

Course Name	:	Android Programming Level-1
Course Code	:	ADD-CS-01
Training Firm	:	Santhisoft Technologies

Course Outcome

CO1 Associating and linking hands-on experience in developing basic and advanced Android apps

CO2 Estimate the overview of required Java programming knowledge

CO3 Build various apps that utilize different capabilities of a modern Android phone, including the usage of vibration, sounds playback and recording, the camera, animations, location, basic 3D graphics, file system, Network operations (UDP/TCP) and more

CO4 Annotating the most advanced IDEs including Eclipse and Android Studio

Course goals

Learn and obtain hands-on experience in developing basic and advanced Android apps. The course begins with an overview of required Java programming knowledge. Then we will move on to the world of Android development and create various apps that utilize different capabilities of a modern Android phone, including the usage of vibration, sounds playback and recording, the camera, animations, location, basic 3D graphics, file system, Network operations (UDP/TCP) and more. During the course we will work with the most advanced IDEs including Eclipse and Android Studio.

Detailed curriculum

Session 1 – Java Basics and overview

- Using variables
- Flow Control
- Arrays and matrices
- Working with Strings
- Exceptions in Java
- Basic OOP

Session 2 – Java Basics and overview

- More OOP
- Array List and collections
- Enums
- Static variables and methods
- Basic Threading
- Timers

Session 3 – UI in Java (SWT)

- What is UI
- Working with SWT
- UI Event

Session 4 – First Android App

- What is Android
- First Android app
- How to run and debug applications (Emulator vs. Real device)
- Android project structure
- XML files
- Enhancing the first app

Session 5 – Basic Android concepts

- Activity
- Menus

- Intents
- Context

Session 6 – Using more Android capabilities

- IntelliJ IDEA / Android Studio
- Permissions
- Working with files

- Working with the network
- Debugging Android apps

Session 7 – Using more Android capabilities

- Providing feedback to the user
- Raw camera usage

- Touch gestures

Session 8 – Using more Android capabilities

- Location
- Status bar notifications

- Localization
- Services

Session 9 – Web Services

- Soap and Rest overview
- Working with SOAP

- Working with Rest

Session 10 – Google's external libraries

- Google Maps
- Monetizing apps
- Ads

- Publishing and uploading app to Google Play

