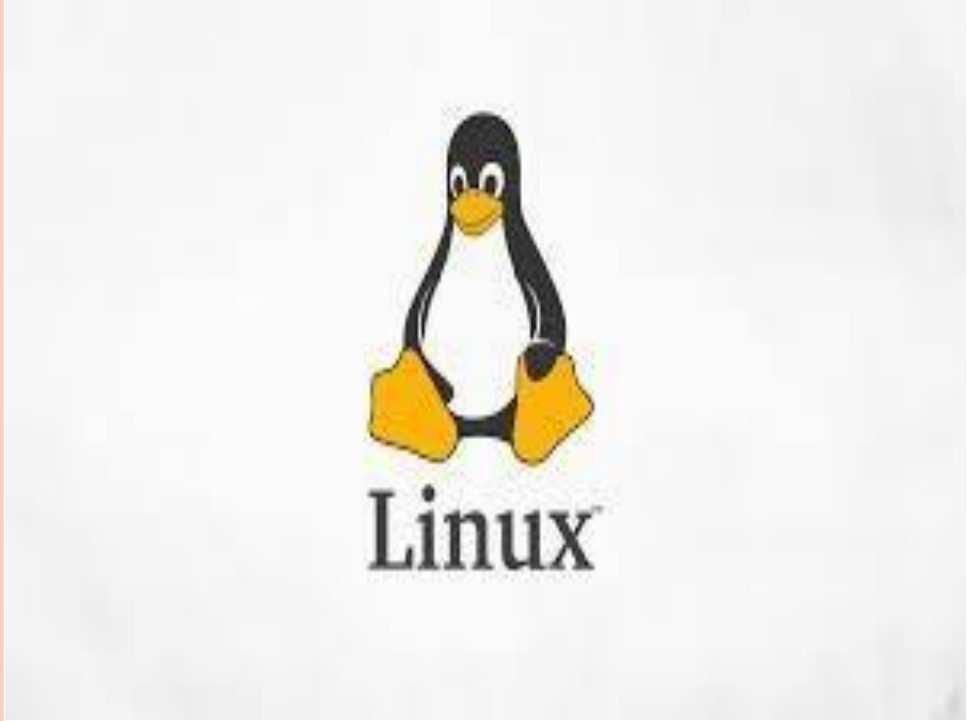


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What is an Operating System?

- An **Operating system (OS)** is a software which acts as an interface between the end user and computer hardware.
- Every computer must have at least one OS to run other programs.
- An application like Chrome, MS Word, Games, etc. needs some environment in which it will run and perform its task.
- The OS helps you to communicate with the computer without knowing how to speak the computer's language.
- It is **not** possible for the user to use any computer or mobile device without having an operating system.

List of Operating Systems

- Windows
- Unix
- Linux
- Android
- iOS
- Mac OS
- Chrome OS
- Windows Phone OS



History Of OS

- Operating systems were first developed in the late 1950s to manage tape storage
- The General Motors Research Lab implemented the first OS for its IBM 701
- In the mid-1960s, operating systems started to use disks
- In the late 1960s, the first version of the Unix OS was developed



History Of OS

- The first OS built by Microsoft was DOS. It was built in 1981 by purchasing the 86-DOS software from a Seattle company
- The present-day popular OS Windows first came to existence in 1985 when a GUI was created and paired with MS-DOS.



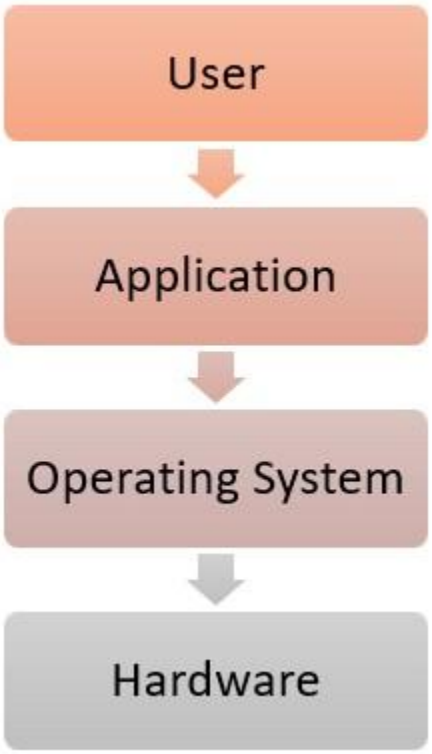
Features of Operating System

Here is a list commonly found important features of an Operating System:

