Chapter 5



About Operating Systems

The operating system is the software that controls the overall operation of your computer. The operating system controls startup application, hardware management, and shutdown. Everything that happens on your computer is initiated, processed, and approved by the operating system, and so it is important that you understand how this important software works. Windows and Mac OS X are two popular operating systems. This book focuses on the Windows operating system.

Starting Up

When you turn on your computer, the operating system immediately assumes control and prepares the computer for use. For example, it turns on devices such as the hard drive, keyboard, mouse, DVD drive, and it runs various checks to ensure that the hardware is functioning properly. The operating system then displays the interface, the screen elements that you use to interact with your computer.



Files and Data

One of the main functions of the operating system is to manage a computer's files. A file is an electronic collection of data and instructions that are stored as a unit. Your computer contains files that are used internally by your programs, as well as the documents, images, spreadsheets, and other data that you create.





Device Drivers

The operating system uses small programs called device drivers to communicate with your computer's hardware. For example, if you insert a CD or DVD, the operating system launches a device driver to read and display the contents of the disc.

Programs / Apps

The operating system interacts with your application software. For example, when you give the instruction to start a program, the operating system finds the appropriate files and opens them. The operating system also allocates computer resources, such as memory, to your programs.





Data Input

When you press a key on your keyboard, move your mouse, use a game controller, talk into your microphone, or start a document scan, the resulting input is first intercepted by the operating system. The system then directs the input appropriately, for example, relaying an instruction to a program or displaying a typed character on the screen.

Data Output

When you request data output, the operating system responds to your request. For example, if you instruct a program to print a document, the operating system sends the document to the printer.

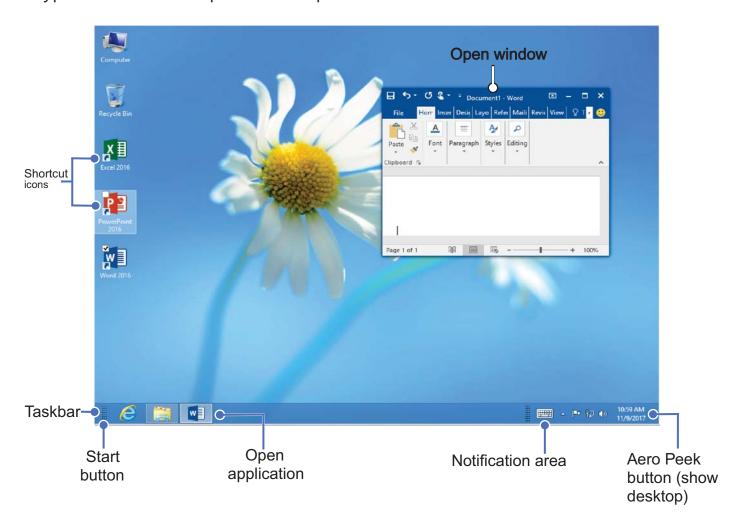


The Windows Operating System Desktop

Microsoft Windows is a piece of software called an *operating system*. An operating system does what its name implies it operates your computer system, working in the background every time you turn on your PC. The *desktop* that fills your screen is part of Windows, as is the taskbar at the bottom of the screen and the big menu that pops up when you click the Start button.

Windows 10 is the latest version of the Microsoft Windows operating system, the successor to Windows 8, Windows 7, Windows Vista and Windows XP. It improves on both those previous versions of Windows, while maintaining the basic operating functions.

Typical Personal Computer Desktop



Using the Mouse

To use Windows efficiently, you must master a few simple operations, all of which you perform with your mouse. Most mouse operations include *pointing* and *clicking*. Normal clicking uses the left mouse button; however, some operations require that you click the right mouse button instead.

- To single-click or click, position the cursor over the onscreen item and click the left mouse or touchpad button.
- To double-click, position the cursor over the onscreen item and click the left mouse or touchpad button twice in rapid succession.
- To right-click, position the cursor over the onscreen item and then click the right mouse button.
- To drag and drop an item from one location to another, position the cursor over the item, click and hold the left mouse button, drag the item to a new position, and then release the mouse button.

