



# iOS App Development using Swift



**Course Duration:** 5 Days

## Description

Swift is a new programming language for iOS and OS X apps that builds on the best of C and Objective-C. Swift is a clean, accessible, object-oriented language, with built-in support for modern programming features like closures, generics, and tuples. In this course, you will be able to learn Swift's core syntax variables, data types, functions, and control structures and its object-oriented classes.

This course covers the design patterns and best practices for building, testing, and debugging native iOS apps. Also it's cover iOS 8 interface development, techniques for connecting UI elements to code, and tips for making flexible layouts that display correctly on different screen sizes. Focusing on developing course using MVC pattern, creating and customizing table views, loading data with SOAP and REST web services, developing application architecture.

## Target Audience

Junior Software Developers, Senior Software Developers, Team Leads and Managers.

## Prerequisites

Participants should know the core concepts of swift programming.

## Course Objective

- Create simple application using SWIFT
- Understanding standard Human Interface guidelines
- Create apps with MVC iOS environment
- Creates apps which interacts with various UI components
- Create an App with Multi Controller environment
- Deploy the App on the iOS devices and over the App Store
- Understand how to make App compatible with multi iOS devices
- Create the Apps with Multitouch and Motion Sensor hardware capabilities
- Understand the architecture for Web services oriented apps and persistent storage oriented apps

# Course Outline

- Getting started with Xcode
  - Xcode authoring environment
  - Writing "Hello World" with Swift
  - Introducing Playground
- Working with Variables and Constants
  - Creating variables and constants
  - Understanding data types
  - Printing variables and constants
  - Commenting code
  - String Interpolations
  - Type Conversion
- Working with conditional statements
  - Working with if condition
  - Working with Switch condition
- Working with Loops
  - for loop
  - for in loop
  - While loop
  - do-while loop
- Working with functions
  - Defining Function
  - void type function
  - return type function
- Working with complex data types
  - Working with arrays
  - Dictionaries & Tuples
  - Declaring optional variable
  - Enumerations
  - Working with closures
  - Defining Structures
  - Working with operators
  - Advanced operators
- Working with Class
  - Defining and instantiating classes
  - Declaring class properties and methods
  - Inheritance
  - Lazy and Computed properties
- Type Checking and casting
  - Understanding Type checking casting
- Protocols
  - Understanding Protocols
- Working with Delegation
  - Implementing delegation
  - Commenting code
- Working with extension and generics
- Automatic Reference Counting
  - Strong reference
  - Reference cycle
  - Using Any and AnyObject reference
- Creating rst app
  - App development process
  - Creating rst Hello World app
  - Understanding folder structure of project
  - Understanding of AppDelegate class
- UIKit and SWIFT
  - Understanding UIView Hierarchy
  - Exploring UI elements
  - Working with UI components
- Application architect of iOS Application
  - Single View Application
  - Types of Multi Controller Applications
  - Implement some project with various Application Architect
- Responder Chain Pattern
  - Understanding Touch Events
  - Implementing touch event
  - Understand pattern of registering the view with touch
  - Drafting of 4 golden rules to register view on touch

- Working with UITabBarController and UINavigationController
  - Architecture of the multi controller environment
  - Tab Bar controller
  - Creating multi controller project in iOS MVC architecture
  - Working with Navigation
- UITableViews
  - Working with UITableViews
  - Customizing Table using various features
- Making universal app for different iOS devices
  - Making app compatible with all iOS devices
  - Understanding the development cycle time for all devices
- Deployment and Distribution
  - Understanding app deployment and distribution process in detail
- Storyboard (Overview)
  - What is Story Board
  - Why it was introduce
  - Where to use Storyboard
- Hardware Capabilities
  - Working with Multi Touch environment
  - Working with Accelerometer
- WebServices using SOAP and REST
  - Understand client server architecture
  - Understand the Web services
  - SOAP webservice
  - Integrate MVC architecture
  - Working with XML
  - 5 golden rules to create robust MVC architecture
  - Implementation of XML parsers
  - Difference between DOM and SAX parser
  - Working with REST and understanding JSON data
- Persistence using SQLite
  - Creating To-Do List App using SQLite
  - Functions required by the SQLite handler class
  - Understanding persistent storage
- Persistence using Plist and CoreData framework
  - Creating persistent storage using plists
  - Working with CoreData framework

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