



Android Training Curriculum

This Module is prepared for the beginner level to help them understand the basics, The Android programming is based on Java programming language so if you have understanding on java programming then it will be fun to learn Android application development.

By end of this session, you will find yourself at a moderate level of expertise in Android Programming from when you can take yourself to next levels.

Getting Started

1. Android Overview -
(https://www.tutorialspoint.com/android/android_overview.htm)
2. Android Architecture and Environment Setup -
(<https://developer.android.com/guide/platform>,)
3. Simple Hello World Example -
(<https://developer.android.com/codelabs/android-training-hello-world#0>)
4. Android Application Component
 - a. Activity, Activity lifecycle -
(<https://developer.android.com/codelabs/android-training-create-an-activity?index=..%2F..%2Fandroid-training#0>
)(<https://developer.android.com/codelabs/android-training-activity-lifecycle-and-state?index=..%2F..%2Fandroid-training#0>)
 - b. Services- (<https://www.geeksforgeeks.org/services-in-android-with-example/>)
 - c. Broadcast Receivers -
(<https://developer.android.com/guide/components/broadcasts>)
 - d. Content Provider -
(<https://developer.android.com/guide/topics/providers/content-provider-basics>)



5. Building Ui using Android Studio
 - a. Layouts and view Hierarchy - (<https://developer.android.com/guide/topics/ui/declaring-layout?hl=en>)
 - b. Linear, Relative, Constraint, Table Layout -(
<https://developer.android.com/guide/topics/ui/layout/linear?hl=en>
,<https://developer.android.com/guide/topics/ui/layout/relative?hl=en> ,
<https://abhiandroid.com/ui/tablelayout>)
 - c. Widgets, Intents, Fragments (
<https://developer.android.com/guide/topics/appwidgets/overview>
, <https://developer.android.com/guide/components/intents-filters> ,
<https://developer.android.com/guide/fragments>)
 - d. Passing data between Activities - (<https://www.tutorialspoint.com/passing-data-between-activities-in-android>)
6. Styles and Themes (<https://developer.android.com/guide/topics/ui/look-and-feel/themes>)
7. Debugger - (<https://developer.android.com/studio/debug>)
8. Support Libraries - (<https://developer.android.com/topic/libraries/support-library>)
9. Use Cases - (<https://developer.android.com/samples>)

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Intermediate

1. ListView, RecyclerView - (<https://developer.android.com/reference/android/widget/ListView>)
2. Android Context - (<https://www.geeksforgeeks.org/what-is-context-in-android/>)
3. Shared Preferences - (<https://developer.android.com/training/data-storage/shared-preferences>)
4. Background tasks (Async) - (<https://developer.android.com/guide/background>)
5. Notifications - (<https://developer.android.com/guide/topics/ui/notifiers/notifications>)
6. File IO - (<https://learntodroid.com/android-file-io-tutorial-with-internal-and-external-storage/>)
7. Permissions - (<https://developer.android.com/guide/topics/permissions/overview>)
8. Animations - (<https://developer.android.com/training/animation>)
9. Parcelable - (<https://www.vogella.com/tutorials/AndroidParcelable/article.html>)
10. Testing (Espresso, Mockito) - (<https://developer.android.com/training/testing> , <https://developer.android.com/training/testing/espresso>)

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Advanced

1. Memory leaks - (<https://developer.android.com/studio/profile/memory-profiler>)
2. Guide to App Architecture - (<https://developer.android.com/jetpack/guide>)
3. Camera, Bluetooth - (https://www.tutorialspoint.com/android/android_camera.htm ,https://www.tutorialspoint.com/android/android_bluetooth.htm)
4. Google Maps integrations - (<https://developers.google.com/maps/documentation/android-sdk/start>)
5. Localization - (<https://lokalise.com/blog/android-app-localization/>)
6. SDK Manager - (https://www.tutorialspoint.com/android/android_sdk_manager.htm)
7. Session Management - (<https://www.geeksforgeeks.org/session-management-in-android-with-example/>)

Assignment- TBD

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