



# Android Application Development

## Introduction :

Mobile Apps are becoming popular day by day. Today, Everyone owns a smartphone and they do a lot of things with the help of their smartphones such as making payments, ordering groceries, playing games, chatting with friends and colleagues etc .There is huge demand in the market to develop android apps. It's Google's CEO Sundar Pichai's initiative to train 2 Million people to become android developers as this platform has a huge need of developers.

In view of this scenario and keeping industry needs in mind, APSSDC is offering an “**Android Application Development Program**” so that the faculty/students across engineering colleges in the state of Andhra Pradesh gain App Development knowledge.

## Hardware Requirements:

- i3 or above Processor is required
- 8 GB RAM is recommended
- Good Internet Connectivity
- Microphone and Speakers facility for Offline training program.

## Duration :

- 36 Hours (6 hours each day X 6 days)



## Syllabus :

1. Introduction to Mobile App Development
  - a. History of Mobile evolution
  - b. Version History of Android
  - c. Android Architecture
2. Installing the Development Environment
  - a. Installation of Android Studio
  - b. Installation of Android emulator
  - c. Connecting the physical device with the IDE
3. Creating the first application
  - a. Hello World
4. Creating a User Interactable App
  - a. Hello Toast
  - b. Text and Scroll View
5. Intents
  - a. Explicit Intents
  - b. Implicit Intents
6. Activity LifeCycle
7. User Interface Components
8. Buttons and Clickable Images
9. Input Controls
10. Menus & Pickers
11. Using Material Design for UI
12. User Navigation
  - a. Navigation Drawer
  - b. Navigation Components
    - i. Navigation Graph
    - ii. Navigation Host
    - iii. Navigation Controller
  - c. Ancestral and Back Navigation
  - d. Lateral Navigation
    - i. Tabs for navigation
13. Recyclerview
14. Working in the background
  - a. Fetching JSON Data from the internet using retrofit GET.
  - b. Discussion of various JSON Converters.
  - c. Writing data to the api using retrofit POST.
  - d. Broadcast Receivers
15. Schedulers
  - a. Notifications
  - b. WorkManger
16. Saving user Data
  - a. ViewModel
  - b. LiveData
  - c. SharedPreferences
  - d. Room Persistence Library.



### **Course Objectives :**

- To enable the faculty/Students of Engineering Colleges to be able to develop android apps.

### **Entry Requirements :**

- Faculty/Students attending this **FDP/STP** should have a good knowledge in **JAVA**.

### **Eligibility :**

- All Faculty/Students who have **JAVA** Knowledge are eligible.

### **Mode Of Training :**

- Offline (Completely Hands on Training)