



Advanced Android Development

Course ID: ITG-MOB-110

ITG Software Engineering

Advanced Android Development

ITG-MOB-110

Course Overview:

This 3 day course will guide the participant through some of the more complex features of the Android operating system. Upon completion of this course attendees will be able to build Android Apps and create sophisticated activities and services.

Prerequisites:

Some Java programming experience and basic knowledge of Android application development.

Who Should Attend this course?

Those interested in developing advanced Android applications.

Topics:

<ul style="list-style-type: none">• Databases for Data Storage	<ul style="list-style-type: none">• Networks
<ul style="list-style-type: none">• Web Services	<ul style="list-style-type: none">• Handling Asynchronous Tasks
<ul style="list-style-type: none">• Using Services	<ul style="list-style-type: none">• Inter-Process Communications
<ul style="list-style-type: none">• Multimedia Content	<ul style="list-style-type: none">• Location Services
<ul style="list-style-type: none">• Maps	<ul style="list-style-type: none">• Publishing

ITG Software Engineering

DAY 01 MODULES:

ITG-MOB-110

Module 01: Databases

- SQLite: Overview
- SQLiteDatabase class
- SQLiteOpenHelper Class
- Database Installation / Updating / Using Cursors

Module 02: Networks and Web Services

- Java.net
- Android.net
- RESTful Web Services
- Building URLs
- Parsing XML Data
- Connected Applications
- Working offline

Module 03: Asynchronous Tasks

- UI Threads
- Background Tasks
- Handlers & Loopers
- AsyncTask
- ProgressDialog
- Handling Errors

ITG Software Engineering

DAY 02 MODULES:

ITG-MOB-110

Module 04: Using Services

- Services Overview
- Communicating with Apps
- Communicating with Activities
- Notifications
- Pending Intents
- Downloaders
- Polling Web Services

Module 05: Inter-Process Communications

- Breaking Out
- Clipboard
- Linkify Text
- Implicit Intents
- Invoking Built-in Apps & Services
- How to accept implicit intents
- Passing Data
- MIME Types

Module 06: Multimedia Content

- Playing Sounds
- Touch feedback (Vibration)
- Images
- Storing & Retrieving Data
- Using the Camera
- Invoking & Using the media recorder
- Using gallery and other image views

ITG Software Engineering

DAY 03 MODULES:

ITG-MOB-110

Module 07: Using Location Services & Maps

- Location Services Overview
- Location Notifications
- Google Maps API
- License Terms and Keys of Maps API
- Map View & Map Activity Classes
- How to Configure a Map
- How to Control a Map
- Events
- Working with Projections
- Map Overlays
- Item Overlays
- Custom Overlays

Module 08: Publishing

- Introduction to the App Market
- Getting your App ready
- Debugging and Release Builds
- How to Sign an APK file
- How to Publish your App
- Metadata of Apps
- Updating and Supporting your App