Multithreading in C#

Process is used by operating system to make execution of a program possible by providing required resources.

A process has atleast one thread and a thread is inside a process that is responsible for executing application process. A process with more than one thread is multithreading. There is System.threading class namespace to implement threading in .Net. The thread.sleep(5000) forces a thread to sleep for 5 seconds. Multithreading makes an application more responsive, faster and efficient.

Advantages of multithreading are to maintain responsive UX, efficient use of processor times and split large CPU bound tasks to be processed simultaneously on a machine that has multiple processor/cores.

Multithreading in a single core machine can affect performance negatively, writing more lines of code to accomplish tasks and they are difficult.

A thread can be created by instance of a thread class by passing name of the function that we want the thread to execute. Thread always require a delegated as purpose of thread is to execute a function and delegate is type safe function pointer as it points to function that thread has to execute.

ParamaterizedThreadStart delegate is used to pass data into thread function.The only disadvantage is loss of type safety.

To pass data tothread function is a safe manner, encapsulated the thread function and data it needs in helper class and use threadstart delegate to execute the thread function.

In order to get or retrieve data from thread, callback method is used