

Android Courseware

Introduction to Android:

- Android Architecture
- Android Installation
- Android Manifest File
- Android Activities and Lifecycle
- Hello World
- Android Versions

Android User Interface:

- Views
- Layouts
- Menus and Dialogs
- Common UI Classes
- Styles
- Drawable Resources
- Handling User Events
- Binding data
- Toasts

Persistence in Android

- Introduction to SQLite
- SQLiteOpenHelper and creating a database
- Opening and closing a database
- Working with cursors
- Inserts, updates, and deletes, Preferences
- Accessing Internal Files system
- Accessing SD cards

Content Providers

- Content Provider

Location Services

- Working with the Location Manager
- Working with Google Maps extensions

Android Multimedia

- Playing Audio and Video
- Recording Audio and Video Camera

Telephony and SMS

- Making calls
- Monitoring data connectivity and activity
- Accessing phone properties and status
- Controlling the phone

Services & Broadcast Receivers

- Overview of services in Android
- Implementing a Service
- Service lifecycle
- What are Broadcast Receivers
- Implementing broadcast receiver
- System broadcasts and how to use them

Notifications

- Role of notifications
- Raising a notification
- Augmenting notifications via hardware
- Reacting to selected notifications

Sensors

- How Sensors work
- Using Sensor & Sensor Manager
- Listening to Sensor readings
- Best practices for performance

Bluetooth & Wi-Fi

- Controlling local Bluetooth device
- Discovering and bonding with Bluetooth devices
- Managing Bluetooth connections
- Managing & Monitoring Wi-Fi

Android Text to Speech Engine

- TTS Integration