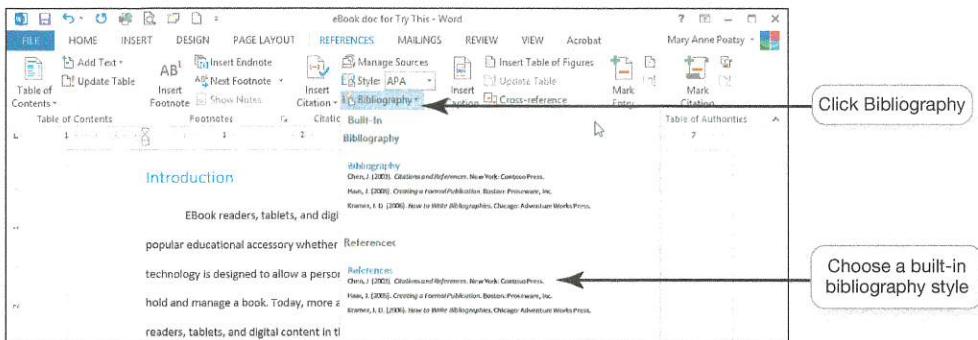


To Create a Bibliography:

You can create a bibliography at any point after you insert one or more sources in a document. Click where you want to insert a bibliography, usually at the end of the document. Then do the following:

Step 1 On the References tab, in the Citations & Bibliography group, click **Bibliography**.

Step 2 Click a predesigned bibliography format to insert the bibliography into the document. The bibliography is automatically generated.



Make This



TOOL: App Inventor 2

MAKE: A More Powerful App

Want your app to be able to open a file from the SD card on your phone, fire up the YouTube app, or display a location in the Maps app?

In this exercise, you'll use the ActivityStarter component of App Inventor to incorporate the software already on your device into your mobile app.

It's as easy as using the Connectivity drawer of the Designer in App Inventor. Drag the ActivityStarter component onto your Designer screen, then control it with the Blocks for ActivityStarter. Your apps now have the power of all the software on your device behind them!

call ActivityStarter1 StartActivity

when ActivityStarter1 AfterActivity

result

do

The ActivityStarter component allows you to use the existing software on your device from within your mobile app.

For the instructions for this exercise, please go to pearsonhighered.com/technaction or MyITLab.

Programs That Let You Play

While many programs help you be more productive, there are also programs that entertain you with audio, video, and digital images and through games, animations, and movies. Regardless of whether the software helps you work or play, it's important to know how to work with and manage the software so that you install it correctly and use it legally. This section discusses multimedia and entertainment software, as well as how to manage any type of software.



multimedia and entertainment SOFTWARE

From movies and television to music and photography, the entertainment world is vastly digital. **Multimedia software** includes digital image- and video-editing software, digital audio software, and other specialty software required to produce computer games, animations, and movies. In this section, we look at several popular types of multimedia and entertainment software, as shown in Figure 4.18.

Digital Image- and Video-Editing Software

How can I edit, share, and organize digital images? One great advantage of taking digital images is that you can easily manipulate them and then share them on the web. While Facebook is a great option for sharing images, Flickr (flickr.com) is a website specifically designed for sharing photos. It lets you organize your images and then share them publicly with millions of users or just with your closest friends and family. Discussion boards are also

available so that people can leave comments about the images.

If you want to edit your photos before sharing, Adobe Photoshop Elements is **image-editing software** geared to the casual photographer. Image-editing software includes tools for basic modifications to digital photos such as removing red-eye; modifying contrast, sharpness, and color casts; or removing scratches or rips from scanned images of old photos. Many programs also include painting tools such as brushes, pens, and artistic media (such as paints, pastels, and oils) that let you create realistic-looking images. Some include templates so you can insert your favorite pictures into preformatted pages for digital scrapbooks or greeting cards. Google Picasa (picasa.google.com) is a popular application that not only lets you edit images but also helps to organize and share your digital images (see Figure 4.19). Picasa also stores your photos on the web.

Several other online photo-sharing and photo-storing sites, such as Snapfish (snapfish.com) and Shutterfly (shutterfly.com), let you upload your digital images from your computer, create photo albums, and share them with friends and family. These sites offer printing services as well, letting you create customized cards, stationery, books, and even smartphone cases with your images.

What image-editing programs might a professional use? Adobe Photoshop and Corel PaintShop Pro are fully featured image-editing applications. Gimpshop (gimpshop.com) is a free download that has most of the features offered by the for-pay applications, such as Photoshop and PaintShop Pro. These offer sophisticated tools for tasks

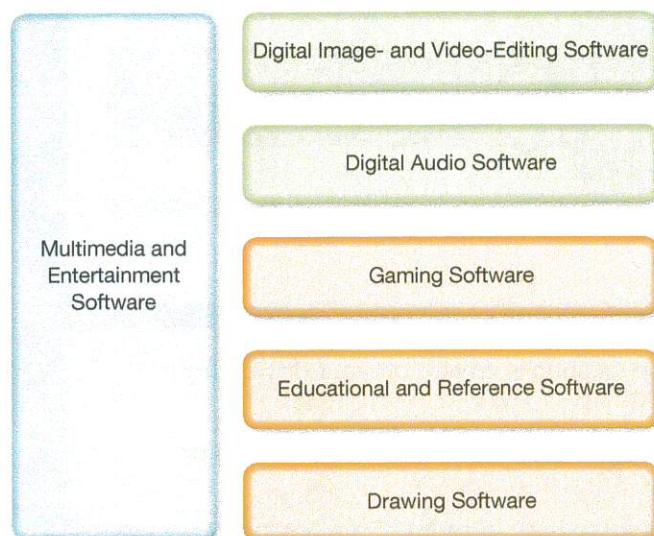


FIGURE 4.18 There are many varieties of multimedia and entertainment software.



SOUND BYTE Enhancing Photos with Image-Editing Software

In this Sound Byte, you'll learn tips and tricks on how to best use image-editing software. You'll learn how to remove the red-eye from photos and to incorporate borders, frames, and other enhancements to produce professional effects.

