

Android App Development

- **Session 1**

Introduction to Android Internet users and Mobile phone users

- Open Handset Alliance (OHA)
- What is Android ?
- History of Android
- Introduction to Android platform
- Android source code structure – packages, external libraries, default apps
- Android development options – Eclipse, Android SDK

Getting to know your Android development environment

- Downloading Android SDK
- Adding ADT-Plugin
- Setting the Android environment
- What is Android made of

Session 2

Project Structure

- Root
- Contents
- Project Files
- The Manifest Writing your first Android application
- The Activity Part of activity Building , Running and debugging your Application
- Working with Android Simulator Test your application on device Using XML – based Layout
- What is an XML –Based Layout ?
- Why use an XML – Based Layout ?
- How does it work Building custom view and layout

Services

- Creating a Service
- Parts of Service
- Implementing a Service
- Implementing a Interface
- Modifying your Manifest's file
- Invoking a Service
- Connecting to a Service

Session 3

User Interface

- Building a User Interface
- Overview of Android 's view structure
- Android built –in layout
- Android built in Views
- Event Handling
- Using basic Widget
- Labels
- Button
- Images
- Radio and Check buttons
- Working and Using Containers
- Concepts and Properties
- Using Menus Using Pop –up messages

Intents

- Creating Intent Filters
- What is an Intent Filters
- Parts
- Intent
- Routing Narrow Receivers

FIRST APPLICATION

A very simple Phonebook having features like POP ups, drop down, search bar and lot of other things.

Session 4

Content Providers

- Using a Content Providers
- What is a Content Providers
- Making queries
- Handling a Content Providers
- Building a Content Providers
- Database Content Provider
- Content Observer

Preferences, Files and Datastores in Android

- SQLite Databases usage and running SQL query from Application
- Data Stores
- Overview of storing, retrieving, and exposing data
- Preferences
- Files Managing and Accessing Local Databases
- Data access over the network

- Single Sign on and Sync.
- Account Management
- Sync Adaptors
- Parts
- Properties

Advance Operations with Android Accessing

Location based Services

Mapping with MapView and MapActivity

SECOND APPLICATION

An application fully based on Google Maps API, it may be like calculating your own location on Earth using GPS and making products for yourselves

Session 5

Media APIs

- Android Media
- API Playing audio/video
- Media recording

Session 6

- What is Augmented Reality?
- Categories of Augmented Reality.
- Marker based Image
- Recognition GPS based Image
- Recognition Description about D'Fusion Studio (free development platform of Augmented Reality applications)

THIRD APPLICATION

Its always better to listen to songs on your own media player. Here participants will be able to make their own media player.

Deliverables to Participant after the conduction of workshop

1. Software toolkit to each participant.
2. Training Material (eBooks) for each participant.