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1 Explore Windows 7

In this chapter, you will learn how to

- ✔ Log on to Windows 7.
- ✔ Explore the desktop.
- ✔ Use the Start menu.
- ✔ Use the Windows Taskbar.
- ✔ Explore Control Panel.
- ✔ Find information about your computer system.
- ✔ Update Windows system files.
- ✔ End a computing session.

This chapter will help you quickly become familiar with the Windows 7 user interface and the tools you'll use to interact with your computer's operating system.

Each time you turn on your computer, it goes through a startup process during which it loads the system files necessary for you to interact with your computer and for your computer to interact with other devices, such as the monitor, keyboard, and mouse. When the startup process is complete, you log on to Windows 7 by providing identification information that uniquely identifies you to the system. After you log on, Windows 7 presents a working environment individually tailored to your preferences. The process might sound somewhat complicated, but in actual practice, it's quite simple.

When you first set up your computer, or if it's been a while since you used it, it's a very good idea to check for and install any updates released by Microsoft to keep your system running smoothly. You can configure Windows 7 to update itself with available updates at regularly scheduled intervals (provided your computer is on). By setting up automatic updating, you can be sure that your computer system always includes the most current features and security tools.

When you finish working with your computer, you can either shut down the computer entirely or leave it running in various ways. For example, you can log off from Windows 7 to end your computing session, lock the computer to restrict access to your session, or put the computer into Sleep mode to conserve power.

In this chapter, you'll learn the basic skills needed to work on a Windows 7 computer and to complete the exercises in this book. You'll learn about logging on to and off from Windows and explore tools you can use to give control the computer. You'll practice using these tools to locate your computer's hardware and operating system specifications, and then ensure that your installation of Windows 7 is absolutely up to date.

Practice Files You won't need any practice files to complete the exercises in this chapter. See "Using the Practice Files" at the beginning of this book for more information.

Important Before you can work through the exercises in this book, you must have Windows 7 already installed on your computer, and you must know your user account name and password (if your user account requires one).

Logging On to Windows 7

The process of starting a computing session is called *logging on*. After you turn on the computer and it goes through its startup processes, the Windows 7 Welcome screen appears. The appearance of the screen and the exact process to log on to Windows depends on whether more than one user account has been created on your computer, and whether your account is protected by a password.

- If there is only one account, and it is not protected by a password, Windows might bypass the Welcome screen entirely and log you on. If the Welcome screen displays your user account name and picture, click the picture to log on to Windows.
- If there is only one account, and it is protected by a password, the Welcome screen displays your user account name and picture and a password box. You enter your password and then press Enter or click the Go button to log on to Windows.
- If there are multiple accounts, the Welcome screen displays the user account names and pictures for all the active user accounts. You click your user account picture and, if your account is password protected, enter your password to log on to Windows.

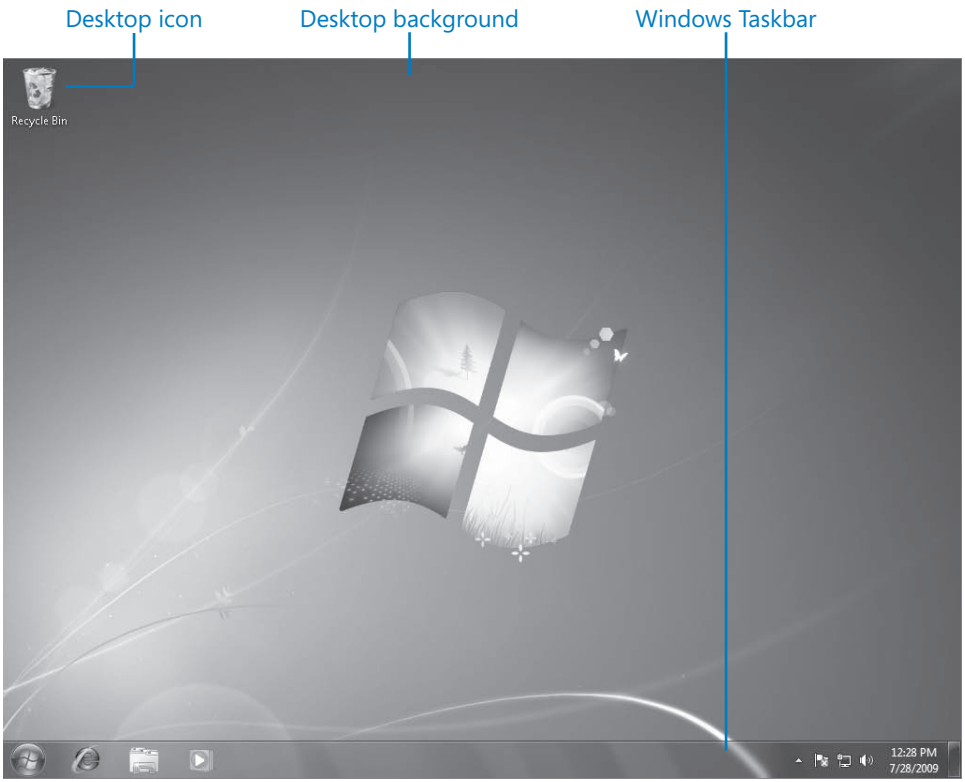
Tip When you assign a password to a user account, you can specify a password hint. Then if you enter your user account password incorrectly, Windows displays the password hint to help you correct your error.

After you log on, Windows 7 loads your user profile and then displays your working environment. Known as the *desktop*, this environment reflects settings you make to personalize Windows. The first time you log on to a computer, Windows also sets up a file structure specific to your user account, which might take a few extra seconds.

Exploring the Desktop

The desktop background you see the first time you log on to Windows 7 might be the default Windows 7 desktop background, which depicts a stylized Windows logo on an organic blue background, or, if you purchased your computer with Windows 7 already installed, the computer manufacturer (also called the original equipment manufacturer, or *OEM*) might have specified a brand-specific desktop background. In either case, you can change the background to one of the many beautiful photographs or artistic renderings that come with Windows 7, to a solid-colored background, or to one of your own photos or graphics. With any background other than a solid color, you can have the background switch to a different image as often as every 10 seconds.

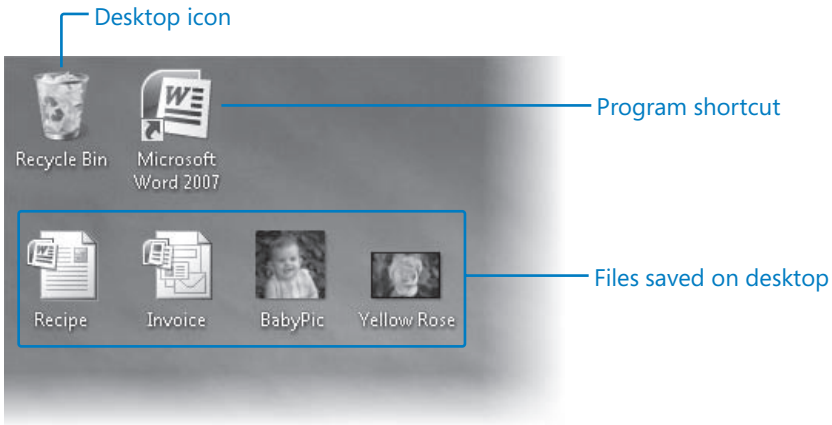
See Also For more information about desktop background options, see "Modifying a Theme" in Chapter 9, "Change Visual Elements."



A typical Windows 7 desktop, with the default background.

See Also If you're new to computing, refer to "Information for New Computer Users" at the beginning of this book for an explanation of basic terminology you will encounter throughout this book, as well as instructions for working with user interface components.

Depending on your Windows 7 settings and the programs installed on your computer, you might have one or more icons on your desktop. Windows 7 assigns an icon to every type of item on your computer to make it easier to identify files, storage locations, and programs. The icon might represent a file type (such as a document, a text file, or a database) or storage component (such as a folder, hard disk drive, or CD drive); or it might indicate the default program for opening a file. This visual representation can make it easier to find a file or program you're looking for. When an icon represents a link, or shortcut, to an item stored somewhere else, an arrow appears in its lower-left corner.



An icon can represent an item stored in the current location or elsewhere.

There are six standard desktop icons representing Windows elements; you can turn the display of these on or off. The only desktop icon that is displayed by default on a standard Windows 7 installation is the one that represents the *Recycle Bin*, which is where Windows temporarily stores files you delete. When the Recycle Bin is empty, the icon depicts an empty trash can; after you delete items (and until you empty the Recycle Bin), the icon depicts pieces of paper in the trash can. You can recover deleted files from the Recycle Bin, or you can empty the Recycle Bin and permanently delete the files to free up space on your hard disk.

See Also **For information about Windows desktop icons, see "Creating Shortcuts" in Chapter 5, "Manage Folders and Files." For information about managing the Recycle Bin, see "Deleting and Recovering Folders and Files" in the same chapter.**

The manufacturer of a new computer might have installed programs—either trial or full versions—on it. To bring these programs to your attention, the manufacturer might have placed shortcuts to them on the desktop, along with links to "offers" (advertisements) for products and services you can purchase. It's not unusual to purchase a new computer and find 20 shortcuts already on its desktop the first time you start it up.

Another way icons might appear on your desktop is if you save or move files or folders there. For example, if you download a program or other file from the Internet that you'll need to use only once, you might save it on your desktop so that you can quickly find it, use it, and then delete it. When you install a program on your computer, you often have the option of creating a shortcut to it on the desktop. (Some installation programs automatically create a desktop shortcut, but others give you the courtesy of choice.) If you created desktop shortcuts before upgrading your computer operating system to Windows 7, your existing desktop shortcuts are still available after you upgrade.



Pointing to an item on the desktop displays a ScreenTip indicating its function or properties.

