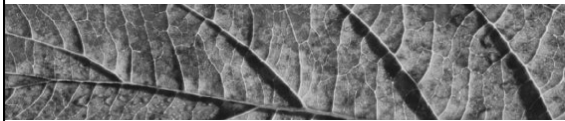


NEW PERSPECTIVES

# Chapter 3 Software

## Computer Concepts 2013



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### 3 Chapter Contents

- Section A: Software Basics
- Section B: Office Suites
- Section C: Installing Software and Upgrades
- Section D: Buying Software
- Section E: Security Software

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### 3 Section A: Software Basics

- Software Categories
- Music Software
- Video Software
- Graphics Software
- Mapping and Location-based Software

Chapter 3: Software 3

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**3 Section A: Software Basics**

- Business and "Number Crunching" Software
- Desktop Publishing Software
- Personal Finance Software
- Utility Software
- Device Drivers

Chapter 3: Software 4

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**3 Software Categories**

- Software is categorized in two main categories:
  - Application software
    - Designed to help people accomplish real-world tasks
  - System software
    - Designed for computer-centric tasks

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**3 Music Software**

- Offers many ways to work with music, sound effects, and narration from your desktop, notebook, or handheld computer
- iTunes
- Audio editing software

FIGURE 3-3 Audio editing software provides controls much like those on a tape recorder. Menus offer additional digital editing features, such as speed control, volume adjustments, clipping, and mixing.

Chapter 3: Software 6

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### 3 Video Software

- Provides a set of tools for creating video productions from raw footage
- Consumer-level video editing software
  - Windows Live Movie Maker
  - Apple iMovie
- DVD authoring software



**FIGURE 3-2**  
Video editing software helps you import a series of video clips from a camera or other video source, arrange the clips in the order of your choice, add transitions between clips, and add an audio track.

Chapter 3: Software 7

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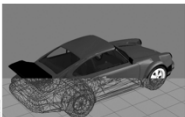
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### 3 Graphics Software

- Designed to help you create, manipulate, and print graphics
  - Paint software
  - Photo editing software
  - Drawing software
  - 3-D graphics software
  - CAD software

**FIGURE 3-4**  
Drawing software provides tools for creating and manipulating graphics.

**FIGURE 3-5**  
3-D graphics software provides tools for creating a realistic 3-D object. Some 3-D software specializes in animating 3-D graphics, while other 3-D software specializes in high-end graphics.

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### 3 Mapping and Location-Based Software

- A mapping application typically displays satellite, aerial, or street maps used to locate places and get directions between two addresses
  - Google Maps
- Location-based software is able to access your current location and use it to show you the closest shops, restaurants, and theaters, as well as information about each location
  - Stay alert for devices and software applications that track your location

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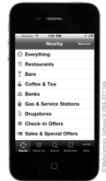
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### 3 Mapping and Location-Based Software

**FIGURE 3-8**  
With Google Maps, you can view a street map, satellite image, or street view.



**FIGURE 3-10**  
Yelp uses the GPS signal built into your mobile phone to pinpoint your position and offer suggestions for nearby restaurants, banks, museums, and other attractions.



Chapter 3: Software 10

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### 3 Business and “Number Crunching” Software

- Vertical market software is designed to automate specialized tasks in a specific market or business
- Horizontal market software is generic software that just about any kind of business can use
  - Payroll software
  - Accounting software
  - Project management software

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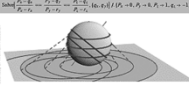
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### 3 Business and “Number Crunching” Software

- Provides a structured environment dedicated to a particular number crunching task
  - Statistical software
  - Mathematical modeling software



**FIGURE 3-11**  
Mathematical modeling software helps you visualize complex formulas. Here the points from a sphere are graphed onto a plane to demonstrate the principles behind the Astronomical Clock of Prague.



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**3 Desktop Publishing Software**

- Desktop publishing software (DTP software) takes word processing to the next level by providing professional tools for producing typeset-quality documents
  - DTP software is available in consumer-level and professional-level versions
- DTP software allows you to create a page using multiple frames; some frames can hold text, while other frames can hold titles, graphics, and tables
- Today's word processing software typically provides an adequate feature set for the document production needs of most individuals

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**3 Desktop Publishing Software**

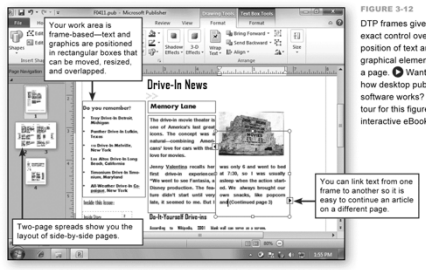


FIGURE 3-12 DTP frames give you exact control over the position of text and graphical elements on a page. Want to see how desktop publishing software works? Start the tour for this figure in your interactive eBook.

