# KNOWING COMPUTER

Computer is an **electronic device** that takes **input**, **processes** it according to instructions given by the user and gives an **output**.

**ABACUS** was the first computer.

**Charles Babbage** is known as father of computer.

Input is called **data** and output is called **information**.

Computer is made of **Transistor, ICs (Integrated Circuits) and Chips.**

Computer performs **mathematical and logical calculations**, based on data and instructions given by user.

There are **three types** of computers - Analog Computer, Digital Computer, Hybrid Computer.

**Analog computer** is used in robotics technology.

**Digital computer** is used in data processing & calculation work.

**Hybrid computer** is used in high-quality computer controlled mechanisms.

**Digital computer** is classified as micro (called PC), mini, mainframe and super computer based on its size.

First Super Computer of India is **PARAM**.

Examples of PC (personal computer) are desktop, laptop, palmtop, etc.

Computer is also classified on basis of generation.

| Generation | Duration | Characteristic |
|---|---|---|
| First Generation | 1949-1955 | Vacuum tubes |
| Second Generation | 1956-1965 | Transistors |
| Third Generation | 1966-1975 | Integrated Circuits |
| Fourth Generation | 1976-1985 | Microprocessors |
| Fifth Generation | 1986-present | Artificial Intelligence |

Computer -- Hardware + Software + firmware.

Hardware is the **physical component** of PC, which we can touch and see. Ex -mouse, keyboard, monitor, printer, etc.

Software is the **logical component** of PC, which we cannot touch and see. Ex- Word, Paint, Car race, etc.

Software is of two types – System Software and Application Software.

**System Software** controls input and output signals of a particular device. Ex- Sound Driver, Mobile PC Suit.

**Application Software** is used to perform any specific task on the computer. Ex- Photoshop, PowerPoint.

**Firmware** is a pre-loaded Program of any CHIP to provide initial instruction for devices. Ex – BIOS/CMOS.

**Unit of storage capacity** is Byte. (1 character -- 1 byte)

1 byte -- 8 bits

4 bits -- 1 nibble

1024 bytes -- 1 Kilo Byte

1024 Kb -- 1 Mega Byte

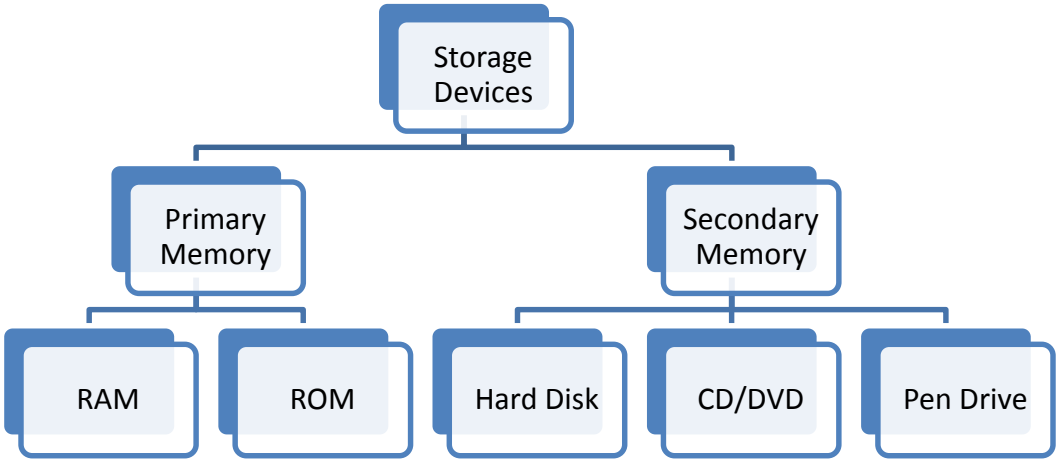
1024 Mb -- 1 Giga Byte

1024 GB -- 1 Terra byte

Devices of Computer – Input device, Storage device, Output device and processing device.

**Input device** is used to enter data and instructions. Ex - keyboard, mouse, scanner, camera, Joystick, modem, bar code reader, etc.

