Diploma in Android Apps Development

Objective:

The Certification is aimed at providing focus hands on training in Android Application Development by the practicing professionals from the industry.

Eligibility:

BE (all Streams), B.Tech, BCS, B.Sc, BCA, MCS, MCM, MCA or Equivalent with IT experience of 0-3 Years.

Selection Procedure:

- Based on Aptitude & Java Test and interview by prior appointment only.
- Direct Admission for candidates with 2+ IT development experience based on personal interview only.

Course Schedule:

- Week Day Batch
- Monday to Saturday
- Duration: 2 Months (Total 120 Hrs.)+1 Month live project Training.

Course Highlights:

- Faculties: Experienced & working IT Professionals.
- Extensive hands on practical.
- Labs available for extra practice.
- Certificate will be awarded to all successful candidates after final test.
- European live + Real project
- Certificates approved by IT Industries.

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Syllabus

1. JAVA Concepts
- OOPs Concepts
- Inheritance in detail
- Exception handling
- Packages & interfaces
- JVM & .jar file extension
- Collections – HashTable,Vector,,List, ArrayList, HashMap
- Multi threading(Thread class & Runnable Interface)

2. SQL
- DML & DDL Queries in brief

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

4. Application Structure(in detail)
- AndroidManifest.xml
    - uses-permission & uses-sdk
    - Activity/services/receiver declarations
- Resources & R.java
- Assets
- Values – strings.xml
- Layouts & Drawable Resources
- Activities and Activity lifecycle
- First sample Application
- Deploying sample application on a real device

5. Emulator-Android Virtual Device
- Launching emulator
- Editing emulator settings
- Emulator shortcuts
- Logcat usage
- Introduction to DDMS
- File explorer
- Second App :- (switching between activities)

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o Develop an app for demonstrating the communication between Intents

6. Basic UI design
- Form widgets
- Text Fields
- Layouts
  - o RelativeLayout ,TableLayout, FrameLayout, LinearLayout
  - o Nested layouts
- [dip,dp,sip,sp] versus px
- Examples

7. Preferences
- SharedPreferences
- Preferences from xml
- Examples

8. Menu
- Option menu
- Context menu
- Sub menu
- menu from xml
- menu via code
- Examples

9. Intents (in detail)
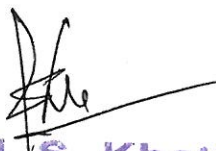- Explicit Intents
- Implicit intents
- Examples

10. UI design
- Time and Date
- Images and media
- Composite
- AlertDialogs & Toast
- Popup
- Examples

11. Tabs and TabActivity
- Examples

12. Styles & Themes
- styles.xml
- colors.xml- declaring colors and drawables
- Drawable resources for shapes, gradients(selectors)
  - o Shapes drawables
  - o State drawables
  - o Transition drawables
  - o 9 Patch drawables

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- style attribute in layout file
- Applying themes via code and manifest file
- Examples

13. SQLite Programming
- SQLite Programming
- SQLiteOpenHelper
- SQLiteDatabse
- Cursor
- Content providers
  - Defining and using content providers
  - Example- Sharing database among two different applications using content
- providers
- Reading and updating Contacts
- Reading bookmarks
- Example :
- Develop an App to demonstrate database usage. CRUD operations must be implemented. Final details should be viewed in GridView as well as in ListView.
- Do the same application with database operations in a single class(As a Model class) and do the CRUD operations with this class object

14. Android Debug Bridge(adb) tool
15. Linkify
- Web URLs,Email address,text,map address,phone numbers
- MatchFilter & TransformFilter
- Examples

16. Adapters and Widgtes
- Adapters :-
  a) ArrayAdapters
  b) BaseAdapters
- Example - Efficient Adapter
- ListView and ListActivity
- Custom listview
- GridView using adapters
- Gallery using adapters
- Examples

17. Notifications
- Broadcast Receivers
- Services and notifications
- Toast
- Alarms
- Examples

18. Custom components

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- Custom Toast
- Custom dialogs
- Custom Tabs
- Custom animated popup panels
- Other components
- Examples

19. Threads
- Threads running on UI thread(runOnUiThread)
- Worker thread
- Handlers & Runnable
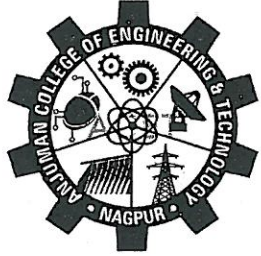- AsynTask(in detail)
- Examples

20. Advanced
- Live Folders
- Using sdcards – Reading and writing
- XML Parsing
- JSON Parsing
- Including external libraries in our application
- Maps via intent and MapActivity
- GPS,Location based Services
- Accessing Phone services(Call,SMS,MMS)
- Network connectivity services
- Sensors
- Using Wifi & Bluetooth
- Action bar tabs and custom views on Action bars
- Introduction to fragments
- A brief introduction to Ice Cream Sandwich

21. Assignment

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ANJUMAN COLLEGE OF ENGINEERING & TECHNOLOGY
SADAR NAGPUR

Department of Computer Science & Engineering

COMPUTER SOCIETY OF INDIA

This is to certify that Mr./ Miss./ Mrs. ___Adarsh Telang.___

of __5th__ semester ___Student___ has

___Android Application Development___ and is being

awarded / secured ___—___ position held on ___2012 - 2013___

We wish him/ her success in life.

COORDINATOR
Farheena Shaikh

Prof. M.S KHATIB
S.B.C -CSI & Head CSE

Prof. Dr. SAJID ANWAR
PRINCIPAL, A.C.E.T