

3	Processing Data	Performing arithmetic, and logical operations on <i>data</i> in order <b>to</b> convert them into useful <b>information</b> .
4	Output Information	The process of producing useful information or results for the user, such as a printed report or visual display.
5	Control the workflow	Directs the manner and sequence in which all of the above operations are performed.

## 1.7 Components of computer

### 1. Input Unit

This unit contains devices with the help of which we enter data into computer. This unit makes link between user and computer. The input devices translate the information into the form understandable by computer.

### 2. CPU (Central Processing Unit)

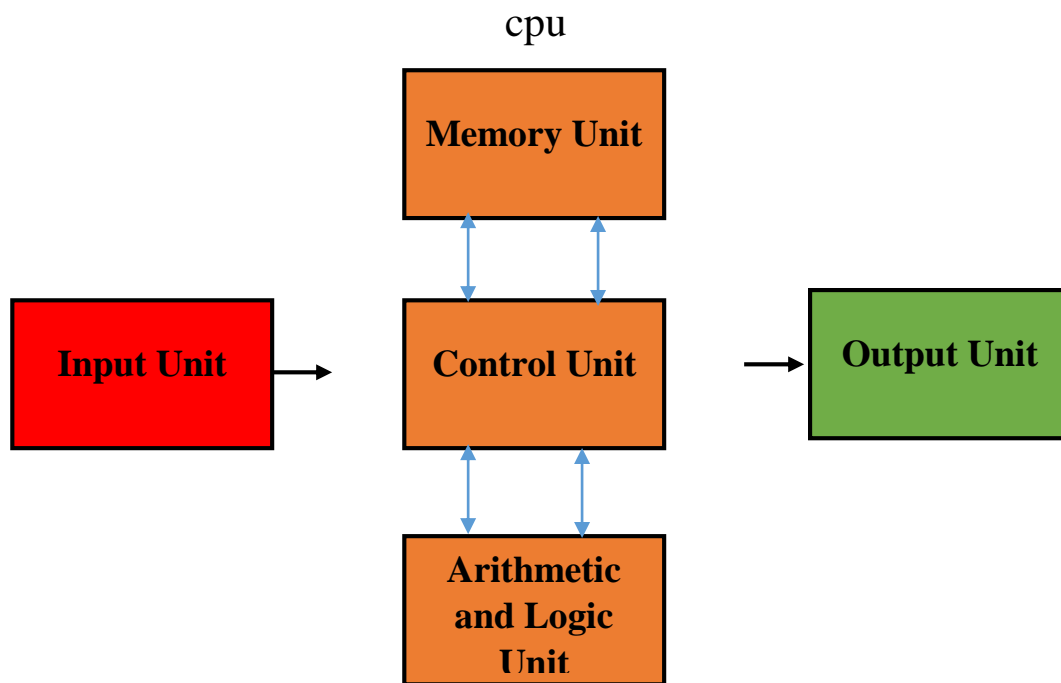
CPU is considered as the brain of the computer. CPU performs all types of data processing operations. It stores data, intermediate results and instructions (program). It controls the operation of all parts of computer.

**CPU itself has following three components**

- ALU (Arithmetic Logic Unit).
- Memory Unit.
- Control Unit.

### 3. Output Unit

Output unit consists of devices with the help of which we get the information from computer. This unit is a link between computer and users. Output devices translate the computer's output into the form understandable by users



**Figure: Components of computer**

## 1.8 Types of computer

Computers can be broadly classified by their **speed** and **computing power**.

<b>Sr.No.</b>	<b>Type</b>	<b>Description</b>
1.	PC (Personal Computer)	It is a single user computer system having moderately powerful microprocessor.
2.	WorkStation	It is also a single user computer system which is similar to personal computer but have more powerful microprocessor.
3.	Mini Computer	It is a multi-user computer system which is capable of supporting hundreds of users simultaneously.
4.	Main Frame	It is a multi-user computer system which is capable of supporting hundreds of users simultaneously. Software technology is different from minicomputer.
5.	Supercomputer	It is an extremely fast computer which can execute hundreds of millions of instructions per second.

### 1. PC (Personal Computer)

A PC can be defined as a **small, relatively inexpensive** computer designed for an individual user. PCs are based on the **microprocessor** technology that enables manufacturers to put an entire **CPU on one chip**. Businesses use personal computers for word processing, accounting, desktop publishing, and for running spreadsheet

and database management applications. At home, the most popular use for personal computers is **playing games** and **surfing Internet**.



**Figure: PC (Personal Computer)**

## **2. Workstation**

Are powerful single user computers. Workstation is like a personal computer (PC), but it has a more powerful microprocessor and in general, a higher-quality monitor. It is used for engineering applications (CAD) and movies animation and other types of applications that require a moderate amount of computing power and high quality graphics capabilities. **In networking**, the term workstation has its own operating system and files but at the same time shares with other workstations.



**Figure: Workstation**

### 3. Minicomputer

It is midsized computer. In size and power, **minicomputers** lie between **workstations** and **mainframes**. But in general, a minicomputer is a multiprocessing system capable of supporting from 4 to about 200 users simultaneously.



**Figure: Minicomputer**

### 4. Mainframe

Mainframe is very large in size and is an expensive computer capable of supporting hundreds or even thousands of users simultaneously. Mainframe executes many programs concurrently and supports many simultaneous execution of programs.

In some ways, mainframes are more powerful than supercomputers because they support more simultaneous programs. But supercomputers can execute a single program faster than a mainframe.



**Figure: Mainframe**

## 5. Supercomputer

Supercomputers are the most powerful computers in terms of speed of execution and large storage capacity.

Supercomputers are one of the fastest computers currently available. Supercomputers are very expensive and are employed for specialized applications that require huge amount of mathematical calculations. For example, weather forecasting, scientific simulations, (animated) graphics, fluid dynamic calculations, nuclear energy research, electronic design, and analysis of geological data (e.g. in petrochemical prospecting).

The chief difference between a supercomputer and a mainframe is that a supercomputer channels all its power into executing a few programs as fast as possible, whereas a mainframe uses its power to execute many programs concurrently.



**Figure: Supercomputer**