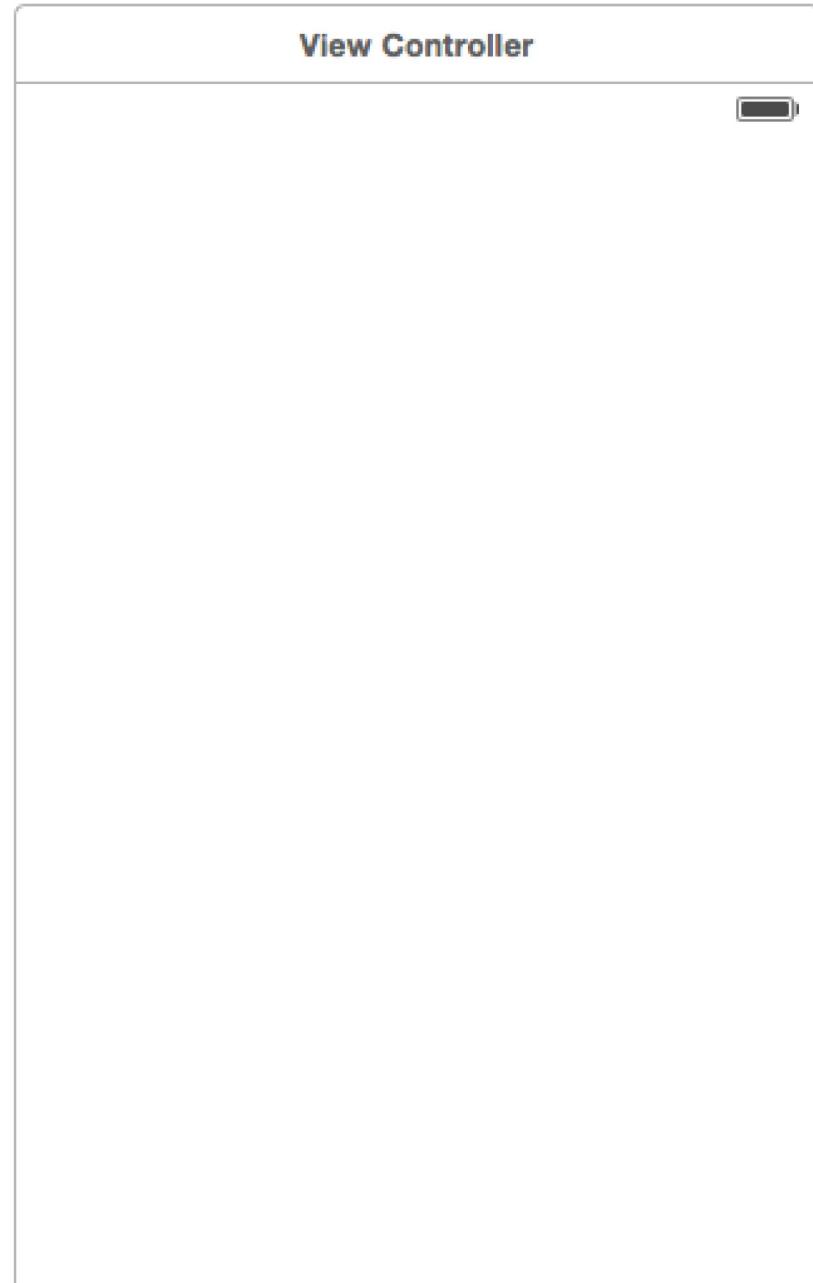
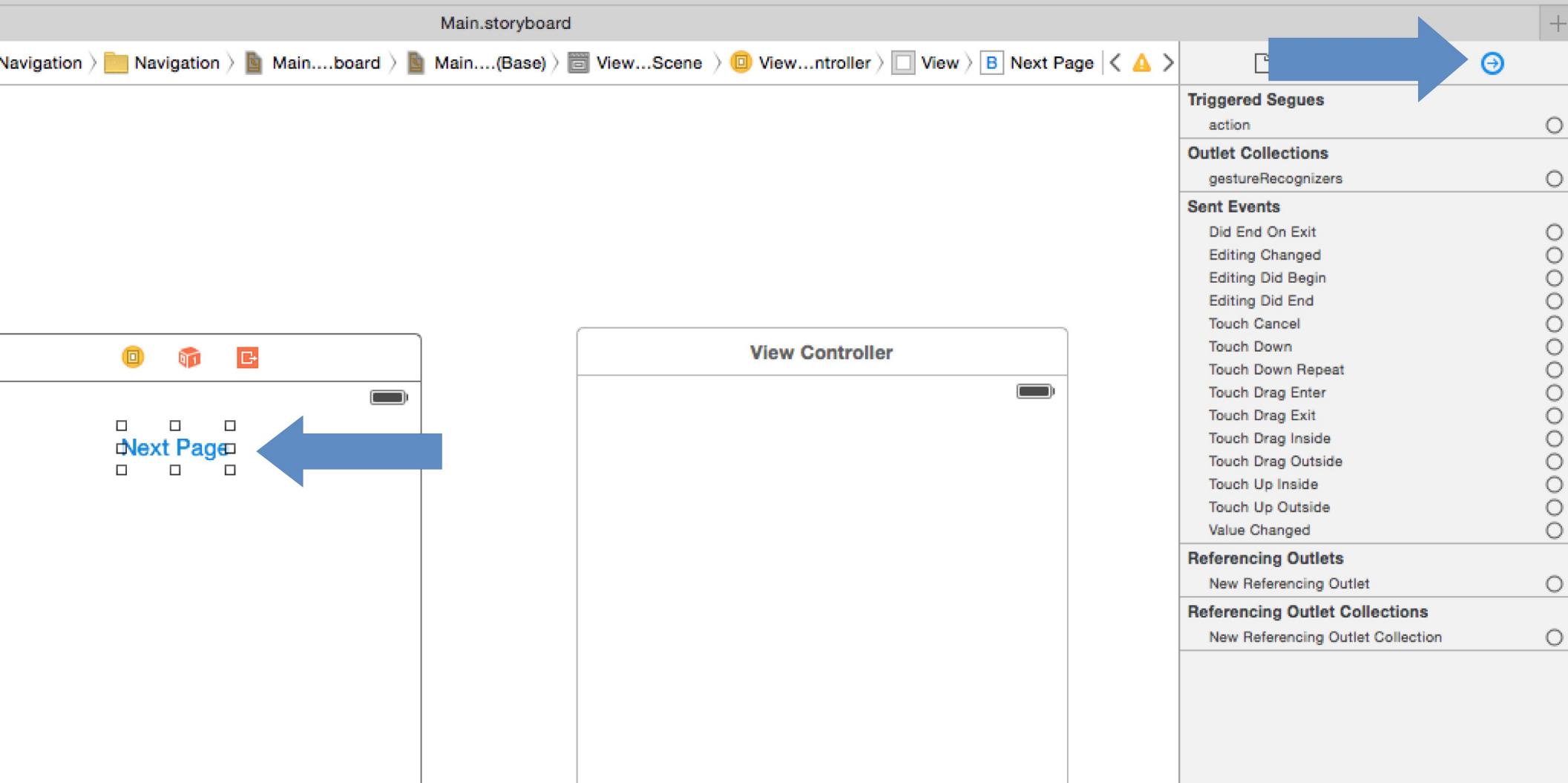
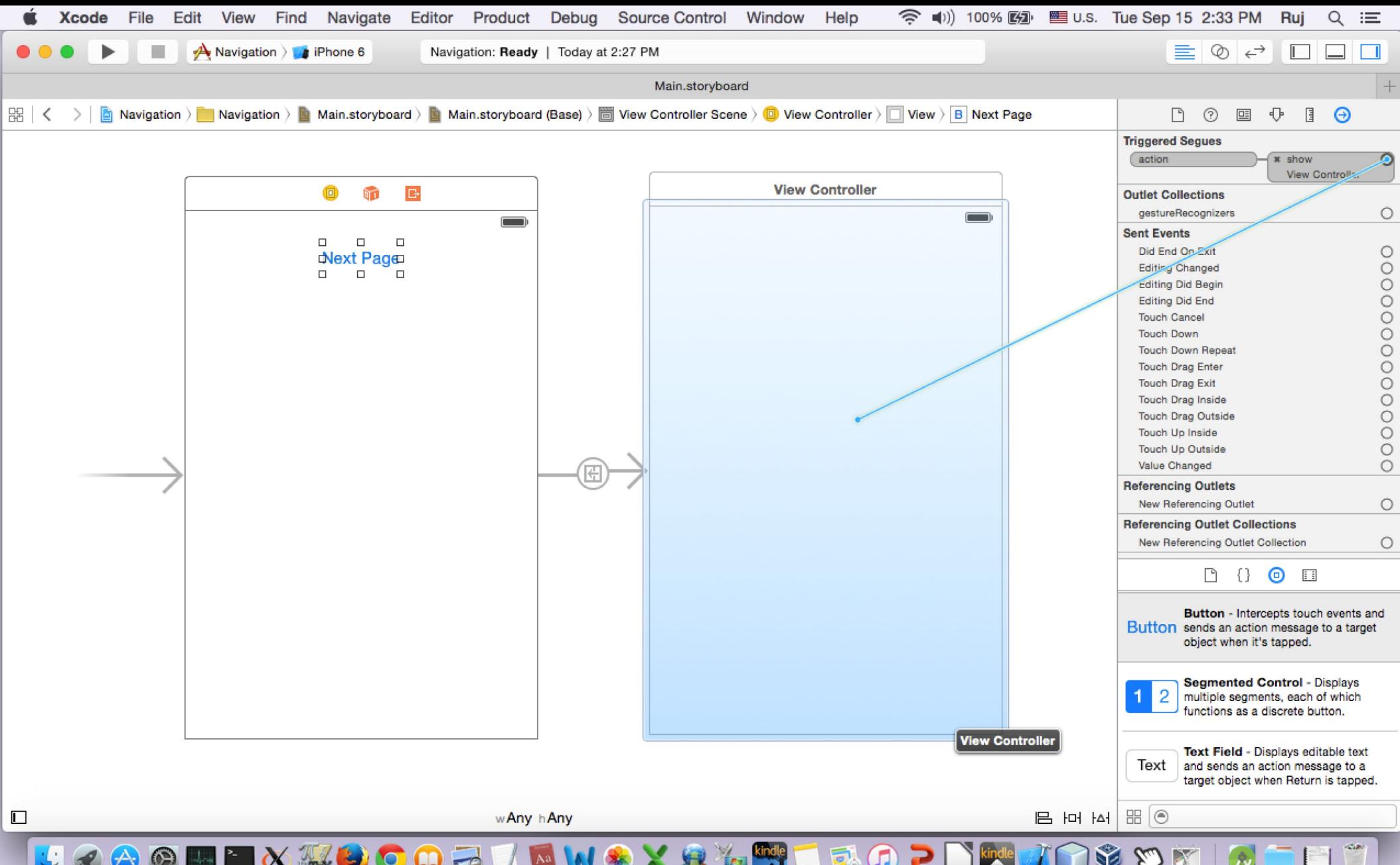


