iOS Development: Multiple MVC's and Storyboards

Jamie Edge

Learning Goals

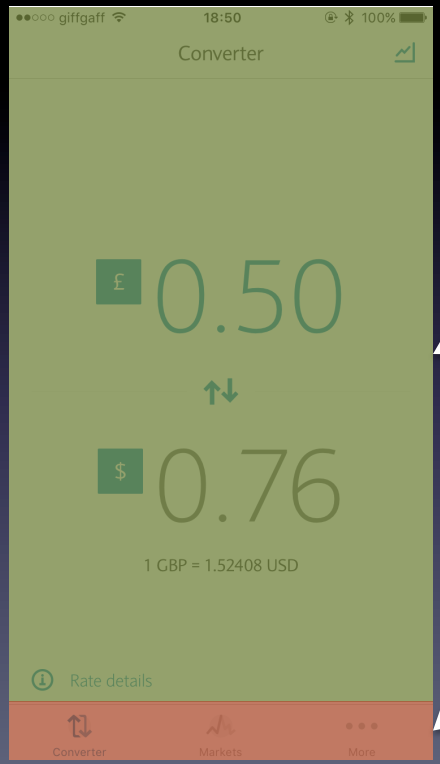
- Understand the meaning of the following components:
  - UITabBarController
  - UINavigationController
  - UIPageViewController
- Learn what a segue is, what types exist and how they can be defined and used
- Learn how these components can be linked in a Storyboard
- Understand how multiple MVC's can interact with each other

