inovex

Trainings

Modern Android App Development with Kotlin

This training course introduces you to the Kotlin programming language and helps you find your way around the associated ecosystem.

Duration: 3 days

14.11 – 16.11.2023 (DE)

Target group: Software developers

Kotlin is *the* state-of-the-art alternative to Java and can be used in a wide range of scenarios, even outside the Java Virtual Machine (JVM). You can, for example, use Kotlin to implement native Android apps, web backends or cross-platform libraries.

This training provides a practice-oriented introduction to the programming language Kotlin and modern Android app development. The trainer, Johannes Schamburger,brings extensive expertise from his projects and incorporates his experiences into the training.

The participants learn all the important tools to develop Android apps with Kotlin. The training is strongly based on the official Android development documentation. In the course, participants develop a small app (Github Client), which is expanded bit by bit. All mediated content is practiced directly in tasks.

This training focuses on the idea of learning together. There is always the opportunity to exchange ideas, ask questions and influence the content of the training.

Agenda

- Kotlin basics

- Kotlin concepts & language features

- Null safety – No longer generate unintentional null values

- Coroutines – Manage synchronous operations easily and effectively

- Delegates – Delegate functions and properties to other classes

- Sealed classes – Increased code security by creating data models with limited, predictable capabilities

- Extension functions – Adding new functionality to a class without editing it directly

- Higher-order functions – Make code more effective and readable

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- Android app architecture
  - Separation of concerns – Separation of UI und business logic

  - Layered Architecture – Easy maintenance of code through clearly defined layers of the app

  - Dependency Injection – Management of dependencies between different components of the app

- UI development with Jetpack Compose

- Concurrency and und network communication

- Data storage & persistence

- Testing
  - Unit Tests

  - UI Tests