**Operating system**

A piece of software which interacts directly with the hardware, manages resources, and usually presents a user interface to the user.

Purpose of operating system let us you use the interface.

**Kernel**

Kernel is the heart of the operating system.

Process management for application execution

Memory management, allocation, and I/O

Device management using device drivers

System call control, which is essential for the execution of kernel services

**Real time operating systems**

Like most operating systems, real time operating systems run on hardware. The way tasks are managed is what sets it apart from a regular operating system. It is possible for multiple processes to run simultaneously in real-time operating systems. Best example: Traffic control.

**Single - user single task**

A single user can only perform one task at a time in a single task operating system. There can be only one instance of a function, such as printing a document, downloading images and Mobile phone.

**Single - users multi – tasking**

One of the most common types of operating systems is the multitasking operating system that is designed for single users to perform multiple tasks at once. Best example: Home PC.

**Multi-user**

The term refers to two or more simultaneous users on a computer system. Although most personal computers and workstations are multi-user systems, mainframes and minicomputers are also. Best examples: windows server, Microsoft teams