Background

UITabBarController

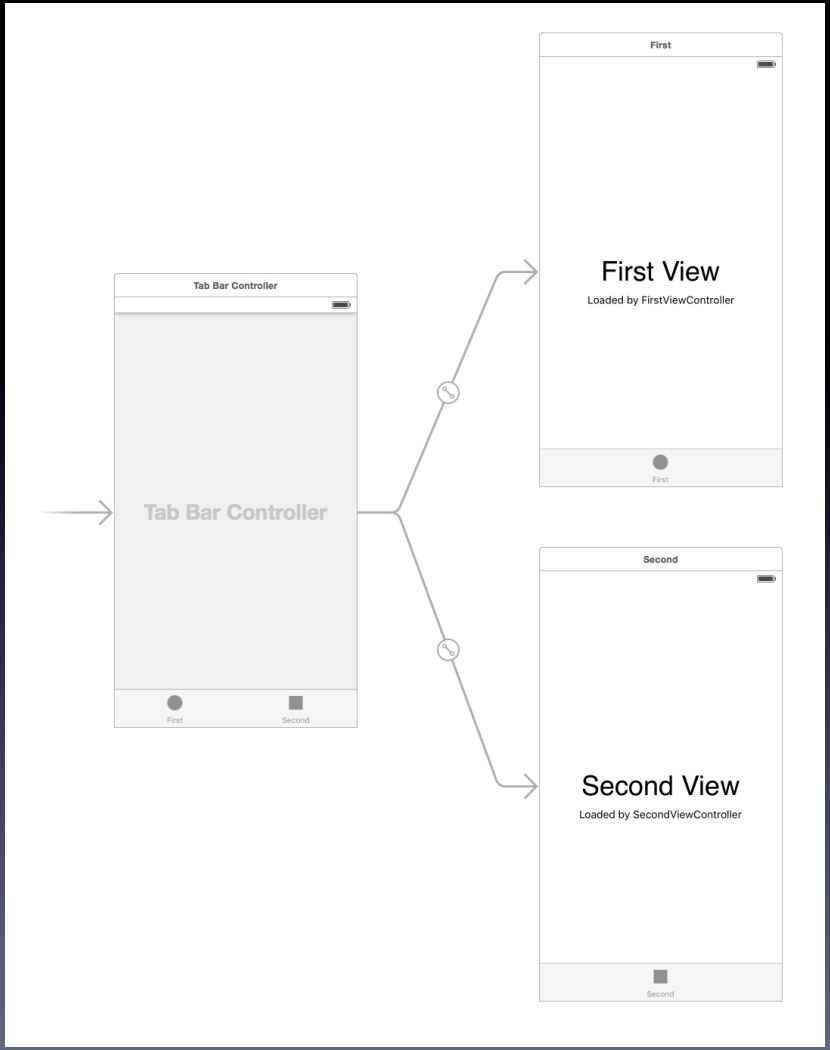
UITabBar

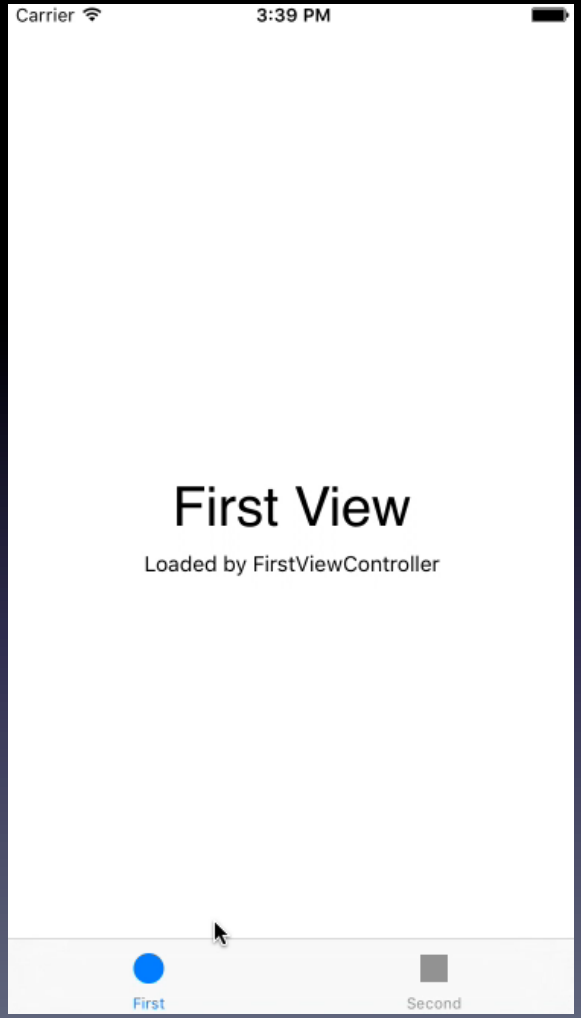
UITabBarController



UIViewController

UITabBar


First
First View
Loaded by FirstViewController
First
Tab Bar Controller
Tab Bar Controller
First
Second
Second
Second View
Loaded by SecondViewController
