Java SE 11 Programmer I
Exam Number: 1Z0-815

Review exam topics

Understanding Java Technology and environment

- Describe Java Technology and the Java development
- Identify key features of the Java language

Creating a Simple Java Program

- Create an executable Java program with a main class
- Compile and run a Java program from the command line
- Create and import packages

Working With Java Primitive Data Types and String APIs

- Declare and initialize variables (including casting and promoting primitive data types)
- Identify the scope of variables
- Use local variable type inference
- Create and manipulate Strings
- Manipulate data using the StringBuilder class and its methods

Using Operators and Decision Constructs

- Use Java operators including the use of parentheses to override operator precedence
- Use Java control statements including if, if/else, switch
- Create and use do/while, while, for and for each loops, including nested loops, use break and continue statements

Working with Java Arrays

- Declare, instantiate, initialize and use a one-dimensional array
- Declare, instantiate, initialize and use a two-dimensional array

Describing and Using Objects and Classes

- Declare and instantiate Java objects, and explain objects' lifecycles (including creation, dereferencing by reassignment, and garbage collection)
- Define the structure of a Java class
- Read or write to object fields

Creating and Using Methods

- Create methods and constructors with arguments and return values
- Create and invoke overloaded methods
- Apply the static keyword to methods and fields

Applying Encapsulation

- Apply access modifiers
- Apply encapsulation principles to a class

Reusing Implementations Through Inheritance

- Create and use subclasses and superclasses
- Create and extend abstract classes
- Enable polymorphism by overriding methods
- Utilize polymorphism to cast and call methods, differentiating object type versus reference type
- Distinguish overloading, overriding, and hiding

Programming Abstractly Through Interfaces

- Create and implement interfaces
- Distinguish class inheritance from interface inheritance including abstract classes
- Declare and use List and ArrayList instances
- Understanding Lambda Expressions

Handling Exceptions

- Describe the advantages of Exception handling and differentiate among checked, unchecked exceptions, and Errors
- Create try-catch blocks and determine how exceptions alter program flow
- Create and invoke a method that throws an exception

Understanding Modules

- Describe the Modular JDK
- Declare modules and enable access between modules
- Describe how a modular project is compiled and run