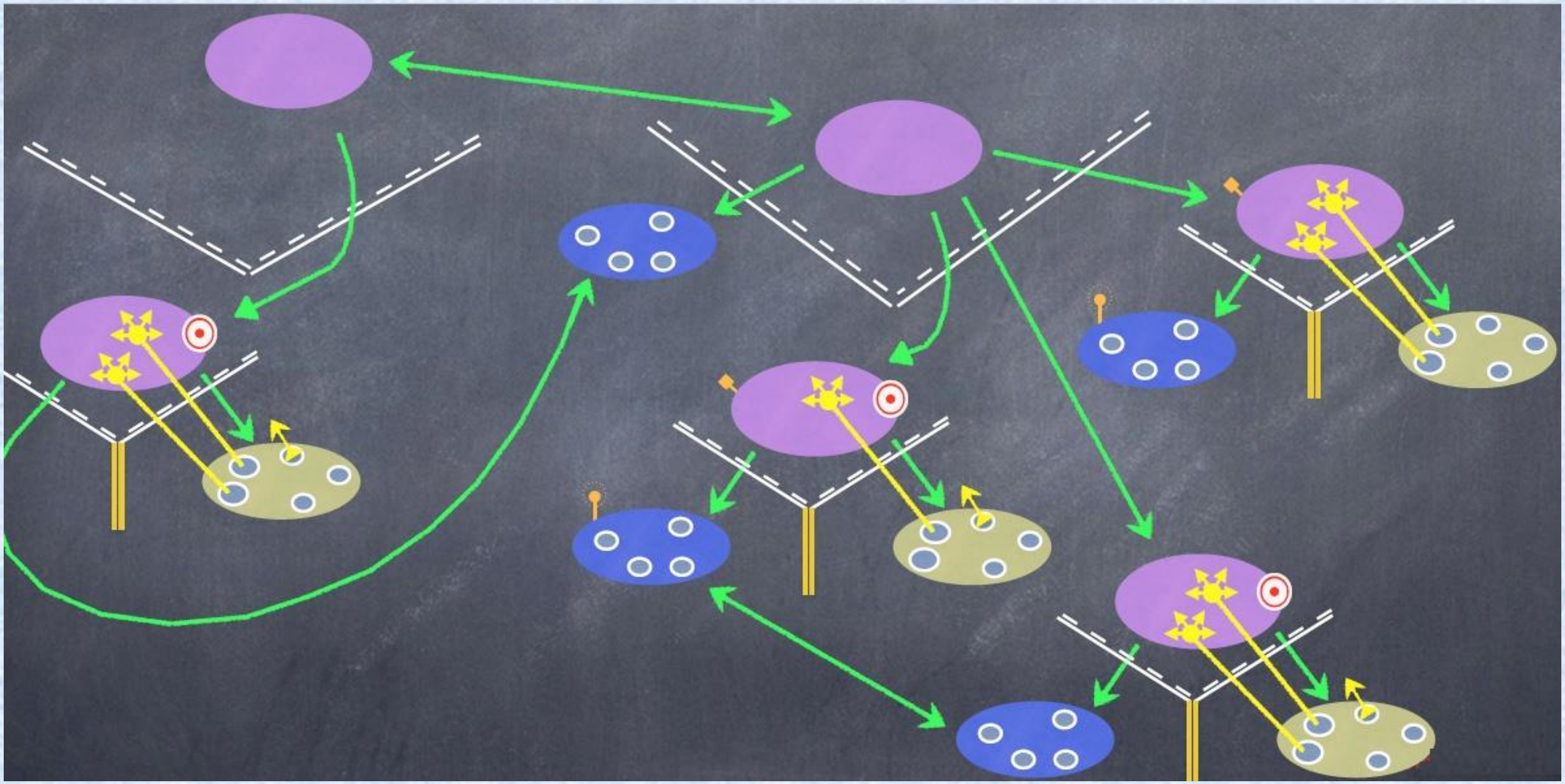
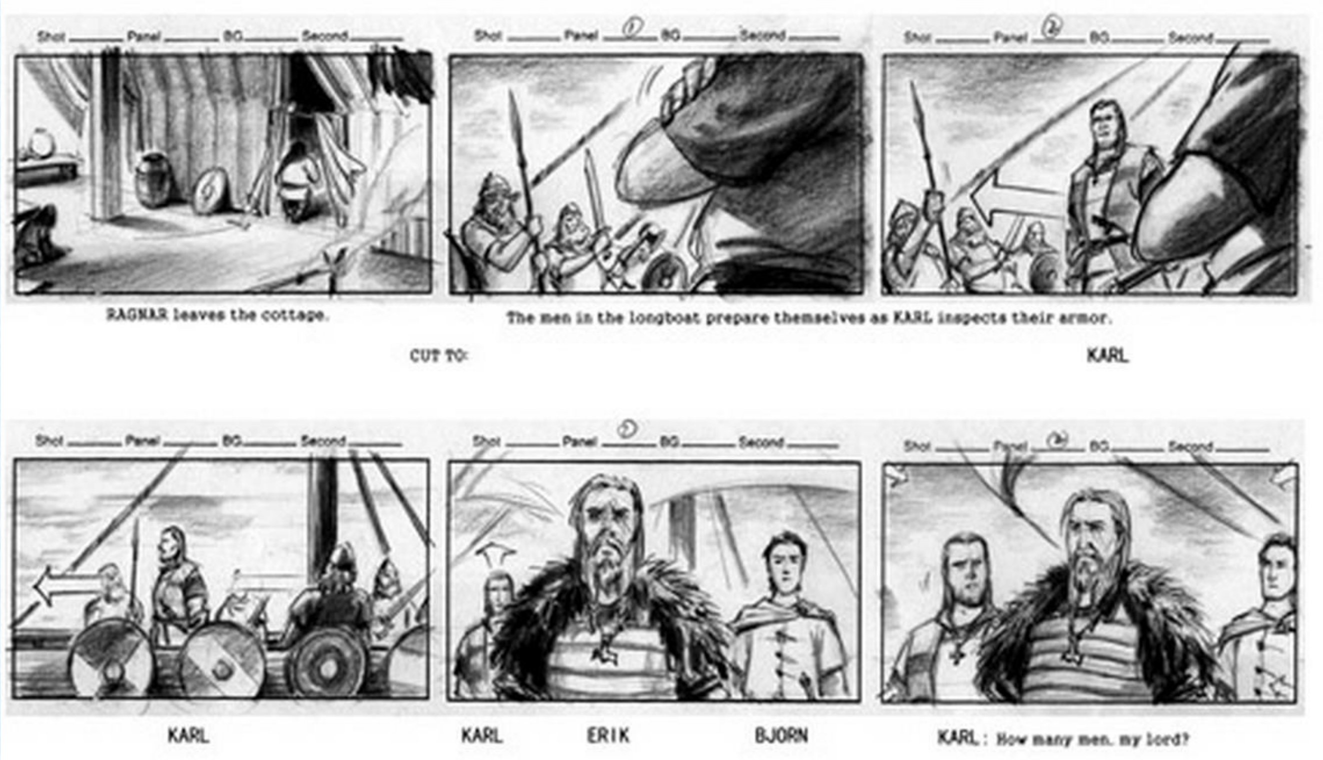
故事板与多场景



