

How to set up a new Xcode project.^{[1][2]}^[SEP]How to use the Interface Builder to design and create the appearance of your app.^{[1][2]}^[SEP]How to find your way around Xcode.^{[1][2]}^[SEP]How to size and arrange various UI elements.^{[1][2]}^[SEP]How to add custom image assets to Xcode projects.^{[1][2]}^[SEP]How to create app icons and size them for all resolutions. How to run apps on the iOS Simulator as well as side-load to a physical device.

Learn to use Swift Playgrounds.^{[1][2]}^[SEP]

Get familiar with the syntax used in the Swift Programming Language

Understand the data type system and the primitive data types such as Strings, Ints and Doubles.

- Variables, Types
- Functions
- Classes, Structs
- Properties
- Enums
- Closures
- Protocols
- Memory Management
- Generic Programming
- Subscripts

Array 1D, 2D, object array

Set

Dictionary

How to add constraints and understand how auto layout works.^{[1][2]}^[SEP]

UIImageView
UITextView
UIWebView
UICollectionView
UITableView
UIView
UILabel
UITextView
UIButton

UIAlert
UIViewController
UINavigationController
NavigationBar
UITabBar
UIActionSheet
UIAlert
Page Control
ScrollView
Date Picker
Segment control
Slider
Steppers
Toggle
UIStackView

Control flow

If else
optional
Switch
for
while
break
continue
defer
guard
let
var

Higher order functions
map, flat map, compact map, filter, sort, reduce

Tuples

OOPS concept
Inheritance, polymorphism, encapsulation

How to use Swift functions and understand input parameters and return types.^[1]Error handling using try and catch.^[SEP]

Understand the different Design Patterns used in Swift and how they are implemented.

Extensions
MVC
MVVM
Singleton

Learn about Swift Structures and creating custom types.

Learn about struct initialisation.^[L]^[SEP]Learn about immutability and the mutating keyword.

Learn about Swift classes.^[L]^[SEP]

Learn the difference between Structures and Classes and when to use each.^[L]^[SEP]

- App Lifecycle
- View Lifecycle

Closure
escaping and non escaping

Reference Cycle
String, weak, unowned

Property observer
didset, willset

Computed and stored property
lazy property

Struct and Class

Dependency injection

GCD

Push notification APNS

Access modifier
Public, open, Private, file private, internal

Protocol delegate

How to use public APIs to get live data from the internet.

Learn about Networking and use the native URLSession object to make HTTP requests to a server.^[1]^[SEP]Learn about the Decodable Protocol and how to parse JSON formatted data using the native JSONDecoder.

Learn to create Dark Mode differentiated assets and use vector assets.^[1]^[SEP]

Plist

NSUserDefaults

Core Data

Codable Protocol

Dependency manager

Swift package manager, pods.

Unit test cases

The entire tour of XCode

Using git for version control and collaboration

Git forking, branching and cloning^[1]^[SEP]Using GitHub as a remote repository

Checkout and rolling back changes with git

Using git and GitHub with Xcode

Intro to Combine and SwiftUI

Understand what is SwiftUI and how it's different from UIKit. Learn to write declarative SwiftUI code to create user interfaces programmatically.^[1]^[SEP]Learn to build user interfaces using SwiftUI Text, Button, Image, HStack, VStack, ZStack, List, Color and NavigationView components.

Learn to use the Preview pane and live Preview.^[1]^[SEP]Use the Object Library to turn UI elements into code. Understand and use SwiftUI modifiers to chain modification methods to SwiftUI components.^[1]^[SEP]Understand the SwiftUI Closure syntax to add custom functionality to SwiftUI components.^[1]^[SEP]See the difference between Imperative and Declarative code. Manage state using the @State property modifier.^[1]^[SEP]Learn about the @Published property modifier from the Combine framework that allows for more

complex state management.^{[L][SEP]}Manage complex app state using the ObservableObject protocol.^[SEP]Learn to incorporate UIKit components in a SwiftUI app using the UIViewRepresentable protocol.^{[L][SEP]}See your iOS apps turn into a Mac app by leveraging project Catalyst.

Familiarising with App Store Connect

What is Certificates and Provisional Profiles^{[L][SEP]}Apple TestFlight^[SEP]Submitting your app for review

Develop app from scratch

Doc file with Q&A