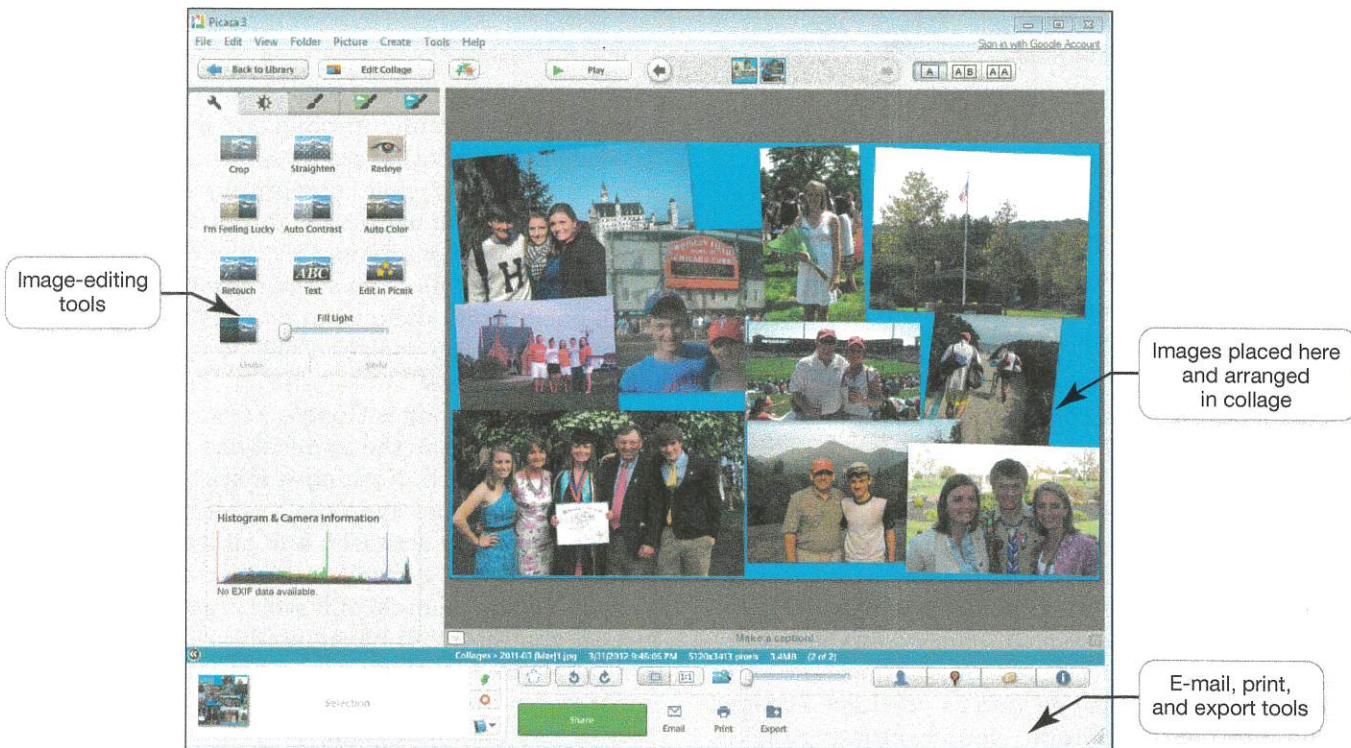


FIGURE 4.19 You can create collages of your favorite images using Google Picasa. (Google, Inc.)

like layering images and masking images (hiding parts of layers to create effects such as collages). Designers use these more sophisticated tools to create the enhanced digital images used commercially in logos, in advertisements, and on book and CD covers.

What software do I need to edit digital videos?

While it's easy to upload videos directly to YouTube or Facebook unedited, you can use **digital video-editing software** to help refine your videos. Although the most expensive products (such as Adobe Premiere Pro and Apple's Final Cut Pro) offer the widest range of special effects and tools, some moderately priced video-editing programs have enough features to keep the casual user happy. Windows Movie Maker and iMovie have intuitive drag-and-drop features that make it simple to create professional-quality movies with little or no training (see Figure 4.20).

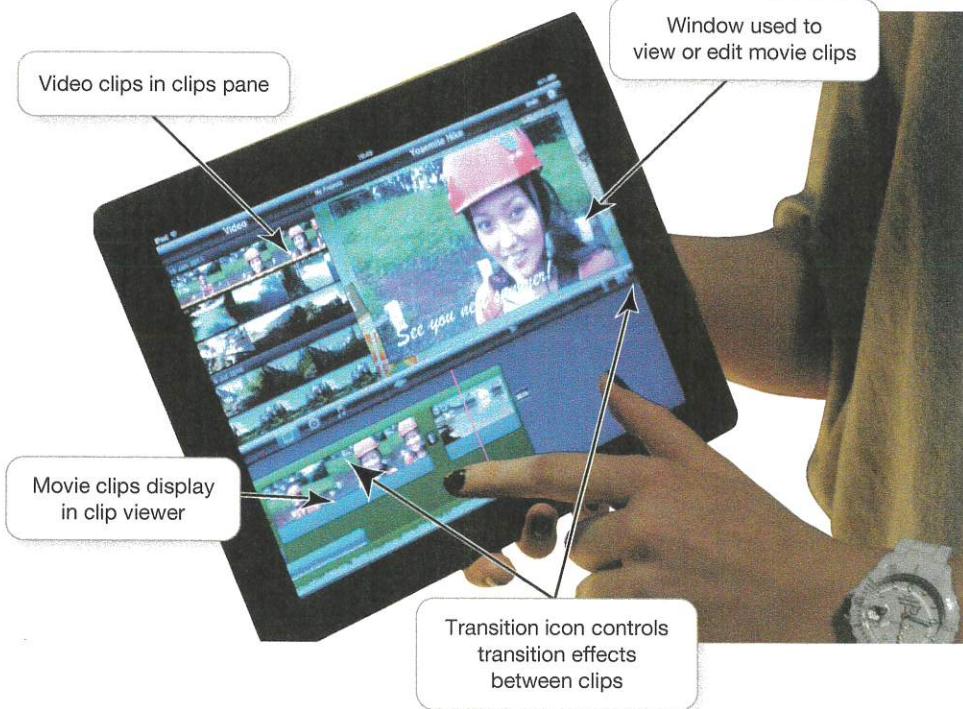


FIGURE 4.20 Video-editing programs such as Apple iMovie make it easy to create and edit movies. (Anthony Devlin/EMPIRE/Wire/AP Images)

DIG DEEPER

How Cloud Computing Works

Have you ever done any of the following?

- Posted pictures on Facebook that your friends accessed from their iPhone
- Used Dropbox or OneDrive to store your files instead of carrying around a flash drive
- Used Google Drive or Microsoft Office Online to collaborate on a team project
- Used Carbonite to back up your data online

By doing any of these activities, you have participated in cloud computing. So what exactly is **cloud computing**?

Cloud computing refers to storing data, files, and applications on the web and being able to access and manipulate these files and applications from any Internet-connected device. Being able to work from the cloud eliminates the need to have everything stored on your own computer's drives and lets you access your pictures, music, files, and programs from any device as long as you have access to the Internet. In addition, cloud computing makes it easier to collaborate and communicate with others, and it can cut down on administrative tasks for organizations maintaining large amounts of computer hardware and software.

There are two sides to cloud computing:

1. The *front end* is the side we see as users. It involves a web browser like Internet Explorer, Firefox, or Google Chrome.
2. The *back end* consists of various data centers and server farms that house the files and programs you access "on the cloud" (see Figure 4.21). These data centers and server farms are warehouses full of computers and servers, and they are being created all over the world, providing us with "cloud storage." The computers in the data centers or server farms are designed to work together, adjusting to the varying degrees of demand placed on them at any time.

Google is one of the first true explorers in the cloud, building applications such as Google Drive, Gmail, and the Chrome web browser in an effort to create a completely virtual operating environment. A fully functioning operating environment would enable users to

sign in on any computer and have "their" computer setup (desktop configurations and images, programs, files, and other personalized settings) display. Additionally, cloud computing would reduce the need for all of us to have the fastest computers with the most memory and storage capabilities. Instead, we could all have simple front-end terminals with basic input and output devices because the computers on the back end will be providing all the computing muscle.

