

DIGITAL LITERACY I

COMP-A



Unit 1: Recognizing Computers

Lesson 1: Computers All Around Us

Objectives

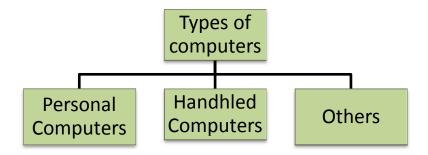
- What is a computer system.
- Classification of computers.
 - Personal Computers.
 - Handheld Computers.
 - Other Electronic Computing Devices.

What is a computer system?

Collection of electronic devices that called **hardware**, each doing special tasks. These devices cooperate with each other, by means of specified instructions that called **software**.

Computers are integrated in our work, home, and social environments and perform a multitude of tasks.

Classification of computers:



Personal Computers: are designed for one user at a time .They process and store smaller amounts of data and programs. For example:

- Desktop Computers: are called personal computers and sit on, beside, or under desk. These process data quickly and are

typically used in small businesses, schools, and homes. Generally two types (PC & Apple).



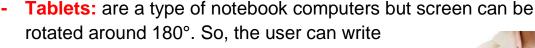
Mac

Notebooks or Laptop Computers: can be similar to desktop models in terms of speed, performance, and usage. The advantages of having a notebook are its portability and its power sources. All laptops use batteries (greener alternative). You can purchase accessories to enhance enjoyment and experience of using a notebook such as a bigger hard drive for storages, a larger screen, a wireless external mouse or keyboard, or more memory.

PC Notebook

Mac Notebook

 Netbook: similar to notebook but smaller and less expensive, and designed to handle wireless communications or access to Internet only.



or select items using a specially designed pen. All tablets have touch screen, which means you can touch a pen or pointing device at an item on the screen to select it.



Hand-held or Mobile Computers (Pocket Computers): are any computing devices that fit within the palm of your hand and are portable. For Example:

- Cellular phones: are now more sophisticated and can include:
 - playing and listening to music
 - taking pictures or video
 - text messaging
 - paging
 - e-mail
 - · accessing the Internet
 - global navigation systems (GPS)





- Personal Digital Assistants (PDAs) or (Smart phones): have specific software to help you make appointments, keep contact lists, or write notes. PDAs are very popular for portability and software (create document, calendars, take pictures or video, or access the internet). PDAs can be main computing device. All PDAs incorporates touch screen technology.









 Music or Media Players (MP3): refers to file type for music to be recognized on audio player only. But, Media player enables viewing of movies, videos, or books that Provide audio and visual capabilities or access to Internet.







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There are **others hand-held** or **mobile computers** that are used in the daily life. For Example:

- Game systems.
- Electronic book reader.
- Calculators.

Other Electronic Computing Devices: is any computer technology which is found in variety of equipment used in daily life such as:

- Equipment to diagnose automobile problems
- Automated Teller Machines (ATMs)
- Point-of-sale machines
- Global Positioning Satellite (GPS)
- Robotics
- Medical equipment
- Small home appliances(microwaves, and coffee machines)
- Large home appliances(ovens, and washing machines)

1. What is the biggest advantage of using a notebook?

Review Questions

	a) Costb) Speedc) Portability				
	d) Size				
2.	Which of the following are true a) MP3 refers to music file b) Some tablets have touc c) Generally, desktop com d) A netbook is similar to a expensive.	e type ch sc npute	reen but ers are tw	PDA doesn't ha to types (PC & A	Apple).
3.	A server is a computer to resources and data. a) True	hat	has bee b)	n designated False	to share
4.	Game systems include a cona) Obtain updates for the b) Play games with other network c) Get technical support d) Any of the above e) a and b	game	e system	•	
5.	An example of a household embedded as part of its equipal and Refrigerator b) Microwave c) Entertainment system d) Doorbell	pmer e) f) g)	nt is: Coffee i Cereal t	machine turn-wheel disp he above	

Unit 1: Recognizing Computers

Lesson 2: Elements of a Personal Computer

Objective

- System unit
- Microprocessor chip
- How memory is measured
- What ROM is
- What RAM is
- How memory works

Looking at system unit:

The System Unit or Box is often the most important and expensive part of the computer system.

There are many separate devices inside the box (motherboard, CPU, RAM etc....) that perform specialized functions for the computer. If one of these devices fails, it can usually be replaced.



A Notebook has the same component as a desktop, and can run on batteries.

The Microprocessor chip:

The microprocessor chip is often called the "brain" of the computer as instructions from the software programs and input from user are received and executed here. This Chip is often referred to as the **Central Processing Unit** (CPU). Each model or type of CPU processes information and instructions at different speed, measured in Megahertz (MHz) or Gigahertz (GHz).

Hertz (HZ) measures the speed of the internal computer clock in terms of frequency or number of cycles per second. Megahertz refers to millions of cycle per second and Gigahertz refers to billions of cycles per second.

Dual and quad core processors contain two or four processor chips, which together perform faster than a single processor chip with higher speed capabilities. These microprocessors are readily available in new computers.

Looking at Memory:

Computers were developed using a numbering system of 1s and 0s, known as the binary system. These two unique numbers represent the charged or uncharged nature of electricity.

For a computer to store information, it needs to have memory chips installed. Memory is measured in bits and bytes. A bit is the smallest unit of data used by computers. It can be a value of 0 or 1. A group of eight bits make one byte. (8 bits= 1 byte).

The smallest unit of data used by humans is one alphanumeric character ('a' to 'z', or 0 to 9) which need a full byte of computer memory to represent it.

The following shows how computer technology and the requirement for storage capacity have grown:

Size in byte

Term	Abbreviation	Approximate Number of Bytes	Exact Amount of Bytes
Kilobyte	KB	1 thousand	1,024
Megabyte	MB	1 million	1,048,576
Gigabyte	GB	1 billion	1,073,741,824
Terabyte	TB	1 trillion	1,099,511,627,776

All data processing within a computer requires the use of various combinations of bytes, as calculated by the computer. Every file used by the computer has a specific size which may increase depending both on the amount of content and the way the content is being used. For instance, the size of a data file will increase or decrease based on what actions are stored in that file, such as cantering a title, formatting words in bold type, calculating a formula, or inserting a photograph. The larger the file is, the more memory you will need to process and store information in the file. Even if a file is not being stored on the computer, your computer still needs memory in order to process it.

Read Only Memory (ROM) BIOS:

Read Only Memory Basic Input/ Output System have information stored in them by the manufacturer. It refers to memory chips responsible for starting your computer, checking RAM, loading the operating system. This occurs only when you turn the computer on or each time you have to restart or "reboot" it. ROM is also used to control input and output devices such as disk drives, keyboard, and monitor while the computer is running.

"Read only" means the CPU can read, or retrieve, data and programs written on the ROM chip. However, the computer cannot write-encode or change-the information or instructions in ROM. Unlike RAM chips, ROM chips are not volatile and cannot be changed by the user.

This type of memory is found in calculators and printers, as it reads information that is entered and processes it during time it resides in memory. When the process is complete, clears itself and waits for next entry. It does not perform any tasks other than reads information and processes it.

Random Access Memory (RAM):

Random-access memory (RAM) chips hold the program (sequence of instructions) and data that the CPU is presently processing. RAM is called temporary or volatile storage because everything is lost as soon as the computer is turned off. Therefore, software programs must permanently reside on hard disk or optical disk. From there, the

computer can load the program and files into memory while they are in use, and remove them out of the memory when programs or files are closed.

The speed of RAM is measured in nano seconds (ns). A nanosecond is extremely fast; a computer can perform large number of tasks in 10 nanoseconds.

RAM chips are used in video display cards, which increase how quickly picture appears on your monitor. RAM also used to buffer information sent to the printer. This increase printing speed and allows the computer to perform other operation while the document is being printed (multitasking).

Understanding How Memory Works:

- When you first turn on your computer, ROM BIOS take control. Its main job is to load the Operating System (OS).
- When the computer loads the windows operating system and passes control over to it, the first screen you will see is the Windows "splash screen", identified by the Windows logo and confirmation of the version of windows you are using.
- Windows uses up a certain amount of RAM used to run basic files
- When starting software "application" or program, asking computer to put copy of program in RAM.
- Close application program when not in use to make RAM available

Review Questions

1. T	-	eed of a microprocessor chip is per of cycles per second.	s measured in frequency or			
	a) Tr	ue	b) False			
2. V	2. What are binary numbers?					
	a) 1s	and Is	c) 1 to 9			
	b) 0s	s and Os	d) 1s and 0s			
3.	B. Read Only Memory is used only when you turn the computer					
	a) Tr	ue	b) False			
4. W	/hy is F	RAM considered volatile?				
	a)	It disappears when the computer is shut down or reset.				
	b)	It uses up only as much mem	nory as it needs for processing.			
	c)	It always uses a certain amount of memory for Windows.				
	d)	a or b				
	e)	a or c				
5. T	he bes	t way to gain more RAM for pr	ocessing a newsletter is:			
	a)	Close any files you are not currently using.				
	b)	Close any application programs you are not currently using.				
	c)	Restart the computer.				
	d)	Any of the above				
	e)	e) a or b				

Unit 1: Recognizing Computers

Lesson 3: Working With Storage System

Objectives

- What is a storage system?
- Working with Disk Drives.
- Working with internal Hard Disk Drives.
- Using Optical drives and Optical writers.
- Working with other types of storage devices.
- Network drives.
- Remote or virtual storage systems.

What is a storage system?

- It is the ability to store data and information on a computer for future use. RAM is temporary so you must save your work to any storage device, for example (CD, DVD, flash memory, floppy disk, hard disk, etc.)
- Storage device you use depends on amount of storage you need and speed of data transfer rate.
- **Data transfer rate:** The amount of digital data that is moved from one place to another in a given time.
- Hard disk drives used most often to store and retrieve software programs and data.

Working with Hard Disk Drives

- Hard disk drive is a primary storage area for both data and programs.
- Both Disk drives "internal" or "external perform same three functions:
 - Rotates disk at constant speed to access sectors on entire disk surface
 - o Moves read/write head across tracks on entire disk surface
 - Reads data from disk and writes data to disk using read/write head



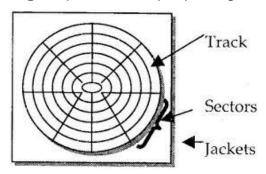
Internal Hard disk



External Hard disk

Data and information located on the disk must be divided into tracks and sectors.

o **Formatting**: is process of preparing disk for use.



Working with Internal Hard Disk Drives and Optical Writers

- Data transfer rate (throughput) of hard drive is function of hard drive rotation speed and number of heads per surface.
- The higher the rotation speed and/or number of heads, the less time it takes to find data.
- Range in capacity from 100 MB to 100+ GB
- Also used in network servers where drives very large to accommodate requirements of whole organization and data storage requirements.
- Data transfer rate quite fast although can be restricted by type of network interface cards and number of users or tasks to be processed.

Working with Optical drives and Optical writer

- Designed to read flat, circular disc, commonly referred to as Compact Disc (CD) or Digital Versatile/Video Disc (DVD)
 - Read by laser device that spins disc at speeds from 200 rpm or higher.

Optical disk	Read	Write	usage	
CD ROM	YES	NO		
CD-ROM			player in audio/video	
DVD-ROM	YES	NO	entertainment system	
Optical writers /Burner Drived	Read	Write	usage	
CD-R	YES	YES	Archive data and record music downloaded from internet.	
CD RW	YES	YES	Create and edit multimedia presentation.	

DVD-RW 1-2X 4.7GB 120min	YES	YES	To record video
DVD-RAM	YES	YES	To record video devices that support this forma

- Blank discs relatively inexpensive, with -R disks cheaper than RW.
- Size of disc can be 650 or 700 MB, while DVDs can be 4.7GB to 17+GB with rapid access speeds.
- Special software needed to manipulate or edit video before burned to DVD.

Working with other types of storage devices

Tape drive or tape streamer: It uses cartridge with magnetic tape

- Generally used to back up large amount of data.
- Use different formats, with tape sizes ranging from 250MB to over 80GB.
- Other tape drives use **Digital Audio Tape** (DAT) format.



Tape Drive

Zip drive:

- It is similar to DVD-RAM drive except that disk can hold between 100MB and 750MB data.
- Offers relatively inexpensive storage option
- Newer systems not compatible with original 100MB devices



Zip Drive

Removable media systems: include flash memory cards, USB flash key/thumb drives, or external hard drives

 Benefits include portability, large storage size, and datasharing capability.



Flash memory card



USB flash key/thumb drive

Network drives:

- Hard drives in network server similar to hard disk drives in computer
 - Traditionally much larger than available with desktop computer
 - May be set as disk array, as drives usually organized to work together.



Network server

Remote or virtual storage systems: is defined as memory created by using the hard disk to simulate additional RAM.

- Do not exist on your computer or location.
- Common service provided by Internet Service Providers (ISP)
- Drives on network or dedicated server at particular site
- Must login to with secure ID and password to access information
- Very useful for off-site backup storage of data, or as "central system" for people in multiple locations to share information
- Disadvantage can be speed of Internet connection

Review Questions

1.	You can use hard disk drives to store and retrieve software programs and data because of their speed and storage capacities.					
	a)	True	b)	False		
2.	Why	should you save your files to	a stor	age device?		
	a)	To prevent data loss if the computer is turned off				
	b)	To store information from RAM onto the storage device				
	c)	To have a copy of the data				
	d)) Any of the above				
	e)	e) a and b				
3. Which removable storage device would you use to pictures from one computer to another?				you use to copy		
	a)	External hard drive				
	b)	Memory card from digital camera				
	c)	USB memory key				
	d)	Any of the above				
	e)	b or c				
4.	. A virtual storage system can exist at a location such as you ISP, where you can store data from anywhere in the world.					
	a)	True	b)	False		
5. How can you access a remote storage system?				system?		
	a)	Start a Web browser and n	avigat	e to that site		
	b)	Through your e-mail progra	m			
	c) Using a USB memory key					
	d) Log on with a valid ID and password					

Unit 1: Recognizing Computers

Lesson 4: Using Input/ Output Devices

bjectives

- What are Input/ Output Devices?
- Common input/ output device
- Specialized device
- What are Ports?
- What is Device driver?

What are Input/ Output Devices?

Input or output device: enable communication between the user and the computer. There are three classifications of input/ output device:

- Send information to computer (example: keyboard).
- Display or transmit information from computer (example: monitor).
- Communicate between computers (example: modem).

Input device: Anything used to enter data into computer.

Output device: Anything used to display data on or from computer.

Common input/output device

Keyboard: is **input device** that allows you to send information to the computer. It is the primary tool for inputting data. You can also use the keyboard to input commands for a task in an application program.



 Typewriter Key: These keys enter text or commands in to the computer.

Enter Executes typed command, performs selected option, marks end of line, or creates blank line.

Backspace Deletes one character to left of flashing cursor; may show as left arrow (←).

Delete Also on numeric keypad as Del; deletes character above or to right of flashing cursor.

Spacebar Inserts blank space between words or sentences.

Cancels current selection, or generates special code for computer; called *Escape* key.

Advances cursor to right by specified number of spaces in word processing program, or to next cell in spreadsheet program.

Shift Selects uppercase letters for typewriter keys and punctuation symbols on number keys. Can use with other keys to perform function or task.

Caps Lock

Locks letter keys to produce only uppercase characters.

Provides secondary meaning or function for specific keys.

Displays Start menu.

(Ctrl)

Displays shortcut menu similar to right-clicking item. Options in menu depend on where mouse pointer was when key pressed.

(Alt) Provides secondary meaning or function for specific keys.

Move cursor up, down, left or right. Located between typewriter keys and numeric keypad.

Print Scrn Captures information on screen and sends to Windows Clipboard.

Scroll Lock Toggle (start and stop) scrolling display of data on screen.

Ctrl) +Pause Stop or freeze computer, then continues when any key pressed; sends Break code to computer to unfreeze or unhang computer.

Function Keys: These are located at the top row of the keyboard F1 and are labelled through to F12. Each key assigned special meaning or function in application programs. Its primary purpose to provide shortcut for commonly used commands.

- Cursor and Numeric Keypad: This is located at the right of the keyboard and it can toggle on and off by pressing Num Lock key:
 - When on, pad becomes calculator or numeric pad.
 - When off, pad becomes arrow or cursor movement pad.

Pointing Devices: are **input devices** that enable you to select or activate items on screen by placing pointer arrow on item and performing required action.

Types of pointing devices:

 Traditional mouse: has left and right buttons used to performing some actions by click, double-click, Right-click.

Click: Point mouse cursor at item, then press left mouse button once and release button to *select item*.

Double-click: Point mouse cursor at item and then click left mouse button twice quickly to *initiate programs or open files*.

Right-click: Point mouse cursor at item and then click right mouse button to display shortcut menu.

 Trackball: has ball on side where your thumb rests; rotate ball to move pointer on the screen.

 Touchpad: enables you to use finger to move pointer by moving you finger on the bad. It has two buttons that work as left and right mouse buttons.





Microphones: input devices that Record sounds and converts into digital format for use on computer.



Monitor: Output device that enables you to view information computer displays.



Specialized device

Scanners: input devices That "Takes picture" of original and then converts to digital format.



Bar Code Reader: input device that Scans or reads thin and thick lines and bar codes.



Game Controllers or Joysticks: input devices Designed to use with games.



Touch Screens: input/output devices that Use pen or finger to select or activate items.

Digital Cameras: input/output devices that Captures pictures and transfer directly to computer.



Webcam: input device and Type of digital camera connected to take pictures and video to share live with others.

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Remote Control: input device used to activate commands on projector or while running slideshow.

Security Devices: input device used as Biometrics handle security issues for logon process and to maintain integrity of data on computer.

Projector: Output devices used to display presentation on screen only, surface such as wall-mounted screen, or both.





Printers: Output devices that convert what is on screen into print using variety of print options. **Types of Printers:**

Inkjet-Printer: printing simple documents and used in homes. Has Print quality and speed are quite good. It is inexpensive.



Laser printer: used for large amount of printing. It contains several trays of varying paper sizes. There are black-and-white or colour laser printers.



Photo Printers: Print photographs on special photographic paper.



Plotters: Specialized printers designed to print onto very large pieces of paper.



All-in-One Printer: for all uses.

Connecting Ports:

Parallel Ports: used for connecting printers



Serial Ports: used for connecting mouse devices or modems.



SCSI (Small Computer System Interface) Ports: used for connecting Hard disk.



USB (Universal Serial Bus) Ports: used to connected newer devices such as flash memory, digital camera.



Network Ports: used for connecting with another computer or a modem.



Midi (musical instrument digitized interface) Ports: are specialized to handle musical devices.



Wireless devices: these devices do not use a cable, but use Bluetooth or infrared radiation.



Using Software

Device driver: It is a **mini-program** tells operating system what kind of device it is, how it is works, and its purpose. Device driver used to enable **communication** between operating system and device. It is important to have correct driver for device to work properly.

Plug-and-play: It is the feature that enables the operating system automatically identifies new device connected to the computer so it looks for and **installs device automatically**.