**Storage device** is used to store data and instructions.




RAM (Random Access Memory) is the main memory of computer and stores inputted items.

RAM is **volatile**, i.e., it loses information when power is switched off.

ROM (Read Only Memory) stores information to start the various devices when computer is switched on.

ROM is **non-volatile** memory, i.e., it keeps information stored even after power is switched off.

We store data and information in the secondary memory permanently.

**Output Device** is used to give/display results (processed data). Ex - Monitor, Printer, Speaker, Plotter, etc.

**Processing Device** controls all the operations of PC. Ex - CPU (Central Processing Unit).

CPU is the main chip of computer.

**CPU** has three components – **Control Unit (CU), Arithmetic Logic Unit (ALU) and Memory Unit**.

**CU** controls the Input/Output (I/O) operations of PC.

**ALU** performs mathematical and logical calculation.

**Memory Unit** is also known as Cache memory. It stores reserved data to maximize the PC performance.

**Computer language** is the medium through which we give instruction to the computer system for performing a task.

There are **two type** of languages – **Low Level Language (LLL) and High Level Language (HLL)**.

**Low Level Language** is a language in which each statement is directly translated into a single machine code. Ex - Machine Level Language (MLL) and Assembly Level Language (ALL).

**High Level Language** consists of instructions that are translated using **compiler** for the machine to understand. Ex – C++.

**File** is a collection of data and instruction with a name like file1.txt, file2.mp3, file3.doc etc.

**Folder** is a specific location on disk to store files and folders according to their categories to find them easily.

**Virus** is a program which does **illegal action** with files, folder, and devices **without any user instruction**.

**Anti-virus** is a specialized program to search and clean Virus infection on devices.

**SMPS (Switch Mode Power Supply)** provides the required voltage to Motherboard and Drives.

**Motherboard** is the main **PCB (Printed Circuit Board)** of computer to interconnect all internal and external components.

Motherboard can be called the **Bridge** among all devices.

**UPS (Uninterrupted Power Supply)** provides **power backup** if the power fails suddenly.

**UPS** prevents H/W and S/W damage due to the sudden power failure.

**Keyboard** is the input device to enter alphabetic, numeric and symbolic data and instructions.

**Mouse** is a pointing device used to work easily with operating system and its applications.

**Joystick** is an input device used to play computer games accurately.

**Modem (Modulator Demodulator)** is input as well as output device.

Modem converts **digital signal to analog signal and vice-versa**.

**BCR (Bar Code Reader)** is an input device to read hidden instruction of bar codes.

**Web camera** is an input device used for video chatting.

**Scanner** is an input device used to scan (convert hard copy to soft copy) contents of document.

**Printer** is an output device used to get print out (convert soft copy to hard copy) on paper.

**Plotter** is a graphical printer to print engineering and medical sketch/drawing.

**CD (Compact Disk)** is an optical disk used to store 700MB of data.

**DVD (Digital Versatile/Video Disk)** is used to store 4.7 GB or more data.

**HDD (Hard Disk Drive)** is also called fixed disk and used to store very huge data up to 5000 GB.

Machine level language is based on **1 & 0** (High voltage & Low voltage).

Base of **Decimal** number system is **10** (0 to 9).

Base of **Binary** number system is **2** (0 & 1).

Base of **Octal** number system is **8** (0 to 7).

Base of **Hexadecimal** number system is **16** (0 to 9 and A to F).

**Trojan** is an example of dangerous **Virus** program.

Windows defender, Norton, Quick Heal are some examples of **Anti-Virus** program.

**Bug** is a **logical or syntactical** error of program.

**Debugging** is the process to **find and correct the errors** in a program.

**EPBAX** is a device to provide extensions of telephone line.

**Motherboard** synchronizes activities of all devices attached to it.

**AutoCAD** is software to draw 2D/3D structures used in engineering or other fields.

**Password** allows users to secure their work area.

Integration technology is used to minimize the size of large circuits using IC and CHIP. Ex. LSI (large scale integration) and VLSI (very large scale integration).

