SIX MONTHS TRAINING IN ANDROID PROGRAMMING

Module 1~ Java Fundamentals

Introduction to Java:
- History of Java
- Need for Java
- Java versions
- Features/Advantages of Java
- JVM Architecture
- Packages in Java

Programming in Java:
- Programming Structure
- Variables/Constants
- Datatypes
- Various operators
- Access Specifiers & Modifiers
- Decision Making & Branching
- Decision Making & Looping

Methods in Java:
- Introduction to Methods
- Argument passing mechanism
- Pass by value
- Pass by reference
- Arrays
- Wrapper Classes
- Manipulating strings

OOPS Principle:
- Basic principles of OOPS
- Class & Object
- Access modifiers
- Constructors & destructors
- Static members

Inheritance & Polymorphism:

- Inheritance & polymorphism
- Overloading methods
- Hiding methods
- Abstract class
- Abstract methods
- Multiple inheritance
- Interfaces
- Method Overriding

Packages & Exception Handling

- Packages in Java
- Importing packages
- Creating User defined packages
- Exception Handling
- Built-in Exceptions
- User defined Exceptions

Multithreading in Java

- Multithreading Concept
- Implementing multithreading in Java
- Thread Life Cycle
- Thread Priorities
- Thread Synchronization

Module 2 ~ Windows Programming

Windows Programming:

- Introduction to GUI Programming
- Introduction to Frames
- Various component classes
- Creating Frames & Components in Java
- Invoking Properties & methods of components

- Overview of awt components

Swings Programming
- Introduction to Swings
- Layout Managers
- Swings Vs AWT in Java
- GUI Programming using Swings

Event Handling
- Event handling mechanism in Java
- Event Listeners & Event Handlers
- Handling mouse & keyboard listeners
- Using MouseListener & MouseMotionListener

Applet Programming
- Applet Introduction
- Applet Life Cycle
- Creating Web pages using Applet
- Handling Events on Applet

Collections Framework
- Introduction to java.util package
- Various classes & interfaces
- Vector,Stack & Hashtable classes

Module 3 ~ Android Application Development

Overview of HTML
- HTML Introduction
- HTML Elements & Attributes
- Creating hyperlinks
- Creating Lists & Tables
- HTML Forms & Controls

Overview of XML

- Introduction to XML
- Creating XML documents
- Introduction to parser
- Validating & Non-Validating parsers

Overview of Android

- Overview of the Android Platform
- Applications (Apps) Defined
- Comparison with Mobile Web
- Android Architecture
- Role of Java

Android SDK

- Eclipse IDE Plugin
- Device Emulator
- Profiling Tools
- Hello World Application
- Application fundamentals & user interface

Android Application Fundamentals

- Android application building blocks
- Activating components
- Life Cycle of Application
- Development tools, Manifest File
- Life Cycle of Activity

Basic UI Design

- Form widgets
- Text Fields
- Layouts
  - Relative Layout
  - Table Layout
  - Frame Layout
  - Linear Layout
  - Nested Layout

Menus
- Option Menu
- Context Menu
- Sub Menu
- Menu from XML
- Menu via code

Main Building Blocks

- Activity
- Intents
- Services
- Content Providers
- Broadcast Receivers

Data Storage

- Shared Preferences
- Internal Storage (Files)
- External Storage(SD Card)
- SQLite Databases

SQLite Programming
- Introduction to SQLite
- SQL Basics
- Database Connectivity
- Data binding
- Using content provider
- Implementing content provider

Device Connectivity
- Bluetooth Tutorial
- List Paired Devices
- Working with WiFi
- Working with Camera

Location API
- Location API Fundamental
- Example of Android Location API
- Working with Google Maps

Multimedia
- Multimedia API
- Playing Audio
- Creating Audio Player
- Playing Video
- Alarm Manager
- Gallary

Speech API
- TextToSpeech API
- TextToSpeech Example
- Managing speed and pitch
- Speech To Text

Android Service
- Android Service
- Android Service API
- Android Started Service
- Android Bound Service
- Android Service Life Cycle
- Android Service Example

Data Storage
- Shared Preferences
- Internal Storage
- External Storage

XML & JSON
- XML Parsing SAX
- XML Parsing DOM
- XML Pull Parser
- JSON Parsing

Android Web Services
- What is web service
- Soap Vs Restful web service
- Android Restful web service example with Php
- Storing data into external MySql database
- Verifying data in android with external MySql database

Android Google Map
- Android Map V2 API
- Adding Map
- Customizing Map
- GoogleMap class
- Android Google Map Application

PHP
- Basic of Php
- Loop ,Array ,block in php
- Database connectivity with mysql in php

MY SQL

Section 1: Relational Database Basics

1.1 Brief History of MySQL
1.2 Relational Databases and Popular Databases
1.3 SQL Statements

Section 2: Data Manipulation Language (DML)

2.1 INSERT
2.2 UPDATE
2.3 DELETE
2.4 SELECT

Section3: Data Definition Language (DDL)

3.1 CREATE
3.2 ALTER

3.3 DROP

Section4: Sub-Queries, Joins and Unions with MySQL

4.1 Order By, Like , And & Or, Where , Between
4.2 Joins & Unions
4.3 Aggregate Functions and Grouping

Section 5: Constraints and Normalization

5.1 Understanding Primary and Foreign Keys
5.2 Understanding Database Normalization

Publishing Applications
- Testing application
- Signing the application
- Versioning application
- Publishing in android market