



## Syllabus: Android Training Course

### Chapter 1: JAVA Concepts

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

### Chapter 2: SQL

- DML and DDL Queries in brief
- Example

### Chapter 3: Introduction to Android

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

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

- AndroidManifest.xml
- uses-permission & uses-sdk
- Resources & R.java

- Assets
- Layouts & Drawable Resources
- Activities and Activity lifecycle

## Chapter 5: Emulator-Android Virtual Device

- Launching emulator
- Editing emulator settings
- Emulator shortcuts
- Logcat usage
- Introduction to DDMS
- Second App:- (switching between activities)
- Develop an app for demonstrating the communication between Intents
- Example

## 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

- ❑ Example

## Chapter 15: Linkify

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

## Chapter 16: Adapters and Widgets

- ❑ Adapters:-
  - ❑ ArrayAdapter
  - ❑ 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
- ❑ Example

## Chapter 19: Threads

- ❑ Threads running on UI thread (runOnUiThread)
- ❑ Worker thread
- ❑ Handlers & Runnable

- ❑ AsyncTask (in detail)
- ❑ Example

## Chapter 20: Advanced

- ❑ Using sdcards
- ❑ XML Parsing
- ❑ JSON Parsing
- ❑ Maps, GPS, Location based Services
- ❑ Accessing Phone services (Call, SMS, MMS)
- ❑ Network connectivity services
- ❑ Sensors
- ❑ Example