**ANDROID APPS DEVELOPMENT**

**Training Course Content (2 Weeks)**

**1. INTRODUCTION TO ANDROID**

* What is Android
* Overview of Android and Android SDK
* History of Android and other Mobile OS
* Android Features

**2**. **ANDROID ARCHITECTURE OVERVIEW**

* Introduction to OS Layers
* Linux Kernel
* Libraries
* Android Runtime
* Application Framework

**3. SETUP OF ANDROID DEVELOPMENT ENVIRONMENT**

* System Requirements
* Android Studio and SDK installation,
* AVD creation
* Creating first Android Application
* Project Structure

**4. ANDROID APPLICATION FUNDAMENTALS**

* Android Application Building Blocks
* Activating Components
* Shutting Down components
* Lifecycle of Application
* Development tools, Manifest File
* Lifecycle of Activity

**5. HELLO WORLD – YOUR FIRST ANDROID APPLICATION**

* What is an Android Application?
* What is ‘.apk’ file?
* What is Android Manifest File?
* Importance of Android Manifest File.
* What is R.java

**6. Front End Development**

* What is front-end development?
* Difference between front-end and back-end development.
* Understanding of Layouts.
* Use of different Widgets

**7. USER INTERFACE**

* View Hierarchy and Layouts
* UI Events
* Building Menus
* Creating Dialogs
* Scroll View

**8. MAIN BUILDING BLOCK**

* Activity
* Intents
* Pending Intent
* Broadcast Receivers
* Services

**9. DATA STORAGE**

* Shared Preferences
* SQLite Databases
* Creating databases and using SQLite
* Querying Database-Create, Update, Delete, Insert
* Using Cursors
* SqliteOpenHelper

**10. LOCATION SERVICES**

* Selecting a Best Location Provider-GPS
* Finding Your Location-latitude & longitude
* Tracking Your Position.

**11. WORKING ON BROWSER**

* Creating your own Web Browser
* Using Back, Forward Button on Browser

**12. SERVICES**

* What is Service
* Creating a Service

**13. CALL**

* Calling Application

**14. WORKING WITH DIFFERENT ADAPTER VIEWS AND WIDGETS**

* List View
* Grid View
* Spinner
* Toggle Button
* Recycler View

**15. CLIPBOARD**

* Working with Clipboard
* Copying text to Clipboard

**16. GOOGLE MAPS**

* Working with Google Play Services
* Working with Google Maps
* Generating Google Map API Key
* Showing Google Map in an Activity
* Finding Current Location and Placing the Marker

**17. WORKING WITH THREADS**

* What is Thread
* Splash Screen Using Thread

**18. FACEBOOK SDK**

* Working with Facebook API
* Generating Facebook App ID
* Integrating Facebook SDK in Android App
* Getting User details on Facebook login

**19. WORKING WITH FRAGMENTS**

* What is Fragment
* Creating Fragments
* Creating Tabs Using Fragment.

**20. WORKING WITH PHP & MYSQL (Cloud Database)**

* Basics of PHP & MySql
* Creating MySql Database
* Creating an API using PHP

**21. WORKING WITH VOLLEY**

* Using Volley
* Creating a Login & Registration Page in Android App
* Fetching Data from Cloud using JSON and Volley

**22. WORKING WITH FIREBASE**

* Creating Firebase Account
* Inserting, Deleting, Updating and Reading Data from Firebase
* Push Notification Using Firebase

**24. WORKING WITH DRAWER**

* Creating a Navigation Drawer

**26. SHORT MESSAGING SERVICE (SMS)**

* Creating SMS sending Application

**27. UPLOADING YOUR APP ON PLAYSTORE**

* Generating signed .apk file
* Steps to upload on Playstore

**PROJECTS**

* A Basic Calculator
* Splash Screen App
* SMS Sending App
* Complete Login and Registration System Using MySQL
* Short Note Making Application using SQLITE
* Working with Firebase
* Getting User data by Facebook Login
* Google Map Integration in App
* Location Tracking Application
* Web Browser
* Uploading App on Play Store