

COMMON COMPETENCY\

Perform

Computer Operations

Different Types of Computers

Learning Objectives:

After reading this information sheet, YOU MUST be able to identify the different types of computers.

Computers have revolutionized all types of industries. They have proved a boon to mankind. What are the different types of computers? To know them all, read on...

1. Types of Computers

A computer is one of the most brilliant inventions of mankind. Thanks to the computer technology, we were able to achieve an efficient storage and processing of data; we could rest our brains by employing computer memory capacities for storage of the information. Owing to computers, we have been able speed up daily work, carry out critical transactions and achieve accuracy and precision in work output. The computers of the earlier years were of the size of a large room and were required to consume huge amounts of electric power. However, with the advancing technology, computers have shrunk to the size of a small watch. Depending on the processing powers and sizes of computers, they have been classified under various types. Let us look at the classification of computers.

Different types of Computers

Based on the operational principle of computers, they are categorized as analog computers and hybrid computers.

Analog Computers: These are almost extinct today. These are different from a digital computer because an analog computer can perform several mathematical operations simultaneously. It uses continuous variables for mathematical operations and utilizes mechanical or electrical energy.

Hybrid Computers: These computers are a combination of both digital and analog computers. In this type of computers, the digital segments perform process control by conversion of analog signals to digital ones.

Following are some of the other important types of computers.

Mainframe Computers: Large organizations use mainframes for highly critical applications such as bulk data processing and ERP. Most of the

mainframe computers have the capacities to host multiple operating systems and operate as a number of virtual machines and can thus substitute for several small servers.

Microcomputers: A computer with a microprocessor and its central processing unit is known as a microcomputer. They do not occupy space as much as mainframes. When supplemented with a keyboard and a mouse, microcomputers can be called as personal computers. A monitor, a keyboard and other similar input output devices, computer memory in the form of RAM and a power supply unit come packaged in a microcomputer. These computers can fit on desks or tables and serve as the best choices for single-user tasks.

Personal computers come in a variety of forms such as desktops, laptops and personal digital assistants. Let us look at each of these types of computers.

Desktops: A desktop is intended to be used on a single location. The spare parts of a desktop computer are readily available at relative lower costs. Power consumption is not as critical as that in laptops. Desktops are widely popular for daily use in workplaces and households.

Laptops: Similar in operation to desktops, laptop computers are miniaturized and optimized for mobile use. Laptops run on a single battery or an external adapter that charges the computer batteries. They are enabled with an inbuilt keyboard, touch pad acting as a mouse and a liquid crystal display. Its portability and capacity to operate on battery power have served as a boon for mobile users.

Personal Digital Assistants (PDAs): It is a handheld computer and popularly known as a palmtop. It has a touch screen and a memory card for storage of data. PDAs can also be effectively used as portable audio players, web browsers and smart phones. Most of them can access the Internet by means of Bluetooth or Wi-Fi communication.

Minicomputers: In terms of size and processing capacity, minicomputers lie in between mainframes and microcomputers. Minicomputers are also called mid-range systems or workstations. The term began to be popularly used in the 1960s to refer to relatively smaller third generation computers. They took up the space that would be needed for a refrigerator or two and used transistor and core memory technologies. The 12-bit PDP-8 minicomputer of the Digital Equipment Corporation was the first successful minicomputer.

Supercomputers: The highly calculation-intensive tasks can be effectively performed by means of supercomputers. Quantum physics, mechanics, weather forecasting, molecular theory are best studied by means of supercomputers. Their ability of parallel processing and their well-designed memory hierarchy give the supercomputers, large transaction processing powers.

Wearable Computers: A record-setting step in the evolution of computers was the creation of wearable computers. These computers can be worn on the body and are often used in the study of behavior modeling and human health. Military and health professionals have incorporated wearable computers into their daily routine, as a part of such studies. When the users' hands and sensory organs are engaged in other activities, wearable computers are of great help in tracking human actions. Wearable computers are consistently in operation as they do not have to be turned on and off and are constantly interacting with the user.

These were some of the different types of computers available today. Looking at the rate of the advancement in technology, we can definitely look forward to many more types of computers in the near future.

Computer Hardware

Learning Objectives:

After reading this information sheet, YOU MUST be able to identify the computer hardware.

Now that you know a little bit about the history of computers and how they are useful in various work situations throughout the world, this lesson will tell you what makes up today's personal computer (PC). You learn about basic computer hardware and the importance of keeping your computer and its data safe. Next, you learn all about operating systems—the software that makes it possible for you to use your computer—with a focus on Microsoft Windows XP. Finally, you learn about applications software and how a computer network operates.

1. Computer Hardware

Computer Parts and Storage Devices

Most computers on the market today have the following components: a processor, RAM, a monitor, a hard disk drive, a keyboard, a mouse, a CD-ROM drive, a sound card, and a modem. In addition, you might want or need components that aren't part of your computer's package, such as a DVD drive, Zip drive, printer, and scanner. The rest of this lesson explains what these components, usually called peripherals, are and how they are used.

A Mouse

Most computers come with a mouse. A mouse is just a pointing device for selecting items on the screen. Some designs are different, including the mouse with a small wheel with which you can do some added tricks. An alternative to the mouse is a track ball, a stationary cradle containing a ball that you roll with your fingertips. Laptop computers offer another alternative, the touchpad—a pressure-sensitive surface built into the keyboard console. It lets you move your cursor by tracing your finger on the touchpad itself.

This mouse is designed to fit the shape of a human hand and contains a wheel for extra functionality.

Keyboards

The computer keyboard is one of the basic ways of entering information into the computer, so most computers have one except certain types of handheld devices. If you've used a typewriter, you can use a computer keyboard. Keyboards come in a variety of styles. The Microsoft keyboard shown below

has an ergonomic design that reduces the muscle and tendon strain in the wrists, arms, and elbows.

The optimized keyboard helps reduce the stress on wrists, arms, and elbows.

Monitors

Monitors are a requirement, so they are often included as standard equipment, but not always. Today, monitors are available in all price ranges. Most people think the bigger the monitor, the better, as long as it fits within their allotted budget range. Granted, bigger is more expensive, but today a 17-inch monitor doesn't cost much more than a 15-inch monitor and the difference is more than worth it. The more screen space you have, the easier it is to work with your applications on the computer. Remember, however, that the bigger the display, the larger the tube. A larger tube takes up more room on your desk. (Many manufacturers do offer short-tube monitors that don't eat up a lot of desktop real estate.)

It's not fancy, but this typical computer monitor is all you need.

A good choice when your desk space is at a premium is the flat-panel display, or LCD monitor. An LCD is a tubeless monitor that uses a liquid crystal technology. These monitors require much less desk space, and the absence of a picture tube means lower power consumption and less heat thrown off in your room. The cost is higher than that of a traditional monitor, but the prices are coming down.

Floppy Disk Drive

This comes as standard with most computers. For many years, the floppy disk was *the* way to give someone a document from your machine. You copied the information to the floppy and passed the floppy on. Then came the Internet and networking, which are new and convenient ways to exchange information. Floppy drives are a common way of backing up files.

CD Drive

Almost all computers have CD drives as standard equipment. Most software today is shipped on CDs, as are all the essential learning programs, games, and reference tools such as Microsoft Encarta, an encyclopedia. A CD drive also allows you to use CDs (short for *compact disc*) with your computer. CD drives are rated by the speed at which they can access information on the CD, indicated with a number like 12x, 20x, 32x, or 40x, which is read as "40 speed."

CD drives come in two types: read-only and recordable. With the read only model, you can't save or store any of your own information on a normal CD. Such a CD drive is the computer equivalent of a stereo record that can also

hold text and graphics. Recordable CD drives allow you to copy information to them as you would to floppy disks.

Sound Cards

A sound card is like your stereo amplifier at home, although it does considerably more than that! Unless you open your computer, you won't see your computer's sound card, and if you don't have one, you won't be able to hear any of the sounds a computer is capable of generating. Most computers come equipped with sound cards.

A description of a sound card can be confusing because it has so many incomprehensible-sounding features: MIDI libraries, MIDI interface, sampling capabilities, and audio playback rates. Despite the confusing jargon, you want a sound card that supports the latest standards and features if possible. When a PC is described as a multimedia PC, it will include a sound card. If you're not buying a new computer or are simply upgrading your existing sound card, look for the most common features across the different brands.

Speakers

With a sound card, a CD drive, and speakers, you can play regular audio CDs on your computer and enjoy many of the other audio features of the applications on your computer. But as with your stereo, you can't hear anything unless you have speakers! Most likely, your computer will come with speakers. Speakers come in all price ranges, but even the less expensive ones work well. The speakers plug into the back of your computer, and look similar to the ones shown below.

With these speakers, you can hear music and other special audio, as well as the everyday reminders and warning sounds your computer makes.

Hard Disk Drives—Closet Space for Your Computer Creations

Today, a computer without a hard disk drive is practically unknown. The hard disk drive is a physical part of your computer where you save all your work for access at another time. For new users, the multi-gigabyte drives of today are more than adequate, but some users run out of disk space and need to expand their digital closet space with higher-capacity hard drives. Graphic artists and photographers, for example, can easily use 40 megabytes of disk space just for one image, and some programs require several hundred megabytes of free space to run. If you are going to be working with photos extensively, you might need a larger hard drive, or you might want to check out Zip drives, which are described in a later section.

RAM: Short-Term Memory You Can Buy

All computers come with internal memory, called RAM (pronounced like the animal), which is short for random access memory. RAM is sometimes confused with hard disk storage, which is completely different. Your computer needs RAM to run programs. You don't need to know the ins and outs right now, but if you are picking out a new PC, look for one that provides at least 128 megabytes of RAM to work effectively on the Internet. If your computer has less, it won't operate as quickly, but as long as it has enough memory to run current software, your computer will still operate correctly. The minimum for current software is usually 64 megabytes.

