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:
  - Basic Building blocks - Activities,Services,Broadcast Receivers & Content providers
  - UI Components - Views & notifications
  - 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
- Second App:- (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
- SQLiteDatabse
- 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

Chapter 16: Adapters and Widgtes
- Adapters:-
  - ArrayAdapters
  - 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
- AsynTask (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
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