The Chromebook is Google's first attempt at a notebook where all the applications and files are stored on the web. Nothing is installed or saved to a hard drive, not even the operating system! All programs are accessed and all work is done through the web-based browser, so sending e-mail, editing photos, and working on documents are all done via web-based applications. Since the Chromebook requires an Internet connection to get most tasks done, users must be near a WiFi connection or pay for a data plan.

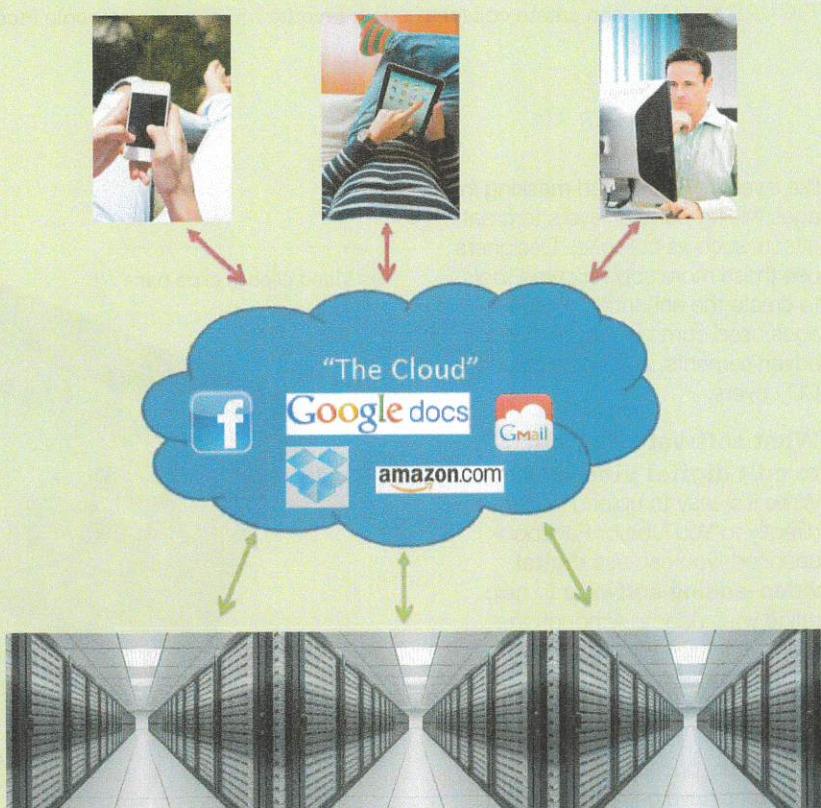


FIGURE 4.21 There are two sides to cloud computing: the side we see as users and the banks of computers and servers that house the files and programs we access.

There are some considerations with cloud computing of which you need to be aware:

- **Security and privacy:** Right now, the security of information stored on the web is built on trusting that the passwords we set and the security systems that the data centers put in place are able to keep our information away from unauthorized users. Caution is always warranted, as nothing is completely safe and private.
- **Backup:** Because even the devices in these large data centers and server farms inevitably will break down, the cloud computing systems have redundant systems to provide backup. However, for critical files that you must have, it might be a good idea not to completely rely

on the cloud but to have your own offline backup system, as well.

- **Access issues:** With cloud computing, you access your files and programs only through the Internet. If you couldn't access the Internet due to a power failure or system failure with your Internet service provider, you wouldn't be able to access your files. Storing your most critical files and programs offline will help reduce the inconvenience and loss of productivity while access to the Internet is being restored.

Before relying on cloud computing, consider the above concerns against the advantages of the convenience of having your information when and where you want it and the ability to promote better collaboration.

Digital Audio Software

What's the difference between all the digital audio file types on my computer? You probably have a variety of digital audio files stored on your computer, such as downloaded music files, audiobooks, or podcasts. These types of audio files have been *compressed* so they're more manageable to transfer to and from your computer and over the Internet. MP3, short for MPEG-1 Audio Layer 3, is a type of audio compression format and is the most common compressed digital format, but there are other compressed formats, such as AAC and WMA.

You may also see *uncompressed* audio files on your computer, such as WAV or AIFF files. Uncompressed files—the files found on audio CDs, for example—have not had any data

removed, so the quality is a perfect representation of the audio as it was recorded. Unfortunately, the file size is much larger than that of compressed files. Compressed formats remove data such as high frequencies that the human ear does not hear in order to make the files smaller and easier to download and store. MP3 format, for example, makes it possible to transfer and play back music on smartphones and other music players. A typical CD stores between 10 and 15 songs in uncompressed format, but with files in MP3 format, the same CD can store between 100 and 180 songs. The smaller file size not only lets you store and play music in less space, it also allows quick and easy distribution over the Internet. Ogg Vorbis (or just Ogg) is a free, open source audio compression format alternative to MP3. Some say that Ogg produces a better sound quality than MP3.

What do I use to create my own audio files? There are many digital audio applications that let you create and record your own audio files. With programs such as MAGIX Music Maker or Apple GarageBand, you can compose your own songs or soundtracks with virtual instruments, voice recorders, synthesizers, and special audio effects, and these will end up as uncompressed MIDI files. Other programs, such as Audacity and Cakewalk SONAR, let you record audio files.

Can I edit audio files? Audio-editing software includes tools that make editing audio files as easy as editing text files. Software such as the open source Audacity (audacity.sourceforge.net) and Sony Sound Forge Pro (sonycreativesoftware.com) lets you perform such basic

BITS&BYTES

Mirror, mirror...

Sometimes when you download software, especially open source software, you must choose a download location. Each location in the list is a mirror site. A mirror site is a copy of a website or set of files hosted at a remote location. Software developers sometimes use geographically distributed mirror sites so that users can choose the mirror site closest to their location to expedite the download time. Mirror sites are also used as backups, so if a server goes down for some reason, users can access the software from a different site, ensuring the software is always accessible. Developers also use mirror sites to help offset issues associated with a sudden influx of traffic that would otherwise overload a single server.



ACTIVE HELPDESK

Choosing Software

In this Active Helpdesk, you'll play the role of a helpdesk staffer, fielding questions about the different kinds of multimedia software, educational and reference software, and entertainment software.

editing tasks as cutting dead air space from the beginning or end of a song or clipping a portion from the middle. You can also add special sound effects, such as echo or bass boost, and remove static or hiss from MP3 files. AudioAcrobat (audioacrobat.com), a web-based program, makes it easy to record and stream audio and video and hosts your audio files. These applications support recording sound files from a microphone or any source you can connect through the input line of a sound card.

Gaming Software

Can I make video games? Now that video games represent an industry that generates billions in revenue each year, designing and creating video games is emerging as a desirable career opportunity. Professionally created video games involve artistic storytelling and design, as well as sophisticated programming. Major production houses such as Electronic Arts use applications not easily available to the casual home enthusiast. However, you can use the editors and game engines available for games such as EverQuest, Oblivion, and Unreal Tournament to create custom levels and characters to extend the game.

If you want to try your hand at creating your own video games, multimedia applications such as Unity, Adobe Flash, and RPG Maker VX provide the tools you need to explore game design and creation. The program GameMaker (yoyogames.com) is a free product that lets you build a game without any programming; you drag and drop key elements of the new game creation into place. Alice (alice.org) is another free environment to check out; it lets you easily create 3-D animations and simple games (see Figure 4.22). You can also make games for your phone. Try the Make This exercise to see how easy it can be. Also see the Sound Byte on 3-D Programming the Easy Way in Chapter 10.

