CLASSIFICATION OF COMPUTERS

Based on size and capacity, computers are classified as follows:
- ➢ Super Computers
- ➢ Mainframe Computer,
- ➢ Mini Computers
- ➢ Micro Computers

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Super Computers: Supercomputers are the most powerful and physically the largest by size. These are systems designed to process huge amounts of data and the fastest supercomputers can perform over one trillion calculations in a second. Supercomputers have thousands of processors. Because of their extraordinary speed, accuracy and processing power, supercomputers are well suited for solving highly complex problems and performing tasks that demand huge amounts of calculations.

Mainframe Computer: Mainframe computers are very large often filling an entire room and can process thousands of millions of instructions per second. In a mainframe environment, users connect to the mainframe through the many terminals wired to the mainframe. Mainframes are capable of supporting hundreds to thousands of users simultaneously. Some of the functions performed by a mainframe include: flight scheduling, reservations and ticketing for an airline etc
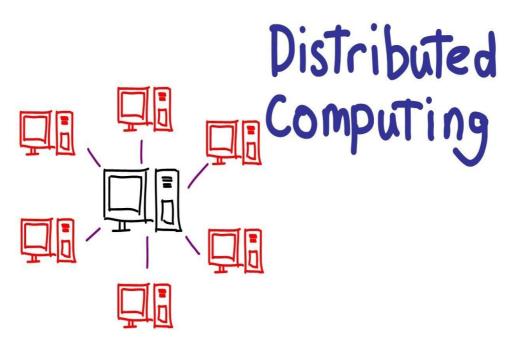
Minicomputers: Minicomputers are much smaller than mainframes .These computers are also less expensive. Sometimes referred to as Midrange Server or Midrange Computer, they are typically larger, more powerful and more expensive than desktop computers. Midrange computers are usually used by small and medium-sized businesses as their servers. Users connect to the server through a network by using desktop computers.

Microcomputers

Microcomputers are the most frequently used type of computer. Also, known as Personal Computer (PC), a microcomputer is a small computer system designed to be used by one person at a time.

Distributed computers: It is a model in which components of a software system are shared among multiple computers to improve efficiency and performance. According to the narrowest of definitions, distributed computing is limited to programs with components shared among computers within a limited geographic area.

In distributed computing, each processor has its own private memory (distributed memory). Information is exchanged by passing messages between the processors. It is shown in the diagram below:

Parallel Computation: It is a type of computation in which many calculations or the execution of processes are carried out simultaneously. Large problems can often be divided into smaller ones, which can then be solved at the same time.

In parallel computing, all processors may have access to a shared memory to exchange information between processors.