I know a bad case of carpal tunnel syndrome is not one of them. Take care of your wrists by carrying a keyboard wrist rest in your laptop bag.

FIGURE 1-3: The BookBook case provides protection and camouflage for your MacBook.

FIGURE 1-4: Break out your aGent V6 HD webcam for on-the-spot moviemaking.

FIGURE 1-5: A plethora of ports provided by Belkin's Thunderbolt Express Dock.

Chapter **2**

Turning On Your Portable Powerhouse

I n Chapter 1, you got as far as unpacking your Mac laptop and connecting a few cables to it. But unless you bought this computer solely as a work of modern art, it's time to turn on your MacBook and begin living The Good Life. (Plus, you still get to admire the design of your Apple laptop while using iTunes.) After you get your new beauty powered on, I show you how to run an initial checkup of your laptop's health. Then I wax enthusiastic about maintaining (and even augmenting) your laptop battery.

I also familiarize you with the initial chores you need to complete before settling in with your favorite applications. These tasks include setting up macOS and moving the data and settings from your existing computer to your MacBook, MacBook Pro, or MacBook Air.

In this chapter, I assume that either macOS High Sierra was preinstalled on your Mac, or you just completed an upgrade to High Sierra from macOS Sierra.

Tales of the On Button

The power switch on current MacBook and MacBook Air models is located on the right side of the keyboard. To turn on your laptop, simply press the button. If you're the proud owner of a new MacBook Pro or MacBook, all you have to do is open your laptop!

You hear the pleasant start-up tone that's been a hallmark of Apple computers for many years. Don't be alarmed if you don't immediately see anything onscreen; it takes a second or two for the initial Apple logo to appear.

In my experience, sometimes a quick press of the power button on some Mac laptop models just doesn't do it. Rather, you must hold down the button for a couple seconds before the computer turns on.

If your Mac laptop ever locks up tight, and you can't quit an application (I discuss quitting in Chapter 3), the power button gives you another option: Hold it down for five seconds or so, and your MacBook shuts off *completely,* even if your laptop is locked up tight. If you're using a MacBook Pro with a Touch Bar, press the Touch ID sensor and hold it to turn your laptop off, then press the Touch ID sensor again to turn your laptop back on.

As the Apple logo appears, you see a familiar progress bar indicator — that indicator is the sign that your MacBook is loading High Sierra and checking the internal hardware for problems. Sometimes the progress bar can take a bit longer to disappear. As long as it's moving, though, something good is happening: Your laptop is busy loading certain file-sharing, networking, and printing components (and so on). This process won't take long.

At last, your patience is rewarded, and your MacBook presents you with the initial High Sierra setup screen, shown in Figure 2-1.

FIGURE 2-1:
The macOS High
Sierra setup
screen — good
things are
happening!
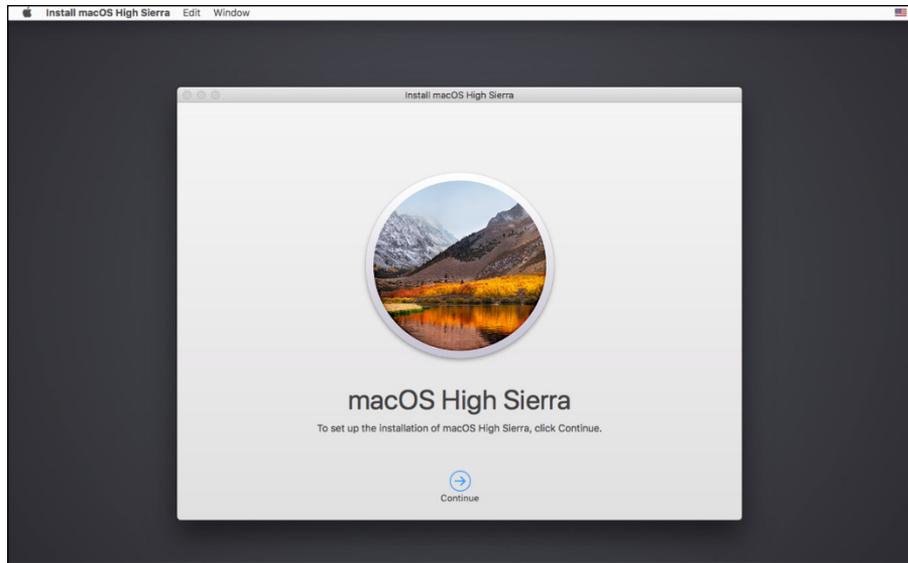
Mark's Favorite Signs of a Healthy Laptop

Before you jump into the fun stuff, don't forget an important step — a quick pre-liminary check of the signs that your new mobile Mac survived shipment intact and happy.

If you can answer "yes" to each of these questions, your MacBook likely made the trip without serious damage:

1. **Does the laptop's chassis appear undamaged?**

   It's pretty easy to spot damage to your MacBook's svelte design. Look for scratches, dents, and puncture marks.

2. **Does the LED screen work, and is it undamaged?**

   Does the cover open smoothly? Are any individual dots (or *pixels*) on the LED screen obviously malfunctioning? Bad pixels appear black or in a different color than everything surrounding them. (Techs call these irritating anarchists *dead pixels.*) A 13-inch MacBook Pro screen has well over two million pixels, and, unfortunately, some new LED screens include one or two dead ones.

3. **Do the keyboard and trackpad work?**

   Check your MacBook's built-in trackpad by moving your finger across its surface; the cursor should move on the screen. To check the keyboard, press the Caps Lock key on the left and observe whether the Caps Lock light turns on and off.

If you do notice a problem with your laptop (and you can use your Safari browser and reach the web), you can connect with an Apple support technician at `www.apple.com`. If your MacBook remains dead — like an expensive paperweight — and you can't get to the Internet, you can check your phone book for a local Apple service center, or call the AppleCare toll-free number at 1-800-275-2273. Chapter 19 also offers troubleshooting information.

You Won't Lecture Me about Batteries, Will You?

No, this isn't a lecture. In fact, the only lecture I put you through in this book concerns backing up (which, naturally, *you should do*). Instead, consider these tips as your rules of the road for monitoring and charging your battery:

» **Recharge your laptop in sleep mode or when powered off.** The battery recharges faster when your laptop is off or in sleep mode. (I go into more detail on sleep mode in Chapter 5.)

» **Keep your laptop plugged into an AC socket (or a car inverter, which plugs into your car's power outlet) when possible.** I take every opportunity to top off my laptop's battery, and so should you.

   If you don't have much time to charge your battery before you're away from an AC socket — say, half an hour — don't use your MacBook while it's plugged in and charging. That way, your battery will gain the maximum benefit from the charge time. (When you're using your MacBook while it's charging, the charging process takes much longer.)

» **Save your juice.** To get the most juice you can scavenge, here are some easy tricks:

   • *Turn off your laptop, or close it to enter sleep mode.*

   • *Turn off unnecessary hardware.* To conserve battery power as much as possible, disconnect any unnecessary USB or Thunderbolt devices. Also turn off your Wi-Fi and Bluetooth wireless hardware if you're not connected to a network. (I cover Wi-Fi wireless networking in Chapter 11.)

- *Reduce the brightness of the display* from your laptop's keyboard by pressing the F1 key.

- *Avoid using processor-intensive applications* (for example, Photoshop or iMovie).

» **Monitor your battery level from the Finder menu.** I love the battery-monitoring system built into High Sierra. Your laptop's battery life can be displayed in the Finder menu as either a simple battery icon or — my favorite — as a percentage of power remaining (with a fully charged battery registering at 100%). To display the percentage, click the battery icon on the Finder menu, and choose Show Percentage.

Keep in mind that the percentage shown is estimated by using your current System Preferences settings and power usage. So if you change your Energy Saver settings or remove a USB device that draws power from your laptop, you see that change reflected in the battery meter. Figure 2-2 shows the battery meter in Percentage view.

» **Calibrate your battery.** You can "train" your battery to provide the maximum charge by calibrating it, which Apple recommends doing monthly. The process is a snap:

1. *Charge your battery until the Finder menu battery meter indicates that the unit is fully charged, at 100%.*

2. *Keep your laptop connected to an AC socket for another two hours to ensure a maximum charge.*

3. *Disconnect the power cord and use your laptop on battery power until it is fully discharged and automatically switches to sleep mode.*

Make sure you close all your applications when you see the low battery warning dialog box so that you don't lose anything.

1. *Allow your laptop to sleep (or turn it off) for a full five hours.*

2. *Reconnect the AC cord and fully charge your battery.*

» **Invest in an external battery.** If you often find yourself running out of battery power on the road without an AC socket handy, consider buying an external battery. These handy units are specially designed to charge your MacBook and other USB-powered devices when no other power source is available. A rechargeable battery can power and charge your MacBook, as well as an iPhone and other USB devices.

WARNING

FIGURE 2-2:
Monitor your MacBook's juice from the Finder menu.
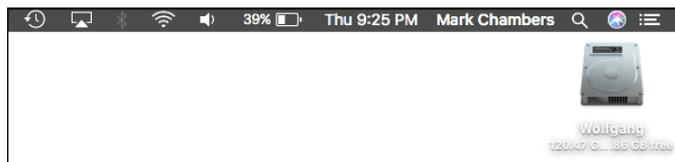
HOT PATOOTIE! IS MY LAPTOP STEAM-POWERED?

Laptops generate heat. Today's super-fast multicore processors can work up a head of steam (pun intended) while you're using them. Some of that heat radiates from the bottom of the computer, even though many current MacBook models have a fan.

What you might not realize, however, is just how *much* heat your MacBook can produce. You won't get burned if you shift your MacBook from a desk to your lap (Apple dislikes lawsuits as much as the next company), but that laptop will be uncomfortably hot if you've been using it for hours!

To avoid that burning sensation, buy a laptop stand or cooling pad for your desk. These nifty metal or Plexiglas pedestals raise your laptop off your desk, allowing air to flow under the bottom of the computer for better cooling. Also, a laptop stand elevates the screen to a more ergonomic position. Some stands even include a built-in fan powered by one of your USB ports. (The keyboard might suddenly be harder to use, naturally, but that's yet another reason why I recommend an external keyboard when you're using your Mac laptop at a semi-permanent desk location. The other reasons are that an external keyboard saves wear and tear on your laptop keyboard, and you get the ease of using a full-size keyboard.)

REMEMBER If your battery is no longer holding a charge — in other words, if you fully charge it and unplug the AC adapter, only to discover that you have only a few minutes of battery life — it's time to invest in a replacement battery. If you use an older Mac laptop with a replaceable battery, you can buy a new battery (from Apple or an online vendor) and install it yourself. Unfortunately, owners of current MacBook models must take their computers in for servicing. Today's Mac laptop is a sealed unit, and you can't replace the battery yourself.

Setting Up and Registering Your Laptop

After your MacBook is running and you give it the once–over for obvious shipping damage, your next chore is to set up your laptop. I won't cover the setup process step by step, unlike other tasks in this book. Apple tweaks the questions you see during setup on a regular basis, and they are very easy to answer. Everything is explained onscreen, complete with onscreen Help if you need it.

However, I do want you to know what to expect, as well as what information you need to have at hand. I also want you to know about support opportunities and neat features like Apple's iCloud. Hence this section. Consider it a study guide for whatever your MacBook's setup procedure throws at you.

Your iCloud account is your friend

Remember when you were offered the chance to create an iCloud account (also known as an *Apple ID*) during the initial setup of High Sierra? (If you already had an iCloud account from an earlier version of macOS, or you created an Apple ID while using your iPad or iPhone, you skipped ahead without a second thought.) If you're careful about your online travels and you decided not to supply your personal data, however, you may have passed up the chance to immediately create your iCloud account during High Sierra setup, most likely thinking that you could take care of it later.

Unfortunately, you've probably realized by now that all sorts of macOS features and applications hinge on your iCloud account, including the App Store, Messages, the iTunes Store, and FaceTime. If you haven't created your iCloud account yet, take care of that chore now. It's free and painless and makes you one of the "in crowd."

When you're prompted for an iCloud password by one of the aforementioned applications, click the Create Apple ID/iCloud Account button to start the ball rolling. The application leads you through the process step by step. You can also create your ID through the App Store or the iTunes Store. Click the Account link in either of these applications, and you're prompted to create your iCloud account.

Note that Apple now uses what it calls *2 Factor Authentication* for your Apple ID — this provides much tighter security for safeguarding your Apple ID. However, if you share your Apple ID among multiple Macs or between iOS devices (like an iPhone or iPad), 2 Factor Authentication does involve entering a code on each of those computers and devices. The code entry isn't a huge hassle, but if you're switching from a Windows PC it may seem a little strange!

Setting up macOS High Sierra

After you start your computer for the first time — or if you just upgraded from macOS Sierra — your laptop will launch High Sierra setup automatically. The setup process takes care of a number of tasks:

» **Setup provides High Sierra with your personal information.** As I mention in Chapter 1, your Mac ships with a bathtub full of applications. Many of them

use your personal data (such as your address and telephone number) to automatically fill out your documents.

REMEMBER

If that stored personal information starts you worrying about identity theft, I congratulate you. If you're using common sense, sharing your personal data at any time *should* make you uneasy. In this case, however, you're fine. Apple doesn't disseminate this information anywhere else, and the applications that use your personal data won't send it anywhere, either. And Safari, the Apple web browser, fills out forms on a web page automatically *only* if you give your permission.

>> **Setup creates your user account.** You're prompted for a username and password, which Setup uses to create your administrator-level account.

>> **Setup configures your language and keyboard choices.** macOS is a truly international operating system, so you are offered a chance to configure your laptop to use a specific language and keyboard layout.

>> **Setup configures your email accounts in Apple Mail.** If you already have an email account set up with your ISP, keep handy the email account information that the ISP provided to answer these questions. The info should include your email address and your login name and password. High Sierra can even automatically configure your email account for you (including many web-based email services such as Google Mail, Yahoo! Mail, and Outlook) if you supply your account ID and password. *Sweet.*

>> **Setup allows you to open an iCloud account.** Apple's iCloud service just plain rocks — especially the free storage. Take my word for it: Join up, trooper, and create your iCloud account during setup. The standard iCloud service is free, and upgrading to additional space is a breeze if you decide you like the service benefits. I go into these benefits in detail in Chapter 9, but for now, just sign up (or sign in, if you already have an existing iCloud account) and take the opportunity to feel smug about owning an Apple computer.

>> **Setup sends your registration information to Apple.** As a proud owner of a MacBook, take advantage of the year of hardware warranty support and the free 90 days of telephone support. All you have to do is register to use 'em. Rest assured that all this info is confidential.

>> **Setup offers to launch Migration Assistant.** This assistant guides you through the process of *migrating* (an engineer's term for *moving*) your existing user data from your old Mac or PC to your laptop. Naturally, if your MacBook is your first Macintosh computer, you can skip this step with a song in your heart! (Read more on Migration Assistant in the later section, "Importing Stuff from Another Mac.")

Registering your MacBook

I'll be honest: Many people, myself included, don't register every piece of computer hardware they buy. For example, I didn't register the wireless Bluetooth adapter I bought for my older iBook because the expenditure was only around $40, the gizmo has no moving parts, and I'm never likely to need technical support to use it or get it fixed.

However, your MacBook is a different kettle of fish, so I *strongly* recommend that you register your purchase with Apple during the setup process. You spent a fair amount on your computer, and your investment has a significant number of very expensive parts. In fact, I heartily advocate the purchase of an AppleCare Protection Plan extended warranty with your new MacBook for the ultimate in peace of mind — if you can invest a couple of hundred dollars more, you'll have a full three years of service coverage from the purchase date.

Even the hardiest of techno-wizards would agree with this important Mark's Maxim:

If you don't register your new laptop, you can't receive support.™

MARK'S
MAXIMS

And rest assured that Apple is not one of those companies that constantly pesters you with email advertisements and near-spam. I've registered every Apple computer I've owned, and I've never felt pestered. (And I have an *extremely* low tolerance for pester.)

Importing Stuff from Another Mac

If you're upgrading from an older Mac running macOS to your new Mac laptop, I have great news: Apple includes *Migration Assistant.* This utility application can help you copy (whoops — I mean *migrate*) all sorts of data from your old Mac to your new machine. It does so via your laptop's wired or wireless Ethernet network connection or an existing Time Machine backup on an external hard drive.

As mentioned earlier, Setup launches Migration Assistant automatically if you indicate that you want to transfer stuff during the setup process, but you can always launch Migration Assistant manually at any time. Simply click the Spotlight search icon (which looks like a magnifying glass) in the Finder menu bar, then type Migration Assistant and press Return.

The list of stuff that gets copied includes the following:

>> **User accounts:** If you set up multiple user accounts (so that more than one person can share the computer), the utility ports them all to your new Mac.

>> **Network settings:** Boy, howdy, this is a real treat for those with manual network settings provided by an ISP or network administrator! Migration Assistant can re-create the entire network environment of your old Mac on your new laptop.

>> **System Preferences settings:** If you're a fan of tweaking and customizing macOS so that it fits like a glove, rejoice. Migration Assistant copies all the changes you've made in System Preferences on your old Mac! (Insert sound of angelic chorus: *Hallelujah!*)

>> **Documents:** The files in your Documents folder(s) are copied to your new MacBook.

>> **Applications:** Migration Assistant tries its best to copy over third-party applications you've installed in your Applications folder on the older Mac. I say "tries its best" because you might have to reinstall some applications. Some developers create applications that spread all sorts of files across your hard drive, and Migration Assistant just can't keep track of those nomadic files. Other applications make the trek just fine, but you might have to reenter their serial numbers.

By far, the easiest method of using Migration Assistant is over a wired or wireless Ethernet network. Both computers should be connected to the same network. (Because today's MacBook models don't have an on-board Ethernet port, you may require a Thunderbolt-to-Ethernet or USB-to-Ethernet adapter if you decide to use a wired Ethernet connection.) Typically, you also have to run Migration Assistant on the source computer. Or, if you're migrating data from a PC, you must download and install the free Windows Migration Assistant (`www.apple.com/migrate-to-mac`).

If you've connected an external hard drive containing the Time Machine backup files from your older Mac, just connect the drive to your new laptop.

After the two computers are connected (or you have connected the Time Machine backup), simply follow the onscreen instructions displayed in the Migration Assistant window. The application leads you through the process step by step. If you need to return to the previous step at any time, click the Back button that appears at the bottom of the screen. Migration Assistant may take an hour (over a wired connection) or even several hours (over a wireless connection) to complete, depending on the amount of data to be moved.

Importing Stuff from Windows (If You Must)

If you're a Windows-to-Mac *Switcher,* you made a wise choice, especially if you're interested in the creative applications in Apple's digital lifestyle suite! Although you could choose to start your Apple computing life anew, you probably want to migrate some of your existing documents and files from that tired PC to your bright, shiny new MacBook.

As mentioned in the preceding section, the Windows Migration Assistant provided by Apple can transfer much of the Windows data you want to take with you. If you find that some files were left behind, you can move stuff manually as well. You can copy your files to a USB flash drive or over a network. To make this manual move more manageable, Table 2-1 covers a number of typical Windows file locations in Windows 7, 8, and 10, their High Sierra counterparts, and the Mac applications you'll use to open them.

TABLE 2-1   Moving Media and Documents betwixt Computers

File Type	Windows Location	macOS Location	Mac Application
Music files	Music folder	Music folder	iTunes
Video and movie files	Videos folder	Movies folder	QuickTime, DVD Player, iTunes
Digital photos	Pictures folder	Pictures folder	Photos
Office documents	Documents folder	Documents folder	Mac Office, OpenOffice, Pages, Numbers, and Keynote

TIP

The macOS Help system contains an entire subsection on specific tricks you can use when switching from Windows to Mac, including how to connect to a Windows network and how to directly connect the two computers.

SWITCHING FROM A PC TO . . . AN APPLE PC?

With the High Sierra Boot Camp feature, you can actually create a full Windows 8 or 10 system on your Intel-based Mac laptop. Yup, Windows and High Sierra coexist peacefully *on the same computer.* However, you have to reboot your computer to use your MacBook as a Windows system.

This possibility brings a whole new meaning to the term *Switcher.* Some Mac owners are moving their stuff from Windows (running on their old PC) to . . . well, Windows (running on their new MacBook) rather than High Sierra. If you decide to create a Windows system on your MacBook with Boot Camp, the files and folders on your existing PC can be copied directly by using the Windows Easy Transfer utility (in Windows 8). Windows 8.1 and 10 users will need a third-party application to move files and folders, such as PCmover Home from Laplink (`www.laplink.com`). In effect, you're copying your settings and data between your old PC and your new Apple-based PC! (That sounds a little skewed, but die-hard Apple apostles will have to forgive me.)

Manually moving existing Windows applications (such as PaintShop Pro X9) to your laptop's drive usually doesn't work even with *Boot Camp* — Apple's dual-boot feature that allows you to run both High Sierra and Windows 8, 8.1 or 10 on your MacBook. Most Windows software installs all sorts of necessary files in several folders across your drive, and manually moving applications doesn't put those files where they should go. Instead, you have to install Windows 8, 8.1 or 10 on your Mac laptop (using Boot Camp) and then reinstall your Windows applications. You'll find complete details on Boot Camp later in Chapter 19.

Chapter **3**

The MacBook Owner's Introduction to macOS High Sierra

Ah, the Finder. Many admire its scenic beauty. But don't ignore its unsur-passed power or its many moods. And send a postcard while you're there.

Okay, so the High Sierra Finder might not be *quite* as majestic as the mighty region it's named after, but it's the basic toolbox you use every day while piloting your MacBook. The Finder includes the most common elements of macOS: window controls, common menu commands, icon fun (everything from launching applications to copying files), keyboard shortcuts, and even emptying the Trash. In fact, you could say that if you master the Finder and learn how to use it efficiently, you're on your way to becoming a power user!

This chapter is your Finder tour guide, and we're ready to roll. I satisfy your curiosity about your new playground and introduce you to the basic elements of the High Sierra Desktop, and I outline the resources available if you need help with macOS.

Oh, and I promise to use honest-to-goodness English in my explanations, with a minimum of engineer-speak and indecipherable acronyms. (In return, promise that you will boast about High Sierra to your family and friends. Aunt Harriet might not be as technologically savvy as we are.)

Your Own Personal Operating System

High Sierra is a special type of software called an *operating system* (or *OS,* as in *macOS*). This means that High Sierra essentially runs your MacBook and allows you to run all your other applications, such as iTunes and Photoshop. It's the most important computer application — or *software* — that you run.

Think of a pyramid, with High Sierra as the foundation and other applications running on top.

You're using the OS when you aren't running a specific application, such as these actions:

>> Copying files from a USB flash drive to your laptop's internal drive

>> Navigating through files and folders on your drive

>> Choosing a different screen saver

Sometimes, High Sierra even peeks through an application while it's running. For example, macOS controls application actions such as these:

>> The Open, Save, and Save As dialogs you see when working with files in Photoshop

>> The Print dialog that appears when you print a document in Pages (Apple's desktop publishing application)

In the following sections, I escort you around the most important hotspots in High Sierra, and you meet the most interesting onscreen thingamabobs you use to control your laptop. (I told you I wouldn't talk like an engineer!)

The High Sierra Desktop

The High Sierra Desktop isn't made of wood, and you can't stick your gum underneath. However, this particular desktop does work much like the surface of a traditional desk. You can store things there, organize things into folders, and take care of important tasks such as writing and drawing (using tools called *applications*). Heck, you even have a clock and a trash can.

Gaze upon Figure 3-1 and follow along as you venture to your Desktop and beyond. I discuss each of these Desktop elements in more detail later in this chapter.
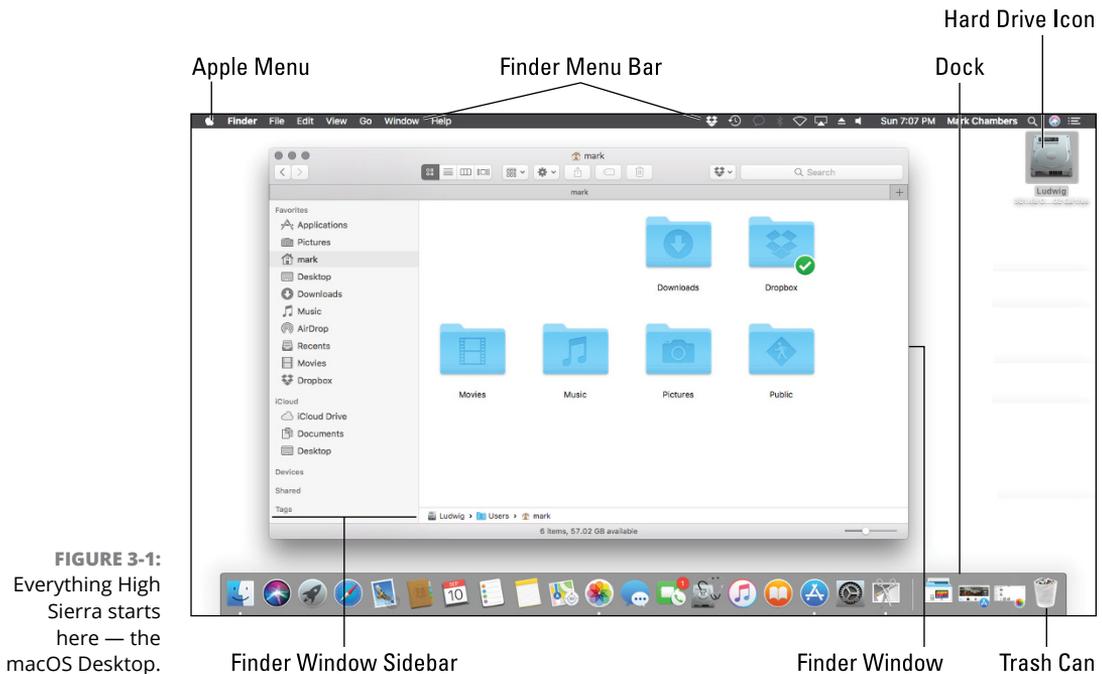
Meet me at the Dock

The Dock is a versatile combination: one part organizer, one part application launcher, and one part system monitor. From the Dock, you can launch applications — for example, the postage stamp icon represents the Apple Mail application, and clicking the spiffy compass icon launches your Safari web

browser. Icons in the Dock also allow you to see what's running, and display or hide the windows shown by your applications.

Each icon in the Dock represents one of the following (many of which are proudly displayed in Figure 3-2):

>> An application you can run (or that is running)

>> An application window that's *minimized* (shrunk)

>> A web page URL link

>> A document or folder on your system

>> A network server, shared document, or shared folder

>> Your Trash

The Dock is highly configurable:

>> It can appear at different edges of the screen.

>> It can disappear until you move the pointer to the edge to call it forth.

>> You can resize it.

Dig those crazy icons

By default, High Sierra always displays at least one icon on your Desktop: your Mac's internal drive. To open a drive and view or use the contents, you double-click the icon. Each icon is a shortcut of sorts that represents something, including

>> CDs and DVDs (if you have an optical drive).

>> External hard drives, solid-state drives, and USB flash drives.

>> Applications and documents.

>> Files and folders.

>> Network servers you access.

Note that an icon can represent applications you run and documents you create. Sometimes you **single**-click an icon to watch it do its thing (as in the Dock), but usually you **double**-click an icon to make something happen.

There's no food on this menu

The menu bar isn't found in a restaurant. You find it at the top of the Desktop, where you can use it to control your applications. Virtually every application you run on your laptop has a menu bar.

To use a menu command, follow these steps:

1. **Click the menu title (such as File or Edit).**

2. **Choose the desired command from the list that appears, as shown in Figure 3-3.**
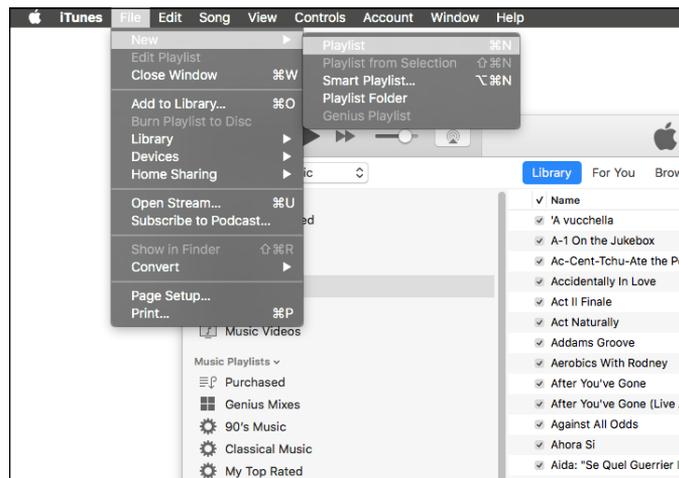
FIGURE 3-3: Clicking a menu displays a list of menu commands.

When you click a menu, it extends down so that you can see the commands it includes. While the menu is extended, you can choose any enabled menu item (just click it) to perform that action. You can tell that an item is enabled if its name appears in black or white. Conversely, a menu command is disabled if it appears grayed out. Clicking it does nothing.

When you see a menu path printed in this book (such as File ⇨ Save), it's just a visual shortcut that tells you to click the File menu and then choose Save from the drop-down menu that appears.

Virtually every Mac application has some menus, such as File, Edit, and Window. You're likely to find similar commands within these menus. However, only two menus are in *every* macOS application:

>> The *Apple menu,* which is identified with that jaunty Apple Corporation icon. This is a special menu because it appears in both the Finder menu bar and the menu bar in every application you run. It doesn't matter whether you're in iTunes or Photoshop or Word. If you can see a menu bar, the Apple menu is there. The Apple menu contains common commands to use no matter where you are in High Sierra, such as Restart, Shut Down, and System Preferences. Figure 3-3 proudly displays the Apple icon at the upper left.

>> The *Application menu,* which always bears the name of the active application. For instance, the DVD Player menu group appears when you run the High Sierra DVD Player, and the Word menu group appears when you launch Microsoft Word.

TIP

You can also display a context or shortcut menu — which regular human beings call a *right-click menu* — by right-clicking the High Sierra Desktop, an application, a folder, or a file icon. (Because your MacBook is equipped with a trackpad, you can right-click by tapping the trackpad with two fingertips. I'll explain more on tapping later in this chapter.)

The Finder menu bar is your friend

Whenever the Finder itself is ready to be used (or, in Mac-speak, whenever the Finder is the *active* application), the Finder menu bar appears at the top of the screen. You know the Finder is active and ready when the word *Finder* appears at the left of the menu bar.

There's always room for one more window

You're probably already familiar with the ubiquitous window itself. Both High Sierra and the applications you run use windows to display things such as

>> The documents you create

>> The contents of your drive

For example, the window shown in Figure 3-1 is a Finder window, where High Sierra gives you access to the applications, documents, and folders on your system. You use Finder windows to launch applications, to perform disk chores such as copying and moving files, and to navigate your hard drive.

IT'S APPLE TO THE RESCUE!

UNIX is the established, super-reliable OS that powers most of the high-performance servers that make up the Internet. UNIX has built-in support for virtually every hardware device ever wrought by the Hand of Man (including all the cool stuff that comes with your MacBook). It's also well designed and highly efficient.

Unfortunately, standard UNIX looks as hideous as old-fashioned character-based DOS, complete with a confusing command line. So ease of use for normal human beings like you and me goes out the window. Enter the genius types at Apple, who understood over 15 years ago that all UNIX needed was a state-of-the-art, novice-friendly interface. To wit: macOS was developed with a UNIX foundation (or *core*), so it shares the same reliability and performance as UNIX. However, the software engineers at Apple (who know a thing or two about ease of use) made it good-looking and easy to use.

Wait a Second: Where the Heck Are the Mouse Buttons?

High Sierra takes a visual approach to everything. What you see in Figure 3-1 is designed for point–and–click convenience, because the *trackpad* is your primary navigational tool while you're using your Mac laptop. You move your finger over the surface of the trackpad, and the pointer follows like an obedient pup. The faster you move your finger, the farther the pointer goes. When your pointer is over the desired item, you tap it (or *click* it, if you prefer the more familiar term), it opens, you do your thing, and life is good.

Never use any object other than your finger on the trackpad! That means no pencils (no, not even the eraser end), pens, or chopsticks; they can damage your trackpad in no time.

If you've grazed on the other side of the fence — if you're one of Those Who Were Once Windows Users — you're probably accustomed to using a mouse with at least two buttons. This brings up the nagging question: "Hey, Mark! Where the heck are the buttons?"

In a nutshell, the buttons simply ain't there if you're using your Mac laptop's trackpad. The entire surface of the trackpad can act as both buttons. To customize how the trackpad operates, click the Apple menu in the Finder menu bar, then click System Preferences, and then click the Trackpad icon. From the Point & Click pane, for example, you can

- >> **Select the Tap to Click check box:** Now, when you tap once quickly anywhere on the trackpad, your Mac laptop counts that as a click. Tap twice quickly, and your MacBook recognizes that as a double-click.

- >> **Select the Secondary Click check box:** A single tap with two fingers displays the right-click menu (which I cover in more detail in a page or two).

- >> **Select the Look Up & Data Detectors check box:** If your Mac laptop is equipped with a Force Touch Trackpad, you can choose how Force Click operates (along with the Force Click and Haptic Feedback check box, which provides physical feedback from the trackpad). Note that these two check boxes will not appear if your Macbook has an older trackpad.

- >> **Enable the Look Up check box:** Tap the trackpad with three fingers to look up a selected word in the Dictionary.

- >> **Enable the Three Finger Drag check box:** (Sounds like a dance from the '60s, doesn't it?) By using three fingers, you can drag around windows on your Desktop to reposition them.

- >> **Adjust your tracking speed and Force Click pressure:** Click and drag the Tracking speed slider to speed up or slow down the rate at which the pointer moves. The Click pressure slider controls how hard you must press to activate Force Click.

Apple has done a great job of illustrating each gesture available from the Trackpad pane in System Preferences. A short video clip shows you both the gesture itself and the effect of that gesture within macOS.

DOING THE MULTI-TOUCH AND FORCE CLICK THINGS

Today's crop of MacBooks has the smartest trackpads on the planet! That's because Apple's latest mice and trackpads include two features. *Multi-Touch* allows you to control the view of a document by using specific finger motions on the trackpad surface, while *Force Click* activates specific features if your fingers press down harder on the trackpad surface. (Your Macbook must be equipped with a Force Touch trackpad to use a Force Click).

At the time of this writing, here's the rundown:

- **Two-finger scrolling:** Move two fingers over the surface of the trackpad at once to scroll the contents of the active Finder window or application in the same direction. For example, you can use the scroll function to move up and down through the pages of a document or to move up and down through a long web page. Who needs scroll bars?

- **Two-finger zooming:** Pinching your thumb and forefinger toward each other on the trackpad zooms in on a document or image. The reverse (moving your finger-tips away from each other) zooms out.

- **Two-finger Smart Zoom:** Tap twice with two fingers to zoom in, and double-tap again with two fingers to zoom back out.

- **Two-finger rotating:** Move your thumb and forefinger in a circle on the trackpad to rotate an image or document in the corresponding direction.

- **Two-finger paging:** Swipe your thumb and forefinger to the left or right across the trackpad to page through a document or to move to the next or previous image in a set.

- **Three-finger full-screen switching:** Swipe your thumb and first two fingertips to the left or right across the trackpad to move between open applications in full-screen mode.

- **Two-finger Notification Center display:** Swipe to the left with two fingers from the right edge of the trackpad, and High Sierra displays the Notification Center. To hide the panel, reverse the gesture and swipe from the left edge to the right using two fingers.

- **Perform actions in Mission Control, Launchpad, and your Desktop:** Using the combination of thumb and fingers you specify, you can configure the display and operation of these features within High Sierra.

- **Force Click data on your screen to display additional information:** You can Force Click on a text or links in documents, web pages, and email messages to display related data, or Force Click on a document icon to display its contents without opening it. Other Force Click functions vary by application, but you can check the Help system within any application to see if it offers Force Click commands.

Note that not all Multi-Touch gestures work with older MacBook trackpads, and you'll only find Force Touch on the latest Mac laptops.

I'll be honest: When my laptop is on my desk at home, I plug in a Logitech optical trackball. This neat device has two buttons and a scroll wheel, saving me wear and tear on my trackpad and offering even finer control in my applications. In fact, a new industry is springing up for tiny USB mousing devices made especially for laptops. Some devices are smaller than a business card, but they still carry a full complement of two buttons and a scroll wheel.

In this book I refer to the *pointer* whether you're using the trackpad or a mouse. So here's a Mark's Maxim I think you'll appreciate more and more as you use your laptop.

If you can afford a USB or wireless Bluetooth mouse, trackpad or trackball for your laptop, *buy it.* **You can thank me later with an email message sent to** mark@ mlcbooks.com**.™**

If you tap the trackpad with two fingertips (or click the right mouse button on a USB mouse), High Sierra performs the same default function that a right-click does in Windows. Namely, with a right-click on most items — icons, documents, even your Desktop — you get a *shortcut menu* of commands specific to that item.

Figure 3-4 shows a typical convenient right-click menu in a Finder window. I have all sorts of cool items at my disposal on this menu because of the applications I've installed that make use of a right-click menu.

FIGURE 3-4:
Welcome to your shortcut menu!

If you're using a USB mouse, don't forget to visit the Mouse pane in System Preferences to configure it.

Launching and Quitting Applications with Aplomb

Now it's time to pair your newly found trackpad acumen with the High Sierra Finder window. Follow along with this simple exercise. Move the pointer over the iTunes icon in the Dock. (This icon looks like a circle with a musical note on it.)

Then tap the trackpad once (see the preceding section for how to set this preference). Whoosh! High Sierra *launches* (or starts, or runs) the iTunes application, and you see a window much like the one shown in Figure 3-5.
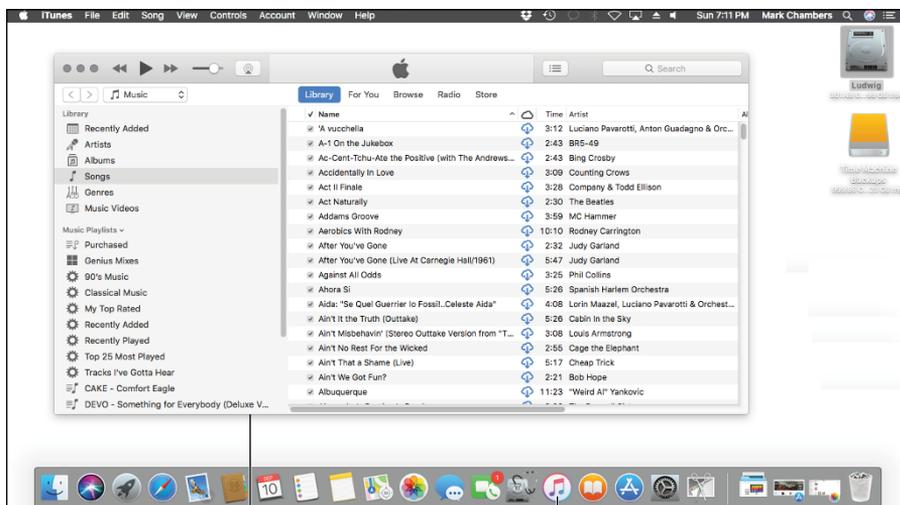
iTunes Application Window   iTunes Dock Icon

If an application icon is already selected (which I discuss later in the chapter), you can simply press ⌘+O to launch it. The same key shortcut works with documents, too.

Besides the Dock, you have a plethora of other ways to launch an application or open a document in High Sierra:

» **From the Apple menu ():** You can launch a number of applications from anywhere in High Sierra using the Apple menu. Click *System Preferences* to change all sorts of settings, such as your display background and how icons appear. Click *App Store* to launch the macOS App Store and display software that you can download for your laptop. (Most are commercial applications that you have to pay for, but many great free applications are available as well.) You can also use the App Store to see whether update patches are available for your Apple software.

» **From the Launchpad:** Arrange all your application icons in a full-screen display. (The Launchpad icon in the Dock bears a spiffy rocket.) If you have more than one screen (or *page*) worth of applications, press the arrow keys to move between Launchpad pages. Using the trackpad, swipe two fingers to the

left or right. To launch an application, just click the icon. (If you're the proud owner of an iPhone, iPad, or iPod touch, the Launchpad is familiar, because it corresponds directly to the iOS Home screen on those devices.)

>> **From the Desktop:** If you have a document you created or an application icon on your Desktop, you can launch or open it from the Desktop by *double-clicking* that icon (tapping the trackpad twice with one finger in rapid succession when the pointer is on top of the icon).

Double-clicking a device or network connection on your Desktop opens the contents in a Finder window. This method works for CDs and DVDs you've loaded, as well as external drives and USB flash drives. Just double-click 'em to open them and display their contents in a Finder window. Applications and documents typically launch from a CD, a DVD, or an external drive just like they launch from your internal drive (the one that's typically named *Macintosh HD*). So you don't have to copy stuff from the external drive just to use it. Note, however, that running an application directly from your optical or external drive usually causes the application to run significantly slower. (Oh, and don't forget that you can't change the contents of most CDs and DVDs; they're read-only, so you can't write to them.)

DIG THAT CRAZY LAUNCHPAD!

You can customize your Launchpad display by dragging icons to arrange them in the order you prefer. (For example, I have all the applications I use the most on the first Launchpad page.) Drag an application icon to the right or left side of the screen to move it to another page.

Launchpad, like a Finder window, allows you to create folders to help organize your applications. To create a folder in Launchpad, drag one application icon on top of another, and then add other icons by dragging them to the folder (or remove them by dragging them out of the folder). To run an application within a folder, click the folder icon to display the icons within it, and then click the desired application. To change a folder name, click the folder to open it, click the folder name to display a text-editing box, type the new moniker for the folder, and press Return.

If you want to remove an application from Launchpad — *which also deletes the application from your MacBook entirely* — click the icon and continue pressing the trackpad until the icons start to wiggle. (Yes, you read that correctly; I wrote *wiggle*. iPhone and iPad owners know what I mean.) Click the tiny delete (X) button that appears next to the icon whose application you want to delete, and the icon — and its application — disappear. Press Esc to stop all that wiggling. (Note that applications supplied with High Sierra can't be deleted this way.)

>> **From the Recent Items selection:** When you click the Apple menu and hover the pointer over the Recent Items menu item, the Finder displays all the applications and documents you used over the past few computing sessions. Click an item in this list to launch or open it.

>> **From the Login Items list:** Login items are applications that High Sierra launches automatically each time you log in to your user account. I cover login items in detail in Chapter 10.

>> **From the Finder window:** You can also double-click an icon within the confines of a Finder window to open it (for documents), launch it (for applications), or display the contents (for a folder).

TIP

The macOS Quick Look feature can display the contents of just about any document or file — but without actually opening the corresponding application! *Sweet.* To use Quick Look from a Finder window, click a file to select it, and then press the spacebar.

After you finish using an application, you can quit that application to close its window and return to the Desktop. Here are a number of different ways to quit an application:

>> **Press ⌘+Q.** This keyboard shortcut quits virtually every Macintosh application. Just make sure that the application you want to quit is currently active first (the application name should appear immediately to the right of the Apple [🍎] menu).

>> **Choose the Quit command from the application's menu.** To display the Quit command, click the application's named menu from the menu bar. As I just mentioned, this menu is always to the immediate right of the Apple (🍎) menu. For example, Safari displays a Safari menu, and that same spot in the menu bar is taken up by Calendar when Calendar is the active application. Refer to Figure 3-5, and look for the iTunes menu, right next to 🍎 at the very top of the figure.

>> **Choose Quit from the Dock.** You can right-click an application's icon in the Dock and then choose Quit from the menu that appears.

A running application displays a small dot under its icon in the Dock.

TIP

>> **Click the Close button in the application window.** Some applications quit entirely when you close their window, such as the System Preferences window or the Apple DVD Player. Other applications might continue running without any window, such as Safari or iTunes; to close these applications, you have to use another method in this list. (More on window controls like Close in the next section.)

WARNING

» **Choose Force Quit from the Apple menu.** *This is a last-resort measure!* Use this method only if an application has frozen and you can't use another method in this list to quit. Force-quitting an application doesn't save any changes to any open documents in that application!

Performing Tricks with Finder Windows

In the following sections of your introduction to macOS, I describe basic windows management in High Sierra: how to move things around, how to close windows, and how to make windows disappear and reappear like magic.

Scrolling in and resizing windows

Can you imagine what life would be like if you couldn't see more than a single window's worth of stuff? Shopping would be curtailed quite a bit — and so would the contents of the folders on your MacBook's drives!

That's why High Sierra includes *scroll bars* that you can click and drag to move through the window's contents. (By default, scroll bars don't appear in High Sierra until you move the pointer close to them.) You can

» Click the scroll box and drag it. For the uninitiated, that means clicking the darker portion of the bar and holding down your finger on the trackpad while you move your finger in the desired direction.

» Click anywhere in the empty area above or below the scroll box to scroll pages one at a time.

» Hold down the Option key and click anywhere in the empty area above or below the bar to scroll to that spot in the document.

TIP

Of course, you can also drag two fingertips across the trackpad to scroll a window's contents (both vertically and horizontally). To control trackpad behavior, open System Preferences and click the Trackpad pane. You can read all about configuring trackpad settings in the earlier section "Wait a Second: Where the Heck Are the Mouse Buttons?"

Figure 3-6 shows two vertical scroll bars in a typical Finder window, as well as the Sidebar and three Finder Tabs.

Minimize Button
Zoom/Full Screen Button
Close Button
Finder Tabs
New Finder Tab Button
Scroll Bars
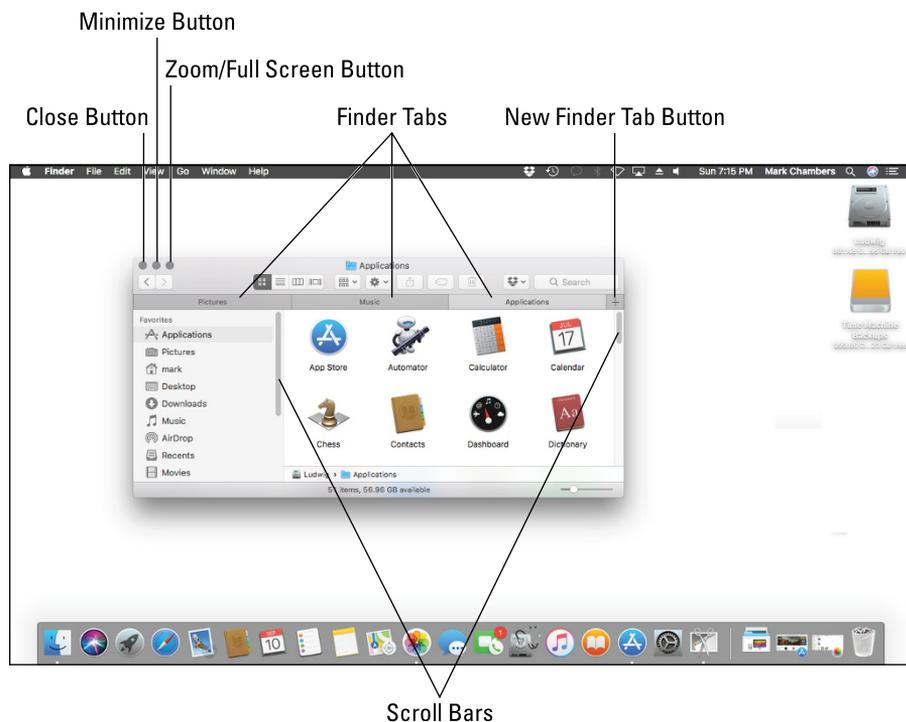
FIGURE 3-6:
A plethora of helpful window controls.

TIP

Often, pressing the Page Up and Page Down keys moves you through a document one page at a time. Also, pressing the arrow keys moves the insertion pointer one line or one character in the four compass directions.

You can also resize most Finder and application windows by enlarging or reducing the window frame itself. Move the pointer over any corner or edge of a window and then drag the edge in any direction until the window is the precise size you need. (More information on dragging pops up later in this chapter.)

Minimizing and restoring windows

Resizing a window is indeed helpful, but maybe you simply want to banish the doggone thing until you need it again. That's a situation for the Minimize button, which also appears earlier, in Figure 3-6. A *minimized* window disappears from the Desktop but isn't closed; it simply reappears in the Dock as a miniature icon. Minimizing a window is easy: Move the pointer over the Minimize button (the second of the three buttons at the upper-left corner of the window) — a minus sign appears in the button to tell you you're on target — and then click. Here's a good shortcut: Double-clicking the window's *title bar* (the top frame of the window, which usually includes a document or application name) minimizes the window.

To restore the window to its full size (and its original position on the Desktop), just click its window icon in the Dock.

Moving and zooming windows

Perhaps you want to move a window to another location on the Desktop so that you can see the contents of multiple windows at the same time. Click the window's title bar and drag the window anywhere you like. Then release the button. (Don't click the icon in the center of the title bar, though. You'll move just the icon itself, not the window.)

TIP

Many applications can automatically arrange multiple windows for you (examples include Microsoft Word and PowerPoint). Choose Window⇨Arrange All (if this option appears).

To see everything a window can show you, use the Zoom feature to expand any Finder or application window to its maximum practical size. (Zooming a Finder window is different from zooming with the Multi-Touch feature, because you're expanding only the size of the Finder window, not an image or document.) Note that a zoomed window can fill the entire screen, or, if that extra space isn't applicable for the application, the window might expand to only a larger part of the Desktop.

To zoom a window, move your pointer over the third button at the top-left corner of the window. Again, refer to Figure 3-6, which struts its stuff and illustrates the position. (Man, that is one versatile figure.) A double-arrow icon appears on the Zoom/Full-Screen button. Click to expand your horizons to full-screen, or hold down the Option key while clicking to zoom the window to maximum size.

Speaking of *full-screen* operation, it comes in very handy on a smaller laptop display — that's where a single application fills the entire screen, without displaying a window frame or traditional Finder menu bar. The method you use to switch to full-screen mode varies depending on the application, so there's no one menu command or one keyboard shortcut that will always do the deed. Most of the applications included with macOS High Sierra use View⇨Enter Full Screen, and many applications have a button you can click in the window to switch back and forth. A click on the Zoom/Full-Screen button switches most Apple applications into full-screen. Finder windows can also be switched to full-screen mode in High Sierra! To exit full-screen mode, just press Esc.

So how do you switch between applications if they're all in full-screen mode?

» Move your pointer to the bottom of the screen to display the Dock, where you can click another application to switch to it.

» Invoke Mission Control and choose another application from there. (More about Mission Control later in this chapter.)

» Swipe three fingers to the left or right across the trackpad surface.

» From the keyboard, use the ⌘+Tab shortcut to cycle through the applications you have running.

TOGGLING TOOLBARS THE HIGH SIERRA WAY

It's time to define a window control that's actually *inside* the window for a change. A *toolbar* is a strip of icons that generally appears under the window's title bar (although toolbars can appear in other locations as well). These icons typically perform the most common actions in an application; the effect is the same as if you used a menu command or pressed a keyboard shortcut. Toolbars are popular these days. You see 'em in everything from the Finder window to most application windows.

You can usually banish a window's toolbar to make extra room for icons, documents, or whatever the window happens to be holding. Just choose View⇨Hide Toolbar. To restore the toolbar to its original position, choose View⇨Show Toolbar. **Note:** If you toggle the Finder window toolbar off, you also lose the Finder window sidebar.

Closing windows

When you're finished with an application or you no longer need to have a window open, move the pointer over the Close button at the upper-left corner of the window (it's the first of the three circular buttons). When the X appears in the button, click it. And yes, I can make *one more* reference to Figure 3-6, which I'm thinking of nominating as Figure of the Year.

TIP

Perhaps you have more than one window open in the same application, and you want to close 'em all in one fell swoop. Hold down the Option key while you click the Close button in any of the windows.

REMEMBER

If you haven't saved a document, and you try to close that application's window, the application gets downright surly and prompts you for confirmation. "Hey, human, you don't really want to do this, do you?" If you answer in the affirmative — "Why, yes, machine. Yes, indeed, I do want to throw this away and not save it." — the application discards the document you were working on. If you decide to keep your document (thereby saving your posterior from harm), you can cancel the action and then save the document within the application.

Juggling Folders and Icons

Finder windows aren't just for launching applications and opening the files and documents you create. You can also use the icons in a Finder window to select one or more specific items or to copy and move items from place to place within your system.

A field observer's guide to icons

Not all icons are created equal. Earlier in this chapter, I introduced you to your MacBook's drive icon on the Desktop. Here's a little background on the other types of icons you might encounter during your mobile Mac travels:

» **Hardware:** These icons are your internal storage devices (such as your hard drive and optical drive, if you have one) as well as external peripherals — like an external hard drive or a USB flash drive.

» **Applications:** These icons represent the applications (or programs) you can launch. Most applications have a custom icon that incorporates the company's logo or the specific application logo. Double-clicking an application usually doesn't load a document automatically; you typically get a new blank document or an Open dialog box from which you can choose the existing file you want to open.

» **Documents:** Many of the files on your hard drive are documents that can be opened in the corresponding application; the icon usually looks similar to the application's icon so they're easy to recognize, as you can see in Figure 3-7. Double-clicking a document automatically launches the associated application (that is, as long as macOS recognizes the file type).

» **Files:** Most of the file icons on your system are mundane things such as preferences and settings files, text files, log files, and miscellaneous data files. Yet most are identified with at least some type of recognizable icon that lets you guess what purpose the file serves. You'll also come across generic file icons that look like a blank sheet of paper (used when High Sierra has no earthly idea what the file type is).

» **Aliases:** An *alias* acts as a link to another item elsewhere on your system. For example, to launch Adobe Acrobat, you can click an Adobe Acrobat alias icon that you can create on your Desktop instead of clicking the actual Acrobat application icon. The alias essentially acts the same way as the original icon, but it doesn't take up the same amount of space — only a few bytes for the icon itself, compared with the size of the actual application. Plus, you don't have to go digging through folders galore to find the original application icon. (Windows switchers know an alias as a *shortcut.* The idea is the same, although Macs had it first. Harrumph.) You can always identify an alias by the small curved arrow at the base of the icon, and the icon might also sport the tag `alias` at the end of its name.

You have two ways to create an alias. Here's one:

1. *Select the item. (More on selecting items in the next section.)*

2. *Choose File ⇨ Make Alias, or press ⌘+L.*

Figure 3-8 shows three aliases for macOS applications, complete with that fashionable alias arrow.

Here's another way to create an alias:

1. *Hold down ⌘+Option.*

2. *Drag the original icon to the location where you want the alias.*

Note that this funky method doesn't add the `alias` tag to the end of the alias icon name unless you drag the icon to another spot in the same folder.

TIP
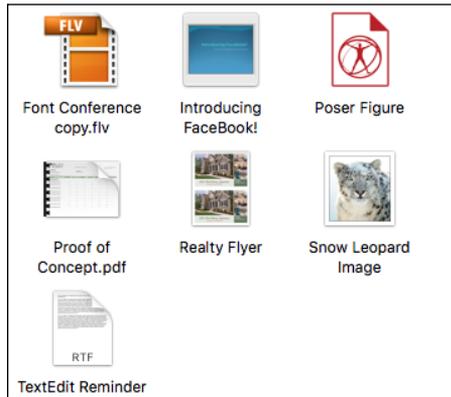
FIGURE 3-7:
A collection of some of my favorite document icons.

Font Conference copy.flv

Introducing FaceBook!

Poser Figure

Proof of Concept.pdf

Realty Flyer

Snow Leopard Image

RTF

TextEdit Reminder

FIGURE 3-8:
No, not the popular girl-spy TV show. These are alias icons in High Sierra.

iTunes

Pages

Safari
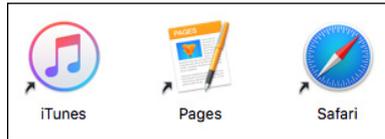
So why bother to use an alias? Two good reasons:

» **You can launch an application or open a document from anywhere on your drive.** For example, if you occasionally need to use another application while working on a Pages project, you can add an alias and launch the other application directly from the folder where you store those Pages documents. Speed, organization, and convenience. Life is good.

» **You can send an alias to the Trash without affecting the original item.** When that school project is finished, you can safely delete the entire folder without worrying about whether Pages will run the next time you double-click the application icon!

Selecting items

Often, the menu or keyboard commands you perform in the Finder need to be performed *on* something. Perhaps you're moving an item to the Trash, getting more information on the item, or creating an alias for that item. To identify the target of your action to the Finder, you need to select one or more items on your Desktop or in a Finder window. In the following sections, I show you just how to do that.

Selecting one thing

High Sierra gives you a couple of options when selecting just one item for an upcoming action:

» **Move the pointer over the item and click.** A dark border (or *highlight*) appears around the icon, indicating that it's selected.

» **If an icon is already highlighted on your Desktop or in a window, move the selection highlight to another icon in the same location by using the arrow keys.** To shift the selection highlight alphabetically, press Tab (to move in order) or press Shift+Tab (to move in reverse order).

REMEMBER

Selecting items in the Finder doesn't actually *do* anything to them by itself. You have to perform an action on the selected items to make something happen.

Selecting a whole bunch of things

You can also select multiple items with aplomb by using one of these methods:

» **Adjacent items:**

- *Drag a box around them.* If that sounds like ancient Sumerian, here's the explanation: Click a spot above and to the left of the first item. Keep holding down your finger on the trackpad surface, and drag down and to the right. (This is called *dragging* in Mac-speak.) A box outline like the one shown in Figure 3-9 appears, indicating what you're selecting. Any icons that touch or appear within the box outline are selected when you release the button.

- *Click the first item to select it, and then hold down the Shift key while you click the last item.* High Sierra selects both items and everything between them.

» **Nonadjacent items:** Select these by holding down the ⌘ key while you click each item.

Check out the status bar (which can appear at the top or bottom of a Finder window, depending on whether the toolbar is hidden). It tells you how much space is available on the drive you're working in, as well as how many items are displayed in the current Finder window. When you select items, it shows you how many you highlighted. (If you don't see a status bar, choose View➪Show Status Bar.)

Copying items

Want to copy items from one Finder window to another, or from one location (like a flash drive) to another (like your Desktop)? Très easy. Just use one of these methods:

> » **On the same drive**
>
> - *To copy one item to another location:* Hold down the Option key (you don't have to select the icon first), and then click and drag the item from its current home to the new location.
>
>   To put a copy of an item in a folder, just drop the item on top of the receiving folder. If you hold the item you're dragging over the destination folder for a second or two, High Sierra opens a new window so that you can see the target's contents. (This is called a *spring-loaded* folder. Really.)
>
> - *To copy multiple items to another location:* Select them all (see the preceding section), hold down the Option key, and then drag-and-drop one of the selected items where you want it. All the items you selected follow the item you drag. (Rather like lemmings. Nice touch, don't you think?)
>
>   To help indicate your target when you're copying files, High Sierra high-lights the location to show you where the items will end up. (This works

whether the target location is a folder or a drive icon.) If the target location is a window, High Sierra adds a highlight to the window border.

>> **On a different drive**

To copy one or multiple items: Click and drag the icon (or the selected items if you have more than one) from the original window to a window you open on the target drive. (No need to hold down the Option key while copying to a different drive.) You can also drag one item (or a selected group of items) and simply drop the items on top of the drive icon on your Desktop.

The items are copied to the top level, or *root,* of the target drive.

If you try to move or copy something to a location that already has an item with the same name, you see a dialog that prompts you to decide whether to replace the file or to stop the copy/move procedure and leave the existing file alone. (Heck, you can even keep *both* — macOS performs the copy or move, but also appends the word *copy* to the item being copied.) Good insurance, indeed.

MY, WHAT AN ATTRACTIVE SIDEBAR . . . AND SO USEFUL!

Have you noticed the sidebar that typically occupies the left side of a Finder window? It's a pane of links to common locations and devices that you can use to jump like a flash to a specific spot on your hard drive. For example, you can click the Applications link under the Favorites heading, and you're transported to your Applications folder in an instant.

Here's a great example of sidebar magic: I like as few icons on my Desktop as possible, so each book I'm working on gets its own folder. All the items for that project that might otherwise end up on my Desktop are saved to that folder instead. In fact, I make a point of adding my current book project folder to my Finder window sidebar so that it's avail-able immediately from any Finder window. To do this, just drag the folder into the column at the left side of the Finder window and drop it on top of the Favorites heading in the sidebar's list.

You can configure the items that will appear in your sidebar: Choose Finder ➪ Preferences, and then click the Sidebar tab to display the list. From here, you can select and deselect check boxes to configure your sidebar to your liking.

Moving things from place to place

Moving things from one location to another location on the same drive is the easiest action you can take. Just drag the selected item or items to the new location. The item disappears from the original spot and reappears in the new spot.

Duplicating in a jiffy

If you need more than one copy of the same item in a folder, use the High Sierra Duplicate command. I use Duplicate often when I want to edit a document but want to ensure that the original document stays pristine, no matter what. I just create a duplicate and edit that file instead.

To use Duplicate, you can

>> Click an item to select it and then choose File ➪ Duplicate.

>> Right-click the item and choose Duplicate from the menu.

>> Hold down the Option key and drag the original item to another spot in the same window. When you release the trackpad button, the duplicate file appears like magic!

The duplicate item has the word `copy` appended to its name. A second copy is named `copy2`, a third is `copy3`, and so on.

REMEMBER

Duplicating a folder also duplicates all the contents of that folder. Therefore, creating a duplicate folder can take some time if the original folder was stuffed full (or contained files several hundred megabytes or larger in size). The duplicate folder has `copy` appended to its name, but the contents of the duplicate folder keep their original names.

Using Finder Tabs

High Sierra includes a powerful feature you can use to display multiple locations in the same window. *Finder Tabs* work just like the tabs in Safari (as well as other popular browsers for both Macs and PCs), allowing you to switch between multiple locations on your Mac *instantly* by clicking a tab to switch to that location. You can even drag files and folders from tab to tab!

To open a new tab in a Finder window, you have a wealth of choices:

>> Click the desired location and press ⌘+T.

>> Right-click the location and choose Open in New Tab.

>> Select the location and click the New Tab button (which bears a plus sign) at the right side of the window.

>> Click the Action icon (which bears a gear icon) in any Finder window toolbar, and choose Open in New Tab.

For example, suppose that you're working on an iMovie project. You might create tabs using the Applications item in the Finder window sidebar and a folder (or even a DVD or shared drive) named Work that contains your video clips. The location appears as a new tab immediately under the toolbar. You can open as many tabs as you like, and you can also drag the Finder Tabs themselves to reorder them. To close a tab, hover the pointer over it and click the X button that appears. That hardworking Figure 3-6 (shown earlier in the chapter) shows three Finder Tabs at work.

> **TIP** You can also set new folders to open in tabs instead of windows. Just click the Finder menu at the top of the Desktop, choose Preferences, and then click the Open Folders in Tabs Instead of New Windows check box to enable it.

Keys and Keyboard Shortcuts to Fame and Fortune

Your MacBook's keyboard might not be as glamorous as the trackpad, but any Macintosh power user will tell you that using keyboard shortcuts is usually the fastest method of performing certain tasks in the Finder, such as saving or closing a file. I recommend committing these shortcuts to memory and putting them to work as soon as you begin using your laptop so that they become second nature to you as quickly as possible.

Special keys on the keyboard

The Apple standard keyboard has a number of special keys that you might not recognize — especially if you've made the smart move and decided to migrate from the chaos that is Windows to macOS! Table 3-1 lists the keys that bear strange hieroglyphics on the Apple keyboard and describes what they do.

TABLE 3-1   **Too-Cool Function Keys**

Action/Key Name	Symbol	Purpose
Audio Mute		Mutes (and restores) all sound produced by your MacBook
Keyboard Illumination		Increases, decreases, or turns off the brightness of your keyboard backlighting
Volume Up		Increases the sound volume
Volume Down		Decreases the sound volume
Ctrl	Ctrl	Displays the right-click/Control+click menu with the trackpad
Command	⌘	Primary modifier for menus and keyboard shortcuts
Delete	Delete	Deletes selected text
Option	Option	Modifier for shortcuts

Using the Finder and application keyboard shortcuts

The Finder is chock–full of keyboard shortcuts that you can use to take care of common tasks. Some of the handiest shortcuts are listed in Table 3-2.

TABLE 3-2   **High Sierra Keyboard Shortcuts of Distinction**

Key Combination	Location	Action
⌘+A	Edit menu	Selects all items (works in the Finder, too)
⌘+C	Edit menu	Copies the selected items to the Clipboard
⌘+H	Application menu	Hides the current application window
⌘+M	Window menu	Minimizes the active window to the Dock (also works in the Finder)
⌘+O	File menu	Opens or launches an existing document, file, or folder (also works in the Finder)
⌘+P	File menu	Prints the current document
⌘+Q	Application menu	Exits (quits) the application, and prompts you to save any changes
⌘+T	File menu	Opens a new Finder tab with the currently selected location
⌘+V	Edit menu	Pastes the contents of the Clipboard at the current pointer position
⌘+X	Edit menu	Cuts the highlighted item to the Clipboard

Key Combination	Location	Action
⌘+Z	Edit menu	Reverses (undoes) the effect of the last action you took
⌘+?	Help menu	Displays the Help system (works in the Finder, too)
⌘+Tab	Finder	Switches between open applications
⌘+Option+M	Finder	Minimizes all Finder windows to the Dock
⌘+Option+W	Finder	Closes all Finder windows

TIP

But wait; there's more! Most of your applications also provide their own set of keyboard shortcuts. While you're working with a new application, display the application's Help file and print a copy of the keyboard shortcuts as a handy cheat sheet.

If you've used a PC before, you're certainly familiar with three-key shortcuts. The most infamous is Ctrl+Alt+Delete, the beloved reboot/Task Manager shortcut nicknamed the *Windows three-finger salute.* Three-key shortcuts work the same way in High Sierra (but you'll be thrilled to know you don't need to reboot by using that notorious Windows shortcut!). If you're new to computing, to use a three-key shortcut, hold down the first two keys and then press the third key.

TIP

You're not limited to the keyboard shortcuts I've listed. In System Preferences, visit the Keyboard pane and then click the Shortcuts tab to change an existing shortcut or add a shortcut.

Home, Sweet Home Folder

Each user account you create in High Sierra is actually a self-contained universe. For example, each user has a number of unique characteristics and folders devoted to just that person, and High Sierra keeps track of everything that user changes or creates. (In Chapter 10, I describe the innate loveliness of multiple users living in peace and harmony on your laptop.)

This unique universe includes a different system of folders for each user account on your system. The top-level folder uses the short username High Sierra assigns when that user account is created. Naturally, the actual folder name is different for each person. Mac techno types typically call this folder your *Home folder.* (On the sidebar, look for the teeny house icon under the Favorites heading, marked with your account name.)

REMEMBER

When you're on the hunt for your Home folder, don't look for a folder that's actually named *Home.* Instead, look for the short username that was assigned when you created the user account.

Each account's Home folder contains a set of subfolders, including

- >> Movies

- >> Music

- >> Pictures

- >> Downloads (for files you download by using Safari or through Apple Mail attachments)

- >> Public (for files you want to share with others on your network)

- >> Sites (for web pages created by the user)

- >> Documents (for files created by the user)

Although you can store your stuff at the *root* (top level) of your drive — or even on your Desktop — that gaggle of files, folders, and aliases can get crowded and confusing quickly. Here's a Mark's Maxim to live by:

MARK'S MAXIMS

Your Home folder is where you hang out and where you store your stuff. Use it to make your computing life *much* easier!™

Create subfolders within your Documents folder to organize your files and folders even further. For example, I create a subfolder in my Documents folder for every book I write so that I can quickly and easily locate all the documents and files associated with that book project.

I discuss security in your Home folder and what gets stored where in Chapter 10. For now, remember you can reach your Home folder easily, because it appears in the Finder window sidebar. One click on the sidebar entry for your Home folder, and all your stuff is within easy reach. (If your Home folder doesn't appear in the sidebar, that's easy to fix: Choose Finder ⇨ Preferences, click the Sidebar tab, and then select the check box to display your Home folder.)

In addition to using the Finder window sidebar, you can reach your Home folder in other convenient ways:

- >> **From the Go menu:** Choose Go ⇨ Home to display your Home folder immediately from the Finder window. Alternatively, you can press ⌘+Shift+H to accomplish the same thing.

- >> **From the Open dialog:** The High Sierra standard File Open dialog also includes the same Home folder (and subfolder) icons as the Finder window sidebar.

- >> **In any new Finder window you open:** If you like, you can set every Finder window you open to automatically display your Home folder:

1. *Choose Finder* ⇨ *Preferences and click the General tab.*

2. *Click the arrow button at the right side of the New Finder Windows Show pop-up menu.*

   A menu pops up (hence the name).

3. *Click the Home entry (with the house icon and your short username) in the menu.*

4. *Click the Close button at the upper-left corner of the dialog.*

   You're set to go. From now on, every Finder window you open displays your Home folder as the starting location!

Here's another reason to use your Home folder to store your stuff: *default locations!* High Sierra expects your stuff to be there when you migrate your files from an older Mac to a new MacBook, and all Apple applications can use your Home folder when loading and saving projects.

Working with Mission Control, Spaces, and Dashboard

For those power users that often work with a passel of applications, allow me to turn your attention to one of the sassiest features in High Sierra: Mission Control. Figure 3-10 shows off the Mission Control screen:

» **Press F3 (or Control+↑, depending on your keyboard)** to show *all* open windows using Mission Control, grouped by application; then click the one you want. Figure 3-10 illustrates the tiled All Windows display on my MacBook Air after I press F3. Move the pointer on top of the window you want to activate — the window turns blue when it's selected — and click once to switch to that window. You can specify which keys you want to use in the Mission Control pane in System Preferences.

» **Press Ctrl+F3 (or Control+↓, depending on your keyboard)** to show all open windows from the application that you're currently using; click the one you want to activate. This Mission Control function is great for choosing from all the images you've opened in Photoshop or all the Safari web pages populating your Desktop!

Astute observers will notice that the application menu bar also changes to match the now-active application.
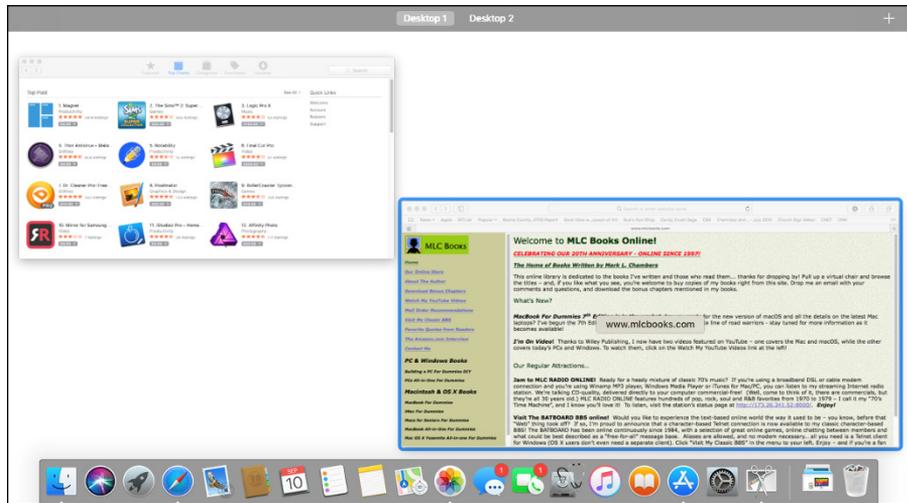
FIGURE 3-10:
Mission Control is the desktop manager in High Sierra.

Besides the F3 and Control+F3 hot keys that I just discussed, Mission Control provides one more nifty function: Press ⌘+F3, and all your open windows scurry to the side of the screen. Now you can work with drives, files, and aliases on your Desktop — and when you're ready to confront those dozen application windows again, just press the keyboard shortcut a second time.

Naturally, these key combinations can be viewed and customized – visit the comfortable confines of System Preferences and click on the Mission Control icon to choose what key sequence does what.

Although the Mission Control screen appears automatically when necessary, you can launch it at any time from your MacBook's Launchpad display or by pressing the Mission Control key on your keyboard. From the trackpad, display the Mission Control screen by swiping up with three fingers.

Switching Desktops with Spaces

Ah, but what if you want to switch to a different *set* of applications? For example, suppose that you're slaving away at your pixel-pushing job — say, designing a magazine cover with Pages. Your page design Desktop also includes Adobe's Photoshop and InDesign, which you switch between often using one of the techniques I just described. Suddenly, however, you realize you need to schedule a meeting with others in your office, using Calendar, and you want to check your email in Apple Mail. What to do?

Well, you could certainly open Launchpad and launch those two applications on top of your graphics applications and then minimize or close them. But with Mission Control's *Spaces* feature, you can press the Control+← or Control+→ sequences

to switch to a different "communications" Desktop, with Calendar and Apple Mail windows already open and in your favorite positions. (I've also created a custom "music" Desktop for GarageBand and iTunes.) Figure 3-10 illustrates multiple Spaces Desktops at the top of the Mission Control screen.

After you set up your meeting and answer any important email, simply press Control+← or Control+→ again to switch back to your "graphics" Desktop, where all your work is exactly as you left it. (And yes, Virginia, Spaces does indeed work with full-screen applications.)

To create a new Desktop for use in Spaces, click the Launchpad icon on the Dock and then click the Mission Control icon. Now you can set up new Spaces Desktops. Move your pointer to the top right of the Mission Control screen, and click the Add button (with the plus sign) that appears. (If you relocated your Dock to the right side of the screen, the Add button shows up in the upper-left corner instead.) Spaces creates a new empty Desktop thumbnail. Switch to the new Desktop by clicking the label at the top of the Mission Control screen, and then open those applications you want to include. (Alternatively, you can drag the applications from Mission Control onto the desired Spaces label.) That's all there is to it!

To switch an application window between Spaces Desktops, drag the window to the edge of the Desktop and hold it there. Spaces automatically moves the window to the next Desktop. (Applications can also be dragged between Desktops within the Mission Control screen.) You can also delete a Desktop from the Mission Control screen. Just hover your pointer over the offending Spaces label to display the thumbnail, and click the Delete button (with the X) that appears.

You can jump directly to a specific Spaces Desktop by clicking its thumbnail in your Mission Control screen or by holding down the Control key and pressing the number corresponding to that desktop. Finally, you can always use the Control+← or Control+→ shortcuts to move between Desktops and full-screen applications.

Stick it on the Dashboard

Dashboard is a favorite feature of mine within High Sierra — I use it to hold widgets and display them with the press of a button. (Okay, I know that sounds a little wacky, but bear with me.) *Widgets* are small applications — dubbed by some as "applets" — that typically provide only one function. For example, Dashboard comes complete with a calculator, dictionary, clock, weather display, and quick-and-simple calendar.

By default, Dashboard is turned off in High Sierra. To enable Dashboard, open the Mission Control pane in System Preferences, click the Dashboard pop-up menu and select As Space (which displays your widgets as a separate Space in Mission

Control). You can also choose overlay mode if you prefer your widgets to "float" over your Desktop instead.

You can display and use these widgets at any time by pressing the Dashboard shortcut; by default, that's Function–F12 on current Apple laptop keyboard models (hold down the FN key and press F12), or press the Function Keys display on your Touch Bar and press F12. You can modify the Dashboard key on the Mission Control pane in System Preferences. Dashboard also appears as a Desktop in the Spaces strip on the Mission Control screen and as an icon in Launchpad, and you can add it to your Dock from the Applications folder.

You can add widgets to your Dashboard by clicking the Add button (which bears a plus sign, naturally) at the lower–left corner of the Dashboard screen. Then Dashboard displays your entire collection of widgets, and you can click a widget to add it directly onto your Dashboard.

While you're adding widgets, rearranging the widgets that are already populating Dashboard is easy: Drag them to the desired spot. When it's time to go back to work (or play), you can return to your High Sierra Desktop by pressing the Dashboard key again, or by clicking anywhere on the Dashboard background.

Most widgets have an option button that allows you to change things, such as borders, zip codes, display columns, and the like; look for a tiny circle with a low-ercase letter *i*. Click this information icon, and you can then tweak whatever options are available for that widget.

To remove a widget from the Dashboard display, just click the Delete button (which bears a minus sign) and you'll notice that a tiny X button appears next to each widget on your Dashboard. Click the X button next to the widget you want to remove, and it vanishes from the display. Note, however, that deleting a widget doesn't remove it from your Mac entirely! You can add that deleted widget back again at any time by clicking the Add button. To return to your Dashboard, click the Delete button again.

Personalizing Your Desktop

Many folks put all their documents, pictures, and videos on their High Sierra Desktop because the file icons are easy to locate! Your computing stuff is right in front of you . . . or *is* it?

Call me a finicky, stubborn techno–oldster — go ahead, it's true — but I prefer a clean macOS Desktop without all the iconic clutter. In fact, my Desktop usually has just three or four icons even though I use my MacBook several hours every day,

often on multiple book projects. It's an organizational thing; I work with literally hundreds of applications, documents, and assorted knickknacks daily. Sooner or later, you'll find that you're using that many, too. When you keep your stuff crammed on your Desktop, you end up having to scan your screen for a particular file, alias, or type of icon. You end up taking more time to locate it on your Desktop than in your Documents folder! And don't forget, open windows hang out on your Desktop too. To find anything, you have to close or move those windows!

