Operating system

An operating system or OS is a software program that enables the computer hardware to communicate and operate with the computer software. Without a computer operating system, a computer and software programs would be useless.

An operating system (sometimes abbreviated as "OS") is the program that, after being initially loaded into the computer by a boot program, manages all the other programs in a computer. The other programs are called applications or application programs. The application programs make use of the operating system by making requests for services through a defined application program interface (API). In addition, users can interact directly with the operating system through a user interface such as a command language or a graphical user interface (GUI).

An operating system performs these services for applications:

- In a multitasking operating system where multiple programs can be running at the same time, the operating system determines which applications should run in what order and how much time should be allowed for each application before giving another application a turn.
- It manages the sharing of internal memory among multiple applications.
- It handles input and output to and from attached hardware devices, such as hard disks, printers, and dial-up ports.
- It sends messages to each application or interactive user (or to a system operator) about the status of operation and any errors that may have occurred.
- It can offload the management of what are called batch jobs (for example, printing) so that the initiating application is freed from this work.
- On computers that can provide parallel processing, an operating system can manage how to divide the program so that it runs on more than one processor at a time.

Examples of computer operating systems

- Redhat – Very popular Linux operating system from Redhat
- Microsoft Windows - PC and IBM compatible operating system. Microsoft Windows is the most commonly found and used operating system in PCs
- Apple MacOS - Apple computer operating system. The only Apple computer operating system.
- Ubuntu Linux - A popular variant of Linux used with PC and IBM compatible computers.
- Google Android - operating system used with Android compatible phones.
- iOS - Operating system used with the Apple iPhone.