多个MVC协同工作

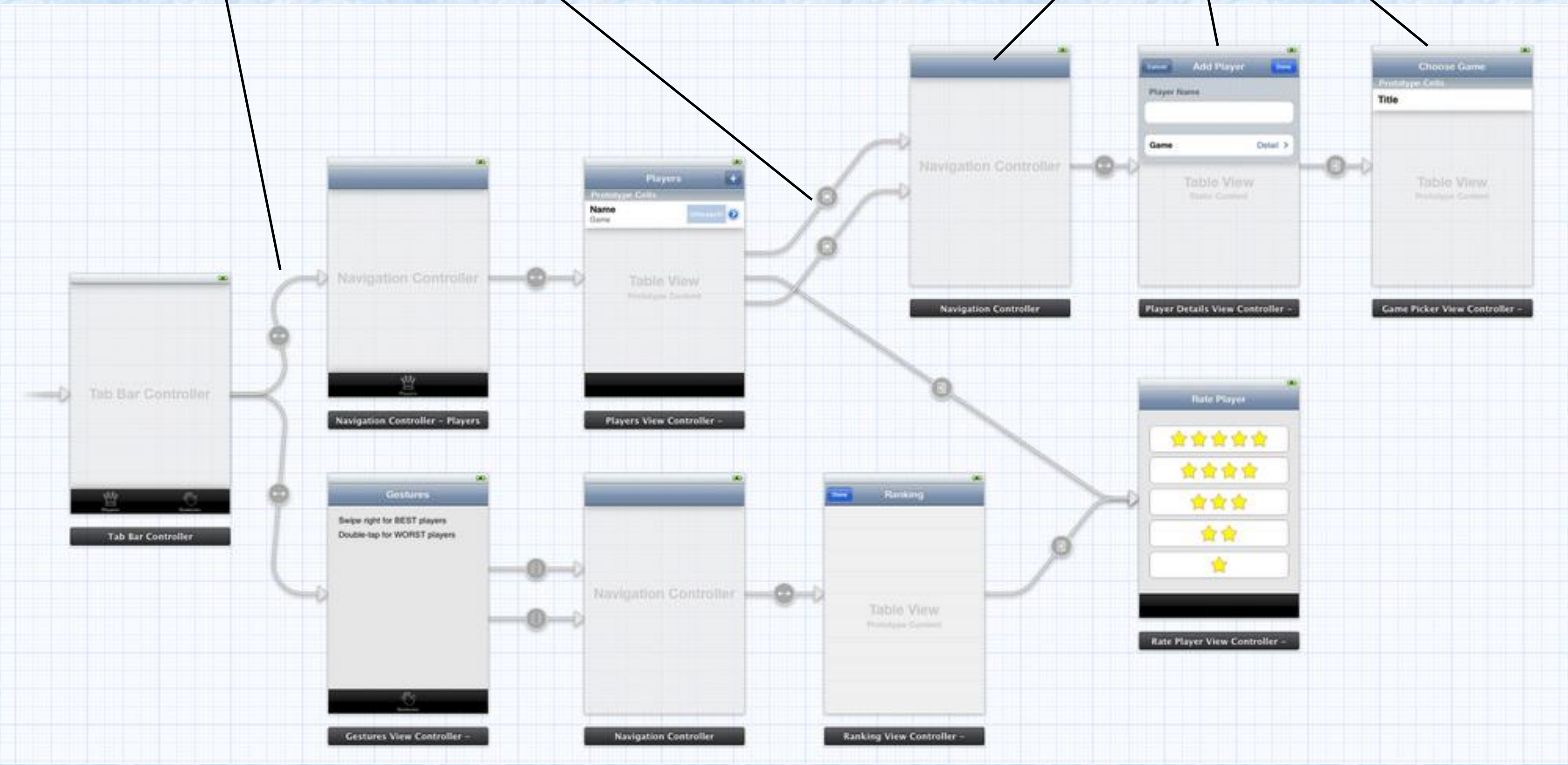
一、StoryBoard(故事板)

1、什么是故事板



场景过渡(Segue)

场景



StoryBoard

●故事板是在Xcode 4.2后提供的一个新功能，它提供了IOS中进行用户界面设计的新途径。在Xcode5后故事板已被 作为默认选项。

●在故事板的推出之前每一个界面被存储在一个单独的nib (xib) 文件,然后通过编写代码来实现界面的连接与导航。使用故事板，所有的界面都存储在一个文件中。这给你一个关于应用程序的可视化表示的概念性概述，并告诉您如何不同连接屏幕。

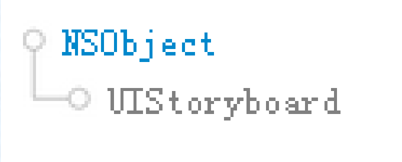
● Xcode提供了一个故事板编辑器，可以在上面定义多个场景、视图控制器和各种界面。并可以使用图形化的过渡（segues）来实现不同的场景。

●故事板的引入明显降低了需要编写的代码量。

●场景（Scene）：在故事板中，场景是指一个单一视图控制器和视图。

●场景过渡（Segue）：Segue在两个场景之间和管理两个场景之间的过渡。在故事板中提供了多种Segue类型。

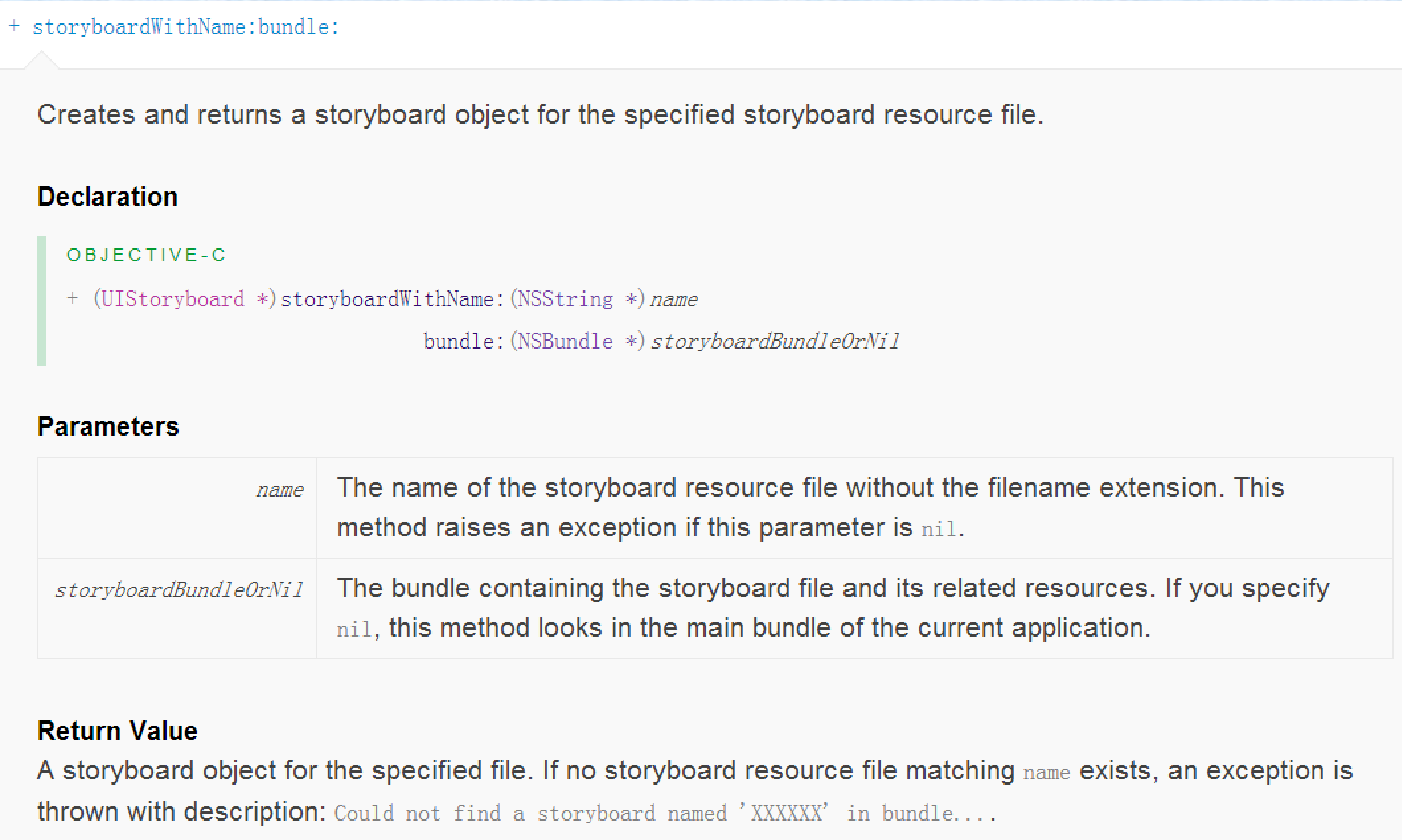
2、 UIStoryboard



NSObject
UIStoryboard

A UIStoryboard object encapsulates the view controller graph stored in an Interface **Builder storyboard resource file**. This view controller graph represents the view controllers for all or part of your application’s user interface. Normally, view controllers in a storyboard are instantiated and created automatically in response to actions defined within the storyboard itself. However, you can use a storyboard object to instantiate the initial view controller in a storyboard file or instantiate other view controllers that you want to present programmatically.

storyboardWithName: bundle:



+ storyboardWithName:bundle:

Creates and returns a storyboard object for the specified storyboard resource file.