Second

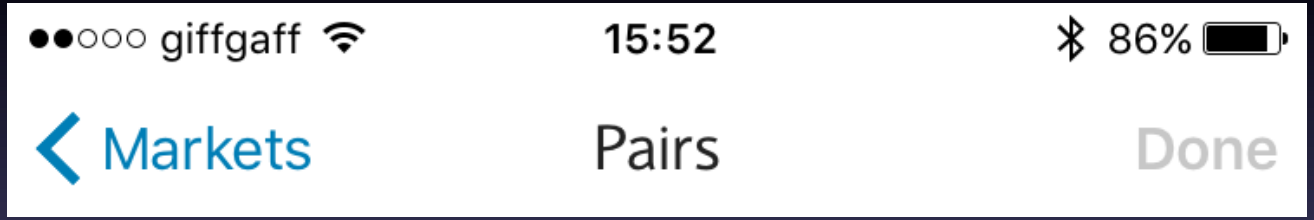

Carrier
3:39 PM
First View
Loaded by FirstViewController
First
Second

Advantages of UITabBarController

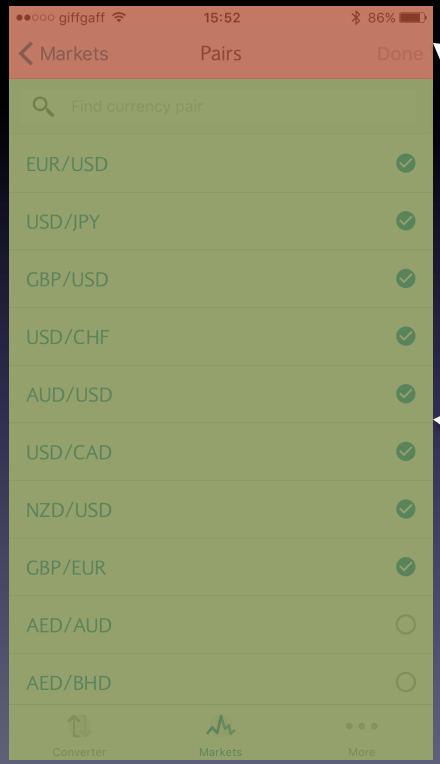
- Allows to present multiple view controllers that may not be linked
- Easy for the user to navigate from any screen