- Protected and supervisor mode
- Allows disk access and file systems Device drivers Networking Security
- Program Execution
- Memory management Virtual Memory Multitasking
- Handling I/O operations
- Manipulation of the file system
- Error Detection and handling
- Resource allocation
- Information and Resource Protection



OS Location



Types of Operating system

- Batch Operating System
- Multitasking/Time Sharing OS
- Multiprocessing OS
- Real Time OS
- Distributed OS
- Network OS
- Mobile OS



Difference between 32-Bit & . 64 Bit Operating System

Parameters	32. Bit	64. Bit
Architecture and Software	Allow 32 bit of data processing simultaneously	Allow 64 bit of data processing simultaneously
Compatibility	32-bit applications require 32-bit OS and CPUs.	64-bit applications require a 64-bit OS and CPU.
Systems Available	All versions of Windows 8, Windows 7, Windows Vista, and Windows XP, Linux, etc.	Windows XP Professional, Vista, 7, Mac OS X and Linux.
Memory Limits	32-bit systems are limited to 3.2 GB of RAM.	64-bit systems allow a maximum 17 Billion GB of RAM.

Disadvantages of using Operating System

- If any issue occurs in OS, you may lose all the contents which have been stored in your system
- Operating system's software is quite expensive for small size organization which adds burden on them. Example Windows
- It is never entirely secure as a threat can occur at any time.



LINUX

- Linux is used for a number of reasons:
  - ✓ It is freely available as ”open Source” software.
  - ✓ It is designed for security and reliability, especially (but not only) in the area of network services and server systems (its strengths).
  - ✓ It is very flexible and multi-use for all kinds of devices use:

    Desktop-PCs
    mobile devices.
    Cell-phones.
    Multimedia devices,
    cars, etc.
  - ✓ Its popularity is constantly increasing.
  - ✓ Many big corporations (HP, IBM, Sun, Intel)

    And more are officially supporting the Linux community.

LINUX

- Many commercial companies are offering-services,packages(“Distributions”) documentation etc.
- Linux today has a growing power and influence of the whole IT world.



Linux

- the resulting GNU/Linux operating system has spawned hundreds of unique distributions,or custom builds, of the system .
- major distributions include:
  - RedHat
  - SUSE
  - Fedora
  - Debian
  - Slackware
  - Ubuntu



LINUX

- distributions differencing in function, utility, installed, applications, hardware support, user inter- face, and purpose.
- For example
  1) RedHat Enterprise Linux is geared to large commercial use.
  2) PC Linux OS is a Live CD– an operating system that can be booted and run from a CD-ROM without being installed on a system ‘s hard disk.



- one variant of PC Linux OS-called "PCLinuxOS Supergamer DVD"- is a LiveDVD that includes graphics drivers and games

Linux Has Many Distributions



Linux

- Linux is a true 32 bit UNIX-like OS developed originally for home PCs, but now it runs on a variety of platforms including PowerPC, Mackintosh, Amiga, DEC Alpha, Sun Sparc, ARM, and many others. The source code for Linux is freely available to everyone. Linux was created by Linus Torvalds in 1991, and it has been developed with the help of many programmers across the Internet. Now it has developed into a very functional, powerful and usable clone of Unix which has at least 10 million users worldwide.



Linux

- A Linux Distribution has thousands of dollars worth of software for no cost.
- Linux is a complete operating system:
- stable - the crash of an application is much less likely to bring down the OS under Linux.
- Reliable - Linux servers are often up for hundreds of days compared with the regular reboots required with a Windows system.
- extremely powerful
- Linux provides a complete development environment.



Why Linux (continued)

- Excellent networking facilities
- Ideal environment to run servers such as a web server, or an FTP server.
- A wide kinds of commercial software is available if not satisfied by the free software
- Easily upgradeable.
- Supports multiple processors.
- True multi-tasking, multi-user OS, Virtual Memory , Shared libraries, TCP/IP .
- An excellent window system called X, the equivalent of Windows but much more flexible.
- Full source code is provided and free.

