



# Kotlin

Duration 2 day(s) (KOTLIN)

Learn how to develop applications in Kotlin

## Description

Kotlin is the programming language created by JetBrains in 2011. It has the distinction of being compiled for the JVM, transpiled to JavaScript and even more with the LLVM compiler. The goal of the language is to be compatible with the existing one, to allow the simple use of the functional programming paradigms, to simplify the writing of the code and to free the developers from the most common errors. Kotlin has been gaining popularity since the release of its version 1.0. Little by little, it becomes the reference in the world of mobile (Android), backend (Spring) and tools (Gradle). In this training we will introduce the key language concepts that will allow you to develop your next Java, JavaScript or Android project in Kotlin.

## Goals

- Learn the basics of language
- Discovery of the standard library
- Getting started with the different tools available
- Overview of different contexts of use (Android, Backend, Javascript)

### *Public*

- Developers

### *Prerequisites*

- Know the basics of programming.

### *Structure*

30% Theory, 70% Practice

# Program

## First steps

- Language presentation
- Installation
- First program
- On the command line (REPL)

## Basic syntax

- Variables (var, val, const, immutability, null safety)
- Expressions (if, when, while => statements)
- Packages
- Types
- Writing standards (coding conventions)

## Classes and objects

- Classes, interfaces and inheritance
- Data Classes
- Extensions
- Generic
- Delegation

## Functions and Lambdas

- Functions
- De-structuring
- Operator overload
- Lambdas
- Higher-Order Function
- Inline functions
- Coroutines

## Standard library and tools

- Collection
- Compilers
- Interactions with Java
- JavaScript interactions