

COMPUTER CAPSULE

INTRODUCTION

- A **Computer** is a general purpose device that can be programmed to carry out a set of arithmetic or logical operations automatically. Since a sequence of operations can be readily changed, the computer can solve more than one kind of problem.
- A general purpose computer has four main components: the arithmetic logic unit (ALU), the control unit, the memory, and the input and output devices (collectively termed I/O).
- The data that is fed into a computer processor received into the computer by a keyboard or other sources is called **Input**.
- A computer is an electronic device that accepts data from the user (input), processes the data by performing calculations and operations on it and generates the desired **Output**.
- The device which is used with a computer to display or store data is called **Peripherals**.
- The mechanical, magnetic, electronic and electrical components that comprises a computer system such as the Central Processing Unit (CPU), monitor, keyboard, etc. is known as **Hardware**.
- A set of instructions that tells the computer about the tasks to be performed and how these tasks are to be performed, is known as **Software**.
- An unprocessed collection or representation of raw facts represented in a manner suitable for communication, interpretation or processing by humans or by automatic means, is known as **Data**.
- The result of processing, manipulating and organising data in a way that adds to the knowledge of the person receiving it, is known as **Information**.
- The smallest unit of information, a computer can understand and process, is known as **Bit**.
- The primary goal of computer is to process information that it receives and output the results. The process of control and alter information is known as **Processing**.
- Which number system computer used to store data and perform calculation?
Binary Number System.
- Computer Speed, Accuracy, Diligence, Storage Capability, Automation, Remembrance Power and

Versatility are the main **Characteristics of Computer**.

- Self Intelligence, Decision-Making power, Learning power, Self care, Fellings are the **Limitations of Computer**.
- A **mainframe computer** is a much larger computer that typically fills a room and may cost many hundreds or thousands of times as much as a personal computer. They are designed to perform large numbers of calculations for governments and large enterprises.
- **Read-only memory (ROM)** is a storage medium used in computers and other electronic devices. Data stored in ROM can only be modified slowly or with difficulty, or not at all. ROM is non-volatile and the contents are retained even after the power is switched off. It only allows reading. The types of ROM include PROM, EPROM and EEPROM.
- **Random Access Memory (RAM)**, allows the computer to store data for immediate for immediate manipulation and to keep track of what is currently being processed.

RAM is referred to as volatile memory and is lost when the power is turned off.

It allows reading and writing.

The two main types of RAM are static RAM and dynamic RAM.

- **SRAM** retains data as long as power is provided to the memory chip and need not be refreshed periodically. SRAM stands for **Static Random**
- The data on **DRAM** continues to move in and out of the memory as long as power is available and must be continually refreshed to maintain the data. DRAM stands for **Dynamic Random Access Memory**.
- **Primary memory** is computer memory that a processor or computer accesses first or directly. For example: RAM, and Cache Memory.
- **Secondary memory (or secondary storage)** is the slowest and cheapest form of memory. It cannot be processed directly by the CPU. Secondary memory devices include magnetic disks like hard drives and floppy disks, optical disks such as CDs and CDRoms, and magnetic tapes, which were the first forms of secondary memory.
- **Virtual memory** is memory on the hard disk that the CPU uses as an extended RAM.
- **Installation** is the process of copying software programs from secondary storage media to the hard disk.
- A central computer that holds collections of data and programs for many PCs, workstations and other computers is a **Server**.

GENERATIONS OF COMPUTER

- Which was the first general purpose computer, designed to handle both numeric and textual information? **Universal Automatic Computer (UNIVAC) (1951)**
- **First Generation (1940-1956) Vacuum Tubes:** The first computers used vacuum tubes for circuitry and magnetic drums for memory, and were often enormous, taking up entire rooms. The UNIVAC and ENIAC computers are examples of first-generation computing devices. In first generation of computer, this operating system allowed only one program to run at a time and a number of input jobs are grouped for processing. It is known as **Batch Processing**.
- **Second Generation (1956-1963) Transistors:** Transistors replaced vacuum tubes and ushered in the second generation of computers.

- **Third Generation (1964-1971) Integrated Circuits:**

The development of the integrated circuit was the hallmark of the third generation of computers. Transistors were miniaturized and placed on silicon chips, called semiconductors, which drastically increased the speed and efficiency of computers.

- **Fourth Generation (1971-Present) Microprocessors:**

The microprocessor brought the fourth generation of computers, as thousands of integrated circuits were built onto a single silicon chip.

What in the first generation filled an entire room could now fit in the palm of the hand

Fourth generation computers also saw the development of GUIs, the mouse and handheld devices

- **Fifth Generation (Present and Beyond) Artificial Intelligence:**

Fifth generation computing devices, based on artificial intelligence, are still in development, though there are some applications, such as voice recognition, that are being used today.

- In 1981 IBM introduced its first computer for the home user, and in 1984 Apple introduced the **Macintosh**.