Zip Drives

A Zip drive is the newer version of a floppy disk drive. Zip drives, sometimes built into new computers, use a Zip disk that is about twice as thick as a floppy disk and holds 100 megabytes of information (250 megabytes for the newest model)—about 80 times more than a standard floppy disk. A Zip drive is something to consider if you will be working with many photographs that take up a lot of disk space for each image. These drives also provide a convenient way to make backup copies of all the important files you want to keep.

Modems

Modems are now as ubiquitous as computers, and more often than not, they come built into computers. You must have a modem to connect to the Internet, so make sure that your computer has one. If you use telephone lines for Internet access, the typical speed for a home modem is 56 K. If your computer doesn't have one already installed internally, you can obtain an external modem, which sits near your computer rather than inside it. External modems are widely available and require minimum installation.

If you use cable or a dedicated line for Internet access, you will need a specialized modem. These are much faster than the modems designed to work with the telephone lines, but they are more expensive.

Printers

Hundreds of different printers are on the market, in a wide range of prices. Printer technology has advanced dramatically in the last 10 years, so even a less expensive printer can produce impressive results. Some new computer packages include a printer. Printers are easy to buy and easy to install if the computer you obtain doesn't have one.

Printers are distinguished by printing features, output quality, and speed—that is, how many pages they can print in a minute. The most popular printers for home use are ink jet printers. Ink jets print pages by spraying a

fine ink mist onto the page and are the type of printers most often used for color printing. Laser printers, although more expensive, are faster and of higher quality, and most models allow only black-and-white printing. Color laser printers can be quite expensive. You can also find multipurpose machines that print, fax, copy, and scan. If you have a need for all these features, check with a local computer store or current magazines to learn more about features and trade-offs.

Laser Printers

Laser printers, long the standard for professional and corporate users, are fast and efficient, and typically are much faster than ink jet printers. Some laser printers can print 32 ppm (pages per minute), which is blazingly fast. They also offer multiple trays for different paper sizes and a host of other features. If you have a small business that requires a good deal of printing or invoicing, or if you expect to use your printer for a community publishing system for a club or group, this type of printer will give you very fast results. However, unless you buy an expensive color laser, you are signing up for black-and-white printing only.

Ink Jet Printers

Ink jet printers are the home standard. They provide color capabilities as well as crisp black and white, but their speed doesn't match that of laser printers. The cheaper models can take more than a minute to print a full page of text. But for most people, the benefits outweigh the inconvenience.

Joysticks for the Future Racecar Driver or Pilot

Computers have become phenomenal game stations, and certain hardware additions can make your playtime wildly enjoyable. You can find several different types of game controllers, including joysticks. As with all computer peripherals, prices vary widely, but a standard joystick is relatively inexpensive. Simple joysticks consist of a single post fixed at the base like a stick shift that can move in all directions. You have probably seen one on a motorized wheelchair to allow the driver to steer with minimal movement. If you are planning to "learn to fly" with Microsoft Flight Simulator, a joystick is required.

This joystick gives you control when you play video games.

Besides joysticks, you can even find steering wheels with dashboard consoles if you want to try your hand at a racecar game. The newest controllers include vibration; when something happens on-screen, the controller vibrates and you feel the jolts and motions of the game you are playing.

Now Playing: A Movie on Your DVD Drive

Never mind the technical details: a DVD drive lets you watch full-length movies on your computer, and you don't even have to rewind! If you are interested and if your computer is set up in a room to allow easy viewing, you can rent videos, not on videotape, but on the newest form of CD drives, the DVD. The DVD is the most recent generation of CD drives; a DVD disk can hold about six times as much information as a regular CD.

CD and DVD Burner

If you want to write your own CDs but your CD drive doesn't have writing capabilities, you might consider buying a specialized drive for this purpose. This kind of drive is called a *CD burner*. CD burners are quite inexpensive and easy to install. The more expensive *DVD burners* use the newer DVD format, which allows you to store more information on your disks.

Scanners for Transferring Photos onto Your Computer

A scanner is used to copy an image or page for storage and display on the computer. Scanners typically look like little copying machines, with a glass plate (the plate you put the copy on) and a heavy rubberized mat that lies on top of that.

DVD drives still accept standard CD-ROM disks and audio CDs, so you don't need a CD drive if you get a DVD drive.

Use a scanner such as this one to move print pictures onto your computer.

Scanners are great if you have many pictures that you want to preserve or share with others. Scanners are also great if you have a lot of typed text that you want to store on the computer. Scanners now come with OCR (optical character recognition) software that actually reads the text on the page and turns it into a text file. This doesn't work very well with handwritten text, however, so if your intention is to use a scanner to translate your brother's badly written letters into something legible, don't count on it.

Special Needs

What happens when someone can't use a standard keyboard or mouse? Or what if someone can't read the screen well or hear the computer's audio cues? Smaller companies have created a whole class of hardware for special needs. If you're visually or hearing impaired, or suffer from arthritis or partial paralysis, some useful and well-conceived alternatives are available for you. Some special needs options are built into Windows, and there is a universe of hardware and software options available as well.

The range of options is almost as diverse as the range of special needs. To find the best software and hardware solution, ask your specialist or local gerontologist for more information. When you get on the Web, you'll find a huge number of resources to choose from as well.

Note

Windows XP comes with Accessibility Options, which address many special computing needs. Visit <http://www.microsoft.com/enable/products/> for details on how to access these features and for more information on other accessibility products.

Other Attachments

Besides all the things commonly attached to a computer, an impressive array of other attachments exists. Here are some of the things that might catch your eye. If it's an electrical appliance, there's a good chance that one model or another can connect to your computer. Here is a partial list:

- Some types of musical keyboards referred to as MIDI keyboards or MIDI compatible keyboards can be connected to your computer so that you can record a performance, edit it, and play it back.
- Robotics toys allow you to build a robot, program it on your PC, and then let it roam around your home executing your instructions.
- Digital video cameras can be attached to your computer, and you can transfer images to or from your computer.
- Digital cameras, which are cameras that take instant, filmless pictures, allow you to snap away and then transfer the pictures directly to your PC.
- Sewing machines connect to a personal computer and do extraordinary multicolored stitch work based on the orders you give it.

Computer Storage Devices

Learning Objectives:

After reading this information sheet, YOU MUST be able to identify the different type's computer storage devices.

Knowing what kinds of storage devices are available can keep you from using up too much space on your computer's hard drive. They can also help keep your computer's hard drive from crashing, along with keeping it running at top speed.

The most common storage devices are:

- Floppy Disks
- Zip Disks
- CD + RW
- CD + R
- DVD + RW
- DVD + R

1. Storage Devices

Floppy Disk – They are plastic square disks, usually with a silver or black sliding piece going across the top. These disks come in a variety of colors and they hold about 144 million bytes. (Bytes are characters, symbols and letters).

Zip Disk – They look like a floppy disk, but they are a little thicker. This disk also comes in a variety of colors and holds about 200 MB of data.

CD + RW Disc (Compact Disc Rewriteable) – This disc looks like a regular CD. The only difference is that you can write on this disc and erase it as many times as you want. It works just like a floppy disk or a zip disk. A CD + RW disc holds about 650 MB.

c (Compact Disc Recordable) – This one is a CD that you can record on. It's mostly used to record audio and once it's been written on, you cannot rewrite or erase anything off of it. This compact disc comes in different sizes, but they are usually silver in color. (Some CDs are black in color and they actually don't get as many scratches on them as the silver ones do. They are also a lot less fragile).

A DVD - R Disc (Digital Video Recordable) – These discs hold the space of about 4.7 GB and are used to record movies on.

The more uncommon storage devices are:

- Removable Hard Drive
- Internet Hard Drive
- Flash
- PC Cards
- Smart Cards
- Storage Tapes
- Memory Sticks
- Smart Media

Removable Hard Drive – This is a disk drive in which a plastic or metal case surrounds the hard drive. It can be inserted and removed just like a floppy disk. It holds about 2 GB of data.

Internet Hard Drive – This one is a service on the Internet that provides storage space to computer users. This service offers about 25 MB of space, but it could be more, depending on the service type.

Flash Drive – This a storage device that comes in many colors and has a stick shape to it. They are very small in size, but they can hold anywhere between 256 MB and 16 GB of material on them.

PC Card – This is a thin credit card size device that fits into a PC card slot, usually on a notebook computer. This card simply adds storage to most notebooks.

Smart Cards – These are the size of an ATM card. When inserted into a smart card reader, they can read and update data for you.

Storage Tape – This one is a magnetically coated ribbon of plastic, capable of storing large amounts of data at a very low cost. Usually, storage tapes are a little bigger than audio tapes. Older computers used tape and tape drives, but even today, some people still back their systems up with storage tape. These tapes hold between 20 GB to about 110 GB of data. An external tape drive can be purchased separately as well, but those are even harder to find.

Miniature Mobile Storage Media – This is used mostly with handheld computers and digital cameras.

Memory Stick – This is a rectangular shaped disk that is used mostly with digital cameras and notebook computers. They hold approximately 128 MB as well.

Micro Drive – This is a square disk that has 1 GB of space and is used with digital cameras and handheld computers.

Smart Media Disc – This is a square disk that has 2 MB to about 128 MB of space on it. It's used with digital cameras, handheld computers and photo printers.

There you go! These are just some of the storage devices that are available today. So, the next time you want to save something that takes up a large amount of space on your hard drive, think twice about it and consider using one of these storage devices instead. One of these devices could save you a lot of space on your hard drive and keep your system running at its best!

Major Types Of Software

Learning Objectives:

After reading this information sheet, YOU MUST be able to identify the different major types of software.

1. Software

Software is the means by which computer systems speak with computer users. Software forms the heart of computer systems. What are the major types of software? Read on to find out.

Software, by definition, is the collection of computer programs, procedures and documentation that performs different tasks on a computer system. The term 'software' was first used by John Tukey in 1958. At the very basic level, computer software consists of a machine language that consists of groups of binary values, which specify processor instructions. The processor instructions change the state of [computer hardware](#) in a predefined sequence. Briefly, computer software is the language in which a computer speaks. There are different types of computer software. What are their major types? Let us see.

