

Thread Life Cycle :

- New

- The thread is in new state if you create an instance of Thread class but before the invocation of start() method.

- Runnable

- The thread is in runnable state after invocation of start() method, but the thread scheduler has not selected it to be the running thread.

- Running

- The thread is in running state if the thread scheduler has selected it.

- Non-Runnable (Blocked)

- This is the state when the thread is still alive, but is currently not eligible to run.

- Terminated

- A thread is in terminated or dead state when its run() method exits.

Executor Service :

ExecutorService is a framework provided by the JDK which simplifies the execution of tasks in asynchronous mode. It allows you to pass a task to be executed by a thread asynchronously. The executor service creates and maintains a reusable pool of threads for executing submitted tasks. It provides mechanisms for safely starting, closing down, submitting, executing, and blocking on the successful or abrupt termination of tasks. With ExecutorService, we don't have to write our own thread manager which can have bugs with it. This is especially useful if the program needs to run several threads at once. It frees application developer from thread management stuff and allows to focus on business logic.