COMPUTER ORGANISATION

- An **Arithmetic Logic Unit (ALU)** is a digital circuit that performs integer arithmetic and logical operations. The ALU is a fundamental building block of the central processing unit of a computer.
- **Control Unit** is responsible for controlling the overall operations of computer. It coordinates the sequence of execution of instructions and controls the overall functioning of the computer.
- The first computer architecture was introduced by **John Von Neumann (1970)**
- Personal computers use a number of chips mounted on a main circuit board called
- The CPU is fabricated as a single Integrated Circuit (IC) chip. It is also known as the **Microprocessor**.
- **Multiprocessing** is the use of two or more central processing units (CPUs) within a single computer system. The term also refers to the ability of a system to support more than one processor and/or the ability to allocate tasks between them.

- The organisation and interconnection of the various components of a computer system is known as **Computer Architecture**.
- A CPU can directly understand the **Machine Language**.

INPUT & OUTPUT DEVICES

- An **input device** is any peripheral (piece of computer hardware equipment) used to provide data and control signals to a computer. They are the devices that feed data into a computer. Examples of input devices include keyboards, mouse, scanners, digital cameras and joysticks.
- The keys include the letter keys (0, 1, 2, ..., 9; A, B, Z), which are generally laid out in the same style as in typewriters are known as **Alphanumeric Keys**.
- 'Caps lock' and 'Num lock' keys are called as **Toggle Keys** because when pressed, they change their status from one state to another.
- **Numeric Keypad** is a keypad located on the right hand side of the keyboard. It consists of digits and mathematical operators.
- A **Modifier key** is a special key (or combination) on a computer keyboard that temporarily modifies the normal action of another key when pressed together. By themselves, modifier keys usually do nothing; that is, pressing any of the Shift, Alt, or Ctrl keys alone does not (generally) trigger any action from the computer.
- A **Mouse** is the most popular input device which is used today for interactive processing and for the one line entry of data for batch processing.
- **Drag and Drop** refers to the action of clicking and holding down the mouse button, while moving the mouse and then releasing the mouse button. The first computer mouse was invented by **Douglas Engelbart**.
- **Joystick** is the device that moves in all directions and controls the movement of a pointer.
- A **Touch Screen** is a type of display screen device that is placed on the computer monitor to allow direct selection or activation of the computer when the user touches the screen.
- **Light Pen** is the pen shaped device, which can sense light and is used to point at spots on a video screen.
- A technology enables a high-speed reading of large quantities of data and transferring these data to the computer without using a keyboard. It is referred as **Optical Mark Reader (OMR)**. It uses a beam of light that is reflected on the paper with marks, to capture presence and absence of marks.
- MICR reads the characters by examining their shapes in a matrix form and the information is then passed on to the computer. **MICR** stands for **Magnetic Ink Character Reader**. It provides a high level of security and is therefore used by the banking industry for faster processing of the cheques
- It is a machine readable code, which is represented by parallel vertical lines with varying widths. For reading these bar-coded data, a device is used, which is known as a **Bar Code Reader (BCR)**
- **Optical Character Recognition (OCR)** is used to scan the document containing text. It is the mechanical or electronic conversion of scanned or photographed images of typewritten or printed text into machine-encoded/computer-readable text.
- A **keyboard** is a typewriter-style device, which uses an arrangement of buttons or keys, to act as mechanical levers or electronic switches. Most of the commonly available personal computers have a keyboard, popularly known as **Qwerty**.
- The keys labelled F1 to F12 on the keyboard are called **Function Keys**.
- An **output device** is any piece of computer hardware equipment used to communicate the results of data processing carried out by an information processing system (such as a computer) which converts the electronically generated information into human-readable form
- The printed form of output is referred as **Hard Copy**.
- The form of output displayed on the screen is referred as **Soft Copy**.

- The device that prints information from the computer onto the paper is **Printer**.
- Pages Per Minute (PPM) is the unit used to count the speed of the printer.
- On the basis of technology, printers are categorised into **Impact and Non- Impact Printers**.
- **Impact printers** create an image by using some mechanism to physically press an inked ribbon against the page, causing the ink to be deposited on the page in the shape desired.
Examples of Impact Printers are Character Printers and Dot Matrix Printers.
- **Non - Impact Printers** do not touch the paper when creating an image.
Examples of Non - Impact Printers are Inkjet printers, Laser printers, Solid ink printers, Dye-sublimation, Thermal wax printers, Thermal autochrome printers.
- A pen based output device, attached to a computer for making vector graphics, that is, images created by a series of many straight lines is known as **Plotters**.
- The number of pixels displayed on a screen is known as **Resolution**.
- A **Monitor** is a TV-like display attached to the computer on which the output can be displayed and viewed. It can either be a monochrome display or a colour display.

