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Q. What is Operating System? Write down important functions of operating systems?

Answer:

Operating System:

An operating system is a set of programs running on a computer system and provides an environment in which other programs can be executed and the computer system can be used effectively.

Explanation:

In order to use a computer to solve our daily problems i.e. to store records, a user must input instructions / data to the computer. But computer hardware does not understand the human language, so we need an application to translate our instructions for computer hardware to understand and solve the problem accordingly. A programmer must write application in machine language. Machine language is very complex and only expert programmers can work in machine language but most programmer cannot work in machine language hence they use programming language which is closer to human language then computer language, for that a translation tool is required which is part of operating system i.e. compiler.

To use the computer easily, we require software known as Operating System (OS).

IT SKILLS IMPORTANT

What Operating System (OS) does:

1. An operating system is a set of programs that manages all computer components and operations.
2. A computer cannot be operated without operating system.
3. Operating system must be installed on every computer.
4. Users can interact with the computer through operating system.
5. When computer is turned on, the operating system runs and checks that which parts are connected and functioning properly.
6. Operating system manages all operations of computer after loading.

We can simply say that:

"Operating system is a master program that helps users to interact with computer hardware"

Function of Operating System (OS):

1. Starting a computer.
2. Providing a user interface
3. Managing Programs
4. Managing Memory
5. Configuration Devices
6. Connecting with internet
7. Control the network

IT SKILLS IMPORTANT

TYPES OF OPERATING SYSTEM:

There are two types of operating system:

- a. Personal Operating System.
- b. Network Operating System.

a. Personal Operating System:

A type of operating system in which only one user can work at a time is called personal user operating system. DOS is an example of personal operating system.

There are two types of personal operating system:

1. Command line interface Operating System.
2. Graphical User Interface Operating System.

1. Command Line Interface Operating System:

An operating system without any GUI and can only be interacted with help of different commands is called command line operating system. Also known as command line interface (CLI).

Example:

DOS stands for Disk Operating System. It was developed by Microsoft in 1981. It was very famous.

2. Graphical User Interface Operating System:

An operating system that provides Graphical Interface to

IT SKILLS IMPORTANT

interact with computer is called Graphic User interface operating system. Also known as GUI.

Example:

Windows is a "Graphical User Interface Operating System". It is multi-tasking operating system which means It can run more than one program simultaneously.

b. NETWORK OPERATING SYSTEM:

A type of operating system in which more than one user can work at a time is called network operating system. UNIX, Linux and Windows NT/2000 are the example of multiuser or network operating system.

UNIX:

It was developed in 1969 at AT & T Laboratories, USA. It is mainly used in universities and research organizations. It is difficult to learn and use. UNIX was designed to work on networks. LINUX:

It can be used as a personal or network operating system. It is open source operating system. It is secure and powerful operating system.

**** Sun Solaris:**

It is a version of UNIX operating system developed by Sun Micro System. It is a network operating system designed specifically for E-Commerce Applications.

IT SKILLS IMPORTANT

** Netware:

It is a network operating system designed for client-server networks. It provides the facility to use more than one user at a time.

Windows NT / 2000:

It is an operating system developed by Microsoft Corporation. It is a 32-bit operating system. It is primarily targeted to client-server-networking environments.

Difference between DOS and Windows

DOS	Windows
1. DOS is command line interface.	1. Window is Graphical User Interface.
2. It is difficult to learn.	2. It is easier to learn.
3. It can perform single task at a time.	3. It is multi-tasking.
4. It is single-user operating system.	4. It is multi-user Operating System.
5. It does not support (Plug and Play).	5. It support (Plug and play).
6. It supports 16bit file system only.	6. It supports 16 & 32 bit file system.
7. It requires less memory for installation.	7. It required more memory for installation than DOS