Plus, you'll likely find yourself looking at old icons that no longer mean anything to you or stuff that's covered in cobwebs that you haven't used in years. Stale icons — *yuck.*

TIP

I recommend that you arrange your Desktop so that you see only a few icons for the files or documents you use the most. Leave the rest of the Desktop for that cool image of your favorite actor or actress.

Besides keeping things clean, I can recommend a number of other favorite tweaks that you can make to your Desktop:

» **Keep Desktop icons arranged as you like.**

1. *From the Finder menu, choose View ⇨ Show View Options.*

2. *From the Sort By pop-up menu, choose the criteria that High Sierra uses to automatically arrange your Desktop icons, including the item name, the last modification date, or the size of the items.*

   I personally like things organized by name, but many MacBook owners prefer to see things organized by date (putting the most recently modified item at the top, for example).

» **Choose a favorite background.**

1. *Right-click any open spot on your Desktop and choose Change Desktop Background.*

   The Desktop & Screen Saver pane appears, as shown in Figure 3-11.

2. *Browse through the various folders of background images that Apple provides, open a folder of your own images, or use an image from your Photos library.*

» **Display all the peripherals and network connections on your system.**

1. *Choose Finder ⇨ Preferences.*

2. *Make sure that all four of the top check boxes are selected: Hard Disks; External Disks; CDs, DVDs, and iPods; and Connected Servers.*

   If you're connected to an external network, or if you've loaded an external hard drive or device, these external storage locations show up on your Desktop. You can double-click that Desktop icon to view your external stuff.
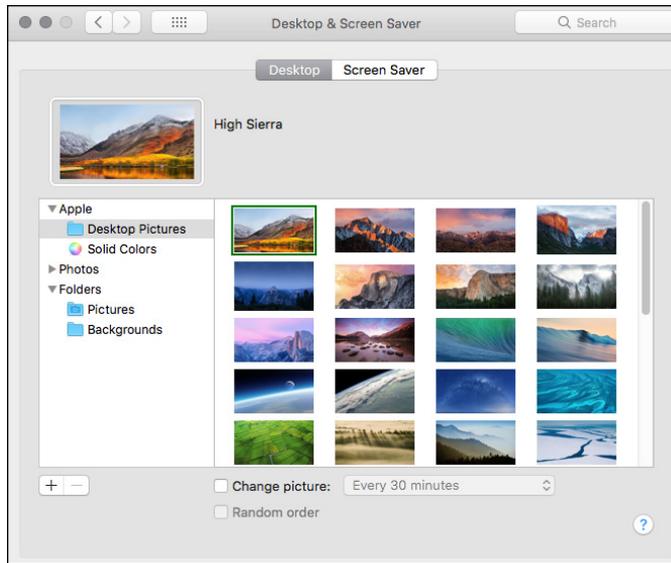
FIGURE 3-11:
Choose a Desktop
background of
more interest.

Customizing the Dock

In terms of importance, the *Dock* — the quick-access strip for applications and documents that appears on your Desktop — ranks right up there with the command center of a modern nuclear submarine. As such, it had better be easy to customize, and naturally, macOS doesn't let you down.

Adding applications and extras to the Dock

Why be satisfied with just the icons that Apple places on the Dock? You can add your own applications, files, and folders to the Dock as well:

» **Adding applications:** You can add any application to your Dock by dragging its icon into the area to the *left* side of the Dock (that's to the left side of the vertical line on the Dock). You'll know when you're in the proper territory because the existing Dock icons obligingly move aside to make a space for it.

Attempting to place an application directly on the right side of the Dock sends it to the Trash (if the Trash icon is highlighted when you release the button), so beware. Note, however, that you can drop an application icon inside a Stack (more on that in a bit) or a folder that already exists at the right side of the Dock. (If you've repositioned the Dock to the left or right side of the screen, consider the top of the Dock as the "left side" and the bottom of the Dock as the "right side.")

>> **Adding individual files and volumes:** Individual files and volume icons can be added to the Dock by dragging the icon into the area to the *right* side of the Dock. (Attempting to place these to the left side of the Dock opens the application associated with the contents, which typically isn't what you intended.) Again, the existing Dock icons move aside to create a space when you're in the right area.

   To open the Dock item you've added in a Finder window, right-click the icon to display a Dock menu, where you can open documents, run applications, and have other assorted fun, depending on the item you choose.

>> **Adding several files or a folder:** High Sierra uses a feature called *Stacks,* which I discuss in the next section, "Keeping track with Stacks," to handle multiple files or add an entire folder to the Dock.

>> **Adding websites:** You can drag any URL from Safari directly into the area at the right of the Dock. Clicking that Dock icon automatically opens your browser and displays that page.

To remove an icon from the Dock, just click and drag it off the Dock. Note, however, that the original application, folder, or volume is *not* deleted — just the Dock icon itself is permanently excused. If you like, you can delete almost any of the default icons that macOS installs on the Dock; only the Finder and Trash icons must remain on the Dock.

Keeping track with Stacks

High Sierra offers *Stacks,* which are groups of items (documents, applications, and folders) that you want to place on the Dock for convenience — perhaps the files needed for a project you're working on, or your favorite game applications. For example, I have a Stack named Wiley on my Dock that holds all the project files I need for the book I'm currently writing.

To create a Stack, just select a folder containing the items and drag the folder to the right side of the Dock. As always, the Dock opens a spot on the right side of the Dock to indicate you're in the zone.

To display the items in a Stack, just click it:

>> **If the Stack holds relatively few items,** they're displayed in a really cool-looking arc that Apple calls a *fan,* and you can click the item you want to open or launch. Figure 3-12 illustrates a typical Stack unfurled as a fan.

>> **If the Stack is stuffed full of many items,** the Stack opens in a grid display, allowing you to scroll through the contents to find what you need.

FIGURE 3-12:
Stacks make it
easy to access
your stuff from
the Dock.
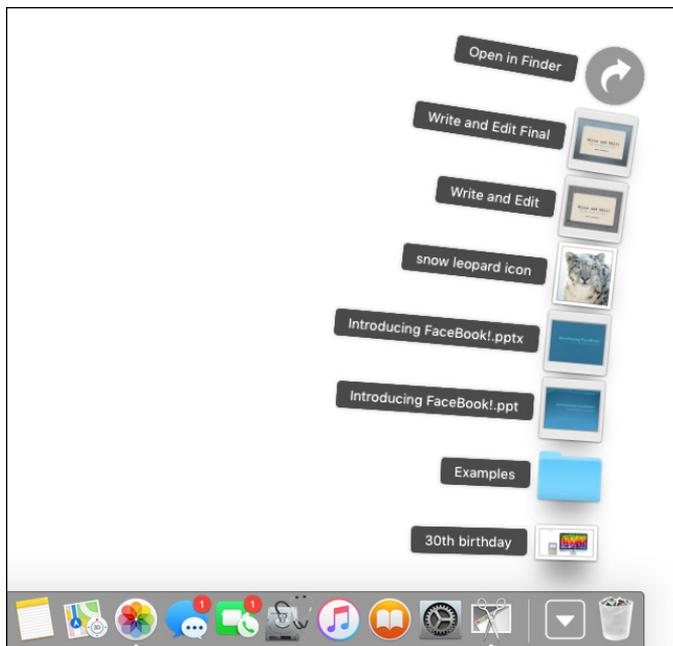
TIP

High Sierra provides a number of display and sorting options for a Stack. Right-click the Stack icon, and you can choose to sort the contents by name, date created or added, date modified, or file type. If you'd prefer a grid display (no matter how many items the Stack contains), you can choose Grid mode. Choose List to display the Stack's contents in much the same way as List view mode in a Finder window. List view mode also allows you to view folders in a Stack as nested menu items. Choose Automatic to return to the default view mode.

When set to Display as Stacks, the Stack icon is displayed using icon images from the contents of the folder; if security is an issue, however, choose Display as Folder from the right-click menu to display the Stack as a plain folder icon instead.

You can remove a Stack from the Dock by right-clicking the Stack icon and choosing Options from the menu that appears. Choose Remove from Dock from the submenu that appears. Alternatively, just drag that sucker right off the Dock.

You can also display the contents of a Stack in a Finder window. Right-click the Stack icon, and choose the Open item at the bottom of the pop-up menu.

TIP

If you add a folder full of items, the Stack is named after the folder; otherwise, High Sierra does the best job it can in figuring out what to name the Stack.

Apple provides a Stack already set up for you: The Downloads folder, situated next to the Trash, is the default location for any new files that you download using Safari or receive in your email. High Sierra bounces the Download Stack icon to indicate that you've received a new item.

Resizing the Dock

You can change the size of the Dock from the Dock settings in System Preferences — but here's a simpler way to resize the Dock, right from the Desktop.

Move your pointer over the vertical solid line that separates the left side of the Dock from the right side; the pointer turns into a funky vertical line with arrows pointing up and down. This is your cue to click and drag while moving up and down, which expands and shrinks the Dock, respectively.

You can also right-click when the funky line pointer is visible to display a menu of Dock preferences. This allows you to change your Dock preferences without the hassle of opening System Preferences and displaying the Dock settings.

What's with the Trash?

Another sign of a Mac laptop power user is a well-maintained Trash can. It's a breeze to empty the discarded items you no longer need, and you can even rescue something you suddenly discover you still need!

The translucent High Sierra Trash icon resides in the Dock, and it works just like the Trash has always worked in macOS: Simply drag selected items to the Trash to delete them.

REMEMBER

Note one *very* important exception: If you drag a Desktop icon for an external device or a removable media drive to the Trash (such as an iPod, DVD, or external hard drive), the Trash icon turns into a giant Eject icon, and the removable device or medium is ejected or shut down — not erased. Repeat, *not erased.* (That's why the Trash icon changes to the Eject icon — to remind you that you're not doing anything destructive.)

Here are other ways to chuck items you select to go to the wastebasket:

>> Choose File ⇨ Move to Trash.

>> Click the Action button on the Finder toolbar, and choose Move to Trash from the list that appears.

>> Press ⌘+Delete.

>> Right-click the item and choose Move to Trash from the menu that appears.

You can always tell when the Trash contains at least one item, because the basket icon is full of crumpled paper. However, you don't have to unfold a wad of paper to see what the Trash holds. Just click the Trash icon in the Dock to display the contents of the Trash. To rescue something from the Trash, drag the item(s) from the Trash folder to the Desktop or any other folder in a Finder window. (If you're doing this for someone who's unfamiliar with High Sierra, remember to act like it was a lot of work, and you'll earn big-time DRP, or *Data Rescue Points.*)

When you're sure that you want to permanently delete the contents of the Trash, use one of these methods to empty the Trash:

>> Choose Finder ⇨ Empty Trash.

>> Press ⌘+Shift+Delete.

>> Right-click the Trash icon in the Dock and choose Empty Trash from the menu that appears.

All You Really Need to Know about Printing

Since we're near the end of this chapter, I turn now to a task that most MacBook owners need to tackle soon after buying their laptop or installing High Sierra: printing documents. Because basic printing is so important (and in most cases, so simple), allow me to demonstrate how to print a document.

Most of us have a Universal Serial Bus (USB) printer — the USB being the favored hardware connection in macOS. As long as your printer is supported by macOS, setting it up is as easy as plugging it into one of your MacBook's USB ports.

TIP

Before you print, *preview!* Would you jump from an airplane without a parachute? Then why would you print a document without double-checking it first? Most applications now have their own built-in Preview thumbnails in the Print sheet, as shown in Figure 3-13 — this is definitely A Good Thing, since you see what the printed document will look like, possibly saving you both paper and some of that hideously expensive ink or toner.
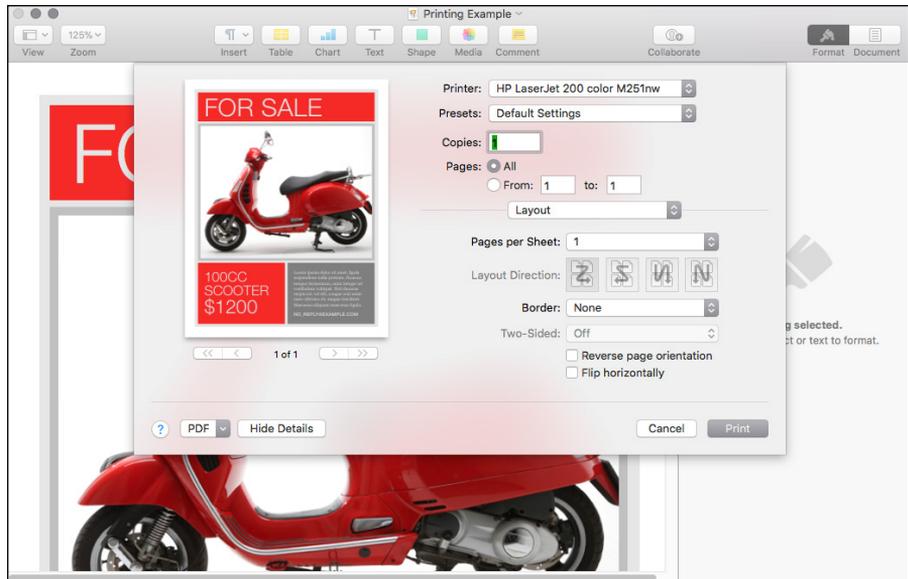
FIGURE 3-13:
The Print Sheet is available from any application with any real guts.

To print from any application using the default page characteristics — standard 8½ x 11″″ paper, portrait mode, no scaling — follow these steps:

1. **In your application, choose File ⇨ Print or press the ⌘+P keyboard shortcut.**

   In most applications, macOS displays the simple version of the Print sheet. (To display all the fields you see in Figure 3-13, click the Show Details button at the bottom of the sheet.) Some applications use their own custom Print dialogs, but you should see the same general settings.

2. **Click in the Copies field, and enter the number of copies you need.**

   You can also enable or disable collation, just as you can with those oh-so-fancy copiers.

3. **Decide what you want to print.**

   - *The whole shootin' match:* To print the entire document, use the default Pages radio button setting of All.

   - *Anything less:* To print a range of selected pages, select the From radio button and enter the starting and ending pages (or, if the application allows it, a selection of individual pages).

4. **(Optional) Choose application-specific printing parameters.**

    Each macOS application provides different panes so you can configure settings specific to that application. You don't have to display any of these extra settings to print a default document, but the power is there to change the look dramatically when necessary. To display these settings, open the Layout pop-up menu in the center of the Print sheet and choose one of these panes. For example, if you're printing from Contacts, you can choose the Contacts entry from the pop-up menu and elect to print a phone list, an envelope, mailing labels, or an email list.

5. **When everything is go for launch, click the Print button.**

    Of course, there are more settings and more functionality to the printing system in macOS. However, I can tell you from my experiences as a consultant and hardware technician that this short introduction to printing will likely suffice for 90 percent of the Mac owners on Earth. 'Nuff said.

And Just in Case You Need Help . . .

You can call on the resources described in this section if you need additional help while you're discovering how to tame High Sierra.

TIP

Some of the help resources are located on the Internet, so your Safari web browser will come in handy when you search for answers.

The High Sierra built-in Help system

Sometimes the help you need is as close as the Help menu on the Finder menu bar. You can get help for either of the following:

» **A specific application:** From the application, just click Help. Then click in the Search box and type a short phrase that sums up your query (such as *startup keys*). You see a list of help topics on the menu. Just click a topic to display more information.

» **General topics:** Click a Finder window and then click Help on the menu bar. Again, you see the Search box, and you can enter a word or phrase to find in the Help system. To display the Help Center window, click the Help Center item under the Search box.

The Apple web-based support center

Apple has online product support areas for every hardware and software product it manufactures. Visit `www.apple.com` and click the Support link at the top of the web page.

TIP

The Search box works just like the macOS Help system, but the knowledge base that Apple provides online has *a lot* more answers.

Magazines

Many magazines and publications (both in print and online) offer tips and tricks on using and maintaining macOS High Sierra.

My personal online favorites are Macworld (`www.macworld.com`) and the Wiley *For Dummies* website (`www.dummies.com`).

Local Mac user groups

I'd be remiss if I didn't mention your local Mac user group. Often, a user group maintains its own website and discussion forum. If you can wait until the next meeting, you can even ask your question and receive a reply from a *real live human being.* This is quite a thrill in today's web–centric world!

To locate a local user group using your Internet connection, launch Safari, click in the Address box, and type

Mac User Group *location*

Instead of *location*, type the desired spot on the map, like

Mac User Group Columbia Missouri

Don't forget to press Return!

2

Shaking Hands with macOS High Sierra

IN THIS PART . . .

Learn more about the new features within macOS High Sierra.

Use System Preferences to fine-tune how High Sierra works.

Keep track of practically everything using Notes, Maps, and Reminders.

Use Spotlight to search your entire system in seconds.

Chapter **4**

What's New in macOS High Sierra?

Have you upgraded to High Sierra from the previous version of macOS, Sierra? (Nothing like a subtle name change to avoid confusion, I always say.) If so, you've opened the door to a number of new features, and this chapter was written especially for you. (And if you're not rubbing your hands together with gleeful anticipation, you *should* be — I know I am.) Here you'll find descriptions of my favorite new features that ship with the latest version of macOS.

Note that a number of other new High Sierra features appear elsewhere in the book — for example, the discussion of customizing settings for individual web-sites appears within the Safari chapter. The new features you find here, however, are what I consider the *real* standouts, so they're showcased separately.

Let the fun begin!

Under the Hood: The New Apple File System

Many of the most important new features in High Sierra work behind the scenes – thus the moniker "Under the Hood." To illustrate: You won't run a new application or choose a new menu item to take advantage of the new *Apple File System* (or APFS) featured in High Sierra, because it's truly the foundation of your MacBook's storage, and it all works automatically and invisibly.

Forgive me while I wax technical for a few seconds: Your MacBook's solid-state drive (or SSD for short) saves and reads every file and folder on your laptop, and it does so at speeds far faster than older magnetic hard drives. However, today's SSD drives were actually running less efficiently under previous versions of macOS than they could be, as they were hobbled by the original Mac OS X file system, which dated back to 2001 and the days of floppy disks. (We're talking antiquity here.)

To address the issue, Apple's engineers redesigned the APFS especially for SSD technology. If that sounds less than heroic, consider the benefits you'll enjoy with every application and macOS function:

» APFS can instantly display file and folder information (like the total size of an overstuffed folder). No more waiting for those pesky calculations!

» Data encryption and security has been improved over the old file system.

» Copying and moving files and folders takes significantly less time.

» Your files and folders are safer in the event of a system crash or sudden loss of power.

"But Mark, my older MacBook still uses a magnetic hard drive! Does this mean I can't run High Sierra?" Never fear, good reader: APFS is backwards-compatible with older hard drives and will run just fine. Naturally, you won't notice much of a speed improvement, since you're not using solid-state technology, but you'll still benefit from the upgrade. Note, however, that an older application that dates back several years might be incompatible with the new file system – contact the developer to see if there's an update to the application that will allow it to run under High Sierra.

Under the Hood: Better Video

Our next "hidden" new feature in macOS High Sierra is the arrival of *High Efficiency Video Coding*, better known by the far less intimidating acronym HEVC. HEVC video files offer up to 40 percent better compression than older video formats, which results in far smaller file sizes. In plain English, movies that you rent and buy from the iTunes Store will take up less space, and streaming sites that feature HEVC video will require less buffering (even on slower broadband connections).

Oh, and here's the payoff: HEVC offers the same quality as the older formats, so your video will look just as good!

Under the Hood: Improved Graphics and Virtual Reality

I'll include one last stowaway within macOS High Sierra: the new graphics engine named *Metal 2*, which will be an amazing boon to gamers, video professionals and virtual reality developers. With Metal 2, you can not only take full advantage of your Mac's built-in graphics hardware (providing mind-blowing visual effects), you can even add an external GPU (short for Graphics Processing Unit) to supercharge your video. Virtual reality fans will thrill to the new support for SteamVR software and the HTC Vive VR headset, finally bringing us closer to a truly seamless VR world!

Adding Functionality to Photos

Although High Sierra's Photos application contains the common image editing functions that most MacBook owners will use the most — such as cropping, rotating, and applying filters — amateur and professional photographers will find that the new version of Photos that accompanies High Sierra adds several powerful features that make it easier to edit and organize a large photo library. For example, the new search, filter, and batch controls allow you to perform the same operation on an entire folder of files. (Can you say, "Rotate every one of these 100 images once clockwise" automatically, instead of manually? Oh, I *knew* you could.) The improved Photos sidebar allows you easy access to every album — even hidden images are now just a click away.

As for editing mode, you're going to appreciate the new advanced tools that Photos provides (shown in Figure 4-1); these controls remind me of other

professional-level image applications, such as Aperture and Adobe Photoshop. And you can still choose to edit images within Photos using a third-party application like Photoshop, but now the process is far more seamless and much easier to use.

FIGURE 4-1: Photos offers new advanced editing controls in High Sierra.

Improved Siri to the Rescue

Are you on an intimate basis with Siri, Apple's voice assistant? There's no shame in admitting it. If so, you're going to love the improvements to Siri:

» Within iTunes, Siri can now recommend music, create playlists and provide you with information about albums or artists.

» If you're in a meeting or want to ask Siri a question without speaking, you can use the new Type to Siri feature. Note, however, that Siri will still speak the results normally.

» Siri now sounds more . . . well . . . *human!* The intonation and expressiveness of your favorite voice is greatly improved.

Banish Scams and Advertisements!

Personally, I find our next standout new feature to be a downright sanity saver: Safari now uses Reader mode automatically if a web page supports it! As you can see in Figure 4-2, the Reader display is far easier on the eyes, and Reader removes all extraneous advertising, images and assorted hoo-hah; in fact, for those of us who date back to the beginning of the World Wide Web, Safari Reader paints the web as it used to look before the arrival of the Commercial Scourge.
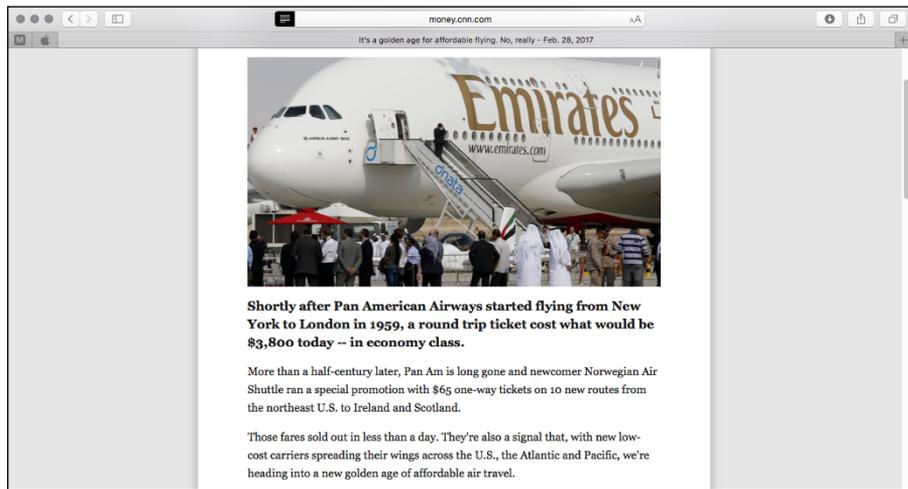

FIGURE 4-2:
Bless you, Safari Reader — the advertisements are gone!

Oh, and you needn't fear losing the content you *do* want to see: Reader provides you with everything on the page, just not the extraneous crud. (More on this treasure in Chapter 8.)

Sharing the Joy of iCloud Drive

If you want to store and share files online using the iCloud Drive provided by macOS, it's time to celebrate: iCloud Drive users can now share files and folders with others using email links! The recipients you select each receive an email with a direct link to the shared file, turning iCloud Drive into a collaboration tool on the order of Dropbox. Best of all, using a shared file is convenient, with no downloading necessary.

Away with Autoplay Videos!

Okay, I know I said that automatic Reader mode was the best thing to hit Safari earlier, but I almost forgot the other killer new feature: Say goodbye to those irritating autoplay videos! How many times have you found yourself grinding your teeth in frustration while your Mac automatically loads some mindless advertising video on a web page? The Apple macOS designers heard your cries, and Safari now prevents videos from starting up by themselves. (If you're on a site where you actually want autoplay videos — such as YouTube — you can enable autoplay for that specific site using the new custom website controls in Safari.)

Chapter **5**

A Nerd's Guide to System Preferences

emember the old TV series *Voyage to the Bottom of the Sea*? You always knew you were on the bridge of the submarine *Seaview* because it had an entire wall made up of randomly blinking lights, crewmen darting about with clipboards, and all sorts of strange and exotic-looking controls on every available surface. You could fix just about anything by looking into the camera with grim determination and barking an order. After all, you were *On the Bridge.* That's why virtually all the dialog and action inside the sub took place on that one (expensive) set: It was the nerve center of the ship, and a truly happenin' place to be. Just like the bridge of your favorite starship from an entire host of TV shows and movies.

In the same vein, I devote this chapter to the System Preferences window and the most commonly used settings within it. After all, if you want to change how High Sierra works or customize the features in our favorite operating system, you should head toward System Preferences. This one window is the nerve center of macOS and a truly happenin' place to be. Sorry, no built-in wall of randomly blinking lights — but you *do* find exotic controls just about everywhere.

An Explanation — without Jargon, No Less

The System Preferences window, shown in Figure 5-1, is a self-contained beast. You can reach it in the following ways:

» Click the Apple menu ( ), and choose System Preferences.

» Click the Time and Date display in the menu bar and then choose Open Date and Time Preferences. In fact, you can also click most of the other menu status icons — including Bluetooth and Wi-Fi — and then choose Open Preferences.

» Right-click any uninhabited area of your Desktop, and choose Change Desktop Background.

» Last, but not least, click the Launchpad icon in the Dock and then click the System Preferences icon (it looks like a collection of gears).

FIGURE 5-1:
The powerhouse of settings and switches: System Preferences.

When the System Preferences window is open, you can click any of the icons to switch to that *pane.* The entire window morphs to display the settings for the selected pane. For example, Figure 5-2 shows the Sound pane, which allows you to set a system alert sound, configure your MacBook's built-in microphone, and choose from several different output options.
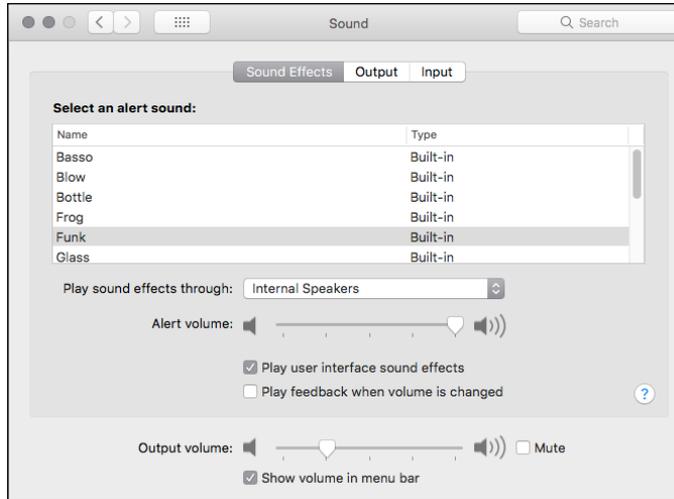
FIGURE 5-2:
The Sound pane, proudly showing off the Sound Effects panel.

Many panes also include a number of tabbed buttons at the top — in this case, Sound Effects, Output, and Input. You can click these tabs to switch to another section in the same pane. Many panes in System Preferences have multiple sections. This design allows our friends at Apple to group a large number of related settings in the same pane (without things getting too confusing).

To return to the top-level System Preferences pane from any other pane, just click the Show All button (located in the upper-left corner of the pane) or press ⌘+L. You can also click the familiar Previous and Next buttons to move backward through the panes you've already visited and then forward again, in sequence. (Yep, these buttons work just like the browser controls in Safari. Sometimes life is funny that way.)

Although the System Preferences panes are arranged by category when you first install High Sierra, you can also display the panes in alphabetical order. To arrange the panes in this way, choose View⇨Organize Alphabetically. Note that you can also select any pane directly from the View menu. Choose View⇨Customize, and you can hide specific icons from the System Preferences window. Just deselect the check box next to each icon you want hidden, and then click Done. You can still reach hidden icons from the System Preferences View menu, so they're not banished forever.

You can right-click the System Preferences icon in the Dock to jump to any pane from the shortcut menu. *Wowzers!*

You won't find an OK button that you have to click to apply any System Preferences changes. Apple's developers do things the right way. Your changes to the settings in a pane are *automatically* saved when you click Show All or when you click the Close button in the System Preferences window. You can also press ⌘+Q to exit the window and save all your changes automatically. This is one of my favorite shortcuts.

If you see an Apply button in a pane, you can click it to immediately apply any changes you made, without exiting the pane. This is perfect for settings you might want to try before you accept them, like many of the controls in the Network pane. However, if you're sure about what you changed and how those changes will affect your system, you don't have to click Apply. Just exit the System Preferences window or click Show All as you normally would.

Locating That Certain Special Setting

Wouldn't it be great if you could search through all the different panes in System Preferences — with those countless radio buttons, check boxes, and slider controls — from one place, even when you're not quite sure what you're looking for?

Figure 5-3 shows exactly that kind of activity taking place. Just click in the System Preferences Spotlight Search box (located in the upper-right corner of the pane, with the magnifying glass icon), and type just about anything. For example, if you know part of the name of a particular setting you need to change, type that. High Sierra highlights the System Preferences panes that might contain matching settings. And if you're a *switcher* from the Windows world, you can even type what you might have called the same setting in Windows.

The System Preferences window dims, and the icons that might contain what you're looking for stay highlighted. *Slick.*
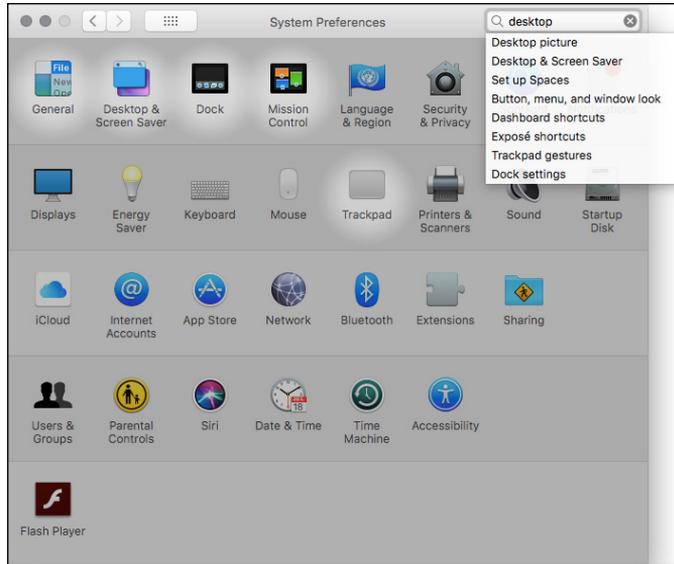
FIGURE 5-3:
Searching for specific settings is a breeze with the Search box.

> You can also search for System Preferences controls by using the Spotlight box from the Finder menu. Find more on this cool feature in Chapter 6.
>
> If you need to reset the Search box to try again, click the X icon that appears at the right side of the box to clear it.

Popular Preferences Panes Explained

It's time to get down to brass tacks: Let's open the most often-used panes in System Preferences to see what magic you can perform. I won't discuss every pane, because I cover many of them in other chapters. In fact, you might never need to open some System Preferences panes, such as the Language & Region pane. This chapter covers just about all the settings you're likely to use on a regular basis.

The Displays pane

If you're a heavy-duty gamer, or you work with applications such as Keynote or Photoshop, you probably switch your monitor's characteristics regularly. To

switch easily, visit the Displays pane, shown in Figure 5-4. It includes three sections:

>> **Display:** To allow High Sierra to choose the best resolution for your display, select the Default for Display radio button. To manually select a resolution, select the Scaled radio button and then click the resolution you want to use from the Resolutions list that appears. In most cases, you want to use the highest resolution.

Move the Brightness slider to adjust the brightness level of your MacBook's display. If you like, you can enable the Automatically Adjust Brightness check box to allow your MacBook to select a brightness level.

To automatically adjust the brightness to match the ambient light around you, enable the Ambient Light Compensation check box.

Ready to stream content to your TV directly from your MacBook — *without cables?* You can use High Sierra's wireless AirPlay Display feature to send the display from your MacBook to your HD-TV. AirPlay requires an Apple TV unit that supports this feature. You can also send the audio from your MacBook directly to an AirPlay-enabled receiver or speaker system. To make it easier to control AirPlay, select the Show Mirroring Options in the Menu Bar When Available check box. (Note that the icon will only appear in your menu bar when you have an Apple TV unit within range.)

>> **Color:** Click a display color profile to control the colors on your screen. To load a profile, click the Open Profile button. To create a custom ColorSync profile and calibrate the colors that you see, click the Calibrate button to launch the Display Calibrator. This easy-to-use assistant walks you step by step through creating a ColorSync profile matched to your MacBook's gamma and white-point values.

>> **Night Shift:** If your MacBook was built in 2012 or later, the Night Shift feature allows High Sierra to automatically adjust your display to provide warmer colors during nighttime operation. Click Schedule to choose either Sunset to Sunrise operation or create your own custom schedule. You can also turn on Night Shift manually using the Turn On Until Tomorrow check box. Finally, adjust the Color Temperature slider to increase or decrease the warmth of colors on your display.

If you connect your MacBook to an external monitor, don't be surprised to see the Arrangement section appear as well. You can drag the output to a different monitor, or drag the menu bar to another screen, or you can choose to mirror the same output to all displays connected to your MacBook.
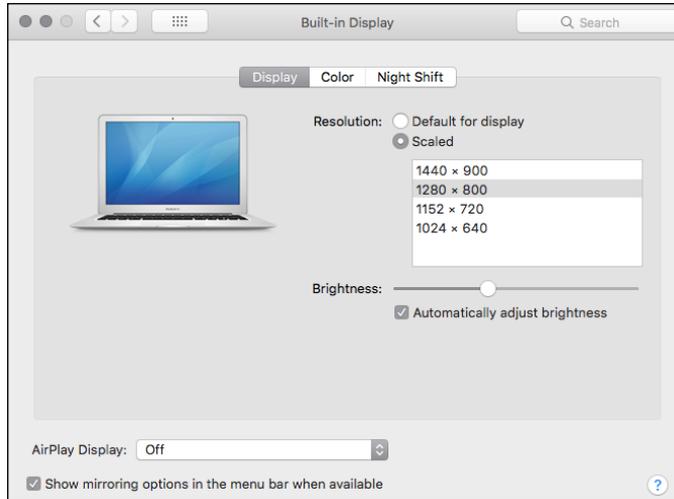
The Desktop & Screen Saver pane

No offense to the awesome High Sierra "sunlit peaks" background, but who doesn't want to choose his or her own background? And what about that nifty screen saver you just downloaded from the Apple website? You can change both the background and screen saver by using these options in the Desktop & Screen Saver pane.

The settings on the Desktop panel, shown in Figure 5-5, are

>> **Current Desktop picture:** You can click a picture in the thumbnail list at the right half of the screen to use it as your Desktop background. The Desktop is immediately updated, and the thumbnail appears in the *well* (the upper-left box in Figure 5-5). To display a different image collection or open a folder of your own images, click the Add Folder button at the lower left of the window (a plus sign) and browse for your heart's desire; then click Choose to select a folder and display the images it contains.

>> **Layout:** You can tile your background image, center it, fill the screen with it (cropping the edges if necessary), and stretch it to fill the screen (without cropping). Note that filling the screen in either case may distort the image. The layout pop-up menu appears only when you're using your own pictures, so you don't see it if you're using a Desktop image supplied by Apple.

>> **Change Picture:** Change the Desktop background automatically after the delay period that you set, including each time you log in and each time your Mac wakes up from sleep mode.

» **Random Order:** To display screens randomly, enable the Random Order check box. Otherwise, the backgrounds are displayed in the sequence in which they appear in the thumbnail list.
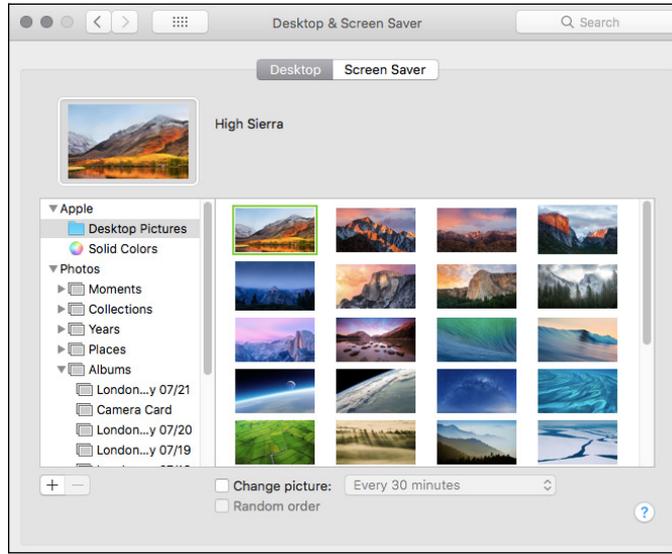

FIGURE 5-5:
Pick your own Desktop background.

The settings on the Screen Saver tab are

» **Screen Saver:** In the Screen Saver list at the left, click any screen saver to preview (on the right). To try out the screen saver in full-screen mode, hover your pointer over the display on the right and click the Preview button that appears. (You can end the test by moving the cursor.) If the screen saver module you select has any configurable settings, click the Screen Saver Options button to display them. (A screen saver is *not* configurable if the Screen Saver Options button doesn't appear.) Choose the Random screen saver to display a different screen saver module each time the screen saver is activated.

» **Start After:** Specify the period of inactivity that triggers the screen saver. To disable the screen saver, choose the Never setting at the top of the list. (Your Start After delay should be a shorter time than the Display Sleep delay you set in the System Preferences Energy Saver pane. Otherwise, you won't see the great screen saver at all. I describe the Energy Saver pane later in this chapter.)

» **Show with Clock:** If you want your selected screen saver to display the time as well, select this check box.

>> **Hot Corners:** Click the Hot Corners button, and then click any of the four pop-up menus at the four corners of the screen. Doing so designates that corner as an *activation hot corner* (immediately activates the screen saver) or as a *disabling hot corner* (prevents the screen saver from activating). As long as the cursor stays in the disabling hot corner, the screen saver doesn't kick in, no matter how long a period of inactivity passes. Note that you can also set the Sleep, Mission Control, Launchpad, Notification Center, and Dashboard activation corners from here. For the scoop on these features, see the next section.

TIP

For additional security, check out the Security & Privacy pane in System Preferences, where you find the Require Password After Sleep or Screen Saver Begins check box. When you select this check box, High Sierra requires your user account password before allowing anyone to turn off the screen saver (a great idea when traveling, as you can imagine).

Mission Control preferences

Figure 5-6 shows the Mission Control, Spaces, and Dashboard settings you can configure in this group. You can use Mission Control to view all the application windows you're using at one time so that you can select a new active window. Or you can move all windows aside so that you can see the Desktop. Dashboard presents a number of mini-applications (or *widgets*), which you can summon and hide by pressing a single key.
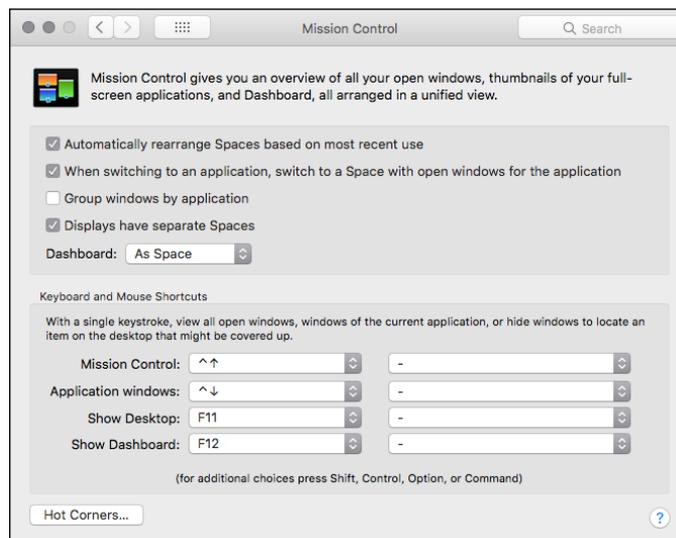

FIGURE 5-6:
Set your
Mission Control
preferences here.

The settings are

>> **Automatically Rearrange Spaces Based on Most Recent Use:** If this check box is selected, Mission Control presents your most recently used Spaces first in the thumbnails at the top of the screen.

>> **When Switching to an Application:** When selected, this check box allows you to switch applications between Spaces desktops by using the ⌘+Tab shortcut. Yosemite jumps to the Desktop that has an open window for the application you choose, even if that Desktop is not currently active.

>> **Group Windows by Application:** When selected, this check box automatically arranges windows in the Mission Control screen by the application that created them.

>> **Displays Have Separate Spaces:** If you have multiple monitors connected to your Mac, you can select this check box to create a separate Spaces display for each monitor.

TIP

To display your Dashboard as a Space (a virtual desktop) in the Mission Control screen, click the Dashboard pop-up menu and choose the As Space option. If you prefer your Dashboard widgets to appear as an overlay over your Desktop, select the As Overlay option from the pop-up menu.

>> **Keyboard and Mouse Shortcuts:** From each pop-up menu, set the key sequences (and mouse button settings) for Mission Control, Application Windows, Show Desktop, and Show Dashboard.

REMEMBER

You're not limited to keyboard and mouse shortcuts in the pop-up menus. Press the Shift, Control, Option, and ⌘ keys while a pop-up menu is open, and you see these modifiers appear as menu choices! (Heck, you can even combine modifiers, such as ⌘+Shift+F9 instead of just F9.)

>> **Hot Corners:** Click the button at the lower-left corner of the pane to specify your hot corner settings. These four pop-up menus operate just like hot corners and active screen corners in the Desktop & Screen Savers pane, allowing you to control the operation of the screen management features within High Sierra. Click one to designate that corner as one of the following:

- *A Mission Control corner* displays the Mission Control screen.

- *An Application Windows corner* displays only the windows from the active application.

- *A Desktop corner* moves all windows to the outside of the screen to uncover your Desktop.

- *A Dashboard corner* displays your Dashboard widgets.

- *A Launchpad corner* activates the Launchpad screen.

- *A Notification Center corner* displays the Notification Center strip at the right side of your Desktop.

Note that you can also set the Screen Saver Start and Disable corners from here, as well as put your display to sleep.

The General pane

The talented General pane, shown in Figure 5-7, determines the look and operation of the controls that appear in application windows and Finder windows. It looks complex, but I cover each option here.
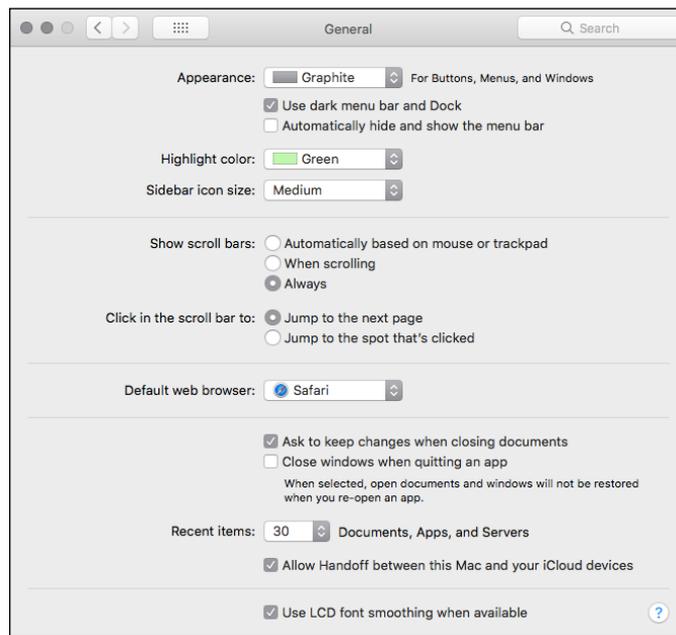
FIGURE 5-7: Appearances might not be everything, but they're easy to find here.

The settings are

>> **Appearance:** Choose a color to use for buttons, menus, and windows. Click the Use Dark Menu Bar and Dock check box to switch to a dark scheme for your Finder menu bar and Dock. You can also choose to hide the Finder menu bar — to display it, move your pointer to the top of the screen.

>> **Highlight Color:** Choose a color to highlight selected text in fields and pop-up menus.

>> **Sidebar Icon Size:** Select the size of the icons in the Finder window Sidebar. It's the strip to the left of the Finder window that displays your devices and favorite locations on your system. If you have a large number of hard drives, or if you've added several folders to the Sidebar, reducing the size of the icons allows you to display more of them without scrolling.

>> **Show Scroll Bars:** Specify when High Sierra should display scroll bars in a window. By default, they're placed automatically when necessary, but you can choose to display scroll bars always or only when you're actually scrolling through a document.

>> **Click in the Scroll Bar To:** By default, macOS jumps to the next or previous page when you click in an empty portion of the scroll bar. Select the Jump to the Spot That's Clicked radio button to scroll the document to the approximate position in relation to where you click.

>> **Default Web Browser:** Click this pop-up menu to specify which application Yosemite should use to display web pages. By default, macOS uses the Safari web browser.

>> **Ask to Keep Changes When Closing Documents:** If you select this check box, High Sierra prompts you for confirmation if you attempt to close a document with unsaved changes. If the check box is deselected, High Sierra allows the unsaved document to be closed without saving a new version.

>> **Close Windows When Quitting an App:** If this check box is deselected, the macOS Resume feature automatically saves the state of an application when you quit. When you relaunch the application again, High Sierra restores all application windows and opens the documents you were working on when you quit. In effect, you can continue using the application just as if you had never quit. If you select the check box, High Sierra does not restore your work, and you have to reload your document.

>> **Recent Items:** The default number of recent applications, documents, and servers (available from the Recent Items item in the Apple menu [🍎]) is 10. To change the default, open the pop-up menus here and choose up to 50. (I like 20 or 30.)

>> **Allow Handoff Between this Mac and Your iCloud Devices:** If this check box appears within the General pane, you can enable it to turn on Handoff functionality within High Sierra. (I discuss Handoff within the confines of Chapter 9.) Note that this check box will not appear on older MacBooks without compatible Bluetooth hardware.

>> **Use LCD Font Smoothing When Available:** By default, this check box is enabled, making the text on your MacBook's display appear more like the printed page. You can turn off this feature to speed up text display slightly.

The Energy Saver pane

I'm an environmentalist — it's surprising how many techno types are colored green — so the two sections on this pane are pretty doggone important. When you use them correctly, you not only conserve battery power but also invoke the Power of High Sierra to automatically start up and shut down your laptop whenever you like!

Move the Computer Sleep slider, shown in Figure 5-8, to specify when High Sierra should switch to sleep mode. The Never setting disables sleep mode. To choose a separate delay period for blanking your screen, drag the Display Sleep slider to the desired period. You can also power down the drive to conserve energy and prevent wear and tear (an especially good feature for laptops with magnetic hard drives).
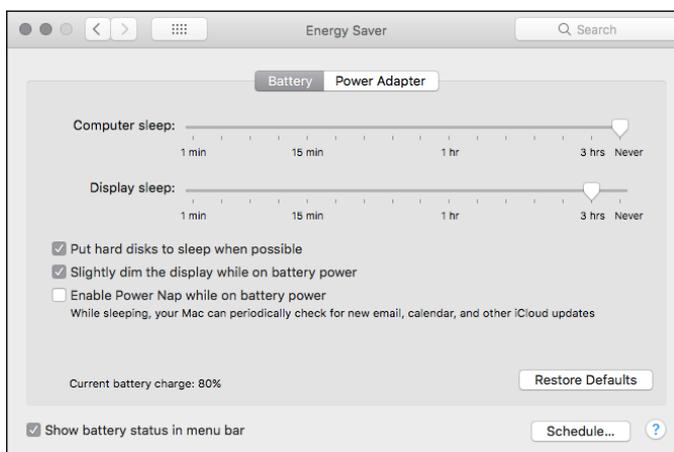

FIGURE 5-8: Reduce your MacBook power consumption from the Energy Saver pane.

Enable the Slightly Dim the Display While on Battery Power check box to save additional power by reducing the brightness of your MacBook's screen. (I can hardly notice the difference, but your laptop's battery will thank you!)

TIP

If you want to start up or shut down your laptop at a scheduled time, click the Schedule button. Select the desired schedules (the Start Up or Wake check box and the Shut Down/Sleep check box) to enable them. Then click the up and down arrows next to the time display to set the trigger time. Click OK to return to the Energy Saver pane.

Mac laptop owners can set two separate Energy Saver configurations by clicking one of the two tabs at the top of the pane:

» **Battery:** Applies when the MacBook is running on battery power

» **Power Adapter:** Kicks in when the laptop is connected to an AC outlet

Your MacBook automatically switches to the proper configuration when you plug in or unplug your laptop.

Some of the settings can toggle events that control sleep mode in High Sierra, including a Wi-Fi network connection (the Wake for Wi-Fi Network Access check box, which appears on the Power Adapter section). You can also set macOS to automatically update iCloud data while in sleep mode, using the Enable Power Nap feature (supported only on all current MacBook models).

Naturally, MacBook owners will want to click the Show Battery Status in Menu Bar check box to select it.

The Dock pane

I'll come clean: I think the Dock is the best thing since sliced bread. (I wonder what people referred to before sliced bread was invented?) You can use the settings shown in Figure 5-9 to configure the Dock's behavior until it fits your personality like a glove:

- **Size:** Pretty self-explanatory. Just drag the slider to change the Dock's scale.

- **Magnification:** When you select this check box, each icon in the Dock swells like a puffer fish when you move the cursor over it. (The Magnification slider determines just how much it magnifies.) I really like this feature because I resize my Dock smaller, and I have a large number of Dock icons.

- **Position on Screen:** Select a radio button here to position the Dock on the left, bottom, or right edge of the Desktop.

- **Minimize Windows Using:** High Sierra includes two cool animations that you can choose from when shrinking a window to the Dock (and expanding it back to the Desktop). Click the Minimize Windows Using pop-up menu to specify the genie-in-a-bottle effect or the scale-up-or-down-incrementally effect.

- **Prefer Tabs when Opening Documents:** This setting allows you to specify when your applications should open documents in a new tab display or within a new document window. You can choose to use tabs always, only when using full-screen mode, or only when you actually create a new tab in the application itself. (Note that if an application doesn't support tab display, new documents will open in a window.)

- **Double-Click a Window's Title Bar to Minimize/Zoom:** Select this check box to minimize or zoom a Finder or application window by simply double-clicking the window's title bar.

- **Minimize Windows into Application Icon:** If this check box is not enabled, minimized application windows appear as thumbnail icons on the Dock. To

minimize application windows into the application icon on the Dock — which can save space on your Dock — select this check box. (To restore a window that's been minimized into the application icon, right-click the icon on the Dock and choose Restore from the menu that appears.)

» **Animate Opening Applications:** Active souls who like animation probably get a kick out of the bouncing application icons in the Dock, which indicate that you've launched an application and that it's loading. If you find this effervescence overly buoyant or distracting, deselect this check box.

» **Automatically Hide and Show the Dock:** Select this check box, and the Dock disappears until you need it. (Depending on the size of your Dock, the Desktop real estate you gain can be significant.) To display a hidden Dock, move the cursor over the corresponding edge of the Desktop.

» **Show Indicators for Open Applications:** macOS indicates which applications are running in the Dock with a small gray dot in front of the icon. To disable these indicators, deselect this check box.
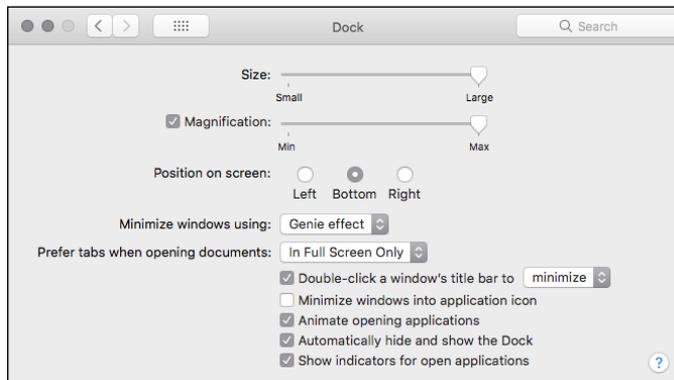

FIGURE 5-9:
Customize your
Dock with these
controls.

You can also change most of these Dock preferences settings from the Apple menu.

The Sharing pane

So you're in a neighborly mood, and you want to share your toys with others on your local wired or wireless network. Perhaps you'd like to start your own website or protect yourself from the Bad Guys on the Internet. All these fun diversions are available from the Sharing pane in System Preferences, as shown in Figure 5-10.
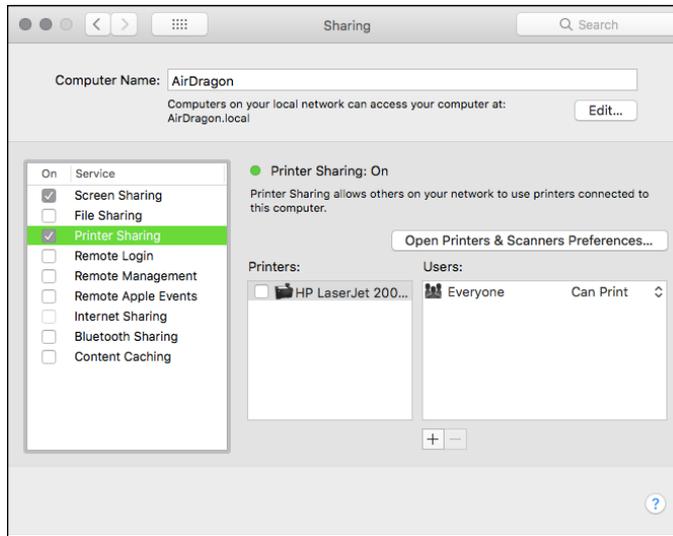
FIGURE 5-10:
Use controls on the Sharing pane to share your toys.

Click the Edit button to change the default network name assigned to your Mac-Book during the installation process. Your current network name is listed in the Computer Name text field.

Each entry in the services list controls a specific type of sharing, including DVD and CD Sharing (if you have an optical drive), Screen Sharing, File Sharing (with other Macs and PCs running Windows), Printer Sharing, Remote Login, Remote Management (using Apple Remote Desktop), Remote Apple Events, Internet Sharing, Bluetooth Sharing and Content Caching (which stores updates and other content for later installation). To turn on any of these services, select the On check box for that service. To turn off a service, click the corresponding On check box to deselect it.

From a security standpoint, I highly recommend that you enable only the services you actually use. Each service you enable automatically opens your High Sierra firewall for that service. Here's a Mark's Maxim to remember:

Poking too many holes in your firewall is *not* A Good Thing.™

MARK'S
MAXIMS

When you click one of the services in the list, the right side of the Sharing pane changes to display the settings you can specify for that particular service.

The Time Machine pane

MacBook users are thrilled with the Time Machine automatic backup feature that's built in to High Sierra. It's saved my stuff numerous times. You can easily

configure how Time Machine handles your backups from this pane, as shown in Figure 5-11. Chapter 21 covers how to use Time Machine. Of course, you need an external drive (or an AirPort Time Capsule wireless backup device) for the best backup security. Note that Time Machine doesn't work with a CD or DVD rewriteable drive; you must use an external drive or a high-capacity USB flash drive.

FIGURE 5-11:
Put Time Machine to work, and your data is always backed up.

To enable Time Machine, click the On toggle switch and then select a disk to hold your Time Machine backup data on the sheet that appears. Click Use Disk to confirm your choice. (Your external backup drive should be at least twice the capacity of your internal drive, thus ensuring that your backup files have the elbow room they need.) If you have an external Time Capsule wireless unit, click Set Up instead.

By default, Time Machine backs up all the drives on your system; however, you may not need to back up some folders on your MacBook. To save time and backup drive space, Time Machine allows you to exclude specific folders from the backup process. Click Options and then click the Add button (with the plus sign) to select the drives or folders you want to exclude. They appear in the Exclude These Items From Backups list.

TIP To remove an exclusion, select it in the list, and click the Delete button (with the minus sign). Note that the Estimated Size of Full Backup figure increases, and Time Machine adds the item you deleted from the list to the next backup.

TIP If you enable the Show Time Machine in Menu Bar check box, you can elect to back up your Mac immediately by clicking the Time Machine icon in the Finder menu bar and then choosing Back Up Now.

By default, High Sierra warns you when deleting older backup files, but you can turn this off from the Options sheet as well.

iCloud preferences

From the High Sierra iCloud Preferences pane, shown in Figure 5-12, you can specify which types of data are automatically pushed to your MacBook and iOS devices. If you haven't created an iCloud account yet — or if you signed out of an existing account earlier — System Preferences prompts you to enter your Apple ID and password. Click Sign In to display the contents of the iCloud pane.

High Sierra allows you to set up Family Sharing, where up to six accounts can share photos, iTunes media and apps, and a common calendar — group members can even display the current location of other members who are carrying MacBooks or iOS devices! Click the Set Up Family button and then click Continue to launch the Family Sharing setup assistant.

The check boxes for each category are

- ❯❯ **iCloud Drive:** Enable and disable iCloud Drive access for specific applications.

- ❯❯ **Photos:** Push the latest photos and video clips you've added in Photos to other devices, and update your Photos library with photos and video clips pushed from your iOS devices.

- ❯❯ **Mail:** Synchronize your Mail account settings between devices.

- ❯❯ **Contacts:** Push your Contact cards between devices.

- ❯❯ **Calendars:** Push your calendar events to and from your iOS devices.

- ❯❯ **Reminders:** Synchronize the reminders you've set between devices.

- ❯❯ **Safari:** Synchronize your Safari bookmarks.

>> **Notes:** Synchronize your Notes between devices.

>> **Siri:** Synchronize your Siri configuration.

>> **Keychain:** Share passwords for applications and websites between your devices.

>> **Back to My Mac:** Control file and screen sharing across all the Macs sharing this iCloud account. Back to My Mac must be enabled on all computers that will use this feature.

>> **Find My Mac:** Locate your MacBook from a web browser or your iOS device. You can also choose to remotely lock your computer — or even *wipe your laptop's hard drive completely* to prevent someone from stealing your data.

WARNING

Wiping your MacBook remotely is a drastic step that will prevent you from locating it in the future.

To display the storage currently being used by your mail, backups, documents, and application data, click the Manage button at the lower right of the pane. Apple provides each iCloud account 5GB of space for free, but you can also elect to buy additional storage from this sheet.

Notifications preferences

The Notifications group is shown in Figure 5-13. Each application that can display notifications appears in the list at the left of the pane.
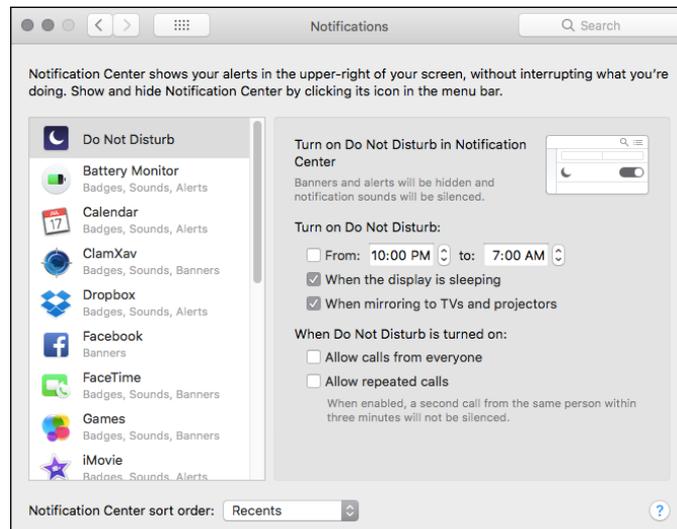

FIGURE 5-13: Each application that uses notifications can be individually configured.

TIP Click the Do Not Disturb entry in the list at the left to set Do Not Disturb mode, where Notification banners, alerts, and sounds are disabled. You can specify a time period, turn on Do Not Disturb when your MacBook is in sleep mode, or turn on Do Not Disturb when you're mirroring (or sending) the video from your Mac-Book to a TV or projector. You can also optionally allow FaceTime calls from any-one while Do Not Disturb is active or just from those you've marked as Favorites in FaceTime. If you select Allow Repeated Calls, a FaceTime caller can call a second time within three minutes without being disabled.

Click an application in the list at the left to configure its notifications. Different applications display different options in the settings pane, but the settings can include the following:

- » **Alert Style:** These three buttons specify which type of alert should appear under the Notification Center icon in the menu bar. You do not need to display the Notification Center to see alerts, which appear on your Desktop. Choose None to disable alerts for this application. Choose Banners to display alert messages that automatically disappear after a delay. Choose Alerts to display alert messages that remain onscreen until you click the confirmation button in the Alert dialog.

- » **Show Notifications on Lock Screen:** If it appears, you can select this check box to allow notifications even if your MacBook is displaying the Lock screen.

- » **Show in Notification Center:** To display notification messages from this application in the Notification Center, select this check box. You can also specify how many recent messages from this application are displayed.

- » **Badge App Icon:** This check box toggles on and off the display of this application's icon in alert boxes and in the Notification Center. It also activates the numeric display of pending items on the icon itself (for example, unread mail and messages).

- » **Play Sound for Notifications:** To play a sound when alerts appear, enable this check box.

TIP You can change the order that notifications are sorted in the Notification Center using the Notification Sort Order drop-down list box at the bottom of the pane. The default sort is by the most recent, but you can choose Recents by App to sort recent notifications grouped by applications. For the ultimate in custom notifica-tions, choose Manually by App from the drop-down list box and drag the applica-tions in the list at the left to your desired order.

Chapter **6**

Sifting Through Your Stuff

W hat would you say if I told you that you could search your entire system for all the data connected with a person — and in only the short time it takes to type that person's name? And I'm not just talking about files and folders that might include that person's name. I mean *every* email message and *every* Calendar event that references that person — and even that person's Contacts card to boot. Heck, how about if that search could dig up every occurrence of the person's name inside your PDF documents? What if it could even search folders shared on other Macs across your network?

You'd probably say, "That makes for good future tech. I'll bet I can do that in five or ten years. It'll take Apple at least that long to do it — and just in time for me to buy a new MacBook! (Harrumph.)"

Don't be so hasty. You can do all this right now. (In fact, this functionality has been part of macOS for a number of years.) The technology is the macOS feature named *Spotlight,* built into High Sierra. In this chapter, I show you how to use it like a MacBook power guru. I also show you how to take advantage of Internet search widgets you can display within the Dashboard. (From what I hear, there's good stuff on the Internet, too.)

Doing a Basic Search

Figure 6-1 shows the Spotlight search box, which is always available from the Finder menu bar. Click the magnifying glass icon once (or press ⌘+spacebar), and the Spotlight search box appears on your Desktop, front and center.
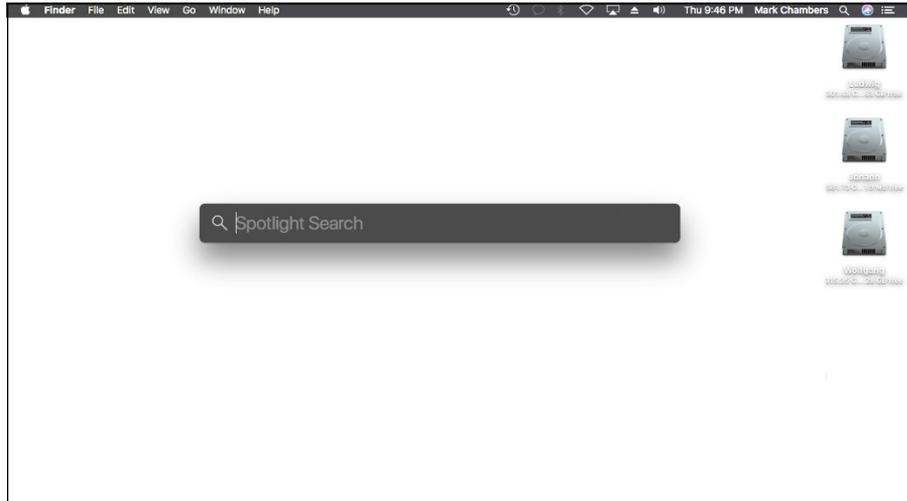
FIGURE 6-1:
Lots of power purrs behind this single Spotlight Search box.

To run a search, simply begin typing. (The words you type that you want to match are called *keywords*.) Matching items appear as soon as you type, and the search results are continually refined while you type the rest of your search keywords. You don't need to press Return to begin the search.

After a second or two, the Spotlight search box expands to display the results of your search, and the list is updated automatically in real time while you continue to type. The most relevant items are grouped into categories — such as Messages, Definitions, Documents, Folders, Images, PDFs, and Contacts, right on the Spotlight search box. Spotlight takes a guess at the item that's most likely the match you're looking for (based on your Search Results list in System Preferences, which I cover later in the chapter) and presents it first. To open the top item like a true High Sierra power user, just press Return. (My brothers and sisters, it just doesn't get any easier than that.)

> **TIP**
>
> Although one or two keywords is typically enough to do the job, you can also type phrases, such as **emails from Mark Chambers** or **songs with sunshine in the title**.

TIP

Single-click any item in the list, and *shazam!* — Spotlight uses the Quick Look technology built in to High Sierra to display the contents (such as a thumbnail image of a document or an album cover) or information on the item! For example, if the item is an iTunes playlist, you'll see the song list in the results pane on the right, and you can click one of the songs to open iTunes and play it. If the item is a Mail message, click it once in the list to view the contents of the message — without leaving the Spotlight box.

When you click an item in the list, Spotlight indicates which application will be used to open the item by displaying the icon for that application in the upper-right corner of the Spotlight box — for example, you'll see the iTunes icon for a song and the Safari icon for a website.

Literally, any text string is acceptable as a Spotlight search. However, here's a short list of the common search criteria I use every day:

» **Names and addresses:** Because Spotlight has access to the Contacts application in High Sierra, you can immediately display contact information using any portion of a name or an address.

» **Email message text:** Need to open a specific email message, but you'd rather not launch Mail and spend time digging through the message list? Enter the person's email address or any text string contained in the message you're looking for.

» **File and folder names:** A simple item name is the classic search favorite. Spotlight searches your entire system for that one file or folder in the blink of an eye.

» **Events and Reminder items:** Yep, Spotlight gives you access to your Calendar events and those all-important Reminders you've created.

» **Specific songs and playlists:** Itching to hear "Rock Me Amadeus" by Falco? With the power of Spotlight and your iTunes library, you can satisfy your musical needs in seconds.

» **System Preferences:** Now things start to get *really* interesting. Try typing the word **desktop** in the Spotlight field. At least one of the results in the list will be a System Preference pane. That's right: Every setting in System Preferences is referenced in Spotlight. For example, the Desktop background setting resides in the Desktop & Screen Saver pane in System Preferences.

» **Weather, stocks, and sports scores:** Put Spotlight to work and you can get instant displays of current weather and forecasts (type **weather** followed by a town name), stock figures (type the desired stock abbreviation), and even sports scores (type your favorite team name).

- **Web pages:** *Whoa.* Stand back, Google. You can use Spotlight to search the web — and, if necessary, the web pages you've recently displayed in Safari.

- **Metadata:** This category is pretty broad, but it fits. If you're not familiar with the term *metadata*, think of the information stored by your digital camera each time you take a photo — exposure setting, time and date, and even the location where the photo was taken, which are also transferred to iPhoto when you import. Here's another example: I like to locate Word documents on my system using the same metadata that's stored in the file, such as the contents of the Comments field in a Word document. Other supported applications include Adobe Photoshop images, Microsoft Excel spreadsheets, Keynote presentations, iTunes media, and other third-party applications that offer a Spotlight plug-in.

- **Airline flight information:** Type in a flight number, and let Spotlight provide you with information like the flight's status, point of departure and arrival, and even the gate numbers.

To reset the Spotlight search and try another text string, press ⌘+A to select the entire contents and then press Delete.

After you find the item you're looking for in the list at the bottom of the Spotlight box, you can double-click the entry in the list to do any of these things:

- Launch it (if the item is an application).

- Open it in System Preferences (if it's a setting or description on a Preferences pane).

- Open it within the associated application (if the item is a document, website, or data item).

- Display it in a Finder window (if the item is a folder).

> **TIP**
>
> Here's another favorite timesaver: You can display all the files of a particular type on your system by using the file type as the keyword. For example, to provide a list of all images on your system, just use *images* as your keyword — the same goes for *movies* and *audio,* too.

How Cool Is That? Discovering What Spotlight Can Do

Don't get fooled into simply using Spotlight as another file-'n'-folder-name search tool. Sure, it can do that, but Spotlight can also search *inside* PDFs, Pages, Word documents, and HTML files, finding matching text that doesn't appear in

the name of the file. To wit: A search for *High Sierra* on my system pulls up all sorts of items with *High Sierra* not only in their names but also files with *High Sierra in* them:

>> **Apple Store SF.ppt** is a PowerPoint presentation with several slides containing the text *High Sierra.*

>> **bk01ch03.doc** is a rather cryptically named Microsoft Word file (a chapter of this book that mentions High Sierra in several spots).

>> **Conference Call with Amy** is a Calendar event pointing to a conference call with my editor about upcoming High Sierra book projects.

Not one of these three examples has the words *High Sierra* occurring anywhere in the title or filename, yet Spotlight found them because they all contain the text *High Sierra* therein. That, dear reader, is the *true* power of Spotlight, and how it can literally guarantee you that you'll never lose another piece of information that Spotlight can locate in the hundreds of thousands of files and folders on your hard drive!

Heck, suppose that all you remember about a file is that you received it in your mail last week or last month. To find it, you can type time periods, such as *yesterday, last week,* or *last month,* to see every item that you saved or received within that period. (Boy, howdy, I *love* writing about TGIs — that's short for Truly Good Ideas.)

IS SPOTLIGHT SECURE?

So how about all those files, folders, contacts, and events that you *don't* want to appear in Spotlight? What if you're sharing your Mac as a multiuser computer or accessing other Macs remotely? Can others search for and access your personal information through Spotlight?

Definitely not! The results displayed by Spotlight are controlled by file and folder permissions as well as your account login, just as the applications that create and display your personal data are. For example, you can't access other users' calendars using Calendar, and they can't see your Mail messages. Only *you* have access to your data, and only after you've logged in with your username and password. Spotlight works the same way. If a user doesn't normally have access to an item, the item simply doesn't appear when that user performs a Spotlight search. In other words, only you get to see your stuff.

However, you can hide certain folders and disks from your own Spotlight searches if necessary. Check out the final section of this chapter for details on setting private locations on your system.

Be careful, however, when you're considering a search string. Don't forget that by default Spotlight matches only those items that have *all* the words you enter in the Spotlight box. To return the highest number of possible matches, use the fewest number of words that will identify the item; for example, use *horse* rather than *horse image,* and you're certain to be rewarded with more hits. On the other hand, if you're looking specifically for a picture of a knight on horseback, using a series of keywords — such as *horse knight image* — shortens your search considerably. It all depends on what you're looking for and how widely you want to cast your Spotlight net.

To allow greater flexibility in searches, Apple also includes those helpful Boolean friends that you may already be familiar with: AND, OR, and NOT. For example, you can perform Spotlight searches such as these:

» **Horse AND cow:** Collects all references to both those barnyard animals into one search

» **Batman OR Robin:** Returns all references to either Batman or Robin

» **Apple NOT PC:** Displays all references to Apple that don't include any information about dastardly PCs

Expanding Your Search Horizons

I can just hear the announcer's voice now: "But wait, there's more! If you double-click the Show All in Finder menu item at the bottom of your search results list, we'll expand your Spotlight search box into the Finder search window!" (Fortunately, you don't have to buy some ridiculous household doodad.)

TIP

Keyboard mavens will appreciate the Finder search window shortcut key, and I show you where to specify this shortcut in the final section of this chapter.

Figure 6-2 illustrates the Finder search window. To further filter the search, click one of the buttons on the search criteria bar to create your own custom filter. Click the button with the + (plus) on the search criteria bar and then click the pop-up menus to choose from criteria, such as the type of file, the text content, or the location on your system (for example, your hard drive, your Home folder, or a network server). You can also filter your results listing by the date when the items were created or last saved. To add or delete criteria, click the + (plus) and − (minus) buttons at the right side of the search criteria bar. To save a custom filter that you've created, click the Save button.
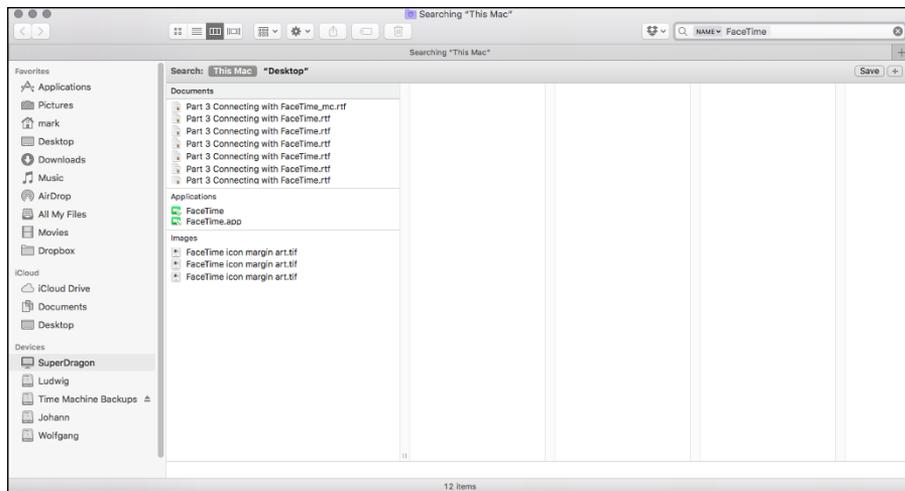
Images appear as thumbnail icons, so you can use that most sophisticated search tool — the human eye — to find the picture you're looking for. (If you don't see thumbnail images, click the Icon view button on the toolbar.) Don't forget that you can increase or decrease the size of the icons by dragging the slider at the bottom right of the window.

TIP

To display the contents of an item in the list (without leaving the comfortable confines of the Finder search window), click the item to select it and press the spacebar for a better view. Note that High Sierra must recognize the format of the file, and it must be supported by at least one application.

Again, when you're ready to open an item, just double-click it in the Finder search window.

As I mention earlier, Spotlight can look for matching items on other Macs on your network only if those remote Macs are configured correctly. To allow another Mac to be visible to Spotlight on your system, enable File Sharing on the other Mac. Oh, and remember that you need an admin level account on that Mac — or access to a good friend who has an admin level account on that Mac.

Follow these steps to enable file sharing on the other Mac:

1. **On the Dock, click the System Preferences icon (it's the one with the gears).**

2. **Click the Sharing pane.**

3. **In the service list on the left side of the Sharing pane, select the On check box next to the File Sharing item to enable it.**

4. **Click the Close button in the System Preferences window. Or, if you're a keyboard power user, simply press the ⌘+Q shortcut.**

REMEMBER

You can search only those items for which you have rights and permissions to view on the remote Mac (such as the contents of the Public folders on that computer). I discussed more about these limitations earlier in this chapter, in the "Is Spotlight secure?" sidebar.

Customizing Spotlight to Your Taste

You might wonder whether such an awesome macOS feature has its own pane in System Preferences — and you'd be right again. Figure 6-3 shows off the Spotlight pane in System Preferences: Click the System Preferences icon on the Dock and then click the Spotlight icon to display these settings.
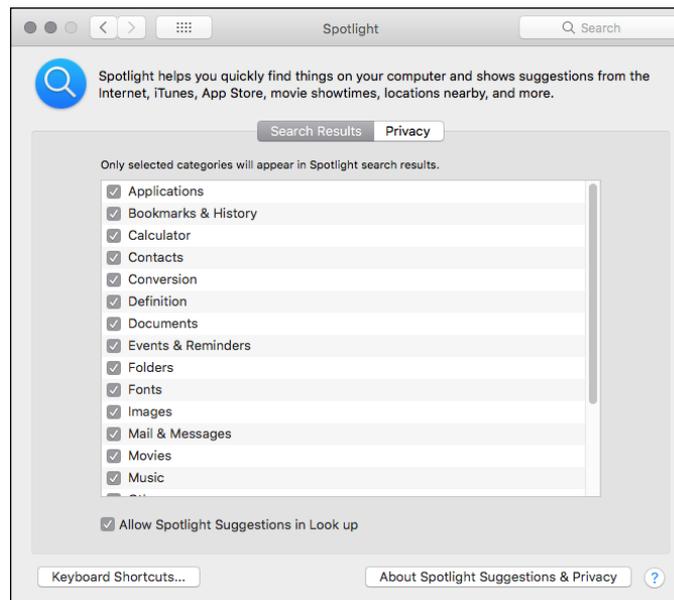
FIGURE 6-3:
Fine-tune your Spotlight menu and Results window from System Preferences.

