

# House Course 59-20

Web and Mobile Applications  
Week 1: Swift and Xcode

Attendance: <http://bit.ly/1OZ93rQ>

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# Week 1

- Swift Language
- Swift Practice
- Xcode IDE (integrated development environment)
- HW

# Housekeeping

- Anyone newly enrolled?
  - Drop/add ends at midnight
- Everyone on Piazza?
  - If you can help, please do

# A history

- Objective-C (Object-Oriented C)
  - Selected as the programming language for NeXT computers in 1988
  - Apple buys NeXT in 1997, iOS and OS X are derived from the NeXTSTEP OS

# A history

- Objective-C Weaknesses
  - C at the core...

```
NSString *string = [someObject name];  
if (string != nil){  
    //do something with string  
}
```

- Message based method calling

```
if ([delegate respondsToSelector:@selector(buttonClicked:)]) {  
    [delegate buttonClicked:self];  
}
```

# A history

- Swift
  - Introduced in 2014 alongside iOS 8 with the tagline “Objective-C without the C”
  - Interoperates with Objective-C
    - Legacy frameworks from NeXT still used
- Safety Features
  - Auto memory management
  - Objects can never be nil (optionals)

# Comparison

- Objective-C

```
if ([delegate respondsToSelector:@selector(buttonClicked:)]) {  
    [delegate buttonClicked:self];  
}
```

- Swift

```
delegate?.buttonClicked(self)
```

Time to get swifty



# Swift

- Key Features
  - Object-oriented - Everything is an object
  - Automatic memory management
  - Strong typing - knows type of object referenced at every moment

# Playgrounds

- A separate area of Xcode for testing and refining portions of code
- Code compiles and displays as you type
- Powerful code visualization tool
- ‘Training wheels’

# HW for Week 2

- Practice with playgrounds, Xcode
- See Piazza