

Java Programming for OO Developers

(4 days hands-on)

This course is aimed at object-oriented developers (e.g. C++ or C#) who need to get up to speed quickly in Java. The course covers the Java programming constructs and APIs quickly, focussing on the differences between Java and other OO languages.

Contents:

- **Java Software Development Kit:** Java SDK tools; Java compiler and Java interpreter; Building API documentation with Javadoc; Java archives
- **Java Language Fundamentals:** Java statements; Code blocks; Primitive data types; Literals and variables; Converting data types; Operators; Packages
- **Flow Control:** Decision making: if and if-else; The switch statement; Looping: for loops; while loops; do-while loops; for-each style loops; Assertions
- **Exception Handling:** Catching exceptions; Throwing exceptions; Defining new exception classes
- **Using Classes:** Creating new objects; Invoking methods; Passing parameters and using return values; Tour of the Java 2 Standard Edition library; Overview of the Object class; Using String and StringBuffer classes; Using the Java wrapper classes
- **Defining New Classes:** Defining instance methods and instance variables; Defining and calling constructors; Comparing and cloning objects; Defining class methods and class variables
- **Inheritance:** Defining subclasses; The 'protected' accessibility specifier; Accessing superclass members; Defining abstract classes; Defining abstract methods; Defining interfaces; Using interfaces in design
- **Inner Classes:** Overview of inner classes; Defining and instantiating inner classes
- **Collections:** Overview of Java SE collection classes; Generics; Using List-based collection classes; Using Set-based collection classes; Using Map-based collection classes; Collection techniques
- **Input and Output:** Streams, readers, and writers; File and directory operations; Reading and writing to a file; Using filter classes
- **Concurrency:** Overview of multithreading; Creating new threads; Object locking; Using wait, notify, and notifyAll
- **New Java Language Features:** Annotations; Scripting integration; Overview of Web Service integration

Who Should Attend:

This training course is aimed at OO developers who need to transition into Java.

Prerequisites:

Experience using a contemporary OO language such as C++ or C#.