

# COMPUTER - CPU CENTRAL PROCESSING UNIT

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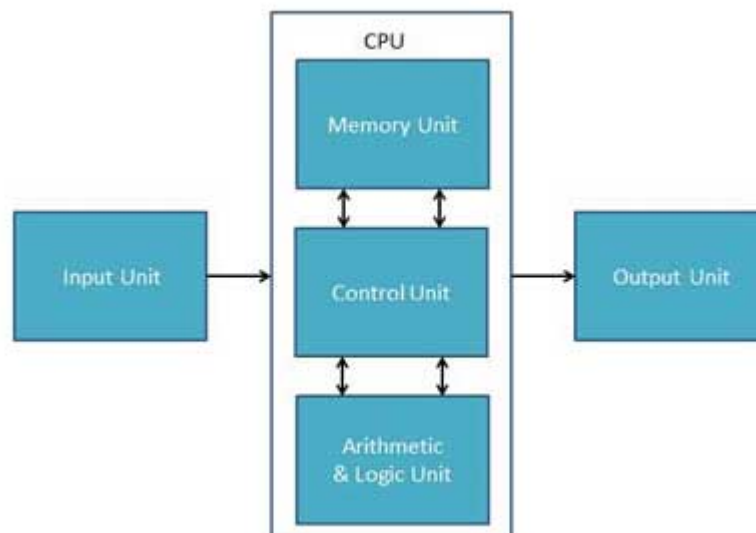
CPU consists of the following features:

- CPU is considered as the brain of the computer.
- CPU performs all types of data processing operations.
- It stores data, intermediate results and instructions *program*.
- It controls the operation of all parts of computer.



CPU itself has following three components.

- Memory or Storage Unit
- Control Unit
- ALU *Arithmetic Logic Unit*



## Memory or Storage Unit

This unit can store instructions, data and intermediate results. This unit supplies information to the other units of the computer when needed. It is also known as internal storage unit or main memory or primary storage or Random access memory *RAM*.

Its size affects speed, power and capability. Primary memory and secondary memory are two types of memories in the computer. Functions of memory unit are:

- It stores all the data and the instructions required for processing.
- It stores intermediate results of processing.
- It stores final results of processing before these results are released to an output device.
- All inputs and outputs are transmitted through main memory.

## Control Unit

This unit controls the operations of all parts of computer but does not carry out any actual data processing operations.

Functions of this unit are:

- It is responsible for controlling the transfer of data and instructions among other units of a computer.
- It manages and coordinates all the units of the computer.
- It obtains the instructions from the memory, interprets them, and directs the operation of the computer.
- It communicates with Input/Output devices for transfer of data or results from storage.
- It does not process or store data.

## ALU Arithmetic Logic Unit

This unit consists of two subsections namely

- Arithmetic section
- Logic Section

## Arithmetic Section

Function of arithmetic section is to perform arithmetic operations like addition, subtraction, multiplication and division. All complex operations are done by making repetitive use of above operations.

## Logic Section

Function of logic section is to perform logic operations such as comparing, selecting, matching and merging of data.

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