Click the Search Results tab to

» **Determine which categories appear in the Spotlight search box.** For example, if you don't use any presentation software on your Mac, you can clear the check box next to Presentations to disable this category (thereby making more room for other categories that you will use).

» **Specify the Spotlight search box and Finder search window keyboard shortcuts.** You can enable or disable either keyboard shortcut and choose the key combination from the pop-up menu. By default, the menu keyboard shortcut is ⌘+spacebar, and the Finder search window keyboard shortcut is ⌘+Option+spacebar.

Click the Privacy tab (shown in Figure 6-4) to specify disks and folders that should **never** be listed as results in a Spotlight search. I know, I know — I said earlier that Spotlight respected your security, and it does. However, the disks and folders that you add to this list won't appear even if *you* are the one performing the search — a great idea for folders and removable drives that you use to store sensitive information, such as medical records.
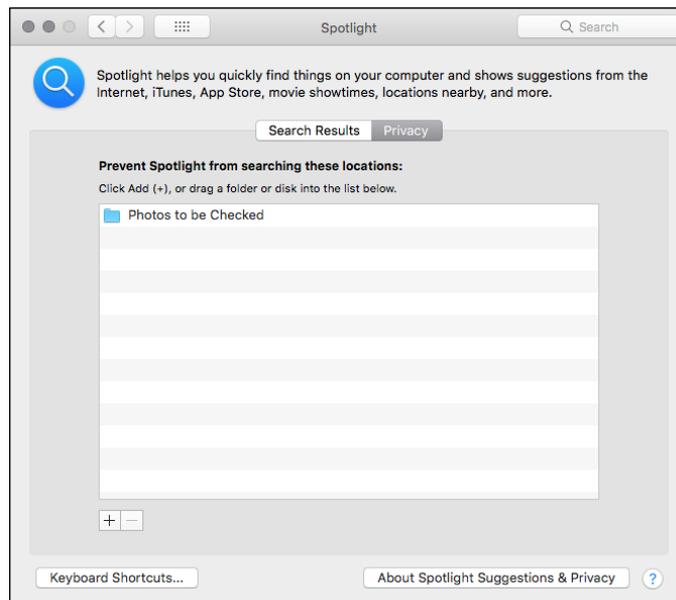
FIGURE 6-4:
When certain folders and disks must remain private (even from you!), add them to this list.

To add locations that you want to keep private, click the Add button (a plus sign) and navigate to the desired location. Click the location to select it and then click Choose. Alternatively, you can drag folders or disks directly from a Finder window and drop them into the pane.

Chapter **7**

Using Reminders, Notes, Notifications, and Maps

As I've said many times before in my books, "If it works in one place, it's likely to show up in another." In this case, four popular time-saving (and headache-preventing) apps have crossed over from the world of iOS devices — the iPhone, iPad, and iPod touch — and have securely landed on your High Sierra Desktop. These apps are Reminders, Notes, Notification Center, and Maps, all taken from the iOS world.

That's not the only good news, though: These four Mac applications work seamlessly with an iCloud account. So if you also use an iOS device (with the same Apple ID), much of the data you store — such as the notes you take and the reminders you make — is automatically synchronized between all your Apple computers and devices.

Because all four of these new applications have a similar goal — keeping you in touch with the information, daily tasks, locations, and digital events that matter to you — I decided to cover them in one shiny chapter. Consider this chapter a guide that demonstrates how you can remind, note, notify, and map like a mobile power user.

Remind Me to Use Reminders

You don't need to look far to find the Reminders application on your Mac. Just click the Reminders icon on the Dock to display the main window, as shown in Figure 7-1.
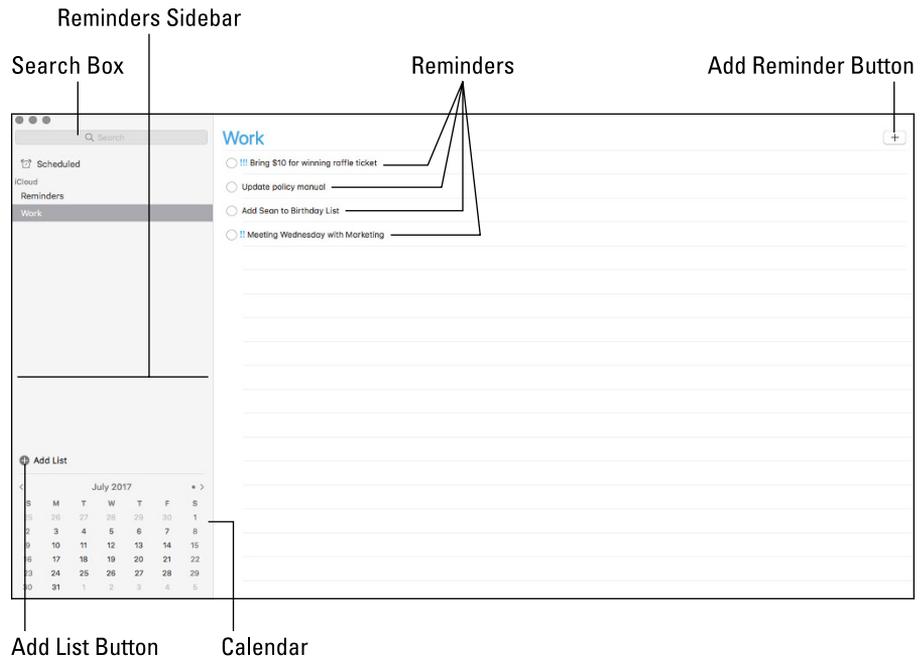

Reminders Sidebar

Search Box · Reminders · Add Reminder Button

Add List Button · Calendar

These are highlights of the Reminders window:

» **Search box:** Click here and type a phrase or name to search for it among your reminders.

» **Reminders Sidebar:** You can add as many separate Reminder lists as you like in the application (one for work, for example, and another for your Mac user group). In the Sidebar, you can switch quickly between your lists.

You can hide or show the Reminders Sidebar at any time using the View menu, or by pressing ⌘+Option+S. You save a significant amount of screen real estate when the display is hidden.

» **Calendar:** This handy calendar indicates which days of the current month already have reminders pending: They're displayed with a dot under the date. You can jump to any date by clicking it. To move forward and backward

through the months, click the Previous and Next buttons next to the month name. (Note that this calendar does not sync or exchange reminder dates with the Calendar application.) To display the Calendar, click View ➪ Show Calendar — to hide the Calendar, click View ➪ Hide Calendar.

>> **Add List button:** Click this button to add a new Reminder list to the Sidebar; from the keyboard, press ⌘+L. The list name is highlighted in a text box, so you can simply type the new name and press Return.

>> **Reminders:** These entries are the reminders themselves. Each is prefaced by a radio button so you can select the radio button when the reminder is complete, thereby moving that reminder automatically to the Completed list. And yes, if you click the Show link next to the number of completed reminders to display them and deselect the radio button for a reminder, it returns (like a bad penny) to the original list.

>> **Add Reminder button:** Click this button to add a new reminder to the currently selected list; from the keyboard, press ⌘+N. In its simplest form, a reminder is just a short phrase or sentence. Press Return afterward to save it to your list.

Adding a reminder is straightforward. First, click a date in the calendar display to jump to that date, and then click the Add Reminder button. Type a few words and press Return to create a basic reminder. However, if you hover your cursor over the reminder you just created, an Info button (the lowercase *i* in a circle icon) appears next to the text. The game is afoot! Click the Info button to display the settings you see in Figure 7-2.
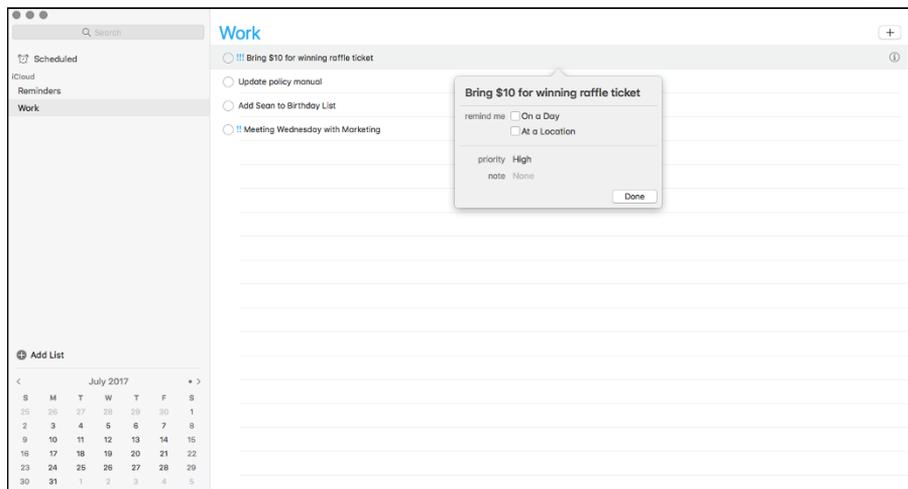

FIGURE 7-2: Editing a reminder.

These fields are on the Edit sheet:

- **Reminder text:** Click this text to edit the reminder text itself.

- **On a Day:** Enable this check box if the reminder should appear in Notification Center on a particular day. By default, the date is the one selected when you created the reminder. You can click the Date and Time fields to change them.

- **At a Location:** This is a powerful feature. Select the At a Location check box, and a pop-up menu appears below the check box. Now you can type an address in the Enter a Location field. Reminders monitor your current location on your MacBook, iPad, or iPhone using Location Services. They notify you when you're leaving or arriving at that location (and, optionally, on the date and time you specify in the On a Day field). For example, you could create a reminder that notifies you on your iPhone when you're arriving at the mall on September 15 to pick up the watch that's being repaired. *Shazam!*

- **Repeat:** If you select the On a Day check box, you can also set this reminder to automatically repeat every day, week, month, or year at the same time.

- **Priority:** You can assign one of four priorities to the reminder: Low, Medium, High, or None. Assigning a priority prefaces the reminder text with one (Low), two (Medium), or three (High) blue exclamation points so the reminder stands out from the crowd.

- **Note:** Click next to the Note field to enter a free-form text note along with the reminder.

Click Done on the Edit sheet when you've finished making changes. You can edit a reminder as often as you like. For example, I sometimes need to change the date on a reminder multiple times as my schedule changes.

TIP

To delete a reminder from the list, right-click it and choose Delete from the menu that appears.

iCloud connectivity allows Reminders to share information with other Macs and iOS devices, as well as Microsoft Outlook on both PCs and macOS. To share reminders, click the System Preferences icon on the Dock, click the Internet Accounts icon and then click one of the accounts at the left of the pane. If an account allows you to share data from the Reminders application — such as the iCloud account — you'll see a Reminders check box at the right side of the pane.

Taking Notes the High Sierra Way

Imagine a notepad of unlimited pages that's always available whenever you're around your Mac, iPhone, iPod touch, or iPad — that's the idea behind Notes, and it's superbly simple. To open the Mac version of the application, click the Notes icon on the Dock. The window shown in Figure 7-3 appears.
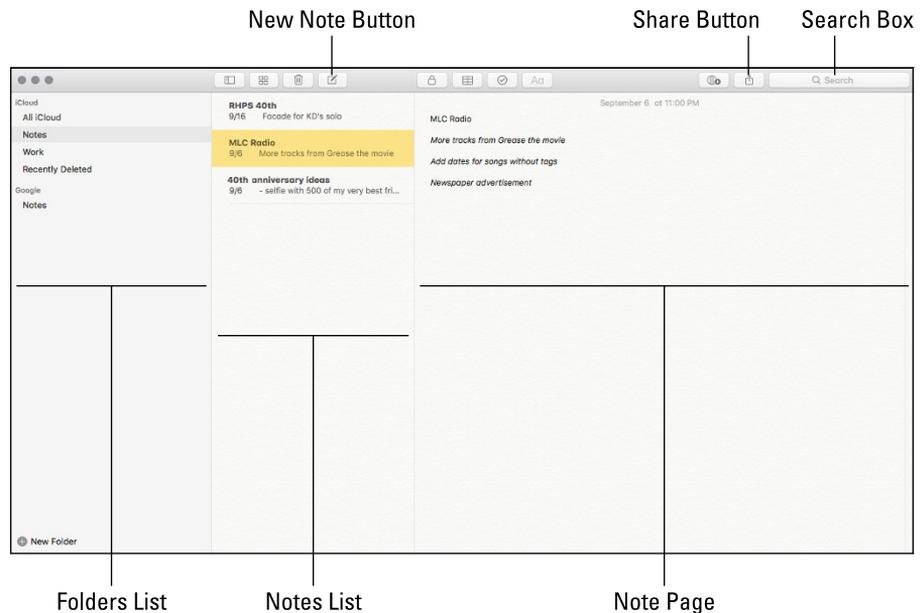

New Note Button   Share Button   Search Box

FIGURE 7-3:
The notable
Notes application
window.

Folders List   Notes List   Note Page

The salient stuff in the Notes window includes these items:

» **Search box:** If you're hunting for a specific note, click in this box and type a phrase or name to search for it.

» **Folders list:** You can create new folders to hold specific kinds of notes. In Figure 7-3, for example, I added a Work folder. To add a new folder, choose File ⇨ New Folder or press ⌘+Shift+N and type the new folder name. To switch between folders, display the Folders list and click the desired folder. You can display or hide the Folders list from the View menu.

» **Notes List:** Each Note you create appears as a separate entry in the List. You can click a Note in the list to switch to it immediately.

» **New Note button:** Click this button to add a new Note. Notes uses the first line of text you type as the title of the Note, which appears in the list.

>> **Note Page:** This free-form pane is where you type the body of your note. You can also drag images from a Finder window and include them in the body of the note, or embed PDF and audio files by dragging them from a Finder window as well.

>> **Share button:** Open this pop-up menu to share the contents of the current note, just like the Share button that appears on the Finder window toolbar. Sharing options can include a new email message, a new message in the Messages application, a new Reminder, and new postings to Twitter or Facebook.

To edit a note, click it to select it in the Notes List, and then simply make your changes or additions in the Note Page. You can format the text from the Format menu — everything from different fonts and colors to inserting bulleted and numbered lists.

To delete a note you no longer need, right-click it in the Notes List and choose Delete from the menu that appears. The application prompts you for confirmation before the deed is done.

You can pin a note to the top of the Notes list to make it more visible – it stays anchored to the top of the list whenever it's visible. Right-click on the desired note in the list and choose Pin Note (or Unpin Note to return the note to regular status).

With the arrival of High Sierra, a note can now include tables to help organize your data, much like the Pages application! Click the Table button in the Notes toolbar to create a default table (two columns and three rows), then click in the first field and begin typing. Press Tab to continue to the next field in the table. To create a custom table, click Format in the Notes menu bar and choose Table – you can specify the number of rows and columns there.

Like Reminders, the Notes application can share information with Macs and iOS devices, as well as Outlook on both Macs and PCs. The process is the same: Open System Preferences and click the Internet Accounts icon, and then click the desired account at the left of the pane. Accounts that support sharing data from Notes will display a Notes check box at the right side of the pane.

Staying Current with Notification Center

Unlike Reminders and Notes, Notification Center isn't an application you launch. Instead, the Notification Center icon appears at the far right side of the Finder menu bar, and it's always running.

Click the icon (or, if you're using a trackpad, swipe with two fingers from the right edge to the left) to display your notifications. These notifications can be generated by a whole host of High Sierra applications and functions, including Calendar, Mail, FaceTime, Reminders, Game Center, Photo Stream, Messages, Safari, Facebook, and even the Mac App Store. Third-party applications can also generate notifications.

You can also click the *Today* button at the top of the Notification Center to display all sorts of information that specifically applies to today's date (as shown in Figure 7-4), including things like Calendar events, Reminders, the current weather, the macOS calculator and the latest stock figures. To switch back to the Notifications view, click the Notifications button at the top of the Notification Center.
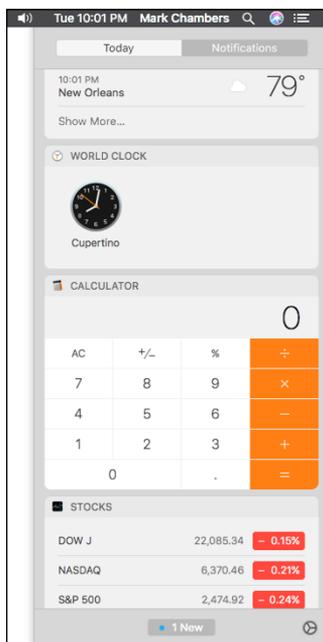
FIGURE 7-4:
Notification Center muscles your desktop to the side.

You can add applets called *widgets* to the Today view as well, allowing you to customize the information you see there. Notification widgets are very similar to Dashboard widgets — you can download them from the App Store.

I love how Notification Center doesn't interfere with open applications. It simply moves the entire desktop to the left so you can see the Center. You can close Notification Center at any time by clicking anywhere on the Desktop to the left, clicking the Notifications icon on the Finder menu bar again, or swiping in the opposite direction.

Notification entries that appear in the Notification view are grouped under the application that created them. Many entries can be deleted from Notification Center by clicking the Delete button that appears next to the application heading (the button bears an X symbol). Other entries, such as Calendar alerts, remain in Notification Center until a certain time has elapsed.

But wait, there's more to Notification Center than just a strip of happenings — depending on the settings you choose, notifications can also appear without Notification Center being open at all. These notifications are displayed as pop–up *banners* (which disappear in a few seconds) and *alerts* (which must be dismissed by clicking a button). Figure 7-5 illustrates a typical alert notification from iTunes.
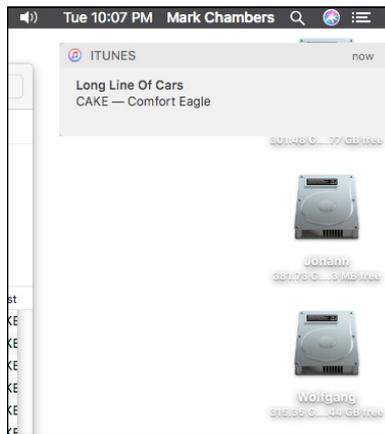
FIGURE 7-5:
An alert notification appears on your Desktop.

High Sierra can also allow *actions* in notifications. Depending on the application or function that generates the notification, you may see buttons on a banner or an alert that allow you to take care of business (without requiring the application to be running). For example, if a new email message is received in Apple Mail, you can choose to reply to or delete the message. Websites can display updates as notifications, and you can answer a FaceTime or an iPhone call directly from the notification.

You can configure the notifications for all your applications from the Notifications pane in System Preferences, which you can reach easily if Notification Center is open. Just click the gears icon at the lower right of the Notification Center.

Introducing the Maps Application

If you own an iPad, iPhone, or iPod touch, prepare yourself for a joyful state: your beloved Maps application also resides on your Dock! As long as you have a connection to the Internet, Maps is ready to display locations, provide directions, and even allow for informal views of important sites worldwide! (Recognize the grand dame in Figure 7-6?)
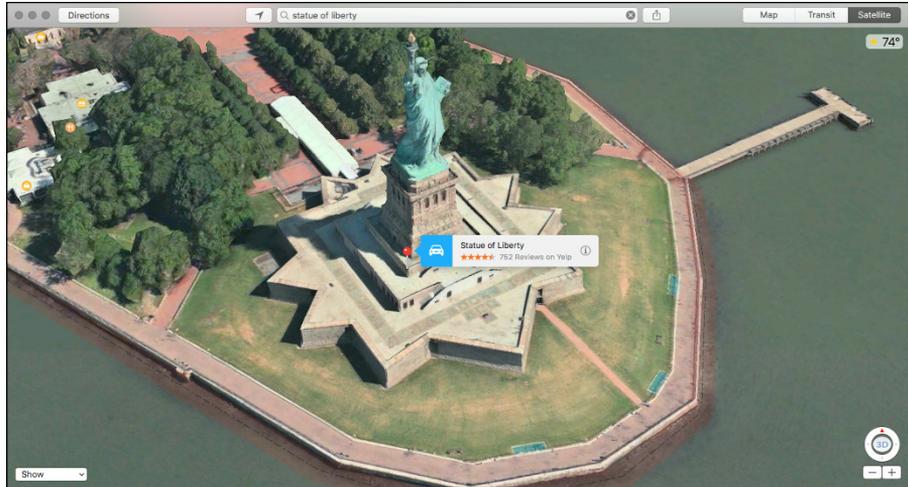
Displaying an overhead view of an address is one of the simplest chores in all of macOS — from the Maps window, just click in the Search box at the top of the window, type the address, and press Return. Maps displays the address with a red pushpin to help you locate it.

TIP Depending on the location you've chosen, you may also see a tiny Info icon (which looks like a lowercase *i* within a circle) next to the name. To view more information, click the Info icon.

TIP If you are in range of a Wi-Fi signal, and have turned Location Services on, you can quickly map your current location — just click View⇨Go to Current Location, or press ⌘+L.

Ah, but why stop with just a simple address? You can also enter the following types of information:

>> The name of a landmark, monument, or building (for example, *Statue of Liberty*).

>> The name of a business or restaurant (or even a genre of food, such as *Chinese*) followed by the city name. Maps displays matching sites with pushpins (complete with reviews), and you can click any of the pushpins to find out more information on a location. Figure 7-7 illustrates a search for *pizza* in my hometown of Columbia, Missouri — you can see the Info pop-up that appears when I click the Info icon next to the restaurant name, complete with a link to their website and reviews a-plenty.

>> Attractions and services, followed by the city name. You can search for a gas station, movie theater, or local park.
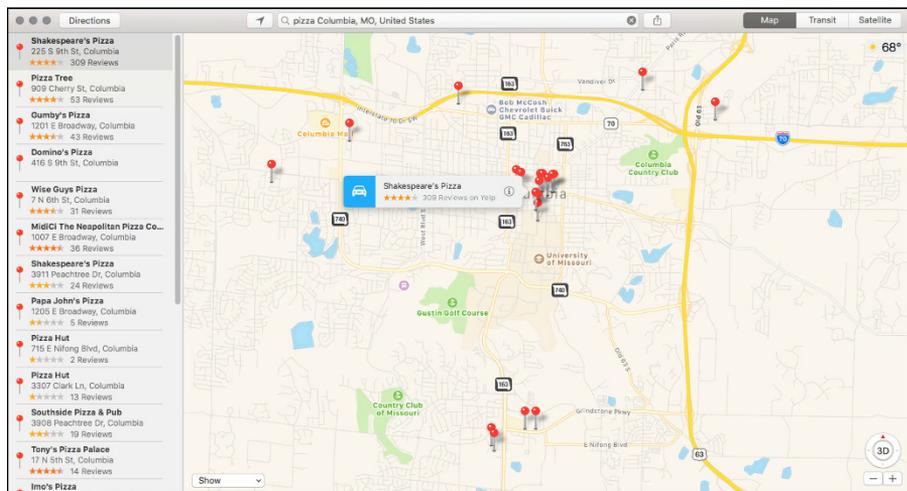
FIGURE 7-7: Looks like this pizza joint is highly rated.

TIP If you need to zoom in or zoom out on a Maps display, use the scroll function on your pointing device, click the plus and minus buttons at the bottom-right corner of the Maps window, or use the ⌘+plus and ⌘+minus shortcuts. To move around the Maps window, click and drag the map in the desired direction.

TIP Teachers and parents, take note: A virtual "flyby" of a famous site in Maps is a valuable (and cool) resource.

Switching Views in Maps

A traditional printed map offers you only one view, which may be perfectly fine for determining a route but provides no visual interest. (The word *banal* comes to mind.) Maps, on the other hand, offers three types of views, each of which offers certain advantages:

» *Standard* (or *Map*) *mode* is a familiar line map, with streets and highways marked. Standard mode is best for planning a road trip, just like your father's old-fashioned paper map.

» *Satellite mode* is a photographic overhead view without streets or highways marked, which is great for panoramic views of your neighborhood or a location and its surroundings.

» *Transit mode* displays public transportation routes and bus, subway and train schedules. Note, however, that Transit information is not available in every location.

To select your view, click one of the buttons at the top of the Maps window: press ⌘+1 for standard Map, ⌘+2 for Transit, or ⌘+3 for Satellite. Figure 7-6 shown earlier illustrates Satellite view mode, while Figure 7-8 shows off Standard view.
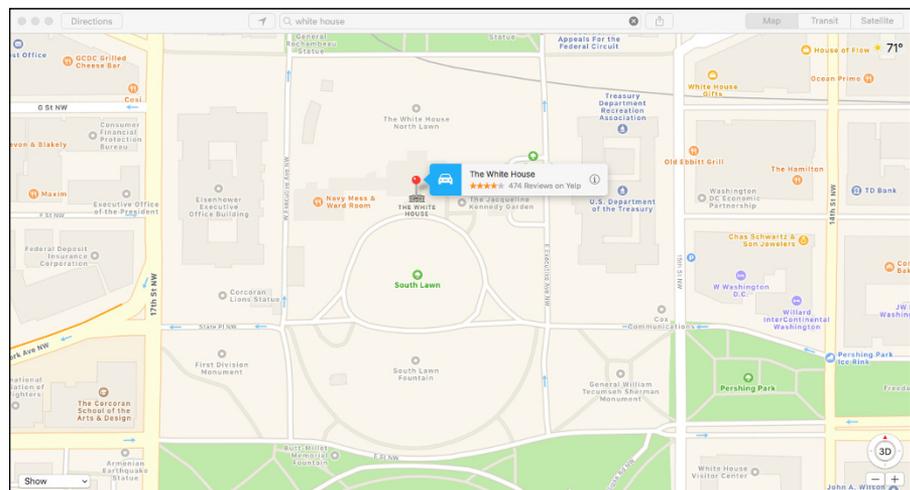
FIGURE 7-8: Standard view reminds me of an auto GPS unit.

Have you noticed the Show pop-up menu at the lower-left corner of the Maps window? If you're using Satellite view, you can click the Show menu and choose Show Labels to toggle street names on and off. The Show pop-up menu also allows you to display traffic conditions and toggle the 3D map.

TIP "Wait, there's a 3D map option?" Yes indeed, and no special glasses are required! For additional visual thrills, you can angle the Maps display with a slight 3D effect — nothing quite as grand as a 3D TV, but it does help add depth to Satellite view. To toggle 3D on and off, press ⌘+0, click the Show pop-up menu, or press the 3D button at the lower-right corner of the window.

TIP By default, Maps is oriented with north at the top of the screen, but if you need to change the orientation, click the red compass arrow at the bottom-right corner of the screen and drag in the desired direction. To immediately return to north at the top of the screen, press ⌘+↑ or click View ⇨ Snap to North.

Getting Directions Over Yonder

My primary use for a map is getting directions from one point to another, and Maps doesn't disappoint when it comes to navigation. Click the Directions button to display the panel you see in Figure 7-9, and you're ready to plot your course.
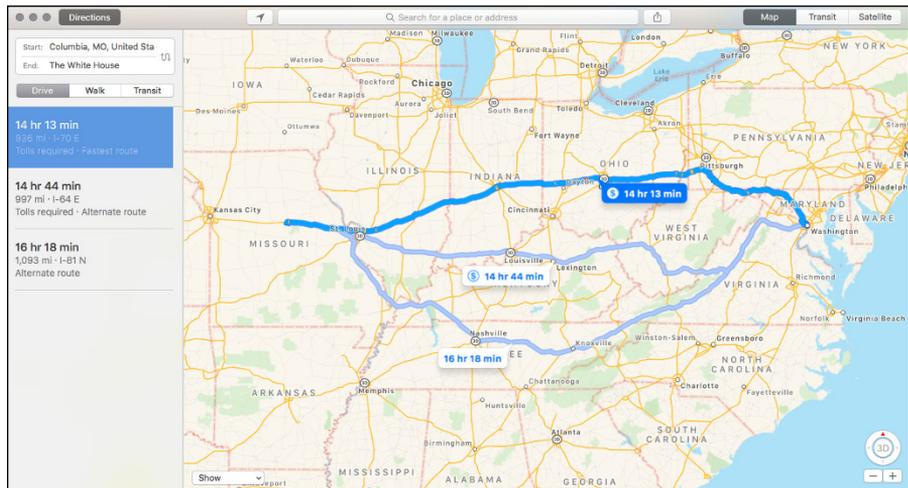
FIGURE 7-9: The Directions panel is ready to provide directions to your next clambake.

Follow these steps to get directions between two addresses:

1. **In the Start box, type the starting address.**

As you type, Maps provides a pop-up list of suggestions taken from your recent locations, as well as addresses from your Contacts database and matching streets from around the globe. To choose one of these suggestions, just click it.

To clear the contents of the field, click the X button that appears at the right side of the box.

2. **Press Tab to move to the End box.**

3. **In the End box, type the destination address.**

   Note that your destination doesn't have to be a specific address — for example, Memphis, TN, works just fine.

4. **Click the Drive button for road directions, click the Walk button for walking directions or display mass transit information by clicking the Transit button.**

5. **Press Return to generate your directions.**

Maps usually offers more than one route for your trip — the first route provided is typically the fastest or shortest, and it appears as a bright blue. To view one of the other routes, just click a light blue line and it turns bright blue to indicate that it's now the selected route. (You can see the approximate mileage and time for the currently selected route at the top of the turn list.) The turn-by-turn list provides approximate mileage for each leg of the journey.

You can easily print the route map and directions by choosing File ⇨ Print (or by pressing ⌘+P), and then clicking the Show Details button at the bottom of the Print sheet to display all the options.

TIP

If you'd rather create a PDF document with your map and directions, choose File ⇨ Export as PDF.

Finally, Maps also allows you to share your maps and directions using Mail, Messages, Twitter, or Facebook. Click the Share button at the top of the window, and then select the desired sharing method.

3

Connecting and Communicating

IN THIS PART . . .

Surf the web with ease using Apple's Safari browser.

Sync documents and data automatically using iCloud.

Share your laptop with other users safely.

Join or create a wireless network with your MacBook.

Chapter **8**

Let's Go on Safari!

proudly surf the web via a lean, mean — and fast — browser application. That's Safari, of course, and it keeps getting better with each new version of macOS. Safari delivers the web the right way, without the wait. You'll find that features have been added to Safari that no other browser offers, like the Reading List, which allows you to easily select articles and pages for later perusal.

If you need a guide to Safari, this is your chapter. Sure, you can start using Safari immediately, but wouldn't you rather read a few pages so that you can surf like a power user?

Within these pages, I show you how to use those other controls and toolbar buttons in Safari — you know, the ones in addition to the Forward and Back buttons. You'll discover how to keep track of where you've been and where you'd like to go.

Pretend You've Never Used This Thing

Figure 8-1 illustrates the Safari window. You can launch Safari directly from the Dock, or you can click the Safari icon in Launchpad.

Toolbar   Tab Bar   Favorites Bar
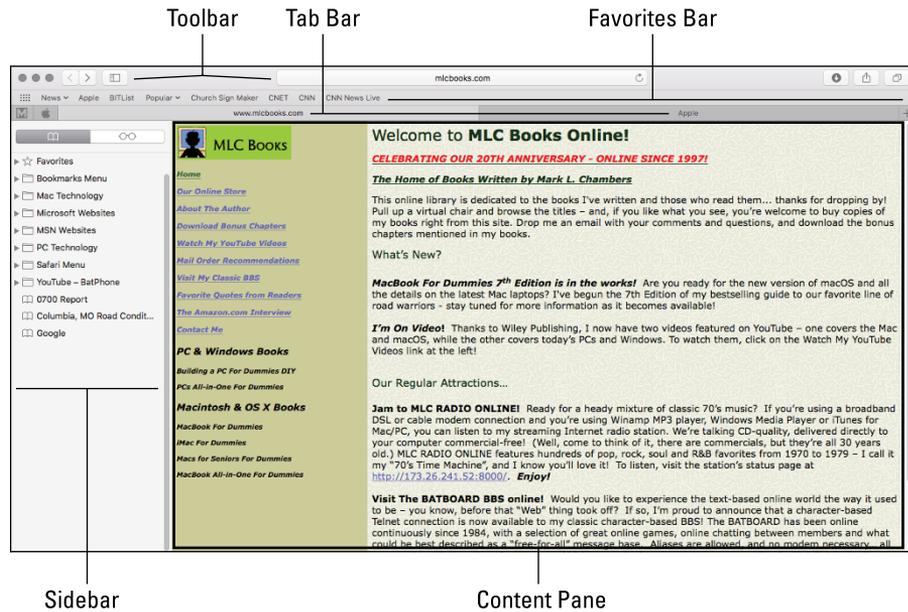
FIGURE 8-1:
Safari at a glance.

Sidebar   Content Pane

These are the major sections of the Safari window:

» **The toolbar:** Here are the most often-used commands for tasks such as navigation, sharing content, and searching Google (or Yahoo!, or DuckDuckGo, or Bing). Plus, here you can type or paste the address for websites that you'd like to visit.

» **The Favorites bar:** Consider this a toolbar that allows you to jump directly to your favorite websites with but a single click or two. I show you later, in the section "Adding and Using Bookmarks," how to add and remove sites from your Favorites bar. For now, remember that you can toggle the display of the Favorites bar by choosing View⇨Hide/Show Favorites Bar or by pressing ⌘+Shift+B.

» **The Tab bar:** This toolbar allows you to quickly switch between multiple web pages that you've loaded, using what appear to be old-fashioned file folder tabs. (Something familiar — familiar is good.) To hide or display the Tab bar, choose View⇨Hide/Show Tab Bar. You can also pin sites to the Tab bar permanently (more on this later in the chapter).

>> **The Sidebar:** The Sidebar pane allows you to organize and read your bookmarks, reading list, and shared links. To hide or display the Sidebar, press ⌘+Shift+L or choose View➪Hide/Show Sidebar.

>> **The Content pane:** Congratulations! At last, you've waded through the pregame show and reached the area where web pages are displayed. The Content pane can be scrolled, and when you minimize the Safari window to the Dock, you get a *thumbnail* (minimized) image of the Content pane.

The Content pane often contains underlined text and graphics that transport you to other pages when you click them. These underlined words and icons are *links,* and they zip you right from one area of a site to another area (or to a different site altogether). You can tell when your pointer is resting on a link because it changes to that reassuring pointing-finger hand. Handy! (Sorry about that.)

>> **The Status bar:** The Status bar displays information about what the pointer is resting on, such as the address for a link or the name of an image; it also updates you about what's happening while a page is loading. To hide or display the Status bar, press ⌘+/ (forward slash) or choose View➪Hide/Show Status Bar.

Visiting Websites

Here's the stuff that virtually everyone over the age of five knows how to do . . . but I get paid by the word, and some folks might just not be aware of the many ways to visit a site. You can load a web page using any of these methods:

>> **Click in the Address box.** If you're not viewing your Top Sites display, just click once on the Address box to display a scrolling thumbnail list of your Favorites and most frequently visited sites. Click a thumbnail to jump immediately to that page. That's about as simple as life gets!

>> **Type (or paste) a website address in the Address box on the toolbar, and press Return.** If you're typing an address and Safari recognizes the site as one that you've visited in the past, it "helps" by autocompleting the address for you. Press Return if you want to accept the suggested site. If this is a new site, just keep typing.

The Safari Address box also acts as a *smart address* field, displaying a new pop-up menu of sites that match the text you enter. Safari does this by using sites taken from your History file and your bookmarks, as well as sites returned from Google, Yahoo!, DuckDuckGo, or Bing. If the site you want to visit appears in the list, click it to jump there immediately.

>> **Click a Bookmarks or Favorites entry.** Bookmarks appear in the Sidebar and the Bookmarks menu, while Favorites appear in the Favorites bar.

>> **Click a tab for a pinned site.** Pinned tabs appear as icons at the left side of the Tab bar.

>> **If the Home button appears on your toolbar, click the button to go to the home page that you specify.** Read more on this in the upcoming section, "Setting Up Your Home Page."

>> **If the Top Sites button appears on the toolbar, click it to open the Top Sites display.** Safari displays a wall of preview thumbnail pages from your most frequently visited sites, and you can jump to a site just by clicking the preview. You can anchor a thumbnail to keep it onscreen permanently by hovering your pointer over the thumbnail and clicking the pin icon that appears, or you can delete a thumbnail by clicking the X button that appears.

Because each thumbnail is updated with the most current content, the Top Sites wall makes a great timesaver. Quickly make a visual check of all your favorite haunts from one screen!

>> **Click an item you saved earlier in the Sidebar's Reading List tab.** To display items in your list, click the button bearing the eyeglasses icon at the top of the Sidebar.

>> **Click a page link in Apple Mail or another Internet-savvy application.** These links are typically highlighted or underlined to make them easier to see.

Never click on a link in an email unless you know and trust the sender!

>> **Click a page link in another web page.** By default, Safari opens the new page in a separate tab.

>> **Select a web address in a document, click the Services menu, and choose Open Page in Safari.** Safari automatically loads and displays the page.

>> **Type a search term in the Address box.** By default, Safari uses Google as a search engine, but you can also use Yahoo!, Bing, or DuckDuckGo if you prefer. To set the default search engine, choose Safari⇨Preferences; then on the Search tab, click the Search Engine drop-down menu. (You can immediately switch to another engine by clicking the magnifying-glass icon that appears before you start typing into the Address box.)

Click in the Address box, type the contents that you want to find, and press Return. Safari presents you with the search results page on Google for the text you entered. (In case you've been living under the Internet equivalent of a rock for the last several years, *Google* (www.google.com) is the preeminent search site on the web. People use Google to find everything from used auto parts to ex-spouses.)

>> **Click a Safari page icon on the Dock or in a Finder window.** Drag a site from your Favorites bar (or drag the icon from the left side of the Address box), and drop it on the right side of the Dock. Clicking the icon that you add launches Safari and automatically loads that site.

TIP
This trick works only on the side of the Dock to the right of the vertical line. More on that all-important divider in a bit.

If you minimize Safari to the Dock, you'll see a thumbnail of the page with the Safari logo superimposed on it. Click this thumbnail on the Dock to restore the page to its full glory.

TIP
Speaking of full glory, Safari supports the same full-screen mode as many other High Sierra applications. Click the Zoom/Full Screen button at the top-left corner of the Safari window to switch to full-screen mode, or press the Control+⌘+F shortcut (a good shortcut to memorize because it works with virtually all High Sierra–compatible applications). To make things convenient for you, the toolbar and Favorites bar remain. To exit full-screen mode, press Esc or the Control+⌘+F shortcut again.

Navigating the Web

A typical web surfing session is a linear experience. You bop from one page to the next, absorbing the information you want and discarding the rest. However, after you visit a few sites, you might find that you need to return to where you've been or head to the familiar ground of your home page. Safari offers these navigational controls on the toolbar:

>> **Back:** Click the Back button (the left-facing arrow) on the toolbar to return to the last page you visited. Additional clicks take you to previous pages, in reverse order. The Back button is disabled if you haven't visited at least two sites.

>> **Forward:** If you've clicked the Back button at least once, clicking the Forward button (the right-facing arrow) takes you to the next page (or through the pages) where you originally were, in forward order. The Forward button is disabled if you haven't used the Back button and haven't navigated to another page.

TIP
Safari supports a number of trackpad gestures. For example, you can swipe in either direction with two fingers to move backward and forward, just as you would move with the Forward and Back buttons. To zoom in and out on the Content pane, you can either double-tap the trackpad or pinch with two fingers — yes, just like an iPhone. (Ever get the notion that someday we'll just have a single box called "The Device" that does it all?)

>> **Home:** Click this button (look for the little house) to return to your home page.

Not all these buttons and controls may appear on your toolbar — you may not see many of these toolbar controls unless you add them yourself. To display or hide toolbar controls, choose View⇨Customize Toolbar. The sheet that appears works just like the Customize Toolbar sheet in a Finder window: Drag the control you want from the sheet to your Safari toolbar, or drag a control that you don't want from the toolbar to the sheet. As with most buttons and controls in Mac applications, if you hover your pointer over an unfamiliar button on the toolbar, Safari will display a tooltip to identify the button for you.

>> **Show/Exit Tab Overview:** A click on this toolbar button displays all the tabbed sites you've opened, as well as the iCloud Tabs from Safari on your other Macs, PCs, and iOS devices.

>> **AutoFill:** If you fill out lots of forms online — when you're shopping at websites, for example — you can click the AutoFill button (which looks like a little text box and a pen) to complete these forms for you. You can set what information is used for AutoFill by choosing Safari⇨Preferences and clicking the AutoFill toolbar button.

To be honest, I'm not a big fan of **automatically** releasing *any* of my personal information to *any* website, so I don't use AutoFill. If you do decide to use this feature, make sure the connection is secure (look for the padlock icon in the Address box) and read the site's Privacy Agreement page first to see how your identity data is treated. **Never** enter credit card numbers or personal information on a website without a secure connection!

>> **Top Sites:** Click this button to display the Top Sites screen I discuss earlier. If you're having trouble finding it, the button bears a tiny, fashionable grid of squares.

>> **Zoom:** Shrink or expand the size of text on the page, offering smaller, space-saving characters (for the shrinking crowd) or larger, easier-to-read text (for the expanding crowd) by clicking one of the Zoom buttons, which are labeled respectively with a small and large letter *A*. (From the keyboard, you can press ⌘+= (equal sign) to expand and ⌘+- (hyphen) to shrink.)

>> **Favorites bar:** Click this button (which carries the Bookmarks symbol sandwiched between two horizontal lines) to display or hide the Favorites bar.

>> **Stop/Reload:** Click Reload (which has a circular arrow in the Address box) to *refresh* (reload) the contents of the current page. Although most pages remain static, some pages change their content at regular intervals or after you fill out a form or click a button. By clicking Reload (look for the curved arrow in the Address box), you can see what's changed on these pages. (I use Reload every hour or so with CNN.com, for example.) While a page is loading, the Reload

button turns into the Stop button — with a little X mark — and you can click it to stop the loading of the content from the current page. This feature is a real boon when a download takes *foorrevverr,* which can happen when you're trying to visit a popular or slow website. Using Stop is also handy if a page has a number of very large graphics that are likely to take a long time to load.

» **Sidebar:** Click this toolbar button at the left side of the Address box to hide or display the Safari Sidebar. You'll find the complete description of the sidebar in an upcoming section.

» **History:** Click this button, which bears a clock symbol, to display or hide the History list, which I discuss later in this chapter.

» **Downloads:** This toolbar button appears only if you're currently downloading a file or if you've downloaded files that haven't been cleared yet. Click it to display the files you've downloaded recently, and click the Clear button to clear the contents of the Download list. Note that clearing the list does not delete the files you've downloaded; it simply cleans things up. You can also double-click a completed download in the list to open it immediately. (More on downloading in the section, "Downloading Files.")

When you're downloading a file, a tiny progress bar appears in the Downloads button on the toolbar to show you how much you've received. Now that, good reader, is *progress*! (Let's see whether my editor allows such a horrible pun to remain.) Anyway, you can click the Downloads button during the file transfer to pause or stop the download completely.

» **Open in Dashboard:** Click this button to create a Dashboard widget using the contents of the currently displayed web page. Safari prompts you to choose which clickable section of the page to include in the widget's borders, such as the local radar map on your favorite weather website. Click Add, and Dashboard loads automatically with your new widget. For more on widgets, see Chapter 3.

» **Mail:** Click this button (bearing an envelope icon) to send an email message with a link to the current page, just as if you clicked the Share button and chose Email This Page. Safari automatically opens Apple Mail (or your default email application) and creates a new message with the link already in the body. *Shazam!*

» **Print:** Click this convenient button to print the contents of the Safari window. (Dig that crazy printer icon!)

» **Website Preferences:** Click this button to display (or change) the preference settings you've selected for this specific website. You can elect to use the Reader whenever possible, enable the content blocker to prevent most advertisements from appearing (more on both these features later in the chapter), set the Zoom level, and enable or disable the Auto-Play feature for videos that contain an audio track.

» **Share:** If you have an iPhone, iPod touch, or iPad, you're probably already familiar with this button, which carries a rectangle and arrow symbol. Click the Share button to send the current page (or a link to it) to a number of different destinations, including your Reading List, an email message, your Notes, Messages or Reminders applications, AirDrop, Facebook, LinkedIn, or Twitter. You can also add a bookmark to the current page using the Share button. Figure 8-2 illustrates the Share button in action.
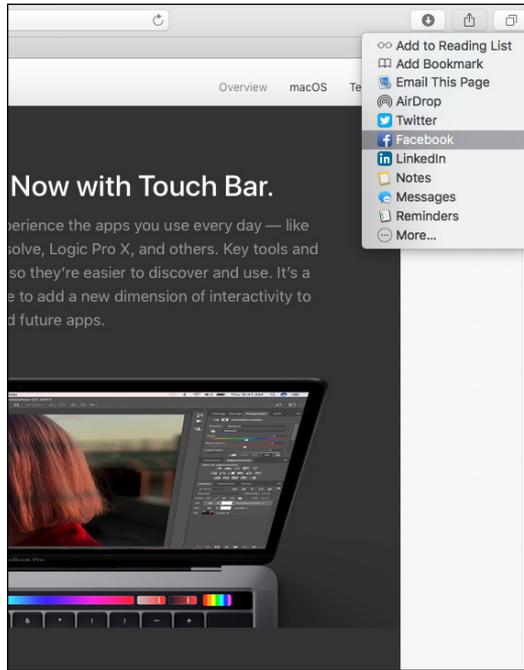
Setting Up Your Home Page

Choosing a home page is one of the easiest methods of speeding up your web surf-ing. However, a large percentage of the MacBook owners whom I've talked with have never set their own home page; instead, they simply use the default home page provided by their browser. Declare your independence! With Safari running, take a moment to follow these steps to declare your freedom to choose your own home page:

1. **In Safari, display the web page that you want to become your new home page.**

   I recommend selecting a page with few graphics or a fast-loading popular site.

2. **Choose Safari⇨Preferences, or press ⌘+, (comma).**

3. **Click the General tab.**

   You see the settings shown in Figure 8-3.

4. **Click the Set to Current Page button.**

5. **Click the Close button to exit the Preferences dialog.**
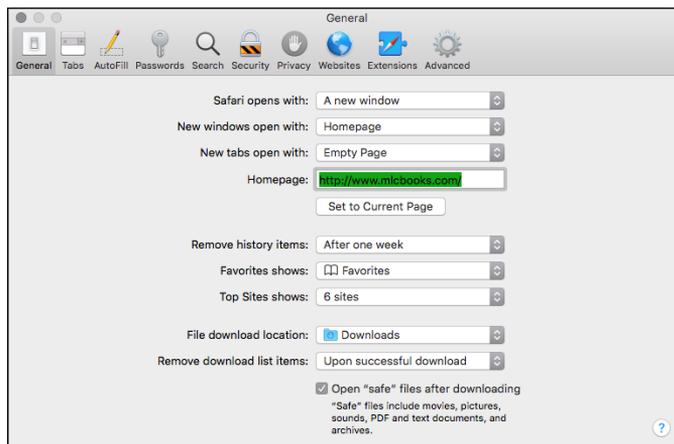
FIGURE 8-3:
Adding your own home page is an easy change you can make.

Alternatively, click the New Windows Open With pop-up menu and choose Empty Page if you want Safari to open a new window with a blank page. This choice is the fastest one for a home page.

Visit your home page at any time by pressing the Home button on the toolbar. If it doesn't appear on your toolbar, you can add it by choosing View⇨Customize Toolbar.

Adding and Using Bookmarks

No doubt about it: Bookmarks make the web a friendly place. As you collect bookmarks in Safari, you're able to immediately jump from one site to another with a single click of the Bookmarks menu or the buttons on the Favorites bar.

To add a bookmark, first navigate to the desired page and then do any of the following:

>> **Choose Bookmarks⇨Add Bookmark.**

Safari displays a sheet where you can enter the name for the bookmark, a description and choose where it appears (on the Favorites bar, Top Sites display, Bookmarks folder, or Bookmarks menu).

>> **Press the ⌘+D keyboard shortcut.**

Again, you'll see the sheet requesting a name and location.

>> **Drag the icon next to the web address from the Address field to the Favorites bar.**

This trick also works with other applications besides Safari, including in a Mail message or Messages conversation. Drag the icon from the Safari Address field to the other application window, and the web page link is added to your document.

You can also drag a link on the current page to the Favorites bar, but note that doing this adds a bookmark only for the page corresponding to the link — not the current page.

To jump to a bookmark, do one of the following:

>> **Choose it from the Bookmarks menu.** If the bookmark is contained in a folder, which I discuss later in this section, hover your pointer over the folder name to show its contents and click the bookmark.

>> **Click the bookmark on the Favorites bar.**

If you've added a great number of items to the Favorites bar, click the More icon on the edge of the Favorites bar to display the rest of the buttons.

>> **Click the Show Sidebar button on the Safari toolbar,** click the Bookmarks button in the Sidebar, and then click the desired bookmark. The Sidebar (shown in Figure 8-4) displays all your bookmarks, allowing you to review each collection at your leisure.

>> **Click Bookmarks⇨Edit Bookmarks** (or press Option+⌘+B) to open the Bookmark list. For those who prefer more information (and more onscreen elbow room) while selecting or organizing their bookmarks, the Bookmark list is the cat's meow. It displays both the name and web address for each bookmark in your collection.

The more bookmarks you add, the more unwieldy the Bookmarks menu and the Sidebar can become. To keep things organized, choose Bookmarks⇨Add Bookmark Folder and type a name for the new folder. With folders, you can organize your bookmarks into *collections,* which appear in the column at the left of the Sidebar, as folders in the Bookmark list, and as menus on the Bookmarks bar. (Collections also appear as separate submenus in the Bookmarks menu on the Safari menu bar.) You can drag bookmarks into the new folder to help reduce the clutter.

FIGURE 8-4:
The Sidebar's Bookmarks tab puts all your bookmarks in easy reach.
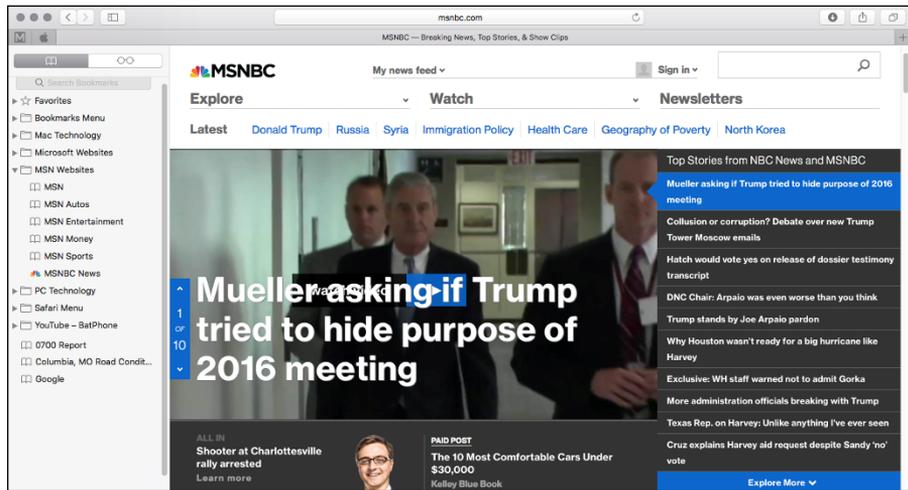
To delete a bookmark or a folder from any of these locations, right-click the icon next to the entry and choose Delete from the contextual menu.

Working with the Reading List

Now that you know all about bookmarks, I'll introduce you to another method of loading, saving, and retrieving specific pages in Safari — and it's hiding in the now-familiar confines of the Safari sidebar!

The Sidebar's Reading List tab allows you to save entire pages for later perusal. From the keyboard, press ⌘+Shift+L to display the Sidebar, and click the Reading List button. Click Bookmarks⇨Add to Reading List or press ⌘+Shift+D to add the current page to the list, or hover your pointer over the left side of the Address box

and click the circular icon with the plus sign that appears. Oh, and don't forget that you can click the Sharing icon in the toolbar and choose Add to Reading List to achieve the same victory.

When you click one of those entries in the Reading List and then click the Show Reader View icon (it looks like a paragraph) that appears at the left side of the Address box, the real magic begins! If you click it, the Reader panel appears to display text articles free of advertisements and silly pop-ups. And if an article is continued over multiple web pages, the Reader panel automatically stitches them together to form a continuous block of text. (Think of an e-book displayed in iBooks on your MacBook, and you get the idea.)

To delete an item from the Reading List, right-click the item and click Remove Item, or click the X icon that appears next to the title.

REMEMBER If the Show Reader View icon appears in Safari's Address box — and you're *not* using the Reading List — don't panic! Because the page you're reading contains text articles, Safari is offering to display it in the Reader panel. (If a page has nothing to display in the Reader panel, the icon disappears.) To display the page in the Reader panel, click the Show Reader View button in the Address box. To return to your mundane browsing experience, click the Reader icon again.

TIP If you're as big a fan of Reader View as I am, you'll be thrilled to learn that you can turn on this feature for every page on a website! With Reader View set on as a default, every page on a website that's compatible with the Reader panel will automatically display in Reader view. (For example, I always set all my news websites — like CNN and Macworld — to default to Reader view.) When you've navigated to the desired website, click the Website Preferences button on the toolbar (if you've added it), or choose Safari⇨Settings for This Website from the Safari menu. Click the Use Reader When Available check box to enable it, and you're good to go!

Downloading Files

A huge chunk of the fun you'll find on the web is the capability to download images and files. If you've visited a site that offers files for downloading, typically you just click the Download button or the download file link, and Safari takes care of the rest. While the file is downloading, feel free to continue browsing or even download additional files; the Downloads status list helps you keep track of what's going on and when everything will be finished transferring. To display the Downloads status list from the keyboard, press ⌘+Option+L. You can also click the Download button at the upper-right corner of the window to display the Download list.

By default, Safari saves any downloaded files to the Downloads folder on your Dock, which I like and use. To specify the location where downloaded files are stored — for example, if you'd like to scan them automatically with an antivirus program — follow these steps:

1. **Choose Safari⇨Preferences, or press ⌘+, (comma).**

2. **Click the General tab (refer to Figure 8-3), and open the File Download Location pop-up menu.**

3. **Choose Other.**

4. **Navigate to the location where you want the files stored.**

5. **Click the Select button.**

6. **Click the Close button to exit Preferences.**

To download a specific image that appears on a web page, move your pointer over the image, right-click, and choose Save Image As from the menu that appears. Safari prompts you for the location where you want to store the file.

You can choose to automatically open files that Safari considers safe — things like movies, text files, and PDF files that are *very* unlikely to store a virus or a damaging macro. By default, the Open "Safe" Files after Downloading check box is selected on the General pane of the Safari Preferences dialog. However, if you're interested in preventing *anything* you download from running until you've manually checked it with your antivirus application, you can deselect the check box and breathe easy.

Luckily, Safari has matured to the point that it can seamlessly handle most multimedia file types that it encounters. However, if you've downloaded a multimedia file and Safari doesn't seem to be able to play or display it, try loading the file in QuickTime Player. *QuickTime Player* is the Swiss Army knife of multimedia players, and it can recognize a huge number of audio, video, and image formats. To launch the Player, click the Spotlight search icon and type **QuickTime Player**.

Using History

To keep track of where you've been, you can display the History list by clicking the History menu in Safari. To return to a page in the list, just choose it from the History menu. Note that Safari also arranges older history items by the date you visited a site so you can easily jump back a couple of days to that page you forgot to bookmark!

Safari also searches the History list automatically, when it fills in an address you're typing — that's the feature I mention in the previous section, "Visiting Websites."

To view your Top Sites display, choose Show Top Sites from the History menu. You can also click the Top Sites button at the far left side of the Favorites bar or on the Safari toolbar (if you've added it).

You can add a site manually to your Top Sites by dragging a bookmark from the Sidebar to the Top Sites icon in the Favorites bar, or by dragging a link or URL address from another application to the Top Sites icon in the Favorites bar. (You'll see a plus sign appear next to your pointer to indicate the addition.) To rearrange screens in the Top Sites display, just drag a screen thumbnail to the desired location. If you prefer that a specific thumbnail remain in the same place, hover your pointer over the thumbnail and click the gray pushpin icon, which turns blue to indicate that the thumbnail is pinned in place.

If you're worried about security and would rather not keep track of where you've been online, find out how to clear the contents of the History file in the upcoming section, "Handling ancient history."

Tabs Are Your Browsing Friends

Safari also offers *tabbed browsing,* which many folks use to display (and organize) multiple web pages at one time. For example, if you're doing a bit of comparison shopping for a new piece of hardware among different online stores, tabs are ideal. Heck, tabbed browsing is so popular that Apple added tabs to Finder windows with the release of OS X Mavericks!

When you hold down the ⌘ key and click a link or bookmark using tabs, a tab representing the new page appears at the top of the Safari window. Just click the tab to switch to that page. By holding down Shift+⌘, the tab is both created and displayed. (If you don't hold down ⌘, things revert to business as usual, and Safari replaces the contents of the current tab with the new page.)

You can also open a new tab by clicking the plus sign that appears at the upper-right corner of the Safari window or by pressing ⌘+T. To move between multiple tabs, simply click on the desired tab header. If you're finished with a page, you can remove a tabbed page by hovering your pointer over the tab and clicking the X button that appears.

Trackpad fans will appreciate Safari's two gestures that control tabs. With multiple tabs active, you can do these:

>> Pinch to display them all in the *All Tabs view* display (as shown in Figure 8-5).

>> With the All Tabs view open, swipe with two fingers to move among tabs.
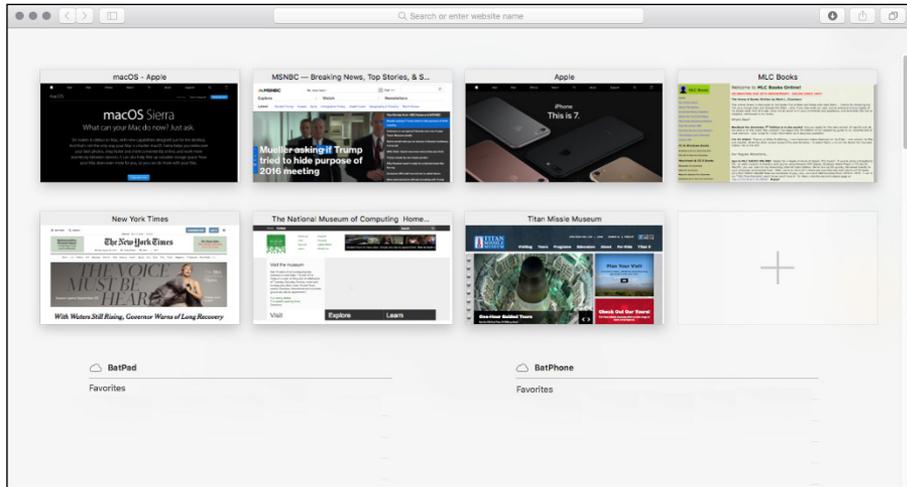
To display your tabs in All Tabs view without a trackpad, click the Show All Tabs button that appears at the right side of the Safari toolbar. From the All Tabs view, you can click any tab thumbnail to switch immediately to that tab. (Note that the iCloud Tabs shared from your other Macs and iOS devices appear at the bottom of the All Tabs view display.) To close a tab in All Tabs view, move your pointer over the thumbnail and click the X button that appears. To close the All Tabs view display, click the Hide All Tabs button at the right side of the Safari toolbar.

The All Tabs view also displays the iCloud Tabs you've set on your other Macs (running OS X Lion or later) and iOS devices (running iOS 7 or later).

To fine-tune your tabbed browsing experience, choose Safari⇨Preferences to display the Preferences dialog, and click Tabs. From here, you can specify whether a new tab or window automatically becomes the active window in Safari, and whether you want to switch between tabs using ⌘+1 through ⌘+9.

TIP

If you open a page that plays audio — either as background music, or as part of a video shown on the page — you can click the speaker icon that appears in the tab header to mute that audio. (Think really, *really* irritating video advertisements.) To unmute the audio, click on the speaker icon again. You can also display the Website Preferences sheet to disable auto-play of videos with sound across all the pages on a website: Choose Safari⇨Settings for This Website from the Safari menu, click the Auto-Play drop-down menu and choose Stop Media with Sound to banish those irritating videos from the current website.

Printing Web Pages

If you've encountered a page that you'd like to print, follow these steps:

1. **Display the desired page.**

2. **Choose File⇨Print, or press ⌘+P.**

3. **Select the number of copies, and specify whether you'd like to print the entire page, only the current page, or a range of pages.**

4. **Click Print.**

TIP

A quick word about printing a page in Safari: Some combinations of background and text colors might conspire to render your printed copy worthless. In a case like that, use your printer's grayscale setting (if it has one), or click the Show Details button at the bottom of the Print sheet and deselect the Print Backgrounds check box (which can save you quite a bit of ink or toner). Alternatively, you can

simply click and drag to select the text on the page, press ⌘+C to copy it, and paste the text into TextEdit, Word, or Pages, where you can print the page on a less offensive background (while still keeping the text formatting largely untouched). You can also save the contents of a page as an electronic PDF file by clicking File⇨Export as PDF or by clicking the PDF pop-up menu at the bottom of the Print sheet. Finally, if the page is available in Reader view, you can print it from there and avoid most color conflicts!

If you'd rather mail the contents of a web page to a friend, click the Share button and choose Email This Page. If you've added the Mail button to your toolbar, one click does the job. Mail loads automatically, complete with a prepared email message. Just address it to the recipients, and click Send.

Protecting Your Privacy

No chapter on Safari would be complete without a discussion of security, against both outside intrusion from the Internet and prying eyes around your laptop. Hence this last section, which covers protecting your privacy.

Although diminutive, the padlock icon that appears at the left side of the website name in the Address box when you're connected to a secure website means a great deal! A *secure site* encrypts the information you send and receive, making it much harder for those of unscrupulous ideals to obtain private data, such as credit card numbers and personal information. You can click the padlock icon (next to the site name) to display the security certificate in use on that particular site. A secure site web address begins with the prefix `https:` instead of `http:`. (The extra *s* stands for *secure.* A Good Thing.)

Yes, there are such things as bad cookies

First, a definition of this ridiculous term: A *cookie,* a small file that a website automatically saves on your Mac's drive, contains information that the site uses on your future visits. For example, a site might save a cookie to preserve your site preferences for the next time or — like shopping at Amazon.com — to identify you automatically and help customize the offerings that you see.

In and of themselves, cookies aren't bad things. Unlike a virus, a cookie file isn't going to replicate itself or wreak havoc on your system, and only the original site can read the cookie that it creates. However, many folks don't appreciate acting as a gracious host for a slew of little snippets of personal information. (Not to

mention that some cookies have highly suggestive names, which can lead to all sorts of conclusions. End of story.)

You can opt to disable cookies altogether. You can also set Safari to accept cookies only from the sites you choose to visit. To change your *Cookie Acceptance Plan* (or CAP, for those who absolutely crave acronyms), follow these steps:

1. **Choose Safari⇨Preferences.**
2. **Click the Privacy tab.**
3. **Click Block All Cookies.**

> **REMEMBER**
>
> If a site's cookies are blocked, you might have to take care of things manually, such as by providing a password on the site that used to be read automatically from the cookie.

> **TIP**
>
> Feeling nervous about the data stored by the websites you visit? You can always delete *all* that stored information with a single click. From the Privacy pane in the Safari Preferences dialog, click the Manage Website Data button, then click the Remove All button. You'll be asked to confirm your draconian decision.

The Privacy pane also includes the Ask websites not to track me check box, which works . . . *sometimes*. Unfortunately, it's up to a particular website whether to honor Safari's request for privacy. Also, some sites — such as Amazon.com — use tracking legitimately, to keep track of your likes and purchases each time you return. With the release of High Sierra, Apple has added Intelligent Tracking Prevention to Safari – it's automatic and works behind the scenes, helping to prevent unwanted intrusion into your browsing history. However, if you're especially worried about leaving a trail of breadcrumbs behind you on the web, I recommend selecting this check box. You can also choose to block any attempts at *cross-site* tracking, where multiple web sites cooperate together and share tracking information.

Finally, you can also limit the access that websites have to your MacBook's location services, which can pinpoint your current location, from the Websites tab in Safari Preferences. For example, Facebook's website uses location services if you allow it. Access can be set through prompting, or you can deny access to location services completely for all websites.

Banishing pesky iCloud Keychain passwords

I am the world's biggest critic of *keychains,* which High Sierra uses to automatically provide all sorts of login information throughout the system. In Safari, for

example, the password information is automatically entered for you whenever a website you've approved requires you to log in.

To be more specific, I'm sure many readers will adopt *iCloud Keychain*, which stores password and credit card information for Safari and wirelessly distributes that information automatically to other Macs and iOS devices using the same Apple ID. Apple even says that the passwords generated by iCloud Keychain are more complex and harder to crack, which *sounds* more secure, right?

I'd rather keep a pet piranha in a cereal bowl than use this feature! Why? Whenever you're logged in, *anyone* using your MacBook gets control of your online persona (in the form of your passwords to secure websites). Safari, like an obedient puppy, automatically provides access to sites with stored keychain passwords.

REMEMBER

If you'd like to take the far-less-convenient-but-*much*-safer, old-fashioned route of remembering your passwords yourself, follow my lead: Visit the iCloud pane in System Preferences, and deselect the Keychain check box to turn the iCloud Keychain feature off.

Now that I've warned you thoroughly, I feel better about mentioning the Passwords tab in Safari Preferences for those who *do* decide to use iCloud Keychain. From the Passwords tab, you can view the iCloud Keychain information that Safari uses, and either remove a specific password or all passwords from your iCloud Keychain.

Handling ancient history

As you might imagine, your History file leaves a very clear set of footprints indicating where you've been on the web. To delete the contents of the History menu, choose History⇨Clear History (at the very bottom of the History menu).

Safari also allows you to specify an amount of time to retain entries in your History file. Open the Safari Preferences dialog, click the General tab (refer to Figure 8-3), and then click the Remove History Items pop-up menu to specify the desired amount of time. Items can be rolled off daily, weekly, biweekly, monthly, or yearly. You can also turn off automatic removal entirely.

Setting notifications

In High Sierra, Safari can allow websites you've approved to send you messages using Notification Center — you can control which sites have been given this functionality from the Websites tab in Safari's Preferences dialog. To prevent a website from sending notifications, click the Notifications entry in the list on the

left, then choose Deny from the drop-down menu next to the offending site. You can also remove a website from the list completely by clicking it and clicking the Remove button.

Avoiding those @*!^%$ pop-up ads

I hate pop-up ads, and I'm sure you do, too. To block many of those pop-up windows with advertisements for everything from low-rate mortgages to "sure-thing" Internet casinos, open the Safari Preferences dialog, click the Security tab, and verify that Block Pop-Up Windows is selected. You can also turn on content blocking for all the pages on the current website by choosing Safari⇨Settings for This Website from the Safari menu and clicking the Enable Content Blockers check box to enable it.

IN THIS CHAPTER

» **Introducing iCloud**

» **Using your iCloud Drive**

» **Sharing documents with iOS devices using Handoff**

» **Setting iCloud preferences**

» **Managing iCloud storage**

Chapter **9**

iCloud Is Made for MacBooks

R eaders often ask me to name my favorite reasons why they should switch platforms. In other words, why should a Windows user who thinks all is well move to the Apple universe? I always mention the superior hardware and that High Sierra is a much better operating system than Windows 10. My favorite selling point is *innovation.* Apple comes up with the best ideas first, and everyone else plays catch-up.

Here's the perfect example: The folks at Apple got tired of constantly synchronizing their iOS devices with their computers over a USB cable. Remember those archaic days? When you took a photo with your iPhone or created a new document with your iPad, your new additions just sat there in their original locations until you had a chance to sync your device with your MacBook. But with Apple's iCloud functionality, your stuff gets *automatically* synchronized and backed up across the Internet – something that the Windows world still doesn't have, even today!

In this chapter, I save you the trouble of researching all the benefits of iCloud. Heck, that's one of the reasons you bought this book, right?

So How Does iCloud Work, Anyway?

Today's iOS devices can all display or play the same media: photos, music, books, TV shows, and such. Heck, iOS devices (your iPhone, iPad, and iPod Touch) can even share applications. Therefore, it makes sense to effortlessly share all your digital media across these devices, and that's what iCloud is all about. Apple calls this synchronization "pushing."

Here's how the pushing process works. Imagine that you just completed a Pages document on your MacBook (an invitation for your son's birthday party), but you're at the office, and you need to get the document to your family so they can edit and print it using your son's iPad.

Before iCloud, you had to attach the document to an email message or upload it to some type of online storage such as Dropbox or Microsoft's OneDrive, and then a family member had to download and save the document to the iPad before working with it. With iCloud, you simply save the document on your MacBook to the Pages folder on your iCloud Drive, and macOS automatically pushes the document to the iPad (using the same Apple ID). Your document appears on the iPad, ready to be opened, edited, and printed — and it appears on any other devices using the same Apple ID as well. Figure 9-1 gives you an idea of what's happening in the background when one of your devices pushes data using iCloud.

FIGURE 9-1: iCloud works by pushing data among all your iOS devices.
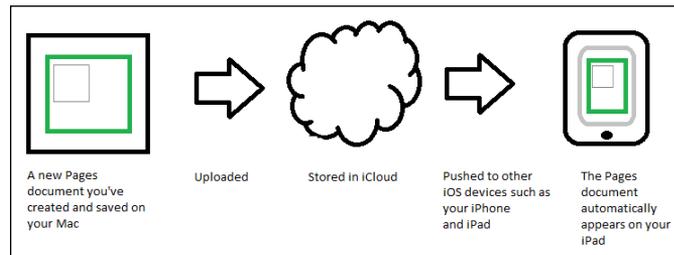
I'll admit that Windows eventually implemented a similar process using OneDrive — for example, you can save documents within Office 365 to OneDrive and access them on other PCs and devices. Ah, but iCloud isn't limited to just digital media, though! High Sierra can also automatically synchronize your email accounts, Calendar, and Contacts entries with other iOS devices across the

Internet, so staying in touch is much easier (no matter where you are or which device you happen to be using at the moment).

Apple also throws in 5GB of free online storage that you can use for all sorts of things — not only digital media files but also documents you'd like to save online for safekeeping. Items you buy through the iTunes Store, iBooks Store, or App Store — music, video, podcasts, books, and applications — do not count against your 5GB limit. (More on how you can expand that 5GB limit later in the chapter.)

REMEMBER

To join the iCloud revolution, you need an Apple ID. If you didn't create one during the initial High Sierra setup, you can create an Apple ID from the App Store.

TIP

You can also access your documents through the web at `www.icloud.com`. Log in with your Apple ID and password to send mail, access your contacts and calendar, edit your notes and reminders, locate your devices, and use online versions of Pages, Numbers, and Keynote.

Moving, Saving, and Opening iCloud Documents

iCloud online storage for your documents is definitely neat; your iCloud Drive functions much like other popular online storage services like Dropbox and Microsoft OneDrive, allowing you to save documents, load documents, and move files to and from your MacBook's drive with ease, using a Finder window. In fact, iCloud Drive keeps things tidy for you: If you move a file from your iCloud Drive to your local drive, it's also deleted automatically from iCloud Drive on your other Macs and iOS devices that use the same Apple ID. (High Sierra prompts you for permission first, of course.)

Figure 9-2 illustrates my iCloud Drive in action; you can access your iCloud Drive from the Finder window Sidebar. Note that iCloud folders are automatically created for supported applications, such as Pages and Numbers, allowing you to click the corresponding iCloud folder from the application's Open dialog. In other words, *both* your iCloud Drive and the application-specific iCloud folder are available within the application's Open dialog. It's about as convenient as you can get.
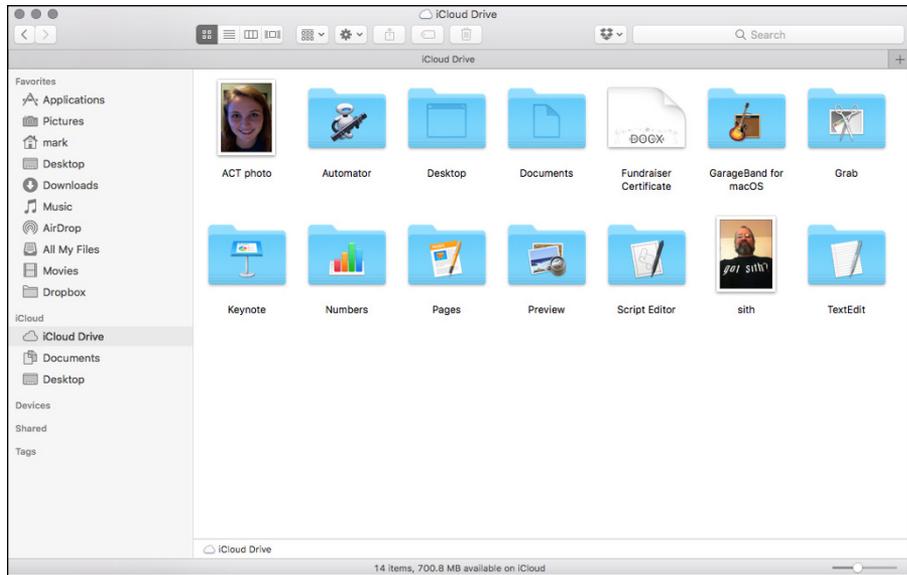
FIGURE 9-2:
Each of these
iCloud folders can
joyously store
documents.

Putting Handoff to Work

If you're like me, your favorite moment in a team track event is the all-important handoff of the baton from one runner to the next — making Handoff the perfect name for this High Sierra feature, because it actually transfers what you're doing on your iOS devices to matching applications on your Mac!

As an example, let's suppose you're using Maps on your iPhone, and you realize you'd rather view the location on your MacBook's larger screen (as well as print it from the USB printer connected to the laptop). If you're within Bluetooth signal range of your MacBook, Handoff is ready to go: An icon for the macOS version of Maps automatically appears at the left side of the Dock in High Sierra. One click on that icon, and your MacBook opens Maps and displays the same location!

You're not restricted to just one application, either — each time you open an application that Handoff supports (like Safari and Mail), High Sierra offers you the chance to open the matching application on your MacBook and displays the current data from the iOS app. All this is completely trouble-free: There's nothing to configure or set.

Caveats? Only three at the time of this writing:

>> **Bluetooth is required:** Bluetooth networking must be turned on for both the iOS device and the MacBook for Handoff to work, and the iOS device must be

within a 30-foot radius of your laptop. (That's the distance limit that Bluetooth hardware can broadcast; walls and other obstructions reduce that range.)

>> **You'll need the right hardware:** In order to use Handoff, you'll need an iPhone 5 (or later), a fourth-generation iPad (or later), any iPad mini, or a fifth-generation iPod Touch (or later). On the computer side, you must have a 2012 model MacBook (or later) that includes Bluetooth LE hardware.

>> **iOS 8 is a must:** Handoff is compatible only with iOS devices running iOS 8 or later.

Handoff works in the other direction as well, allowing you to pick up where you left off on your MacBook application by transferring the active session to your iPhone, iPad, or iPod touch. Swipe the icon that appears on your iOS device to start the ball rolling.

Configuring iCloud

You control all the settings for iCloud from High Sierra's iCloud pane in System Preferences (shown in Figure 9-3). Click the System Preferences icon on the Dock and then click the iCloud icon. At the sign-in prompt, enter your Apple ID and your password. System Preferences then guides you through basic iCloud configuration.

FIGURE 9-3:
The iCloud pane appears in System Preferences.

Most of the check boxes on the iCloud Preferences pane control whether a particular type of data — such as a Contacts entry, Keychain password, Mail message, or calendar in Calendar — is pushed to all your iOS devices. (If an Options button appears next to an entry, you can click it to specify additional settings.)

Note, however, that you can enable three other unique features from this pane as well:

» **Photos:** Click the Options button and enable the My Photo Stream check box to allow your MacBook to automatically receive photos from your iOS devices. Take a photo with your iPhone, for example, and that image is immediately pushed to your laptop, iPad, and iPod touch. On the MacBook, however, Photo Stream goes one step further: The photos appear automatically in Photos in a special album titled Photo Stream. To store *all* of your photos In iCloud, enable the iCloud Photo Library check box. (If you have a large number of photos, you may have to buy additional iCloud storage space to use the iCloud Photo Library feature.) You can also enable iCloud Photo Sharing, which allows you to share photos with others from Photos.

To turn on My Photo Stream or iCloud Photo Sharing in Photos, choose Photos ⇨ Preferences, click the iCloud button, and select the desired check boxes.

» **Back to My Mac:** If you enable Back to My Mac, you can remotely control your MacBook from another Mac computer (or vice versa) using High Sierra's Screen Sharing feature. You can also transfer files between the two computers. Back to My Mac works over both a broadband Internet connection and a local network. Available Mac computers show up in the Shared section of the Finder window sidebar. Note that you must manually turn on Screen Sharing in the System Preferences Sharing pane before you can remotely control another Mac.

» **Find My Mac:** Talk about Buck Rogers! Imagine locating a lost or stolen MacBook from your iPhone or iPad. Now think about this: With Find My Mac, you can even lock or completely wipe your Mac's hard drive *remotely*, preventing unauthorized use and erasing your private data! After you access your MacBook from another iOS device, you can play a sound, send a message to be displayed onscreen, remotely lock the machine, or remotely wipe the drive.