Educational and Reference Software

What fun educational and reference software should I check out?

If you want to learn more about a subject, you can turn to the web for many instructional videos and documents. But

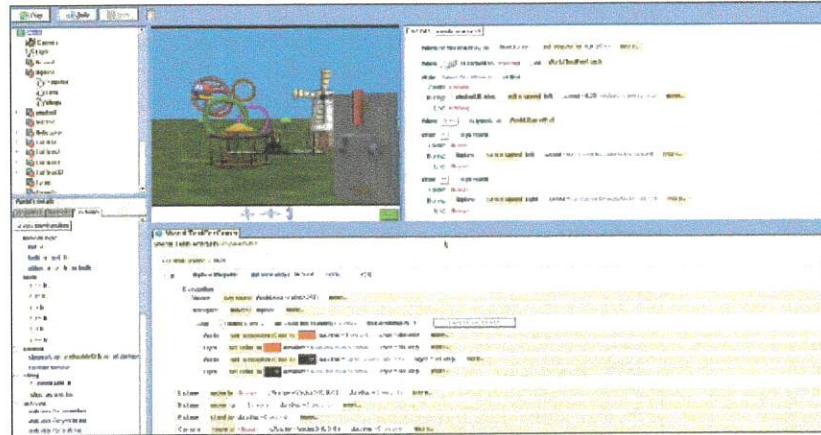


FIGURE 4.22 Software programs such as that from Alice.org help students learn how to program as well as create 3-D animations and simple games.
(Carnegie Mellon University Press)

sometimes, it's best to use software for more complete or detailed instructions. Educational and reference software is available to help you master, study, design, create, or plan. As shown in Figure 4.23, there are software products that teach new skills such as typing, languages, cooking, and playing the guitar.

Students who will be taking standardized tests like the SAT often use test preparation software. In addition, many computer and online brain-training games and programs are designed to improve the health and function of your brain. Lumosity (lumosity.com) is one such site that has a specific "workout" program that you can play on your PC or smartphone. Brain Age² (brainage.com) has software for the Nintendo DS and is designed for players of all ages.

What types of programs are available to train people to use software or special machines?

Many programs provide tutorials for popular computer applications (you may even use one in your course provided with MyITLab). These programs use illustrated systematic instructions to guide users through unfamiliar skills in an environment that acts like the actual software, without the software actually being installed.

Some training programs, known as **simulation programs**, allow you to experience or control the software as if it were an actual event. Such simulation programs include commercial and military flight training, surgical instrument training, and machine operation training. One benefit of simulated training programs is that they safely allow you to experience potentially dangerous situations such as flying a helicopter during high winds. Consequently, users of these training programs are more likely to take risks and learn from their mistakes—something they could not afford to do in real life. Simulated training programs also help prevent costly errors. Should something go awry, the only cost of the error is restarting the simulation program.

Do I need special software to take courses online?

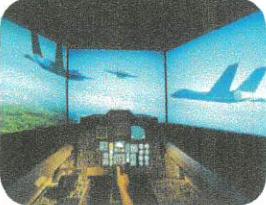
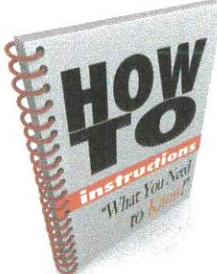
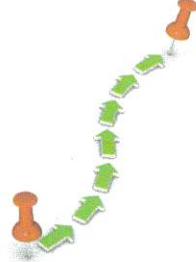
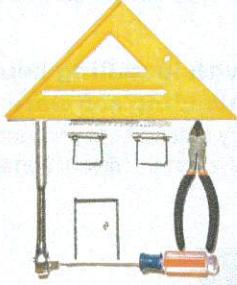
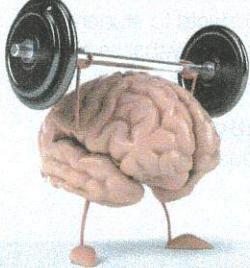
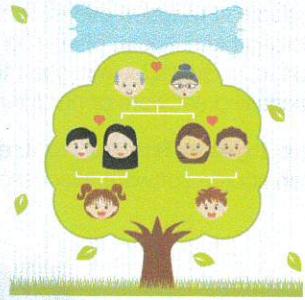
Although some courses are run from an individually developed website, many online courses are run using **course management software** such as Blackboard, Moodle, and Canvas. In addition to traditional classroom tools such as calendars and grade books, these programs provide special areas for students and instructors to exchange ideas and information through chat rooms, discussion forums, and e-mail. In addition, collaboration tools such as whiteboards and desktop sharing facilitate virtual office hour sessions. Depending on the content and course materials, you may need a password or special plug-ins to view certain videos or demos.

Drawing Software

What kind of software should I use to create illustrations? Drawing software

(or **illustration software**) lets you create or edit 2-D, line-based drawings. You can use it to create technical diagrams or original nonphotographic drawings, animations, and illustrations using standard tools such as pens, pencils, and paintbrushes. You also can drag geometric objects from a toolbar onto the canvas area to create images and can use paint bucket, eyedropper, and spray can tools to add color and special effects to the drawings.

FIGURE 4.23

Educational and Reference Software: A Sample of What's Available			
Test Preparation	Simulation	Instructional	Trip Planning
			
Designed to improve your performance on standardized tests	Allows you to experience a real situation through a virtual environment	Designed to teach you almost anything from playing a musical instrument to learning a language or cooking	Generates maps and provides driving instructions; some incorporate hotel, restaurant, and other trip information
Home Design/Improvement	Course Management	Brain Training	Genealogy
			
Provides 2-D or 3-D templates and images to let you better visualize indoor and outdoor remodeling projects and landscaping ideas	Web-based software system that creates a virtual learning experience, including course materials, tests, and discussion boards	Features games and activities to exercise your brain to improve your memory, processing speed, attention, and multitasking capabilities	Helps chart the relationships between family members through multiple generations

Adobe Illustrator includes tools that let you create professional-quality creative and technical illustrations such as muscle structures in the human body. Its warping tool allows you to bend, stretch, and twist portions of your image or text. Because of its many tools and features, Illustrator is the preferred drawing software program of most graphic artists.

What kind of software can be used for home or landscape planning?

There are many software packages to help plan the layout of homes and landscapes, such as those offered by Broderbund. A simple, web-based and fairly full-featured free 3-D modeling application is Trimble's SketchUp (formerly owned by Google). SketchUp (sketchup.com) lets you create a 3-D image of your dream home (see Figure 4.24). ■



FIGURE 4.24 SketchUp is a free, web-based 3-D modeling application. (Archipoch/Shutterstock)



managing your SOFTWARE

It's important to know how to pick out the best software for your computer, how to get it onto your computer correctly, and how to take it off. We discuss all of these topics next.

Getting Software

Is discounted software for students available?

If you're a student, you can sometimes buy substantially discounted software that is no different from regularly priced software. Campus computer stores and college bookstores offer discounted prices to students who possess a valid student ID. Online software suppliers such as Journey Education Marketing (journeyed.com) and Academic Superstore (academicsuperstore.com) also offer popular software to students at reduced prices. Software developers, such as Microsoft and Apple, often offer their products to students at a discount so it's always good to check their websites before purchasing software or hardware.