Major Types of Software

Programming Software: This is one of the most commonly known and popularly used forms of computer software. This software comes in forms of tools that assist a programmer in writing computer programs. Computer programs are sets of logical instructions that make a computer system perform certain tasks. The tools that help the programmers in instructing a computer system include text editors, compilers and interpreters.

System Software: It helps in running the [computer hardware](#) and the computer system. System software is a collection of operating systems; device drivers, servers, windowing systems and utilities. System software helps an application programmer in abstracting away from hardware, memory and other internal complexities of a computer.

Application Software: It enables the end users to accomplish certain specific tasks. Business software, databases and educational software are

some forms of application software. Different word processors, which are dedicated for specialized tasks to be performed by the user, are other examples of application software.

Apart from these three basic types of software, there are some other well-known forms of computer software like inventory management software, ERP, utility software, accounting software and others. Take a look at some of them.

Inventory Management Software: This type of software helps an organization in tracking its goods and materials on the basis of quality as well as quantity. Warehouse inventory management functions encompass the internal warehouse movements and storage. Inventory software helps a company in organizing inventory and optimizing the flow of goods in the organization, thus leading to an improved customer service.

Utility Software: Also known as service routine, utility software helps in the management of [computer hardware](#) and application software. It performs a small range of tasks. Disk defragmenters, systems utilities and virus scanners are some of the typical examples of utility software.

Data Backup and Recovery Software: Ideal data backup and recovery software provides functionalities beyond simple copying of data files. This software often supports user needs of specifying what is to be backed up and when. Backup and recovery software preserve the original organization of files and allow an easy retrieval of the backed up data.

This was an overview of the major types of software. Computer software are widely popular today and hence we cannot imagine a world of computers without them. We would not have been able to use computers if not for the software. What is fascinating about the world of computers is that it has its own languages, its ways of communication with our human world and human interaction with the computers is possible, thanks to computer software. I wonder, if the word 'soft' in 'software' implies 'soft-spokenness', which is an important quality of a pleasant communication

OPERATING SYSTEM

Learning Objectives:

After reading this information sheet, YOU MUST be able to identify the operating systems.

1. Operating system

An **operating system (OS)** is [software](#), consisting of [programs](#) and [data](#), that runs on [computers](#), manages [computer hardware](#) resources, and provides common services for execution of various [application software](#). The operating system is the most important type of [system software](#) in a computer system. Without an operating system, a user cannot run an application program on their computer, unless the application program is self booting.

For hardware functions such as input and output and [memory allocation](#), the operating system acts as an intermediary between application programs and the [computer hardware](#),^{[1][2]} although the application code is usually executed directly by the hardware and will frequently call the OS or be interrupted by it. Operating systems are found on almost any device that contains a computer—from [cellular phones](#) and video to [supercomputers](#) and [web servers](#).

Examples of popular modern operating systems are: [BSD](#), [Linux](#), [Mac OS X](#), [Microsoft Windows](#), and [Unix](#).^[3]

Types

Real-time

A [real-time operating system](#) is a multitasking operating system that aims at executing real-time applications. Real-time operating systems often use specialized scheduling algorithms so that they can achieve a deterministic nature of behavior. The main objective of real-time operating systems is their quick and predictable response to events. They have an event-driven or time-sharing design and often aspects of both. An event-driven system switches between tasks based on their priorities or external events while time-sharing operating systems switch tasks based on clock interrupts.

Multi-user vs. Single-user

A multi-user operating system allows multiple users to access a computer system concurrently. Time-sharing system can be classified as multi-user systems as they enable a multiple user access to a computer through the sharing of time. Single-user operating systems, as opposed to a multi-user operating system, are usable by a single user at a time. Being able to have multiple accounts on a Windows operating system does not make it a multi-user system. Rather, only the network administrator is the real user. But for a Unix-like operating system, it is possible for two users to login at a time and this capability of the OS makes it a multi-user operating system.

Multi-tasking vs. Single-tasking

When a single program is allowed to run at a time, the system is grouped under a single-tasking system, while in case the operating system allows the execution of multiple tasks at one time, it is classified as a multi-tasking operating system. Multi-tasking can be of two types namely, pre-emptive or co-operative. In pre-emptive multitasking, the operating system slices the CPU time and dedicates one slot to each of the programs. Unix-like operating systems such as Solaris and Linux support pre-emptive multitasking. Cooperative multitasking is achieved by relying on each process to give time to the other processes in a defined manner. MS Windows prior to Windows 95 used to support cooperative multitasking.

Distributed

A distributed operating system manages a group of independent computers and makes them appear to be a single computer. The development of networked computers that could be linked and communicate with each other, gave rise to distributed computing. Distributed computations are carried out on more than one machine. When computers in a group work in cooperation, they make a distributed system.

Embedded

[Embedded](#) operating systems are designed to be used in embedded computer systems. They are designed to operate on small machines like PDAs with less autonomy. They are able to operate with a limited number of resources. They are very compact and extremely efficient by design. Windows CE and Minix 3 are some examples of embedded operating systems.

Customizing Windows Desktop

Learning Objectives:

After reading this information sheet, YOU MUST be able to customize windows desktop.

1. Customizing Windows Desktop

Start menu

The Start menu is a primary conduit to functions and files. How to configure it for individual preferences is discussed.

Many of the properties of the Start menu can be configured by right-clicking the Start button and choosing "Properties" from the context menu. Figure 1 shows the resulting properties sheet. To customize the Start menu, click the "Customize" button. This will open the dialog box shown in Figure 2. Those who wish can change the appearance of the Start menu to the older look by choosing "Classic Start menu". Only the XP style will be considered in this discussion.

There are several areas in the Windows XP **Start** menu and these are shown in figure 3. A number of the entries are discussed in following sections.

Recently used programs

Using an algorithm that is not always clear, Windows XP will place shortcuts to some of the programs that you have recently used into the area labeled "Recently used programs".

Pinned programs

If you wish to give a permanent place on the Start menu to a favorite program, place it in the "Pinned" area. Right-click the program entry in the All Programs menu or other location and choose "Pin to Start menu". To remove a program from the pinned area, right-click and choose "Unpin from Start menu".

Organizing the "All Programs" menu

The listings in the **All Programs** menu are just shortcuts to the actual program files and can be edited like any other shortcut.

Customizing Shortcuts

One way to use Windows XP better and more efficiently is to have a quick path to your most common tasks. Here's how to create useful shortcuts.

Everyone is familiar with the icons placed on the desktop, the shortcuts to open programs. Many are also aware that shortcuts can be placed in the [taskbar](#). However, the average PC user is often unfamiliar with the various methods that exist for creating shortcuts, not just to programs but also for other functions. There are a number of methods for creating new shortcuts:

- Drag and drop
- The right-click "Send To" function
- The right-click "New" function

A discussion of each approach to creating shortcuts is given in the sections below.

Drag and drop

The drag and drop method can be used in several ways. Either the left or the right mouse button can be used for drag and drop with somewhat different behavior. I prefer the right-click method and this will be the basis for the rest of the discussion. Dragging with the right-click brings up the context menu shown in the figure. One way to employ drag and drop is to use the menu entry "Copy Here" to make a copy of an existing shortcut in a different location. For example, an entry in the [Start-All Programs](#) menu can be dragged to the desktop or to the [Quick Launch](#) bar to place a copy of a shortcut in a more readily available spot.

The right-click "Send To" function

For making shortcuts specifically on the desktop, the [Send To](#) function of the right-click can be used (figure on the left). Simply right-click on the desired file or folder and select "Desktop (create shortcut)" from the "Send To" menu.

The right-click "New" function

The most general method for creating shortcuts uses the "New" function of the context menu that appears when a vacant spot within a folder window or on the desktop is right-clicked (figure on the left). Right-click in the folder where the shortcut is to be placed and select the entry "Shortcut" from the menu. The dialog box shown below will open. The location of the target item can be entered or the "Browse" function can be used to locate it.

First dialog box for creating new shortcut

If the "Browse" button is selected, the dialog shown below will open. Here you can select the file or folder that you wish to create a shortcut for (the target). Once the desired folder or file has been selected, Click the "OK" button.

Dialog box for Browse function

Customizing the Taskbar

The Taskbar is the strip across the length of the screen that is the central means for accessing programs and files. Configuring it to suit individual preferences is discussed.

Windows XP taskbar

Configuring the taskbar

To configure the taskbar, right-click in an empty space on the bar and select "Properties" from the context menu. The resulting dialog box is shown in the figure below.

Taskbar properties sheet

Notification Area (aka System Tray)

A variety of programs will place icons in the section of the taskbar on the far right that typically contains the clock. In XP, Microsoft calls this the "Notification area". It was previously known as the "System tray".

Section of Taskbar properties for Notification area

Toolbars

It is possible to add customized toolbars to the middle area of the taskbar. Right-click an empty spot on the taskbar and choose "Toolbars". There are five standard default choices, including "Quick Launch" (first figure below). (Other software may sometimes add extra choices.) There is also an item "New toolbar" that allows the choice of any folder (second figure below). The Desktop toolbar gives access to the contents of the desktop without having to minimize any open windows. Similarly, a frequently used folder can be made easily accessible by creating a toolbar for it.

TO CHANGE YOUR DESKTOP BACKGROUND

1. Open Display in Control Panel.

2. On the **Desktop** tab, do one or more of the following:

- Click a picture in the **Background** list. In **Position**, click **Center**, **Tile**, or **Stretch**.
- Click **Browse** to search for a background picture in other folders or on other drives. You can use files with the following extensions: .bmp, .gif, .jpg, .dib, .png, .htm. In **Position**, click **Center**, **Tile**, or **Stretch**.
- Select a color from **Desktop color**. The color fills the space not used by a picture.