Declaration

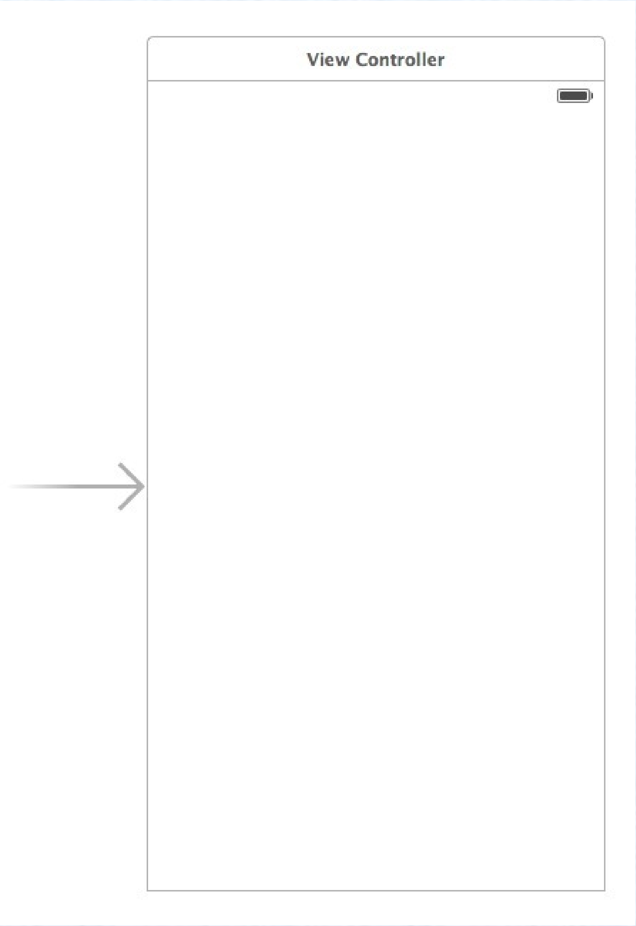
```
OBJECTIVE-C
+ (UIStoryboard *)storyboardWithName:(NSString *)name
                              bundle:(NSBundle *)storyboardBundleOrNil
```

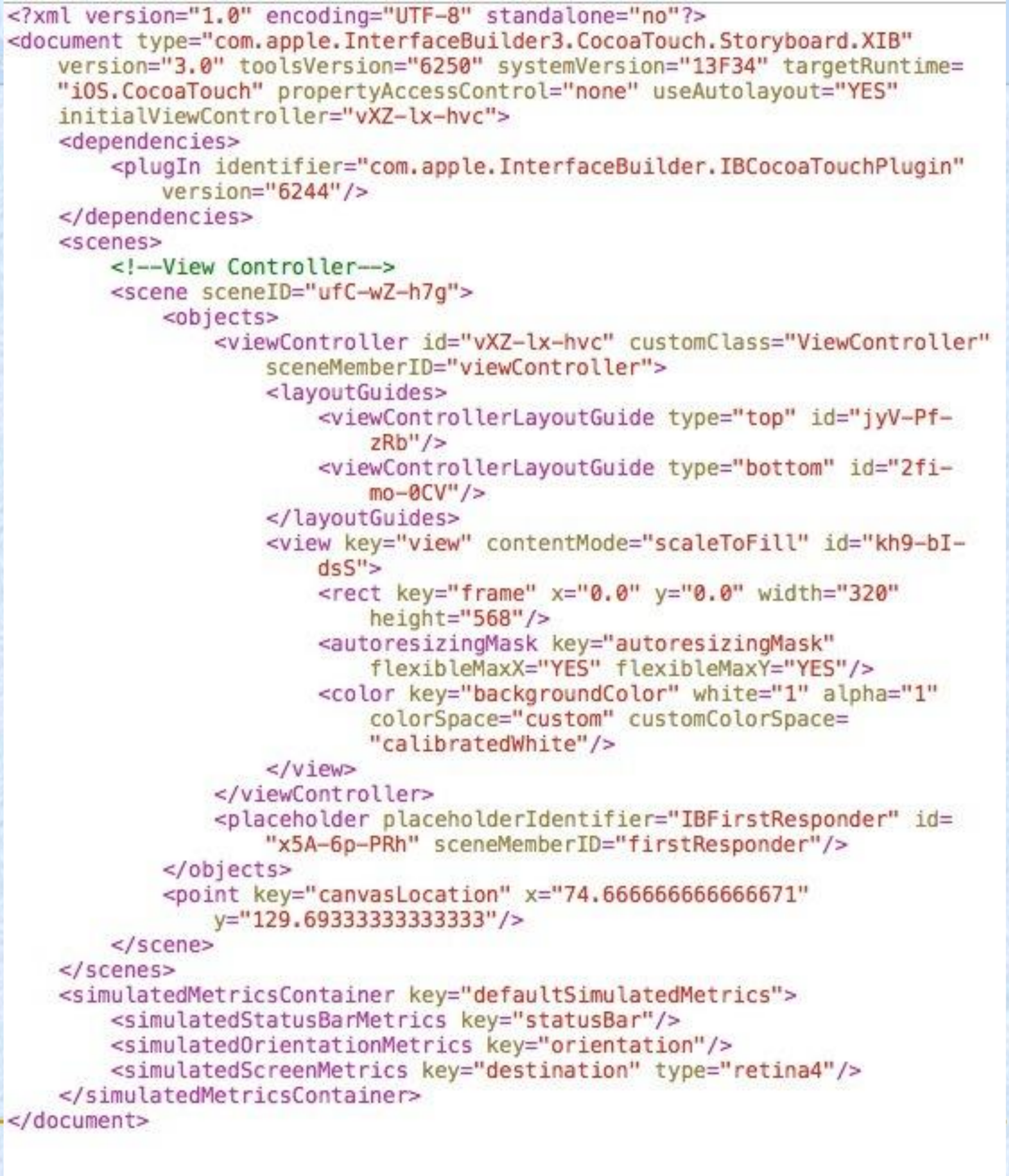
Parameters

name	The name of the storyboard resource file without the filename extension. This method raises an exception if this parameter is `nil`.
storyboardBundleOrNil	The bundle containing the storyboard file and its related resources. If you specify `nil`, this method looks in the main bundle of the current application.

