



## Android Syllabus

### JAVA Concepts

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

### SQL

- DML & DDL Queries in brief

### 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)

### Application Structure (in detail)

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

- Launching emulator
- Editing emulator settings
- Emulator shortcuts
- Logcat usage
- Introduction to DDMS

### Basic UI design

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



## Preferences

- Shared Preferences
- Preferences from xml

## Menu

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

## Intents (in detail)

- Explicit Intents
- Implicit intents

## UI design

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

## Tabs and Tab Activity

- Examples

## Styles & Themes

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

## Content Providers

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

## Linkify

- Web URLs, Email address, text, map address, phone numbers
- MatchFilter & TransformFilter
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## Adapters and Widgtes

- Adapters:-
- ArrayAdapter
- BaseAdapters
- ListView and ListActivity
- Custom listview
- GridView using adapters
- Gallery using adapters

## Notifications

- Broadcast Receivers
- Services and notifications
- Toast
- Alarms

## Custom components

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

## Threads

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

## Advanced

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