## **Complete Threads Workshop**

## **Course Content**

## Pre requisite: Core Java -

- What is Thread?
- How many ways thread object can be created?
- What is the difference between java program execution vs thread execution
- > Thread Life cycle.
- Different thread states
- What is the need for Synchronization?
- Synchronization in Java
- What is Object Lock?
- What is Class Lock?
- > Synchronization vs Lock
- What is interthread communication?
- Difference between Sleep and Wait methods?
- Why wait, notify and notify all are in Object class?
- Yield Method, join method
- What is the drawback of Thread?
- What is the need for Thread pool in Java?
- What is the need for Callable interface?
- What are the difference between callable and runnable?
- What are different thread pools in Java and example program using the thread pool?
  - Single Thread pool
  - Cached Thread pool
  - Fixed Thread pool
  - Scheduled Thread pool
- ➢ How to implement thread pool?
- Executor framework ?
- ➤ How to do multi threading in Java ? Practical program on multi threading using executor framework
- What is Future interface in Java?
- What is Volatile keyword in Java?
- What is Deadlock and how to avoid it?
- What is Atomicity in Java?
- What is the difference between lock and Synchronization?
- What is reentrant lock?
- What is read write lock?

- ➤ What is count down latch?
- What is semaphore?
- What is cyclic barrier?
- What is thread local?
- **▶** What is Thread Groups
- > Java 8 changes to executor framework changes
- > Producer and Consumer example (Blocking queue) implementation using Threads
- > Interview Q & A

Timing: 7:00 AM to 8:00 AM (Recordings up to 6 months)

Fee: 2000

**Duration is: 25 to 30 days (Mon to Fri)**