Java Fundamentals - (Duration 40 Hours)

(Exam code 1z0-850) (Associate certification : Oracle Certified Associate -JAVA)

What will you learn ?

If you have little or no programming experience, this Java course is a great place to begin. Hands-on instruction and exercises will help you learn programming using the Java programming language.

Course Objectives

- Demonstrate knowledge of Java technology, the Java programming language, and the product life cycle
- Use various Java programming language constructs to create several Java technology applications
- Use decision and looping constructs and methods to dictate program flow
- Implement intermediate Java technology programming and object-oriented (OO) concepts in Java technology programs

Required Prerequisites:

- Create and edit text files using a text editor.
- Use a World Wide Web (WWW) browser.
- Solve logic problems.

Suggested Prerequisites:

- Describe the concept of a variable.
- Execute commands using a command-line interface.

Learn To:

- Understand the significance of object-oriented programming.
- Use keywords and constructs of the Java programming language.
- Follow the steps required to create simple Java technology programs.
- Develop a solid basis in the Java programming language upon which to base continued work and training.
- Use the Java Platform, Standard Edition 6 (Java SE 6) platform, as well as the the Java SE Development Kit 6 (JDK 6) product.

Training Requirements

This course counts towards the Hands-on course requirement for the Java SE 6 Developer Certification. Only instructor-led in class or instructor-led online formats of this course will meet the Certification Hands-on Requirement. Self Study and Knowledge Center courses DO NOT meet the Hands-on Requirement.

Audience

- Technical Administrator
- Developer
- System Administrator

Course Topics

Explaining Java Technology

- Describe key concepts of the Java programming language.
- List the three Java technology product groups.
- Summarize each of the seven stages of the product life cycle.

Analyzing a Problem and Designing a Solution

- Analyze a problem using object-oriented analysis.
- Design classes from which objects will be created.

Developing and Testing a Java Technology Program.

- Identify the four components of a class in the Java programming language.
- Use the main method in a test class to run a Java technology program from the command line.
- Compile and execute a Java technology program.

Declaring, Initializing, and Using Variables

- Identify the use the syntax for variables and define the syntax for a variable.
- List the eight Java programming language primitive data types.
- Declare, initialize, and use variables and constants according to Java programming language guidelines and coding standards.
- Modify variable values using operators.
- Use promotion and type casting.

Creating and Using Objects

- Declare, instantiate, and initialize object reference variables.
- Compare how object reference variables are stored in relation to primitive variables.
- Use a class (the String class) included in the Java Software Developer Kit (SDK).
- Use the Java 2 Platform, Standard Edition (J2SE[TM]) class library. specification to learn about other classes in this application programming interface (API)

Using Operators and Decision Constructs

- Identify relational and conditional operators.
- Create if and if/else constructs.
- Use the switch construct.

Using Loop Constructs

- Create while loops
- Develop for loops
- Create do/while loops

Developing and Using Methods

- Describe the advantages of methods and define worker and calling methods.
- Declare and invoke a method.
- Compare object and static methods.
- Use overloaded methods.

Implementing Encapsulation and Constructors

- Use encapsulation to protect data.
- Create constructors to initialize objects.

Creating and Using Arrays

- Code one-dimensional arrays.
- Set array values using length attribute and a loop.
- Pass arguments to the main method for use in a program.
- Create two-dimensional arrays.

Implementing Inheritance

- Define and test your use of inheritance.
- Explain abstraction.
- Explicitly identify class libraries used in your code.

Exam Details

Exam No	Exam Name	Exam Objectives	Duration	No of Questions	Passing Score
1Z0-850	Java Standard Edition 5 and 6, Certified Associate Exam	Objectives	**115**	**51**	**68%**