

# OJAV-15 - JAVA SE 11: PROGRAMMING COMPLETE

Categoria: **Java**

## INFORMAZIONI SUL CORSO



**Durata:**  
5 Giorni



**Categoria:**  
Java



**Qualifica Istruttore:**  
Oracle Certified  
Professional



**Dedicato a:**  
Sviluppatore



**Produttore:**  
Oracle

## OBIETTIVI

- Manipulate numeric, text, date and time values using appropriate Java primitives and classes
- Organise Java code using classes, interfaces and enumerations
- Implement program logic using variables, arrays, conditional and loop constructs
- Create Java applications that leverage the object-oriented features of the Java language, such as encapsulation, inheritance, and polymorphism
- Use Lambda Expressions
- Use Java Collections API
- Process information using Streams API
- Use Java Concurrency API
- Implement error propagation and handling
- Implement input/output (I/O) functionality to read and write binary and text data
- Manipulate files, directories and file systems
- Deploy and execute Java applications using a modularized approach

## PREREQUISITI

Some experience with a programming language

## CONTENUTI

### 1: Introduction to Java

- Introduction to Java, Part 1
- Introduction to Java, Part 2
- Introduction to Java, Part 3
- Practice 1-1: Verify the JDK Installation
- Practice 1-2: Create, Compile, and Execute a Java Application

### 2: Primitive Types, Operators, and Flow Control Statements

- Primitive Types, Operators, and Flow Control Statements, Part 1
- Primitive Types, Operators, and Flow Control Statements, Part 2
- Primitive Types, Operators, and Flow Control Statements, Part 3

- Practice 2-1: Manipulate with Primitive Types
- Practice 2-2: Use the if/else and switch Constructs and a Ternary Operator

### **3: Text, Date, Time, and Numeric Objects**

- Text, Date, Time, and Numeric Objects, Part 1
- Text, Date, Time, and Numeric Objects, Part 2
- Text, Date, Time, and Numeric Objects, Part 3
- Practice 3-1: Explore String and StringBuilder Objects
- Practice 3-2: Use BigDecimal Class and Format Numeric Values
- Practice 3-3: Use and Format Date and Time Value
- Practice 3-4: Apply Localization and Format Messages

### **4: Classes and Objects**

- Classes and Objects, Part 1
- Classes and Objects, Part 2
- Classes and Objects, Part 3
- Practice 4-1: Create the Product Management Application
- Practice 4-2: Enhance the Product Class
- Practice 4-3: Document Classes

### **5: Improved Class Design**

- Improved Class Design, Part 1
- Improved Class Design, Part 2
- Improved Class Design, Part 3
- Practice 5-1: Create Enumeration to Represent Product Rating
- Practice 5-2: Add Custom Constructors to the Product Class
- Practice 5-3: Make Product Objects Immutable

### **6: Inheritance**

- Inheritance, Part 1
- Inheritance, Part 2
- Inheritance, Part 3
- Inheritance, Part 4
- Practice 6-1: Create Food and Drink Classes That Extend Product
- Practice 6-2: Override Methods and Use Polymorphism...Part 1
- Practice 6-2: Override Methods and Use Polymorphism...Part 2
- Practice 6-2: Override Methods and Use Polymorphism...Part 3
- Practice 6-3: Create Factory Methods

### **7: Interfaces**

- Interfaces, Part 1
- Interfaces, Part 2
- Interfaces, Part 3
- Practice 7-1: Design the Rateable Interface
- Practice 7-2: Enable Products Review and Rating
- Practice 7-3: Test the Product Review Functionality

### **8: Arrays and Loops**

- Arrays and Loops, Part 1

- Arrays and Loops, Part 2
- Practice 8-1: Allow Multiple Reviews for a Product

## 9: Collections

- Collections, Part 1
- Collections, Part 2
- Collections, Part 3
- Practice 9-1: Organize Products and Reviews into a HashMap
- Practice 9-2: Implement Review Sort and Product Search Features

## 10: Nested Classes and Lambda Expressions

- Nested Classes and Lambda Expressions, Part 1
- Nested Classes and Lambda Expressions, Part 2
- Practice 10-1: Refactor ProductManger to use a Nested Class
- Practice 10-2: Produce Customized Product Reports

## 11: Java Streams API

- Java Streams API, Part 1
- Java Streams API, Part 2
- Java Streams API, Part 3
- Practice 11-1: Modify ProductManager to Use Streams
- Practice 11-2: Add Discount Per Rating Calculation

## 12: Handle Exceptions and Fix Bugs

- Handle Exceptions and Fix Bugs, Part 1
- Handle Exceptions and Fix Bugs, Part 2
- Handle Exceptions and Fix Bugs, Part 3
- Practice 12-1: Use Exception Handling to Fix Logical Errors...Part1
- Practice 12-1: Use Exception Handling to Fix Logical Errors...Part2
- Practice 12-2: Add Text Parsing Operations...Part 1
- Practice 12-2: Add Text Parsing Operations...Part 2

## 13: Java IO API

- Java IO API, Part 1
- Java IO API, Part 2
- Java IO API, Part 3
- Java IO API, Part 4
- Practice 13-1: Print Product Report to a File
- Practice 13-2: Bulk-Load Data from Files...Part 1
- Practice 13-2: Bulk-Load Data from Files...Part 2
- Practice 13-3: Implement Memory Swap Mechanism

## 14: Java Concurrency and Multithreading

- Java Concurrency and Multithreading, Part 1
- Java Concurrency and Multithreading, Part 2
- Java Concurrency and Multithreading, Part 3
- Java Concurrency and Multithreading, Part 4
- Practice 14-1: Redesign ProductManager as a Singleton
- Practice 14-2: Ensure ProductManager Memory Safety

- Practice 14-3: Simulate Concurrent Callers...Part 1
- Practice 14-3: Simulate Concurrent Callers...Part 2

### **15: Open Module Content**

- Open Module Content, Part 1
- Open Module Content, Part 2
- Open Module Content, Part 3
- Practice 15-1: Convert ProductManagement Application into a Module
- Practice 15-2: Separate Application into Several Modules

### **16: Annotations**

- Annotations, Part 1
- Annotations, Part 2

### **17: Java Database Connectivity**

- Java Database Connectivity, Part 1
- Java Database Connectivity, Part 2

### **18: Java Security**

- Java Security, Part 1
- Java Security, Part 2

### **19: Advanced Generics**

- Advanced Generics, Part 1
- Advanced Generics, Part 2

### **20: Oracle Cloud Deployment**

- Oracle Cloud Deployment, Part 1
- Oracle Cloud Deployment, Part 2
- Oracle Cloud Deployment, Part 3
- Oracle Cloud Deployment, Part 4

## **INFO**

**Natura del corso:** Operativo (previsti lab su PC)