After you wipe the drive, though, you can't locate your MacBook again.

You can also enable Family Sharing from the iCloud pane, which allows you to share purchased media and apps with as many as six users' accounts. Participants can share a special Photo Stream, apps, and media (purchased from the iTunes Store, iBooks Store, or App Store), common reminders and a common calendar — and no, they don't actually need to be members of the same family. To launch the Family Sharing Setup assistant, click the Set Up Family button and follow the onscreen instructions.

Managing Your iCloud Storage

Apple knows that you're curious about how much space you've taken up in your personal iCloud. To monitor your iCloud storage, click the Manage button at the bottom-right corner of the iCloud System Preferences pane. From the sheet that appears, shown in Figure 9-4, you can see how much space you're using for document and data storage.

Click the data type in the left column, and iCloud displays the amount of storage space that's being used for that data. For instance, in Figure 9-4, I'm checking the amount taken by my iCloud Photo Library. Other items that might appear in this sheet include Mail and selected iPad and iPhone apps that support iCloud.

TIP

If you find yourself running out of iCloud storage space, delete any stored item by selecting it in the list at the right side of the sheet and click Delete.

And if you need more elbow room than 5GB, Apple is happy to provide 50GB, 200GB, or even a whopping 2TB of additional storage for a monthly subscription fee of $0.99, $2.99, or $9.99, respectively. Click the Manage button on the iCloud pane in System Preferences and then click the Buy More Storage button to subscribe.

Chapter **10**

Your Laptop Goes Multiuser

Everybody wants a piece — of your laptop, that is.

Perhaps you live in a busy household with kids, significant others, grandparents, and a wide selection of friends, all of them clamoring for a chance to spend time on the Internet, take care of homework, or enjoy a good game.

On the other hand, your MacBook might occupy a college classroom or boardroom at your office. Suddenly your classmate or coworker wants his own Private iDaho on-the-road warrior, complete with a reserved spot on the drive and his own attractive, handpicked Desktop background. (Even flying at 30,000 feet, your coworker will be eyeing your MacBook.)

Before you throw up your hands in defeat, read this chapter and take heart! Here you find all the step-by-step procedures, explanations, and tips to help you build a *safe* multiuser MacBook that's accessible to everyone with clean hands.

Oh, and you still get to use it, too. And, no, that's not being selfish.

Once Upon a Time (An Access Fairy Tale)

Okay, so you don't have Cinderella, Snow White, or that porridge-loving kid with the trespassing problem. Instead, you have your brother Bob.

Every time Bob visits your place, it seems he needs to do "something" on the Internet, or he needs a moment with your MacBook Air to bang out a quick message, using his web-based email application. Unfortunately, Bob's forays onto your laptop always end up changing stuff, such as your Desktop settings, Contacts database, and Safari bookmarks.

What you need, good reader, is a visit from the Account Fairy. Your problem is that you have but a single user account on your system, and macOS High Sierra thinks that Bob is *you.* By turning your MacBook into a multiuser system and giving Bob his own account, High Sierra can tell the difference between the two of you, keeping your druthers separate!

With a unique user account, High Sierra can track all sorts of things for Bob, leaving your computing environment blissfully pristine. A user account keeps track of stuff such as

- » Contacts cards
- » Safari bookmarks and settings
- » Desktop settings (including background images, screen resolutions, and Finder tweaks)
- » iTunes Libraries, just in case Bob brings his own music (resigned "sigh")

Plus, Bob gets his own reserved Home folder on your laptop's hard drive, so he'll quit complaining about how he can't find his files. Oh, and did I mention how user accounts keep others from accessing *your* stuff? And how you can lock Bob out of where-he-should-not-be, such as certain applications (like Messages and Mail)? Heck, you can even lock Bob out of specific websites (including that offshore Internet casino site he's hooked on)!

User accounts affect just about everything you can do in High Sierra and on your laptop. The moral of my little tale? A Mark's Maxim to the rescue:

MARK'S MAXIMS

Assign others their own user accounts, and let High Sierra keep track of everything. Then you can share your MacBook with others and still live happily ever after!™

Big-Shot Administrator Stuff

Get one thing straight right off the bat: *You* are the administrator of your MacBook. In network-speak, an *administrator* (or *admin* for short) is the one with the power to Do Unto Others — creating new accounts, deciding who gets access to what, and generally running the multiuser show. In other words, think of yourself as the Monarch of macOS. (The king or queen, not the butterfly.)

TIP

I always recommend that you have only one (or perhaps two) accounts with administrator-level access on any computer. In this way, you can be assured that no one can monkey with your laptop while you're away from the keyboard. So why might you want a second admin account? Well, suppose you're away from your laptop — think "daughter takes it with her on a trip to Europe." You might need to assign a second administrator account to a *trusted* individual who knows as much about your road warrior as you do. (Tell 'em to buy a copy of this book.) That way, if something breaks or an account needs to be tweaked in some way, the other person can take care of it while you're absent (but without getting access to your personal data). If necessary, don't forget you can always log in to your second admin account and change the password to guarantee security!

In the following sections, I explain the typical duties of a first-class MacBook administrator.

Deciding who needs what access

The three most common user account levels are

>> **Admin (administrator):** See the preceding section.

>> **Standard level:** Perfect for most users, these accounts allow access to just about everything but don't let the user make drastic changes to High Sierra or create new accounts.

>> **Managed with parental controls level:** These accounts are standard accounts with specific limits assigned by you or another admin account.

Another Mark's Maxim is in order:

Assign other folks standard-level accounts and then decide whether each new account needs to be modified to restrict access as a managed account. *Never assign an account admin-level access unless you deem it truly necessary.*™

Standard accounts are quick and easy to set up, and I think they provide the perfect compromise between access and security. You'll find that standard access allows your users to do just about anything they need to do, with a minimum of hassle.

Managed accounts (with parental controls) are highly configurable, so you can make sure that your kids don't end up trashing the hard drive, sending junk mail, or engaging in unmonitored chatting. (*Note:* Attention, all parents, teachers, and anyone designing a single public access account for a library or organization: This means *you.*)

Adding users

All right, Mark. Enough pregame jabbering. Show this good reader how to set up new accounts! Your laptop already has one admin-level account set up for you (created during the initial High Sierra setup process). You need to be logged in to that account to add a user. To add a new account, follow these steps:

1. **In the Users & Groups pane (from System Preferences), click the New User button (plus sign) at the bottom of the accounts list to display the empty user record sheet shown in Figure 10-1.**

If the New User button is disabled and you can't click it, click the padlock at the bottom left of the System Preferences pane, and provide your password to unlock the Users & Groups pane.

2. **Select the access level for this user from the New Account pop-up menu.**

By default, the user receives a standard-level account. You can also choose an administrator account, a managed standard account with parental controls already enabled, or a sharing-only account.

The sharing-only account allows the user to copy or open shared files from your MacBook remotely (from another computer), but that user can't directly log in to your laptop.
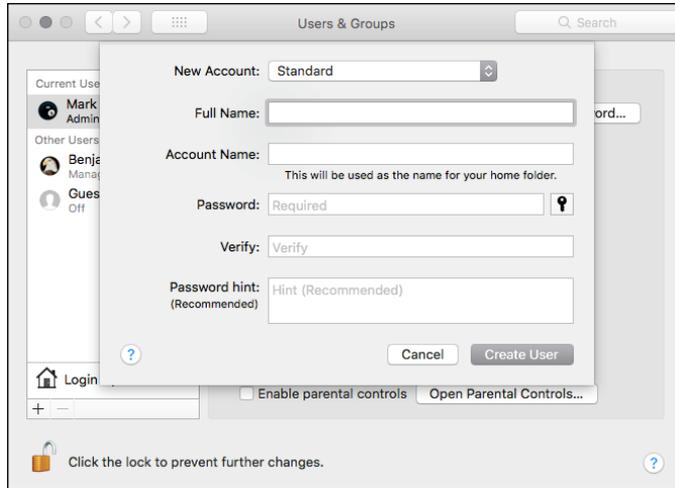
FIGURE 10-1:
Fill out those fields, and you have a new user.

3. **In the Full Name text box, type the name you want to display for this account (both in the Current User list and on the Login screen). Then press Tab to move to the next field.**

   macOS automatically generates an *account name* in the Account Name field for use as your screen and buddy name in Messages and various network applications. The account name is also the name of the folder that macOS creates on the computer's hard drive for this user. You can keep the default account name or type a new one, but it cannot contain any spaces.

   TIP

4. **Type the password for the new account.**

   Click the button with the key icon next to the Password field, and High Sierra is happy to display Password Assistant, complete with a suggestion. Click the Suggestion pop-up menu to see additional suggestions. You can choose the password's length and select from among several types: letters and numbers, numbers only, memorable, completely random, or even FIPS-181 compatible (government-quality). Password Assistant automatically copies the current password you're considering into the Password and Verify text boxes.

   As always, when you enter or verify a password, macOS displays bullet characters for security.

5. **Press Tab, type the password in the Verify text box, and press Tab again.**

6. **(Optional) If you decide to use the password hint feature, you can enter a short sentence or question in the Hint text box.**

   The hint is displayed after three unsuccessful attempts at entering the account password.

WARNING

From a security standpoint, password hints are taboo. (Personally, I *never* use 'em. If someone is having a problem logging in to a computer I administer, you better believe I want to know *why.*) Therefore, despite the recommendation that High Sierra shows here, I strongly recommend that you skip this field. If you decide to offer a hint, *keep it vague!* Avoid hints like "Your password is the name of the Wookiee in *Star Wars.*" And don't embed the password in the hint!

7. **Click the Create User button to finish and create the account.**

The new account shows up in the Current User list and in the Login screen.

Each user's Home folder has the same default subfolders, including Movies, Music, Pictures, Public, and Downloads. A user can create new subfolders within his or her Home folder at any time.

Here's one more neat fact about a user's Home folder: No matter what the account level, most of the contents of a Home folder can't be viewed by other users. (Yes, that includes admin-level users. This way, everyone using your MacBook Pro gets his or her own little area of privacy.) In the Home folder, only the Public folder can be accessed by other users — and only in a limited fashion. (Read all about Home folders in Chapter 5.)

Modifying user accounts

Next, consider the basic modifications you can make to a user account, such as changing existing information or selecting a new picture to represent that user's unique personality.

To edit an existing account, log in with your admin account, display the System Preferences window, and click Users & Groups to display the account list. Then follow these steps:

1. **In the list to the left of the window, click the account you want to change.**

REMEMBER

If the accounts in the list are disabled and you can't select one, you must unlock the Users & Groups pane. Click the lock at the bottom left of the System Preferences pane (and type your password, if prompted).

2. **Edit the settings you need to change.**

Examples include temporarily enabling administrator rights for an account (by selecting the Allow User to Administer This Computer check box) and changing the account password (by clicking the Reset Password button).

3. **Click the round picture well (the circle that displays the image) to specify the thumbnail image that appears in the Login list next to the account name.**

Apple provides a number of good images in the preview collection. Just click a thumbnail to select it.

4. **To replace your account image, drag a new image from a Finder window or the Photos window and drop it into the picture well.**

Note that some of these choices are available only when you're using an Admin-level account:

- *To choose an image from the default set of High Sierra icons:* Click the picture well, click the Defaults entry at the left (see Figure 10-2), click the desired image, and then click Done.

- *To choose an image from your Photos collection:* Click the Photos entry, click the desired image, and then click Done.

- *To choose an icon image from your iCloud Photo Stream:* Click the iCloud entry, click the desired image, and then click Done.

Alternatively, you can click the picture well and click the Camera entry to grab a picture from your MacBook's built-in FaceTime HD camera. When you're set to take the photo, click the camera icon and then click Done to accept it. *Most* cool. (You can also use Photo Booth to take an account image.)

5. **After you make your changes, press ⌘+Q to save them and close the System Preferences window.**

Standard-level users have some control over their accounts — they're not helpless, after all. Standard users can log in, open System Preferences, and click Users & Groups to change the account password or picture as well as the Contacts Card assigned to them in the High Sierra Contacts application. All standard users can also set up login items, which I cover later in this chapter. Note, however, that managed users might not have access to System Preferences, so they can't make changes. (Read about this in the upcoming section "Managing an account's access settings.")

I banish thee, mischievous user!

Not all user accounts last forever. Students graduate, coworkers quit, kids move out of the house (at last!), and Bob might even find a significant other who has a faster broadband connection. We can only hope.

Anyway, no matter what the reason, you can delete a user account at any time. Log in with your admin account, display the Users & Groups pane in System Preferences, and then follow these steps to eradicate an account:

1. **In the user list at the left of the window, click the account you want to delete.**

2. **Click the Delete User button (which bears the Minus Sign of Doom).**

   macOS displays the confirmation sheet shown in Figure 10-3.

   Note that the contents of the user's Home folder can be saved in a disk image in the Deleted Users folder (just in case you need to retrieve something). Alternatively, you can choose to leave the deleted user's Home folder as is, without removing it (but naturally you won't regain any space, even though the user account is deleted).

   If you're absolutely sure you won't be dating that person again, select the Delete the Home Folder radio button (which doesn't save anything in the Deleted Users folder). You regain all the drive space that was being occupied by the contents of the deleted user's Home folder.

3. **To delete the account, click Delete User. If you're not sure, click the Cancel button to abort and return to the Accounts list.**

Time once again for a Mark's Maxim:

> *Always* delete unnecessary user accounts. Otherwise, you're leaving holes in your laptop's security.™

FIGURE 10-3:
This is your last chance to save the stuff from a deleted user account.

WORKING WITH THE GUEST ACCOUNT

The *Guest* account is a convenient method of granting someone temporary access to your MacBook. In fact, your guest doesn't even need a password to log in. Your Guest account has all the attributes of a standard account, so the visitor has little chance of accidentally (or purposefully) damaging your system. Nevertheless, after the guest user logs out, the Guest account is "flushed," and all the data and files that person created using the account are deleted automatically. (This allows the next guest to start with a clean slate.)

By default, the Guest account is disabled. To turn on this feature, open System Preferences, click Users & Groups, and then click the Guest User entry in the list. (You may have to click the Lock icon at the lower-left corner of the Users & Groups pane and provide your admin password before you can continue.) Click the Allow Guests to Log In to This Computer check box to enable it.

Oh, and don't forget that you can enable specific parental controls for the Guest account, just as you can for any other standard-level account. This feature should come in handy if your child has a slumber party coming up this weekend.

Setting up login items and parental controls

Every account on your MacBook can be customized. Understandably, some settings are accessible only to admin-level accounts, and others can be adjusted by standard-level accounts. In the following sections, I introduce you to the things that can be enabled (or disabled) in a user account.

Automating with login items

Login items are applications or documents that can be set to launch or load automatically as soon as a specific user logs in — for example, Apple Mail or Contacts. In fact, a user must be logged in to add or remove login items. Even an admin-level account can't change the login items for another user.

REMEMBER

A user must have access to the Users & Groups pane in the System Preferences window to use login items. As you can read in the following section, a user can be locked out of System Preferences, which makes it more difficult for login items to be deleted for that account. (Go figure.) Therefore, if the account is managed and access to System Preferences has been turned off, an administrator must enable the account's access to System Preferences, allowing the managed user to delete login items.

To set login items for your account, follow these steps:

1. **Click the System Preferences icon in the Dock, and then click the Users & Groups icon.**

2. **Click the Login Items tab to display the settings shown in Figure 10-4.**

    It bears repeating: You can change the Login Items for only the account that's currently logged in, so be sure that the desired account appears under the Current User heading in the list at the left.

3. **Click the Add button (with the plus sign) to display a file selection sheet.**

4. **Navigate to the application you want to launch each time you log in, click it to select it, and then click Add.**

    If you're in the mood to drag and drop, just drag the applications you want to add from a Finder window, and drop them directly into the list.

5. **Press ⌘+Q to quit System Preferences and save your changes.**

TIP

If the application is running at the moment, you can take an easy shortcut and avoid these steps: Simply right-click the application icon in the Dock and choose Options⇨Open at Login from the pop-up menu that appears.
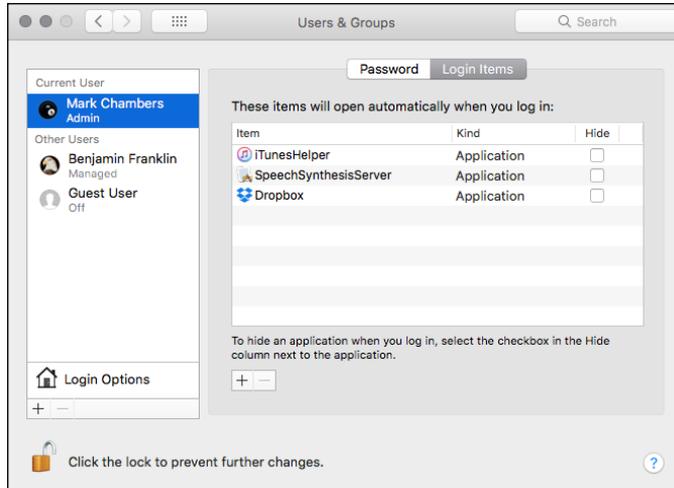
FIGURE 10-4:
Add apps to your
Login Items list.

Login items are launched in the order in which they appear in the list, so feel free to drag the items into any order you like.

TIP

It's a good idea to limit the amount of login items, especially with older Mac-Books. Login items may be automatic and convenient, but too many of them can dramatically slow the boot process each time you start your laptop. No one wants to wait 3 minutes before starting to work or play!

Managing an account's access settings

A standard-level account with restrictions is a *managed* account. (You can read about these accounts earlier in this chapter.) With these accounts, you can restrict access to many different places in High Sierra and your laptop's applications by using *parental controls.* (Naturally, admin-level accounts don't have parental controls, because an admin account has no restrictions.)

REMEMBER

In short, parental controls come in handy in preventing users — family members, students, coworkers, friends, or the public at large — from damaging your files, your software, or High Sierra itself. If an account has been restricted with parental controls, the account description changes from Standard to Managed in the Accounts list.

To display the parental controls for a standard account, start here:

1. **Log in with an admin-level account.**
2. **Open System Preferences and click Users & Groups.**

3. **Click the desired Standard account in the list and then select the Enable Parental Controls check box.**

If necessary, click the Lock icon at the lower-left corner to confirm your access.

4. **Now click the Open Parental Controls button to display the six categories (tabs) shown in Figure 10-5.**
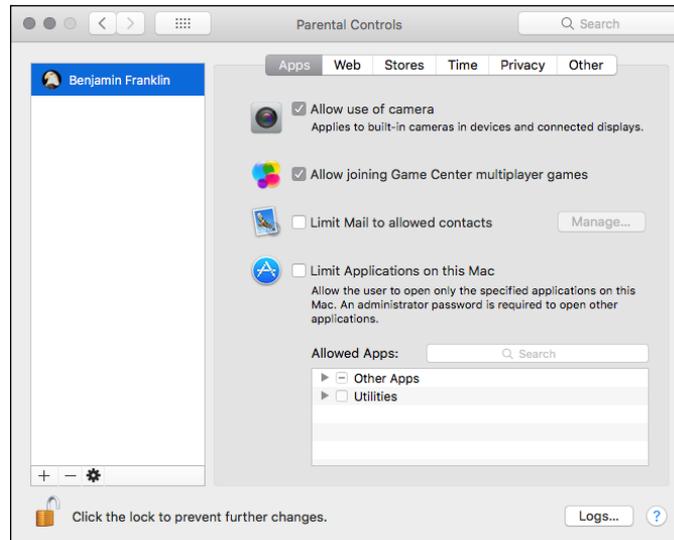
FIGURE 10-5:
You can restrict access to many functions in a Managed account.

You can restrict access to the following functions in a Managed account:

» **Apps:** These settings (which I discuss in more detail in a second) affect what the user can do in High Sierra, as well as what the Finder itself looks like to that user.

» **Web:** High Sierra offers three levels of control for websites:

  • *Allow Unrestricted Access to Websites:* Select this radio button to allow unfettered access for this user.

  • *Try to Limit Access to Adult Websites:* You can allow Safari to automatically block websites it deems adult. To specify particular sites that the automatic "adult filter" should allow or deny, click the Customize button.

  • *Allow Access to Only These Websites:* Choose this radio button to specify which websites the user can view. To add a website, click the Add (plus sign) button, and respond to the High Sierra prompt for a title and the website address.

>> **Stores:** You can specify whether the user can use the iTunes Store and the iBooks Store, as well as restrict access within both stores to music, movies, TV shows, apps, and books by age or rating.

>> **Time:** Parents, click the Time tab, and you'll shout with joy! Check out the options in this pane, shown in Figure 10-6. You can limit an account to a certain number of hours of usage per weekday (Weekday Time Limits) and per weekend day (Weekend Time Limits). You also can set a bedtime computer curfew time for both weekdays (called "Bedtime" here) and weekend days.
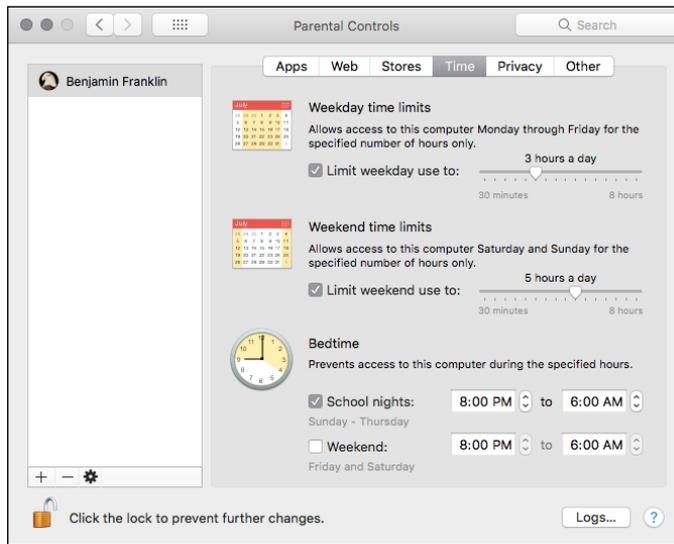
FIGURE 10-6:
High Sierra keeps track of your kid's computer usage so that you don't have to.

>> **Privacy:** From this tab, you can individually configure the user's ability to launch apps or access social media. Use the convenient check boxes to allow or prevent changes to the settings used by Location Services, Contacts, Calendars, Reminders, Twitter, Facebook, and Diagnostic Apps. For even more control, click the Manage Privacy button to jump immediately to the Privacy tab of the Security & Privacy pane (allowing you to fine-tune which apps can access specific data).

>> **Other:** These settings control the Dictionary and hardware devices such as your printer and DVD burner. They include

- *Turn Off Siri and Dictation:* Enable this check box to prevent the user from accessing the Siri assistant and Dictation features in System Preferences.

- *Disable Editing of Printers and Scanners:* With this check box selected, the user cannot modify the printers and printer queues in the Print & Scan

pane in System Preferences. If this option is enabled, the user can still print to the default printer and switch to other assigned printers but can't add or delete printers or manage the macOS print queue. (If the print job encounters a problem, that user has to bug you to fix things.)

- *Block CD and DVD Burning in the Finder:* Select this check box to prevent the user from recording CDs or DVDs via the built-in disc-recording features in macOS. (Note, however, that if you load a third-party recording program, such as Toast, the user can still record discs with it — unless you also disable access to that program in the Apps section.)

- *Restrict Explicit Language in Dictionary:* With this check box selected, profane terms in the Dictionary are hidden for this user.

- *Prevent the Dock from Being Modified:* Select this check box, and the user can't remove applications, documents, and folders from the Dock in the full Finder. (This is a great choice if you don't want the contents of the Dock changing according to the whims of other users.)

- *Use Simple Finder:* I discuss the Simple Finder later in this section; it's a great idea for families and classrooms with young children.

TIP

You might want to create a single standard-level account for an entire group of people to use. For example, maybe you want to leave the laptop in kiosk mode in one corner of the office, or perhaps everyone in a classroom will use the same account on the MacBook. Keep your one admin-level account close to your bosom, and create a standard-level account for the Unwashed Horde.

High Sierra keeps a number of different types of *text log files.* They track where the user goes on the Internet, the applications launched by the account, and the contents of any Messages conversations in which the user participated. Click the Logs button on any Parental Controls screen to monitor all the logs for a particular account.

REMEMBER

You can always tell whether an account has been assigned parental controls, because the account description changes from Standard to Managed in the User list.

Of particular importance are the Finder and the applications controls. Click the Apps tab (refer to Figure 10-5) to modify these settings:

≫ **Allow Use of Camera:** Specify whether the account has access to your MacBook's built-in camera. (Note that an external USB Web camera is unaffected by this setting.)

>> **Allow Joining Game Center Multiplayer Games:** This check box allows or disables the user's access to the multiplayer games in Game Center.

>> **Limit Mail to Allowed Contacts:** Select this check box to specify the email addresses that this user can communicate with. (Note that this feature affects only Apple Mail; other mail clients, web-based mail, instant messaging applications, and audio/video chat applications aren't controlled.) To add an address to which the user can email, click the Manage button, then click the familiar Add button bearing the plus sign. To delete an address, click the Manage button, select the offending address, and click the Delete button (bearing the minus sign).

TIP If you want a notification if the user is attempting to send an email to someone not on the list, click the Manage button, select the Send Requests To check box, and then type your email address in the text box.

>> **Limit Applications on this Mac:** When this option is selected, you can choose which specific applications the user sees. These restrictions are in effect whether the user has access to the full Finder or just the Simple Finder. Click the triangle icon next to the desired group heading to expand the list. To locate a specific application, click in the Search box and type the application name:

  • **To allow access to all applications:** Simply disable the Limit Applications on this Mac check box.

  • **To allow or restrict access to all the applications of a specific type:** Enable or disable the check box next to the desired group heading — for example, clicking the Other Apps check box to disable it will prevent the user from launching any of the applications in that group.

  • **To allow or restrict access to an individual application:** Select the check box next to any application to select or deselect it.

TIP To add a new application to the Allowed Apps list, drag its icon from the Finder and drop it in the list in the Other Apps group. After you add an application, it appears in the Other Apps group, and you can toggle access to it just like the applications in the named groups.

These settings can work hand in hand with the High Sierra *Gatekeeper* feature, which prevents anyone from launching applications that were not downloaded from the App Store (or are not Apple-approved).

You can restrict your standard–level users even further by assigning them the Simple Finder set of limitations. The Simple Finder is a highly simplified version of the regular macOS Finder. It has a basic Dock that contains only the Finder icon, the Trash icon, and the folders for the user's approved applications, documents, and shared files.

The Simple Finder is the network administrator's idea of a foolproof interface for macOS: A user can access only the system files and resources needed to do a job, with no room for tinkering or goofing off.

A Simple Finder user can still make the jump to the full version of the Finder by clicking the Finder menu, choosing Run Full Finder, and entering an admin-level username and password.

TIP Would you like to set up a public-access MacBook? You can also change the Automatic Login account from the Users & Groups pane. Click the Login Options button under the User list, and then click the Automatic Login pop-up menu to choose the account that automatically logs in when macOS starts. On the confirmation sheet that appears, enter the account password, and click OK. I've made it clear elsewhere that Automatic Login is *not* a good security feature in many cases, such as with a laptop on the road. However, it can be a good feature if you're preparing a MacBook for public use. If you set the Automatic Login to your public standard-access account, macOS automatically uses the correct account if the Mac is rebooted or restarted.

REMEMBER You can always choose Log Out from the Apple menu to log in under your own account, or use the fast user switching feature I describe in the next section.

Mundane Chores for the Multiuser Laptop

After you're hip to user accounts and the changes you can make to them, you can turn to a number of topics that affect all users of your MacBook. These topics include how they log in, how a user can share information with everyone else on the computer, and how each user account can be protected from unscrupulous outsiders with state-of-the-art encryption. (Suddenly you're James Bond! I told you High Sierra would open new doors for you.)

Logging in and out of High Sierra For Dummies

Hey, how about the login screen itself? How do your users identify themselves? Time for another of my "shortest books in the *For Dummies* series" special editions. (The title is practically longer than the entire book.)

Exploring your login options

High Sierra offers four methods of logging folks in to your multiuser laptop, all of which are available from the Login Options button on any admin account:

» **The username and password login:** This screen is the most secure type of login screen you'll see in High Sierra; it requires that you type your account username and password. (A typical hacker won't know all the usernames on your MacBook.) Press Return to complete the process.

When you enter your password, you see bullets rather than your password because High Sierra displays bullet characters to ensure security. Otherwise, someone could simply look over your shoulder and see your password.

Keep your laptop secure: Use a username and password login, and always choose a password that's tough to guess.™

» **The list login:** This login screen offers a good middle of the road between security and convenience. Click your account image in the list, and type your password when the login screen displays the password prompt. Press Return to continue.

» **Fast user switching:** This feature allows another user to sit down and log in while the previous user's applications are still running in the background. This is perfect for a fast email check or a scan of your eBay bids without forcing someone else completely off the MacBook. When you turn on Fast User Switching, High Sierra displays the currently active user's name at the right side of the Finder menu bar.

To switch to another account:

1. Click the current user's name in the Finder menu (see Figure 10-7).

2. Click the name of the user who wants to log in.

High Sierra displays the login window, just as if the laptop had been rebooted.

The previous user's stuff is still running, so you definitely shouldn't reboot or shut down the computer!

MARK'S MAXIMS

WARNING
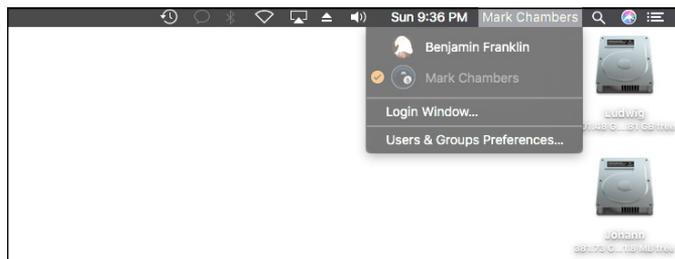
FIGURE 10-7:
The Fast User
Switching menu,
unfurled for
all to see.

To switch back to the previous user:

1. *Click the username again on the Finder menu.*

2. *Click the previous user's name.*

For security, High Sierra prompts you for that account's login password.

>> **Auto login:** This option is the most convenient method of logging in but offers *no* security whatsoever. High Sierra automatically logs in the specified account when you start or reboot your MacBook.

I *strongly recommend* that you use auto login only if

● Your laptop is in a secure location, such as your home or a locked office. If you're on the road, you and your data need the protection of a username and password login!

● You can guarantee that you're the only one using your laptop. **Period.**

● You're setting up a public-access laptop kiosk, in which case you want your MacBook to immediately log in with the public account.

Working in a public environment? *Never* set an admin-level account as the auto login account. This is the very definition of an SDI, or *Supremely Dumb Idea.*

Changing your login settings

To set up a username/password or list login, open System Preferences, click the Users & Groups icon and then display the Login Options settings, as shown in Figure 10-8. (If necessary, click the Lock icon at the lower-left corner to confirm your access.) Here's a rundown of key login settings:

>> **Automatic Login:** To set Auto Login, click the Automatic Login pop-up menu and choose the account that High Sierra should use.

>> **Display Login Window As:** Select the List of Users radio button for a list login screen, or select the Name and Password radio button to require your users to type their full username and password.

>> **Show Fast User Switching Menu As:** Select this check box to enable fast user switching. Click the pop-up menu to specify how accounts should appear in the Finder menu (as full names, short names, or account icons).
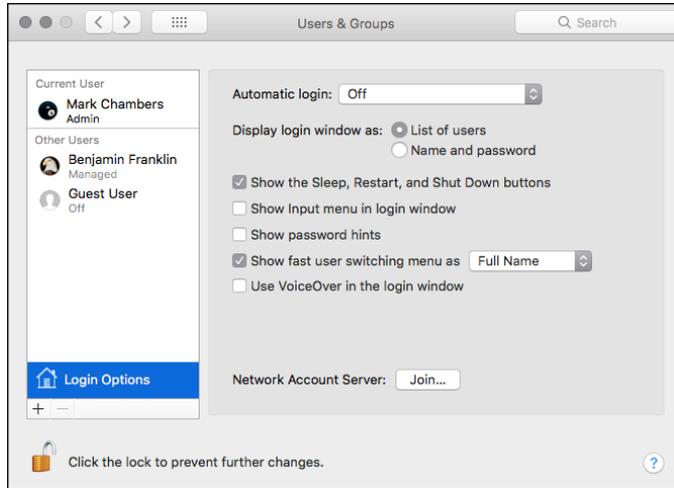
Logging out

Logging out of High Sierra all the way (without fast user switching) is a cinch. Just click the Apple menu ( ) and then choose Log Out. (From the keyboard, press ⌘+Shift+Q.) A confirmation dialog appears that automatically logs you off in one minute. And that one minute is important, because if someone walks up and clicks Cancel, he'll be using your laptop with your account! Therefore, it's a good idea to bypass the confirmation dialog by pressing Option while choosing Log Out from the menu (or by adding the Option key to the keyboard shortcut). Your Mac-Book returns to the login screen, ready for its next victim. Heed this Mark's Maxim:

Always **click the Log Out button in the logout confirmation dialog before you leave your MacBook (or use the Option key to bypass the confirmation dialog), and double-check to make sure the logout completes successfully.™**

Interesting stuff about sharing stuff

You might wonder where shared documents and files reside on your MacBook. That's a good question. Like just about everything in High Sierra, the answer is simple. The Users folder on your laptop has a *Shared* folder within it. To share a file or folder, place it in the Shared folder.

You don't have to turn on file sharing in the Sharing pane of System Preferences to use Shared folders on your laptop. File sharing affects only network access to your machine by users of other computers.

Each user account on your MacBook also has a *Public* folder in that user's Home folder. The Public folder is a read–only folder that other users on your laptop (and across the network) can access. They can only open and copy the files it contains. (Sorry, no new documents or changes to existing documents from other users.)

Encrypting your Home folder can be fun

Allowing others to use your Mac laptop always incurs a risk — especially if you store sensitive information and documents on your computer. Although your login password should ensure that your Home folder is off–limits to everyone else, consider an extra level of security to prevent even a dedicated hacker from accessing your stuff. All it takes is a forgetful moment in an airport or classroom, and your personal and business data is suddenly within someone else's reach. Adequate security is a Supremely Good Thing!

To this end, High Sierra includes *FileVault,* which automatically encrypts the contents of your MacBook's drive. Without the proper key (in this case, either your login password or the FileVault recovery key), the data stored on your drive is impossible for just about anyone to read. (I guess the FBI or CIA would be able to decrypt it, but they're not likely a worry at your place!)

The nice thing about FileVault is that it's completely transparent to you and your users. In other words, when you log in, High Sierra automatically takes care of decrypting your files and folders. You won't know that FileVault is on the job (which is how computers are *supposed* to work).

To turn on FileVault protection for a specific account, follow these steps:

1. **Click the System Preferences icon in the Dock and then click the Security & Privacy icon.**

2. **Click the FileVault tab and then click the Turn On FileVault button.**

3. **Specify whether your iCloud (Apple ID) account can be used to reset your password and unlock your disk and then click Continue.**

   For most MacBook owners, the Allow My iCloud Account to Unlock My Disk option is probably just fine, but if you're security-conscious (or you've shared your iCloud account information with others), click the Create a Recovery Key and Do Not Use My iCloud Account radio button.

4. **If you decide to create a separate recovery key, write down the FileVault recovery key displayed by High Sierra, and store it in a safe place.**

TIP

To avoid mistakes, you can capture an image of your screen by pressing ⌘+Shift+3. The screenshot appears as an image file on your Desktop. From there, you can open it and print a copy, or even copy the image file to a USB flash drive or another computer on your network for safekeeping. (Naturally, you'll delete the image once it's been printed or copied elsewhere.)

WARNING

Personally, I love the FileVault feature. I use it on all my Macs running High Sierra. Yet a risk is involved (insert ominous chord here). To wit: **Do not forget your login and iCloud account passwords (or make *DOGGONE* sure that you or your Admin user have access to a copy of that all-important FileVault recovery key)!** macOS displays a dire warning for anyone who's considering using FileVault: If you forget these safeguards, you can't retrieve any data from your MacBook's drive. Even the smartest Apple support technician will tell you that nothing can be done. As Jerry Reed used to say, "It's a gone pecan" (with *pecan* pronounced Southern style, as "puh-*kahn*").

5. **If necessary, click Enable User, provide the login password for each user on your account, and then click Continue.**

REMEMBER

Each user on your MacBook has to be enabled to use your laptop after FileVault has been turned on. If you don't know the login passwords for the other user accounts on your system, you have to ask each person to provide his or her password to continue. (If an account is not enabled, that person can no longer access anything on the hard drive after it has been encrypted.)

6. **Click the Restart button on the confirmation screen.**

Your MacBook automatically reboots and begins the encryption process. You can continue to use your laptop normally during the encryption.

You're done!

Chapter **11**

Working Well with Networks

In my opinion, network access ranks right up there with air conditioning and the microwave oven. Like other "I can't imagine life without them" kinds of technologies, it's hard to imagine sharing data from your laptop with others around you without a network. I guess you could still make use of a *sneakernet* (the old-fashioned term for running back and forth between computers with a floppy disk), but these days, Apple computers don't even *have* floppy drives. (Even with a high-capacity USB 3.0 flash drive, a sneakernet is still a hassle – and somewhat of a security risk, to boot.)

Nope, networking is here to stay. Whether you use a network to share an Internet connection, challenge your friends to a relaxing game of WWII battlefield action, or stream your MP3 collection to other computers that use iTunes, you'll wonder how you ever got along without one. In this chapter, I fill you in on all the details you need to know to get your road warrior hooked up to a new (or existing) network.

What Exactly Is the Network Advantage?

If you have other family members with computers, or if your MacBook is in an office with other computers (*including* those rascally PCs), here's just a sample of what you can do with a network connection:

» **Share an Internet connection:** This is *the* major reason why many families and most small businesses install a network. Everyone can simultaneously use the same digital subscriber line (DSL) or cable Internet connection on every computer on the network.

» **Share a printer:** You say your fellow employee — or, even worse, your big sister — has a great printer connected to her computer? Luckily, that printer can be shared with anyone across your network.

» **Copy and move files of all sizes:** Need to get a Keynote presentation from one Mac to another? With a network connection, you can accomplish this task in just seconds. Otherwise, you'd have to copy that file to a USB flash drive, burn it to a DVD-R, or use an external hard drive. A network connection makes copying as simple as dragging the project folder from one Finder window to another.

» **Share documents across your network:** Talk about a wonderful collabora-tion tool! For example, you can drop a Word document or Keynote presenta-tion file in your Public folder (or save it in your iCloud Drive) and ask for comments and edits from others in your office (or around the planet).

» **Stream music and video:** With iTunes, you can share your audio and video media collection on your MacBook with other Macs and PCs (and even devices such as an Apple TV or an AirPlay speaker system) on your network. Your eyes and ears can't tell the difference! Using a network connection, you can also watch streaming TV and movies from services like Netflix and Hulu.

» **Play multiplayer games:** Invite your friends over and tell 'em you're hosting a *LAN party* (the techno-nerd term for a large gathering of game players, connected through the same network, all playing the same multiplayer game). Alternatively, you can play most of today's games remotely, challenging other players across the Internet. (A great feature if you're stuck in a hotel room for the evening.)

If your laptop isn't within shouting distance of an existing network, or you don't plan on buying any additional computers, you may not need to create a network. A lone MacBook hanging out in your home with no other computers around should need a network only for Internet access.

REMEMBER

If you have just your Mac laptop and an Internet connection through a high-speed DSL/cable modem, and you have no plans to add another computer, wireless equipment, a network printer, or a mobile device, a network probably isn't necessary.

Should You Go Wired or Wireless?

After you decide that you indeed need a network for your home or office, you have another decision to make: Should you install a *wired* network (running cables between your computers) or a *wireless* network? Heck, should you throw caution to the wind and build a combination network with both wireless and wired hardware?

Your first instinct is probably to choose a wireless network for convenience. After all, this option allows you to eliminate running cables behind furniture, in the walls, or in your office ceiling. Ah, but I must show you the advantages of a wired network as well. Table 11-1 gives you the lowdown to help you make up your mind.

TABLE 11-1   **Wireless versus Wired Networks**

Factor	Wireless Networks	Wired Networks
Speed	Moderate	Much faster
Security	Moderate	Better
Convenience	Better	Worse
Compatibility	Confusing standards	Easier to understand
Cables	Few (or none)	Required

As I see it, here are the advantages of choosing a wired versus a wireless network setup:

» **Wired:** Using a wired network offers two significant perks over a wireless network:

- **Faster speeds:** In general, wired networks that are compatible with your MacBook are many, many times faster than the fastest 802.11ac wireless connections.

The performance of a wireless connection can be compromised by interference (from impeding structures, such as concrete walls, and from household appliances, such as some wireless phones and microwave ovens) and by distance. A wireless network can also slow down because of interference from other wireless networks (especially in densely populated areas). Wired networks have no such problems (as long as you keep your cables to lengths of 25 feet or less).

- **Better security:** A wired network doesn't broadcast a signal that can be picked up outside your home or office, so it's more secure.

Hackers can attack through your Internet connection, though, even if you're using a wired network. Hence the final section of this chapter, "USE YOUR FIREWALL!"

» **Wireless:** A wireless connection really has only one advantage, but it's a big one: *convenience* (which, in this case, is another word for *mobility* for all your networked devices). Laptop owners crave this independence — a freedom that desktop computer owners can only dream about.

Accessing your network anywhere within your home or office — without cables — is so easy. Connecting a wireless printer is a breeze. And when using an AirPort Express mobile Base Station, even your home stereo can get connected to your MP3 collection on your MacBook. Read more about base stations later.

GRAFTING WIRELESS ACCESS TO A WIRED NETWORK

Maybe you're caught in the middle when trying to choose between wired and wireless networking. Or perhaps you're already using a wired network but are thrilled by the idea of sitting on your deck in the sunshine, checking your email on your laptop, untethered. By combining both technologies, you can get the faster transfers of a wired network between all the computers in your office and the freedom you crave. In fact, your cable or DSL Internet provider may offer a combo router that provides both wired and wireless connections.

For example, in my home office I use a wireless base station that also includes a built-in wired switch. My family gets all the convenience a wireless network offers, and everyone can connect to the Internet from anywhere in our house. On the other hand, my office computers have the faster performance and tighter security of a wired network. *Sassy* indeed!

Be a Pal: Share Your Internet!

It's time to see what's necessary to share an Internet connection. In the following sections, I cover two methods of connecting your network to the Internet. (And before you open your wallet, keep in mind that you might be able to use your laptop to share your broadband connection across your network!)

WARNING

Naturally, sharing an Internet connection should only be done with those devices and computers that you trust and consider secure (typically, only the hardware within your home network).

Using your MacBook as a sharing device

You can use your MacBook to provide a shared Internet connection across a simple wireless network, using a broadband DSL or cable connection.

WARNING

It is possible to use a High Sierra-compatible external USB dial-up modem to share a dial-up modem Internet connection, but I would consider it *only* if you have absolutely no other option. A dial-up modem connection really can't handle the data transfer speeds for more than one computer to access the Internet at one time. (In plain English, an external USB modem that you add to your MacBook isn't fast enough for both you and your significant other to surf the web at the same time.) Sharing a dial-up connection just isn't practical.

Because your MacBook has built-in AirPort Extreme wireless hardware, it's easy to share your cable/DSL broadband connection wirelessly with other computers in your home or office.

REMEMBER

When your laptop is functioning as an Internet-sharing device, your MacBook uses High Sierra's built-in Internet-connection-sharing feature to get the job done, *but your MacBook must remain turned on to allow Internet sharing.* I show you how to do this in the later section "Network Internet connections."

Using a dedicated Internet-sharing device

You can also choose to use a dedicated Internet-sharing device (often called an *Internet router*) to connect to your cable or DSL modem. You do have to buy this additional hardware, but here's the advantage: Your MacBook doesn't have to remain turned on just so everyone can get on the Internet.

As I mentioned, Internet routers usually include either wired or wireless network connections, and many include both.

Setting up an Internet router is usually a simple matter, but the configuration depends on the device manufacturer and usually involves a number of different settings in System Preferences that vary according to the router model. Grab a diet cola, sit down with the router's manual, and follow the installation instructions you find there. (In some cases, you must set up your cable or DSL modem as a *bridge* between your ISP and your router, which should be covered in your modem and router manuals as well.)

TIP Most Internet routers offer a DHCP server, which automatically assigns Internet protocol (IP) addresses, and I *strongly* recommend that you turn on this feature! (You can read more about DHCP later in this chapter, in the sidebar "The little abbreviation that *definitely* could.")

What Do I Need to Connect?

Most *normal* folks — whom I define as those who have never met a network system administrator, and couldn't care less — think that connecting to a network probably involves all sorts of arcane chants and a mystical symbol or two. In the following sections, I provide you with the shopping list you need to set up a network — or connect to a network that's already running.

Wireless connections

Today's Mac laptops come complete with built-in AirPort Extreme wireless hardware, so if you already have an AirPort Extreme or Express Base Station, you're all set. Otherwise, hold on tight while I lead you through the hardware requirements for wireless networking.

REMEMBER The maximum signal range — and effectiveness — of any wireless network can be impeded by intervening walls or electrical devices, such as microwave ovens and some wireless phones, all of which can generate interference.

Connecting a MacBook to an existing wireless network

Connecting a MacBook to an existing wireless network requires no extra hardware, because your hardware is already built in. (Whew. That was easy!)

Using a base station to go wireless

If you decide that you want to build your own wireless network, you eschew cables, or you want to add wireless support to your existing wired network, you need a *base station.* (If you do have an existing wired network, the base station can act as a bridge between computers using wireless hardware and your wired network, allowing both types of computers to talk to each other.) Such a wireless base station will have either

>> A port that can connect to your existing wired network's switch

>> A full built-in switch for wired connectivity (which means you can sell your old wired Ethernet switch to your sister in Tucson)

And, of course, a base station can simply act as a central switch for your wireless network (with no support for a wired network).

You can use either a cool Apple Base Station or a boring 802.11ac or 802.11n generic wireless base station; however, the Apple hardware requires less configuration and tweaking. (Sounds like a Mark's Maxim!)

If you don't want the hassle of tweaking PC hardware to accommodate your MacBook, buy Apple hardware and software.™

MARK'S MAXIMS

APPLE BASE STATION MODELS

As listed in the upcoming Table 11-2, your MacBook can work with three current Apple Base Station models for wireless networking:

>> **AirPort Extreme:** I recommend using AirPort Extreme if your network needs an enhanced antenna, which provides greater range. You can read about connectivity ranges in Table 11-2.

>> **AirPort Time Capsule:** Apple's *Time Capsule* unit (an external wireless backup unit) isn't just a wireless remote hard drive. It can also act as a full AirPort Extreme Base Station. In fact, the wireless specifications for a Time Capsule unit and an AirPort Extreme Base Station are almost identical.

>> **AirPort Express:** I recommend using AirPort Express if you want to

- *Carry your wireless base station with you.* Express is much smaller than the other Apple Base Station models. (Think "party on the patio" or a LAN gaming get-together at a friend's house.)

- *Extend the range of your existing wireless network.* If your network signal fades by the pool or potting shed, consider adding an AirPort Express at the edge of your current range to extend the reach of your wireless network.

- *Connect your home stereo or speakers for wireless music streaming using AirPlay.* You can connect a pair of speakers to your AirPort Express and use AirPlay to play music from your MacBook's iTunes library. (Heck, you're not limited to playing the music on your laptop. You can also stream music from your iPhone, iPad, or iPod touch!)

REMEMBER The latest 802.11ac standard used by the AirPort Extreme Base Station and AirPort Time Capsule delivers a connection that's several times faster than the old AirPort Base Station's 802.11b/802.11g/802.11n standards. 802.11ac is also compatible with *all* the older standards — 802.11b/a/g/n — so I highly recommend that you stick with 802.11ac in the future. It plays well with others, and at warp speed to boot!

TABLE 11-2   **Apple Wireless Network Base Stations**

Feature	AirPort Extreme/ AirPort Time Capsule	AirPort Express
Price	$199/$299/$399	$99
Users (maximum)	50	50
802.11ac support	Yes	No
802.11n support	Yes	Yes
802.11g support	Yes	Yes
802.11b support	Yes	Yes
LAN Ethernet jack (high-speed Internet connection)	Yes	Yes
WAN Ethernet jack (wired computer network)	Yes	Yes
Stereo mini-jack	No	Yes
USB printer port	Yes	Yes

WARNING The names of the Apple Base Stations are irritatingly similar; Apple usually does a better job of differentiating its product names. Jot down the name of your model on a Post–it Note on your laptop's desktop so you don't get confused.

Installing an Apple Base Station is simple. Follow these steps:

1. **If you have a DSL or cable modem, connect it to the WAN (wide-area network) port on the base station with an Ethernet cable.**

2. **If you have an existing wired Ethernet computer network with a switch or router, connect it to the Ethernet LAN port on the base station with an Ethernet cable.**

3. **If you have a USB printer, connect it to the USB port on the base station.**

   I cover the steps to sharing a printer in the later section "Sharing a network printer."

4. **Connect the power cable.**

5. **Switch on your base station.**

6. **Run the installation software provided by Apple on your laptop.**

USING NON-APPLE BASE STATIONS

If any company other than Apple manufactured your wireless base station, the installation procedure is almost certainly the same. Naturally, you should take a gander at the manufacturer's installation guide just to make sure, but I have added many brands of these devices, and I used the same steps for each one.

However, I should note that Apple wireless hardware uses a slightly different security encryption standard than most PC wireless hardware. This fact creates an extra hurdle when you connect to a non–Apple base station or access point with your laptop. (More on this in the next section. For now, just remember that I recommend using Apple wireless hardware with your MacBook whenever possible because the installation process is easier!)

Joining a wireless network

As far as I'm concerned, the only two types of base stations are Apple and non–Apple, which includes all 802.11ac, 802.11n, and 802.11g base stations and access points. In the following two sections, I relate what you need to know to get onboard with either type of hardware.

APPLE AIRPORT BASE STATIONS

To join a wireless network that's served by any flavor of Apple Base Station, follow these steps on each Mac with wireless support:

1. **Click the System Preferences icon in the Dock.**

2. **Click the Network icon.**

3. **From the Connection list on the left, click Wi-Fi.**

4. **Select the Show Wi-Fi Status in Menu Bar check box.**

5. **Click the Apply button.**

6. **Press ⌘+Q to quit System Preferences and save your settings.**

7. **Click the Wi-Fi status icon (which looks like a fan) on the Finder menu bar, and choose an existing network connection you'd like to join.**

The network name is the same as the network name you chose when you set up your AirPort Base Station.

8. **If you set up a secure network, enter the password you assigned to the network during setup.**

By the way, security is always A Good Thing. I strongly recommend that you enable the password encryption features of your Apple Base Station while installing it. (Luckily, the Apple Base Station setup application leads you through this very process.) In the words of an important Mark's Maxim:

> **Keep uninvited guests out of your network! Use your base station's security features and encrypt your data by using WPA2 encryption!™**

MARK'S
MAXIMS

Some wireless networks might not appear in your Wi-Fi menu list. These are *closed networks*, which can be specified when you set up your AirPort Base Station. You can't join a closed network unless you know the exact network name (which is far more secure than simply broadcasting the network name). To join a closed network, follow these steps:

1. **Click the Wi-Fi status icon (which looks like a fan) on the Finder menu bar and choose Join Other Network.**

2. **Type the network's name.**

3. **If the network is secured with WPA, WPA2, WEP, or LEAP encryption — the security standards for protecting your data through encryption — click the Security pop-up menu and choose which type of encryption is being used.**

I recommend avoiding WEP and LEAP encryption whenever possible. Your best bet is WPA2 encryption, which is the current standard for home wireless networks — always choose it when it's available.

4. **Enter the network password if required.**

To disconnect from a Wi-Fi network, click the Wi-Fi menu and either choose Turn Wi-Fi Off or connect to another wireless network. In other words, if you choose another available wireless network from the Wi-Fi menu, your MacBook automatically drops the previous connection. (You can be connected to only one wireless network at a time, which makes Good Sense.)

USING NON-APPLE BASE STATIONS

If you're using your MacBook to connect to a non-Apple base station at your office, you might need to follow a specific procedure that takes care of the slightly different password functionality used by standard 802.11b/g/n/ac hardware.

High Sierra can take care of many potential wireless "language barriers" caused by security encryption. The two most common forms are WPA2 and WEP. So whether you need to modify your password to connect to your non–Apple base station depends on the specific hardware and encryption system it uses.

To read or print the latest version of this procedure, fire up Safari, visit `http://kbase.info.apple.com/index.html`, and type HT1126 in the search field. The article provides the details on how to convert a standard wireless encrypted password to a format your AirPort Extreme hardware can understand.

TRANSFERRING FILES THE EASY AIRDROP WAY

AirDrop is the local Mac-to-Mac file transfer feature built in to macOS High Sierra, and it couldn't be easier to use. No setup and no passwords are involved! However, it comes with three caveats:

- AirDrop works only with Macs running Lion and later, and only with specific models: MacBook Pro (late 2008 or newer), MacBook Air (late 2010 or newer), and MacBook (late 2010 and newer). The 17-inch MacBook Pro (late 2008) doesn't support AirDrop.

- AirDrop uses the Wi-Fi hardware built in to today's Mac laptops and desktops, so don't forget to turn on Wi-Fi first. (If you're displaying the Wi-Fi status icon on your Finder menu bar, click the icon and choose Turn Wi-Fi On.)

- You have to be within Wi-Fi signal range of another Mac to use AirDrop. Note, however, that the two computers *don't* have to be using the same Wi-Fi network. (For example, my iMac uses a wired connection to my network, but because the iMac has internal Wi-Fi hardware, I can use AirDrop to send files to my MacBook Air.) Because AirDrop uses a Wi-Fi connection, file transfers are significantly slower (and less secure) than they would be over a wired Ethernet network.

To use AirDrop to transfer files to another Mac, both users should click the AirDrop icon in any Finder window sidebar to join the AirDrop group. After a short delay, you see the account pictures for all Macs within signal range and with AirDrop open. Just drag the files you want to transfer to the person's picture. Both you and the recipient are prompted for confirmation before the transfer begins. After the transfer is complete, the files you sent are saved in the recipient's Downloads folder.

When you're done using AirDrop, just close the Finder window displaying the account pictures (or click another location in the Finder window sidebar) to exit the AirDrop group. (Don't forget that you have to reopen AirDrop if someone wants to send you files. I leave my AirDrop Finder window open and minimized to the Dock.)

Wired connections

If you own a current MacBook model, your machine doesn't come from Apple with a wired Ethernet port onboard. But you can add a Thunderbolt or USB-to-Ethernet connector that allows you to use a wired network. After you add the connector to your system, you can follow along without any problem. You just connect the hardware and configure the connection. Don't forget that you also need cables and an inexpensive Ethernet switch. (If you're using an Internet router or other hardware sharing device, it almost certainly has a built-in four- or eight-port switch.)

Making a connection to a wired network

On older MacBooks, your Ethernet 10/100/1000 port (which looks like a slightly oversized telephone/modem jack) is located on one side of your laptop. It's ready to accept a standard Ethernet Cat5/Cat5E/Cat6 cable with RJ-45 connectors. (If you've connected a Thunderbolt- or USB-to-Gigabit-Ethernet adapter to your MacBook, you're also in business.)

If you're connecting to an existing wired network, you need a standard Cat5/Cat5E/Cat6 Ethernet cable of the necessary length. I recommend a length of no more than 25 feet, because longer cables are often subject to line interference (which can slow or even cripple your connection). You also need a live Ethernet port from the network near your laptop. Plug the cable into your MacBook, and then plug the other end into the network port.

Wired network hardware

If you don't know your switch from your NIC, don't worry. Here I describe the hardware you need for your wired network.

WIRED NETWORK COMPONENTS

If you're building your own wired network, you need

>> **A switch:** This gizmo's job is to provide more network ports for the other computers in your network. Switches typically come in four- and eight-port configurations.

As mentioned earlier in this chapter, most Internet routers (sometimes called *Internet-sharing devices*) include a built-in switch. So if you've already invested in an Internet router, make doggone sure it doesn't come equipped with the ports you need before you go shopping for a switch.

>> **A number of Ethernet cables:** Exactly how many cables you need is determined by how many computers and other devices (such as a network printer) you're connecting. If you're working with a Gigabit Ethernet system, you need Cat5E or Cat6 cables. Cat6 cables provide better performance but are more expensive.

TIP

Naturally, if you're using a broadband Internet connection, you also have a DSL or cable modem. These boxes always include a port for connecting to your wired Ethernet network. If you have one of the new breed of *wireless* modems — which acts as a wireless base station — don't panic. It should also have a wired port for connecting to your existing switch.

WIRED NETWORK CONNECTIONS

After you assemble your cables and your router or switch, connect the Ethernet cables from each of your computers to the router or switch, and then turn on the device. (Most need AC power to work.) Check the manual that comes with your device to make sure that the lights you're seeing on the front indicate normal operation. (Colors vary by manufacturer, but green is usually A Good Color.)

Next, connect your cable or DSL modem's Ethernet port to the WAN port on your switch with an Ethernet cable. If your modem isn't already on, turn it on now, and check for normal operation.

When your router or switch is powered on and operating normally, you're ready to configure macOS for network operation. Just hop to the upcoming section "Connecting to the Network." (How about that? Now you can add network technician to your rapidly growing computer résumé!)

Joining a wired Ethernet network

After all the cables are connected and your central connection gizmo is plugged in and turned on, you've essentially created the hardware portion of your network. Congratulations! Now you need a beard and suspenders (the common equipment for the network guru stereotype).

With the hardware in place, it's time to configure High Sierra. In this section, I assume you're connecting to a network with an Internet router or switch that includes a DHCP server. (Jump to the later sidebar "The little abbreviation that *definitely* could" for more on DHCP.)

Follow these steps on each Mac running macOS that you want to connect to the network:

1. **Click the System Preferences icon in the Dock.**

2. **Click the Network icon.**

3. **From the Connection list on the left, choose Ethernet.**

   The entry may also be named Ethernet 1, depending on the Mac model you're configuring. (Make sure you select the Ethernet entry that does *not* carry the Wi-Fi fan symbol.)

4. **Click the Configure IPv4 pop-up menu and choose Using DHCP, as shown in Figure 11-1.**
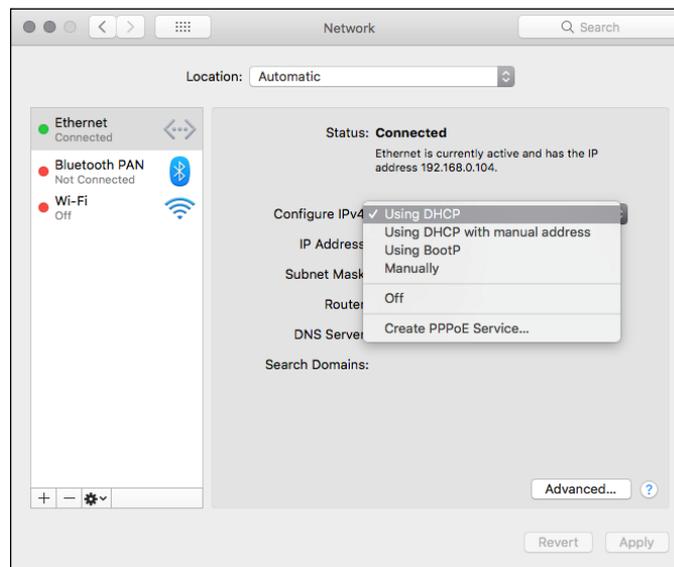
FIGURE 11-1:
All hail DHCP, the magic networking fairy!

5. **Click the Apply button.**

   The Apply button is grayed out in the figure because my status (in this dialog) is Connected.

   Enjoy the automatic goodness as macOS connects to the DHCP server to obtain an IP address, a subnet mask, a gateway router IP address, and a Domain Name System (DNS) address. (Without a DHCP server, you'd have to add all this stuff manually. Ugh.)

   A few seconds after clicking the Apply button, you should see the information. You might also notice that the DNS Server and Search Domains fields are empty.

Fear not. macOS is really using DNS server and domain information provided by the DHCP server.

6. **Press ⌘+Q to quit System Preferences and save your settings.**

   You're on!

Connecting to the Network

All right! The hardware is powered up, the cables (if any) are installed and connected, and you have configured High Sierra. You're ready to start (or join) the party. In the following sections, I show you how to verify that you're connected, as well as how to share data and devices with others on your network.

THE LITTLE ABBREVIATION THAT *DEFINITELY* COULD

You know, some technologies are just *peachy.* (So much for my über-tech image.) Anyway, these well-designed technologies work instantly, you don't have to fling settings around like wrapping paper on Christmas day, and every computer can use them: Mac, Windows, Linux, and even the laptops used by funny-looking creatures from Roswell, New Mexico.

Dynamic Host Configuration Protocol, or *DHCP* for short, is about as peachy as it gets. This protocol enables a computer to automatically get all the technical information necessary to join a network. Let me hear you say, "*Oh yeah!*" Virtually all network devices can use DHCP these days, including Internet routers, switches, and (go figure) macOS. Today's networking hardware and operating systems provide a *DHCP server,* which flings the proper settings at every computer on the network all by itself. Your MacBook just accepts the settings and relaxes in a placid networking nirvana.

In this book, you can bet the farm that I assume you want to use DHCP and that your network hardware supports it (which is a virtual certainty with today's hardware). That way, I won't spend 30 pages leading you through the twisting alleyways of manual network settings.

If you're connecting to an existing network, tell the network administrator you're taking the easy route and using DHCP. A warning, however: Adding more than one DHCP server on a single network will cause a civil war, and your system will lock up tight. Therefore, before adding hardware with a DHCP server to an existing network, ask your network administrator to ensure that you aren't making a mistake.

Verifying that the contraption works

After you have at least two computers on a wired or wireless network, test whether they're talking to each other over the network by *pinging* them. (No, I didn't make up the term. Honest.) Essentially, pinging another computer is like yelling "Are you there?" across a crevasse.

To ping another computer on the same network from any Mac running High Sierra, follow these steps:

1. **Click the Spotlight search icon in the Finder menu bar and type Network Utility in the Spotlight search box.**

2. **Click the Network Utility entry in the Spotlight list to launch the application.**

3. **Click the Ping tab, as shown in Figure 11-2.**
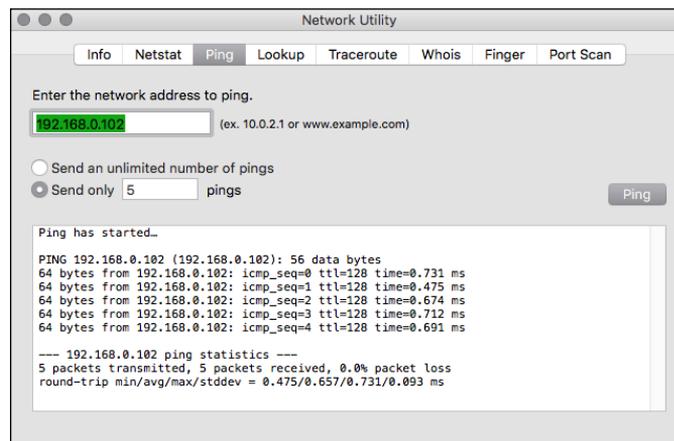
FIGURE 11-2:
Look, Ma, I'm pinging!

4. **In the Enter the Network Address to Ping text field, enter the IP address of the computer you want to ping:**

- *If you're pinging another Mac running macOS,* you can get that machine's IP address by simply displaying its Network pane in System Preferences, which always displays the IP address.

- *If you're trying to ping a PC running Windows,* and you don't know that machine's IP address, follow these steps:

1. Click Start and right-click Network (under Windows 7) and then choose Properties. Under Windows 8, 8.1, or 10, display the Control Panel and then click Network and Sharing Center.

2. *Click Change Adapter Settings, then right-click your Local Area Network connection icon and choose Status from the menu that appears.*

3. *Click the Details button.*

   The IP address of that computer is proudly displayed.

5. **Select the Send Only *x* Pings radio button, and enter 5 in the text field.**

6. **Click the Ping button:**

   - *Yay!:* If everything is working, you should see results similar to those shown in Figure 11-2, in which I'm pinging my Windows server at IP address 192.168.0.102 across my wired Ethernet network.

     The addresses 192.168.0.*xxx* and 192.168.1.*xxx* are a common series of local network IP addresses provided by Internet routers, hubs, and switches with DHCP servers, so don't freak if you have the same local IP address. Similarly, Apple tends to use the form 10.0.1.*xxx* for local networks.

   - *Nay:* If you don't get a successful ping, check your cable connections, power cords, and macOS settings. If you're using a wireless connection, you might have to move closer to the network base station to connect successfully, especially through walls.

Sharing stuff nicely with others

It works! By golly, it works! Okay, now what do you *do* with your all-new shiny chrome network connection? Ah, my friend, let me be the first to congratulate you and the first to show you around! In the following sections, I cover the most popular network perks. (The good news is that these perks work with both wired and wireless connections.)

Network Internet connections

If your DSL or cable modem plugs directly into your MacBook (rather than into a dedicated Internet-sharing device or Internet router), you might ponder just how the other computers on your network can share that spiffy high-speed broadband connection. If you're running a wireless network, it comes to the rescue!

Follow these steps to share your connection wirelessly:

1. **Click the System Preferences icon in the Dock.**

2. **Click the Sharing icon.**

3. **Click the Internet Sharing entry in the Services list to the left of the pane.**

4. **From the Share Your Connection From pop-up menu, choose Ethernet.**

5. **Select the Wi-Fi check box (in the To Computers Using list).**

6. **Select the On check box next to the Internet Sharing entry in the Services list.**

   High Sierra displays a warning dialog stating that connection sharing could affect other computers on your network. If you intend to share the Internet connection provided on an existing network at your home or office that you didn't set up, contact your network administrator first! (It's best to avoid sowing chaos and disorder.)

7. **Click Start in the warning dialog to continue.**

8. **Click the Close button to exit System Preferences.**

REMEMBER

Sharing an Internet connection (without an Internet router or dedicated hardware device) through macOS requires your computer to remain on continuously. Remind others in your office or home that the svelte laptop must remain on, or they'll lose their Internet connection! Naturally, when you take off on your next trip with your road warrior, the folks left at your home or office will be without an Internet connection until you return.

Don't forget, you don't need to configure Internet sharing if your DSL or cable modem connects to a dedicated sharing device or router. That snazzy equipment automatically connects your entire network to the Internet.

Network file sharing

You can swap all sorts of interesting files with other Macintosh computers on your network. When you turn on file sharing, High Sierra allows all Macs on the network to connect to your MacBook and share the files in your Public folder. (Note that sharing across a network is different from sharing a single computer between several people. I cover that environment in Chapter 10.)

Follow these steps to start sharing files and folders with others across your network:

1. **Click the System Preferences icon in the Dock.**

2. **Click the Sharing icon.**

3. **Select the On check box next to the File Sharing service entry to enable the connections for Mac and Windows sharing.**

   Other Mac users can connect to your computer by clicking Go in the Finder menu and choosing the Network menu item. The Network window appears, and your laptop is among the choices. If the other Macs are running High

Sierra, your MacBook's shared files and folders appear in a Finder window, and they're listed under the Shared heading in the sidebar.

Windows 7 users can use the Network window. Windows 8, 8.1, and 10 users should head to the Network panel. Those lucky Windows folks also get to print to any shared printers you've set up. (The following section covers shared printers.)

4. **Click the Close button to exit System Preferences.**

High Sierra conveniently reminds you of the network name for your MacBook at the top of the Sharing pane.

Sharing a network printer

I love describing easy procedures, and sharing a printer on a Mac network ranks high on the list! You can share a printer that's connected to your laptop (or your AirPort Extreme, AirPort Time Capsule, or AirPort Express Base Station) by following these simple steps:

1. **Click the System Preferences icon in the Dock.**

2. **Click the Sharing icon.**

3. **Select the On check box next to the Printer Sharing service entry.**

4. **From the list at the right of the System Preferences window, select the check box next to the printer you want to share.**

5. **Click the Close button to exit System Preferences.**

A printer you share automatically appears in the Print dialog on other computers connected to your network.

USE YOUR FIREWALL!

Yep. That's the only heading in this *entire book* that's all uppercase. It's that important.

The following Mark's Maxim, good reader, isn't a request, a strong recommendation, or even a regular Maxim. Consider it an *absolute command* (right up there with *Pay your taxes*).

Turn on your firewall *now.*™

When you connect a network to the Internet, you open a door to the outside world. As a consultant to several businesses and organizations in my hometown, I can

tell you that the outside world is chock-full of malicious individuals who *dearly love* to inflict damage on data and would like to take control of your MacBook for their own purposes. Call 'em hackers, call 'em delinquents, or call 'em something I can't repeat, but *don't let them in!*

High Sierra comes to the rescue again with the built-in firewall in macOS. When you use the firewall, you essentially build a virtual "brick wall" between you and the hackers out there (both on the Internet and within your local network). Follow these steps:

1. **Click the System Preferences icon in the Dock.**

2. **Click the Security & Privacy icon.**

3. **Click the Firewall tab.**

4. **Click the Turn On Firewall button to activate your firewall.**

5. **Click the Firewall Options button.**

6. **Select the Automatically Allow Built-In Software to Receive Incoming Connections check box.**

7. **Select the Automatically Allow Downloaded Signed Software to Receive Incoming Connections check box.**

8. **Select the Enable Stealth Mode check box.**

   This important feature prevents hackers from trolling for your MacBook on the Internet — or, in normal-speak, searching for an unprotected computer — so it's much harder for them to attack you. (Stealth mode also prevents other computers from pinging you, so don't be surprised if your MacBook suddenly clams up if you try to ping it.)

9. **Click OK.**

10. **Click the Close button to exit System Preferences.**

High Sierra even keeps track of the Internet traffic that you *do* want to reach your laptop, such as web page requests and file sharing. When you activate one of the network features described in the section "Sharing stuff nicely with others," High Sierra automatically opens a tiny hole (called a *port* by net types) in your firewall to allow just that type of communication with your Mac.

For example, if you decide to turn on printer sharing (as described in the preceding section), High Sierra automatically allows incoming print jobs over the network from other computers.

You can also add ports for applications that aren't on the firewall's Allow list, such as third–party instant messaging clients and multiplayer game servers. Depending on the type of connection, High Sierra often displays a dialog prompting you for confirmation before allowing certain traffic, so you probably won't need to do anything manually.

However, you *can* manually add a program to your list of allowed (or blocked) firewall ports. Follow these steps:

1. **Click the System Preferences icon in the Dock.**

2. **Click the Security & Privacy icon.**

3. **Click the Firewall tab and then click the Firewall Options button.**

4. **Click the Add button (which carries a plus sign).**

   High Sierra displays a standard file-browsing sheet.

5. **Browse to the application that requires access to the outside world — or the application that you want to block from outside communication — and click it to select it.**

6. **Click the Add button in the File sheet.**

   The application appears in the Firewall list. By default, it's set to Allow Incoming Connections.

7. **If you want to block any communications coming into the application, click the Allow Incoming Connections pop-up menu and choose Block Incoming Connections instead.**

8. **Click the Close button to exit System Preferences.**

4

Living the iLife

Chapter **12**

The Multimedia Joy of iTunes

Sometimes, words just aren't enough. iTunes is that kind of perfection.

To envision how iTunes changes your laptop, you have to paint the picture with *music* — music that's easy to play, search for, and transfer from device to device. Whether it be classical, alternative, jazz, rock, hip-hop, or folk, I guarantee you won't find a better application than iTunes to fill your life with music. And podcasts. And video. And TV shows. And online education. And ringtones. And Internet radio. (See how hard it is to pin down this wonderful application? Along with your MacBook, iTunes really *does* form the hub of your digital lifestyle.)

In this chapter, I lead you through all the features of my absolute favorite Apple application. (It will be pretty doggone obvious how much I appreciate this piece of software.)

What Can I Play on iTunes?

Simply put, iTunes is a media player that plays audio and video files. These files can be in any of many different formats. iTunes supports these common audio formats:

- **MP3:** The small size of MP3 files has made them popular for file trading on the Internet. You can reduce MP3 files to a ridiculously small size (albeit at the expense of audio fidelity), but a typical CD-quality, three-minute pop song in MP3 format has a size of 3–5MB.

- **AAC:** Advanced Audio Coding is an audio format that's similar to MP3, but offers offer better recording quality at the same file sizes. However, this format is somewhat less compatible with non-Apple music players and software. (Luckily, you can still burn AAC tracks to an audio CD, just as you can MP3 tracks.) The tracks that you download from the iTunes Store are in AAC format, and AAC music files are becoming more popular for downloading on the Internet.

- **Apple Lossless:** Another format direct from Apple, *Apple Lossless* format (also known as ALAC) provides the best compromise between file size and sound quality. These tracks are encoded without loss of quality, although Apple Lossless tracks are somewhat larger than AAC. This format is generally the favorite of discerning audiophiles.

- **AIFF:** This standard Macintosh audio format produces sound of the absolute highest quality. This high quality, however, also means that the files are pretty doggone huge. AIFF recordings typically require about 10MB per minute of audio.

- **WAV:** Not to be outdone, Microsoft created its own audio file format (WAV) that works much like AIFF. It can reproduce sound at a higher quality than MP3, but the file sizes are very large, similar in size to AIFF files.

- **CD audio:** iTunes can play audio CDs. Because you don't usually store CD audio anywhere but on an audio CD, file size is no big whoop — but again, 10MB of space per minute of music is a good approximation.

- **MP2:** A close cousin of the far more popular MP3 format, MP2 is the preferred format in radio broadcasting and is a standard audio format for HDV camcorders. It produces file sizes similar to MP3 format.

- **Movies and video:** You can buy and download (or rent and stream) full-length movies, TV shows, music videos, and movie trailers from the iTunes Store . . . and, with an Apple TV unit connected to your home theater system, you can watch those movies and videos from the comfort of your sofa on the other side of your living room (or even from your bedroom on the other side of your house).

- **Podcasts:** These audio downloads (typically in MP3 format) are like radio programs for your iOS devices, but iTunes can play and organize them, too.

Some podcasts include video and photos to boot. You can download podcasts from the iTunes Store, and most are free.

» **iTunes U:** iTunes offers educational materials (think slideshows, presentations, and class recordings) from a wide variety of colleges and technical institutions — and virtually all free for the download.

» **Audiobooks:** You no longer need cassettes or audio CDs to enjoy your spoken books. iTunes can play them for you, or you can send them to your iOS device for listening on the go.

» **Streaming Internet radio:** You can listen to a continuous broadcast of songs from one of tens of thousands of Internet radio stations, with quality levels ranging from what you'd expect from FM radio to the full quality of an audio CD. You can't save the music in iTunes, but streaming radio is still great fun. (I run my own station . . . more on MLC Radio later in this chapter.) Unlike services like Spotify, Pandora, and Apple Music, these streaming radio stations are free and don't require a subscription!

Playing an Audio CD

If you have an optical drive (either internal or external), playing an audio CD in iTunes is simple. Just insert the CD in the drive, start iTunes by clicking its icon on the Dock, and click the Play button. (Note that your MacBook might be set to automatically launch iTunes when you insert an audio CD.) The iTunes interface resembles that of a traditional CD player. The main playback controls of iTunes are Play, Previous, Next, and the Volume slider, as shown in Figure 12-1.
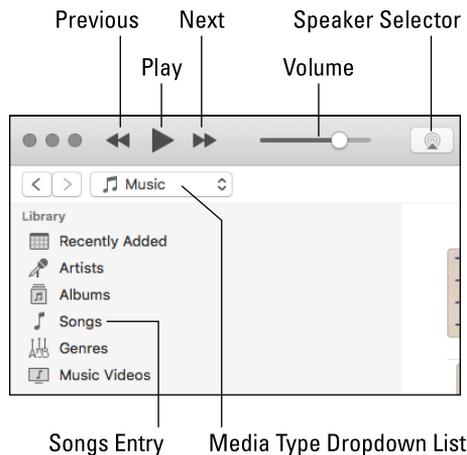
FIGURE 12-1: The main playback controls: Play, Previous, and Next.

Click the Play button to begin listening to a song. While a song is playing, the Play button toggles to a Pause button. As you might imagine, clicking that button again pauses the music. If you don't feel like messing around with a mouse or trackpad, you can always use the keyboard. The spacebar acts as the Play and Pause buttons. Press the spacebar to begin playback; press it again to stop.

Click the Next button to advance to the next song on the CD. The Previous button works like the Next button but with a slight twist: If a song is currently playing and you click the Previous button, iTunes first returns to the beginning of the current song (just like an audio CD player). To advance to the previous song, double-click the Previous button. To change the volume of your music, click and drag the volume slider.

As with other Mac applications, you can control much of iTunes with the keyboard. Table 12-1 lists some of the more common iTunes keyboard shortcuts.