Day 4

Navigation

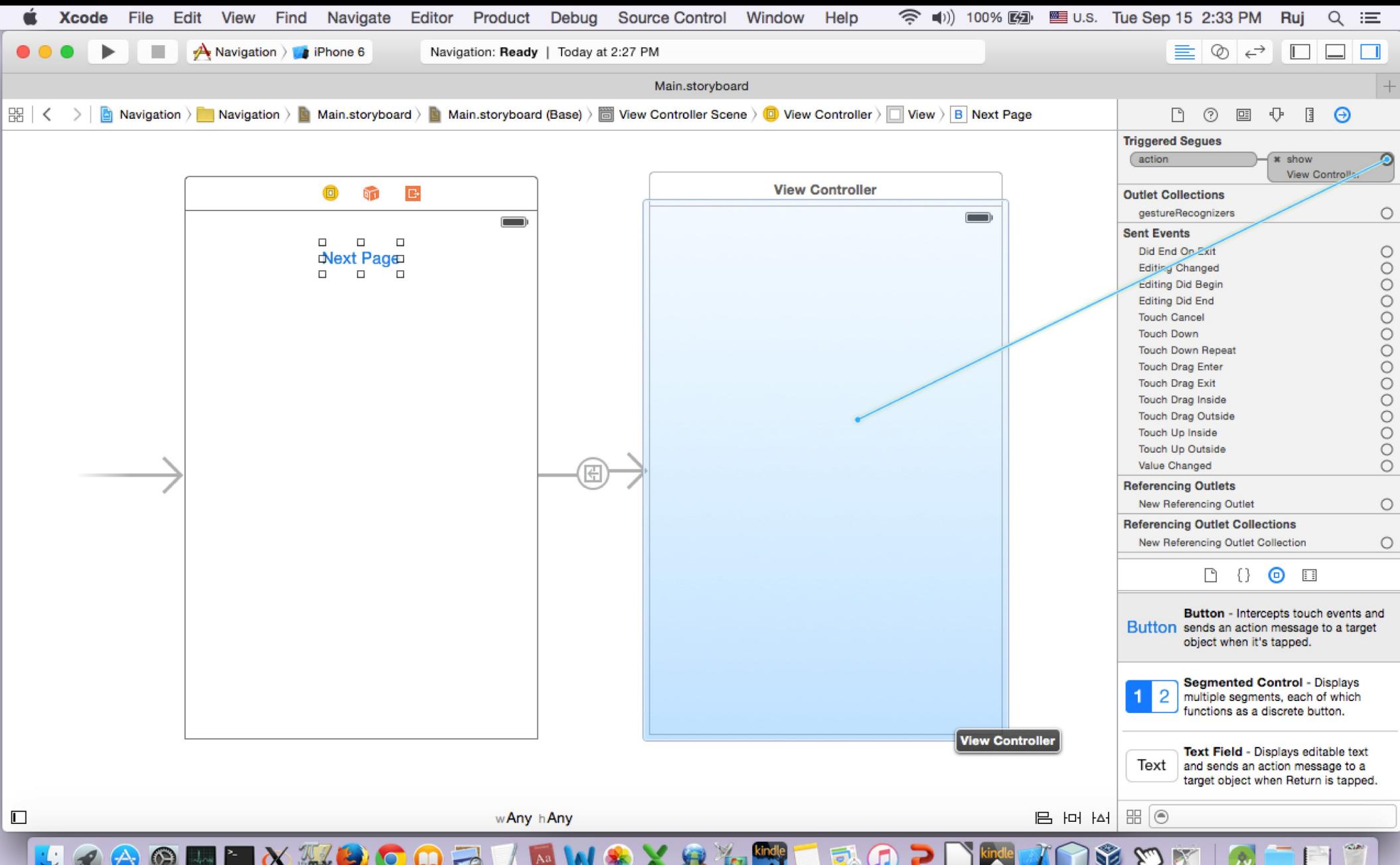


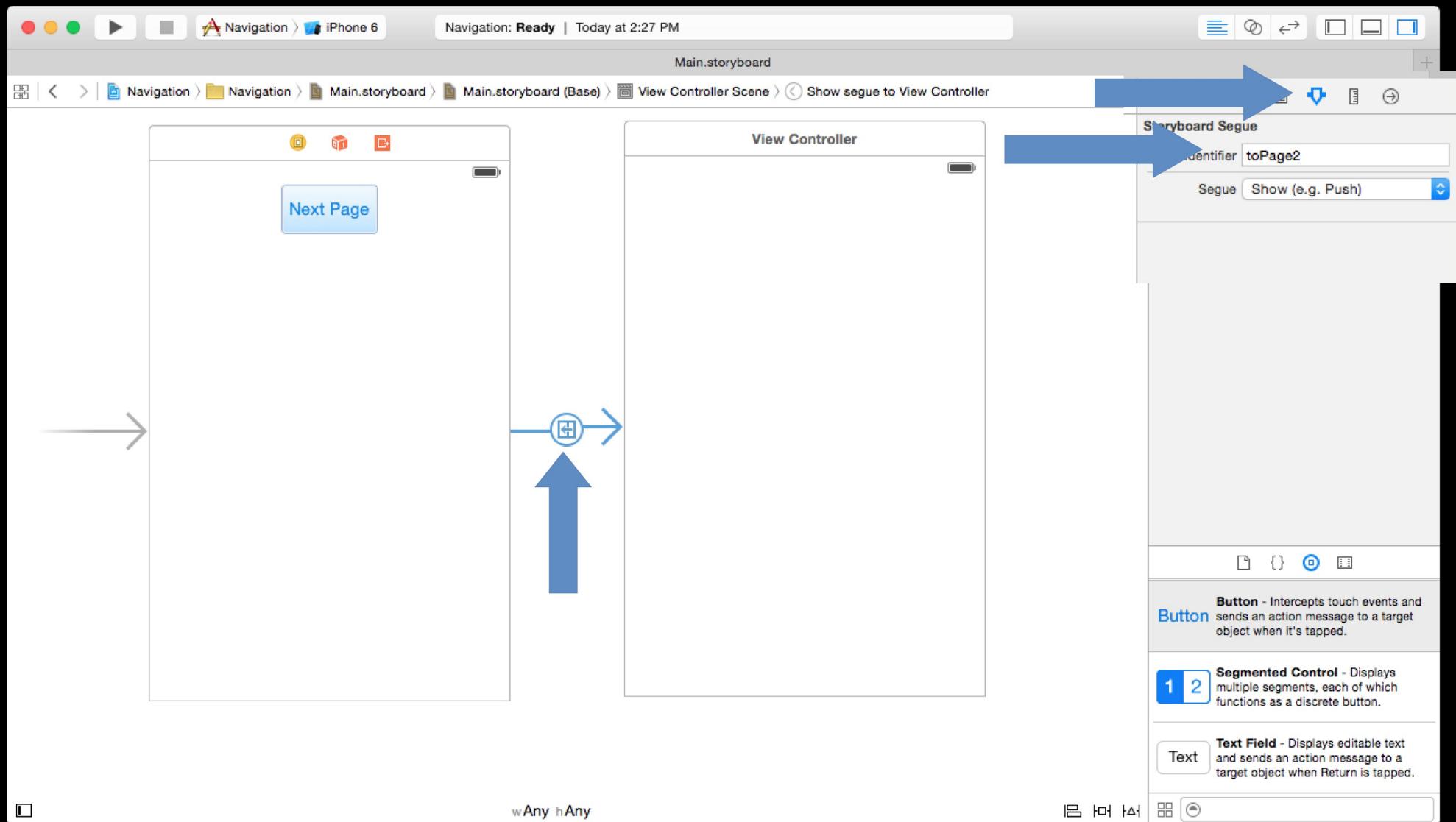


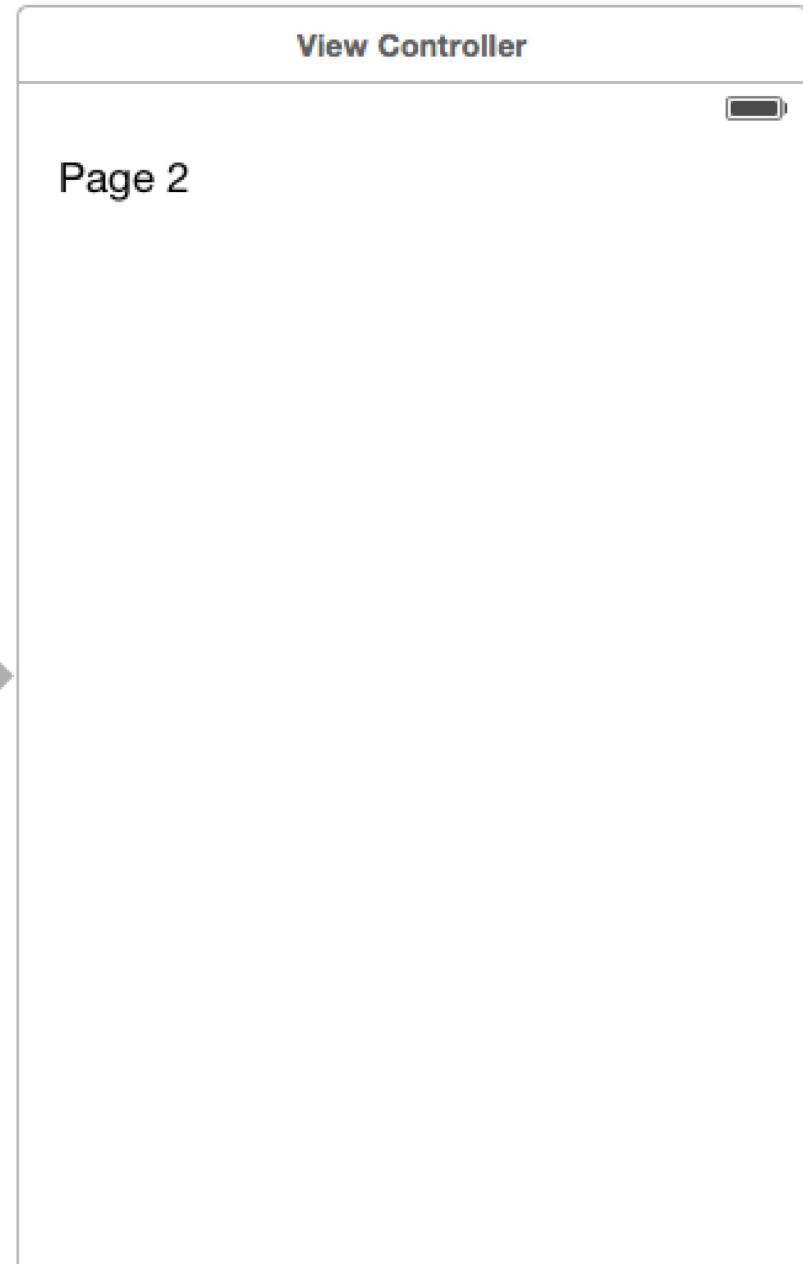
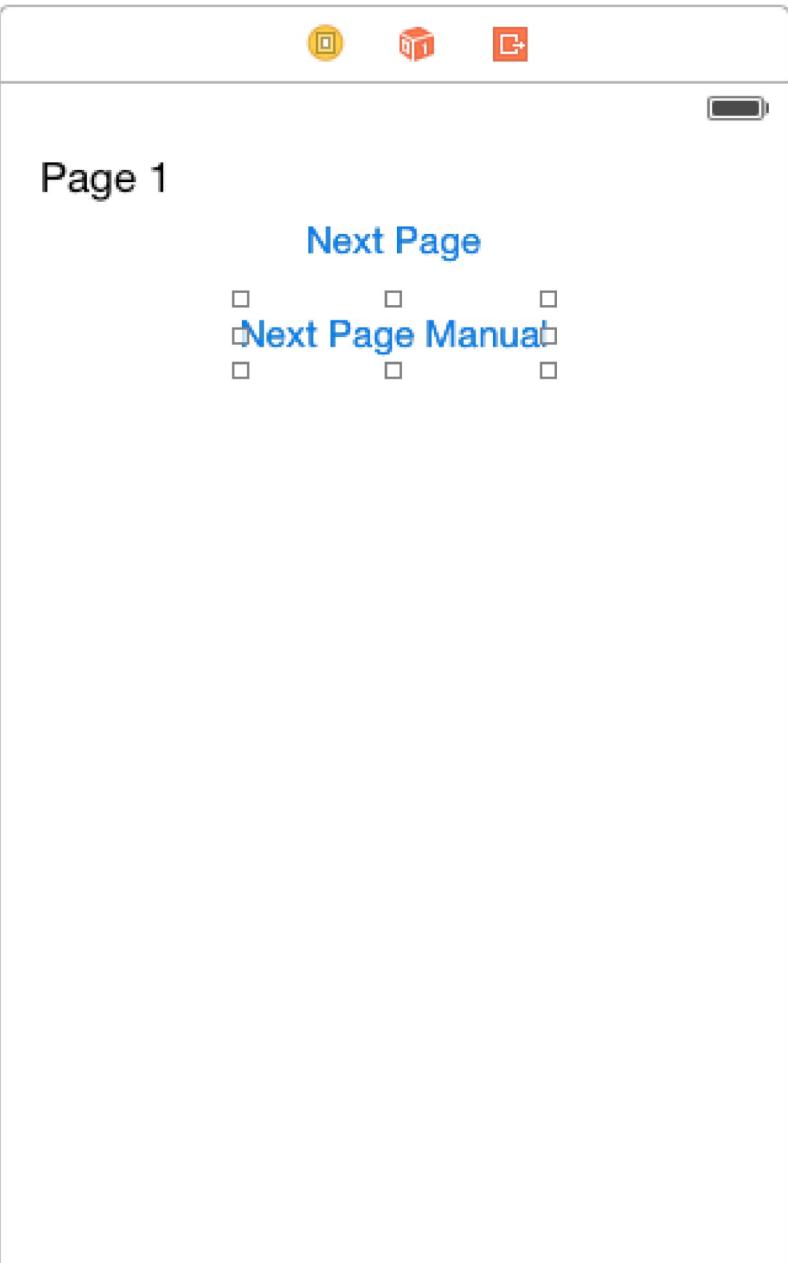




- `show`
- `show detail`
- `present modally`
- `popover presentation`
- `push (deprecated)`
- `modal (deprecated)`
- `custom`







Navigation > iPhone 6 Navigation: Ready | Today at 2:35 PM

Main.storyboard

Navigation > View > Next Page Manual

Automatic > ViewController.swift > No Selection

```
// ViewController.swift
// Navigation
//
// Created by Ruj on 9/15/15.
// Copyright (c) 2015 Kasetsart
// University. All rights reserved.

import UIKit

class ViewController: UIViewController {

    override func viewDidLoad() {
        super.viewDidLoad()
        // Do any additional setup after
        // loading the view, typically from
        // a nib.
    }

    override func didReceiveMemoryWarning() {
        super.didReceiveMemoryWarning()
        // Dispose of any resources that can
        // be recreated.
    }
}
```

Triggered Segues

- action

Outlet Collections

- gestureRecognizers

Sent Events

- Did End On Exit
- Editing Changed
- Editing Did Begin
- Editing Did End
- Touch Cancel
- Touch Down
- Touch Down Repeat
- Touch Drag Enter
- Touch Drag Exit
- Touch Drag Inside
- Touch Drag Outside
- Touch Up Inside
- Touch Up Outside
- Value Changed

Referencing Outlets

- New Referencing Outlet

Referencing Outlet Collections

- New Referencing Outlet Collection

Label Label - A variably sized amount of static text.