## OPERATING SYSTEMS

**Operating System (OS)** is the interface between computer and user.

**Operating system** is a collection of **system and application software**.

Some of the popular OS are Windows, Linux, DOS, UNIX, etc.

Hardware needs System Software to work.

**Booting** is the process of successfully loading of OS into the computer.

Booting takes 30 seconds to several minutes after switching on the PC.

**Cold Boot** is booting the system by pressing Power Switch, when PC is in off position.

**Warm Boot** is re-booting the system by pressing Reset Switch, when PC gets hanged.

**Bootable file** is a set of system files to initialize loading of O/S (windows files).

Windows is one of the most **users friendly O/S** due to its features like **Graphical User Interface, Multi-tasking and Multi-user**.

**Graphical User Interface** provides colorful and easy-to-use environment to work on PC.

**Multi-tasking** gives the facility to work with many applications simultaneously.

**Multi-user interface** provides networking support, so many user can perform group work using many PCs.

**Desktop** is the 1st screen we see on switching on our computer.

We see Shortcuts, Application system icons, Menu, Buttons, Wallpaper, etc. on the desktop.

**Wallpaper** is any image or picture on Desktop.

**Shortcut** is an icon to open or run any file, folder, or program.

**Recycle bin** is used to store deleted items and can be restored later or permanently deleted.

On clicking on the **My Computer (Computer)** icon, we can see all the files, folders and devices of computer.

We can carry out tasks like copy, rename, delete, open, run, move, etc, on these files, folders and devices.

**Notepad** is an application software used to create and edit simple text file without any image or heavy formatting.

Notepad files are saved with **.txt** extension.

**WordPad** is also used to create and edit files with rich text (Formatted text) and image too.

WordPad files are saved with **.rtf** extension.

**Paint** is used to create or edit pictures files.

Paint files are saved with **.bmp** extension.

Every file is saved with a **filename** and **file extension**. E.g. abc.doc

The **file extension** defines the **type of file**. Ex- .doc, .txt, .rtf (documents), .mp3 (music), etc.

**Media player** is software to play audio and video files.

When the computer does not respond to any instruction and needs to re-Boot, we say the computer has "**Hanged"**.

**Task bar** is a panel where user can find **start button** of windows and see many information like running programs, date & time, etc.

Using **Run option**, we can open/run any file/program directly by typing their true name.

We can find missing items by typing their small portion of name or contents in the **search option**.

We should switch off the PC after closing all the running/opened programs.

In **Control Panel** we can configure devices and software of PC.

**Document/My Document** is the folder where windows/office files are saved by default.

**Screen Saver** is the graphics/blank screen which appears automatically after a fixed period when PC is not in use.

**Standby** mode is used to send PC to sleep (power saving mode) but programs remain open in memory.

Binary numbers 1 & 0 are base of Digital Signals.

**DOS** and **UNIX** operating systems have **Character User Interface (CUI)**.

**Windows** and **Linux** operating systems have **Graphical User Interface (GUI)**.

## INTERNET AND COMMUNICATION

**Communication medium** is the medium to carry data signals between computers on a network.

The two types of communication medium are **wired** (cable) and **wireless**.

Examples of cables – **Twisted Pair** cable, **Coaxial** cable and **Optical fiber** cable.

Examples of wireless medium – **Microwave**, **Infra-red**, **Bluetooth** and **Wi-Fi**.

**Microwave** is used where cabling is not possible.

**Microwaves** have a **range of 1000 Km** or more.

**Infra-Red** is used where cabling is not suitable and both computers are visible to each other.

Range of infra-red is approx. **500 meters**.

Bluetooth and Wi-Fi are used for **very short distance** devices and **internet sharing**.

Bluetooth and Wi-Fi have a range of approx. **100 meters**.

Data **modulation** is the method to convert **digital signal to analog signal**.

Data **demodulation** is the process of converting **analog signal to digital**.

A device which does data modulation and demodulation is **MODEM**.

**Baud Rate** defines speed of MODEM. Ex. 512 Kbps, 2 Mbps etc.

Network **topology** is the method to connect computers in a network to get maximum benefits in network maintenance and handling.