HARDWARE AND SOFTWARE BASICS

- The set of instructions, which control the sequence of operations, are known as **Program**. It is a sequence of instructions, written to perform a specified task with a computer.
- A **Software** instructs the computer what to do and how to do it. It is a set of instructions that tells the computer about the tasks to be performed and how these tasks are to be performed.
- One or more defects or problems that prevent the software from working as intended or working at all is a **Bug**.
- Software that contributes to the control and performance of the computer system and permits the user to use the system more conveniently is termed as **System Software**.
- **Antivirus Software** is used to scan the hard disk to remove the virus from them.
- The assembly language program is translated into machine code by a separate program known as an **Assembler**.
- A **Backup**, or the process of backing up, refers to the copying and archiving of computer data so it may be used to restore the original after a data loss event. It contains a copy of every program data and system file on a computer.
- An **Operating System** controls the way in which the computer system functions and provides a means by which users can interact with the computer.
- Loading of the Operating System is known as **Bootting**. Restarting a computer that is already on, is referred to as **Warm Bootting**.
- **Basic Input - Output System (BIOS)** is the part of operating system that manages the essential peripherals such as the keyboard, screen, disk drives and parallel and serial ports.
- An **Integrated Software** is a single application that combines major features of several types of application.
- An **Application Software** is the program that makes the computer useful to the users.
- **Computer hardware** is the collection of physical elements that constitutes a computer system.
- **Computer hardware** refers to the physical parts or components of a computer such as the monitor, mouse, keyboard, computer data storage, hard drive disk (HDD), system unit (graphic cards, sound cards, memory, motherboard and chips), etc. all of which are physical objects that can be touched.
- The **motherboard** is the main component of computer. It is a large rectangular board with integrated circuitry that connects the other parts of the computer including the CPU, the RAM, the disk drives(CD, DVD, hard disk, or any others) as well as any peripherals connected via the ports or the expansion slots.
- Here are some common individual computer hardware components that you'll often find inside a modern computer case:
 - ≈ Motherboard
 - ≈ Central Processing Unit (CPU)
 - ≈ Random Access Memory (RAM)
 - ≈ Power Supply
 - ≈ Video Card
 - ≈ Hard Drive (HDD)
 - ≈ Solid-State Drive (SSD)
 - ≈ Optical Drive (e.g. BD/DVD/CD drive)
 - ≈ Card Reader (SD/SDHC, CF, etc.)
- Here are some common hardware that you might find connected to the outside of a computer:
 - ≈ Monitor
 - ≈ Keyboard

- ≈ Mouse
- ≈ Battery Backup (UPS)
- ≈ Printer
- ≈ Speakers
- Here are some less common computer hardware, (either because these pieces are now usually integrated into other devices or because they've been replaced with newer technology):
 - ≈ Sound Card
 - ≈ Network Interface Card (NIC)
 - ≈ Expansion Card (Firewire, USB, Thunderbolt, etc.)
 - ≈ Hard Drive Controller Card
 - ≈ Analog Modem
 - ≈ Scanner
 - ≈ Floppy Disk Drive
 - ≈ Joystick
 - ≈ Webcam
 - ≈ Microphone
 - ≈ Tape Drive
 - ≈ Zip Drive
- The following hardware are referred to as network hardware and various pieces are often part of a home or business network:
 - ≈ Digital Modem (e.g. Cable Modem, DSL Modem, etc.)
 - ≈ Router
 - ≈ Network Switch
 - ≈ Access Point
 - ≈ Repeater
 - ≈ Bridge
 - ≈ Print Server
 - ≈ Firewall

INTERNET

- The **Internet** is a global system of interconnected computer networks that use the standard Internet protocol suite (TCP/IP) to link several billion devices worldwide.
- It is a **network of networks** that consists of millions of private, public, academic, business, and government networks, of local to global scope, that are linked by a broad array of electronic, wireless, and optical networking technologies.
- The **World Wide Web** (abbreviated as WWW or W3, commonly known as the Web) is a system of interlinked hypertext documents that are accessed via the Internet.
- A **Website**, is a set of related web pages served from a single web domain.
- A **Home page, index page, or main page** is a page on a website. A home page usually refers to:
 - ≈ The initial or main web page of a website, sometimes called the "front page" (by analogy with newspapers).
 - ≈ The first page that appears upon opening a web browser program, which is also sometimes called the start page. This 'start page' can be a website or it can be a page with various browser functions such as the visual display of websites that are often visited in the web browser.
 - ≈ The web page or local file that automatically loads when a web browser starts or when the browser's "home" button is pressed; this is also called a "home page". The user can specify the URL of the page to be loaded, or alternatively choose e.g. to re-load the most recent web page browsed.
 - ≈ A personal web page, for example at a web hosting service or a university web site, that typically is stored in the home directory of the user.
- A **Hyperlink** is a reference to data that the reader can directly follow either by clicking or by hovering or that is followed automatically
- A **web browser** (commonly referred to as a browser) is a software application for retrieving, presenting and traversing information resources on the World Wide Web.
- The **Uniform Resource Locator**, abbreviated as URL is a specific character string that constitutes a reference to a resource. In most web browsers, the URL of a web page is displayed on top inside an address bar.
An example of a typical URL would be "http://www.bankersadda.com".
- **Downloading** means to receive data to a local system from a remote system, or to initiate such a data transfer
- **Uploading** refers to the sending of data from a local system to a remote system such as a server or another client with the intent that the remote system should store a copy of the data being transferred
- An **Internet Protocol address** (also known as an **IP address**) is a numerical label assigned to each

device (e.g., computer, printer) participating in a computer network.

It acts as an identifier for a computer. It is a unique address for every computer.

- An **email attachment** is a computer file sent along with an email message. One or more files can be attached to any email message, and be sent along with it to the recipient.
- **Hotmail** was co - founded by an Indian American entrepreneur Sabeer Bhatia along with Jack Smith in July of 1996
- **CC (Carbon Copy)** in e - mail indicates those who are to receive a copy of a message addressed primarily to another. The list of CCed recipients is visible to all other recipients of the message.
- An additional **BCC (blind carbon copy)** field is available for hidden notification; recipients listed in the BCC field receive a copy of the message, but are not shown on any other recipient's copy (including other BCC recipients)
- The **Drafts folder** retains copies of messages that you have started but are not yet ready to send.
- The first email was sent by **Ray Tomlinson** to himself in 1971.