Button Button - Intercepts touch events and sends an action message to a target object when it's tapped.

Segmented Control Segmented Control - Displays multiple segments, each of which functions as a discrete button.

Page 1

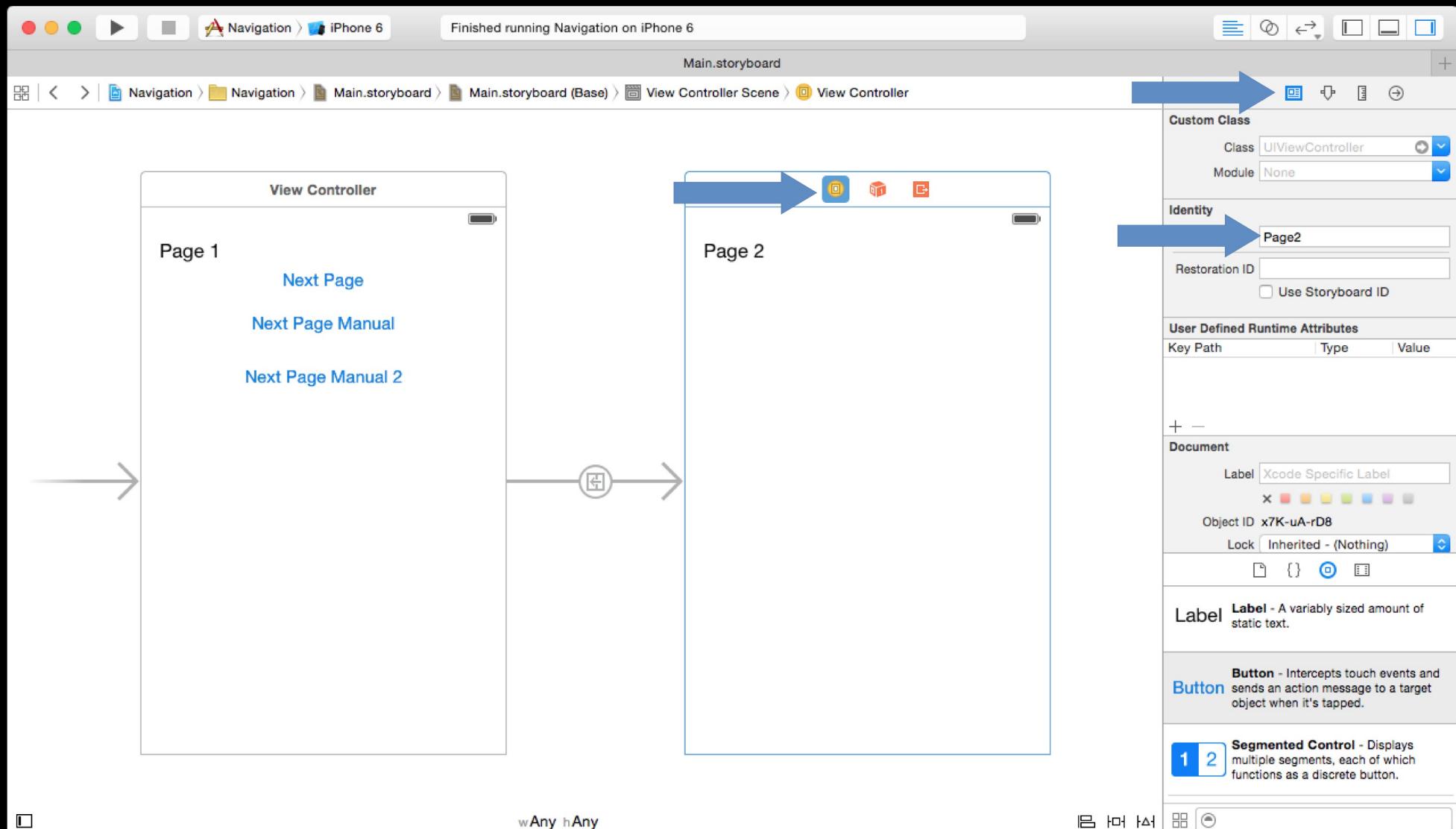
Next Page

Next Page Manual

→

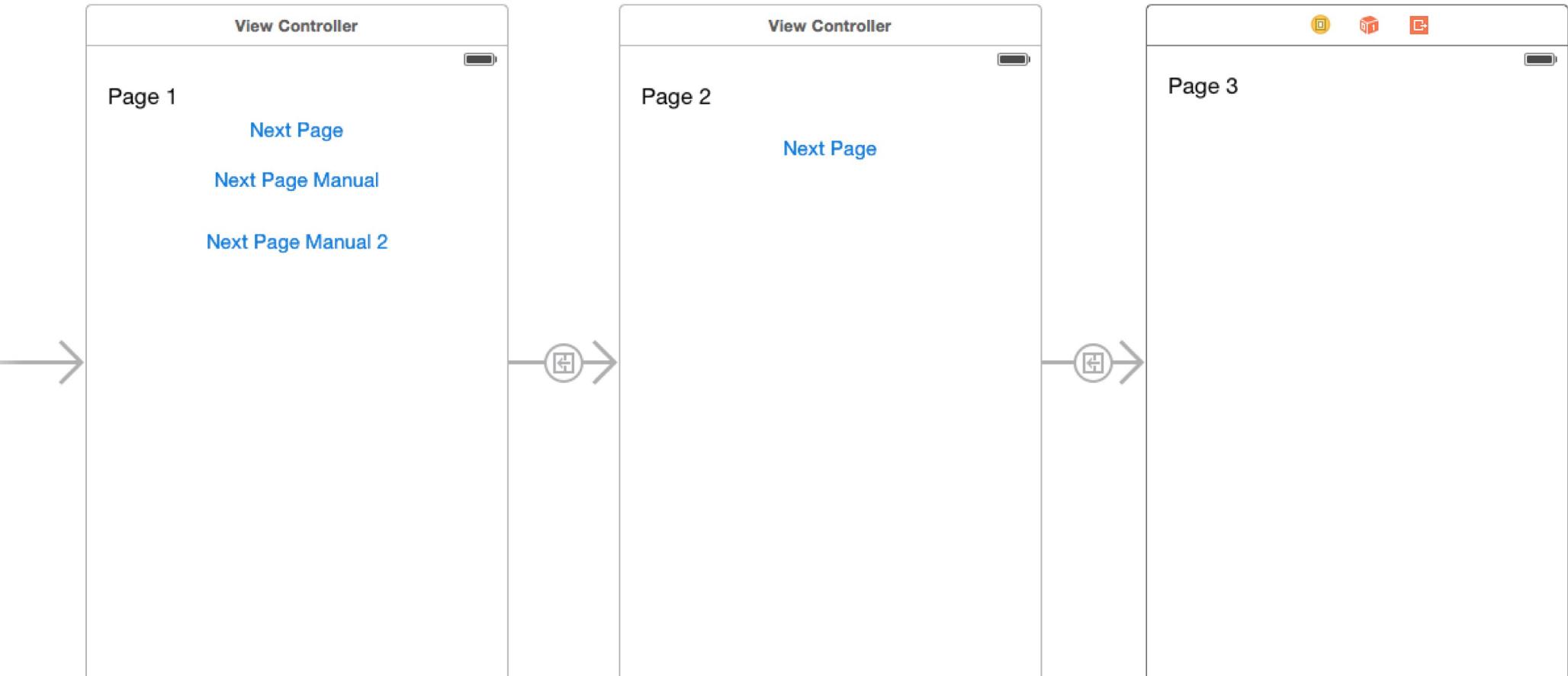
Event For “Next Page Manual” button

```
@IBAction func nextPageManualTouch() {  
    performSegueWithIdentifier("toPage2", sender: self)  
}
```



Event For “Next Page Manual 2” button

```
@IBAction func nextPageManual2Touch() {  
    let vc = self.storyboard?.instantiateViewController(withIdentifier("Page2") as!  
        UIViewController  
    presentViewController(vc, animated: true, completion: nil)  
}
```





Navigation

Navigation
2 targets, iOS SDK 8.4

Navigation

- AppDelegate.swift
- ViewController.swift
- Main.storyboard
- Images.xcassets
- LaunchScreen.storyboard
- Supporting Files
- NavigationTests
- Products

Show in Finder

Open with External Editor

Open As

Show File Inspector

New File...

