Advanced Android

1) Introduction To Mobile Apps
   I. Why we Need Mobile Apps
   II. Different Kinds of Mobile Apps
   III. Briefly about Android

2) Introduction Android
   I. History Behind Android Development
   II. What is Android?
   III. Pre-requisites to learn Android
   IV. Brief Discussion on Java Programming

3) Android Architecture
   I. Overview of Android Stack
   II. Android Features
   III. Introduction to OS layers

4) Deep Overview in Android Stack
   I. Linux Kernel
   II. Libraries
   III. Android Runtime
   IV. Application Framework
   V. Dalvik VM

5) Installing Android Machine
   I. Configuring Android Stack
   II. Setting up Android Studio
   III. Working with Android Studio
   IV. Using Older Android Tools
6) Creating First Android Application

I. Creating Android Project
II. Debugging Application
III. Setting up environment
IV. AVD Creation
V. Executing Project on Android Screen

7) Android Components

I. Activities
II. Services
III. Broadcast Receivers
IV. Content Providers

8) Hello World App

I. Creating your first project
II. The manifest file
III. Layout resource
IV. Running your app on Emulator

9) Building UI with Activities

I. Activities
II. Views, layouts and Common UI components
III. Creating UI through code and XML
IV. Activity lifecycle
V. Intents
VI. Communicating data among Activities

10) Advanced UI

I. Selection components (GridView, ListView, Spinner)
II. Adapters, Custom Adapters
III. Complex UI components
IV. Building UI for performance
V. Menus
VI. Creating custom and compound Views
11) **Notifications**

I. Toast, Custom Toast  
II. Dialogs  
III. Status bar Notifications

12) **Multithreading**

I. Using Java Mutithreading classes  
II. AsyncTask  
III. Handler  
IV. Post

13) **Styles and Themes**

I. Creating and Applying simple Style  
II. Inheriting built-in Style and User defined style  
III. Using Styles as themes

14) **Resources and Assets**

I. Android Resource  
II. Using resources in XML and code  
III. Localization  
IV. Handling Runtime configuration changes

15) **Intent, Intent Filters and Broadcast Receivers**

I. Role of filters  
II. Intent-matching rules  
III. Filters in your manifest  
IV. Filters in dynamic Broadcast Receivers  
V. Creating Broadcast receiver  

VI. Understanding Broadcast action, category and data  
VII. Registering Broadcast receiver through code and through XML  
VIII. Sending Broadcast
16) Data Storage

I. Shared Preferences  
II. Android File System  
III. Internal storage  
IV. External storage  
V. SQLite  
  a. Introducing SQLite  
  b. SQLiteOpenHelper and creating a database  
  c. Opening and closing a database  
  d. Working with cursors Inserts, updates, and deletes  

VI. Network

17) Content Providers

I. Accessing built in content providers  
II. Content provider  
III. Searching for content  
IV. Adding, changing, and removing content  
V. Creating content provider  
VI. Working with content files

18) Services

I. Overview of services in Android  
II. Implementing a Service  
III. Service lifecycle  
IV. Inter Process Communication

19) Multimedia in Android

I. Multimedia Supported audio formats  
II. Simple media playback  
III. Supported video formats  
IV. Simple video playback
20) **Location Based Services and Google Maps**

I. Using Location Based Services  
II. Finding current location and listening for changes in location  
III. Working with Google Maps  
   i. Showing Google map in an Activity  
   ii. Map Overlays  
   iii. Itemized overlays  
   iv. Geocoder  
   v. Displaying route on map

21) **Web Services and WebView**

I. Consuming web services  
II. Receiving HTTP Response (XML, JSON)  
III. Parsing JSON and XML  
IV. Using WebView

22) **Sensors**

I. How Sensors work  
II. Using Orientation and Accelerometer sensors  
III. Best practices for performance

23) **WiFi**

I. Monitoring and managing Internet connectivity  
II. Managing active connections  
III. Managing WiFi networks

24) **Telephony Services**

I. Making calls  
II. Monitoring data connectivity and activity  
III. Accessing phone properties and status  
IV. Controlling the phone  
V. Sending messages
25) Camera

I. Taking pictures
II. Media Recorder
III. Rendering previews

26) Bluetooth

I. Controlling local Bluetooth device
II. Discovering and bonding with Bluetooth devices
III. Managing Bluetooth connections
IV. Communicating with Bluetooth

27) Android Web Services

I. What is web service
II. Web service
III. Android Restful web service example with php
IV. Storing data into external mysql database
V. Verifying data in android with external mysql database

28) More

I. Fragments
II. Material Design
III. Gradle
IV. NEW TOPICS: Since each new version of Android has new features, we keep extra time for adding custom topics in every batch. You can request any Android Topic.

29) Android Application Deployment