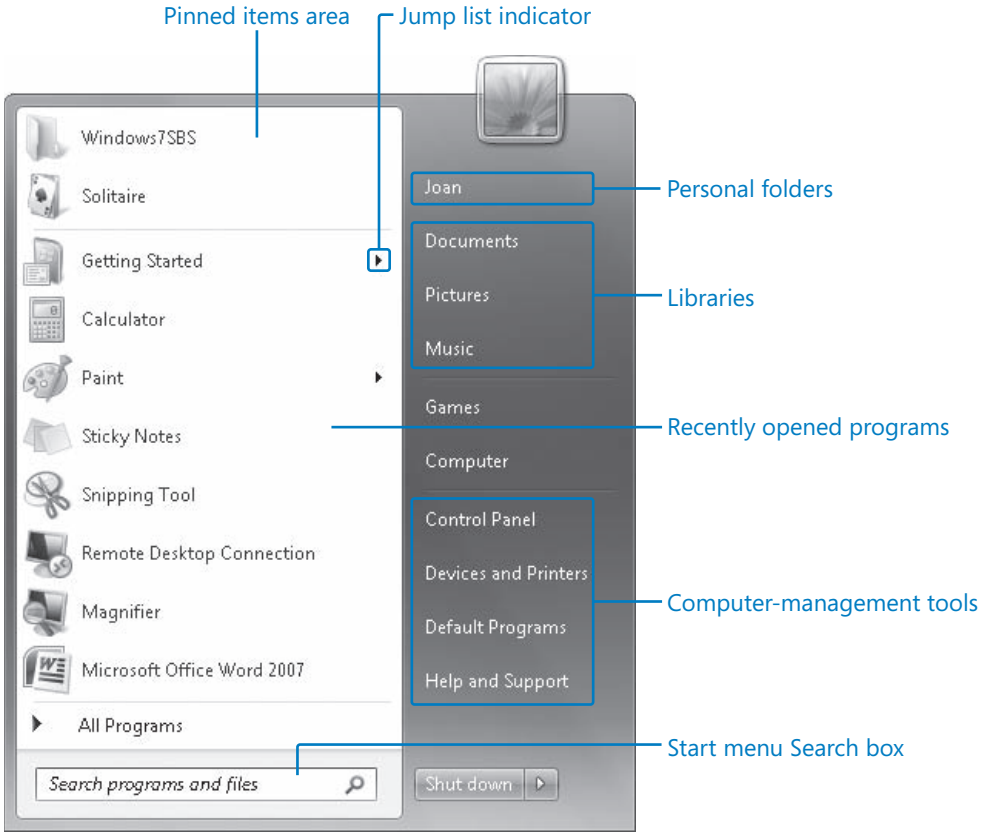
Below each icon on the desktop is the name of the item it represents. If the name is too long to fit onto two lines, it is truncated by an ellipsis (...) when not selected and displayed in full when you click it, or sometimes when you click the desktop. When you point to an icon, a ScreenTip containing identifying information appears. Pointing to a program shortcut, for example, displays the location of the file that starts the program. Pointing to a file displays the file name, type, size, and modification date. You can start a program, open a folder or file, or jump to a network location or Web site by double-clicking the associated icon or shortcut.

Tip You can create your own shortcuts to programs, to specific folders or files, to other computers, or to Web sites, on the desktop or in any other folder. You can delete an item from the desktop as you would from any folder. When you delete a shortcut, however, you aren't actually deleting the linked program, folder, or file—only the link to that item.

See Also For information about creating desktop shortcuts, see "Creating Shortcuts" in Chapter 5, "Manage Folders and Files."

Using the Start Menu

The Start menu is your central link to your computer's programs, management tools, and file storage structure. You open the Start menu by clicking the Start button at the left end of the Windows Taskbar, or by pressing the Windows logo key (the keyboard key, usually located to the left of the Spacebar, labeled with the Windows logo). The Windows 7 Start menu looks similar to that of earlier versions, and features the vertical folder expansion introduced in Windows Vista.

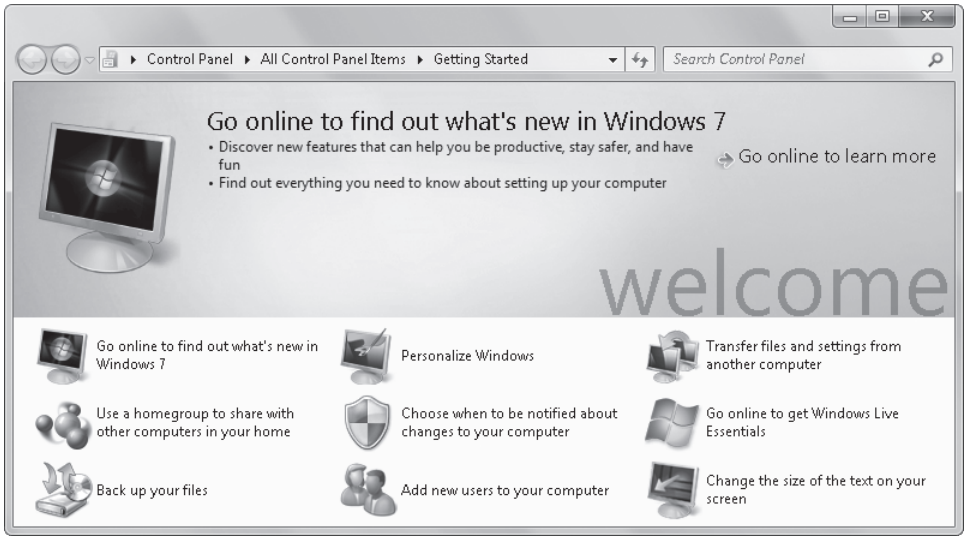


The Windows 7 Start menu.

See Also For information about customizing the Start menu, see "Modifying the Start Menu" in Chapter 10, "Change System Settings."

Quickly Getting Started

Clicking the Getting Started link on the Start menu displays the Getting Started window of Control Panel. (Pointing to the Getting Started link displays a jump list of the same items.)



The Getting Started window of Control Panel contains links to some of the tasks that you are likely to want to perform when setting up a new computer.

If you're familiar with Windows, you might want to jump right in and start working from this window. If you're uncertain about these tasks, or want to learn more about how the associated functionality works in Windows 7, you might prefer to read about them in this book before taking action.

In this book, we cover the common startup tasks in a logical order and provide step-by-step instructions for completing them in the manner that is appropriate for your situation.

From the Getting Started window, you can also link to online information about Windows 7, and download useful programs from the Windows Live Essentials Web site.

Exploring the Left Pane of the Start Menu

The left pane of the Start menu provides efficient access to programs and other items installed on your computer.

Pinned Items Area

You can quickly access specific programs, folders, or files by inserting links to them in the pinned items area at the top of the left side of the Start menu. This area is not visible until the first time you pin an item to it.

See Also For information about pinning and unpinning Start menu links, see "Creating Shortcuts" in Chapter 5, "Manage Folders and Files."

Recently Opened Programs List

The recently opened programs list displays links to the last 10 programs you started. You can adjust that number, or remove the list entirely.

The first time you log on to Windows 7, the list displays links to some of the new and improved programs that come with Windows 7, such as Windows Media Center, Sticky Notes, the Snipping Tool, the Calculator, and Paint. The programs that appear here might vary depending on the edition of Windows 7 running on your computer and any programs installed by the computer manufacturer.

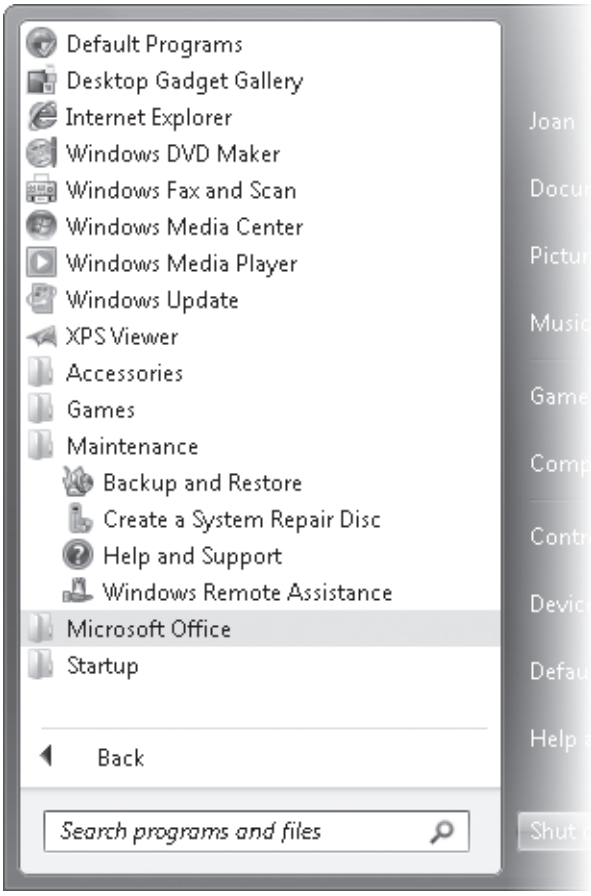
See Also For information about the different editions of Windows 7 and how they are addressed in this book, see "Introducing Windows 7" at the beginning of this book.

All Programs Menu

The All Programs menu provides access to most of the programs and utilities installed on your computer. These include programs installed as part of Windows 7, programs installed by the computer manufacturer, and programs you have installed. (Most program setup utilities add a program link to the Start menu.)

You display the All Programs menu by pointing to or clicking All Programs at the bottom of the left pane of the Start menu. Some programs are available from the menu itself, and some are grouped in folders. Clicking a folder expands it to make its programs accessible. If you want to close the All Programs menu without starting a program, you can point to or click Back to return to the standard Start menu.

In a default installation of Windows 7, the programs and utilities that are not available from the root of the All Programs menu are grouped in these folders:



On the All Programs menu, new programs are highlighted to bring them to your attention.

- **Accessories** This folder includes links to the following programs and utilities: Calculator, Command Prompt, Connect to a Network Projector, Connect to a Projector, Getting Started, Math Input Panel, Notepad, Paint, Remote Desktop Connection, Run, Snipping Tool, Sound Recorder, Sticky Notes, Sync Center, Windows Explorer, and WordPad. Also included are the Ease Of Access, System Tools, Tablet PC, and Windows PowerShell subfolders.

  Tip On a Tablet PC, the *Tablet PC* folder appears directly on the All Programs menu.

- **Games** This folder includes links to the games that come preinstalled with Windows 7, to the Games Explorer window, and to the Game Providers page of the Microsoft Web site, from which you can download additional games.

- **Maintenance** This folder contains links to the following preventive maintenance tools: Backup and Restore, Create a System Repair Disc, Help and Support, and Windows Remote Assistance.
- **Startup** This folder contains links to programs that you want to start automatically with Windows 7.

