iOS Development

iOS, Xcode, Cocoa Touch and iOS Devices

ElectronicArmory.com

Reading

[Get Started Developing iOS Apps](#)

[Swift iBook](#)

[Electronic Armory](#)

References

[Apple Developer Portal](#)

[Swift API Design Guidelines](#)

Free Tutorials

Lynda.com

Anyone with a Boise Public Library Card:

Free Lynda.com account

Introduction to Cocoa Touch

Objective-C is a very thin superset of C

Anything you can do in C, you can do in Obj-C

Cocoa Touch is what adds all the collections, data types, and functionality, and views

NS vs UI

NS stands for NextStep

UI is the class prefix for iOS specific classes

Apple is working on removing NS from its classes and constants in Swift 3

Foundation vs UIKit

Foundation is all the

- core collections (NSArray, NSDictionary)
- data structures (NSString, NSURL, NSNumber)
- functionality (NSNotificationCenter, NSOperationQueue)

Foundation vs UIKit

UIKit is all the iOS specific UI elements:
UIButton
UIView
UIColor
UILabel

NS-classes Examples (Obj-C)

NSString

NSArray

NSDictionary

NSData

NS-classes Examples (Swift 5)

~~NS~~String

~~NS~~Array

~~NS~~Dictionary

~~NS~~Data (Changed in Swift 3)

UI-classes Examples

UIImage and UIImageView

UIViewController and UIView

UITableView and UITableViewController

UIColor

Mutability (Obj-C)

NSString -> NSMutableString

NSArray -> NSMutableArray

NSDictionary -> NSMutableDictionary

NSData -> NSMutableData

Mutability (Swift 5)

Immutable: `let String`
Mutable: `var String`

Immutable: `let Array`
Mutable: `var Array`

Immutable: `let Dictionary`
Mutable: `var Dictionary`

Immutable: `let Data`

Mutable: `var Data`

iOS Devices

iPad - iPad Mini, iPad, iPad with Retina, iPad Air 1&2, iPad Pro

iPhone - iPhone 3.5", iPhone 4" and
 iPhone 4" 64-bit, iPhone 4.7", iPhone 5.5"

http://iosres.com

https://www.paintcodeapp.com/news/ultimate-guide-to-iphone-resolutions

Device Capabilities

GPS, Geofencing

Accelerometer

Maps

Microphone

Wi-Fi

Internet

Bluetooth (LE on iPhone 4S+)

Camera

OS Versions and Differences

iPhone OS 1 - Based on OS X

iPhone OS 2 - App Store

iPhone OS 3 - Copy & Paste, MMS

iOS 4 - Multitasking, iPad

iOS 5 - Siri

iOS 6 - Apple Maps

iOS 7 - UI Enhancements

iOS 8 - Touch ID, PhotoKit, Camera API, HealthKit, HomeKit, ResearchKit, CloudKit, SpriteKit, SceneKit, Metal

iOS 9 - OS improvements, in-app multitasking, night shift, car play, quicktype

iOS 10 - Stickers, message bubbles, SiriKit, HomeKit, rich notifications

OS Versions and Differences

iOS 11 - ARKit, Automatic Setup, Document Scanning In Notes, Files App For iPad, Indoor Maps / Lane Guidance, Inline Drawing And Instant Markup In Notes Using The Apple Pencil, iPad Multitasking, Live Photo Editing Options

iOS 12 - Screenshots, FaceID, many improvements on current features

[iOS 13](iOS 13) - Dark mode, sign in with Apple

iOS 14 - New home screen, home screen widgets

Swift

"Swift is a general-purpose programming language built using a modern approach to safety, performance, and software design patterns."

[Not just for iOS, NodeJS-like webserver in Swift](#)

Swift, Xcode and Playgrounds

Demo