



## Curriculum Of Android Development & Kotlin

**Duration: 3 Months**

### MODULE 1: ANDROID KOTLIN

- Environment Setup
- Hello World Program
- First Program Concept
- Environment Setup (IDE)
- First Program (IDE)
- Kotlin Variable
- Kotlin Data Type
- Kotlin Type Conversion
- Kotlin Operator
- Kotlin Input/Output
- Kotlin Comment

### MODULE 2: CONTROL FLOW

- Kotlin if Expression
- Kotlin when Expression
- Kotlin for Loop
- Kotlin while Loop
- Kotlin Do while Loop
- Return and Jump
- Continue Structure

### MODULE 3: FUNCTION

- Kotlin Function
- Recursion Function
- Default and Named Argument
- Kotlin Lambdas
- Higher order Function
- Kotlin Inline Function

### MODULE 4: ARRAY

- Kotlin Array
- String & Kotlin String
- Exception Handling
- Kotlin Try Catch
- Multiple Catch Block
- Nested Try Block
- Kotlin Finally Block
- Kotlin Throw Keyword

### MODULE 5: NULL SAFETY

- Nullable Non Nullable Types
- Kotlin Smart Cast
- Unsafe and Safe Cast
- Kotlin Elvis Operator

### MODULE 6: COLLECTIONS

- Mutable Array
- Kotlin Collections
- List: listOf()
- mutableListOf()
- Kotlin Array List
- arrayListOf()
- Map: mapOf()
- Kotlin HashMap
- hashMapOf()
- mutableMapOf()
- Set: setOf()
- mutableSetOf()
- hashSetOf()

### MODULE 7: ANNOTATIONS

- Kotlin Annotations

### MODULE 8: REFLECTION

- Kotlin Reflection

### MODULE 9: KOTLIN OOPS

- Class and Object
- Nested and Inner Class
- Kotlin Constructor
- Visibility Modifier
- Kotlin Inheritance
- Abstract Class
- Kotlin Interface
- Data Class
- Sealed Class
- Extension Function
- Kotlin Generics



## Curriculum Of Android Development & Kotlin

### MODULE 10: RANGES

- Integer type range
- Kotlin Working Ranges
- Kotlin Utility Function

### MODULE 11: JAVA INTEROPERABILITY

- Calling Java code from Kotlin
- Calling Kotlin code from Java

### MODULE 12: REGEX

- Regular Expressions Introduction
- Regex patterns

### MODULE 13: ANDROID STARTUP

- Install Android Studio
- Hello World App

### MODULE 14: KOTLIN ANDROID

- Android Text View and Edit Text
- Kotlin Android Toast
- Android Button
- Android Custom Toast
- Android Explicit Intent
- Android Implicit Intent
- Android List View
- RecyclerView
- Android Alert Dialog
- Android Context Menu
- Android Custom List View
- Android Options Menu
- Android Popup Menu
- Android WebView
- Kotlin Android Seek Bar
- Tab Layout with Frame Layout

- Tab Layout with View Pager 2
- Android Media Player
- Android Video Player
- External Storage
- Internal Storage
- Shared Preferences
- Room DB
- Android Notification
- Authentication - Google Login
- Google Ad Mob Banner Ads
- Google Ad Mob Interstitial Ads
- Google Map Current Location
- Google Map Fixed Location
- Google Map Search location
- Android Web Service
- Retrofit

### MODULE 15: MVVM

- Coroutines