Note

- To open Display, click **Start**, click **Control Panel**, click **Appearance and Themes**, and then click **Display**.
- You can use a personal picture as a background. All of your personal pictures located in **My Pictures** are listed by name in the **Background** list.
- You can save a picture from a Web site as a background. Right-click the picture and then click **Set as Background**. The picture is listed in the **Background** box as Internet Explorer Background.
- If you choose an .htm document as your background picture, the **Position** options are unavailable. The .htm document is automatically stretched to fill your background.

Screen Saver

A **screensaver** is a computer program originally designed to conserve the image quality of [computer displays](#) by blanking the screen, or filling it with moving images or patterns when the computer was not in use. Today, screensavers are primarily used for entertainment or security purposes.

Steps:

1. Open Display properties by Clicking Start, Control Panel & Display or Right Click your desktop and choose properties.
2. Click Screen Saver Tab
3. Choose your screen saver and click applies.

Getting Started with Word

After completing this lesson, you will be able to:

Start Word.

- Explore the Word window.
- Enter text in a document.
- Save a document.
- Close a document and quit Word.

1. Getting Started with Word

Just a few years ago, correspondence was created with paper and pencils, pens, or typewriters. Gone are the days, however, of correction fluid, crossed-out words, and wads of crumpled papers scattered around your garbage can. Today most personal and professional correspondence is created using computers. And, in most cases, those computers are running a word-processing program to make the creation of documents easier and more accurate.

Microsoft Word is one such word-processing program. With the help of Microsoft Word, you can quickly and easily create memos, faxes, reports, letters, charts, and newsletters. You can also, among other things, add graphics to documents and use other Microsoft Office XP programs to import data into a Word document. Not only is Word a convenient time-saver, but Word also allows you to check spelling and edit documents before printing. No longer do reports, letters, and other documents have to be completely retyped just because of an error or two. Word allows you to edit quickly and leaves you with a very clean, professional-looking document (and saves you from emptying your garbage can so often).

In this lesson, you will learn how to start and quit Word and how to identify the various components in the Word window, such as the menu bar and **toolbar**. You'll explore the task pane, you'll practice entering text into a document, and then you'll save a document. To complete the procedures in this lesson, you will create your own practice files.

A toolbar is a group of buttons used to carry out commands. For example, the Drawing toolbar contains buttons that you can use to draw and format pictures.

The taskbar is the strip along the bottom or side of the screen. You use the mouse pointer to open

applications on the taskbar.

Starting Word

You start Word by clicking the Start button, which is at the left end (or top) of the Microsoft Windows **taskbar**. After you start Word, the program appears in its own **window** with a new, blank **document** open. A window is an area of the screen that is used to display a program or document. Every window has common components, including scroll bars and toolbars. You'll learn more about the components of the Word window later in this lesson. A document is a self-contained piece of work created by using a program.

In other words, the Word window and each open document are displayed in separate windows. You can use Word to open multiple documents (therefore multiple document windows) at a time, you can resize a document window, and you can also **minimize** a document window. When you minimize a document window, the document window is reduced to a button on the Windows taskbar. The document is still open; you just can't see it.

Notice in this illustration that the Standard and Formatting toolbars are on separate lines to allow you to view them clearly.

In this exercise, you use the Start button to open Word.

- 1 Click the Start button at the left end (or top) of the Windows taskbar, which is typically located along the bottom of the screen. (You may also find it at the top or along one of the sides of the screen.)

The Start menu appears.

- 2 On the Start menu, point to All Programs.

The All Programs submenu appears.

- 3 On the All Programs submenu, click Microsoft Word.

Word starts.

tip

Rather than clicking the Start button, pointing to All Programs, and clicking the program that you want to use, you can save time by creating a desktop shortcut. You simply double-click a shortcut icon to start its associated program. To create a desktop shortcut to Word, click the Start button, point to All Programs, point to Microsoft Word, and hold down the Ctrl key while you drag the Microsoft Word icon to the desktop. Double-click the Word shortcut icon to open Word.

Exploring the Word Window

Many components in the Word window are similar to those in other Windows programs. The following illustration displays the elements in the Word window, and a description of each element follows the figure.

A desktop shortcut is represented by an icon with a curved arrow in the left corner. You can create a shortcut by right-clicking the desired button-icon and clicking Create Shortcut. The shortcut icon can be moved to the desktop by dragging the icon to the desktop.

Title bar The area of a window or dialog box that displays the name of the current dialog box or application and the name of the current document. It is located along the top of the window.

Menu bar The area that lists the names of the menus available in Word. A **menu** is a collection of related commands from which you can make a selection. The menu bar is located just below the title bar.

Standard toolbar A toolbar that provides quick access to the editing functions you use frequently. For example, on the Standard toolbar, the **button** that you use to save a document contains an **icon** of a floppy disk. The Standard toolbar is located just below the menu bar.

Formatting toolbar A toolbar that provides quick access to the formatting functions that you use frequently. The names of buttons are displayed in **ScreenTips** when you position the **mouse pointer** over the buttons.

Insertion point A blinking vertical line in the document window that indicates where the next **character** (any single letter, number, space, tab, page break, paragraph mark, or symbol that can be entered in a document) typed from the keyboard will appear.

Selection area The area between the left edge of the window and the left edge of a line of text. You position the mouse pointer in the selection area to select an entire line of text. The pointer changes to a right-pointing arrow when it is positioned in the selection area.

Ruler An on-screen scale marked with inches or other units of measure, which changes the indentation of paragraphs, resets a page margin (an area of blank space between the edge of the paper and the text), and adjusts the width of columns. The ruler is located below the toolbars.

Scroll bars Bars that are used for moving the view of the document. The vertical scroll bar is located along the right side of the window, and the horizontal scroll bar is located along the lower portion of the window, just above the status bar.

Navigation buttons Buttons that are used for moving the view in a long document. These buttons are located on the vertical scroll bar.

Status bar A bar that displays explanations of currently selected text at the bottom edge of the program window.

Minimize button A button that reduces a window to a button on the Windows taskbar. It appears as a button with a horizontal line and is located in the group of three buttons at the upper-right corner of the window.

Maximize/Restore Down button A button that switches back and forth, or **toggles** (alternately turns an option on or off each time that the option is selected) between displaying a window in its maximum size and restoring a window to its previous size. It is located in the group of three buttons at the upper-right corner of the window.

Close button A button that closes the current window or application. It is located in the group of three buttons at the upper-right corner of the window.

ScreenTip A help item that shows the name of a button or screen element when you rest the mouse pointer on a toolbar button or screen element.

Task pane Word organizes commands for common tasks in the task pane, a small window next to your document that opens when you need it. For example, when you start Word, you see the New Document task pane, which includes commands for opening and creating documents. Use the New Document task pane to open a saved or blank document, to create a document based on an existing one, or to create a document from a **template** (a file containing structure and style settings that help you create a specific type of document, such as a memo or resume). You can also show or hide any task pane when you like. If you want to use a task pane and the one that you want does not appear, you can manually show the task pane and then select the specific task pane that you want from the Other Task Panes menu on the task pane. If you no longer need the task pane, you can hide it to free up valuable screen space in the program window. On the View menu, click Task Pane; clicking the command hides the task pane if it is currently displayed or shows it if it is currently hidden.

tip

The task pane opens each time you start Word and closes when you open a document. If you don't want the task pane to appear each time you start Word, clear the Show at Startup check box in the task pane.

Entering Text

You begin creating a document by simply typing text. When you enter text into a document, you don't have to press Enter at the end of each line.

Word's **word wrap** automatically wraps text from one line to the next each time the insertion point reaches the right margin. Word wrap breaks lines of text so that they stay within margin boundaries; you don't have to enter hard returns. You press Enter only when you want to begin a new paragraph or insert a blank line. Word uses left and right page margins of 1.25 inches and top and bottom margins of 1 inch by default; however, you can reset the page margins.

As you type text, the insertion point moves, indicating the location for the next character. If you make a mistake, press Backspace to delete characters to the left of the insertion point or press Delete to delete characters to the right of the insertion point.

Saving a Document

The text that you enter is stored in the computer's memory, which is temporary. To keep the **file** for future use, you must store the document on your hard disk.

In this exercise, you save your new document to your hard disk and save the document again after you make changes.

1 On the Standard toolbar, click the Save button to display the Save As dialog box.

2 In the File name box, type **Brochure 01**.

3 Click the Save In down arrow, and click the icon for your hard disk.

4 Double-click the Computer Fundamentals Practice folder.

The Save in box displays the text Computer Fundamentals Practice, and the dialog box displays the contents of the Computer Fundamentals Practice folder.

5 Double-click the Part III folder, and then the Lesson01 folder.

The Lesson01 folder opens.

6 Click the Save button.

The file is saved to your hard disk with the new name, which is now displayed in the Microsoft Word title bar.

7 Click at the end of the first paragraph to position the insertion point there.

8 Press the Spacebar, and type the following sentence:

Meetings are held monthly where an expert guest speaker presents timely and pertinent information.

9 On the Standard toolbar, click the Save button.

Word saves the document.

Keep this file open for the next exercise.

Tip

Word saves documents for recovery in case the program stops responding or you lose power. The Document Recovery task pane lists all recovered documents and allows you to open the documents, view the repairs, and compare the recovered versions. Word saves the changes in a recovery file based on the amount of time indicated in the AutoRecover option. To turn on the AutoRecover option and specify a time interval in which to save, on the Tools menu, click Options, click the Save tab, select the Save AutoRecover info every check box, specify the period of time, and then click OK.

Closing a Document and Quitting Word

After a file is stored on your hard disk, you can clear it from the screen by closing the document window or quitting Word. If the document has not been saved, Word prompts you to save the file before closing the window.

To clear a document from the document window, on the File menu, click Close, or in the upper-right corner of the screen, click the Close button. Closing the current document window leaves Word still running. When you click Exit on the File menu, the Word program quits.

1 On the File menu, click Close.

The document closes, leaving Word open but no documents open.

2 On the File menu, click Exit.

Word closes.

