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COMPUTER ORGANIZATION & OPERATING SYSTEM

Operating System: An Operating system is software which acts as an interface between the end user and computer hardware.

- ❖ Every computer must have least one OS to run other programs. An applications like chrome, MS word, Games, etc. needs some environment in which it will run and perform its task.
- ❖ The operating system acts as an interface between the users of the system and hardware of the system.
- ❖ Every computer system whether it is an independent system like a desktop or a cell phone must have an operating system for performing all functionalities like accepting input from various input devices, directing the output to the display to communicating with hardware, and installing/uninstalling of peripheral devices.

Functions of an Operating System:

The prime functions of an operating system as categorized:

- ❖ COMMUNICATION MANAGEMENT
- ❖ RESOURCE MANAGEMENT
- ❖ PROCESS MANAGEMENT
- ❖ FILE MANAGEMENT
- ❖ MEMORY MANAGEMENT

1. **Communication management:-** Manages the communication needs of the system, it communicating with the peripheral devices or the Internet, are addressed by the operating system. Each of peripheral devices like printer, mouse have unique characteristics and the computer needs to know these unique properties, for this operating system uses special programs called drivers which enable recognition of these devices and their properties.

2. **Resource Management:** Working of a computer system is predominantly dependent on how its resources are being managed. Operating systems handles the allocation of all such resources, the resources we talk of here; are the memory of the computer , the CPU time, files, secondary storage, input/output devices etc.

3. **Process Management**: A Process is a program currently executing in the memory or waiting for the CPU. In a computer there are multiple processes in the system. The OS manages, controls, schedules all the processors being executed in the computer. It decides which process gets the processor.