TABLE 12-1   **Common iTunes Keyboard Shortcuts**

Press This Key or Key Combination	To Do This
Spacebar	Play the currently selected song if iTunes is idle.
Spacebar	Pause a playing song.
→	Advance to the next song.
←	Go back to the beginning of a song. Press a second time to return to the previous song.
⌘+↑	Increase the volume of the music.
⌘+↓	Decrease the volume of the music.
⌘+Option+↓	Mute the audio if any is playing. Press again to play the audio.

Playing Digital Audio Files

In addition to playing audio CDs, iTunes can play the digital audio files that you download from the Internet or obtain from other sources in the WAV, AAC, Apple Lossless, AIFF, MP2, and MP3 file formats.

Enjoying a digital audio file is just slightly more complicated than playing a CD. After downloading or saving your audio files to your laptop, open Finder and navigate to wherever you stored the files. Launch iTunes and click on the Music entry from the Media Type dropdown list at the upper left (or press ⌘+1), then

click on the Songs entry in the sidebar. (If the sidebar doesn't appear in your iTunes window, choose View➪ Show Sidebar.) Now you can simply drag the music files (or an entire folder of music) from the Finder window to the list of your songs at the right side of the window. The added files appear in the Music section of your iTunes Library. You can also drag a song file from a Finder window and drop it on the iTunes icon on the Dock, which adds it to your Music Library as well.

> **TIP**
>
> The iTunes sidebar is a convenient beast indeed. You can drop the music file(s) on top of a playlist name in the list and iTunes adds it to that particular *playlist* as well as the main Library. (More about playlists in a bit.) If you drop a folder of songs on top of the Playlists header in the sidebar, iTunes creates a new playlist using the name of the folder and adds all the songs in the folder to the new playlist. *Bam!*

> **TIP**
>
> You can customize the iTunes sidebar to display only those media types and music classes that you prefer. (For example, I like my Internet Radio media type and the Composers class visible.) To edit the entries in the sidebar, hover your pointer over the "Library" label at the very top of the sidebar and click the Edit link that appears, then enable or disable the check boxes next to each heading as desired.

Think of the Library as a master list of your audio and video media. To view the Music Library, select the Music entry from the Media Type dropdown list under the Play, Previous, and Next controls, and click the Songs entry in the sidebar, as shown in Figure 12-2. (Go figure.) In a similar manner, you can view your movies and TV shows by choosing those types from the Media Type dropdown list. (In classic Apple style, you can also switch your media type from the View menu, or by pressing ⌘+1 through ⌘+5 from the keyboard. Since our current focus is on music, I'll discuss playing video in more depth later in this section.
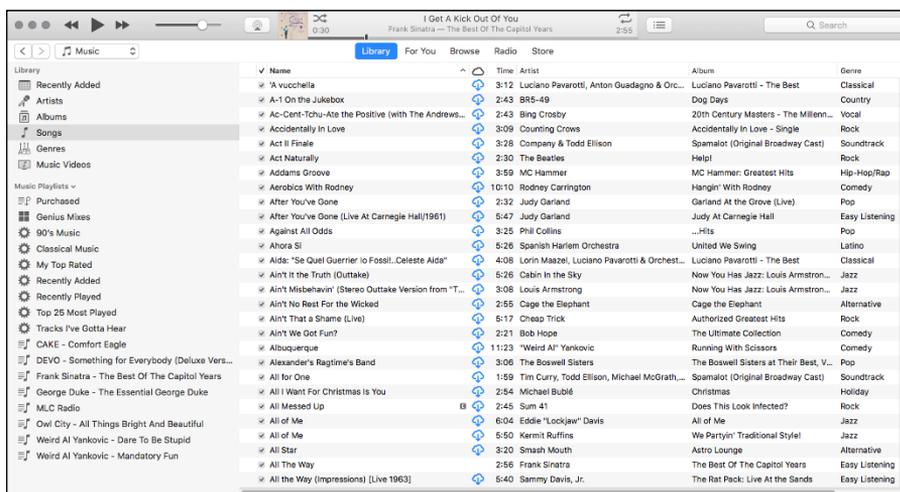
FIGURE 12-2:
The Music Library keeps track of all your audio files.

To play a song, just double-click it in the Music list. Alternatively, you can use the playback controls (Play, Previous, and Next) that I discuss earlier in this chapter (refer to Figure 12-1).

The iTunes window can play media from a surprising number of possible sources:

>> **Library:** The Media Type dropdown list at the upper-left corner of the screen can display Music, Movies, TV Shows, Podcasts, and Audiobooks.

>> **Store:** I discuss this music source in the final section "Buying Digital Media the Apple Way."

>> **Shared:** If another Mac or PC on your local network is running iTunes and is set to share part or all of its library, you can connect to the other computer for your music.

>> **Devices:** If an iPod is connected, it appears in the sidebar and on the toolbar next to the Media Type dropdown list. (And yes, Virginia, other models of MP3 players from other companies also appear in the list if they are supported in iTunes.) If you connect an iPhone or iPad to your Mac, it shows up here as well.

>> **Genius:** Click File ⇨ New ⇨ Genius Playlist from the iTunes menu to allow iTunes to automatically create playlists from songs in your iTunes Music Library. You can also allow Genius to recommend music, movies, and TV shows based on the titles you already have in your iTunes Library. (More on this feature later in the chapter.)

>> **Audio CD:** A standard audio CD . . . anything from the Byrds to Justin Timberlake shows up in as an icon if you load the CD into your optical drive.

>> **Home Sharing:** You can turn on Home Sharing to share your Mac's media library across your wireless network with up to five other Mac computers, as well as iPhones, iPads, and the iPod touch. (More on Home Sharing later in this chapter.)

>> **Playlists:** Think of playlists as folders you use to organize your music. (More on playlists later in this chapter.)

If you've invested in an Apple TV, it appears in the list as well, allowing iTunes to share media with your Apple TV, which in turn sends it to your HD-TV.

You can browse your Music Library in a number of ways: first, click the Media Type dropdown list and choose the Music entry to display your music. By default, the application sorts by *Songs* (active in Figure 12-2), but you can choose

View➪Sort By from the iTunes menu to sort by a number of different criteria (including Album, Artist, Genre and Time).

If you're using the Songs view mode, the Music Library may display information for each song that you add to it, including these items:

- **Name:** The title of the song
- **Time:** The length of the song
- **Artist:** The artist who performs the song
- **Album:** The album on which the song appears

If any song you're adding doesn't display anything for the title, album, or artist information, don't panic; most MP3 files have embedded data that iTunes can read. If a song doesn't include any data, you can always add the information to these fields manually. I show you how later, in the section "Setting or changing the song information manually."

If you'd rather eschew the iTunes menu, it's easy to change your sort order by clicking any column heading in the Music Library list — iTunes will reorder the Library list according to that category. For example, clicking the Artist column heading alphabetizes your Library by artist name. I often click the Time heading to sort my Library according to the length of the songs. Oh, and you can drag column titles to reorder them any way you like (except for the check box column at the far left, which remains fixed).

While listening to your music, you can always display the tracks that iTunes will play next — and even change their order. (Believe me, this is great fun for us amateur party DJs.) Click View➪Show Up Next to display the list, and drag selected songs to the perfect order! (You can also click the button with the list icon that appears on the toolbar.)

Browsing the Library

After you add a few dozen songs to iTunes, viewing the Library can become a task. Although a master list is nice for some purposes, it becomes as cumbersome as an elephant in a subway tunnel if the list is very long. To help out, iTunes can display your Library in another format, too: namely, browsing mode. To view the Library in browsing mode, click View➪Column Browser➪Show Column Browser. (Keyboard mavens can simply press the ⌘+B keyboard shortcut to switch to browsing mode.)

WILL I TRASH MY COUNT BASIE?

Novice iTunes users, take note: iTunes watches your back when you trash tracks.

To illustrate: Suppose you delete a song from the Library that's located only in the iTunes music folder (which you didn't copy into iTunes from another location on your hard drive). That means you're about to delete the song entirely, and there'll be no copy remaining on your MacBook. Rest assured, though, that iTunes prompts you to make sure you really want to move the file to the Trash. (I get fearful email messages all the time from readers who are loath to delete *anything* from iTunes because they're afraid they'll trash their digital music files completely.)

Remember: If you delete a song from the Library that *also* exists elsewhere on your hard drive (outside the reach of the iTunes music folder), it isn't deleted from your hard drive. If you mistakenly remove a song that you meant to keep, just drag it back into iTunes from Finder, or even from the Trash. 'Nuff said.

The Browse mode of iTunes displays your library in a compact fashion, organizing your tunes into up to five sections:

- **»** Genres
- **»** Artists
- **»** Albums
- **»** Composers
- **»** Groupings

Selecting an artist from the Artist list in Browse mode causes iTunes to display that artist's albums in the Album list. Select an album from the Album list, and iTunes displays that album's songs in the bottom section of the Browse window. (Those Apple software designers . . . always thinking of you and me.) You can also specify which sections you want included in Browse mode from the View ⇨ Column Browser menu — click a section name to toggle the display of that section on or off.

Finding songs in your Music Library

After your collection of audio files grows large, you might have trouble locating that Swedish remix version of "I'm Your Boogie Man." To help you out, iTunes has a built-in Search function. To find a song, type some text into the Search box at the top right corner of the iTunes window. While you type, iTunes tries to find a selection

that matches your search text. The search is thorough, showing any matching text from the artist, album, song title, and genre fields in the results. For example, if you type **Electronic** into the field, iTunes might return results for the band named *Electronic* or other tunes that you classified as *electronic* in the Genre field. (The section "Know Your Songs," later in this chapter, tells you how to classify your songs by genre, among other options.) Click the magnifying glass at the left side of the Search field to restrict the search even more: by Artists, Albums, Composers, and Songs.

Removing old music from the Library

After you spend some time playing songs with iTunes, you might decide that you didn't *really* want to add 40 versions of "Louie Louie" to your Library. (I prefer either the original or the cast from the movie *Animal House*.) To remove a song from the Library, click the song to select it and press the Delete key on your keyboard, or right-click the song entry and choose Delete from the menu.

You can also remove a song from the Library by dragging it to the Trash on the Dock.

Watching Video

Watching video in iTunes is similar to listening to your music. To view your video collection, click the Media Type dropdown list at the upper left of the iTunes window and choose Movies or TV Shows. Music videos appear as a Smart Playlist within the iTunes sidebar. (Read more about these in the section, "Some playlists are smarter than others.")

From your collection, you can do the following:

>> Double-click a video thumbnail or an entry in the list.

>> Drag a QuickTime–compatible video clip from the Finder window to the iTunes window. (These clips typically include video files ending in `.mov`, `.mv4`, or `.mp4`.)

iTunes plays video in the box below the Source list, within the iTunes window or in full-screen mode, depending on the settings you choose from the View⇨Video Playback menu. In full-screen mode, move your pointer to display a control strip at the bottom of the screen, sporting the standard slider bar that you can drag to move through the video (as well as a volume control and Fast Forward/Reverse buttons). You can also pause the video by clicking the Pause button.

Keeping Slim Whitman and Slim Shady Apart: Organizing with Playlists

As I mention earlier, the iTunes Music Library can quickly become a fearsomely huge beastie. Each Library can contain thousands upon thousands of songs: If your Library grows anywhere near that large, finding all the songs in your lifelong collection of Paul Simon albums is *not* a fun task. Furthermore, with the Library, you're stuck playing songs in the order that iTunes lists them.

To help you organize your music into groups, use the iTunes playlist feature. Typically, a *playlist* is a collection of some of your favorite songs from the Library, but playlists can also include media like movies and audiobooks. You can create as many playlists as you want, and each playlist can contain any number of items. Whereas the Music Library lists all available songs, a playlist displays only the items that you add to it. Further, any changes you make to a playlist affect only that playlist, leaving the Library untouched.

To create a playlist, you can do any of the following:

>> **Choose File ⇨ New ⇨ Playlist.**

>> **Press ⌘+N.**

>> **Choose File ⇨ New ⇨ Playlist from Selection.** This creates a new playlist and automatically adds any tracks that are currently selected.

>> **Choose File ⇨ New ⇨ Genius Playlist.** iTunes builds a playlist of songs that are similar in some way (typically by matching the genre of the selection or the beats per minute, but also based on recommendations from other iTunes members). Note that your MacBook needs an Internet connection to create a Genius playlist, and the larger your music library, the longer it takes iTunes to build your playlist. You also need to turn on the Genius feature by clicking File ⇨ Library ⇨ Turn on Genius and entering your Apple ID. (Note that Genius playlists can sometimes mix tracks containing explicit content with less objectionable material — especially in the comedy and rap genres.)

>> **Drag a folder containing audio files from a Finder window onto the Playlists heading in the sidebar.**

To help organize your playlists, it's a good idea to . . . well, *name* them. (Aren't you glad now that you have this book?) For example, suppose that you want to plan a party for your polka-loving friends. Instead of running to your computer after each song to change the music, you could create a polka-only playlist. Select and start the playlist at the beginning of the party, and you won't have to worry about changing the music the whole night. (You can concentrate on playing the accordion.) To load a playlist, select it in the sidebar list; iTunes displays the songs for that playlist.

The same items can appear in any number of playlists because the items in a playlist are simply pointers to the media in your Music Library — not the actual songs, movies, or TV shows themselves. Add and remove them at will to or from any playlist, secure in the knowledge that the items remain safe in your Library. Removing a playlist is simple: Select the playlist in the sidebar, and press Delete.

Removing a playlist does not delete any songs from your Library.

REMEMBER

SOME PLAYLISTS ARE SMARTER THAN OTHERS

You can create a Smart Playlist in the iTunes sidebar by choosing File ➪ New Smart Playlist, or by pressing Option+⌘+N.

The contents of a *Smart Playlist* are automatically created from a specific condition or set of conditions that you set via the Smart Playlist dialog: You can limit the track selection by mundane things, such as album, genre, or artist; or you can get funky and specify songs that were played last, or by the date you added tracks, or even by the sampling rate or total length of the song. For example, iTunes can create a playlist packed with songs that are shorter than three minutes, so you can fill your iPod Shuffle with more stuff! If you want to add another criterion, click the plus sign at the right side of the dialog and you get another condition field to refine your selection even further. Smart Playlists can even contain TV shows, movies, podcasts, and audiobooks.

You can choose the maximum songs to add to the Smart Playlist, or limit the size of the playlist by the minutes or hours of play or the number of megabytes or gigabytes the playlist will occupy. (Again, this is great for automatically gathering as much from your KISS collection as will fit into a specific amount of space on a CD or your iPod.) Mark the Live Updating check box for the ultimate in convenience. iTunes automatically maintains the contents of the Smart Playlist to keep it current with your conditions at all times in the future. (If you remove tracks manually from a Smart Playlist, iTunes adds other tracks that match your conditions.)

Now think about what all these settings mean when combined . . . *whoa*. Here's an example yanked directly from my own iTunes library. I created a Smart Playlist that selects only those songs in the Rock genre. It's limited to 25 songs, selected by least often played, and live updating is turned on. The playlist is named Tracks I've Gotta Hear because it finds the 25 rock songs (from my collection of more than 10,000 songs) that I've heard least often! After I listen to a song from this Smart Playlist, iTunes automatically "freshens" it with another song, allowing me to catch up on the tracks I've been ignoring.

Know Your Songs

Besides organizing your music into Elvis and non-Elvis playlists, iTunes gives you the option to track your music at the song level. Each song you add to the Music Library has a complete set of information associated with it. iTunes displays this information (see upcoming Figure 12-3) on the Details tab:

- » **Song Name:** The name of the song

- » **Artist:** The name of the artist who performed the song

- » **Album Artist:** The name of the artist responsible for a compilation or tribute album

- » **Album:** The album where the song appears

- » **Grouping:** A group type that you assign

- » **Composer:** The name of the astute individual who *wrote* the song

- » **Comments:** A text field that can contain any comments on the song

- » **Year:** The year the artist recorded the song

- » **Track:** The position of the song on the original album

- » **Genre:** The classification of the song (such as rock, jazz, or pop)

- » **Disc Number:** The original disc number in a multi-CD set

- » **BPM:** The beats per minute (indicates the song's tempo)

You can display this information by clicking a song name and pressing ⌘+I. The fields appear on the Details tab.

Setting the song information automatically

Each song you add to the iTunes Music Library might have song information included with it. If you add music from a commercial audio CD, iTunes connects to a server on the Internet and attempts to find the information for each song on the CD. If you download a song from the Internet, it often comes with some information embedded in the file already; the amount of included information depends on what the creator supplied. (And it's often misspelled as well — think *Leenard Skeenard*.) If you don't have an Internet connection, iTunes can't access the information and displays generic titles instead.
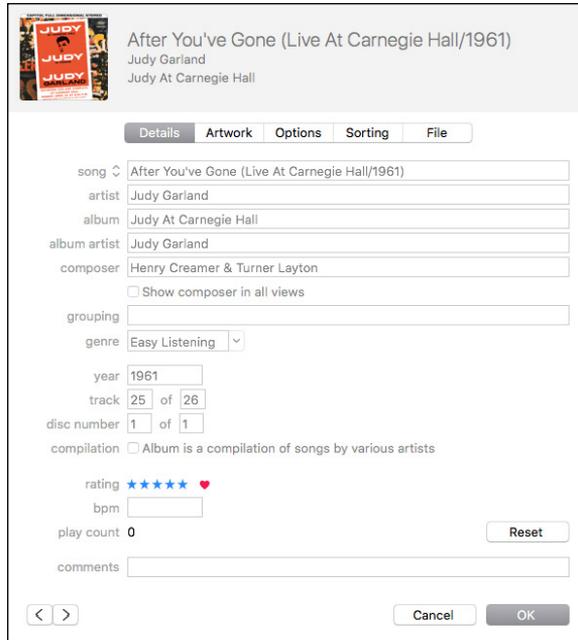
FIGURE 12-3:
View and edit song information here.

Setting or changing the song information manually

If iTunes can't find your CD in the online database or someone gives you an MP3 with incomplete or inaccurate information, you can change the information yourself — believe me, you want at least the artist and song name! To view and change the information for a song, follow these steps:

1. **Select the song in either the Song list or a playlist.**

2. **Press ⌘+I, or choose File ➪ Get Info.**

3. **Click a field to edit the song's information on the Details tab, as shown in Figure 12-3.**

TIP

You can move to the next or previous tracks in the Music Library list or playlist by clicking the Next or Previous buttons at the bottom left of the dialog.

REMEMBER

The more work you put into setting the information of the songs in your Music Library, the easier it is to browse and use iTunes. Incomplete song information can make it more difficult to find your songs in a hurry. If you prefer, you don't have to change all information about a song (it just makes life easier later if you do). Normally, you can get away with setting only a song's title, artist, and genre.

The more information you put in, however, the faster you can locate songs and the easier they are to arrange. iTunes tries to help by automatically retrieving known song information, but sometimes you have to roll up your sleeves and do a little work. (Sorry, but some things just can't be automated.)

"What about cover art, Mark?" Well, I'm overjoyed that you asked! iTunes can try to locate artwork automatically for the tracks you select. (Note that embedding large images can significantly increase the size of the song file.) Follow these steps:

1. **Select the desired songs from the track list.**
2. **Choose File ➪ Library ➪ Get Album Artwork**

> **TIP**
>
> You can set iTunes to automatically attempt to add album artwork every time you rip tracks from an audio CD (as described in the next section), or when you add songs without artwork to your Music Library. Select iTunes ➪ Preferences ➪ Store, and select the Automatically Download Album Artwork check box. (By the way, if you buy tracks or an album from the iTunes Store, Apple includes album covers automatically!)

> **TIP**
>
> Want to manually add album covers to your song info? Select one or more songs in the track list, display the Info dialog and click the Artwork tab. Now launch Safari, visit Amazon.com, and do a search on the same album (or search an online artwork library, such as AllCDCovers.com). Drag the cover image from the web page right into the Info dialog, and drop it on top of the "sunken square" Artwork image well. When you click OK, the image appears in the Artwork tab of the Info dialog.

Ripping Audio Files

You don't have to rely on Internet downloads to get audio files: You can create your own MP3, AAC, Apple Lossless, AIFF, and WAV files from your audio CDs with iTunes. The process of converting audio files to different formats is called *ripping.* (Audiophiles with technical teeth also call this process *digital extraction,* but they're usually ignored at parties by the popular crowd.) Depending on what hardware or software you use, each has its own unique format preferences.

The most common type of ripping is to convert CD audio to MP3 (or AAC) format. To rip MP3s from an audio CD, follow these simple steps:

1. **Launch iTunes by clicking its icon on the Dock.**

    Alternatively, you can locate iTunes in your Applications folder or in Launchpad.

2. **Choose iTunes ⇨ Preferences.**

3. **In the Preferences dialog that appears, click the General tab.**

4. **Click the Import Settings button that appears at the bottom of the Preferences dialog.**

5. **Choose MP3 Encoder from the Import Using pop-up menu.**

6. **Choose High Quality (160 Kbps) from the Setting pop-up menu, and click OK to return to the Preferences dialog; click OK again to return to iTunes.**

   This bit rate setting provides the best compromise between quality (it gives you better than CD quality, which is 128 Kbps) and file size (tracks you rip will be significantly smaller than audiophile bit rates such as 192 Kbps or higher). Remember, songs you buy and download from the iTunes Music Store are all 256 Kbps.

7. **Load an audio CD into your Mac's optical drive.**

   The CD title shows up in the iTunes Source list (under the Devices heading), which is on the left side of the iTunes window. The CD track listing appears on the right side of the window.

   If iTunes asks whether you want to import the contents of the CD into your Music Library, you can click Yes and skip the rest of the steps; however, if you've disabled this prompt, just continue with the remaining two steps.

8. **Clear the check box of any song you don't want to import from the CD.**

   All songs on the CD have a check box next to their title by default. Unmarked songs aren't imported.

9. **Click the Import CD button.**

Tweaking the Audio for Your Ears

Besides the standard volume controls that I mention earlier in this chapter, iTunes offers a full equalizer. An *equalizer* permits you to alter the volume of various frequencies in your music, allowing you to boost low sounds, lower high sounds, or anything in between.

To open the Equalizer, choose Window ⇨ Equalizer or press ⌘+Option+E. Use the leftmost slider (Preamp) to set the overall level of the Equalizer. The remaining sliders represent various frequencies that the human ear can perceive. Setting a slider to a position in the middle of its travel causes that frequency to play back with no change. Move the slider above the midpoint to boost that frequency; conversely, move the slider below the midpoint to reduce the volume of that frequency.

Continue adjusting the equalizer sliders until your music sounds the way you like it. In case you prefer to leave frequencies to the experts, the iTunes Equalizer has several predefined settings to match most musical styles. Open the pop-up menu at the top of the Equalizer window to choose a genre. When you close the Equalizer window, iTunes remembers your settings until you change them again.

A New Kind of Radio Station

Besides playing back your favorite audio files, iTunes can also tune in Internet radio stations from around the globe. You can listen to any of a large number of preset stations, seek out lesser-known stations not recognized by iTunes, or even add your favorite stations to your playlists. You can also subscribe to the iTunes Radio feature to create a custom station dedicated to just the genres and artists you prefer. This section shows you how to do it all.

Internet Radio

Although it's not a radio tuner in the strictest sense, iTunes can locate virtual radio stations all over the world that send audio over the Internet — a process usually dubbed *streaming*. iTunes can track down hundreds of Internet radio stations in a variety of styles with only a few mouse clicks.

To begin listening to Internet radio with iTunes, click the Internet Radio item in the sidebar list. (If Internet Radio doesn't appear under the Library heading in the sidebar, it's hidden. Hover your pointer over the "Library" label at the very top of the sidebar and click the Edit link that appears, then click the Internet Radio check box to enable it.) The result is a list of more than 20 types of radio stations, organized by genre.

WHAT'S WITH THE NUMBERS NEXT TO THE STATION NAMES?

When choosing an Internet radio station, keep your Internet connection speed in mind. If you're using a broadband DSL or cable connection — or if you're listening at work over your company's high-speed network — you can listen to stations broadcasting at 128 Kbps (or even higher). The higher the bit rate, the better the music sounds. At 128 Kbps in AAC format, for example, you're listening to sound that's as good as an audio CD.

When you expand an Internet category by clicking its disclosure triangle, iTunes queries a tuning server and locates the name and address of dozens of radio stations for that category. Whether you like Elvis or not-Elvis (those passing fads, such as new wave, classical, or alternative), something's here for everyone. The Internet also offers news, sports, and talk radio.

After iTunes fetches the names and descriptions of radio stations, double-click one that you want to hear. iTunes immediately jumps into action, loads the station, and begins to play it.

Tuning in your own stations

Although iTunes offers you a large list of popular radio stations on the web, it's by no means comprehensive. Eventually, you might run across a radio station that you'd like to hear, but don't find listed in iTunes. Luckily, iTunes permits you to listen to other stations, too. To listen to a radio station that iTunes doesn't list, you need the station's web address.

In iTunes, choose File⇨Open Stream (or press ⌘+U). In the Open Stream dialog that appears, enter the URL of your desired radio station and click OK. In seconds, iTunes tunes in your station.

Radio stations in your playlists

If you find yourself visiting an online radio station more than once, you'll be glad to know that iTunes supports radio stations in its playlists. To add a radio station to a playlist from the Internet Radio list, follow these steps:

HAVE AN ITCH TO HEAR "KUNG FU FIGHTING"?

As you can probably tell from this chapter, music is very important to me. This particular technology author has a preference for a certain hot jam spot: *MLC Radio,* the Internet radio station I've been running for several years now. I call my station a '70s Time Machine because it includes hundreds of classic hits from 1970–1979. You hear every- thing from "Rock and Roll Hoochie Koo" by Rick Derringer to "Moonlight Feels Right" by Starbuck. (Hey, I'm summing up a decade here, so be prepared for both Rush and the Captain & Tennille.) The station broadcasts at 128 Kbps (audio CD quality), so you need a broadband connection to listen. For the station's Internet address or to ask for help connecting to MLC Radio, visit my website at www.mlcbooks.com!

1. **Open the category that contains the station you want to add to your playlist.**

2. **Locate the station you want to add to your playlist, and drag it from the Radio list to the desired playlist on the left.**

   If you haven't created any playlists yet, see the section "Keeping Slim Whitman and Slim Shady Apart: Organizing with Playlists" earlier in this chapter to find out how.

You can also follow the same steps to add a radio station that doesn't appear in the Radio list. iTunes allows you to load a radio station URL manually by choosing File ⇨ Open Stream, and any station that you play using the Open Stream command is automatically added to your Songs list. Therefore, you can drag the station from the Songs list to any playlist.

Creating a custom iTunes Radio station

The recent addition of i*Tunes Radio* makes it possible for you to listen to the art-ists, songs, and genres that you prefer in iTunes, without selecting a specific Internet radio station. To use iTunes Radio, click the Radio button at the top of the iTunes window, and type the artist name, song name, or genre in the Search field. (Note that iTunes Radio is an Apple Music subscription service, unlike the Internet Radio stations I described in the last section.)

As you download new music from the iTunes Store (and add new artists and genres in iTunes Radio), the service learns more about your musical tastes and can automatically play and recommend new music, much like the Genius feature I discussed earlier in this chapter.

Like Internet radio, the iTunes Store, and Apple's iTunes Match subscription ser-vice (described in the next section), iTunes Radio requires an Internet connection and an Apple ID.

Your iTunes Radio station is automatically shared among all your Macs running OS X Lion or later (as well as any devices you own running iOS 7 or later).

iTunes and iCloud Together

iTunes is connected closely with the Apple iCloud service, allowing you to share music betwixt all your Macs and iOS devices. To download a local copy of any iCloud item, simply click the iCloud icon next to the item. After the local copy has

been saved to your Mac's drive, the iCloud icon disappears and you're ready to listen or watch your purchase.

Apple's iTunes Match subscription service builds on this same functionality, allowing you to store *all* your music in iCloud (including the songs you've ripped from audio CDs and downloaded from other sources) and listen to it on any of your Macs, PCs, or iOS devices! When you join iTunes Match, all the songs that aren't available from the iTunes Store are automatically uploaded to iCloud.

At the time of this writing, the service is $25 a year and is limited to a maximum of 10 devices and 100,000 songs (note that purchases you make from the iTunes Store don't count toward that 100,000-song limit).

To subscribe to iTunes Match or manage your Match storage, click the Store button to display the iTunes Store and click the iTunes Match link at the right side of the screen.

iSending iStuff to iPod, iPhone, and iPad

If you're cool enough to own an iPod, you'll be happy to know that iTunes has features for your personal audio and video jukebox as well. The *iPod Touch,* Apple's multimedia player, will set you back $200 to $300 (depending on the storage capacity). The iPod touch can hold literally thousands of songs, as well as podcasts, photos, and video. This great gadget and those like it have become known worldwide as *the* preferred portable digital media players.

If you own an iPhone or iPad, you probably already know that these devices can act as your music player as well. You can buy all sorts of applications for these devices at the iTunes Store. iTunes even keeps track of these applications as part of your iTunes Library.

REMEMBER

In order to sync correctly, both your computer and the device *must* share the same Apple ID.

You connect your iPod to any Macintosh or Windows PC that has USB 2.0 ports using the included cable. After the iPod is connected, you can synchronize it with iTunes. By default, this process is automatic: The iPod and the iTunes software communicate with each other and figure out what items are in your iTunes Library (as compared to the iPod Library). If they discover songs, podcasts, and video in your iTunes Library that are missing from your iPod, the items automatically transfer to the iPod. Conversely, if the iPod contains stuff that's no longer in iTunes, the iPod automatically removes those files from its drive.

WARNING

Go back and reread that last sentence about how the iPod *automatically removes* files from its drive. (I'll wait.) Apple added this feature in an effort to be responsive to copyright concerns. The reasoning is that if you connect your iPod to your friend's computer, you can't transfer songs from the iPod to that computer. Of course, you could always look at it from the marketing perspective as a feature that makes sure your MacBook and iPod are always in total sync. Whatever the case, pay close attention and read all warning dialogs when connecting to a computer other than your own, or you might wipe out your iPod's library.

You can change your settings on the device's Summary pane so iTunes autosyncs only selected playlists (click on the device icon at the upper left of the window to display the Summary pane). Or, if you're really nervous, you can choose to manually manage the contents of your iPod with iTunes from the Summary pane.

Sharing Your Media Across Your Network

Ready to share your music, podcasts, and video — *legally,* mind you — with other folks on your local network? You can offer your digital media to other iTunes users across your home or office. Follow these steps:

1. **Choose iTunes ⇨ Preferences to open the Preferences dialog.**

2. **Click Sharing.**

3. **Select the Share My Library on My Local Network check box.**

4. **Specify whether you want to share your entire library or only selected playlists and files.**

   Sharing selected playlists is a good idea for those Marilyn Manson and Sex Pistols fans who work at a cubicle farm in a big corporation.

5. **If you want to restrict access to just a few people, select the Require Password check box; then type a password in the text box.**

6. **Click OK.**

   Note that the music you share with others can't be imported or copied, so everything stays legal.

TIP

Want to change that frumpy default name for your shared media library to something more exotic, like "Dan's Techno Beat Palace"? No problem. Display the Preferences dialog again, click the General tab, and click in the Library Name text box. Edit your network entertainment persona to your heart's content.

You can also share your media library using *Home Sharing*, which allows others join in the fun — including up to five Mac computers and iOS devices (your iPad, iPhone, and iPod touch). Home Sharing requires a network connection for all your devices, and you have to enter the same Apple ID information on each device. To turn on Home Sharing in iTunes, click File⇨Home Sharing and choose Turn On Home Sharing. (Don't forget to repeat this setup on each computer and iOS device.) After Home Sharing is enabled, a Shared Libraries heading appears in the sidebar.

Burning Music to Shiny Plastic Circles

Besides being a great audio player, iTunes is adept at creating CDs, too. (Of course, your MacBook must have either an internal SuperDrive or an external optical drive to record them.) iTunes makes the process of recording songs to a CD as simple as a few taps on the trackpad. Making the modern version of a compilation (or *mix*) tape is easier than getting a kid to eat ice cream! If you have an internal or external optical drive, iTunes lets you burn CDs in one of three formats:

» **Audio CD:** This format is the typical kind of commercial music CD you buy at a store. Most typical music audio CDs store up to 800MB of data, which translates into about 80 minutes of music.

» **Data CD or DVD:** A standard computer CD-ROM or DVD-ROM is recorded with the audio files. This disc can't be played in any standard audio CD player (even if it supports MP3 CDs, which I discuss next). Therefore, you can listen to these songs only by using your Mac and an audio player, such as iTunes or a PC running Windows.

>> **MP3 CD:** As does the ordinary computer CD-ROM that I describe, an MP3 CD holds MP3 files in data format. However, the files are arranged in such a way that they can be recognized by audio CD players that support the MP3 CD format (especially boomboxes, DVD players, personal CD players, and car stereos). Because MP3 files are so much smaller than the digital audio tracks found on traditional audio CDs, you can fit as many as 160 typical four-minute songs on one disc. These discs can also be played on your Mac via iTunes.

WARNING

Keep in mind that MP3 CDs aren't the same as the standard audio CDs you buy at the store, and you can't play them in older audio CD players that don't support the MP3 CD format. Rather, this is the kind of archival disc that you burn at home for your own collection or for use in a CD/DVD player or car audio system that supports MP3 discs.

To begin the process, build a playlist (or select an existing playlist that you want to record). If necessary, create a new playlist and add to it whatever songs you would like to have on the CD. (See the earlier section, "Keeping Slim Whitman and Slim Shady Apart: Organizing with Playlists," if you need a refresher.) With the songs in the correct order, right-click the playlist and choose Burn Playlist to Disc to commence the disc-burning process. Click the desired recording format (again, usually Audio CD) in the Burn Settings dialog that appears.

TIP

To save yourself from sonic shock, I always recommend that you enable the Use Sound Check check box before you burn. iTunes adjusts the volume on all the songs on your audio CD so they play at the same volume level.

WHAT THE HECK IS A PODCAST?

Today's podcasts are much like the recurring radio commentary programs of old, covering a huge range of subjects. Most are produced by fans of a particular topic — like a website, you can create your own — but others are offered by major news outlets and talk radio shows (sometimes as companions to their radio broadcasts).

Podcasts are designed to entertain and inform, usually while you're doing something else, but they can contain video as well. A typical podcast is released on a regular schedule, and iTunes helps you maintain the schedule by allowing you to *subscribe* to a podcast from within the iTunes Store. After you subscribe, iTunes automatically downloads new episodes of the podcast.

To get started with podcasts, click Store on the iTunes toolbar, then click the Media Type dropdown list at the left corner of the window and choose Podcasts. Remember, virtually all podcasts are free!

Ready to go? Click Burn, and load the blank disc. iTunes lets you know when the recording is complete.

Feasting on iTunes Visuals

By now, you know that iTunes is a feast for the ears, but did you know that it can provide you with eye candy as well? With just a click or two, you can view mind-bending graphics that stretch, move, and pulse with your music.

To begin viewing iTunes visuals, choose View⇨Show Visualizer (or press ⌘+T). Immediately, most of your iTunes interface disappears and begins displaying groovy lava lamp–style animations (like, *sassy,* man). To stop the visuals, choose View⇨Hide Visualizer (or press ⌘+T again). The usual sunny aluminum face of iTunes returns.

You can also change the viewing size of the iTunes visuals in the View menu. Select View⇨Enter Full Screen (or press ⌘+Control+F). To escape from the Full Screen Visuals mode, press Esc, or simply press ⌘+Control+F again.

You can still control iTunes with the keyboard while the visuals are zooming around your screen. See Table 12-1 earlier in this chapter for a rundown on common keyboard shortcuts.

Exercising Parental Authority

Do young children use your Mac? I'll be honest here: A large amount of content in the iTunes Store, including audio, movies, and even apps, is stuff I don't consider suitable for kids. And what about the media that others in the family may decide to share? Such is the world we live in today, and the good folks at Apple recognize that you may not want to inadvertently allow your kids to have access to explicit content.

Luckily, you can use the Restrictions settings in iTunes to build a secure fence around content that's for grown-ups only. Heck, you can even banish items from the sidebar entirely. Figure 12-4 illustrates the Restrictions pane in the iTunes Preferences dialog.
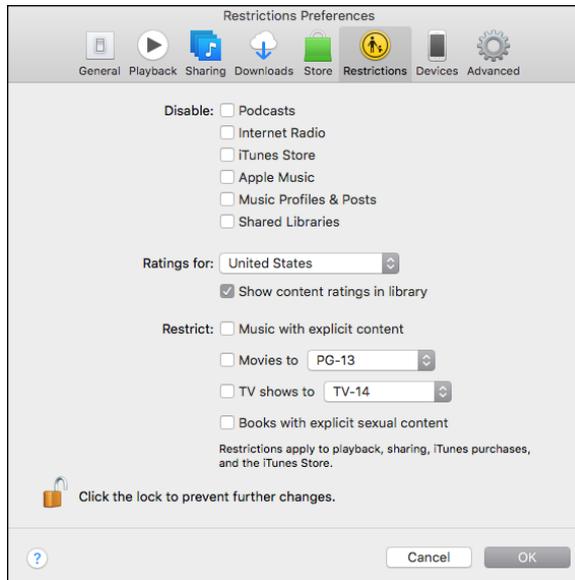
FIGURE 12-4:
Protect your kids from explicit content.

REMEMBER You must log in with an Administrator account to change these settings, just like with the Parental Controls in the System Preferences dialog. If the settings are *locked* — the padlock icon at the bottom of the dialog is closed — click the padlock and supply your administrator password to unlock them. (Read more about Parental Controls in Chapter 10.)

To restrict access, follow these steps:

1. **Choose iTunes ⇨ Preferences.**

2. **Click the Restrictions tab.**

3. **Select any of the Disable check boxes to prevent access to those features.**

REMEMBER Disabling features in iTunes applies to *all* user accounts — no matter who is logged in! Notice that any features you disable disappear completely from the sidebar after you click OK at the end of these steps.

4. **Click the Ratings For pop-up menu, and choose your country.**

Because Apple maintains separate iTunes Stores for different nations, you can choose which country's iTunes Store to monitor. If you like, you can disable the display of content ratings in your iTunes library by deselecting the Show Content Ratings in Library check box.

5. **To restrict specific content in the iTunes Store, select the check box next to the source, and make choices from the corresponding pop-up menu to choose the restriction level.**

Note that these restrictions apply only to content in the iTunes Store, content that can be downloaded through iCloud, and media shared with your Mac.

6. **Click the padlock icon at the bottom of the dialog to close it and prevent any changes.**

7. **Click OK.**

Buying Digital Media the Apple Way

The hottest spot on the Internet for buying music and video is the iTunes Store, which you can reach from the cozy confines of iTunes. (That is, as long as you have an Internet connection. If you don't, it's time to turn the page to a different chapter.)

Click the iTunes Store button near the top of the window, and after a few moments, you're presented with the latest offerings. Click a link in the store list to browse according to media type; the Back and Forward buttons at the top of the iTunes Store window operate much the same as those in Safari, moving you backward or forward in sequence through pages you've already seen.

To display the details on a specific album, track, video, podcast, or audiobook (whew), just click it. If you're interested in buying just certain tracks (for that perfect road warrior mix), you get to listen to 90 seconds of any track — for free, no less, and at full sound quality. When you're ready to buy, click the Buy Now button. (At the time of this writing, tracks are usually 99 cents a pop, and an entire album is typically $9.99 . . . what a bargain!)

The iTunes Store uses your Apple ID to identify you, and it keeps secure track of your payment information for future purchases. After you use the iTunes Store once, you rarely have to log in or retype your credit card information again.

The tracks and files that you download are saved to a separate playlist called Purchased. After the download is finished, you can play them, copy them to other playlists, burn them to CD or DVD, share 'em over your network, or ship them to your iOS devices using iCloud, just as you can any other item in your iTunes Library.

TIP

iTunes can automatically download the media you purchase on another iCloud device (including another Mac and your iPhone, iPad, or iPod touch). To set up automatic downloading, choose iTunes➪Preferences to open the Preferences dialog, and click the Downloads tab. After you're signed in at the iTunes Store, you can choose to download music or app purchases, and you have the option to check for new downloads automatically. Click OK to save your changes.

Chapter **13**

Focusing on Photos

For decades now, the Mac has been the choice of professional photographers for working with digital images — not surprising, considering the Mac's graphical nature. Apple continues this tradition with *Photos,* its photography tool for the home user that can help you organize, edit, and even publish your photographs. (It sports more features than a handful of Swiss army knives.) After you shoot your photos with a smartphone or a digital camera, you can import them into Photo, edit them, and publish them. You're not limited to photos that you take yourself, either; you can edit, share, and organize all kinds of digital image files, as well as video clips. You can even create a photo album and use the Photos interface to order a handsome soft-bound or hard-bound copy shipped to you, or create a slideshow that you can upload to YouTube.

In this chapter, I walk you through an overview of what Photos can do. After that, I give you a brief tour of the controls in Photos so that you can see what features are available to you, including those for managing, printing, and publishing your photos.

Delving into Photos

Figure 13-1 shows most of the major controls Photos offers. (Other controls appear automatically when you enter different modes; I cover them in upcoming sections.)
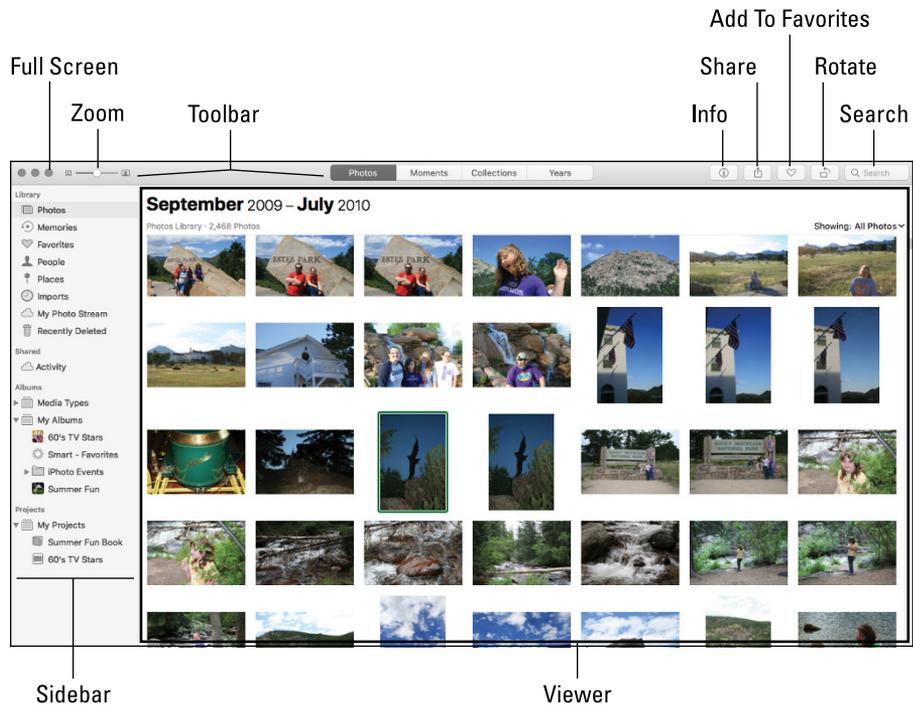
FIGURE 13-1:
Photos greets you with an attractive window.

These controls and sections of the window are covered in more detail in the following sections. For now, here's a quick rundown of what you see when you launch Photos and click the Photos mode button at the top center of the screen:

» **Sidebar:** Like iTunes and Safari, Photos sports a sidebar that displays different locations and groupings within the application — photos you've recently imported, for example, or specific photo albums and book projects you've created. Switching between your photo library, your albums and your projects involves a single click!

» **Toolbar:** This group of controls determines how many images the Photos Viewer will display, and allows you to perform a number of actions with selected photos.

  • You can display photos by *moment* (photos taken around the same time and at the same location), *collection* (a group of related moments, like each day of a family reunion), or *year* (the year the photos were taken). If the Back button is visible, you can click it to see more images at once. To zoom in on a specific photo, just click the desired thumbnail. To switch between each of these groupings, click one of the four view buttons on the toolbar (from the keyboard, press ⌘+1 through ⌘+4. The Photos view button returns you to an overview of your entire library.)

- You can create new albums, slideshows, and print projects (like books, calendars, and cards) using your photos. These new thumbnails appear when you click the Albums and Projects entries in the sidebar, which makes it much easier to organize your photos.

- You can share selected photos in a slew of different ways, including Apple Mail, Messages, and AirDrop networking, as well as popular online sites like Facebook, Twitter, and Flickr. If you've enabled iCloud Photo Sharing, you can also share photos to your other Macs and iOS devices.

- You can search for specific images. Just click in the box and start typing to search by description and title, or even Faces and keywords, which I cover later in the chapter.

» **Viewer:** This pane displays the images from your Photos Library.

You can click and drag or ⌘+click to select photos in the Viewer for further tricks, such as assigning keywords and image editing.

» **Thumbnails:** If you're displaying a single image from your Library, you can press Option+S to open and close the Thumbnails pane. The Thumbnails pane allows you to quickly switch to another image by clicking on the desired thumbnail — a very helpful feature when you're editing a number of images taken around the same time.

» **Full Screen:** Click the Full Screen/Maximize button at the upper-left corner of the window to switch to a full-screen display of your photos. In full screen mode, you can double-click a thumbnail to view the image using your Mac's entire screen real estate. (The toolbar is still available at any time: Just move your pointer to the top of the screen to display it.) Press Esc to return to windowed mode.

Click View ➪ Always Show Toolbar and Sidebar in Full Screen to prevent the toolbar and sidebar from disappearing in full screen mode.

» **Zoom:** Drag this slider to the left to reduce the size of the thumbnails in the Viewer. This allows you to see more thumbnails at one time, which is convenient for quick visual searches. Drag the slider to the right to expand the size of the thumbnails, making it easier to differentiate details between similar photos in the Viewer. You can also use the Zoom slider when a single image is displayed in the Viewer.

» **Add To Favorites:** This toolbar button (which bears a heart icon) appears in the toolbar only while you're viewing or editing a single image. Click the Add to Favorites button to add the item that's currently displayed in the Viewer as a Favorite. (When viewing your Library as moments or collections, you can also hover your pointer over an item and click the heart symbol that appears at the lower-left corner of the photo.) You can search for Favorite photos using keywords, which are covered later in this chapter.

>> **Info:** Click this button to display information on the item that's currently displayed in the Viewer.

>> **Share:** Click this button to share the currently selected photos on Flickr, Twitter, or Facebook. Choose iCloud Photo Sharing to send the selected photos to your iPhone, iPad, or iPod Touch (they'll appear in the Photo Stream albums on those devices) or to another Mac. If you use Apple's Aperture application to edit or organize photos, you can add the selected photos to your Aperture library. You can also add them to a Note, attach the photos to a text message, or email them.

>> **Edit:** Here's another button that's displayed in the toolbar only when you view a single image. Click this button to switch to the editing controls within Photos and make changes to the current image. I cover editing in depth later in the chapter.

>> **Rotate Counterclockwise:** Pretty self-explanatory — a click will rotate the currently selected image(s) in a counterclockwise direction. I find myself doing this often, which is why Apple designers decided to park this button here.

>> **Search:** Click within the familiar confines of the Search box to filter the photos displayed in the Viewer by keyword, description, filename, or date.

Working with Images in Photos

Even a superbly designed image display and editing application such as Photos would look overwhelming if everything were jammed into one window. Thus, Apple's developers provide different operational modes, such as editing and book creation, that you can use in the one Photos window. Each mode allows you to perform different tasks.

In this section, I discuss three of these modes — import, organize, and edit — and what you can do when you're in them.

Import images 101

In *import* mode, you're ready to download images and video clips directly from your digital camera — and you're not limited to cameras, of course. You can also import items from a folder on your hard drive, a memory card reader, such as the SDXC card slot sported by many current Mac models, or even a Kodak PhotoCD.

Follow these steps to import images directly from your camera:

1. **Connect your digital camera to your Mac.**

Plug one end of a USB cable into your camera and the other end into your computer's USB port, and prepare your camera to download images.

2. **Prepare your camera to download files.**

The procedure for downloading images and video varies by camera, but the process usually involves turning on the camera and choosing a "Download" or "PC" mode. Check your camera's user guide for more details.

3. **Launch Photos.**

Your Mac probably launches Photos automatically when your camera is detected, but you can always launch Photos manually by clicking the Photos icon on the Dock (or clicking on the Photos icon within Launchpad).

4. **Choose File ⇨ Import from the Photos menu and click the device in the sidebar.**

Photos displays all of the images and video clips currently stored on your camera in the Viewer.

5. **Click the Import All New Photos button to import all new files from the camera.**

To select specific images to import, hold down the ⌘ key and click each desired photo; then click Import Selected instead of Import All New Photos.

The images and clips initially appear within the Last Import album in your Photos Library, where you can organize them as you want.

6. **Click the Import To dropdown menu and select a destination for the imported files.**

You can choose an existing album, create a new album, or simply add them to your library.

Note that Photos automatically groups imported images and video into moments and collections, which use the date, time, and location where the files were created, if your camera stores this information with each file. For example, if you want to see photos from your son's graduation, they'll appear as a separate moment. Think about that. It's pretty tough to arrange old-fashioned film prints by the moment in time they document, but Photos makes it easy for you to see which photos are part of the same group.

Don't be surprised if Photos automatically appears when you connect your iPhone or iPad to your MacBook. This gives you a convenient opportunity to import photos with a single click.

Organize mode: Organizing and sorting your images

In the days of film prints, you could always stuff another shoebox with your latest photos or buy another sticky album to expand your library. Your digital camera, though, stores images as files instead, and many folks don't print their digital photographs. Instead, you can keep your entire collection of digital photographs and scanned images well-ordered and easily retrieved within Photos — then you can display them in a slideshow, email them, print them, use them as Desktop backgrounds, or burn them to an archive disc.

A new kind of photo album

The most familiar method of organizing images in Photos is the *album.* Each album can represent any designation you like, be it your pets, a vacation, your daughter, or your daughter's ex-boyfriends. Follow these steps:

1. **Create a new album.**

   You can choose File ⇨ New Album, press ⌘+N. If you've selected any item thumbnails in the Viewer, they are added to the new album automatically.

2. **Type the name of your new photo album into the Album Name text box in the sidebar (Figure 13-2).**

3. **Press Return.**
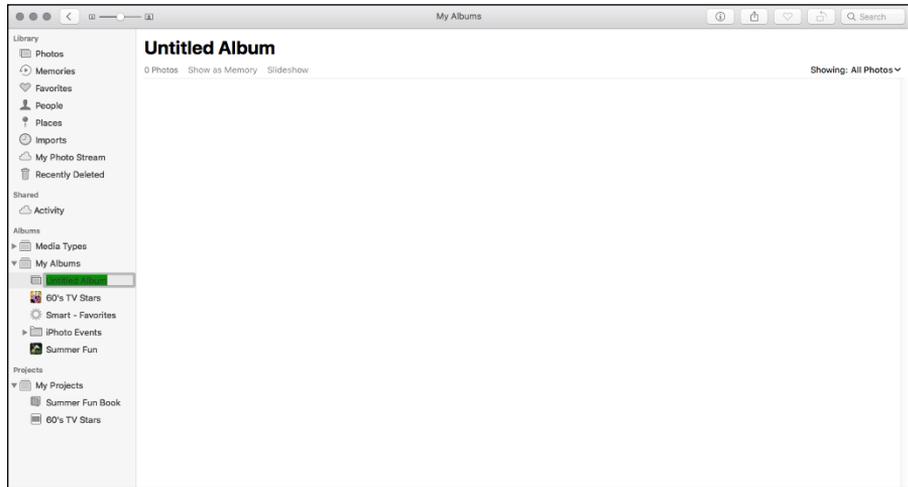
Photos also offers a special type of album called a *Smart Album,* which you can create from the File menu. (For even faster action, press Option+⌘+N.) If you're familiar with the Smart Folders you can use within the Finder and the Smart Playlists within iTunes (see Chapter 12), you've figured out this one already.

A *Smart Album* contains only photos that match certain criteria you choose, including the keywords you assign your images. Other criteria include text in the photo file-names, the dates the images were added to Photos, a specific person you've identi-fied, and any description you might have added (as well as camera-specific data, such as ISO and shutter speed).

Now here's the really nifty angle: Photos *automatically* builds and maintains Smart Albums for you. It adds new photos that match the criteria and deletes those you remove from your Photo Library (and also removes the photos that no longer match the Smart Album's criteria). Smart Album icons carry a gear symbol in the Photos sidebar.

TIP

You can display (or edit) information about any photo or video clip — just right-click on the thumbnail and choose Get Info from the menu that appears. Click the Add a Title heading in the dialog to display a text edit box, and you can simply type a new value. You can also type a short note or description in the Add a Description box that appears in the Info dialog.

You can copy selected items from the Viewer into any album you choose. Right-click the desired items, then hover your pointer over the Add To menu item and choose the destination album. You can also copy selected items to an album by dragging them from the Viewer to the desired album entry in the sidebar.

To remove a photo or video clip that has fallen out of favor, follow these steps:

1. **Click the desired album in the sidebar.**
2. **In the Viewer, click the item you want to remove to select it.**
3. **Press Delete.**

REMEMBER

When you remove a photo or clip from an album, you *don't* remove the actual file from your collection (represented by Photos button in the toolbar or the Photos entry at the top of the sidebar). An album is actually just a group of links to the images in your collection, just like how a playlist in iTunes is a group of links to songs in your Music Library. If you want to completely remove an offending photo from Photos, click the Photos button in the toolbar (or the Photos entry at the top of the sidebar) to display your entire collection of photos and clips and delete the item there. The item disappears from all albums with which it is associated.

To remove an entire album, right-click on the offending album entry in the sidebar and choose Delete Album.

To rename an album from the sidebar, click the entry under the Albums heading in the list to select it, and click again to display a text box. Type the new album name, and press Return.

TIP

Change your mind? Photos comes complete with a handy-dandy Undo feature. Just press ⌘+Z, and it's as though your last action never happened. (This is a great trick for those moments when you realize you just deleted your only image of your first car from your Library.) For an extra level of backup protection for your priceless images, you can invest in an external hard drive and use the awesome High Sierra Time Machine backup feature.

HEY, WHAT HAPPENED TO MY EVENTS?

In iPhoto — the predecessor to Photos — an *Event* was a group of images you shot or downloaded at the same time (much like a collection in Photos). Now that iPhoto has bit the dust, you may be mourning the loss of your Events . . . don't worry, they're still available! You'll find that Photos includes a special album named iPhoto Events (which is available as an entry in the sidebar list). Click this iPhoto Events entry in the sidebar and your existing Events will appear like magic!

Note that you can no longer create Events within Photos, as collections now handle the same chore!

Working with People

Photos includes a powerful organizational tool called *People*, which appears as a separate item within the sidebar.

People is a sophisticated recognition system that automatically recognizes human faces within the photos you add to your Photos Library. (I don't know whether it works well with pets, but you can try.) Naturally, you have to identify — or *tag* — faces before Photos can recognize them.

To tag a face, follow these steps:

1. **In the Viewer, double-click the photo with a person you want to tag.**

   Note that Photos indicates each person's face in the photo with a circle. If a face has already been tagged, the label (which appears when you hover your pointer over the icon) matches the person's face.

2. **To set Photos to always show labels in the Viewer — so that you don't have to click the Add Faces link — click View ⇨ Show Face Names.**

3. **Click the *unnamed* label under the person's face to open a text box, as shown in Figure 13-3.**

4. **Type the person's name and press Return.**

5. **If the name appears on a Contacts contact card — or is recognized as an existing People name, or as one of your Facebook friends — you can click the matching entry that appears to confirm the identity. Wowzers!**

6. **To delete an incorrect face recognition, right-click inside the circle that appears around the face and choose This is Not (Name) from the menu that appears.**

Photos might not recognize the face if the person is turned at an angle to the camera or is in a darker area of the photo. If so, display the Info pane and click the Add Faces link to display a "floating" circular outline, then click the outline and drag the circle over the person's face. If necessary, you can resize the box using the handle that appears at the right side of the circle. Now you can click the *Click to Name* label and type the person's name.

FIGURE 13-3: Adding another mug to my collection of Faces. (That doesn't sound right.)
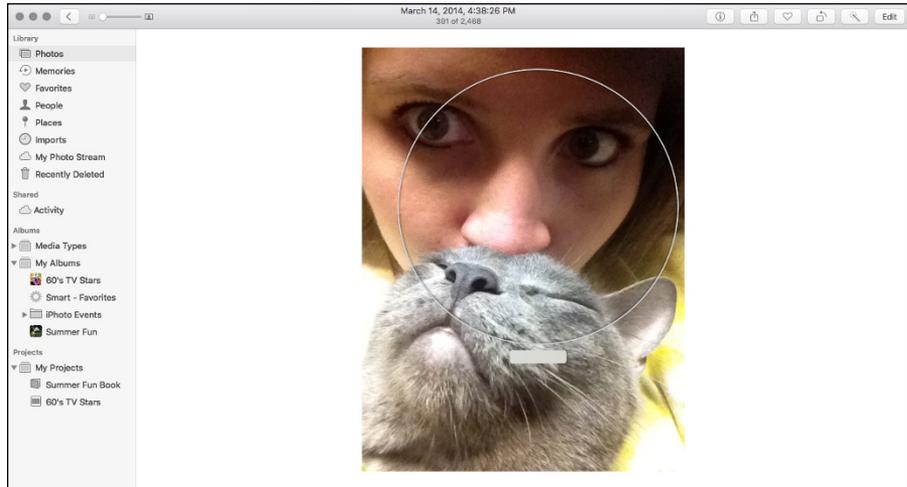
After you tag an image, it appears in your People collection, which you can view by clicking the People entry in the sidebar. You can double-click a portrait in your People collection to see all the images that contain that person.

Organizing with keywords

"Okay, Mark, albums and People are great ideas, but there has to be a way to search my Library by category!" Never fear, good Mac owner. You can also assign descriptive *keywords* to items to help organize your Library and locate certain pictures and video clips fast. Photos comes with a number of standard keywords, and you can create your own as well.

To illustrate, suppose you'd like to identify your images according to special events in your family. Birthday photos should have their own keyword, and anniversaries deserve another. By assigning keywords, you can search for Elsie's birthdays or your silver wedding anniversary (no matter what collection or album they're in), and all related photos with those keywords appear like magic!

Photos includes a number of keywords that are already available:

>> Favorite

>> Family

>> Kids

>> Vacation

>> Birthday

>> Photo Booth

>> Photo Stream

>> Check mark

TIP

What's the check mark all about, you ask? It's a special case: The check mark keyword comes in handy for temporarily identifying specific items, because you can search for just your check-marked photos and clips.

To assign keywords to images (or to remove keywords that have already been assigned), select one or more photos in the Viewer. Choose Window⇨Manage My Keywords or press ⌘+K to display the Keyword Manager window, as shown in Figure 13-4.
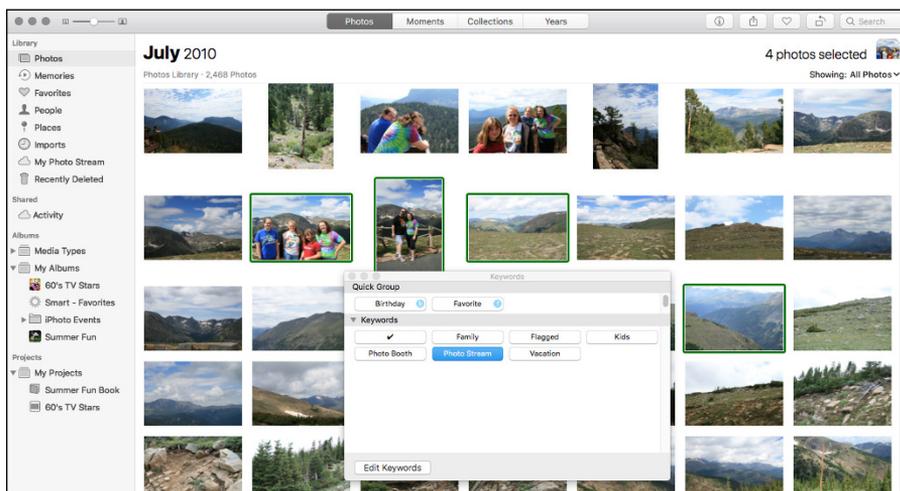
FIGURE 13-4:
Add keywords to these selected images.

TIP

Drag the keyword buttons that you use the most to the Quick Group section of the Keyword Manager window, and Photos automatically creates a keyboard shortcut for each keyword in the Quick Group. Now you don't even need to display the Keywords window to get business done!

Click the buttons for the keywords you want to attach to the selected images to mark them. Or click the highlighted buttons for the keywords you want to remove from the selected items.

Digging through your library with keywords

Behold the power of keywords! To sift through your entire collection of images by using keywords, click the Search button on the toolbar at the top right of the Photos window and type one or more keywords. For example, to see all the items you've flagged as Favorites that include kids, you'd type *Favorite Kids.*

REMEMBER

The images that remain in the Viewer after a search must have *all* the keywords you specified. For example, if an image is identified by only three of four keywords you chose, it isn't a match and doesn't appear in the Viewer. (You can create a Smart Album with specific keywords to get around this limitation.)

TIP To search for a photo by words in its description, just click in the Search box and start typing. You can search through your images by date and rating as well.

Searching by locations where photos were taken

Photos can also track the location where photos were taken automatically, but this feature requires a digital camera that includes GPS tracking information in the image metadata for Photos to do so without your help. (Older camera models are unlikely to support GPS tracking. Naturally, newer iPhones and iPads support this feature.) You don't have to turn anything on to view photos by location.

When you're viewing photos by moments and collections, you'll notice that Photos includes the location name to identify where the photos were taken. To search for all images taken at a specific location, type the location name into the Search field.

TIP If you right-click a specific photo (that includes location information) to select it and then click Get Info, you see a close-up map of the location where the photo was taken.

Edit mode: Removing and fixing stuff the right way

Not every digital image is perfect — just look at my collection if you need proof. For shots that need a pixel massage, Photos includes a number of editing tools you can use to correct common problems.

The first step in any editing job is to select the image you want to fix (double-click on a thumbnail in the Viewer so that it fills the screen). Then click the Edit button on the Photos toolbar (or simply press Return) to display the Edit mode controls at the right side of the window, as shown in Figure 13-5. Now you're ready to fix problems, using the tools I discuss in the rest of this section.

REMEMBER If you display a video clip in the Viewer, you can play it by hovering your pointer over the clip and pressing the Play button that appears. However, you can only edit photographs, so the Edit button is disabled when you're viewing a video clip.

While you're editing, you can press the left and right arrow keys to move to the next image (or back to the previous image). This trick works whether you were browsing the Library or displaying the contents of an album. You can also display the Thumbnail pane in Edit mode.
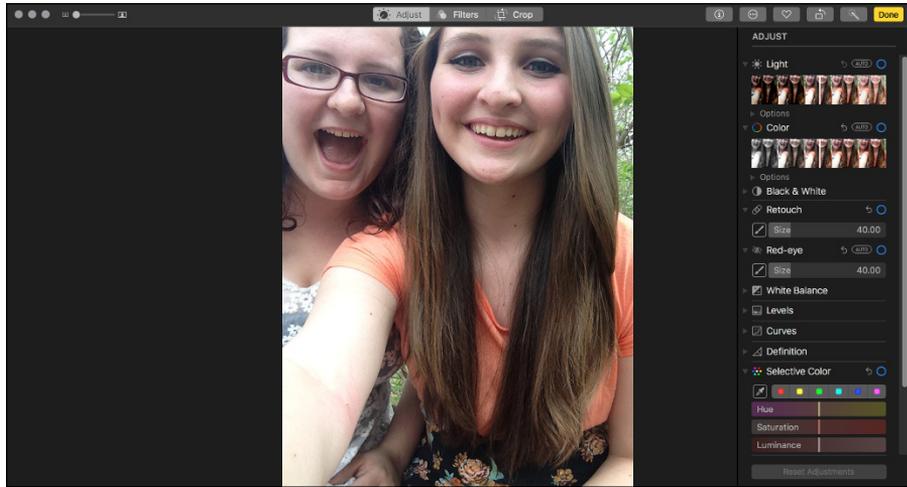
TIP

If you prefer to edit images while using more of your screen real estate, click the Full Screen/Maximize button at the upper-left corner of the Photos window. To switch back to the standard window arrangement, simply press the Esc key.

When you're finished with Edit mode, click the (wait for it) Done button again to return to the Viewer.

Rotating tipped-over shots

If an image is in the wrong orientation and needs to be turned to display correctly, click the Rotate button to turn it once in a counterclockwise direction. Hold down the Option key while you click the Rotate button to rotate in a clockwise direction.

Crop 'til you drop (and a whole lot more)

Does that photo have an intruder hovering around the edges of the subject? You can remove some of the border by *cropping* an image, just as folks once did with film prints and a pair of scissors. (We've come a long way.) With Photos, you can remove unwanted portions from the edges of an image; it's a great way to get Uncle Milton's stray head (complete with toupee) out of an otherwise perfect holiday snapshot.

While you're in Editing mode, follow these steps to crop, flip and straighten an image:

1. **Click the Crop button at the top of the window.**

2. **Select the portion of the image you want to keep.**

In the Viewer, click and drag the right-angle handles in the corners of the rectangle to outline the part of the image you want. Whatever is outside this rectangle disappears after the crop is completed.

When you drag a corner or edge of the outline, a semi-opaque grid (familiar to amateur and professional photographers as the nine rectangles from the Rule of Thirds) appears to help you visualize what you're claiming. (Check it out in Figure 13-6.)

You can expand the outline to the image's full dimensions at any time by clicking the Reset button.

See that attractive-looking Auto button that appears at the lower-right corner of the Photos window when you're in crop mode? A single click of the Auto button and Photos will take its best shot at producing the ideal cropping and straightening job for you! If you don't like the results, just use the Undo feature (⌘+Z) to return the photo to its previous appearance.

Photos features multiple Undo levels, so you can press ⌘+Z several times to travel back through your last several changes. Alternatively, you can always return the image to its original form (before you did any editing at all) by clicking the Reset button.

3. **(Optional) Choose a preset aspect ratio.**

You might want to force your cropped selection to a specific aspect ratio, such as 4×3 or 16×9 for a widescreen desktop background, or 4×6 or 5×7 to match the dimensions of photo paper. If so, click the Aspect item at the right side of the window and select that ratio from the pop-up menu that appears. (Pick the Square menu item for the perfect Facebook profile image, and Freeform to allow any aspect ratio after your cropping is done.)

4. **(Optional) Flip your photo horizontally.**

A click of the Flip item gives you the mirror image of your original photo.

5. **(Optional) Straightening what's crooked.**

Was your camera slightly tilted when you took the perfect shot? Never fear! Click on the circular angle control at the right edge of the image and drag in the desired direction. (Besides straightening the subject, you can do some truly wild camera angles this way, just like the 60s Batman TV series!)

6. **Click the Done button.**

Enhancing images to add pizzazz

If a photo looks washed out, click the Auto Enhance button to increase (or decrease) the color saturation and improve the contrast. Auto Enhance is automatic, so you don't have to set anything — but be prepared to use Undo if you're dissatisfied with the changes.
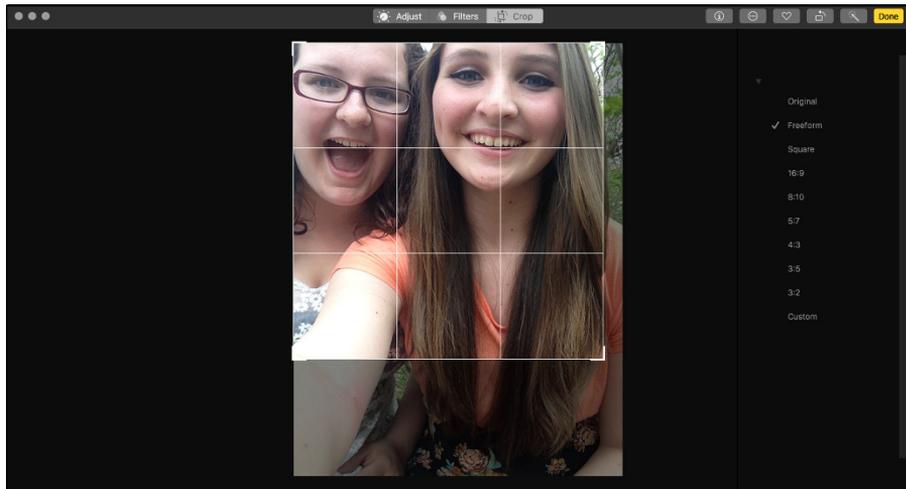
Removing rampant red-eye

Unfortunately, today's digital cameras can still produce the same "zombies with red eyeballs" as traditional film cameras. *Red-eye* is caused by a camera's flash reflecting off the eyes' interior surface, and it can occur with both humans and animals. (I'm told pets get *green-eye* or *blue-eye*, but Photos can handle them, too!)

Photos can remove that red-eye and green-eye and turn frightening zombies back into your family and friends. In Editing mode, click the Adjust button at the top of the window, then hover your pointer over the Red-Eye item at the right side of the screen and click the Auto button that appears. Photos automatically attempts to remove any red-eye effect it detects in the photo, and a blue check mark appears next to the Red-Eye item to indicate that a change was made.

Retouching like the pros

The Photos Retouch feature is perfect for removing minor flecks or lines in an image (especially those you've scanned from prints). Click the disclosure triangle (which looks like a right arrow) by the Retouch item and click the Edit button that appears (it carries a paintbrush icon). Now hover your pointer over the photo to display the circular retouch tool. You can drag the Size slider to change the size of the retouch tool. Drag the pointer across the imperfection and click Done when you're finished touching up. Don't forget to take a moment and marvel at your editing skill!

Using filters and adjustments to add a mood

Wondering whether a particular photo in your Library would look better as a black-and-white *(grayscale)* print? Click the Filters button at the top of the screen

to display a list of different effects that you can apply to the photo, including different black-and-white effects, enhanced color levels and subtle shading. Click any thumbnail in the strip to apply the filter.

If you'd like more precise manual control over your image attributes — including sharpness, color levels, shadows, definition and white balance — click the Adjust button at the top of the screen and explore the lengthy array of options. Note that most of the adjustments offer an Auto button if you hover your pointer over the entry, and you can click the disclosure triangle at the left of each entry to display additional controls that you can use to create a different look.

Producing Your Own Coffee-Table Masterpiece

Projects mode unleashes what I think is probably the coolest feature of Photos: the chance to design and print a high-quality bound photo book. First you complete an album by editing all the images just the way you want and placing in the album all the photos you want to include in your book. Photos can send your images as data over the Internet to a company that prints and binds your finished book. (No, they don't publish *For Dummies* titles, but then again, I don't get high-resolution color plates in most of my books, either.)

At the time of this writing, you can order many different sizes and bindings. The largest size is a 13-by-10-inch hardcover book (complete with a dust jacket) with 20 double-sided pages for about $50 — extra pages cost $1.50 each. Smaller sizes include a 10-by-10-inch hardcover book with 20 double-sided pages for about $40 and a softcover 8-by-8-inch album with 20 double-sided pages for about $15. Extra pages can be added at $1.00 and $.80 a pop, respectively.

Photos can also produce and automatically order calendars and cards (both the postal and greeting varieties) using a process similar to the one I describe in this section for producing a book. Who needs that stationery store in the mall anymore? (You can even order old-fashioned photo prints.)

If you decide to create a photo book, make sure the images have the highest quality and highest resolution. The higher the resolution, the better the photos look in the finished book. I always try to use images of more than 1,200 pixels in the shortest dimension. You should also make sure you've added enough images to the album you'll be using, because you need to populate the entire book. (You can add extra pages later, but each book requires a minimum number of pages.) Don't forget to include a good mix of landscape and portrait shots.

To create a photo book, follow these steps:

1. **Right-click the entry for the desired album in the sidebar and choose Create ⇨ Book from the menu that appears.**

Make sure no individual photos are selected in the Viewer. This way, Photos uses all the images in the chosen location.

2. **Select the type of book (Square, Classic, or Softcover).**

Your choice determines the number of pages and the size of the book.

3. **Click a theme thumbnail.**

The theme you choose determines both the layout scheme and the background graphics for each page.

4. **Click Create Book.**

Photos adds your new book project under the Projects heading in the sidebar (using the name of the album where the photos were located), and you see the layout and controls shown in Figure 13-7.

In Book mode, the Viewer displays a collection of thumbnail images, each of which represents a portion of your book — the front cover, internal pages, or back cover. Photos automatically fills as many pages as it can with images that best fit your layout — any extra images appear in the photo strip along the bottom of the window. You can drag any image thumbnail into one of the photo placeholders to add it (or replace the existing photo).

TIP It's easy to switch to another theme at any time. Click the Change Settings button in the toolbar (which bears a book icon), and then click the Change Theme button that appears.

5. **(Optional) Rearrange the page order to suit you by dragging the thumbnail of any page from one location to another.**

TIP If you prefer a book without page numbers, click the Change Settings button and click Show Page Numbers to toggle it off.

6. **(Optional) To change the look of the selected cover or page, click the Layout Options button on the toolbar to change the color and design layout for that element.**

Clicking a design thumbnail automatically updates the page display.

7. **Double-click a page to edit captions and short descriptions.**

Click any of the text boxes in the page display, and begin typing to add text to that page. (Note that some themes don't have caption or description text boxes.)

After you're finished editing, click the Back button at the top of the window to return to your full spread.

8. **(Optional) To add pages to your book, click the Add Page button on the toolbar.**

As mentioned earlier, the price of additional pages varies according to the size and type of binding you choose.

9. **To view the book at any time, right-click any open spot in the Photos Viewer and choose Preview Book.**

After a short wait, the macOS Preview application opens, and you can scroll through the contents of your book (or even print a quick copy). To close the Preview window, choose Preview ⇨ Quit Preview.

10. **When you're ready to publish your book, click the Buy Book button at the upper-right corner of the window.**

11. **In a series of dialogs that appears, Photos guides you through the final steps to order a bound book.**

Note that you are asked for credit card information, so have that plastic ready.
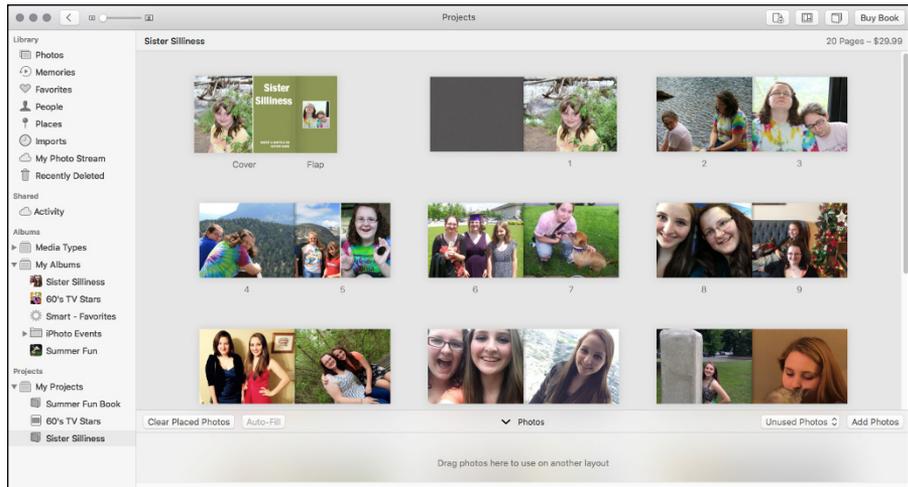
FIGURE 13-7:
Preparing to publish my own coffee-table masterpiece.

> **TIP**
>
> Why limit yourself to paper copies of your publishing success? You can also right-click any open spot in the Viewer and choose Save Book as PDF to create a snazzy electronic version of your book.

I REALLY NEED A SLIDESHOW

You can use Photos to create slideshows by following these steps:

1. **Right-click the desired album in the sidebar and choose Create ⇨ Slideshow from the menu that appears.**

2. **Type the name of the slideshow in the text box and press Return. Photos adds a adds a new entry under Projects in the sidebar.**

   A scrolling thumbnail strip appears at the bottom of the Viewer, displaying the images in the album.

3. **Click and drag the thumbnails to appear in the desired order.**

After creating your slideshow, you can customize it with the controls that appear at the right side of the Photos window:

- **Themes:** Click the Theme Picker button to choose the theme for your slideshow. The theme you choose controls the animation, transition type, and screen layout that Photos uses — everything from the classic Ken Burns "moving photo" animation to a nifty Sliding Panels layout.

- **Music:** Click the Music button to display Apple's theme music as well as the tracks from your iTunes Library. To choose a standard theme, open the Source pop-up menu and choose Theme Songs; click that perfect song to select it. To choose songs from your iTunes Library, open the Source pop-up menu and click iTunes, then click the songs you want in the order you want them.

- **Duration:** Click the Duration Settings button, and you can choose to fit the display of images to the length of the music you've chosen, or you can set individual timings for the slide thumbnails you've selected. If you want your slideshow to loop after it finishes, click the Loop icon that appears at the lower-right corner of the Viewer to toggle it on (the icon turns blue).