3 To restart Word, Click the Start button on the Windows taskbar, point to All Programs, and click Microsoft Word. (You could also choose Microsoft Word from the first column of the Start menu.)

Word starts.

4 Click the Close button on the New Document task pane.

Keep the new Word document open for the next exercise.

To close MS Word Window

1 On the File menu, click Close to close the file. If you are prompted to save changes, click No.

Word closes the file without saving the changes.

2 In the upper-right corner of the Word window, click the Close button.

The Word program closes.

Learning Worksheet Fundamentals

Learning Objectives:

After completing this lesson, you will be able to:

- Create a workbook.
- Understand Microsoft Excel window elements.
- Select cells.
- Enter text, numbers, and dates in a worksheet.
- Enter a range of data.
- Edit cell contents.
- Move between worksheets.
- Name and save a workbook.
- Open a workbook.
- Close a workbook and quit Excel.

1. Learning Worksheet Fundamentals

Microsoft Excel is an excellent program for organizing, formatting, and calculating numeric data. Excel displays data in a row-and-column format, with gridlines between the rows and columns, similar to accounting ledger books or graph paper. Consequently, Excel is well suited for working with numeric data for accounting, scientific research, statistical recording, and any other situation that can benefit from organizing data in a table-like format. Teachers often record student grade information in Excel, and managers often store lists of data—such as inventory records or personnel records—in Excel. As you work through this course, you'll learn how Excel makes it easy to perform calculations on numeric data and provides dozens of ways to format data for presentation purposes, including charts and reports.

Creating a Workbook

You start Excel by using any of the methods that you use to start other Microsoft Windows programs.

1 On the Windows taskbar, click the Start button, point to All Programs, and click Microsoft Excel.

Excel opens with Book1 ready for you to use.

2 In the New section of the New Workbook task pane, click Blank Workbook.

Excel creates a workbook called Book2 and the task pane disappears.

3 On the File menu, click Close.

Excel closes Book2, and Book1 reappears.

Keep this file open for the next exercise.

Understanding Window Elements

Many elements in the Excel window are similar to those in windows of other Windows programs. The graphic on the following page points out the most important parts of Excel, the last two of which were new in Excel 2002: the workbook window, the main menu bar, the formula bar, the Standard and Formatting toolbars, the Ask A Question box, and the task pane.

The following table describes the elements in the Excel window.

Element	Description
Title bar	Identifies the current program and the name of the current workbook.
Menu bar	Lists the names of the menus in Excel.
Toolbars	Give you quick access to functions that you use frequently, such as formatting, aligning, and totaling cell entries. The Standard and Formatting toolbars appear by default.
Name Box	Displays the address of the active cell.
Formula Bar	Displays the contents of the active cell.
Task pane	Lets you open files, paste data from the Clipboard, create blank workbooks, and create Excel workbooks based on existing files.

Ask A Question box	Displays the help topics that match your request, when you type a question in the box.
Status bar	Displays information about a selected command. It also indicates the status (on or off) of the Caps Lock and Num Lock keys.
Scroll bars	Include a vertical and a horizontal scroll bar and four scroll arrows, each of which is used to display different areas of the worksheet.
Select All button	Selects every cell in a worksheet.
Sheet tabs	Let you display worksheets in the open workbook.
Worksheet	A grid of vertical columns (identified by alphabetic characters) and horizontal rows (identified by numeric digits). Columns and rows intersect to form cells. Each cell can be identified by a full-cell reference, or address, consisting of the column and row coordinates of that cell—for example, B3.
Active cell	The cell, designated by a thick border, which will be affected when you type or edit data.
Minimize button	Minimizes the window to a button on the taskbar.
Maximize/Restore Down button	Toggles (switches back and forth) between maximizing a window and restoring a window to its previous size.
Close button	Closes the window on which the button appears.
ScreenTip	A small pop-up box that displays the name of an object or toolbar button if you point to it with the mouse pointer.

Work with Excel window elements.

1 Point to the Chart Wizard button on the Standard toolbar for a few seconds.

A ScreenTip appears, displaying the words Chart Wizard.

2 Point to the Name Box, which contains the cell address A1.

A ScreenTip appears, displaying the title Name Box.

3 Click the Toolbar Options button at the end of the Formatting toolbar.

A menu with options appears.

4 Point to the Add or Remove Buttons command.

A menu with additional commands appears.

5 Point to Formatting on the submenu.

A menu with the formatting button options appears.

6 Position your mouse pointer over each newly displayed toolbar button.

A ScreenTip appears to explain each button.

7 When you are done, click somewhere outside of the open menus to close the menus.

Keep this file open for the next exercise.

Selecting Cells

Before you can enter data into a worksheet, you must identify the **cell** (the intersection of a row and a column) in which you want to put the data. This is known as **selecting** the cell. You can select a single cell, a row, a column, and groups of adjacent and nonadjacent cells.

To select a single cell, simply click that cell. When a cell is selected, a black border surrounds it, and that cell becomes the **active cell**, as shown in the following illustration.

You can select all of the cells in a worksheet by clicking the Select All button at the top-left corner of the worksheet.

You can select a single row or column in a worksheet by clicking the corresponding row or column selector.

In this exercise, you select an entire row and an entire column in the current worksheet.

1 Click the column selector for column D.

Column D is selected.

2 Click the row selector for row 1.

Row 1 is selected.

3 Click the column selector for column B, and drag the mouse pointer to the column selector for column E.

The columns are selected.

4 Click any cell in column G.

Columns B, C, D, and E are deselected.

Keep this file open for the next exercise.

Selecting a Range of Cells

A **range** is normally identified by the references for its first and last cells with a colon between them. For example, the vertical range extending from cell A1 to cell A9 is identified as A1:A9. Likewise, the horizontal range extending from cell C3 to cell G3 is identified as C3:G3. Ranges that extend across a block of columns and rows are identified by the addresses for the cells in the top-left and bottom-right corners of that block (C5:F9), as shown in the following illustration.

You select a range of cells by dragging the mouse pointer over the cells. When you select a range of cells, the first cell chosen becomes the active cell. The active cell is white, and the range of cells is blue.

In this exercise, you select a group of adjacent cells in the current worksheet.

1 Click cell E3, hold down the mouse button, drag the mouse pointer down to cell E12, and release the mouse button.

The range E3:E12 is selected, and E3 remains the active cell.

2 Click cell A5, hold down the Shift key, and click cell H16.

The range is selected, and A5 remains the active cell.

3 Click cell F17, hold down the Shift key, and press the Down arrow key four times.

The range of cells from F17 to F21 (referred to as F17:F21) is selected.

Entering Text in a Worksheet

In this exercise, you enter text in a worksheet.

1 Click cell A1, type **Sales**, and press Enter.

The text is entered into cell A1, and A2 becomes the active cell.

2 Click cell A3, type **Cabins**, and press Enter.

Cell A3 contains the word Cabins, and the active cell moves to A4.

3 Type **Condos**, and press Enter.

The word Condos is entered into cell A4.

Keep this file open for the next exercise.

Entering Numbers in a Worksheet

A numeric entry contains some combination of the digits 0 through 9 and, optionally, the following special characters.

Character	Used To
+	Indicate a positive value
- or ()	Indicate a negative value
\$	Indicate a currency value
%	Indicate a percentage

/	Indicate a fraction
.	Indicate a decimal value
,	Separate the digits of the entry
E or e	Display the entry in scientific (exponential) notation

If you start an entry with a plus sign to indicate a positive number, Excel ignores the sign. If you type parentheses to indicate a negative number, the number appears with a minus sign. If you include a dollar sign, a percent sign, a forward slash, a comma, or an exponential symbol, the program automatically assigns a numeric format to the entry.

By default, a numeric entry appears right-justified in a cell. If the entry is longer than the defined width of the cell, it appears in scientific notation, as pound signs (#####), or rounded. Internally, however, Excel stores all numbers as originally entered.

In this exercise, you enter sales figures in your worksheet.

1 Click cell B3, type **42848**, and press Enter.

The number is entered in cell B3, and B4 becomes the active cell.

2 Type **92346**, and press Enter.

The number is entered in cell B4, and B5 becomes the active cell.

Keep this file open for the next exercise.

Entering Dates in a Worksheet

Dates in Excel worksheets can be represented using only numbers or a combination of text and numbers. For example, January 22, 2004, and 1/22/04 are two ways of entering the same date. Like text, dates are often used as row and column labels. But unlike text, dates are considered serial numbers; they are sequential and can be added, subtracted, and used in calculations.

In this exercise, you enter dates in a worksheet.

1 Click cell B1, type **January 2004**, and press Tab.

Excel abbreviates the date to Jan-04, and C1 becomes the active cell.

2 Type **Feb 2004**, and press Tab.

Excel uses the same date formatting as above, and Feb-04 is entered in cell C1. D1 is now the active cell.

Keep this file open for the next exercise.

Entering a Range of Data

To enter data in an individual cell, you type the data, and then press Enter. When you have several consecutive entries to make, you can select the range first to enter the data more quickly.

In this exercise, you enter more sales figures in your worksheet.

1 Click cell C3, drag to cell D4, and release the mouse button.

Cells C3, C4, D3, and D4 are selected.

2 Type **39768**, and press Enter.

The number is entered into cell C3, and C4 becomes the active cell.

3 Type **90426**, and press Enter.

The number is entered into cell C4, and D3 becomes the active cell.

4 Type **45122**, and press Enter.

The number is entered into cell D3, and D4 becomes the active cell.

5 Type **87409**, and press Enter.

The number is entered, and cell C3 becomes the active cell.

Keep this file open for the next exercise.

Editing Cell Contents

In this exercise, you revise some of the entries in the current worksheet.

1 Click cell B3, position the mouse pointer between 2 and 8 in the Formula bar, and click.

Edit mode is activated, and the insertion point appears as an I-beam.

2 Press Backspace, type **6**, and press Enter.

Cell B3 now contains the entry 46848.