UINavigationController

UINavigationBar

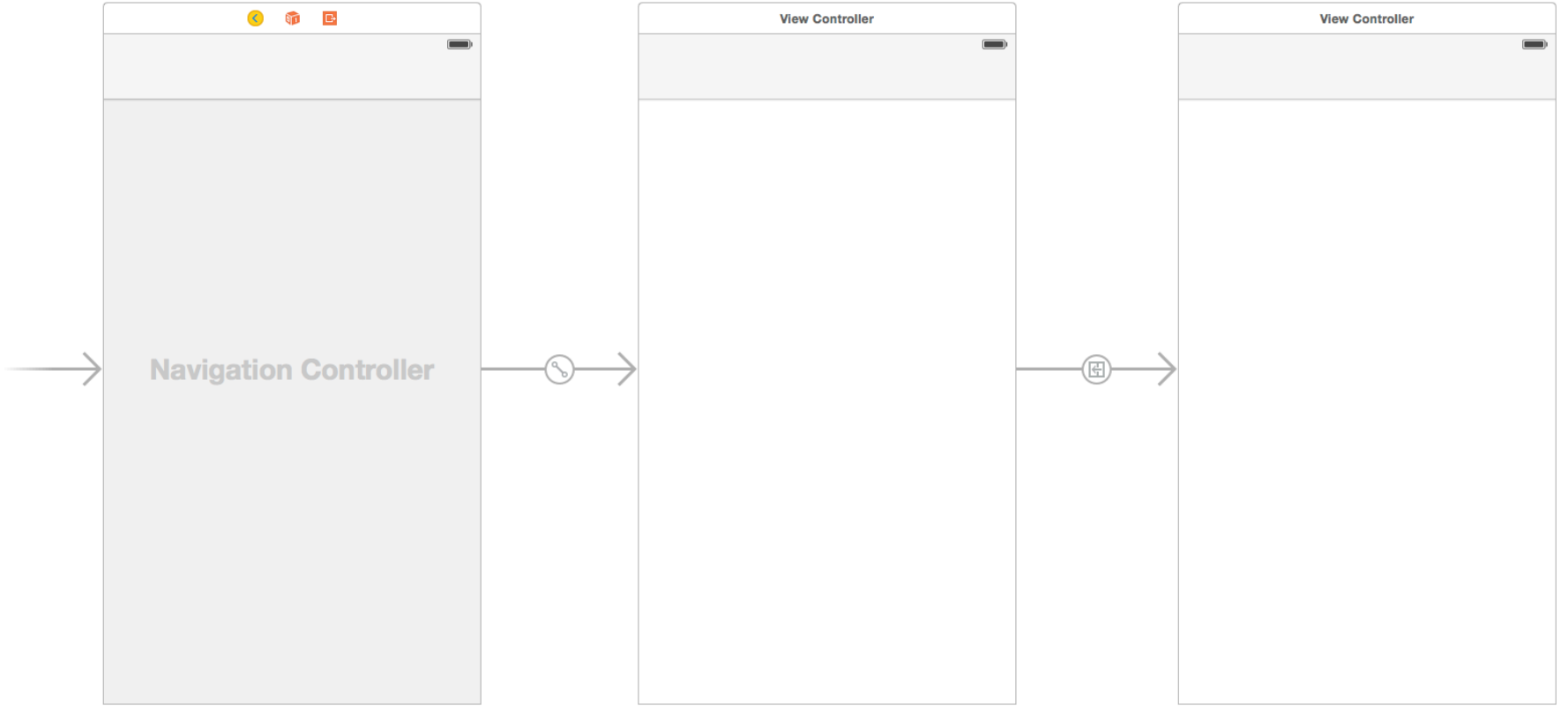


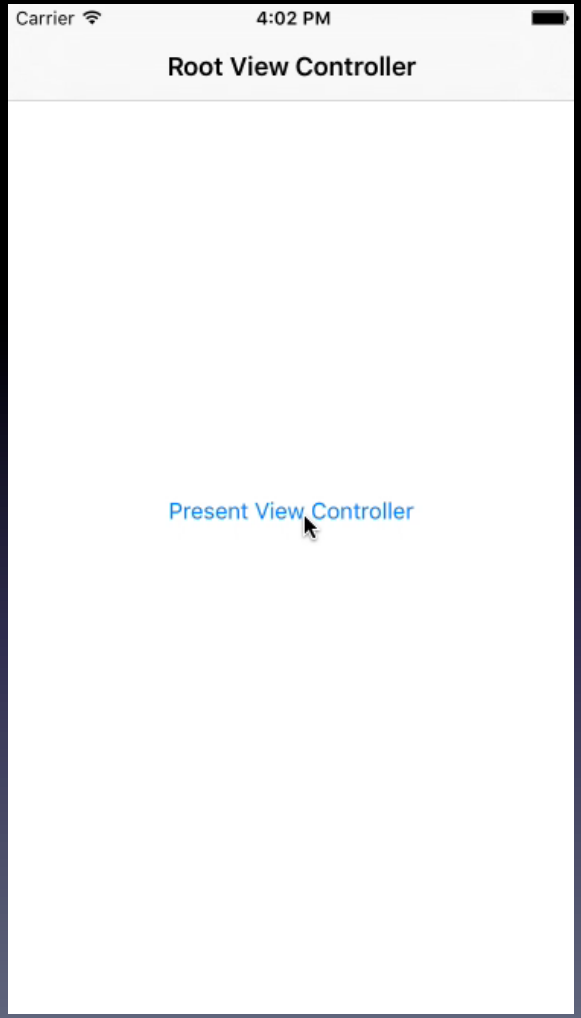
UINavigationController



UINavigationBar

UIViewController


Navigation Controller
View Controller
View Controller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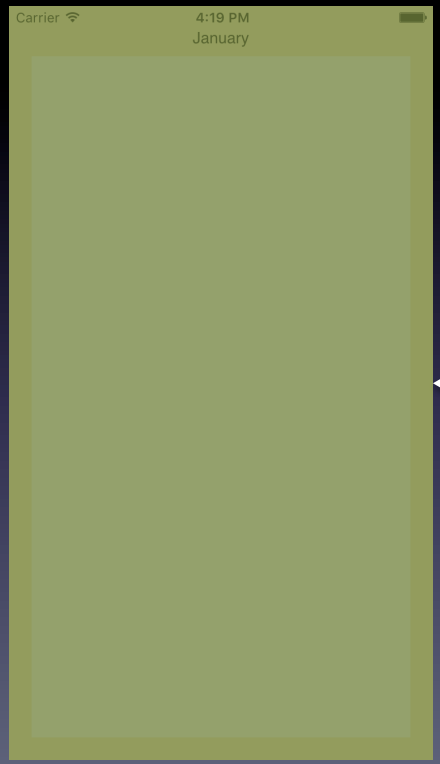
Root View Controller
Present View Controller

