

Android Course Contents

Android is an open-source mobile operating system developed by Google, primarily for touchscreen devices like smartphones and tablets. Based on Linux, it supports a wide variety of apps through the Google Play Store and allows for extensive customization. Known for its flexibility, Android powers devices from multiple manufacturers and is the world's most widely used OS for mobile devices.

Overview

- Why go MAD (Mobile Application Development)?
- Why Android and not iPhone or other OS?

Architecture of Android

- Components of Android
- Layouts in Android
- Life Cycle of Activity

Getting Started

- Android SDK
- ADT Bundle & Eclipse
- Creating a Virtual Device/emulator

Hello World Application

- Creating new Android application
- Running an Android application
- Understanding Android application structure

Android UI Design & Event Handling

- Edit Text
- Global Strings
- Checkbox
- Radio Buttons

- Spinner
- Button
- Using Images
- Image Button
- List

Menus

- Options Menu
- Custom Menu

Intent

- Switching screens / activities

Service

- Life Cycle of Service
- Implementing & running a Service
- Stopping a Service

Alerts & Dialogs

- Toast
- Alert Dialog
- Custom Dialog

Multi Media Programming

- Playing an audio

Database Programming in Android

- Shared preferences
- Storing internally
- Storing externally

Hardware Programming in Android

- Camera
- Vibrate

Custom Designs

- Customizing Button and other controls

Graphics and Animation

- Creating Graphics for different screen size, mobiles and tablets
- Creating Animations in Android (rotate, scale, alpha, translate)

Sensors

- Light
- Orientation (Gyroscope)
- Location
- Vibration

Maps

- GPS & Geo-location programming
- Getting current location

Social Networking Integration

- Facebook login integration
- Twitter login integration

Applications (Cloud services)

- Firebase
- Fabric

Deploying Publishing an Android Application

- Signing App
- Creating Developer / Publisher account(Procedure)
- Publishing App