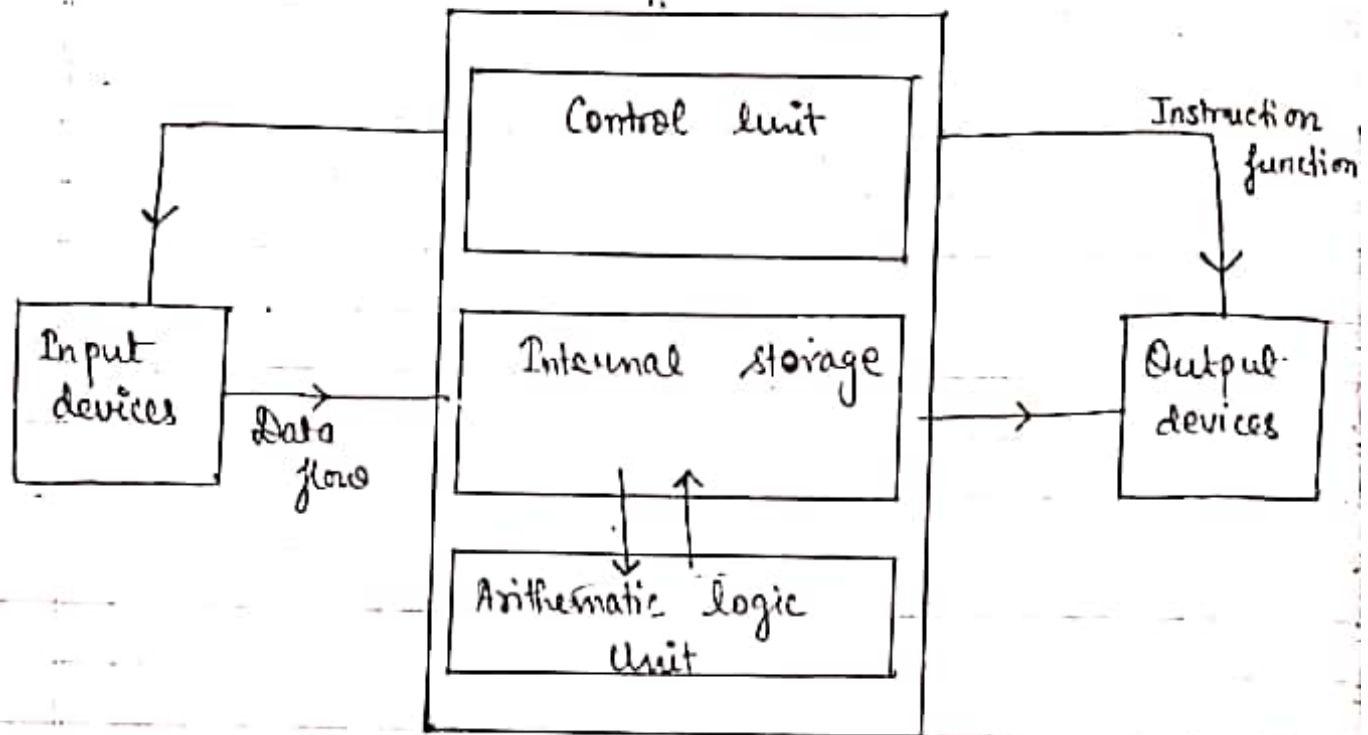


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Computer Organisation & its application

⇒ Computer Organisation (schematic diagram)



© Functions :

C.U. - Deciphers program and gives instructions to various units.

I.S - Holds program, data, etc.

A.L.U - Performs all arithmetic and logical operations.

Input devices - Enters program and data into comp. storage.
E.g., Joy-stick, Keyboard, Mouse etc.

Output D. - Records results from internal storage. eg.,
Printer, Monitor, Plotters

- A comp. has 3 main parts a Central processing unit, input and Output devices. The C.P.U can be further divided into 3 units -

- ✓ i) Control Unit
- ii) Internal storage
- iii) A.L.U

- The function of input devices is to translate the user given program into binary which can be understood by the computer.
- The output devices perform the reverse function by translating the binary output into human readable format.
- Input devices directly communicate with internal storage of comp. to interfacing data into storage of comp.
- The output devices convert the output from binary to human readable format and also communicate with the internal storage of the comp.
- The C.U. reads the sequence of instructions from the user input program and directs instruction to input and Output devices and the A.L.U for performing different tasks.
- The ALU reads data from internal storage, performs various ~~function~~ computations as directed by C.U. and writes information and processed result to internal storage.