Advantages of UINavigationController

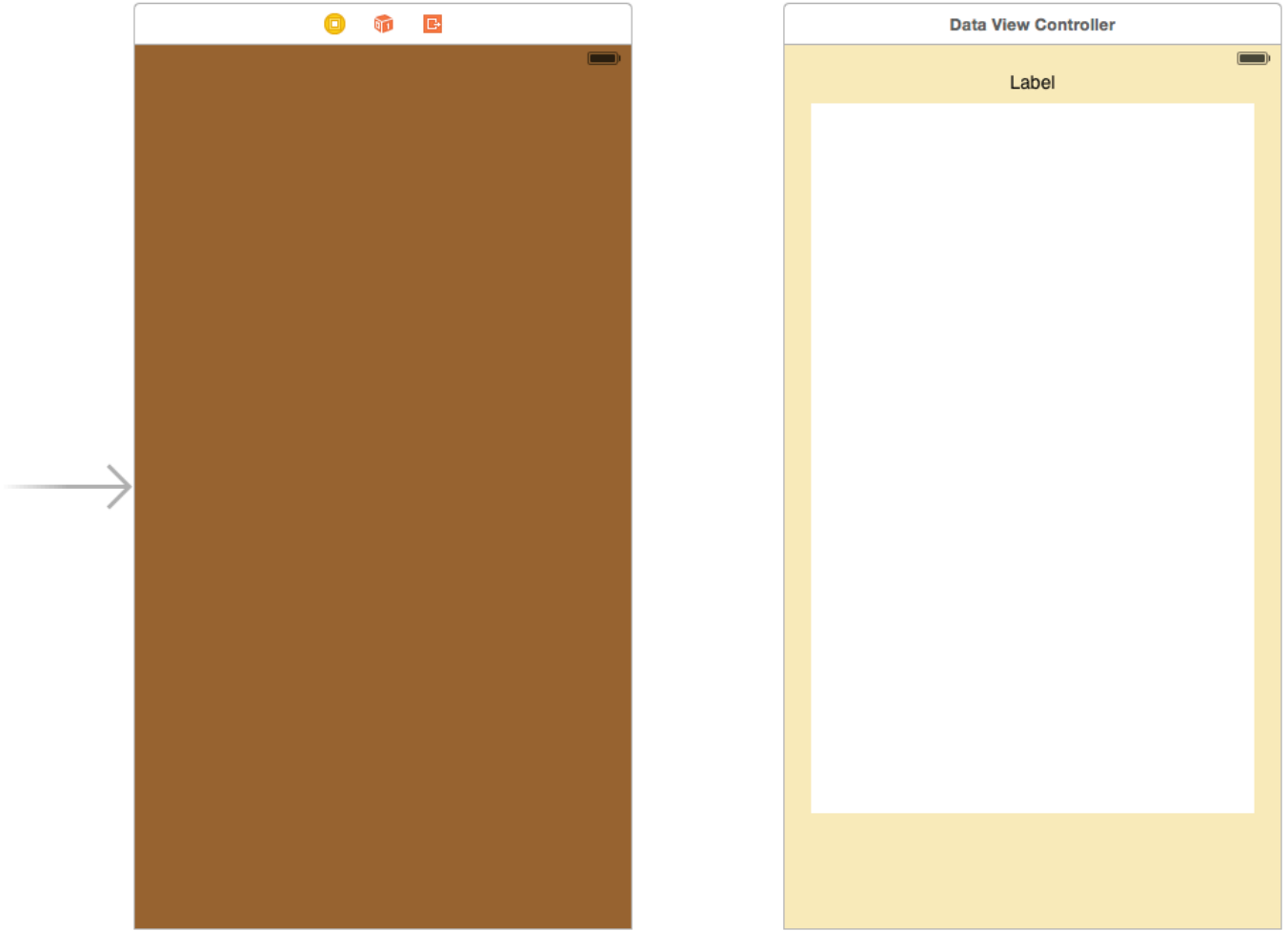
- Allows functionality for common user journeys
- UINavigationBar