We'll explore many of these programs and utilities in this book.

Jump Lists

In earlier versions of Windows, a right-pointing arrow next to a link or menu item indicated that additional options for that entry were available. This functionality has been expanded in Windows 7 to create a very useful feature called *jump lists*.

On the Windows 7 Start menu, pointing to (not clicking) a right-pointing arrow next to a program name in the recently opened programs list or the pinned items area displays a list of files recently opened with that program, of related tasks, or of common actions you can perform within that program. For example, pointing to WordPad in the recently opened programs list displays a list of the WordPad documents you've recently been working with. You can "jump" to a specific file or task by clicking it in the jump list.

Start Menu Search Box

In the lower-left corner of the Start menu, you'll find one of the greatest treasures of Windows 7—the Start menu Search box. This feature made our Top 3 Favorite Features list when it was introduced in Windows Vista, and it's still right up there—the time savings it provides are just amazing.

The first thing to note about Start menu Search is that it's immediately available regardless of what you're currently doing on your computer. Simply click the Start button—or press the Windows logo key if your keyboard has one—and the Start menu expands with the cursor already active in the Search box. Then type any characters in the Search box, and Windows immediately displays a list of programs, Control Panel items, files, documents, music, videos, and e-mail messages containing that string of characters, grouped by category. As you type more characters, Windows refines the search results almost instantly.

You can open any item that appears in the search results by clicking it, or you can open the folder containing that item by right-clicking the item and then clicking Open File Location. To view more information about documents and messages matching the search term, click See More Results (at the bottom of the list) to open the Search Results In Indexed Locations window. This window displays the file type icon (or, for certain

types of graphics, a thumbnail of the actual graphic), name, location, date, and size of each item in the search results. For documents and HTML files, the first 150 or so characters of the file's content appear in the window. The search results remain available in the window until you close it.

See Also For more information about Start menu Search, see "Exploring Control Panel" later in this chapter. For information about efficient search techniques, see "Finding Specific Information" in Chapter 4, "Navigate Windows and Folders."

Exploring the Right Pane of the Start Menu

The right pane of the Start menu is divided into three sections whose contents can vary depending on the Start menu properties you specify.

- The top section provides quick access to file storage locations. It displays your user account picture and name, and links to the Documents, Pictures, and Music libraries. Clicking your user account picture displays your user account settings. Clicking your user account name displays all your personal folders (the Windows folders specifically associated with your user account). These include the Contacts, Desktop, Downloads, Favorites, Links, Saved Games, and Searches folders as well as your Documents, Music, Pictures, and Videos folders.
- The middle section provides access to games installed with Windows 7 and to the Computer window, from which you can access all the devices attached to your computer or network. This section can also display links to your Internet Explorer Favorites menu, to a list of the 15 files you have most recently worked with, to a window that displays the contents of your computer, and to a window that displays the computers, programs, folders, and files you can access on your network.
- The bottom section provides access to computer-management tools. It can display links to existing network connections, to the Control Panel window from which you can access all the Windows 7 system settings, to the default settings for opening various types of files and media, to the Devices And Printers window, and to Windows Help And Support.

By default, clicking an item in the right pane of the Start menu opens the corresponding folder window. Some items can alternatively be displayed as menus, to give you even faster access to files and commands.

At the bottom of the right pane of the Start menu, the Power button and Shut-down Options menu provide options for ending your computing session.

See Also For information about the Power button and the Windows 7 shut-down options, see "Ending a Computing Session" later in this chapter. For information about Start menu links and menus, see "Modifying the Start Menu" in Chapter 10, "Change System Settings."



Quick Access to Windows Functionality

The Windows logo key is located to the left of the Spacebar (between the Ctrl and Alt keys) on most keyboards. It is labeled with the Windows logo, which resembles a waving flag. On currently manufactured keyboards, the Windows logo on the key is inside a recessed circle. This makes the key easier for keyboard users to locate. Similarly, many keyboards incorporate raised bars on the "home keys" (the F and J keys on an English-language keyboard) to enable keyboard users to quickly locate the "home position" (the correct placement of hands on the keyboard) by touch.

Pressing the Windows logo key alone or in combination with other keys enables you to move around and work with Windows without using a mouse or other pointing device. In Windows 7, the Windows logo key enables functionality including that shown in the following table.

Keyboard shortcut	Function
Windows logo key	Open or close the Start menu
Windows logo key+B	Select the first icon in the notification area of the taskbar
Windows logo key+D	Minimize all open windows
Windows logo key+E	Open the Computer window
Windows logo key+F	Open the Search window
Windows logo key+G	Select or move between desktop gadgets
Windows logo key+L	Lock the computer
Windows logo key+M	Minimize all open windows
Windows logo key+Shift+M	Redisplay the windows
Windows logo key+P	Display the Projection controls
Windows logo key+R	Open the Run dialog box
Windows logo key+T	Select or move between taskbar buttons
Windows logo key+U	Open the Ease Of Access Center window
Windows logo key+X	Open the Windows Mobility Center (portable computers only)
Windows logo key+Spacebar	Make all open windows temporarily transparent (Aero-capable computers only)

Keyboard Shortcut You'll find other keyboard shortcuts throughout this book. For a full list of keyboard shortcuts for Windows 7 and for the Windows 7 programs and utilities, search Windows Help And Support for "keyboard shortcuts."

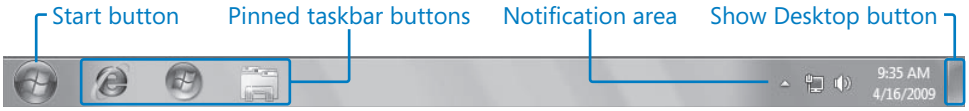
Using the Windows Taskbar

The taskbar that appears, by default, across the bottom of your screen is your link to current information about what is happening on your Windows computer. In Windows 7, the taskbar functionality has been significantly upgraded. The default taskbar is twice the height that it was in previous versions of Windows, so you can more clearly see its contents. The Start button still appears at the left end of the taskbar, and the time and date still appear near the right end. However, what appears between them has undergone a transformation. Larger icons, improved grouping, thumbnail window previews from which you can view and work with window content, and the ability to move taskbar buttons where you want them all contribute to the increased usefulness of this feature.

See Also For information about changing the size of the taskbar and the taskbar buttons, moving the taskbar to another location, and adding toolbars to the taskbar, see "Modifying the Taskbar" in Chapter 10, "Change System Settings."

The Show Desktop button appears at the far right end of the taskbar. (If you've used previous versions of Windows, you'll notice that the button appearance has changed significantly.) Pointing to the Show Desktop button makes all the open windows transparent so that you can see the desktop. Clicking the button once minimizes all currently open windows; clicking it again redisplays the windows.

Keyboard Shortcut Pressing the Windows logo key+D has the same effect as clicking the Show Desktop button.



The default Windows 7 taskbar.

Tip The Quick Launch toolbar that was available on the taskbar in previous versions of Windows is, by default, not displayed in Windows 7 because you can now pin programs directly to the taskbar. If you miss this feature, you can display the Quick Launch toolbar by adding the hidden AppData\Roaming\Microsoft\Internet Explorer\Quick Launch folder, located in your personal folder structure, to the taskbar.

Taskbar Buttons

To the right of the Start button, buttons for starting Internet Explorer, Windows Explorer, and Windows Media Player are pinned to the Windows Taskbar. Almost any action, such as starting a program or opening a file, dialog box, or Control Panel window, adds a corresponding, temporary button to the taskbar. These taskbar buttons, which by default

are larger in Windows 7 than in previous versions of Windows, are identified by their program icons. When multiple files or windows of the same type are open, they are stacked under one taskbar button.

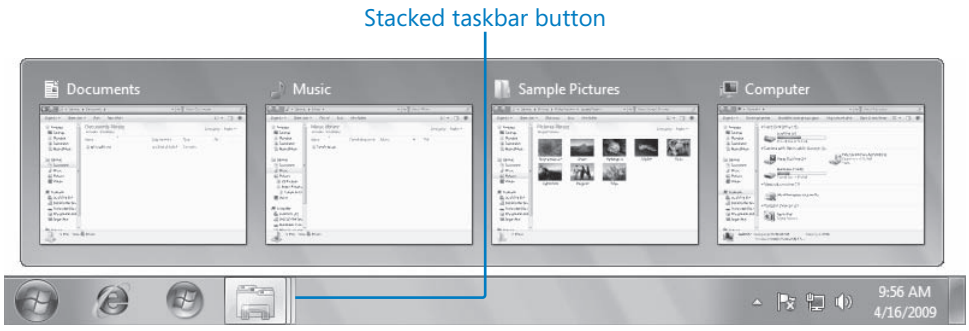
Tip Windows Explorer windows stack under the pinned Windows Explorer button, and Web pages stack under the pinned Internet Explorer button.

See Also For information about pinning and unpinning taskbar buttons, see "Creating Shortcuts" in Chapter 5, "Manage Folders and Files." For information about displaying multiple taskbar rows or small taskbar icons, see "Modifying the Taskbar" in Chapter 10, "Change System Settings."

The number of taskbar buttons you can fit on each row of the Windows 7 taskbar varies depending on your screen resolution and whether the taskbar is displaying large icons or small icons. When there are more buttons than the taskbar can display, a scroll bar appears so that you can get to hidden buttons. The following table provides examples of the taskbar capacity:

Screen resolution	Buttons per row (large icons)	Buttons per row (small icons)
800 × 600	10	15
1024 × 768	15	22
1280 × 1024	20	29
1600 × 1200	26	39

Pointing to a taskbar button displays thumbnails of each open window of that type. You can switch to a window by clicking its thumbnail. Pointing to a thumbnail temporarily displays that window and makes all other windows transparent, so you see only the selected window and the desktop. (If the window was minimized, it appears in its most recent location.) Pointing to a thumbnail also causes a Close button to appear in its upper-right corner, so you can close the window without making it active.



Large, grouped thumbnails make it easier to manage multiple open windows.

Keyboard Shortcut You can use keyboard shortcuts to minimize, maximize, close, and switch between windows. For more information, see "Working with Windows" in Chapter 4, "Navigate Windows and Folders."

