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Android Development  
Innovative mobile development

# Android Application Development



IT Enabler Consultancy is the appointed Authorised Training Center for Android Course - Android Application Development Course in Singapore.

### **Course Objective:**

This is a 3-day (21-hours) course that provides the required knowledge and skills to design and build a complete Android™ application. It delivers an extensive training on the main Android API components and its interactions.

At course completion, the participant will be able to:

- Design and build a complete Android application.
- Debug and maintain Android applications using different tools and plugins.
- Thoroughly understand the life-cycle of an Android application and its main components.
- Use external resources, manifest files, intents and adapters
- Developing Android Network Connection and File I/O.
- Understand and use all Android persistent storage techniques: Preferences, files, databases, and content providers.
- Connecting, Saving and Retrieving Data using Android Storage: SQLite,
- Use Android's background processing techniques.
- Publishing Android Application to Google PlayStore

### **Course Prerequisite:**

For a best learning experience and a quick start with this course, a trainee is required to have adequate knowledge of the OOP(Object-Oriented Programming) of Java. Previous knowledge and experience of any programming language is considered sufficient.

### **Certificate Of Attendance:**

Certificate Of Attendance will be awarded to participants completing the course achieving minimum 75% attendance.

### **Training Methodology & Materials:**

- Practical hands-on sessions using Android Studio.
- 1 person to 1 computer with great CPU processing power.
- Well-designed tutorial sessions and screen capture to enhance further understanding of the courseware.

### **Training Duration:**

Full-time: 4 Weekdays / 4 Sats  
Time : 9.30am – 5.30pm

Part-time: 8 Sessions  
Time : 6.30pm - 10.00pm (twice/thrice a week)

### **Course Training Fee :**

Normal Fee : S\$1299 **Promotion Fee : S\$795**  
Regn Fee : S\$50  
Exam Fee (Optional) : S\$305 (includes S\$80 Exam Proctor Fee)

All fees subject to GST 7%.

**Course eligible for SDF and PIC Grants. Self-Sponsored may use their SkillsFuture Credit Claim.**

## DETAILED COURSE OUTLINE

### Lesson 1: Android Framework and Android Studio

- Creating an Android Project
- Android Studio and Gradle

### Lesson 2: Android SDK Tools and Activity Class

- Android Software Layers
- Linux kernel

- From Command line
- Running Your Application
- Running you project on the emulator
- Components of an Android application
- Application Life-cycle
- Modifying created project
- Change activity's name

### Lesson 3: Fragment, ListActivity and ListView

- Introduction to Fragments
- Using Views
- Adding a View to your application
- List Views and List Activity
- Using a ListActivity
- Adding ListView
- Add Event to List Items

### Lesson 4: Intents and Intent filters

- Introduction
- Intents
- Explicit Intents
- Implicit Intents
- Native Android Actions
- Data Transfer
- Intent to Call Activities
- Direct calls
- Sub-activities: Calling Activities for Results
- Register an IntentFilter

### Lesson 5: Android Layout and Custom Views

- Introduction
- Different Uses of Customized Views
- Modify Existing Views
- Step by Step
- What is in onDraw()
- The full picture

### Lesson 6: Android Resources, Themes and Material Design

- Android Resources
- Android Themes and Styles
- Android Material Design

### Lesson 7: Dialogs, Toasts, Menus, and WebView

- Dialogs and Dialog sub-classes
- Creating dialogs with user-defined layout
- Activities with Dialog Theme
- Toasts
- Menus
- Building a menu from Java code
- Building a menu from a resource file
- Handle Select Events
- Sub-menus
- Context Menus
- Handling Context Menu Selection

- C/C++ Libraries
- Android Runtime
- Application Framework
- Additional Menu Item options
- Checkboxes and Radio Buttons
- Menu Item Click Listener
- WebView

### Lesson 8: Android Storage: Network, File I/O, and SharedPreferences

- Android Storage Options
- Shared Preferences
- Internal Storage and File I/Os
- Network Connection
- Connecting to the internet
- Including files as resources
- Retrieving Shared Preferences
- Background processing - Using AsyncTask

### Lesson 9: Android Storage: SQLite and Content Providers

- SQLite in your application
- SQLite library
- SQLiteOpenHelper
- SQLiteDatabase
- Cursors
- Databases in Android
- Native Android Content Providers
- Custom Content Providers
- Sync Adapters

### Lesson 10: Android Notifications

- Creating a notification
- Notification actions
- Expandable notifications
- Notifications Layout
- Notifications in Android 5.0(Lollipop)
- Example: NotificationManager

### Lesson 11: Publishing Android Application

- Preparing for Publishing
- Digital Signing and Version Control
- Deploying Android APK Files
- Publishing on the Android Market