Review Questions:

- 1. What are three common input devices?
 - a) Keyboard, mouse, monitor
 - b) Keyboard, mouse, speakers
 - c) Keyboard, mouse, printer
 - d) Keyboard, mouse, microphone
- 2. Which mouse button would you press to select an option?
 - a) Left
 - b) Right
- 3. How can you use a biometric device on your computer?
 - a) To identify someone who wants access to that computer
 - b) To identify the person as valid using their fingerprint
 - c) As another security method to logon to the computer
 - d) Any of the above
 - e) a or c
- 4. Identify the type of port shown in the following image:
 - a) Network
 - b) Serial
 - c) USB
 - d) Parallel
- 5. Why is it important to have the correct device driver installed?
 - a) The computer can recognize the purpose of the new device driver.
 - b) It enables the Windows operating system to install it automatically.
 - c) The device driver is the configuration file that identifies what the device is and how it should work.
 - d) Any of the above
 - e) a or c

Unit 1: Recognizing Computers

Lesson 5: Basic Troubleshooting Techniques

Objectives

- Factors that affects computer performance.
- Protecting your computer.
- Solving hardware problems.
- Basic troubleshooting techniques.

Factors that affects computer performance.

The computer performance is characterized by the amount of useful work accomplished by a computer system and after period of time find the performance of the computer appears to decrease (Slowdown) that effect by many factors such as:

- Size of RAM if is smaller that will effects:
 - System resources are too low to process work if many programs and files open at same time.
 - Take a long time to display the contents of document on screen.
- Size of hard disk(HD) if is smaller that will effects:
 - No enough space to install many programs and save files.
 - No enough space for operating system to processing many programs at the same time.
- Speed of CPU if slower that will effects :
 - Take a long time on open and close large file.
- Add new hardware, and software for computer that will cause:
 - Slowdowns the computer.
 - Conflicts with other system components.

Protecting your computer:

There are many ways to protect your computer from theft and damage. For example:

- To protect your computer system from theft you should to do:
 - Use security cable to lock down your computer.
 - Store it in locked room and can't any person to enter into it.
 - Void store any sensitive data or information in your computer.
- To protect your computer system from overheating you should to do:
 - Do not store near heat source or cold environment.
- To protect your computer system from magnetic fields you should to do:
 - Ensure there are no magnetic items near computer.
- To protect your computer system from electrical damage you should to do:
 - Use surge suppressor or UPS to protect from power surges, brownouts, or general fluctuations.
 - Use converter that adapts electrical system and voltage.
 - Avoid connecting too many electrical devices on same power bar.

Solving hardware problems:

You sometimes find that hardware has stopped working or does not respond. Following is table include examples of common hardware problems and how to solving them:

Name of hardware	Problem	How to solving it
Hard Disk (HD)	No enough space	 Use disk Cleanup tools to(remove temporary files¹, empty the recycle bin, remove installed programs that you no longer used) Use disk defragmenter tool to (reorganize files on HD And speed up retrieval of files)
Mouse and keyboard	Not work properly	 Cleaning it by using cleaning kits. Replace it if spilling liquid into it.
Printers	Cannot print	 check printer connected and on Check cable connections Check printer exists and is active If connections active but printer does not print, check for error messages

If you unsure how to proceed with changes, ask for help from specialist when and work with specialist to learn how to make changes safely and effectively.

¹ Generated when you install programs, use attachments, visit Web sites, or register/subscribe on Web site

Basic troubleshooting techniques

1. Collecting Information.

When you see problems with computer, write information down for reference, and keep notes about frequency of each message and what you were doing when message appeared. For Example: **Mouse doesn't work**. How to collect information about this problem? Ask you self some questions How?, What?, When?, and Why?

2. Analyzing the Information.

Analyze information for any patterns or common themes. For Example: If the errors occur when you use the mouse, this could mean the mouse needs a new battery or you may need a new mouse.

3. Attempting Basic Solutions.

Try simple troubleshooting. For Example: If the errors occur when you use the mouse, try simple steps such as replacing the mouse battery, or replacing the mouse.

4. Finding Help.

If the message continues, seek help and advice from technical support specialist, or IT department, or online sources, such as the Internet, offline sources, such as the library.

5. Communicating the Problem Accurately.

Be accurate and concise when communicating problem with technical support specialist and provide text of error message, and what you did during the problem occurred. Provide as much detail as possible so the specialist can begin to find a solution.

6. Analyzing and Selecting the Proper Action.

By providing as much detail as you can, so specialist can provide list of options to correct the situation, from the easiest to hardest solution. For Example: recoding to mouse not working, try first to change battery of mouse, if it still doesn't work try to reset device driver of the mouse, if it still doesn't work try to buy new mouse.

7. Implementing the Solution.

When you know all the options for fixing a problem, try to apply all option in order from easiest to hardest.

8. Confirming the Problem is Fixed.

After implementing each option, try to duplicate problem to see if error occurs again. Repeat with each option until the problem is fixed.

9. Documenting and Communicating the Incident.

When the problem is resolved, be sure to document incident to use for future reference and share document with others that let all users on network to know and learn to solve problem on their own.

10. Avoiding Similar Problems in the Future.

Documenting issue can help prevent similar problems in future. For Example, if the problem was a virus that came from installing a program you download from internet, scan any files you download, update antivirus program regularly.

Review Questions

- 1. Ahmed is beginning to see many messages about no enough space on his hard drive. What should he do next?
 - a) Gather information regarding the messages.
 - b) Call technical support to fix the problem.
 - c) Shut down the computer until technical support arrives.
 - d) Buy a new computer.
- 2. Where can you find help or advice for fixing a problem on your computer?
 - a) IT department
 - b) Online sources, such as the Internet
 - c) Offline sources, such as the library
 - d) Any of the above
 - e) a or b
- 3. If you notice printer cannot print, what solutions could you do?
 - a) Check printer is on
 - b) Check cable connections
 - c) Check printer exists and is active
 - d) All of the answers
- 4. To protect your computer system from electrical damage you should to do:
 - a) Use surge suppressor or UPS.
 - b) Store it in locked room.
 - c) Use converter.
 - d) Do not store near heat source.
 - e) A and c
- 5. It is important to communicate the problem as accurately as you can so the specialist can isolate the problem and resolve it.
 - a. True b. False

Unit 1: Recognizing Computers

Lesson 6: Buying a Computer

Objectives

- Hardware considerations
- Software considerations
- Price considerations
- Support or service considerations

Deciding What to Purchase

Many factors are involved when buying a computer. These vary depending on the purpose of the computer, as well as how and where it will be used (for example, school, home or business). These same factors will determine the type of computer you purchase or the operating system you choose. Some additional Factors are listed below.

Determining the purpose

The first factor is purpose: how will this computer be used and by whom? For example, if the purpose is to store a large amount of data that must be available to multiple users around the world, then this computer will likely need to be a server with one or more large hard drives.

Hard drive size and type are crucial when purchasing a computer that will become a server. The computer type and model are also important, especially if it will store a large amount of data. You will also need to ask what other equipment you will need to protect the data on the server, such as a backup device or a UPS.

On the other hand, if the computer if for a new sales representative who will be travelling around a lot, he/she may need a notebook that can be set to connect to the server at head office and should include a number of features that will enable him or her to present information to customers (for example, ensure there is an appropriate port to allow a LCD projector to be connected, or wireless networking).

If the computer is for someone in marketing who works with videos, graphics, or other media, the microprocessor speed, amount of RAM, quality of video card, size of monitor, and size of hard drive are important. How many monitors and what size of monitor will this person need?

Someone who will be using the computer at home may only need a base-model notebook or a Netbook. The latter can be an inexpensive option for the home user who wants Internet access only and does not plan to store many files on the computer. Alternatively, if the home user is a student who requires the portability of a notebook consider the amount of hard disk space needed to accommodate application programs and personal data such as homework or shared photographs and videos.

Identifying other requirements

When purchasing a computer for a particular organization, you may need to consider company standards. Specific department may require standard configuration or types of computers; for example, perhaps all field sales people need a minimum hardware requirement on their notebooks, which are passed along to administration staff every two years when the sales people are upgraded with the latest notebooks.

Similarly, a school may purchase computers from a designated vendor who can accommodate one set of standards for classroom computers and another set of standards for faculty. A library may need computers without hard drives (called thin clients) in order to offer free courses to the public while ensuring that participants do not save anything to the library network. An Internet café may only need a server that handles wireless Internet access for customers.

An organization such as a travel agency may not need computers will large hard drives as they will be connected via the Internet to a number of other organizations, like airlines and hotels, which provide enquiry services. The major requirement here could be adequate bandwidth to search these databases in order to make reservations.

Selecting the Operating Platform

In addition to hardware requirements, you will also need to consider which operating platform should be installed. In some cases, an organization may use multiple operating platforms. An example would be a university that uses a Unix or Linux platform for its school database system, while students might be using any computer with any operating system when they sign on to the university Web site to find information. Alternatively, all employees at a particular business may use PCs, except for the marketing department staff, which uses Mac-based computers for the specific types of documents they create and use.

Another factor in selecting an operating platform is what application programs will need to run on it. While many applications designed for different platforms share similar features, there often is enough of a difference to create problems in sharing files or features. For example, Microsoft Office 2007 on the PC shares many features with Microsoft Office 2008 for the Macintosh. Consider compatibility issues that may arise from using different operating platforms for a variety of tasks in the organization, such as whether the contact management program works the same on a PDA as it does on a desktop, or what is required to set up access to the contact management program on a PDA.

Looking at Support Options

New computer are covered by warranty; the length of coverage depend on the vendor. The warranty is usually one year and covers any replacement costs associated with manufacturing defects, such as abnormal hard drive failure, malfunctioning network card, or faulty monitor. Warranties do not cover damage caused by careless action such as dropping a notebook or spilling liquid on it.

Retailers often offer support agreements which can help extend the life of your computer for a cost that may be less than paying for each repair as need arises. Prices are adjusted based on call volume and cost of parts. The term of agreement and the services included will also vary. Some agreements include an option for the retailer to lend you another computer while yours is in for repair.

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Extended warranties differ from support agreements as these do not extend the life of the computer. These warranties typically cover two years beyond the manufacturer's one year warranty.

Review Questions

- 1. What factors should you consider when purchasing a computer for someone who works with video files?
 - a) Large Hard Drive
 - b) Digital Camera
 - c) Microprocessor Speed
 - d) Amount of RAM
 - e) Any of the above
 - f) a, c, or d
- 2. An organization that may not need computers with large hard drives would be:
 - a) Library
 - b) Internet Café
 - c) School
 - d) Travel Agency
 - e) Any of the above
 - f) a or b
- 3. The useful life of a computer is exactly two years.
 - a) True

- b) False
- 4. What factors should you consider when choosing an application program?
 - a) The ability to share files between operating platforms
 - b) The ability to use the same features in similar application programs on the different operating platforms
 - How to use the same application program on different computer devices
 - d) Any of the above
 - e) a or b
- 5. A support agreement is:
 - a) A replacement for a warranty
 - b) An agreement that can extend for the life of the computer
 - c) An extra cost that you do not need
 - d) Any of the above
 - e) a or b

Unit 1: Recognizing Computers

Lesson 7: Looking at Software

Objectives

- What software programs are
- How software programs are developed
- What the operating system is
- Which software programs are designed for specific tasks

What is a Software Program?

Refers to everything that makes computer run .Only functions when loaded into computer's RAM that tell the computer how to process data into the form you want. There are two major kinds of software:

- 1. System software works with end users, application software and computer hardware to handle the majority of technical details.
- 2. Application software can be described as end-user software and is used to accomplish a variety of tasks. Application software can be divided to three categories. Application software divided into 3 main parts:
- General purpose applications, includes word processing programs, spreadsheets, database management system and presentation graphics.
- **Specialized applications**, includes thousands of other programs that tend to be more narrowly focused and used in specific disciplines and occupations.
- Mobile apps, is programs designed for a variety of mobile devices including smart phone and tablets.

You can think of application software as the kind you use. It created using **programming languages** that contain commands to perform specific tasks. These commands that users will activate in order to complete that ask. The commands are based on a set of rules (referred to as algorithms).

Algorithms are exactly telling the computer what to do using Step by step procedures designed to perform an operation. They specify how software program identifies input type, and then proper format for output. The following example describes exactly how the algorithms work:

```
Public static int partition (int[] a, int p, int r)
  {
     int x = a[p];
     int i = p;
     int j = r + 1;
     while(true)
        while(a[i] < x)
        {
           i++;
           if (i == r) break;
        while(x > a[j])
           if (j == p) break;
   if (i \le j) {
       tmp = a[i];
       a[i] = a[j];
       a[i] = tmp;
       i++;
       j--;}
     **int exch = a[p];
     a[p] = a[j];
     a[p] = exch;**
```

Software programs are created to help the user perform tasks on the computer. Which software you use depends on what requirements you or your office may have to output. The choice for software is really based on what you need to accomplish, the degree of detail and features needed, and you can afford.

All retail software programs go through thorough process before being released to public. The software vendor Perform quality controls on software based on most commonly used tasks in order to minimize the amount of problems that could occur once the program is installed on the computer.

When purchase software program, actually purchasing license to install and use that program on one computer only. The traditional

way of purchasing software is with CDs in package that includes booklet with instructions on how to install and use the program. You can also purchase by Download software online where you pay with credit card, and then receive separate e-mails from vendor confirming purchase and providing license number.

Organization with large number of users usually purchase **network license.** Network administrator purchase one media (for example, CD)that contains the software ,as well as options copied to network folder, and then installed to individual computers .This option is an effective option to reduce amount of time needed to install a program on many computers.

Software as a service (or SaaS) is another method to obtain software. It is a way of delivering applications over the Internet—as a service. Instead of installing and maintaining software, you simply access it via the Internet, freeing yourself from complex software and hardware management. SaaS applications are sometimes called Web-based software, on-demand software, or hosted software. Whatever the name, SaaS applications run on a SaaS provider's servers. The provider manages access to the application, including security, availability, and performance. SaaS customers have no hardware or software to buy, install, maintain, or update. Access to applications is easy: You just need an Internet connection. A good way to understand the SaaS model is by thinking of a bank, which protects the privacy of each customer while providing service that is reliable and secure—on a massive scale. A bank's customers all use the same financial systems and technology without worrying about anyone accessing their personal information without authorization. Once SaaS contract expires, you can no longer access software until you renew.

Although these are the most common ways to obtain software, there are other methods include Shareware, freeware, bundling and open source. Shareware are trial version software you download for free, but usually have limited functionality or provide limited amount of time to access program, for example Some software developers offer a shareware version of their program with a built-in expiration date (after 30 days, the user can no longer get access to the program). Freeware is software that is free to use. Unlike commercial software, it does not require any payment or licensing fee. It is similar to shareware, but will not eventually ask you for payment to continue using the software. You can legally download and use freeware for as long as you want without having to pay for it.

Many types of software programs are offered as freeware, including games, utilities, and productivity applications. Since the software is free, you might wonder what incentive developers have to create freeware programs. Below are a few reasons a program might be offered as freeware:

- 1. To offer a program developed by a non-profit or educational institution to the public
- 2. To promote a brand or drive traffic to a company's website
- 3. To generate revenue through advertisements or in-app purchases within the program
- 4. To generate revenue by offering other programs during the installation process
- 5. To provide a "lite" version of a program that may lead users to upgrade to the full-featured version.

Software can also be "bundled". Alternatively referred to as bundle ware and pre-installed software, bundled software is any software that is included with a new computer, hardware, or other software program. This bundled software is included at no additional cost to the user and is used to help promote the software with demos of the actual program. In some cases, it may be full versions of programs, but often is trial programs that expire after so many days or is limited versions of the actual program. Common types of bundled software include operating systems, utilities and accessories sold with desktop or laptop computers, as well as mobile devices. Other types of bundled software are multiple programs sold as a single software service or product that can provide more than one use.

Open Source is where programming code available to anyone. You can Modify program to your needs and then share your version with others but cannot charge for it (available at no cost).



Whichever way you obtain software, your responsibility to ensure you observe whatever licensing rules apply. If you do not have a valid license, you will be violating the vendor's copyright and could be subject to legal action. A network administrator is aware of this responsibility and should take the necessary steps to ensure there are enough licenses for each computer in the organization.

As most people know, it is very unusual for software programs to be error free with the first release of the software. A lot of bugs (errors) that occur generally are items that the software company cannot always predict based on how customer uses that program.

Update or upgrade are not always problems with software, they could be created to address Changes in government regulations such as new tax table for accounting programs or other external factors such as a new viruses.

Updating and upgrading a software program are two different things. Updates are Renew for a program that allows adding new some features in that program, , are almost always free , typically very small and the process of running an update on the computer that installs the latest upto-date code and fixes. For example, Computer Hope may recommend updating your software to resolve an issue you may be experiencing; While Upgrade is replaced of a program with newer version of the same program, and is usually not free and often requires installing a full copy of a program. For example, if you have Microsoft Windows XP and wanted to install Windows 7 you would have to "upgrade" to Windows 7. When you register your copy of the software, you can become entitled to receive notification about updates or upgrades, usually by e-mail that you can use to download the upgrade. Some software vendor build a feature within the program to automatically check the for online updates, and display messages to indicate when a new update is ready to for installation.

To use application software you must instruct the operating system start a program. An operating system is a set of programs containing instructions that coordinate all the activities among computer hardware resources. Most operating systems perform similar functions that include starting a computer, providing a user interface ,managing programs, managing memory ,scheduling jobs, configuring device, establishing an internet connection, monitoring performance, and providing file management utilities. Applications software designed for a specific operating system may not run when using another operating system. For example, PCs often use Windows XP, and iMacs use Mac OS X. When

purchasing application software, you must ensure that is works with the operating system installed on your computer. The computer must load the OS into memory before it can load any application.

An application program performs a specific function such as accounting, word processing, or drafting. It is important to use the appropriate software program to complete a specific task to help organize and generate information as needed .Many programs share a number of features to choose the one that best suits your need, look closely to what you need to accomplish.

Business software

Business software is application software that assists people in becoming more effective and efficient while performing their daily business activities. Business software includes programs such as word processing, spread-sheet, database, presentation graphics, and note taking, personal information management software, PDA business software, software suites, project management, accounting, document management and enterprise computing software.

The following section discusses the features and functions of some of business software.

Word processing software

Word processing software sometimes called Word processors. It create text-based documents and are one of the most flexible and widely used software tools .All types of people and organizations use word processor to create memos, letters and faxes. Organisations create newsletters, manuals, and brochures to provide information to their customers. Students and researchers use word processor to create reports. It can even be used to create personalized web pages.

Word processing software has many features to make documents look professional and visual appealing. Some of these features include the capability of changing the shape and size of characters, changing the colour of characters, and organizing text in newspaper-style columns. Most word processing software allows users to corporate many types of graphical images in documents. One of popular type is **clip art**. **Clip art** is a collection of drawing, diagrams, maps, and photographs that you can insert in documents.

Word processing software provides some basic capabilities to help users create and modify documents. Defining the size of the paper on which print and specifying the margin (the portion of the page outside the main body of the text.

In addition of these basic capabilities, most current word processing programs provide numerous additional features.

