

to system or application programs.

**System Library** – System libraries are special functions or programs using which application programs or system utilities access Kernel's features. These libraries implement most of the functionalities of the operating system and do not require kernel module's code access rights.

**System Utility** – System Utility programs are responsible to do specialized, individual level tasks.

## Linux Operating System

### Kernel Mode vs User Mode

Kernel component code executes in a special privileged mode called kernel mode with full access to all resources of the computer. This code represents a single process, executes in single address space and does not require any context switch and hence is very efficient and fast. Kernel runs each process and provides system services to processes, provides protected access to hardware to processes.

Support code which is not required to run in kernel mode is in System Library. User programs and other system programs work in User Mode which has no access to system hardware and kernel code. User programs/ utilities use System libraries to access Kernel functions to get system's low level tasks.

### Basic Features

Following are some of the important features of Linux Operating System.

**Portable** – Portability means software can