

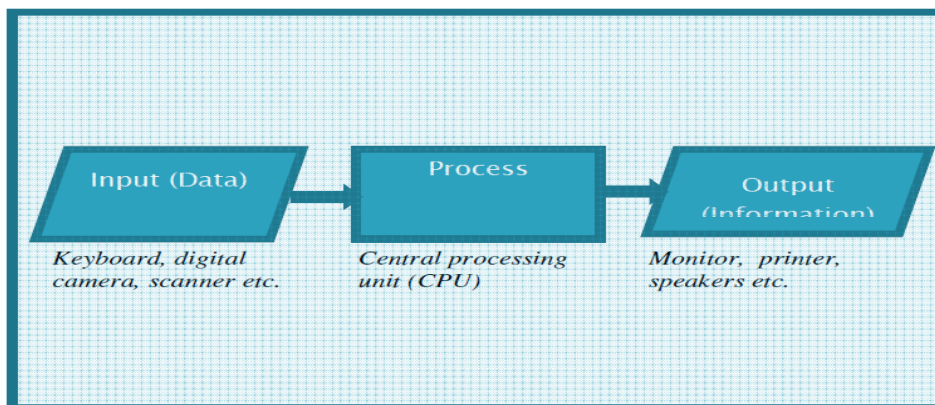


Introduction to Digital Computer World

What is a computer?

A computer is an electronic device that accepts raw data and processes it to produce a meaningful information according to some given instructions by a user.

Input – Process - Output



Any computer should execute the following four functions:

1. Receives data as input.
2. Stores data and instructions in its memory.
3. Processes the data according to given instruction by the user into useful information.
4. Produces output.

○ **Input**

1. Keyboard, mouse, digital camera ...
2. Provide data to computers.
3. Translate data to a form that can computers understand.



- **Process**

Central Processing Unit CPU is the brain of a computer. The speed of Central Processing Unit (CPU) is measured by Hertz (Hz), which represents a CPU cycle. The speed of CPU is known as Computer Speed.



CPU Parts

1. Control Unit CU controls and coordinates all computer components.
2. Arithmetic and Logic Unit ALU executes all arithmetic and logic operations such as addition, subtraction, ..., comparison.
3. Registers very fast storage area.

- **Output**

Converts electronically generated information into human readable form.



Computer Advantages:

1. A computer is very fast that can perform millions of calculations in few seconds as compared to a person who needs days and months to perform the same task.
2. A computer can perform calculations on huge data, store and retrieve huge data as well.
3. A computer can work for long time without getting tired as human beings.
4. A computer is very accurate.
5. A computer is a reliable machine and its components have long lives.

Computer Disadvantages:

1. A computer cannot make a decision by its own (has no intelligence).
2. A computer causes health hazards.
3. A computer can lead to misuse of information.
4. Downtime.
5. Expensive to produce.



Computer Generations:

These are technologies that a computer is being used. A generation includes both hardware and software that make up the entire computer system.

There are five known generations:

1. First generation: (1946-1959) Vacuum tube based.



Basic component for memory and CPU (central processing unit) was a vacuum tube. This tube likes a bulb that produces heat and occupies a space. Computers in this era used Punch cards, paper tape, and magnetic tape as input and output devices. The computers in this generation used machine code as the programming language. Some of disadvantages are: huge size, generated heat, slow input and output and cost-effective.

2. Second generation: (1959-1965) Transistor based.



Transistors were used in this generation which were cheaper, consumed less power, more compact in size, more reliable and faster.

3. Third generation: (1965-1971) Integrated Circuits based.



The computers of third generation used Integrated Circuits (ICs). A single IC has many transistors, resistors, and capacitors. This made computers smaller in size, reliable, and efficient.

4. Fourth generation: (1971-1980) Very Large Scale Integrated based.



Computers of fourth generation used Very Large Scale Integrated (VLSI) circuits. One VLSI circuit may have 5000 transistors. Computers became more powerful, compact, reliable, and affordable.

5. Fifth generation: (1980-till date) Ultra Large Scale Integrated based.

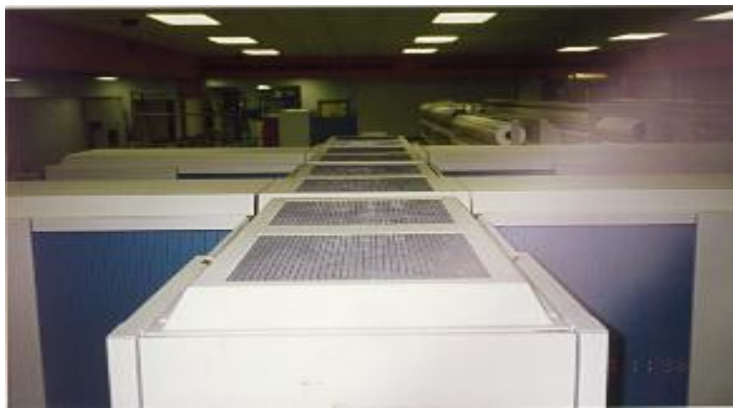


Production of microprocessor chips having ten million electronic components resulting in availability of very powerful and compact computers at cheaper rates.

Classification of Computers

Computers come in sizes from tiny to monstrous, in both appearance and power. The size of a computer that a person or an organization needs depends on the computing requirements.

- **Supercomputers:** The most expensive-are known as supercomputers process billions of instructions per second. Supercomputers are used for tasks that require mammoth data manipulation, such as worldwide weather forecasting and stock analysis.
- **Mainframes:** These are large computers. Mainframes are capable of processing data at very high speeds-millions of instructions per second. They are used in banks, insurance companies, manufacturers and online shopping.



