

# iOS Application Development using Swift

**Duration: 40 Hours (5 Days)**

## Overview

The iOS Application Development using Swift course is designed to equip learners with the skills and knowledge necessary to create engaging and functional iOS applications using Apple's powerful programming language, Swift. This comprehensive course covers everything from the basics of the Swift language to the intricacies of iOS frameworks and Design patterns. Starting with an Introduction to Swift and the interactive Playground, learners will quickly grasp the fundamentals such as Variables and Constants, Optionals & Forced Unwrapping, and the creation of Classes and Objects. As they progress, they will delve into iOS Application Development principles, learning the unique aspects of coding for iOS and exploring the iOS Stack. The course provides hands-on experience with XCODE, Apple's integrated development environment (IDE), and covers essential topics like MVC and User Interfaces, Auto rotation, Auto sizing, and Multi view Application design. Students will also gain practical skills in Table view with Navigation Controllers, Basic Data Persistence, and Grand Central Dispatch for efficient app performance. Moreover, learners will explore advanced features such as the implementation of Gestures, working with Maps, handling Camera and Photo Library, and managing Multimedia content. The course concludes with a focus on Localization and the steps required to Deploy your application. By earning an apple swift certification or swift certification, learners validate their skills and enhance their professional credibility. This course is a pathway to mastering Swift and iOS development, setting the stage for a successful career in app development.

## Audience Profile

Learn to build innovative apps with our iOS Application Development using Swift course, ideal for aspiring mobile developers and tech enthusiasts.

- Aspiring iOS Developers
- Mobile Application Developers looking to expand their skillset to iOS
- Software Engineers with an interest in mobile app development
- Computer Science and Software Engineering Students
- IT Professionals wanting to switch to mobile app development
- Entrepreneurs looking to create iOS apps for their business
- UI/UX Designers seeking to understand iOS development
- Product Managers aiming to gain technical iOS knowledge
- Quality Assurance Engineers transitioning to mobile app testing
- Hobbyists who enjoy learning new programming languages and app development

## Course Syllabus

### Course Contents:

#### 1. Swift

- Introduction to Swift
- Introduction to Playground
- Variables and Constants
- Optional & Forced Unwrapping

- Class and Objects
- Playing with Methods

## **2. Introduction to iOS Application Development**

- Introduction of iOS
- What's different about coding for iOS ?

## **3. iOS Stack and Setting development Environment**

- A top down tour of the layers
- About UIKit, Cocoa Touch
- Setting up your project in XCODE

## **4. Getting Familiar with XCODE ( IDE )**

- The XCODE workspace window
- The Toolbar
- The Navigator View
- Project Navigator
- Symbol Navigator
- Search Navigator
- Debug Navigator
- Break- Point Navigator
- Log Navigator
- The Jump Bar
- The Utility Pane
- Closer look to Project

## **5. MVC and User Interfaces**

- View Controller
- Outlets and Actions
- Button and Action Methods
- Image View and Text Fields
- Closing Keypad
- Slider and Label
- Tags,
- Checkbox and Radio
- Alert Controller
- Switches and Segment Controls
- Web View
- More UI Components

## **6. Auto rotation, Auto sizing**

- Mechanics of Autorotation
- Points, Pixels and Retina display
- Autorotation Approaches
- View Orientation
- Auto sizing with different apple devices

## **7. Multi view Application**

- Architecture of Multi View Application
- Root controller
- Navigation Controller
- Tab Bar Controller
- Segues

## **8. Working with Pickers**

- Date Picker
- Single Component picker
- Multi Component picker
- Custom picker with images
- Delegates and Data sources

## **9. Table view with Navigation Controllers**

- Working with Table View
- Working with Table View Controller
- Grouped and Indexed Section
- Header and Footer
- Custom Table View
- Connecting View controller with Table View Controller

## **10. Basic Data Persistence**

- Store data in file
- Core Data
- SQLite Databases
- Accessing remote database (Web Services)

## **11. Grand Central Dispatch**

- Overview of Grand Central Dispatch
- Slow worker
- GCD: Playing with queues
- Background processing

## **12. Gestures**

- Taps Gesture
- Pinch Gesture
- Rotation Gesture
- Swipe Gesture
- Pan Gesture
- Screen Edges Pan Gesture
- Long Press Gesture

## **13. Working with Maps**

- iOS Core Location Framework
- iOS Map Kit Framework

- The Location Manager
- Getting Location Updates
- Visualizing your movement on a map
- Annotation
- Latitude & Longitude

## **14. Camera, Photo Library, Collection**

- Image Picker Controllers
- Camera and Library
- UI Collection

## **15. Multimedia**

- Playing video using URL
- Playing video using resource
- Working with Audio

## **16. Localization**

- Localization Architecture
- Localize application

## **17. Deploy your application**

- Overview on deployment of application
- Generating Certificate Request
- Provision Profile
- App ID Creation
- Deploy Application