GENERAL ASSEMBLY

MOBILE DEVELOPMENT

INTRO TO SWIFT

Tedi Konda
Executive Director, Technology, Unison

LEARNING OBJECTIVES

- Define Swift and its value to the iOS ecosystem
- Define and demonstrate playgrounds
- Define Swift’s fundamental data types
- Use variables and constants, and understand the difference between the two
- Apply optionals and understand when to use them
- Utilize control flow to create a simple program flow in playgrounds

REVIEW ASSESSMENT AND LAST CLASS

QUESTIONS

- What are the benefits of using nibs over storyboards and what are the downsides of storyboards?
- What are the benefits of using storyboards over nibs and what are the downsides of nibs?
- Give real world examples of nibs and storyboards (when one would use storyboards and nibs)?
- Why are segues important and how do you use them?
- Define navigation controllers and give a sample use case.
- Bonus question: What are outlets?

INTRO TO SWIFT

PROGRAMMING LANGUAGES

- Our code is like a recipe for a meal
- The computer will start with the first instruction, complete it…
- Then move on to the second instruction, complete that…
- Repeat until it is done with instructions
- Unlike a recipe, we have to be much more specific with computer code
- Computers are fast and dumb. They will do exactly what you say, mistakes and all

PROGRAMMING LANGUAGES

Doing multiple steps of a recipe at the same time can shorten the amount of time it takes to complete the meal

- This is possible with computers, too, but we won't be concerned with how to do that in this class
- The computer will, for the most part, read each step of our recipe in order, complete it, and move on to the next
- One step of the recipe can change the state of our food in preparation for the next step

ENOUGH WITH THE RECIPE

TALK, LET'S CODE!

RECAP

- Variables: Changeable state
- Constants: Unchangeable state
- Type: What a variable/constant is, e.g. String, Integer
- nil: Nothing
- Optional: A kind of type that can be nil

CONTROL FLOW

In computer science, control flow (or alternatively, flow of control) refers to the order in which the individual statements, instructions or function calls of an imperative or a declarative program are executed or evaluated.

-Wikipedia

RECAP

- if statement { code } // Code runs if statement evaluates to true
- if statement { code } else { moreCode } // Code runs if statement evaluates to true, moreCode runs if statement is false
- if statement { code } else if statement2 { moreCode } // Code runs if statement evaluates to true, moreCode runs if statement2 is true
    - You can stack as many if else blocks as you want.
- if let name = optional { code } // code runs and has access to a non-optional version of optional only if optional exists
- for, while // Loops

INTRO TO SWIFT

Q&A

- List the different Swift types.
- Highlight the difference between variables and constants. When to use each?
- What are optionals? When would you use them?
- What is inferred type? What are type annotations?
- What is the difference between a for loop and a while loop?
- What’s the difference between a for loop and a for-in loop?