- **Personal computers:** These are often called PCs. They range in price from a few hundred dollars to a few thousand dollars. A PC usually comes with a *tower* that holds the main circuit boards and disk drives of the computer, and a collection of *peripherals*, such as a keyboard, mouse, and monitor.
- **Notebook Computers:** These also known as Laptop computers, are portable and functional, and popular with travelers who need a computer that can go with them.
- **HandHeld computers-** pen-based computers accept handwritten input directly on a screen. Users of the handheld pen-based computers, also called personal digital assistants (PDA).



Computer components

1. **Hardware** is the set of physical objects that can be seen and touched such as monitor, keyboard, memory, hard disk drive.... Etc.
2. **Software** is a collection of data and instructions to perform a task.

Types of software

System software	Application software
Controlling and managing computer hardware components such as operating systems and some fundamental utilities	Helping users to performing a specific task
Dos, Windows, Linux, Unix, and Mac OSX	Chrome web browser, Microsoft word, excel and PowerPoint
Users do not interact	Users always interact
Working independently on application software	Cannot work without the presence of system software

Computer Memory: addressable locations that can hold data and instructions in a personal computer.

Bit - Binary digit its value can be 0 or 1.

Nibble=4 bits.

Byte - a grouping of binary digits (0 or 1), Byte =8 bits.

Kilobyte KB= 1000 bytes.

Megabyte MB= 1000 KB.

Gigabyte GB= 1000 MB.

Question: how many bits can be represented in a memory of 3MB?

Memory Types:

1. Primary memory

ROM – Read Only Memory – the microcomputer’s non-volatile memory is a permanent form of storage. Data is written into this memory at manufacture and are not affected by power loss.

RAM – Random Access Memory – the microcomputer’s volatile memory. Data held in it is lost when power is switched off. RAM is considered "random access" because you can access any memory cell directly if you know the row and column that intersect at that cell.





2. Secondary Memory:-

Stores data and programs permanently: it's retained after the power is turned off.

- Hard disk drive (HDD) that store and provides relatively quick access to large amounts of data on an electromagnetically charged surface or set of surfaces.



- Optical Disk: CD and DVD, that uses laser light as part of the process of reading or writing data to or from optical discs. Some drives can only read from discs, but recent drives are commonly both readers and recorders, also called burners or writers. CDs can store up to 700 megabytes (MB) of data and DVDs can store up to 8.4 GB of data.



- Flash Disk a flash disks have no mechanical platters or access arms.



Differences between Main and Secondary Memory

Main Memory	Secondary Memory
<ol style="list-style-type: none"> 1. Primary memory is also known as Main memory or Internal memory 2. In primary memory, data is Directly accessed by CPU. 3. Semi-conductor chips are used to store information in primary memory. 4. Information stored is temporary and it can be lost when there is a sudden power cut. 5. Primary memory devices are more expensive than secondary storage devices. 6. Nature of Parts of Primary Memory varies. RAM- volatile in nature. ROM- Non-volatile 7. It is very fast in interacting with CPU. 8. Primary memory has limited Storage capacity. 9. Examples: RAM, ROM 	<ol style="list-style-type: none"> 1. Secondary memory is also known as External memory or Auxiliary memory 2. In secondary memory, data is first transferred to RAM and then to CPU. 3. Magnetic disk, optical disks are used to store information in secondary memory. 4. Information stored is permanent unless one deletes it intentionally. 5. Secondary memory devices are less expensive when compare to primary memory devices. 6. It's always Non-volatile in nature. 7. It is little slow in interacting with CPU. 8. Secondary memory can store bulk amounts of data. 9. Examples: Magnetic Tapes, Optical Disc, Floppy Disks, Flash memory [USB drives], etc.

Numbering Systems

Number systems are simply ways to count things. Ours is the base-10 or radix-10 system.

No.	Number System and Description
1	Decimal Number System Base 10. Digits used : 0-9
2	Binary Number System Base 2. Digits used : 0, 1
3	Octal Number System Base 8. Digits used : 0 to 7
4	Hexa Decimal Number System Base 16. Digits used: 0 to 9, Letters used : A- F

Digital computers are made up of electronic circuits, which have exactly 2 states: on and off. Computers use binary numbering system which has exactly 2 symbols, representing on and off.



Converting Decimal to Other Numbering systems:

- **Converting from decimal to binary**

Example: $6 = (?)_2$

$6 / 2$ gives us a quotient of 3 and a remainder 0

Procedure:

While (the quotient is not zero)

1. Divide the decimal number by the new base (2 in the above example).
2. Make the remainder the next digit to the left in the answer.
3. Replace the original decimal number with the quotient.

Solution:

$6 / 2 = 3$, remainder 0 rightmost bit

$3 / 2 = 1$, remainder 1

$1 / 2 = 0$, remainder 1 leftmost bit

$5 = (110)_2$

- **Converting from decimal to octal**

$(103)_{10} = (?)_8$

$103 / 8 = 12$, remainder 7 rightmost bit

$12 / 8 = 1$, remainder 4

$4 / 8 = 0$, remainder 4 leftmost bit

$(103)_{10} = (447)_8$

- **Converting decimal to hexadecimal**

$(103)_{10} = (?)_{16}$

$103 / 16 = 6$, remainder 7 rightmost bit

$6 / 16 = 0$, remainder 6 leftmost bit

$(103)_{10} = (67)_{16}$

In hexadecimal numbering system the numbers from 10 – 15 are represented using letters from A – F as shown in the following table.