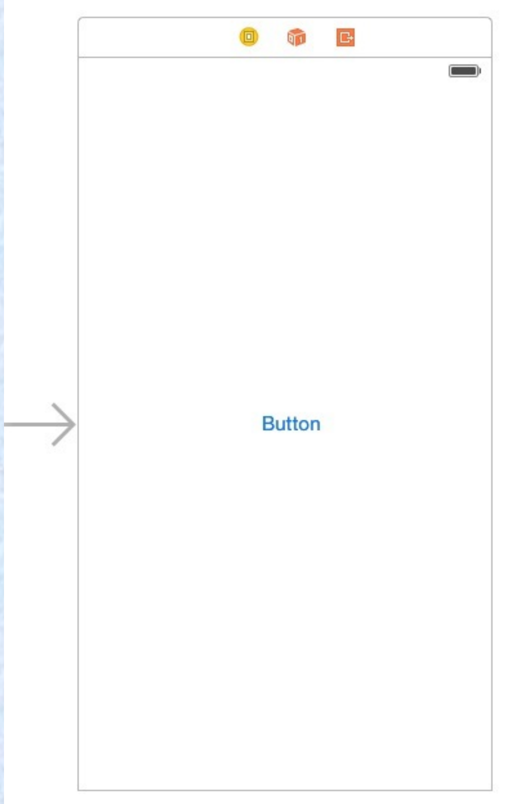
Return Value

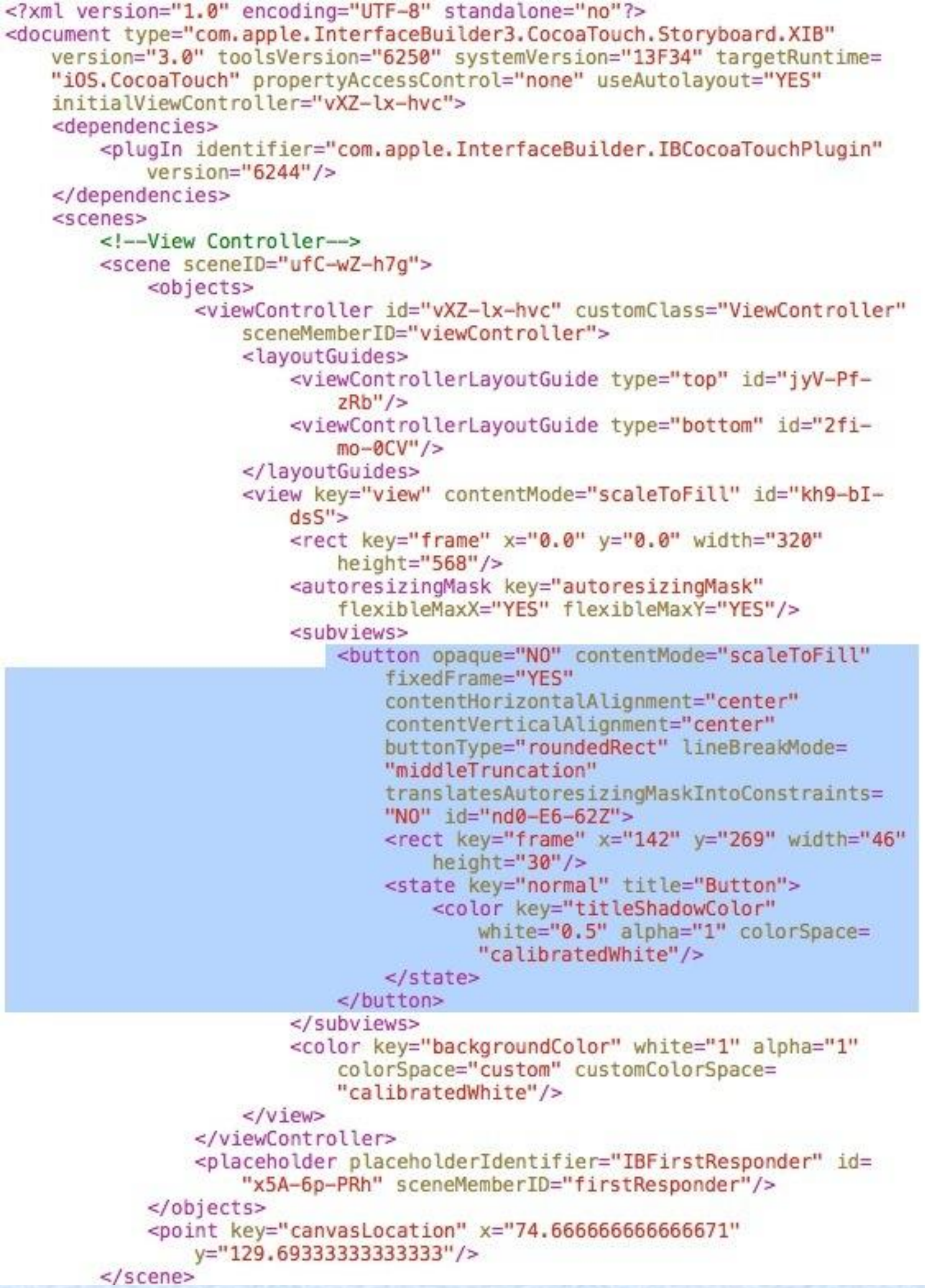
A storyboard object for the specified file. If no storyboard resource file matching `name` exists, an exception is thrown with description: `Could not find a storyboard named 'XXXXXX' in bundle....`





```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<document type="com.apple.InterfaceBuilder3.CocoaTouch.Storyboard.XIB"
    version="3.0" toolsVersion="6250" systemVersion="13F34" targetRuntime=
    "iOS.CocoaTouch" propertyAccessControl="none" useAutolayout="YES"
    initialViewController="vXZ-lx-hvc">
    <dependencies>
        <plugIn identifier="com.apple.InterfaceBuilder.IBCocoaTouchPlugin"
            version="6244"/>
    </dependencies>
    <scenes>
        <!--View Controller-->
        <scene sceneID="ufC-wZ-h7g">
            <objects>
                <viewController id="vXZ-lx-hvc" customClass="ViewController"
                    sceneMemberID="viewController">
                    <layoutGuides>
                        <viewControllerLayoutGuide type="top" id="jyV-Pf-
                            zRb"/>
                        <viewControllerLayoutGuide type="bottom" id="2fi-
                            mo-0CV"/>
                    </layoutGuides>
                    <view key="view" contentMode="scaleToFill" id="kh9-bI-
                        dsS">
                        <rect key="frame" x="0.0" y="0.0" width="320"
                            height="568"/>
                        <autoresizingMask key="autoresizingMask"
                            flexibleMaxX="YES" flexibleMaxY="YES"/>
                        <color key="backgroundColor" white="1" alpha="1"
                            colorSpace="custom" customColorSpace=
                            "calibratedWhite"/>
                    </view>
                </viewController>
                <placeholder placeholderIdentifier="IBFirstResponder" id=
                    "x5A-6p-PRh" sceneMemberID="firstResponder"/>
            </objects>
            <point key="canvasLocation" x="74.666666666666671"
                y="129.69333333333333"/>
        </scene>
    </scenes>
    <simulatedMetricsContainer key="defaultSimulatedMetrics">
        <simulatedStatusBarMetrics key="statusBar"/>
        <simulatedOrientationMetrics key="orientation"/>
        <simulatedScreenMetrics key="destination" type="retina4"/>
    </simulatedMetricsContainer>
</document>
```





```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<document type="com.apple.InterfaceBuilder3.CocoaTouch.Storyboard.XIB"
    version="3.0" toolsVersion="6250" systemVersion="13F34" targetRuntime=
    "iOS.CocoaTouch" propertyAccessControl="none" useAutolayout="YES"
    initialViewController="vXZ-lx-hvc">
    <dependencies>
        <plugIn identifier="com.apple.InterfaceBuilder.IBCocoaTouchPlugin"
            version="6244"/>
    </dependencies>
    <scenes>
        <!--View Controller-->
        <scene sceneID="ufC-wZ-h7g">
            <objects>
                <viewController id="vXZ-lx-hvc" customClass="ViewController"
                    sceneMemberID="viewController">
                    <layoutGuides>
                        <viewControllerLayoutGuide type="top" id="jyV-Pf-
                            zRb"/>
                        <viewControllerLayoutGuide type="bottom" id="2fi-
                            mo-0CV"/>
                    </layoutGuides>
                    <view key="view" contentMode="scaleToFill" id="kh9-bI-
                        dsS">
                        <rect key="frame" x="0.0" y="0.0" width="320"
                            height="568"/>
                        <autoresizingMask key="autoresizingMask"
                            flexibleMaxX="YES" flexibleMaxY="YES"/>
                        <subviews>
                            <button opaque="NO" contentMode="scaleToFill"
                                fixedFrame="YES"
                                contentHorizontalAlignment="center"
                                contentVerticalAlignment="center"
                                buttonType="roundedRect" lineBreakMode=
                                "middleTruncation"
                                translatesAutoresizingMaskIntoConstraints=
                                "NO" id="nd0-E6-62Z">
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                                    height="30"/>
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                                        white="0.5" alpha="1" colorSpace=
                                        "calibratedWhite"/>
                                </state>
                            </button>
                        </subviews>
                        <color key="backgroundColor" white="1" alpha="1"
                            colorSpace="custom" customColorSpace=
                            "calibratedWhite"/>
                    </view>
                </viewController>
                <placeholder placeholderIdentifier="IBFirstResponder" id=
                    "x5A-6p-PRh" sceneMemberID="firstResponder"/>
            </objects>
            <point key="canvasLocation" x="74.666666666666671"
                y="129.69333333333333"/>
        </scene>
```
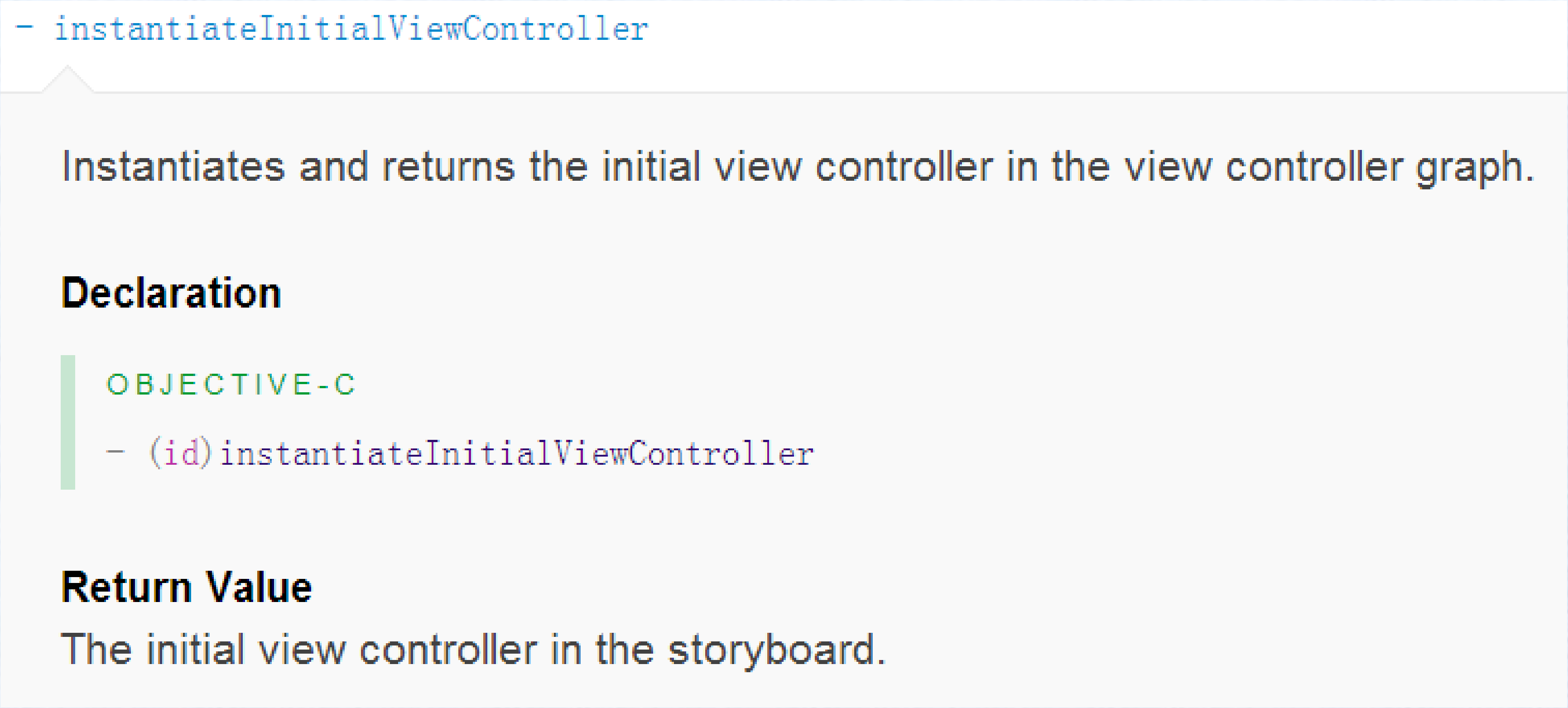

instantiateInitialViewController



- instantiateInitialViewController

Instantiates and returns the initial view controller in the view controller graph.

