

## Java SE: Programming II (D102474)

ID D102474 Price 2,390.— €(excl. VAT) Duration 5 days

### Who should attend

- Data Scientist
- Java Developers
- Developer
- Technical Consultant

### Prerequisites

[Java SE: Programming I \(D102470\)](#)

### Course Objectives

- Use Lambda Expression concurrency features
- Apply modular programming practices and services to applications
- Create high-performing multi-threaded applications
- 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

### Course Content

#### Functional Programming

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

#### Modular Programming

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

#### Streams and Parallel Streams

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

#### Java API Programming and Secure Coding Concepts

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

#### Collections and Generics

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

#### Exception Handling and Assertions

- Error handling
- Exceptions
- Assertions

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