You can link text from one frame to another so it is easy to continue an article on a different page.

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**3 Personal Finance Software**

- Money management software offers a variety of tools for tracking cash flow and investments
- Personal finance software, such as Intuit Quicken, is designed to keep track of income, expenses, assets, and liabilities using a simple checkbook-like user interface
- Tax preparation software is a specialized type of personal finance software designed to help you gather your annual income and expense data, identify deductions, and calculate tax payments

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### 3 Personal Finance Software

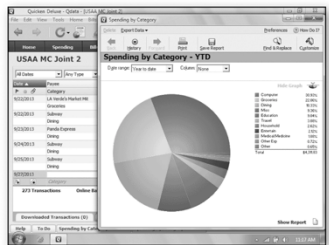


FIGURE 3-13 Personal finance software offers lots of tools to help you get a handle on the money that comes in and goes out.

Chapter 3: Software

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### 3 Utility Software

- Utility software is designed to help you monitor and configure settings for your digital gear, its operating system, or application software
- Third-party software companies offer additional products that extend and improve upon those supplied by the operating system
- A PDF reader, such as Adobe Reader, is an essential utility that displays documents stored in standard PDF files

Chapter 3: Software

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### 3 Utility Software

- Adaptive utilities alter a device's user interface to create an accessible environment by providing closed captions, text-to-speech, speech-to-text, or large screen text
- System utilities that can track down and fix disk errors, repair corrupted files, and give your device a performance-enhancing tune-up



FIGURE 3-14 Utility software includes diagnostics that track down the errors and other problems that prevent computers from running at peak efficiency.

Chapter 3: Software

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### 3 Device Drivers

- A device driver is software that helps a peripheral device establish communication with a computer
- On a Mac, you can click the Apple icon, select About this Mac, and then select More info to look at a list of devices connected to your computer
- On a PC, if you need to update a device driver or change its settings, you can usually access the driver by using the Start menu's Control Panel option and opening the System icon

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### 3 Device Drivers

FIGURE 3-17  
The Windows Device Manager offers access to device drivers. You can check if they are working and change settings. You can also check the device driver's version number and compare it with the most recent version posted online.



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### 3 Section B: Office Suites

- Office Suite Basics
- Word Processing
- Spreadsheets
- Databases
- Presentations

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### 3 Word Processing

- Word processing software has replaced typewriters for producing many types of documents, including reports, letters, memos, papers, and book manuscripts
- A typical word processor window displays a work area, called a workspace, that represents a blank piece of paper

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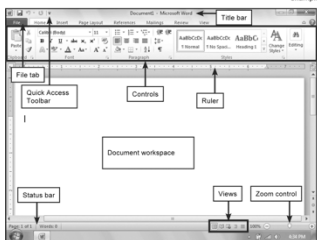
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### 3 Word Processing

FIGURE 3-18  
No matter which word processor you use, it includes elements similar to those shown in this Microsoft Word example.



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### 3 Word Processing

- Word processing features include:
  - Word wrap
  - Search and Replace
  - Thesaurus
  - Grammar checker
  - Readability formula
  - Spelling checker
  - Spelling dictionary

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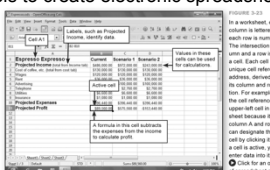
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### 3 Spreadsheets

- A spreadsheet uses rows and columns of numbers to create a model or representation of a real solution
- Spreadsheet software, such as Microsoft Excel, iWork Numbers, Google Docs Spreadsheets, or LibreOffice Calc, provides tools to create electronic spreadsheets



**FIGURE 3-23**  
In a worksheet, each column is labeled and each row is numbered. The intersection of a column and a row is called a cell. Each cell has a unique cell reference, or address, derived from its column and row location. For example, A1 is the cell reference for the upper-left cell in a worksheet because it is in column A and row 1. You can designate the active cell by clicking it. Once a cell is active, you can enter data into it.

Click for an overview of spreadsheet software.

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### 3 Spreadsheets

- A formula tells the computer how to use the contents of cells in calculations
  - Cell references
    - Relative reference
    - Absolute reference
  - Mathematical operators
  - Functions
  - Automatic recalculations



**FIGURE 3-24**  
When a cell contains a formula, it displays the result of the formula rather than the formula itself. To view and edit the formula, you use the Formula bar. You can look at the formula as working behind the scenes to perform calculations and then to display the result.