Declaration

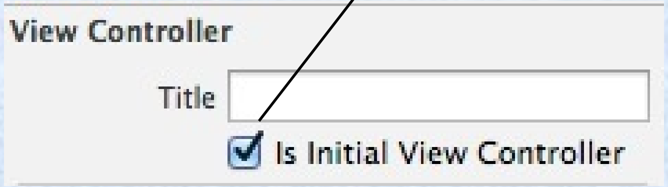
OBJECTIVE-C

```
- (id)instantiateInitialViewController
```

Return Value

The initial view controller in the storyboard.

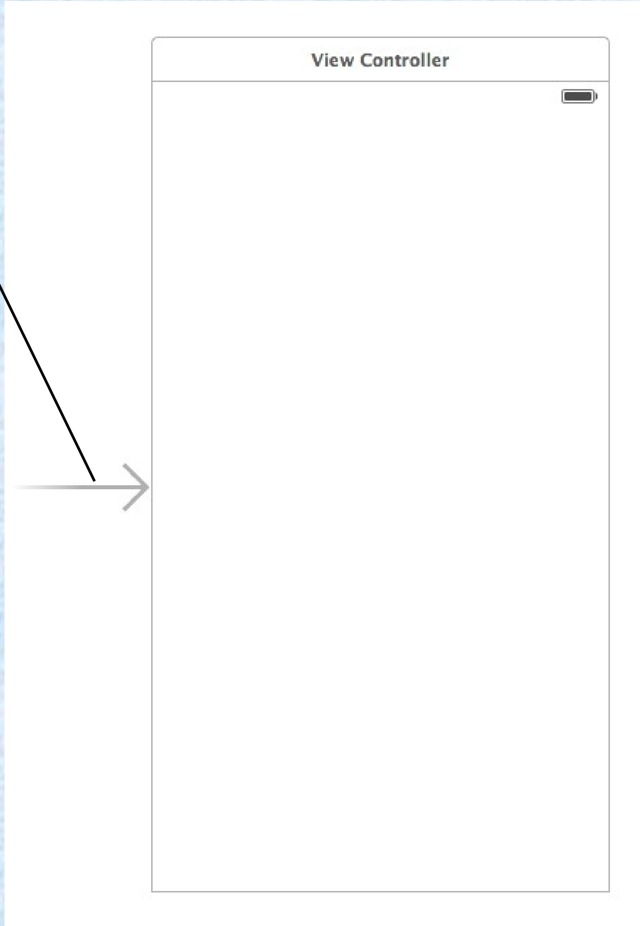
初始化视图控制器设置



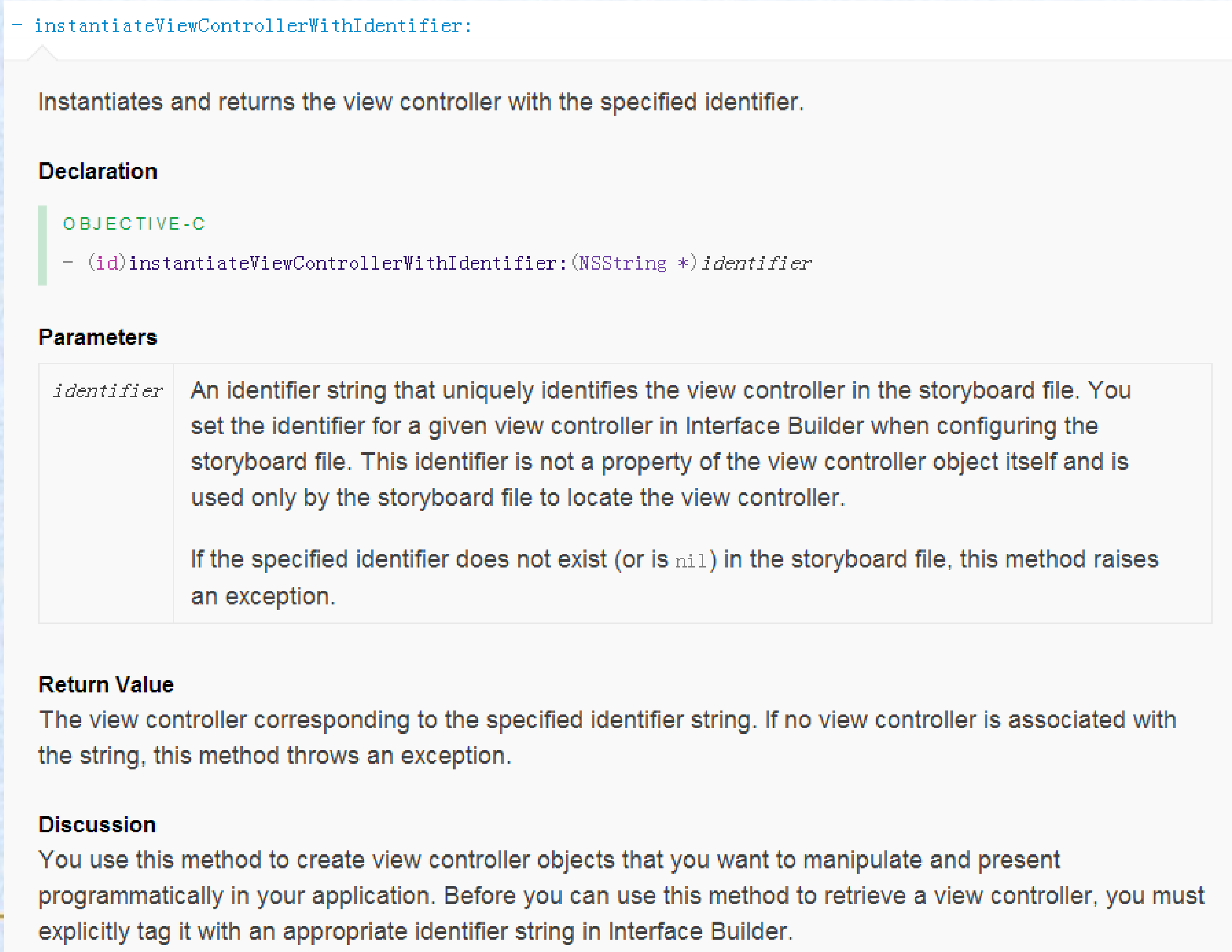
View Controller

Title

☑ Is Initial View Controller



instantiateViewControllerWithIdentifier:



`- instantiateViewControllerWithIdentifier:`

Instantiates and returns the view controller with the specified identifier.

Declaration

OBJECTIVE-C

```
- (id)instantiateViewControllerWithIdentifier:(NSString *)identifier
```

Parameters

identifier	An identifier string that uniquely identifies the view controller in the storyboard file. You set the identifier for a given view controller in Interface Builder when configuring the storyboard file. This identifier is not a property of the view controller object itself and is used only by the storyboard file to locate the view controller. If the specified identifier does not exist (or is `nil`) in the storyboard file, this method raises an exception.

Return Value

The view controller corresponding to the specified identifier string. If no view controller is associated with the string, this method throws an exception.