Can I get software for free legally? In addition to open source software, discussed previously in this chapter,

freeware is copyrighted software that you can use for free. Explore sites like FileHippo (filehippo.com) and MajorGeeks (majorgeeks.com) to see how many good freeware programs are available. However, while much legitimate freeware exists, some unscrupulous people use freeware to distribute viruses and malware. Be cautious when installing freeware, especially if you're unsure of the provider's legitimacy.

Can I try new software before it's released?

Some software developers offer beta versions of their software free of charge. A **beta version** is an application that is still under development (see Figure 4.25). By distributing free beta versions, developers hope users will report errors, or bugs, they find in their programs. Many beta versions are available for a limited trial period and are used to help developers respond to issues before they launch the software on the market.

Are there risks associated with installing beta versions, freeware, or downloading software from the Internet?

By their very nature, beta products are unlikely to be bug free, so you always run the risk of something

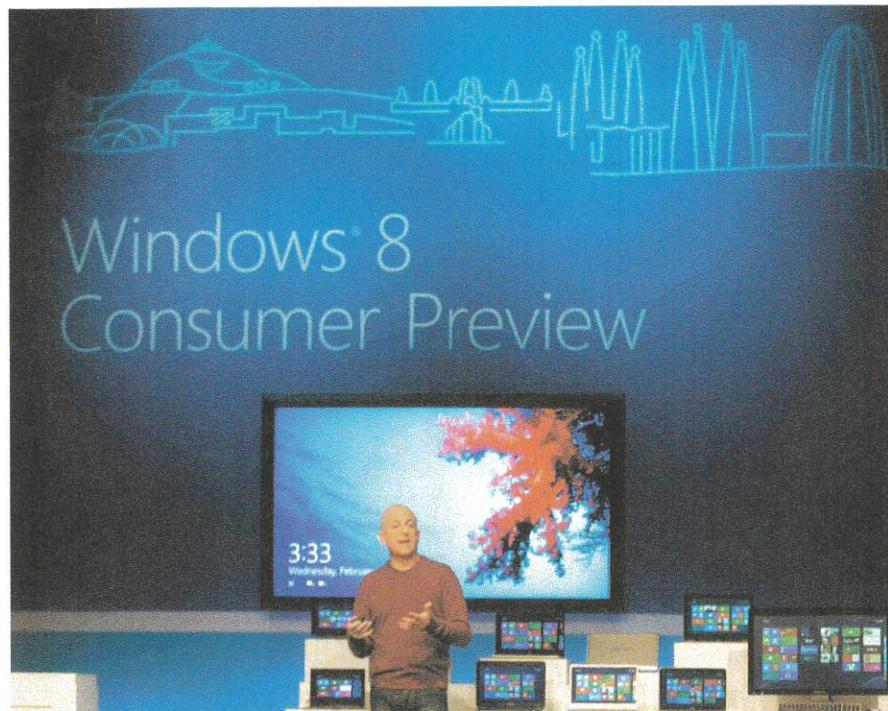


FIGURE 4.25 Prior to releasing Windows 8, Microsoft released the beta version, named Consumer Preview, for users to try. (Gustau Nacarino/Reuters/Corbis)

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How to Open Unknown File Types

Normally, when you double-click a file to open it, the program associated with the file runs automatically. For example, when you double-click a file with a .doc or .docx extension, the file opens in Microsoft Word. However, if the file has no extension or Windows has no application associated with that file type, an “Open with” dialog box appears and asks what program you want to use to open the file. In other cases, a document may open with a program other than the one you wanted to use. This is because many applications can open several file types, and the program you expected the file to open in is not currently the program associated with that file type. To assign a program to a file type or to change the program to open a particular file type, follow these instructions:

1. Use the search and navigation tools in File Explorer (previously called Windows Explorer) to locate the file you want to change. (For example, you can search for all Word files by searching for *.doc or *.docx.) Right-click on the file, and then point to **Open With**.
2. A list of programs installed on your computer appears. Click the program you want to use to open this file type. If you’re sure the selected program is the one that should always be used for this file type, then instead select **Choose default program**, and make sure to check “**Use this app for all [extension] files**,” and click the default program from the list.

When you double-click that file in the future, the file will open in the program you selected.

going awry with your system by installing and using beta versions. Unless you’re willing to deal with potential problems, it may be best to wait until the last beta version is released—often referred to as the *gold version*. By that time, most of the serious bugs have been worked out.

As a precaution, you should be comfortable with the reliability of the source before downloading a freeware or beta version of software. If it’s a reliable developer whose software you’re familiar with, you can be more certain that a serious bug or virus isn’t hiding in the software. Similarly, you should be sure that the software you’re downloading is meant for your system and that your system has met all the necessary hardware and operating system requirements.

Before installing any software, it’s always good to make sure your virus protection software is up to date. It’s equally important that you back up your system as well as create a *restore point*. That way, if something does go awry, you can return your system to the way it was before you started. You can create a restore point by using Windows 8 System protection tools. To access the System protection tools, click System and Security from the Control Panel, and then click System. In the left pane, click System protection to display the System Properties dialog box. On the System Protection tab, click the Create button, and type a description for the restore point (such as “Before installing [name of software]”) and click Create. You will be notified when the restore point is created.

Software Licenses

Don’t I own the software I buy? Most people don’t understand that, unlike other items they purchase, the software they buy doesn’t belong to them. The only thing they’re actually purchasing is a license that gives them the right to use the software for their own purposes as the *only* user of that copy. The application is not theirs to lend.

A **software license**, also known as an **End User License Agreement (EULA)**, is an agreement between you, the user, and the software company (see Figure 4.26). You accept this agreement before installing the software on your machine. It’s a legal contract that outlines the acceptable uses of the program and any actions that violate the agreement. Generally, the agreement states who the ultimate owner of the software is, under what circumstances copies of the software can be made, and whether the software can be installed on any other machine. Finally, the license agreement states what, if any, warranty comes with the software.



FIGURE 4.26 You must accept the terms of the software license before using the product.

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Run versus Save When Downloading Software

When you download software from the web, often you're given the choice to run or save it (see Figure 4.27). What's the difference? When you select Run, the program is downloaded to your machine and generally stored in Temporary Internet Files. Then the file is "run," meaning that it is loaded into memory and the operating system runs it. Use the Run option when you need to use the downloaded file on a limited basis, such as a song or video that you only plan to watch once or twice. Some installation programs instead install the software on your machine in a permanent location when Run is selected.

When you select Save (or sometimes Save As) on a download, the file will be copied to your hard disk. There may be an AutoRun program associated with the file that starts the installation automatically. Otherwise, you may need to navigate to the stored location and execute (or run) the file independently. The big difference is that the saved file is not downloaded into a temporary location. Use Save when you want to keep the file for a longer period of time or when you want to control where the file or program is saved.

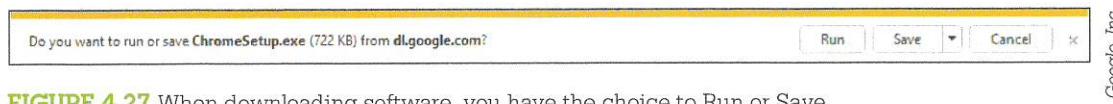


FIGURE 4.27 When downloading software, you have the choice to Run or Save.