Right-clicking a taskbar button displays a shortcut menu of related files and commands. The list varies depending on the type of item the taskbar button represents. For example:

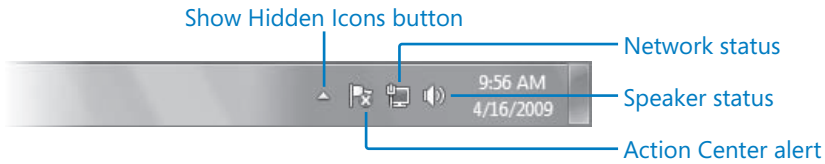
- Right-clicking the Internet Explorer taskbar button displays your Internet Explorer browsing history so that you can access a recently visited Web site directly from the taskbar.
- Right-clicking the Windows Explorer taskbar button displays a list of windows you frequently open.
- Right-clicking the Windows Media Player button displays a list of tasks related to the media that is currently accessible on your computer.
- Right-clicking a running program's taskbar button displays a list of files recently opened with that program, and gives you the options of pinning that program to the taskbar and closing all the open program windows.

The shortcut menu for every taskbar button includes links to start the associated program and to remove the button from the taskbar.

Tip You can rearrange buttons on the taskbar by dragging them.

Notification Area

The notification area at the right end of the taskbar displays information about the status of programs, including those running in the background (programs you don't need to interact with), as well as links to certain system commands. Some notification icons and system icons are hidden by default, and you can choose to hide others that you don't actively want to monitor.



The notification area displays information about programs and your computer system.

See Also For information about displaying and hiding notification area icons, see "Modifying the Taskbar" in Chapter 10, "Change System Settings."

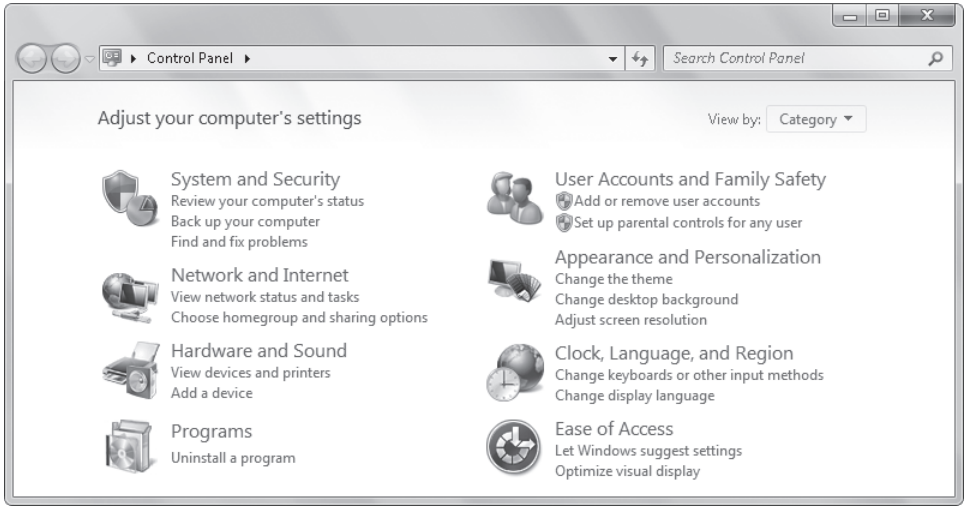
Exploring Control Panel

Control Panel is the central location from which you can manage all the aspects of your Windows 7 operating system: how it looks, how it works, how it communicates, and so on. When you open Control Panel, it's displayed in a unique instance of Windows Explorer; the taskbar button representing Control Panel and the various Control Panel windows appears on the taskbar independent of the Windows Explorer taskbar button.

Control Panel Categories

In Windows Vista and Windows XP, Control Panel offered two views: Category view and Classic view. To help guide users to the correct Control Panel item, Category view described the tasks you might want to perform. Classic view provided direct access to the Control Panel items, and retained the look and feel of the Windows 2000 Control Panel. (In Classic view, you had to know or guess which item to use.)

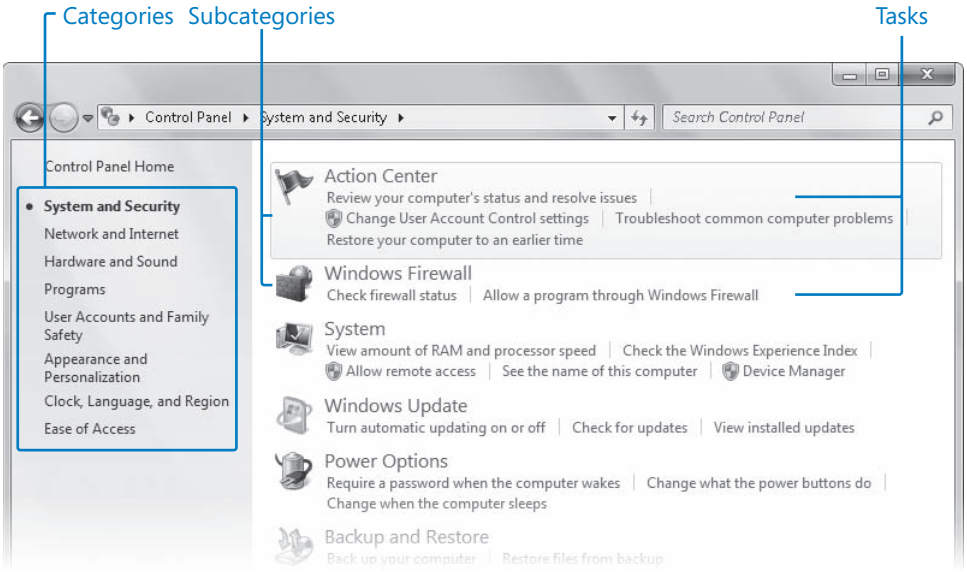
In Windows 7, you can choose from three views of the Control Panel window—Category view, Large Icons view, and Small Icons view. Category view is the default. In this view, Control Panel items are divided into eight categories:



In Category view, links to the most common tasks are available under the category name.

The most common tasks within each category are listed below the category name so that you can go directly to the window or dialog box in which to perform that task.

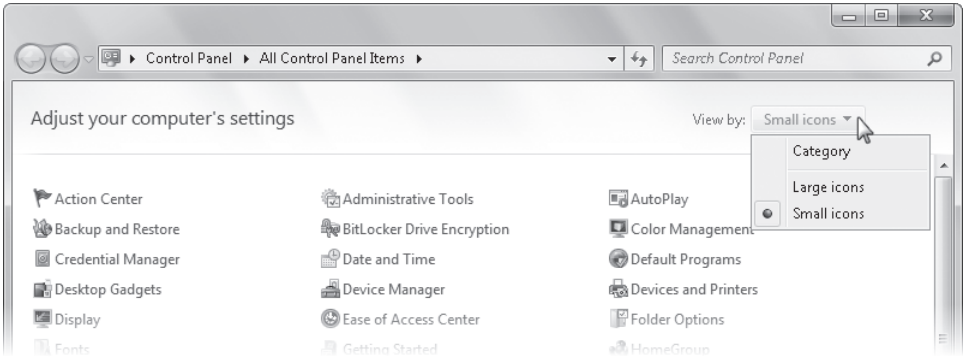
Alternatively, you can browse through a category to the windows, dialog boxes, and tasks related to that category.



Within a Control Panel category, clicking a subcategory opens that item's window; clicking a task jumps to a specific command center available from the item's window.

Accessing Individual Control Panel Items

From Control Panel, you can access more than 40 individual controls—windows and dialog boxes—with which you manage specific aspects of your computer system. Clicking Small Icons or Large Icons in the View By list displays the All Control Panel Items window.



Small Icons view of the All Control Panel Items window displays links to every Control Panel window or dialog box.

In Small Icons view or Large Icons view, the All Control Panel Items window displays the following items, which are common to all Windows 7 installations:

- Action Center
- Administrative Tools
- AutoPlay
- Backup and Restore
- BitLocker Drive Encryption
- Color Management
- Credential Manager
- Date and Time
- Default Programs
- Desktop Gadgets
- Device Manager
- Devices and Printers
- Display
- Ease of Access Center
- Folder Options
- Fonts
- Getting Started
- HomeGroup
- Indexing Options
- Internet Options
- Keyboard
- Location and Other Sensors
- Mouse
- Network and Sharing Center
- Notification Area Icons
- Parental Controls
- Performance Information and Tools
- Personalization
- Phone and Modem
- Power Options
- Programs and Features
- Recovery
- Region and Language
- RemoteApp and Desktop Connections
- Sound
- Speech Recognition
- Sync Center
- System
- Taskbar and Start Menu
- Troubleshooting
- User Accounts
- Windows CardSpace
- Windows Defender
- Windows Firewall
- Windows Update

Other Control Panel items might also be available, including controls with which you manage specific hardware components, software programs, and peripheral devices. Throughout this book, we will discuss many of these controls and how you can use them to manage your computer.

Tip **The Control Panel view you choose remains in effect until you choose another, even if you log off of Windows 7.**

Different Ways of Opening Control Panel Items

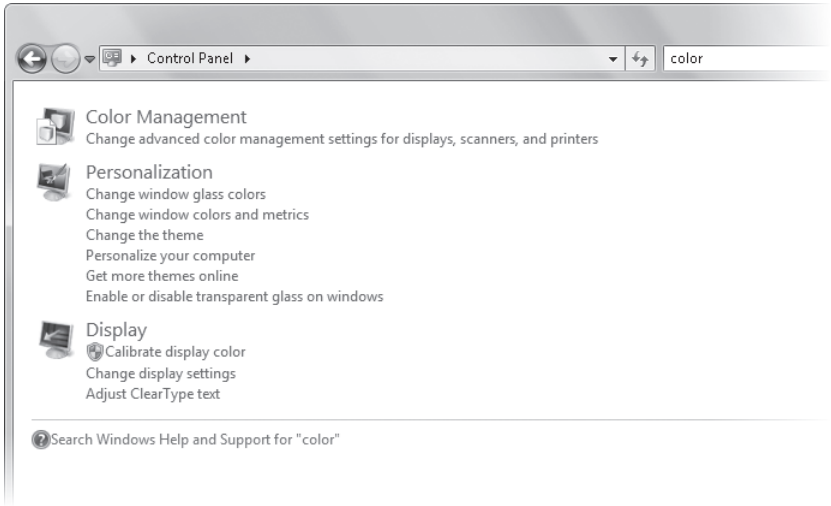
As you gain experience with Windows 7, you'll learn the Control Panel items to use to perform common management tasks. You can access controls in other ways than navigating through the Control Panel categories, such as the following:

- If you're not certain of the specific name of a Control Panel item, you can browse a list of all the items in the All Control Panel Items window to locate the one you want.

