

Android Apps Development (Google AAD)

Duration: 5 days

1. Hello Android

- Introduction to Android
- Android Flavors
- Android OS Architecture
- Gradle Build System
- Setting up Android Development Environment
 - System Requirements
 - Android Studio Installation
 - Create First Android Application
 - Understand Project Hierarchy

2. User Interface & Event Handling

- Layouts & Views
- Resources
- User Input Control
- List View and Scrolling Views
- RecyclerView & Card View
- Themes & Styles
- Material Design
- Providing Resources for adaptive layouts
- Dialogs – Alert, Progress and Custom
- Floating Action Button
- Localization

3. Activities and Intents

- Activity Lifecycle
- Activity State
- Explicit Intent
- Implicit Intent
- Intent resolution

4. Exploring Action Bar

- Getting Access of Action Bar
- Option Menus
- Context Menus
- Popup Menus
- Navigation Drawer
- Tab Navigation
- Swipe View with View Pager

5. Broadcast Receivers & Notification

- Broadcast Receiver
 - Sending a Broadcast

- Creating Receiver
- Registering broadcast receiver
- Notification
- Integrating notification with broadcast receiver

6. Services

- Service
- Types of Service
- Service Declaration
- Creating a Service
 - Extending Service Class
 - Start a Service
 - Stop a Service
- Creating a Bound Service
- Life cycle of Service

7. Fragments

- What is Fragment?
- Creating a Fragment
- Fragment Lifecycle
- Handling Fragment Events
- Fragment Communication

8. Background Tasks & Networking

- Async Task
- Async Task with Progress Bar
- Android Networking
- Connecting to Internet using Async Task
- Downloading an Image using Async Task
- Alarm Manager
- Job Scheduler
- Thread Handlers
- Introduction to REST web services
- Consuming of REST Web services

9. Data: Saving, Retrieving, Loading

- Shared Preferences
- Set & retrieve shared preferences
- SQLite
- Store data using SQL in SQLite Databases
- Content Providers
- Share data b/w apps using content resolver

10. Maps with Android

- Google Maps Android API
- Adding a Map to an Application
- Display User's current Location

- Change Map Type
- Map Gestures
- Map Markers

11. Testing Application

- Use of Logcat as Debugging
- Use of Android Debugger tool
- Android JUnit Testing
- Testing User Interface
- Espresso testing

12. Application Deployment

- Signing Application
- Developer Console
- Deployment app on Google Play