
Next Level Java 9 Programming | Intermediate Java (TT2209)

Overview

This fast-track course is designed for experienced developers who have prior working knowledge of basic Java 8 or Java 9 and want to take advantage of the newest features of Java 9 that can help improve performance and functionality of Java 9 applications. You will gain invaluable insight into how to leverage Modules, scale applications into multi-core environments, improve performance, and become a more effective Java 9 developer.

Prerequisite Comments

TT2100-J9 Introduction to Java 9 Programming for OO Experienced Developers

TT2120-J9 Java 9 Programming Basics for Developers new to OO

Continued Java & JEE training: Intermediate to Advanced Java, JEE Essentials, Java for Web, Spring / Spring Boot, Microservices / Web Services / REST, RXJava, Tuning, Patterns & More

TDD / Test Driven Development, JUnit / Unit Testing, Agile development training

Secure Java Coding / Java Security and secure application development training

Mobile developer / Android training

Please contact us for recommended next steps tailored to your longer-term education, project, role or development objectives.

Target Audience

This is an intermediate level Java development course geared for students experienced with Java 8 or later programming essentials who wish to quickly get up and running with advanced Java skills. This course does not cover Java programming fundamentals.

Course Objectives

Students will leave this course armed with the required skills to improve their Java applications using sound coding techniques and best practices.

This "skills-centric" course is about 50% hands-on lab and 50% lecture, designed to train attendees in advanced development skills, coupling the most current, effective techniques with the soundest industry practices. Working in a hands-on learning environment, guided by our expert team, attendees will learn to:

Develop modular applications in Java

Utilize the tooling that is provided in Java 9 to migrate, monitor and optimize applications

Use the new JShell tool to quickly test java constructs

Understand how the implementation of the String class has been updated to decrease the memory footprint

Use the enhancements made to the Concurrency API, working with Completable Future instance of Thread pools

Specific Java 9 features that are covered in the course include:

The Java Module System (project Jigsaw)

JShell

Updated try-with-resources

Performance enhancements in Java 9

Multi-Release Jar files

Course Outline

1 - Java 9 Updates

Review of What is New in Java 9
Milling Project Coin

2 - The Java Module system (Jigsaw)

Why Jigsaw?
Introduction to the Module System
The Module Descriptor
Working with Modules

3 - JShell

JShell

4 - More Java 9

Other New Java 9 Features
Performance Optimizations
Memory Management (Optional)

5 - Multithreading and Concurrency

Multithreading
Concurrent Java
Java 8 Concurrency Updates

6 - Reflection and References

Introspection and Reflection
Reference Objects

7 - Effective Java

Objects, Declarations, and Initializations
Exceptions

8 - Writing High-Performance Applications

Profiling and Benchmarking
Profiling Tools
Code Optimization Techniques
Code Optimization Myths
Design Optimization Techniques