3 Click cell C4, type **92313**, and press Enter.

Cell C4 now contains the entry 92313.

4 Click cell C3, type **65452**, and click the Cancel button on the Formula bar.

The data entry is cancelled and the original value is restored.

Keep this file open for the next exercise.

Moving Between Worksheets

As explained at the beginning of this lesson, each Excel workbook is made up of individual worksheets. This gives you the flexibility to group worksheets with similar subject matter together in one workbook.

In this exercise, you view two worksheets within the same workbook.

1 Click the Sheet2 tab at the bottom of the workbook window.

Sheet2 and its contents appear. The worksheet is blank.

2 Click the Sheet1 tab at the bottom of the workbook window.

Sheet1 and its contents reappear.

Keep this file open for the next exercise.

Naming and Saving a Workbook

When you finish entering and editing data in a workbook, you need to name and save the workbook on your hard disk so that the information will be available the next time you start your computer.

As with any other Windows file, a workbook's name can be up to 255 characters long, but it can't contain any of the following characters:

/ \ > < * ? " | : ;

You can also use the controls in the Save As dialog box to specify a different format for the new file.

. You also save the workbook as a Lotus file. (Lotus is another spreadsheet program.)

1 On the File menu, click Save As.

Excel displays the Save As dialog box. The files and folders that appear in this dialog box will depend on the folder that was last used to save a workbook on your computer.

2 Click the Save In down arrow, and click the icon for your local hard disk (probably drive C).

3 Double-click the Computer Fundamentals Practice folder.

4 Click the Create New Folder button in the dialog box.

The New Folder dialog box appears.

5 Type **2004 Sales**, and click OK.

The New Folder dialog box closes and the Save As dialog box displays the 2004 Sales folder. The name Book1 appears in the File name text box because Book1 is the open file.

6 Select the text in the File name text box, type **Lodging Sales**, and then click Save.

The file is named and saved.

7 On the file menu, click Save As.

8 In the Save As dialog box, click the down arrow in the Save as type text box.

9 Scroll and select the WK4(1-2-3)(*.wk4) option.

10 Click Save.

Your file is now saved with the same name but as a Lotus spreadsheet so it has a different file name extension.

11 Close the workbook, but leave Excel open.

Opening a Workbook

After you save an Excel workbook, you can reopen it at any time to review its contents and make changes.

1 On the Standard toolbar, click the Open button.

The Open dialog box appears.

2 Click the Look in down arrow, click the icon for your hard disk, and double-click the Computer Fundamentals Practice folder.

The contents of the Computer Fundamentals Practice folder appear in the Open dialog box.

3 Double-click the Part IV folder, then the Lesson01 folder.

The names of the files stored in the Lesson01 folder appear.

4 Click the Employee Information file, and click Open.

The Open dialog box closes and the Employee Information file appears.

5 On the File menu, click Close.

Excel closes the Employee Information workbook.

6 Click File on the menu bar.

Excel displays a list of recently opened workbooks at the bottom of the File menu.

7 On the File menu, click Employee Information.

The file opens.

Keep this file open for the next exercise.

Renaming a Worksheet

By default, the worksheets in each Excel workbook are named Sheet1, Sheet2, and Sheet3. Just as giving a unique name to your workbook helps you remember what is in it, renaming a worksheet can remind you of its contents.

In this exercise, you give a worksheet a different name.

- 1 Double-click the Sheet1 sheet tab.

Sheet1 is selected within the tab.

- 2 Type **Directory**, and press Enter.

Directory appears in the sheet tab.

Keep this file open for the next exercise.

Closing a Workbook and Quitting

You can remove a workbook from the window by closing the workbook or by quitting Excel.

- 1 Click the Close button in the top-right corner of the workbook window.

The workbook closes.

- 2 Click the Close button in the top-right corner of the Excel window.

Excel closes.

Creating a Presentation

After completing this lesson, you will be able to:

- Start Microsoft PowerPoint.
- Explore the PowerPoint window.
- Choose a method to start a presentation.
- Create a presentation using a wizard.
- Save a presentation.

1. Creating a Presentation

With Microsoft PowerPoint, you can create overhead slides, speaker notes, audience handouts, and outlines—all in a single presentation file. PowerPoint offers powerful tools to help you create and organize a presentation step by step.

Starting Microsoft PowerPoint

After you install PowerPoint and the practice files, you are ready to start PowerPoint. As with other programs, there are several ways to start PowerPoint. One way is to use the Start button on the taskbar.

- 1 On the taskbar, click Start.

The Start menu appears.

- 2 On the Start menu, point to All Programs.

The Programs menu appears, displaying all the programs on your hard disk drive, including Microsoft PowerPoint. A portion of the Programs menu should look like the illustration on the following page.

- 3 Click the Microsoft PowerPoint icon to start PowerPoint.

tip

You can also start PowerPoint by creating a shortcut icon on the Windows desktop. Simply double-click a shortcut icon to start its associated program. To create a shortcut, click the Start button, point to All Programs, right-click

Microsoft PowerPoint, point to Send To, and then click Desktop (create shortcut).

A desktop shortcut is represented by an icon with a curved arrow in the left corner.

Exploring the PowerPoint Window

When Microsoft PowerPoint opens, it displays the program window.

A **window** is an area of the screen that is used to display a PowerPoint program or presentation window. The **presentation window** is the electronic canvas on which you type text, draw shapes, create graphs, add color, and insert objects. As with any Microsoft Windows XP program, you can adjust the size of the PowerPoint and presentation windows with the Minimize and Restore Down/Maximize buttons, and you can close PowerPoint or the presentation window with the Close button.

Toolbar Options

The Standard and Formatting toolbars are located directly below the menu bar. When PowerPoint is first started, the Standard and Formatting toolbars appear on the same row to save window space. Only the most commonly used commands appear on the toolbars.

Outline/Slides Pane

The default view, Normal, is made up of three panes: Outline/Slides, Slide, and Notes. The **Outline/Slides pane** has tabs that allow you to alternate between an outline of the slide text (the Outline tab) and a list of the presentation's slides displayed as thumbnails (Slides tab). The **Slide pane** shows the slide as it will appear in the presentation. The **Notes pane** is where you enter speaker notes. You can resize any of the panes by dragging the gray bar that separates them.

Task Pane

At the right side of the PowerPoint window is the **task pane**, as shown in the illustration on the following page. The task pane displays commands and features you use often in working with presentations.

ScreenTip

Window menu and display a ScreenTip for a button.

- 1 On the menu bar, click Window.

The Window menu appears.

- 2 Click the arrows at the bottom of the Window menu to view the expanded menu.

The expanded menu appears.

- 3 Click Next Pane.
- 4 On the menu bar, click Window again.

Notice that the Next Pane is now displayed on the Window menu. PowerPoint has personalized the Window menu for you.

Slides Tab

In this exercise, you look at the Slides tab and use the Other Task Panes menu.

- 1 Position the pointer on the slide icon in the Slides tab of the Outline/Slides pane.

A ScreenTip appears when you position the pointer over the icon.

- 2 Click the Other Task Panes down arrow.

The Other Task Panes menu opens.

- 3 Click an empty place anywhere in the PowerPoint window.

The Other Task Panes menu closes, leaving the New Presentation task pane open.

Choosing a Method to Start a Presentation

The New Presentation task pane can help you work with existing presentations as well as create new ones. If you have already created a presentation, you will find its name listed in the Open a presentation section of the task pane. If you want to create a new presentation, you can simply start adding text to the blank presentation in the Slide pane or use the options in the New section of the task pane.

- Click Blank Presentation to start a new presentation from scratch.
- Click from Design Template to apply one of PowerPoint's design templates to a new, blank presentation.
- Click From AutoContent Wizard to let PowerPoint help you with both presentation content and a design.

Creating a Presentation Using a Wizard

Creating a presentation with the AutoContent Wizard can save you time by helping you organize and write the presentation. The wizard takes you through a step-by-step process, prompting you for presentation information, beginning with the **title slide**, which is the first slide in the presentation.

In this exercise, you create a presentation using the AutoContent Wizard.

1 In the New Presentation task pane, click From AutoContent Wizard under New.

The New Presentation task pane closes and the AutoContent Wizard dialog box opens, displaying the Start screen. On the left side of the dialog box is a list of the screens in the wizard.

tip

If the Office Assistant appears, click No, don't provide help now in the help screen.

2 Read the introduction, and then click Next.

The second screen in the AutoContent Wizard appears, and the square next to Presentation type on the left of the dialog box turns green to indicate that this is the current screen. The AutoContent Wizard prompts you to select a presentation type. To help you identify presentation types quickly, the wizard organizes presentations by category.

3 Click Projects.

4 In the list on the right, click Project Overview.

5 Click Next.

The AutoContent Wizard now prompts you to select a media type for the presentation.

6 Click the On-screen Presentation option if necessary to select that presentation type.

7 Click Next.

The AutoContent Wizard now prompts you to enter information for the title slide and for footer information to be included on each slide.

8 Click in the Presentation title box, type **New Employee Training Program** and then press Tab.

9 In the Footer box, type **Contoso, Ltd.**

10 Verify that the Date last updated and the Slide number check boxes are selected.

11 Click Next, and then click Finish.

The PowerPoint presentation window appears with content provided by the AutoContent Wizard in outline form in the Outline tab of the Outline/Slides pane and the title slide in the Slide pane. The name on the title slide is the name of the registered user.

Saving a Presentation

The work you have completed so far is stored only in your computer's temporary memory. To save your work for further use, you must give the presentation a name and store it on your computer's hard disk drive.

In this exercise, you save a presentation.

Almost every dialog box includes a question mark button in the upper-right corner of its window. When you click this button and then click any dialog box control, a Help window appears that explains what the control is and how to use it.

1 On the Standard toolbar, click the Save button.

PowerPoint displays the Save As dialog box, as shown in the illustration on the following page. The text in the box next to the label File name is selected so that you can type a presentation name.