Does a license only cover one installation? Some software is purchased with a single license to cover one person's specific use. You can't share these licenses, and you can't "extend" the license to install the software on more than one of your computers. Many manufacturers are now offering licensing bundles to allow several computers in one household to be installed with a legal copy. For example, Apple offers a Family Pack Software License Agreement that permits a user to install the purchased software legally on as many as five computers in the same household, and some versions of Microsoft Office come with the ability to install the software on multiple computers in the same household.

Businesses and educational institutions often buy multiuser licenses that allow more than one person to use the software. Some multiuser licenses are per-seat and limit the number of users overall, whereas others, called *concurrent licenses*, limit the number of users accessing the software at any given time.

Does open source software require a license? As you learned earlier, anyone using open source software has access to the program's code. Therefore, open source software programs can be tweaked by another user and redistributed. A free software license, the *GNU General Public License*, is required and grants the recipients the right to modify and redistribute the software. Without such a license, the recipient would be in violation of copyright laws. This concept of redistributing modified open source software under the same terms as the original software is known as **copyleft**. Thus, all enhancements, additions, and other changes to copyleft software must also be distributed as free software.

Getting the Right Software for Your System

How do I ensure the software I buy will work on my computer?

Every software program has a set of system requirements that specify the minimum recommended standards for the operating system, processor, primary memory (random access memory, or RAM), and hard drive capacity. Sometimes there are other specifications for the video card, monitor, optical drive, and other peripherals. These requirements are printed on the software packaging or are available at the manufacturer's website. Before installing software on your computer, ensure that your system setup meets the minimum requirements as specified by the developer.

When is it worth buying a newer version?

Periodically, software developers improve the functionality of their software by releasing a software upgrade. Although software developers suggest otherwise, there's no need to rush out and buy the latest version of a software program every time one is available. Depending on the software, some upgrades may not be sufficiently different from the previous version to make it cost-effective for you to buy the newest version. Unless the upgrade adds features that are important to you, you may be better off waiting to upgrade every other release. You also should consider whether you use the software frequently enough to justify an upgrade and whether your current system can handle the new system requirements of the upgraded version. In between

upgrades, developers will make available software updates (sometimes referred to as software patches). Updates are usually downloaded and provide smaller enhancements to the software or fix program bugs.

If I have an older version of software and someone sends me files from a newer version, can I still open them? Software vendors recognize that people work on different versions of the same software. Vendors, therefore, make new versions backward compatible, meaning that the new versions can recognize (open) files created with older versions. However, some software programs are not forward compatible, so these older versions are not able to recognize files created on newer versions of the same software. Files created on newer versions of software can be recognized by older versions if the correct file extension is chosen under Save As Type. For example, a .docx can be recognized by an older version of Microsoft Word if it is saved as .doc (Word 97-2003 document).

Installing and Uninstalling Software

What's the difference between a custom installation and a full installation? Before you use most software, you must permanently place it, or install it, on your system. The installation process may differ slightly depending on whether you're installing the software from a DVD or downloading it from the web. One of the first steps in the installation wizard asks you to decide between a full installation and a custom installation. A **full installation** (often referred

to as a *typical installation*) copies all the most commonly used files and programs from the distribution disc to your computer's hard drive. By selecting **custom installation**, you can decide which features you want installed on your hard drive. Installing only the features you want saves space on your hard drive.

How do I start my programs in Windows 8?

Every program you install on your system gets a tile on the Start screen. The simplest way to start an application is by clicking the program tile on the Start screen. Alternatively, you can work from the desktop view in Windows 8. To easily access commonly used programs or newly installed programs, you can pin a shortcut to a program on the taskbar or to the Start screen. To place a program on the taskbar or pin it to the Start screen, right-click the program icon on your desktop or right-click the program tile on the Start screen. From the options that are displayed, select Pin to Taskbar or Pin to Start. Windows then places an icon for this program on the taskbar or a tile on the Start screen (see Figure 4.28). To uninstall a pinned icon from Start, right-click the icon and select Unpin from Start.

How do I uninstall a program? An application contains many different files—library files, help files, and other text files—in addition to the main file you use to run the program. By deleting only the main file, you're not ridding your system of all the pieces of the program. Windows 8 makes it easy to uninstall a program: Simply right-click on the program icon on the Start screen, then click Uninstall. To uninstall a program from the desktop view in Windows 8.1, open the

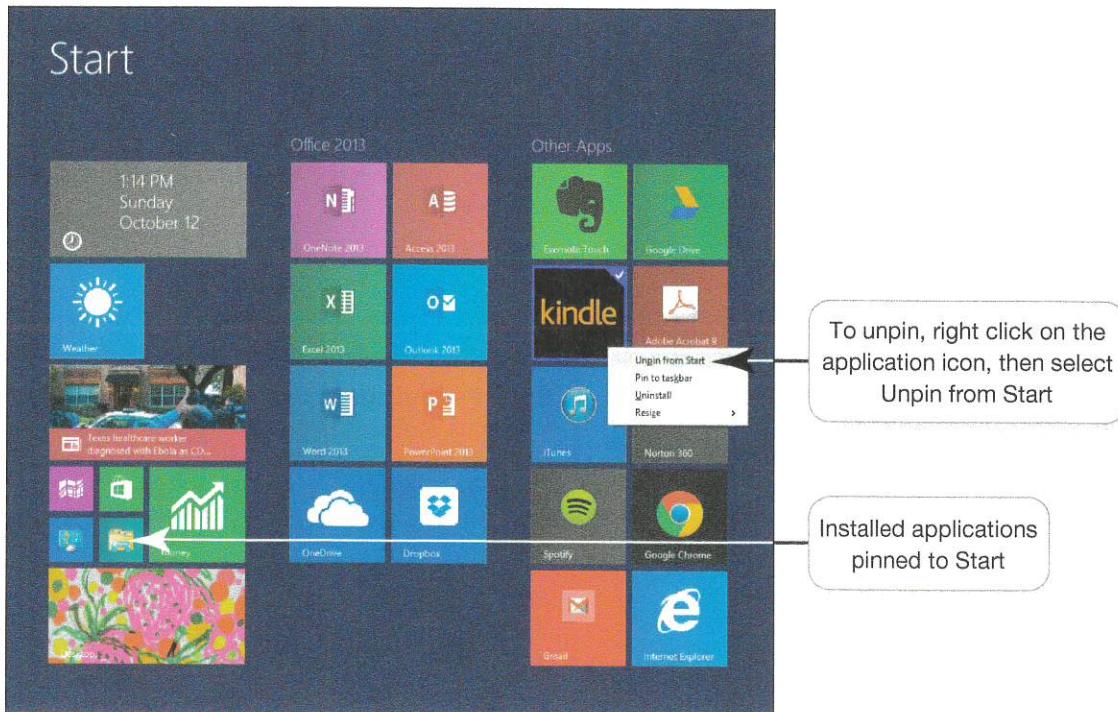


FIGURE 4.28 By pinning an application to the Start screen in Windows 8.1, you have easy access to your most frequently used programs.

