What are different types of Kernels?

Types of Kernels in OS

1. Monolithic Kernel
2. Microkernel
3. Hybrid Kernel

Monolithic Kernel:

A monolithic kernel is a type of kernel design in an operating system where the entire operating system is contained in a single large program. In a monolithic kernel architecture, all the core functions of the operating system, such as process management, memory management, device drivers, and file systems, are implemented as part of the kernel.

- Examples include Linux, Unix, and MS-DOS.

Microkernel :

A microkernel is a type of kernel design in an operating system that aims to keep the kernel minimalistic by providing only essential services and delegating other functions to user-level processes. In a microkernel architecture, the kernel itself is small and focuses on providing basic functionalities such as process scheduling, inter-process communication, and memory management.

Hybrid kernel:

A hybrid kernel is a type of kernel design that combines features of both monolithic and microkernel architectures. In a hybrid kernel, certain key functions and services are implemented in kernel space, while others are implemented as separate user-level processes or modules. This design approach aims to strike a balance between performance, modularity, and extensibility.