Domain Types	
Type	Description
Com	Commercial and for profit organizations
Edu	Education Provider, college, Universities
Gov	Federal Government Agencies
Mil	US military sites
Net	Internet infrastructure and service providers
Org	Miscellaneous and non-profit organizations

INFORMATION SECURITY

- A **Computer Virus** is a computer program or code that can replicate itself and spread from one computer system to another system.
A computer virus has the capacity to corrupt or to delete data on your computer and it can utilize an e-mail program to spread the virus to other computer systems.
In the worst case scenario, it can even delete everything on your hard disk.
The purpose of it to disrupt the operation of the computer or the program.
- Some examples of Computer Virus are Trojan viruses. stealth viruses, worms, malware (malicious software), Disk Killer, Stone virus, Sunday, Cascade, Nuclear, Word Concept, etc.
- **Malware**, short for **malicious software**, is any software used to disrupt computer operation, gather sensitive information, or gain access to private computer systems. It can appear in the form of executable code, scripts, active content, and other software.
- **Antivirus Software** is used to scan the hard disk to remove the virus from them.
Some of the famous anti - viruses available are Avast!, Norton, Avira, Kaspersky, AVG, etc.
- The **Creeper virus** was the first virus detected on ARPANET, in the early 1970s.
- A person who* uses his or her expertise to gain access to other people's computers to get information illegally or do damage is a **Hacker**.
- **Authorization** is the function of specifying access rights to resources related to information security and computer security in general and to access control in particular. More formally, "to authorize" is to define an access policy.
- **Authentication** is the act of confirming the truth of an attribute of a single piece of data or entity. It might involve confirming the identity of a person by validating their identity documents, verifying the validity of a website with a digital certificate, tracing the age of an artifact by carbon dating, or ensuring that a product is what its packaging and labeling claim to be. In other words, Authentication often involves verifying the validity of at least one form of identification.
- **Phishing** is the attempt to acquire sensitive information such as usernames, passwords, and credit card details (and sometimes, indirectly,

money) by masquerading as a trustworthy entity in an electronic communication.

- A **Spoofing attack** is a situation in which one person or program successfully represents oneself as another by falsifying data and thereby gaining an illegitimate advantage.
- **Browser Sniffing** is a set of techniques used in websites and web applications in order to determine the web browser that a visitor is using, and to serve browser-appropriate content to the visitor.

MICROSOFT OFFICE

- **Microsoft Office** is an office suite of desktop applications, servers and services for the Microsoft Windows and OS X operating systems. It was first announced by **Bill Gates of Microsoft** on August 1, 1988 at COMDEX in Las Vegas.
- MS office primarily includes Word, Excel, PowerPoint, Access and Outlook. It also includes OneNote, Groove, InfoPath and Publisher.

MS WORD

- Microsoft Word is a word processor developed by Microsoft.
- It is used for creating, editing, formatting, storing, retrieving and printing of a text document.
- Microsoft Word's native file formats are denoted either by a .doc or .docx file extension.

Function Keys	
F1	Get help or visit Microsoft office Online.
F2	Move text or graphic.
F4	Repeat the last action
F5	Choose the Go To command (Home tab).
F6	Go to the nest pane or frame.
F7	Choose the spelling command (Review tab)
F8	Extend a selection
F9	Update the selected fields
F10	Show key tips
F11	Go to the nest field
F12	Choose the Save As command (Microsoft Office Button).

- A **Cursor** is an indicator used to show the position on a computer monitor or other display device that will respond to input from a text input or pointing device.
- To create a document, we use **New command** at the menu.
- **Save as** is used to save a document for the first time. It is also used to change the destination of the saved file in the computer.
- **Print Preview** is used to see the document before the printout is taken.
- **Cut and Paste** options are used to move the data from one part of the document to another.

Control Keys + Function keys	
Ctrl+F2	Choose the print preview command (Microsoft office Button)
Ctrl+F3	Cut on the spike
Ctrl+F4	Close the window
Ctrl+F6	Go to the next window
Ctrl+F9	Insert an empty field
Ctrl+F10	Maximise the document window
Ctrl+F11	Lock a field
Ctrl+F12	Choose the Open command (Microsoft Office Button)

- **Portrait and Landscape** options are available in **Orientation** category of Page Setup.
- **Alignment** refers to the position of text between the margins.
- **Auto complete** is a feature in word that automatically completes the spelling of days of the week and months of the year that have more than five letters in their names.