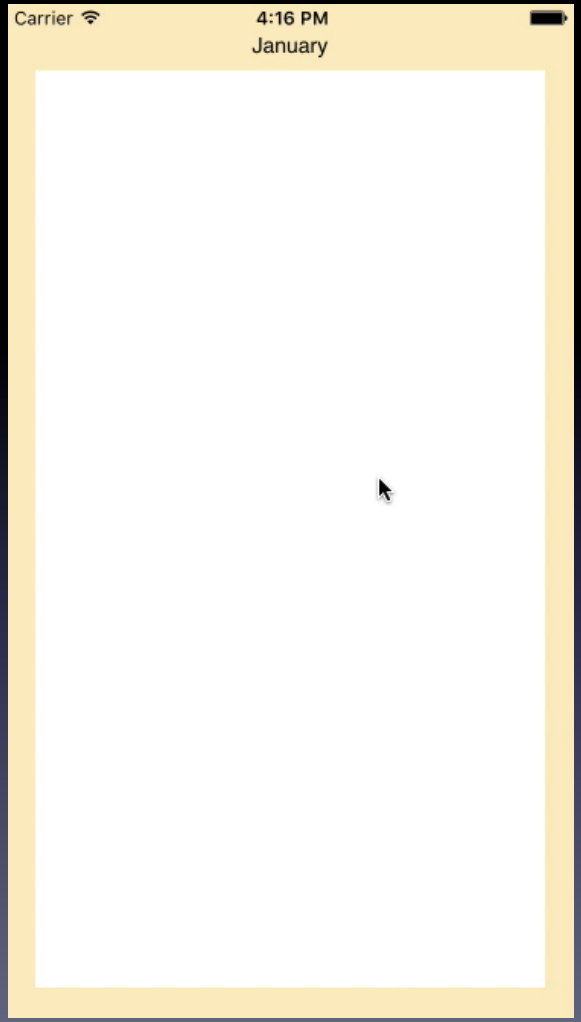
UIPageController

UIPageController



UIViewController


Data View Controller
Label


Carrier
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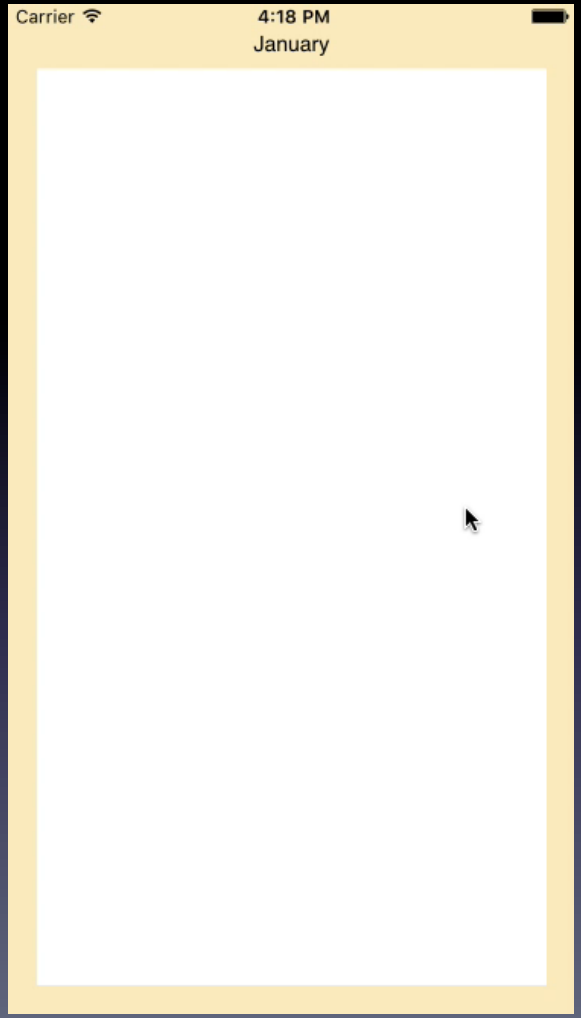
January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January

Advantages of UIPageController

- Reuse the same detail view controller
- Choice of transition types
- Can be used to create swipe-through tutorials

Segues

‘Show’ (Push)

- Usually used with a UINavigationController
- Pushes a view into the navigation stack
- Can reverse the segue by using ‘Back’ action

‘Present Modally’ (Modal)

- Used to present a view controller over the existing content
- Usually slides in from the bottom
- Can dismiss by using ‘dismissViewControllerAnimated’ method

Other Segue Types

- ‘Show Detail’ (Replace)
  - Used with UISplitViewController
  - Example: Landscape Mail on iPad when selecting a message
- ‘Popover Presentation’ (Popover)
  - Displays view as a popup
  - Example: Pressing ‘About’ on FX powered by Barclays on iPad
- Custom
  - Use delegate methods to define a custom presentation

