COURSE TABLE OF CONTENTS

Kotlin Multiplatform Mobile (KMM) Development

OEM: JetBrains • Duration: 3 Days (24 hrs)

COURSE MODULES & TOPICS

Module 1: Introduction to Kotlin Multiplatform Mobile

- When to choose KMP vs Flutter or native apps
- Project structure: shared, androidApp, iosApp
- Gradle setup and Kotlin version alignment
- Common pitfalls in KMP projects
- expect/actual vs common abstractions
- Shared data models and business logic
- Creating a KMP project and calling shared code from Android

Module 2: Networking, Storage, and Architecture in Shared Code

- Ktor client in commonMain
- Kotlinx serialization and error handling
- Platform HTTP engines
- SQLDelight for shared persistence
- Dependency injection in shared code (Koin)
- Testing shared logic
- Building a shared repository for data fetching and caching

Module 3: Android UI Integration and Platform APIs

- Consuming shared code from Jetpack Compose
- ViewModels and state holders with shared use cases
- Accessing platform APIs via expect/actual or interfaces
- Build variants and R8 notes
- Debugging shared code
- Building Android UI on top of shared repository

Module 4: iOS Interoperability, Distribution, and Operations

- Calling shared Kotlin from Swift and SwiftUI
- XCFramework and Swift Package Manager distribution
- CI and versioning for shared modules
- Migrating existing Android apps to KMP
- What to keep out of shared code
- Completing the sample app with production-readiness checklist

Module 5: Compose Multiplatform UI (Optional)

- Compose Multiplatform UI basics
- Sharing the UI layer and its limitations
- Building list, detail, and write flows for Android and iOS

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