Basic Keys Common Tasks	
Ctrl + Shift + Spacebar	Create a non breaking space
Ctrl + B	Make letters bold
Ctrl + I	Make letters italic
Ctrl + U	Make letters underline
Ctrl + Shift + <	Decrease font size one value
Ctrl + Shift + >	Increase the font size one value
Ctrl + [Increase the font size by 1 point
Ctrl +]	Decrease the font size by 1 point
Ctrl + Spacebar	Remove paragraph or character formatting.
Ctrl + C	Copy the selected text or object
Ctrl + X	Cut the selected text or object
Ctrl + V	Paste text or an object
Ctrl + Alt + V	Paste special
Ctrl + Shift + V	Paste formatting only
Ctrl + Z	Undo the last action
Ctrl + Y	Redo the last action

- **Header and Footer** option is used to display information such as title and page number of the document.
- The bar at the top of the window that bears the name of the window, is known as **Title Bar**.
- A screen element of MS Word that is usually located below the title bar that provides categorised option, is called **Menu Bar**.
- **Auto Correct** in word automatically corrects certain spelling, typing, capitalisation or grammar errors.
- **Thesaurus** is used for finding a synonym for a word in the document.
- **WordArt** enables drawing text in a Microsoft Word document such as a title, watermark, or other text, with graphical effects such as skewing, shadowing, rotating, stretching in a variety of shapes and colors and even including three-dimensional effects.
- Word has extensive lists of **bullets and numbering** features used for tables, lists, pages, chapters, headers, footnotes, and tables of content.

MS EXCEL

- **Microsoft Excel** is a spreadsheet application developed by Microsoft for Microsoft Windows and Mac OS.

- It features calculation, graphing tools, pivot tables, and a macro programming language called Visual Basic for Applications.
- The intersection of a row and column is called a **Cell**.
- The cell in which we are currently working is known as **Active Cell**.
- Microsoft Excel's native file formats are denoted either by a .xls or .xlsx file extension.
- A Worksheet is made of columns and rows, wherein columns run **Vertically** and rows run **Horizontally**.
- Up to Excel 2003, the standard amount of columns has been 256 and 65,536 rows.
- Excel 2007 onwards, the maximum number of rows per worksheet increased to 1,048,576 and the number of columns increased to 16,384.
- Microsoft Excel has the basic features of all spreadsheets, using a grid of cells arranged in numbered rows and letter-named columns to organize data manipulations like arithmetic operations
- The letter and number of the intersecting column and row is the **Cell Address**.
- Short cut key to insert a new worksheet in MS-Excel is **ALT + Shift + F1** or **F11**.
- **Sheet tab** is the tab at the bottom of the worksheet window that displays the name of the worksheet.
- A Microsoft office document that contains one or more worksheets is known as a **Workbook**.

Shortcut Keys of MS-Excel	
Key	Description
F2	<i>Edit the selected cell</i>
F5	<i>Go to a specific cell</i>
F7	<i>Spell check selected text and/or document</i>
F11	<i>Create chart</i>
Ctrl + Shift + ;	<i>Enter the current time</i>
Ctrl + ;	<i>Enter the current date</i>
Shift + F3	<i>Open the Excel formula window</i>
Shift + F5	<i>Bring up search box.</i>
Ctrl + A	<i>Select all contents of the worksheet</i>
Ctrl + B	<i>Bold highlighted selection</i>
Ctrl + I	<i>Italic highlighted selection</i>
Ctrl + U	<i>Underline highlighted selection</i>
Ctrl + P	<i>Bring up the print dialog box to begin printing</i>
Ctrl + Z	<i>Undo last action</i>
Ctrl + F9	<i>Minimise current workbook</i>
Ctrl + F10	<i>Maximise currently selected workbook</i>
Ctrl + F6	<i>Switch between open workbooks/window</i>
Ctrl + page up	<i>Move between Excel worksheet in the same Excel document.</i>
Ctrl + Page Down	<i>Move between Excel worksheets in the same Excel document</i>
Ctrl + Tab	<i>Move between two or more open Excel files</i>
Alt + =	<i>Create a formula to sum all of the above cells</i>
Ctrl + '	<i>Insert the value of the above cell into cell currently selected.</i>
Ctrl + Arrow key	<i>Move to next section to text</i>
Ctrl + Space	<i>Select entire column</i>
Shift + Space	<i>Select entire row</i>

- Microsoft PowerPoint is a slide show presentation program developed by Microsoft.
- PowerPoint presentations consist of a number of individual pages or "**slides**".
- Microsoft PowerPoint's native file formats are denoted either by a .ppt or .pptx file extension.

- PowerPoint provides three types of movements:
 - ≈ Entrance, emphasis, and exit of elements on a slide itself are controlled by what PowerPoint calls **Custom Animations**.
 - ≈ **Transitions**, on the other hand, are movements between slides. These can be animated in a variety of ways.
 - ≈ **Custom animation** can be used to create small story boards by animating pictures to enter, exit or move.

SOME IMPORTANT ABBREVIATIONS

A

- **AI** – Artificial intelligence
- **ALGOL** – Algorithmic Language
- **ARP** – Address resolution Protocol
- **ASCII** – American Standard Code for Information Interchange

B

- **BINAC** - Binary Automatic Computer
- **BCC** – Blind Carbon Copy
- **Bin** – Binary
- **BASIC** - Beginner's All-purpose Symbollic Instruction Code
- **BIOS** – Basic Input Output System
- **Bit** – Binary Digit
- **BSNL** – Bharat Sanchar Nigam Limited

C

- **CC** – Carbon Copy
- **CAD** – Computer Aided Design
- **COBOL** – Common Business Oriented Language
- **CD** – Compact Disc
- **CRT** – Cathode Ray Tube
- **CDR** – Compact Disc Recordable
- **CDROM** – Compact Disc Read Only Memory
- **CDRW** – Compact Disc Rewritable
- **CDR/W** – Compact Disk Raed/Write