Types of network Topologies are **Bus** topology, **Star** topology, **Ring** topology, **Tree** topology and **Mesh** topology.

**LAN** can connect devices up to **10 Km**.

Communication medium of a Local Area Network (**LAN**) is **Cable/Wire**.

**WAN** can connect devices up to **100 Km**.

Communication medium of a Wide Area Network (**WAN**) is **Cable or Wireless** connection.

Very Wide Area Network (**VAN**) is a **wireless** network.

**VAN** connects devices that are more than **100 km** apart.

**Repeater** is used as an **Amplifier** in a network.

**Optical Fiber** cable can carry millions of signals up to 100 Km without repeater.

Each computer or device on a network has a **unique IP address**.

**Switch** is a network device that accepts data from source PC and delivers to target PC.

**Server** is a high configuration PC to deliver any kind of information to client PC.

**Gateway** interconnects two different types of networks, e.g. LAN with WAN.

**Network topology** is the arrangement of various elements, like computers, printers, etc., of a computer network.

**Router** is a network device to connect two networks of different topologies.

Any device which is required for networking, e.g. repeater, switch, bridge, router, gateway, etc. is called a **network device**.

**Repeater** amplifies the weak signal to its original strength, in a long distance data transmission.

**Switch** receives data packets from source network device and sends to target device.

**Bridge** connects two same types of topologies. i.e. star with star.

**Router** connects two different types of topologies. i.e. ring with star.

**Gateway** connects two types of networks i.e. LAN with WAN.

Examples of switching of data are **circuit switching** and **packet switching**.

**Multiplexer** is a device to receive data from many sources and delivers them to target PC.

Examples of Multiplexer – TDM (**time division multiplexer**) and FDM (**frequency division multiplexer**).

**Server** is a computer system (PC) which **shares its hardware and software resources** as per instruction from other PC (client) in network.

**Client** is any PC which uses the resources of server.

**Internet** is a world-wide **network of computers** to **exchange/share** data or information.

We need a **digital device** (PC/mobile phone/I-Pad), **modem**, and **internet connection** for connecting to a network.

**Networking** is used to connect computers to share hardware and software resources.

**Modem** is a network device which works as an **interface between computer and telephone** line.

**Switches** and **hubs** are network devices used to connect computers.

**ISP (Internet Service Provider)** is the company that provides access to internet and related works.

**WWW (World Wide Web)** is a spider net of computers with internet connectivity.

**ARPANET** was the world's first network and is called the **father/grandfather of all networks**.

**Father of WWW** is Tim Berners Lee.

**Internet Browser** is the software to provide facilities to **perform internet based tasks** like viewing pages, downloading music, uploading photos, etc.

Some of the commonly used internet browsers are **Internet Explorer, Google Chrome, Opera**, etc.

**HTTP (Hyper Text Transfer Protocol)** is the technology used to exchange HTML pages on the internet.

**HTML (Hyper Text Markup Language)** is the programming language used to create web pages.

**Web page** is a page that contains **hyperlinked text/object**.

A **hyperlink** is a link or **connection from a file to another location or file**. The link can be activated by clicking on **highlighted word/words**.

**Website** is a collection of related web pages.

**Website** is also a unique address on internet. E.g. technosolution.co.in

**TCP /IP** is a **network communication protocol**.

**Protocol** is a **set of rules and regulations** used by two or more devices on the internet to connect to each other and exchange information.

TCP/IP is a set of two protocols: **TCP (Transfer Control Protocol) and IP (Internet protocol)**.

The **7 layers of OSI model** are **Physical** layer, **Data Link** layer, **Network** layer, **Transport** layer, **Session** layer, **Presentation** layer and **Application** layer.

**IP address** is a string of numbers separated by periods that gives unique identification to each computer attached to the Internet/Network. (ex. 192.168.1.25)

**Search Engine** is software to **search and display web contents** as per users' requirements. Ex. Google, MSN.

Getting information from internet by viewing different web pages is called **browsing or surfing the net**.