Table 1: Numbers from 0-15 in decimal, binary, octal and hexadecimal numbering system

<i>Decimal</i>	<i>Binary</i>	<i>Octal</i>	<i>Hexadecimal</i>
0	0	0	0
1	1	1	1
2	10	2	2
3	11	3	3
4	100	4	4
5	101	5	5
6	110	6	6
7	111	7	7
8	1000	10	8
9	1001	11	9
10	1010	12	A
11	1011	13	B
12	1100	14	C
13	1101	15	D
14	1110	16	E
15	1111	17	F

Converting Other Numbering systems to Decimal numbering system

- *Converting from binary to decimal*

Example: $(110)_2 = (?)_{10}$

Solution:

$$\begin{aligned}
 &= (0 \times 2^0) + (1 \times 2^1) + (1 \times 2^2) \\
 &= 0 + 2 + 4 \\
 &= 6 \\
 (110)_2 &= (6)_{10}
 \end{aligned}$$

- *Converting from octal to decimal*

Example: $(447)_8 = (?)_{10}$

Solution:

$$\begin{aligned}
 &= (7 \times 8^0) + (4 \times 8^1) + (4 \times 8^2) \\
 &= 7 + 32 + 64 \\
 &= 103
 \end{aligned}$$



- **Converting hexadecimal to decimal**

$$(A1)_{16} = (?)_{10}$$

$$= (1 \times 16^0) + (10 \times 16^1)$$

$$= 1 + 160$$

$$= 161$$

Operating system

It is a system program that controls, coordinates and manipulates overall desktop publishing operations. It serves as an interface between the hardware and other software on the computer system. Some examples are:

1. MS-DOS.
2. Microsoft Windows 98/2000/Me/2003/Vista
3. UNIX
4. Linux
5. MacOS

Operating system functions

- **Memory Management**

It is also an important function of operating system. The memory cannot be managed without operating system. Different programs and data execute in memory at one time. If there is no operating system, the programs may mix with each other. The system will not work properly.

- **Disk Management**

Operating system manages the disk space. It manages the stored files and folders in a proper way.

- **Resources Management**

It controls other computer resources like files and programs, input/output devices, computer memories etc. during data processing operations.

- **Data security:** Data is an important part of computer system. The operating system protects the data stored on the computer from illegal use, modification or deletion.
- Operating system also performs hardware and software diagnosis to detect faults and errors.



MS-DOS and Windows

One of the early operating system is MS-DOS Microsoft Disc Operating System. It used command line interface (CLI) in other words the keyboard for input. Modern OS uses a mouse for input with a graphical user interface (GUI) such as Windows operating system. The Microsoft Windows family of operating systems originated as a graphical layer on top of the older MS- DOS environment for the IBM PC.

- **A directory vs. A file**
 - A directory (folder) is used to store documents. It can be empty or contains files and sometimes subdirectories (subfolders).
 - A file is a common storage unit.
- **Some Ms-DOS Commands**
 - Commands for Directories:
 - dir : list the contents of the current directory (the files and subdirectories).
 - cd : change a directory
 - md : make a directory
 - rd : remove a directory
 - Commands for files:
 - delete – delete a file
 - copy – copy a file
 - ren – rename a file
- **MS-DOS Path:** it is the required path to access a file or a directory.
 1. c:\> (root)
 2. c:\myclassess> (myclassess is a directory)
 3. c:\myclassess\computerscience>
 4. (computerscience is a subdirectory in myclassess directory)
 5. To build the above tree:
 6. cd\ (move to the root).
 7. c:\> md myclassess
 8. c:\> cd myclassess
 9. c:\myclassess> md computerscience
 10. c:\myclassess> cd computerscience
 11. c:\myclassess\computerscience>



Comparison of MS-DOS and Windows

- DOS can do only a single task whereas WINDOW is multitasking.
- DOS consist of (CLI) COMMAND LINE INTERFACE on the other hand window consist of (GUI) GRAPHICAL USER INTERFACE.
- DOS is not time sharing but WINDOW can share time.
- DOS consists of INPUT DEVICE KEYBOARD whereas WINDOW consists of STANDARD INPUT DEVICES.
- DOS is totally based on text in WINDOW by one click on an icon command can be given.
- In case of networking DOS is not supportive whereas WINDOW is supporting networking.
- In DOS there is need to remember all the commands. In WINDOWS all command is easily available or given at that time.
- In WINDOW multiple windows can open at a time but in DOS we can open only a single window at a time.

Windows Operating System

The appearance of window screen depends on how the computer is being set-up. A window screen always contains various items or ICONS depending on the window version.

- The Desktop is the main Windows screen. It is the work area where dialog boxes, windows, icons, and menus appear. Like an office desk, the Windows desktop contains items you can use to do your job. For instance, from your desktop, you can perform file-management tasks and run software applications. You can customize the appearance of the desktop to suit your preferences.





- **Icons:** An icon is an image or picture representing a particular function on the window's screen. It is like a command or instruction to perform a particular task. Some of the icons noticed on the window screen: My computer, Internet Explorer, Recycle Bin. To access an icon, double click on such, and window responds by displaying the operation under the icon.
- **My computer Icon:** This is a container for disk drives. My computer icon displays window with Icons representing object in the computer system. Such as folder, files, disk-drive.
- **Internet Explorer:** This is a shortcut for launching the internet explorer program, which is web browser. A web browser is a software program for navigating, WWW (World Wide Web).
- **Recycle Bin:** This is a computer object for files that are no longer needed the computer or, it is a temporary storage location where all files are kept. One can retrieve such file if deleted by error.
- **Status Bar:** This is the lower part of the windows. It consists of the start button, task bar and time.
- **Task Bar:** Each time an operation is performed, a button representing that window appears on the task bar. To switch from the window to another click on the button for the window you want in the task bar.
- **Notification Area:** It shows at the extreme end of the status bar, displays date and current time.

Start Menu Parts

The Start menu for Windows consists of many Parts:

- Start programs
- Open commonly used folders
- Search for files, folders, and programs
- Adjust computer settings
- Get help with the Windows operating system
- Turn off the computer
- Log off from Windows or switch to a different user account



Shutting Down the computer

Click the Shutdown button to turn off your computer. Clicking the arrow next to the Shut down button displays a menu with additional options for switching users, logging off, restarting, or shutting down.

