

# Java 23 Initiation : The Fundamentals

5 days (35 hours)

## Presentation

Java is the most widely used programming language. It has been one of the [most popular](#) computer languages since its creation in the 90s.

Easy to learn and platform-independent. Learning Java is a valuable skill in the application world.

Our Java training for beginners will teach you the fundamentals. You'll learn object language syntax, IntelliJ, object collection and queries. At the end of the course, you'll have the skills to create your own Java application.

What's more, our introductory course will introduce you to advanced development concepts such as classes, methods and unit tests.

As with all our training courses, this one will introduce you to the latest version of Java (at the time of writing: [JDK 23](#)).

## Objectives

- Discover object-oriented programming
- Learn the basics of Java
- Creating a small Java application

## Target audience

- Developers
- Technical architects
- Computer application developers
- Project managers

# Prerequisites

Basic knowledge of object programming. 10 days training if no knowledge.

## Materials required

[IntelliJ](#) installed on his machine.

## Java 23 Initiation Training Program

### Discover IntelliJ

- Discovering EDL (IntelliJ, Gradle)
- Configuration
- Tips for optimizing your work environment
- Project architecture in Java
- StackTrace
- Debugger
- Gradle
- Using Gradle and adding libraries

### Object-oriented programming

- Basic syntax
  - Attribute
  - Pointer
  - Instance method
- Algorithms with objects
- Fundamental concepts
  - Polymorphism
  - Encapsulation
  - Manufacturers
  - Accessors

### Learn Java syntax

- Hello World
- Writing syntax
- Table
- Algorithms

### Object collection

- Table of objects
- ArrayList, HashMap

## Queries

- Exception handling
- Adding external libraries
- Making a web request
- Parsing JSON (serialization/deserialization)
- Using an API
- Performing an asynchronous task

## Create your application

- Reading a class diagram
- Create a game on the console using several objects
- Relationship with a graphical interface
- Generating a graphical interface
- Introduction to inheritance with graphical components
- Introduction to interfaces using events on graphical components
- Modify data following an event and update the graphical interface
- Explaining and implementing SVM

## Advanced notions

- Generic classes and methods
- Abstract classes and methods
- Unit testing

## Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

## Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

## Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

## Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

## Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

## Sanction

A certificate will be issued to each trainee who completes the course.