**UNIT 1**

**AN INTRODUCTION TO OPERATING SYSTEMS**

**Application software** performs specific tasks for the user.

**System software** operates and controls the computer system and provides a platform to run application software.

An **operating system** is a piece of software that manages all the resources of a computer system,both hardware and software, and provides an environment in which the user can execute his/her programs in a convenient and efficient manner by hiding underlying complexity of the hardware and acting as a resource manager.

Why OS?

1. What if there is no OS?

a. Bulky and complex app. (Hardware interaction code must be in app’s code base)

b. Resource exploitation by 1 App.

c. No memory protection.

2. What is an OS made up of?

a. Collection of system software.

An operating system function -

- Access to the computer hardware.

- interface between the user and the computer hardware

- **Resource management (Aka, Arbitration) (memory, device, file, security, process etc)** - **Hides the underlying complexity of the hardware. (Aka, Abstraction)** - facilitates execution of application programs by providing isolation and protection.



User

| Application programs |
| --- |
| Operating system |
| Computer hardware |

The operating system provides the means for proper use of the resources in the operation of the computer system.