2 In the File Name box, type Contoso Employee Training Report Pres 01.

The word Pres in the file name is an abbreviation for Presentation.

3 Click the Save In down arrow, and then click drive C.

4 In the list of file and folder names, double-click the Computer Fundamentals Practice folder, then the Part V folder, and then double-click the Lesson01 folder.

5 Click Save or press Enter to save the presentation.

The title bar name changes from Presentation1 to Contoso Employee Training Report Pres 01.

tip

Creating a Presentation

After completing this lesson, you will be able to:

- Start Microsoft PowerPoint.
- Explore the PowerPoint window.
- Choose a method to start a presentation.
- Create a presentation using a wizard.
- Save a presentation.

1. Creating a Presentation

With Microsoft PowerPoint, you can create overhead slides, speaker notes, audience handouts, and outlines—all in a single presentation file. PowerPoint offers powerful tools to help you create and organize a presentation step by step.

Starting Microsoft PowerPoint

After you install PowerPoint and the practice files, you are ready to start PowerPoint. As with other programs, there are several ways to start PowerPoint. One way is to use the Start button on the taskbar.

- 1 On the taskbar, click Start.

The Start menu appears.

- 2 On the Start menu, point to All Programs.

The Programs menu appears, displaying all the programs on your hard disk drive, including Microsoft PowerPoint. A portion of the Programs menu should look like the illustration on the following page.

- 3 Click the Microsoft PowerPoint icon to start PowerPoint.

tip

You can also start PowerPoint by creating a shortcut icon on the Windows desktop. Simply double-click a shortcut icon to start its associated program. To create a shortcut, click the Start button, point to All Programs, right-click Microsoft PowerPoint, point to Send To, and then click Desktop (create shortcut).

A desktop shortcut is represented by an icon with a curved arrow in the left corner.

Exploring the PowerPoint Window

When Microsoft PowerPoint opens, it displays the program window.

A **window** is an area of the screen that is used to display a PowerPoint program or presentation window. The **presentation window** is the electronic canvas on which you type text, draw shapes, create graphs, add color, and insert objects. As with any Microsoft Windows XP program, you can adjust the size of the PowerPoint and presentation windows with the Minimize and Restore Down/Maximize buttons, and you can close PowerPoint or the presentation window with the Close button.

Toolbar Options

The Standard and Formatting toolbars are located directly below the menu bar. When PowerPoint is first started, the Standard and Formatting toolbars appear on the same row to save window space. Only the most commonly used commands appear on the toolbars.

Outline/Slides Pane

The default view, Normal, is made up of three panes: Outline/Slides, Slide, and Notes. The **Outline/Slides pane** has tabs that allow you to alternate between an outline of the slide text (the Outline tab) and a list of the presentation's slides displayed as thumbnails (Slides tab). The **Slide pane** shows the slide as it will appear in the presentation. The **Notes pane** is where you enter speaker notes. You can resize any of the panes by dragging the gray bar that separates them.

Task Pane

At the right side of the PowerPoint window is the **task pane**, as shown in the illustration on the following page. The task pane displays commands and features you use often in working with presentations.

ScreenTip

Window menu and display a ScreenTip for a button.

- 1 On the menu bar, click Window.

The Window menu appears.

- 2 Click the arrows at the bottom of the Window menu to view the expanded menu.

The expanded menu appears.

- 3 Click Next Pane.
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- 5 Click Save or press Enter to save the presentation.

The title bar name changes from Presentation1 to Contoso Employee Training Report Pres 01.

Tip

How to Print File

Learning Objectives:

After reading this information sheet, YOU MUST be able to identify the [computer hardware](#).

1. How to Print File

Printing Document

Steps

1. Open a program that allows you to insert text into a document or get on the internet.
2. If you were to open a program, you would need to type text into the document. If you were to get on the internet, you could skip to step 7.
3. After you have typed text into the document, you need to locate the menu bar, click on file, then point to print.
4. Click on print.\
5. When the print dialog box appears, select the printer you want to use (if it is not already selected) and select the number of copies to print.
6. Click OK.
7. If you were to print a page or pages from the internet, follow steps 3, 4, 5, and 6, except you don't have to type text into a document to print.

Printing Spreadsheet

1. Format your spreadsheet the way you want to see it printed. Add borders and shading as necessary to your tables and adjust column widths so your data fits without overlapping. The better job you do preparing your spreadsheet from the beginning, the easier it will be to print. Include features like headers and footers to ensure all the necessary information will be on the printout.
2. Change the screen view from normal mode to print view mode. For Microsoft Excel, click "View" on the menu bar and then click "Page Break Preview." Other spreadsheets will likely have a similar process. If not, go to

the "Print Preview" page and, if necessary, turn on the margins by clicking the appropriate button--usually "Margins."

3.

3. Adjust the page breaks or margins by clicking on them and dragging them in the direction you want them adjusted. Sometimes, the scale will automatically adjust to fit your new margin or page-break definitions. If not, you will have to do it manually.

4. Go to your spreadsheet's "Page Setup" function, usually in the "File" menu, if you must manually adjust the scale. There are three types of adjustments you may see. The first option is to choose between "Landscape" and "Portrait." The former is better for wide, continuous spreadsheets, while the latter is good for narrow or limited-length tables. The second adjustment is to fit the spreadsheet to a set number of pages in length and in width. The scale is automatically adjusted to meet the criteria you define. The final option is to choose a percentage adjustment from the original size. This can work to enlarge or reduce the final printout.

4. Click the "Print" button on the toolbar once all of the adjustments are made. There is no way to determine exactly how the spreadsheet will look when it is finally on paper, so you may have to go back and fine-tune some of your adjustments in order to print out a copy that is professional and readable, especially for extremely wide or complex spreadsheets.

Printing Slides in Power Point

Set the slide size and orientation for printing

To change your printing options, do the following:

1. On the **Design** tab, in the **Page Setup** group, click **Page Setup**.
2. In the **Slides sized for** list, click the size of paper on which you will be printing.

NOTES

- If you click **Custom**, type or select the measurements that you want in the **Width** and **Height** boxes.
 - To print an overhead transparency, click **Overhead**.
3. To set the page orientation for the slides, under **Orientation**, under **Slides**, click **Landscape** or **Portrait**.

NOTE By default, PowerPoint slide layouts appear in landscape orientation. Although you can use only one orientation (either landscape or portrait) in a presentation, you can link two presentations to display both portrait and landscape slides in what appears to be one presentation. For more information, see [Use portrait and landscape slide orientation in the same presentation](#).

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Print the slides

1. Click the **Microsoft Office Button** , and then click **Print**.
 - In the **Print** dialog box, under **Print range**, do one of the following:
 - To print all slides, click **All**.
 - To print the slide that is currently displayed, click **Current slide**.
 - To print one or more slides that you selected, click **Selection**.
 - To print specific slides numbers, click **Slides**, and then enter the slide numbers or ranges in the adjoining box.
2. Under **Copies**, enter the number of copies that you want.
3. Under **Print What**, select **Slides**.

NOTES

- For information about printing handouts, see [Create and print handouts](#).
 - If you select **Outline view**, PowerPoint prints only the text of your slides (as it appears in outline view) and none of the graphics or animation.
4. Under **Color/Grayscale**, click one of the following:
 - **Color** If you print to a color printer, this option prints in color.
 - **Color (On Black and White Printer)** If you print to a black-and-white printer, this option prints in grayscale.
 - **Grayscale** This option prints images that contain variations of gray tones between black and white. Background fills are printed as white, so that the text will be more legible. (Sometimes grayscale appears the same as **Pure Black and White**.)
 - **Pure Black and White** This option prints the handout with no gray fills.

5. To increase resolution, blend transparent graphics, and print soft shadows in your print job, select the **High quality** check box.

TIP When you print in high quality, it may take longer for your presentation to print. To prevent a possible decrease in your computer's performance, clear the **High quality** check box after you finish printing.

6. To print your slides on the paper that you selected for your printer, select the **Scale to fit paper** check box.

7. To print a thin border around your slides, select the **Frame slides** check box.

8. Click **Print**.

NOTES

· If you want to reset the print options and keep them as your default settings, do the following:

1. Set the settings as you want them in the **Print** dialog box.

2. Click the **Microsoft Office Button** , click **PowerPoint Options**, and then click **Advanced**.

3. Under **When printing this document**, click **Use the most recently used print settings**.

· If you are creating transparencies for an overhead projector, see [Set the slide size and orientation for printing](#). PowerPoint automatically optimizes your slides for either black and white or color printers.

MAINTAIN COMPUTER SYSTEM

Learning Objective:

After reading this INFORMATION SHEET, YOU MUST be able to Maintain Computer System

1. How to perform Disk Clean Up?

How to perform Disk Clean Up:

1. Start Menu>>Programs>>Accessories>>System Tools>>Disk Clean Up
2. Select Drive to Clean Up and click "OK"
3. Place Check Marks in Items to be removed Click "OK"

(If your not sure what you are deleting select the category and then Click "View Files")

How to Clear Internet "History"

1. Start Menu>>Settings>>Control Panel>>Dbl Click Internet Options
2. Click "Clear History"
3. Click "OK"

How to Clear Internet "Temporary Internet" Files

1. Start Menu>>Settings>>Control Panel>>Dbl Click Internet Options
2. Click "Delete Files"
3. Put check mark in "Delete all Offline Content"
4. Click "OK"
5. Click "OK" again

How to Run Scan disk and Disk Defragmenter without interruption:

Start Menu>>Run >>In Run Type "MSCONFIG" then click "OK"

MSCONFIG will appear

Select "Selective Startup" then Uncheck

"Load Startup Group Items"

Click "OK"

Click Yes to Restart Computer

Upon Restart

Start Menu>>Settings>>Control Panel>>Dbl Click Display

Select the "Screen Saver" Tab

Change the Screen Saver Drop Menu to "NONE"

Click OK

Then Perform Scan Disk:

Start Menu>>Programs>>Accessories>>System Tools>>Scan Disk

After Scan Disk Perform Disk Defragmenter

Start Menu>>Programs>>Accessories>>System Tools>>Disk Defragmenter
Select which disk to Defragment then click "OK"

After Disk Defragmenter

Start Menu>>Run >>In Run Type "MSCONFIG" then click "OK"
MSCONFIG will appear>>select "Normal Start Up" and Click "OK"
Click Yes to Restart Computer

Upon Restart

Start Menu>>Settings>>Control Panel>>Dbl Click Display

Select the "Screen Saver" Tab>>Change the Screen Saver Drop Menu to
your preferred screen saver

Click OK

Removing viruses from infected machines

Computer Virus

§ A virus is a destructive executable program that infects the other programs in the [system](#) and spreads by replicating itself.

