

**DURATION : 3 Months**

## 1. JAVA FOR ANDROID

- o Getting Started With Java
- o Learning Language Fundamentals
- o Discovering Classes and Objects
- o Discovering Inheritance, Polymorphism, and Interfaces
- o Mastering Advanced Language Features Part 1
- o Mastering Advanced Language Features Part 2
- o Exploring the Basic APIs Part 1
- o Exploring the Basic APIs Part 2
- o Exploring the Collections Framework
- o Exploring Additional Utility APIs
- o AWP
- o Spring
- o Performing Classic I/O
- o Accessing Networks
- o Migrating to New I/O
- o Accessing Databases

## 2. XML FOR ANDROID

- o Introduction to XML
- o Class over view
- o Nested classes
- o Fields
- o Public Methods
- o Inherited Methods
- o XML layouts

## 3. ANDROID INTRODUCTION

- o Introduction to Android.
- o A brief history of Android.
- o The Android platform.
- o Languages used for android application development.

## 4. ANDROID INTERNALS

- o Application architecture
- o Required tools.
- o Android Debug Bridge

## 5. ANDROID UI

- o Getting familiar with android UI.
- o Development Environment
- o Configuring Eclipse for Android Development
- Android UI(Part 1)
  - o Intent
  - o View & ViewGroup
  - o Event Listeners
  - o Menus
  - o Styles/Themes & Layout Managers
  - o Widgets
- Android UI(Part 2)
  - o Adapter
  - o Toast
  - o Spinner
  - o ListView & GridView
  - o Gallery & ImageSwitcher
  - o TabWidget
  - o WebView

## 6. ANDROID APPLICATION DEVELOPMENT I

- o Image Button
- o Rating Bar
- o Seek Bar
- o Toggle Button
- o Pop up Dialogs
- o Screen Oreintation
- o Asset Vs Resource

- o 2D Graphics
- o Frame Animation
- o Tweening: scale, rotate, translate, alpha
- o Interpolation
- o Canvas/Drawing into a view
- o Nine Patch Image
- o Surface view/SurfaceHolder
- o Dialog Fragments
- o Sensors
- o Camera
- o Touch Events
- o Trackball Events

### Components(Part 1)

- o Threads/Message Queues
- o Multi Threading
- o Async. task
- o Local Service

- o Remote Service/AIDL
- o Broadcast Receiver

- o Loopers/Handlers
- o Alarm Manager
- o Notification Manager

### Components (Part 2)

- o Service
- o App Widgets
- o Live Folders
- o SQLite DB
- o Location Servises
- o Local manager
- o GCM
- o GPS
- o MapView
- o Google Play Distribution

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## 7. ANDROID APPLICATION DEVELOPMENT II

- o User Preferences & Preference Manager
- o Network & Connectivity Manager
- o HTTP Client / Simple JSON GET
- o Java Sockets / Simple JSON POST
- o Unit Testing
- o d2h08a demo application
- o Audio -Audio Manager/ Audio Recording /Audio Playback
- o Ringtones
- o Platform versions
- o Architecture
- o Framework
- o Core Application
- o Device input / Output / Radios
- o Toolchains
- o Trace Logging
- o Messaging
- o Local Service / Remote Service / aidl
- o Broadcast receiver
- o Loopers/ Handlers
- o Alarm manager
- o Notification manager
- o Eclipse demonstration local/ Remote service and Broadcast receivers

- o Scrolling ListAdapter
- o Services and Managers
- o Network Services
- o Telephony Manager
- o Connectivity Manager
- o HTTP Client
- o Advance Web View
- o Java Support
- o XML Support
- o Android Manifest File
- o Get contact information Via JSON
- o Sensors
- o Accelerometer
- o Compass
- o Needs camera
- o Trackball
- o Needs Multitouch
- o Views and Menus
- o Location Services , GPS, MapView
- o NDK & JNI overview
- o JNI Build Environment
- o JNI Demonstration
- o Platform overview
- o Director overview
- o Platform Built

**DURATION ; (Addition 2Months)**

## 8. ANDROID APPLICATION DEVELOPMENT III 9. ANDROID CTS

- o Layout manager
- o Content Providers/Resolvers
- o System database
- o Live folders/Widgets
- o Eclipse Demonstration
- o Database – SQLite Database
- o Create database/ contact provider

- o o CTS Introduction
- o CTS background
- o CTS history
- o CTS workflow
- o Prepare to run CTS
- o Check CTS report
- o Typical Failures

## 10. ANDROID TESTING RAPSODY

- o Model-Driven Development (MDD)
- o Converging MDD with Android Software Development
- o Overview of JAZZ platform
- o Android based testing using Rational Quality Manager
- o Debugging and testing of Android applications
- o Creation of test plans
- o Building test cases
- o Managing the test lab
- o Executing test and generating test reports in Rational RQM