Android Application Development and Programming Training Course

Professional Development Training Course Outline

Category	Information Technology	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Android application development is one of the most in-demand skills in the tech industry today. With over 2.8 billion active Android devices worldwide, mobile apps are essential for businesses to reach customers, improve engagement, and drive growth. This course on Android Application Development & Programming equips participants with the knowledge and skills needed to develop robust, user-friendly Android apps. Whether you're looking to enter the mobile development industry or enhance your existing programming skills, this course will provide a comprehensive understanding of Android development fundamentals and advanced techniques.

Android apps are written in Java or Kotlin, two of the most popular programming languages in the software development world. This course covers both languages, along with Android Studio, the official Integrated Development Environment (IDE) used for building Android applications. Participants will learn how to design, develop, and deploy Android apps, focusing on user interfaces (UIs), app functionality, and handling back-end services. By the end of the course, learners will be able to create fully functional Android applications that can be published on the Google Play Store.

Programme Curriculum

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With the mobile app market continuing to grow, the demand for skilled Android developers has never been higher. Android app development offers exciting opportunities for innovation and creativity. This course also covers key topics such as integrating third-party libraries, utilizing Android APIs, managing databases, and handling performance optimization to ensure the development of efficient apps. By understanding Android programming best practices, participants will be prepared to create apps that are scalable, secure, and optimized for diverse devices

Course Duration

10 Days

Course Objectives

1. Understand the fundamentals of Android development and the Android operating system.
2. Learn how to use Android Studio, the official IDE for Android app development.
3. Gain proficiency in Java and Kotlin programming languages for Android applications.
4. Understand how to design and implement user-friendly interfaces (UI) in Android apps.
5. Develop skills in integrating Android APIs for enhanced app functionality.
6. Learn how to work with Android databases and data persistence mechanisms.
7. Understand best practices for managing app performance and optimizing for speed and efficiency.
8. Master the process of debugging and testing Android apps.
9. Learn how to handle app security and ensure data protection in mobile applications.
10. Gain practical experience in developing Android apps through hands-on projects and case studies.

Organizational Benefits

1. Enhanced technical capacity to develop custom Android applications tailored to the organization’s needs.
2. Improved productivity through the use of mobile applications that streamline business processes.
3. Increased competitive advantage by deploying feature-rich Android apps to attract and engage customers.

4. Ability to integrate mobile solutions with existing IT systems, enhancing overall business operations.
5. Build in-house mobile development capabilities, reducing dependence on third-party developers.
6. Improved employee proficiency in programming languages such as Java and Kotlin, leading to higher-quality applications.
7. Increased innovation through creative app development, offering new services or enhancing customer experiences.
8. Improved customer satisfaction by providing well-functioning, user-friendly Android apps.
9. Ability to address mobile app security concerns and ensure compliance with data protection regulations.
10. Continuous improvement of mobile app development skills, keeping up with the latest trends in the mobile app industry.

Target Participants

- Aspiring Android developers who want to build mobile apps from scratch.
- Software engineers looking to expand their skill set to include Android app development.
- Web developers with an interest in transitioning into mobile app development.
- IT professionals who want to develop in-house Android applications for their organizations.
- Students, graduates, or professionals looking to enter the mobile development industry.
- Entrepreneurs and startups seeking to create their own mobile apps for business solutions.

Course Outline

Module 1: Introduction to Android Development

1. Overview of Android and mobile application development.
2. Setting up Android Studio and development environment.
3. Introduction to Java and Kotlin programming for Android.
4. Understanding the Android SDK and its components.
5. **Case Study**: Building your first "Hello World" Android app.

Module 2: Android App Design and User Interface (UI) Development

1. Principles of UI/UX design for mobile apps.
2. Understanding Android Layouts and Views.
3. Creating interactive user interfaces with XML.
4. Handling user input with buttons, text fields, and other UI elements.
5. **Case Study**: Designing a simple mobile app interface with Android Studio.

Module 3: Working with Android APIs and Third-Party Libraries

1. Introduction to Android APIs and external libraries.
2. How to integrate third-party libraries in Android Studio.
3. Using Android APIs for location services, camera, and sensors.

4. Understanding data exchange with web services (RESTful APIs).
5. **Case Study**: Building an app that uses a RESTful API for data retrieval.

Module 4: Data Persistence in Android (SQLite and Shared Preferences)

1. Overview of data storage options in Android.
2. Introduction to SQLite and using databases in Android apps.
3. Using SharedPreferences for saving simple data.
4. Best practices for managing app data effectively.
5. **Case Study**: Creating a to-do list app with SQLite for data persistence.

Module 5: App Debugging, Testing, and Optimization

1. Techniques for debugging Android applications.
2. Best practices for testing Android apps (unit and UI testing).
3. Optimizing app performance and memory usage.
4. Managing background processes and services.
5. **Case Study**: Debugging and optimizing an Android app for performance.

Module 6: Publishing and Distributing Android Apps

1. Steps to prepare an Android app for release.
2. Signing and securing Android apps for deployment.
3. How to publish an app on the Google Play Store.
4. Managing app updates and version control.
5. **Case Study**: Publishing an Android app on Google Play and handling updates.

Module 7: Advanced Android Features

1. Introduction to Android Jetpack and modern Android development tools.
2. Using Android's Navigation Component for advanced UI flows.
3. Implementing push notifications with Firebase Cloud Messaging.
4. Integrating maps and geolocation in Android apps.
5. **Case Study**: Building an app with maps and real-time notifications.

Module 8: Mobile App Security and Best Practices

1. Understanding mobile app security risks.
2. Implementing secure data storage and encryption.
3. Best practices for handling sensitive data in mobile apps.
4. Securing user authentication and authorization in Android apps.
5. **Case Study**: Securing an Android app with Firebase authentication.

Module 9: Android Development for Different Devices

1. Building apps for multiple Android screen sizes and resolutions.
2. Optimizing Android apps for tablet and phone devices.
3. Introduction to Android Wear and Android TV development.
4. Using Android's responsive design features.

5. **Case Study**: Adapting an Android app for multiple device types.

Module 10: Final Project - Building a Complete Android Application

1. Selecting an app concept and planning the app architecture.
2. Designing the app layout and user interface.
3. Integrating APIs, databases, and other Android features.
4. Debugging, testing, and optimizing the app.
5. **Case Study**: Developing a complete Android app from start to finish.

Training Methodology

The instructor led trainings are delivered using a blended learning approach and comprises of presentations, guided sessions of practical exercise, web-based tutorials and group work. Our facilitators are seasoned industry experts with years of experience, working as professional and trainers in these fields.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com