- **Preview:** To display a quick preview of your slideshow without leaving the Photos window, click the Preview button at the lower-left corner of the Viewer; this is a handy way of determining whether the theme and music you've selected are really what you want. When you're ready to play your slideshow, click the Play button that appears under the Viewer, and Photos switches to full-screen mode. To create a movie file from your completed slideshow, click Export on the Photos toolbar.

Exploring iCloud Photo Library

Yes, Apple has decided that everything except the kitchen sink should be stored online in iCloud: first it was your iTunes music library, then your Pages, Numbers, and Keynote documents, and now it's your photographs and video clips! To turn the iCloud Photo Library feature on, click Photos ⇨ Preferences, click the iCloud tab, and click the iCloud Photo Library check box to enable it.

With iCloud Photo Library, your entire Photos Library is actually stored online, and everything in your Library is also accessible from other Macs and iOS devices like your iPad and iPhone. (Think "central storage house for everything visual that you can reach from anywhere with an Internet connection.") If you take a photo with your iPhone, for example, you'll see it appear automatically within Photos — and if you've recently cropped and edited a photo to perfection with Photos, you'll be able to retrieve that edited photo on any of your iOS devices or another Mac.

From the same iCloud pane in the Preferences dialog, you can choose to

» Download copies of the full-size images and full-resolution videos on your MacBook's local hard drive (allowing you to edit or view the originals even when you're not connected to the Internet).

» Store smaller size images and smaller-resolution videos on your laptop, but with the ability to retrieve the originals from the iCloud at any time (if you're connected to the Internet).

Naturally, if you're a photographer that needs constant, instant access to your original images, the first option is preferable (choose the Download Originals to this Mac option in the iCloud pane). However, if your MacBook's drive is nearly full and you'd like to conserve space, the second option is very attractive (choose the Optimize Mac Storage option in the iCloud pane).

All this goodness is handled automatically, but there's a catch: your *entire* Photos Library needs to fit within your free 5GB of iCloud storage, or you'll have to pay a monthly subscription to get additional elbow room! (Storage subscriptions range from $0.99 a month for 20GB of space to $19.99 a month for a whopping 1TB of space.) If you have only 3GB of photos, you may be able to use iCloud Photo Library without spending anything extra, but since my Photos Library is nearing 10GB in size I would probably need to subscribe to take full advantage of the feature. The choice is yours, dear reader: If you decide not to use the iCloud Photo Library, rest assured that Photo Stream will still work as it did in iPhoto.

Putting My Photo Stream and iCloud Photo Sharing to Work

Like iPhoto before it, Photos includes the *My Photo Stream* feature that automatically shares the photos you take among your Macs, your PCs, and iOS devices. Unlike iCloud Photo Library, however, your images and videos are stored on your Mac's local hard drive and *not* in your iCloud storage. (The images and videos are also always full-size and full-resolution.)

To turn on My Photo Stream, choose Photos⇨Preferences and click the iCloud toolbar button, then select the My Photo Stream check box. Once the feature is turned on, Photos should automatically import My Photo Stream photos taken with iOS devices and other Mac computers to your Photos Library.

Once the My Photo Stream feature is turned on, it's a cinch to share images and videos across your Apple computers and devices — simply copy the items into the My Photo Stream location in the sidebar. Photos automatically sends the selected images to all compatible devices over your Internet connection. (Note that all devices using My Photo Stream must be configured using the same Apple ID.)

You can also choose to share specific photos by using iCloud Photo Sharing, which can be turned on from the Photos Preferences dialog. (Yes, I agree, Apple *seriously* needs to work on choosing more discrete names for these features.) Choose Photos⇨Preferences, click the iCloud tab on the toolbar, and select the iCloud Photo Sharing check box.

To subscribe to a shared album invitation from another person, right-click on the desired shared album in the sidebar, and click Accept.

To create your own shared album, select the images you want to share, click the Share button on the toolbar and click the iCloud Photo Sharing item. Click the New Shared Album button and Photos prompts you for the album name and the email addresses of the folks you want to invite to your shared album. After you have entered each email address, click the Create button at the bottom of the sheet to start the ball rolling. You can also add or delete items from your shared album in the same way that you would with a regular Photos album.

IS THAT FACEBOOK, TWITTER, AND FLICKR I SPY?

Indeed it is! Photos includes direct connections to both your Facebook and Twitter social networking accounts (`www.facebook.com` and `www.twitter.com`) and your Flickr online gallery account (`www.flickr.com`). You can simply select one or more photos and send them automatically to any of these services. Click the Share button on the toolbar to select the type of account.

The first time you select photos in the Viewer (or an album) and choose either option, Photos prompts you for permission to set up your connection. (Of course, this requires you to enter your Facebook, Twitter, and Flickr account information — hence the confirmation request.) Click Set Up, and provide the data each site requires.

After you set up your accounts, simply select your photos or albums, click the Share toolbar button, and choose the menu item for the desired service. Apple, you absolutely *rock!*

Chapter **14**

Making Film History with iMovie

Remember those home movies you used to make in high school? They were entertaining and fun to create, and your friends were impressed. In fact, some kids were so downright inspired that you're not surprised when you discover at your high school reunion that they turned out to be graphic artists, or got involved in video or TV production.

iMovie, part of Apple's digital lifestyle suite, makes moviemaking as easy as those homemade movies. Apple simplifies all the technical stuff, such as importing video and adding audio, leaving you free to concentrate on your creative ideas. In fact, you won't find techy terms such as *codecs* and *keyframes* in this chapter. I guarantee you'll understand what's going on at all times. (How often do you get a promise like that with video-editing software?)

With iMovie, digital video from your smartphone or your camcorder, and the other applications that Apple provides, you can soon produce and share professional-looking movies, with some of the same creative transitions and titles used by Those Hollywood Types every single day. All on your MacBook, all by yourself.

If you turn out to be a world-famous Hollywood-Type Director in a decade or so, don't forget the little people — like computer book authors — along the way!

Shaking Hands with the iMovie Window

If you've ever tried using a professional-level video-editing application, you probably felt as though you were suddenly dropped into the cockpit of a jumbo jet. In iMovie, though, all the controls you need are easy to use and logically placed.

To launch iMovie, click the iMovie icon on the Dock or within Launchpad. (It looks like a star on the Hollywood Walk of Fame.) You can also click the Applications folder in any Finder window Sidebar and then double-click the iMovie icon.

To follow the examples I show you here, take these strenuous steps and create a new movie project:

1. **Choose File ➪ New Movie (or press ⌘+N).**

    Alternatively, you can click the Create New thumbnail and choose the Movie entry from the pop-up menu. No matter how you get there, iMovie displays the window shown in Figure 14-1.

    TIP   You can also create movie *trailers* (short previews or teasers) within iMovie, as I demonstrate later in this chapter. Generally, however, you should create your trailer project *after* your movie is completed (unless, of course, you're specifically creating just a trailer). Why? For the same reason that studios create trailers after the filming is finished: After you complete your movie, all the clips will be imported already, and you'll have a better idea of what you want to include while "teasing" your audience!

2. **Press ⌘+6 to display the Theme Chooser.**

3. **Click a Theme thumbnail to select a theme to apply to your finished movie.**

    TIP   To preview the appearance of a theme, hover your cursor over the thumbnail and click the Play button that appears.

    iMovie automatically adds the transitions and titles that correspond to that theme.

    Normally, this is what you want to do. However, you can add transitions and titles manually, as I show you later in this chapter. So if you decide not to use a theme out of the gate, you don't have to open the Theme Chooser at all.

4. **Click the Change button.**

    iMovie adds the new project to the list in the sidebar, and you're on your way! Check out Figure 14-2: This is the whole enchilada, in one window.
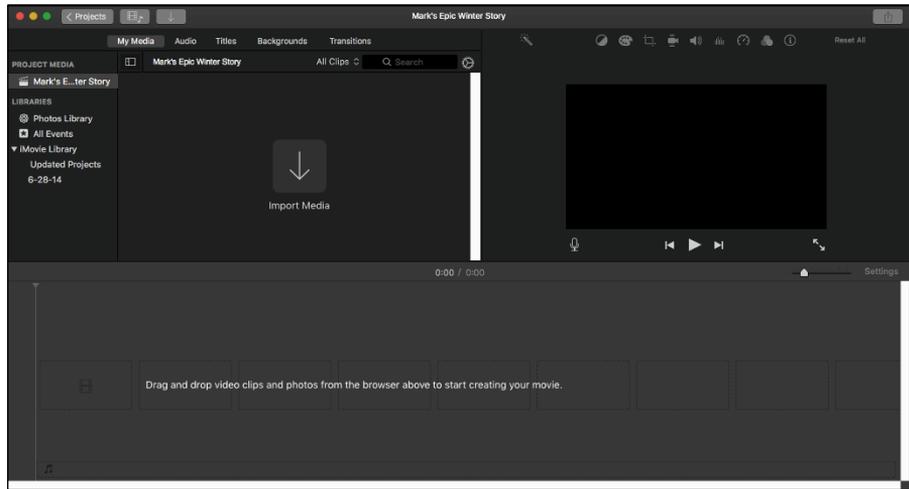
FIGURE 14-1:
Creating a new movie project within iMovie.

Import   Event/Project Library Pane

Content Library   Viewer   Toolbar
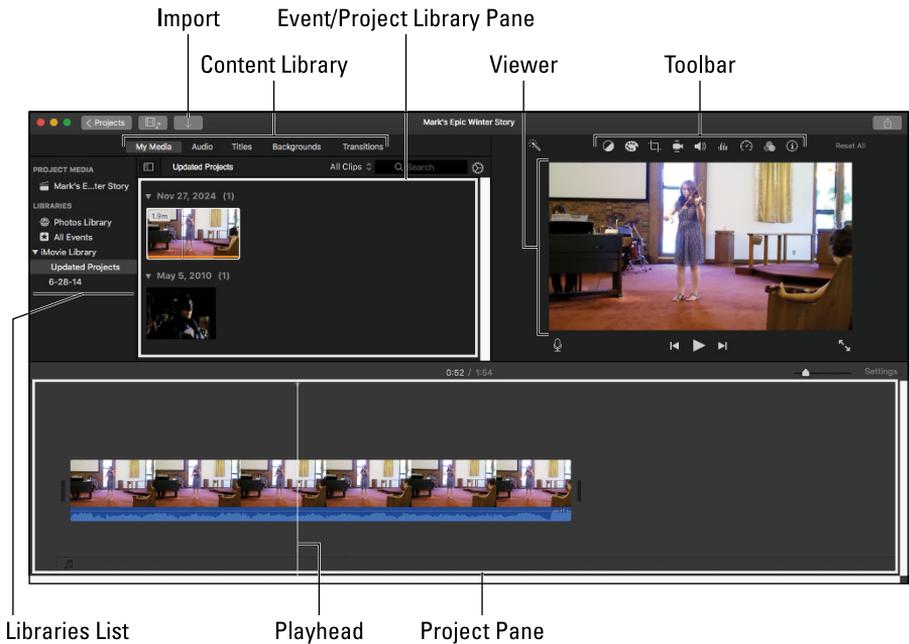
FIGURE 14-2:
iMovie is a lean, mean, video-producing machine.

Libraries List   Playhead   Project Pane

You'll use these controls and displays most often:

» **Viewer:** Think of this as being just like your TV or computer monitor. Your video clips, still images, and finished movie play here. You also crop and rotate your video within the Viewer.

>> **Content Library:** This row of buttons allows you to add photos, video clips, audio and effects such as transitions, titles, music, and sounds.

>> **Libraries List:** This sidebar list allows you to display your photos from your Photos library. (You can also display images from your Aperture library, if you used this legacy application.) Additionally, the Libraries list displays all the video clips you can add to your project from events you've imported. The items in the list change, depending on the type of content you've chosen from the Content Library. You can also select an existing iMovie project from the iMovie Library. To hide the Libraries list and make more room for the media pane, click the Hide button that appears at the top-right corner of the Libraries list. (To display the Libraries list again, click the same button, which now reads Show.)

> *TIP*

You can hide and show both the Content Library and the Libraries list with one click on the Show or Hide the Media Library button, which appears at the top left of the iMovie window. By hiding both, you maximize the space available for your Viewer.

>> **Event/Project Library pane:** If you select an event from the All Events entry in the Libraries list, iMovie displays a thumbnail of that event's content in the *Event* pane. (Move your cursor over the Event thumbnail to see previews of the clips.) If you decide you want to include a clip, double-click the Event to display the clips and add the desired clip to your project. This pane also acts as the *Project Library* pane, where you can display your existing iMovie projects; click the Projects entry in the Libraries list to display your projects as thumbnails. To load a project, just double-click the thumbnail and it appears in the Project pane.

> *REMEMBER*

The Event/Project Library pane displays different content, depending on the entry you select in the Libraries list.

>> **Project pane:** This pane is where most of your work gets done within iMovie, displaying the elements you added to that specific project (such as video clips, still photos, and audio clips). Your movie appears as a linear strip of thumbnails, making it easy to select, insert, and delete elements.

>> **Playhead:** The white vertical line you see in the Project pane (or the red vertical line you see in the Event/Project Library pane) is the *playhead,* which indicates the current editing point while you're browsing your clips or creating your movie. When you're playing your movie, the playhead moves to follow your progress through the movie.

>> **Toolbar:** This strip of buttons allows you to enhance and adjust photos and video clips.

Those are the major highlights of the iMovie window. A director's chair and megaphone are optional, of course, but they do add to the mood.

A Bird's-Eye View of Moviemaking

I don't want to box in your creative skills. After all, you can attack the moviemaking process from a number of angles. (Pun, unfortunately, intended.) However, I've found that my movies turn out best when I follow a linear process. So before I dive into specifics, allow me to give you an overview of moviemaking with iMovie.

Here's my take on the process, reduced to seven basic steps:

1. Import your video clips from your camcorder, your MacBook's FaceTime HD camera, your Photos Library, or your hard drive.

2. Drag your new selection of clips from the Event pane to the Project pane, and arrange them in the desired order.

3. Import or record audio clips (from iTunes, GarageBand, or external sources, such as audio CDs or audio files you've recorded yourself), and add them to your movie.

4. Import your photos (directly from Photos or Apple's legacy Aperture application, or your hard drive), and place them where needed in your movie.

5. Add professional niceties, such as voiceovers, transitions, effects, and text, to the project.

6. Preview your film, and edit it further if necessary.

7. Share your finished film with others through the web, email, your Apple TV, or an iOS device (an iPhone, iPad, or iPod Touch), or within iMovie Theater. If you have a MacBook with an optical drive — or an external USB optical drive — you can also use a DVD recording application to create a DVD movie disc using your exported movie. I use (and recommend) Toast 16 Titanium from Roxio, at `www.roxio.com`.

TIP Wondering how you save your project in iMovie — especially when the File menu has no Save item? iMovie automatically saves your project as you work, leaving you free to concentrate on your moviemaking art.

Importing the Building Blocks

Sure, you need video clips to create a movie of your own, but don't panic if you have a small supply. You can certainly turn to Apple's other digital media applications for additional raw material. (See, I told you that whole "integration" thing would come in handy.)

Along with video clips you import from your DV camcorder, your MacBook's trusty built-in FaceTime HD camera (or an external webcam), and your hard drive, you can call on Photos (as well as the legacy applications iPhoto and Aperture) for the still images you'll need for your credits. On the audio side, you can call on iTunes and GarageBand for background audio and effects. In this section, I show you how.

Pulling in video clips

Your MacBook comes equipped with extras that come in handy for video editing — a large internal drive and ports to connect stuff. Depending on the MacBook model you're using and your external devices, you may use a USB, Thunderbolt or (on older MacBooks) a FireWire connection. Today's mass-storage camcorders, tablets, and smartphones use a USB connection to transfer clips. I cover both older tape-based camcorders and USB/Thunderbolt mass-storage devices in this section.

Oh, and don't forget that your MacBook has a FaceTime HD camera on board, ready to record clips. Heck, you're a self-contained movie studio!

Here's the drill if your clips are on your FireWire mini-DV camcorder or mass-storage USB/Thunderbolt video device:

1. **Plug the proper cable into your MacBook.**

2. **Set the camcorder to VTR (or VCR) mode.**

   Some video devices call this *Play mode.*

3. **Click the Import button at the upper left of the iMovie window (refer to Figure 14-2).**

   iMovie opens the Import window.

4. **Open the Import To pop-up menu at the top of the Import window, and choose the destination for your new video clips.**

   To create a new event for the imported clips, choose New Event. Alternatively, you can import into an existing Event or iMovie project. If your family reunion spanned more than one day, you can create a new Event for each day. (How do they think up these things?)

5. **Click the desired video source in the Source list at the left side of the Import window.**

   If you're using a tape-based camcorder, playback controls appear under the Camera Import window, mirroring the controls on your camcorder. This allows you to control the unit from iMovie. *Keen!* If you're using a mass-storage camcorder connected by USB, you instead get an Import All button beneath the thumbnails of available clips. (Note that this button changes to Import Selected if you select one or more of the clips.)

If you choose your FaceTime HD camera from the list, you see a real-time preview and a big red Record button. Click the Record button to start and stop recording. (You can skip the rest of the steps in this section, which deal only with USB/Thunderbolt and FireWire camcorders.)

6. **To import selected clips from your FireWire DV camcorder, advance the video to a couple of seconds before the point where you want to start your capture; then click Import.**

7. **Click OK, and admire your handiwork.**

   iMovie begins transferring the footage to your drive and automatically adds the imported clips to the specified destination.

> **TIP** If your clips are already on your drive, rest assured that iMovie can import them, including those in high–definition video (HDV) format. iMovie also recognizes a number of other video formats, as shown in Table 14-1.

TABLE 14-1   **Video Formats Supported by iMovie**

File Type	Description
DV	Standard 4:3 digital video
DV widescreen	Widescreen 16:9 digital video
MOV	QuickTime movies
HDV and AVCHD	High-definition (popularly called *widescreen*) digital video, in 720p and 1080i
MPEG-2	Digital video format used for DVD movies
MPEG-4	A popular format for streaming Internet and wireless digital video, as well as handheld iOS devices such as the iPad, iPhone, and iPod Touch

To import a movie file, follow this bouncing ball:

1. **Click the Import button on the toolbar.**

2. **Click the drive that stores your clips in the window's sidebar, and navigate to their location.**

3. **Select the desired clips in the list.**

4. **From the Import To pop-up menu at the top of the Import window, choose the destination within iMovie.**

5. **Click Import.**

Alternatively, you can also drag a video clip from a Finder window and drop it in the Project pane.

Making use of still images

Still images come in handy as impressive–looking titles or as ending credits to your movie. (To be truly professional, make sure you list a *gaffer* and a *best boy.* I have no idea what they do, but they're always listed.) You also can use still images to introduce scenes, close scenes, and separate clips. For example, I use stills when delineating the days of a vacation within a movie or different Christmas celebrations over time.

Here are two methods of adding stills to your movie:

» **Adding images and video clips from Photos, iPhoto, or Aperture:** Click the Photos, iPhoto, or Aperture Library entries in the Libraries list to access your images, right from iMovie (as shown in Figure 14-3). When you find the image you want to add, just drag it to the right spot in the Project pane.

» **Importing images from your hard drive:** If you're a member of the International Drag-and-Drop Society, you can drag TIFF, JPEG, GIF, PICT, PNG, and PSD images directly from a Finder window and drop them into the Project pane.
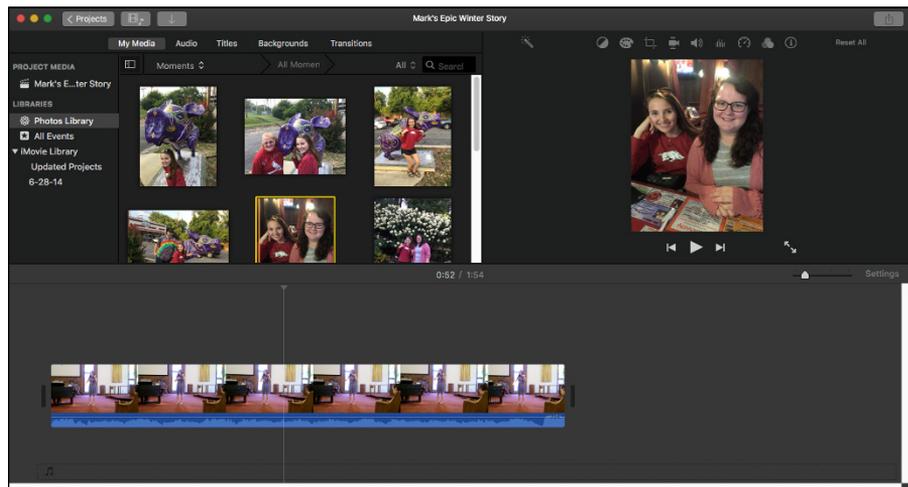
FIGURE 14-3: Pulling still images from Photos is child's play.

Importing and adding audio from all sorts of places

You can pull in everything from Wagner to Weezer as both background music and sound effects for your movie. In this section, I focus on how to get those notes into iMovie and then how to add them to your movie by dragging them to the Project pane.

You can add audio from a number of sources:

>> **Adding songs from iTunes and GarageBand:** Click the Audio media button in the Content Library and click the iTunes entry in the sidebar to display the contents of your iTunes Library. Click the desired song in the scrolling list (which displays all your music). To display a playlist or Smart Playlist, click the Music dropdown list box above the waveform display. Figure 14-4 illustrates a playlist of Frank Sinatra I selected for this project. You can add a track to your movie by dragging any song entry from the list to the desired spot in the Project pane.
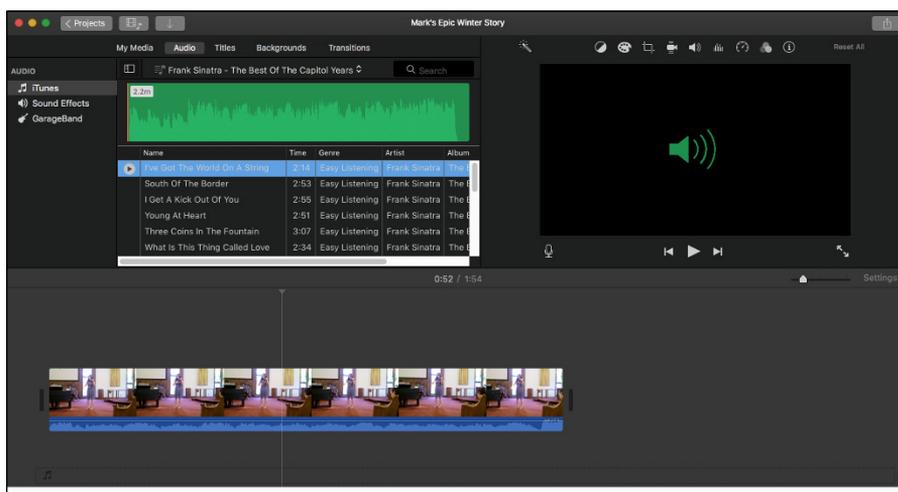
You're not limited to iTunes for ear candy, however. If you exported any original music you've composed in GarageBand to your iTunes Library, you can use those songs in your movie. Click the GarageBand button in the sidebar to view your GarageBand music, and then drag and drop to your heart's content.

>> **Adding sound effects:** If you need the sound of a horse galloping for your Rocky Mountains vacation clips, click the Audio button in the Content Library, then click Sound Effects in the sidebar. iMovie includes a number of top-shelf audio effects you can use in the sound effects audio track in the Project pane. This way, you can add sound effects even when you've already added a background song. Again, to add a sound effect, drag it to the perfect spot in the Project pane.

TIP

If you have several gigabytes of music in your iTunes Library, it might be more of a challenge to locate Janis Joplin's rendition of "Me and Bobby McGee," especially if she's included in a compilation. Let your supercomputer do the digging for you! Click in the Search box above the track list (which carries the familiar magnifying glass icon), and begin typing a song name. iMovie narrows down the song titles displayed to those that match the characters you type. To reset the search box and display all your songs in the Library or selected playlist, click the X icon that appears to the right of the box.

» **Recording directly from a microphone:** Yep, if you're thinking voiceover narration, you've hit the nail on the head. Check out the following sidebar for the scoop.

NARRATION THE EASY WAY

Ready to create that award-winning nature documentary? You can add voiceover narration to your iMovie project that would make Jacques Cousteau proud. In fact, you can record your voice while you watch your movie playing, allowing perfect synchronization with the action! To add narration, follow these steps:

1. **Press V to display the Voiceover controls under the Viewer.**

2. **Click the Voiceover Options button, and select the input device.**

   Today's MacBook models sport a decent internal microphone, but you can always add a USB microphone to your system.

3. **Drag the input volume slider to a comfortable level.**

4. **To mute the audio from your movie (which may make it easier to concentrate on your narration), select the Mute Project check box.**

5. **Click in the desired spot within your movie in the Project pane where the narration should begin.**

6. **Click the Start Recording button.**

   iMovie prompts you with three tones before the playhead reaches the selected spot in your movie, so make sure you begin speaking after the third tone.

7. **Watch the video while you narrate so you can coordinate your narration track with the action.**

8. **Click the red Stop Recording button to stop recording.**

   iMovie adds an icon to the Project pane under the video with the voiceover.

9. **Click the Close button in the Voiceover controls.**

Building the Cinematic Basics

It's time to dive in and add the building blocks to create your movie. Along with the video clips, audio tracks, and still images you've imported, you can add Hollywood-quality transitions, optical effects, and animated text titles. In this section, I demonstrate how to elevate your collection of video clips into a real-life, honest-to-goodness movie.

Adding clips to your movie

You can add clips to your movie via the Project pane and Event/Project Library pane (refer to Figure 14-2). The Dynamic Duo works like this:

» **Project pane:** This displays the media you've added to your project so far, allowing you to rearrange the clips, titles, transitions, and still images in your movie.

» **Event/Project Library pane:** This pane acts as the source repository for all your clips, displaying them arranged by Event (the date they were shot or imported) or by Project (media you've added to existing iMovie projects).

Typically, you add a clip to your movie from an Event. Follow these steps:

1. **Click the My Media button in the Content Library.**

2. **Click the All Events entry in the Libraries list.**

3. **Move the cursor across clips in the Event pane to watch a preview of the video.**

4. **When you've decided what to add to your project, either add the entire clip or a selection:**

   - *To select an entire clip:* Right-click the clip's thumbnail and choose Select Entire Clip from the menu that appears.

   - *To select a portion of a clip:* Click and hold, and then drag the cursor across the thumbnail. A yellow frame appears around your selection. To change the length of the selected video, hover the cursor over either end of the clip and drag the handle that appears on either side. If you make a mistake while selecting video, just click any empty space within the Event pane to remove the selection frame and try again.

5. **Drag the selection from the Event pane to the spot where it belongs in the Project pane.**

   Alternatively, you can press the E key.

Preview your work — and do it often.™

iMovie includes a Play Full Screen button, which appears at the right corner of the Viewer. (Alternatively, press ⌘+Shift+F or choose View➪ Play Full Screen to watch the selection.) Press the spacebar to pause, and press Esc to return to iMovie. Of course, you can also move the cursor across the filmstrip in the Project pane to quickly browse your project.

To play a selection from the beginning, press \ (the backslash). If you've ever watched a director at work on a movie set, you may have noticed that he or she constantly watches a monitor to see what things will look like for the audience. You have the same option in iMovie!

Marking clips

While you're watching video in the Event/Project Library pane, you may decide that a certain clip has a favorite scene or that another clip has material you don't want, such as Uncle Ed's shadow puppets. (Shudder.) iMovie features *Favorite* and *Rejected* frames, allowing you to view and use your best camera work (and ignore the worst stuff).

To mark a great video clip as a Favorite, select and right-click a range of frames or the entire clip in the Event/Project Library pane, and then select the Favorite menu item (or press F). To mark clips that are subpar, select the offending clip in the Event/Project Library pane and press Delete (or right-click and choose Reject). Clips marked as Favorites have a green line on top of the clip, and clips marked as Rejected have a red line.

You can use the Search Filter option to specify which types of marked clips are shown: Click the pop-up menu next to the Search field at the top of the Event/Project Library pane. Your options include displaying all clips, displaying just Favorite clips, hiding Rejected clips, or displaying just Rejected clips.

If you decide that a Rejected clip isn't so bad after all or that a Favorite really isn't your best work, no problem. Unmark any selected Favorite or Rejected scene in the Event/Project Library pane by choosing Mark➪ Unrate (or just press U).

Removing clips from your movie

Don't like a clip? Bah. To banish a clip from your movie, follow these steps:

1. **Click the offending clip in the Project pane to select it.**

   Alternatively, you can select a portion of a clip by holding down the mouse button (or maintaining pressure on the trackpad) and dragging the selection box that appears.

2. **Press Delete.**

   This deletes the clip from the Project pane, but the clip is still available if you choose All Events or the iMovie Library from the Libraries list.

If you remove the wrong clip, don't panic. Instead, use iMovie's Undo feature (press ⌘+Z) to restore it.

Reordering clips in your movie

If Day One of your vacation appears after Day Two, you can easily reorder your clips and stills by dragging them to the proper space in the Project pane. When you take your finger off the mouse (or trackpad), iMovie automatically moves aside the rest of your movie with a minimum of fuss and bother.

Editing clips in iMovie

If a clip has extra seconds of footage at the beginning or end (as it should, to ensure you get all the action), you don't want that superfluous stuff in your masterpiece. Our favorite video editor gives you the following basic functions:

» **Crop:** Removes unwanted material from a video clip or still image

» **Rotate:** Rotates a clip or image on its center axis

» **Trim:** Trims frames from a video clip

Before you can edit, however, you have to select a section of a clip:

1. **Click a clip or image in either the Project pane (where changes you make are specific to this project) or the Event pane (where edits you make are reflected in any project using that footage).**

   iMovie displays the clip or image in the monitor.

2. **To select the entire clip or image, simply click it.**

3. **Drag the cursor across the thumbnail to select the section of the media you want to edit.**

Some editing functions, such as Crop and Rotate, automatically apply to the entire clip.

The selected region is surrounded by a yellow frame. You're ready to edit that selected part of the clip.

4. **When you move the cursor to the beginning or end of the selection, handles appear. You can make fine changes to the selected section by dragging the handles.**

- **To crop:** Click the Crop button in the toolbar at the top of the Viewer. Drag the edges of the frame using the handles to select the section you want to keep. To preview your selection, click the Play button that appears when you move the cursor into the Viewer pane. When you're ready, click the Done button (which bears a check mark), and everything but the selected region is removed.

- **To rotate:** Click the Crop button. Now you can click one of the two rotation buttons that appear at the right side of the Viewer (both of which carry a box and curved arrow icon). Each click rotates the media 90 degrees in the indicated direction. Click the Done button (with the check mark) when the clip or image is properly oriented.

- **To trim:** Right-click the selection, and choose Trim to Playhead from the context menu. iMovie removes the frames up to the playhead position from the selected video.

Transitions for the masses

Many iMovie owners approach transitions as *visual bookends:* They merely act as placeholders that appear between video clips. Nothing could be further from the truth, though, because judicious use of transitions can make or break a scene. For example, which would you prefer after a wedding ceremony — an abrupt, jarring cut to the reception, or a gradual fadeout to the reception?

Because today's audiences are sensitive to transitions between scenes, you should try not to overuse the same transition. Pick two or three that match the mood of your film and the scenes between which you're transitioning. Also carefully weigh the visual impact of a transition. You might even decide that having no transition is the most effective (directors call this deliberate lack of a transition a *jump cut*).

iMovie includes a surprising array of transitions, including old favorites (such as Fade In and Dissolve) and some nifty stuff that you might not be familiar with (such as Cube and Page Curl). To display your transitions collection (see Figure 14-5), click the Transitions entry in the Content Library.

To see what a particular transition looks like, click the thumbnail to select it and move the cursor over the thumbnail to display the transition in the Viewer.

Adding a transition couldn't be easier: Drag the transition from the thumbnail list, and drop it between clips or between a clip and a still image in the Project pane. In iMovie, transitions are applied in real time.

Even Gone with the Wind had titles

The next stop on the iMovie Hollywood Features Tour is the Titles list, shown in Figure 14-6. You find it by clicking the Titles entry in the Content Library. You can add a title with a still image, but iMovie also includes everything you need to add basic animated text to your movie.

Most of the controls you can adjust are the same for each animation style. You can change the font, the size of the text, and the color of the text. To add a title manually, follow these steps:

1. **Select a Title animation thumbnail from the Titles list, and drag it to the desired spot in the Project pane.**

    Note that the title is previewed in the Viewer as well as in the Project pane.

2. **Click the title strip in the Project pane to select it.**

3. **Click the Title Settings button (which bears a capital T symbol) in the toolbar to make any changes to the fonts or text attributes.**

4. **Click in the text box within the Viewer to delete the default text and type your own titles.**
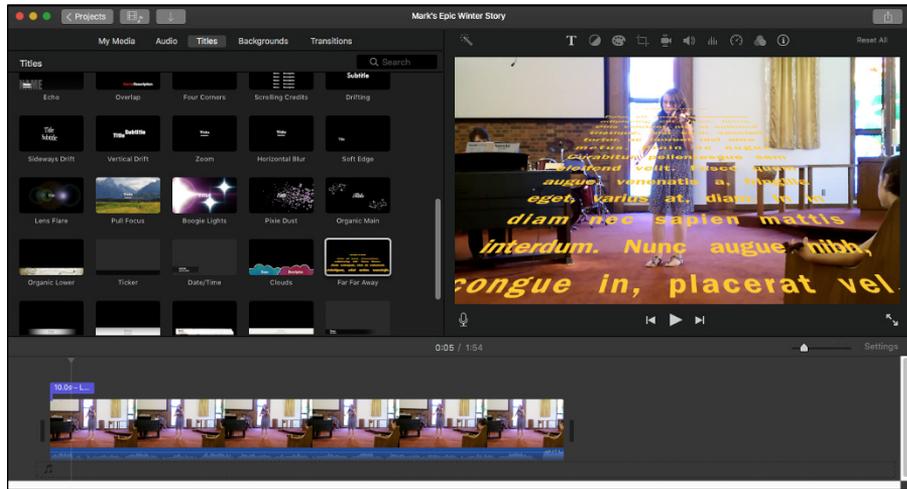
FIGURE 14-6:
Add titles for your next silent film.

5. **Click the Done (checkmark) button to save your changes.**

6. **Click the Play button in the Viewer to preview your title.**

   iMovie displays a preview of the effect in the Viewer with the settings you choose.

Adding maps and backgrounds

iMovie includes easy-to-use animated maps — think Indiana Jones traveling by airplane from place to place — and static backgrounds that can be used with your titles. To display them, click the Backgrounds entry in the Content Library.

To use an animated map, follow these steps:

1. **Drag one of the globe or map thumbnails to the Project pane.**

2. **After the globe or map is created, click it in the Project pane to select it.**

3. **Click the Map Settings button (which bears a globe icon) and then click the Start Location button (and, optionally, the End Location button) to enter the start and stop points for the animation.**

   Type a city or place name to see your choices. (Heck, you can even type an airport code or decimal coordinates to specify the spot.)

4. **Click Done, and watch as iMovie animates your location (or your trip) in seconds!**

To add a static background from the browser, drag it to the desired spot within the Project pane.

Creating an Honest-to-Goodness Movie Trailer

Yes, friends, you read that correctly: iMovie includes a Trailer feature that can turn your film clips into a Hollywood–class preview, complete with genre transitions and background music.

To create a trailer project, follow these steps:

1. **Click File ⇨ New Trailer (or click the Create New button and choose Trailer from the pop-up menu).**

2. **Click a Movie Trailer thumbnail to select it.**

   If you hover the cursor over the thumbnail and click the Play icon that appears, iMovie displays a nifty preview of the trailer style you selected. You can click different thumbnails to preview their look before you decide. Naturally, you want to choose a trailer style that most closely matches the mood you want to project with your movie.

   Note that each trailer has a suggested number of cast members. This number reflects the number of people who will appear in the clip placeholders during the editing process. (More on this in a moment.)

3. **Click Create.**

iMovie replaces the Project pane with the Trailer pane, as shown in Figure 14-7. You can fine-tune your trailer with the Outline, Storyboard, and Shot List tabs:

- **Outline:** On the Outline tab, you can edit the titles used in the trailer, as well as pop-up lists of information, such as the names of the star(s) and the logo style you want for your "studio" at the beginning of the trailer. To change a text field, click in it and type the new text. You see the changes you make in the Trailer display appear in the Viewer in real time.

- **Storyboard:** After you complete your edits to the titles, click the Storyboard tab. Now you can edit the text for each transition: Simply click the text to display the edit box, and type. You can also drag clips from the Event pane (or from a Finder window) to fill the storyboard's placeholders for video clips. To delete a clip from the storyboard, click it to select it, and press Delete.

To preserve the look and feel of the trailer storyboard, try to match your clips with the description and suggested activity indicated by the place-holder. (In other words, don't stick a wide-angle video clip of the family dog cavorting in the yard into a placeholder marked "Closeup." You get the idea.)

The Storyboard tab may not look like an editing timeline, but you can move the cursor anywhere within the storyboard to preview your trailer. The playhead indicator appears wherever the cursor appears, allowing you to watch the clip or transition it's resting on. You'll soon be sweeping the cursor to the left or right to move through each section of your trailer.

Shot List: For an overall listing of each clip required for the full trailer, click the Shot List tab. On this tab, clips are organized by type. For example, all the action clips appear in one section, and all the landscape and close-up clips are grouped as well. If necessary, you can also add, delete, or swap video clips from the Shot List.

To preview your trailer in its entirety, click the Play button at the bottom of the Viewer (or the Play Full–Screen button at the far right of the Viewer controls). Naturally, any storyboard placeholder you haven't filled with a clip displays just the placeholder.

Note that iMovie displays your trailer when you click the Updated Projects entry in the Libraries list, and it now appears in the Event/Project Library pane.

I bet all those hard–working Hollywood video editors are fuming at how easy it is to create a trailer in iMovie!
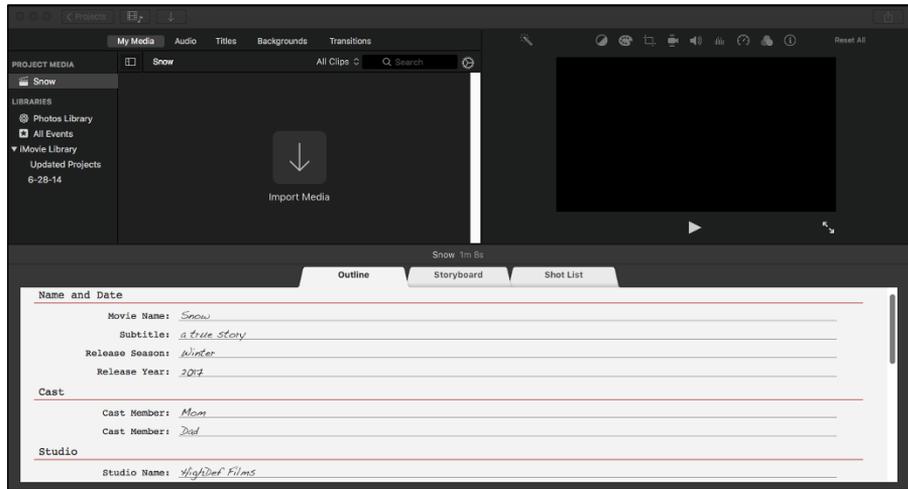
Sharing Your Finished Classic with Others

Your movie is complete, and iMovie has saved it automatically to your drive. Now you're wondering where to go from here. Select your movie in the Event/Project Library pane, and click Share at the top right corner of the window. iMovie can unleash your movie on your unsuspecting family and friends (and even the entire world) in a number of ways:

>> **iTunes:** Send your movie to your iTunes Library as a movie.

>> **Theater:** Add your movie to the iMovie Theater on your MacBook.

>> **YouTube/Facebook/Vimeo:** Why, certainly you can send your iMovie directly to any of these websites! Can it get any more convenient than that? (I think not.)

>> **File:** Create a copy of your movie on your hard drive in one of four resolutions (from Standard Definition to High Definition).

>> **Email:** Send your movie as an email message attachment.

When you choose a sharing option, iMovie displays the video quality for the option and makes automatic changes to the movie attributes. (For example, choosing Email reduces the finished movie as far as possible in file size.)

If you're worried about permanently reducing the quality of your project by sharing it in a smaller size, fear not! When you choose a sharing option to export your movie, your original project remains on your hard drive, unchanged, so you can share a better-quality version at any time in the future.

IN THIS CHAPTER

» **Navigating the GarageBand window**

» **Adding tracks and loops to your song**

» **Repeating loops and extending your song**

» **Building arrangements**

» **Adding effects to instruments**

» **Exporting your work across the globe**

» **Burning your song to an audio CD**

Chapter **15**

Recording Your Hits with GarageBand

D
o you dream of making music? I've always wanted to join a band, but I never devoted the time it takes to learn the guitar. You know the drill: Rock stars struggle for years to master an instrument, practice for untold hours and memorize chords. Wait a second, I almost forgot. You don't need to do any of that now!

Apple's GarageBand lets a musical wannabe (like yours truly) make music *anywhere* with a MacBook — complete with a driving bass line, funky horns, and perfect drums that never miss a beat. In fact, the thousands of prerecorded loops on tap in this awesome application allow you to design your music to match that melody running through your head, from techno to jazz to alternative rock.

This chapter explains everything you need to know to create your first song. I also show you how to import your hit recording into iTunes so that you can listen to it on your iPhone with a big silly grin on your face (as I do) or add it to your next iMovie project or Photos slideshow.

Don't be too smug when you think of all that practicing and hard work you missed out on. What a shame!

Shaking Hands with Your Band

As you can see in Figure 15-1, the GarageBand window isn't complex, and that's good design. In this section, I list the most important controls so you know your Play button from your Loop Browser button.

Forward · Rewind · Playhead · New Track Button · Play · Time/Tempo · Media Browser · View/Hide Loop Browser · Volume Slider · Track List · Timeline

Your music-making machine includes

» **Track list:** In GarageBand, a *track* is a discrete instrument you set up to play one part of your song. For example, a classical piece for string quartet would have four tracks — one each for violin, viola, cello, and bass. The Track list contains all the tracks in your song, arranged so you can easily see and modify them, like the rows in a spreadsheet. A track begins in the list, stretching out to the right all the way to the end of the song. In the upper left of Figure 15-1, I already have one track defined — a Classic Electric Piano.

>> **Timeline:** This scrolling area holds the loops (see the next bullet) you add, compose, or record, allowing you to move and edit them easily. When a song plays, the Timeline scrolls to give you a visual look at your music. (Bear with me; you'll understand that cryptic statement in a page or two.)

>> **Loop:** *Loops* — prerecorded clips of an instrument being played in a specific style and tempo — are the building blocks of your song. Most are five seconds in length, and others are even shorter. You can drag loops from the Loop Browser to a track and literally build a bass line or guitar solo. Loops can also be repeated within a track, which I discuss further in a page or two. (Note that loops have not been added yet in Figure 15-1 – you'll see them later.)

>> **Playhead:** This vertical line is a moving indicator that shows you the current position in your song while it scrolls by in the Timeline. You can drag the playhead to a new location at any time. The playhead also acts like the insertion cursor in a word processing application: If you insert a section of a song or a loop from the Clipboard, it appears at the playhead's current location. (More on copying and inserting loops later, so don't panic.)

>> **New Track button:** Click this button to add a new track to your song.

>> **View/Hide Loop Browser button:** Click the button with the loop icon to display the Loop Browser at the right side of the window (as shown in Figure 15-1); click it again to close it. You can see more of your tracks' contents at one time without scrolling by closing the Loop Browser.

>> **View/Hide Media Browser button:** Click this button (which bears icons of a filmstrip, camera, and musical note) to display the Media Browser at the right side of the window; click it again to close it (and see more of your tracks). Use the Media Browser to add media (in this case, digital song files or movies) to your GarageBand project for use as ringtones.

>> **Go to Beginning button:** Clicking this button returns the playhead to the beginning of the Timeline. (Note that this button appears only when the playhead isn't already at the beginning of the Timeline — hence, it doesn't appear in Figure 15-1.)

>> **Rewind/Forward One Measure buttons:** To move quickly through your song by jumping to the previous or next measure, click the corresponding button.

>> **Play button:** Hey, old friend! At last, a control you've probably used countless times before — and it works just like the same control within iTunes or on your audio CD player. Click Play, and GarageBand begins playing your entire song. Notice that the Play button turns green. To pause the music, click Play again; the button loses that sexy green sheen, and the playhead stops.

>> **Time/Tempo display:** This cool-looking LCD display shows you the current playhead position in seconds.

TIP

You can click the drop-down menu at the right of the display to switch between a beats and time display.

» **Volume slider:** Here's another familiar face. Just drag the slider to raise or lower the volume.

Of course, more controls are scattered around the GarageBand window, but these are the main controls used to compose a song — which is the next stop!

Composing Made Easy

In this section, I cover the basics of composition in GarageBand, working from the very beginning. Follow along with this running example:

1. **Click the GarageBand icon in the Dock; it looks like an electric guitar and an amplifier.**

2. **If GarageBand opens a window for a previous project, close it by clicking the Close button in each window.**

GarageBand displays the top-level New Project dialog, as shown in Figure 15-2.

3. **Click New Project from the list at the left.**

4. **Click the Empty Project icon, and click the Choose button.**

GarageBand displays the Track Type dialog.

5. **Click the Software Instrument icon.**

In this chapter, I focus on using software instrument tracks, which are the easiest for a non-musician to use (and don't require you to actually play any notes on an instrument).

6. **Click the Create button.**

You see the window shown in Figure 15-1. Now you're ready to add tracks.

Adding tracks

Although I'm not a musician, I am a music lover. I know that many classical composers approached a new work in the same way you approach a new song in GarageBand — by envisioning the instruments they wanted to hear. (I imagine Mozart and Beethoven would've been thrilled to use GarageBand, but I think they did a decent job with pen and paper.)

FIGURE 15-2:
Start creating
your new
song here.
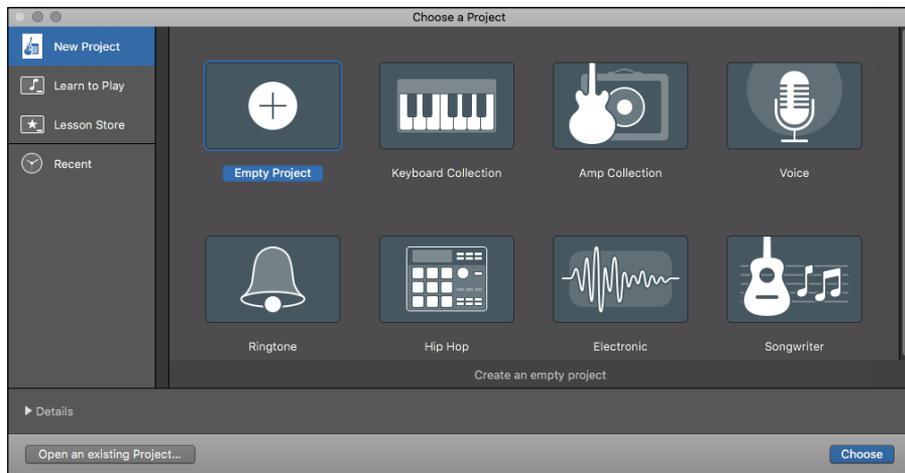
If you've followed along to this point, you've noticed these things:

» **A Musical Typing keyboard in your GarageBand window:** You can record the contents of a software instrument track by playing the Musical Typing keyboard layout. (As you might imagine, this isn't the best solution.) If you're a musician, the best method of recording your own notes is with a MIDI instrument, which I discuss later in the chapter. You can display the Musical Typing keyboard window at any time by pressing ⌘+K. If the keyboard window is onscreen and you don't need it, banish it by pressing ⌘+K or by clicking the Close button in the keyboard window.

» **The example song with only one empty track:** If you want to write the next classical masterpiece for Classic Electric Piano, that's fine. (I'm a big fan of this instrument, so I'll use this track later in the example.) Note that you can always delete a track completely, however. Click the offending track to select it, and choose Track ➪ Delete Track from the GarageBand menu bar.

You can use five kinds of tracks in GarageBand:

» **Software instrument tracks:** These tracks aren't audio recordings. Rather, they're mathematically precise algorithms that your MacBook *renders* (builds) to fit your needs. If you have a MIDI instrument connected to your laptop, you can create your own software instrument tracks. (More on MIDI instruments later in this chapter.)

» **Real instrument tracks:** These tracks are actual audio recordings, such as your voice or a physical instrument without a MIDI connection. (Think microphone.)

>> **Electric Guitar and Bass tracks:** GarageBand includes a real instrument track especially made for either an electric guitar or bass. This allows you to use a number of different amplifiers and *stompboxes* (those effect pedals that electric guitarists are always poking with their foot to change the sound of their instruments).

>> **Drummer track:** I call this feature "Ringo in a Box" — a drum track that's automatic, yet *very* configurable and easy to customize. You have presets galore, so you can quickly jump into different drum sets and playing styles.

>> **Movie tracks:** The video sound track appears if you're *scoring* (adding music to) an iMovie movie — you also get a cool companion video track that shows the clips in your movie. (More on this in the "Look, I'm John Williams!" sidebar later in this chapter.)

It's time to add a software instrument track of your very own:

1. **Press ⌘+Option+N (or click the New Track button).**

   GarageBand displays the New Track sheet.

2. **Click the Software Instrument icon and then click Create.**

3. **Click the new track (the second in the list) to select it.**

4. **From the Library pane on the far left, choose the general instrument category you want.**

   I chose Guitar, which prompts a second list of choices to the right, still in the Library pane.

5. **From the second list, choose your specific style of weapon, such as Classic Clean for a simple playing style.**

   Figure 15-3 shows the new track that ends up in your list when you follow these steps. Now you're ready to rock with both the original electric piano and an electric guitar! If you like, you can hide the Library by clicking the Show/Hide Library button at the upper-left corner of the window.

TIP GarageBand includes a Songwriter project (also available from the top-level New Project dialog; refer to Figure 15-2). When you choose a Songwriter project, GarageBand presents you with a full set of instrument tracks, plus a real instrument track for your voice. You're instantly ready to start adding loops and recording your own voice!
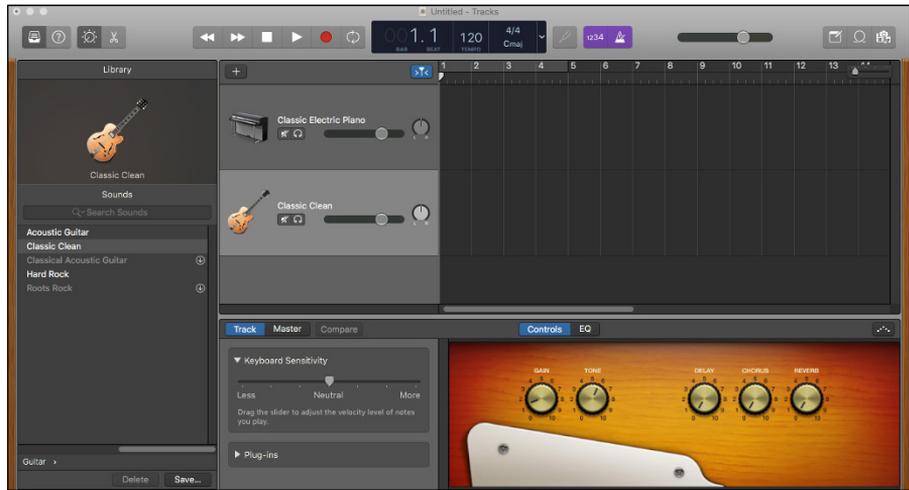
Choosing loops

After you have a new, empty track, you can add loops to build your song from the
Loop Browser. Apple gives you thousands of loops to choose from, in a mind-
boggling variety. Click the Loop Browser button (which bears a loop symbol,
somewhat like a roller coaster; refer to Figure 15-1) to display your collection, as
shown in Figure 15-4.
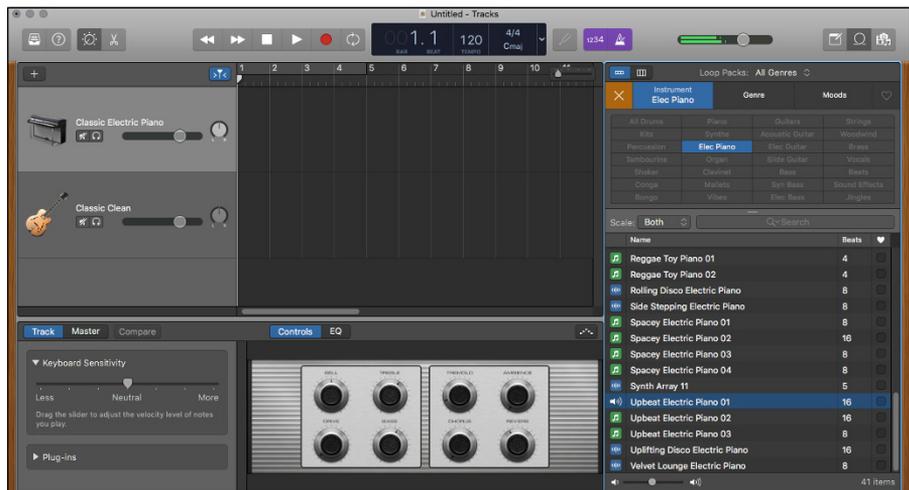
Looking for just the right loop

The running project already includes two tracks but no loops yet. (Refer to Figure 15-3.) Just for grins, add a Classic Electric Piano loop. Follow these steps to search through the loop library for just the right rhythm:

1. **In the Loop Browser, click the Instrument tab and click the button that corresponds to the instrument you're using.**

   I chose the Elec Piano button.

   A list of different beats appears in the pane at the bottom of the Loop Browser window. (Refer to Figure 15-4.)

2. **Click one of the loops with a green musical-note icon.**

   Go ahead; this is where things get fun! GarageBand begins playing the loop nonstop, allowing you to get a feel for how that particular loop sounds.

   REMEMBER

   The examples I chose for this chapter are software instruments, which are identified by a green musical-note icon. (If you have a MIDI instrument that you play, have at it with real instrument loops.)

3. **Click another entry in the list, and the application switches to that loop.**

   Now you're beginning to understand why GarageBand is so cool for both musicians and the note-impaired. It's like having your own band, with members who never get tired, never miss a beat, and play whatever you want while you're composing. (Mozart would've *loved* this.)

   TIP

   If you want to search for a particular instrument, click in the Search box near the top of the Loop Browser, and type the text you want to match. GarageBand returns the search results in the list.

4. **Scroll down the list, and continue to sample the different loops until you find one that fits like a glove.**

   For this reporter, it's Upbeat Electric Piano 01; refer to Figure 15-4.

5. **Drag the entry to your Classic Electric Piano track, and drop it at the very beginning of the Timeline (as indicated by the playhead).**

   Your window looks like Figure 15-5.

TIP

If you want that same beat throughout the song, you don't need to add any more loops to that track. (More on extending that beat in the next section.) However, if you want the piano's beat to change later in the song, you add a second loop after the first one in the *same* track. For now, leave this track as is.

FIGURE 15-5:
A track with a
loop added.

Whoops! Did you do something you regret? Don't forget that you can undo most actions in GarageBand by pressing the old standby ⌘+Z immediately afterward.

Second verse, same as the first

When you compose, you can add tracks for each instrument you want in your song:

>> Each track can have more than one loop.

>> Loops *don't* have to start at the beginning; you can drop a loop anywhere in the Timeline.

For example, you might prefer to start a song with just your drum kit, with your bass line beginning some time later (for a funkier opening).

You put loops on separate tracks so they can play simultaneously on different instruments. If all your loops in a song are added on the same track, you hear only one loop at a time, and all the loops use the same software instrument. By creating multiple tracks, you give yourself the elbow room to bring in the entire band at the same time. It's über-convenient to compose your song when you can see each instrument's loops and where they fall in the song.

Click the Reset button in the Loop Browser (which carries an X icon) to choose another instrument or genre category.

Resizing, repeating, and moving loops

If you haven't already tried listening to your entire song, try it now. You can click Play at any time without wreaking havoc on your carefully created tracks. Sounds pretty good, doesn't it?

But wait: I bet the song stopped after about five seconds, right? (You can watch the passing seconds using either the Time/Tempo display or the second rule that appears at the very top of the Timeline.) I'm sure you want your song to last more than five seconds! After the playhead moves past the end of the last loop, your song is over. Click Play again to pause the playback; then click the Go to Beginning button (shown in Figure 15-1) to move the playhead back to the beginning of the song.

The music stops so soon because your loops are only so long. As mentioned earlier, most loops are five seconds in length, and others are even shorter. To keep the groove going, you must do one of three things:

>> **Resize the loop.** Hover the cursor over either the left or right edge of most loops, and an interesting thing happens: The cursor changes to an icon representing the left or right edge of the loop, with arrows pointing both ways. That's your cue to click and drag — and as you drag, some loops expand to fill the space you're making, repeating the beats in perfect time. By resizing a loop, you can literally drag the loop's edge as long as you like.

>> **Repeat the loop.** Depending on which loop you chose, you might find that resizing it doesn't repeat the measure. Instead, the new part of the loop is simply dead air. In fact, the length of many loops is limited to anywhere from one to five seconds. However, if you move the cursor over the *corner* of a loop you want to extend, it turns into a vertical line with a circular arrow, which tells you that you can click and *repeat* the loop. GarageBand actually adds multiple copies of the same loop automatically, for as far as you drag the loop. In Figure 15-6, you can see how I repeated the Upbeat Electric Piano 01 loop.

>> **Add a new loop.** You can switch to a different loop to change the music's flow. Naturally, the instrument stays the same, but there's no reason you can't use a horn-riff loop in your violin track (as long as it sounds good played by a violin)! To GarageBand, a software instrument track is compatible with *any* software instrument loop you add from the Loop Browser, as long as that loop is marked with your old friend, the green musical note.
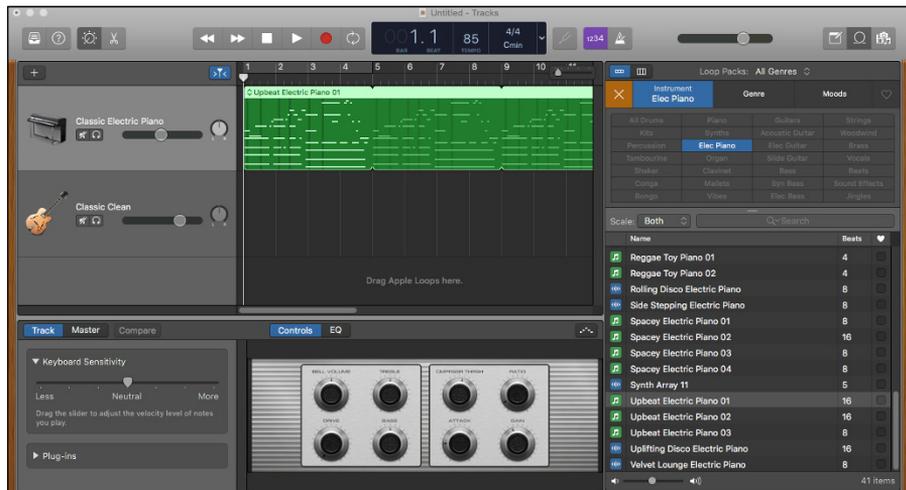
FIGURE 15-6:
By repeating a loop, you can keep the notes flowing.

You can also use the familiar Cut (⌘+X), Copy (⌘+C), and Paste (⌘+V) editing keyboard shortcuts to cut, copy, and paste loops both on the Timeline and from track to track. And you can click a loop and drag it anywhere.

A track doesn't have to be filled for every second with one loop or another. Most of my songs have a number of repeating loops with empty space between them as different instruments perform solo.

Each track can be adjusted so you can listen to the interplay between two or more tracks or hear how your song sounds without a specific track:

» **Mute a track:** Click the tiny speaker button under the track name in the list, and the button turns blue to indicate that the track is muted. To turn off the mute, click the speaker icon again.

» **Change the volume or balance of a track:** Use the mixer that appears next to the track name. This comes in handy if you want an instrument to sound louder or confine that instrument to the left or right speaker.

Using the Arrangement track

GarageBand includes another method you can use to monkey with your music: Use the *Arrangement track* to define (or *mark*) specific sections of a song, allowing you to reorganize things by selecting, moving, and copying entire sections. For example, you're probably familiar with a song's chorus (or refrain) and how often it appears during the course of the tune. With the Arrangement track, you can reposition the entire chorus within your song, carrying all the loops and settings within the chorus along with it. If you need another chorus, just copy that arrangement.

To use the Arrangement track, display it by choosing Track⇨Show Arrangement Track from the GarageBand menu bar. The Arrangement track then appears as a thin strip at the top of the Track list. Click the Add Marker button (the circular button bearing a plus sign) at the right side of the Arrangement track, and you see a new marker appear, as shown in Figure 15-7. You can drag the right side of the Arrangement marker to the left or right to resize it, or drag it to move it anywhere in the song.

TIP

To rename an Arrangement marker, click the current name to display the menu of existing marker names, click Rename, type a new name for the marker in the text box, and press Return. (You can also choose one of the existing names from the menu.) In Figure 15-7, you can see the first marker is named *Intro*.

Now, here's where Arrangement markers get *cool:*

» **To move an entire Arrangement marker:** Click anywhere in the marker's title bar (except the title itself), and drag it anywhere you like in the song. (You can hold down Shift while clicking multiple contiguous markers to select more than one.)

FIGURE 15-7:
I just added a
new marker in
my song's
Arrangement
track.

» **To copy an Arrangement marker:** Hold down the Option key, and drag the desired marker's title to the spot where you want the copy to appear.

» **To empty the regions in an Arrangement marker:** Select it, and press Delete. To completely delete the marker, press Delete a second time.

Tweaking the settings for a track

You don't think that bands like Rush and U2 just "play and walk away," do you? No, they spend hours after their recording session is over, tweaking their music in the studio and on the mixing board until every note sounds just as it should. You can adjust the settings for a track, too. The tweaks you can perform include adding effects (pull a Hendrix by adding echo and reverb to your electric guitar track) and kicking in an equalizer (for fine-tuning the sound of your background horns).

To make adjustments to a track, follow these steps:

1. **Click the desired track in the track list to select it.**

2. **Click the Smart Controls button at the top left of the GarageBand window (labeled in Figure 15-1).**

You can also press B to hide or display the Smart Controls pane.

3. **Click the Controls tab to show the settings shown in Figure 15-8.**

Note that the settings you see will vary according to the type of instrument track you've selected.

4. **Click the knob control or slider for a specific effect to change the sound.**

GarageBand offers a Visual Equalizer window you can use to create a custom equalizer setting for each track. From the Smart Controls pane, click the EQ button. To change the Bass, Low Mid, High Mid, or Treble setting for a track, click and drag the equalizer waveform in the desired direction. And yep, you can do this while your song is playing, so you can use both your eyes *and* ears to define the perfect settings!

5. **Click the Smart Controls button (or press B) to return to GarageBand.**

FIGURE 15-8:
Finesse your tune by tweaking the sound of a specific track.

Time for a Mark's Maxim:

Save your work often in GarageBand. One power blackout, and you'll never forgive yourself. When you're pleased with the progress you've made in your project, press ⌘+S and enjoy the peace of mind (and use Time Machine with an external backup drive for good measure).™

If your MacBook is equipped with a Touch Bar, you can conveniently control a number of features within GarageBand. The shortcuts include standard controls (like Play and Record), quick movement throughout your project and editing using Smart Controls. You can even use the Touch Bar as a simple musical keyboard, or a set of drum pads! The GarageBand Help system contains all the specifics on Touch Bar operation; simply click Help in the GarageBand menu and type Touch Bar into the Search box.

JOIN IN AND JAM . . . OR TALK!

GarageBand is even more fun if you happen to play an instrument! (And yes, I'm envious, no matter how much I enjoy the techno and jazz music I create. After all, take away my MacBook, and I'm back to playing the kazoo — at least until I absorb all the Learn to Play lessons for the guitar. More on Learn to Play in the next sidebar.)

Most musicians use MIDI instruments called *controllers* to play music on the computer. That pleasant-sounding acronym stands for *Musical Instrument Digital Interface.* A wide variety of MIDI controllers is available these days, from traditional MIDI keyboards to more exotic fun, such as MIDI saxophones. For example, Apple sells a 37-key MIDI keyboard from iRig for around $150. Alternatively, the highly recommended Casio CTX-3200 offers 61 keys, and it's available online for about $130. (Both keyboards connect to your trusty MacBook using a USB cable.)

If you have an older instrument with traditional round MIDI ports — you'll never confuse them with USB connectors — you need a USB-to-MIDI converter. You can find this type of converter for around $50 on websites catering to musicians.

You can also connect microphones or traditional electric instruments into your MacBook for use with GarageBand – you'll need an audio interface, which feeds the signal from these traditional sources into your laptop through the USB port.

After your instrument is connected, you can record tracks using any software instrument. Create a new software instrument track as I demonstrate in this chapter, select it, and play a few notes. Suddenly you're playing the instrument you chose! If nothing happens, check the MIDI status light — which appears in the Time display — to see whether it blinks with each note you play. If not, check the installation of your MIDI connection, and make sure you've loaded any required drivers, as well as your MIDI settings within QuickTime and the input settings in the System Preferences Sound pane.

Drag the playhead to a beat or two before the spot in the Timeline where you want your recording to start. This gives you time to match the beat. Then click the big red Record button and start jamming! When you're finished, click the Play button to stop recording.

Sharing Your Songs

After you finish your song, you can play it whenever you like through GarageBand. But then again, that isn't really what you want, is it? You want to share your music with others on an audio CD or download it to your iPod so that you can enjoy it yourself while walking through the mall.

HEY, GARAGEBAND, TEACH ME HOW TO PLAY!

In the early days of GarageBand, you were limited to creating music. And if you were a non-musician like yours truly, GarageBand had no practical use as a tool for teaching yourself how to actually *play* an instrument.

Ah, but Apple's addition of Learn to Play actually turns GarageBand into your private video tutor for basic piano and guitar! From the New Project dialog (refer to Figure 15-2), click the Learn to Play entry in the list on the left to display your guitar and piano lessons. Right out of the box, you have a solid introduction to both instruments. You can also download more lessons — which cover more advanced topics such as fingering and chords — for each instrument from the Lesson Store (available from the New Project dialog). Your onscreen instructor can even record what you play.

In fact, GarageBand includes the How Did I Play feature, which can pinpoint the portions of a lesson you played correctly and which spots in the song you need to work on. (I'm told musicians call such trouble spots *flubs.* Having no musical talent whatsoever, anything I attempted to play would be one giant flub.) To try How Did I Play, open your favorite lesson, click the Record button (with the red dot in the center), and begin playing. To stop recording, click the Play button. Now you can see the portions of the song you played correctly (where the notation area is green) and spots where you, um, flubbed (the notation area turns red). Oh, and make sure your instrument is in tune, because even correct notes played on an instrument that's out of tune produce errors for How Did I Play!

If you find the free Learn to Play lessons valuable, you can move up to the Artist lessons, which are taught by famous musicians (including favorites of mine such as Alex Lifeson, John Fogerty, and Sting, who actually teaches you how to play "Roxanne")!

iTunes to the rescue! As with the other digital lifestyle applications I cover in this book, GarageBand can share the music you make through the digital hub that is your MacBook. (You'll become an iTunes power user in Chapter 12.)

Creating song files and ringtones in iTunes

You can create an AAC song file (or even a ringtone) from any project in just a few simple steps:

1. **Open the project you want to share.**

2. **Choose Share ⇨ Song to iTunes from the GarageBand menu bar.**

GarageBand displays the settings you see in Figure 15-9.

To create a ringtone and send it to iTunes, choose Share ➪ Ringtones to iTunes from the GarageBand menu bar.

3. **Click in each of the text boxes to type the title, artist name, composer name, album name, and iTunes playlist for the tracks you create.**

   You can leave the defaults as they are if you prefer. Each track you export is named after the song's name in GarageBand.

4. **From the Quality pop-up menu, choose the proper audio quality for the finished file.**

   The higher the quality, the larger the file.

5. **Click the Share button.**

   After a second or two of hard work, your MacBook opens the iTunes window and highlights the new (or existing) playlist that contains your new audio, whether it be a song or ringtone.

FIGURE 15-9:
Tweaking settings for iTunes audio files.

Exporting a project

Sometimes, you'd like to create an audio file from a GarageBand project, but you'd rather not automatically add that song or ringtone to your iTunes Music Library. (Perhaps you now have audio proof that a family member does indeed snore.)

In that case, you can always export a song straight to your hard drive by following these steps:

1. **Open the project you want to export.**

2. **Choose Share ⇨ Export Song to Disk.**

3. **Type a name for the audio file.**

   Click the button next to the Save As text box to select a specific location where the file should be created, or choose a preset from the Where pop-up menu.

4. **From the Quality pop-up menu, choose the desired audio quality.**

   As with sharing a song to iTunes, the higher the quality, the larger the file.

5. **Click Export.**

Burning an audio CD

Ready to create a demo CD with your latest GarageBand creation? If your MacBook has an internal or external optical drive, follow these steps to burn an audio disc from within GarageBand:

1. **Open the song you want to record to disc.**

2. **Load a blank disc into your optical drive.**

   If you see a dialog requesting that you choose an action, click the Ignore button.

3. **Choose Share ⇨ Burn Song to CD.**

Note that the CD you create has only one track. To include more tracks on the CD, share the song to your iTunes Library (as described earlier), create a playlist containing the desired songs, and burn that playlist within iTunes.

5

Getting Productive and Maintaining Your MacBook

IN THIS CHAPTER

» **Creating a Pages document**

» **Entering, editing, and formatting text**

» **Inserting tables and graphics**

» **Resizing objects**

» **Checking your spelling**

» **Printing Pages documents**

» **Sharing your work**

Chapter **16**

Desktop Publishing with Pages

What's the difference between word processing and desktop publishing? In a nutshell, it's in how you design your document. Most folks use a word processor like an old-fashioned typewriter, much like I'm using Microsoft Word right now. (Yawn.)

A *desktop publishing application* allows far more creativity in choosing where to place text, how to align graphics, and how to edit formats. I think desktop publishing is more visual and intuitive, allowing your imagination a free hand at creating a document.

In this chapter, I show you how to set your inner designer free from the tedious constraints of word processing. Whether you need a simple letter, a stunning brochure, or a multipage newsletter, Pages can handle the job with ease — and you'll be surprised at how simple it is to use. Plus, Pages is a *free* download for any MacBook of recent vintage (and free Apple software is always A Good Thing).

Creating a New Pages Document

To create a new Pages document, follow these steps:

1. **Click the Pages icon on the Dock.**

If the Pages icon doesn't appear on your Dock, click the Launchpad icon and then click the Pages icon (which looks like a document and pen). If you haven't installed the three Apple productivity applications yet — Pages, Numbers, and Keynote — click the App Store icon in your Dock and download them for free!

2. **Click the New Document button at the lower-left corner of the Open dialog.**

Pages displays the Template Chooser window, shown in Figure 16-1.

You can also create a new Pages document at any time from the File menu. Just choose File ⇨ New to display the Template Chooser window.

TIP

3. **In the list to the left, click the type of document you want to create.**

The thumbnails on the right are updated with templates that match your choice.

4. **Click the template that most closely matches your needs.**

To start with a blank page, choose the Blank template.

5. **Click the Choose button to open a new document in the template you selected.**
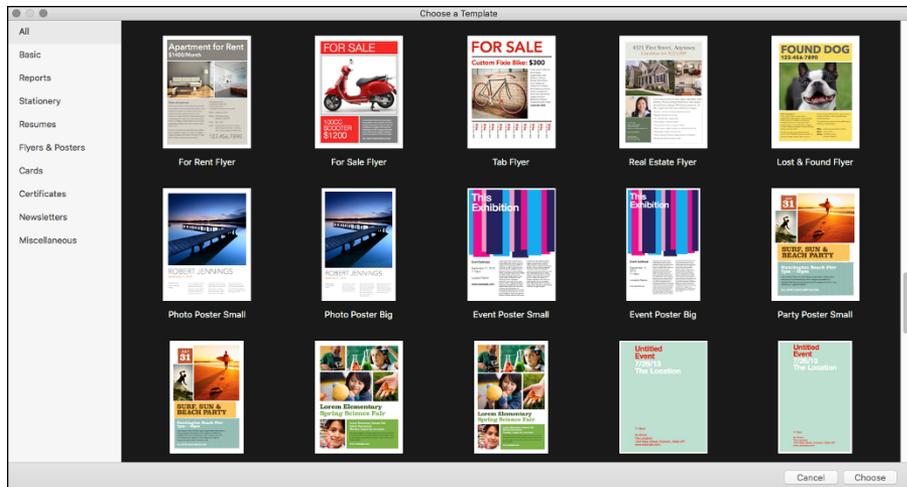
FIGURE 16-1:
Select a template from the Template Chooser window.

Open an Existing Pages Document

Of course, you can always open a Pages document from a Finder window. Just double-click the document icon. (The All My Files location in the Finder window sidebar makes it easy to track down a document.) You can also open a Pages document from within the program. Follow these steps:

1. Launch Pages as described in the preceding section.

2. Press ⌘+O to display the Open dialog.

The Open dialog operates much the same as a Finder window in Icon, List, or Column view mode. To open a document you've already saved in your iCloud Drive, click the Pages item under the iCloud heading in the sidebar at the left of the dialog and double-click the desired document thumbnail in the thumbnail display at the right side of the dialog. To open a document on your internal drive or network, click the desired location in the Open dialog sidebar. (If you're into convenience like I am, click one of the locations under the Favorites heading to jump immediately to common folders like your Downloads or Documents!)

3. Click the desired drive in the Devices list at the left of the dialog, and then click folders and subfolders until you locate the Pages document.

You can also click in the Search box at the top of the Open dialog and type in a portion of the document name or its contents.

TIP If you're using Icon view mode (or you're displaying the Preview column in Column view mode), you can hover the cursor over a document thumbnail and quickly flip through the different pages by clicking on the left and right arrows that appear. This "find" feature can help you identify a particular Pages document without even opening it.

4. Double-click the thumbnail (or filename) to load it.

If you want to open a Pages document you've edited in the recent past, things get even easier. Just choose File ⇨ Open Recent, and you can open the document with a single click from the submenu that appears.

REMEMBER Pages can open, edit, and save documents created with the Mac version of Microsoft Word.

Saving Your Work

Pages fully supports High Sierra's Auto-Save feature, but you may feel the need to manually save your work after you finish a significant edit (or if you need to take a break while designing). If you're editing a document that has already been saved

at least once, press ⌘+S. A new version of the document is saved to its current location — and you can continue with your work.

However, if you're working on a *new* document that hasn't previously been saved, follow these steps to save it:

1. **With the Pages document open, press ⌘+S.**

2. **Type a filename for your new document.**

3. **Open the Where pop-up menu, and choose a location in which to save the document.**

   Note that Pages defaults to your iCloud Drive as the target location. This way, you can open and edit your Pages document on any Mac or iOS device that shares the same Apple ID. Alternatively, click the button sporting the down arrow to expand the Save As sheet. This allows you to navigate to a different location on your hard drive or network, or to create a new folder to store this Pages project.

4. **Click Save.**

REMEMBER You can create a version of a Pages document by choosing File ➪ Save. To revert the current document to an older version, choose File ➪ Revert To. Pages gives you the option of reverting to the last saved version, or you can click Browse All Versions to choose from multiple versions of the document.

Touring the Pages Window

Before you dive into any real work, let me show you around the Pages window. You'll find the following major components and controls, as shown in Figure 16-2:

» **Pages list:** This thumbnail list displays all the pages you've created within your document. (For a single-page document, of course, the Page list contains only a single thumbnail.) You can switch instantly between different pages in your document by clicking the desired thumbnail in the list. If the list isn't visible, click the View button at the left side of the Pages toolbar, and click Show Page Thumbnails.

» **Layout pane:** This section takes up most of the Pages window. It's where you design and edit each page in your document.

» **Toolbar:** Yep, Pages has its own toolbar. It keeps all the most common application controls within easy, one-click reach.