New Project...

Add Files to "Navigation"...

Delete

New Group

New Group from Selection

Sort by Name

Sort by Type

Find in Selected Groups...

Source Control

Project Navigator Help



Choose a template for your new file:

iOS

Source

User Interface

Core Data

Resource

Other

Apple Watch

OS X

Source

User Interface

Core Data

Resource

Other



Cocoa Touch
Class



Test Case Class



Playground



Swift File



Objective-C File



Header File



C File



C++ File



Cocoa Touch Class

A Cocoa Touch class.

Cancel

Previous

Next

Choose options for your new file:

Class: `Page2ViewController`

Subclass of: `UIViewController`

Also create XIB file

iPhone

Language: `Swift`

Cancel

Previous

Next



Navigation



Search

Favorites

- Recents
- All My Files
- iCloud Drive
- Ruj
- Desktop
- Applications
- Documents
- KU
- BookExample
- Google Drive
- Books
- DEQP_Volunteer

Today

Date Modified

Size

K

AppDelegate.swift	2:21 PM	2 KB	S
Images.xcassets	2:21 PM	--	F
Info.plist	2:21 PM	1 KB	p
ViewController.swift	2:53 PM	836 bytes	S
Base.iproj	2:58 PM	--	F

Group

Navigation



Targets

- Navigation
- NavigationTests

New Folder

Cancel

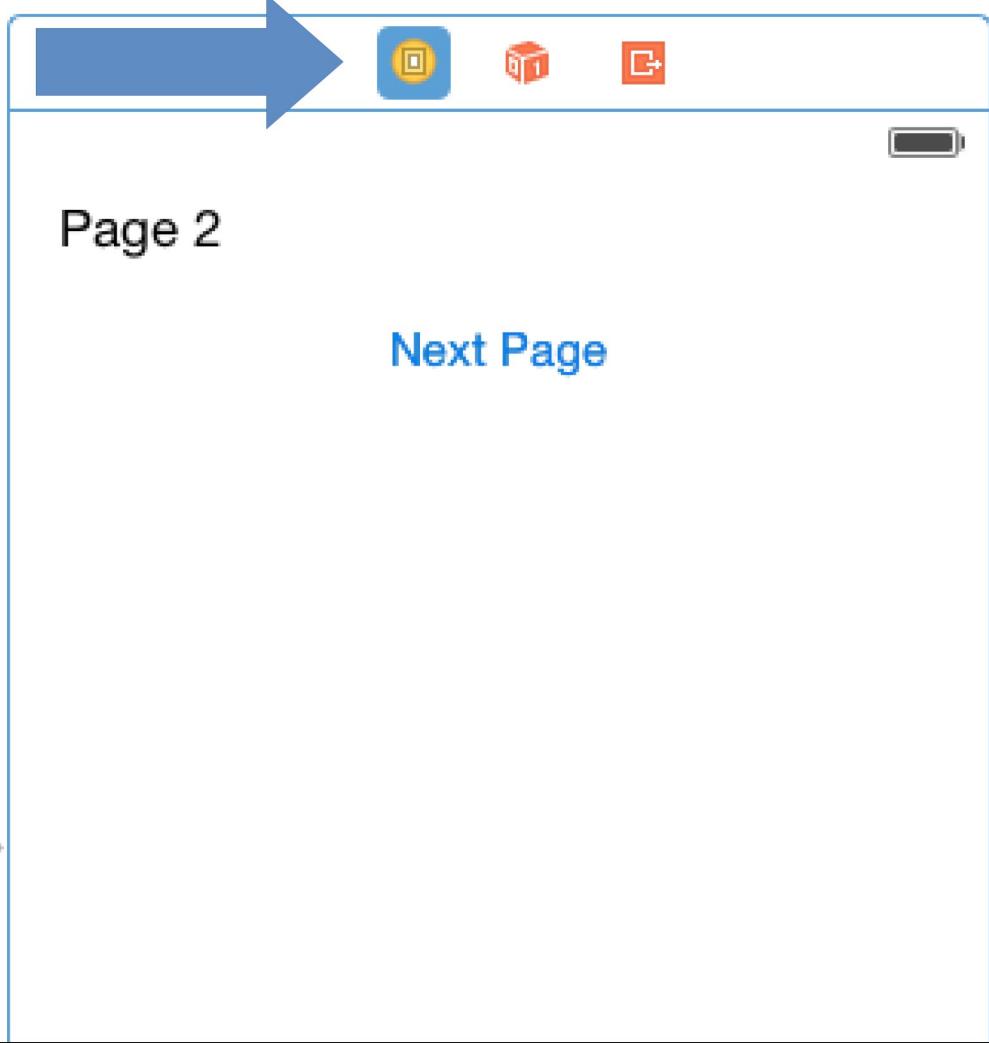
Create

ne 6



Main.storyboard

Storyboard > Main.s...(Base) > View Controller Scene > View Controller



Custom Class

Class: UIViewController

Module: None

Identity

Storyboard ID: Page2

Restoration ID:

Use Storyboard ID

User Defined Runtime Attributes

Key Path	Type	Value

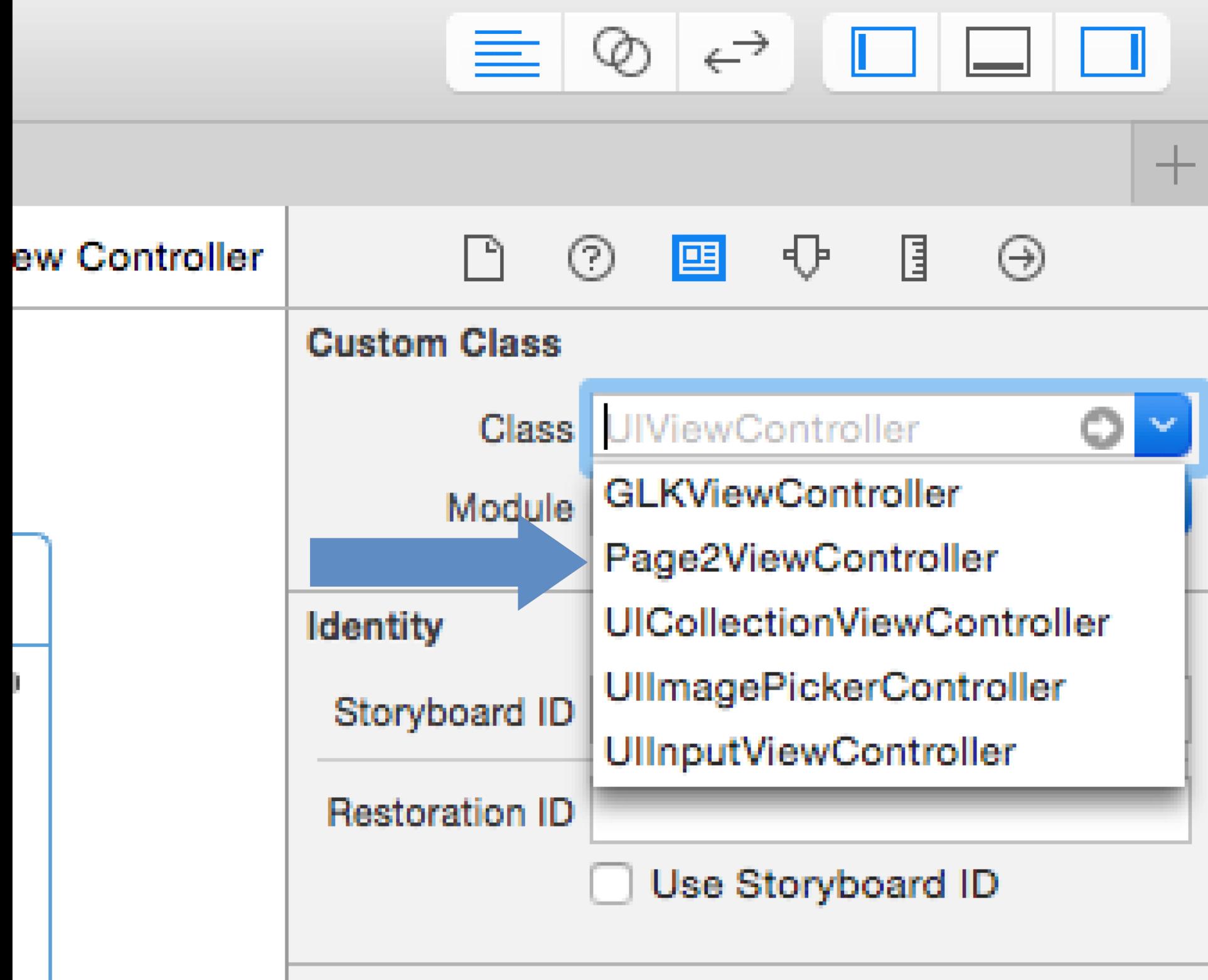
Document

Label: Xcode Specific Label

x ■ ■ ■ ■ ■ ■ ■

Object ID: x7K-uA-rD8

Lock: Inherited - (Nothing)





Main.storyboard

Main.storyboard > View Controller Scene > Page2 View Controller

**Custom Class**Class **Page2ViewController**Module **Current – Navigation****Identity**Storyboard ID **Page2**

Restoration ID

 Use Storyboard ID**User Defined Runtime Attributes**

Key Path	Type	Value
----------	------	-------

Page 2

[Next Page](#)

Do the same for Page 3

Add This to Page 1 code

```
@IBAction func unwindPage1(seg:UIStoryboardSegue!){  
}  
}
```

Do similar thing for each page.