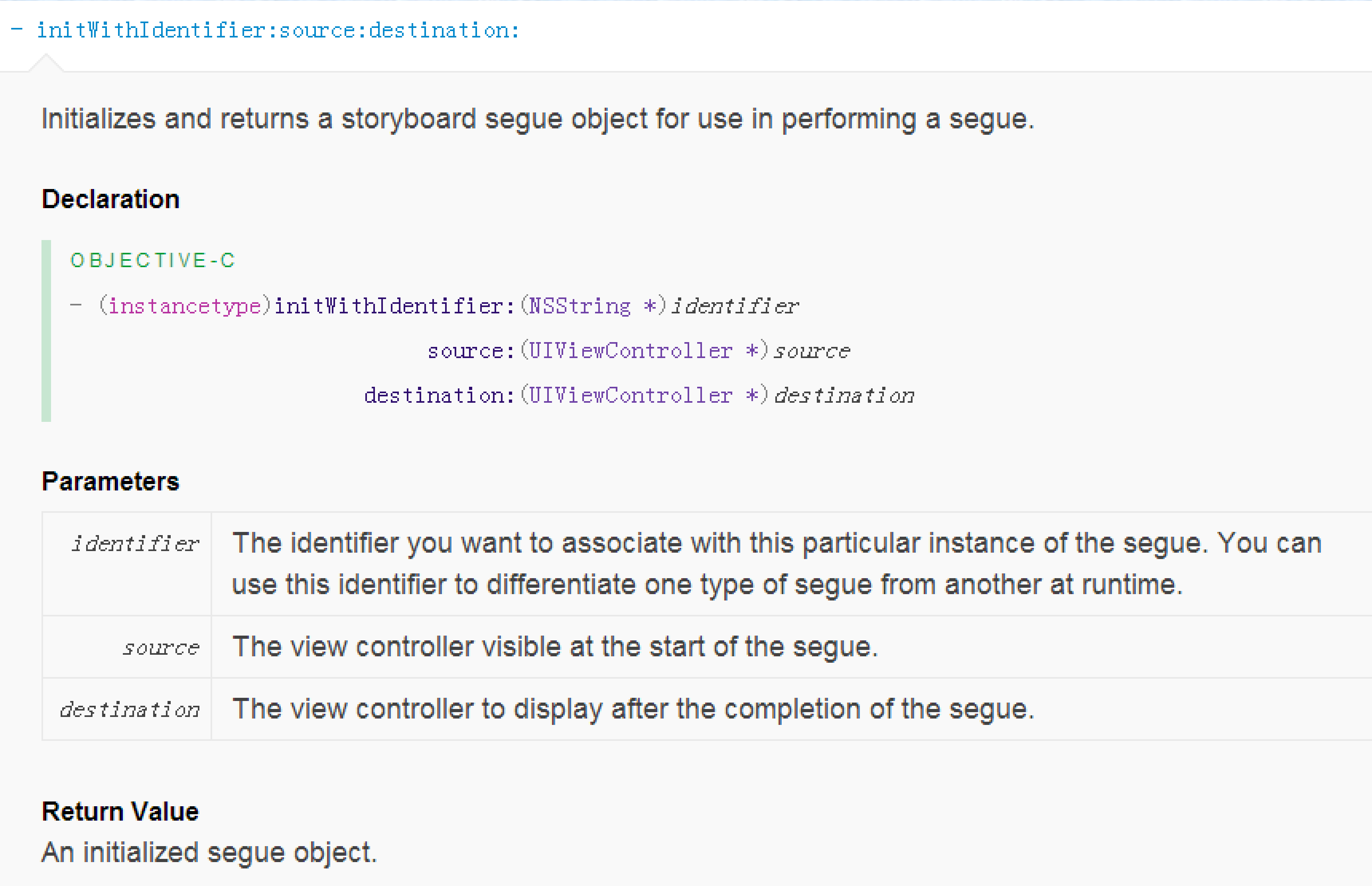
Discussion

You use this method to create view controller objects that you want to manipulate and present programmatically in your application. Before you can use this method to retrieve a view controller, you must explicitly tag it with an appropriate identifier string in Interface Builder.

3、UIStoryboardSegue

A UIStoryboardSegue object is responsible for performing the visual transition between two view controllers. In addition, segue objects are used to prepare for the transition from one view controller to another. Segue objects contain information about the view controllers involved in a transition. When a segue is triggered, but before the visual transition occurs, the storyboard runtime calls the current view controller’s prepareForSegue:sender: method so that it can pass any needed data to the view controller that is about to be displayed.

initWithIdentifier: source: destination:



- initWithIdentifier:source:destination:

Initializes and returns a storyboard segue object for use in performing a segue.

Declaration

OBJECTIVE-C

```
- (instancetype)initWithIdentifier:(NSString *)identifier
                            source:(UIViewController *)source
                       destination:(UIViewController *)destination
```

Parameters

identifier	The identifier you want to associate with this particular instance of the segue. You can use this identifier to differentiate one type of segue from another at runtime.
source	The view controller visible at the start of the segue.
destination	The view controller to display after the completion of the segue.

Return Value

An initialized segue object.

源视图控制器

```
@property(nonatomic, readonly) id sourceViewController
```

目标视图控制器

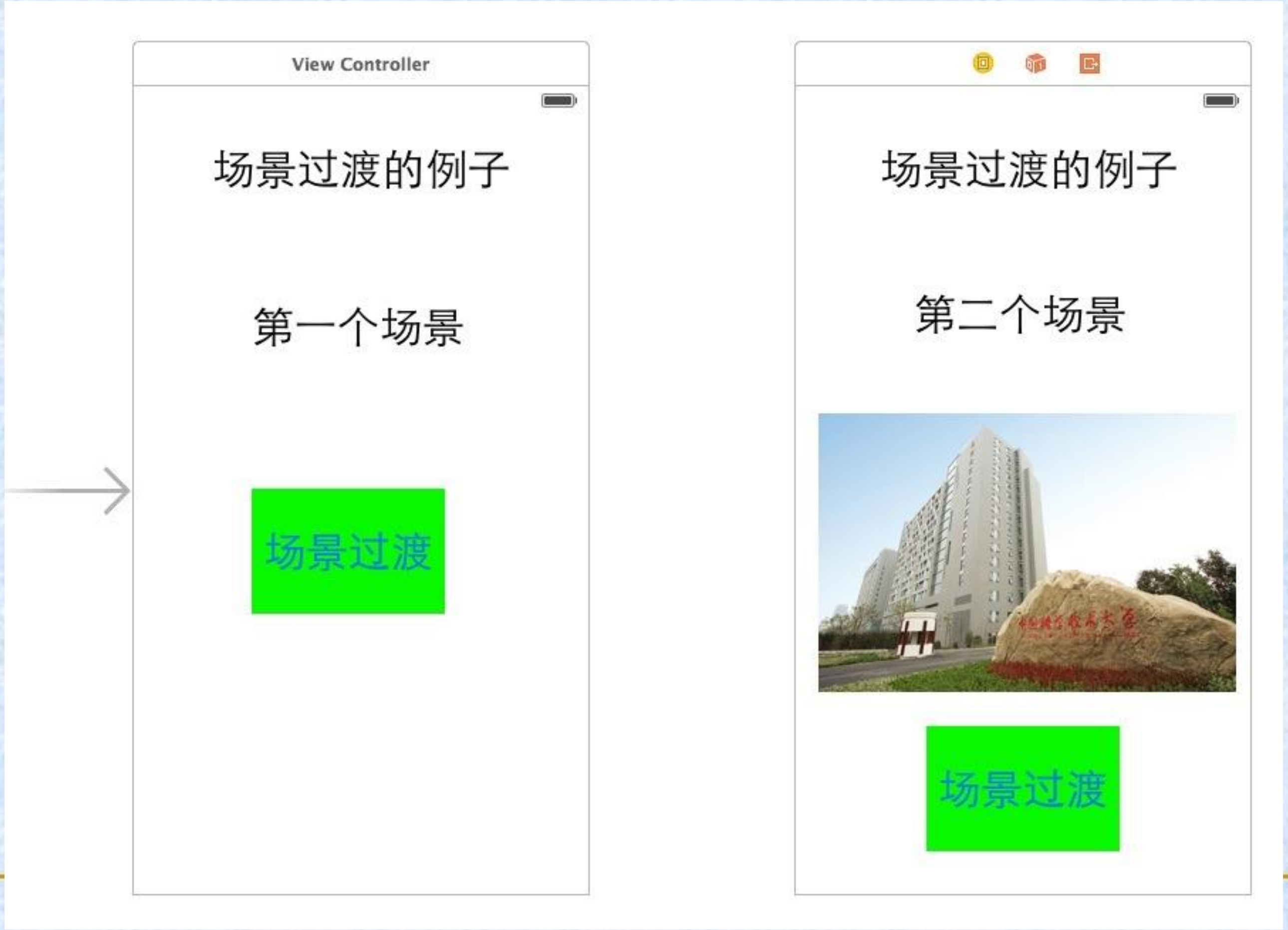
```
@property(nonatomic, readonly) id destinationViewController
```

