# Different Types of Computers

Super Computer: A supercomputer is a high-performance computer designed to perform complex calculations and simulations that require massive processing power. They are often used in scientific research, engineering, and weather forecasting.

Mainframe Computer: A mainframe computer is a large and powerful computer that can handle multiple users and process large amounts of data simultaneously. They are often used in large organizations for critical applications such as banking, healthcare, and government services.

Server Computer: A server computer is a computer system that provides services and resources to other computers connected to a network. They are used to manage data storage, network communications, and other centralized functions in organizations.

Mini Computer: A minicomputer, also known as a midrange computer, is a computer system that is smaller and less powerful than a mainframe computer but larger and more powerful than a microcomputer. They are often used in scientific and engineering applications as well as in small to medium-sized businesses.

Micro Computer: A microcomputer, also known as a personal computer, is a small and inexpensive computer designed for individual use. They are commonly used for tasks such as word processing, web browsing, and multimedia entertainment.

# DIFFERENT TERMS

Architecture: The architecture of a computer refers to the attributes that are visible to the programmer, such as the instruction set, addressing techniques, I/O mechanisms, and the number of bits used for data representation. It describes what the computer can do and how it operates. For example, does the computer have a multiply instruction in its instruction set?

Organization: The organization of a computer refers to how the features of a computer are implemented, including the realization of hardware, hardware details (such as RAM, hard drive, and graphic card technology used), peripherals devices (such as mouse and keyboard), and control signals. It determines how the computer's architecture is put into practice. For example, does the computer have a hardware multiply unit or is it done by repeated addition?

Structure & Function: A computer is a complex system that has millions of elementary electronic components, and to describe them, it's essential to recognize the hierarchical nature of the system. At each level of hierarchy, a designer is concerned with two things: structure, which refers to the way components relate to each other, and function, which describes the operation of individual components as part of the structure. A top-down approach is used to explain the system.

Function: There are four basic functions that a computer can perform: data processing, data storage (short-term and long-term), data movement (input-output or data communication), and control. Data processing involves manipulating data in various forms, while data storage involves saving data for future use. Data movement refers to the transfer of data from one location to another, either within the computer or to and from external devices. Control involves managing the computer's resources and orchestrating the performance of its functional parts in response to instructions.

# Concept of computer ‘Family’

A computer family refers to a group of computers that have similar designs and microprocessors, making them compatible with each other. For example, the IBM or PC family and the Apple or Mac family of computers. These families usually have successive generations and share the same architecture, but there are exceptions.