  To display individual Control Panel item icons in the All Control Panel Items window, click Small Icons or Large Icons in the View By list in the upper-right corner of Control Panel. Then simply double-click the Control Panel item you want to open.

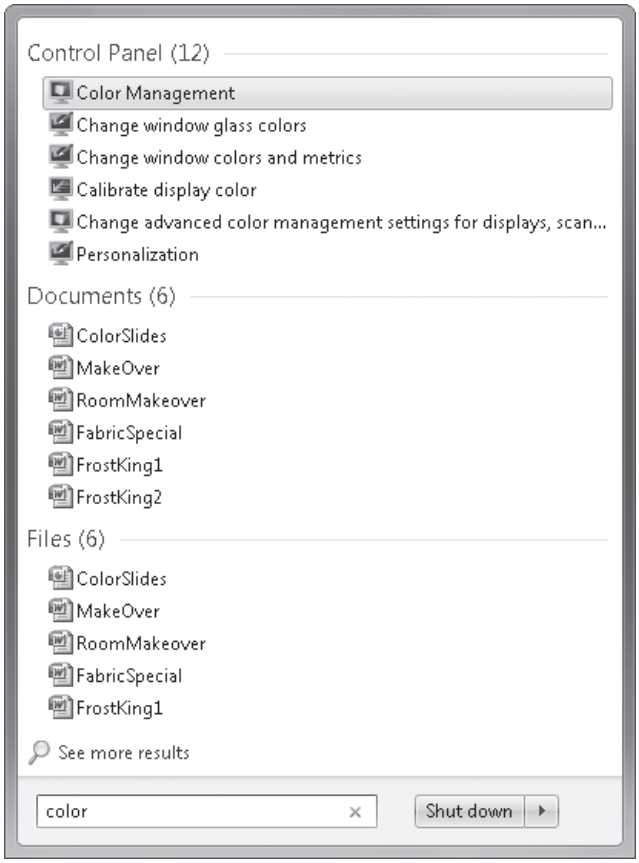
  Tip You can return to the original Control Panel view by clicking Category in the View By list.

- If you know part of the name of the Control Panel item you want to open, you can locate it from Control Panel by entering it in the Search box at the right end of the Control Panel window title bar.



Typing part of an item name in the Control Panel Search box displays items matching your entry so that you can choose the one you want.

- The simplest method of opening a Control Panel item is directly from the Start menu, by typing part of the item name into the Start menu Search box.



As you enter characters into the Start menu Search box, the Start menu displays a list of matching items.

See Also For more information about searching, see "Finding Specific Information" in Chapter 4, "Navigate Windows and Folders."

Understanding User Account Control

User Account Control (UAC) is a security feature first introduced with Windows Vista. The intention of UAC is to enable you to log on to and operate the computer with a more secure standard user account. When you want to perform an operation that could pose a security risk, UAC requires that you enter an administrator account password before it proceeds. This system offers a greatly increased level of security, especially to computers that are not protected as part of a network domain.

Important We'll talk about UAC in depth in Chapter 2, "Manage User Accounts." What you need to know now is that your computer responds differently to commands marked with a security icon, depending on whether you are logged on with an administrator or standard user account and which UAC security level is currently selected.

When UAC is turned on, as it is by default, clicking a command that requires administrator approval opens the User Account Control dialog box.



When you're logged on as an administrator, Windows requests only that you acknowledge the security prompt; you don't need to enter your password.

To continue with the restricted operation:

- If you're logged on as a standard user, click one of the administrator accounts, enter its password, and then click Yes.
- If you're logged on as an administrator, click Yes.

Important In this book, we assume that you are logged on as a standard user and that User Account Control is set to Default. Under these conditions, the User Account Control message box appears only when a program tries to make changes to your computer, and not when you make changes to Windows settings, as you'll be doing when working through the exercises. If User Account Control is set to Always Notify and a User Account Control message box appears, you'll need to provide the requested credentials or acknowledgment.

Finding Information About Your Computer System

Sometimes you'll want or need to locate information about your computer system, such as the processor speed, amount of memory, or edition of Windows. The System window of Control Panel displays information about your computer hardware and operating system, in the following categories:

- **Windows edition** This section contains information about your operating system including the version (such as Windows 7), edition (such as Home Premium), the most recently installed service pack (if a service pack for the operating system has been released) and, depending on the installed edition, a link to the section of the Microsoft Web site from which you can upgrade your edition of Windows.
- **System** This section provides the computer's Windows Experience Index base score (a number from 1.0 to 7.9), the processor type (such as Intel Pentium 4) and speed (such as 2.80 GHz), the amount of onboard random access memory (RAM) that is available, the system type (32-bit or 64-bit), and whether pen input or touch input is available through the computer monitor. This section might also provide information about the manufacturer and model of the computer.
- **Computer name, domain, and workgroup settings** This section displays the computer name (and a description if one exists) and the network domain or workgroup the computer belongs to. If your computer belongs to a homegroup, that information is not shown here.

  See Also For information about connecting your computer to homegroups, workgroups, and domains, see Chapter 3, "Manage Your Network."
- **Windows activation** The section displays the Windows activation status and product ID, or if Windows hasn't yet been activated, provides an online activation link.

The computer manufacturer may provide additional information, such as support contact information or links to associated hardware and software vendors, in the System window.

Tip You can quickly display the System window by right-clicking Computer on the Start menu and then clicking Properties.

The Windows Experience Index base score shown in the System window is not a cumulative rating; it is the lowest of the individual ratings scored by the following five system components:

- Processor speed
- Installed RAM
- General desktop graphics capabilities
- Three-dimensional gaming graphics capabilities
- Primary hard disk data transfer rate

The highest score available for a Windows 7 computer is 7.9 (updated from 5.9 in Windows Vista, to take advantage of improvements in available processor, graphics, and hard disk technologies). Higher scores may be introduced as necessary to keep up with hardware advances.

See Also For more information about the Windows Experience Index, see "Rating Your Computer's Hardware" in Chapter 12, "Set Up Hardware Devices."

In this exercise, you'll open Control Panel and locate information about your computer system. In the process, you'll learn different methods of accessing Control Panel items.

SET UP You don't need any practice files to complete this exercise. Log on to your Windows 7 computer, and then follow the steps.



1. At the left end of the **Windows Taskbar**, click the **Start** button.

   The Start menu expands.

2. On the right side of the **Start** menu, click **Control Panel**.

   The Control Panel window opens.

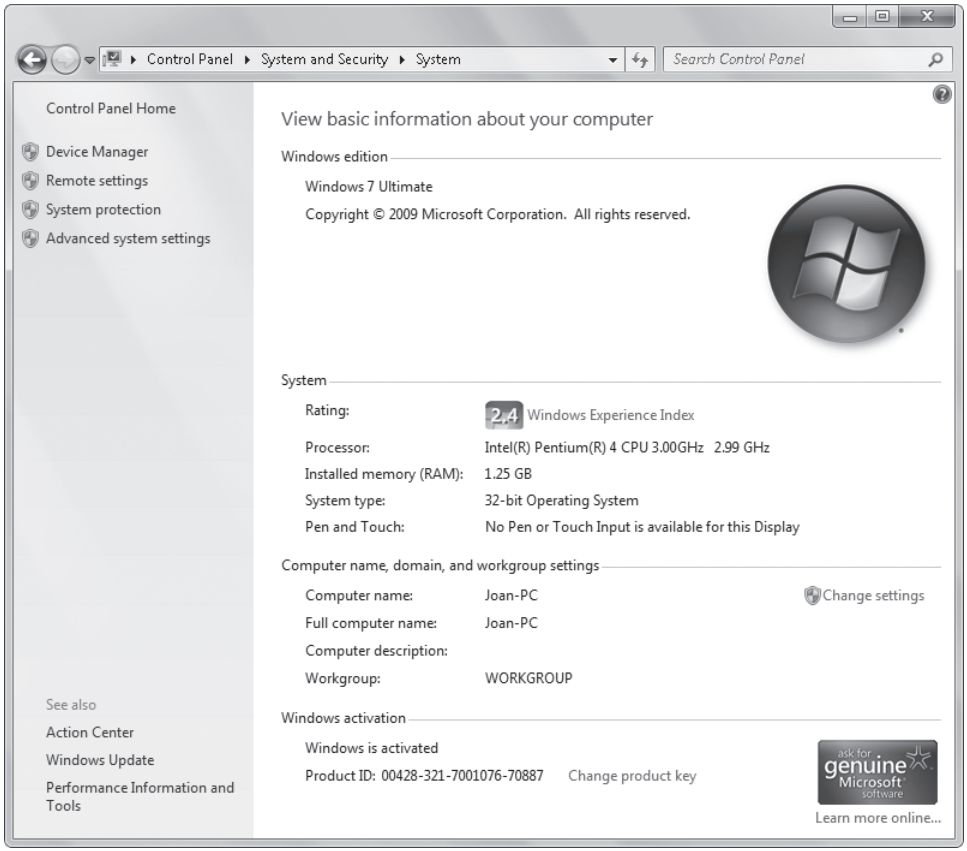
   Troubleshooting If Control Panel opens in a view other than Category view, click Category in the View By list before continuing.

3. Click the **System and Security** category.

   See Also For information about some of the security features of Windows 7, see "Updating Windows System Files" later in this chapter; "Understanding User Accounts and Permissions" in Chapter 2, "Manage User Accounts;" and "Configuring Power Options" in Chapter 10, "Change System Settings."

4. In the **System and Security** window, click the **System** subcategory.

   The System window opens.



