

COMPUTER FUNDAMENTALS

FUNDAMENTALS OF COMPUTERS (LIKE
HARDWARE, SOFTWARE, INPUT/OUTPUT DEVICES,

What is Computer?

A computer is an electronic device that follows our instructions. It is a machine capable of storing, retrieving, and arranging information, performing calculations, and controlling other machines.

Full Form of Computer?

C – Common
O-- Operating
M-- Machine
P-- Particularly
U-- Used
T-- Technology
E-- Education
R-- Research

Invention by Charles Babbage's



Some examples of Computers.

Types of Computer



Microcomputer



Minicomputer



Personal computer



Supercomputer



Laptop



Tablet

What are the types of Computers?

There are three types of Computer.

1. Digital Computer
2. Analog Computer
3. Hybrid Computer

What is Digital computer?

The Digital Computer which have their own display are know as Digital Computer. Examples: - Desktop , laptop, tablet, digital camera , palm top, calculator, mobile phone ..etc.

What is Analog Computer?

The analog computer which don't have display are known as Analog Computer. Examples: - Mobile phone Tower, Radar, Satellite , setup box ..etc.

What is Hybrid Computer?

The analog setup which are controlled through the digital setup are Known as hybrid Computers. Examples: - Industrial Computer, ATM(automatic teller machine) , Super Computer ..etc.

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What is Personal Computer?

A computer designed for use by one person at a time.
Examples: - Desktop, Laptop, Palmtop, Tab...etc.