Practical Example

Storyboards, UITabBarController,

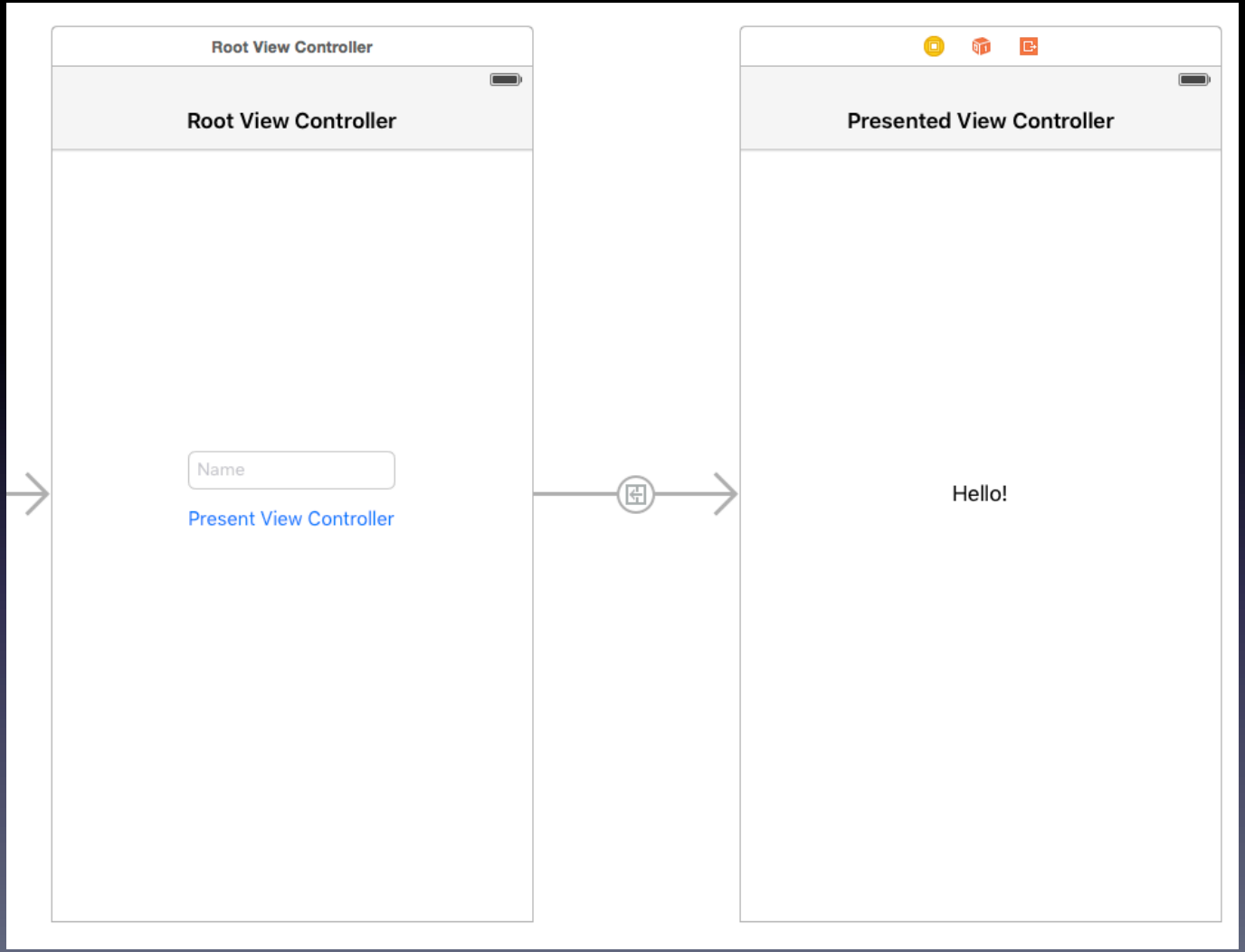
UINavigationController and Segues

Multiple Model View Controllers (MVC's)

Why do MVC's need to communicate?

- Exchange information entered by the user

  (e.g. a name entered into a text field)


Root View Controller
Root View Controller
Name
Present View Controller
Presented View Controller
Hello!

Getting a reference to another View Controller

- Use a weak property
- Creating the class ourselves – provide a direct reference
- Using a segue – get the presented view controller reference within ‘prepareForSegue’

Practical Example

Multiple MVC's

Practical Example

Programmatic Approach for UITabBarController and UINavigationController

Task 1

Using the ‘Single View Application’ template, create an app that uses both UITabBarController and UINavigation Controller. Use both ‘Show’ and ‘Present Modally’ segues.

Task 2

Using your application from Task 1, pass data between two different View Controllers using ‘prepareForSegue’.

Task 3 (Optional)

Create an app using the ‘Page-Based Application’ template, and modify it to use a dictionary data source. Each page should display a title and content section.