

SWIFT

CLASS + HACKDAY

The set up

THE SETUP



Xcode6-Beta3

WHO AM I?

JP SIMARD

@SIMJP

REALM.IO

Realm 

TODAY



CLASS

1. LEARN ABOUT SWIFT

2. BUILD AN APP

3. QUESTIONS

WHY SWIFT > OBJC?

- ▶ **Type safety & inference**
 - ▶ **Closures**
 - ▶ **Tuples**
 - ▶ **Super-Enums**
- ▶ **Functional programming**
 - ▶ **Generics**

**Q: WHAT DOES
IT LOOK LIKE?**

TYPE SAFETY & INFERENCE

```
let anInt = 3
let aFloat = 0.1416
var pi = anInt + aFloat // Compile warning
```

```
pi = 3 + 0.1416
// Compiles: number literals are untyped
```

LIKE RUST & SCALA

CLOSURES

```
func backwards(s1: String, s2: String) -> Bool {  
    return s1 > s2  
}  
sort(["b", "a"], backwards) // => ["a", "b"]
```

SWIFT CLOSURES ➡ OBJC BLOCKS

TUPLES

```
let http404Error = (404, "Not Found")
```

LIKE HASKELL & SCALA

SUPER- ENUMS*

*OK, NOT EXACTLY THE CORRECT TECHNICAL TERM

```
enum Suit {  
    case Spades, Hearts, Diamonds, Clubs  
    func simpleDescription() -> String {  
        switch self {  
            case .Spades:  
                return "Spades"  
            case .Hearts:  
                return "Hearts"  
            case .Diamonds:  
                return "Diamonds"  
            case .Clubs:  
                return "Clubs"  
        }  
    }  
}
```

FUNCTIONAL PROGRAMMING

```
let numbers = [1, 5, 3, 12, 2]
numbers.map {
    (number: Int) -> Int in
    return 3 * number
} // => [3, 15, 9, 36, 6]
numbers.filter {$0 % 2 == 0} // => [12, 2]
```

LIKE HASKELL, SCALA & MANY OTHERS

GENERIC

LIKE... UH... EVERY MODERN
LANGUAGE!


```
// Reimplement the Swift standard
// library's optional type
enum OptionalValue<T> {
    case None
    case Some(T)
}
var maybeInt: OptionalValue<Int> = .None
maybeInt = .Some(100)

// Specialized Array
var letters: [Array]
letters = ["a"]
```

**Q: WHAT HAPPENED TO MY
BELOVED**



Q: WHAT HAPPENED TO MY BELOVED *?

- ▶ **concepts** are still there: reference types and value types
- ▶ pointers still exist to interact with C APIs:
`UnsafePointer<T>`, etc.

Q: WHAT HAPPENED TO MY BELOVED *?

C APIS ARE STILL USABLE

```
import Foundation
import Security

let secret = "Top Secret".dataUsingEncoding(NSUTF8StringEncoding)
let dict = [kSecClass as String: kSecClassGenericPassword,
            kSecAttrService as String: "MyService",
            kSecAttrAccount as String: "Some Account",
            kSecValueData as String: secret] as NSDictionary
let status = SecItemAdd(dict as CFDictionaryRef, nil)
```

JAZZY



GITHUB.COM/REALM/JAZZY

A SOULFUL WAY TO GENERATE DOCS FOR SWIFT & OBJECTIVE-C

LINKS (🍏)

- ▶ Official Swift website
- ▶ The Swift Programming Language Book
 - ▶ WWDC Videos
 - ▶ WWDC Sample Code
- ▶ Xcode 6 (and other resources)

Free Apple Developer Account Required

LINKS (!)

- ▶ **This talk:** github.com/jpsim/talks
- ▶ **Jay Freeman's AltConf talk:** debugging your (Swift) apps with cypcript
- ▶ **ObjC/Swift doc generator:** github.com/realm/jazzy
 - ▶ **Evan Swick:** Inside Swift
 - ▶ **Swift on** StackOverflow

LET'S BUILD A TO-DO APP!



THANK YOU!

Hackday().questions?.askThem!

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