

ANDROID TRAINING COURSE SYLLABUS

Introduction to Android

- Application fundamentals
- Overview of Android
- Overview of Android SDK
- History of Android
- Android features
- Components and layout
- Tasks and activities

Action Bar

- Action Bar vs. Option Menu
- Defining an Action Bar menu
- Custom Views in the Action Bar
- Contextual action mode

Styling and Themes

- Styling of Views
- Using Themes for styling Activities
- Extending Android themes (Holo)

Views and List Activity

- List View
- List Activity
- Defining List Adapter
- Performance Optimization

File based Persistence

- Preferences
- File and Access restrictions
- Permissions

Security

- Androids security concept
- Using Permissions
- Defining Permissions

Network Communication

- Apache HTTP Client REST
- JSON
- XML

Asynchronous Processing in Android

- Multitasking User Interface Updates via Threads
- Androids Limits - Application Not Responding
- Using Handler for message communication
- Using Async Task

Android Architecture Overview

- Libraries
- Linux Kernel
- Introduction to OS layer

Defining Android User Interfaces

- Views
- Layouts
- Accessing widgets in Activities
- View interaction Layouts

SQLite and Content Provider

- Using the SQLite Database in Android
- Outlook: Using and defining Content Provider
- Outlook: Loader

Services

- Android System Services, Alert Manager etc
- Outlook: Definition of own Services

Broadcast Receiver

- Definition of a Broadcast Receiver
- Registration of own Broadcast Receiver

Notification Manager

- Using the Notification Manager
- Notification Builder
- Rich Notifications

Custom Views Creation

- Defining custom Views
- View state persistence

Location services and Google Maps

- Location based Services
- Google Maps and Map-Overlays
- Geocoding / Reverse Geocoding
- Using GPS, Wifi
-

Development of different screen sizes

- Screen sizes and Densities
- Using device independent pixel (dp)
- Converting between pixels and dp

Intents and Activity Communication

- Intents Intent Filter
- Defining Activities
- Activity stack

Audio and Video

- Playing and recording audio
- Playing and recording video
- Camera

Targeting Tablets and Smart phones

- Overview Fragments
- Multi-Pane Layouts with Fragments
- Designing layouts for tablets and phones

Deployment

- Deployment Option
- Markets (Google Play Store)