D

- **DBA** – Data Base Administrator
- **DBMS** – Data Base Management System
- **DNS** – Domain Name System
- **DPI** – Dots Per Inch
- **DRAM** – Dynamic Random Access Memory
- **DVD** – Digital Video Disc/Digital Versatile Disc
- **DVDR** – DVD Recordable
- **DVDRW** – DVD Read Only Memory
- **DVDRW** – DVD Rewritable
- **DVR** – Digital Video Recorder
- **DOS** – Disk Operating System

E

- **EBCDIC** – Extended Binary Coded Decimal Interchange Code
- **e-Commerce** – Electronic Commerce
- **EDP** – Electronic Data Processing
- **EEPROM** – Electronically Erasable Programmable Read Only Memory
- **ELM/e-Mail** – Electronic Mail
- **ENIAC** – Electronic Numerical Integrator and Computer
- **EOF** – End Of File
- **EPROM** – Erasable Programmable Read Only Memory
- **EXE** – Executable

F

- **FAX** – Far Away Xerox/ facsimile
- **FDC** – Floppy Disk Controller
- **FDD** – Floppy Disk Drive
- **FORTTRAN** – Formula Translation
- **FS** – File System
- **FTP** – File Transfer Protocol

G

- **Gb** – Gigabit
- **GB** – Gigabyte
- **GIF** – Graphics Interchange Format
- **GSM** – Global System for Mobile Communication

H

- **HDD** – Hard Disk Drive
- **HP** – Hewlett Packard
- **HTML** – Hyper Text Markup Language
- **HTTP** – Hyper Text Transfer Protocol

I

- **IBM** – International Business Machine
- **IM** – Instant Message
- **IMAP** – Internet Message Access Protocol
- **ISP** – Internet Service Provider

J

- **JPEG** – Joint Photographic Experts Group

K

- **Kb** – Kilobit
- **KB** – Kilobyte
- **KHz** – Kilohertz
- **Kbps** – Kilobit Per Second

L

- **LCD** – Liquid Crystal Display
- **LED** – Light Emitting Diode
- **LPI** – Lines Per Inch
- **LIS** – Large Scale Integration

M

- **Mb** – Megabit
- **MB** – Megabyte
- **MPEG** – Moving Picture Experts Group
- **MMS** – Multimedia Message Service
- **MICR** – Magnetic Ink Character reader
- **MIPS** – Million Instructions Per Second

N

- **NIC** – Network Interface Card
- **NOS** – Network Operating System

O

- **OMR** – Optical Mark Reader
- **OOP** – Object Oriented Programming
- **OSS** – Open Source Software

P

- **PAN** – Personal Area Network
- **PC** – Personal Computer
- **PDA** – Personal Digital Assistant
- **PDF** – Portable Document Format
- **POS** – Point Of Sale
- **PNG** – Portable Network Graphics
- **PPM** – Pages Per Minute
- **PPP** – Point-to-Point Protocol

- **PROM** – Programmable Read Only Memory
- **PSTN** – Public Switched Telephone Network
- **POST** – Power On Self Test
- **PING** – Packet Internet Gopher

R

- **RAM** – Random Access Memory
- **RDBMS** – Relational Data Base Management System
- **RIP** – Routing Information Protocol
- **RTF** – Rich Text Format

S

- **SMTP** – Simple Mail Transfer Protocol
- **SQL** – Structured Query Language
- **SRAM** – Synchronous Random Access Memory
- **SNMP** – Simple Network Management Protocol
- **SIM** – Subscriber Identification Module

T

- **TCP** – Transmission Control Protocol
- **TB** – Tera Bytes

U

- **UPS** – Uninterrupted Power Supply
- **URI** – Uniform Resource Identifier
- **URL** – Uniform Resource Locator
- **USB** – Uniform Serial Bus
- **ULSI** – Ultra Large Scale Integration
- **UNIVAC** – Universal Automatic Computer

V

- **VAR** – Variable
- **VGA** – Video Graphics Array
- **VSNL** – Videsh Sanchar Nigam Limited
- **VDU** – Visual Display Unit

W

- **Wi-Fi** – Wireless Fidelity
- **WLAN** – Wireless Local Area Network
- **WPA** – Wi-Fi Protected Access
- **WWW** – World Wide Web
- **WORM** – Write Once Read Memory

X

- **XHTML** – eXtensible Hyper text Markup Language
- **XML** – eXtensible Markup language

Z

- **ZB** – Zeta Byte

GLOSSARY

A

- **Access time** - The amount of time it takes for requested information to be delivered from disks and memory.
- **Antivirus software** - A program designed to look for and destroy viruses that may infect the memory of a computer or files stored on a computer.
- **Artificial intelligence (AI)** - Computer systems that attempt to imitate human processes for analyzing and solving problems.
- **Accumulator** - A local storage area called a Register, in which the result of an arithmetic or logic operation is formed.