Spreadsheets

Spreadsheets organize, analyse and graph numeric data such as budgets and financial reports. Once used exclusively by accountants, spreadsheets are widely used by nearly every profession.

The most widely used spreadsheet program is Microsoft Excel. A spreadsheet file is similar to a notebook with up to 255 related individual worksheets. Data is organized vertically in columns and horizontally in rows on each worksheet.

A cell is the intersections of a column and row .Each worksheet has more than 16 million cells in which you can enter data. Cells may contain three types of data: labels (text), values, and formula. Values or numbers that contained in cells can be used in calculations and formulas. Formulas perform calculations on the data in the worksheet and display the resulting value in a cell.

Another standard feature of spreadsheet is charting, which depicts the data in graphical form.

Presentation

Presentation is a program that combines a variety of visual objects to create attractive, visually interesting presentations. You can create slides with any type of content for presentations .Also; you can add Special effects include animation, slide transitions, and theme designs. Presentation graphics software typically includes a clip gallery that

provides images, pictures, video clips, and audio to enhance multimedia presentation. The presentation can be broadcast over Internet, to live audience, or as self-running slide show.

Database Management

A database is a collection of related data. A database management system is a program that sets up or structures, a database. It also provides tools to enter, edit, and retrieve data from the database.

Database management can also be used to generate monthly sales reports that can assist a company's management in making sound business dcission.

Databases are identified by their structure:

- Fields contain individual pieces of data
- Collection of related fields make up record
- Collection of records make up table
- Multiple tables of related records make up database

With this structure, you can Use queries to extract data, generate reports, use forms to access fields within table, set up key fields, and link tables to each other. Not all databases are created for companies to collect information. May websites use databases be "behind the scenes" to help you find and purchase items on Web site.

Graphics and Multimedia software

Many people work with sophisticated software designed specifically to allow them to work with graphics and multimedia. This software includes computer aided design, desktop publishing; paint/image editing, photo editing, video and audio editing and multimedia. In graphics software, you can obtain graphics from different sources, create your own, or customize picture files. This software can be grouped with multimedia software programs to create or edit sounds or video. The program you use will allow you to save files in specific file formats such as .gif, jpg,.png and etc. This type of programs Include basic set of tools for drawing shapes, text, painting fill colors or patterns, changing line styles, width color, or filling in arrowhead styles.

"Multimedia" encompasses any software programs that incorporate graphics, music, or video. Multimedia software has grown in popularity as these programs have become much easier to use, especially when building items for a Web site. Having fundamental knowledge on how best to structure or edit video is helpful to produce professional files for distribution. It allows you to add elements such as video, music, or animation. As with graphic programs, you need to save multimedia files in correct file format such as Adobe Flash, Windows Media Player or Quick Time software.

Education and Entertainment software

Sophisticated Programs designed specifically to entertain and educate people of all ages. These programs Integrate simulation and interaction as a way for one or many users to acquire information. Many educational programs using game system work as entertainment methods, For example, **Xbox** (online multiplayer gaming and digital media delivery service created and operated by Microsoft) **or Wii** (home video game).

Computer-Based Training (CBT) or eLearning is another educational program. It is Self-paced learning offered though vendor's Web site. It May have measures built into program to track progress or assess skills. Learning is also available in form of audio or video file that can be downloaded from Web site for use in another media or location.

A virtual environment is another program that is used by simulation to teach crucial skills for dealing with real-life scenarios. For example, an airline pilot which use flying simulation to practice handling plan in different weather conditions.

Utility Tools are specialized programs designed to make computing easier. There are hundreds of different utilities programs, the most essential are"

 Antivirus program Protection that protects your computer system from viruses that may corrupt files and invade your computer system.

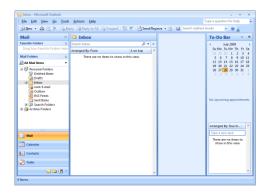
- Adware /Spyware Protection is a special utility provided with antivirus program to finds and blocks unwanted items from the Internet such as spyware and adware. Spyware referred to a Software program designed to collect information about you, about where and what you are browsing on Internet without your permission. Adware referred to Programs that display advertisement automatically.
- **Disk Compression**, Frees space to store more files in most accessible area.
- **Disk Cleanup:** Reduces number of temporary files
- Backup Protection: Schedule backups or copies of specific data should computer fail.
- **File Compression:** Reduce size of file for storage purposes or to transfer file from one location to another.
- Widgets/Gadgets: Mini-programs that provide quick access to information, services and tools from Internet.

Accounting or Financial programs

- Accounting programs: Automates tasks performed by bookkeepers and accountants. Users need accounting fundamentals to understand all features available in accounting software program.
- **Financial programs:** Focus on specialized areas such as small business management, investments, or personal finances.
- Financial investment programs: Can be obtained from financial institution where you do your banking. These can be downloaded from their web site, so that can Manage financial portfolio on your own or with help of investment advisor.

Electronic Mail

It referred to as e-mail. The Process of sending e-mail similar to manual process for addressing, writing, and mailing hard copy letter. E-mail requires you have e-mail program, correct e-mail address, and Internet connection.



Web Browsers

It enables you to view Web sites placed online by different companies, organizations, or individuals. You must have Internet connection, and Web browser to enter address of site to visit. You can then, Click links on Web site to navigate to different areas of same Web site, another Web site, or enter new Web address to go to new site.



Messaging

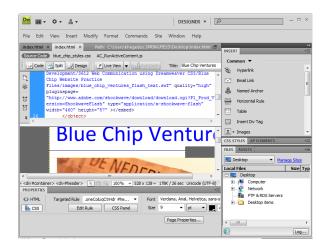
It is a very popular way to communicate quickly with others through Instant Messaging (IM) or Chat room.

Instant Messaging (IM): Is when you Send text messages using cellular telephone or Internet. This type of communication is limited - only one "line" of communication can display text submitted by one person at time. It is very useful when quick response required. You can include emoticons.

- Chat room: It needs to subscribe to particular group with chat room. It can be included in instant messaging programs or search for Web sites of interest and join their chat rooms. There will be numerous conversations happening at same time although only one line of communication displays at a time.

Webpage authoring programs

Programs are used to Create and design pages for Web site with focus on options important to consider. You need to know some fundamentals about Web site design and maintenance. These programs work in combination with multimedia programs to include entertainment items such as video or pictures.



Web Conferencing

It is a method of communicating with people in different locations. It is Similar to traditional conferencing. All participants attend one physical location or are connected via telephone service.

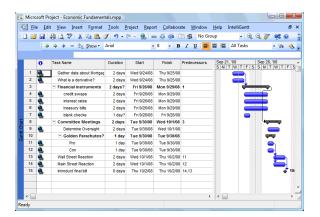


Computer Aided Design

CAD Programs are used to design objects, or create plans or drafts and to animate special effects. Many designs can be set up in two or three dimensions.

Project Management

Project Management programs enable you to Plan and track tasks for small and large projects using many people or resources. By entering tasks into a program such as Microsoft project, you can organize tasks, people, and other resources to accurately estimate and track start and end dates and important milestones in between. As things change in project, you can make changes to see how timeline or resources affected.



Group Collaboration

Programs Enable people to share information or coordinate activities, usually within organization although can include external people. Most group collaboration software such as Microsoft SharePoint or Lotus Notes, enable members go to central spot to view or find information about activities in organization. They can add or modify items for own department or for themselves. Group Collaboration programs Include tools network administrator can set up to look and feel like company Web site.

Integrated Suites

Are group of programs packaged together for purchase. For example, Microsoft office suite might consist of word processing, spreadsheet, presentation and e-mail programs, perhaps database or graphics program. The programs are all integrated or compatible with each other, so the Data from one program can be used in any other program without difficulty. Grouping programs is generally more cost-effective than purchasing programs individually.





Specialized or Custom

Is any program that targets specific market for certain tasks such as managing contacts, generating reports or filling income taxes. Custom programs developed for specific companies with company's needs as

main purpose. They May also be used for many

tasks in other industries.

Custom programs can be used for many tasks in many industries such as scientific, medical, engineering doing inspections, tracking patient progress.

Review Questions

- 1. What are algorithms?
 - a) A set of rules used for computer software code
 - b) Designed to complete specific tasks in specific sequences
 - c) Specifications for how data is inputted into a software program
 - d) Any of the above
 - e) b and c
- 2. When you purchase a software program, you are actually purchasing a license to use that software program.
 - a) True

- b) False
- 3. Which is the most cost-effective method for a network administrator to purchase licenses for 25 computers in an organization?
 - a) Purchase 25 licenses from a retail store
 - b) Purchase a network license for 25 computers
 - c) Purchase a SaaS for 25 computers
 - d) Any of the above
 - e) b or c
- 4. Which software program would you use to manage a quarterly sales report for expenses?
 - a) Word Processing
 - b) Spreadsheet
 - c) Accounting
 - d) Utility
 - e) Any of the above
- 5. If you wanted to have a meeting with someone in Tokyo, London, and Miami, which type of program would be best to use to simulate everyone being in the same room?
 - a) Teleconferencing

b) Web conferencing

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Unit 2: Using Windows 7

Lesson 8: Looking at Operating Systems

Objectives

- Operating system definition
- Identifying different operating systems
- Operating systems interaction with other computers
- Capabilities and limitations of operating systems
- Common problems related to operating systems

Operating system definition

Operating system: is a collection of programs designed to control interaction and communication with user. It does two important functions:

- Manage input devices, output devices, and storage devices.
- Manages files stored on computer and recognizes file types.

Every computer requires an operating system to function. A computer must load the operating system into memory before it can load any application program.

There are two types of operating systems:

- Command Line Interface (Text-based software): required single line commands to perform functions or managing files (Examples: Dos, Unix). Text-based software requires you to enter a command by typing codes or words. It uses the keyboard for input
- Graphical user interface (GUI): enables you to use a pointing device such as the mouse to point and select functions. Many of these functions or commands appear as buttons, pictures or icons to reduce time needed for each functions (*Examples:* Windows, Linux, and Mac OS).

Identifying different operating systems

Microsoft Windows 7

This operating system was released in October 2009 and designed to take advantage of features of *Vista* and *XP* by simplifying common tasks.



Microsoft Windows Vista

Vista is an Operating system for PCs. Windows products include a WYSIWYG (What You See Is What You Get) screen display which



enables user to have an overall preview of what is available.

Mac OS

This operating system is designed for Apple Macintosh computers. It



uses the graphics interface so the computer will be much easier and faster. Newer versions of Mac operating systems use *Unix* as its underlying structure, providing a very secure and stable computing device.

Unix

This operating system was released in early 1970s by programmers for programmers. The system was designed with portability in mind for multiple uses and users. The main drawback to this operating system is that it is based on **one-line commands** controlling functions. This system is very popular with **universities** and **scientific or research organizations**.

```
_ D X
🧬 UNIX33.andrew.cmu.edu - PuTTY
sh> echo "This is a shell that I wrote for 15-213" > file.dat
This is a shell that I wrote for 15-213 tsh> echo "Now I will start a background job!";
Now I will start a background job! ;
tsh> ./myspin1 10 &
[1] (14966) ./myspin1 10 &
tsh> jobs
[1] (14966) Running ./myspin1 10 &
tsh> fg 1
tsh> jobs
[1] (14966) Running ./myspin1 10 &
tsh> echo "Suspend signals work too";
Suspend signals work too ;
tsh> emacs file.dat
Job [1] (14978) stopped by signal 20
tsh> echo "However, my shell does not support pipe streaming...";
However, my shell does not support pipe streaming...;
usn) is | grep "asdr"
ls: |: No such file or directory
ls: grep: No such file or directory
ls: agdf: No such file or directory
```

Linux

This operating system is based on Unix with a graphical user interface. This system is readily available and very popular for use with **high-end servers** and **entrepreneurial** software developers.



Handheld Operating Systems

These operating systems work with a PDA (*Personal Digital Assistant*) device. The first operating system used in PDAs is **Palm OS**. Recently the PDAs spread in the word and the companies developed new operating systems for PDAs such as **windows**, **Apple**, **Linux** and **Android OS**. The options for each system vary depending on the type of handheld device.



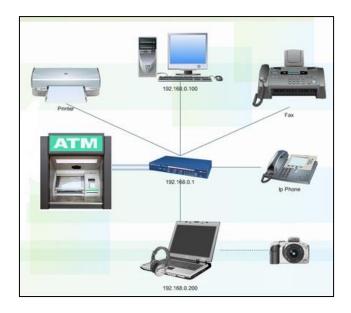
Embedded Operating Systems

Embedded operating systems Manage and control operations for the specific types of equipment for which they are designed. They are Follow process similar to those used in typical computing devices, but recognizes purpose of specialized equipment. Some manufacturers embedding modified version of Windows programs in the equipment so they simulate PC environment. (*Examples: ACs, Microwave, coffee Machine, ATM machine, television, car, plane*).



Operating systems interaction with other computers

In general, not all users at one network use the same operating system or same computer type. Operating systems designed to interact with each other to share data or communicate. In the same network we can have many devices with different operating systems but they can communicate and interact with each other without any problem. Equipment with embedded operating systems interacts with larger systems with network operating systems. For example, *ATM machine* connected to the bank server in the network.



Capabilities and limitations of operating systems

There are some examples of operating systems Capabilities and limitations:

- You can save files using names that are up to 256 characters long, enabling a detailed description of files content.
- If you are using PC, you cannot use these characters (\?:
), but if you are using Mac OS you cannot use colon (:).
- You can open two or more programs at same time.
- You can customize an operating system to your preference by change the desktop background, the color, or the screensaver. On network environment or school environment, your customization options may be restricted; for example, you may not allowed to change system setting such as colors background picture and so on.
- On a stand-alone computer, you can install programs or download items from the Internet. You may be restricted in environments such as school or company network.
- In a network, you can view contents of folders for other departments but cannot move or delete any of these files. Also you can make a copy of the file to your own folder but cannot change original file.

Common problems related to operating systems

Operating systems have some problems include:

- Incompatibility between application program and operating system my prevent software programs from working. For example, you may be able to install and use older software on newer operating systems, but you cannot run a software program designed for a newer operating system on older operating system.
- An error massage may appear indicating that a device does not work, usually because of the operating system cannot identify hardware.
- Other problems can arise from:
 - Power failures
 - Shutting down computer incorrectly
 - Installing too much software or installing it incorrectly
 - Viruses
 - Conflict between software and the operating system
 - Deleting system files
- If your system displays many error messages or requires you to restart computer several times, you should check with specialist to reinstall or upgrade the operating system.
- The operating system or an application program may fail after an update. In this case you need to remove the update by uninstall it.
- If you see an error message indicate you do not have access to particular PC, drive, software program, file, or folder, it means that the login ID is incorrect, or network restrictions have been placed on your ID.

Review Questions

- 1. An operating system is a collection of programs designed to control the computer's interaction and communication with the user.
 - a) True
 - b) False
- 2. An example of interaction between operating systems is the transfer of data between a notebook and a PDA.
 - a) True
 - b) False
- 3. If you changed the desktop background color yesterday and it is the original color again today, why did the color not remain with the preference you chose?
 - a) You do not have rights to change the background color.
 - b) The computer was set to revert to the original color when it was shut down.
 - c) You cannot change anything in the operating system.
 - d) Any of the above
 - e) a or c
- 4. It is crucial that you do not change any of the operating system files without working with an IT specialist.
 - a) True
 - b) False
- 5. What should you try if you cannot open an application program after updating Windows?
 - a) Uninstall the Windows update
 - b) Uninstall the application program
 - c) Make sure the file is valid
 - d) Any of the above
 - e) a or c

Unit 2: Using Windows 7

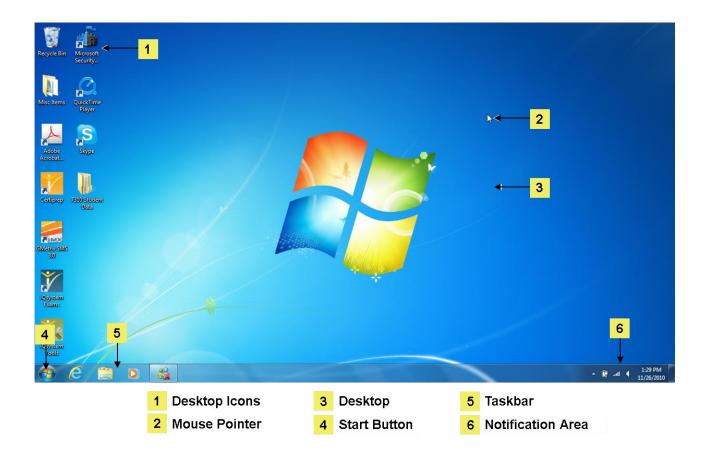
Lesson 9: Looking at the Windows Desktop

Objective

- Looking at Windows Desktop.
- Using Start Button.
- Exiting the Computer Properly.
- Restarting the computer.
- Using Taskbar.
- Looking at Typical Window:
 - o Moving Window.
 - o Sizing Window.

Looking at Windows Desktop

When turn on your computer, a windows logo will stay few seconds then you will see windows desktop include small symbols (icons) on a colored or pictures background that will look similar to following screen:



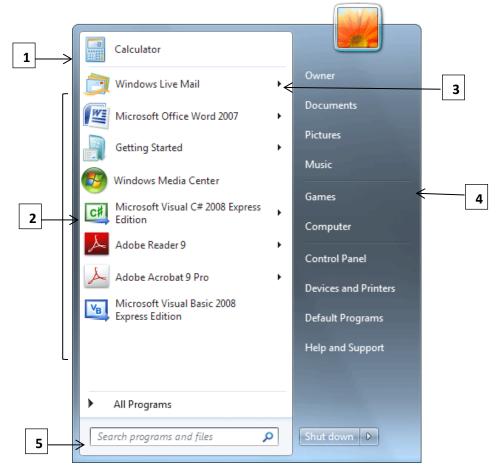
Desktop Icons	Shortcut buttons that open frequently used programs, folders or files.
Mouse Pointer	Arrow that follows the same movement when you move mouse; use to identify which option to select or activate.
Desktop	The work area where windows, icons, menus, and dialog boxes appear.
Start button	Start programs, open documents, find items, get help, or log off and shut down computer.
Taskbar	Contains Start button, taskbar notification area, and Quick Launch or other toolbars. Each open program or file displays as a button.
Taskbar Notification Area	Small icons may notify of a program status, or be another shortcut route to open programs.

Using Start Button

The Start Button appears on the Task Bar. It contains everything you need to begin using Windows such as: starting programs, accessing online help, logging off the network, switching between users, or shutting down the computer.

To display Start button, you can:

- Click Start
- Press
- Press Ctrl + Esc



- 1. Pinned programs (appear on left slide of start menu).
- 2. Recently opened.
- 3. Indicates submenu available.
- 4. Useful System Folders.
- 5. Search Box.

Exercise

If you use a program regularly, you can create a shortcut to it by pinning the program icon to the Start menu.

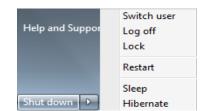
- 1. Right-click the program icon you want to pin to the Start menu, and then click Pin to Start Menu.
- 2. To unpin a program icon, right-click it, and then click Unpin from Start Menu.

