

## Introduction to Programming in Java 5 Part 1 Training Course Outline

### Course Description:

Are you interested in learning Java programming? Are you looking for a Java programming course that provides easy, expert training? Our introduction to Java two-part series provides outstanding instruction on how to program in Java.

This Java programming training class provides a guided, in-depth introduction to the Java programming language, highlighting key benefits and features. You will learn about object-oriented programming concepts, Java's core packages, and creating graphical user interfaces with Java. You will also learn file input and output from within Java in this Java developer course.

**Note:** This is a training class in Java 5. If you wish to learn Java 6, please see *Programming in Java 6 with Swing and Servlets Parts 1 & 2*.

### Course Prerequisites:

Prior programming experience with any procedural or object-oriented language. Experience with SQL is helpful. Experience with graphically-oriented IDEs, such as Eclipse, is helpful.

### Course Objectives:

As a result of taking this Java training course, you will be able to:

- Describe and obtain an overview of Java's capabilities, benefits and features.
- Define object oriented programming concepts and their implementation in Java.
- Utilize classes from Java core packages in a Java application.
- Create a graphical user interface (GUI) using Java classes.
- Program using Java event listeners.
- Build programs that directly read and write operating system files from within Java.

Continue this Java development training with *Introduction to Programming in Java 5 Part 2*.

### Course Outline:

#### Module 00: Introduction to Programming in Java 5 Part 1 Online Training - Course Introduction

#### Module 01: Introduction and Overview – Part 1

- Benefits and Features of Java
- The Java Virtual Machine
- Java's Core Packages
- The Java Developer's Kit
- Applets vs. Applications

#### Module 02: Introduction and Overview – Part 2

- Object References
- Variables and Arrays
- Methods: Java's Functions
- Control Flow

**Module 03: Introduction and Overview – Part 3**

- Reference Data Types
- Variable Types
- Variable Modifiers
- Naming Conventions
- Operators
- Exercise

**Module 04: Object-Oriented Programming (OOP) in Java – Part 1**

- Define Object-Oriented Programming Concepts
- Describe How Java Implements Object-Oriented Programming

**Module 05: Object-Oriented Programming (OOP) in Java – Part 2**

- Explain the Structure of Classes
- Examine How Simple Inheritance is Used

**Module 06: Object-Oriented Programming (OOP) in Java – Part 3**

- Identify Class and Variable Access Modifiers
- Encapsulation
- Polymorphism
- Packages
- Exercise

**Module 07: Java Core Packages – Part 1**

- What are Packages
- Lifecycle of a Java Object
- Memory Management and Garbage Collection
- The lang Package
- The util Package
- The net Package
- The awt Package
- The io Package

**Module 08: Java Core Packages – Part 2**

- The applet Package
- Applets and HTML
- Events in the Lifetime of an Applet
- Exercise

**Module 09: Java AWT and JFC – Part 1**

- Explain How to Construct a Graphically-Oriented Interface in Java

- Describe the Classes that Comprise the Abstract Windowing Toolkit

**Module 10: Java AWT and JFC – Part 2**

- Demonstrate the Graphically-Oriented Java Foundation Classes

**Module 11: Java AWT and JFC – Part 3**

- Illustrate How the Event-Listener Mechanism Handles Events
- Exercise

**Module 12: File I/O – Part 1**

- Manipulate Files, Directories and Their Contents from Within Java Applications
- Discover How to Open and Close Files from Within a Java Application
- Explain How to Read Files from Within a Java Application

**Module 13: File I/O – Part 2**

- Demonstrate How to Write Files from Within a Java Application
- Demonstrate How to Use Formatting Specifiers to Construct Custom Output
- Exercise