B

- **BIT** - It is basic unit of computers .It has two values 1 & 0 only.
- **BYTE** - Combination of 8 Bits.
- **Basic Input Output System (BIOS)** - Also known as ROM BIOS. It provides a abstraction layer for the hardware, i.e., a consistent way for application programs and operating system to interact with input/output devices.
- **Bug** - A software bug is an error, flaw, failure, or fault in a computer program or system produces an incorrect or unexpected result.
- **Bus** - A pathway along which electronic signals travel between the components of a computer system.

C

- **Cookie** - A packet of information that travels between a browser and the web server.

- **Crash** - Your computer or application no longer works correctly and so you lose all the work you've done since the last time you saved.
- **Command** - An instruction that causes a program or computer to perform a function.
- **Cache** - It is a memory storage area that keeps frequent use data readily available to the computer so that the computer does not retrieve them from slow storage devices.
- **Clock Speed** - The speed of computer is measured in clock speed. High clock speed is synonymous with high processing capability. It is measured in Megahertz (MHz).
- **Column** - A vertical block of cells in a table or spreadsheet.

D

- **Delete** - To remove an item of data from a file or to remove a file from the disk.
- **Debugging** - Locating and eliminating defects in a program.
- **Desktop** - The electronic work area on a display screen.
- **Dots Per Inch (DPI)** - It is defined as the measure of the resolution of a printer and scanner, or monitor.
- **Domain Name** - A unique name that identifies a particular website and represents the name of the server where the web pages reside.

E

- **Edit** - To make certain changes in existing data.
- **Ethernet Card** - A network adapter that enables a computer to connect to an ethernet.

F

- **Fax** - A shortened form of the word facsimile. A copy of a document transmitted electronically from one machine to another.
- **File transfer protocol (FTP)** - A set of guidelines or standards that establish the format in which files can be transmitted from one computer to another.
- **Firewall** - A security system usually consisting of hardware and software that prevents unauthorized persons from accessing certain parts of a program, database, or network.
- **Flash Memory** - It is a type of non-volatile computer storage chip that can be electrically erased and reprogrammed. It was developed by EEPROM.

G

- **Gateway** - A machine that links two networks using different protocols.
- **Gigabyte** - A measurement of the storage capacity of a device. One gigabyte represents 1024 megabytes.
- **Google** - search engine on the web.
- **Gopher** - A protocol used for locating and transferring information on the internet. It is an internet search tool that allows users to access textual information.
- **GUI** - Graphical User Interface uses icons and menus to carry out commands such as opening files, delete files, move files etc..
- **Graphic Interchange Format (GIF)** - A simple file format for pictures and photographs, that are compressed so that they can be sent quickly.

H

- **Hard copy** - Text or graphics printed on paper; also called a printout.
- **Hard disk** - A rigid type of magnetic medium that can store large amounts of information.
- **Hyperlink** - An image or portion of text on a webpage which is linked to another webpage.
- **Hub** - A network device that connects multiple computers on a LAN so that they can communicate with another network and the internet.
- **Header** - Repetitive information that appears at the top (the head) of every page of a document.
- **Hypertext transfer protocol (HTTP)** - The protocol used on the World Wide Web that permits Web clients (Web browsers) to communicate with Web servers

I

- **Icons** - In a graphical user interface (GUI), a small, pictorial, on screen representation of an object, such as a document, program, folder or disk drive.
- **Instant messaging (IM)** - A chat program that lets people communicate over the Internet in real time.
- **Internet protocol (IP) address** - A unique set of numbers that identifies a computer over a network.
- **Internet service provider (ISP)** - An organization that provides access to the Internet for a fee.
- **Intranet** - A private network established by an organization for the exclusive use of its employees. Firewalls prevent outsiders from gaining access to an organization's intranet

J

- **JPEG** - Joint Photographic Experts Group. A format for storing complex graphics in compressed form.
- **Justification** - Aligning lines of text at the left margin, the right margin, both margins, or the center. Text aligned at both margins is considered fully justified.

K

- **Keyboard** - The device used to enter information into a computer.
- **Kilobyte** - A measurement of the storage capacity of a device. One kilobyte represents 1024 bytes.

L

- **LAN** - A local area network (LAN) is a computer network that interconnects computers within a limited area such as a home, school, computer laboratory, or office building, using network media.
- **Laptop computer** - A portable computer. Also known as a notebook computer.
- **Landscape Orientation** - The positioning of the page so that the information is printed across the long dimension of the page.
- **Liveware** - It is a term to describe the human system, opposed to hardware or software in a computer.

M

- **Macro virus** - A type of virus that attaches itself to documents or word processing templates.
- **Malware** - Software that disrupts normal computer functions or sends a user's personal data without the user's authorization.
- **Memory** - The part of a computer that stores information.
- **Memory Cell** - A circuit in memory that represents a single bit of information.
- **Mass Storage** - Storage systems that provide access to hundreds of billions of bytes of stored data. They are often referred to as Archival Storage because of the very large volumes of historical or backup data they can store.
- **MIPS** - An acronym derived from millions of instructions per second. Used to measure the speed of a processor.
- **Morphing** - The transformation of one image into another image.
- **Mobile Commerce (m-Commerce)** - A form of e-commerce that has the ability to conduct monetary transactions via a mobile device such as a cell phone.
- **Mozilla** - a web browser and successor to Netscape Communicator.

- **Multitasking** - The ability of a computer to execute more than one program at a time.