Saving any file or any other contents from Internet to local disk/computer is called **downloading**. Ex. – Downloading of song.

Sending file or any other content of local disk or computer to Internet is called **uploading**. Ex. - uploading of resume for job.

**Email** is technology to **send message or file** to any other user on the internet.

**Chatting** is the **live conversation** among online users, using text, voice and video communication.

Many websites provide **email facilities** to its users **after registering** on their site. Ex – Yahoo, MSN, Google, etc.

**Email ID** is the unique identification of registered user of the email providers. Ex. – name@yahoo.com

URL (**Uniform Resource Locator**) defines path of Web pages or web address. Ex. - www.technosolution.co.in

**Inbox** folder stores received messages.

**Spam** also contains received messages from indirect contacts.

**Sign-up** means to get registered with any ISP to become an authorized user of its services.

**Sign-in** means getting secured entry to use facilities of internet services. (To be **online**)

**Sign-out** means to quit from secured work area to prevent unauthorized use of services. (To be **offline**)

**Social networking sites** are web sites that allow users to share/exchange thoughts/files/message among its users (friends). Ex. Facebook.

**Attachment** is any file which is selected for sending with mail (Email).

We write recipients' email address in box containing "TO --- ". For ex. - contact@technosolution.co.in

**Subject** of email hints brief about message body.

In **BCC** (**blind carbon copy**) also we write the email addresses, but the recipients of CC will not be aware about these recipients.

**CC – Carbon copy** (here we write email addresses to send same copy of mail)

**Sign-in/Log-in** – Entering into secured Account by giving Username & Password for email, chat, online banking etc.

**Sign-out /Log-out** – Exit from secured Account, to prevent misuse.

**Server** is a computer that stores information that can be accessed by anyone on the internet.

**Client** is the computer which accesses the information from the server PC.

**Facebook** is a social networking site to share ideas, files, message etc. among users.

**Skype** is application software specially used for chatting purpose.

**Twitter** is a site where any user can put his/her thought/comment publicly, in 140 words.

**Blog** is a website where an individual or groups of users publish their personal opinions, information, etc. about a topic of their choice.

**IRCTC (Indian Railway Catering and Tourism Corporation)** is the official Indian railways site to do online ticket reservation and related tasks.

**Web portal** is a site that provides many facilities to its users, like email, chatting, current news, shopping, etc. e.g. Yahoo, MSN, etc.

Websites that give **only one service** to the customers are called **dedicated websites**.

**E-commerce** websites allow users to buy and sell online.

**ISP** (Internet Service Provider) has three types of servers – Web, Mail & Chat Server.

**Web Server** supports browsing activities.

**Mail Server** provides facilities to send/receive Emails.

## WORD PROCESSING

**MS Word** is **word processing application software** of Ms Office group.

MS-Word is mainly used to **create and edit documents**.

It is also used for printing letter, preparing mailing lists, creating and editing report, etc.

The extension of MS Word file is **.doc**.

The executable file of MS Word is **winword**.

To open Word Processor Package:

Click Start Button →All Program →Microsoft Office→Microsoft Word 2003

OR

Click Start Button →Click on Run→**Type winword** in open textbox

OR

Double- Click on the Word **shortcut icon** on desktop

**Components** of the Word Window are **Title Bar, Menu Bar, Format Bar, Status Bar**.

The bar at the **top of an open window** is the **Title bar**.

**Menu Bar** is located **just below the Title bar**.

There are **9 menus** available in Microsoft Word document: **File, Edit, View, Insert, Format, Tools, Table, Window, and Help**.

**File** menu has all the command related to the file operation, namely **opening, saving, closing, printing**, etc.

**Edit** menu has all command related to the editing of document, namely **copy, paste, delete, undo, redo**, etc.

**View** menu has all the commands related to controlling the view of document namely, **zoom**, etc.

**Insert** menu has the commands related to inserting external objects in document, namely **insert picture**, **Clipart, excel files**, etc.

