MULTITHREADING VS MULTITASKING

* Difference Between Concepts:

Multi threading is a specialized form of multitasking. A multi threaded program contains 2 or more threads running concurrently. Where as in multitasking environment 2 or more processes will run concurrently.  
Multithreading requires less overhead than multitasking, processes are heavyweight tasks that require their own address space. Inter process communication is very expensive and context switching from one process to another process is costly since they are running  
in different address spaces.  
In case of multithreading threads are light weight process and  
can share same address space and inter thread communication is less expensive than inter process.

* Pros Of Multithreading:
* Threads share the same address space.
* Threads are lightweight which has a low memory footprint.
* The cost of communication between threads is low.
* Access to memory state from another context is easier.
* Takes lesser time to switch between two threads within the shared memory and time to terminate.
* Threads are faster to start than processes and also faster in task-switching.
* All Threads share a process memory pool that is very beneficial.
* Takes lesser time to create a new thread in the existing process than a new process.
* Cons Of Multithreading:
* Code is usually harder to understand and increases the potential for race conditions increases dramatically.
* Multithreading system is not interruptible/killable.
* Pros Of MultiTasking:
* Multitasking helps one to achieve different goals in less time.
* Multitasking increases productivity.
* This helps in strengthening mental focus. One gets trained to switch from one task to another, thus enabling flexibility in focus. Such level of focus and ability to switch also increase the resilience.
* The ability to switch from one task to another swiftly and working on different stuff simultaneously enhances the adaptability.
* Cons Of MultiTasking:
* Multitasking demands haste. In some cases it can lead to a compromise in quality.
* Multitasking is distracting. While a person is focused on multiple tasks at hand, she or he is distracted from everything else. This distraction can become chronic.
* Multitasking doesn’t segregate tasks based on priority or significance. It enables a misconception that a person can get a task done anytime and anyway. This shows procrastination.