- **Switch user:** If you have more than one user account on your computer, Fast User Switching is an easy way for another person to log on to the computer without logging you off or closing your programs and files.
- **Log off:** When you log off from Windows, all of the programs you were using are closed, but the computer is not turned off.
- **Lock:** Locking your PC is a good option if you'll be back soon. You'll have to enter your password when you come back, which helps keep your work more secure.
- **Restart:** The Restart button "reboots" your computer. That means it saves your information to the hard drive, turns off the computer for a moment, and then turns it back on again.
- **Sleep:** Clicking on Sleep puts your computer in a low-power state, but doesn't turn it off. The main advantage is that it allows you to get back to work quickly, without having to wait for the computer to do a full reboot.

Mouse Techniques

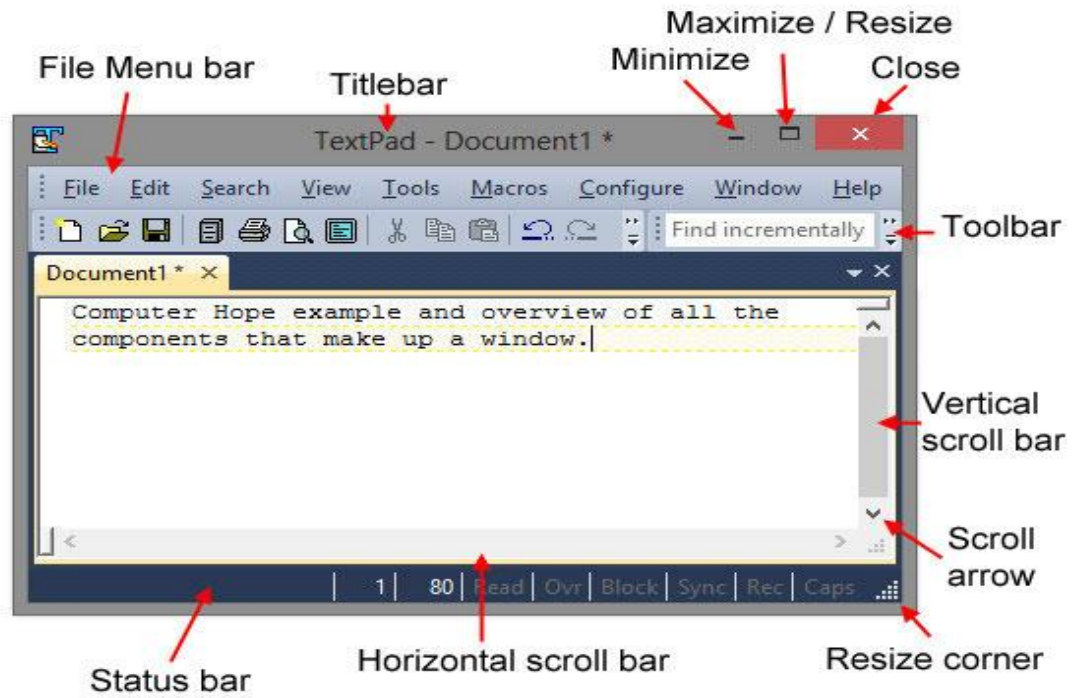
These are the modes of using the mouse. They include:

- (1) **Pointing:** this is a process of making the mouse pointer touch an option or icon on a window screen during selection of an object or option.
- (2) **Clicking:** this is a process of pointing the mouse pointer at the option or icon and instantly presses the left right button to select an option.
- (3) **Dragging:** this is a process of holding down the left button and move the mouse along the mouse pad and release when desired.
- (4) **Double clicking:** it is a process of pressing the button on two consecutive times i.e. we double click to see the content of an icon.



Working with windows

Example of a Microsoft Windows window



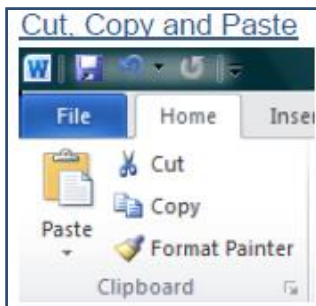
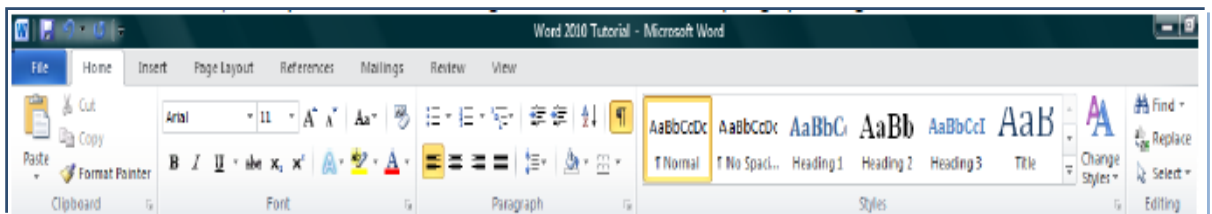
Microsoft Word Basics

Microsoft Word is a word-processing program, designed to help you create and organize your documents more efficiently.

You can easily create and edit documents, such as:

1. Letters
2. Books
3. Reports
4. Articles.

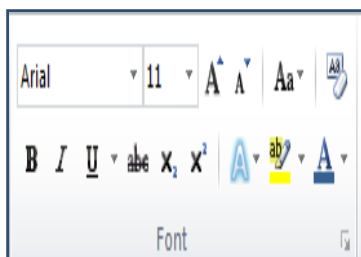
- **file Tab** This tab is used to perform the followings:
 - Open new file (Ctrl+N).
 - Open an existing file (Ctrl+O).
 - Save file (Ctrl+S) and “Save as” to keep a file in different names.
 - Print a file (Ctrl+P).
 - Close a file.
- **Home Tab** This is the most used tab; it enables all text formatting features such as font and paragraph changes.



