About the Tutorial

An operating system (OS) is a collection of software that manages computer hardware resources and provides common services for computer programs. The operating system is a vital component of the system software in a computer system.

This tutorial will take you through step-by-step approach while learning Operating System concepts.

An Operating System (OS) is an interface between a computer user and computer hardware. An operating system is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.

Some popular Operating Systems include Linux Operating System, Windows Operating System, VMS, OS/400, AIX, z/OS, etc.

Memory Management

Memory management refers to management of Primary Memory or Main Memory. Main memory is a large array of words or bytes where each word or byte has its own address.

Main memory provides a fast storage that can be accessed directly by the CPU. For a program to be executed, it must in the main memory. An Operating System does the following activities for memory management:

 Keeps tracks of primary memory, i.e., what part of it are in use by whom, what part are not in use.

 In multiprogramming, the OS decides which process will get memory when and how much.

 Allocates the memory when a process requests it to do so.

 De-allocates the memory when a process no longer needs it or has been terminated.

Processor Management

In multiprogramming environment, the OS decides which process gets the processor when and for how much time. This function is called **process scheduling**. An Operating System does the following activities for processor management:

 Keeps tracks of processor and status of process. The program responsible for this task is known as **traffic controller**.

 Allocates the processor (CPU) to a process.

 De-allocates processor when a process is no longer required.