

Android :- 30days – 30 hrs

Basic JAVA Concepts

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

Introduction to Android

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

Application Structure (in detail)

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

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

Basic UI design

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

Preferences

- SharedPreferences
- Preferences from xml
- Examples

Menu

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

Intents (in detail)

- Explicit Intents
- Implicit intents
- Examples

UI design

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

Tabs and Tab Activity

- Examples

Styles & Themes

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

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 Grid View as well as in List View.

Adapters and Widgets

- Adapters:-
 - o Array Adapters
 - o Base Adapters
- ListView and ListActivity
- Custom listview
- GridView using adapters
- Gallery using adapters
- Examples

Notifications

- Broadcast Receivers
- Services and notifications
- Toast
- Alarms

- Examples

Threads

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

Advanced

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