

Android For Beginner

Ice Certification Program , CourseDuration :-(45Hrs)

1. Introduction to Android 2H

- a. What is Android?
- b. Setting up development environment
- c. History of Android & .apk file extension
- d. Architecture of android
- e. Fundamentals:
 - i. Basic Building blocks - Activities,Services,Broadcast Receivers & Content providers
 - ii. UI Components - Views & notifications
 - iii. Components for communication -Intents & Intent Filters
- f. Android API levels (versions & version names)
- g. Lifecycle Methods

2. Application Structure (in detail) 1H

- a. AndroidManifest.xml
- b. uses-permission & uses-sdk
- c. Resources & R.java
- d. Assets
- e. Layouts & Drawable Resources
- f. Activities and Activity lifecycle
- g. First sample Application

3. Emulator-Android Virtual Device 1H

- a. Launching emulator
- b. Editing emulator settings
- c. Logcat usage
- d. Second App:- (switching between activities)
-Develop an app for demonstrating the communication between Intents

4. Basic UI design 3H

- a. Form widgets
- b. Text Fields
- c. Spinner
- d. Layouts
- e. [dip, dp, sip, sp] versus px
- f. Splash Screen
- g. Examples

5. Preferences	1H
a. SharedPreferences	
b. Preferences from xml	
c. Examples	
6. Menu	2H
a. Option menu	
b. Context menu	
c. Sub menu	
d. PopUpMenu	
e. menu from xml	
f. menu via code	
g. Examples	
7. Intents (in detail)	2H
a. Explicit Intents	
b. Implicit intents	
c. Examples	
8. UI design	4H
a. Time and Date	
b. Images and media	
c. Composite	
d. AlertDialogs & Toast	
e. Floating Action Button & Snackbar	
f. Popup	
g. Examples	
9. Tabs and Tab Activity	2H
a. Fixed Tabs	
b. Scrollable Tabs	
c. Tabs with Icon & Text	
d. Tabs with only Icon	
e. Custom Tab View with Icon & Text	
f. Examples	
10. Styles & Themes	1H
a. styles.xml	
b. drawable resources for shapes, gradients (selectors)	
c. style attribute in layout file	
d. Applying themes via code and manifest file	
e. Examples	

11. Working with WebView – Building a Simple In-App Browser	1H
12. Content Providers	6H
<ul style="list-style-type: none"> a. SQLite Programming b. SQLiteOpenHelper c. SQLiteDatabase d. Cursor e. Room Database f. Crud operations with room g. Example : -Develop an App to demonstrate database usage. CRUD operations must be implemented. 	
13. Adapters and Widgets	5H
<ul style="list-style-type: none"> a. Adapters:- <ul style="list-style-type: none"> i. ArrayAdapter ii. BaseAdapters b. ListView and ListActivity c. Custom listview d. MultiLevel ListView e. GridView using adapters f. Gallery using adapters g. Expandable ListView h. Horizontal & Vertical ListView i. CardView & RecyclerView j. Adding Search functionality in ListView k. Examples 	
14. Notifications	1H
<ul style="list-style-type: none"> a. Services and Push notifications b. Toast c. Examples 	
15. Android Working with Marshmallow (M) Runtime Permissions	1H
16. Build Intro Slider for your App	2H
17. Create apk/app bundle and upload on play store	2H
18. Projects	8H