BITS & BYTES

Ridding Your Computer of “Bloat”

Manufacturers often include software on new computers that you don't want or need. Called *bloatware*, this software can slow down your computer and degrade its performance. How do you get rid of it? Install an application such as PC Decrapifier (pcdecrapifier.com), or, if you'd rather do it yourself, consider some of these tips:

- *Uninstall preinstalled antivirus software:* If you have antivirus software on your old computer, you may be able to transfer the unexpired portion of your software license to your new computer. If this is the case, you can uninstall the preinstalled trial version on your new computer.

- *Uninstall unwanted toolbars:* Many computers come with Google, Bing, and other toolbars preinstalled. Go through Programs and Features in the Control Panel to uninstall any toolbars you don't want.
- *Remove manufacturer-specific software:* Some computer manufacturers install their own software. Some of these programs can be useful, but others are help features and update reminders that are also found in your operating system. You can remove any or all of these support applications and instead just check the manufacturer's website periodically for updates or new information.

Control Panel, select Programs from the Control Panel, then click Uninstall a program. Select the program you want to uninstall from the list, then click Uninstall.

If my computer crashes, can I get the preinstalled software back? Although some preinstalled software is not necessary to replace if your computer crashes, other software such as the operating system is critical to reinstall. Most manufacturers use a separate partition on the hard drive to hold an image, or copy, of the preinstalled software. However, it's not always possible to reboot from the partitioned hard drive, especially when your computer crashes, so one of the first things you should do after you purchase a new computer is create a recovery drive. Generally, the manufacturer will

have placed a utility on your system, or you can use the Recovery utility included in Windows to create a recovery drive. You can access the Advanced Recovery tools in Windows 8.1 from the Control Panel by typing Recovery in the search box, and then clicking Create a recovery drive under System. Then, to create the recovery drive, insert a blank flash drive in a USB port and follow the steps in the wizard. Once the recovery drive has been made, label the flash drive and put it away in a safe place.

There is an application for almost anything you want or need to do on your computer, whether it is school or work related or just for entertainment purposes. And there are a variety of types of applications, such as proprietary, open source, web-based, and freeware. Have fun exploring all the various possibilities! ■



ACTIVE HELPDESK

Buying and Installing Software

In this Active Helpdesk, you'll play the role of a helpdesk staffer, fielding questions about how to best purchase software or to get it for free, how to install and uninstall software, and where you can go for help when you have a problem with your software.

Before moving on to the Chapter Review:

- **Watch Replay Video 4.2**
- Then check your understanding of what you've learned so far.

check your understanding // review & practice

For a quick review to see what you've learned so far, answer the following questions. Visit pearsonhighered.com/techinaction to check your answers.

multiple

1. The minimum set of recommended standards for a program is known as the
 - a. operating system.
 - b. system requirements.
 - c. setup guide.
 - d. installation specs.
2. Which of the following statements about compressed audio files is FALSE?
 - a. Compressed audio files have a smaller file size than uncompressed audio files.
 - b. The sound is noticeably different on compressed audio files than on uncompressed audio files.
 - c. WAV is a compressed audio file format.
 - d. Downloaded songs are compressed audio files.
3. Which of the following is considered a benefit of using simulation programs?
 - a. They allow users to experience potentially dangerous situations without risk.
 - b. They help to prevent costly errors.
4. Which of the following is NOT necessary to do before installing beta software?
 - a. creating a restore point
 - b. backing up your system
 - c. defragging the hard drive
 - d. ensuring your virus protection software is updated
5. Which software is best to use if you want to change the looks of your digital pictures?
 - a. image-editing program
 - b. video-editing program
 - c. media management software
 - d. All of the above

To take an autograded version of this review, please go to the companion website at pearsonhighered.com/techinaction, or go your MyITLab course.

Continue 

4 Chapter Review

summary //



The Nuts and Bolts of Software

1. What's the difference between application software and system software?

- The term *software* refers to a set of instructions that tells the computer what to do.
- Application software is the software you use to do everyday tasks at home, school, and work. Application software includes the following:
 - Productivity software, such as word processing, finance, and personal information management programs
 - Business software for small and large businesses
 - Multimedia software, such as applications used for image and video editing, recording and editing digital audio, and gaming software
 - Educational and reference software
- System software is the software that helps run the computer and coordinates instructions between application software and the computer's hardware devices. System software includes the operating system and utility programs.

2. What are the different ways I can access and use software?

- Some software comes preinstalled on your computer. You will need to add other software by installing the software or accessing the software from the web. There are two types of software that you can install on your computer:
 1. Proprietary (or commercial) software is software you buy.
 2. Open source software is program code that is free and publicly available with few licensing and copyright restrictions. The code can be copied, distributed, or changed without the stringent copyright protections of software products you purchase.
- Web-based applications are those that are hosted online by the vendor and made available to the customer over the Internet. This web-based distribution model is also referred to as Software as a Service

(SaaS). Web-based applications are accessed via an Internet connection to the site that hosts the software.



Productivity and Business Software

3. What kinds of applications are included in productivity software?

- Productivity software programs include the following:
 - Word processing: to create and edit written documents
 - Spreadsheet: to do calculations and numerical and what-if analyses easily
 - Presentation: to create slide presentations
 - Database: to store and organize data
 - Note-taking: to take notes and easily organize and search them
 - Personal information manager (PIM): to keep you organized by putting a calendar, address book, notepad, and to-do lists within your computer
- Individuals can also use productivity software to help with business-like tasks such as managing personal finances and preparing taxes.

4. What kinds of software do small and large businesses use?

- Businesses use software to help them with the following tasks:
 - Finances and accounting
 - Desktop publishing
 - Web page authoring
 - Project management
 - Customer Relationship Management (CRM)
 - Enterprise Resource Planning (ERP)
 - E-commerce
- Businesses may use specialized business software (or vertical market software) that is designed for their specific industry.
- Some businesses also use specialized drawing software to create technical drawings and computer-aided design (CAD) software to create 3-D models.



Multimedia and Entertainment Software

5. What types of multimedia and entertainment software are available?

- Multimedia software is software for playing, copying, recording, editing, and organizing multimedia files. Multimedia software includes the following:
 - Digital image- and video-editing software
 - Digital audio software
 - Specialty software to produce computer games
- Educational and reference software is available to help you master, study, design, create, or plan.
 - Simulation (training) programs let users experience or control the software as if it were the actual software or an actual event. Simulated programs safely allow users to experience potentially dangerous situations without the risks of experiencing the same situations in real life.
 - Course management software provides traditional classroom tools such as discussion areas, assignment features, and grade books over the Internet.
 - Drawing software includes a wide range of software programs that help you create and edit simple line-based drawings or create more-complex designs for both imaginative and technical illustrations.



Managing Your Software

6. What's important to know when buying software?

- You must purchase software unless it is freeware or open source.
- When you purchase software, you're actually purchasing the license to use it and therefore must abide by the terms of the licensing agreement you accept when installing the program.
- Before installing software on your computer, ensure that your system setup meets the system

requirements that specify the minimum recommended standards for the operating system, processor, primary memory (RAM), and hard drive capacity. Sometimes, there are other specifications for the video card, monitor, optical drive, and other peripherals.