Highlight the text and go to the **Home** tab in the **Clipboard** group and click **Cut** or **Copy** to remove text from your document you can copy or cut the text from the document.

The **Format Painter** feature allows you to quickly copy a format that you have applied to text already in your

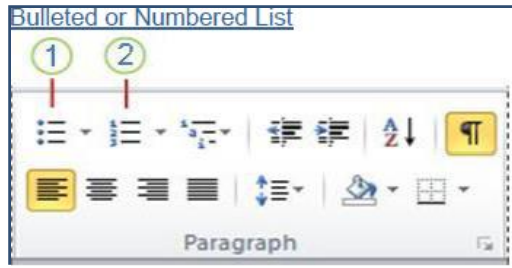
Formatting Text



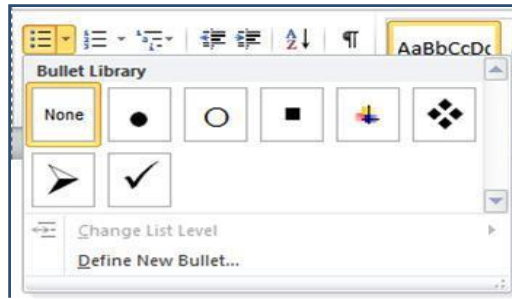
Highlight the text and go to the **Home** Tab, while text is highlighted you can also click on the color, bold, italics or underline commands.



Bullets and Numbering



1. Bullets Command
2. Numbering Command



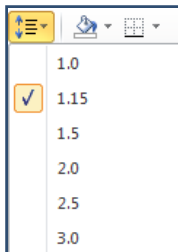
You can choose Bullets and Numbering style.

Text Alignment



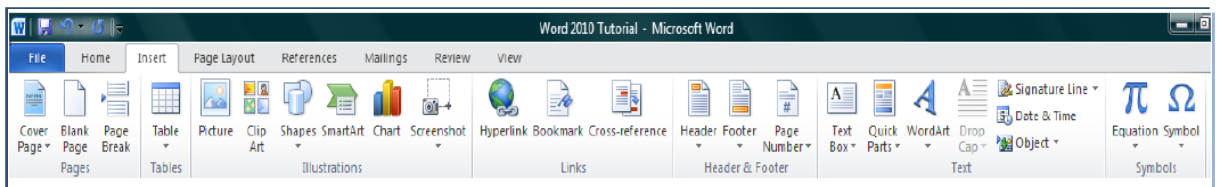
In Paragraph group choose the appropriate alignment (left, right, center and justify).

Line spacing



Highlight the lines in your document to change line spacing in Paragraph group.

- **Insert Tab** This tab is used to insert a variety of items into a document such as pictures, clip art, tables and headers and footers.

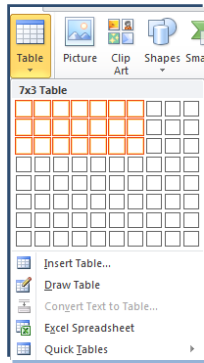


Tables can be used to create lists or format text in an organized fashion.

With tables you can perform the followings:

1. Add/remove rows/columns.
2. Merge/split cells.
3. Format borders in/out.

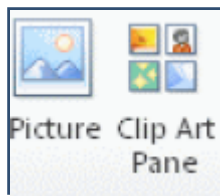




Insert Picture/Clip Art

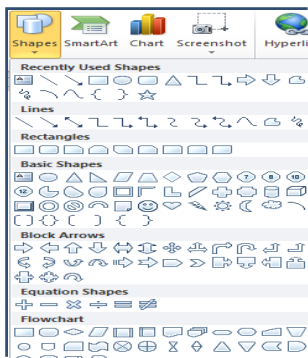
Pictures and clip art can be inserted or copied into a document from many different sources, including:

1. A folder where you save pictures (HD, USB, CD,...).
2. Downloaded from Web site provider.



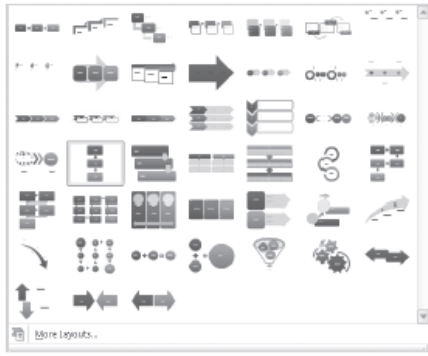
Inserting Shapes: You can add one shape to your file or combine multiple shapes to make a drawing or a more complex shape. You can do the followings with the shapes:

1. Add text to shapes.
2. Format shapes.

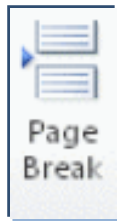


Inserting SmartArt: these are visual representations of your information that you can quickly and easily create such as Process, Hierarchy, Cycle, or Relationship.





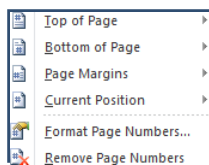
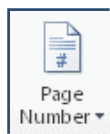
Page break: Word automatically inserts a page break when you reach the end of a page. If you want the page to break in a different place, you can insert a manual page break.



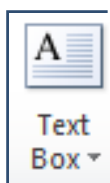
Header and Footer: open your document header or footer area to enter text.



Page Number: If you want a page number on each page, you can quickly add a page number from the gallery.

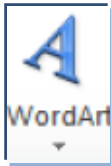


A text box is an object that lets you put and type text anywhere in your file.

