

Module: iOS Application Development

Objective: Building iOS Applications class teaches attendees how to build iOS native applications for iPhone and iPad using Objective-C and Apple's Cocoa Touch framework

Mode: Classroom

Duration: 60 hours

Pre-requisite: None

Course Outline:

Introduction

- iPhone and iPad Device
- iOS Architecture and SDK Frameworks

Xcode

- Tour of the IDE
- Templates, Projects, and Workspaces
- Creating a New Project
- Debug

Objective-C for Experienced Programmers

- Classes, Objects, and Methods
- Declared Properties
- Memory Management
- Automatic Reference Counting (ARC)
- Formal and Informal Protocols
- Blocks

Application Patterns and Architecture

- Model View Controller (MVC)
- IBOutlets and IBActions
- Subclassing and Delegation

Views and Windows

- The View Hierarchy
- Containers
- Controls
- Text and Web Views
- Alert Views and Action Sheets
- View Autosizing
- Autolayout

Storyboards

- Adding Scenes

- Segues
- Transitions

Table Views

- Static and Dynamic Table Views
- Delegates and DataSources
- Custom Cells

Navigation Based Applications

- Adding the Root View Controller
- Creating the Navigation Controller
- Controlling the Stack Navigation Programmatically

UIPickerView and UIDatePicker

- Designing the UI
- Coding for the Data Picker

Working with Data

- SQLite Integration
- Using SQLite Directly
- Overview of Core Data
- Retrieving and Modifying Data

Multitouch, Taps, and Gestures

- The Responder Chain
- Touch Notification Methods
- Enabling Multitouch on the View
- Gesture Recognizers

Notifications

- Local Notifications
- Push Notifications

Core Location Framework

- Location Accuracy
- Obtaining Location Information
- MapKit Framework and MKMapView

Networking

- Reachability
- Synchronous Downloads
- Asynchronous Downloads
- Sending HTTP GET and POST Requests
- Parsing JSON
- Parsing XML

Targeting Multiple Devices

- iPhone vs. iPad
- Universal Apps

- Multiple SDK Support
- Detecting Device Capabilities

Localization

- Resources
- Language and Region
- NSLocale
- Text
- Dates
- Numbers

Performance and Power Optimization

- Measuring Performance
- Memory Usage, and Leaks

Project

