

TYPES OF COMPUTER

CLASSIFICATION OF COMPUTER ON THE BASIS OF WORK

The computer is an electronic device which accepts the input and processes them to give desired output. There are various types of computer available in the market. We can classify the computer as special purpose computers and general purpose computers. Special purpose computers are applicable for special area and have limited area for application of temperature recording, speed measurement, telephone billing etc, but general purpose computers are the standard computers used for general application like word processing, spreadsheet, database application, internet access, program development etc.



Analog Computer

The computer that works with natural phenomena and physical values like earthquake measurement, speed of wind, weight light etc is known as Analog computers. It is especially used in scientific work, medical and industrial field. These are special purpose computers. It measures physical values such as temperature or pressure that fall along a continuous scale in temperature or pressure. For example, you can see a system at petrol pump that contains an analog processor and analog device that converts the flow of petrol into quantity. Speedometer in cars and your watch are other examples of an analog computer.

Features of Analog computer

- It is specific to the particular task so we cannot use it for multiple applications.
- It works on continuous data and gives continuous output.
- It works in real time and has no storage capacity.
- It gives output in the form of the graph, signals, table etc.

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Digital Computer

A computer that works with digital value 0 and 1, where 0 is OFF and 1 is ON. It works with discrete data. Digital computer does not measure the continuous data for continuous output. Most of the electronic system is based on the digital system. Digital computers are very popular for actual computer works like preparation of the report, documentation, billing and other graphical work etc. The entire PC (Personal Computer) used today on different fields are digital computers. They are classified into two groups:

(i) Specific Purpose Digital Computer

Digital computer which are used to perform specific task is known as specific purpose digital computer. It only perform specific task.

(ii) General Purpose Computer

Digital computer which are used to perform general task is known as general purpose computer. It is used to perform various tasks.

Features of Digital computer

- It works on the discontinuous or discrete data.
- It is applicable for a general purpose so this is very versatile for an application.
- It is based on the digits 0 and 1.
- It is faster.
- It has storage section also.
- It is highly accurate and reliable than an analog system.



Hybrid computer

It is the combination of analog and digital computer system. It works with continuous and discrete value. The good qualities of analog and digital computers are combined on this computer and made as the hybrid computer. These are used in ICU (Intensive Care Unit) of hospitals, jet planes, and other data analysis terminals. The hybrid computer transfers the data from analog to digital and digital to analog and vice-versa.

Features of hybrid computer

- It is an expensive system.
- It is designed for the special purpose so it is not versatile.
- It works on discrete and continuous data.
- It has limited storage.
- It is complex than another computer system.

CLASSIFICATION OF COMPUTER BASED ON CONFIGURATION

Super computer



Super computer is the fastest, most expensive, big in size, and most powerful computer that can perform multiple tasks within a second. It has multi-user, multiprocessing, very high efficiency and large amount of storage capacity. It is called super computer because it can solve difficult and complex problem within a nano second. These computers are used to forecast the weather and global climates, digital film recording, etc.

Example

C-DAC (Center for Development of Advanced Computer) of India has developed PARAM series of Super Computer. ANURAG is also Indian Super Computer. Other Super Computers are CRAY XMP/14, CDC-205 etc. Mr. Seymour Cray was a pioneer person in the field of supercomputer production. He had developed the first super computer Cray-1 in 1976.

Mainframe Computer



Mainframe Computer is the large sized computer that covers about 1000 sq feet. It is general purpose computer that is designed to process large amount of data with very high speed. It accepts large amount of data from different terminals and multiple users and process them at the same time. More than 100 users are allowed to work in this system. It is applicable for large organization with multi-users for example: large business organization, department of examinations, industries and defense to process data of complex nature. It uses several CPU for data processing. These computers are used for credit card processing, marketing, air traffic control system etc.

Example

IBM S/390, IBM S/709, ICL 39, CDC 6600

Minicomputer



Mini Computers are medium sized computer. So, these are popular as middle ranged computer. It is also multiple user computer and supports more than dozen of people at a time. It is costlier than microcomputer.

It is also used in university, middle range business organizations to process complex data. It is also used in scientific research, instrumentation system, engineering analysis, and industrial process monitoring and control etc.

Example

MAI Basic 4, Data generation NOVA, Microdata Corp/Micro 820, PDP-11, VAX etc.

Microcomputer



Most popular general purpose computers which are mostly used on day to day work are microcomputers. These are popular as Home PC or Personal Computer (PC) because these are single user computers and mostly used for personal use and application. These support many higher level application cost and easy in operation.

Example

IBM PCs, Apple Mac, IBM PS/2, All computer available with Pentium Models etc.