

Android App Development

♦ **Lecture 1: Introduction to Android & Setup.** **13th October 2026 (06:00-07:00)**

- Introduction to Android OS
- History of Android
- Installing **Android Studio**
- Setting up Emulator
- Understanding Project Structure
- First "Hello World" App

♦ **Lecture 2: Java & Kotlin Basics for Android.** **17th October 2026 (06:00-07:00)**

- Introduction to **Java**
- Introduction to **Kotlin**
- Variables, Data Types
- Conditions & Loops
- Functions
- Why Kotlin is Preferred

♦ **Lecture 3: Android Project Structure & XML.** **22th October 2026 (06:00-07:00)**

- Understanding Manifest File
- Layout Files (XML)
- Resource Folder
- Views & ViewGroups
- LinearLayout, RelativeLayout, ConstraintLayout

♦ **Lecture 4: UI Components (Part 1)** **25th October 2026 (06:00-07:00)**

- TextView
- EditText
- Button
- ImageView
- Toast & Log
- Handling Click Events

♦ **Lecture 5: UI Components (Part 2)** **28th October 2026 (06:00-07:00)**

- RecyclerView
- CardView
- ListView
- Adapter Concept
- Building a Simple List App

♦ **Lecture 6: Activities & Intents** **31st October 2026 (06:00-07:00)**

- Activity Lifecycle
- Explicit & Implicit Intents
- Passing Data Between Activities
- Opening Camera & Browser

♦ **Lecture 7: Fragments & Navigation.**

- What is Fragment?
- Fragment Lifecycle
- Navigation Component
- Bottom Navigation Bar App

♦ **Lecture 8: Material Design & UI Enhancement**

- Material Design Principles
- Using Material Components
- Themes & Styles
- Splash Screen Design
- Dark Mode

♦ **Lecture 9: Data Storage (Local)**

- SharedPreferences
- SQLite Database
- Room Database
- Creating Notes App (Mini Project)

♦ **Lecture 10: Firebase Integration.**

- Introduction to **Firebase**
- Authentication (Email/Password)
- Realtime Database
- Firestore
- Hosting

♦ **Lecture 11: REST API Integration**

- What is API?
- JSON Parsing
- Using Retrofit Library
- Fetching Data from API
- Weather App Example

♦ **Lecture 12: Background Tasks & Notifications.**

- Services
- Broadcast Receiver
- Push Notifications
- Firebase Cloud Messaging

♦ **Lecture 13: Location & Google Maps**

- Location Permissions
- Google Maps API Integration
- Tracking Current Location
- Building Location Tracker App

♦ **Lecture 14: Testing & Debugging.**

- Logcat
- Debugging Techniques
- Exception Handling
- App Optimization
- Performance Improvement

♦ **Lecture 15: Final Project + Deployment.**

Capstone Project (Choose One):

- E-Learning App
- Food Delivery App
- Expense Tracker App