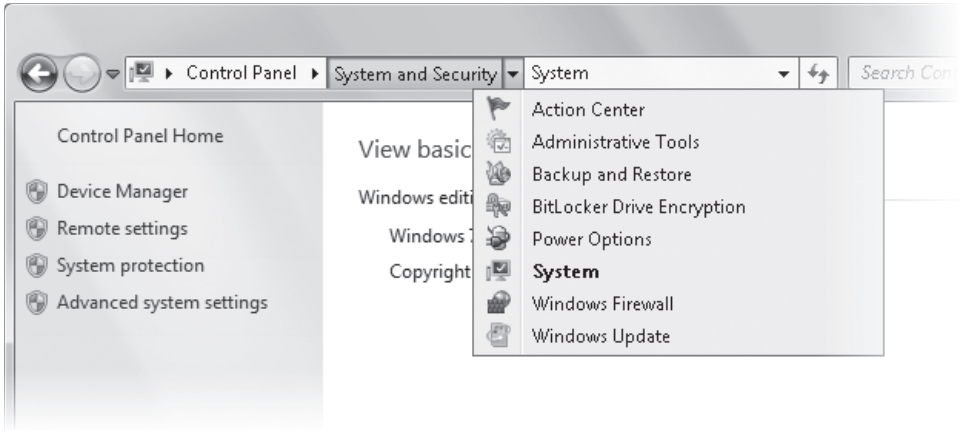
In the System window, you can view information about your computer and access related tools and Control Panel items.

5. View the information about your computer that is displayed in the right pane of the **System** window.

   The left pane of each Control Panel window contains links to related tools at the top, and to related Control Panel items at the bottom. You can return to Control Panel by clicking the Control Panel Home link at the top of the left pane, but for the purpose of learning how to navigate through Control Panel, we'll use a different method, which involves working with the path displayed in the Address bar above the panes. This path shows the route you have taken to get to the displayed window—in this case, the System window.

6. In the **Address bar**, click the arrow to the right of **System and Security**.

   A list of the System And Security subcategories appears, with System (the current window) displayed in bold.



You can open any subcategory window by clicking it in the list.

7. In the list, click **Action Center**.

   The path in the Address bar changes, and the Action Center opens.

8. In the **Address** bar, click **System and Security**.

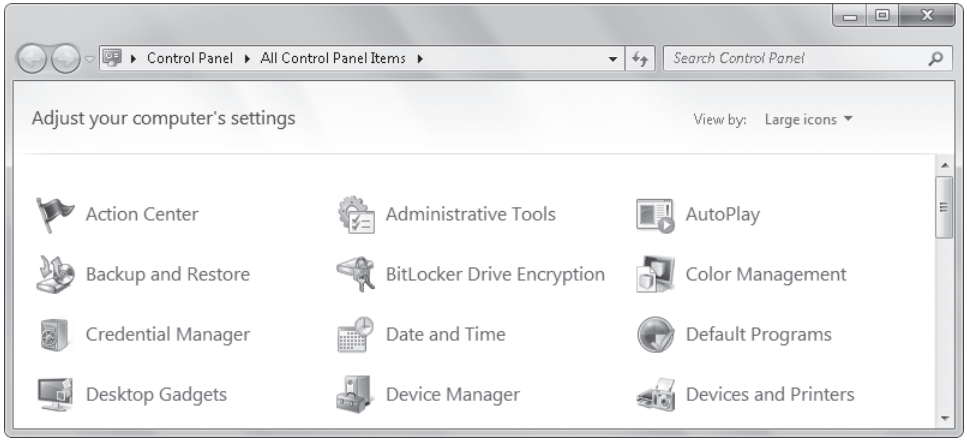
   You return to the System And Security window.

9. If **Control Panel** appears at the left end of the path shown in the **Address** bar, click **Control Panel**. Otherwise, click the left-pointing chevron to the left of the first item in the path, and then in the list that appears, click **Control Panel**.

   You return to the Category view of Control Panel window.

10. In the **View by** list, click **Large Icons**.

    Control Panel displays large icons and names for the individual subcategories.



In Large Icons view, the icons provide visual clues to the purpose of each control.

11. Scroll the **All Control Panel Items** window to locate the **System** item, and then click it.

    The System window opens. Note that although this is the same window that opened after step 4, the path in the Address bar reflects that you accessed the window from the All Control Panel Items window.

12. In the **Address** bar, click the arrow to the right of **All Control Panel Items**.

    An alphabetical list of the items appears.

13. Without clicking away from the list to close it, point to the arrow to the right of **Control Panel**.

    The list of Control Panel categories appears.

14. In the **Address** bar, click **Control Panel**.

    You return to the Control Panel home page.

CLEAN UP Click the Close button to close the Control Panel window before continuing to the next exercise.

Updating Windows System Files

When you upgrade to Windows 7 or purchase a Windows 7 computer, the operating system files are the ones available when your Windows 7 installation media was created or when Windows was installed. Whenever necessary, Microsoft releases updates to Windows (and to other products), either to provide additional functionality or to protect your computer from new security threats. It's important to install these updates as soon after their release as possible.

Windows Update is a utility that scans your computer, confers with the Microsoft Update online database, and recommends or installs any updates that are available for your operating system, your Microsoft software programs, or your hardware. Quite apart from knowing that you have the "latest and greatest," by using Windows Update, you can be sure that your computer is updated whenever necessary.

Types of Updates

During the Windows 7 installation process, your computer is automatically configured to install updates. (If you upgraded to Windows 7 from a previous version of Windows, Windows Update retains your previous settings.) Updates are classified as follows:

- **Important updates** These increase the security or reliability of the operating system and Microsoft software products.
- **Recommended updates** These address non-critical problems, and help enhance your computing experience.
- **Optional updates** These do not address specific Microsoft software problems. They might include software add-ons or drivers for third-party hardware.

With the default settings, Windows Update collects the version numbers of your operating system, Web browser, and other installed software, as well as information about the hardware devices that are connected to your computer, at 3:00 each morning. It then proactively contacts the Microsoft Update site, compiles a list of updates that are available for your system, downloads any available Important or Recommended updates for Windows and Windows programs (even for Windows Update itself), and installs them.

Tip When the update process is complete, Windows Update discards the version and ID information that it collected from your computer.

Completing an Update

Some updates require that you restart the computer to finish the installation, because files can't be updated while they're in use. If you don't restart the computer immediately after installing an update that requires a restart, Windows Update displays a reminder message. From the message box, you can restart the computer or dismiss the message for 10 minutes, 1 hour, or 4 hours. If you don't postpone the reminder, Windows Update counts down to a restart time. If you don't interrupt the countdown, Windows saves auto-recover copies of open documents, shuts down running programs, performs any other tasks necessary to safely shut down the computer, restarts the computer, and displays a message that it has done so.

Windows Update Options

The frequency, time, and independence of the Windows Update utility are your choice. You can access Windows Update from the Start menu, from Control Panel, or from Windows Help And Support. The options are to have Windows 7 do one of the following:

- Download and install updates automatically.
- Download updates and notify you when they are ready to be installed.
- Check for updates and notify you when an update is available.
- Check for updates only when you manually initiate the process.

Important If your computer is connected to a network domain, your network administrator might control the installation of updates.

The default setting in Windows 7 allows you to install updates whether you're logged on as an administrator or as a standard user. You can choose to restrict the installation of updates to administrators only.

Automatic updating is very convenient if you don't want to bear the responsibility of remembering to manually update your system, or if you want to be sure updates are installed as soon as they become available. The default update settings make the automatic update process reasonably unobtrusive—but they are effective only if your computer is usually on and online at 3:00 in the morning.

Tip The default Windows 7 Sleep mode options allow scheduled programs such as Windows Update to bring your computer out of Sleep mode to check for, download, and install available updates according to your Windows Update settings. For more information, see "Configuring Power Options" in Chapter 10, "Change System Settings."

When an update has been downloaded and is ready to be installed, Windows Update alerts you in one or more ways:



- When any type of update is ready, a Windows Update icon appears in the notification area of the taskbar.



- When an Important update is ready, a security icon appears on the Power button on the Start menu. You can't shut down your computer without first installing the update.

In addition to updating Windows system files, you can update other Microsoft products and featured programs through Windows Update. When not already selected, these options are available from the box at the bottom of the Windows Update window:

- **Get updates for other Microsoft products** To have Windows Update monitor availability of updates to Office and other Microsoft programs, click the Find Out More link. This opens the Microsoft Update site. At the bottom of the page, select the I Accept The Terms Of Use check box, and then click Install.
- **Additional Windows Update options are available** Windows Update can notify you when featured updates and programs are available. To invoke this option, click the View Options link and then, in the Windows Update message box, click Turn On This Option.

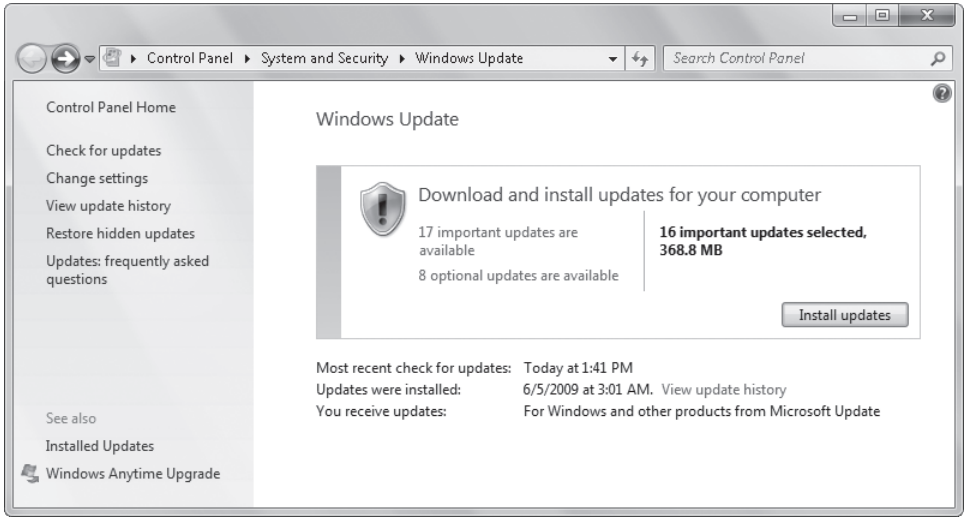
In this exercise, you'll check update settings, install available updates, and set up the computer to periodically install critical updates.

SET UP You don't need any practice files to complete this exercise; just follow the steps.

1. Click the **Start** button, click **All Programs**, and then click **Windows Update**.

   Windows Update displays information about your computer's current update status, when it most recently checked for updates, when it most recently installed updates, and the scope of updates your computer receives from Microsoft Update.