Some Examples:-



Desktop



Tablet



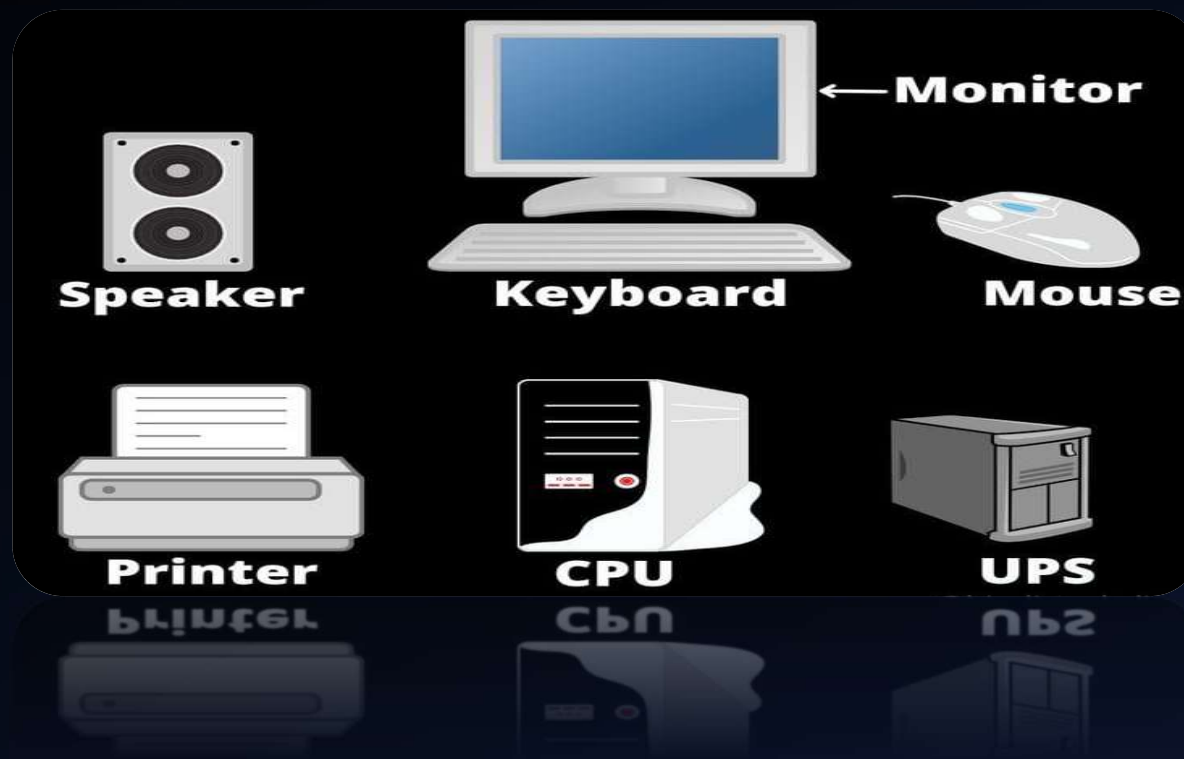
Laptop

Desktop



A COMPUTER SUITABLE FOR USE AT AN ORDINARY DESK

Parts Of Computer



Monitor

Monitor is the displaying unit of our PC

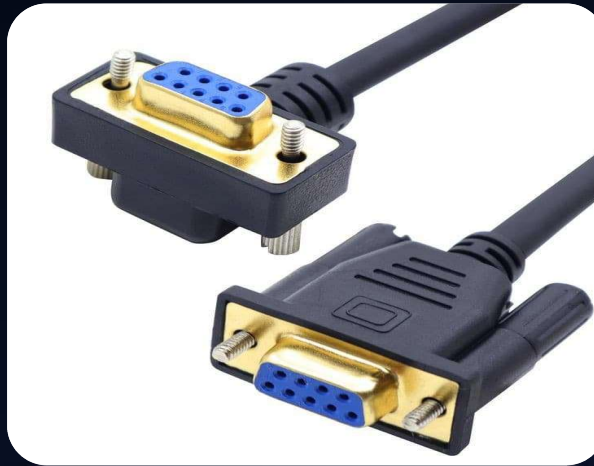
Types of Computer

1. CRT (Cathode Ray Tube)
2. LCD (Liquid Crystal Display)
3. LED (Light Emitting Diode)



Monitors Contains Three types of wires.

1. Power Cable (Supply Electricity to Monitor)
2. VGA (Video Graphics Array) Takes information from CPU and supply it to monitor
3. HDMI (High-Definition Multimedia Interface.)



MOUSE

Mouse is a pointing device to operate pointer.

Types of Mouse:-

1. Wire mouse
2. Wireless mouse



MOUSE BUTTONS

- I. Left Click (To open any file)
- II. Right Click (To open the option) Open, Delete, Rename, Properties.
- III. Scroll
 - a.) Zoom in & Zoom Out
 - b.) Page up & Page down
 - c.) Icon Size small & Large
 - d.) Increase & Decrease Volume

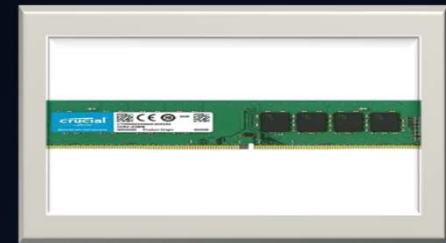
UPS: -

(UNINTERRUPTIBLE POWER SUPPLY) It is a device that allows your computer to keep running for at least a short time when the primary power source is lost. It also provides protection from power surges.



RAM: -

RANDOM ACCESS MEMORY It is the temporary Memory of the Computer



HARD DISK: -

Rigid non-removable magnetic disk with a large data storage capacity.



DVD.DRIVER (An optical disk drive that reads and writes all C.D. and D.V.D.



Types Of Disk

CD	Compact Disk	700 MB
DVD	Digital Video Disk	4.7 GB
BRD	Blue Ray Disk	25 GB

Some Device Of Computers

MOTHERBOARD: - A Motherboard is the main printed circuit board (P.C.B) found in Computers.

U.S.B. UNIVERSAL SERIAL BUS: -Used to connect hardware.

PS2-PERSONAL SYSTEM :-Used to connect Mouse & Keyboard.

S.M.P.S. (SWITCH MODE POWER SUPPLY)

Main functions of S.M.P.S. are: -

1. Converts A.C. to D.C
2. Different wire contains different volts
3. Different switch supply power to Different places.

R.O.M. (READ ONLY MEMORY)

We can't change any information from ROM. We can just read it.

Ex. When we ON our mobile Phone it shows the name of Company.
(Samsung, Nokia, Airtel ..etc.

C.P.U. (CENTRAL PROCESSING UNIT)

Commonly called processor

It is the brain of the computer where most calculations take place.

