Mobile Application Development

Android Native Application Development

1. Android Framework and Android Studio
   a. Introduction
   b. Android Software Layers
   c. Android Libraries
   d. Components of an Android Application
   e. Pre-requisite of Android Application Development
   f. Android Studio

2. Android SDK Tools and Activity Class
   a. Android Project Structure
   b. Android Manifest File
   c. Structure of Manifest File
   d. Activity

3. Fragment Views and List View
   a. Introduction
   b. Fragments
   c. Views
   d. List Views and List Activity

4. Intents and Intent Filters
   a. Introduction
   b. Intents
   c. Native Android Action
   d. Data Transfer
   e. Intent to Call activities
   f. Register and Intent Filter

5. Android Layouts and custom views
   a. Introduction
   b. Views
   c. Layouts
   d. Customized Views

6. Android UI- Dialogs, Menus and Web view
   a. Introduction
   b. User Interaction
   c. Dialogs
   d. Toasts
   e. Context Menu
   f. Option Menu

g. Web View

7. Android Storage and Background Processing
    a. Android Storage Option
    b. Shared Preferences
    c. SQLite
    d. Web Services
    e. Background Processing

8. Android Notifications
    a. Introduction
    b. Creating a notification
    c. Notification action
    d. Expandable Notification
    e. Notification Layouts

iOS Native Application Development (SWIFT)

1. Swift
    a. Introduction to Swift
    b. Introduction to Playgrounds
    c. Variables and Constants
    d. Optional and Forced Unwrapping
    e. Class and Objects
    f. Playing with Methods

2. iOS stack and setting development environment
    a. A top down tour of the layers
    b. Setting up project in XCODE
    c. What's different about coding in iOS?

3. Getting Familiar with XCODE (IDE)
    a. The XCODE workspace windows
    b. The Toolbar
    c. The Navigation View
    d. Project Navigator
    e. Symbol Navigator
    f. Search Navigator
    g. Debug Navigator
    h. Break Point Navigator
    i. Log Navigator
    j. The Jump Bar
    k. The Utility Pane

4. **MVC and User Interfaces**
    a. View Controller
    b. Outlet and Actions
    c. Button and Action Methods
    d. Image view and Text Filed
    e. Closing Keypad
    f. Slider and Label
    g. Tags,
    h. Check Box and Radio
    i. Alert Controller
    j. Switches and Segment Controllers
    k. Web View
    l. More UI Components

5. **Auto Layouts**
    a. Mechanics of Autorotation
    b. Autorotation approaches
    c. Auto sizing with different apple devices

6. **Multi View application**
    a. Architecture of Multi View Application
    b. Root Controller
    c. Navigation Controller
    d. Tab Bar Controller
    e. Segues

7. **Working with Pickers**
    a. Date Picker
    b. Single Component Picker
    c. Multi Component Picker
    d. Custom Picker with Images
    e. Delegates and data Sources

8. **Table view and Navigation Controllers**
    a. Working with Table View
    b. Working with Table View controller
    c. Grouped and Indexed Section
    d. Header and Footer
    e. Custom Table View
    f. Connecting View controllers with Table View

9. **Basic Data Persistence**
    a. SQLite
    b. Core Data

c. Web Services

10. Gestures
    a. Taps Gesture
    b. Pinch Gesture
    c. Rotation Gesture
    d. Pan Gesture
    e. Swipe Gesture
    f. Screen Edges Pan Gesture
    g. Long press gesture

11. Working with Maps
    a. iOS Location Framework
    b. iOS Map Kit Framework
    c. The Location Manager
    d. Annotation
    e. Latitude and Longitude

12. Camera and Photo Library, Collection
    a. Image Picker Controllers
    b. Camera and Library
    c. UI Collection

13. Localization
    a. Localization Architecture
    b. Localize Application

Phone gap

1. Phonegap Introduction
    a. Introduction
    b. History
    c. Architecture

2. Introduction to HTML/ CSS
    a. Basics
    b. Simple Website making
    c. Styling using CSS
    d. Adding functionalities using jQuery/ Java script

3. Setting up Environment
    a. Download and installing Phonegap
    b. Phonegap with Android
    c. Phonegap with iOS

       d. Hello World

4. UI Designing using jQuery Mobile
       a. Introduction
       b. Creating Pages
       c. Navigation bar, buttons, grids and other controls
       d. Data in jQuery Mobile Pages

5. Phone gap API
       a. Movement and Location
       b. File System and Local database
       c. Working with Images and Video
       d. Working with Contacts
       e. Working with Events
       f. Many more APIs

6. Extending Phonegap with Plugins
       a. Extending Cordova application with a native plugin
       b. Extending Cordova iOS application with a native plugin

Deployment

1. Deployment
       a. Deployment of Android
       b. Deployment of iOS