>> **Inspector:** This window extension allows you to quickly switch the appearance of selected paragraphs, characters, and lists (in Format mode) or specify settings that affect the entire document (in Document Setup mode). You can hide and display the Inspector from the View menu, or by clicking the Format or Document buttons on the toolbar.
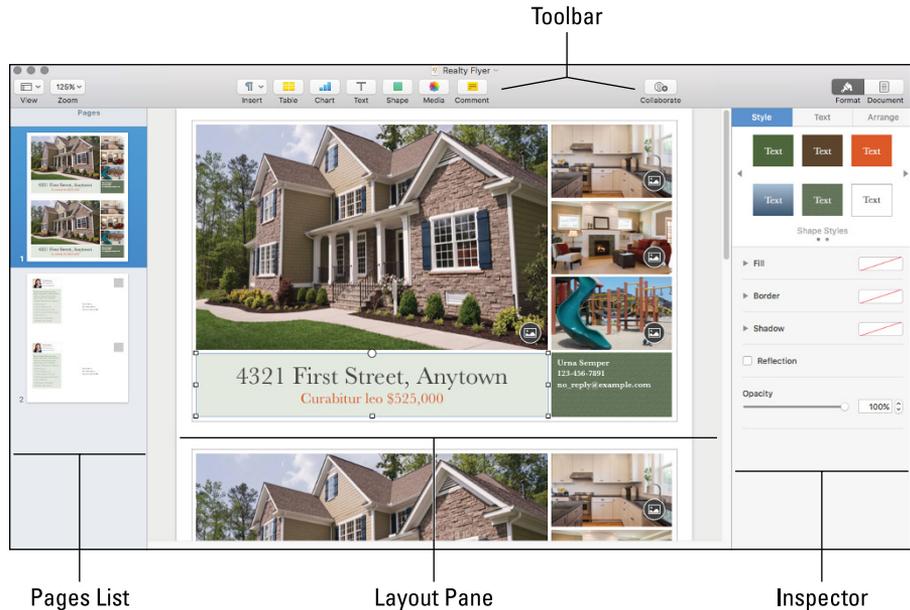
Entering and Editing Text

If you've used a modern word processing program, you'll feel right at home typing within Pages. The bar–shaped text cursor, which looks like a capital letter *I*, indicates where the text you enter will appear in a Pages document. To enter text, simply begin typing. To edit existing text in your Pages document, select and highlight the text. As you type, Pages replaces the existing text. You can delete text by clicking and dragging across the characters to highlight them and then pressing Delete.

Using Text, Shapes, and Graphics Boxes

Within Pages, you'll quickly learn that text, shapes, and graphics appear in *boxes*, which can be resized by clicking and dragging one of the handles that appear

around the edges of the box. (Click the box to select it and hover the cursor over one of the square handles; you'll see that it changes to a double-sided arrow, indicating that Pages is ready to resize the box.)

You can also move a box, including all the stuff it contains, to another location within the Layout pane. Click in the center of the box, and drag the box to the desired spot. Note that Pages displays yellow alignment lines to help you align the box with other elements around it (or with regular divisions of the page, such as the vertical center of a poster or flyer).

REMEMBER

To select text or graphics within a box, you must first click the box to select it and then double-click the line of text or the graphic you want to change.

The Three Amigos: Cut, Copy, and Paste

"Hang on, Mark. You've covered moving stuff, but what if you want to *copy* a block of text or a photo to a second location? Or how about cutting something from a document open in another application?" Good questions. That's when you can call on the power of the cut, copy, and paste features within Pages. The next few sections explain these actions.

Cutting stuff

Cutting selected text, shapes or graphics removes them from your Pages document and places that material on your Clipboard. (Think of the *Clipboard* as a holding area for snippets of text and graphics you want to manipulate.) To cut, select some material and choose Edit⇨Cut or press ⌘+X.

Copying text and images

When you copy text, shapes, or graphics, the original selection remains untouched, and a copy of the selection is placed on the Clipboard. Select some material and choose Edit⇨Copy or press ⌘+C. To copy selected items by dragging, hold down the Option key while you drag the items to their destination.

REMEMBER

If you cut or copy a new selection to the Clipboard, it erases what was there. In other words, the Clipboard holds only the latest material you cut or copied.

Pasting from the Clipboard

Wondering what you can do with the stuff that's stored on the Clipboard? Pasting the contents of the Clipboard places the material at the current location of the insertion cursor.

WARNING

You must paste the contents before you cut or copy again to avoid losing what's on the Clipboard.

To paste the Clipboard contents, click the insertion cursor at the location you want and choose Edit⇨Paste or press ⌘+V.

Formatting Text the Easy Way

If you feel that some (or all) of the text in your Pages document needs a facelift, you can format that text any way you like. Formatting lets you change the color, font family, character size, and attributes as necessary.

After the text is selected, you can apply basic formatting in two ways:

» **Use the Inspector.** The Inspector appears at the right side of the Pages window (refer to Figure 16-2). The controls it displays vary according to the selection you've made. (Click the Format button on the right side of the toolbar, which looks like a tiny paintbrush, to display and hide the Inspector.) Click to select a font control to display a pop-up menu, and then click your choice. For example, select a portion of text and open the Font Family pop-up menu to change the font family from vanilla Arial to something more daring. You can also select characteristics, such as the text's paragraph style, or choose italic or bold. The Inspector also provides buttons for both vertical and horizontal text alignment.

» **Use the Format menu.** Most controls displayed within the Format section of the Inspector are also available from the Format menu. Click Format and hover the mouse cursor over the Font menu item, and you can then apply bold, italic, and underlining to the selected text. You can also make the text bigger or smaller. To change the alignment from the Format menu, click Format, and hover the mouse cursor over the Text menu item.

Adding a Spiffy Table

In the world of word processing, a *table* is a grid that holds text, shapes, and graphics for easy comparison. You can create a custom table layout within Pages with a few simple clicks.

Follow these steps:

1. **Click the insertion cursor at the location where you want the table to appear.**

2. **Click the Table button on the Pages toolbar.**

Pages displays thumbnail images of different table styles. You have a selection of colors. Some tables also include highlighted rows and columns. Use the left and right buttons to display different styles of thumbnails until you find the one that's closest to the table you need.

Don't worry if the style isn't exactly right. You can always change the layout by selecting the table and displaying the Format Inspector, where you can fine-tune all sorts of font, color, grid, and border options.

3. **Click the style thumbnail to insert the table.**

If you need to change the number of rows or columns in your table, Pages makes it easy. To add or delete rows or columns directly from the table, select it and click the row and column buttons that appear. (Each bears two horizontal or vertical lines, as shown in Figure 16-3.)

4. **Click within a cell in the table to enter text.**

The table cell automatically resizes and *wraps* the text you enter to fit.

You can paste material from the Clipboard into a table. See the earlier section "Pasting from the Clipboard" for details.

Here are a few pointers on how to dress up your table and make its data more attractive and readable:

>> **Change the borders on a selected cell.** Click the Format icon on the toolbar to open the Inspector, click the Cell tab, and then click the desired button in the Border section.

Select a range of cells in a table by holding down Shift as you click. Hold down ⌘ and click to select multiple cells that aren't contiguous.

>> **Add a background color to selected cells, or fill them with an image for a background.** Click the Cell tab, and then click the Fill section in the Inspector and choose a type of background.
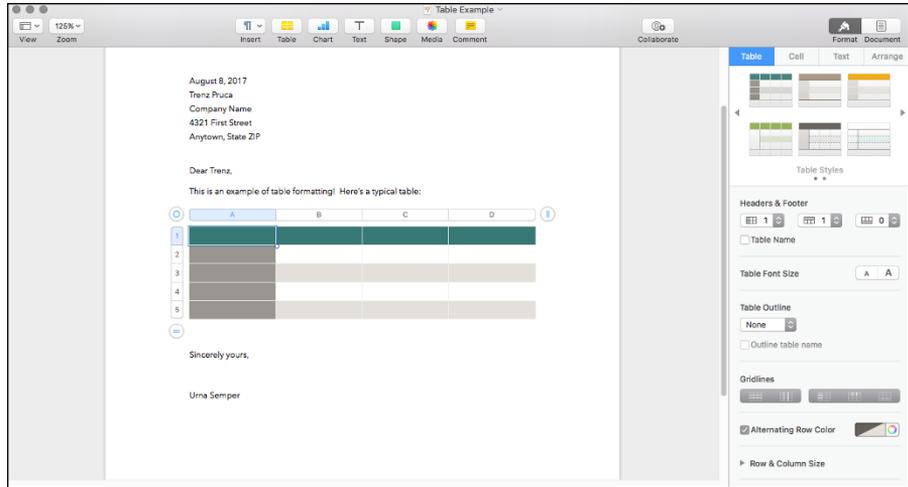
FIGURE 16-3:
Use Table
controls to tweak
your table.

Adding Alluring Photos

You can choose between two methods of adding a picture within your Pages document:

» **As a floating object:** You place the image in a particular spot, and it doesn't move even if you make changes to the text. To add a floating object, drag an image file from a Finder window and place it at the spot you want within your document. Alternatively, you can click the Media button on the toolbar, click Photos, navigate to the location where the file is saved, and click the image thumbnail. Figure 16-4 shows the Media Browser in action.

TIP Click the magnifying glass icon to search for a specific item using keywords or by filename.

Note that a floating object (such as a shape or image) can be sent to the *background,* where text does not wrap around it. To bring back a background object as a regular floating object, click the object to select it and choose Arrange ➪ Bring to Front. (More about background objects later in this chapter.)

» **As an inline object:** The image flows with the surrounding text as you make layout changes. To add an inline object, hold down the ⌘ key as you drag an image file from a Finder window and place it where you want within your document. You can also click the Media toolbar button and click Photos to display the Media Browser. Navigate to the location where the file is saved, hold down the ⌘ key, and drag the image thumbnail to the spot where you want it in the document.
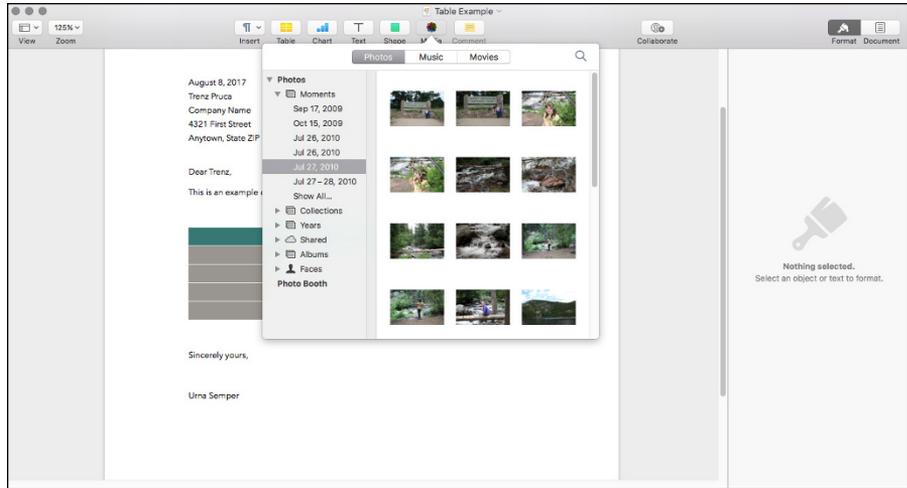
To resize an image object, click the image to select it and drag one of the selection handles that appear along its border. (The handles look like tiny squares.) The side-selection handles drag only that edge of the frame. The corner-selection handles resize both adjoining edges of the selection frame. Hold down the Shift key to make the vertical and horizontal proportions remain fixed.

Adding a Background Shape

To add a shape (such as a rectangle or circle) as a background for your text, follow these steps:

1. **Click the insertion cursor in the location you want.**

2. **Click the Shape button on the Pages toolbar, and choose a shape.**

   The shape appears in your document.

3. **Click the center of the shape, and drag it to a new spot.**

   Shapes can be resized or moved in the same manner as image boxes. See the preceding section.

You can type over a shape set as a background. Before you do, though, select the shape, and choose Arrange ➪ Send to Back.

Are You Sure about That Spelling?

Pages can check spelling as you type (the default setting) or after you complete your document. If you find automatic spell-checking distracting, you should pick the latter method.

REMEMBER As my technical editor reminds me, spell-checking only confirms that a word matches an entry in the Pages dictionary, *not* that it's the right word for the job! If you've ever "red" a document that someone else "rote," you understand.

To check spelling as you type, follow these steps:

1. **Click the Edit menu, and hover the cursor over the Spelling and Grammar menu item.**

2. **Choose Check Spelling While Typing from the submenu that appears.**

   If a possible misspelling is found, Pages underlines the word with a red dashed line.

3. **Right-click the word to choose a possible correct spelling from the list, or choose Ignore Spelling if it's spelled correctly.**

   To turn off automatic spell-checking, click the Check Spelling While Typing menu item again to deselect it.

To check spelling manually, follow these steps:

1. **Click within the document to place the text insertion cursor where the spell check should begin.**

2. **Click Edit, hover the cursor over the Spelling and Grammar menu item, and choose Check Document Now from the submenu that appears.**

3. **Right-click any possible misspellings, and choose the correct spelling, or choose Ignore Spelling if the word is spelled correctly.**

Printing Your Pages Documents

Ready to start the presses? You can print your Pages document on real paper, of course, but don't forget that you can also save a tree by creating an electronic PDF instead of a printout. You'll find the PDF dropdown menu at the bottom of the standard High Sierra Print dialog.

To print your Pages document on old-fashioned paper, follow these steps:

1. Within Pages, choose File ⇨ Print.

Pages displays the Print sheet.

2. Click in the Copies field, and enter the number of copies you need.

3. Select the pages to print:

- *To print the entire document,* select All.

- *To print a range of selected pages,* select the From radio button and enter the starting and ending pages.

4. Click the Print button to send the document to your printer.

Sharing That Poster with Others

Besides printing — which is, after all, so *very* passé these days — you can choose to share your Pages document electronically via the Internet or your network:

» Send a Copy: To send a copy of the actual document (which the recipient can open using Pages on his or her own Mac or iOS device), click Share on the Pages menu, and hover the cursor over the Send a Copy item. You can send the document via Mail, Notes, or Messages, or you can make it available through AirDrop (if the recipient is within range of your MacBook's Wi-Fi signal).

REMEMBER

If you decide to send your Pages document as an email attachment, don't forget that most ISPs have a maximum message size. If your document is too large, your mail server probably will reject it.

» Export: You're not limited to sharing over that Internet thing! Pages can also export your work directly to your drive in one of six different formats: a PDF file, a Microsoft Word document, an ePub file (for use with electronic book apps like iBooks), a document compatible with the previous version of Pages, a Rich Text Format document, or even plain text. (Remember when everything was in plain text?) Choose File ⇨ Export To, and pick your format; Pages displays any options you can set for that format. When you're ready, click Next and select the location where Pages should save the file. Click Export, and sit back while your favorite desktop publishing application does all the work.

TIP

If the recipient of your document doesn't need to edit your work, I recommend creating a PDF file, which keeps your document as close as possible to how it appears in Pages.

Chapter **17**

Creating Spreadsheets with Numbers

A re you downright afraid of spreadsheets? Does the idea of building a budget with charts and all sorts of fancy graphics send you running for the safety of the hall closet? Well, good MacBook owner, Apple has again taken something that everyone else considers super-complex and turned it into something that normal human beings can use! (Much as Apple did with video editing and songwriting. Is there *any* type of software that Apple designers can't make intuitive and easy to use?) And Numbers is a free download from the App Store to boot!

In this chapter, I demonstrate how the Numbers spreadsheet program can help you organize data and analyze important financial decisions for home and business — everything from a household budget to your company's sales statistics!

Before You Launch Numbers . . .

In case you're unfamiliar with applications like Numbers and Microsoft Excel — and the documents they create — let me provide you with a little background information.

A *spreadsheet* organizes and calculates numbers by using a grid system of rows and columns. The intersection of each row and column is a *cell*, which can hold either text or numeric values. Cells can also hold calculations called *formulas* and *functions,* which are usually linked to the contents of surrounding cells.

Spreadsheets are wonderful tools for making decisions and comparisons, because they let you plug in different numbers — such as interest rates or your monthly insurance premium — and instantly see the results. These are some of my favorite spreadsheets that I use regularly:

>> Car and mortgage loan comparisons

>> A college planner

>> My household budget (not that we pay any attention to it)

REMEMBER Numbers can open, edit, and save spreadsheets created with Microsoft Excel.

Creating a New Numbers Document

Like Pages (Apple's desktop publishing application that I cover in Chapter 16), Numbers ships with a selection of templates you can modify quickly to create a new spreadsheet. For example, after a few modifications, you can easily use the Budget, Loan Comparison, and Mortgage templates to create your own spreadsheets.

To create a spreadsheet project file, follow these steps:

1. **Click the Launchpad icon on the Dock.**

2. **Click the Numbers icon.**

3. **Click the New Document button at the lower-left corner of the Open dialog that appears.**

   Numbers displays the Choose a Template window, shown in Figure 17-1. (To display the Choose a Template window and start a new Numbers project at any time, just choose File ⇨ New.)
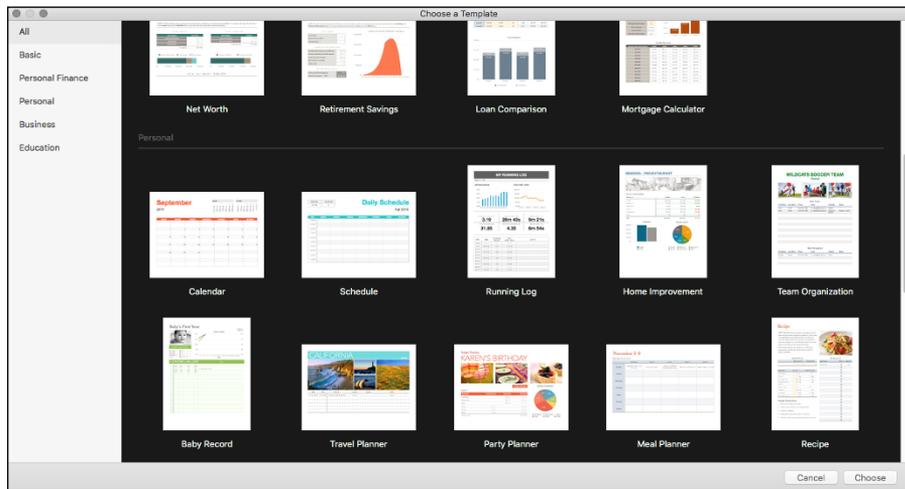
4. **From the list on the left, click the type of document you want to create.**

   The document thumbnails in the center are updated with templates that match your choice.

5. **Click the template that most closely matches your needs.**

6. **Click the Choose button to open a new document using the template you selected.**

Opening an Existing Spreadsheet File

If you see an existing Numbers document in a Finder window or the All My Files location (or you find it using Spotlight), just double-click the Numbers document icon to open it. Numbers automatically loads and displays the spreadsheet.

It's equally easy to open a Numbers document from within the program. Follow these steps:

1. **From Launchpad, click the Numbers icon to run the program.**

2. **Press ⌘+O to display the Open dialog.**

   As a MacBook power user running macOS High Sierra, you can save and load Numbers documents directly to and from your iCloud Drive. All three of Apple's productivity applications — Pages, Numbers, and Keynote — feature an Open dialog that can display the contents of your iCloud Drive as well as

your laptop's internal drive. If the spreadsheet is stored in your iCloud Drive, click the Numbers item under the iCloud heading in the sidebar at the left of the dialog and then double-click the desired document thumbnail.

3. **If the document is stored on your MacBook's internal drive, your network, or one of your Favorites locations click the desired drive or folder in the sidebar at the left of the dialog. Drill down through folders and subfolders until you locate the desired Numbers document.**

> **TIP** If you're unsure where the document is, click in the Search box at the top of the Open dialog and type a portion of the document name or even a word or two of text it contains. Note that you can choose to search your drive, your iCloud Drive, or both.

4. **Double-click the spreadsheet to load it.**

> **TIP** If you want to open a spreadsheet you've been working on over the last few days, choose File➪Open Recent to display Numbers documents that you've worked with recently.

Save Those Spreadsheets!

Thanks to the Auto–Save feature in High Sierra, you no longer have to fear losing a significant chunk of work because of a waning battery or a coworker's mistake. However, if you're not a huge fan of retyping data, *period,* you can also save your spreadsheets manually after making a major change. Follow these steps to save your spreadsheet to your hard drive:

1. **Press ⌘+S.**

   If you're saving a document that hasn't yet been saved, the Save As sheet appears.

2. **Type a filename for your new spreadsheet.**

3. **Open the Where pop-up menu, and choose a location in which to save the file.**

   Common locations are your iCloud Drive, Desktop, Documents folder, and Home folder.

> **TIP** If the location you want isn't listed in the Where pop-up menu, click the down-arrow button next to the Save As text box to display the full Save As dialog. Click the desired drive in the Devices list at the left of the dialog and then click folders and subfolders until you reach the desired location. Alternatively, type the folder name in the Spotlight search box at the top right,

and double-click the desired folder in the list of matching names. (As a bonus, you can also create a new folder in the full Save As dialog.)

4. **Click Save.**

After you save a Numbers document for the first time, you can create a version of that document by choosing File ➪ Save. To revert the current document to an older version, choose File ➪ Revert To. You can choose to revert to the last saved version, or you can click Browse All Versions to look through multiple versions of the document and choose one of those to revert to.

Exploring the Numbers Window

Apple has done a great job of minimizing the complexity of the Numbers window. Figure 17-2 illustrates these major points of interest:

» **Sheets tabs:** Because a Numbers project can contain multiple spreadsheets, they're displayed in the Sheets tabbed bar at the top of the window. To switch among spreadsheets in a project, click the desired tab.

» **Sheet canvas:** Numbers displays the rows and columns of your spreadsheet in this section of the window; you enter and edit cell values within the sheet canvas.
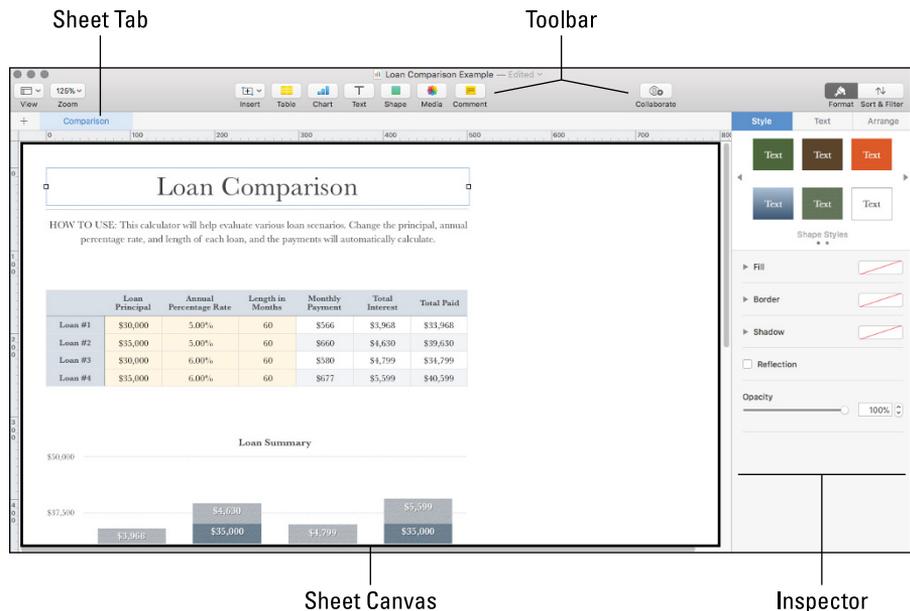
FIGURE 17-2: The Numbers window struts its stuff.

» **Toolbar:** The Numbers toolbar keeps the most common commands you'll use within easy reach.

» **Inspector:** Located at the right side of the Numbers window, the Inspector displays editing controls for the object that's currently selected, regardless of whether it's a selection of text, a table, or a single cell. (If you enter an equals sign [=] into a cell to create a formula, the Inspector displays the Function list, where you can specify a calculation that Numbers should perform.)

Navigating and Selecting Cells in a Spreadsheet

You can use the scrollbars to move around in your spreadsheet, but when you enter data into cells, moving your fingers from the keyboard is a hassle. Numbers has various handy navigation shortcut keys you can employ, as shown in Table 17-1. After you commit these keys to memory, your productivity level will shoot straight to the top.

TABLE 17-1 ## Movement Shortcut Keys in Numbers

Key or Key Combination	Where the Cursor Moves
Left arrow (←)	One cell to the left
Right arrow (→)	One cell to the right
Up arrow (↑)	One cell up
Down arrow (↓)	One cell down
Home	To the beginning of the active worksheet
End	To the end of the active worksheet
Page Down	Down one screen
Page Up	Up one screen
Return	One cell down (also works within a selection)
Tab	One cell to the right (also works within a selection)
Shift+Enter	One cell up (also works within a selection)
Shift+Tab	One cell to the left (also works within a selection)

You can also use the mouse or trackpad to select cells in a spreadsheet:

>> To select a *single* cell, click it.

>> To select a *range* of adjacent cells, click a cell at any corner of the range you want and drag in the direction you want.

>> To select a *column* of cells, click the alphabetic heading button at the top of the column.

>> To select a *row* of cells, click the numeric heading button at the far left of the row.

Entering and Editing Data in a Spreadsheet

After you navigate to the cell in which you want to enter data, you're ready to type your data. Follow these steps to enter That Important Stuff:

1. Either click the cell or press the spacebar.

A cursor appears, indicating that the cell is ready to hold any data you type.

2. Enter your data.

Spreadsheets can use both numbers and alphabetic characters within a cell; either type of information is considered data in the Spreadsheet World.

REMEMBER

3. When you're ready to move on, press Return (to save the data and move one cell down) or press Tab (to save the data and move one cell to the right).

Make a mistake? No big deal:

>> **To edit data:** Click within the cell that contains the data error (to select the cell), and then click the cell again to display the insertion cursor. Drag the insertion cursor across the characters to highlight them, and then type the replacement data.

>> **To delete characters:** Select the cell, and then highlight the characters and press Delete.

Selecting the Correct Number Format

After you enter your data (in a cell, row, or column), you might need to format it so it appears correctly. For example, say you want certain cells to display a specific type of number, such as a dollar amount, percentage, or date. Numbers gives you a healthy selection of number-formatting possibilities.

TIP Characters and formatting rules — such as decimal places, commas, and dollar and percentage notation — are part of **number** formatting. If your spreadsheet contains units of currency, such as dollars, format it as such. Then all you need to do is type the numbers, and the currency formatting is applied automatically.

To specify a number format, follow these steps:

1. **Select the cells, rows, or columns you want to format.**

2. **Click the Format toolbar button.**

3. **Click the Cell tab in the Inspector.**

4. **From the Data Format pop-up menu, choose the type of formatting you want to apply, as shown in Figure 17-3.**
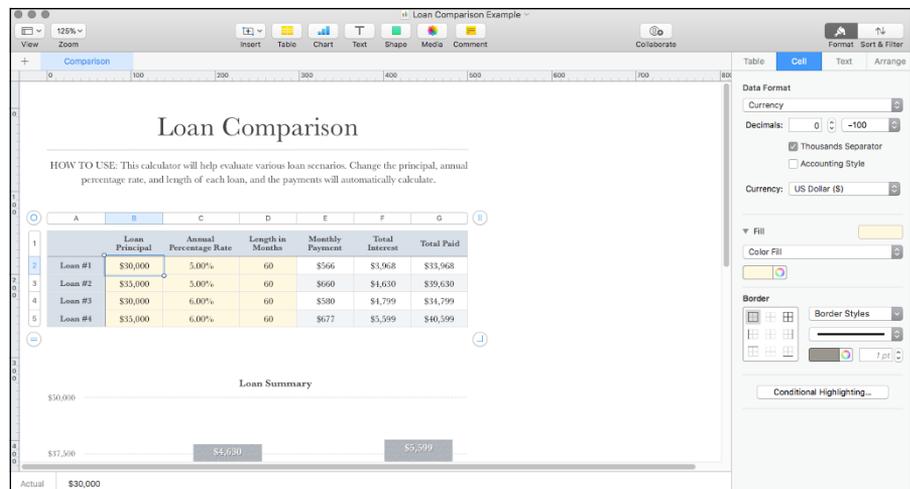
FIGURE 17-3: From the Inspector, you can format the data you've entered.

Aligning Cell Text Just So

You can also change the alignment of text in the selected cells. The default alignment is *flush left for text* and *flush right for numeric data.* Follow these steps:

1. **Select the cells, rows, or columns you want to format.**

See the earlier section "Navigating and Selecting Cells in a Spreadsheet" for tips on selecting stuff.

2. **Click the Format toolbar button.**

3. **Click the Text tab of the Inspector to display the settings shown in Figure 17-4.**
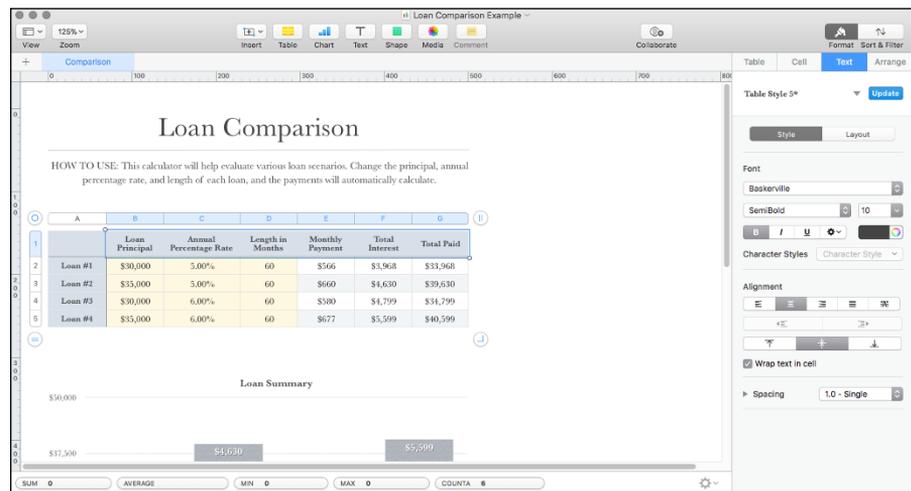
FIGURE 17-4:
Set text alignment within a cell.

4. **Click the corresponding Alignment button to choose the type of formatting you want to apply.**

You can choose left, right, center, and justified (as well as the defaults of text left and numbers right). Text can also be aligned at the top, center, or bottom of a cell.

TIP Do you need to set apart the contents of some cells? For example, you might need to create text headings for some columns and rows or to highlight the totals in a spreadsheet. To change such formatting, select the cells, rows, or columns you want to format, and then open the Font Family, Font Size, or Font Color buttons on the Text tab.

Formatting with Shading

Shading the contents of a cell, row, or column is helpful when your spreadsheet contains subtotals or logical divisions. Follow these steps to shade cells, rows, or columns:

1. **Select the cells, rows, or columns you want to format.**

2. **Click the Format toolbar button.**

3. **Click the Cell tab of the Inspector.**

4. **Click the triangle next to the Fill heading, and choose a shading option from the Fill pop-up menu.**

   Figure 17-5 shows the controls for a gradient fill.
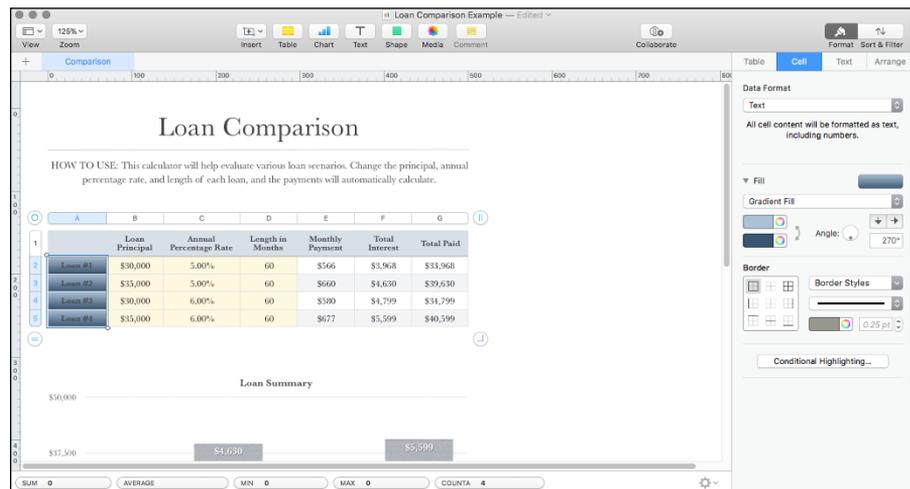
5. **Click the color box to select a color for your shading.**

   Numbers displays a color picker (also shown in Figure 17-5).

6. **Click to select a color.**

7. **After you achieve the effect you want, click the color box again to close the color picker.**

> **TIP**
> You can also add a custom border to selected cells, rows, and columns from the Cell tab. Click the triangle next to the Border heading to select just the right border.

Inserting and Deleting Rows and Columns

What's that? You forgot to add a row, and now you're three pages into your data entry? No problem. You can easily add — or delete — rows and columns. First, select the row or column adjacent to where you want to insert (or delete) a row or column, and do one of the following:

» **For a row:** Right-click and choose Add Row Above, Add Row Below, or Delete Row from the shortcut menu that appears.

» **For a column:** Right-click and choose Add Column Before, Add Column After, or Delete Column from the shortcut menu that appears.

If you select multiple rows or columns, right-click and choose Add. Numbers inserts the same number of new rows or columns you selected.

You can also insert rows and columns via the Table menu at the top of the Numbers window.

The Formula Is Your Friend

It's time to talk about *formulas,* which are equations that calculate values based on the contents of cells you specify in your spreadsheet. For example, if you designate cell A1 (the cell in column A at row 1) to hold your yearly salary and cell B1 to hold the number 12, you can divide the contents of cell A1 by cell B1 (to calculate your monthly salary) by typing this formula into any other cell:

```
=A1/B1
```

Formulas in Numbers always start with an equals sign, and they may include one or more functions as well. A *function* is a preset mathematical, statistical, or engineering calculation that will be performed, like figuring the sum or average of a series of cells.

"So what's the big deal, Mark? Why not use a calculator?" Sure, you could. But maybe you want to calculate your weekly salary. Rather than grab a pencil and paper, you can simply change the contents of cell B1 to 52, and — boom! — the spreadsheet is updated to display your weekly salary.

That's a simple example, of course, but it demonstrates the basics of using formulas (and the reason why spreadsheets are often used to predict trends and forecast budgets). It's the what-if tool of choice for everyone who works with numeric data.

To add a simple formula within a spreadsheet, follow these steps:

1. **Select the cell that will hold the result of your calculation.**

2. **Type = (the equals sign).**

   The Formula Box appears within the confines of the cell.

3. **Click the Format button on the Numbers toolbar to display the available functions in the Inspector, as shown in Figure 17-6.**
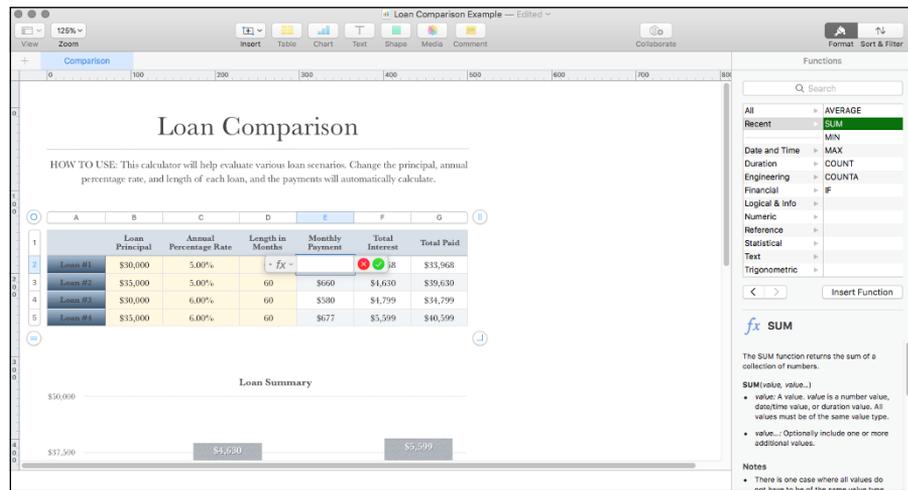
4. **Click the category of calculation you want from the left column of the Inspector.**

   Instead of scrolling through the entire function library, it's easier to choose a category — such as *Financial* for your budget spreadsheet — to filter the selection. (Alternatively, you can click in the Search box and type a function name or keyword.)

   > **TIP**
   > To display more information about a specific function, click it in the right column of the Inspector. In Figure 17-6, choosing the SUM function brings up a description at the bottom of the Inspector.

5. **After you select the perfect function in the right column, click the Insert Function button.**

   The function appears in the Formula box, along with any arguments it requires.

   In case you're unfamiliar with the term *argument,* it refers to a value specified in a cell that a formula uses. For example, the SUM formula adds the contents of each cell you specify to produce a total; each of those cell values is an argument.

6. **Click an argument button in the formula, and click the cell that contains the corresponding data.**

   Numbers automatically adds the cell you indicated to the formula. Repeat this step for each argument in the formula.

7. **After you finish, click the Accept button — the green check mark — to add the formula to the cell.**

That's it! Your formula is now ready to work behind the scenes, doing math for you so the correct numbers appear in the cell you specified.

Adding Visual Punch with a Chart

Sometimes, you just have to see something to believe it, so it can help to use the data you've added to a spreadsheet to generate a professional–looking chart. After you've entered the data you want to chart, follow these steps:

1. **Select the adjacent cells you want to chart by dragging.**

   To choose individual cells that aren't adjacent, you can hold down the ⌘ key as you click.

2. **Click the Chart button on the Numbers toolbar.**

   The Chart button bears the symbol of a bar graph.

   Numbers displays the thumbnail menu shown in Figure 17-7. Note that you can display different categories of charts by clicking one of the three tabs at the top (2D/3D/Interactive), and you can scroll the menu to reveal additional thumbnails by using the left- and right-arrow buttons.

3. **Click the thumbnail for the chart type you want.**

   Numbers inserts the chart as an object within your spreadsheet so you can move the chart. You can drag using the handles that appear on the outside of the object box to resize your chart.

   With your chart selected, click the Format toolbar button to display your old friend the Inspector, complete with the controls you can use to customize your chart's appearance. For example, you can change the colors and add (or remove) the title and legend.

4. **To change the default title, click the title box to select it; click it again to edit the text.**
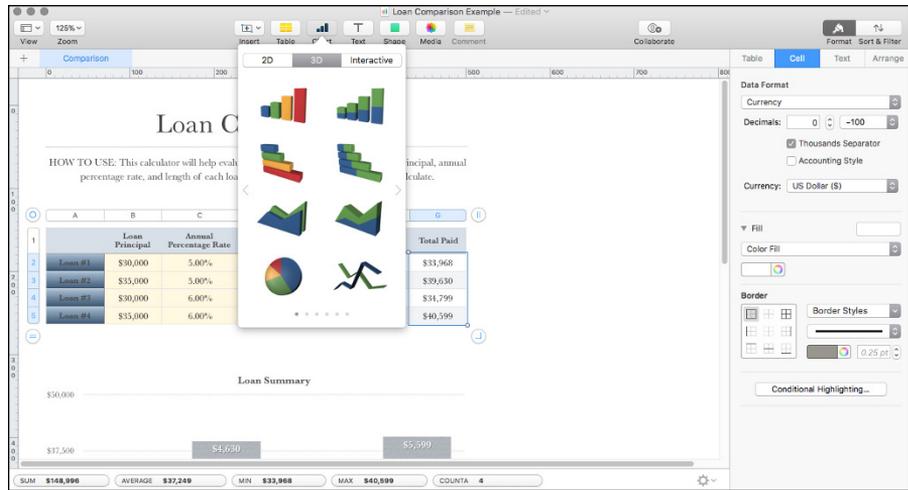
Printing Your Spreadsheet

You can easily send a Numbers spreadsheet to a USB or shared network printer — or, if you'd rather create an electronic copy of the document as an Adobe PDF, you can click the PDF button that appears on the Numbers Print dialog and select a location where the file will be saved.

To print a Numbers spreadsheet on your default printer, follow these steps:

1. **Choose File ⇨ Print from the Numbers menu bar.**

Because a Numbers document can contain multiple spreadsheets, you can select a specific spreadsheet to print (by clicking it in the grid and clicking the Print This Sheet radio button at the bottom of the window), or you can print all spreadsheets in the document (by clicking the Print All Sheets radio button).

2. **Click the desired page orientation.**

Spreadsheets with a large number of columns are often printed in landscape orientation to ensure that everything fits on the page. You can also scale the spreadsheet so it automatically fits on the page by clicking the Fit button (next to the Content Scale slider).

3. **Click Print at the bottom of the window.**

Numbers displays the Print dialog. To display additional settings, click the Show Details button at the bottom of the sheet.

4. **Click in the Copies field, and enter the number of copies you need.**

5. **Select the pages to print:**

   - *To print the entire spreadsheet,* select All.

   - *To print a range of selected pages,* select the From radio button, and enter the starting and ending pages.

6. **Click the Print button to send the document to your printer.**

   Click the Share menu item to share your spreadsheet masterpiece with others (as an actual copy of the document file).

Chapter **18**

Building Presentations with Keynote

I t seems like only yesterday that I was giving business presentations with a clunky overhead projector and black-and-white acetate transparencies. Fancy color gradients and animation were unheard of, and the only sound my presentations made was the droning of the projector's fan. I might as well have been using tree bark and chalk.

Thank goodness those "cave painting" days are gone. Cutting-edge presentation software like Keynote makes slide creation easy and — believe it or not — *fun!* This is the application Steve Jobs once used for his Macworld keynotes every year. So much visual candy is available that you'll never need to shout to wake your audience again. Even better, this jewel of an application is a free download from the App Store!

In this chapter, I first demonstrate how simple it is to build a stunning Keynote presentation. Then you can see how to start and control your slide display from the keyboard (or even your iPhone, iPad, or iPod touch). And don't forget that you can print your slides and notes so your audience can keep a copy of your brilliant work.

Creating a New Keynote Project

Like the other applications in the iWork suite, Keynote begins the document creation process with a Theme Chooser window. To create a new presentation project, follow these steps:

1. **Click the Launchpad icon on the Dock.**

2. **Click the Keynote icon, which looks like a lectern.**

3. **Click the New Document button at the lower-left corner of the Open dialog.**

   The Theme Chooser window, shown in Figure 18-1, appears. (I have to say that these are probably the most stunning visual building blocks I've ever seen in a presentation application.)

4. **Choose the aspect ratio, using either the Standard or Wide button at the top of the window.**

   Although you don't necessarily need to select an exact match for your MacBook's screen resolution, it's a good idea to select the value closest to your projector's maximum resolution. If someone else is providing the projector, the Standard size is the more compatible choice. If you'll present on a typical high-resolution computer monitor, widescreen provides a better display. (Of course, nothing's stopping you from creating *two* documents of the same presentation, one in Standard ratio and one using Wide ratio. As the Scouts say, "Be prepared!")

5. **Click the theme thumbnail that most closely matches your needs.**

6. **Click the Choose button to open a new document that uses the theme you selected.**

FIGURE 18-1:
Select a template from the Theme Chooser window.

Opening a Keynote Presentation

If an existing Keynote presentation file is visible in a Finder window, you can double-click the document icon to open the project. If Keynote is already running, follow these steps to load a project from within the application:

1. **Press ⌘+O to display the Open dialog.**

2. **Click the desired drive in the Devices list at the left of the dialog; then click folders and subfolders until you locate the Keynote project. If the project is stored in your iCloud Drive, click the Keynote item under the iCloud heading in the sidebar at the left of the dialog, and then double-click the desired project thumbnail.**

   If the project is stored on your hard drive, the All My Files location can quickly display all your documents. You can jump directly to any location or folder under the Favorites heading by simply clicking on the entry. Oh, and don't forget that you can use the Search box at the top of the Open dialog to locate the document by name or by some of the text it contains.

3. **Double-click the filename to load it.**

TIP If you want to open a Keynote document you've edited in the recent past, things get even easier! Just choose File ➪ Open Recent, and you can open the document with a single click from the submenu that appears.

Saving Your Presentation

Because Keynote provides full support for the macOS Auto-Save feature, saving your work often isn't as critical as it used to be. To safeguard your work in a world of power failures, though, follow these steps:

1. **Press ⌘+S.**

   If you're saving a document that hasn't yet been saved, the familiar Save As sheet appears.

2. **Type a filename for your new document.**

3. **From the Where pop-up menu, choose a location in which to save the document.**

   By default, Keynote saves the project directly to your iCloud Drive (iCloud appears in the Where pop-up menu), making it available to other Macs and iOS devices using the same Apple ID. To select a location not available from the Where pop-up menu, click the button with the down-arrow symbol to expand the sheet. You can also create a new folder from the expanded sheet.

4. **Click Save.**

REMEMBER

You can create a version of a Keynote presentation by choosing File ➪ Save. To revert the current presentation to an older version, choose File ➪ Revert To. Keynote gives you the option of reverting to the last saved version, or you can click Browse All Versions to browse multiple versions of the presentation and revert to any saved version.

Putting Keynote to Work

Ready for the 5-cent tour of the Keynote window? Launch the application and create or load a project, and you see the tourist attractions shown in Figure 18-2:

» **Slides list:** Use this thumbnail list of all the slides in your project to navigate quickly. Click a thumbnail to switch instantly to that slide.

TIP

The Slides list can also display your project in outline format, allowing you to check all your discussion points. (This is a great way to ferret out any "holes" in your presentation's flow.) While in outline mode, you can still jump directly to any slide by clicking the slide's title in the outline. To display the outline, choose View ➪ Outline. You can switch back to the default Navigator Slides list by choosing View ➪ Navigator.

- » **Layout pane:** Your slide appears in its entirety in this pane. You can add elements to and edit the content of the slide from the Layout pane.

- » **Toolbar:** As does the toolbar in Pages and Numbers, the Keynote toolbar makes it easy to find the most common controls you'll use while designing and editing your slides. Clicking an icon on the toolbar performs an action, just as selecting a menu item does.

- » **Presenter Notes pane:** You might decide to add notes to one or more slides — either for your own use or to print as additional information for your audience. Click the View icon on the toolbar, and select Show Presenter Notes (or choose View ➪ Show Presenter Notes) to open the Notes pane. This text box appears under the Layout pane.

- » **Inspector:** Keynote displays this pane on the right side of the window when you click the Format button, allowing you to format selected text and images on the fly.
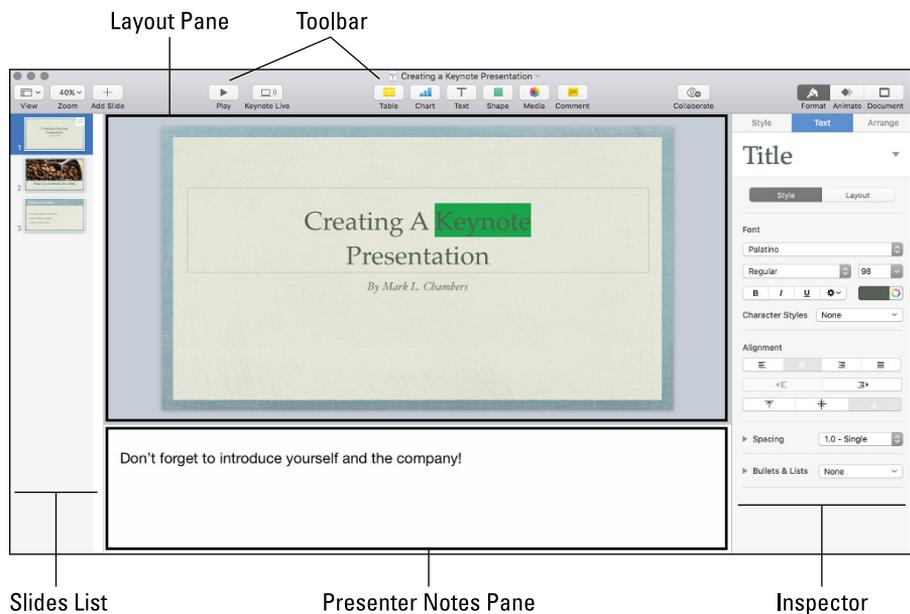
FIGURE 18-2:
The Keynote window is dominated by the Layout pane.

Adding Slides

Keynote creates a single Title slide when you first create a project. However, not many presentations are complete with just a single slide! To add more slides to your project, use one of these methods:

» Click the Add Slide button on the toolbar.

» Choose Slide ➪ New Slide.

» Press ⌘+Shift+N.

» Right-click an existing slide in the Slides list, and choose New Slide from the menu that appears.

Keynote adds the new slide to your Slides list and automatically switches to the new slide in the Layout pane.

TIP Need a slide that's very similar to an existing slide you've already designed? Right-click the existing slide, and choose Duplicate to create a new slide just like it. (Consider this cloning without the science.)

To move slides to different positions in the Slides list (that is, to change the order in your Keynote presentation), drag each slide thumbnail to the desired spot in the list.

Working with Text, Shapes and Graphics Boxes

All the text, shapes, and graphics placeholders on your first Title slide appear within boxes. Keynote uses these boxes to manipulate text, shapes, and graphics. You can resize a box (and its contents) by clicking the box and dragging one of the handles that appear around the edges of the box. (The cursor changes into a double-sided arrow when you're "in the zone.") Side selection handles drag only the edge of the frame, whereas corner selection handles resize both adjoining edges of the selection frame.

TIP To keep the proportions of a box constrained, hold down Shift while dragging its corner handles.

Boxes make it easy to move text, shapes and graphics together (as a single unit) to another location within the Layout pane. Click in the center of the box, and drag the box to the desired spot. Keynote displays alignment lines to help you align the box with other elements around it (or with regular divisions of the slide, like horizontal center).

REMEMBER

To select a box, click it. To select text, shapes, or graphics within a box (see the next section), double-click the box.

When you're resizing a photo in a box, hold down the Shift key while you drag the frame. Doing so tells Keynote to preserve the image's aspect ratio so that the vertical and horizontal proportions remain fixed. You can also flip images horizontally or vertically from the Arrange menu. To delete an image, just click it to select it and press the Delete key.

Adding and Editing Slide Text

As with Pages, which also uses boxes for text layout, you can add or edit text in Keynote with ease. For example, say you have a box with the placeholder text `Double-click to edit`. Just double-click in that box, and the placeholder text disappears, leaving the field ready to accept new text. Any new text you type appears at the blinking cursor within the box.

Here are some additional ways to work with slide text:

» **Add a new text box:** Just click the Text button in the Keynote toolbar, and click one of the sample styles that appear. Your new text box appears in the middle of the slide.

» **Edit existing text:** Click — using the bar-shaped cursor to select just the right spot in the text — and drag the insertion cursor across the characters to highlight them. Type the replacement text, and Keynote obligingly replaces the old text with the new text you type.

» **Delete text:** Click and drag across the characters to highlight them; then press Delete. You can also delete an entire box and all its contents: Right-click the offending box, and choose Delete from the menu that appears.

When a box's contents are just right, and you're finished entering or editing text, click anywhere outside the box to hide it from view. You can always click the text again to display the box later.

Formatting Slide Text for the Perfect Look

Keynote doesn't restrict you to the default fonts for the theme you chose. It's easy to format the text in your slides — a different font family, font color, text alignment, and text attributes (such as bolding and italicizing) — on the fly.

Select the desired text by double-clicking a box and dragging the text cursor to highlight the characters. Now apply your formatting using one of two methods:

» **The Inspector:** The font controls in the Inspector work in one of two ways: After you've selected text, either click a font control to display a pop-up menu, or click a button to immediately perform an action. Opening the Font Size pop-up menu, for example, displays a range of sizes for the selected text. With a single click of the B (bold) button, add the bold attribute to the highlighted characters. To create bullets and lists, click the Text tab at the top of the Inspector.

» **The Format menu:** Once you've selected text, the controls on the Keynote Format menu generally mirror those in the Inspector. To change the alignment from the Format menu, click Format and hover the cursor over the Text menu item. To change text attributes, click Format and hover the cursor over the Font menu.

Using Presenter's Notes in Your Project

As mentioned earlier, you can type presenter's text notes in the Notes pane. I use them to display related topic points while presenting my slideshow. However, you can also print the notes for a project along with the slides, so presenter's notes are also great for including reminders and To Do points for your audience in handouts.

To type your notes, just click within the Notes pane. If that pane is hidden, choose View⇨Show Presenter Notes, or click the View button at the far left of the Keynote toolbar and choose Show Presenter Notes. When you're finished adding notes, click in the Slides list or the Layout pane to return to editing mode.

TIP To display your notes while practicing, use the Keynote Rehearsal feature. Click the Play menu at the top of the Keynote window, choose Rehearse Slideshow, click the Tools icon at the top right, and select the Presenter Notes check box to enable it. Now you can scroll through the notes while the slideshow runs! (More on slideshows in a second.)

Every Good Presentation Needs Media

Adding audio, photos, and movies to a slide is drag-and-drop easy in Keynote! Simply drag an image, audio, or movie file from a Finder window, and place it at the spot you want within your document.

You can also use the Media Browser. To do so, follow these steps:

1. **Click the Media button on the toolbar, and then click the Photos, Music, or Movies tab to select the desired type.**

   Keynote displays the contents of your various media collections (such as your Photos, iMovie, and iTunes libraries).

2. **When you find the file you want to add, drag it to the spot you want in the document.**

   Figure 18-3 shows the Media Browser in action.
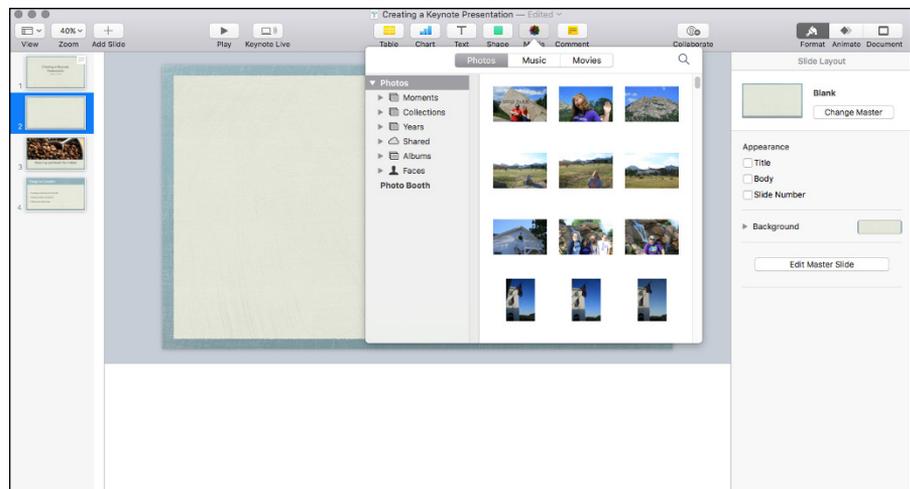
FIGURE 18-3: It's not just photos. You can add audio and movie clips to a slide too!

TIP Having trouble finding that specific photo or movie? Click the Search icon (which looks like a magnifying glass) at the top-right corner of the Media Browser, and you can specify a particular filename or keyword.

Adding a Background Shape

Text often stands out on a slide when it sits on top of a background shape. To add a shape (such as a rectangle or circle) as a background for your text, follow these steps:

1. **Click the insertion cursor in the location you want.**

2. **Click the Shape button on the Keynote toolbar, and choose a shape.**

   The shape appears in your document.

3. **Click the center of the shape, and drag it to a new spot.**

4. **As with image boxes, you can resize or move shapes. You can read about how to do just that in the earlier section "Working with Text, Shapes and Graphics Boxes."**

5. **When the shape is properly positioned and sized, select it, and choose Arrange ⇨ Send to Back.**

   You want to "send the shape to the back" so that any text you enter sits in front of the shape, not hidden behind it.

> **TIP** Of course, you're not limited to creating shapes and graphics within Keynote; consider using an application like Adobe Photoshop or Illustrator to create graphics that you can import into your slides! As mentioned earlier, you can easily drag and drop your new graphic into a slide from a Finder window.

Creating Your Keynote Slideshow

The heart of a Keynote presentation is the slideshow you build from the slides you've created. A Keynote slideshow is typically presented as a full-screen presentation, with slides appearing in linear order as they are sorted in the Slides list.

You run a Keynote slideshow simply by clicking the Play button on the toolbar or by choosing Play ⇨ Play Slideshow. You can advance to the next slide by clicking, or by pressing the right bracket key, which looks like this:].

Of course, other controls are available besides just the ones that advance to the next slide. Table 18-1 lists the key shortcuts you'll use most often during a slideshow.

TABLE 18-1   **Keynote Slideshow Shortcut Keys**

Key	Action
] (right bracket)	Next slide
[(left bracket)	Previous slide
Home	Jump to first slide
End	Jump to last slide
C	Show or hide the pointer
number	Jump to the corresponding slide in the Slides list
U	Scroll notes up
D	Scroll notes down
N	Show current slide number
H	Hide the slideshow and display the last application used (the presentation appears as a minimized icon on the Dock)
B	Pause the slideshow and display a black screen (press any key to resume the slideshow)
Esc	Quit

> **TIP**
>
> Keynote offers a number of settings you can tweak to fine-tune your slideshow. To display these settings, choose Keynote ⇨ Preferences, and click the Slideshow button in the Preferences window.

> **TIP**
>
> If you have an iPhone, iPad, or iPod touch handy, and you've installed the iOS version of Keynote on your device, choose Keynote ⇨ Preferences to display the Preferences window. Click the Remotes tab to link your device to your laptop and Keynote. Now you can use your handheld device as a remote during your slideshow. *Sweet!*

Printing Your Slides and Notes

I'll be honest: I don't print handouts for every presentation I give. However, if you're presenting a lengthy slideshow with plenty of information you want your audience to remember or refer to later, nothing beats handouts that include scaled-down images of your slides (and, optionally, your presenter's notes).

You're not limited to paper, though. You can also use Keynote to create an electronic PDF (Portable Document Format) file instead of a printed handout, which your audience members can download from your website. Or, if you're an educator with access to an interactive whiteboard (such as a SMART Board), you can use this cutting-edge technology with Keynote.

To print your slides and notes, follow these steps:

1. **Within Keynote, choose File ⇨ Print or press ⌘+P.**

   Keynote displays the Print sheet, shown in Figure 18-4. (Note that some printer-specific features may be different on your screen.) If necessary, expand the Print sheet to show all the settings by clicking the Show Details button at the bottom of the sheet.

2. **Click one of the following formats (each format displays a different set of Layout options):**

   - *Slide:* Print each slide on a separate page at full size. You can optionally choose to print the presenter notes for each slide as well.

   - *Grid:* Print multiple slides on a page at a reduced size. From the Slides per Page pop-up menu, specify how many slides Keynote should print on each page.

   - *Handout:* Print a handout with multiple slides per page (and, optionally, with presenter's notes). Again, you can choose how many slides appear on each page.

   - *Outline:* Print the contents of your Slides list in Outline view.

3. **Select the pages to print:**

   - *To print the entire document,* select the All radio button.

   - *To print a range of selected slides,* select the From radio button, and then enter the starting and ending pages.

4. **Select or deselect additional options from the Options section.**

5. **Click the Print button to send the job to your printer.**

Keynote offers a
wide range of
printing options
for your slides
and notes.
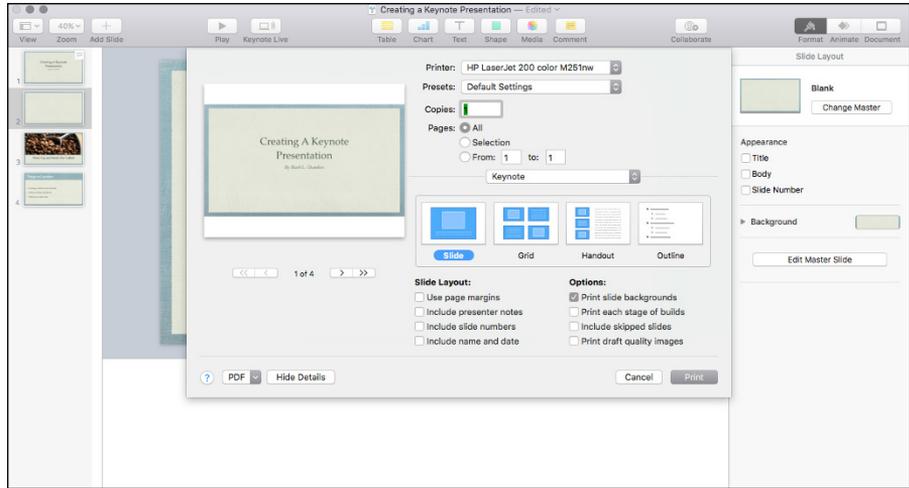
You can also send a copy of your finished presentation as an attachment within Mail or Messages, or you can provide others with a copy through Twitter or Facebook. Click Share⇨Send a Copy to explore your options.

Chapter **19**

When Good Mac Laptops Go Bad

wish you weren't reading this chapter.

Because you are, I can only surmise that you're having trouble with your MacBook, and that it needs fixing. (The other possibility — that you just like reading about solving computer problems — is more attractive but somewhat more problematic.)

Consider this chapter a crash course in the logical puzzle that is computer *troubleshooting:* the art of finding out What Needs Fixing. I tell you what to do when you just plain can't solve the problem yourself.

And then? I expose the BKS (*Best Kept Secret*) about your MacBook – the feature that many MacBook owners have never heard of, and would never imagine. I'll demonstrate how you can run Windows alongside macOS High Sierra . . . both cohabitating on your Mac laptop! (Mac purists need read no farther when you get to this section.)

One final word: You're going to encounter a lot of Tips and Mark's Maxims in this chapter. I learned all of them the hard way, so I recommend committing them to memory.

Repeat after Me: Yes, I Am a Tech!

Anyone can troubleshoot. Believe it, and put these common troubleshooting myths to rest:

MARK'S
MAXIMS

» **It takes a college degree in computer science to troubleshoot.** Tell that to my troubleshooting teen. She'll think it's a hoot, because she owns a MacBook, as well as Apple computers in the classroom, and she fixes minor problems all the time. You can follow all the steps in this chapter without any special training.

» **I'm to blame.** Ever heard of viruses? Failing hardware? Buggy software? Any of those things can cause the problem. It's Mark's Maxim time:

Don't beat yourself up! Your laptop *can* be fixed.™

» **I need to buy expensive utility software.** Nope. You can certainly invest in a commercial testing and repair utility if you like. My favorite is Drive Genius 5 from Prosoft Engineering (`www.prosofteng.com`), but a third-party utility isn't a requirement for troubleshooting. (I do, however, consider an antivirus application a must-have; you should have one already. Hint, hint.)

» **There's no hope if I can't fix it.** Sure, parts fail and computers crash, but your Apple Service Center can repair just about any problem. And (ahem) *if you backed up your laptop* (as I preach throughout this book), you'll keep that important data (even if a new hard drive or motherboard is in your future).

» **It takes forever.** Wait until you read the number one rule in the next section; the first step takes but 10 seconds and often solves the problem. Naturally, not all problems can be fixed so quickly. But if you follow the procedures in this chapter, you should fix your MacBook (or at least know that the problem requires outside help) in an afternoon.

With those myths banished, you can get down to business and start feeling better soon.

Step-by-Step Laptop Troubleshooting

In the following sections, I walk you through my should-be-patented Troubleshooting Tree, as well as the High Sierra built-in troubleshooting application, Disk Utility. I also introduce you to a number of keystrokes that can make your MacBook jump through hoops.

The number one rule: Reboot!

The simple fact is that rebooting your MacBook can often solve a number of problems. If you're encountering these types of strange behavior with your laptop, a reboot might be all you need:

» Intermittent problems communicating over a network

» A garbled screen, strange colors, or screwed-up fonts

» The swirling Beach Ball of Doom that won't go away after several minutes

» An application that locks up

» An external device that seems to disappear or can't be opened

To put it succinctly, here's a modest Mark's Maxim:

Always try a reboot before beginning to worry. *Always.*™

MARK'S
MAXIMS

If you're in the middle of a program, try to save all your open documents before you reboot. That might be impossible, but try to save what you can.

WHY IS REBOOTING SO DARNED EFFECTIVE?

Rebooting fixes problems because it resets *everything*. Your network connection, for example, might be acting up or might have timed out, and rebooting restores it. Hardware connections are reset when you reboot, which can "magically" bring recalcitrant external peripherals back to life. Rebooting also fixes problems due to brownouts or those notorious AC power flickerings you undoubtedly have noticed from time to time, which can even affect a laptop running on an AC adapter. Such interruptions in constant juice might not bother you or me (or your less-intelligent toaster), but they can play tricks on your laptop that rebooting can fix.

As your first (and best) option for shutting down, click the Apple menu and choose Shut Down. If you need to force a *locked* application (one that's not responding) to quit so that you can reboot, follow these steps to quash that locked application:

1. **Click the Apple (🍎) menu, and choose Force Quit.**

The dialog shown in Figure 19-1 appears. (Note that you can also press Option+⌘+Esc to display the dialog.)

2. **Click the offending application and then click the Force Quit button.**

FIGURE 19-1:
Force a
recalcitrant
application to
take off.

> **Force Quit Applications**
>
> If an app doesn't respond for a while, select its name and click Force Quit.
>
> - Grab
> - **iTunes**
> - Photos
> - Safari
> - System Preferences
> - Finder
>
> You can open this window by pressing Command-Option-Escape.   [Force Quit]

When you get everything to quit, you should be able to click the Apple menu and choose Shut Down (not Restart) without a problem.

If your MacBook simply won't shut down (or you can't get the offending applica-tion to quit), do what must be done:

1. **Press and hold your laptop's Power button until it shuts itself off.**

You have to wait about five seconds for your MacBook to turn itself off. If you're using a MacBook Pro with a Touch ID sensor, press and hold the Touch ID sensor for a count of 5 to 6 seconds instead.

2. **Wait about ten seconds.**

3. **Press the Power button again to restart the computer.**

After everything is back up, check whether the problem is still apparent. If you use your laptop for an hour or two and the problem doesn't reoccur, you likely fixed it!

Special keys that can come in handy

A number of keys have special powers over your MacBook. I'm not kidding! These keys affect how your road warrior starts up, and they can really come in handy while troubleshooting.

Using Safe mode

You can use Safe mode to force High Sierra to run a directory check of your boot drive and disable any login items that might be interfering with your system. Follow these steps:

1. **Use the Shut Down menu item from the Apple (🍎) menu to completely turn off your laptop.**

2. **Press the Power button to restart the computer.**

3. **Immediately after you hear the start-up tone, press and hold down the Shift key (and keep holding it down until you see the boot progress indicator).**

4. **After High Sierra completely boots, you're in Safe mode, and you can check the operation of your MacBook using Disk Utility (or a commercial utility application).**

5. **Once you're ready to return to normal operation, restart your MacBook again (this time without pressing the Shift key).**

Start-up keys

Table 19-1 provides the lowdown on start-up keys. Hold down the indicated key either *when you push the Power button* or *immediately after the screen goes blank during a restart.* (As I just mentioned, the Shift key shortcut to Safe mode is the exception; you should press it and hold it down after you hear the start-up tone.)

TABLE 19-1   **Start-Up Keys and Their Tricks**

Key	Effect on Your MacBook
C	Boots from the CD or DVD that's loaded in your optical drive (if you have one)
Media Eject	Ejects the CD or DVD in your optical drive (if you have one)
Option	Displays a system boot menu, allowing you to choose any bootable operating system on your laptop
Shift	Boots in Safe mode
T	Starts your MacBook in Target Disk mode (using your Thunderbolt or FireWire port)
⌘+V	Shows macOS Console messages
⌘+R	Boots from the High Sierra Recovery HD volume
⌘+S	Starts your Mac in Single User mode
⌘+Option+P+R	Resets Parameter RAM (PRAM)

Some of the keys and combinations in Table 19-1 might never be necessary for your machine, but an Apple technician might instruct you to use them.

All hail Disk Utility, the troubleshooter's friend

The High Sierra *Disk Utility* is a handy tool for troubleshooting and repairing your MacBook's drive. You can find it in the Utilities folder in Launchpad.

DANGER, WILL ROBINSON!

Many Disk Utility functions can actually *wipe your drives clean of data* instead of repairing them! These advanced functions are unlikely to help you with troubleshooting a problem with your existing volumes.

Remember: Don't use the following Disk Utility functions unless an Apple technician *tells* you to:

- Partitioning and erasing drives
- Adding or deleting APFS volumes
- Restoring files from disk images

Fire up Disk Utility to open the rather powerful-looking window shown in Figure 19-2.
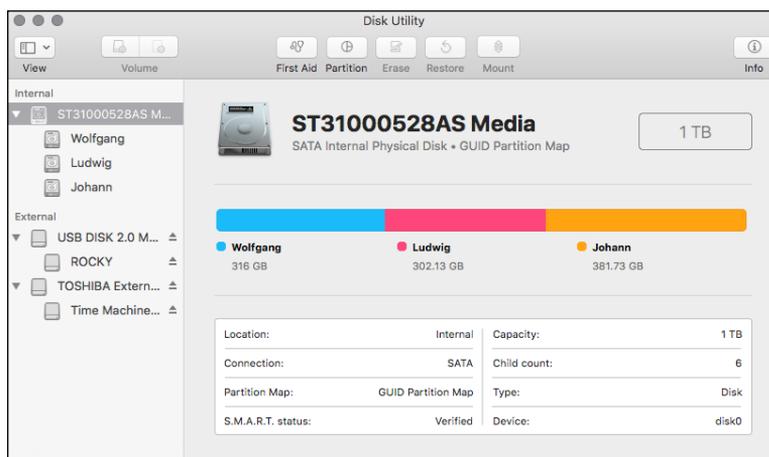
FIGURE 19-2:
The physician of drives: the High Sierra Disk Utility.

In the left column of the Disk Utility window, you can see

» The *physical* drives in your system (the actual hardware).

» The *volumes* (the data stored on the drives, which appears as a drive icon on your Desktop).

You can always tell a volume, because it's indented below the physical drive entry. (If you don't see physical drives and volumes, press ⌘+2 to show all devices.)

» Any CD or DVD loaded on your MacBook.

» USB or Thunderbolt external drives.

For example, referring to Figure 19-2, I have one internal drive (the ST310 entry), one USB 2.0 external hard drive (the Toshiba External entry), and one USB flash drive (The USB Disk entry). The internal drive has three volumes (Wolfgang, Ludwig, and Johann), the external Toshiba drive has one volume (Time Machine), and the USB flash drive has one volume (ROCKY).

The information at the bottom of the Disk Utility window is the specifications for the selected drive or volume. This info includes capacity and available space for a volume, or connection type and total capacity for a drive.

Repairing permissions and disks

Disk Utility can check the format and health of both drives and volumes (and correct any problems it finds) with the First Aid button.

**TECHNICAL
STUFF**

Using Disk Utility to repair your hard drive carries a couple of caveats:

>> **You may not be able to immediately repair problems on your boot drive
   or boot volume.** This limitation actually makes sense, because you're actually
   using that drive and volume right now.

   If First Aid finds a problem on your boot drive but reports it can't fix that error,
   boot your MacBook from the macOS Recovery HD volume. Reboot and then
   hold down the ⌘+R keyboard shortcut immediately after you hear the
   start-up chord. Then run Disk Utility from the window that appears. Because
   you've booted your laptop from the Recovery HD volume, you can repair
   those problems with your start-up drive. (You should be able to select your
   boot hard drive or volume and click the First Aid button.)

>> **You can't repair CDs and DVDs.** CDs and DVDs are read-only media and thus
   can't be repaired (at least by Disk Utility).

   If your MacBook is having trouble reading a CD or DVD, wipe the disc with a
   soft cloth to remove dust, oil, and fingerprints. Should that fail, invest in a
   disc-cleaning contrivance of some sort.

To check and repair problems using First Aid, follow these steps:

1. **Click the Go menu and choose Utilities, then double-click the Disk
   Utility icon.**

2. **In the list at the left side of the Disk Utility window, click the drive or
   volume you want to check.**

3. **Click the First Aid button, and click the Run button that appears.**

4. **Click Done to exit First Aid.**

   If changes were made (or if you had to boot from the macOS Recovery HD volume), Disk Utility may prompt you to reboot after repairs have been made.

Figure 19-3 illustrates the details you'll see if you click Show Details to expand the display. Although some of the messages might include cryptic Linux details, you can still tell from the figure that the operation is successful (and you get that snazzy green check mark). All is well!

FIGURE 19-3: First Aid reports that this drive is error-free.

Mark's MacBook Troubleshooting Tree

As hip-hop artists say, "All right, kick it." And that's just what my MacBook Troubleshooting Tree is here for. If rebooting your laptop didn't solve the problem, follow these steps in order until you either find the solution or run out of steps (more on that in the next section).

If you're not sure quite what's producing the error, this process is designed to be *linear* — followed in order — but if you already know that you're having a problem with one specific peripheral or one specific application, feel free to jump to the steps that concern only hardware or software.

Step 1: Investigate recent changes

The first step is a simple one that many novice MacBook owners forget. Simply retrace your steps and consider what changes you made to your system recently. Here are the most common culprits:

» **Did you just finish installing a new application?** Try uninstalling it by removing the application directory and any support files it might have added to your system. (And keep your applications current with the most recent patches and updates from the developer's website.)

» **Did you just apply an update or patch to an application?** Uninstall the application, and reinstall it without applying the patch. If your MacBook suddenly works again, check the developer's website, or contact the application's technical support department to report the problem.

» **Did you just update High Sierra?** Updating macOS can introduce problems in your applications that depend on specific routines and system files. Contact the developer of the application, and look for updated patches that bring your software in line with the latest High Sierra updates.

» **Did you just make a change in System Preferences?** Return the options you changed to their original settings; then consult Chapter 5 for information on what might have gone wrong. (If the setting in question isn't listed in Chapter 5, consider searching the macOS online Help or the Apple support website for more clues.)

» **Did you just connect (or reconnect) an external device?** Try unplugging the device and then rebooting to see if the problem disappears. Remember that some peripherals need certain application software to run; without those applications installed, they don't work correctly. Check the device's manual or visit the company's website to search for software you might need.

If you didn't make any significant changes to your system before you encountered the problem, proceed to the next step.

Step 2: Run Disk Utility

The next step is to run Disk Utility and use First Aid. The earlier section "Repairing permissions and disks" shows how to complete this task on your High Sierra boot drive.

Step 3: Check your cables

Cables can work themselves loose, and sometimes they fail. Check all the cables to your external devices — make sure that they're snug — and verify that

everything's plugged in and turned on. (Oh, and don't forget to check for crimps in your cables or even Fluffy's teeth marks.)

TIP

If a Thunderbolt or USB device acts up, swap cables around to find whether you have a bad one. A faulty cable can have you pulling your hair out in no time.

Step 4: Check your Trash

Check the contents of the Trash to see whether you recently deleted files or folders by accident. Click the Trash icon in the Dock to display the contents. If you deleted something by mistake, right-click the item in the Trash and choose Put Back.

I know this one from personal experience. A slight miscalculation while selecting files to delete made an application freeze every time I launched it.

Step 5: Check your Internet and network connections

Now that always-on DSL and cable modem connections to the Internet are the norm, don't forget an obvious problem: Your laptop can't reach the Internet if your ISP is down or your network is no longer working!

When you're at home, a quick visual check of your DSL or cable modem usually indicates whether a connection problem exists between your modem and your ISP. For example, my modem has a set of informative activity lights that I always glance at first. However, if your laptop is connected to the Internet through a larger home or office network, and you can't check the modem visually, you can check your Internet connection by pinging `www.apple.com`:

1. **Click the Spotlight icon at the right side of the Finder menu bar, and type Network Utility in the search box.**

2. **Click the Network Utility entry.**

3. **Click the Ping button.**

4. **Enter** `www.apple.com` **in the Address box.**

5. **Click Ping.**

   You should see successful ping messages. If you don't get a successful ping *and* you can still reach other computers on your network, your cable modem, DSL modem, or ISP is likely experiencing problems. If you can't reach your network at all, the problem lies in your network hardware or configuration. (In an office environment, your network system administrator will be happy to help you at this point, especially if you're blood relatives.)

Step 6: Think virus

If you've made it to this point, it's time to run a full virus scan. Make sure that your antivirus application has the latest updated data files. My antivirus application of choice is Mac Internet Security X9 from Intego (`www.intego.com`). I can also recommend the excellent ClamXAV (`www.clamxav.com`).

> **TIP**
>
> If a virus is detected, and your antivirus application can't remove it, try *quarantining* it instead. This basically disables the virus-ridden application and prevents it from infecting other files.

Step 7: Check your login items

High Sierra might encounter problems with applications you've marked as login items in System Preferences. Your account's login items are applications that run automatically every time you log in to your MacBook. If one of these login items is to blame for your laptop's problems, your MacBook will encounter some type of trouble every time you log in. (This is usually the case when you receive an application error message each time you start the computer.)

To check the boot process, it's time to use that fancy Safe mode I discussed earlier in the chapter. Restart your MacBook, and press and hold down the Shift key after you hear the start-up tone. Login items are disabled when you're running in Safe mode, so if your laptop starts up without any errors, you know that one or more login items are probably to blame.

If your computer starts without problems in Safe mode, the next step is to check your login items. Restart your MacBook, and make a list of each of the login items displayed for future reference. Then follow this procedure for each item in the login list:

1. **Open System Preferences, click Users & Groups, and then click the Login Items button.**

2. **Select the first item from the list, and remove it.**

   You can delete the selected item by clicking the Delete button, which bears a minus sign. (If a recurring error message mentions a specific application that appears in the Login Items list, that's your likely culprit, so start by deleting that item.)

