

# CS – 31 Mobile Computing using Android and iPhone

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## Unit : 1

### Introduction to Android & Android Application Design

- The Open Handset Alliance
- The Android Platform, Android SDK
- Building a sample Android application
- Anatomy of an Android applications
- Android terminologies
- Application Context, Activities, Services, Intents
- Receiving and Broadcasting Intents
- Android Manifest File and its common settings
- Using Intent Filter, Permissions
- Managing Application resources in a hierarchy
- Working with different types of resources

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## Unit : 2 – Android User Interface Design

- User Interface Screen elements
  - Button
  - EditText
  - TextView
  - DatePicker
  - TimePicker
  - ProgressBar
  - ListView
  - GridView
  - RadioGroup
  - ImageButton
  - Fragment
- Designing User Interfaces with Layouts
  - Relative Layout
  - Linear Layout
  - Table Layout
  - GridLayout etc
- Dialogs
- Drawing and Working with Animation
  - Frame By Frame Animation
  - Twined Animation
    - Fade In
    - Fade Out
    - Cross Fading
    - Blink
    - Zoom In
    - Zoom Out
    - Rotate
    - Move
    - Slide Up
    - Slide Down
    - Bounce
    - Sequential
    - Together

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## Unit : 3 - Database Connectivity Using SQLite and Content Provider

- Using Android Data and Storage APIs
- Managing data using SQLite and Perform (insert update delete and select operation)
- Sharing Data Between Applications with Content Providers
- Introduction to rest api
- Introduction to Retrofit

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## **Unit : 4 – Location Based Services (LBS) Common Android API Notifications Services Deployment of applications**

- Using Global Positioning Services (GPS)
- Geocoding Locations
- Mapping Locations
- Generate marker
- Many more with location based services
- Android networking API
- Android web API
- Android telephony API
- Notifying the user Notifying with the status bar
- Vibrating the phone
- Blinking the lights
- Customizing the notifications Services
- Application development using JSON in MySQL
- Publish android application

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## **Unit : 5 – Introduction To iPhone**

- Introduction To X-Code (IDE)
- What is Storyboard
- Framework Design User Interface for button text view text field etc.
- Creating And Building Simple Application
- Cocoa Touch And MVC

**Notes : Android application must be developed using ANDROID STUDIO.**

### **Reference Books :**

- 1) Android Wireless Application Development By Lauren Darcey and Shane Conder Pearson Education 2nd ed. (2011)
- 2) Beginning iOS 6 Development By David Mark Jack Nutting Jeff LaMarche Fredrik Olsson Apress Publication.
- 3) Using SQLite By Jay A. Kreibich Publisher: O'Reilly Media
- 4) Mobile Computing using Android & iPhone [ISBN: 978-93-81786-93-2] by Bharat & Company
- 5) Professional Android 2 Application Development Reto Meier Wiley India Pvt Ltd (2011)
- 6) Beginning Android Mark L Murphy Wiley India Pvt Ltd

### **Reference Websites:**

- 1) <https://www.tutorialspoint.com/android/>
- 2) <https://www.javatpoint.com/android-tutorial>
- 3) <https://developer.android.com/guide>
- 4) <https://developer.android.com/training/basics/firstapp>
- 5) <https://www.studytonight.com/android/>