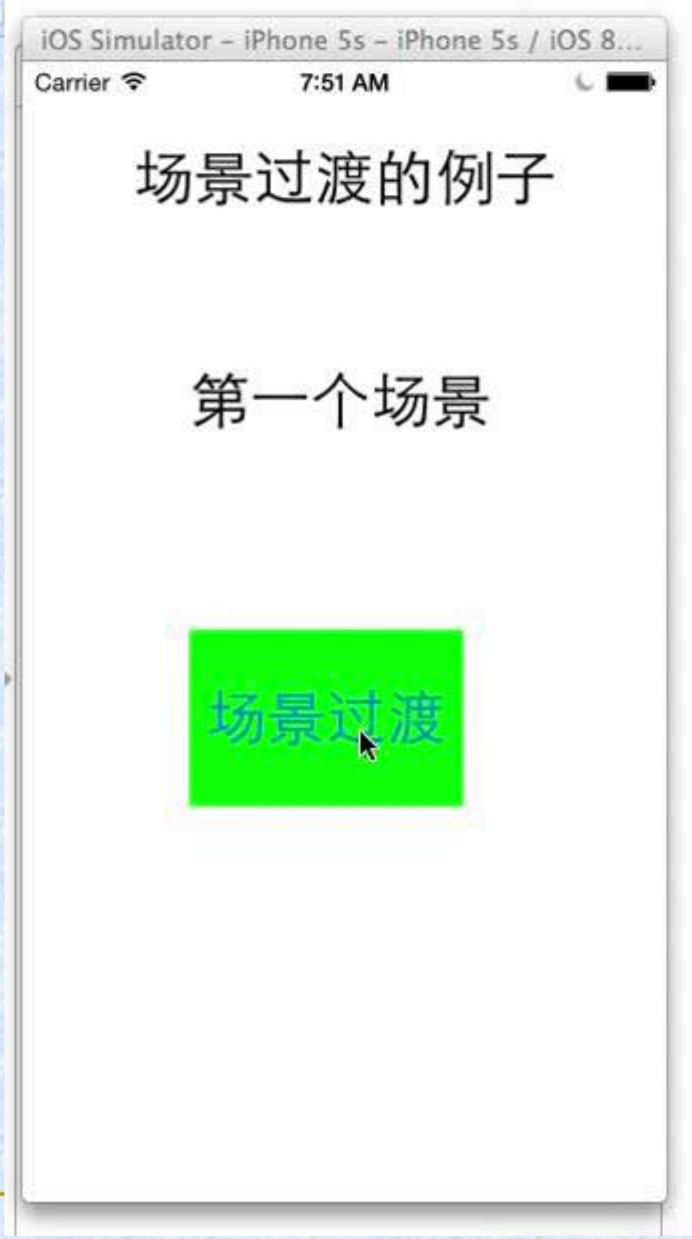
Segue的标识

```
@property(nonatomic, readonly) NSString *identifier
```

二、在故事板中设计场景过渡（Segues）

1、直接过渡



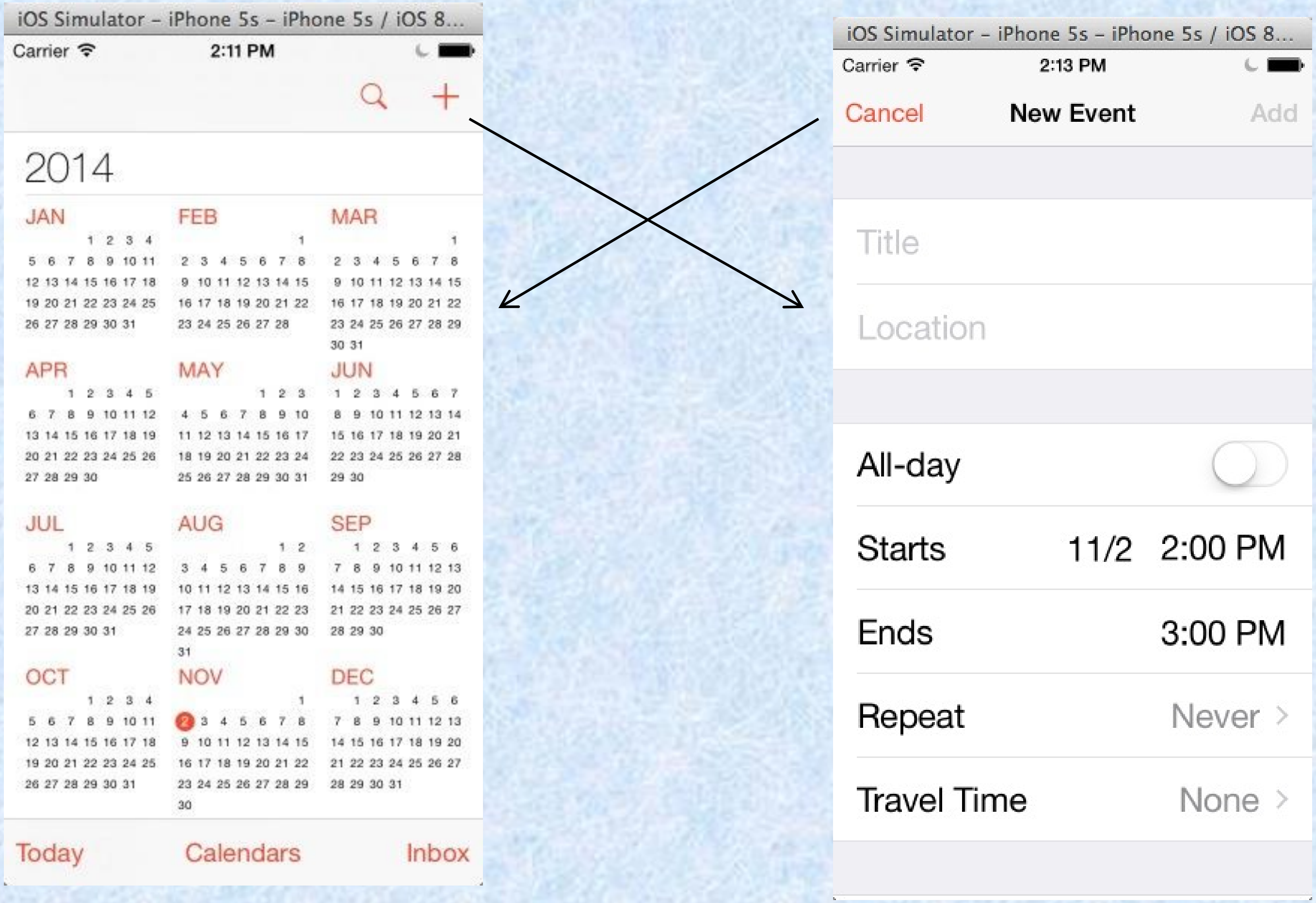


iOS Simulator – iPhone 5s – iPhone 5s / iOS 8...

场景过渡的例子

第一个场景

2、Navigation Controller



iOS Simulator – iPhone 5s – iPhone 5s / iOS 8...
Carrier 2:11 PM

2014

JAN
1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30 31

FEB
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2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28

MAR
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2 3 4 5 6 7 8
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16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31

APR
1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30

MAY
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4 5 6 7 8 9 10
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25 26 27 28 29 30 31

JUN
1 2 3 4 5 6 7
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15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30

JUL
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20 21 22 23 24 25 26
27 28 29 30 31

AUG
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31

SEP
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OCT
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NOV
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23 24 25 26 27 28 29
30

DEC
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14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31

