

# ANDROID STUDIO



**TEACHER:  
CERTIFIED  
TRAINER**

**DURATION:  
16 CLASSES (x3 LEVELS)  
(1 HOUR PER CLASS)**

**MODE:  
ONLINE AND  
OFFLINE**

Android Studio is the official integrated development environment (IDE) for building Android applications. Developed by Google, it provides tools and resources for coding, designing, debugging, and testing Android apps. It supports programming languages like Java, Kotlin, and XML, with features like a visual layout editor, real-time previews, and an emulator to simulate apps on different devices. Android Studio integrates with version control systems and the Google Play Store, streamlining the development-to-deployment process.

## **COURSE CURRICULUM**

### **Level 1: Beginner (Fundamentals of Android Development)**

- Intro to Android & Java: Setup, basic Java concepts, activity lifecycle, and fragments.
- UI & Widgets: Layouts, Views, OnClickListener, simple calculator app.
- Navigation & Data: Intents, SharedPreferences, basic networking, permission handling.
- Debugging & Jetpack: Logcat, Jetpack basics, simple to-do list app.

### **Level 2: Intermediate (Advanced Android Concepts)**

- UI & Custom Views: Advanced layouts, custom views, notifications.
- Services & Networking: Background tasks, Retrofit for APIs, Room for database.
- Sensors & Firebase: Using sensors, GPS, Firebase for chat and notifications.
- Design & Animations: Material Design, animations, data binding.
- Project: Build a weather app using Retrofit and Room.

### **Level 3: Advanced (Enterprise Android Development)**

- Coroutines & DI: Kotlin coroutines, Dagger/Hilt for dependency injection.
- Jetpack Compose & Architecture: UI with Compose, Clean Architecture principles.
- Advanced Features: WorkManager, security, Firebase Firestore, app bundles.
- Testing & Optimization: CI/CD, unit testing, performance optimization.
- Final Project: Build an E-commerce app with advanced concepts.