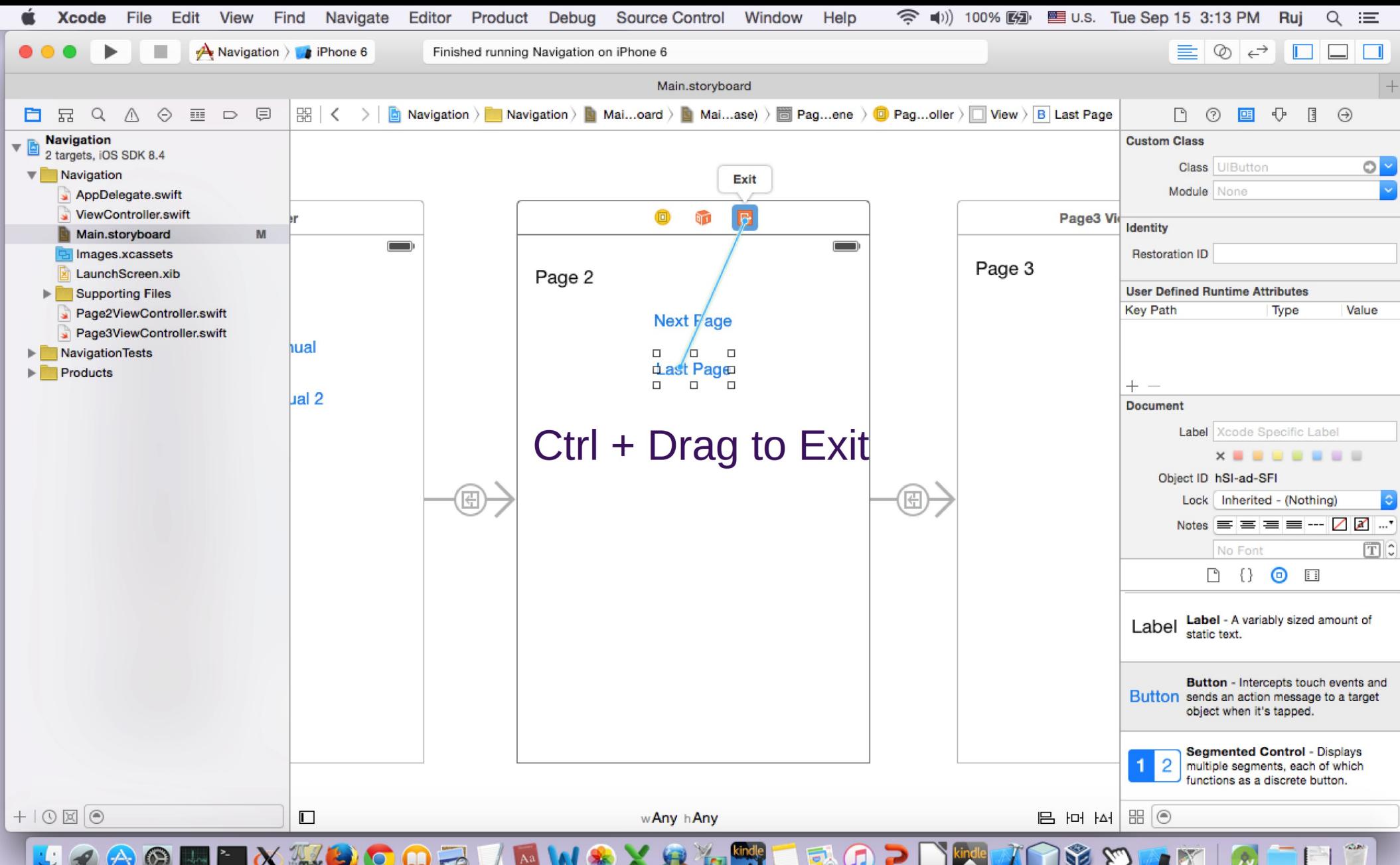


Page 2

[Next Page](#)

[Last Page](#)





Exit

Action Segue

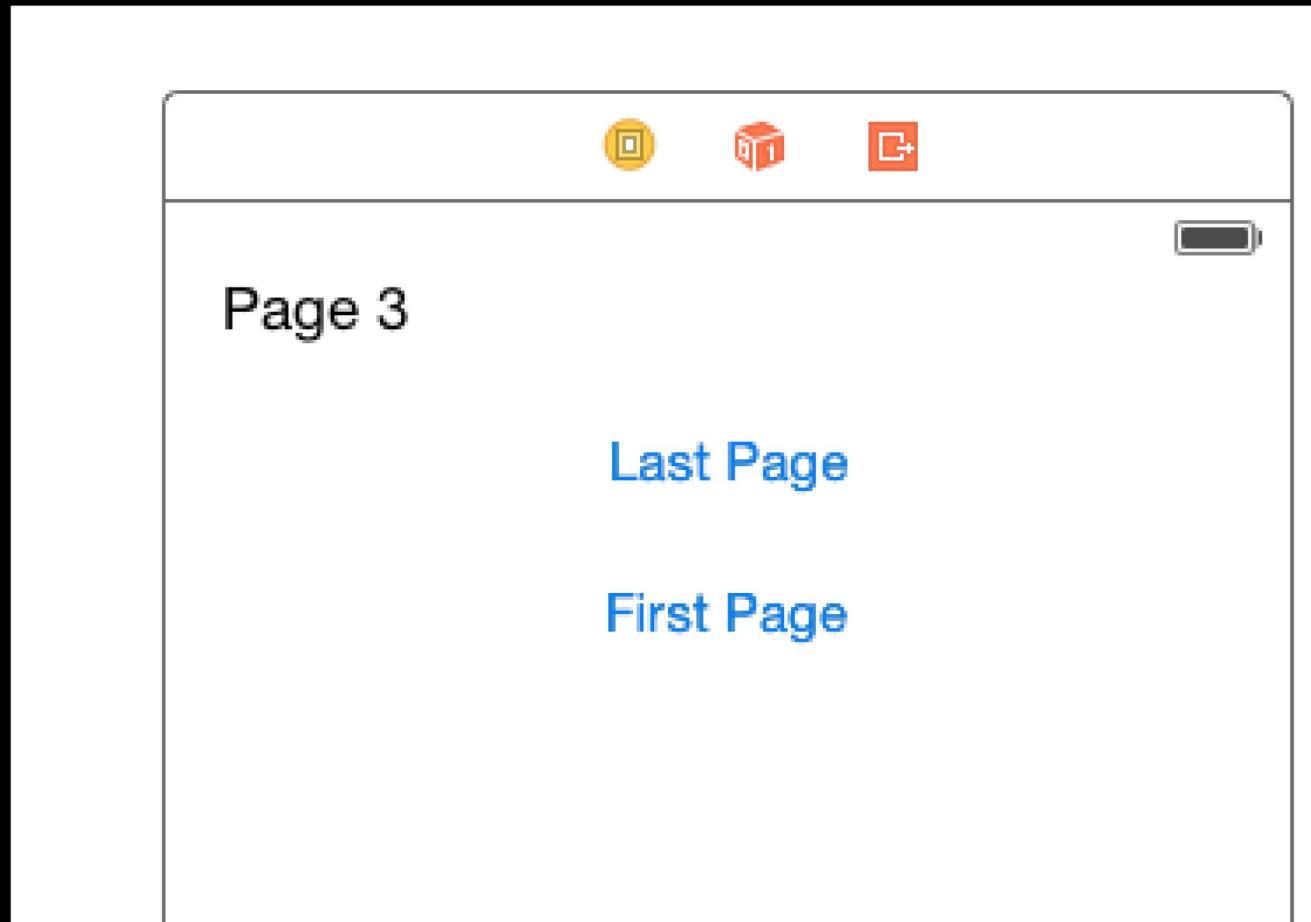
unwindPage1:

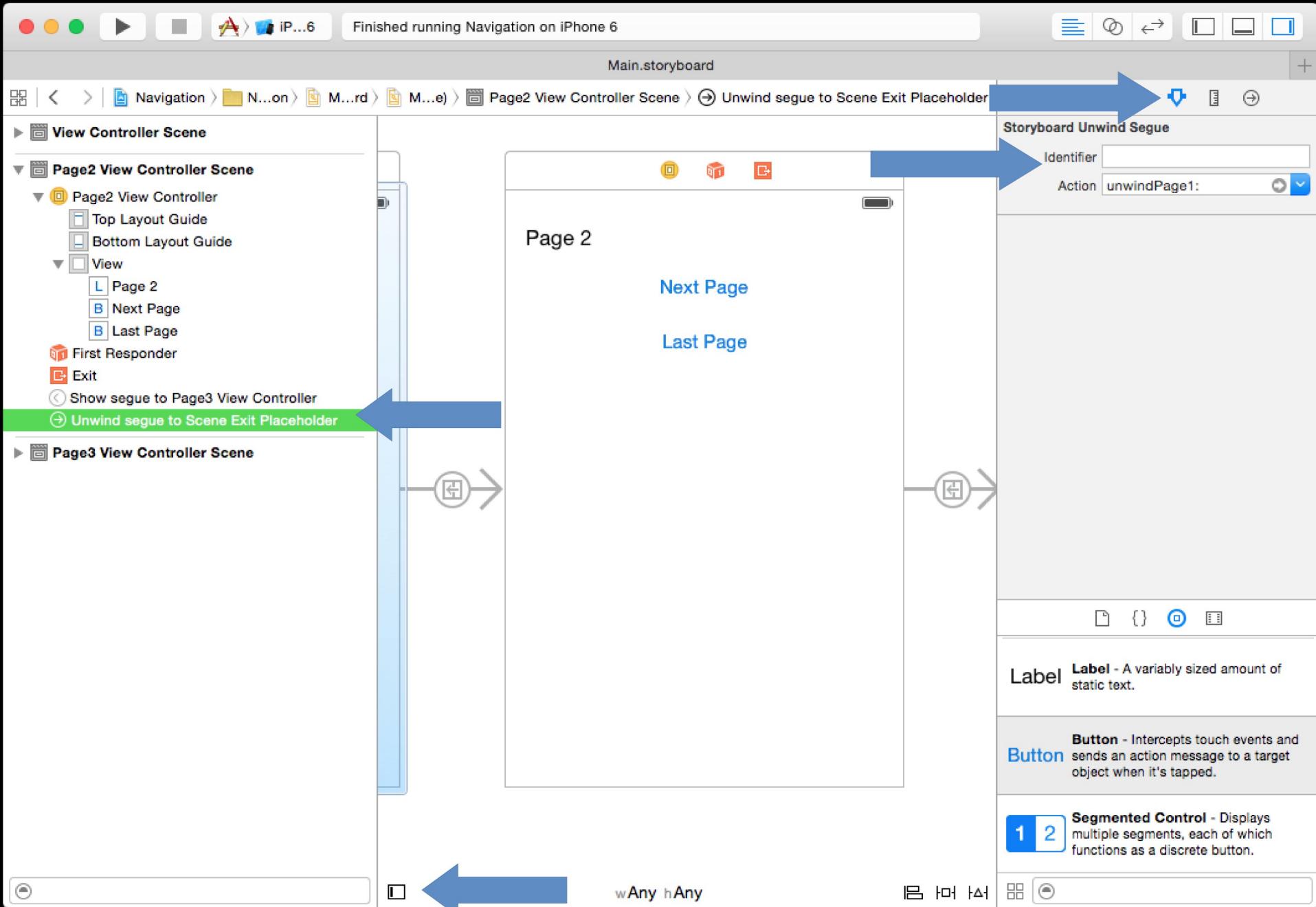
unwindPage2:

unwindPage3:

Next Page

Complete Page 3





holder



Storyboard Unwind Segue

Identifier `unwindPage1`

Action `unwindPage1:`

Add Event Listener For Button

The screenshot shows the Xcode interface with two main panes. On the left is the storyboard editor showing a view controller titled "Page 2" with three buttons: "Next Page", "Last Page", and "Last Page Manual". On the right is the code editor showing the implementation of `Page2ViewController.swift`.

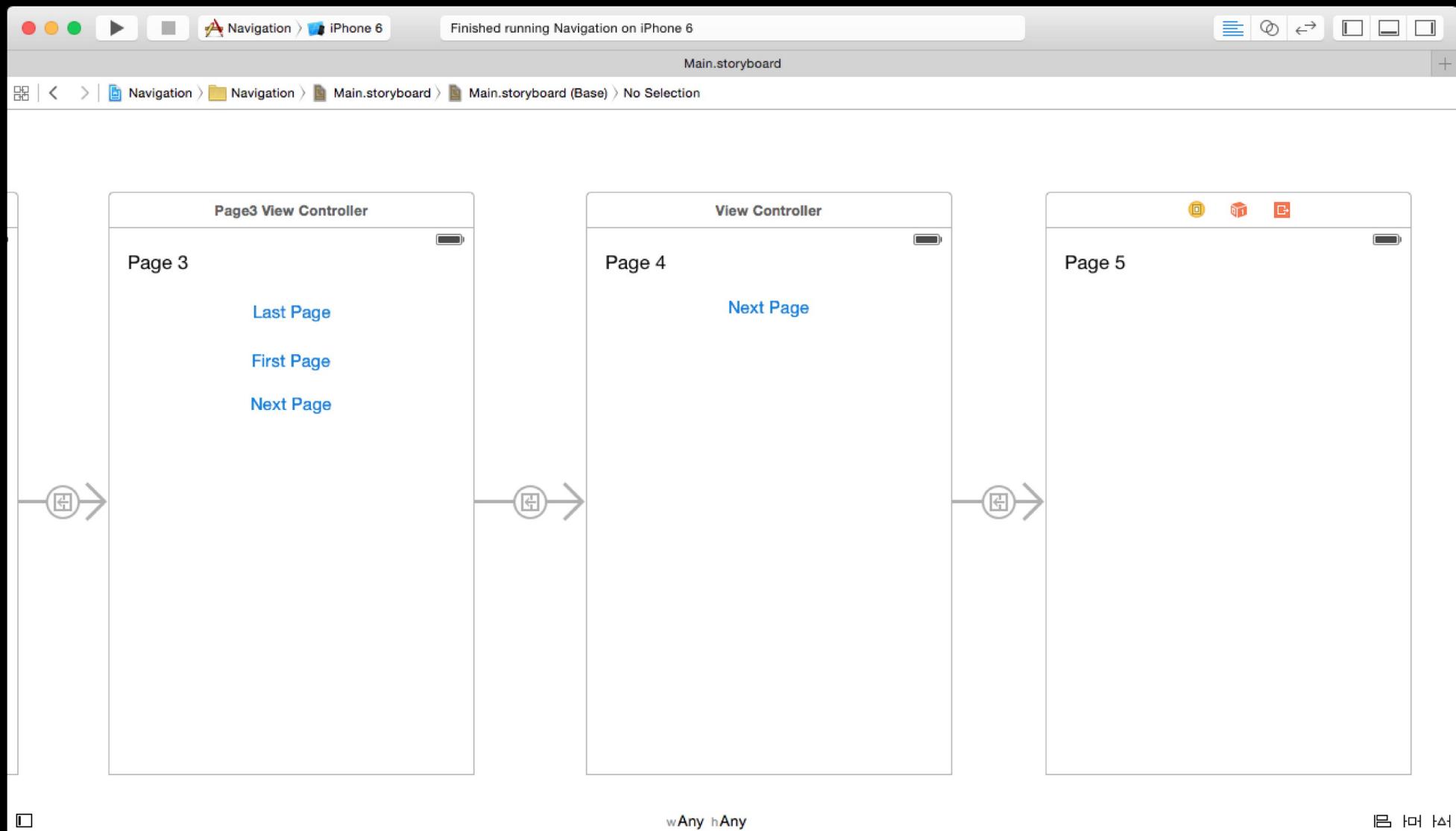
```
        loading the view.  
    }  
  
    override func didReceiveMemoryWarning()  
    {  
        super.didReceiveMemoryWarning()  
        // Dispose of any resources that can  
        // be recreated.  
    }  
  
    @IBAction func lastPageManualTouch() {  
    }  
  
    // MARK: - Navigation  
    /*  
     // In a storyboard-based application,  
     you will often want to do a little  
     preparation before navigation  
    override func prepareForSegue(segue:  
        UIStoryboardSegue, sender:  
        AnyObject?) {  
        // Get the new view controller using  
        // segue.destinationViewController.  
        // Pass the selected object to the  
        // new view controller.  
    }  
*/  
  
    @IBAction func unwindPage2(seg:  
        UIStoryboardSegue) {  
    }
```

The "Sent Events" section of the Utilities pane is expanded, showing various touch events. The "Touch Up Inside" event is selected, and its target is set to the `lastPageManualTouch()` method.