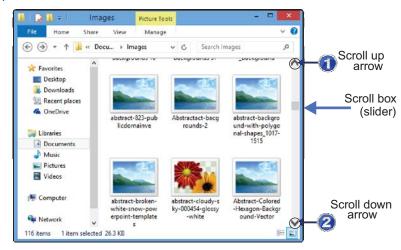




Scrolling a Window

Many windows contain more information than can be displayed in the window at once. When you have a long document or web page, only the first part of the document or page is displayed in the window. To view the rest of the document or page, you have to scroll down through the window, using the various parts of the scrollbar.

- Click the up arrow on the window's scrollbar to scroll up one line at a time.
- Click the down arrow on the window's scrollbar to scroll down one line at a time.

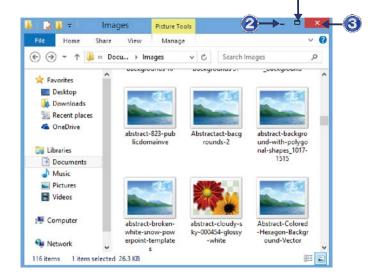


Maximizing, Minimizing, and Closing a Window

After you've opened a window, you can maximize it to display full screen. You can also minimize it so that it disappears from the desktop and resides as a button on the Windows taskbar, and you can close it completely.

- To maximize the window, click the **Maximize** button.
- To minimize the window, click the Minimize button.
- 3 To close the window completely, click the **Close** button.

Restoring a Maximized Window To restore a maximized window, click the window's title bar and drag it down from the top of the screen, or press Windows + down arrow.



Using Aero Snaps

Windows 7 adds some new ways to manage open windows on your desktop, collectively called Aero Snaps. Aero Snaps let you maximize windows and stack multiple windows side by side with just a few drags of the mouse.

- To maximize a window, click the window's title bar and drag it to the top edge of the screen, or press Windows + up arrow.
- To snap a window to the left side of the screen, click the window's title bar and drag it to the left edge of the screen, or press Windows + left arrow.
- 3 To snap a window to the right side of the screen, click the window's title bar and drag it to the right edge of the screen, or press Windows + right arrow.



Using the Windows Start

All the software programs and utilities on your computer are accessed via Windows's Start menu, which consists of two columns of icons. Your most frequently used programs are listed in the left column; basic Windows utilities and folders are listed in the right column. To open a specific program or folder, just click the menu icon.

- Click at the bottom corner of the screen to open the Start menu.
- Click any menu item to launch a program or open a folder
- Alternatively, you can directly type the program name when you are at the Start Menu window to search a specific program or application.



Opening a Program

To view all the programs installed on your PC, open the **Start** menu and click the **All Programs** arrow. This displays a new menu called the Programs menu. From here, you can access various programs, organized by type and title or manufacturer.

- Olick at the bottom corner of the screen to open the Start menu.
- Right-click on your mouse to view All apps icon then click on it.
- 3 All Application that are installed in your computer will be displayed on the current window.
- 4 Click the icon of the program you want to launch / run.



Displaying and Peeking at the Desktop

What do you do if you have a lot of windows open but need to view or access an item residing on the desktop below? Windows lets you peek at the desktop below all your windows (called Peek) or quickly minimize all windows to access desktop items.

- To peek at the desktop below all open windows, hover your cursor over the bottom far right of your task bar. If does not work, right-click on your task bar and select Properties then tick on *Use Peek to preview....* to enable this feature.
- To quickly minimize all windows and show a clear desktop, rightclick the Show Desktop button at the far right of the taskbar.



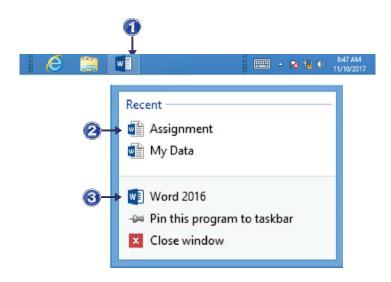
TIP

Peek. When you preview the desktop with Peek, all open windows are shown as translucent window outline as shown.

