Android Application Progamming 60Hrs @ (Rs. 20,000.00)

Module: 1 Basic Android Application Development

Basics of Android

Introduction
- What is Android? - History of Android? - Features of Android?
- Handsets Available.
- Android Architecture   – Various layers in Android Architecture
- Kernel - C libraries
- Application framework, Dalvik Virtual Machine, DVM Vs JVM - Application
Application Fundamentals
Application Components
- Activities
- Services
- Broadcast Receivers
- Content Providers
Component Life cycles

Android - IDE configuration and environment setup.
Introduction to development environment
Sample "Hello World" Application Discussion
How to run and Debug Android Application

Android UI Components

Basics of Android Project Working with User Interface
1)Various Widgets like Button,CheckBoView,Edit View ,Spinner etc
2)Layouts Like Relative,Absolute,Table,Linear,Frame
Intents , accessing resources within Project / APK file
Lab Assignment : Creating form to accept data and Form navigation

Android Database, Broadcast Receiver, Services

SQLite DB, File Handling, Preference activity
Lab Assignment : Creating,Inserting, fetching & deleting form data
Lab Assignment :File Handling, Preference sharing
List view, grid view, dynamic table generation,Item Selection and Alignment
Lab Assignment :Dynamic UI generation , different types of list-view.
Lab Assignment : fetching & displaying form data & adding various events to it.
Broadcast receivers, services – Notification, Alarm and Toasts.
Security and Permissions eg:- Sending & receiving text messages, Telephony, email
Lab Assignment :Sending and Receiving SMS, email, Telephony
Lab Assignment : Alarm and Notification

Android Content Providers, Location Manager, Phone Accessing

Working with Content Providers – Accessing phone contacts and updating them
Working with Location Manager – Receiving the latitude and longitude of current location
Lab Assignment :Accessing Gallery content
Lab Assignment : Adding ,deleting ,update data to Phone contacts and display them.

Module: 2 Android Advance Application Development

Android Webservices

Networking : Client & servers,
Network status , Working with HTTP .Web Services with demo
Lab Assignment:fetching data from server, creating webservice and calling it

Android Rich UI Components

UI Enhancements, Styles & Themes -customized buttons .
Animation-working with view flipper,view switcher,animation text and canvas
Lab Assignment : Applying Styles and themes to different widgets, Animations

Android Multimedia, GSP & Other communication components

Playing Audio-Media Manager,Media player,Media Recorder
Playing Video-Preparing Video for playback.

Working with camera : modes of image capture, Controlling and Monitoring settings and image options

Lab Assignment: Record audio,play video files, Using Camera
Google Maps, Goecoding, Bluetooth API
Lab Assignment: Using Maps, GPS and Bluetooth

Module: 3 Android System Level Development & Porting

Android NDK, C/C++ modules in Android

Installing NDK on Window & Linux, Understanding the internal components of NDK

Writing C/ C++ modules and Android Make files, compiling with NDK Toolchain

Code Flow from Android Application Layer to the Native Layer

Debugging the Native code using GDB Remote Debugging

Android JNI Layer, Implementing JNI code and integrating in Android App.

Small JNI based project to access the hardware serial port or GPIO port

Android Porting

Android Source code download from git server

Android Source code organization and folder structure

Android porting code modifications

Compiling Android Source & preparing Android Root File System

Porting New modules in Android

Porting Android on a Hardware

Course HighLights :

- *First 10 Participants get Android Tablet Free (worth 10K).*

- *All the programs are done on Real Hardware (Tablets / Phone / Boards)*

- *Min of 3 Live projects*

- *For fresher & Students special batch of 3 Months and job 100% assurance (Exams will be conducted for each module)*

- *Learn from Industry Experts*

- *Courseware and sample code more then 4 GB of data for reference.*