Exiting the Computer Properly

To quit windows and exiting the computer properly, it is important to save your files, close the programs, log off the computer when you finish working, to prevents unauthorized access to files or to company's network. You can shut down the computer completely using the shutdown button to prevent others from using it. Never turn off your computer without closing your files and open software programs in the correct manner, has this will Protects software and data files from being corrupted or lost.

- 1 Shut down
- 2 Shut down options





Switch user	Switches to another user account without logging out of the current account.
Log off	Closes all open items, logs out of the current user account, and returns to the log on screen.
Lock	Hides the desktop behind a log on screen.
Restart	Closes all open items and restarts the computer; also called a reboot or warm boot.
Sleep/ Standby mode	Puts computer in state where it consumes less power without losing your place on the screen; computer does not shut down. If using desktop computer, Sleep command appears as Standby, where mmonitor or hard disk turns off after set interval of time. If power failure occurs while in this state, you will lose any unsaved information. To return to normal, move mouse or press key .Use when you want to leave computer on but not using it for length of time

Hibernate	Available only on notebooks, saves what is on desktop and	
then shuts down the computer completely. When you re		
	and log on, desktop returns to where you left it.	

Restarting the computer

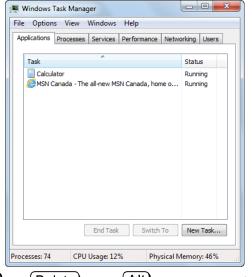
You may sometimes find that the computer does not respond to a request. When this happens, you need to reboot or restart using the Task manger.

To display Task Manager:

- 1. Press Ctrl + Alt + Delete or Ctrl + Shift + Esc , then click Start Task Manager.
- 2. Right-click taskbar and click Task Manager

To switch programs, start program, check which programs running and status, or safely close program if problems occurring, such as it is no longer responding.

The Task Manager advanced is application; the others tabs in Task Manager should be used by experiences user. If Task Manager not respond or close down applications appropriately, you will need to press keystrokes to restart computer Ctrl + Alt



keystrokes to restart computer (Ctrl) + (Alt) + (Delete) or (Alt) + F4 key. If you can to activate Start menu, use Restart option from Shut Down.

Exercise

You will now start a program and then, for demonstration purposes, use the Task Manager to end it:

- 1. Click Start, All Program, Accessories, and then WordPad.
- 2. Right-click a blank area of taskbar and select Start Task Manager.
- 3. Ensure the **Application** tab is active.
- 4. In Windows Task Manager, **Click Document WordPad** and then **End Task.**
- 5. This closes the WordPad Program.
- 6. Close the Task Manager.

Using Taskbar

The taskbar is at the bottom of windows desktop, includes the Start button, a notification area, the clock, and a taskbar button for each open program.



The Notification Area displays date and time, volume control, and with access to startup programs such as antivirus program.

Can move the taskbar or change the way it displays as follows:

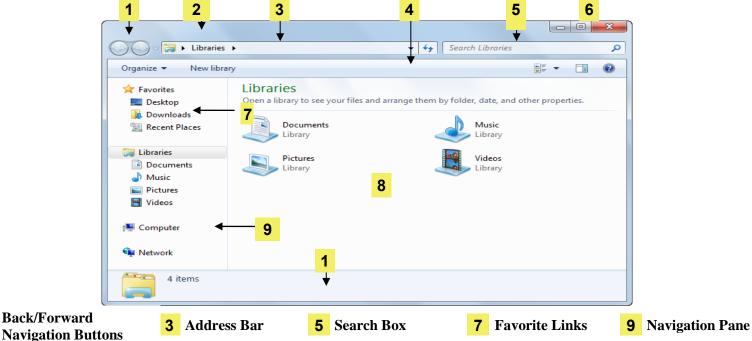
- Point the mouse pointer over blank area of taskbar and drag to any side of screen.
- To change size, point mouse over edge of taskbar and drag to desired height.
- To prevent changes or movement, right-click area of taskbar and click Lock the Taskbar.
- To customize properties, right-click area to customize, or right-click Start button and click **Properties.**

Looking at Typical Window

Command Bar

Title Bar

When program or folders are opened, they appear on desktop individual "windows." You can have multiple windows displayed on the screen, but each window will share features.



Back / Forward	Navigate between different views of files and folders.	
Title Bar	Displays name of feature or application program currently active.	
Command Bar	Contains commands to organize, view, or protect your data.	
Address Bar	Click name in bar to go to that folder, or click arrow to see items in folder.	
Search box	Enter criteria to search for file or folder.	
Control buttons	closes window to button on taskbar, displays window full screen, restores to size before maximized, and closes window.	
Favorite Links	Displays commonly used folders or locations as links.	

6 Control Buttons

8 Contents Pane

1 Details Pane

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Navigation Pane	Displays list of folders and drives you can access to view contents.
Contents Pane	Displays contents for selected folder or drive in Navigation pane.
Details Pane	Displays properties or details for selected file or folder in Contents Pane.

Exercise

- 1. Click **Start**, and then click **computer**.
- Click the (Maximize) button at the top right corner of the window.
- 3. Click the (Minimize) button.
 - Notice that the window seems to have disappeared but it actually was moved to the taskbar.
 - Click the computer button on the taskbar to redisplay the window. The window is now maximized, occupying the entire screen, and the (Restore Down) button appears.
- 4. Click the (Restore Down) button.
- 5. Click the (close) button.

Moving Window

You can move a window anywhere on the desktop using mouse and keyboard.

- Point mouse cursor on title bar and drag to new location
- With keyboard, press Alt + Spacebar to activate control icon

 - 2. Use arrow keys to move window to new location and then press Enter to exit action

You can only move window in Restore Down (not full screen).

Sizing Window

You want to change the size of the window so that you can see more or less of multiple windows. You can use the mouse or the keyboard to size a window.

- Position mouse pointer anywhere on border to size and drag to desired size
- To size vertical and horizontal sides at same time, position mouse cursor on any corner of window, and then drag to desired size for window
- With keyboard, press Alt + Spacebar to activate control icon
 - 1. Press to select **Size** and press Enter
 - 2. Use arrow keys for side to size, pressing that key until window is size you want, and then press Enter to exit action

You will need to repeat this action for every side to be sized.

	Review Ques	stions	
		nut down the computer is simply to press the power er case to turn it off.	
	a) True	b) False	
2.	Use the Task Man	ager to:	
	b) Check the c) Check wh d) Any of the e) a or c To see the progra Start button would y a) Documen b) All Progra c) Search	ms installed on your system, which option from the you use?	
	If you wanted to make the window smaller than the full screen, would you use?		
	a) 💷	b) 💷	
	C) •••	d) x	
5.	What would you c	do to move the window?	
	,	drag the Control Icon to move to the new location drag the Title bar to move to the new location	

- c) Click anywhere in the window to move to the new location
- d) Click on the 💷 button

Unit 2: Starting Windows Applications

Lesson 10: Customizing System Settings

bjectives

- start an application program
- move between open application programs
- start an application using the Run command
- access online help
- understand the Help screens
- · determine the version of Windows

Starting Application Programs

To start program is from the All Programs menu.

You can also select shortcut for application program on desktop or button on taskbar.

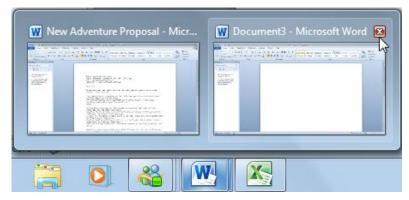


An application program might also create an option in the Startup folder during the time of installation, which means it automatically runs each time you start Windows.

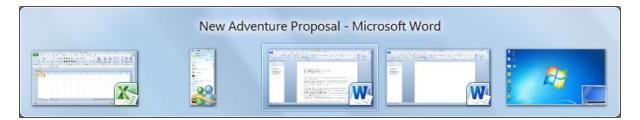
Each application program contains own set of control icons to manage application window.

Working with Multiple Windows

 Working with multiple windows and multiple programs at the same time is called multitasking.



- Using the keyboard, Press + Tab or Alt + Esc to switch between programs, or press Alt + Tab to display small window with icons for each open program

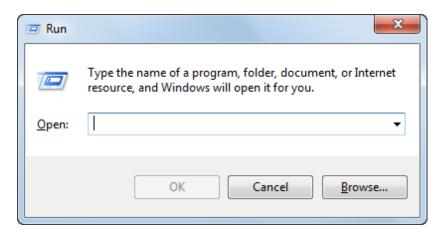


Using the Run Command

May need to start program that was or does not need to be installed and not in the Start menu using Run command.

To activate Run:

- Click Start, type: run in search field, and press Enter
- Click Start, All Programs, Accessories, Run
- Press + R



Using Windows Help and Support

Windows provide an extensive online Help system displays step-by-step procedures, definitions for terms, and hypertext links to other related topics

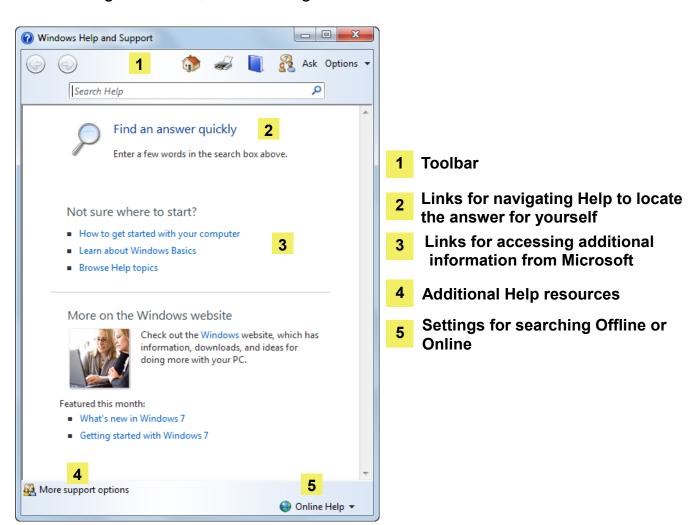
Web Help is available for additional online support via Internet.

To activate Help:

- Select Help and Support from Start
- Press F1
- Click (Help) in any dialog box

Windows Help and Support window contains navigation and search tools, as well as links to variety of resources, such as assistance in finding an Answer,

Asking Someone, or Obtaining Information from Microsoft.





Arrows

1 Retrace steps through Help system.

Home and Support home

Goes to Help and Support home page.

Print

Prints currently displayed topic.

Browse Help

4 Displays current location in table of contents.

Learn about other support options

Goes to page with links to other resources.

Options

6 Provides additional commands to get help.

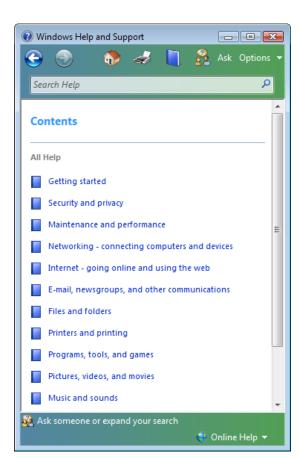
Using the Table of Contents

Use a table of contents to find help on specific topics. Here, the topics grouped in types of task or activity.

- To activate Table of Contents in Help:
 - In Windows Help and Support window, click

Table of Contents

- On Help toolbar, click (Browse Help)
- Categories link you to specific features or options available
 - Links to window with description for topic
 - Links to window with more options for topic



 Displays hierarchy of selected topics with options to find more information

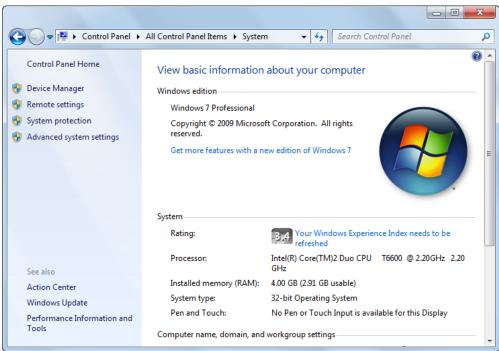
Getting Additional Technical Support

If you cannot find help on specific topic online, a number of other options for technical support are available:

- Contact Microsoft
 - List of numbers and ways to contact available in Help menu of Microsoft application program
 - Can also use online help option to find technical support
- Go to computer store that provides technical support
- Hire consultant who can come to your site to fix computer or provide training or assistance on problem
- Take additional courses on Windows to study advanced skills and troubleshooting techniques
- Search Internet for any groups that specialize in Windows 7 or have blogs where they share information

When you require further technical support, you may be asked which version of Windows you are using. It is important to tell technical support the version you are using so they can provide you with the correct support for that version.

- To display the version of Windows for technical support:
 - click Start button, click Control Panel, click System and Security, click System, or
 - click Start button, right-click Computer and click Properties



Review Questions

- 1. The most common way to start an application program is to use the Start button on the desktop.
 - a) True

b) False

- 2. Multitasking is a process whereby Windows allows you to work on multiple programs or documents at the same time.
 - a) True

b) False

- 3. How can you activate the Help feature?
 - a) Select Help and Support from the Start menu
 - b) Click a Help icon or button if it is displayed on the screen
 - c) Press
 - d) Any of the above
- 4. If you cannot find online help on a Windows topic, what options are available to you for further help?
 - a) Check with a technical person, either at your site or a computer dealer.
 - b) Contact Microsoft.
 - c) Search the Internet for groups of people who may have experienced the same problem or issue.
 - d) Hire a consultant to help you or take training courses that target the features you want to learn.
 - e) Any of the above

Unit 2: Windows 7

Lesson 11: Looking at Files and Folders

Objective

- What a file or folder is on the computer.
- How to recognize a file or folder on the desktop.
- How to recognize the drives available.
- Selecting files or folders.
- Moving and copying files or folders.
- Changing the view for drives, files or folders.
- How to create, customize, or change a folder's properties.
- · Renaming files or folders.
- Viewing file or folder properties.
- Finding files.

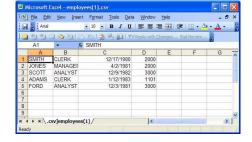
Understanding Files and Folders

A **file** is an object on a computer that stores <u>data</u>, <u>information</u>, settings, or commands that are used with a computer program. It is created using a specific program. The type of program determines which type of a file it is.

There are three major types of file:

 Application File: it includes very detailed instructions for microprocessor on what tasks to perform like (read or write). It stored in program folder which resides in Program Files folder. Many simple examples of application files (Microsoft word, Excel,

power point...)



Application File

 Data File: This type of file Contains information entered and saved in application. For example, presentation power point, letter in word and so on.

Department Budget

Data File

 System File: Contains detailed instructions for microprocessor on what tasks to perform, except they are part of operating system. Generally, many of system files remain hidden to protect them from any changed or deleted.

System file

Regardless of the type of file all files have icon that includes symbol of associated program.

Folder is a container for programs and files and method of organizing information. It represented by yellow icon that looks like file folder. Each folder has Hierarchical structure indicates how many levels and where folder exists. This structure is much like a family tree. Consider the example shown in at the right:

This structure shows libraries folder at the top level with underneath documents folder, and another folder below called my documents. This folder has a sub folder called annual report that contains two folders for 2008 and 2009 years. Also, it has three data files. To indicate the annual report 2010 file to someone, you need to write it as follows:



C:\Users\{login Name}\My Documents\Annual Reports\Annual Reports2010 (audited).doc

This Known as **path** as you are stating exact route to follow to get to location of file.

No limitations where you store file, or number of folders created, and no one correct method for setting up filing system. Just insure that you are following company's standards or create structure logical to you and others who share computer.

It is important to be more familiar about that, if you have any important, confidential or sensitive data you must have backups or copies. This will protect your data from the lost due to the theft or any hardware failure.

Understanding Files and Folders

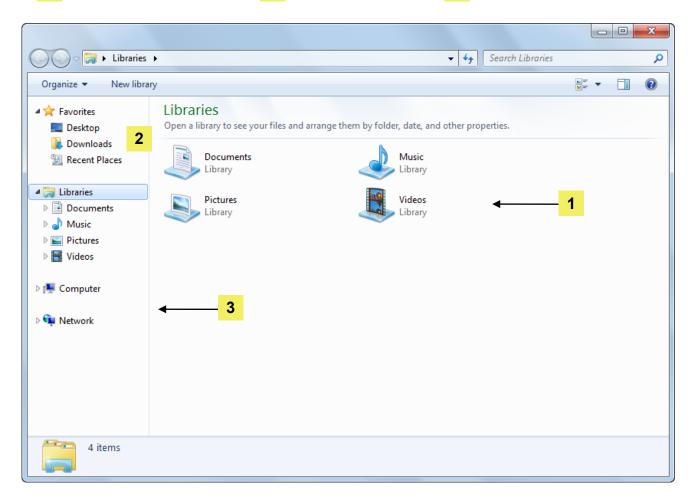
To begin working with files and folders:

- Click Start, Computer
- Click Start, Accessories, Windows Explorer
- Click Start, type: expl in Search box, click Windows
 Explorer
- Double-click Computer icon on Windows Desktop
- Right-click Start button and click Explore
- − Press + E

Actually, you are allowed to do many functions to manage your files and folders in both areas of computer and Windows Explorer. But, there is a difference in what appear when you start a computer versus windows Explorer. Computer area usually displays the storage devices in right pane, while Windows Explorer displays the contents of folder where you are storing your work.

Take view the following file management and the method of view the contents of the computer:

1 Contents Pane 2 Navigation Pane 3 Split Bar



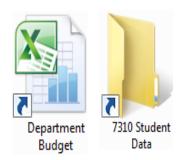
Navigation Pane	Displays Favorites, Libraries, and Computer or		
	Network areas.		
Expand	Displays more folders or items at this level; may see		
	several buttons depending how structure set.		
⊿ Collapse)	Hide items at this level; may see several buttons		
	based on structure set up.		
Split Bar	Drag bar to show more or less of either pane.		
Contents Pane	Shows contents of drive or folder selected in		
	Folders pane.		

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Files and folders both of them can be saved anywhere .But, It is important to identifying specific items in relation to recognizing a shortcut versus a program or file that has been set up in a location, i.e., on the desktop. Consider the following view of files or folders:



- Icon at left represents program to view or modify document
- Text below icon is file or folder name
- If delete icon, you delete actual file or folder.



- Small arrow at lower left corner represents shortcut to location where item saved
- Only shortcut deletes, not actual file.



- Shortcut to application program file
- Only shortcut deletes, not actual file to start program.

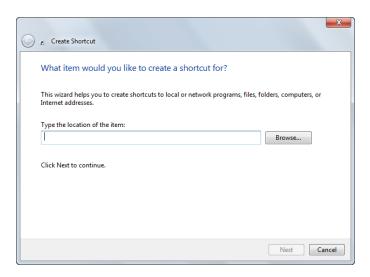
Creating Folders

You can create folders at any level, including on Desktop. To create folder:

- On Command bar, click New folder and click New Folder
- Right-click location in folders area, and click New, Folder
- Right-click in contents pane and click New, Folder

To create shortcut to folder:

- Right-click location in folders area, and then click New,
 Shortcut
- Right-click contents window and then click New, Shortcut



Renaming a Folder

Folder name can be as long or short as required. To change folder's name:

- Click folder icon to select it and F2 then press for Edit mode
- Click folder icon, then click inside folder name for Edit mode
- Right-click folder and then click Rename
- On Command bar, click Organize and click Rename

Documents

In Edit mode when see folder name highlighted, with name highlighted, type new name for folder. You can use mouse pointer or arrow keys to move cursor to exact location in folder name to insert or delete characters.