7. How do I install and uninstall software?

- When installing software, you are often given the choice between a full (typical) or custom installation.
 - A full installation copies all the files and programs from the distribution disc to your computer's hard drive.
 - A custom installation lets you decide which features you want installed on your hard drive.
- When uninstalling software, it's best to use the uninstall feature that comes with the operating system.
 - In Windows 8.1, right-click on the program tile on the Start screen, then select Uninstall from the shortcut menu that displays.
 - Using the uninstall feature of the operating system when uninstalling a program will help you ensure that all additional program files are removed from your computer.
- Your system comes with preinstalled software, such as the operating system and possibly some files from the manufacturer.
- One of the first things you should do after you purchase a new computer is create a recovery drive that you can use to reboot the computer after a system failure and return the computer to the condition it was in when you first purchased it.

Be sure to check out the companion website for additional materials to help you review and learn, including a Tech Bytes Weekly newsletter—pearsonhighered.com/technaction.

And don't forget the Replay Videos .

key terms //

- accounting software **135**
application software **124**
audio-editing software **143**
beta version **146**
cloud computing **142**
computer-aided design (CAD) **135**
copyleft **148**
course management software **144**
custom installation **149**
database software **130**
desktop publishing (DTP)
 software **135**
digital video-editing software **141**
drawing software (illustration
 software) **144**
End User License Agreement
 (EULA) **147**
- financial planning software **133**
freeware **146**
full installation **149**
image-editing software **140**
macro **133**
management software **144**
multimedia software **140**
open source software **124**
personal information manager (PIM)
 software **132**
presentation software **129**
productivity software **126**
program **124**
proprietary (commercial)
 software **124**
simulation programs **144**
software **124**
- Software as a Service
 (SaaS) **125**
software license **147**
software piracy **134**
software suite **126**
spreadsheet software **128**
system requirements **148**
system software **124**
tax preparation software **133**
template **133**
vertical market software **135**
web-based applications **125**
web authoring software **135**
wizard **133**
word processing software **126**

chapter quiz// assessment

For a quick review to see what you've learned, answer the following questions. Submit the quiz as requested by your instructor. If you are using MyITLab, the quiz is also available there.

multiple choice

1. Which software application would you use to calculate and manipulate numerical data?
 - a. Microsoft Office Excel
 - b. Apple iWork Numbers
 - c. Apache OpenOffice Calc
 - d. All of the above
2. PowToon and HaikuDeck are alternatives to
 - a. Microsoft Word.
 - b. Microsoft PowerPoint.
 - c. Adobe InDesign.
 - d. Apple iWork Pages.
3. Calendars, tasks, and e-mail will be found in which application?
 - a. Excel
 - b. One Note
 - c. Outlook
 - d. Access
4. Which of the following describes copyleft?
 - a. Terms enabling redistributing proprietary software
 - b. Terms enabling redistributing open source software
 - c. Terms enabling free use of software content
 - d. Terms restricting free use of software content
5. What is often distributed prior to a final release of software?
 - a. Alpha prerelease
 - b. Open source release
 - c. Beta version
 - d. Freeware version
6. What should you check first to ensure software will work on your computer?
 - a. The type of operating system
 - b. The amount of available RAM
 - c. The available hard drive capacity
 - d. All of the above

true-false

1. Productivity software suites are not available as web-based software.
2. A wizard is a software tool that offers a step-by-step guide through complicated tasks.
3. Removing red-eye, cropping, and altering pictures with pen- and brush-like tools are features of image-editing software.
4. When you buy software, you then own it and can do anything you'd like with it, including giving it to friends to install on their machines.

critical thinking

1. Living on the Cloud

Cloud computing is becoming more popular, and many users are working from the cloud and not even realizing it. Open Google Drive and Office Online and compare one of the applications in these online suites with an installed counterpart (e.g., Excel Online and Google Spreadsheets vs. Excel). What similarities and differences do you find between the online applications and the installed version? Envision a time when all software is web-based and describe how being totally on the cloud might be an advantage. What disadvantages might a cloud-based environment present?

2. Windows 8 Modern Apps

With the launch of Windows 8 came Modern Apps. Modern Apps are designed primarily to work well on touchscreen devices and are more streamlined than desktop applications. Some software, such as Skype and Internet Explorer, have separate versions that run both as a Modern App and a desktop application. Why do you think Microsoft developed Modern Apps? Do you think having two versions of the same software might be helpful or confusing? Explain your answer.

team time //

Software for Startups

Problem

You and your friends have decided to start Recycle Technology, a not-for-profit organization that would recycle and donate used computer equipment. In the first planning session, your group recognizes the need for certain software to help you with various parts of the business such as tracking inventory, designing notices, mapping addresses for pickup and delivery, and soliciting residents by phone or e-mail about recycling events, to name a few.

Task

Split your class into as many groups of four or five as possible. Make some groups responsible for locating free or web-based software solutions and other groups responsible for finding proprietary solutions. Another group could be responsible for finding mobile app solutions. The groups will present and compare results with each other at the end of the project.

Process

1. Identify a team leader who will coordinate the project and record and present results.
2. Each team is to identify the various kinds of software that Recycle Technology needs. Consider software that will be needed for all the various tasks required to run the organization such as communication, marketing, tracking, inventory management, and finance.
3. Create a detailed and organized list of required software applications. Depending on your team, you will specify either proprietary software or open source software.

Conclusion

Most organizations require a variety of software to accomplish different tasks. Compare your results with those of other team members. Were there applications that you didn't think about, but that other members did? How expensive is it to ensure that even the smallest company has all the software required to carry out daily activities, or can the needs be met with free, open source products?

ethics project //

Open Source Software

Ethical conduct is a stream of decisions you make all day long. In this exercise, you'll research and then role-play a complicated ethical situation. The role you play might or might not match your own personal beliefs, but your research and use of logic will enable you to represent the view assigned. An arbitrator will watch and comment on both sides of the arguments, and together, the team will agree on an ethical solution.

Topic: Proprietary Software Versus Open Source Software

Proprietary software has set restrictions on use and can be very expensive, whereas open source software is freely available for users to use as is or to change, improve, and redistribute. Open source software has become acceptable as a cost-effective alternative to proprietary software—so much so that it is reported that the increased adoption of open source software has caused a drop in revenue to the proprietary software industry. But determining which software to use involves more than just reducing the IT budget.

Research Areas to Consider

- Open source software
- Proprietary software
- Copyright licensing
- Open source development

Process

1. Divide the class into teams.
2. Research the areas cited above and devise a scenario in which someone is a proponent for open source software but is being rebuffed by someone who feels that "you get what you pay for" and is a big proponent of using proprietary software.
3. Team members should write a summary that provides background information for their character—for example: open source proponent, proprietary developer, or arbitrator—and that details their character's behaviors to set the stage for the role-playing event. Then, team members should create an outline to use during the role-playing event.
4. Team members should present their case to the class or submit a PowerPoint presentation for review by the rest of the class, along with the summary and resolution they developed.

Conclusion

As technology becomes ever more prevalent and integrated into our lives, more and more ethical dilemmas will present themselves. Being able to understand and evaluate both sides of the argument, while responding in a personally or socially ethical manner, will be an important skill.