Managing the Windows Taskbar

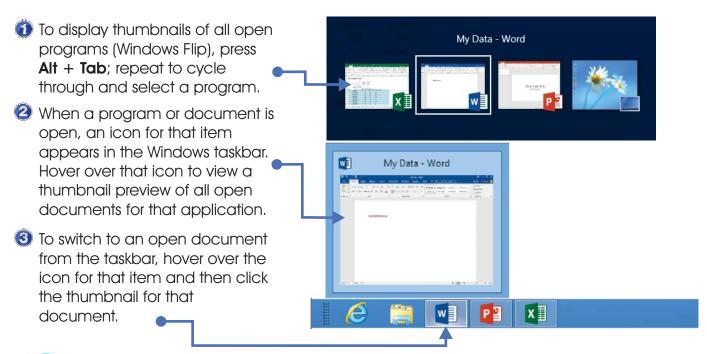
The taskbar is the area at the bottom of the Windows desktop, and it's completely revised for Windows latest version. In Windows, icons on the taskbar can represent frequently used programs, open programs, or open documents.

- To open an application from the taskbar, click the application's icon.
- To view a list of recently opened documents for an application, rightclick the application's icon to display a Jump List, and then select an item.
- 3 To open a new blank document for an already-open application, right-click the application's icon to display the Jump List, and then click the application item.



Switching Between Programs

After you've launched a few programs, you can easily switch between one open program and another. In fact, Windows offers several ways to switch programs, including Windows Flip, Flip 3D, and new taskbar thumbnails.



Multiple I application

Multiple Documents If multiple documents or pages for an application are open, multiple thumbnails will appear when you hover over that application's icon in the taskbar

Managing Drives with Computer Explorer

Windows's Computer Explorer folder lets you access each major component of your system and perform basic maintenance functions. For example, you can use Computer Explorer to "open" the contents of your hard disk and then copy, move, and delete individual files.

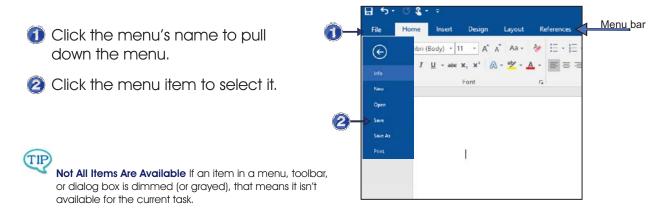
- Hover over your mouse pointer to the Start menu, then right-click.
- Select File Explorer.
- 3 Click any icon to select the drive.
- Ouble-click any icon to view its contents.

View Drive Contents To view the contents of a specific drive, double-click the drive's icon. You'll see a list of folders and files located on that drive; to view the contents of any folder, double click the icon for that folder



Using Menus

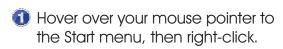
Many Windows programs use a set of pull-down menus to store all the commands and operations you can perform. The menus are aligned across the top of the window, just below the title bar, in what is called a *menu bar*. You open (or pull down) a menu by clicking the menu's name; you select a menu item by clicking it with your mouse.



Managing Windows with the Control Panel

The Windows Control Panel is used to manage most (but not all) of Windows's configuration settings. The Control Panel contains links to individual utilities that let you adjust and configure various system properties.

Programs and Features
Power Options



- Select Control Panel to open the Control Panel window.
- 3 Click the heading or link for the category you want to configure.
- Olick the task you want to perform.
- Configure the settings for that task using the selected utility's dialog box.

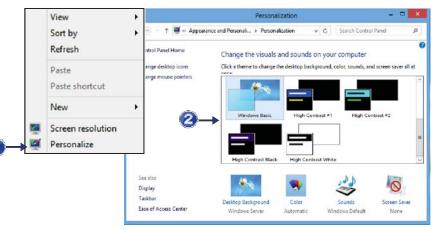




Changing Desktop Themes

Most users like to personalize the look of the Windows desktop. To this end, Windows 7 includes a number of preconfigured desktop *themes*, comprised of selected desktop backgrounds, color schemes, sound schemes, and screensavers.

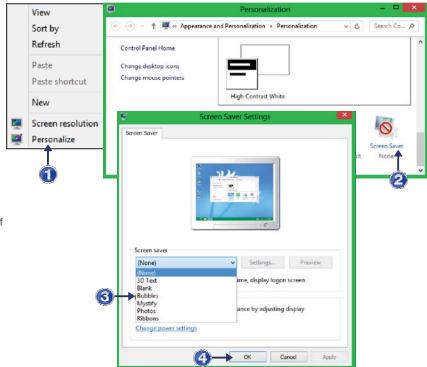
- Right-click anywhere on the desktop and click Personalize.
- Click from one of the available themes, you may use the scrollbar to choose other Windows themes or get themes online if you have an internet connection.