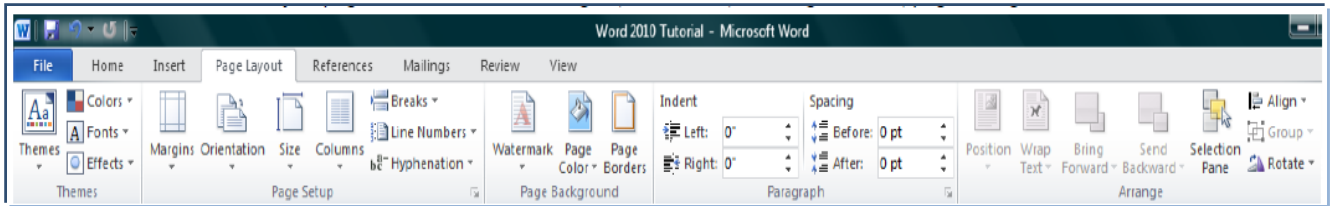


Wordart is a decorative text. It has special text effects.

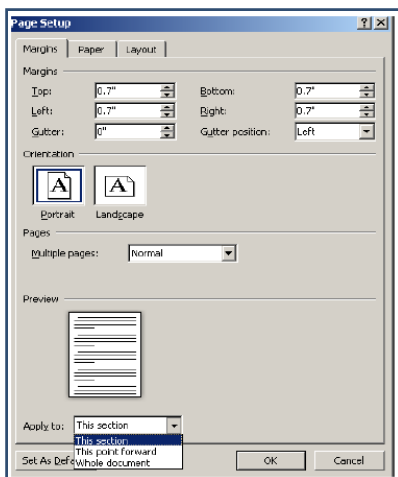




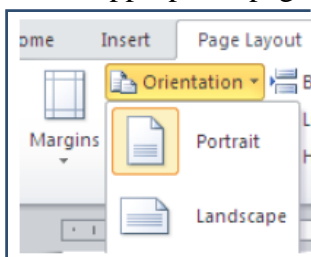
Page Layout tab: this tab is used to set up page margins, orientation, background and borders.



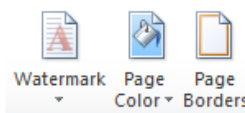
- set up the page margins



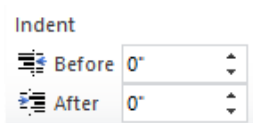
- To select the appropriate page orientation



- You can put watermark, select page color and borders for your document pages.