N

- **NIBBLE** - Combination of four bits.
- **Network** - A system of interconnected computers. They are of three types i. e. LAN, MAN, WAN.
- **Network Interface Card (NIC)** - This is a part of the computer that allows it to talk to other computers via a network protocol like TCP/IP.
- **Node** - A computer which is attached to the network. Each node has its own address on the network so that it can be uniquely identified and can communicate with other nodes on the same or different network.

O

- **Offline** - Refers to the state in which a computer is temporarily or permanently unable to communicate with another computer.
- **Online** - Refers to the state in which a computer is ready to communicate with other computers.
- **Open source software** - Software that makes the underlying source code available to all users at no charge.
- **Operating system (OS)** - Software that manages the internal functions and controls the operations of a computer.

P

- **Palmtop computer** - A portable computer smaller than a notebook for laptop computer that fits on the palm of your hand. Also called a handheld computer.
- **Password** - A user's secret identification code, required to access stored material. A procedure intended to prevent information from being accessed by unauthorized persons.
- **Piracy** - The illegal copying of software or other creative works.
- **Peripherals** - A connectable device that has an auxiliary function outside the permanent system configuration such as plotters, printers and graphic displays.
- **Phishing** - A type of computer fraud that tries to trick users into revealing their passwords and other confidential information.
- **Pixel** - A smallest picture element of a digital image. The smaller the pixels, the higher the resolution.
- **Port** - An electrical connection on the computer into which a cable can be plugged so that the computer

can communicate with other devices such as printer or modem.

- **Protocol** - A set of rules and regulations that coordinates the exchange of information over the network.
- **Portrait orientation** - Positioning paper so that information is printed across the short dimension of the paper.

Q

- **Query** - An alternate pipe form of operating system, which handles data in the form of messages rather than bytes.
- **Qwerty** - It is one of the standard computer keyboard, with the character Q, W, E, R, T, Y on the top row of letters on the keyboard.

R

- **Response time** - The time a computer takes to execute a command.
- **Retrieve** - To call up information from memory or storage so that it can be processed in some way.
- **Record** - A collection of all the information pertaining to a particular subject.
- **Row** - A horizontal block of cells in a table or spreadsheet.
- **Resolution** - Measurement of the degree of sharpness of a displayed image. It is defined as number of pixels per square inch on a computer generated display.
- **Register** - A temporary storage unit for quick, direct accessibility of a small amount of data for processing.

S

- **Save As** - Give the file a name and/or store the file in a certain place.
- **Save** - Tell the computer to create a file on disk that has the information you've put into the document.
- **Scroll bar** - Allows you to move around through your document.
- **Shut down** - To quit all applications and turn off the computer.
- **Spam** - unwanted repetitious messages, such as unsolicited bulk e-mail.
- **Scanner** - An input device that can copy a printed page into a computer's memory, thus doing away with the need to type the copy.
- **Screen saver** - A program that changes the screen display while the user is away from the computer.

- **Server** - A computer that manages a shared resources and provides a set of shared user services to the clients.
- **Search Engine** - Software that searches, gathers and identifies information from a database based on an index, keywords or titles.
- **Spam** - Unwanted repetitious messages, such as unsolicited bulk e-mail.
- **Soft copy** - Information shown on the display screen.
- **Sort** - To arrange fields, records, or files in a predetermined sequence.
- **Surfing the Net** - Browsing through various Web sites on the Internet in search of interesting things.

T

- **Trash** - Place where you put files and folders that you want to delete or get rid of.
- **Topology** - The structure of the network, including physical connections such as wiring schemes and logical interactions between network devices.
- **Track** - A ring on a disk where data can be written.
- **Telnet** - A protocol for remote computing on the internet that allows a computer to act as a remote terminal on another machine, anywhere on the internet.
- **Touchpad** - The device on a laptop computer that takes the place of a mouse.
- **Touch screen technology** - The technology that permits a user to perform a function simply by touching the screen on an appropriate spot.

U

- **Uninterrupted Power Supply (UPS)** - A Battery powered backup system that provides enough electricity to a computer during a power outage so that a user can save files before shutting down the computer.
- **Universal Serial Bus (USB)** - A common standard for connecting multiple peripherals to a computer as needed.
- **Upload** - To transfer information from a client computer to a host computer.

V

- **Virus** - A piece of computer code designed as a prank or malicious act to spread from one computer to another by attaching itself to other programs.

W

- **WAP** - Wireless Application Protocol is a specification for a set of communication protocol used to allow wireless devices to access the internet and other utilities.
- **Web browser** - Software that permits a user with a click of a mouse to locate, display, and download text, video, audio, and graphics stored in a host computer on the Web.
The most common Web browsers now in use are Internet Explorer, Google Chrome and Mozilla Firefox.
- **Web site** - One or more related pages created by an individual or an organization and posted on the World Wide Web.
- **Wi-Fi** **Wireless fidelity** - A process that permits high-speed wireless transmission of data.
- **Word processing** - The electronic process of creating, formatting, editing, proofreading, and printing documents.
- **Workstation** - A desktop computer that runs applications and serves as an access point in a local area network.

Z

- **Zombie** - A computer that has been hijacked by a cracker without the owner's knowledge and used to perform malicious tasks on the Internet.