

ANDROID Apps Development

Description

Android is a mobile operating system developed by Google. It is based on a modified version of the Linux kernel and other open source software, and is designed primarily for touchscreen mobile devices such as smartphones and tablets.

Expectations and Goals

You might love the look of this clean, professional syllabus as much as we do. But it's also easy to get exactly the look you want. Now is a good time to pursue a career in Android development. It is not only an easy skill to learn, but also highly in demand. A career in Android development also offers plenty of freedom to learn and work as you please. With the right Android developer training, you will most definitely be on the right career path. Today's employers want their developers to have up-to-date knowledge. The best way to do this, of course, is by taking a training course or getting real-life experience. The course is structured in such way to improve your knowledge retention - by having a lot of hands-on projects. In each section of the course, you will be given the opportunity to practice and build something meaningful which will aid your understanding of Android Development even further.

Prerequisites

Java Programming: The most basic building block of Android development is the programming language Java. To be a successful Android developer, you'll need to be comfortable with Java concepts like loops, lists, variables, and control structures.

Course Schedule

Module	Topic
Module 1	Installation procedure of android studio & Introduction to Android Programming: Overview of an Android Project Creating an Android Project using Android Studio Building an Android Project Android Build System overview: introducing javac, aidl, aapt, dex, apkbuilder, jarsigner and zipalign Automating the build process using Gradle: configuring build files Running and Debugging an Android application Introduction to ADB: Android Debug Bridge Installing an Android application over real or virtual devices using ADB command line client Installing an Android application over real or virtual devices from Android Studio Debugging an Android Application: Introducing DDMS and Logcat. Lab Session – Building a simple user interface in Android
Module 2	Android Components, View System: Overview of Android application components: activities, broadcast receivers, services and content providers Introducing Android Activity: Details of Activity Life Cycle Activity Layout View and View Group Defining Layout using XML and Java Layout Parameters, Layout position, Size, Padding and Margins Lab Session – User interface design and event handling
Module 3	Styles and Themes: How to change styles and properly implementation of those styles and themes Common Layouts: Linear Layout, Relative Layout and Web View Building layouts with Adapters: List View and Grid View Event handling mechanism in Android Introduction to App Bar Lab Session – User interface design and event handling

Module 4	<p>Notification:</p> <p>Types of notifications</p> <p>How to implement those notification</p> <p>How to customize those notification</p> <p>Lab Session – Examples of notifications</p>
Module 5	<p>Intents and Intent Filters</p> <p>What is an intent: how intent can start an activity or service or deliver a broadcast to a receiver</p> <p>Intent types: Implicit and Explicit</p> <p>Building an intent by specifying Component name, Action, Data, Category, Extras and Flags chooser</p> <p>Receiving an implicit intent Example Filters</p> <p>Using a pending Intent</p> <p>Intent resolution by Action, Data and Category test Implicit intent example Continuation of second module. Explicit intent example</p> <p>Forcing an app</p>
Module 6	<p>Stored Procedure:</p> <p>Types of stored procedure</p> <p>What are external and internal stored procedure</p> <p>Saving Key-Value sets using Shared Preferences API</p> <p>Lab Session – Practical implementation of external and internal stored procedure</p>
Module 7	<p>SQLite Database:</p> <p>Saving Data in SQL Databases using `Open Helper</p> <p>Lab Session – Examples showing different ways of saving data</p>
Module 8	<p>View Group and Adapter:</p> <p>What is adapter</p> <p>How many types of adapter</p> <p>How to implement those in different listview, recycler view etc.</p>
Module 9	<p>Broadcast receivers</p> <p>Introduction to broadcast and broadcast receivers System broadcasts</p> <p>Defining broadcast receivers</p> <p>Declaring broadcast receivers in the manifest</p> <p>Registering a broadcast receiver with a context Sending broadcasts</p> <p>Restricting broadcasts with permissions Using Local Broadcast Manager</p>
Module 10	<p>Services</p> <p>What is a Service</p> <p>Different types of services:</p> <p>Scheduled Service (Android 5.0, API level 21) Started Service</p> <p>Bound Service</p>
Module 11	<p>Google Maps:</p> <p>Implementation google maps api</p>
Module 12	<p>Connectivity with Bluetooth:</p> <p>Introduction to Wireless Connectivity using Bluetooth</p> <p>Lab Session – Examples showing Network Connectivity and Cloud</p>
Module 13	<p>Connectivity with Firebase and network library:</p> <p>Connecting to the Network Transferring Data using Sync Adapters</p> <p>Introduction to Volley Firebase Cloud Messaging</p> <p>Declaring a Service in the manifest</p> <p>Creating a Started Service by extending Service and Intent Service class Starting and Stopping a Service</p> <p>Sending Notifications from a Service using Toast and Status Bar Notifications Running a Service in the foreground</p> <p>Service Life Cycle Creating a Bound Service:</p>

	<p>By extending the Binder class Using a Messenger</p> <p>Using AIDL</p> <p>Binding to a Service</p>
Module 14	<p>Content Providers</p> <p>Content Provider Basics Creating a Content Provider Calendar and Contacts Provider Storage Access Framework(SAF)</p> <p>Create a Custom Document Provider</p> <p>Lab Session – Examples demonstrating Content Provider</p>
Module 15	<p>Connectivity and Cloud</p> <p>Introduction to Wireless Connectivity using Wireless and Bluetooth Connecting to the Network</p> <p>Transferring Data using Sync Adapters Introduction to Volley</p> <p>Firebase Cloud Messaging</p> <p>Lab Session – Examples showing Network Connectivity and Cloud</p>
Module 16	<p>Google Maps:</p> <p>Implementation google maps api</p>
Module 17	<p>Project Work and Documentation</p>