Android Application Development

Mobile Aps. Development Course

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Android Application Development Training Course

About Course

The course is basically designed for developers, learners to familiarize with Android Development Kit using Java IDEs like Eclipse to develop Android application. The training period allows the developer to understand different features of Android used for coding, debugging, tuning and deploying applications of Mobile

Syllabus Overview

Java concepts
❖ OOPs Concepts
❖ Inheritance in detail
❖ Exception handling
❖ Packages & interfaces
❖ JVM & .jar file extension
❖ Multi threading(Thread class & Runnable Interface)

Introduction to Android
❖ What is Android?
❖ Setting up development environment
❖ Dalvik Virtual Machine & .apk file extension
❖ Fundamentals :
❖ Basic Building blocks – Activities, Services, Broadcast ,Receivers & Content
❖ UI Components- Views & notifications
❖ Components for communication -Intents & Intent Filters
❖ Android API levels(versions & version names)
❖ Providers

Application Structure (in detail)
❖ AndroidManifest.xml
❖ uses-permission & uses-sdk
❖ Activity/services/receiver declarations
❖ Resources & R.java
❖ Assets
❖ Layouts & Drawable Resources
❖ Activities and Activity lifecycle
❖ First sample Application

Emulator & Intents
- ❖ Launching emulator
- ❖ Editing emulator settings
- ❖ Emulator shortcuts
- ❖ Logcat usage
- ❖ Introduction to DDMS
- ❖ File explorer
- ❖ Explicit Intents

Basic UI design, Styles & Themes
- ❖ Form widgets
- ❖ Text Fields
- ❖ Layouts
  - ✓ Relative Layout
  - ✓ Table Layout
  - ✓ Frame Layout
  - ✓ Linear Layout
  - ✓ Nested layouts
- ❖ styles.xml
- ❖ drawable resources for shapes, gradients(selectors)
- ❖ style attribute in layout file
- ❖ Applying themes via code and manifest file
- ❖ Examples

Dialogboxes
- ❖ AlertDialogs
- ❖ Toast
- ❖ Time and Date

Images and media, Composite
- ❖ ListView and ListActivity
- ❖ Custom listview
- ❖ GridView using adapters
- ❖ Gallery using adapters

Menu
- ❖ Option menu
- ❖ Context menu
- ❖ Sub menu
- ❖ menu from xml
- ❖ menu via code
- ❖ Examples

Linkify
- ❖ Web URLs, Email address, text, map address, phone numbers
- ❖ Match Filter & Transform Filter
- ❖ Examples

Adapters
- ❖ ArrayAdapters
- ❖ BaseAdapters

Receivers and services
- ❖ Alarm Via services
- ❖ Broadcast Receiver

Preferences
- ❖ SharedPreferences
- ❖ Preferences from xml
- ❖ Examples

Content Providers
- ❖ SQL
- ❖ DML & DDL Queries in brief
- ❖ SQLiteDatabase and SQLiteOpenHelper
- ❖ DB programming using 2 and 3 tier architecture
- ❖ Reading and updating Contacts
- ❖ Reading bookmarks

Customized Controls
- ❖ Custom Toast
- ❖ Custom dialogs
- ❖ Custom Tabs
- ❖ Custom animated popup panels

Thread
- ❖ Threads running on UI thread (runOnUiThread)
- ❖ Worker thread
- ❖ Handlers & Runnable
- ❖ AsyncTask

Server Connection
- ❖ XML Parsing
- ❖ JSON Parsing

Fragments
- ❖ Fragment Life Cycle
- ❖ Fragments in Activity
- ❖ Develop Fragment based UI designs (Fragment Tabs, ListView)

Location based Services
- ❖ GPS
- ❖ Geocoding

Accessing Phone services
- ❖ Call
- ❖ SMS
- ❖ MMS

Action bar
- ❖ Action bar with fragments, Navigation Drawer

Lab and Project