



Website:<https://www.smartfuturepoint.com>

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Android Application Development Course

A typical course syllabus for Android development might include the following topics, structured over a period of weeks or months depending on the depth and duration of the course:

1:Core Java:

1. Introduction to java
2. Token in java
3. Control statement
4. Loop
5. Oops
6. Array
7. String
8. Multithread
9. Exception handling
10. Swing
11. File handling

2: Introduction to Android Development

- Overview of Android platform and ecosystem
- Setting up Android development environment (Android Studio, SDK, etc.)
- Basics of Java programming language (if necessary)
- Creating and running a simple Android app
- Understanding the Android project structure

- User Interface (UI) components: Layouts, Views, ViewGroups
- Handling user input: Buttons, EditText, etc.

3: Activities and Intent

- Understanding Android Activities and their lifecycle
- Creating multiple activities and navigating between them
- Working with Intents for communication between activities
- Passing data between activities
- Using explicit and implicit intents
- Introduction to Android manifest file

4: UI Design and Layouts

- Advanced UI components: RecyclerView, ListView, GridView
- Creating custom UI components
- Working with Fragments for modular UI design
- Understanding responsive design and supporting multiple screen sizes
- Material Design principles and guidelines
- Styles and themes in Android applications

5: Data Persistence

- Overview of SQLite database for local data storage
- Creating and managing SQLite databases
- Performing CRUD operations (Create, Read, Update, Delete) in SQLite
- Using SharedPreferences for simple data storage
- Introduction to Room Persistence Library (optional)

6: Networking and Web Services

- Making network requests using HTTP libraries (e.g., Retrofit, Volley)
- Consuming RESTful APIs
- Parsing JSON data

- Handling network operations asynchronously using AsyncTask, Thread, or libraries like RxJava
- Implementing background tasks using Services

7: Multimedia and Location Services

- Working with multimedia: Images, Audio, Video
- Integrating camera and gallery features into the app
- Implementing location-based services using GPS and Google Maps API
- Geocoding and reverse geocoding
- Handling permissions for accessing device features

8: Advanced Topics

- Implementing push notifications using Firebase Cloud Messaging (FCM)
- Integrating third-party libraries and SDKs
- Security best practices: Data encryption, HTTPS, ProGuard
- Testing and debugging Android applications
- Publishing apps to Google Play Store: Preparing APK, signing, and distribution

9: Final Project

- Students work on a final project to demonstrate understanding and proficiency in Android development
- Project could be individual or group-based, focusing on a real-world application
- Emphasis on applying concepts learned throughout the course and implementing best practices

<u>Class Duration</u>	<u>6month</u>
<u>Fee</u>	<u>Rs45000</u>
<u>Duration</u>	<u>6Month</u>