§ Such a program is designed to damage the victim's [computer](#) files.

§ Viruses are coded by malicious programmers in a way that they can spread in the system without one's permission and knowledge.

Different Aspects of Computer Virus

Finder- searches for the new uninfected files and the

Replicator- actually targets these files and infects it by multiplying itself.

How Virus does Affects a System?

- It corrupts files
- It slows down the speed of the computer system
- It causes the system to hang frequently
- It deletes various files

Sources of Virus Infection

A virus can enter the system and infect it through various sources. Some of the sources are

- Infected CDs, DVDs, pen drives, etc
- E-mail
- Browsing infected sites
- Downloading files from the internet

Steps to Remove Viruses

Removing viruses, though technical, is yet a very simple process if all the required steps are properly followed.

The basic steps are:

- Buy or download an antivirus software
- Install the antivirus software
- Update antivirus software with the latest virus definitions
- Do a complete system scan

Methods of Eliminating Viruses

Removing the virus – When the virus can be easily identified and can be removed without affecting other files, then the antivirus removes it from the host place.

Quarantine – This is done when the virus cannot be easily identified removed from the file and the removal of virus means the removal of the complete file. In this method, although the virus is not eliminated, it is rendered inactive by moving the file into "quarantine" and renaming it.

Types of viruses and Examples

Boot viruses: These viruses infect floppy disk boot records or master boot records in hard disks. They replace the boot record program (which is responsible for loading the [operating system](#) in memory) copying it elsewhere on the disk or overwriting it. Boot viruses load into memory if the computer tries to read the disk while it is booting.

Examples: Form, Disk Killer, Michelangelo, and Stone virus

Program viruses: These infect executable program files, such as those with extensions like .BIN, .COM, .EXE, .OVL, .DRV (driver) and .SYS (device driver). These programs are loaded in memory during execution, taking the virus with them. The virus becomes active in memory, making copies of itself and infecting files on disk.

Examples: Sunday, Cascade

Multipartite viruses: A hybrid of Boot and Program viruses. They infect program files and when the infected program is executed, these viruses infect the boot record.

Examples: Invader, Flip, and Tequila

Stealth viruses: These viruses use certain techniques to avoid detection. They may either redirect the disk head to read another sector instead of the one in which they reside or they may alter the reading of the infected file's size shown in the directory listing. size given in the directory.

Examples: Frodo, Joshi, Whale

Polymorphic viruses: A virus that can encrypt its code in different ways so that it appears differently in each infection. These viruses are more difficult to detect.

Examples: Involuntary, Stimulate, Cascade, Phoenix, Evil, Proud, Virus 101

Macro Viruses: A macro virus is a new type of computer virus that infects the macros within a document or template. When you open a word processing or spreadsheet document, the macro virus is activated and it infects the Normal template.

Examples: DMV, Nuclear, Word Concept.

Antivirus Software

Software designed to cure virus infected machines. An antivirus is a program that searches for, identifies and removes potential viruses existing in the computer system

Examples of Anti-virus software

- Symantec Norton antivirus
- AVG antivirus
- McAfee Scan
- Microsoft Antivirus

Back up your files

As our world becomes more digitized, the files we store on our computers are becoming increasingly more important. Instead of keeping handwritten letters in a shoebox, we correspond with family members using e-mail. If we use digital cameras, we often keep our photo albums on our computers.

Unfortunately, computers (and particularly the hard disk drives that hold your files) can fail. Your computer might run for a decade with no problems, or it could fail tomorrow—there's no way to tell. To make sure you don't lose important files if your computer stops working, you should back up your computer on a regular basis. The backup process copies your files to a safe place so that even if your computer fails, you won't lose them.

Choose backup storage

It doesn't make sense to back up your files to the hard disk drive inside your computer, because if your computer were to fail, you would also lose your backup. Instead, you should back up your files to an external hard disk drive or removable disk drive, such as a CD. If your computer does fail, you can then connect the external hard disk drive or use the CDs to restore your files to your new or repaired computer. (This article describes how to back up your files to an external hard disk drive, which is the easiest way to do a full

backup of all your files. If you decide to use CDs, you'll need to choose which files to back up and then manually insert and remove CDs as they are filled.)

If you decide to get an [external hard disk drive](#), choose one that is at least as large as the hard disk drive inside your computer. For example, if your computer has a 100-gigabyte (GB) hard disk drive, choose a 100-GB or larger external hard disk drive. Then [connect the external hard disk drive to your computer](#). Make a note of the drive letter (such as E:, F:, or G:) assigned to your new hard disk drive.

With an external hard disk drive, you can [manually back up your files](#), or you can [schedule automatic weekly backups](#).

Manually back up your files

To back up your files to an external hard disk drive

1. Click **Start**, point to **Accessories**, point to **System Tools**, and then click **Backup**. If the **Backup** option does not appear on the **System Tools** menu, you can [install it](#).
2. The **Backup or Restore Wizard** appears. Click **Next**.
3. On the **Backup or Restore** page, click **Next**.
4. On the **What to Back Up** page, click **All information on this computer**, and then click **Next**.
5. On the **Backup Type, Destination, and Name** page, click **Choose a place to save your backup**, and select your external hard disk drive. Then click **Next**.
6. On the **Completing the Backup or Restore Wizard** page, click **Finish**.
7. Windows Backup saves a copy of your files to your external hard disk drive. When the backup is complete, click **Close**.

If your computer stops responding, you will be able to restore your files to the state they were in when you completed the backup. However, any new files you have created and any changes you have made to existing files since the backup occurred will not be saved unless you back up your files again. For best results, back up your files every week or immediately after creating important files, such as after you copy pictures from your digital camera.

For an additional layer of protection, purchase a second external hard disk drive and perform another backup of your hard disk drive. Store this external hard disk drive in a different location, such as at a family member's house, to protect your files from theft, fire, or natural disasters that might damage both your computer and your backup.

Schedule backups

If you're busy, you might not have time to manually back up your files every week. Fortunately, you can schedule backups to occur automatically. This takes a few minutes to set up, but once you've done so, you'll be protected indefinitely.

To schedule a weekly backup

1. Click **Start**, point to **Accessories**, point to **System Tools**, and then click **Backup**. If the **Backup** option does not appear on the **System Tools** menu, you can [install it](#).
2. The **Backup or Restore Wizard** appears. Click **Next**.
3. On the **Backup or Restore** page, click **Next**.
4. On the **What to Back Up** page, click **All information on this computer**, and then click **Next**.
5. On the **Backup Type, Destination, and Name** page, click **Choose a place to save your backup**, and select your external hard disk drive. Then click **Next**.
6. On the **Completing the Backup or Restore Wizard** page, click **Advanced**.
7. On the **Type of Backup** page, click **Next**.
8. On the **How to Back Up** page, click **Next**.
9. On the **Backup Options** page, select **Replace the existing backups**. Then click **Next**.
10. On the **When to Back Up** page, click **Later**. In the **Job name** box, type **Backup**. Then click **Set Schedule**.
11. On the **Schedule** tab in the **Schedule Job** dialog box, click the **Schedule Task** list, and then click **Weekly**.
12. In the **Start time** box, specify a time of day when your computer will not be used for several hours, such as **3:00 AM**. In the **Schedule Task Weekly** area, select the day of the week you want to back up your files. If you are backing up files overnight, remember to leave your computer running the night before.
3. Click the **Settings** tab. Select the **Wake the computer to run this task** check box.
4. Click **OK**.
5. In the **Set Account Information** dialog box, type your password in both the **Password** and **Confirm password** fields. Then click **OK**.
6. On the **When to Back Up** page, click **Next**.

7. In the **Set Account Information** dialog box, type your password in both the **Password** and **Confirm password** fields. Then click **OK**.

8. In the **Account Information Warning** dialog box, click **OK**.

9. On the **Completing the Backup or Restore Wizard** page, click **Finish**

Your computer will automatically back up your files to your external hard disk drive every week at the time you specified.

How to change an installed program

Note You cannot use this feature to modify all programs.

You can use this feature to change the installation of Windows Installer-based programs such as Microsoft Office XP. Windows Installer-based programs include a Maintenance Mode option. With this option, you can add or remove features, change the installation state of the program or of individual components, or repair and restore the installation.

To change a program, follow these steps:

1. Click **Start**, click **Control Panel**, and then double-click **Add or Remove Programs**.
2. In the **Currently installed programs** box, click the program that you want to remove, and then click **Change** or **Change/Remove**.
3. Follow the instructions that appear on the screen to make the changes that you want.

How to remove an installed program

To remove a program that is installed on your computer, follow these steps:

1. Click **Start**, click **Control Panel**, and then double-click **Add or Remove Programs**.
2. In the **Currently installed programs** box, click the program that you want to remove, and then click **Remove**.
3. If you are prompted to confirm the removal of the program, click **Yes**.

Troubleshooting

- Make sure that the program that you click in the Add or Remove Programs tool is the program that you want to remove from your computer. Some programs may not prompt you to confirm the removal before the program is removed from the computer.
- You can only remove a program with the Add or Remove Programs tool if the program is written for Windows. If you do not see the program that you want

to remove in the **currently installed programs** box, view the program documentation for instructions about how to remove it.