

ANDROID COURSE SYLLABUS

Hi Folks,

Oranium Tech introducing some amazing content on Android Course. In addition to the Advanced Android Course Syllabus, the lab facilities offered by the institute are also well structured with all infrastructures.

Introduction to Java

• Keywords & Data Types – Arrays

OOPS and its Implementation

- Classes
- Objects
- Inheritance
- Polymorphism Abstraction
- Encapsulation

Exception Handling

Collection Framework

- Collection
- Map
- Date \$ Calendar
- Enumerator
- Iterator



Applets

- Applet Basics Event Handling in Applets Displaying Image
- Playing Audio Applet Interactions sample Applets.

AWT

SWING

Mobile App Development using Android

Introduction to Android

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

Android Application Structure

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

Emulator-Android Virtual Device

- Launching emulator
- Editing emulator settings
- Emulator shortcuts
- Logcat usage
- Introduction to DDMS



• File explorer

Basic UI Design

- Form widgets
- Text Fields
- Layouts
- RelativeLayout,TableLayout,FrameLayout,LinearLayout
- Nested layout [dip,dp,sip,sp] versus px

Preferences

- SharedPreferences
- Preferences from xml

Menu

- Option menu
- Context menu
- Submenu
- Menu from xml
- Menu via code

Intents

- Explicit Intents
- Implicit intents
- Switching between activities for demonstrating communication between intents

UI Design

- Time and Date
- Images and media
- Composite
- Alert Dialog & Toast
- Popup



Tabs and Tab Activity

- Tab host
- Tab widget
- Tap Spec

Styles & Themes

- xml
- xml- declaring colors and drawables
- Drawable resources for shapes, gradients(selectors)
- Shapes drawables
- State drawables
- Transition drawables
- 9 Patch drawables
- Style attribute in layout file
- Applying themes via code and manifest file

Linkify

- Web URLs, Email address, text, map address phone numbers
- Match filters & Transform filters

Adapters and Widgets

Adapters

- 1. Array Adapters
- 2. Base Adapters
- Listview and List Activity
- Custom Listview
- Gridview using adapters
- Gallery using adapters

Notifications

- Broadcast Receivers
- Services and Notifications
- Toast



- Alarms
- Debugging android applications
- Intent and intent filters
- Status bar, dialog notifications

Custom Components

- Custom Toast
- Custom Dialogs
- Custom Tabs
- Custom animated popup panels
- Other components

Threads

- Threads running on UI thread(runOnUiThread)
- Worker thread
- Handlers & Runnable
- Asyn Task

SQLite Programming

- SQlite programming
- SQLite OpenHelper
- SQLite Database
- Cursor

Content Providers

- Defining and using content providers
- Sharing database among two different applications using content providers
- Reading and updating contacts
- Reading bookmarks

Android Debug Bridge (ADB) Tool

- Multimedia in android
- Multimedia supported audio formats
- Media playback



• Supported video formats

Accessing Android Hardware

- Using the Media apis
- Using the camera
- Using the accelerometer and compass

Animations

- Programmatically creating animations
- Introducing tweened animations

Graphics And Animations

- Drawing graphics in android
- Drawing with xml
- Canvas drawing best practice

Networking

- Overview of networking
- Checking the network status
- Communication with server socket
- Working with HTTP
- Web services

Sensors

- How sensors work
- Listening to sensor reading Best Practices for
- Performance

WIFI

- Monitoring and managing internet connectivity
- Managing active connections
- Managing Wi-Fi



Telephony

- Making Calls
- Monitoring Data connectivity and Connectivity
- Accessing Phone properties and status
- Controlling the phone

Camera

• Taking picturing Rendering preview

Bluetooth

- Controlling local blue tooth device
- Discovering and bonding with Bluetooth devices
- Managing blue tooth connections
- Communicating with Bluetooth

Services

- Update the Manifest File
- Simplifying StatusActivity
- UpdaterService
- Creating the UpdaterService with Java Class
- Update the Manifest File
- Add Menu Items
- Update the Options Menu Handling
- Looping in the Service
- Pulling Data from Twitter
- Testing the Service

GPS, Location Based Services

- Simulating your location within the emulator
- Using LocationManager and Location Provider
- Working with maps
- Converting places and addresses with Geocoder



Advanced

- Live Folders
- Using sdcards-Reading and Writing
- XML Parsing
- JSON ParsingIncluding external libraries in our application
- Maps via intent and MapActivity
- Accessing Phones services (call,sms,mms)
- Action bar tabs and custom views on Action bars
- Introduction to fragments

Work with your Android Phone

- Deployment
- Get Your Apps on Phone Get Connected with Android Market
- App Transfer Among Hands Sets

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