Changing Folder Options

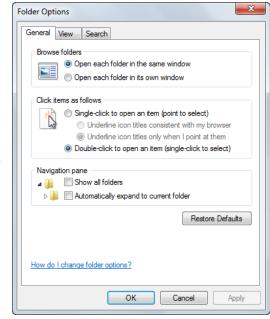
You can Change folder appearance by changing properties. You can also, change view of folders and files or display file types.

To change the options: Select folder and on Command bar, click

Options. and then Folder and Search

The window will show three options:

- Tasks: Specifies whether to display details and Preview pane.
- Browse folders: Specifies whether each folder opens in same window, or in different window.
- Click items as follows: Provides options to single- or double-click to open items.



Changing the View

Sometimes you need to change the view of files or folders to display them in different ways.

To select view:

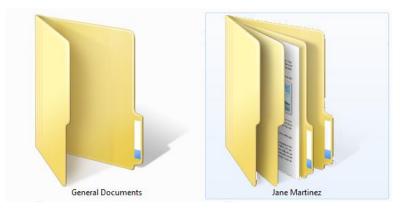
- On Command bar, click arrow
- Right-click blank area of Contents Pane and then View.
- On Command bar, click to cycle through list of views.

Use column headings to sort contents or manipulate view further:

- To adjust width of column, drag vertical line at right of column and drag to make column narrower or wider.
- To sort contents by item type, click **Type** column heading

The following views can be used for different purposes:

Extra Large Icons:
Shows as very large icons.File and folder names display below icon. This view is helpful for visually impaired users.



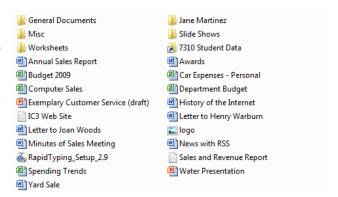
 Large Icons: This view displays files and folders as large icons. This is helpful to preview picture files.



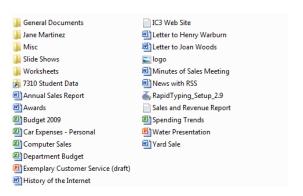
 Medium Icons: displays files and folders with names below icons. It is helpful for overview of folders or files in location.



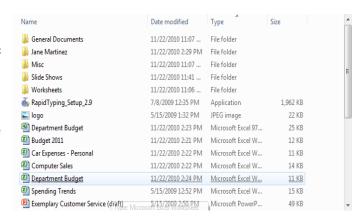
 Small Icons Lists: files and folders with names displayed to right. The contents are sorted alphabetically in multiple columns from left to right.



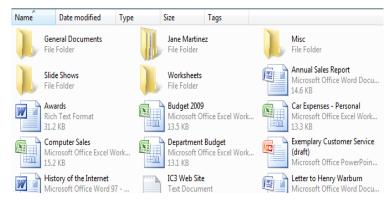
List view: Displays contents of folder as list of names preceded by small icons. The main difference between this view and small icons view is how the contents are stored. List view is useful to scan contents for files.



 Details view: lists contents of open folder with its detailed information inside it, including name, type, size, and date modified and shows the file in groups.



 Tiles view: displays files and folders with file names to right of icon. File format and file size also display.



 Contents view: displays some of file's contents, such as the creator of the document, the time of last saved, etc.

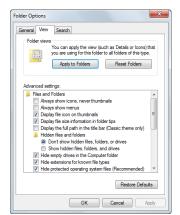


Viewing the File Extensions

Sometimes, you may need to change some options that related to

default setting in Windows like showing or hiding file extensions of the document. File extension is icon to left of file name is visual reminder of software program. The Displaying of file extension is helpful to see how the file is saved and organized.

To display file extensions, on Command bar, Organize -



click Folder and Search Options and then on View tab, in advanced settings list, uncheck Hide extensions for known file types.

This option can be applied on Important files such as system files hidden to prevent them from being deleted or changed inadvertently.

Selecting Files or Folders

- To select one file or folder, point to that file or folder. To select all files and folders here, click organize and click Select All, or press ctrl A.
- To select consecutive multiple files or folders, point to first file or folder, press shift, and then point to last file or folder in list.
- To select files using lasso method, point at right of first file or folder, drag to select rest of files or folders.
- To select non-consecutive multiple files or folders, point to first file or folder, press ctrl, and then point at each file or folder
- If need to change any part of selection, use shift or control to add or deselect specific parts of selection.
- To de-select selection of any files or folders, click away from selection.

Copying and Moving Files or Folders

Copying file means: Original remains in source location and copy are placed in destination location.

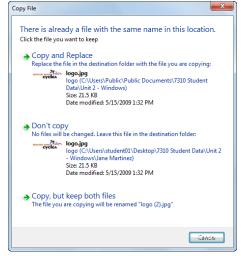
To copy a file or folder, select files or folders and then:

- Click Organize , click Copy, go to new location and click Organize , click Paste
- Press ctrl +c , move to new location and press ctrl + v
- Right-click selection and click Copy, go to new location, right-click and click Paste
- If copying files from one drive to another, Windows automatically copies selection as you drag selection to new location.

 If copying files in same drive, press ctrl as you drag selected file or folder to new location.

As Windows copies files from original location to new one, it will check if other files with same name exists. If so, message similar to screen at right. Always check whether new file to be copied over existing file. You

can keep both copies and let Windows create number at end of filename to indicate copy



Moving Files

Physically moves file or folder to destination location. That means all contents in that folder move.

After selecting files or folders to move, use the following steps:

- Click Organize , click Cut, move to the new location, click
 Organize , and click Paste.
- Press ctrl+x, move to new location and then press ctrl+v
- Right-click selection and click cut, go to new location, rightclick, and click paste
- Drag selected files or folders to new location on same drive.
 If different drives, Windows automatically copies selection unless you press shift as you drag.

Renaming Files or Folders

Renaming a file or folder can be an effective way to make it more descriptive, and you can do it easily. Whenever see black line around name means Edit mode active. So, Press **F2** function key for Edit mode, or click once inside selection. Remember that, there are two limitations

for file or folder naming conventions: the maximum number of characters that can be used in name is 255, and special symbols like \ /:* cannot be used in the file or folder name. Be very careful not to rename program files or folders and ensure you keep same extension for file.

To activate **Rename** using single-click:

- Point at file or folder to select it and then press F2
- Right-click on file or folder and then click Rename

To activate **Rename** using double-click:

- Click file or folder to select it, and then press F2
- Click file or folder to select it, and then click once in file or folder name
- Right-click file or folder and then click Rename.

Viewing File or Folder Properties

Each file or folder has property sheet to determine size, when created, last modified, or last accessed. Number of tabs that appear when viewing properties for file or folder depend on folder and file type, or network connection and access rights.

To display properties for folder:

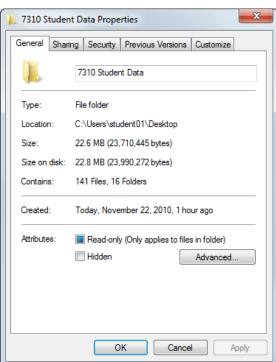
- Select the file or folder, then on Command bar, click organize and

click **Properties.**

Right-click file or folder and then click
 Properties.

- General

Displays folder type, location, size, contents, dates, and attributes.



Sharing

Share folder with others on network.

- Security

Shows who has access rights to folder and type of rights assigned.

- Previous Versions

Displays copies of file created by Windows as part of restore point.

Customize

Select or change options for how folder appears

To display properties for file:

- General

Displays file type, location, size, date created, date last modified, date last accessed, and attributes.

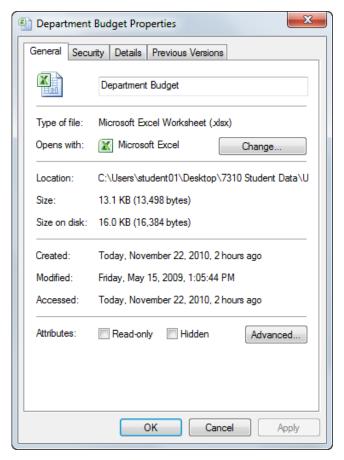
- Security

Displays who has access rights to this file.

Details

Displays list of general information about file.

 Previous Versions: Displays copies of file created by Windows backup as part of restore point.

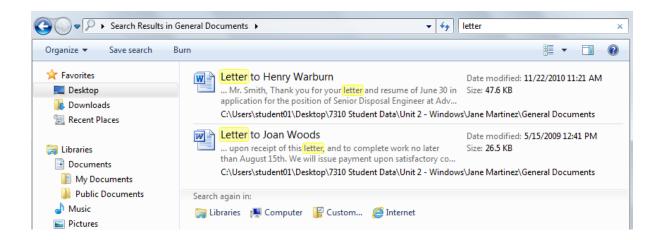


Finding File

You can search for file or folder in various disk drives or folders using specific criteria.

To activate Search feature, enter text in Search Local Disk (C:)

Click to clear all search criteria



Review Questions

•	311 Quodudiid	
1.	A data file can be any you have entered and sa	type of document containing information wed.
	a) True	b) False
2.	a) It tells you which driv b) It tells you whether the contents of the conten	th for a folder or file be helpful? ve the file or folder is stored in. he file or folder is stored on a network. e of the folder and how many levels you get to it.
3.	An item on the desktop to is a shortcut to the actuate a) True	that has an arrow on the lower left corner I file location. b) False
4.	There is no difference folders. a) True	between copying and moving files or b) False
5.	Why might you want to c	hange the details for a file's properties?
	a) To add more informatio	on to help find the file
	b) To change or update th	ne name of the file
	c) To prevent anyone else	e from looking at the file contents
	d) Any of the above	
	e) Only a or b	

Unit 2: Using Windows 7

Lesson 12: Using the Recycle Bin

Objectives

- Looking at the Recycle Bin
- Deleting files or folders
- · Restoring files and folders
- Emptying the Recycle Bin
- identifying common problems with files

Looking at the Recycle Bin

The **Recycle Bin** is a temporary storage area for files and folders you delete from the local hard disk. Files and folders deleted from an external disk (such as a flash drive, memory card, or virtual storage device) or from network drive are <u>permanently</u> deleted and cannot be restored from Recycle Bin.

The Recycle Bin has an icon on the desktop. Also you can find other icons in the Windows Explorer and computer.



This icon indicates there is something in the Recycle Bin that can be stored or removed.



This icon indicates the Recycle Bin is empty.

If the computer shared by multiple users, a separate Recycle Bin exists for each user. To permanently delete a file or a folder and bypass Recycle Bin, press Shift key while deleting the file or folder.

Deleting files or folders

If you no longer need files or folders, or you want to save disk space, delete these items. Before delete any folder, always check the content of the folder and make sure you not need it.

To delete a file or folder, select file or folder and then:

- Click organize and then click Delete
- Press Delete
- Right-click and click Delete
- Drag item to Recycle Bin folder

Restoring files and folders

You can restore a deleted file or folder to its original location. To restore a file or folder, open the Recycle Bin then do one of the following:

- Select the file or folder to be restored, and then click
 Restore this item, or
- To restore multiple files or folders, select appropriate files or folders, and then click Restore the selected items, or
- To restore all items, click Restore all items, or
- Right-click selected files or folders and then click Restore.

Emptying the Recycle Bin

Deleted files remain I the Recycle Bin until you empty it or it is full. If the Recycle Bin is full and you deleting more items, windows will automatically delete older files and folders to free up enough space for new items. When a file or folder deleted from Recycle Bin, they are <u>permanently</u> deleted from your computer.

To empty Recycle Bin, use one of the following:

- On Command bar, click Empty the Recycle Bin, or
- Right-click Recycle Bin window and click Empty Recycle Bin, or
- Right-click Recycle Bin icon on desktop and click Empty Recycle Bin.

Identifying common problems with files

When working with files, you may face a problem accessing, using or finding a file. Following are some ways to identify problem and resolve it:

 Use a standard naming convention when saving files, ensuring each file name is unique and do not overwrite any files.

- If you display the file extension or file type with the file name, be careful not to change this extension or, if you rename the file, be careful to type the file extension correctly.
- When renaming files, remember characters you cannot use.
- When moving files, be careful to select the appropriate file.
- When using portable storage device, copy from hard drive to storage device to ensure you have a copy in case you lose the portable device or it does not work.
- Always delete files to Recycle Bin if you might need them later.
- Carefully read any error messages Windows displays about files before closing message to understand any problem with accessing the file.
- If you see an error message indicating that you are low on space on the hard drive, first delete data files you do not need or use.
- Be very careful when using passwords with confidential or sensitive files; ensure you choose a password that is logical but not easy to guess.
- If you cannot make changes to a file, it is likely the file has been set to read-only status.
- If the error message indicates file may be corrupted, try opening file on another computer to see if can duplicate the message. Corruption o files can occur due to these reasons:
 - Hardware failure
 - Power surges
 - Software or hardware incompatibilities
 - Software issues
 - viruses
- Be very careful when working with hidden files and change them back to hidden status once you have completed the necessary actions.
- If Windows cannot find a program on your system to automatically accept or open a file, usually indicates you do not have proper software installed on your computer.

Digital Literacy I

 Always you need to check with technical support whenever you are unsure what is happening on the system with files, or cannot get access to the files.

Rev

iew	questions	
1.	The Recycle Bin is a temporary storage folders that have been deleted from the hama) True	
2.	When you empty the Recycle Bin, you of files or folders.	
	a) True	b)False
3.	Always be careful when renaming a file the or file extension to ensure you do not actile to become unrecognizable to a program a) True	cidentally change the
4.	How can corruption of a file occur? a) Virus b) Hardware Failure c) Power Surges d) Software Issues e) Any of the above f) b or c	
5.	An error message indicating the system file with a program means you do not hav that can open that file type. a) True	

Unit 2: Using Windows 7

Lesson 13: Customizing System Settings

bjectives

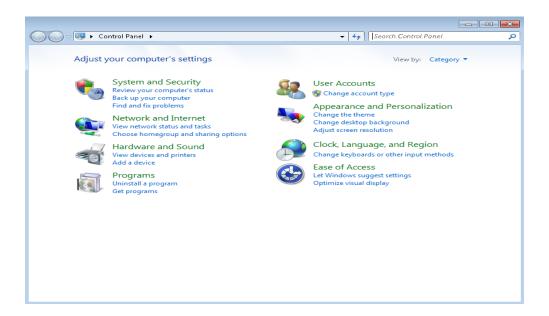
- what the Control Panel is
- changing or customizing the desktop display
- · changing the date or time
- changing or customizing mouse settings
- · changing or customizing multimedia devices
- · working with printers installed on your system

What the Control Panel is:

The control panel is an area to access features to install or customize device settings.

To access Control Panel:

- Click Start, Control Panel
- In Explorer, click Computer in the Navigation pane, click
 Open Control Panel in Command bar
- In Explorer, click Control Panel in the Navigation pane



Using the control panel:

The control panel has a number of features that allow you to change the settings of your computer. Be sure you fully understand what each option can do and when you might want to use it before attempting any changes.

System and Security Review your computer's status Back up your computer Find and fix problems	Provides options for maintain system integrity and perform data backups. Also provides options for security purposes such as checking for antivirus updates and scanning downloads.
Network and Internet View network status and tasks Choose homegroup and sharing options	Check network status and change settings, set preferences for sharing files and computers, configure Internet display and connection.
Hardware and Sound View devices and printers Add a device	Used to add and remove printers and other hardware, change systems sounds and more.
Programs Uninstall a program Get programs	Used to uninstall programs or Windows features, uninstall gadgets, get new programs from the network or online.
User Accounts © Change account type	Provides options for setting the computer up to be used by more than one person.
Appearance and Personalization Change the theme Change desktop background Adjust screen resolution	Allow you to change the appearance of desktop items, apply a theme or screen saver to your computer, or customize the Start menu and taskbar.
Clock, Language, and Region Change keyboards or other input methods	Provides option to change the date, time, and time zone, the language to use, and the way numbers, currencies, dates, and time are displayed.

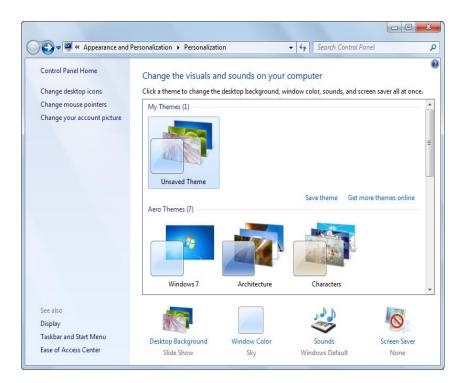


Allow you to adjust your computer settings for vision, hearing, and mobility, and use speech recognition to control your computer with voice commands.

Customizing the Desktop Display:

Customizing the desktop display includes changing the background, screen saver, desktop appearance, or screen resolution. To change the display, use one of the following options:

- Click Start, Control Panel, Appearance and Personalization, Personalization
- Right-click, click Personalize, click display option to change
- If in icon view, click Personalization



Changing the Date and Time:



By default, the current time displays in the notification area.

The operating system uses the date and time settings to identify when you create or modify files. These date and time stings are obtained from

a battery –operated clock inside the computer (its internal clock), which should be current.

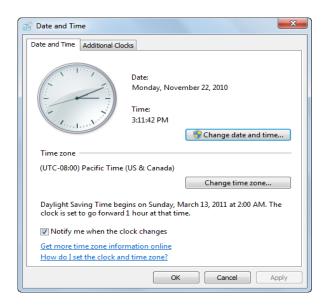
If you are connected to the network, the time may be determined by the sever and only the network administrator can change it permanently. If you are connected to the internet, it will also synchronize its clock with a time server on the internet. You can set this by selecting the Internet Time tab in the Date and Time window.

To view current date/time, click time in notification area:



You can change the date or time using control panel features:

- Click Start, Control Panel, Clock, Language, and Region, click Date and Time or Set the time and date
- · If in icon view, click Start, Control Panel, Date and Time
- Click time in notification area, click Change date and time settings



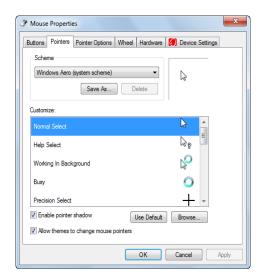
Digital Literacy I

Date and Time	Change existing time and date, or time zone*.
Additional Clocks	Show clocks for additional areas in notification area.
Internet Time	Synchronize time with time showing for Internet.

