GENERAL ASSEMBLY

MOBILE DEVELOPMENT AUTOLAYOUT PT. 2 & MIDTERMS

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Learning Objectives

- Design layouts with Autolayout
- Use NSLayoutConstraints to set our constraints in code
- Introduce midterm project

REVIEWING AUTOLAYOUT THROUGH IB

AUTOLAYOUT PROGRAMATICALLY

ADDING A CONSTRAINT

```
var subview = UIView()
subview.setTranslatesAutoresizingMaskIntoConstraints(false)
superview.addSubview(subview) // happens before constraints
superview.addConstraint(NSLayoutConstraint(item: subview,
                                attribute: .CenterX,
                                relatedBy: .Equal,
                                toItem: superview,
                                attribute: .CenterX,
                                multiplier: 1,
                                constant: 0)
```

CONSTRAINTS

- Views likely have multiple constraints
- From those constraints we must be able to figure out origin and size

REMEMBER ANIMATIONS

```
someConstraint.constant = 100 // someConstraint is
a constraint within self.view
UIView.animateWithDuration(5, animations: {
  self.view.layoutIfNeeded() // This animates the
above change
})
```

DICTIONARIES

WHAT IS A DICTIONARY?

A dictionary has a unique set of **keys**. Each of those keys is unique in the dictionary

- Each key has a **value**, which can be quickly referenced if you have the **key**
  - Values do not have to be unique in the dictionary
- Storage: ages[“tedi”] = 30
- Retrieval: if let tediAge = ages[“tedi”] {/* if ages[“tedi”] exists, this is run */}
- Also referred to as **maps**

WHAT IS A DICTIONARY?

- We use dictionaries when there is an association between one thing and another
- You r**eally really should** query a dictionary for a value when you already have the key
- Looking up values for keys in dictionaries is **fast**

DICTIONARY SYNTAX

- Creating a dictionary with values: var ages = [“tedi”:30] // Type is [String: Int]
- Creating an empty dictionary: var ages: [String: Int] = [:]
- Creating a constant: let ages = [“tedi”:30]
- Accessing: let tediAge = ages[“tedi”] // tediAge is an Int? with value 30
  - Hint: This is a great chance to use ‘if let’!
- Setting: ages[“thomas”] = 43

AUTOLAYOUT PT. 2 & MIDTERMS

REVIEW

MIDTERM OVERVIEW