



Nutech Computer Training Institute

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Overview of Java Certification Preparation Class

Session 1:

Review: Java Language Fundamentals

- Primary Goals
- The Java Virtual Machines
- Garbage Collection
- Code Security
- A Basic Java Application
- A Basic Java Applet
- Using The Java API Documentation

Practice Questions

Session 2:

Review: Identifiers, Keywords, Types, and Arrays

- Comments, Semicolons, Blocks, and Whitespace
- Identifiers, Java Keywords
- Basic Java Types, Objects and Classes
- Variables, Declarations, and Initialization
- Java Coding Conventions
- Array Declaring, Creating, and Initializing
- Multi-Dimensional Arrays
- Array Bounds, Resizing, and Copying
- Anonymous Arrays

Practice Questions

Session 3:

Review: Expressions and Flow Control

- Variable Initialization
- Scope
- Operators
- Logical Expressions
- Bitwise Operations
- Promotion and Casting
- Branching Statements: if, else, and switch
- Looping Statements: for, while, and do loops
- Special Loop Flow Control

Practice Questions

Session 4:

Review: Objects and Classes (I)

- Fundamentals
- Pass-by-value
- Constructing and Initializing Objects
- Subclassing
- The this and super Keywords
- Access Control
- Overloading and Overriding
- The static and final Keywords
- toString(), == and equals()

Practice Questions

Session 5:

Review: Objects and Classes (II)

- The Nested Classes
- Abstract Classes and Interfaces
- Grouping Classes
- Deprecation
- The Wrapper Classes
- The java.lang Package
- Collection API
- The Reflection Package

Practice Questions

Session 6:

Review: Stream I/O and Files

- Stream I/O – Introduction
- Basic Stream I/O Classes
- URLs and Streams
- Readers and Writers
- Files – Introduction
- Random Access Files
- Object Serialization
- Zip and JAR Files
- Client/Server Features
- Call native applications from Java

Practice Questions

Session 7:

Review: Exceptions and Threads

- Exception – Introduction
- Exception Categories
- Exception Handling
- Threads – Introduction
- Basic Control of Threads
- The Problem
- Thread Interaction

Practice Questions

Session 8:

Review: Building AWT GUIs

- The AWT
- Building Graphical User Interfaces
- Frames
- Panels
- Layout Managers

Practice Questions

Session 9:

Review: The AWT Components

- Features
- Components
- Controlling Visual Effects
- Printing

Practice Questions

Session 10:

Review: The Java Events

- Events – Introduction
- Event Listeners and Adapters
- Event Processing

Practice Questions

Session 11:

Review: Java Applets

- Applets – Introduction
- Applet Methods and the Life Cycle
- The appletviewer
- The applet Tag
- Additional Applet Features
- Dual Purpose Code (Applet/Application)

Practice Questions

Session 12:

Review: The Java Overview

- Review Critical information
- Sample Exam. Practice