- The internal storage is responsible for holding the programs and data to be used by CU and ALU.

⇒ Different terms used in computers -

✓ Hardware - All physical components of computer are collectively referred as Hardware. for e.g.: (input), (output devices), (storage devices) etc.

✓ Software - Software refers to comp. programs which tell the comp. which function is to perform. The operating system or the sys. software refer to the program used at the startup supplied by the manufacturer.

✓ Integrated circuit - It is the complete electronic circuit fabricated on single chip of silicon, and this is pure silicon. An I.C. may be very small, medium or large depending on electronic components fabricated on it.

✓ Memory chips - These are also integrated circuits forming the secondary memory or the storage of comp. They can hold the data and instructions not immediately needed by the comp. or the main memory.

(v) Bits - The transistors on an integrated circuit chips can have only two states on/off. On is represented by '1' and off by '0'. These two binary digits 1 and 0 are called Bits. A string of 8 bits is called byte and a grp. of bits constitute a word. A chip may be 8 bits, 16 bits, 32 bits or 64 bits depending upon its standard word size.

⇒ Difference b/w RAM and ROM.

	ROM (Read Only Memory)	RAM (Random Access Memory)
Main diff.	Non-volatile which it can hold data without power supply, therefore it is referred as permanent storage of computer.	Volatile and is only used for temporary storage.
Other diff.	It is primarily used at the startup of computer.	It is used for normal operations after the operating sys. has been loaded.
	Read only memory chip is much slower as compared to RAM when reading or writing data to it.	Much faster than ROM.
	A ROM chip can store typically b/w 4 megabyte	A RAM chip can store multiple gigabytes of data

to 8 megabyte per chip

per chip . For e.g., 1 GB to 256 GB .

(vi) Storage devices - Any storage device is a hardware i.e. used for storing, posting & extracting data and files. They can hold information temporarily or permanently. They may be internal or external. They are available in different forms. For e.g., A comp. has multiple storage devices including RAM, cache, harddisk, USB drive, Optical disk drive, etc.

⊙ Storage devices can be divided into two types -

(i) Primary storage devices

- The Primary storage devices are generally smaller in size hold data temporarily and are internal to the comp.
- For e.g., RAM, cache.
- They provide fast access to data.

(ii) Secondary s. Devices

- They are larger in size and in storage capacity. They can store data permanently. They may be internal or external.
- For e.g., Hard-disk, optical disk drive, USB Drive, etc.
- They provide slow access to data.

⑥ Input devices & Output devices - These are pieces of hardware use to communicate with the computer. They work as interface b/w information processing system & the

outside world.

For e.g., Keyboard, mouse, scanner, barcode reader are input devices.

Monitor, printer, plotter are all output devices.

⇒ Web - Browser

A web browser is a software application to ~~access~~ access any information on the world wide web (www).

Each individual webpage, image or video has a distinct URL enabling the browser to retrieve and display on the user's comp. ~~any~~ distinct URL.

E.g., Internet, Mozilla Firefox, Chrome, etc.

Search engine

A search engine is just a web site like google.com that stores and searches information on other web sites.

In order to connect and display web sites on user's device, a user must have a web-browser.

E.g., Google, Wikipedia, etc.

⇒ Text editor - It is type of comp. program that edits plain text such as Notepad.

(first developed by Microsoft), wordpad, etc.

Text editor can be used to change documentation files, configuration files, program source code, etc.

Along with plain text there are rich text files also. The plain text consist of characters, represented by fixed length sequence in bytes. Acc. to 'ASCII' code, -

These convention defines flow of text, line space, page breaks, etc but does n't contain any other information about the text.

Rich text files contains character formatting data like ~~the~~ font size, style type, indentation, alignment page specification etc. Therefore, Rich text files can be very complex. They can be saved in a binary format or in a mark up file (~~rtf~~.rtf) (.doc)

~~RTML~~ is a hybrid format of both.