Customizing the Mouse:

To change settings:

- Click Start, Control Panel, Hardware and Sound, Mouse
- Right-click desktop and then click Personalize, Mouse Pointers



• If using notebook without mouse, may have additional tab to

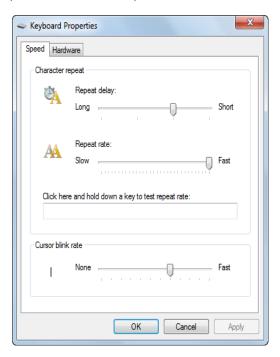
customize touchpad



Customizing the Keyboard:

To customize keyboard:

• Click Start, Control Panel, Hardware and Sound, Keyboard.



Changing the Volume:

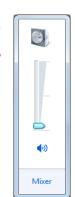
If your system has a sound card and speaker hooked up, a (speaker) icon appears in the notification area. If you point at this icon, it displays a screen indicating where the volume level is currently set.

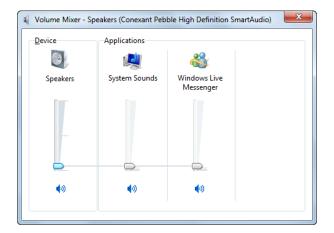
To display volume window, click icon



To adjust volume when playing sounds or to mute any sounds, click icon and drag slider up or down Speakers: 6%

To change or set more options, click icon and click Mixer



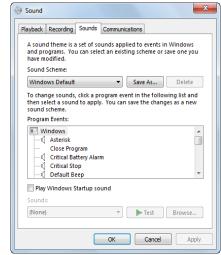


Also you can go to Sound feature in Hardware and Sound area of

Control Panel to customize speaker options

 Depending on type of microphone, use Recording tab to set up how to record sounds on computer

- In Sounds tab, can apply sounds to certain Windows events
- In Communications, set volume for other types of communications



Accessibility Settings:

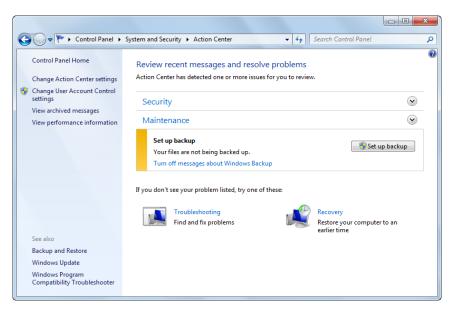
If you have devices installed on the computer to assist a person with physical disabilities, use the **Ease of Access** option to customize these devices.



Security Settings:

This option includes a number of settings for security purposes, such as firewall protection and program updates. You can make changes to each option as appropriate; if you are unsure about any of them, work with technical specialist or record the settings before making any changes so that you can revert to the original settings if your changes don't work.

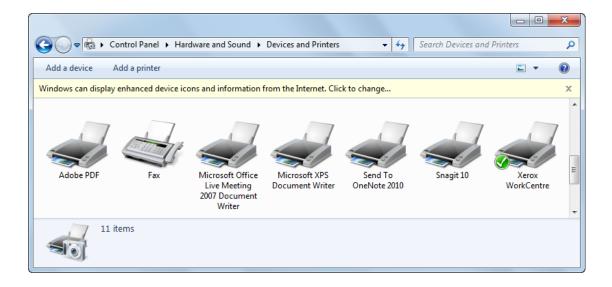
To activate security options, click Start, Control Panel, Security, and Security Center.



Looking at Printers:

When you print a document, Software program or Windows sends document to print in background so you can continue to work on that document. Once document sent to print, use print queue to check printing status of documents or to cancel print request.

To view printers available, click Start, Control Panel, in Hardware and Sound, click Printer



Printer with check mark is default printer; to change:

- Select printer and then on Command bar, click
- Right-click printer and then click Set as Default Printer

To see what is in queue to print:

- Select printer and then on Command bar, click
- Click printer to view status

Add printer using

Displays prompts for each step required to add new printer

Each printer slightly different; to check features of printer:

- Select printer and then on Command bar, click
- Right-click selected printer and click **Printing Preferences**
- Right-click selected printer and click Properties

Review Questions

- 1. How can you access the Control Panel?
 - a) From the Start menu
 - b) From a file management tool
 - c) By pressing +
 - d) Any of the above
 - e) Only a or b
- 2. If you cannot access certain commands in Control Panel, what is the most likely cause?
 - a) You do not have access rights to these commands.
 - b) You have selected the wrong command.
 - c) Windows has restricted your access based on what you used last.
 - d) Any of the above
- 3. The date and time on a computer is determined by the internal clock of the computer, which can be controlled by the network.
 - a) True

- b) False
- 4. Reasons why you might want to change the options for the mouse include:
 - a) You have a new mouse with customizable buttons.
 - b) You need to change or update the mouse driver.
 - c) You want to decrease the speed of the double-click action.
 - d) Any of the above
 - e) a or b
- 5. To view which options are available for your printer, which option would you use?
 - a) Printing Preferences
 - b) See what's printing
 - c) Properties
 - d) Default Printer
 - e) Any of the above
 - f) a or c

Unit 2: Using Microsoft Windows 7 Professional

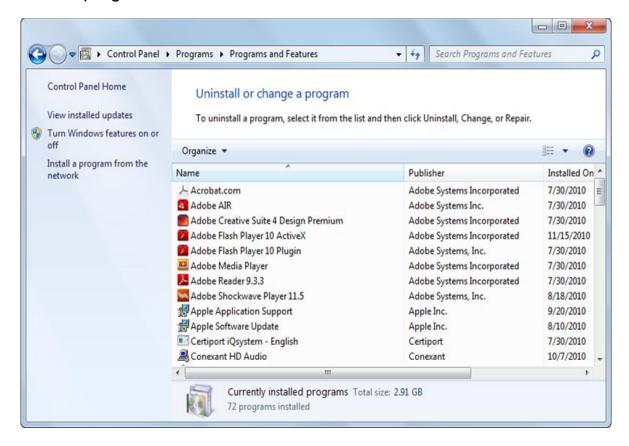
Lesson 14: Installing and Uninstalling Program

Objectives

- Managing Application Programs
- how to install a new program
- Why Isn't the Program Working?
- how to uninstall a program

Managing Application Programs

Windows guides process for installing and removing programs. If installed program does **not** appear in Start menu, could be result of how it was **installed** previously or **deleted** from Start menu. Use **Programs** and **Features** command in **Programs** category **of Control Panel** to check if program on list.



Installing a New Program

You can install programs from number of different sources such as hard drive, an optical drive, a USB drive, or the Internet.

Most of the program stored in the CD, *Auto run file* option is available on it and the installation process started just when you insert CD or DVD in CD/DVD drive. In this case just follow up the driven menu shown in the screen add the desired option for installing the program on your computer. In case the auto run is not available, and you want to install the program in your computer, you can follow the following steps:

- Browse the content of the CD or the folder where the program you want to install is stored.
- Look for a file name **Setup** or **Install** with the **.exe** extensions.
- Double click on this file name
- And, follow up the instruction which displayed on the setup window and select the suitable option until the in stallion process finish.

Programs from Internet fall into one of two categories:

- Download program file for installation
- Subscribe to SaaS² option with software vendor

Both entitle you to updates, so if you are downloading software from the internet, always save it and scan it for viruses prior to installing it. Also if you download software from site that not the vendor's official web site, there could be spyware or viruses include in the download file.

When software vendor notifies of updates to program, these updates usually are not critical to install immediately. Be sure to read notice to decide whether to install. Might receive notices from vendor in e-mail, media (e.g. CD), or link for update the program.

As the licensed owner of the software, you are allowed to make one copy for backup purpose.

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² Software as a service

Why Isn't the Program Working?

Sometimes, a program may not work after installation, or problems may occur during installation. Following are some of the problems you may happen and what to do about them

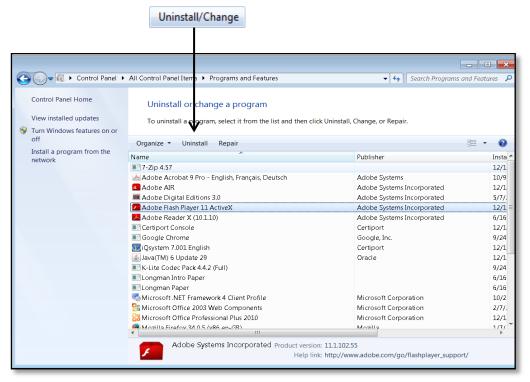
- If unable to install or download program, may not have rights with your user account. If this happens, contact your network administrator to have the rights changed or to request that the administrator install it for you.
- If have rights but installation stops and error message displays, there may be some kind of defect or damage to program copy, it could be a result of lack of space on hard drive, a missing file, or a conflict between software programs. Be sure to read the error message carefully to help with possible resolutions.
- If using backup copy and installation does not start, try installing from original media.
- Installation can also fail with hardware conflicts. If this is the case, it's likely that an error message would display indicating something is missing, such as a driver file, or that your computer cannot find the specified hardware
- Software conflicts also very common reason for installation to fail.
 Not all software programs are compatible with one another.
- If installation successful but you cannot access existing files in new program, check if new program has tools to convert files from an older format into new program. If this is not a solution, check what format the files are in and if there is another format you can use for these file
- If software installation was successful but having problems viewing different parts of the program, check system requirements to ensure your computer has everything necessary for the new program to run properly.
- If software installation successful but another program no longer works, this may not be compatible with version of other program, so Check system or driver files which may be overwritten when new software program installs.
- If unable to download software, check site not down for maintenance, or software or download key sent has not expired.

To resolve these type of issues, call the vendor's technical support line or send them an e-mail clearly outlining the problem.

- ❖ To reduce chance problems will occur during installation:
 - Before purchasing and installing program, check system requirements
 - Check software is compatible with operating system(e.g. many older programs designed for previous versions of Windows do not work well Windows7 due to significant changes in the technology)
 - Close all programs before installing new program.
 - If installation program completes but program does not work correctly, uninstall the program using correct uninstall procedure
 - Before changing system settings, check with technical support

Uninstalling a program

Always uninstall program from system when no longer used. Always use **Uninstall a program** in **Control Panel** from **Start** menu as shown on the following windows.



Do not just delete program files using Windows Explorer. When you install a program, configuration information needs to be adjusted in Windows Registry. This can lead to problems with other software programs, if re-install, or if upgrade to new version.

Review Questions

1.	the program is not already installed.	
	a) True	b) False
2.	should you take before a. Check that the pub. Save the file and	g a program from the Internet, what process installing the program? urchase of the software is complete. run the installation from the Web site. run a virus/spyware scan on the file.
3.	When you no longer u uninstall it from the co	se a program, you should remove it or mputer.
	a) True	b) False
4.	a) Check the system than the minimumb) Close any prograinstallation.c) Check the version	ms currently open before starting the n of software to make sure it is the latest to ws version installed.
5.	a) The optical mediab) You need more helist of system req	ard disk space than was suggested in the uirements. re conflict, perhaps between Windows and .

References:

Website References:

- 1. http://www.en.wikipedia.org
- 2. http://www.news.techgenie.com
- 3. http://www old.hariseshadri.com
- 4. http://www.www.mybtechnology.com
- 5. http://www.bankinnovation.net
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Textbooks References:

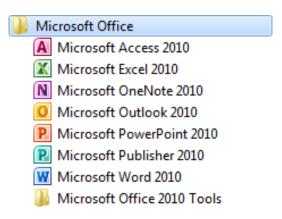
- Internet and Computing Core Certification, IC3 Textbook.
- 2. Basic Computing Skills, SQU, Collage of Science.
- 3. مبادي الحاسوب والإنترنت, Global Skills

Unit 3: Common Elements

Common Elements o start an application program recognize screen elements use the Ribbon use the Quick Access Toolbar obtain online Help change the program options recognize some common problems with files

Starting Word/Excel/PowerPoint:

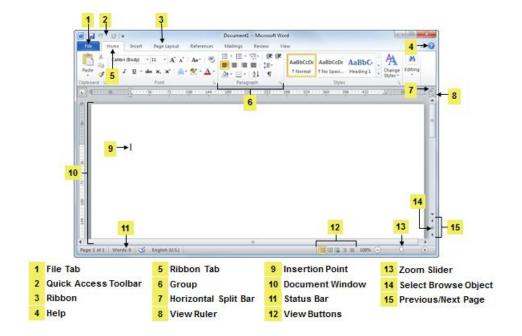
- To start one of these programs:
 - Click Start, All Programs, Microsoft Office, and then Microsoft Word 2010, Microsoft Excel 2010, or Microsoft PowerPoint 2010
 - If set up as icons on taskbar or desktop, click icon for program to use



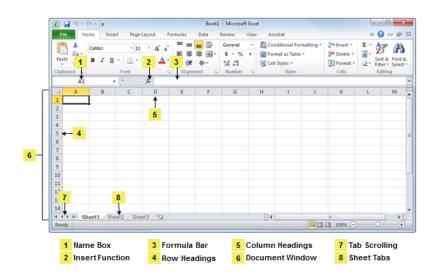
- When finished using program, always exit properly
- Prevents possible corruption of program files and frees up memory for another program

- To exit program:
- Click File and click Exit
- Click (Close) at far right corner of title bar for application program
- Press Alt + F4
- If changes made but not saved, program asks for confirmation to save document or abandon changes

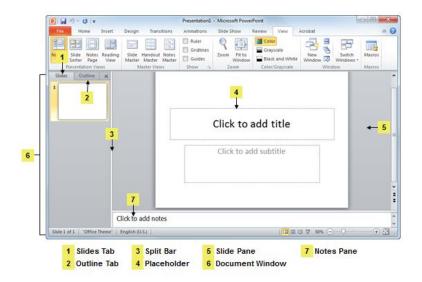
Microsoft Word 2010



Microsoft Excel 2010



Microsoft PowerPoint 2010



Most Common Elements

File Tab	Click to display Backstage and then commands for managing files.
Quick Access Toolbar	Access frequently used commands.
Title Bar	See what files or programs currently active.
Ribbon	Use tabs on Ribbon to access commands.
Microsoft [Program] Help	Get Help.
Status Bar	Displays general information about document.
View Buttons	Change to different views for document on screen.
Zoom Slider	Increase or decrease zoom level of document on screen.

Additional Elements for Word

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Horizontal Split Bar	Drag to split screen into two screens to see two different parts of same document.
View Ruler	Use to help set or modify tabs, indents, and margins.
Insertion Point	See where cursor is in document.
Previous Page/ Next Page	Move from top of one page to another.
Select Browse Object	Choose what you want Word to find.

Additional Elements for Excel

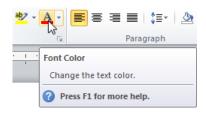
Name Box	Look here for address of active cell.
Insert Function	Open dialog box to help choose and insert built-in functions.
Formula Bar	See contents of active cell.
Column Headings	Sequential letters at top to identify columns.
Row Headings	Sequential numbers on left to identify rows.
Tab Scrolling Buttons	Move between worksheet tabs, or create new worksheet.
Horizontal and Vertical Split Bars	Split worksheet window into two or more panes.

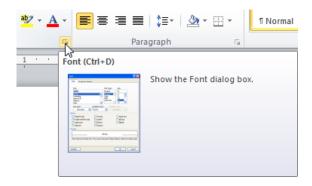
Additional Elements for PowerPoint

Slides Tab	Thumbnail or miniature picture of slides in Slide pane to quickly view contents.
Outline Tab	Display outline of text on slides, or quick method to enter text.
Placeholder	Dash-lined boxes on slides with hints on type of content to insert onto slide.
Split Bar	Drag to increase or decrease size of Outline or Slides tab, or Slide or Notes pane.
Notes Pane	Type notes for presenter's use and are not visible to audience.
Slide Pane	Enter or view contents of slide.

Looking at the Screen

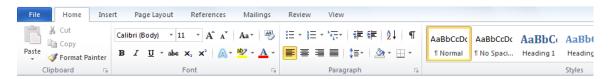
- · Can customize appearance of screen
- Use ScreenTips to help identify buttons or elements on Ribbon tabs and screen



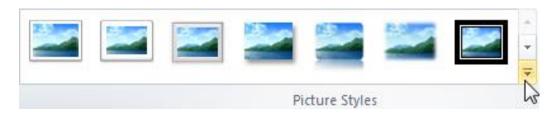


- To view ScreenTip, point at item
- Some elements can be set to show or hide
- Can set items by clicking File and then Options

Using the Ribbon



- Helps find command buttons to complete task
- Command buttons grouped logically by activity type
- Buttons in different color or outline are active
- Many deactivate when click same button or another choice
- When Ribbon displays different options for feature, item with border is active
- Can preview effect by pointing at another option in list
- If group displays feature with scroll bar, click More to display full gallery of choices for feature



- Point at option to see live preview of effect
- Can turn off preview option in Program Options
- Click Dialog box launcher to show corresponding dialog box or window with other options for feature

Dialog Box

 Usually contains large selection of options



Window/Task Pane

 Usually contains options specific to feature



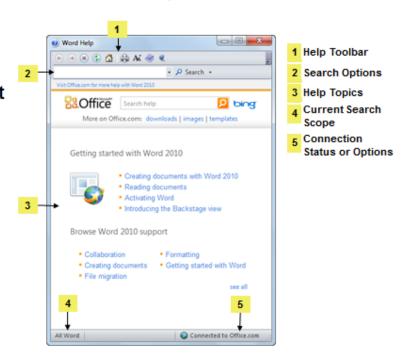
Getting Help

- User's Guide manual included with software generally provides same type of information as in Help feature of program
- Help feature very extensive and includes online contact link where you can submit questions or suggestions for new or improved features
 - Can be set to search Microsoft's Web site, thereby always having access to latest help and support information
- Online Web sites often offer tips and technical support information you may not find on software vendor's site
- Colleagues or friends proficient with program can provide specific training on how to accomplish task or use feature
- Help Desk department or person designated to provide technical support can answer questions and provide assistance with features specific to organization or server
- Contact online Help Desk or Support for application program vendor
 - Navigate to vendor's Web site and click link for support option

- Books developed by third-party publishers available through retail stores
- Courses offered online or classroom settings

Using Help in a Microsoft Office Program

- To access Help in Office:
 - Click (Microsoft Word Help)
 - press F1



Using the Help Toolbar

	● ● ② ② △ △ △ △ △ △ △ ◆ ◆
Back	Move to previous page viewed.
Forward	Move to next page viewed.
Stop	Stop download or search for this Help page.
Refresh	Refresh contents of this Help page.
Home	Move to home page or main page for Word Help.
Print	Print contents of this Help page.
Change Font Size	Increase or decrease font size of displayed text.
Show Table of Contents	Display table of contents in separate pane to help navigate through different topics.
Not On Top/Keep On Top	Choose whether to keep Help window on top of any open window.

