## **Functions of Operating System**

An operating system is a software component that acts as the core of a computer system. It performs various functions and is essentially the interface that connects your computer and its supported components.

Drivers play a major role in the operating system. A driver is a program designed to comprehend the functions of a particular device installed on the system. A driver enables the operation of numerous devices, including your mouse, keyboard printer, video card and CD-ROM drive by translating commands from the operating system or the user into commands understood by the associated component. It also translates responses from the component back to the operating system, software application or user.

The operating system performs other functions with system utilities that monitor performance, debug errors and maintain the system. It also includes a set of libraries often used by applications to perform tasks to enable direct interaction with system components. These common functions run seamlessly and are transparent to most users.

Linux provides powerful tools with which to write their applications: developer environments, editors, and compilers are designed to take a developer's code and convert it to something that can access the kernel and get tasks done.

Like the kernel, the Linux operating system is also modular. Developers can pick and choose the operating tools to provide users and developers with a new flavor of Linux designed to meet specific tasks.

## **Basic Features**

**Portable** - Portability means software can works on different types of hardware in same way. Linux kernel and application programs support their installation on any kind of hardware platform.

**Open Source** - Linux source code is freely available and it is community based development project. Multiple teams' works in collaboration to enhance the capability of Linux operating system and it is continuously evolving.

**Multi-User -** Linux is a multiuser system means multiple users can access system resources like memory/ ram/ application programs at same time.

Multiprogramming - Linux is a multiprogramming system means multiple applications can run at same time.

Hierarchical File System - Linux provides a standard file structure in which system files/ user files are arranged.

**Shell** - Linux provides a special interpreter program which can be used to execute commands of the operating system. It can be used to do various types of operations, call application programs etc.

**Security** - Linux provides user security using authentication features like password protection/ controlled access to specific files/ encryption of data.