EXPERIMENT NO. 1

Aim: Assembling of computer

- ➢ What is computer?
  - o A computer is a programmable electronic device that accepts raw data as input and processes it with a set of instructions (a program) to produce the result as output. It renders output just after performing mathematical and logical operations and can save the output for future use. It can process numerical as well as non-numerical calculations. The term "computer" is derived from the Latin word "computare" which means to calculate.

    Charles Babbage is called the "Grand Father" of the computer. The First mechanical computer designed by Charles Babbage was called Analytical Engine. It uses read-only memory in the form of punch cards.

- ➢ Generations of Computer
  - o The modern computer took its shape with the arrival of your time. It had been around 16th century when the evolution of the computer started. The initial computer faced many changes, obviously for the betterment. It continuously improved itself in terms of speed, accuracy, size, and price to urge the form of the fashionable day computer. This long period is often conveniently divided into the subsequent phases called computer generations:
    - ▪ First Generation Computers (1940-1956)
    - ▪ Second Generation Computers (1956-1963)
    - ▪ Third Generation Computers (1964-1971)
    - ▪ Fourth Generation Computers (1971-Present)
    - ▪ Fifth Generation Computers (Present and Beyond)

Table 1.1: Generations of computers

Generations of computers	Generations timeline	Evolving hardware
First generation	1940s-1950s	Vacuum tube based
Second generation	1950s-1960s	Transistor based
Third generation	1960s-1970s	Integrated circuit based
Fourth generation	1970s-present	Microprocessor based
Fifth generation	The present and the future	Artificial intelligence based

➢ Input and Output Devices:
- o An input/output device, often known as an IO device, is any hardware that allows a human operator or other systems to interface with a computer. Input/output devices, as the name implies, are capable of delivering data (output) to and receiving data from a computer (input).

  Input Devices:
  - Keyboard
  - Mouse
  - Joystick
  - Bar Code Reader
  - Web Camera

  Output devices:
  - Monitor
  - Printer

➢ Types of Computers:
- o A computer is a device that transforms data into meaningful information. It processes the input according to the set of instructions provided to it by the user and gives the desired output. Computers are of various types and they can be categorized in two ways on the basis of size and on the basis of data handling capabilities.

  So, on the basis of size, there are five types of computers:
  - Supercomputer
  - Mainframe computer
  - Minicomputer
  - Workstation
  - PC (Personal Computer)