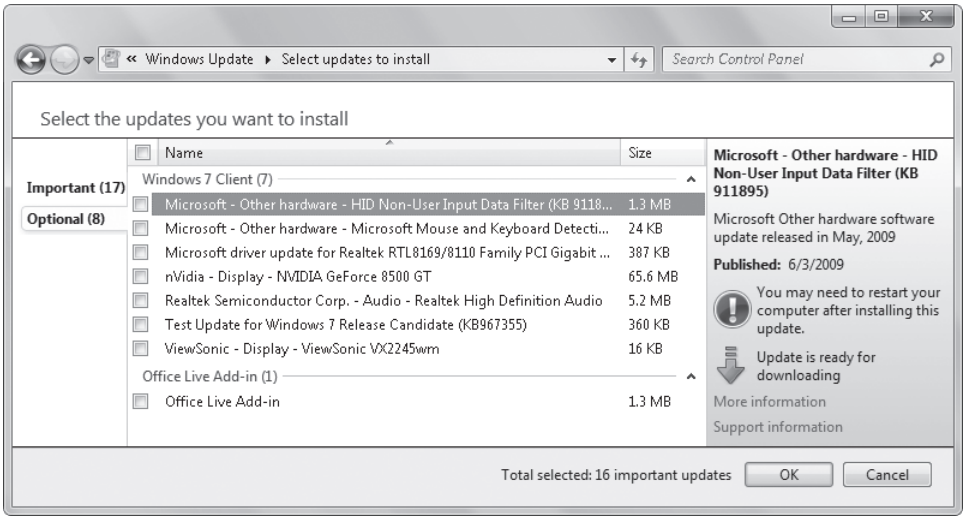
   If your computer is up to date or only optional updates are available, a green bar and security shield appear at the left end of the update status pane. If Important or Recommended updates are available, the bar and shield are yellow or red.



The color of the bar and shield indicates your Windows Update status: green means that all available Important updates are installed.

2. If a link to available updates appears in the status box at the top of the **Windows Update** window, click it. (If there are multiple links, click any one.) Otherwise, skip to step 6.

   The Select Updates To Install page displays the selected category of updates that are available for your computer.



On the Select Updates To Install page, you can display the description of each available update and select whether to install it.

In the left pane of the Select Updates To Install window are tabs for each level of available updates. Clicking a tab displays the updates of that type in the center pane. Clicking an update (not its check box) in the center pane displays its description in the right pane. Selecting an update's check box selects that update for installation.

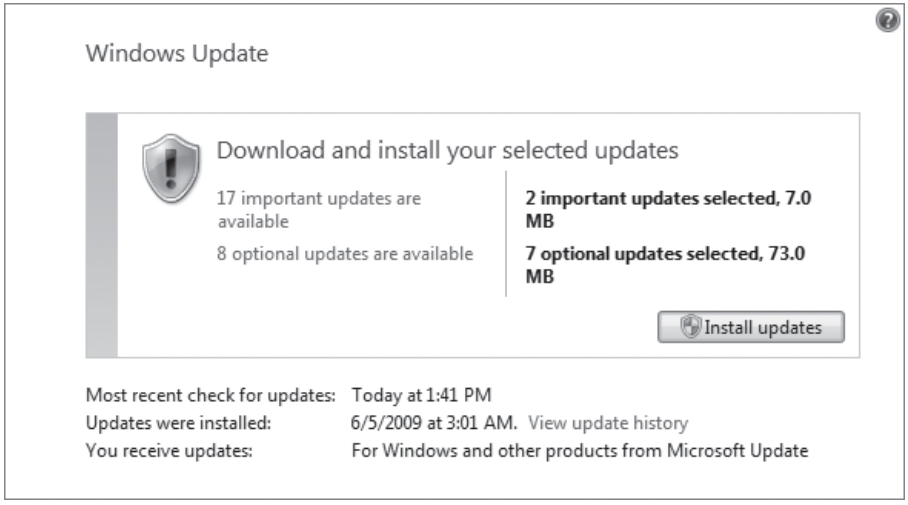
Important updates are automatically selected for installation. You can choose to not install an update by clearing its check box, but unless you have a very good reason to wait, we recommend that you install Important updates as soon as possible.

Tip If administrator permission is required to install an update, the Windows security icon appears on the Install Updates button.

3. Select the check boxes of the updates you want to install, and then click **OK**.

   Windows Update prompts you to begin the installation process.

   Tip You can select all the updates in the center pane by selecting the check box to the left of the Name column header.

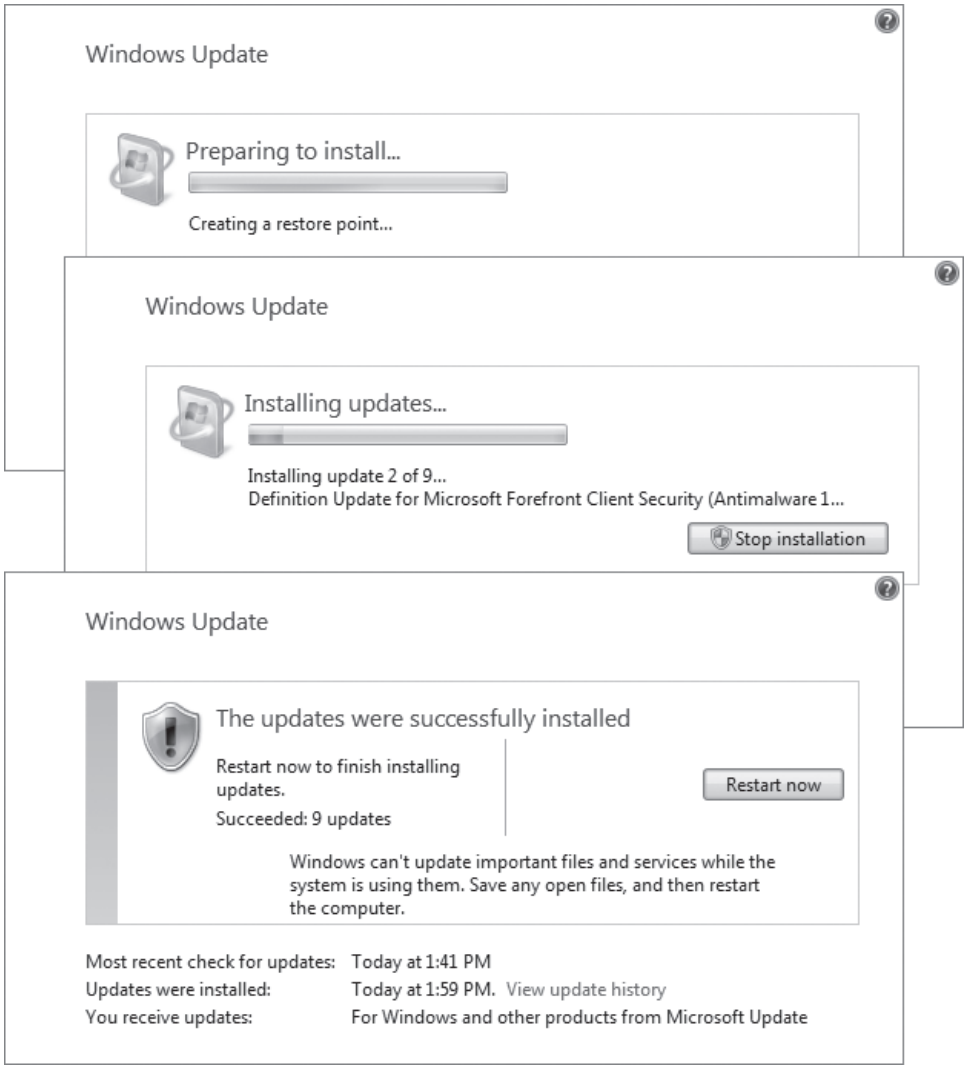


Windows Update is ready to download and install the selected update.

4. In the **Windows Update** window, click **Install updates**.

   Troubleshooting Some software program updates require that you agree to the licensing terms and conditions of the program before you can install the update.

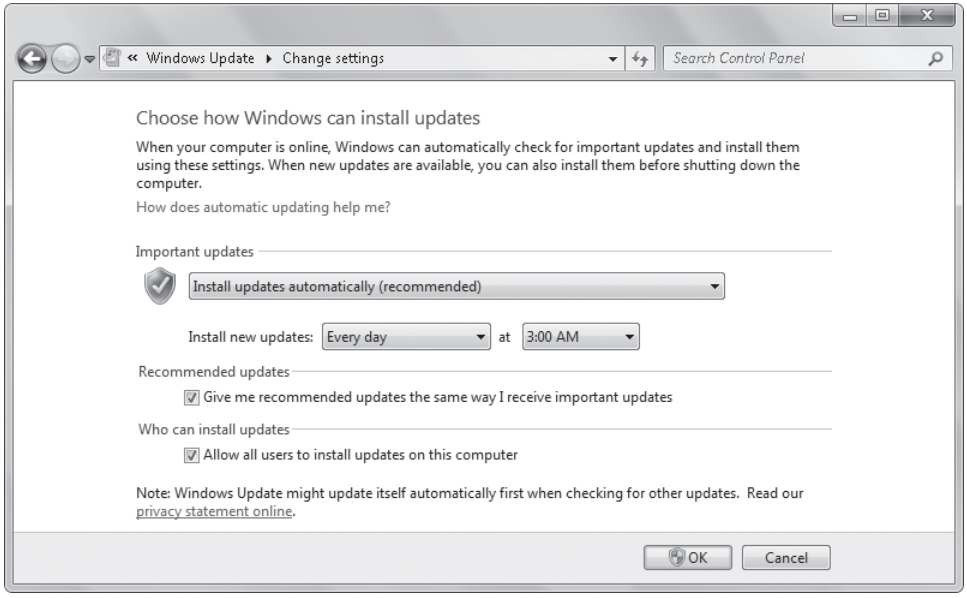
A progress bar reports on the update activities as Windows downloads the selected update(s), creates a restore point, and then installs each update.



Windows Update downloads and installs the selected update.

5. If Windows 7 prompts you to restart your computer, close any open files, and then click **Restart now**. Windows will complete the configuration of installed updates before and/or after restarting the computer. After your computer restarts, log on, and then repeat step 1 to return to Windows Update.

