**Title**

Android App Development with Kotlin and Android Studio

**Duration**

5 Days

**Format**

In Person Instructor Led or Remote Instructor Led.

**Pre-Requisites**

Proficiency in any object oriented programming language such as Java, C#, Swift or C++.

**Overview**

In this course, you'll learn the basics of building Android apps with the Kotlin programming language and the Android Studio IDE. Along the way, you'll develop a collection of apps to start your journey as an Android developer.

Students will spend the first day covering the basics of the Kotlin Language followed by four days of Android Development using Android Studio.

This course consists of a combination of instructor-led discussion and hands-on lab exercises for students.

| **Agenda:**  **Android App Development with Kotlin and Android Studio** | | |
| --- | --- | --- |
| **Day** | **Lesson** | **Topics** |
| Day 1 | Kotlin Basics | * + Operators   + Data Types   + Variables   + Conditionals   + Lists and Arrays   + Null Safety |
|  | Functions | * + Programs in Kotlin   + Compact Functions   + Lambdas and Higher-Order Functions   + List Filters |
|  | Classes and Objects | * + Classes   + Inheritance   + Extension Functions   + Special Classes   + Organizing Your Code |
| Day 2 | Build Your First Android App | * + Anatomy of an Android App   + Layouts and Resources   + Activities   + Making an App Interactive   + Accessibility |
|  | Layouts | * + Common Layouts (Linear Layout, Relative Layout)   + Constraint Layouts   + View Binding and Data Binding   + Displaying Lists with RecyclerView |
|  |  | * + The Application   + Activities   + Views   + Lifecycle |
| Day 3 |  | * + Views   + Layout   + Graphical design   + XML Layout |
| Day 2 |  | * + Toasts   + Status Bar Notification   + Progress Dialog   + Other notifications |
| Day 3 |  | * + Spinners   + View Pager   + Tabs   + View Flipper |
| Day 3 | Intents | * + Intents   + Intent Filters   + Starting Activities   + Implicit and explicit targeting |
| Day 3 | Navigation | * + Menus   + Action Bar   + The back button   + Gestures |
| Day 3 | Services | * + Running in the background   + Starting a service   + Communicating with a service   + Bound Services |
| Day 4 | Content Providers | * + URLS   + Creating a Content Provider   + Queries   + Inserts |
| Day 4 | Broadcast Receivers | * + Events   + Registering   + Intents   + Sticky Events |
| Day 4 | Tasks | * + Handlers   + Async Task   + Callbacks   + Updating the GUI |
| Day 4 | Data | * + Shared Preferences   + Internal Storage   + SQL Lite   + Resource Files |
| Day 5 | Accessing RESTful Services | * + HTTP   + Connections   + JSON   + Asynchronous requests/responses |
| Day 5 | The WebView | * + The WebView   + Navigation   + Local content   + JavaScript |
| Day 5 | Fragments | * + Screen sizes   + Responsive Layouts   + Alternate Resources   + Images |
| Day 5 | JetPack | * + Navigation   + Paging   + Slices   + Work Manager |