

# Syllabus: Android Training Course

## **Chapter 1: JAVA Concepts**

OOPs Concepts  
Inheritance in detail  
Exception handling  
Packages & interfaces  
JVM & .jar file extension  
Multi threading (Thread class & Runnable Interface)

## **Chapter 2: SQL**

DML & DDL Queries in brief

## **Chapter 3: Introduction to Android**

What is Android?  
Setting up development environment  
Dalvik Virtual Machine & .apk file extension  
Fundamentals:  
a. Basic Building blocks - Activities, Services, Broadcast Receivers & Content providers  
b. UI Components - Views & notifications  
c. Components for communication - Intents & Intent Filters  
Android API levels (versions & version names)

## **Chapter 4: Application Structure (in detail)**

AndroidManifest.xml  
uses-permission & uses-sdk  
Resources & R.java Assets  
Layouts & Drawable Resources  
Activities and Activity lifecycle  
First sample Application

## **Chapter 5: Emulator-Android Virtual Device**

Launching emulator  
  
Editing emulator settings  
Emulator shortcuts  
Logcat usage  
Introduction to DDMS  
SecondApp:- (switching between activities)

- Develop an app for demonstrating the communication between Intents

## **Chapter 6: Basic UI design**

Form widgets  
Text Fields  
Layouts  
[dip, dp, sip, sp] versus px  
Examples

## **Chapter 7: Preferences**

SharedPreferences  
Preferences  
from xml  
Examples

## **Chapter 8: Menu**

Option  
menu  
Context  
menu  
Sub menu  
menu from  
xml  
menu via  
code  
Examples

## **Chapter 9: Intents (in detail)**

Explicit  
Intents  
Implicit  
intents  
Examples

## **Chapter 10: UI design**

- Time and Date
- Images and media
- Composite
- AlertDialogs & Toast
- Popup
- Examples

## **Chapter 11: Tabs and Tab Activity**

- Examples

## **Chapter 12: Styles & Themes**

- styles.xml
- drawable resources for shapes, gradients (selectors)
- style attribute in layout file
- Applying themes via code and manifest file
- Examples

### **Chapter 13: Content Providers**

- SQLite Programming
- SQLiteOpenHelper
- SQLiteDatabase
- Cursor
- Reading and updating Contacts
- Reading bookmarks
- Example :

Develop

an App to demonstrate database usage. CRUD operations must be implemented. Final details should be viewed in GridView as well as in ListView.

### **Chapter 14: Android Debug Bridge (adb) tool**

### **Chapter 15: Linkify**

- Web URLs, Email address, text, map address, phone numbers
- MatchFilter & TransformFilter
- Examples

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### **Chapter 16: Adapters and Widgets**

- Adapters:-
  - a. ArrayAdapter
  - b. BaseAdapters
- ListView and ListActivity
- Custom listview
- GridView using adapters
- Gallery using adapters
- Examples

### **Chapter 17: Notifications**

- Broadcast Receivers
- Services and notifications
- Toast
- Alarms
- Examples

### **Chapter 18: Custom components**

- Custom Tabs
- Custom animated popup panels
- Other components
- Examples

### **Chapter 19: Threads**

- Threads running on UI thread (runOnUiThread)
- Worker thread
- Handlers & Runnable
- AsyncTask (in detail)
- Examples

### **Chapter 20: Advanced**

- Live Folders
- Using sdcards
- XML Parsing
- JSON Parsing

- Maps, GPS, Location based Services
- Accessing Phone services (Call, SMS, MMS)
- Network connectivity services
- Sensors