

What is Linux?

- Linux is a free and open source operating system. That is causing a revolution in the computer world.
- Originally created by Linus Torvalds with the assistance of developers called community.
- This operating system in only a few short years is beginning to dominate market worldwide.

Why use Linux?

- Free and open source
- Reliability
- Secure
- Scalability

What is opensource?

- Freedom of software
- Freedom of redistribute
- Freedom of copy
- Freedom of modify
- Freedom of use

Components of Linux?

- Hardware controllers
- Linux kernel
- o/s services
- user Applications

Hardware controllers:

This subsystem is comprised of all the possible physical devices in a Linux installation.

Linux kernel:

The kernel abstracts and mediates access to the hardware resources, including the CPU. A kernel is the core of the operating system.

o/s services:

these are services that are typically considered part of the operating system

user applications:

these set applications in use on a particular Linux system.

What is operating system?

An operating system is a set of programs that manage computer hardware resources and provide common services for allocation software. The operating system is the most important types of systems software in a computer system. A user cannot run an application program the computer without an operating system unless the application program is self booting.

Or

An operating system is an interface between a computer user and computer hardware.

Types of operating system:

- Multi programing batch operating system.
- Time sharing operating system.
- Multi processes operating system.
- Mobile operating system.
- Real time operating system.
- Distributed operating system.
- Network operating system.
- Simple batch operating system.

Difference between Linux and Unix

Linux	Unix
It is an opensource operating system which is freely available to everyone	It is an operating system which can be only used by its copyrights
It has different distributions like Ubuntu, Red hat, Fedora.	IBM AIX, HP-UX and sun Solaris
Linux is used everywhere from servers, PC, smartphones, tables to mainframes and supercomputers.	It is use in servers, workstations and PCS.
Linux is freely distributed, downloaded, and distributed through magazines also. and priced distros of Linux are also cheaper than windows	Unix copyright vendors decide different costs for their respective Unix operating system
Linux is command base but some distros provide GUI base Linux Gnome and KDE are mostly used GUI	Initially it was command base OS but later common Desktop Environment was created. Most Unix distributions use Gnome
The default interface is BASH. But some distros have developed their own interfaces	It is originally use Bourne shell. But is also compatible with other GUIs.
Linux is just the kernel	Unix is a complete package of Operating system

components of Linux?

- Applications
- Shell

- Kernel
- Hardware
- Utilities

What is kernel?

Kernel is the main component of Linux, it controls the activity of other hardware components. It visualizes the common hardware resources and provide each process with necessary virtual resources. It makes the processes to wait in the ready queue and execute in consequently to avoid any kind of conflict.

Types of kernel:

- Monolithic kernel
- Micro kernel
- Exokernel
- Hybrid kernel

Features of Linux operating system?

- Free and opensource
- Multiuser capacity
- Multitasking
- Security
- Graphical user interface
- File system
- Application support