Working with Files

- Set up system to manage files so you and others can share documents easily
 - Can save files in variety of formats through the Save option
 - Can save files in any location on computer or network
 - Can open files from any location on computer or network.
 - Can use list of locations at left of Save or Open dialog boxes to go quickly to folder, or to list showing recently accessed files
 - Can open as many files as you need
 - Can view files at different magnifications or in different views
 - Can use variety of pre-designed files or templates to create new documents
- Editing and formatting tools similar between applications
 - Can use same tools to edit and format text

Identifying Problems with Files

- File can be corrupted due to problems with storage device where file saved, or damage to file during save process
- Compatibility error could be because file saved in newer version of application, or saved for different platform
- If cannot find file using Search function, could be file was deleted or moved to storage device you cannot access, if file renamed, or file not saved at all

- Cannot tell which file you want from file name
- Need password to open or edit file
- Cannot find file in location where last saved or opened
- File set for read-only or someone else is using it can occur if on network and sharing files
- Windows identified no program associated with this file type



- Renaming file without file type or changing file type can cause problems with opening file
- Program stops responding
 - May need to update software
 - AutoRecover may recover file contents on next startup of program

Review Questions

- 1. You can start Word, Excel, or PowerPoint using which method?
 - a. Start, All Programs
 - b. Desktop shortcut
 - c. Taskbar
 - d. Any of the above
 - e. a or b
- 2. To customize the Quick Access toolbar, you must use the File tab and then access the options for that program.
 - a. True b. False
- 3. To minimize the Ribbon, which command would you use?
 - Right-click anywhere on the Ribbon tabs line and click Minimize the Ribbon.
 - b. Right-click the Quick Access toolbar and click Hide the Ribbon.
- 4. Some ways you can obtain help for an application program include:
 - a. Third-party books
 - b. Training courses
 - c. Software vendors
 - d. Software forums that specialize in this software
 - e. Any of the above
 - f. borc
- 5. If you cannot open a file, it might be because:
 - a. The file no longer exists in that location.
 - b. The file name has been changed.
 - c. You do not have access rights to the file.
 - d. The file is corrupted and cannot be accessed until repaired.
 - e. Any of the above
 - f. a, b or c

Unit 4: Using Microsoft Word 2010

Lesson: Home Tab

bjective

- Working with Text
- Using Cut, Copy and Paste
- Formatting Text Characters
- Working with Indents
- Aligning Text
- Working with Indents
- Setting the Paragraph Spacing
- Working with Styles
- Finding Items
- Replacing Items
- Selecting Items

Working with Text

Typing and Inserting Text

To insert the text, type from key board and as a result the text will appear on the screen, at the location of the blinking cursor. Right, left, up or down arrow keys (buttons) can be used to move the cursor or we can also use the left button of the mouse. Following shortcuts are helpful for the movement of cursor.

Move Action	Keystroke
Beginning of the line	Home
End of the line	END
Top of the document	CTRL+HOME
End of the document	CTRL+END

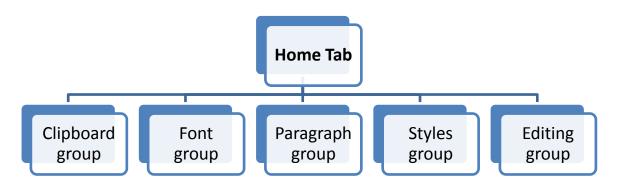
Selecting Text

If you want to change the attributes of the text, it should be highlighted. Drag the mouse over the required text and keep the left mouse button. Or hold down the **SHIFT** key from the key board and use the arrow key (left, right, up, down) to select the desired text. Following shortcuts are helpful for the selection of a portion of text:

Selection	Technique
Whole word	Double-click within word.
Whole paragraph	Triple-click within the paragraph.
Several word or	Drag the mouse over the words, or hold down SHIFT
lines	while using the arrow keys.
Entire document	Choose Home Tab→ Editing group→ Select → Select
	All or press CTRL+A.

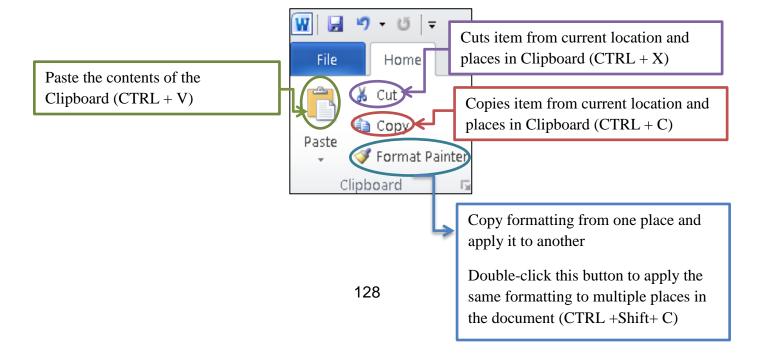
Deleting Text

There are two keyboard keys Delete and Backspace to delete the text. **Backspace** key is used to delete the text to the left of the cursor and **Delete** is used to delete the text to the right of the cursor. If you want to delete a large amount of text, select text and press Delete



Clipboard group

Using Cut, Copy, Paste and Format Painter



- o To cut item, select item and then:
 - On Home tab, in Clipboard group, click Late
 - Press Ctrl +X
 - right-click item and click Cut
- o To copy item, select item and then:
 - On the Home tab, in the Clipboard group, click
 - Press Ctrl + C
 - Right-click item and click Copy
- To paste item, place insertion point where to paste item and then:
 - On the Home tab, in the Clipboard group, click
 Paste
 - Press Ctrl + V
 - Right-click the item and then click Paste

Font group

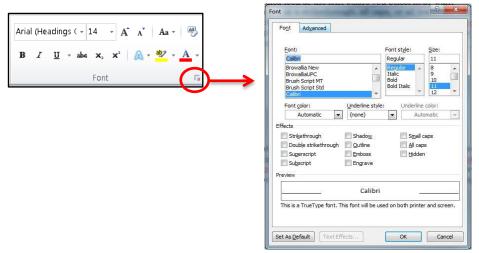
- Font: Describes typeface of characters on screen and in print or press (CTRL +Shift+ F).
- Font Size: Refers to height of characters or press (CTRL +Shift+ P)



- Grow Font: Increase the font size or press (CTRL +Shift+ >)
- Shrink Font: Decrease the font size or press(CTRL +<)
- Change Case: Change all the selected text to UPPEAR CASE, lowercase, or other common capitalization.
- Clear formatting: Clear all the formatting from the selection, leaving only the plain text.
- Bold: Make the selected text Bold or press (CTRL +B).
- Italic: Italicize the selected text or press (CTRL +I).
- Underline: underline the selected text or press (CTRL +U).
- Strikethrough: Draw a line through the middle of the selected text.
- Subscript: Create small letters below the text baseline (CTRL +=).

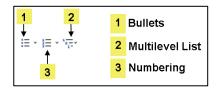
- Superscript: Create small letters above the text baseline (CTRL++).
- Text Effect: Apply a visual effect to the selected text, such as a shadow, glow or reflection.
- Text Highlight Colour: Make text like look like it was marked with a highlighter pen.
- Font colour: change the text colour

To view more additional options to enhance the text, you can access **Font dialog box launcher.**

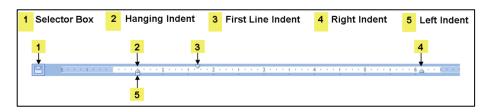


Paragraph group

 Bullets and Numbering: Use bullets if no priority on list items, numbers to prioritize list, or Outline feature to show progression.



- Decrease & Increase Indent: Decrease & Increase Indent level of the paragraph.
 - You can set indents using indent markers on ruler



- Sort: Alphabetize the selected text or sort numerical data.
- Show/Hide ¶: Show paragraph marks and other hidden formatting symbol (CTRL + *).
- Aligning Text: Align text to left, right, center.



Align Left	Aligns text to left margin with ragged or uneven edge on right side. (CTRL +L).
Center	Aligns text exactly between left and right margins (CTRL +L).
Align Right	Aligns text to right margin with ragged left edges (CTRL +R).
Justify	Aligns text so left and right edges of text flush with margins and each line of text evenly spaced between margins, except for last line.(CTRL +J).

- Line and paragraph Spacing: Change the spacing between lines
- Shading: Colour the background behind the selected text or paragraph.
- Border: Customize the border of the selected cell or text.

To view more additional options to enhance the text, you can access

Paragraph dialog box launcher.

Paragraph Paragraph

Styles group

Combination of character and paragraph formatting you create and save

with unique name

Styles

Two main types of styles:

- Character Style: Affects selected text only and can include any character formatting attributes found in Font dialog box.
- Paragraph Style: Affects appearance and position of entire paragraph and can include both paragraph and character formatting.

Show Preview

- Turns preview of style with its attributes on or off
- Disable Linked Styles
 - Disables styles set up in Based on field
- New Style
 - Creates new style using Create New Style from Formatting dialog box
- Style Inspector
 - Review attributes for style to customize or manage it
- Manage Styles
 - Sets default options for styles, or edit styles in this dialog box
- Options
 - Select options for how Styles pane appears when active
- When naming style:
 - Can use any combination of characters and spaces for style
 name

Name:

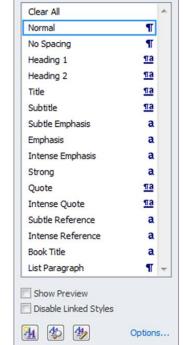
Paragraph style preview
Style1

- Cannot use \ ; { }
- Style names are case sensitive
- Each style name within document must be unique

Editing group

Finding Items

Can locate occurrences of specific words, phrases, symbols,









OK <u>M</u>odify... Cancel

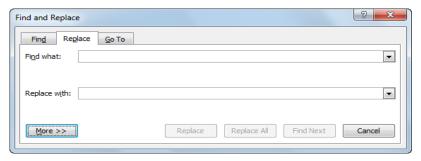
codes, or any combination of items

- To activate the Find feature:
 - On the Home tab, in the Editing group, click Find; or
 - click the page number box on the status bar and click the Find tab; or press (CTRL+F)



Replacing Items

- Find item to replace with something you specify
- Can apply same search criteria as for Find feature
- To activate Replace feature:
 - On Home tab, in Editing group, click Replace
 - Press (CTRL + H)
 - If Find and Replace dialog box open, click Replace tab



Selecting Items

Select text or objects in the document.



- To activate Select feature:
 - On Home tab, in Editing group, click Select
 - Press (Ctrl+ A)
 - Press (CTRL+A).

Reference:

- 1. Model A:Computing Fundamentals and Using Microsoft Windows 7, Approved by Certiport.
- 2. http://afis.ucc.ie/gkiely/IS6132/Lecture10.html.
- 3. Basic Computing Skills, Approved by SQU, Collage of Science.
- GLOBAL SKILLS, عربي أنجليزي, GLOBAL SKILLS

Unit 4: Using Microsoft Word

Lesson: Insert Tab	
Objectives	 Insert plank page Insert Table Inserting Pictures Inserting Clip Art Drawing Objects Using Hyperlinks Inserting Headers and Footers
	Adding Page NumberingAdding Date & Time

Insert plank page:

To insert a new blank page at the cursor position: Click Blankpage.



Insert Table...

☑ Draw Table

Quick Tables

Convert Text to Table.

To start the next page at the current position: Click Page Break (Ctrl + Return).

Insert Table: To insert a table, use the following methods:

On the insert tab, in the Tables group, click Table.

In the drop-down menu by dragging you can specify the number of columns and rows you want.

If you need table larger than 8 x 10, use the **Insert Table** feature. You can enter the number of columns and rows by typing the number into the box or using the incremental buttons.



Working with Text:

Insertion point in first cell of table for data entry

To move within table to enter text:

- Press Enter to add more lines of text in same cell; increases row height
- Use arrow keys to move through the text in the cell
- Use Tab to jump to next cell
- Use Shift + Tab to jump to previous cell

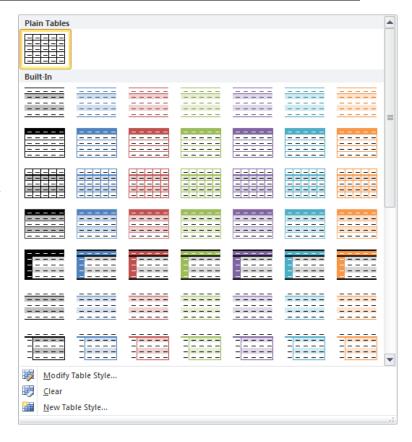
Selecting items in the Table

Entire Column	Move to top of column and click when you see ♣
Entire Row	Move cursor to selection bar and click at left of row
Multiple Columns or Rows	Click and drag across columns or rows
One Cell	Move cursor to lower left corner of cell and click when you see ♣
Multiple Adjacent Cells	Click and drag across those cells

Formatting the Table:

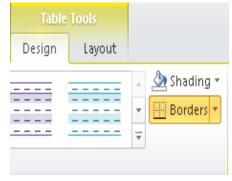
Using Table Styles

- To view Table Styles gallery, under Table Tools, on Design tab, in Table Styles group, click More
- Point at style to preview formatting



Modifying the Borders and Shading:

- Tables appear with single line borders around cells
 - Can display different colours, styles, widths, or not at all
- Under Table Tools, on Design tab, in Table Styles group, click arrow for Borders



 Under Table Tools, on Design tab, in Table Styles group, click arrow for Shading



■ Direction Margins

Alignment

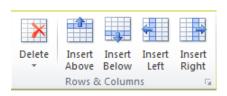
Changing the Alignment:

- To change vertical alignment of text, select cells and:
- Under Table Tools, on Layout tab, in ____
 Alignment group, click alignment option
- To change the text direction within the selected cells:
 - Under Table Tools, on Layout tab, click Alignment group, click Text Direction.

Text Direction

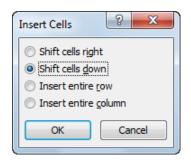
Inserting & Deleting Rows/Columns:

 To insert row or column, click where new row or column to go, then under Table Tools, on Layout tab, in Rows & Columns group, click option



To insert cells, under Table Tools, on Layout tab,

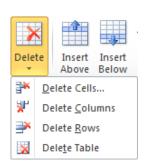
in Rows & Columns group, click Dialog box launcher



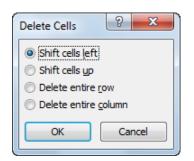
To delete cells, rows, columns, or entire table, under
 Table

Tools, on Layout tab, in Rows & Columns group, click

arrow for Delete, click option



 To delete specific cells, under Table Tools, on Layout tab, in Rows & Columns group, click arrow for



Adjusting the Width or Height:

To adjust column width or row height:

Delete, click Delete Cells, click option

 Under Table Tools, on Layout tab, in Cell Size group, click incremental buttons or type



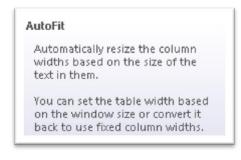
measurement to change Height or Width

- To distribute width for columns or height of rows evenly:
 - Under Table Tools, on Layout tab, in Cell Size group,



group, click **AutoFit**





Merge

Cells

Split

Cells

Split

Table

Merging and Splitting Cells:

- Can merge cells to create single cell, or be split into multiple columns or rows
- To merge cells, select cells and then under Table Tools, on Layout tab, in Merge group, click Merge Cells

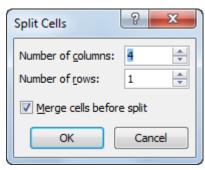
Digital Literacy I

 To split cell into multiple cells, select cell and then under Table Tools, on Layout tab, in Merge group, click Split Cells

Splitting a Table

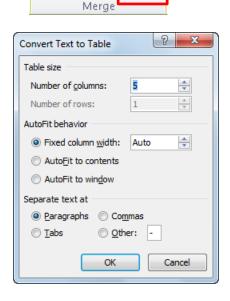
 Select cell in table row where you want to split table, then under Table Tools, on Layout tab, in Merge group, click Split Table

Tables can only be split horizontally



Converting Text or Tables:

- To convert text to table, select text and:
 - On Insert tab, in Tables group, click Table, click Convert Text to Table



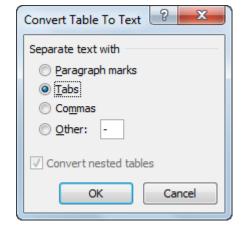
Split

Cells

Merge Cells Split

Table

 To convert table into text format, click in table, then under Table Tools, on Layout tab, in Data group, click Convert to Text



Sorting Information in a Table:

- · Can sort in ascending or descending order
- Type of data determines sort type in table and how many columns of information

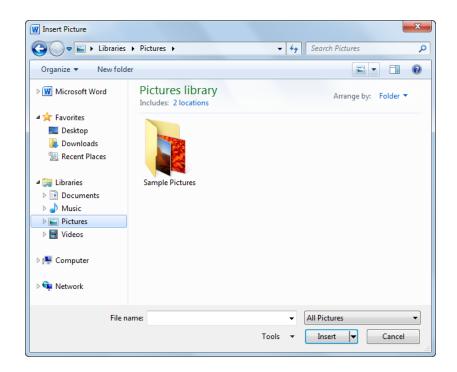
- To activate Sort, select cells and:
 - Under Table Tools, on Layout tab, in Data group, click Sort



On Home tab, in Paragraph group, click (Sort)

Inserting Pictures:

- Can add pictures to document from sources
- To insert picture, position pointer where you want picture to be, and on Insert tab, in Illustrations group, click Picture



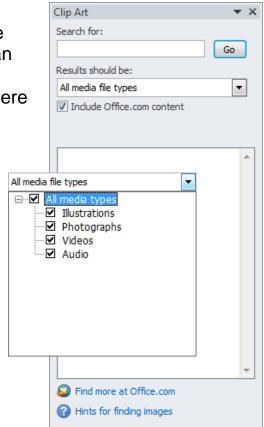
Inserting Clip Art:

 Available online from Microsoft Office Online Web site with graphics you can download

To insert Clip Art, position pointer where you want graphic to be, and on **Insert** tab, in **Illustrations** group, click **Clip Art**

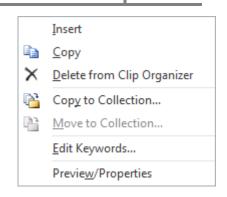


 Enter text for Word to search for specific clip art images.



Digital Literacy I

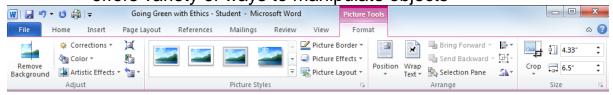
- Results should be
 - Specifies media type to display.



- To insert picture from results of search, position pointer over image and:
 - Click image in list
 - point at graphic and click arrow beside it

Manipulating Pictures:

 Once you insert picture, Picture Tools ribbon appears and offers variety of ways to manipulate objects



To add picture style:

Select Picture Tools , Picture style and select any option



To add border to the picture:

 Select Picture Tools, Picture Border select any option



<u>S</u>hadow

Reflection

Soft Edges

3-D Rotation →

Glow

To apply effects to the picture:

Select Picture Tools, Picture Effects and select any option

Sizing a Picture:

To size picture: Select Picture Tools, Size Group



Cropping a Picture:

Refers to ability to "cut" certain portions of picture.

