Java SE: Programming I

Category: Software Development & Programming | **Vendor:** Oracle

Duration: 40.00 hours (5 days) **32.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

This entry-level course is aimed at programmers who are new to Java and who need to learn its concepts, language constructs, and data types. Included in the agenda are topics on exception handling, lambda expressions, and modular programming.

The course is designed for programmers who will apply these language skills to develop programs using the latest versions of the JDK, such as Java 10 and Java 11. Students practice the skills learned in each lesson through hands-on labs, using the latest major version of Java.

About This Course

- What is a Java Program
- Creating a Java Main class
- Data in the Cart
- Managing Multiple Items
- Describing Objects and Classes
- Manipulating and Formatting the Data in Your Program
- Creating and Using Methods
- Using Encapsulation
- More on Conditionals
- More on Arrays and Loops
- Using Inheritance
- Using Interfaces
- Handling Exceptions
- Deploying and Maintaining the Soccer Application
- Understanding Modules
- JShell

Who Should Attend

- System Analysts
- Architect
- Java Developers
- Technical Consultant

Prerequisites & Entry Requirements

General Prerequisites:

Suggested Prerequisites

- Familiarity with general computer programming concepts and techniques
- Experience with another programming language

Learning Outcomes

Upon successful completion of this course, participants will be able to:

- Create simple Java classes and use object references to access fields and methods in a class
- Demonstrate polymorphism by implementing a Java interface
- Handle a checked exception in a Java application
- Use a Predicate Lambda expression as the argument to a method
- Define and implement a simple class hierarchy that supports application requirements
- Write Java code that uses variables, arrays, conditional and loop constructs of achieve program objectives
- Identify modular programming principles
- Access and create static fields and methods
- Encapsulate a class using access modifiers and overloaded constructors
- Manipulate numeric, text, and string data using appropriate Java operators
- Set environment variables to allow the Java compiler and runtime executables to function properly

Detailed Course Outline

What is a Java Program

- Running and testing a Java program
- Java technology and development environment
- Key features of the Java language

Creating a Java Main class

- Java classes
- Adding a Main method
- The Main method

Data in the Cart

- Manipulating numeric data

- Working with numbers

- Introducing variables

- Working with strings

Managing Multiple Items

- Working with a list of items

- Working with conditions

- Using IF statements

- Processing a list of items

Describing Objects and Classes

- Working with object references

- Doing more with arrays

- Declaring, instantiating, and initializing objects

- Defining fields and methods

- Working with objects and classes

Manipulating and Formatting the Data in Your Program

- Using the StringBuilder class

- More about primitive data types

- Using the Java API docs

- More numeric operators

- Using the String class

- Promoting and casting variables

Creating and Using Methods

- How arguments are passed to a method

- Using methods
- Overloading a method
- Static methods and variables
- Method arguments and return values

Using Encapsulation

- Access control
- Overloading constructors
- Encapsulation

More on Conditionals

- More ways to use IF/ELSE constructs
- Using the Netbeans debugger
- Relational and conditional operators
- Using switch statements

More on Arrays and Loops

- The ArrayList class
- Nesting loops
- Parsing the args array
- Alternate looping constructs
- Working with dates
- Two-dimensional arrays

Using Inheritance

- Working with subclasses and superclasses
- Creating and extending abstract classes
- Overriding methods in the superclass

- Overview

Using Interfaces

- Using the List interface
- Using interfaces
- Introducing Lambda expressions
- Polymorphism in the JDK foundation classes
- Local-variable type inference
- Polymorphism

Handling Exceptions

- Propagation of exceptions
- Overview
- Handling multiple exceptions and errors
- Catching and throwing exceptions

Deploying and Maintaining the Soccer Application

- Application modification and requirements
- Packages, JARs, architecture

Understanding Modules

- Module declarations
- Modular JDK
- JARs
- The Module system

JShell

- Testing code

- JShell basics

- JShell in an IDE

Skills You Will Learn:

- Create simple Java classes and use object references to access fields and methods in a class
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Frequently Asked Questions

Q: What delivery options are available for Java SE: Programming I?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 5-day Java SE: Programming I course provides up to 32.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Java SE: Programming I training?

The training takes place over 5 day(s), with each day lasting approximately 40.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Java SE: Programming I?

Yes, we provide corporate training, dedicated training, and closed classes for Java SE: Programming I. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Java SE: Programming I, Oracle Java and Middleware Training, D102470

Q: Why choose Nexus Human for Java SE: Programming I?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Java SE: Programming I training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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