Use a formula such as =A1+B1 instead of a formula with the actual numbers. To do that, click the bar for the figure in your reference eBook.

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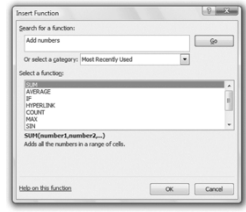
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### 3 Spreadsheets

**FIGURE 3-25**  
Functions are special formulas provided by spreadsheet software.



Insert Function

Search for a function:  
Add numbers

Or select a category: Most Recently Used

Select a function:  
SUM  
AVERAGE  
COUNT  
COUNTIF  
COUNTA  
MAX  
MIN  
SUMIF  
SUMIFS  
SUMPRODUCT  
SUMSQ  
SUMX2MY2  
SUMX2PY2  
SUMXMY2

Click on this function

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### 3 Databases

- A query language such as SQL (Structured Query Language) provides a set of commands for locating and manipulating data
  - Natural language query
  - Keyword search
  - Query by example

FIGURE 3-30  
When you query by example, your database software displays a blank form on the screen, and you enter examples of the data that you want to find.



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### 3 Presentations

- Presentation software supplies the tools for combining text, photos, clip art, graphs, animations, and sound into a series of electronic slides that can be shown on a computer screen or projector

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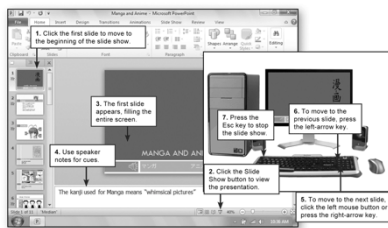
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### 3 Presentations

FIGURE 3-31  
A computer-based presentation consists of a series of slides created with presentation software.  
● Click to find out how to use presentation software.



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### 3 Section C: Installing Software and Upgrades

- Web Apps
- Mobile Apps
- Local Applications
- Portable Software
- Software Upgrades and Updates
- Uninstalling Software

Chapter 3: Software

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### 3 Web Apps

- Software installation is a process that places a program into a computer so that it can be run or executed
- A Web application, or Web App, is software that is accessed with a Web browser
  - Example of cloud computing
  - Many are associated with consumer sites
  - Most require no installation at all on your local computer or handheld device

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### 3 Web Apps

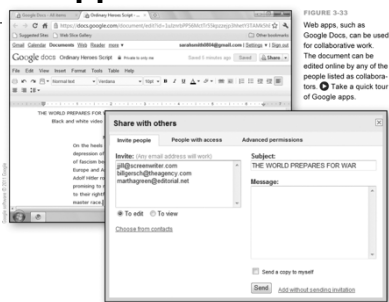


FIGURE 3-33 Web apps, such as Google Docs, can be used for collaborative work. The document can be edited online by any of the people listed as collaborators. Take a quick tour of Google apps.

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### 3 Mobile Apps

- A mobile app is designed for a handheld device, such as a smartphone, tablet computer, or enhanced media player
- Most handheld devices can use both Web apps and mobile apps
- Mobile apps can be purchased from an app store
  - Apple App Store
  - Android Market
- Apps are available from other sources, but using them requires an unauthorized change to the device's software called a jailbreak

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### 3 Mobile Apps

FIGURE 3-34 Mobile apps range from simple utilities that turn the device into a flashlight, to more sophisticated apps for entertainment and learning.



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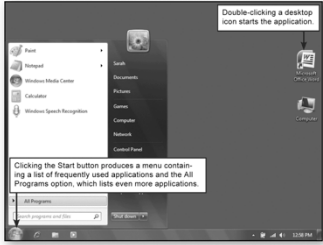
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### 3 Local Applications



Double-clicking a desktop icon starts the application.

Clicking the Start button produces a menu containing a list of frequently used applications and the All Programs option, which lists even more applications.

FIGURE 3-36 When using a Windows computer, you can usually start application software using the Start menu or a desktop icon. Use your interactive eBook to take a tour of ways to start programs and create desktop shortcuts.