 To crop picture: Select Picture Tools, Size Group, select crop

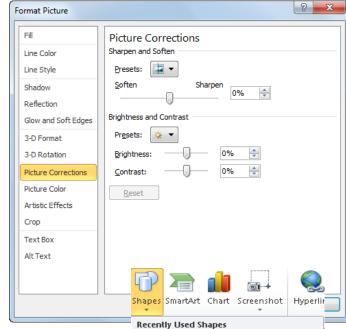


Changing the Properties for a Picture:

Way picture inserts depends on properties set for picture

 To change properties for selected picture:

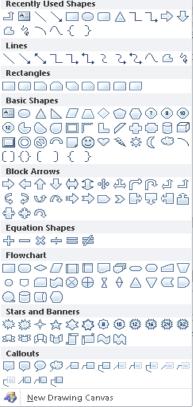
- Click appropriate feature from
 Picture Tools
 Format ribbon
- Under Picture
 Tools, on
 Format tab, click
 Dialog box
 launcher for
 group properties
 to adjust
- Right-click picture and click Format Picture



Moving a Picture:

- Drag-and-drop method easiest way to move picture
- If inline object, mouse pointer displays as you drag
- If floating object, mouse pointer displays
 as you drag

Drawing Objects:



To insert shape: In Insert Tab, Illustration Group, select shape

To insert text into object or edit text already there:

- Select object to display **Drawing Tools** ribbon, and then on **Format** tab, in **Insert Shapes** group, click (**Draw Text Box**)
- On Insert tab, in Text group, select Text Box



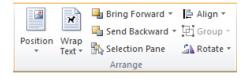
Editing Shapes:

- Refers to sizing, moving, or enhancing object and its properties
- Select object before making changes



Arranging Objects:

Under **Drawing Tools**, on **Format** tab, in **Arrange** group:

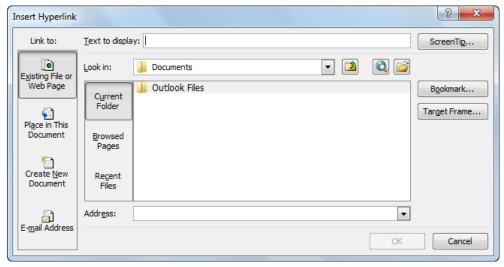


Group	Groups selected objects into single object, reverts to separate objects, or regroups objects ungrouped originally.
Bring Forward	Brings selected shape forward one layer, or to top layer.

Send Backward	Sends selected shape back one layer, or to last layer.
Align	Aligns edges of multiple objects along single line, or distributes objects evenly across page horizontally or vertically. Can view gridlines or set features of grid.
Rotate	Rotates or flips object in different directions.

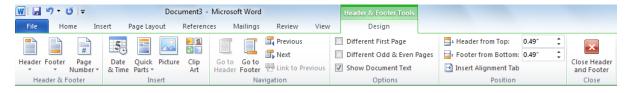
Using Hyperlinks:

- Help navigate to different locations in document, to another document, to Web site, or to e-mail program
- · Can set up hyperlinks anywhere in document
- To create hyperlink:
 - On Insert tab, in Links group, click Hyperlink
 - Press Ctrl + K



Inserting Headers and Footers:

- Text or graphics that appear at top or bottom of every page
 Can create headers and footers using the Insert tab and Header &
 Footer group
 - Header & Footer Design tab appears for modifications



-To edit existing header or footer, double-click header or footer

& Time Parts *

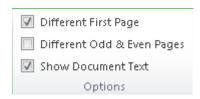
Top of Page

Bottom of Page

Current Position

Page Margins

-To use different header or footer for first page, under **Header & Footer Tools**, in **Design** tab, in **Options** group, click **Different First Page**



Page

Number

#

#

Adding Page Numbering:

To insert page numbers, on **Insert** tab, in **Header & Footer** group, click **Page Number:**

 Top of Page: Displays gallery of top-of-page numbering options.

 Bottom of Page: Displays gallery of bottomof-

page numbering options.

Page Margins: Displays gallery of margin numbering options.

Current Position: Displays

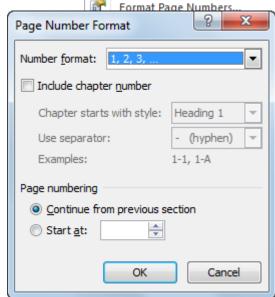
 numbering
 options to apply to current page
 number
 location.

 Format Page Numbers: Displays various numbering styles and option to start numbering other than at 1

Adding Date & Time:

Refer to insert current date or time into the current document.

To insert Date & Time, on **Insert** tab, in **Text** group, click **Date & Time**.



Unit 8: Using Microsoft Word

Lesson: Page layout Tab		
Objectives	 Changing Margins Changing the Orientation Changing the Paper Size Splitting text to columns Inserting page and section breaks. Inserting water mark. Inserting page colour. Inserting page border. 	

Page layout Tab: Page setup Group

Is related to page setup, page background and paragraph tools.

Orientation:

Switch the pages between portrait (vertical orientation) and landscape layouts (horizontal orientation).

To change orientation for document:

- On Page Layout tab, in Page Setup group, click Orientation.
- Double-click darker area of ruler, click Margins tab, and then select orientation to use.



Orientation

Size

Portrait

Landscape

Margin:

Determines amount of space between paper edge and area where text prints. It must be in Print Layout view for arrows to adjust margins to appear on horizontal or vertical rulers. Boundaries are divider lines between light and dark shades on ruler. To change margins:

- On Page Layout tab, in Page Setup group, click
 Margins
- To adjust margins using the ruler, point at margin and drag to measurement for margin



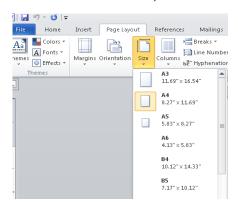
Double-click one dark area of horizontal or vertical ruler



Changing the Paper Size:

To change paper size of document:

- On Page Layout tab, in Page Setup group, click Size
- Double-click in darker area of ruler, and click Paper tab



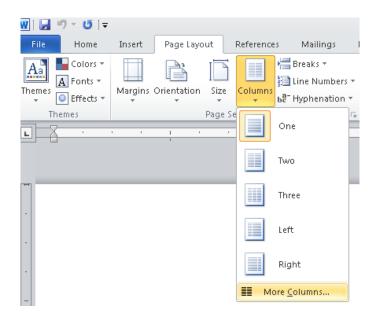
Columns

It is used to split text into two or more columns.

-To create columns:

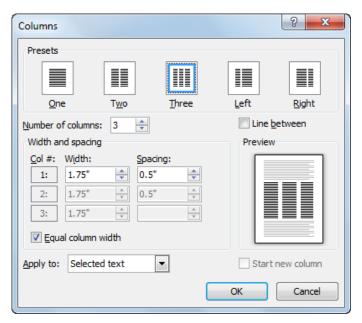
On Page Layout tab, in Page Setup group, click Columns.

-To set additional options for columns, click More Columns



Applying Columns

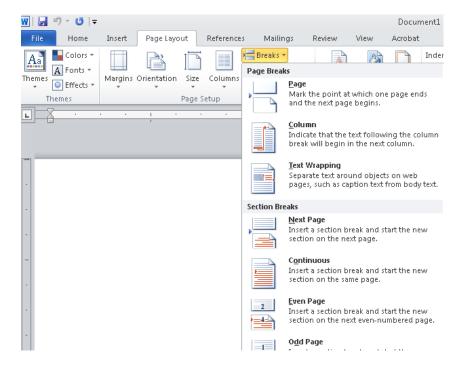
Presets	Offers options for number of different column layouts.
Number of columns	Use incremental buttons to set number of columns you want.
Width and spacing	Alters width and spacing between one column and next.
Apply to	Identifies which text you want to apply column structure.
Line between	Inserts vertical line between each column.
Start new column	Works similar to inserting section break in text not in column format.



Insert page and section breaks

To break page at specific location:

-On Page Layout tab, in Page Setup group, click Breaks, click Page



Using Section Breaks:

Insert break when something about page layout has to change

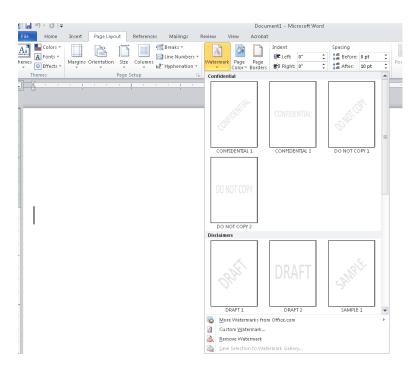
- Next Page
 - Starts new section on next page
- Continuous
 - Starts new section on same page
- Even Page
 - Starts new section on next even page
- Odd Page
 - Starts new section on next odd page

Page layout Tab: Page background Group

Watermark:

To insert ghosted text behind the content on the page:

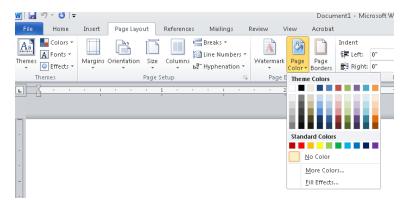
-On Page Layout tab, in Page background group, click water mark



Page colour

To choose a colour for your background:

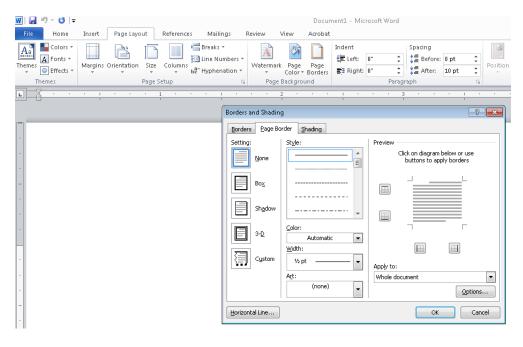
-On Page Layout tab, in Page background group, click page color



Page border

To add or change the border around the page:

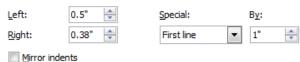
-On Page Layout tab, in Page background group, click page border



Page layout Tab: paragraph Group

Indent

- To set precise paragraph indents:
- On Page Layout tab, in Paragraph group, set measurement from Left or Right margin
- Indent On Home tab, in Paragraph group, **₹** 0.5° click Paragraph Dialog box launcher, in Indentation area, select indents Indentation to set

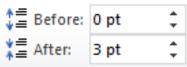


Paragraph Spacing

To set or change paragraph spacing:

-On Page Layout tab, in Paragraph group, set spacing

Spacing



Exercise:

In Page layout Tab:

- A. Insert a confidential2 water mark to your page.
- B. Change your top page margin to 2 points.
- **C.** Change the page orientation to portrait.
- D. Change paper size to A3.
- E. Fill the paper colour with light blue colour.
- F. Insert box, red and 3pt width border to your page.

Unit 8: Using Microsoft Word

Lesson: References Tab

Objectives

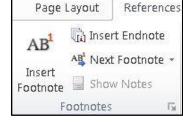
- Using Footnotes and Endnotes.
- Creating Footnotes and Endnotes.

Using Footnotes and Endnotes

Footnotes located at bottom of each page containing reference, whereas endnotes located at end of section or document.

Consider the following regarding footnotes and endnotes:

- Automatically renumber when you add, delete, move, or copy them.
- Consist of reference mark in text and corresponding note at bottom of page or end of section or document.
- · Can be any length and formatted as regular text.
- Reference marks usually numbers, but can be letters or characters.
- Numbering consecutive from beginning to end of document.
- Inserting in Print Layout view to see reference mark in body text and footnote or endnote area.
- Draft view displays separate pane at bottom of screen for entering footnote or endnote text.



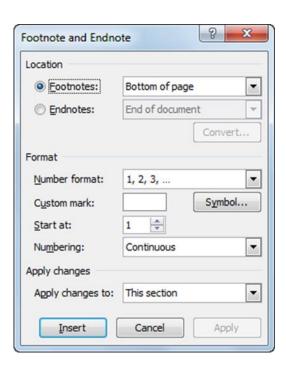
Creating Footnotes and Endnotes

To view content of footnotes or endnotes, point at note reference in main text. To display note text in separate pane at bottom of screen, double-click note reference mark.

To insert footnote or endnote, on **References** tab, in **Footnotes** group, click Insert Footnote

To change default settings or choose endnote, on **Reference**s tab, in **Footnotes** group, click **Dialog box launcher**.

To delete or move footnote or endnote, use note reference mark in document window.



Exercise

- 1. Open Ms .Word, and save it as Endnote or Footnote Exercise.
- 2. Type following text:
 - "Footnotes located at bottom of each page containing reference, whereas endnotes located at end of section or document.

 www.google.com"
- 3. **Select <u>www.google.com</u>** and then click **Cut** from **Home** tab, in **Clipboard** group.
- 4. On Reference tab, in the Footnotes group, click Insert Endnote.
- 5. Click **Paste**, from **Home** tab, in the **Clipboard** group.
- 6. Save the document.

Unit 2: Using Microsoft Word 2010

Lesson: Review Tab

Objective

- Checking the Spelling and Grammar
- use the thesaurus
- research items
- display document statistics
- insert and delete comments
- track changes made in documents
- accept or decline changes made in a document
- protect documents

Checking the spelling and Grammar

Check the spelling and grammar of text in the document.

Spelling checks for:

- Incorrect spelling
- Repeated words





- Works in background to check for mistakes
 - Spelling mistakes have wavy red line
 - Grammatical errors have wavy green line
 - Blue dotted lines refer to a contextual error
 - To activate automatic Spelling and Grammar:
 - On Review tab, in Proofing group, click Spelling
 & Grammar
 - Press F7
 - First error displays in Spelling and Grammar dialog box with same color as error type.



Digital Literacy I





Refers to words with same sound but different spellings and meanings



Not in Dictionary	Displays misspelled word in text box with surrounding text for reference.
Suggestions	Displays list of alternatives for misspelled word. If correct word in list, click it and then click Change , or double-click word.
Ignore Once	Ignores this occurrence of this spelling but continues to search for other occurrences of this spelling.
Ignore All	Ignores all occurrences of this spelling.
Add to Dictionary	Adds this spelling to custom dictionary.
Change	Changes this occurrence with selected word in Suggestions box.
Change All	Changes all words with this spelling with selected word in Suggestions box.
AutoCorrect	Adds this item to AutoCorrect list so it is automatically corrected every time you misspell it.
Check grammar	Choose to check grammar at the same time as spelling.
Options	Choose how spelling and grammar options should work.
Undo	Reverses spelling or grammar changes made recently in reverse order made.

Using the Thesaurus

Searches for and displays synonyms and antonyms

- To activate Thesaurus:
 - On Review tab, in Proofing group, click
 Thesaurus
 - press Shift + F7
 - Press Alt as you click the word
 - Right-click word, click Synonyms, click
 Thesaurus



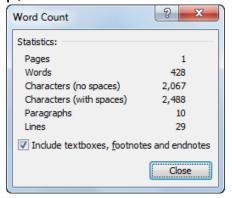
Using Research Tools

- To activate Research option:
 - On Review tab, in Proofing group, click
 Research
 - press Alt and click

Search for	Enter search criteria.
Reference	List of sources to find matches for search criteria.
Get services on Office Marketplace	Go online to Microsoft Office Marketplace Web site to find more research services.
Research options	Display list of sources to find matches for search criteria.

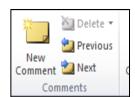
Using Document Statistics

- To retrieve statistics:
 - On Review tab, in Proofing group, click Word Count
 - Click Words: 428 on status bar



Working with Comments

 Can display in balloon objects, in document, or in Reviewing Pane



- Can hide or display comments on screen
- Can also record own audio comment and insert into document
- To insert comment, on Review tab, in Comments group, click
 New Comment
- To navigate backward and forward through comments, on Review tab, in Comments group, click Previous (Previous Comment) or Next (Next Comment)
- To delete comment:

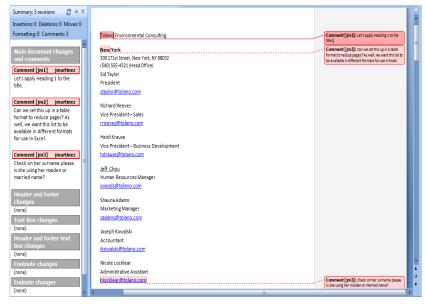
 - On Review tab, in the Changes group, click (Reject and Move to Next)
 - Right-click comment and click **Delete Comment**.

Show Markup ▼

Changes + Reviewing Pane +

Track

- To see all comments or changes in separate window, on **Review** tab, in **Tracking** group, click Reviewing Pane , and then:
 - Click Reviewing Pane Vertical to open window at left side of screen



Tracking Changes

For others to review document with control over final changes, distribute copies to others using Track Changes

- To turn on Track Changes:
 - On Review tab, in Tracking group, click Track Changes
 - Pressctrl) Shift) (**E**)
- To accept change, click change and then on **Review** tab, in Changes group, click Accept
- To accept all changes in document, click arrow for **Accept** and then Accept All Changes Shown or Accept All Changes in **Document**
- To reject change, click change and then **Reject**
- To reject all changes, click arrow for **Reject** and then **Reject All Changes Shown or Reject All Changes in Document**

 To show all marked items, on Review tab, in Tracking group, click



- Use Reviewing Pane if balloon items too distracting on screen
- Make changes or insertions as if Reviewing Pane not there
- Click arrow for Final: Show Markup (Display for Review) to change view for tracked document
- To delete item in Reviewing Pane, click heading for item and then click Reject Change/Delete Comment
- Turn off Track Changes option when no longer need it

Protecting Documents

- Use **Security Options** to:
 - Prevent unauthorized users from opening document
 - Control sharing options
 - Control privacy
 - Increase macro security to reduce virus attacks
- To restrict document, on Review tab, in Protect group, click Protect Document
 - Formatting restrictions
 - Prevents others from making formatting changes, or specific types of formatting using Settings link
 - Editing restrictions
 - Limits others from making changes to document for tracked changes, comments, or fill-in



forms, and sets up exceptions for those who have access to shared document

Start enforcement

 Becomes active only after selecting previous restriction types

Unit 8: Using Microsoft Word

Lesson: View Tab

Objectives

- Change document's layout views
- Set the zoom level to the document
- Switching between Documents

Change document's layout views

The document Views contain different views:

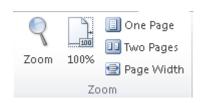
 Print layout: View the document as it will appear on the printed document

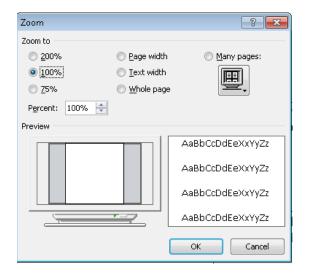


- Full Screen Reading: View the document in full screen reading
- Web layout: View the document as it would look as a web page
- Outline: View the document as an outline
- Draft: View the document as a draft to quickly edit text

Set the zoom level to the document

On view tab select zoom to specify the zoom level of the document





To zoom the document to 100% of the normal size on view tab select



To zoom the document so that the width of the page matches the width of the window on view tab select page

| Page Width | width |

Switching between Documents

- Can switch between multiple documents:
 - On View tab, in Window group, click Switch Windows



Click button for document on taskbar



Exercise

- 7. Open **Ms** .**Word**, and save it as Review tab.
- 8. Type the following text:
- 9. Correct the words spellings using Spell-check.
- 10. Find the Thesaurus to the word "manner" and replace it.
- 11.Add new comment for the title and write (Machine).
- 12. Apply track change for the word "specific" and write "exact".
- 13. Save your file again.