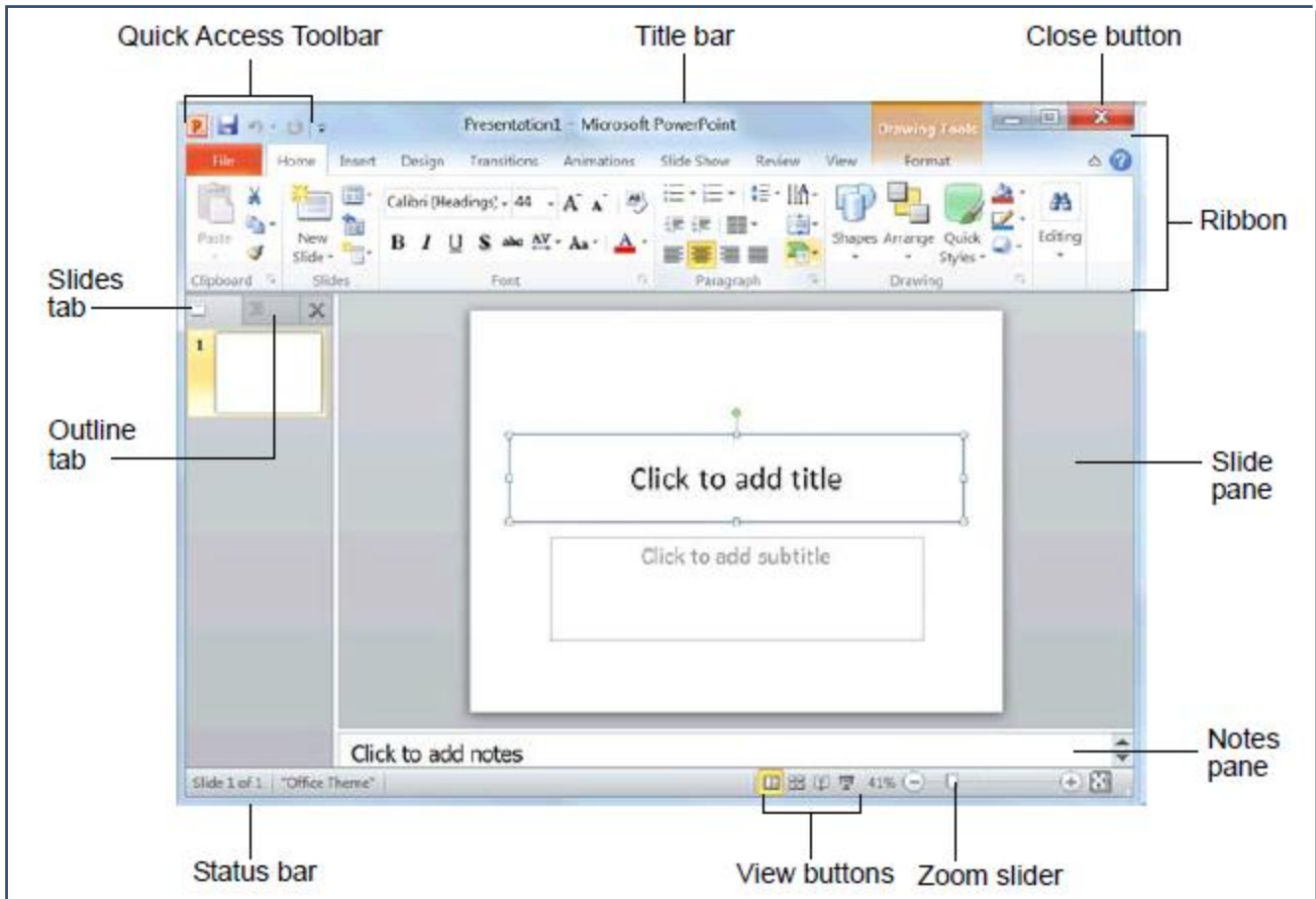


- You can set up your paragraph indent as well



Microsoft PowerPoint Basics

PowerPoint Screen



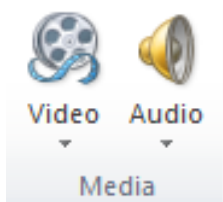
- **Insert new slides**

- To Insert a New Slide: Click the **Home** tab and click **New Slide** in the Slides group, or press **<Ctrl> + <M>**.
- To Change the Slide Layout: Click the **Home** tab, click the **Layout** button in the Slides group, and select a layout.

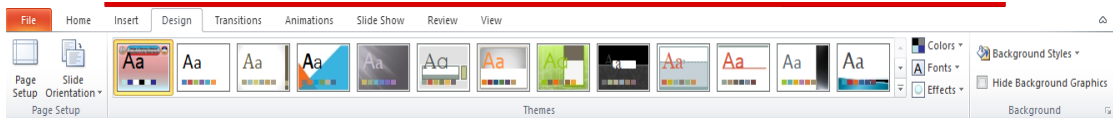
- Duplicate selected slides
- Reuse slides

- **To insert a video file or an audio clip you can add them from:**

- File.
- Website.
- Clipart.

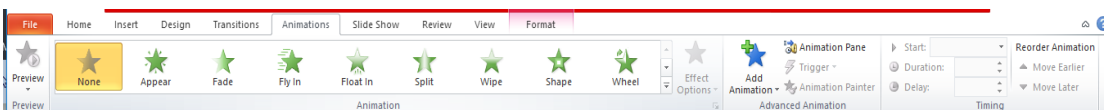
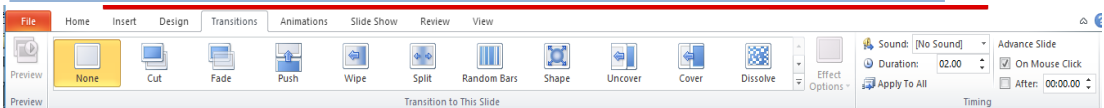


- Using **Design** tab enables select slides orientation and themes



- Transition and Animation effects

- To Add a Slide Transition: Navigate to the slide you want to add a transition to. Click the **Transitions** tab on the Ribbon, click the **More** button in the Transition to This Slide group, and select a transition effect.
- To Add an Animation Effect to an Object: Select the object that you want to animate, click the **Animations** tab on the Ribbon. Click the **More** button in the Animation group, and select an animation effect.
- To Copy Animation Effects from One Object to Another: Select the object with the animation effect you want to copy, click the **Animations** tab on the Ribbon, and click the **Animation Painter** button in the Advanced Animation group. Then, click the object you want to apply the copied animation effect to.




- To Present a Slide Show: Click the **Slide Show** button on the status bar, or press **<F5>**.

- Views



Normal view: This is the default view in PowerPoint 2010. Normal view includes the Outline pane, Slide pane, and Notes pane.



Slide Sorter view: Displays all the slides in the presentation as thumbnails (tiny images). Use Slide Sorter view when you want to rearrange the order of slides or add transition effects between slides.



Reading View: Similar to Slide Show view, it displays the presentation in a window with simple controls, making it easy to review.