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### 3 Local Applications

- Most local applications contain a setup program that guides you through the installation process
- At least one of the files included in a software package is an executable file designed to be started by users or automatically launched by the operating system

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### 3 Local Applications

FIGURE 3-31  
Installing from Distribution Media

- 1 Insert the first distribution CD or DVD. The setup program should start automatically. If it does not, look for a file named Setup.exe and then run it.
- 2 Read the license agreement. If one is presented on the screen, by agreeing to the terms of the license, you can proceed with the installation.
- 3 Select the installation option that best meets your needs. If you selected full installation, the setup program copies all files and data from the distribution medium to the hard disk of your computer system. A full installation gives you access to all features of the software.
- 4 Follow the prompts provided by the setup program to specify a folder to hold the new software program. You can use the default folder specified by the setup program or a folder of your own choosing. You can also create a new folder during the setup process.
- 5 If the software includes multiple distribution CDs, insert each one in the specified drive until the setup program prompts you to do so.

When the setup is complete, start the program you just installed to make sure it works.

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### 3 Local Applications

FIGURE 3-32  
Installing Downloaded Software

- 1 At the distribution Web site, locate any information pertaining to installing the software. The page may contain a link to Download and Install.
- 2 Click the download link.
- 3 If you are downloading from a trusted site and have antivirus software running, click the Run button in the File Download dialog box.
- 4 Wait for the download to finish. Usually, the setup program included in the download starts automatically.
- 5 Use the setup program to specify a folder to hold the new software program. You can use the default folder specified by the setup program or a folder of your own choosing. You can also create a new folder during the setup process.

Wait for the setup program to decompress the downloaded file and install the software in the selected directory. During this process, respond to the license agreements and other prompts. When the installation is complete, test the software to make sure it works.

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### 3 Portable Software

- Portable software is designed to run from removable storage, such as a CD or USB flash drive
  - Installation is simply a matter of getting program files to the media on which they are supposed to run

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### 3 Portable Software




FIGURE 3-42 Portable software is designed so that you can simply copy files to a hard disk or flash drive and run the program without additional installation. Find out how to work with portable software from your USB flash drive.

Download the program files to your flash drive.

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### 3 Software Upgrades and Updates

- Periodically, software publishers replace older versions of a software product with a new version that's sometimes referred to as a **software upgrade**
- A software update is a small section of program code that replaces part of the software you currently have installed
  - Service packs

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### 3 Software Upgrades and Updates

- Updates are usually available online for registered software
- Automatic Update option
- Always install updates and service packs when they become available
- Many software publishers require users to type in a validation code to complete an upgrade

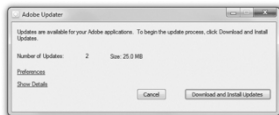


FIGURE 3-43  
If you prefer not to have software updates automatically installed, look for an option or preference that lets you choose which updates to install and decide when to install them. Work with the tour to find out how to manually launch updates.

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### 3 Uninstalling Software

- Uninstall routines delete the software's files from the various folders on your computer's hard disk

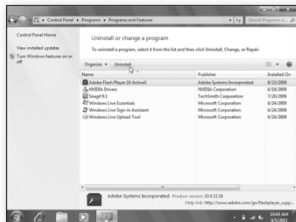


FIGURE 3-44  
Always use the Uninstall utility when removing Windows software to make sure all files are properly deleted. Make sure you know how to uninstall software by watching the tour for this figure in your interactive eBook.

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### 3 Section D: Buying Software

- Consumer Basics
- Software Copyrights and Licenses

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**3 Consumer Basics**

➤ Most operating systems include a handful of small applications and a good variety of useful utility software

Software	Function
Internet Explorer	Browse the Web
Windows Explorer	Keep track of files and folders; shrink file size
WordPad	Perform basic word processing
Notepad	Perform basic text editing
Calculator	Add, subtract, and calculate basic functions
Paint	Edit bitmap images, such as photos
Sound Recorder	Digitize music and voice input from a microphone
Windows Media Player	Play music and videos
Backup	Make backups of hard disk files
Disk Defragmenter	Arrange data on hard disk for optimal efficiency
Security Center	Set security levels for Internet and network access
Windows Firewall	Block intrusion attempts
Windows Movie Maker	Edit videos
Windows Photo Gallery	View digital photos

FIGURE 3-46 The Windows operating system includes many useful applications and utilities. You can evaluate these offerings before considering whether to supplement them with third-party versions.

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**3 Consumer Basics**

➤ System requirements specify the operating system and minimum hardware capacities necessary for a software product to work correctly

FIGURE 3-47 System requirements typically can be found on the software box or posted on the download site.