Add This Code in Page

```
@IBAction func lastPageManualTouch() {  
    performSegueWithIdentifier("unwindPage1", sender: self)  
}
```

Navigation Controller



Navigation > iPhone 6

Navigation > Navigation >

Editor

Align
Pin
Resolve Auto Layout Issues

Embed In

Unembed

Size to Fit Content

Arrange

Localization Locking

Canvas

Size Class

Show Document Outline

Reveal in Document Outline

✓ Automatically Refresh Views

Refresh All Views

Debug Selected Views

View

ScrollView

Navigation Controller

Tab Bar Controller

Page 3

Last Page

First Page

Next Page



Navigation > iPhone 6

Navigation > Navigation >

Navigation > Navigation >

Editor

Align
Pin
Resolve Auto Layout Issues

Embed In

Unembed

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View

ScrollView

Navigation Controller

Tab Bar Controller

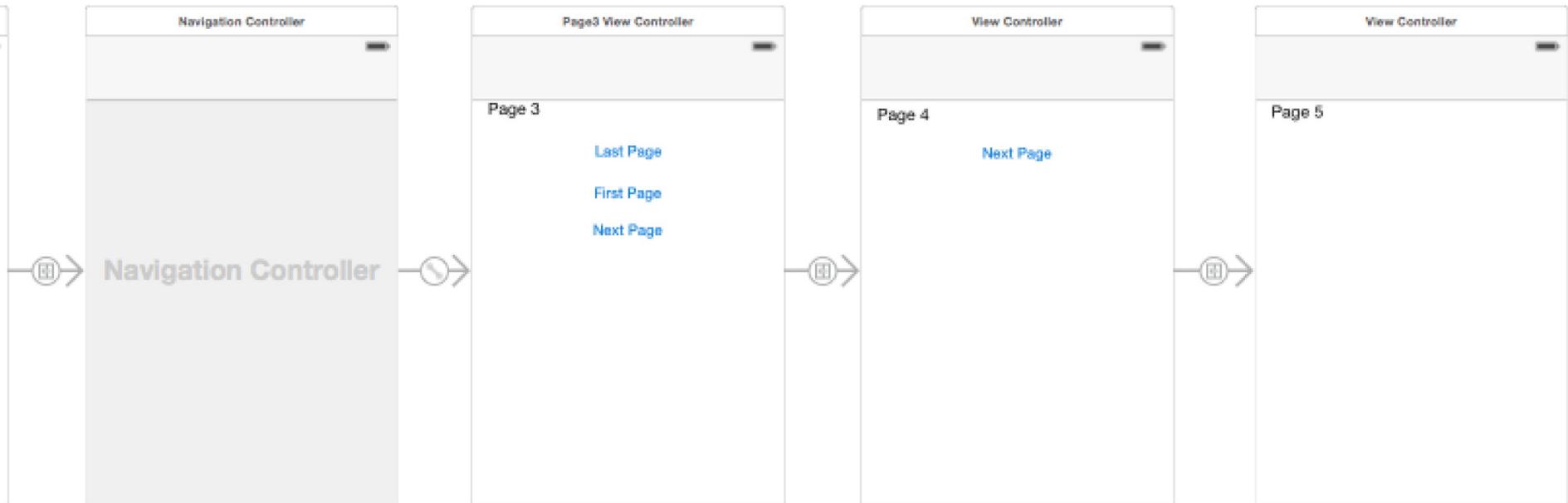
Page 3

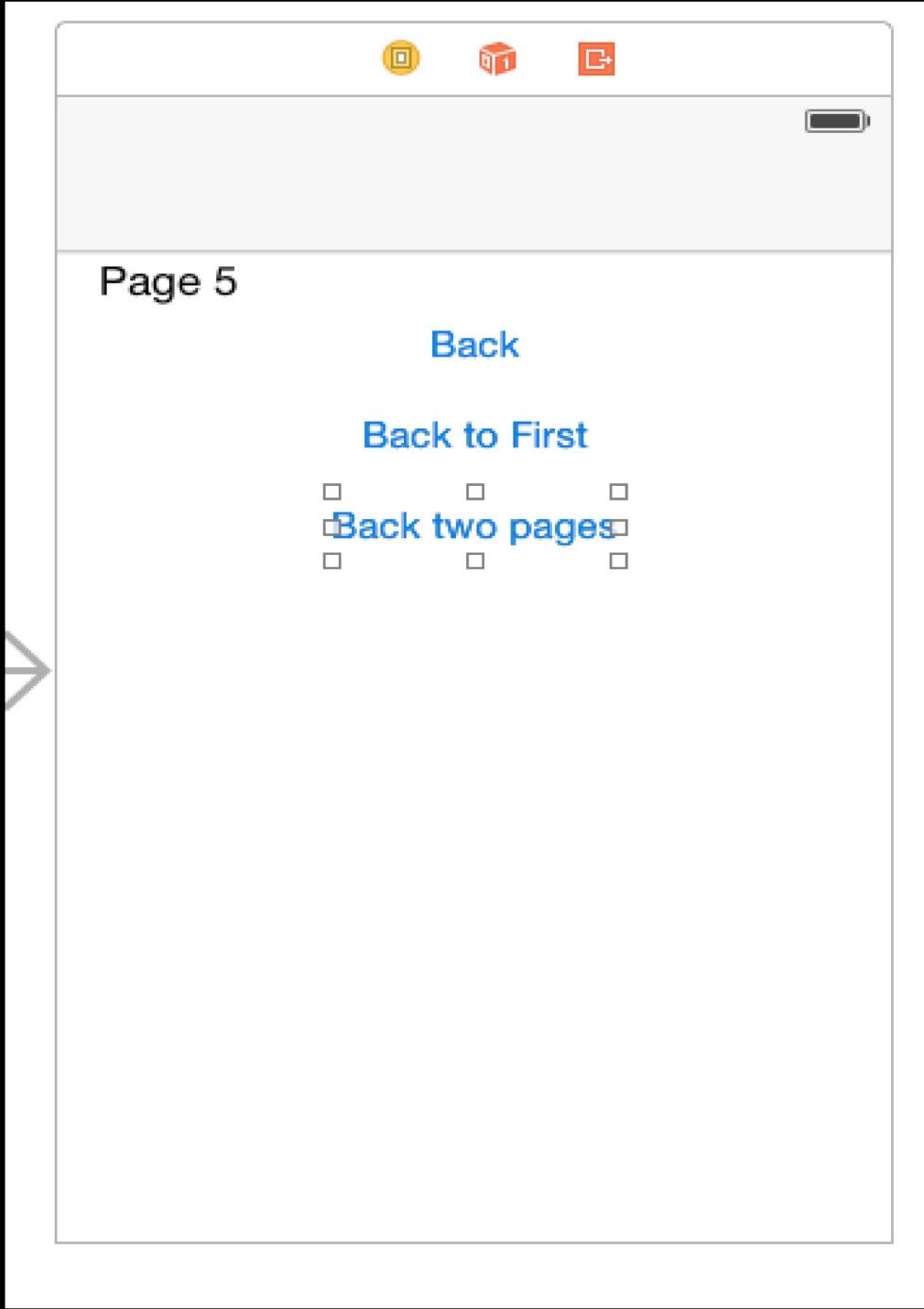
Last Page

First Page

Next Page







Add Appropriate Event Listeners for All Buttons

Add Code to Page 5

```
@IBAction func backButtonTouch() {  
    self.navigationController?.popViewControllerAnimated(true)  
}  
  
@IBAction func backToFirstButtonTouch() {  
    self.navigationController?.popToRootViewControllerAnimated(true)  
}
```

Add Code to Page 5

```
@IBAction func backTwoPagesButtonTouch() {  
  
    // Without this if you won't pass compilation  
  
    if let vcs = self.navigationController?.viewControllers{  
  
        let vc:ViewController = vcs[0] as! Page3ViewController  
  
        self.navigationController?.popToViewController( vc, animated: true)  
    }  
}
```