6. In the left pane, click **Change settings**.



In the Change Settings window, you can change the frequency, time, type, and scope of automatic updates.

7. In the **Important updates** section of the **Change Settings** window, if **Install updates automatically** is not already selected in the first list, select it now.

8. In the two lists to the right of **Install new updates**, click a frequency and a time at which your computer will usually be on and online.

   It's best to select a time outside your core work hours—say at the beginning or end of your workday—when connecting to the Internet and installing updates won't impact your ability to work by monopolizing your computer's resources.

   Tip If you prefer to have more control over the update process but still enjoy the benefit of automatic updates, select the Download Updates But Let Me Choose Whether To Install Them option. With this option, Windows 7 downloads available updates to your computer and displays the Windows Update icon in the notification area. You can click the icon to review and approve or reject the installation of each update.

9. Select or clear the check boxes in the **Recommended updates**, **Who can install updates**, and **Featured update notifications** sections to reflect the way you want Windows Update to function on this computer. Then click **OK**.

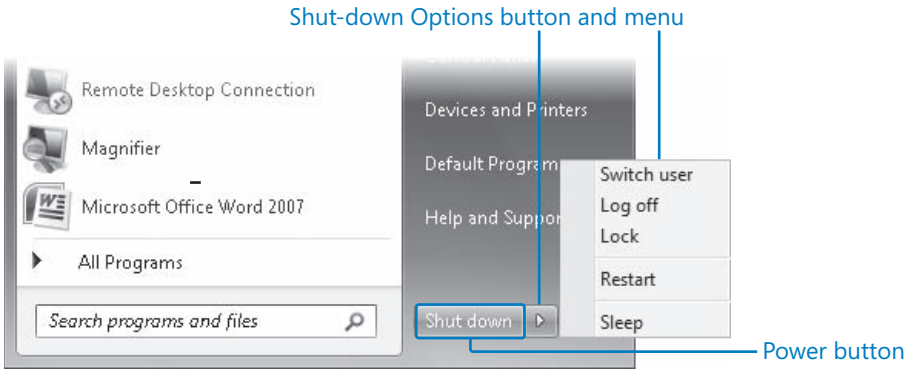
   Windows Update saves your changes.

CLEAN UP Close the Windows Update window.

Ending a Computing Session

If you are going to stop working with your computer for any length of time, you can safeguard your information and save power in a number of ways. Although not all the options actually turn off the computer, they are referred to collectively as *shut-down options*, and they are available from the Shut-down Options menu located in the lower-right corner of the Start menu.

By default, clicking the Power button (labeled *Shut Down*) starts the process of shutting down the computer. Clicking the Shut-down Options button (to the right of the Power button) displays a list of the other available shut-down options.



By default, clicking the Power button invokes the Shut Down command. Click the Shut-down Options button to display other options for ending your computing session.

Tip The shut-down option currently assigned to the Power button does not appear on the Shut-down Options menu.

See Also For information about changing the Power button behavior, see "Modifying the Start Menu" in Chapter 10, "Change System Settings."

The shut-down options include the following:

- **Log off** If you're finished working on a computer that you share with other people, you can end your Windows 7 session (but not affect other users' sessions) by logging off. You must save your files and shut down all running programs before you log off; if you don't, Windows 7 will close any open windows and exit programs, possibly losing unsaved data in the process.

  See Also For information about multiple concurrent user sessions, and about the Switch User shut-down option, see the sidebar "Switching Quickly Among Users" in Chapter 2, "Manage User Accounts."

- **Lock** If you want to prevent passersby from seeing what you're working on, you can lock the computer, which displays the Welcome screen and requires that you log on to your account to resume. Locking is most effective when your user account is protected by a password; otherwise, anyone can click your user account picture on the Welcome screen to unlock the computer and access your information.

  Keyboard Shortcut You can lock the computer by pressing the Windows Logo key+L.

  See Also For information about configuring a screen saver to lock a computer, see "Implementing a Screen Saver" in Chapter 9, "Change Visual Elements."

- **Restart** After installing certain programs and program updates, it is necessary to restart the computer to complete the update of system files that are in use. You might also find, at times, that restarting the computer helps to resolve a technical difficulty.

  Troubleshooting If your computer seems to be operating unusually slowly, or you're experiencing technical problems that seem related to the operating system rather than to an application, try restarting your computer. Restarting clears the system cache—an area in memory where Windows 7 stores information it might need to access quickly—and frequently resolves minor issues..

- **Sleep** If you're going to be away from your computer, conserve power and protect your work by putting your computer into Sleep mode. When you do, Windows 7 saves any open files, records their state and the state of any running programs in memory, and then puts your computer into a power-saving mode. When you "wake up" the computer, usually by moving the mouse or by pressing the Enter key or the computer's power button, Windows 7 needs only a few seconds to come out of its power-saving state and retrieve information from memory. Then it does one of the following:

  - If your user account is not password protected, resumes your previous computing session, exactly as you left it.
  - If your user account is password protected, displays the Welcome screen.

  Troubleshooting Some video card drivers don't support Sleep mode. If the Shut-down Options menu doesn't include the Sleep option, update your video driver. A Hibernate shut-down option is available on computers that don't support Sleep mode. Hibernate is similar to Sleep, except that it saves open files and the state of running programs on your hard disk instead of in memory, and then completely turns off the computer. When you awaken the computer, Windows 7 retrieves information from the hard disk and restores your previous computing session.

  Putting your computer into Sleep mode conserves power and keeps your work quickly available. When a desktop computer is sleeping, it uses approximately 10 percent of the power required to run normally. When a mobile computer is sleeping, it uses approximately 2 percent of its battery power per hour.

See Also For information about configuring your computer to automatically enter Sleep mode after a period of inactivity, see "Configuring Power Options" in Chapter 10, "Change System Settings."

- **Shut Down** If you need to turn off your computer entirely—for example, to install hardware or to move a desktop computer—you do so by shutting down the computer. Shutting down closes all your open programs and files, ends your computing session, closes network connections, stops system processes, stops the hard disk, and turns off the computer. This option appears by default on the Power button.

See Also For information about specifying which shut-down option appears on the Power button, see "Modifying the Start Menu" in Chapter 10, "Change System Settings."

In this exercise, you'll lock and unlock your computer, put it into Sleep mode and wake it up, log off from Windows 7, and then shut down the computer.

SET UP You don't need any practice files to complete this exercise; just follow the steps. Windows will prompt you to save and close any open files during the shut-down process.



1. On the **Start** menu, click the **Shut-down Options button**, and then on the **Shut-down Options menu**, click **Lock**.

   The Windows 7 Welcome screen appears, displaying only your user account. The word *Locked* appears under your user account name.

2. If your account is password protected, enter your password in the **Password** box, and then press the **Enter** key. Otherwise, click your user account picture.

   Your previous computing session resumes.

3. On the **Shut-down Options menu**, click **Sleep**.

   Windows saves your file and program information and then puts your computer into a power-saving state. The hard disk stops spinning, but the power light on the computer itself is still on, either steadily or blinking slowly.

4. Depending on your hardware, either move the mouse, press **Enter**, or press your computer's power button to wake up your computer.

   The Windows 7 Welcome screen appears on the screen.

   Troubleshooting If you don't know which method to use to wake up your computer, try them in the order given. If none of these methods work, consult your computer's manual or the manufacturer's Web site.

5. If your account is protected by a password, enter your password in the **Password** box, and then press **Enter**.

   Windows logs you on to your user account.

6. On the **Shut-down Options menu**, click **Log Off**.

   If no programs are running on your computer, Windows 7 logs you off. Otherwise, Windows 7 displays a list of running programs and open files.

7. If you don't have any unsaved work, click **Force log off** to complete the process and display the Welcome screen. Otherwise, click **Cancel** to return to your computing session; then save and close open files, shut down running programs, and click **Log Off** again on the **Shut-down Options menu** to complete the process.

   The Windows Welcome screen appears.



8. In the lower-right corner of the Welcome screen, click the **Power** button.

   Troubleshooting If any other user accounts are logged on to the computer, Windows 7 gives you the opportunity to cancel the shut down process. If you shut down a computer while people are logged on to it, they could lose data in open files or running programs.

   Windows 7 shuts down all computer processes and turns off your computer.

CLEAN UP If you're ready to continue your Windows 7 experience, start your computer and log on to Windows; then continue to the next chapter.

Key Points

- You start a computing session by logging on to Windows.
- Each computer user has an individual user account. Each person using a computer logs on to the computer with his or her own user account.
- To maintain security, log on as a standard user. You'll enjoy the most secure computing experience when you log on to your computer as a standard user and keep the User Account Control feature turned on.
- Your Windows environment preferences are linked to your user account. When you log on to Windows 7, it looks and works the way you want.
- Your primary interactions with the Windows 7 operating system are through the Start menu, the Windows Taskbar, and Control Panel.
- It's important to keep your computer up to date with the most current security updates. Windows Update makes it easy to do this automatically or manually.
- You end a computing session by logging off from Windows. You can log off and leave the computer running, or you can log off as part of the process of shutting down.
- You can save power without closing files and exiting programs by putting your computer into Sleep mode.

Want to read more?

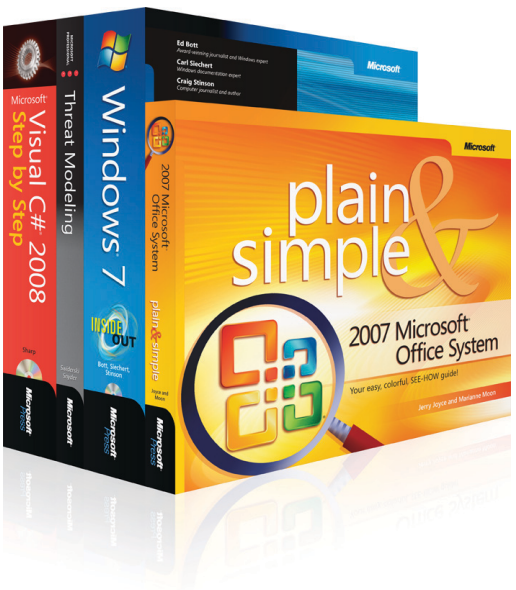
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