iOS Programming for iPhone® and iPad® Applications Using Objective-C

Duration: 5 Days *(Face-to-Face & Remote-Live)*, or 35 Hours *(On-Demand)*

Price: $2495 *(Face-to-Face & Remote-Live)*, or $1495 *(On-Demand)*

Discounts: We offer multiple discount options. Click here for more information.

Delivery Options: Attend face-to-face in the classroom, remote-live or via on-demand training.

Description

Participants in this hands-on course will learn about and gain practice developing iOS applications for iPhone and iPad devices. Attendees will learn all the basics needed for iOS development, from installation of the Xcode editor to the Apple approval process. The Objective-C language is presented and used in hands on exercises to learn how it interacts with the hardware systems.

In hands on exercises, students will use built-in data views as well as create custom screens for data entry and presentation. Students will learn to follow Apple's design recommendations to provide clean interfaces that appropriately size to various devices and screens.

The course includes coverage of scheduled background execution to allow code to be run when the app isn't active and to schedule alerts to draw attention back to the app.

Comprehensive hands on exercises are integrated throughout to reinforce learning and develop real competency. Students will create apps from the ground up, demonstrating the features of Objective-C and serving as an introduction to developing apps for release to the App Store.

Prerequisites

Prior programming experience in an object-oriented language such as Java, C# or C++.

Course Overview

Macintosh Orientation

- Versions of iOS and Supported Devices
- Overview of the New OS X
- Command Line Interaction
- Apple Approval Process

Objective-C

- Fundamental Syntax
- Object Oriented Programming Support
- Using Dynamic Binding
- Using ARC
- Writing Code for Hardware Interaction
- Data Types and Structs
- Flow Control
- Pointers, Heap and Stack

Xcode IDE Installation and Use

- Installing and Updating Xcode
- Code Development and Tracking
- Debugging Utilities
- Application Navigation Tools

NeXTStep Object Support

- Using the NeXTStep Data Types
    - NSDate, NSPoint, NSSize, NSString
- Using the NeXTStep Collection Objects
    - NSSet and NSMutableSet
    - NSArray and NSMutableArray
    - NSDictionary and NSMutableDictionary

MVC Architecture

- Model-View-Controller Development Paradigm
- Application Design Process

System Event Handling

- Recognizing Apps Moving to Background
- Detecting and Solving Low Memory Events
- Handling Custom Events and Exceptions

SOA Application Design Overview

- Service Oriented Architecture
- Web Services Overview
- Apple Push Notification Service (APNs)

Threading Support

- Creating Threads
- Using Threads for Asynchronous Processing

Dynamic Typing

- Understanding the id Data Type
- Analyzing Objects for Type Safety
- Testing Objects for Function Support

Basic Design Patterns Used in iOS

- Singleton Pattern
- Lazy Instantiation
- Protocol/Delegate Patterns

Custom View Design and Layout

- Designing Views
- Apple's UI Design Standards
- Utilizing Controls
- Custom View Transitions and

Views and View Controllers

- Using Generic Views and View Controllers
- Using Specific Purpose Views
    - Text View

Animations

- Web View
- Map View
- Table and Table Cell View

Blocks

- Purpose and Syntax of Blocks
- Block Animation Methods
- Developing Multithreaded Blocks

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