Some of latest CPUs are - Dual Core, Core 2 Dual, Core i3, Core i5,
Core i7, Core i9

What is Hardware?

Computer hardware refers to the physical components that make up a computer system, such as the motherboard, CPU, memory, storage, keyboard, monitor, etc. These parts work together to process and store data.

IBM (INTERNATIONAL BUSINESS MACHINES CORPORATION) Computer Hardware Company The International Business Machines Corporation is an American Multi-national technology and consulting corporation, with headquarters in Armonk, New York, United States

What is Software?

A software refers to the set of programs and instructions that run on computer hardware, enabling the hardware to perform specific tasks, such as operating systems, applications, games, etc.

SOFTWARE

The Program and other operating information used by a computer.

There are two types of Computer

1. System Software
2. Application Software

System Software:- The Software without which we can't open our Computer are known as System Software.

OPERATING SYSTEM	DEVELOPED YEAR
Window 1.0	1985
Window 1.2	1987
Window 2.1	1987
Window 3.0	1990
Window 3.1	1992
Window 3.11	1993
Window 95	1995
Window 98	1998
Window 2000	2000
Window XP	2001
Window Vista	2006
Window 7	2009
Window 8 & 8.1	2012
Window 10	2015

Window 11	2021
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Application Software

Such software which is used for specific use is called application software.

Ex:- Tally (Accounting Software), PageMaker (Page Designing Software), MS-Word (Document Creating Software) VLC (HD Videos Playing Software), etc.

MICROSOFT (WORLD'S BIGGEST SOFTWARE COMPANY): - Microsoft Corporation is an American multinational corporation that develops, manufactures licenses, supports and sells computer software, consumer electronics and personal computers and services. Microsoft founder name: - Satya Nadella.

INPUT DEVICES

It allows you to enter information into CPU. The most fundamental pieces of information are keystrokes on a keyboard and clicks with a mouse. These two input devices are essential for you to interact with your computer. Many other input devices exist for entering other types of information, such as images by Scanner, audio by mic and video by camera

Examples: - Touch pad, Barcode Reader, Joy Stick, Webcam ..etc.

OUTPUT DEVICES

Data from a computer to user.

Ex:- Audio from Speaker, Headphone, Earphone, Home Theatre, etc.



MULTIMEDIA :-Multi means many and media means way to express one medium to another medium. Some of the medias are :-mage, Audio, Video, Animation or Text are combined to form a multimedia.

PICTURE FORMAT:-

1. JPEG/JPG-Joint Photographic Experts Group
2. GIF- Graphics Interchange Format
3. PNG- Portable Network Graphics

AUDIO FORMAT

1. MP3
2. AMR-Adaptive Multi Rate
3. MIDI- (Musical Instrument Digital Interface)- Mobile Tones only..

VIDEO FORMAT

1. MTS/AVCHD- Advanced Video Coding High Definition
2. AVI- Audio Video Interleave (HD- High Definition)
3. MP4
4. 3GP-3rd Generation Protocol

What is Converter?

Converter is an application software through which we can convert any Multimedia format to another format.

Ex:- We can Convert any Video to audio, HD Video to low resolution video (3GP).... ETC.

What is Media Player?

It is the software through which we can play media files.

Ex:- VLC Media Player increase volume up to 400% and able to play all types of formats, whereas system software like Window media player is unable for such features.

CLASSIFICATION OF COMPUTER

1. Super Computer- Used by Scientist
2. Mainframe Computer- Used by corporates
(Computer used by corporate and governmental or generation.)
(Organization for critical applications, bulk data processing, industry consumer statistics, enterprises resource planning and transaction processing.)
3. Minicomputer- Used in Railways and Airports
4. Microcomputer- Used by Common People

Type of Microcomputer

- (a) Desktop
- (b) Laptop
- (c) Palmtop

Desktop and Laptop are commonly known PC (Personal Computer)

KEYBOARD

The Name Qwerty for our computer keyboard comes from the first six letters in the keyboard

QWERT Main Keys :-

Alphabets (A-Z) = 26

Number Key = 10

Symbols = 32

Special Keys 19