Using a Screensaver

Screensavers display moving designs on your computer screen when you haven't typed or moved the mouse for a while. This provides some small degree of entertainment if you're bored at your desk.

- Right-click anywhere on the desktop and click **Personalize**.
- Click Screen Saver at the bottom of the window.
- Select a screensaver from the Screen Saver drop-down list.
- Olick OK when you're done.
- How Long to Wait? To determine the number of minutes you want the screen to be idle before the screensaver activates, select a new value from the Wait list.
- Configure the Screensaver Click the Settings button to configure settings specific to an individual screensaver (if available).



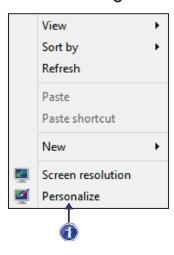
Personalizing the Desktop Background

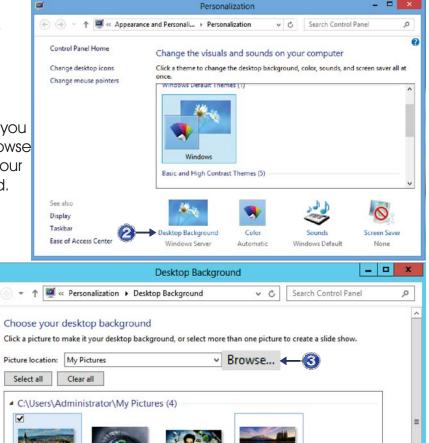
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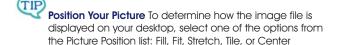
Picture position:

Windows also lets you change just the desktop background, without changing the entire theme. Windows 7 includes a number of built-in desktop wallpapers; you can also choose your own photo or graphic for your desktop background.

- Right-click anywhere on the desktop and click Personalize.
- Click Desktop Background at the bottom of the window.
- When the next window opens, choose from the selections or you can personalize by clicking Browse then choose an image from your computer for your background.
- Click Save Changes.







Choose a Custom Background To use a picture of your own for your desktop background, click the Browse button next to the Picture Location list, and then select the picture you want from your computer's hard disk

Save changes

Cancel

Shuffle

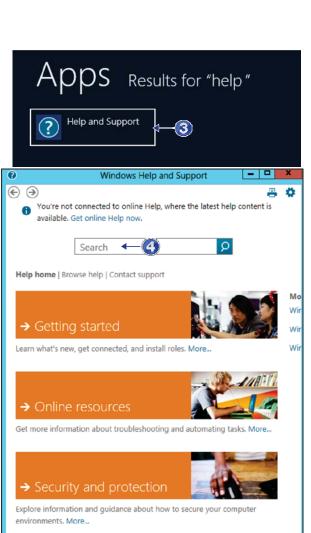
Change picture every:

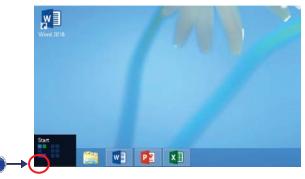
30 minutes

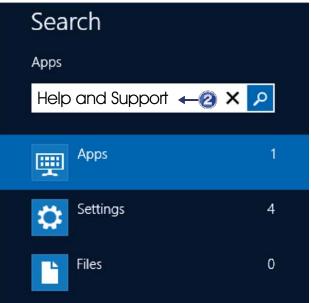
Getting Help in Windows

When you can't figure out how to perform a particular task, it's time to ask for help. In Windows, this is done through the Windows Help and Support Center.

- 1 Hover over your mouse pointer to the Start menu, then right-click.
- 2 Type **Help** and Support.
- Olick Help and Support.
- Enter your query into the Search Help box at the top of the next dialog box, and then press Enter.







Windows' Help You can also browse the topics in Windows' Help system. Click the Browse Help icon at the top of the dialog box, and then click the appropriate topic below.

More on the Web More help information is available on Microsoft's website, www.microsoft.com.