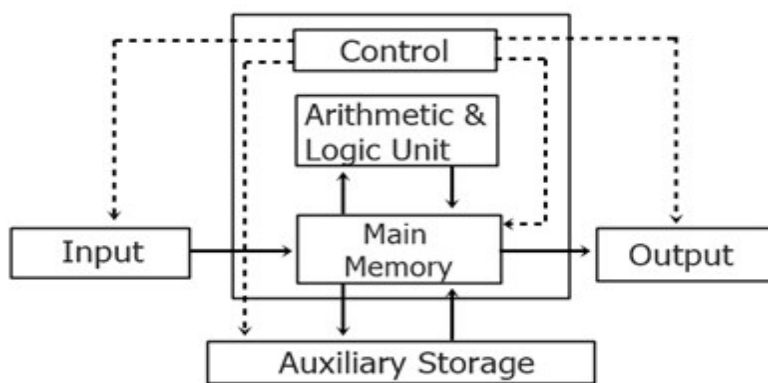Unit-1

Block diagram of a computer

Block diagram of a computer gives you the pictorial representation of a computer that how it works inside. Or you can say that, in computer's block diagram, we will see how computer works from feeding the data to getting the result.

Here is the block diagram of a computer system:

Block Diagram of Computer

In the above diagram, both **control (control unit or CU)** and **arithmetic & logic unit (ALU)** combinely called as **Central Processing Unit (CPU)**.

Let's describe about all the parts as included in the above diagram one by one.

The Processor Unit (CPU)

It is the brain of the computer system.

All major calculation and comparisons are made inside the CPU and it is also responsible for activation and controlling the operation of other unit.

This unit consists of two major components, that are arithmetic logic unit (ALU) and control unit (CU).

Arithmetic Logic Unit (ALU)

Here arithmetic logic unit performs all arithmetic operations such as addition, subtraction, multiplication and division. It also uses logic operation for comparison.

Control Unit (CU)

And the control unit of a CPU controls the entire operation of the computer. It also controls all devices such as memory, input/output devices connected to the CPU.

Fundamentals of computers

CU fetches instructions from memory, decodes the instruction, interprets the instruction to know what the task are to be performed and sends suitable control signals to the other components to perform for the necessary steps to executes the instruction.

Input/Output Unit

The input/output unit consists of devices used to transmit information between the external world and computer memory.

The information fed through the input unit is stored in computer's memory for processing and the final result stored in memory can be recorded or display on the output medium.

Memory Unit

Memory unit is an essential component of a digital computer. It is where all data intermediate and find results are stored.

The data read from the main storage or an input unit are transferred to the computer's memory where they are available for processing.

This memory unit is used to hold the instructions to be executed and data to be processes.

Disk Storage Unit

Data and instruction enters into a computer system through input device have to stored inside the computer before actual processing start.

Two types of storage unit are primary and secondary storage unit.

Primary Storage Unit

Primary memory has direct link with input unit and output unit. It stores the input data, calculation result.

Secondary Storage Unit

The primary storage is not able to store data permanently for future use. So some other types of storage technology is required to store the data permanently for long time, it is called secondary or auxiliary storage.