iOS Programming

Lecture 1

Welcome

What is this course about?

- What will you gain

What is this course NOT about?

- Deep dive into Object Oriented Programming

Programming

Introduction

- What is programming

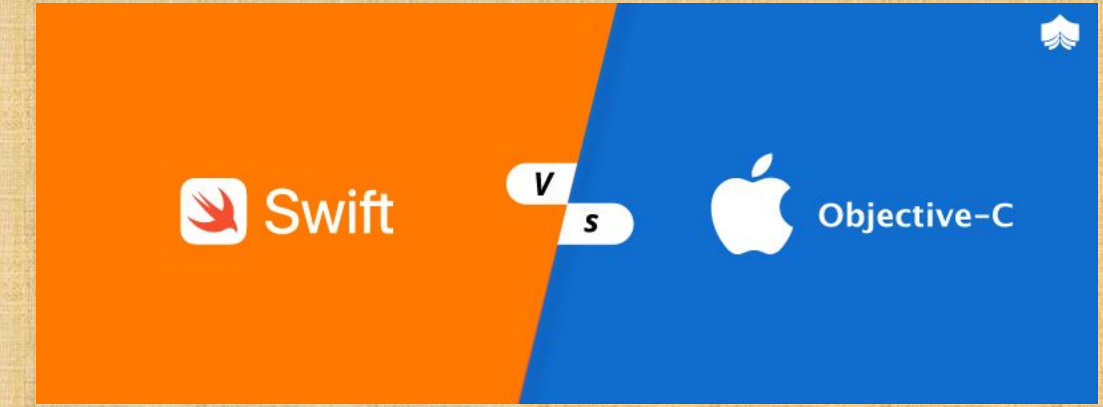
Why is Mobile Special?

-What’s different in Mobile Programming

Language

Language

- Swift
- Objective C
- Kotlin
- Java
- ReactNative
- More?? – Write once run anywhere…..



Language vs Framework

Language

- Swift

Framework

- Cocoa Touch
- Model View Variant (MVC/MVP)

vs

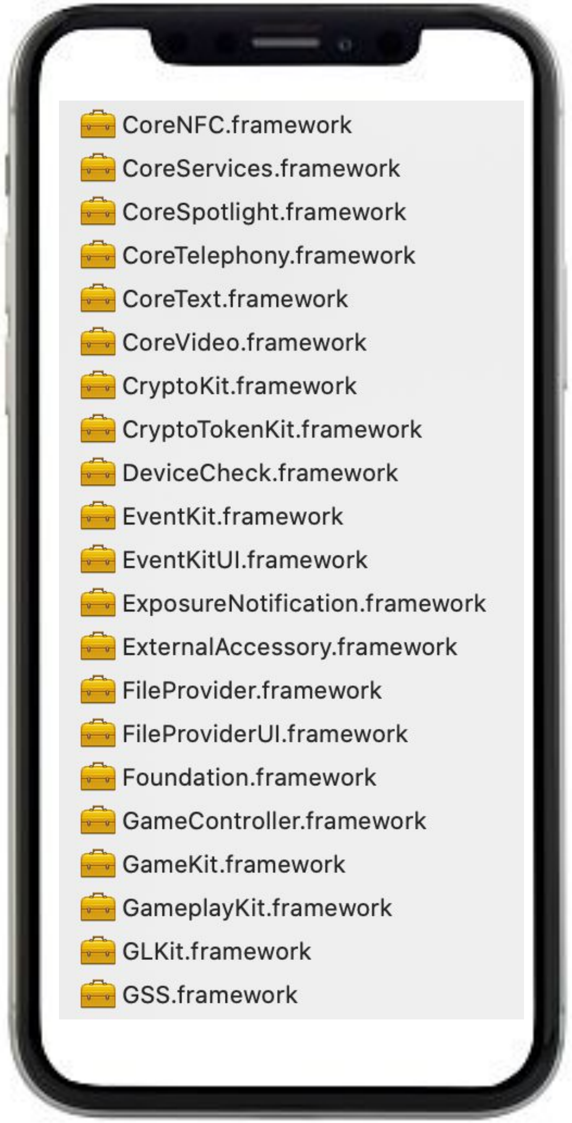
Frameworks

Apple provides lots of frameworks that simplify development process for:

- Building UI
- Making Network Calls
- Providing Security
- Tracking Location
- Capturing Images
- AR/VR
- And more & more………..

Good Source:

https://developer.apple.com/documentation/



CoreNFC.framework
CoreServices.framework
CoreSpotlight.framework
CoreTelephony.framework
CoreText.framework
CoreVideo.framework
CryptoKit.framework
CryptoTokenKit.framework
DeviceCheck.framework
EventKit.framework
EventKitUI.framework
ExposureNotification.framework
ExternalAccessory.framework
FileProvider.framework
FileProviderUI.framework
Foundation.framework
GameController.framework
GameKit.framework
GameplayKit.framework
GLKit.framework
GSS.framework

IDE

- XCode
- Terminal
  - Terminal is always an option
- Online
  - Online Swift Playground (http://online.swiftplayground.run/)

IDE

- XCode

Instructions:

Let’s install the latest XCode

We will start the download if not already installed but wouldn’t wait for download to complete.