**Format** menu has all the commands related to formatting the document.

**Tools** menu has the commands like **Spelling and Grammar, Thesaurus, Change Case,** etc.

**Table** menu has the commands related to inserting tables into the document and modifying them.

**Window** menu has all the commands related to the arranging the window in which we are working, like **Cascade, Arrange All, Split,** etc.

**Help** menu has all the commands related to getting help for using MS-Word.

To **create a new document** click on File → New or press ctrl + N from keyboard.

To **open an existing document**, click on File → Open or press ctrl + O from keyboard.

To **close the active document**, click File → Close.

To **close the Word window**, click File → Exit.

To **save** an active document, click File → Save or press ctrl +S from keyboard.

To **save** an existing document **under a new name**, click File → Save As or press F12 from keyboard.

To **print** a document, click File → Print or press ctrl + P.

To **cut text**, select the text and click Edit → Cut or press ctrl + X.

To **copy text**, select the text and click Edit → Copy or press ctrl + C.

To **paste text**, select the text and click Edit → Paste or press ctrl + V.

**Red wavy line** indicates **spelling error**.

**Green wavy line** indicates **grammatical error**.

**Thesaurus** provides **synonyms and antonyms** of words.

Microsoft Word allows **4 types of Alignment – left, right, centre and justify**.

In **left alignment**, text is aligned to the left side of page.

To left align the text, press Ctrl + L.

In **right alignment**, text is aligned to the right side of page.

To right align the text, press Ctrl + R.

In **centre alignment**, text is aligned to the centre of page.

To centre align the text, press Ctrl + E.

In **justify alignment**, text is aligned to both sides of the page.

To justify the text, press Ctrl + J.

**Bullet and Numbering** is used to create numbered lists.

To apply Bullet and Numbering, click Format → Bullets and Numbering.

Text can be typed in **lowercase, UPPERCASE, Sentence case, tOGGLECASE,** etc…

To **Change case**, select the text and click Format →Change Case.

**Page Size** option is used to set paper height and width. Ex.- 11” X 8”.

**Margin** is the **non-printable frame** area of the page.

**Page margins** are on **left, right, top and bottom** of the page.

**Page Orientation** option is used to set whether that page will be tall or wide.

**Shapes** – Different type of lines/circles/boxes/stars/icons can be added to page.

**Clip art** is used to add drawings from many categories, i.e., animals, flowers, buildings etc.

**Word art** is used to put stylish heading from required design and text.

**Page background** is used to add picture/color/watermark. etc. to page background.

Table can be inserted in a document using Table menu.

**Format Painter** applies formatting of selected text to destination text.

In Margin setup, "**Gutter**" provides additional space after margins for paper binding.

A new paragraph can be started by pressing the Enter key.

**Some other Shortcut key of MS Word:**

**Change or resize the font**

| **Press** | **To** |
|---|---|
| CTRL+SHIFT+> | increase the font size |
| CTRL+SHIFT+< | decrease the font size |
| CTRL+] | increase the font size by 1 point |
| CTRL+ [ | decrease the font size by 1 point |

**Apply character formats**

| **Press** | **To** |
|---|---|
| CTRL+D | open font dialog box |
| SHIFT+F3 | change the case of selected letter |
| CTRL+SHIFT+A | format letter as all capitals |
| CTRL+SHIFT+K | format letter as all small capitals |
| CTRL+B | make letter bold |
| CTRL+I | make letter italic |
| CTRL+U | make letter underline |
| CTRL+SHIFT+W | underline word but not space |
| CTRL+SHIFT+D | double underline text |
| CTRL+-- | apply subscript formatting |
| CTRL+SHIFT+-- | apply superscript formatting |

**Undo and redo actions**

| **Press** | **To** |
|---|---|
| ESC | cancel the action |
| CTRL+Z | undo the action |
| CTRL+Y | redo or repeat an action |

**Alignment paragraph**

| **Press** | **To** |
|---|---|
| CTRL+E | center a paragraph |
| CTRL+J | justify a paragraph |
| CTRL+L | left align a paragraph |
| CTRL+R | right align a paragraph |

