

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 operating system (OS) to run the 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 language. It is not possible for the users to use any computer or mobile devices without having an operating system.

* Various types of function performed by OS

↳ Security

The operating system uses password protection to protect user data and similar other techniques. It also prevents unauthorized access to program and user data.

3. Control over system performance
- Monitors overall system health to help improve performance. Records the response time between service requests and system responses to have complete view of the system health. This can help improve performance by providing important information needed to troubleshoot problems.

3. Error detecting aids
- Operating system constantly monitors the system to detect errors and avoid the malfunctioning of computer system.

4. Memory management

The operating system manages the primary memory or main memory.

It is made up of large array of bytes or words where each byte or word is assigned a certain address. Main memory is a fast storage and it can be accessed directly by the CPU. For a program to be executed it should be first loaded in the main memory. An OS performs the following activities for memory management.

5 Processor management

In a multi programming environment the OS decides the order in which processes have access to the processor and how much processing time each process has. This function of OS is called process scheduling. An operating system performs following activities for processor management. Keeps tracks of the status of processes. The program which perform this task is known as traffic controller. Allocates the CPU that is processor to a process. De-allocates processor when process is no more required.

* Data types used in C

- Data type is a type of data which is used in the program. In other word we can say that it is used to declare a variable.

— There are two types of data types

- ① Primary data type
- ② Secondary data type

Primary data types

types	int	char	float	void
Size	2 byte	1 byte	4 byte	-
Range	-32768 to 32767	-128 to +127	3.4×10^{-38} to 3.4×10^{38}	-

Secondary data types

- Array, Pointer, Structure, Union.