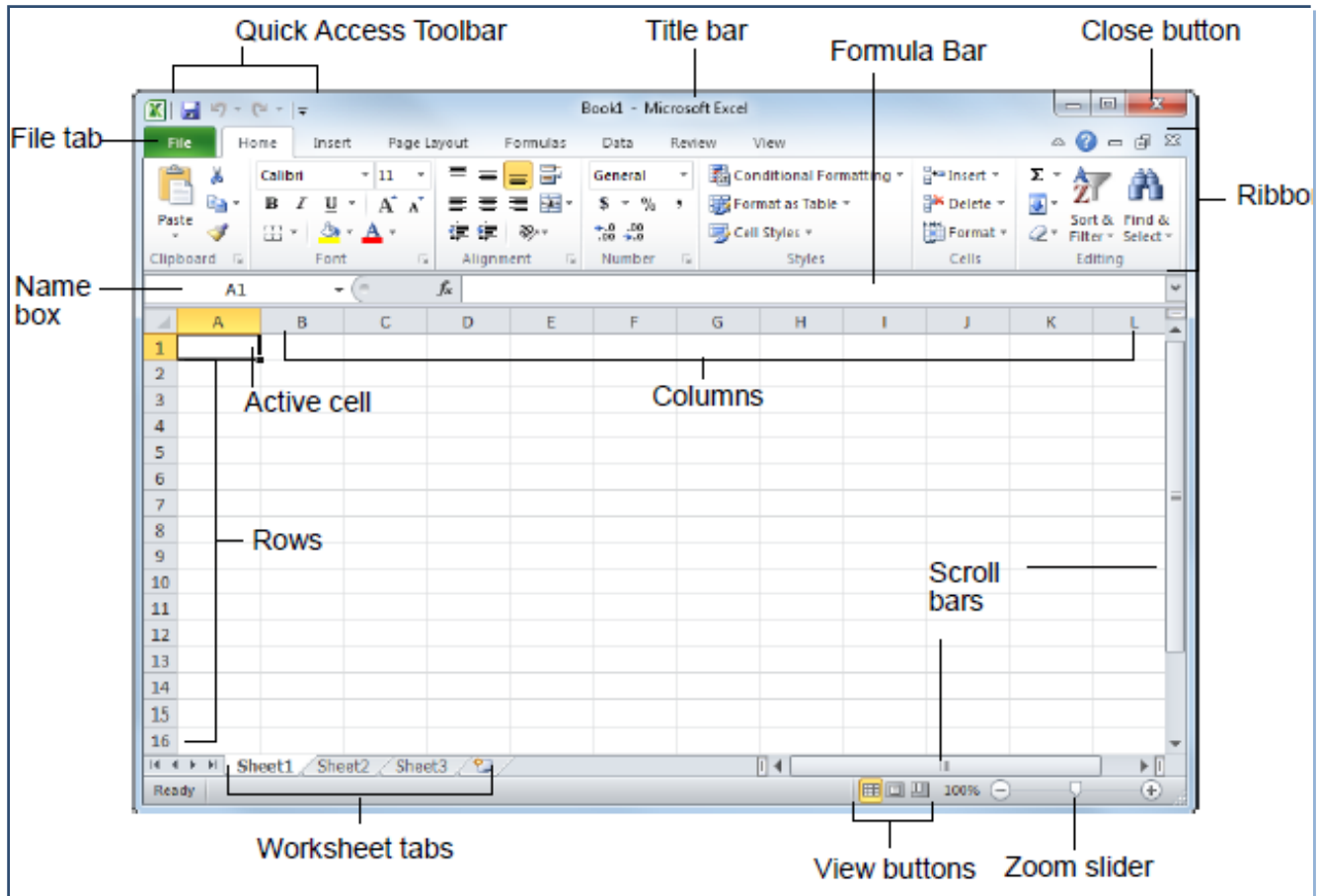


Slide Show view: Displays the presentation as an electronic slide show. Whenever you deliver a presentation in front of an audience, Slide Show view is definitely the view you want to use.



Microsoft Excel Basics

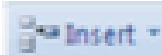
Excel screen



Working with sheets

- You can

INSERT A COLUMN, ROW OR WORKSHEET



- Click in a cell within the column or row that is to be blank.
- On the *Home* tab on the Ribbon, click the down arrow on the Insert button.
- Click either Insert Sheet Columns or Insert Sheet Rows or Insert Sheet.

ADD A FILL COLOR



- Select the cells you wish to add the fill color to.
- On the *Home* tab of the Ribbon, click the down arrow of the Fill button (in the Font group).
- Select a color from the list.



ROTATE TEXT



1. Select the cells with the text to rotate.
2. On the *Home* tab of the Ribbon, click the **Orientation** button (in the **Font** group).
3. Select the appropriate orientation from the list.

FORMAT NUMBERS WITH A COMMA

1. Select the cells to be changed.
2. On the *Home* tab of the Ribbon, click the **Comma** button (located in the **Number** group).

FORMAT AS A PERCENTAGE



1. Select the cells to be changed.
2. On the *Home* tab of the Ribbon, click the **Percentage** button (located in the **Numbers** group).

button.

ADD A BORDER



1. Select the cells you wish to add a border around.
2. On the *Home* tab on the Ribbon, click the down arrow of the **Border** button (in the **Font** group).
3. Select the border from the list.

MERGE CELLS

1. Select the cells to merge.
2. On the *Home* tab of the Ribbon, click the down arrow of the **Merge and Center** tool (located in the **Alignment** group).
3. Click on either **Merge & Center**, or **Merge Cells**, as appropriate.

FORMAT DECIMAL PLACES



1. Select the cells to be changed.
2. On the *Home* tab of the Ribbon, click either the **Increase Decimal** or **Decrease Decimal** tool, as appropriate.

➤ You can apply conditional formatting.


To Apply Conditional Formatting: Select the cells to which you want to apply conditional formatting. Click the **Conditional Formatting** button in the **Styles** group of the *Home* tab. Select the formatting scheme you wish to use, then set the conditions in the dialog box.



- You can adjust row and column height and width.

To Adjust Column Width or Row Height: Drag the right border of the column header, or the bottom border of the row header. Double-click the border to AutoFit the column or row according to its contents.

- **Formulas and Functions**

- **To Total a Cell Range:** Click the cell where you want to insert the total and click the **Sum** button in the Editing group on the Home tab. Verify the selected cell range and click the **Sum** button again.
- **To Enter a Formula:** Select the cell where you want to insert the formula. Type **=** and enter the formula using values, cell references, operators, and functions. Press **<Enter>** when you're finished.
- **To Insert a Function:** Select the cell where you want to enter the function and click the  **Insert Function** button on the Formula Bar.
- **To Reference a Cell in a Formula:** Type the cell reference (for example, B5) in the formula or click the cell you want to reference.
- **To Create an Absolute Cell Reference:** Precede the cell references with a \$ sign or press **<F4>** after selecting cell(s) to make it absolute.
- **To Use Several Operators or Cell Ranges:** Enclose the part of a formula you want to calculate first in parentheses.

- **Charts**

To Create a Chart: Select the cell range that contains the data you want to chart and click the **Insert** tab on the Ribbon. Click a chart type button in the Charts group and select the chart you want to use from the list.

- **Worksheets management**

To Insert a New Worksheet: Click the **Insert Worksheet** tab next to the sheet tabs at the bottom of the program screen. Or, press **<Shift> + <F11>**.

To Delete a Worksheet: Select the sheet want to delete, click the **Delete** button in the Cells group on the Home tab, and select **Delete Sheet**. Or, right-click the sheet tab and select **Delete** from the contextual menu.

To Rename a Worksheet: Double-click the sheet tab, enter a new name for the worksheet, and press **<Enter>**.

To Change a Worksheet's Tab Color: Right-click the sheet tab, select **Tab Color**, and choose the color you want to apply.

To Move or Copy a Worksheet: Click and drag a tab to move a worksheet. Hold down the **<Ctrl>** key while clicking and dragging to copy the worksheet.

