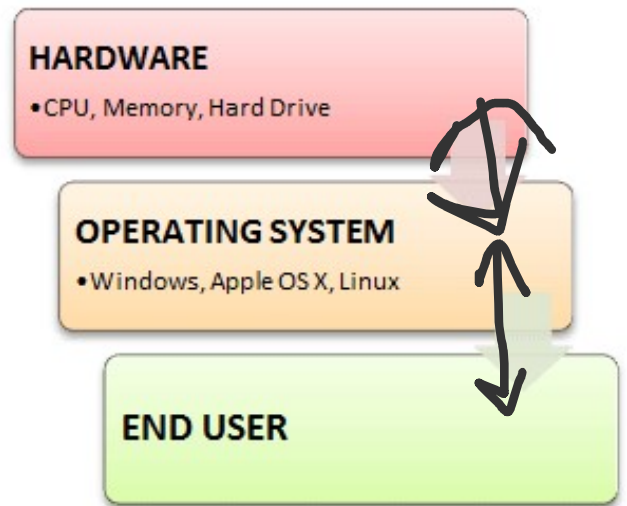


Operating system

An Operating System (OS) is a software that acts as an interface between computer hardware components and the user. Every computer system must have at least one operating system to run other programs. Applications like Browsers, MS Office, Notepad Games, etc., need some environment to run and perform its tasks.

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.



FUNCTIONS OF OPERATING SYSTEM

1. File Management

An operating system's (OS) primary function is to manage files and folders.

Operating systems are responsible for managing the files on a computer. This includes creating, opening, closing, and deleting files. The operating system is also responsible for organizing the files on the disk.

2. Device management

Operating systems provide essential functions for managing devices connected to a computer. These functions include allocating memory, processing input and output requests, and managing storage devices. This device could be a keyboard, mouse, printer, or any other devices you may have connected.

An operating system will provide you with options to manage how each device behaves. For example, you can set up your keyboard to type in a specific language or make it so that the mouse only moves one screen at a time.

3. Process management

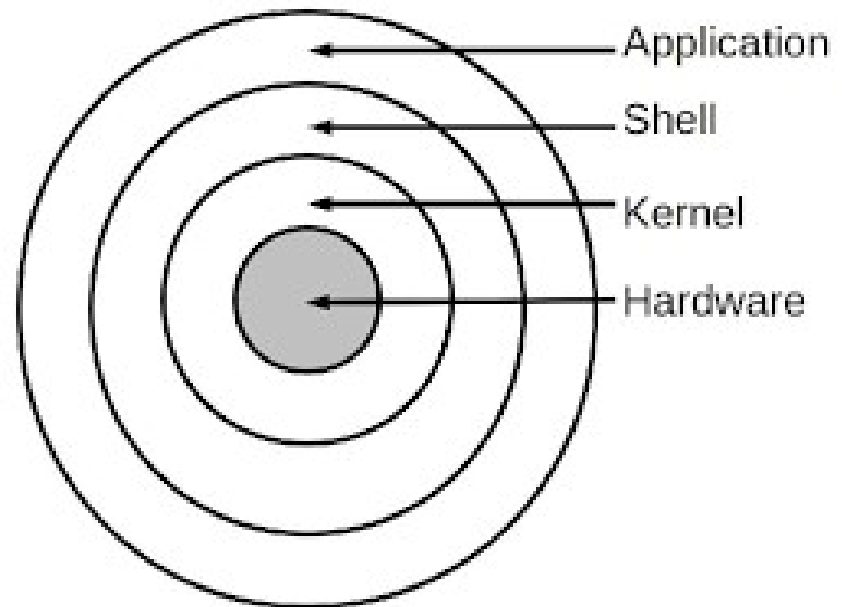
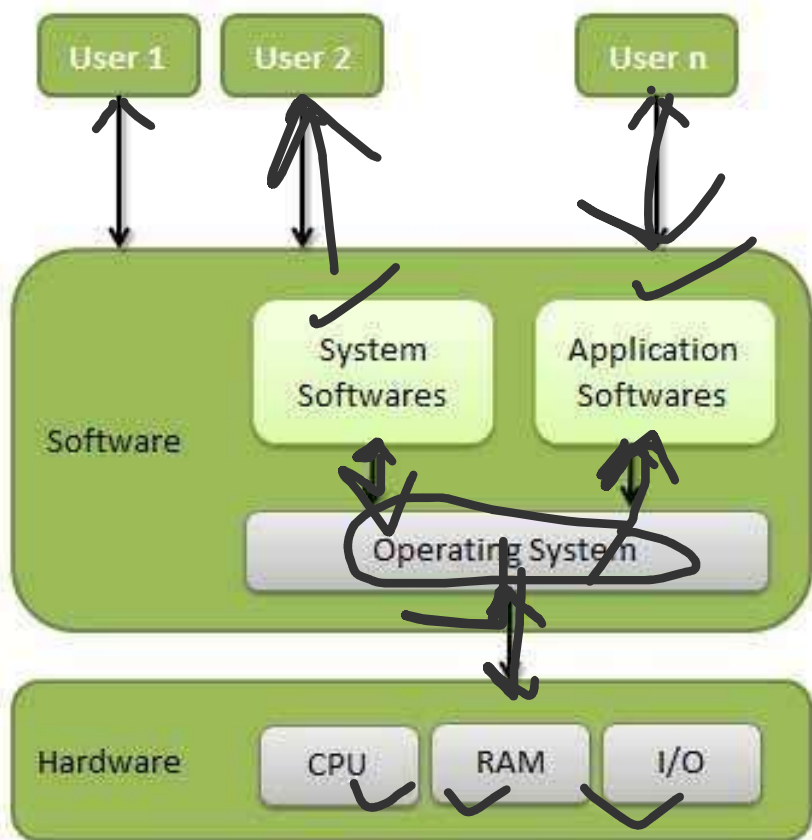
The operating system's responsibility is to manage the processes running on your computer. This includes starting and stopping programs, allocating resources, and managing memory usage. The operating system ensures that the programs running on your computer should be compatible. It's also responsible for enforcing program security, which helps to keep your computer safe from potential attacks.

