

Start Up

- Understanding the Development Environment
- Installing the Tools
- Components of the SDK
- Understanding the Xcode and IB interface
- Understanding the Playground
- Understanding the advantages and Limitations of Simulator

Swift Programming Language

Swift Basics

- The language basics
- Constants and Variables
- Type Annotations
- Data Types
- Type-Safety and Inference
- Conversions
- Tuples
- Optionals

Basic Operators

Strings and Characters

Collection Types

- Arrays
- Dictionaries
- Assignment and Copy behavior
- Mutation in Collections

Control Flow

- Conditional Statements
- Iteration Statements
- Value bindings
- Control Transfer

Functions

- Defining Functions
- Function Parameters
- Functions with Multiple Return values
- External Parameters
- In-Out Parameters
- Function Types

- Function Types are Parameters
- Nested Functions

Closures

- Closure Expressions
- Closure Context
- Trailing Closures
- Closures as Reference types

Enumerations

- Enumeration Basics
- Associated Values
- Raw Values

Swift – OOPS Concepts

Classes and Structures

- Defining class and structure instances
- Properties
- Stored Properties
- Computer Properties
- Property Observers
- Type Properties
- Initializers
- Methods
- Type Methods
- Instance Methods
- Subscripts
- Inheritance
- Defining Base Class
- Subclassing
- Overriding
- Preventing Overrides
- Initialization
- Designated_INITIALIZER
- Custom Initialization
- Default Initialization
- _INITIALIZER Chaining and Safety
- Deinitialization
- Automatic Reference Counting
- How ARC Works
- Strong Reference Cycles
- Resolving Strong Reference Cycles
- Reference Cycles for Closures

- Resolving Strong Reference Cycles for Closures
- Optional Chaining
- Type Casting
- Class Hierarchy for Type Casting
- Type Checking
- DownCasting
- Object Casting
- Extensions
- Types
- Methods
- Initializers
- Subscripts
- Nested Types
- Protocols
- Property Requirements
- Method requirements
- Mutating Requirements
- Protocols as Types
- Delegation
- Protocol Conformation with Extension
- Protocol Adaption
- Collections of Protocol
- Protocol Inheritance
- Optional Protocols
- Generics
- Why use Generics
- Functions
- Type parameters
- Types
- Constraints
- Associated Types
- Where Clauses

User Interface

UI basic

- Using iPhone Project Templates
- The Units of Measurement
- The iOS Hello World Boilerplate Dissection
- Understanding the App Startup process
- The iOS Architecture

- Retina v/s non-Retina UI considerations
- The Developer License
- Understanding Views and Windows
- Creating User Interface
- Basic GUI Components
- UITextField, UISlider, UISegementControl, UIStepper, UIButtonetc
- Actions, Outlets and Events
- Handling Basic Interactions
- The Human Interface Guidelines
- Understanding Delegation
- Exercise - Create a Settings Controller that allows to Switch Font Sizes, Change RGB color background, Allow Text Events

Understanding UITableView

- Understanding UINavigationController
- Creating a Simple Table View
- Reusing TableViewCells
- Customizing a TableView
- Grouping Data in Tables
- Selecting and Navigation in TableViews

Model Views

- Alerting a User
- Customization AlertViews
- Capturing User response
- TextField Alerts and Keyboard Styles
- Implementing ActionSheets

UICollectionView

- Using a UICollectionView
- DataSource and Delegates
- Custom UICollectionViewCells
- Reusing Collection Cells

Multi-View Applications

- Container and Content Views
- Introduction to Multi-View Applications
- The MVC Architecture. Why and How to use MVC.
- Subclassing Controllers
- Creating a Utility Application and Creating Protocols
- Implementing Different Animation for View Transitions

Basic Data Handling

- Understanding the Controller States in Life Cycle
- Understanding Application Document Structure
- Understanding the Product Folder Structure
- The Application Default Folders and File Manager

- Capturing Files form Bundles
- Storing and retrieving data from Files
- Storing and Retrieving data from Plists

The Application Project Structure

- Creating and Accessing your own Bundles
- A Start Up Project using Different Controllers.
- Creating a Multi-View Application from Scratch
- Creating Scenes and Segues
- Adding Controllers
- Passing Data Across Scenes
- Understanding Master-detail Application
- Universal Applications