Difference between Microkernel and Monolithic kernel.

Monolithic Kernel

- A monolithic kernel is designed as a single, large executable file where the entire operating system kernel resides.
- It provides all the essential operating system services, such as process management, memory management, file system access, device drivers, and networking protocols, within the kernel itself.
- The large size and complexity of the kernel can lead to slower performance and increased vulnerability to bugs and crashes.

Microkernel

- A microkernel is designed to be minimalistic and modular, with a small core that provides only essential services such as inter-process communication, basic scheduling, and memory management.
- Non-essential services like file systems, device drivers, and networking protocols are implemented as separate user-space processes called servers, which run outside the kernel.