**Delete text and graphics**

| **Press** | **To** |
|---|---|
| BACKSPACE KEY | delete one character to the left |
| CTRL+ BACKSPACE | delete one word to the left |
| DELETE | delete one character to the right |
| CTRL+DELETE | delete one word to the right |
| CTRL+X | cut the selected text to the clipboard |

**Copy and move text and graphics**

| **Press** | **To** |
|---|---|
| CTRL+A | select all text |

| | |
|---|---|
| CTRL +C | copy the selected text or graphics |
| CTRL+V | paste text or object |

**Find, replace through text**

| **Press** | **To** |
|---|---|
| CTRL+F | find text, formatting, and special items |
| CTRL+H | replace text, specific formatting and special items |
| CTRL+G | go to a page, line or other location |

**Select text and graphics**

| **Press** | **To** |
|---|---|
| SHIFT+END | to the end of a line |
| SHIFT+HOME | to the beginning of line |
| SHIFT+PAGE UP | one screen up |
| SHIFT+PAGE DOWN | one screen down |
| CTRL+HOME | to the beginning of document |
| CTRL+END | to the end of document |

**Create, view and save documents**

| **Press** | **To** |
|---|---|
| CTRL+N | create a new document |
| CTRL+O / CTRL+F12 | open a document |
| CTRL+S | save an active document |
| F12 | save as |
| CTRL+W / CTRL+F4 | close a document |

## USING SPREADSHEET

Ms Excel is **Spreadsheet application software** of Ms Office group.

Ms Excel is used to do **mathematical calculations and logical operations**.

MS Excel is also used to manage data and do related tasks.

The **extension** of Ms Excel file is **.xls**.

The **executable file** of Ms Excel is **excel**.

Excel files are called **workbooks**.

Each page of the workbook is a **sheet**.

By **default 3 sheets** open in excel workbook. We can add or remove sheets as required.

A spreadsheet consists of **intersecting rows and columns**.

**Columns** are the **vertical grids** represented by alphabets A, B, C, …… and so on.

**Rows** are **horizontal grids** represented by numbers 1, 2, 3, …… and so on.

Each box created by the **intersection of one row and one column** is called a **cell**.

Each cell has a **cell address**, e.g. D5.

To **open MS-Excel**, click Start → All Program →Microsoft Office→Microsoft Excel 2003.

OR

Click Start →Run→Type excel in the open textbox.

OR

Double-Click on the Ms Excel shortcut icon on desktop.

To **create a new Excel Workbook**, click File →New or press ctrl + N from keyboard.

To **open** an existing file, click File →Open or press ctrl + O.

To **save** an active sheet, click File → Save or press ctrl +S.

To **save** an existing document **under a new name**, click File → Save As or press F12.

To **print** a Spreadsheet, click File →Print or press ctrl + P.

To enter any data in a cell, select the cell and start typing.

Text entered in a cell is **displayed in the Formula bar** also.

If you want to **edit data** in a cell, double click on the cell.

To edit the data you can select the cell and Press F2.

To **insert rows**, select the rows where you want to insert, click Insert → Rows to insert rows.

To **insert columns**, select the column where you want to insert , click Insert → Columns to insert columns.

To **delete rows or columns**, select the rows or columns to delete, click Edit →Delete.

In **sorting** we can order our data and also filter our data so that repetitions will be removed.

MS-Excel has **predefined functions** that perform **mathematical calculations or logical operations** on specific values.

Each function takes specific types of **arguments**, such as numbers, text, logical values.

To use the functions, formula is entered in the cell.

A formula always starts with **equal to** "=" sign.

In Excel, **∑** icon on the toolbar is used to find **Quick Sum (Total)**.

Functions may be Mathematical, Logical, Date and time, Text, Database, etc.

