What do you mean by System Calls? Discuss types of System Call?

System calls are functions that allow user-level processes to interact with the underlying operating system kernel. When a process needs to perform privileged operations or access system resources, it makes a request to the operating system through a system call.

System Calls are the only way through which a process can go into **kernel mode** from **user mode**.

Types of System Calls:

Process Control:

Creating, terminating, and managing processes.

File Management:

Creating, opening, closing, reading, and writing files.

Device Management:

Requesting and controlling I/O operations on devices.

Information Maintenance:

Retrieving system, process, and file-related information.

Memory Management:

Allocating, deallocating, and managing memory.