Java SE 6 Programming Fundamentals

Information

Length:	5.0 Days
__Ref:	WD154G-X
Delivery method:	ClassroomInstructor Led Online
Price:	EUR

Overview

In this 5-day instructor-led course, students learn how to develop applications using the Java Platform, Standard Edition (Java SE) 6 programming language.

This course introduces students to the Java language and programming techniques using lectures, demonstrations, and extensive labs. It covers object-oriented programming, Java syntax, and important Java classes and interfaces such as collections, exceptions, threads, I/O, and other utility classes.

Hands-on lab exercises throughout the course allow students to gain hands-on experience with Java programming, covering skills such as building classes, debugging Java code, refactoring, and creating and running test cases. Students have the choice of performing the lab exercises using either Eclipse V3.6 or IBM Rational Application Developer V8.0.

For information about other related WebSphere courses, visit the WebSphere Education Training Paths website:

http://www.ibm.com/software/websphere/education/paths/

Public

This basic course is for students with little or no Java programming experience. However, some programming experience and some familiarity with object-oriented programming is helpful.

Prerequisits

Students should be familiar with object-oriented (OO) programming,**or** successfully complete course *Introduction to Object-Oriented Programming with Java Examples (WD150)***or** *Introduction to Object-Oriented Programming with Java Examples (Remote Classroom) (VD150).*

Objective

- Describe the fundamentals of object-oriented programming

- Use Java syntax to develop applications in Java
- Use inheritance and interfaces in Java applications
- Refactor Java code
- Describe and use some of the important API classes and interfaces available in Java, including:
  - Primitive wrapper classes
  - Classes in the Collections Framework
  - Utility classes
  - I/O classes
  - Threads
  - Exceptions
- Use generic types in Java classes
- Develop components (beans) using the JavaBeans API
- Use the Java features in Eclipse V3.6 or Rational Application Developer V8
- Debug Java programs
- Perform unit testing of Java applications using Junit

Topics

- Course introduction
- Introduction to the Java programming language
- Introduction to the Java development environment
- Exercise: Compiling and running Java programs
- Object-oriented programming
- Java syntax basics - Part 1
- Java syntax basics - Part 2
- Exercise: Writing simple Java code using the IDE
- Building classes
- Exercise case study overview
- Exercise: Building classes
- Debug applications
- Exercise: Debugging Java code
- Inheritance
- Design patterns and refactoring
- Exercise: Inheritance and refactoring
- Interfaces
- Collections
- Generics
- Exercise: Collections and generics
- Exercise: Interfaces and sorting
- Threads and synchronization
- Exercise: Threads

- Utility classes
- Exceptions and exception handling
- Exercise: Exceptions
- I/O and serialization
- JavaBeans API and architecture
- Exercise: JavaBeans
- Exercise: Serialization
- Other Java SE features
- Unit testing with JUnit
- Exercise: Using JUnit
- Course summary