Nearly ~11GB

Developing UI

Presentation Frameworks

MVC

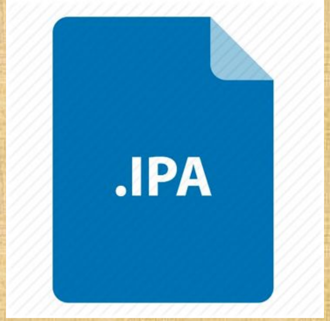
MVP

MVVM

Journey to App Store

Build

Create package



App Store deploys

Swift Playgrounds

Demo

- Let’s jump in – let’s create a Swift Playground and inaugurate with “Hello World”

```
print("Hello World!!!")
```

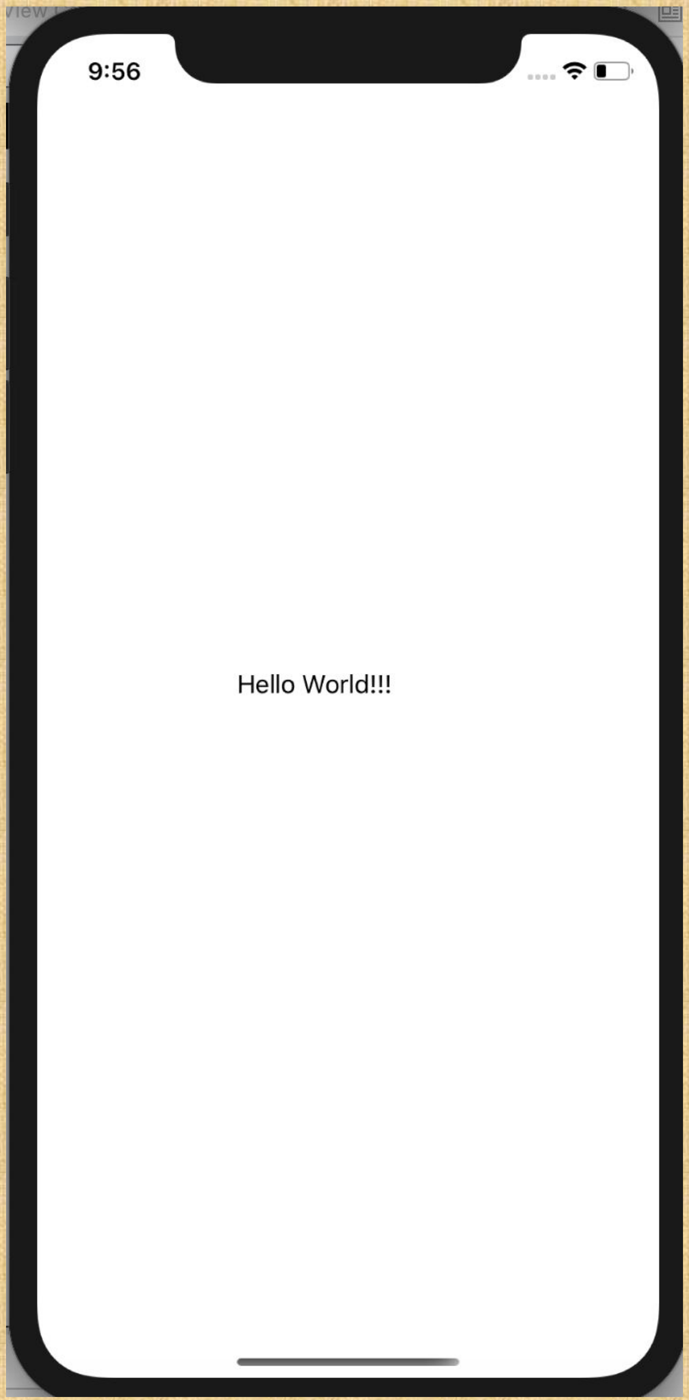
Sample App

Demo

- Create a Sample do nothing app but something we can run on Simulator

Things to Note:

- App Delegates
- Controllers
- Story Boards



Hello World!!!

Debugging

Running into bugs is inevitable…

How to Debug?? - Demo

- Add breakpoints
- Print Objects

A crime movie in which you are the detective for a crime that you committed.

Code commenting

```
//Cmd + /
//This is a single line comment

/*
 This is a multi-line comment
 This is very useful for me to document tons and tons of information
 about the way my code will work
 */


//Cmd + Option + /
/// Function greets the user
/// - Parameter to: Name of the user to greet
func sayHello(to: String){
    print ("Hello: \(to)")
}
```

String concatenation

```
var planetName = "Earth"
var hoursInDay = 24


var infoMessage = "A day on "
infoMessage += planetName
infoMessage += " has "
infoMessage += String(hoursInDay)
infoMessage += "h i.e. "
infoMessage += String(hoursInDay * 3600)
infoMessage += "s"


print(infoMessage)
```

String interpolation \()

```
var planetName = "Earth"
var hoursInDay = 24


//String interpolation makes formatting strings really easy
print("A day on \(planetName) has \(hoursInDay)h i.e. \(hoursInDay * 3600)s")
```

Parting Notes

In world of software use the below loop:

1. Understand Theory
2. Practice – Write Code
3. Identify Gaps
4. Repeat Step 1 through 3 – Iterate

- Do install XCode
- Do write code

Reference - https://docs.swift.org/swift-book/LanguageGuide/TheBasics.html