

## Java SE: Programming II

- **Formato do curso:** Presencial e Live Training
- **Localidade:** Porto
- **Data:** 22 Nov. 2021 a 26 Nov. 2021
- **Preço:** 2050€
- **Horário:** Laboral - das 09h30 às 16h30
- **Duração:** 30 horas

This is a second-level course for programmers learning the Java language. It rounds-out the topics that were taught in [Java SE: Programming I](#), and provides additional key skills for Java programmers, such as secure coding, modular programming, and database access.

This course uses today's main Java version for its practices (currently Java 11).

### Destinatários

- Data Scientist
- Developer
- Implementer

### Pré-requisitos

#### Required Prerequisite

- [Java SE: Programming I](#)

### Objectivos

- Create Java applications that leverage the object-oriented features of the Java language, such as encapsulation, inheritance, and polymorphism
- Execute a Java application from the command line
- Create applications that use the Java Collections framework
- Search and filter collections using Lambda Expressions
- Implement error-handling techniques using exception handling
- Implement input/output (I/O) functionality to read from and write to data and text files

- Manipulate files, directories and file systems using the JDK NIO.2 specification
  - Perform multiple operations on database tables, including creating, reading, updating and deleting using both JDBC and JPA technology
  - Use Lambda Expression concurrency features
  - Apply modular programming practices and services to applications
  - Create high-performing multi-threaded applications
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## Programa

### **Functional Programming**

- Functional Interfaces and Lambda Expressions
- Collections Streams, and Filters
- Built-in Functional Interfaces

### **Modular Programming**

- Introduction to Modular Programming in Java
- Services in a Modular Application
- Migration to a Modular Application

### **Streams and Parallel Streams**

- Concurrency
- Parallel Streams
- Terminal Operations: Collectors
- Creating Custom Streams

### **Java API Programming and Secure Coding Concepts**

- I/O (Fundamentals and NIO2)
- Secure Coding
- Database Applications with JDBC
- Localization

### **Collections and Generics**

- What is the Collections Framework?
- Iterators
- Type-Wrapper Classes
- What are Generics?

### **Exception Handling and Assertions**

- Exceptions
- Error handling
- Assertions