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Introduction

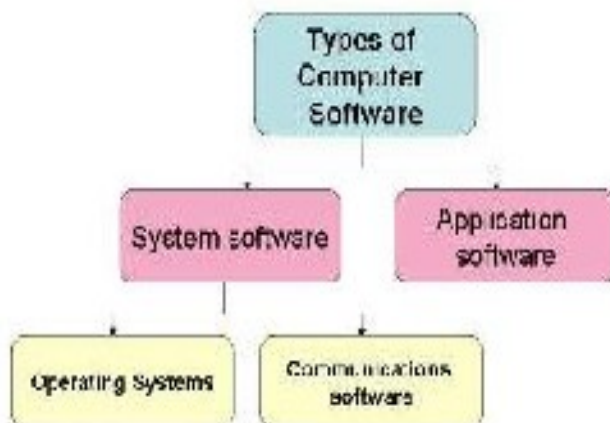
In this lesson, your attention will be drawn to understand the ‘computer software’ and functions within computer systems. Software plays a vital role in computer systems by creating a bridge between the computer hardware and computer users. Computer systems have several types of software and their functionality is different. There are several ways one may seek computer software and the user has to select the most appropriate mode of obtaining his software requirement.

We are aware that computers need instruction to carryout tasks, and it cannot perform itself without instructions. When instructions are given to computers in a manner that computers can understand then computers can execute those instructions accordingly. Such instructions to carryout certain task or tasks that are pre-designed when made available in a computer readable format, are called programmes. Such programmes are called computer software. These software can be stored in the secondary storage devices and make use of them as and when required.

Further, computer systems can store data in a computer readable format for subsequent applications. These computer readable data and information are also part of computer software.

Types of Computer Software

Computer software are of two main types according to the type of its functioning in the computer system. They are;



System software performs the basic functions to start and operate the hardware components of the computer system. They instruct the computer how to operate its peripherals. In other words system software deals with running the computer system or making it work. The system software also looks after the controlling computer peripherals, coordinate the functionality of the computer

peripherals, and it also manages all the computer related resources.

System software can be divided into operating system and communications software. Operating system only deals with the way of functioning the computer and its peripherals. Operating systems sometimes comes with the computer in a ROM chip or as a separate set of software.

Communication software deals with transfer of data, instructions and command with other computers. Examples to communication software include software used for computer sharing, controlling data transfers, etc.

Main functions of operating software includes

- Management of computer's resources including optimal use of computer memory, optimize the use of central processing unit, and handle computer peripherals
- Management of data files: loading data and program files into memory, carryout necessary tasks with computer files.
- Tasks related to management and liaise with user such as help user to interface with the user, select and manage input and output devices of computer, manage multitasking.

Application software are developed to carryout different applications or tasks by the computer as required by user. These software automates and performs different functions like invoice processing, inventory management, payroll, word processing, etc.

Functions of Computer Software

We are aware of the role of computer software in operating and managing the hardware resources of a computer. Further the application software, the prewritten set of instructions to carryout specified tasks, can perform the task as per the instructions given by the program as planned. Software can make the computer to compare data, make logical decisions, do mathematical calculations, store and retrieve data and instructions from primary or secondary memory and carryout sequence of tasks.

The computer software acts as a bridge between hardware of a computer system and the users of a computer. They enable computer user to obtain what they need from the computer. Further they make the computer to work towards giving the outputs in the manner the user wants it, such as output on a screen, makes printouts, sound, send emails or facsimiles, etc. Therefore software enables user to interact with the computer.

Many software use today are closer to English language for the comfort of the user, but the computer may not understand it since it can only understand its primary language, that is the machine language. Programmers use various secondary computer languages to develop software for different user requirements. Therefore many of the software developed by programmers need translating into the machine understandable format to execute. The translations required are carried out by another set of software called 'compilers' or 'interpreters'. Different programming languages need different compilers. They translate the programs written in secondary languages into machine

language. Therefore the secondary languages become machine independent.