4. Memory management

One of the most critical functions of an operating system is memory management. This is the process of keeping track of all different applications and processes running on your computer and all the data they're using.

ARCHITECTURES OF OS

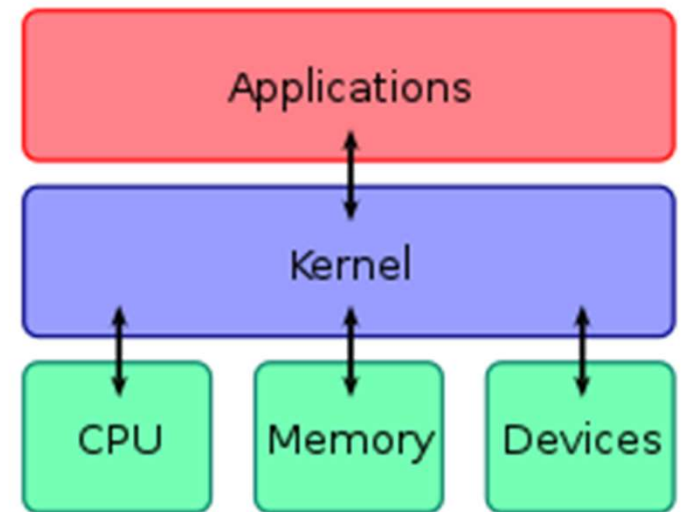
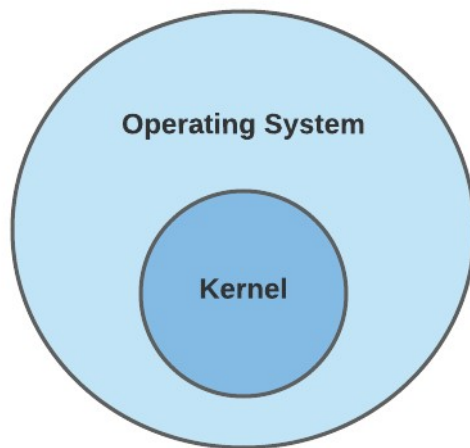
VLC →



Kernel

Kernel is central component of an operating system that manages operations of computer and hardware. It basically manages operations of memory and CPU time. It is core component of an operating system. Kernel acts as a bridge between applications and data processing performed at hardware level using inter-process communication and system calls.

Kernel loads first into memory when an operating system is loaded and remains into memory until operating system is shut down again. It is responsible for various tasks such as disk management, task management, and memory management.



BIOS

BIOS is a program, stands for basic input/output system, which is stored in nonvolatile memory like ROM (Read Only Memory) or flash memory that allows you to set up and access your computer system at the greatest basic level. Although there is no need for most people to mess with the BIOS on a computer, it can be better to know about BIOS. It is found on motherboards that are a pre-installed program on Windows-based computers that executes when a computer is powered up. Before an OS is loaded, the CPU accesses the basic input/output system (BIOS). Then, the next function of BIOS is to examine all the hardware connections and detects all your devices.

The main function of BIOS is to set up hardware and start an OS, and it contains generic code that is needed to control display screens, the keyboard, and other functions.

