

W3 Engineers

Standards/ Curriculum Format for Mobile Application Development (Android)

Course Duration: Three Months

Course Curriculum

• Android Overview & Quick Start

- An Overview of Android Apps Development

Lesson

- Discuss the history of Apps Development

Lesson

- Technology stack needed for android apps development

Lesson

- Configure your computer for setting up android application development environment

Lesson

- Setup Android Apps Development Environment in your computer

Lesson

• Main Building Blocks

- Understand main building block of Android apps

Lesson

- Create an activity

Lesson

- Understand Intents and Service

Lesson

- Understand Content Providers, Broadcast receivers and Application context

Lesson

• Java Basics

- Understand basic anatomy of a java program for android application

Lesson

- Data types in Java

Lesson

- Create hello world application in java

Lesson

- Work with java variables: integer, string, double

Lesson

- Understand conditional statement, looping

Lesson

- See the list of number in display

Lesson

- Methods in java

Lesson

• OOP Basics

- Encapsulate your data and its functionality

Lesson

- Define association relationship

Lesson

- Understand the essence of inheritance relationship

Lesson

- Keep some field, property, method inside a class

Lesson

- Create a class with the collection of another class in its field

Lesson

- Define static class and method from real life example

● Android User Interface

Lesson

- What is activity life cycle

Lesson

- Understand View and Layout

Lesson

- Familiar with UI Widgets

Lesson

- Design a simple activity layout for some basic user operation

Lesson

- Design UI with Fragments and ActionBar

● SQLite Database

Lesson

- Overview on SQLite and Database design

Lesson

- How to manage SQLite database

Lesson

- Doing CRUD operation in database

Lesson

- Create a table in SQLite

Lesson

- Save and select data from database using Android Application

● Broadcast receivers

Lesson

- Understand event receiving.

Lesson

- How to start a service by using broadcast receiver

Lesson

- Receive an event

Lesson

- Start a service

● Services

Lesson

- Lifecycle of services

Lesson
 Implement different types of service

Lesson
 Generate notification using service

Lesson
 How to play music as a background service

Lesson
• **Content Providers**

How to create content provider

Lesson
 Use content provider

Lesson
 Pass data from one process to another

Lesson
 Simplify database operation

Lesson
• **APIs**

Understand Location API

Lesson
 Working with Map API

Lesson
 Maps issues

Lesson
 Retrieve telephony network information

Lesson
 Access phone call state

Lesson
 Introduction to sensor

Lesson
 Finding users location

Lesson
 Drawing routes on Map

Lesson
 Access call state