3. **Restart your MacBook.**

4. **If your laptop is still misbehaving, repeat Steps 2 and 3, and disable a new login item.**

5. **When your MacBook starts up normally, you have discovered the perpetrator. You'll likely need to delete that application and reinstall it.**

Don't forget to add back each of the *working* login items to the Login Items list using the Add button (which carries a plus sign)!

Step 8: Turn off your screen saver

The next step is to turn off your screen saver. This remedy is a long shot, but it isn't unheard of to discover that a faulty, bug-ridden screen saver has locked up your MacBook. If you are running a screen saver other than one from Apple, and your computer never wakes up from Sleep mode or hangs while displaying the screen saver, you've found your prime suspect.

Reboot your MacBook (if necessary), open System Preferences, click Desktop & Screen Saver, and click the Screen Saver button. Then do one of the following:

» Switch to an Apple screen saver.

» Click the Start After pop-up menu and choose Never.

Step 9: Run System Information

Ouch. You've reached the final step, and you still haven't uncovered the culprit. At this point, you've narrowed the possibilities to a serious problem, such as bad hardware or corrupted files in your macOS System folder. Fortunately, High Sierra provides the System Information utility, which displays real-time information on the hardware in your system. To start System Information, follow these steps:

1. **Click the Apple menu and choose About This Mac.**

2. **Click the System Report button.**

3. **Click each of the Hardware categories in turn, double-checking to make sure everything looks okay.**

REMEMBER You don't have to understand all the technical hieroglyphics. If a Hardware category doesn't return what you expect or displays an error message, though, that's suspicious. (If your MacBook doesn't have a specific type of hardware onboard — for example, an optical drive — you won't see information in that category.)

TIP The Diagnostics category shows whether your MacBook passed the Power On self-test.

Okay, I Kicked It, and It Still Won't Work

Don't worry, friendly reader. Just because you've reached the end of my MacBook Troubleshooting Tree doesn't mean you're out of luck. In the following sections, I discuss the online help available in macOS and on the Apple website, as well as local help in your own town.

Local service, at your service

In case you need to take in your MacBook for service, an Apple Store or Apple Authorized Service Provider is probably in your area. To find the closest service, launch Safari and visit the Apple website Support page (`www.apple.com/support`), then click the Apple Repair link at the bottom of the page.

Always call your Apple service provider before you lug your (albeit lightweight) laptop all the way to the shop. Make sure you know your MacBook's serial number (which you can display in System Information) and which version of macOS you're using.

The macOS Help Center

Although most macOS owners tend to blow off the Help Center when the troubleshooting gets tough, that's never the best course of action. Always take a few moments to search the contents of the Help Center by choosing Finder ⇨ Help to see whether any mention is made of the problem you've encountered.

Apple Help Online

If you haven't visited the Apple MacBook Support site yet, run, don't walk, to `www.apple.com/support/macbook`. There you will find

>> **The latest patches, updates, and tutorials** for the MacBook line

>> **MacBook and macOS discussion boards,** moderated by Apple

>> **Tools** for ordering spare parts, checking on your remaining warranty coverage, and searching the Apple knowledge base

>> **Do-it-yourself instructions** (PDF files) that you can follow to repair or upgrade your MacBook

And Now. . . Windows?

Okay, I know this is a chapter about what to do if your MacBook misbehaves – so why am I suddenly talking about Windows? That's a touch of nerd humor on my part, because many die-hard Mac fanatics would consider the idea of running Windows on your MacBook a *big* step backwards! They'd say, "Mark, why introduce that misbegotten operating system onto a perfectly good MacBook?"

Well, ignore those naysayers! There's no need to be furtive about your Windows yearnings. Although I'm an enthusiastic Mac owner, I also own two smooth-running PCs, and all my computers cohabitate quite well in my office. I use Windows 10 every day for a number of tasks, and some PC software is simply not available for Macs to run. So, dear reader, what if I told you that both macOS High Sierra and Windows 10 can live together in peace and harmony, *all on the same hard drive inside your Mac?*

In this chapter, I discuss the wonder that is Boot Camp — the free utility included with High Sierra that allows you to install and run Windows on your MacBook's hard drive. I explain how to switch between the two operating systems with a simple reboot.

Hold on to your hat, MacBook owners: You're about to take a wild trip that proves you can indeed have the best of both worlds.

Figuring Out How Boot Camp Works

First, a bit of technobabble, but I promise it'll be over soon, and I'll try to keep things from getting too boring. In years past, you may have heard that a Mac computer couldn't run Windows out of the box (without expensive hardware or software), and that Mac software was off-limits to PCs . . . and you'd have heard correctly, at least for all but the recent history of the Macintosh computer. The incompatibility was a result of Apple using a series of Motorola processors (CPUs) that didn't speak the same language as the Intel CPUs used in PCs. Consider a person speaking Korean trying to read a book in Arabic, and you get the general idea.

Then Apple began using Intel processors in Macs, and the ground rules changed. Apple hardware was suddenly compatible with Windows. All that was needed was a bridge to help keep both OSes separate on the same hard drive — and Apple developed Boot Camp. Of course, that bridge works only in one direction because you still can't run Macintosh software on a PC. (Go figure.)

Boot Camp accomplishes this magic by creating a separate Windows partition on your MacBook's hard drive. The partition holds all your Windows data, including the OS, your Windows program files, and the documents you create while running Windows. Consider this partition as completely separate from your macOS data even though both partitions exist on the same physical internal drive.

Think of it this way: When you reboot your MacBook using Boot Camp, it's similar to changing the station on an FM radio. The hardware is the same, but you switch to a different station (Windows instead of macOS), and you're listening to differ-ent music (country instead of rock). How's *that* for a comparison, Dr. Science?

Naturally, you need free space on your MacBook's hard drive to install Boot Camp. Apple recommends having 15GB of free space, but I'd bump that up to 40GB.

WARNING

When your MacBook is running Windows, it's just as susceptible to virus and spy-ware attacks as any other Windows PC. Make sure to invest in quality antivirus and antispyware protection for your Windows side!

WARNING

Remember what I said about Boot Camp modifying your hard drive? **Do not install Boot Camp without backing up your existing data on your MacBook's internal drive!** I've personally never had a problem with Boot Camp, but there's always a first time. In case of catastrophe, you can always use your Time Machine backup to restore your MacBook's operating system and all your data — yes, that's yet *another* good reason for you to pick up an external drive and use Time Machine on your Mac laptop. Back up, brothers and sisters, back up!

Configuring Boot Camp

Installing Boot Camp is surprisingly easy and takes far less time than it takes to install Windows afterward. Follow these steps:

1. **Launch the Boot Camp Assistant.**

    You can find the Assistant in your Utilities folder, which is in your Applications folder. I use Spotlight to reach it quickly: Click the Spotlight icon in the Finder menu bar and type Boot Camp into the Search box, then click the Boot Camp Assistant entry in the list.

    TIP

    Click the Open Boot Camp Help button on the Introduction screen for addi-tional tips and documentation that cover the Boot Camp setup process. (You can also print any part of the Boot Camp Help, which makes handy documen-tation in case you have questions about running Windows that aren't covered in this section.)

2. **Click Continue on the Introduction screen.**

The Boot Camp Assistant Support Software screen appears.

3. **Make sure the Download the Latest Windows Support Software from Apple check box is selected, and click Continue.**

Boot Camp Assistant can copy these drivers to a blank CD or DVD or an external USB flash drive. I think an optical disc (which you can hang on to in case you need it later) is the easiest choice, but current MacBook models no longer have an optical drive, so the USB flash drive may be a better choice. You load this software after your Windows installation is complete, and it provides all the drivers that Windows needs for your Mac's hardware.

4. **Choose the size of your Windows partition, and click Create.**

Again, you can devote more hard drive space to your Windows partition than the amount recommended by the assistant, but don't forget this important fact: What you reserve for use in Windows cannot be used by macOS High Sierra! Therefore, I always suggest a conservative amount. (In other words, don't devote 300GB of your 500GB drive to your Windows partition because you'll cramp your style in macOS.)

5. **Reboot if required.**

You may be prompted to launch the assistant again.

6. **Click Start the Windows Installer, and then click Continue.**

From this point on, you're running the Windows installation program, just as you would be if you were using a PC. (Well, actually you *are* using a PC now – temporarily, anyway.) Follow the onscreen prompts, which differ for each version of Windows.

When prompted by the Windows Installer to choose the partition to format, choose the partition named BOOTCAMP. Formatting any other partition likely results in the loss of all your macOS files and data. (Again, this is why you should **always** back up your existing system before putting Boot Camp to work.)

After Windows has been installed, load the disc or USB flash drive you created with the drivers and support software. Windows should automatically run the Boot Camp driver installation program for you. After the drivers are in place, you're ready to do the Microsoft dance.

Are you moving your stuff from Windows (running on your old PC) to . . . well, Windows (running on your Mac)? Brings an entirely new meaning to the term *switcher*, doesn't it? If so, the files and folders on your existing PC can be copied directly to Windows running on your Mac by using the Windows Easy Transfer utility.

USING THE BOOT CAMP CONTROL PANEL

Besides the capability to restart your Mac in macOS High Sierra, the Windows Boot Camp notification icon is also your gateway to a number of other features. Right-click the icon, and choose Boot Camp Control Panel from the contextual menu to display the settings; these vary depending on the version of Windows you're using and the type of Mac you're running. On the Control Panel, you will find these tabs:

- **Startup Disk tab:** From this tab, which is essentially a Windows version of High Sierra's Startup Disk pane in System Preferences, you can choose to reboot in macOS High Sierra by clicking the Mac macOS folder and then clicking Restart.

- **Power tab:** Specify whether your Mac should restart automatically after a power failure.

If you make any changes in the Boot Camp Control Panel, click OK to save your changes and return to Windows.

Switching to Windows

Here are three methods for switching back and forth between your macOS partition and your Windows partition:

» **From macOS High Sierra:** To restart your Mac in Windows, click System Preferences on the Dock and then click the Startup Disk icon. Click the Windows partition you created in the list to select it. (The folder icon bears the Windows logo, and it's labeled Windows as well.) Click Restart, and then click Restart again when asked for confirmation. Your Mac reboots and loads Windows, and it continues to run Windows when started or rebooted until you follow one of the next two methods of returning to macOS.

» **From Windows:** Right-click the Boot Camp icon in the notification area at the right side of your Windows taskbar — it looks like a slanted square — and choose Restart in macOS from the menu that appears. Again, you'll be asked to confirm your choice. After you click OK, your MacBook reboots and returns to High Sierra.

» **During the boot process:** Need a temporary fix from your other OS? You can reboot from either High Sierra or Windows and hold down the Option key when you see the Apple logo appear. Your MacBook displays a nifty row of icons, each representing a bootable OS that you can use. To boot macOS, click the High Sierra partition icon. To choose Windows, click the Windows partition icon. Note that when you turn on or reboot your Mac, it returns to the OS you last selected in the System Preferences Startup Disk pane.

Chapter **20**

Adding New Stuff to Your Laptop

"No laptop is an island." Somebody famous wrote that, I'm sure.

Without getting too philosophical — or invoking the all-powerful Internet yet again — the old saying really does make sense. All computer owners usually add at least one *peripheral* (external device), such as a printer, trackball, backup drive, or scanner. I talk about the ports on your MacBook in Chapter 1. These holes aren't there just to add visual interest to the sides of your treasured laptop. I cover your ports (and what you can plug into them) in detail in this chapter.

But what about the stuff *inside* your road warrior? That's where things get both interesting and scary at the same time. In this chapter, I describe what you can add to the innards of your computer, as well as how to get inside there if you work up the courage to go exploring.

More Memory Will Help

Every computer benefits from more memory — and no, there's no *however* stuck on the end of that statement! For once, I'm happy to report, there's *no* exception, no matter what type of computer you own. Hard as it is to believe, just keep in mind this Mark's Maxim:

More memory helps. Always.™

Period. End of statement. No matter what type of computer you own, how old it is, or what operating system you use, adding more memory to your system (to the maximum it supports) significantly improves the performance of your operating system (and practically every application you run).

Memory maximizes the power of your computer. The more memory you have, the less data your laptop has to temporarily store on its drive. Without getting into virtual memory and other techno-junk, just consider that extra memory as extra elbow room for your applications and documents. Believe me, both macOS High Sierra and Windows 10 efficiently use every kilobyte of memory you can provide.

If your MacBook is already stuffed full with the maximum amount of memory it can hold, you can skip this section.

Unfortunately, owners of all the latest MacBook models can skip this section as well, because these models can't be upgraded. Because these laptops are sealed units — literally — you must visit your local Apple hardware technician if your laptop's memory malfunctions and needs replacing. The same is true for the battery in all current MacBook models.

If you're using an older MacBook with upgradeable memory, read on.

Figuring out how much memory you have

To see how much memory your computer has, click the Apple menu (<kbd></kbd>) and choose About This Mac. In the dialog that appears, click the Memory toolbar button.

Click the Memory Upgrade Instructions link at the bottom of the dialog. macOS High Sierra automatically opens a Safari browser window with online instructions on how to upgrade the RAM in your specific MacBook model. If you're confident about your technical skills, you can use this documentation as a guide to removing and installing memory modules, along with the step-by-step procedure described in the next section.

While you're within the confines of the About This Mac dialog, click the Overview toolbar button to display both the machine speed (processor speed) and the common identifier that Apple uses to refer to your specific model. For example, my older MacBook Air has a 1.8 GHz Intel Core i5 processor, and it's identified as a mid-2012 model. Write down these two figures. We're starting a handy list that will help you when you order your memory!

How you plan memory upgrades depends on how much memory you want. Most MacBook owners simply opt to install the maximum amount of memory possible. So if your 4GB 13-inch non-Retina MacBook Pro is upgradeable to 8GB and it currently uses the two default 2GB modules supplied by Apple, you can add 4GB of additional RAM by replacing the existing memory modules with two 4GB memory modules. At the time of this writing, a 4GB memory module should set you back less than $40.

I should note that 4GB of memory is certainly acceptable for running the applications bundled with High Sierra. With that said, these applications will run significantly faster with 8GB or 16GB instead!

If your primary applications include video editing, game playing, audio production, or image editing, you can use all the memory your laptop can hold.

In the past, Apple's prices for upgrade RAM were, well, *outrageous* (as in, "Boy, Howdy, I can't afford that!"). Recently, however, Apple's prices have become far more competitive. If you're interested in comparison shopping, I can heartily recommend any of these online sources that cater to Mac owners:

» **MacMall:** www.macmall.com

» **CDW:** www.cdw.com/content/brands/apple/default.aspx

» **Newegg:** www.newegg.com

Installing memory modules

I'm happy to report that adding extra memory to your older laptop is one of the easiest internal upgrades you can perform. Therefore, I recommend that you add memory yourself unless you simply don't want to mess with your laptop's internal organs. Your local Apple service specialist will be happy to install new RAM modules for you (for a price).

CLIMBING INSIDE YOUR MAC LAPTOP

This section on laptop upgrades is short for a reason: Laptops simply aren't *meant* to be disassembled. As I mention several times in this book, internal expansion in older MacBooks is severely limited. Basically, you can add extra memory and swap out your drive. Adding memory (on a MacBook that allows it) is easy, but swapping out your hard drive requires more work and considerable preparation. And you can't make *any* internal modifications to the current crop of MacBook models, which are sealed units. (Breaking in will likely void your warranty.)

Therefore, I always recommend that you seek professional servicing when you need to repair your laptop. For example, if your laptop's LED screen is cracked or broken, do *not* try to fix it yourself! Sure, you might see a number of used LED panels on eBay, but these parts aren't designed to be easily swapped out, like a desktop computer's video card. Besides, if you make a mistake when trying to fix something deep in the bowels of your laptop, you might end up causing more damage than you repair.

The moral of the story? Let your local Apple dealer's service technicians perform major surgery on your laptop, and buy an AppleCare Protection Plan that can cover your laptop like a blanket for up to three years!

💡 **TIP**

If you have a knowledgeable friend or family member who can help you install your hardware, buy that individual the proverbial NSD (short for *Nice Steak Dinner*) and enlist him or her in your cause. Even if you still do the work yourself, it's always better to have a second pair of experienced eyes watching, especially if you're a little nervous.

To add memory modules to an older MacBook model, follow these steps:

1. **Get ready to operate.**

   a. *Spread a clean towel on a stable work surface, such as your kitchen table.*

      The towel helps protect your screen from scratches.

   b. *Find a small Phillips screwdriver. (Some new models use a "star" screwdriver, so take a second to make sure you're using the right tool!)*

   c. *Shut down your laptop, and wait at least ten minutes for it to cool down.*

   d. *Unplug all cables from the computer.*

2. **Close the computer, and flip it over on top of the towel.**

3. Ground thyself!

Check out the nearby "Let's get grounded!" sidebar.

4. Remove the screws and bottom cover.

Depending on the model, you may have to remove up to ten screws before you can put aside the cover. Note that some screws may be longer than others. If so, they must be replaced in the same locations. Place the screws in a handy plastic bowl for safekeeping. Tah-dah! That wasn't much of a challenge, was it? Here's your chance to gaze with rapt fascination at a portion of the bare innards of your favorite computer.

5. Locate the memory modules in your MacBook's svelte chassis.

6. If you're replacing an existing memory module, remove it.

To remove a memory module, gently spread the two tabs at the ends of the socket, as shown in Figure 20-1. Then lift and slide the module away from the socket.

TIP

Save the old module in the static-free packaging that held the new module. Your old RAM (which you can now sell on eBay) will be protected from static electricity.

7. Position the new module in the socket.

a. Line up the module's gold connectors toward the socket at a 25-degree angle.

b. Line up the notch in the module with the matching spacer in the socket.

See what I mean in Figure 20-2.

8. Press gently but firmly on both ends of the module until the module's tabs click into place on both ends of the socket.

Figure 20-3 shows in which direction you should press on the module. If the module doesn't seem to fit, make sure once again that the notch on the module connector lines up with the spacer in the socket. Never attempt to make it fit through sheer force!

9. Replace the bottom covers and screws.

To replace the bottom cover, just reverse the steps at the beginning of this list. (It's rather like changing the oil in my Dad's 1970 Ford pickup truck.)

FIGURE 20-1:
Remove a memory module like a pro.
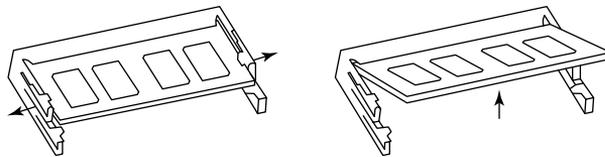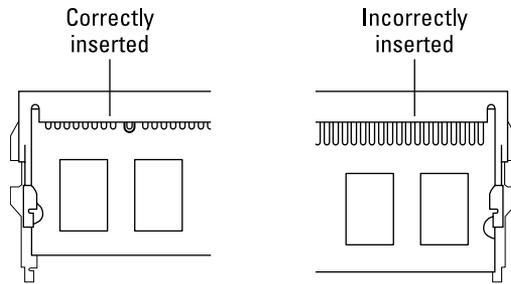
FIGURE 20-2:
Prepare to install
the new module.

Correctly inserted   Incorrectly inserted
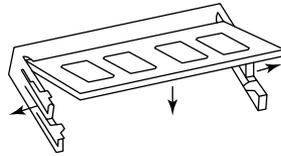
FIGURE 20-3:
Press the new
RAM module
into place
until it locks.

Congratulations! You've done it. You're now a MacBook Pro memory guru! To verify that all is well with your road warrior, boot the computer, click the Apple menu, choose About This Mac, and then click the Memory toolbar button. Your laptop should report the additional memory.

LET'S GET GROUNDED!

Follow one cardinal rule when the unguarded insides of *any* computer are in easy reach: *Always ground yourself before you touch anything!* Your body can carry enough static electricity to damage the circuitry and chips that make up the brains of your older MacBook, and touching those parts without grounding yourself is an invitation to disaster.

Grounding yourself is easy: Just touch a conductive metal surface (preferably steel) around your workplace for a few seconds before you dig in. (Don't use something inside your laptop; use a metal surface outside your MacBook's case.) After you ground yourself, you can safely handle both your laptop's internal components and any new hardware components you might be installing (such as memory modules or a hard drive).

If you walk anywhere in the room — hunting for a screwdriver, perhaps, or taking a sip of liquid reinforcement that you've stashed a comfortable distance away — you *must* ground yourself again before you get back to work. *Remember:* You can pick up a static charge by simply walking.

Considering a Hard Drive Upgrade?

Asking whether you can upgrade your hard drive is a trick question. Yes, you certainly can upgrade your hard drive. But before you start cruisin' the Internet for a 2TB monster, I have two suggestions:

>> Don't upgrade your internal hard drive yourself.

>> Be sure you *really* need a hard drive upgrade.

Apple's pretty generous when configuring drive storage for its base systems. Current models run with anywhere from a 128GB solid-state drive to a 1TB solid-state drive.

Most folks simply don't need more than 256GB or 500GB of drive space (even with Windows loaded in a separate partition for use with Boot Camp, which I discuss in Chapter 19). You're likely to find that you still have plenty of elbow room on your drive for a typical family's needs unless you're heavily into

>> Digital video (DV)

>> Cutting-edge video games

>> Tons of digital audio or digital photos

TIP If you're short on drive space, clean up your existing drive by deleting all the crud you don't need. This includes game and application demos, duplicate or work copies of images and documents, archived files you downloaded from the Internet, and the contents of the Trash. You can read how in Chapter 21.

REMEMBER If you decide that you *do* need to upgrade your MacBook's internal drive, I strongly recommend that you don't install your new hard drive yourself. Call on the services of an Apple technician to upgrade your drive!

Ponder your external options

If you find that you do need additional hard drive space, I recommend using an external drive. Use a high-speed Thunderbolt or USB port to connect a second hard drive the quick and easy way.

Most of today's external peripherals don't even require the driver software that Mac old-timers remember with such hatred. You simply plug in a Thunderbolt or USB device, and it works. You can move your external drive between different Macs with a minimum of fuss and bother. A typical external USB 3.0 hard drive that holds 1TB costs less than $80.

An external hard drive can do anything that your internal hard drive can do. You can boot from it, for example, or install a different version of macOS (great for beta testers like me). External optical drives work just the same as internal models; Apple sells an external USB SuperDrive optical drive for the MacBook for about $80.

Apple's AirPort Time Capsule unit is an external hard drive with a difference: It stores the huge Time Machine backup files created by the Macs running High Sierra on your network, and it uses a wireless connection to transfer data! (In fact, if you're thinking of adding a wireless base station to your wired network, your Time Capsule actually acts as a full AirPort Extreme Base Station, complete with USB port for connecting a USB printer.) At the time of this writing, Time Capsule is available with either a 2TB ($299) or 3TB ($399) drive.

One problem with external drives is that data typically transfers more slowly over a USB connection than via an internal drive. (A Thunderbolt external drive can actually deliver transfer speeds comparable to your internal drive, but at the time of this writing, it's somewhat more expensive than USB hardware.) That's why most Mac owners use their external drives to store lesser-used documents and applications or Time Machine backups. Their favorite applications and often-used documents are housed on the faster internal drive.

Putting a port to work

A MacBook can carry two kinds of high-speed ports, any of which is a good match for connecting any external device:

>> **USB 2.0/3.0/C:** The USB standard is popular because it's just as common in the PC world as it is in the Mac world. (Most PCs don't have Thunderbolt ports.) Your MacBook offers a USB-C port (which acts as a USB 3.0 port with the proper connector, but can also charge the laptop), while older models usually carry at least two USB 2.0 or 3.0 ports. Hardware manufacturers can make one USB device that works on both types of computers.

Naturally, USB-C and USB 3.0 offers faster data transfer speeds than the older USB 2.0 standard. So if your MacBook model sports USB 3.0 or USB-C ports, you should buy only USB 3.0 external hard drives, DVD recorders, or flash drives. 'Nuff said.

>> **Thunderbolt 1/2/3:** A Thunderbolt external drive offers much better performance than a USB 3.0 drive. Today's shiny Thunderbolt drives are getting cheaper every day. As with USB ports, the higher the version number the faster the port, so if your MacBook model comes with a Thunderbolt 2 or 3 port, invest in Thunderbolt 2 or 3 peripherals. The MacBook Air and MacBook Pro proudly sport at least one Thunderbolt port on the side, but the MacBook has only a USB-C port.

THE MACBOOK'S MYSTERY SLOT

If you're wondering what that inch-long slot on the side of your MacBook Air is for, you'll be pleased to hear that it's called an SDXC card slot. Why the glee? Well, this slot allows your laptop to directly accept the storage cards used by many of today's digital cameras and mass-storage video camcorders, without requiring an external device or a cable connection to your camera!

Some MacBook owners also use SDC/SDXC cards for storage, much like a USB flash drive. I find that a USB flash drive offers far more storage for less cost (as well as being compatible with other Macs and PCs). If you have a large number of SDC/SDXC cards collecting dust in your drawer, why not use them?

Connecting an external drive

With Thunderbolt or USB, you can install an external hard drive without opening your laptop's case. With your MacBook turned on, follow these steps:

1. **Connect the Thunderbolt or USB cable between the drive and your computer.**

2. **Plug the external drive into a convenient surge protector or uninterruptible power supply (if necessary).**

   Note that some external devices are *bus-powered,* meaning that they don't need a separate power supply. These devices draw their power directly from the port (but will also drain your MacBook's battery faster).

3. **Switch on the external drive.**

4. **If the drive is unformatted (or formatted for use in Windows), partition and format the external drive.**

   The drive comes with instructions or software for you to do this. (Don't worry; your external drive comes from the factory completely empty, and you won't damage anything by formatting it.) Partitioning divides the new drive into one or more volumes.

   TIP If the drive comes preformatted for use with a Windows PC, I strongly suggest reformatting it for use with macOS. Doing so will result in faster performance and more efficient use of space.

After the drive is formatted and partitioned, the volumes you've created immediately appear on the desktop. Shazam!

Gotta have internal

If you decide that you must upgrade your existing internal drive — or if your internal drive fails and needs to be replaced — you should always take your MacBook to an authorized Apple service center and allow the techs there to sell you a drive and make the swap. Here are four darned good reasons why:

>> **Warranty:** You're very likely to void your laptop's warranty by attempting a drive upgrade yourself.

>> **Selection:** If you're worried about choosing the proper drive, your friendly neighborhood Apple technician can order the correct type and size of drive for you.

>> **Difficulty:** Swapping a drive in your Mac laptop is a downright pain.

>> **Backup:** That very same Apple service technician can back up all the data on your existing drive, format the new drive, and move all your data to its new mansion, so you won't lose a single document. That will save you time and possible angst.

WARNING

Perhaps you won't be truly satisfied with your life until you upgrade your MacBook's internal drive. I'm sure you can find a magazine article that purports to show you how. I've seen many how-to articles on the web that claim to lead you down a rosy path to a hard drive upgrade. Here's my take on those savvy instructions: You're walking into a minefield using someone else's map, so you better have *complete* faith in your technical skills. (And a darn good backup.)

A List of Dreamy Laptop Add-Ons

The USB toys I cover in this section might add a cable or two to your collection at the side of your road warrior, but they're well worth the investment. And they can really revolutionize how you look at technologies such as television, digital audio, and computer gaming.

Game controllers

If you're ready to take a shot at the enemies — whether they be Nazi soldiers, chattering aliens, or the latest jet fighters — you'll likely find your keyboard and mouse somewhat lacking. (And if that enemy happens to be a friend of yours playing across the Internet, you'll be ruthlessly mocked while you fumble for the right key combination.) Instead, pick up either a USB joystick (for flying games) or a gamepad (for arcade and first-person shooting games).

Video controllers

For armchair directors, specialized USB digital video controllers make editing easier. The ShuttleXpress from Contour Design (`www.contourdesign.com`) provides a five-button jog control that can be configured to match any DV editor. For $60, you get the same type of editing controller as dedicated video-editing stations costing several thousand dollars.

Music hardware

Ready to put GarageBand to the test with your favorite version of "Chopsticks"? You'll need a USB piano keyboard. I recommend the Keystation 49 II from M-Audio (`www.m-audio.com`), which retails for a mere $100. It provides 49 keys and uses a USB connection.

IN THIS CHAPTER

» **Cleaning unnecessary stuff off your drive**

» **Backing up your data with Time Machine**

» **Fixing hard drive permission errors and catalog problems**

» **Automating tasks in High Sierra**

» **Updating OS X automatically**

Chapter **21**

Tackling the Housekeeping

Nothing runs better than a well-oiled machine, and your laptop is no exception. (Well, you actually *shouldn't* oil it, but you know what I mean.) With a little High Sierra maintenance, you can ensure that your MacBook performs as efficiently as possible (which translates into longer battery life and faster operation overall).

In this chapter, I demonstrate how you can make good use of every byte of storage space provided by your drive. I also show you how to back up and restore that hard drive to an external drive, using Time Machine.

The High Sierra Automator application is a great housekeeping tool. It allows your laptop to perform tasks automatically that used to require your attention. I show you how you can create Automator applications and set them up to run by themselves. (It sounds a little spooky, but you'll have a ball!)

And it's important to never forget about updating macOS itself. But then again, with Software Update configured correctly, you can live life free and easy, surfing the web and eating ice cream (or yogurt — your pick).

Cleaning Unseemly Data Deposits

Criminy! Where does all this stuff *come* from? Suddenly that spacious 512GB solid-state drive has only 19GB left, and you're starting to feel pinched.

Before you consider buying a new internal or external drive (which you can read about in Chapter 20), take the smart step: Sweep your laptop's drive clean of unnecessary and space-hogging software and temporary files.

Getting dirty (or, cleaning things the manual way)

If you're willing to dig into your data a little, you have no reason to buy additional software to help clean up your hard drive. All you really need is the willpower to announce, "I simply don't need this item any longer." (And, sometimes, that's tougher than it might seem.)

Unnecessary files and unneeded folders

Consider all the stuff you probably don't really need:

>> Game demos and shareware that you no longer play or use (or even remember)

>> Movie trailers and other QuickTime video files that have long since passed into obscurity

>> Temporary files that you created and promptly forgot about

>> Log files that chronicle application installations and errors

>> Zip and StuffIt archives that you downloaded and no longer covet

>> GarageBand loops and iMovie video clips you'll never use

>> iTunes music and videos that no longer appeal to your eye and ear

How hard is it to clean this stuff off your drive? Easier than you might think! Here are some ways to clear space on your laptop's internal drive:

>> You can easily delete files.

>> You can move seldom-used files and folders to external storage (such as a USB flash drive, an external hard drive, or a DVD).

- >> You can uninstall applications purchased from the App Store using Launchpad. From the Launchpad display, click and hold down the icon until it wiggles. If an X button appears on the icon, you can click the X to remove the application from your MacBook.

- >> You can get rid of an unnecessary application by deleting its application folder that was created during the installation process.

WARNING

Always check the application's README file and documentation for any special instructions before you manually delete any application's folder! If you created any documents in that folder that you want to keep, don't forget to move them before you trash the folder and its contents. In fact, some applications may come with their own uninstall utility, so checking the README file and documentation may save you unnecessary steps.

Removing an application or file from your drive usually involves two simple steps:

1. **Display the file or application folder in a Finder window.**

2. **Delete the file or folder with one of these steps:**

   - Drag the icon to the Trash.

   - Press ⌘+Delete.

   - Right-click the icon and choose Move to Trash.

   - Select the icon and click the Delete button on the Finder toolbar (if you added one).

   Truly, no big whoop.

REMEMBER

Don't forget to actually *empty* the Trash, or you'll wonder why you aren't regaining any drive space. (High Sierra stores the contents of the Trash until you manually empty the Trash, just in case you want to undelete something.) To get rid of that stuff permanently and reclaim the space, right-click the Trash icon in the Dock and choose Empty Trash from the pop-up menu that appears.

Associated files in other folders

Some applications install files in different locations across your drive. (Applications in this category include Microsoft Office and Photoshop.) How can you clear out these orphan files after you delete the application folder?

The process is a little more involved than deleting a single folder, but it's still no big whoop. Here's the procedure:

1. Click the Search text box in a Finder window.

You can read more about searching and the Finder window in Chapter 6.

2. Type the name of the application in the Search text box and choose Name Matches from the pop-up menu.

Figure 21-1 shows a typical search. I wanted to remove orphan files associated with Adobe Acrobat Reader. By searching for the word *Adobe,* I found both the application and its main folder. This trick displays files created in other folders that include your search word in their names, such as project files, PDF files, and the font files that appear in the system Fonts folder.
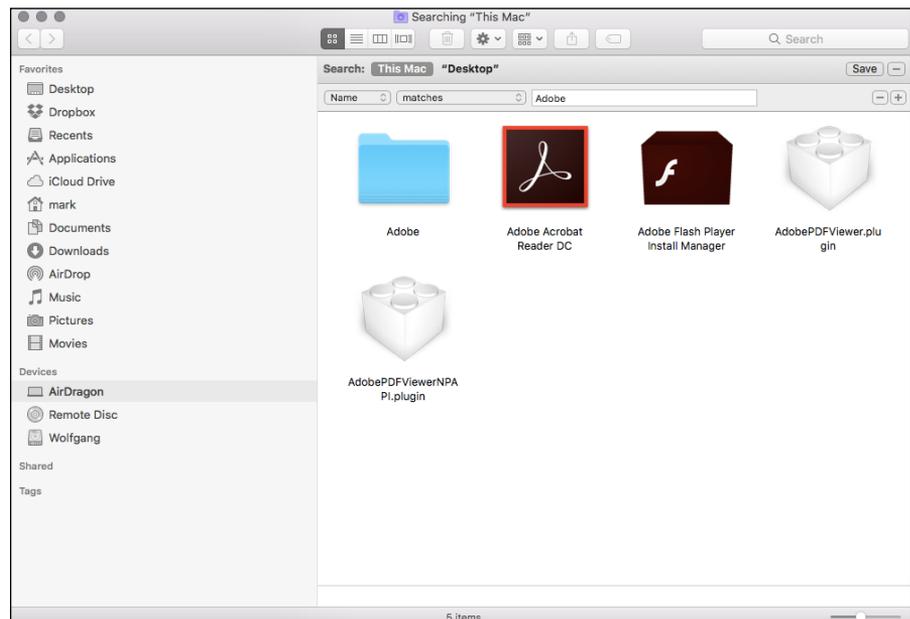
FIGURE 21-1:
Mine your hard drive for additional files to delete.

3. Decide which of these files belong to the application to be deleted.

WARNING

Be sure that the files you choose to delete are part of the deleted application. If necessary, right-click on the file and choose Get Info to display more information In Figure 21-1, the Adobe Flash Player Install Manager is included in the search results, but it's definitely not a part of Adobe Acrobat!

Many associated files either

- Have the same icon as the parent application
- Are in the Preferences, Caches, or Application Support folders

4. **In the Search Results window, click the associated files you want to delete, and just drag them to the Trash.**

Don't empty the Trash immediately after you delete these associated files. Wait a few hours or a day. That way, if you realize you deleted a file you truly need, you can easily restore it from the Trash.

Using a commercial clean-up tool

If you'd rather use a commercial application to clean up your drive, many are available. However, most are shareware and perform only one task. For example, Tidy Up! 4 from Hyperbolic Software (`www.hyperbolicsoftware.com`) finds only duplicate files on your drive, matching by criteria such as filename, size, content, and extension. It's a good tool at $30.

For keeping your MacBook's drive slim and trim, I recommend CCleaner for Mac, from Piriform (`www.piriform.com/mac/ccleaner`), as shown in Figure 21-2. This great utility can clean everything from Internet crud (browser cookies and your surfing history) to those macOS system caches that can grow so doggone huge. And you can easily fine-tune whatever CCleaner for Mac wants to remove. The utility can also uninstall many applications with a single click. Oh, and did I mention that it's free? I *really* like free!
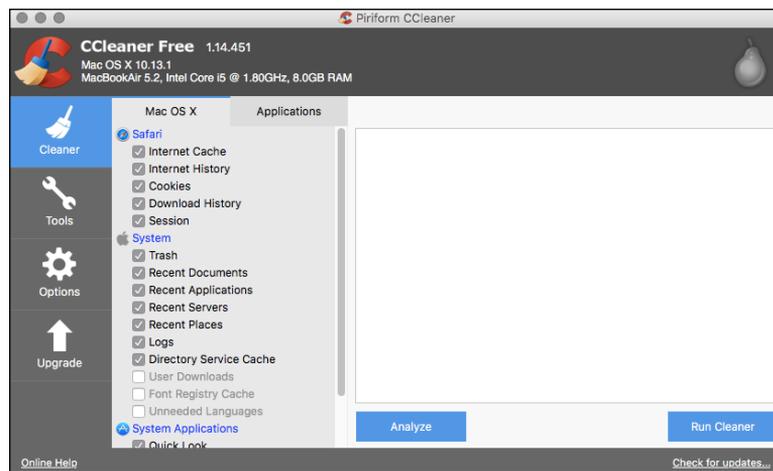
FIGURE 21-2:
Piriform's CCleaner for Mac is a great tool for cleaning your MacBook's drive.

Backing Up Your Treasure

Do it. I won't lecture you about backing up your drive. Well, perhaps for just a moment. Imagine what it feels like to lose *everything* — names, numbers, letters, reports, presentations, saved games, photographs, and music. Then ask yourself, "Self, isn't all that irreplaceable stuff worth just a simple backup?" It's time for a Mark's Maxim:

MARK'S MAXIMS

Back up your hard drive. **On a regular basis.™**

You can back up your files either by saving them to external media or — as I strongly recommend — by using the awesome Time Machine feature in El Capitan.

Saving files

The simplest way to back up files is simply to copy the files and folders to an external hard drive, a USB flash drive, a CD, or a DVD. Nothing fancy, but it works.

Backing up to an external hard drive or USB flash drive

If you use an external hard drive with your MacBook, you can easily drag backup files to it from your internal hard drive. Follow these steps:

1. **Open separate Finder windows for**

    - The external drive

    - The internal drive

    Because you're using High Sierra, you can also open a Finder tab within a single Finder window to accomplish the same task — from the keyboard, press ⌘+T.

2. **From your internal drive, select the files and folders you want to back up.**

3. **Drag the selected files to the external drive window.**

Backing up to CD and DVD

You can burn backups of your most important files to a recordable CD or DVD. Owners of the latest MacBooks need to use an external SuperDrive or third-party recorder, however. Saving your data is more labor-intensive this way, but the end result is a truly "bullet-proof" backup that doesn't rely on an external hard drive.

To use the Finder's Burn feature with a CD or DVD, follow these steps:

1. **Load a blank disc into your MacBook's optical drive.**

   If you're using the default settings in the CDs & DVDs pane in System Preferences, a dialog asks you for a disc name.

2. **Choose Open Finder from the Action pop-up menu and click OK.**

3. **Double-click on the Untitled optical disc icon on your Desktop to open a Finder window showing the contents of the disc.**

4. **Drag the files and folders you want to back up into the disc's Finder window.**

   They can be organized any way you like. Don't forget that the total amount of data shouldn't exceed 700MB on a CD. You should also stick within 4GB or so (on a standard recordable DVD) or 8GB (on a dual-layer recordable DVD). You can see how much free space remains on the disc at the bottom of the disc's Finder window.

5. **Choose File ⇨ Burn Disc.**

   You can also click the Action button that appears at the top of the disc's Finder window and choose Burn Disc from the pop-up menu.

6. **Choose the fastest recording speed possible.**

7. **Click Burn.**

TIP If you've invested in Toast Titanium from Roxio (`www.roxio.com`) or another CD/DVD recording application, you can create a new disc layout to quickly burn the same files to your backup disc in the future. (Think of a layout as a "road map" that indicates which files and folders Toast should store on the backup.)

TIP "Mark, can I back up individual files to cloud-based storage like iCloud Drive or DropBox?" Of course! These services are fine for a handful of files (much like backing up a *handful* of files to CD or DVD), but these cloud drives aren't suitable for backing up the entire contents of your MacBook's internal drive. (You should always use Time Machine with an external hard drive for that important chore.) Also, don't forget that you need an Internet connection to save or retrieve files from cloud storage.

Putting things right with Time Machine

If you enable backups via the High Sierra Time Machine feature, you can literally move backward through the contents of your MacBook's hard drive, selecting and restoring all sorts of data. Files and folders are ridiculously easy to restore — and

I mean easier than *any* restore you've ever performed, no matter what the operating system or backup program. Time Machine can even handle some deleted items, such as Contacts cards!

Because Time Machine should be an important and integral part of every MacBook owner's existence, Time Machine has its own pane in System Preferences. (Apple is not messing around!)

TIP Apple's AirPort Time Capsule device is designed as a wireless storage drive for your Time Machine backup files. If you're interested in a single Time Machine backup location for multiple Macs across your wireless network, Time Capsule is a great addition to your home or office. Note, however, that the Time Capsule drive isn't meant to be mobile, so while you're on the road, you still need an external USB or Thunderbolt drive to safeguard your data.

REMEMBER Before you can use Time Machine, it must be enabled in the Time Machine pane in System Preferences. I cover the Time Machine configuration settings (and how to turn on the feature) in more detail in Chapter 5.

Here's how you can turn back time, step by step, to restore a file or folder you deleted or replaced:

1. **From a Finder window, open the folder that contained the item you want to restore.**

2. **Click the Time Machine icon in the Finder menu bar and click Enter Time Machine.**

The oh-so-ultra-cool Time Machine history appears behind your folder, complete with its own set of buttons at the bottom of the screen, as shown in Figure 21-3. On the right, you see a timeline that corresponds to the different days and months included in the backups High Sierra has made.

3. **Click within the timeline to jump directly to a date. The folder's contents on that date are displayed.**

Alternatively, use the Forward and Back arrows at the right to move through the folder's contents over time. (You should see the faces of Windows users when you riffle through a specific folder to locate something you deleted several weeks ago!)

TIP The backup date of the items you're viewing appears in the button bar at the bottom of the screen.

4. After you locate the file or folder you want to restore, click it to select it.

5. Click the Restore button at the bottom right of the Time Machine button bar.

If you want to restore all the contents of the current folder, click the Restore All button instead.
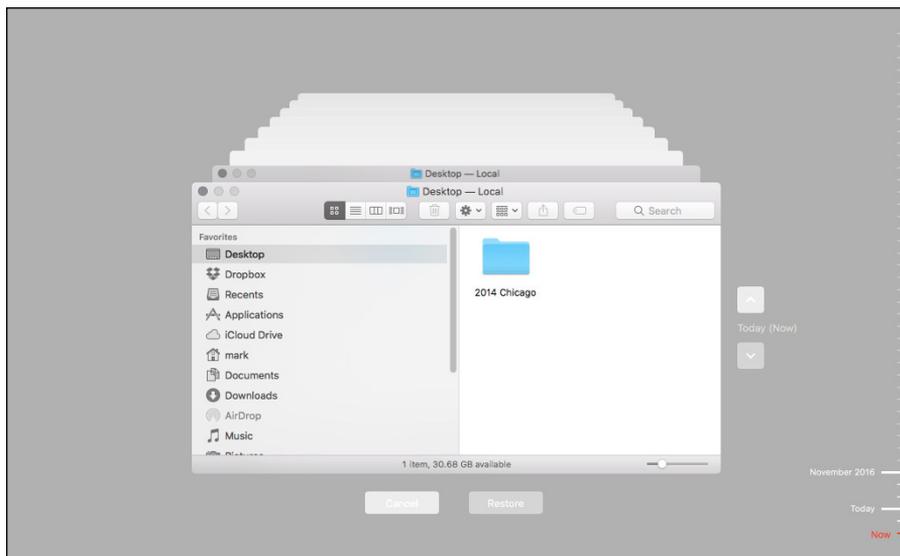
Time Machine returns you to the Finder, with the newly restored file now appearing in the folder. Out–*standing!*

For robust backup-and-restore protection, Time Machine has everything a typical Mac owner at home is likely to ever need. Therefore, this is an easy Mark's Maxim to predict:

Connect a high-capacity external hard drive and turn on Time Machine. *Do it now.* **Don't make a humongous mistake.™**

MARK'S
MAXIMS

Maintaining Hard Drive Health

Shifty-eyed, sneaky, irritating little problems can bother your hard drive: *permissions errors.* Incorrect disk and file permissions can

>> Make your MacBook lock up

>> Make applications act screwy (or refuse to run)

>> Cause weird behavior in a Finder window or System Preferences

Problems with your drive's catalog file can also result in corrupted data and files that won't open.

TIP

To keep High Sierra running at its best, I recommend that you check your hard drive at least once per week.

To fix any permissions or catalog errors on your system, follow these steps:

1. **Click the Launchpad icon in the Dock, and then click within the Search box at the top of the window.**

2. **Type the word *disk*.**

3. **Click the Disk Utility icon.**

4. **At the left, click the volume or named partition you want to check.**

5. **Click the First Aid button and click Run.**

   Disk Utility does the rest and then displays a message about whatever it has to fix. (When will someone invent a *car* with a First Aid button?)

Automating Those Mundane Chores

One popular feature in High Sierra — Automator — can save you a tremendous amount of time behind the keyboard. You use Automator (shown in Figure 21-4) to create applications with a relative of AppleScript called *AppleEvents.* (In case you're unfamiliar with *AppleScript,* it's the simple programming language you can use to automate tasks and applications within High Sierra.)
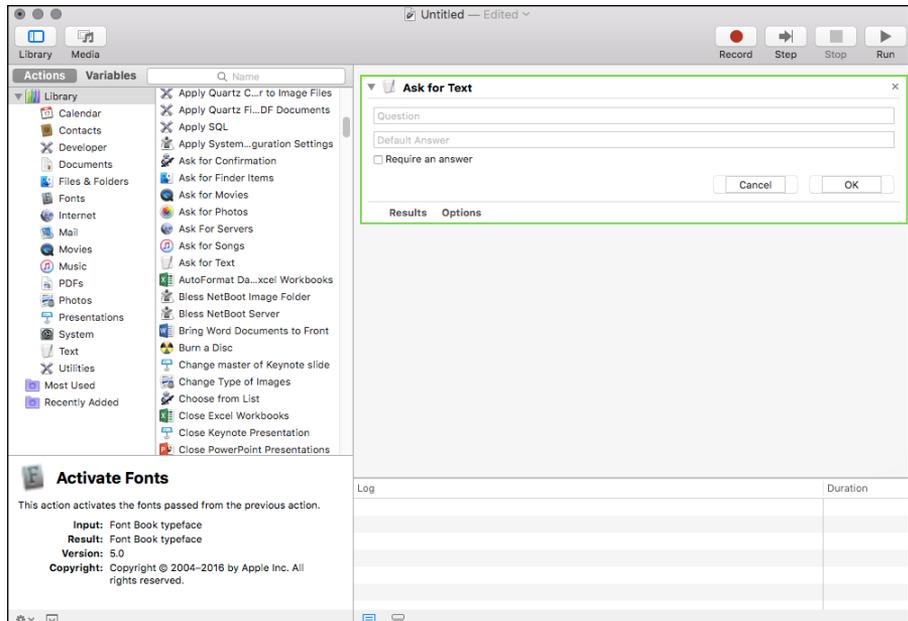
FIGURE 21-4:
Automator is a dream come true if you hate repetitive tasks.

Of course, writing an application might sound daunting — akin to single-handedly building your own nuclear submarine over a long weekend — but Automator is actually easy to use. Heck, you might find it downright *fun!*

You can also create *workflows,* which are sequential (and repeatable) operations that are performed on the same files or data. Then your Automator application can automatically launch whatever applications are necessary to get the job done.

Here's a great example: You work with a service bureau that sends you a huge Zip file every week with new product shots for your company's marketing department. Unfortunately, these images are flat-out *huge* — taken with a 24-megapixel camera — and they're always in the wrong orientation. Before you move them to the Marketing folder on your server, you have to laboriously resize each image and rotate it and then save the smaller version.

With help from Automator, you can build a custom application that automatically reads each image in the folder, resizes it, rotates it, and even generates a thumbnail image or prints the image. Then it moves the massaged images to the proper folder. You'd normally have to manually launch Preview to perform the image operations and then use a Finder window to move the new files to the right location. But now, with Automator, a single double-click of your custom application icon does the trick.

You find Automator in the Utilities (or Other) folder in Launchpad (or, from a Finder window, in your Applications folder). Currently, Automator can handle specific tasks in more than 100 applications (including the Finder). But both Apple and third–party developers can add new Automator task support to both new and existing applications.

To create a simple application with Automator, launch the application and follow these steps:

1. **Click the New Document icon.**

2. **Select Application and click the Choose button.**

3. **Click the desired application in the Library list.**

Automator displays the actions available for that application.

4. **Drag the desired action from the Library window to the workflow window on the right.**

5. **Modify any specific settings provided for the action you chose.**

6. **Repeat Steps 3 through 5 until you have completed the workflow.**

7. **Click the Run button (at the upper right) to test your script.**

Use sample files while you're fine-tuning your application lest you accidentally do something deleterious to an original (and irreplaceable) file!

WARNING

8. **When the application is working as you like, press ⌘+S to save it.**

9. **In the Save dialog that appears, type a name for your new application.**

10. **Click the Where pop-up menu and specify a location where the file should be saved.**

11. **Click the File Format pop-up menu and choose Application.**

12. **Click Save.**

Your new Automator application icon includes the Automator robot standing on a document. Most normal human beings would call you a *programmer,* so make sure you're inscrutable from now on! If you plan to use your new Automator application often, don't forget that you can make it more convenient to use by dragging the application icon to the Dock or to the desktop.

TIP

To find all the actions of a certain type in the Library list, click in the Search box at the top of the Library list and type a keyword, such as *save* or *burn.* You don't even need to press Return!

If you want your Automator application to run every time you log in — for example, the application tracks your time on a project — follow these steps to set up the application as a login item:

1. **Open System Preferences.**

2. **Display the Users & Groups pane.**

3. **Click the Login Items button.**

4. **Click the plus button at the bottom of the list.**

5. **Navigate to the location of your new Automator application.**

6. **Click Add.**

   Now your Automator application is *really* automatic. Watch your significant other gape in amazement as your MacBook begins to work without your touching the keyboard! (If you've added the application icon to your Dock, you can also simply right-click the icon and choose Options ➪ Open at Login from the menu that appears. Either way, your MacBook gets the message.)

Updating macOS Automatically

I prefer that my MacBook clean up after itself as much as possible, so updating High Sierra should be automatic as well. In macOS High Sierra, operating system updates are performed in the App Store, but you configure the update process from System Preferences.

TIP

The App Store uses the Internet, so you need an Internet connection to shake hands with the Apple server and download any updates.

Updates can be found in two convenient spots:

» **The Apple menu:** Click the Apple menu () and then choose App Store. Click the Update icon in the App Store toolbar, which alerts you to anything new that's available.

» **System Preferences:** Click the App Store icon in the System Preferences window.

If you take the System Preferences route, you can set the App Store to check for critical system updates and install them automatically:

- *Select the Automatically Check for Updates checkbox to enable it.*

- *Select the Install macOS Updates checkbox to enable it.*

- *Select the Install System Data Files and Security Updates checkbox to enable it.*

You can even display any updates immediately from within the App Store System Preferences pane (click the Check Now button).

TIP With automatic downloading disabled, macOS launches the Updates pane of the App Store and displays any available updates with short descriptions. You can manually click the Update button next to a specific update. High Sierra also displays a Notification window alerting you to new updates. You can choose to continue with the update from the Notification window, or wait and update manually later.

TIP If you're using the same Apple ID on more than one Mac, the applications you've purchased through the App Store on your other Macs can be automatically downloaded to this computer as well. Select the Automatically Download Apps Purchased on Other Macs checkbox to enable it, and then sit back and watch convenience happen.

6

The Part of Tens

IN THIS PART . . .

Commit Mark's top laptop rules to memory.

Avoid the worst computing pitfalls known to man.

IN THIS CHAPTER

» **Protect your laptop while you're in transit**

» **Pack that MacBook with RAM**

» **Track your Mac with a hidden beacon**

» **Encrypt your MacBook's drive**

» **Save energy by disabling wireless hardware**

» **Use a surge protector**

» **Back up your laptop**

Chapter **22**

Ten Laptop Rules to Follow

Ah, the sedentary life of a desktop Mac. It sits there, like a bump on a log, comfortable and immobile. As long as you have a stable surface and an uninterrupted power supply, your iMac, Mac mini, or Mac Pro is a happy puppy.

But you, good reader, are *mobile!* Whether you're on campus or attending a convention, your Mac laptop is rarely running in the same spot, so it's susceptible to all sorts of road warrior pitfalls. In this chapter, I remind you of ten of the most important rules every laptop owner should follow to prevent chaos and carnage while traveling.

Keep Your Laptop in a Bag

Using a laptop case or bag sounds like common sense. But MacBooks are so doggone sexy that you'd be surprised how many people carry them around without any protection. These Mac owners hear phrases like "unibody construction" and "solid-state drive" and figure that their laptop can survive a construction site, college campus, or hotel room.

Part of that is true. Mac laptops *are* some of the toughest ever made, but they're not immune to bumps, scratches, and the rare fall. The moral? If you carry around your MacBook without any protection, soon it will look like a boxer after a bad fight.

If you're like me, you're proud that your computers remain in pristine condition, so use a laptop bag or case that offers ample padding and a convenient shoulder strap or carry handle. (My laptop bag even converts to a backpack. It includes plenty of extra space for power supplies, USB mouse and keyboard, and all the assorted hoo-hah that you know you need to carry with you.) Spend an extra $30 on a laptop bag, and your $2,000 computer can weather the worst the world can dish out.

Using a traditional laptop bag comes with a caveat, however. Some folks think a bag draws too much attention to its expensive cargo. (And to some extent, I agree. Few people tote an obvious 15-by-7-inch bag with a hardware manufacturer's logo emblazoned on it these days.) If you're a member of this group, consider a *well-padded* laptop sleeve (with corner protectors) that allows you to carry your MacBook in your backpack, such as the BookBook cover I describe in Chapter 1. The laptop always goes on top of those heavy books, of course. Remember, though, that the padding is the important thing. Without that extra cushion, you might as well just toss your unprotected laptop in with the rest of your books and must-have equipment.

Oh, and if you've been using your MacBook for a longer period and it's warm to the touch, don't pack it away immediately — allow it to cool for a few minutes before stowing it safely, and you'll help prevent damage over time to your MacBook's internal hardware.

Maximize Your RAM

Like any other computer running Windows or macOS, your MacBook will benefit from all the system RAM (memory) you can squeeze onto it. (Chapter 20 describes the benefits of extra RAM.) The virtual memory functionality built into High Sierra

(which I also describe in Chapter 20) results in mediocre performance during memory-intensive tasks such as video and image editing.

When your laptop has a full complement of RAM, its performance will rival the performance of a desktop computer with the same processor — and you'll be using it on the go!

Current MacBook models can be configured with anywhere from 8GB to 16GB of RAM at the time you order one from Apple, depending on the model. Unfortunately, you can't add more memory after purchase, so order your new MacBook with the maximum amount of memory you can afford! If you own an older MacBook model that can be upgraded, I discuss adding memory in Chapter 20.

Install a Tracker Application

Suppose the unthinkable happens: Your laptop is stolen while you're on vacation or on a business trip, and you know that the chances it will be returned are next to nil. You've resigned yourself to replacing it (and all your data). But wait! What if I told you that you might just be able to display your MacBook's current location, as well as wipe the data that's on it (if necessary)?

If this scenario sounds a little like a James Bond movie, you'll be surprised to discover that several *tracker applications* are available for High Sierra that can run invisibly on your laptop. A tracker application can turn your MacBook into a transmitting beacon, broadcasting to you its current location and all the Internet information it can get. Then you can alert the police, who will apprehend the crook (who might be in the middle of creating a new album in Photos).

In fact, the *Find My Mac* feature built in to High Sierra is a tracker application in disguise! (Note that you must set up your iCloud account in the iCloud pane in System Preferences before you can use Find My Mac, as I cover in Chapter 5.) If your MacBook is lost or stolen (and someone uses it to connect to the Internet), you can visit `www.icloud.com`, sign in with the same Apple ID, and click Find My iPhone; then click the All Devices menu at the top of the window and click on your MacBook. From the display that appears, you can choose to Remote Lock or Remote Erase your MacBook.

Keepeth Thy Drive Encrypted

In Chapter 5, I discuss a number of System Preferences panes. The Security pane is particularly important to laptop users, because it allows you to encrypt your drive.

Encryption prevents just about anyone from accessing (or even *identifying*) any of the files you've stored on your MacBook. The robust encryption provided by High Sierra will certainly stymie just about anyone but the NSA. (I won't even go there.)

In System Preferences, click Security & Privacy, click the FileVault tab, and then click Turn On FileVault. You can use your Apple ID to unlock your MacBook's drive, or you can choose a unique recovery key, just in case. (Your login account password is your primary password.) High Sierra takes care of automatically encrypting and decrypting files as necessary. You won't even know it's working.

REMEMBER

To take full advantage of an encrypted drive, you need the proper login mode (as I discuss in Chapter 10). Think about this possible security back door: From the Users & Groups pane, you've set your laptop to automatically log you in every time you boot your MacBook Air. This scenario is the very definition of Not Secure because your login account password automatically bypasses the FileVault encryption! Therefore, *make sure that you actually have to log in to access your account.* For the full scoop, see Chapter 10.

Brand Your MacBook

Put your brand on your laptop! Whether by using an engraving tool on the bottom of the machine (my personal favorite) or a permanent metal tag, your MacBook deserves some sort of identifying information. After all, most people are honest, so you might not need to use the Find My Mac feature I mentioned earlier in this chapter. You might have left your laptop behind by accident, and someone would like to return it to you. (Don't forget to offer a reward!)

Some laptop owners want to include their name, address, and other contact information. Other road warriors feel more comfortable with just their name and email address. Whatever information you choose to provide, branding your laptop is as important as backing it up.

Disable Your Wireless

Funny how we don't think about it, but wireless communications take juice, and that power comes straight from your laptop's battery! Because your Mac laptop comes with built-in Wi-Fi and Bluetooth hardware, you're constantly broadcasting — sending and receiving, or at least *trying* to exchange data with others.

Therein lies the rub: If you're not connected to a wireless network or Bluetooth device, you're wasting precious battery power. That's why High Sierra lets you turn off your Wi-Fi and Bluetooth hardware to save energy. When you're sitting in a crowded auditorium without access to an AC socket or a wireless network, the energy savings you reap when you disable your wireless hardware can be significant.

WARNING

In fact, you might *have to* disable your wireless connectivity in situations where cellphones are not allowed, such as on an airplane flight or in certain areas of a hospital. And, because I'm a security-conscious kind of guy, I always disable my wireless hardware whenever I'm not using it (even if I'm in range of a wireless network). Call me overly careful, but none of my shared files have ever been sucked out of my MacBook without my permission!

To turn off your Wi-Fi hardware from the High Sierra Finder menu bar, click the Wi-Fi status icon and choose Turn Wi-Fi Off from the menu. To turn off your Bluetooth hardware from the menu bar, click the Bluetooth icon and choose Turn Bluetooth Off.

Take a Surge Protector with You

I'll be honest: I usually am not a huge supporter of surge protectors, because I think they do only half the job. That job is protecting both your hardware *and* your data. And, as you probably know, a surge protector doesn't provide backup power in case of a brownout or total loss of power, like a UPS (uninterruptible power supply) can.

Of course, many locales around the world offer a less-than-perfect power grid, which translates into a sudden loss of power — usually at exactly the wrong moment. (Think *Great American Novel Takes a Nosedive*.) Unlike a desktop, however, your MacBook is smart enough to immediately switch from AC current to its battery in case of a power failure (much like a UPS). So why am I suggesting a surge protector for your laptop, especially seeing as how it adds bulk and weight to your laptop bag or luggage?

>> **The risk of a power spike:** A surge protector is good protection from a massive power spike, such as an overload or lightning strike.

>> **Extra sockets on tap:** Don't forget that you might need several more AC sockets for external devices, such as a DVD drive, projector, and portable printer. A surge protector can provide extra access to power, even when your host can't.

Naturally, if you're traveling to a country with different AC standards (and different socket configurations), invest in an AC plug adapter that's compatible with the standard used at your destination.

Use Power-Saving Features

Apple allows you considerable control over your MacBook's sleep schedule, which is a real boon to power-hungry laptop owners. In System Preferences, click Energy Saver to display the Battery and Power Adapter settings.

If your laptop is running on battery power, and you need to conserve as much power as possible, click the Battery tab. Make sure that you move the Computer Sleep and Display Sleep sliders to 5 minutes or less. (You should also enable the Put Hard Disks to Sleep When Possible checkbox.) Now you're squeezing the maximum amount of computing time out of your remaining battery power.

If you're running your laptop while connected to an AC outlet, click the Power Adaptor tab. Although power isn't a problem, I still don't recommend that you set the Computer Sleep and Display Sleep sliders to Never. (Sleep mode helps prolong the life of your MacBook's display, and a sleeping laptop generates practically no heat.) However, you can set both sliders for a much longer delay while connected to AC power, such as the 30 minutes I use for my display sleep when my MacBook is charging.

Use an External Keyboard and Mouse

Does your laptop remain at your home, dorm room, or office for long periods of time? If so, I recommend that you invest in an external keyboard and an external mouse, trackball, or trackpad for two very good reasons:

» Adding external input devices helps lessen the wear and tear on your laptop's keyboard and trackpad.

» External input devices are generally more comfortable and convenient to use than those offered by your MacBook, especially for gaming.

If price is no obstacle, a wireless keyboard and pointing device allow you far more freedom of movement. Note, though, that a standard USB keyboard and mouse do just as fine a job and cost less.

In fact, you can have two external keyboards if you like: one to work with your laptop while you're running High Sierra (which has all the keys unique to an Apple keyboard), and one to use when you're running Windows under Boot Camp (with those gnarly Windows-specific keys). *Techno-suave.*

Not Again! What Is It with You and Backing Up?

Yes, this is one of the Top Ten Laptop Rules as well. I'm not kidding: If you think you don't need to back up on a regular basis, *you will eventually lose every byte of data you have. Period.* It's only a matter of time. Even if you have incredible luck and don't do something you regret with a Finder window, your MacBook is just a machine, and it will wear out in the long run. (Especially with the mobile life of a road warrior, with all the bumps and bruises of travel.) That's why hard drive manufacturers list MTBF (Mean Time Between *Failures*) figures for their hard drives.

Backing up your drive with Time Machine isn't difficult and doesn't take long, and it does indeed protect *every* file and folder. Chapter 21 explains everything you need to know. After you finish your first full backup, drop me a line at `mark@mlcbooks.com` with the subject **I've Got Laptop Peace of Mind**. We can celebrate together!

IN THIS CHAPTER

» **Dodging USB 1.1 storage devices**

» **Shunning email and web phishing expeditions**

» **Skirting those strange-sized discs**

» **Keeping liquids at arm's length**

» **Banishing outdated disk utilities**

» **Eschewing pirated software**

» **Steering clear of the root/System Administrator account**

» **Sidestepping unsecured public wireless networks**

» **Spurning refurbished hardware**

» **Expelling dust and dirt**

Chapter **23**

Ten Things to Avoid Like the Plague

I f you've read other books I've written in the *Dummies* series, you might recognize the title of this chapter. It's one of my favorite Part of Tens subjects. I don't like to see any computer owner fall prey to pitfalls. Some pitfalls are minor (such as not keeping your laptop clean), and others are downright cata–strophic (such as providing valuable information over the Internet to persons unknown).

All these potential mistakes, however, have one thing in common: They're *easy to prevent* with a little common sense — that is, as long as you're aware of them. And making you aware is my job. In this chapter, I fill in what you need to know. Consider these pages valuable experience gained easily!

USB 1.1 Storage Devices

Man, a USB 1.1 storage device is the very *definition* of sluggish. Only a creaking USB 1.1 external device such as a hard drive, USB hub, or CD-ROM drive could be as slow as a turtle on narcotics.

Unfortunately, you still find countless examples of USB 1.1 hardware hanging around, ready to ensnare unsuspecting computer owners who don't know antiques when they see them. eBay is stuffed to the gills with USB 1.1 equipment, and your family and friends might try to bestow that old 4x CD-RW drive on you as a gift. (This present, like your Aunt Harriet's fruitcake, is one you should politely refuse.) These drives were considered cool in the early days of the colorful iMac G3, when USB was a new technology. Today, a USB 1.1 hard drive is simply a slow-as-maple-syrup-in-January *embarrassment.*

I do admit that plenty of great USB 1.1 devices are still around these days, such as joysticks, keyboards, mice, and other controllers, along with printers that work just fine with slower transfer rates. However, if a peripheral's job is to store or move data quickly — including hard drives, network connections, USB hubs, CD-ROM drives, and USB flash drives — give a USB 1.1 device a wide berth. Opt instead for a Thunderbolt 1/2, USB 2.0/3.0, or even a FireWire device on older MacBooks.

Phishing Operations

Phishing is no phun. No, that's not a misspelling. In Internet lingo, *phishing* refers to an attempt by unsavory characters to illegally obtain your personal informa-tion. If that sounds like an invitation to identity theft, it is. Thousands of sites have defrauded individuals like you and me (along with banks and credit card companies) out of billions of dollars. Unfortunately, the phishing industry has been growing like a weed, and more innocent folks are being ripped off every day. (The lowlifes running phishing operations are pond scum. I'm being polite here because this will appear in print.)

A phishing scam works like this: You get an email purporting to be from a major company or business, such as eBay, a government agency, or a credit card

company. The message looks genuine, with all the proper graphics and company information. It warns you that you must "update" your login or financial information to keep it current, or that you must "validate" your information. It even provides you with a convenient link to an official-looking web page. After you enter your oh-so-personal information on that bogus page, the info is piped directly to the bad guys, and they're off to the races.

Here's a Mark's Maxim that every Internet user should take to heart:

No *legitimate* company or agency will *ever* solicit your personal information through an email message!™

Never respond to these messages. If you smell something phishy, open your web browser and visit the company's site (the *real* one) directly. Then contact the company's customer support personnel. They'll certainly want to know about the phishing expedition, and you can help by providing them with the email and web addresses used in the scam.

In fact, sending any valuable financial information through unencrypted email — even to those you know and trust — is a bad idea. Email messages can be intercepted or read from any email server that stores your messages.

Oddly Shaped Optical Discs

Your external SuperDrive (if you have one) is a marvel of precision — and it's doggone svelte to boot. Today's optical drives typically don't require a loading tray: You just slide your CD or DVD into the drive, and the disc smoothly disappears from sight. Right-click the disc icon on the desktop and choose Eject or drag the disc icon to the Trash, and the disc appears like magic. No need to give the loading and ejecting procedures a second thought, right?

Well, good reader, that's true — but *only* if you're loading a standard 1.2mm-thick, 120mm *round* CD or DVD into your drive! Note that I didn't say

- » **An 80mm minidisc:** Yes, they're cute. Yes, all sorts of devices have used them, from DV camcorders to digital cameras. But no, they're not supported by many slot-loading drives, so there's a good chance one will refuse to eject.

- » **A credit-card-shaped or triangular disc:** Friends, these discs just aren't *natural!* Of course, that's part of their pizzazz for advertisers, who give them away in scads. A square disc works in a tray-loading drive, but a slot drive will likely get indigestion and refuse to eject it.

>> **A super-thick disc:** Sure, a tray DVD drive can likely accept a disc with a thick, printed paper label, but if that disc is more than 1.5mm thick, it can damage your laptop's slot-loading drive. Consider these words: "Marge, it's stuck in there!" Now imagine how you would feel if *you* were the one saying that.

WARNING

All three of these oddly shaped discs have one thing in common: *The damage you may cause by attempting to use one in your external SuperDrive is not covered under your Apple warranty.* A weighty statement indeed.

TIP

If you do need to read from or record to a nonstandard disc size on a regular basis, I recommend that you pick up a USB external tray–loading drive, which can easily handle any size disc you toss at it.

Submerged Keyboards

Do you *really* want a submerged keyboard? Your answer should be an unequivocal no! And that's why you should make it a rule to keep all beverages well out of range of keyboards, trackpads, and external devices, such as speakers and mice — especially when kids or cats are in close proximity to your laptop.

If soda gets spilled on your MacBook, you're likely to be visited with intermittent keyboard problems (or, in the worst case, a short in your laptop's motherboard). Suffice it to say that 12 inches of open space can make the difference between a simple cleanup and an expensive replacement!

Antiquated Utility Software

Everyone's gotta play the upgrade game. If you're using macOS High Sierra, you must upgrade your older utility programs — such as an older copy of TechTool Pro from Micromat (www.micromat.com) that supports only OS X Mavericks. I know you spent good money on 'em, but these older disk utility applications can do more harm than good to a hard drive under macOS High Sierra. Of course, you should avoid utility software designed for ancient versions of Mac OS X, such as Panther and Jaguar. (In fact, those antique applications probably wouldn't even run with High Sierra.)

A number of things change when Apple makes the leap to a new version of macOS. These include subtle changes to disk formats, memory management in applications, and the support provided for different types of hard drives and

optical drives. If you use an older utility application, you could find yourself with corrupted data. (In fact, most utilities now refuse to run if they don't recognize the version of macOS you're running.)

Now that you're using High Sierra, make sure you diagnose and repair disk and file errors by using only a utility application specifically designed to run in High Sierra (including, of course, Disk Utility). Your laptop's drive will thank you.

Software Piracy

Avoiding pirated software is a no-brainer. Don't endorse software piracy. Remember, Apple's overall market share among worldwide computer users currently weighs in at around 26 percent. Software developers know this, and they have to expect (and *receive*) a return on their investment, or they'll find something more lucrative to do with their time. As a shareware author, I can attest to this fact firsthand.

Pirated software might seem attractive. The price is right, no doubt about it. But if you use an application without buying it, you're cheating the developer, who will eventually find doing Macintosh programming no longer worth the time and trouble. Believe me, the MacBook is a great machine, and High Sierra is a great operating system, but the sexiest laptop on the planet won't make up for an absence of good applications.

Pay for what you use, and everyone benefits.

The Forbidden Account

You may never have encountered the *root,* or *System Administrator,* account in macOS — and that's A Good Thing. Note that I'm not talking about a standard Administrator (or Admin) account. Every Mac needs at least one Admin account. (In fact, it might be the only visible account on your computer.) Any Standard user account can be toggled between Standard and Admin status with no trouble.

The root account, though, is a different beast altogether, and that's why it's disabled by default. All UNIX systems have a root account. As you know from earlier chapters, High Sierra is based on a UNIX foundation, so it has one too. Anyone logging in with the root account can do *anything* on your system, including deleting or modifying files in the System folder (which no other account can

normally access). Believe me, deliberately formatting your hard drive is about the only thing worse than screwing up the files in your System folder.

Luckily, no one can access the root/System Administrator account by accident. In fact, you can't assign the root account through System Preferences; you have to use the Directory Utility application located in your Utilities folder. Unless an Apple support technician tells you to enable and use it, you should promptly forget that the root account even exists.

Unsecured Wireless Connections

I like free Internet access as much as the next technology author. It's cool, it's convenient, and public-access wireless networks are popping up all over the world. A number of U.S. cities now offer citywide free wireless Internet access.

However, just because something is *free* doesn't mean it's *safe.* (Impromptu and overly trusting bungee jumpers, take note.) Unfortunately, the free public wireless access you're likely to encounter is *not secure.* Anyone can join, and the information you send and receive can be intercepted by any hacker worthy of the name. A public network uses no WEP or WPA key, so no encryption is involved. Therefore, you have no guarantee that your private email, your company's financial spreadsheets, and your Great American Novel aren't being intercepted while you're uploading and downloading them in the airport.

REMEMBER

If you *must* use your laptop on an unsecured public network, make sure that the connection itself is secure instead. For example, don't check your email by using a web browser unless your ISP or email service offers an encrypted SSL (Secure Sockets Layer) connection. (Yep, I'm talking again about that little padlock that appears in Safari, which I discuss in Chapter 8. It's not just for ordering things online!) If you need to establish a secure connection with your home or office network, use an SSL-enabled Virtual Private Network (VPN) client, which allows you to transfer files and remotely operate a host computer with bulletproof security.

Naturally, High Sierra includes a built-in basic VPN client, so you don't need additional software to connect. Open System Preferences, click the Network icon, and then click the Add (plus sign) button. Click the Interface pop-up menu and choose VPN. Then select the correct VPN type and click Create. (To add VPN host capability to macOS, upgrade to macOS Server via the App Store.) If you decide to use a VPN provider instead, use Google to shop for a provider with positive reviews and proper customer service.

Refurbished Hardware

Boy, do I hate refurbished stuff. Like my single-minded quest to rid the world of floppy disks, I likewise make it a point to dispel the myth that you're actually "saving" money when you buy a refurbished (or remanufactured) piece of hardware. As the saying goes, if it sounds too good to be true, it probably is.

Consider what you get when you buy a refurbished external hard drive. It's likely that the drive was returned as defective and then was sent back to the factory. There the manufacturer probably performed the most cursory of repairs (just enough to fix the known problem), perhaps tested the unit for a few seconds, and then packed it back up again. Legally, retailers can't resell the drive as a new item, so they cut the price so low that you're willing to take a chance on it.

Before you spend a dime on a so-called bargain that's *remanufactured* — I can't get over that term — make sure you find out how long a warranty you'll receive, if any. Consider that the hardware is likely to have crisscrossed the country at least once, picking up a few bumps and bruises during its travels. Also, you have no idea how well the repairs were tested or how thoroughly everything was inspected.

I don't buy refurbished computers or hardware. Most of the tales I've heard about folks who did ended badly. (The exception is the Apple online store, where you can find a refurbished Mac with a full 1 year warranty. However, AppleCare isn't available with refurbished equipment.) Take my advice: Spend the extra cash on trouble-free, new hardware that has a full warranty.

Dirty Laptops

Clean your machine. Every computer (and every piece of computer hardware) appreciates a weekly dusting.

You should clean your screen every two or three days — unless you *like* peering through a layer of dust, fingerprints, and smudges. Never spray anything directly on your screen or your MacBook's case. I highly recommend using pre-moistened LCD cleaning wipes typically used for notebook computers or computer monitors.

Your laptop's case really doesn't need a special cleaning agent. In fact, you shouldn't use any solvents on it. But a thorough wipe with a soft cloth should keep your MacBook's case in spotless shape.

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About the Authors

Mark L. Chambers has been a technology author, computer consultant, BBS sysop, programmer, and hardware technician for over 30 years, pushing computers far beyond "normal" performance limits for decades. His first love affair with a computer peripheral blossomed in 1984 when he bought a lightning-fast 300 bps modem for his Atari 400. Now he spends entirely too much time on the Internet and drinks far too much caffeine-laden soda.

With a degree in journalism and creative writing from Louisiana State University, Mark took the logical career path: programming computers. However, after five years as a COBOL programmer for a hospital system, he decided there must be a better way to earn a living. So he became Documentation Manager for Datastorm Technologies, a well-known communications software developer. Somewhere in between writing software manuals, Mark began writing computer how-to books. His first book, *Running a Perfect BBS,* was published in 1994. After a short 20 years or so of fun (disguised as hard work), Mark is a best-selling technology author (and very happy to boot)!

His pastimes include collecting gargoyles, watching St. Louis Cardinals baseball, playing his three pinball machines, playing both classic and cutting-edge computer games, supercharging computers, and rendering 3D flights of fancy. During these activities, he listens to just about every type of music imaginable. Mark's Internet radio station, MLC Radio (at `www.mlcbooks.com`), plays CD-quality classics from the 1970s, including everything from Rush to Billy Joel to favorites from *The Rocky Horror Picture Show.*

Mark's rapidly expanding pantheon of books includes *iMac For Dummies,* 9th Edition; *MacBook All-in-One For Dummies,* 2nd Edition; *Mac OS X Yosemite All-in-One For Dummies; Macs for Seniors For Dummies,* 3rd Edition; *Build Your Own PC Do-It-Yourself For Dummies*; *Building a PC For Dummies,* 5th Edition; *Scanners For Dummies,* 2nd Edition; *CD & DVD Recording For Dummies,* 2nd Edition; *PCs All-in-One For Dummies,* 6th Edition; *Mac OS X Tiger: Top 100 Simplified Tips & Tricks; Microsoft Office v. X for Mac Power User's Guide; BURN IT! Creating Your Own Great DVDs and CDs; The Hewlett-Packard Official Printer Handbook; The Hewlett-Packard Official Recordable CD Handbook; The Hewlett-Packard Official Digital Photography Handbook; Computer Gamer's Bible; Recordable CD Bible; Teach Yourself VISUALLY iMac; Running a Perfect BBS; Official Netscape Guide to Web Animation*; and *Windows 98 Optimizing & Troubleshooting Little Black Book.*

His books have been translated into 15 languages; his favorites are German, Polish, Dutch, and French. Although he can't read them, he enjoys looking at the pictures a great deal.

Mark welcomes all comments about his books. You can reach him at MLC Books Online, his website, at `www.mlcbooks.com`.

Authors' Acknowledgments

Dedication

This book is dedicated to the memory of Dennis R. Cohen. He was not only the finest Apple technical editor I've ever known, and a fellow author, but also an exceptional friend for well over a decade. I will never forget his humor, his enthusiasm for the world of computers, and his love for his family.

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