System Requirements
Operating Systems: Windows 7/Vista/XP
Processor: Intel Pentium or Core or equivalent
Memory: 1 GB or more
Hard Disk Space: 10 MB for installation
Network Protocol: TCP/IP
Network Connection: 10/100 Ethernet LAN/WAN, cable modem, DSL router, ISDN router, or dial-up modem

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**3 Software Copyrights and Licenses**

➤ A copyright is a form of legal protection that grants the author of an original "work" exclusive rights

- Copyright notice

➤ Software licenses, also called license agreements, define the ways in which you may use a computer program

- Single-user license
- Site license
- Multiple-user
- Concurrent-use license
- Shrink-wrap license

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<b>3</b>	<b>Section E: Security Software</b>
	<ul style="list-style-type: none"><li>➤ Security Software Basics</li><li>➤ Security Suites</li><li>➤ Antivirus Modules</li></ul>
<small>Chapter 3: Software</small>	
<small>58</small>	

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<b>3</b>	<b>Security Software Basics</b>
	<ul style="list-style-type: none"><li>➤ Security software is designed to protect computers from various forms of destructive software and unauthorized intrusions</li><li>➤ The terms malicious software and malware refer to any computer program designed to surreptitiously enter a computer, gain unauthorized access to data, or disrupt normal processing operations</li></ul>
<small>Chapter 3: Software</small>	
<small>59</small>	

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<b>3</b>	<b>Security Software Basics</b>
	<ul style="list-style-type: none"><li>➤ Computer virus</li><li>➤ Computer worm<ul style="list-style-type: none"><li>➤ Mass-mailing worm</li></ul></li><li>➤ Trojan horse<ul style="list-style-type: none"><li>➤ Remote Access Trojan (RAT)</li></ul></li><li>➤ Bot<ul style="list-style-type: none"><li>➤ Spider</li><li>➤ Botnet</li></ul></li><li>➤ Spyware</li></ul>
<small>Chapter 3: Software</small>	
<small>60</small>	

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**3 Security Software Basics**

FIGURE 3-53  
Symptoms of Infection

- ▶ Irritating messages or sounds
- ▶ Frequent pop-up ads, at times with pornographic content
- ▶ The sudden appearance of a new Internet toolbar on your browser's home page
- ▶ An addition to your Internet favorites list that you didn't put there
- ▶ Prolonged system startup
- ▶ Slower than usual response to mouse clicks and keyboard strokes
- ▶ Browser or application crashes
- ▶ Missing files
- ▶ Your computer's security software becomes disabled and cannot be restarted
- ▶ Periodic network activity when you are not actively browsing or sending e-mail
- ▶ Your computer reboots itself frequently



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**3 Security Software Basics**

- ▶ The term rootkit refers to software tools used to conceal malware and backdoors that have been installed on a victim's computer
- ▶ A virus hoax usually arrives as an email message containing dire warnings about a supposedly new virus on the loose

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**3 Security Suites**

- ▶ A security suite integrates several security modules to protect against the most common types of malware, unauthorized access, and spam
- ▶ A security suite costs less than purchasing standalone security modules

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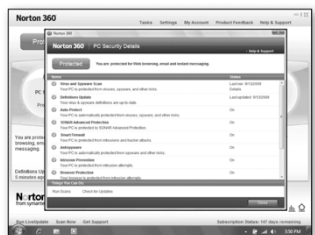
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### 3 Security Suites

FIGURE 3-55  
The Norton security suite includes modules for scanning viruses, detecting spyware, and activating a firewall against unauthorized intrusions. Take a tour of these modules by using your interactive eBook.




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### 3 Antivirus Modules

- Antivirus software is a type of utility software that looks for and eradicates viruses, Trojan horses, worms, and bots
  - A virus signature is a section of program code, such as a unique series of instructions, that can be used to identify a known malicious program, much as a fingerprint is used to identify an individual
  - Virus signatures and other information that antivirus software uses to identify and eradicate malware is stored in one or more files usually referred to as virus definitions

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### 3 Antivirus Modules

- Start scanning when the computer boots.
- Scan all programs when they are launched and document files when they are opened.
- Scan other types of files, such as graphics, if you engage in some risky computing behaviors and are not concerned with the extra time required to open files as they are scanned.
- Scan incoming mail and attachments.
- Scan incoming instant message attachments.
- Scan outgoing e-mail for worm activity such as mass-mailing worms.
- Scan zipped (compressed) files.
- Scan for spyware, sometimes called pups (potentially unwanted programs).
- Scan all files on the computer's hard disk at least once a week.

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### 3 Antivirus Modules

- Most experts recommend that you configure your antivirus software to periodically scan all the files on your computer
- If, during the scanning process, your virus protection software identifies a virus, worm, Trojan horse, or bot in a file or attachment, it can try to remove the infection, put the file into quarantine, or simply delete the file



FIGURE 3-42  
Free antivirus software is available, so computer owners have no excuse for leaving their computers unprotected.

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