

Android Course

Glance of Android

❖ Introduction Android

- ❖ What is Android?
- ❖ Why should go for Android development compare with other mobile platform like hybrid app(phone gap)
- ❖ Introduction to Android SDK
- ❖ Android SDK Features
- ❖ Introducing the Development Framework
- ❖ Android Architecture

❖ Setting up development environment

- ❖ How to install java Jdk
- ❖ How to install Eclipse IDE or Android studio as preferable
- ❖ How to install Android SDK
- ❖ How to install Android Plug ins
- ❖ How configure emulator(AVD) and real device for app testing

❖ Creating First Android App

- ❖ Creating activity
- ❖ Creating basic layout design
- ❖ Introduction of layout resources
- ❖ Introduction of Android Manifest.xml
- ❖ Introduction of R.java
- ❖ Introduction of Assets, Drawable and Raw resources
- ❖ Activity Life Cycle

❖ Basic Components of Android

- ❖ Activity
- ❖ Services
- ❖ BroadCast Receiver
- ❖ Content Provider

❖ Music Player App

- ❖ Create Music player app with play, pause and stop option
- ❖ Testing app in real device

- ❖ Understand the bugs in above app
- ❖ Fixing bugs by overriding activity lifecycle methods

❖ **How to Create User Interfaces**

- ❖ Fundamental Android U I Design
- ❖ Introducing Views (Form widgets, button, textview, and etc)
- ❖ Introducing Layouts
- ❖ Types of layout
- ❖ Creating and understanding Linear, Relative Layouts
- ❖ Creating Material design layout (new view for lollipop and above users)
- ❖ Creating basic form with material widgets

❖ **Introducing Intents**

- ❖ Using Intents to Launch new Activities
- ❖ Types of Intents
- ❖ Implicit and Explicit Intent
- ❖ Starting Activity for result
- ❖ Using Camera, wifi, bluetooth by intent

❖ **Notifications**

- ❖ Toasts
- ❖ Custom Toast
- ❖ Status bar notifications
- ❖ Basic notification
- ❖ Custom notification
- ❖ Notification with icon like sms

❖ **Adapters**

- ❖ Understand need of Adapter class
- ❖ Simple Array Adapter
- ❖ Cursor adapter
- ❖ Customs adapter

❖ **Adopter Views**

- ❖ Auto Complete text views
- ❖ List views

- ❖ Spinner
- ❖ Custom ListView and custom Spinner

❖ **Menus**

- ❖ Option menu
- ❖ Context menu
- ❖ Popup menu

❖ **Animations**

- ❖ Set
- ❖ Translate
- ❖ Rotation
- ❖ Alpha
- ❖ Scale

❖ **Services**

- ❖ Services overview
- ❖ Types of services
- ❖ Implementation of service in music player
- ❖ Service life cycle
- ❖ Multithreading with service

❖ **Data Storage**

- ❖ Shared preference
- ❖ Internal and external storage (phone and sd card)
- ❖ Sqlite database

❖ **SQLite Database**

- ❖ Learning sqlite command
- ❖ Creating database in android phone
- ❖ creating table
- ❖ Performing different sqlite commands on phone database
- ❖ Understanding need of open helper over sqliteDatabase
- ❖ Learning open helper for database creation

❖ **Login page**

- ❖ CRUD application for user registration to understand database
- ❖ Creating Login page
- ❖ Creating local database

❖ **Shared Preference**

- ❖ Introduction of shared preference
- ❖ Saving data in shared preference and accessing
- ❖ Using shared preference data as session creation like as gmail

❖ **Content providers**

- ❖ Using Content Providers
- ❖ Content provider to access phone contents and name
- ❖ Content provider to access images
- ❖ Creating custom content provider
- ❖ Native Android Content Providers

❖ **Introducing Broadcast Receivers**

- ❖ Broadcast Receivers
- ❖ Types of broadcast receiver
- ❖ Introduction to sticky broadcast
- ❖ Using existing broadcast receiver
- ❖ Creating own broadcast and customizing
- ❖ Alarms manager
- ❖ Pending intent

❖ **Media Framework**

- ❖ Making audio player with basic functionality
- ❖ Making Video player with media controller
- ❖ Making Audio recorder
- ❖ Making speech recognition app
- ❖ Making text to speech converter and speech to text converter

❖ **How to use system services**

- ❖ GPS
- ❖ Google map integration
- ❖ Sensors
- ❖ Telephony and sms manager
- ❖ Working with bluetooth, wifi and camera APIs

❖ **Web services**

- ❖ Understanding need of web service
- ❖ Types of web services
- ❖ Creating web API using java servlet or php

❖ **JSON in android**

- ❖ Introduction of json
- ❖ Json object
- ❖ Json array
- ❖ Creating json data
- ❖ Json parsing
- ❖ Introduction to other parsing technique

❖ **Async task**

- ❖ Need of async task
- ❖ Method used in async task
- ❖ Hitting web API using http protocol and async task
- ❖ Retrieve data from API
- ❖ Parse data receive from API using json
- ❖ API hitting using other third party library
- ❖ Conclusion and bugs fixing

❖ **Cloud notifications**

- ❖ **GCM**:- Google Cloud messaging.(obsolete)
- ❖ **FCM**:-Firebase Cloud messaging.(latest used)

Note:- Every topic is based on practical. And discussed using some real Industry problem and their solutions.