**SUM**() : Add all the number in a range of cells.

**MAX**(): It returns the largest value in set of data.

**MIN**():It returns the smallest value in set of data.

**COUNTA**(): Count the number of cells that contain alphabets and number.

**CONCATECATE**(): It joins two or more text string into one text string.

**TODAY**(): It returns the current system date.

**NOW**(): It returns the current date and time.

**Some shortcut keys used in Excel:**

**Ctrl+;** Enters the current date

**Ctrl+Minus (-)** to delete the selected cells

**Ctrl+Plus (+)** to insert the selected cells

**Ctrl+;** Enters the current date

**Ctrl+1** Displays the Format Cells dialog box

**Ctrl+D** Uses the Fill Down cells below

**Ctrl+R** Uses the Fill Right

**Ctrl+T** Displays the Create Table dialog box

## POWERPOINT

**PowerPoint** is software to create presentation on any topic/subject.

**File extension** of PowerPoint is .ppt.

Each page of a presentation is called **Slide**.

Slide can consist of text, shapes, images, clipart, word art, tables, charts, hyperlinks, etc.

**Slide Design** is used to apply **background theme**, **colour schemes** and **animation** to slides.

**Slide Layout** is used to arrange the objects on each slide.

**Slide Transition** is used to set the style in which each slide appears during a presentation.

We can also **adjust sound and speed** of the transition.

**Custom Animation** is used to apply Entrance/Exit/Emphasis/Movement/sound/timing effects to each object of slides.

There are three views available in PowerPoint – **Slide View, Outline View,** and **Slide Sorter View**.

In the N**ormal View**, thumbnail of each slide can be seen on the left task pane.

In the **Outline View**, text content of each slide can be seen on the left task pane, which you can edit there as well.

In the **Slide Sorter View**, all the slides are available in one window.

**Slide Sorter View** can be used to apply arrange the order of the slides, change themes, etc. before running slide show.

In **Slide Sorter View**, you can select the slide and delete it by using DEL key of keyboard.

Running a presentation, on PC or using a projector, is called **slide show**.

A presentation can run on the click of a mouse/keyboard button or automatically.

**Rehearse Timing option** can be used to add timing to each and every action of slides to auto play the presentation.

**Shift + F5** – Keyboard shortcut to start slide show from current slide.

## ABBREVIATIONS

**CPU** -- Central Processing Unit

**RAM** -- Random Access Memory

**ROM** -- Read Only Memory

**PROM** -- Programmable Read Only Memory

**EPROM** -- Erasable PROM

**EEPROM** -- Electrically EPROM

**HDD** -- Hard Disk Drive

**FDD** -- Floppy Disk Drive

**KBD** -- KeyBoard

**I/O** -- Input & Output

**CD** -- Compact Disk

**DVD** -- Digital Video Disk

**SMPS** -- Switch Mode Power Supply

**POST** -- Power ON Self Test

**BIOS** -- Basic Input Output System

**VDU** -- Visible Display Unit

**LED** -- Light Embedded Diode

**LCD** -- Liquid Crystal Display

**USB** -- Universal Serial Bus

**VGA** -- Video/Visual Graphic Adapter

**LAN** -- Local Area Network

**WAN** -- Wide Area Network

**MAN** -- Metropolitan Area Network

**HLL** -- High Level Language

**LLL** -- Low Level Language

**KB** -- Kilo Byte

**MIPS** -- Million of Instruction Per Second

**Mbps** -- Mega Bytes Per second

**Kbps** -- Kilo Bytes per second

**WWW** -- World Wide Web

**IP** -- Internet Protocol

**ISP** -- Internet Service Provider

**HTTP** -- Hyper Text Transfer Protocol

**TCP/IP** -- Transmission Control Protocol / Internet Protocol

**LAN** -- Local Area Network

**MAN** -- Metropolitan Area Network

**WAN** -- Wide Area Network

**Modem** -- Modulator/Demodulator

**URL** -- Uniform Resource Location

**FTP** -- File Transfer Protocol

**HTTP** -- Hyper Text Transfer Protocol

**PPP** -- Point to Point Protocol

**GSM** -- Global System for Mobile

**CDMA** -- Code Division Multiple Access

**WLL (WiLL)** -- Wireless in Local Loop

**SMS** -- Short Message Service

**WWW** -- World Wide Web

**HTML** -- Hyper Text Markup Language

**XML** -- eXtensible Markup Language

**NFS** -- Network File System

**GB** -- Giga Byte