System: It has three distinct entities namely, Input, Process & output. It is a group of integrated parts that have the common purpose of achieving some objectives.

Data: Any representation of a fact that can be communicated or manipulated by some process.
It is collection of observation.

Scanning through data to find something is called Processing.

End result of processing is Information.

Data can be converted into information by imposing structure & interpreted information can be converted to knowledge.

Output of one data can become input of other processing data & informations are interconvertible.

Computer: It is fast & accurate symbol manipulating system that is organized to accept, store & process data & produce output results under the direction of a stored program or instructions.

Basic organisation of computer system:

1) Input device:

e.g. Keyboard (QWERTY type).
F1-F15 keys perform special functions. They automatically perform many tasks that would be tedious & time consuming.
Usually has 110 keys.
Another e.g. is mouse, scanner.

(2) Central Processing Unit (CPU):

It is the brain of the computer system. It receives data & instructions, stores them temporarily & then processes the data as per the instructions.

It has three major components:

(1) Memory Unit:

It is that essential part of a computer which stores all data, instructions & results temporarily. The storage locations are called cells, each capable of storing one word of information.

It is also called storage, internal storage, primary storage, memory or main memory.

(11) Arithmetic Logic Unit (ALU):

It performs all arithmetic (+, -, *, /) & logic operations (AND, OR, NOT → comparisons) & store results within itself.

(111) Control Unit:

It selects, interprets & executes the program instructions. It performs functions of overall supervision in the ALU, memory unit, input & output units.

It also supplies appropriate data & control signals to these units. It coordinates activities of input-output, arithmetic & memory units by turning & directing flow of information from one unit to another

e.g: For addition of two numbers X & Y:
Control Unit will select number X from its location in the memory & load it into ALU. Then, it will select Y & add it to X in ALU. The result will then be stored in memory or retained in ALU for further calculation.

(3.) Output Devices:

Receive information from CPU & present it to user in the desired form.
e.g. Visual Display Unit (VDU), printer, ~~scanner~~.

Memory is of two types:

1. Primary or Main or Internal Memory (RAM).
2. Secondary or Auxiliary or External Memory (ROM).

Random Access Memory (RAM):

It is the main memory used to store programs & data in a computer. During execution of a program, the data required by program is stored in RAM. It provides volatile storage i.e. data is lost in event of power failure or when computer is switched off.
When new data is stored in RAM, previous data is erased & new data takes its place.
It stores data & program temporarily.
It is expensive.