

Workshop on Java Development

(5 days hands-on)

This course will prepare students for the **Sun Certified Developer for the Java Platform, Standard Edition (CX-310-252A and CX-310-027)** certification examination. The examination is a practical test that requires you to complete a programming assignment. This course will introduce those Java technologies essential for completing the assignment, as well as discussing how to approach the project design and implementation.

In order to prepare students for the assignment, the final two days of the course will see students completing a sample project similar to one they will be required to complete as part of the examination.

Contents:

- **Introduction:** The Certified Developer qualification and examination; Programming project overview – what to expect; Analysis – OO principles and design patterns Web applications
- **Java Coding Conventions:** File names and file organization; Naming conventions; Line wrapping and comments; Declarations and statements
- **Creating Client Applications Using Swing:** The Swing and AWT libraries; Containers and components; JComponent and JFrame; Basic and advanced Swing components; Layout managers; Creating basic and advanced layouts
- **Exception Handling and Logging:** Exception Handling; Defining a custom exception class; Logging
- **Multithreading:** Understanding multithreading; Creating threads; Synchronization and coordination; Scheduling threads
- **Networking:** Introduction to networking; Using URLs; Working with sockets; Working with a multithreaded server
- **Remote Method Invocation (RMI):** Introduction to RMI; A complete RMI example; Passing objects in RMI
- **Implementing a File-Based Database:** Writing a database lock manager; Writing a database factory; Implementing database functionality
- **Accessing Relational Databases Using JDBC:** JDBC drivers and connections; Statements and results; Obtaining metadata; JDBC 3.0 features
- **Project Workshop (2 days):** Analyse project requirements; Develop the user interface; Create a network server that connects to a database; Create the network connection between client and server

Who Should Attend:

Students who wish to sit the **Sun Certified Developer for the Java Platform, Standard Edition** certification examination.

Prerequisites:

Students should have completed the Java for Programmers course, or have equivalent experience.