

Multi-tasking and multi-Threading:

Multitasking and multithreading are both techniques used in computing to enable multiple tasks to run concurrently on a single processor or multiple processors. However, there are some differences between the two concepts.

Multitasking **refers to the ability of an operating system to run multiple processes or tasks concurrently.** The operating system divides the processor's time among the different processes, giving each process a certain amount of time to execute its code before switching to another process. Multitasking can be achieved through time-sharing, where the operating system switches between processes based on a predefined time slice, or through priority-based scheduling, where higher-priority processes are given more processor time than lower-priority processes.

Multithreading, on the other hand, **is a programming technique that enables a single process to execute multiple threads of execution concurrently within the same program.** Each thread is a separate sequence of code that runs independently of the other threads within the same process. Multithreading can improve the performance of a program by enabling it to perform multiple tasks concurrently, such as handling user input, updating the user interface, and performing background tasks.

In summary, multitasking is a technique used by the operating system to run multiple processes concurrently, while multithreading is a programming technique used by a single process to execute multiple threads of execution concurrently within the same program.