iOS Simulator – iPhone 5s – iPhone 5s / iOS 8...
Carrier 2:13 PM

Title

Location

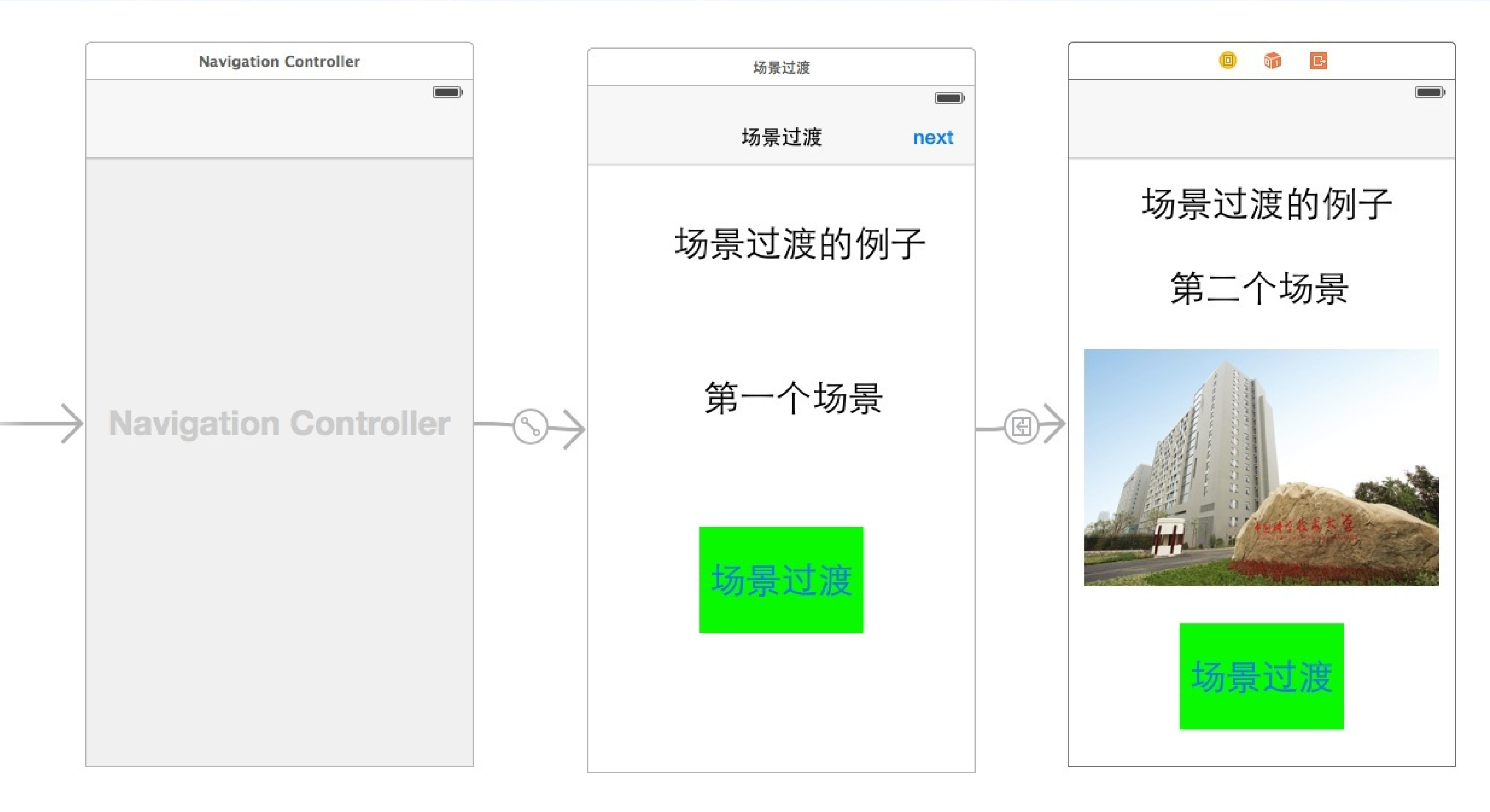
All-day

Starts 11/2 2:00 PM

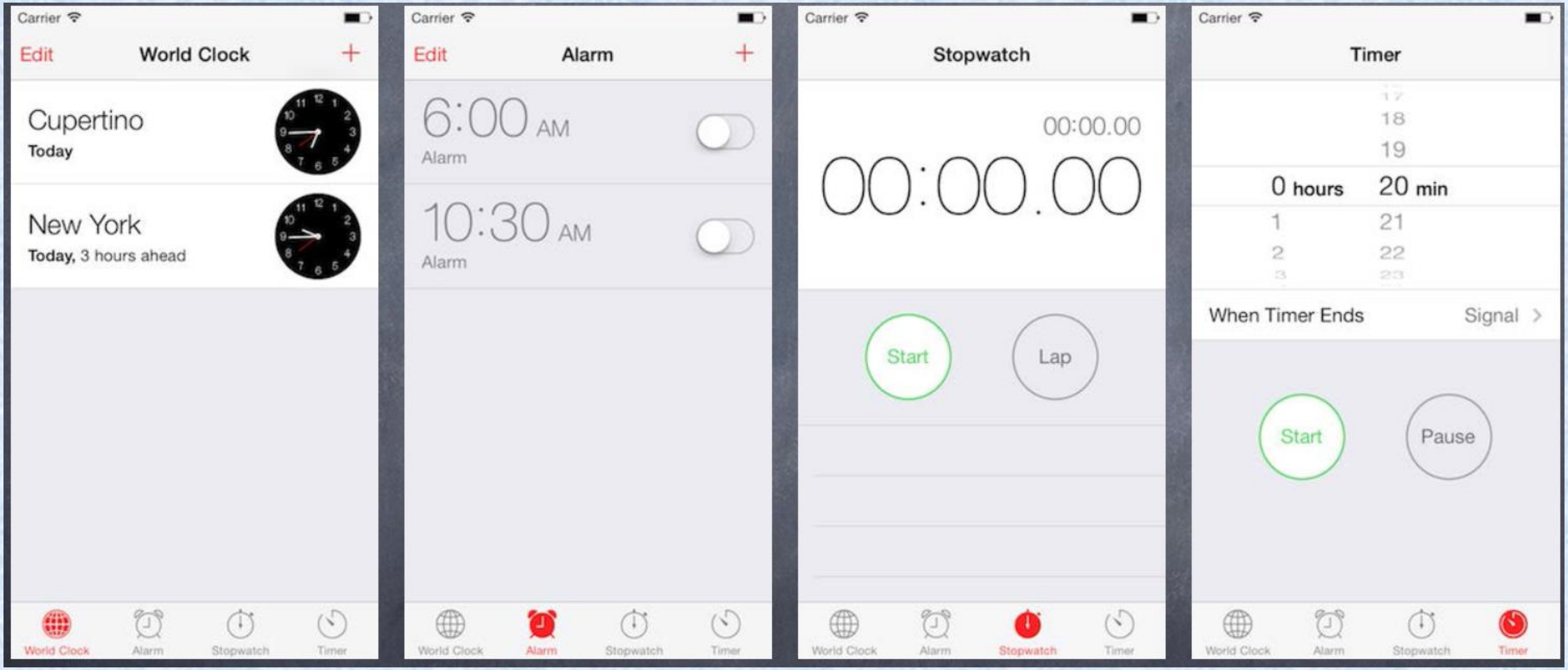
Ends 3:00 PM

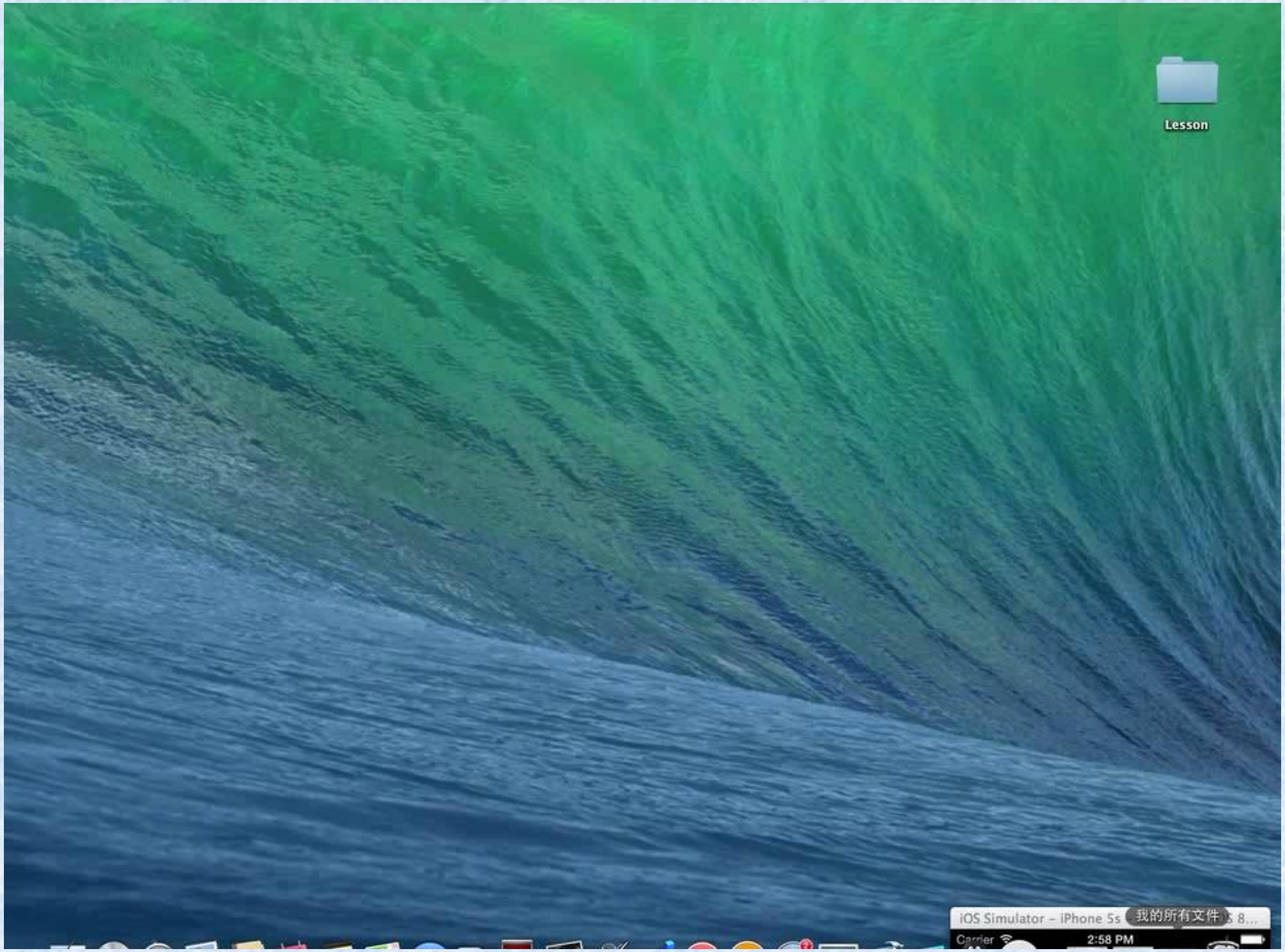
Repeat Never

Travel Time None


Navigation Controller
Navigation Controller
场景过渡
场景过渡
next
场景过渡的例子
第一个场景
场景过渡
场景过渡的例子
第二个场景
场景过渡

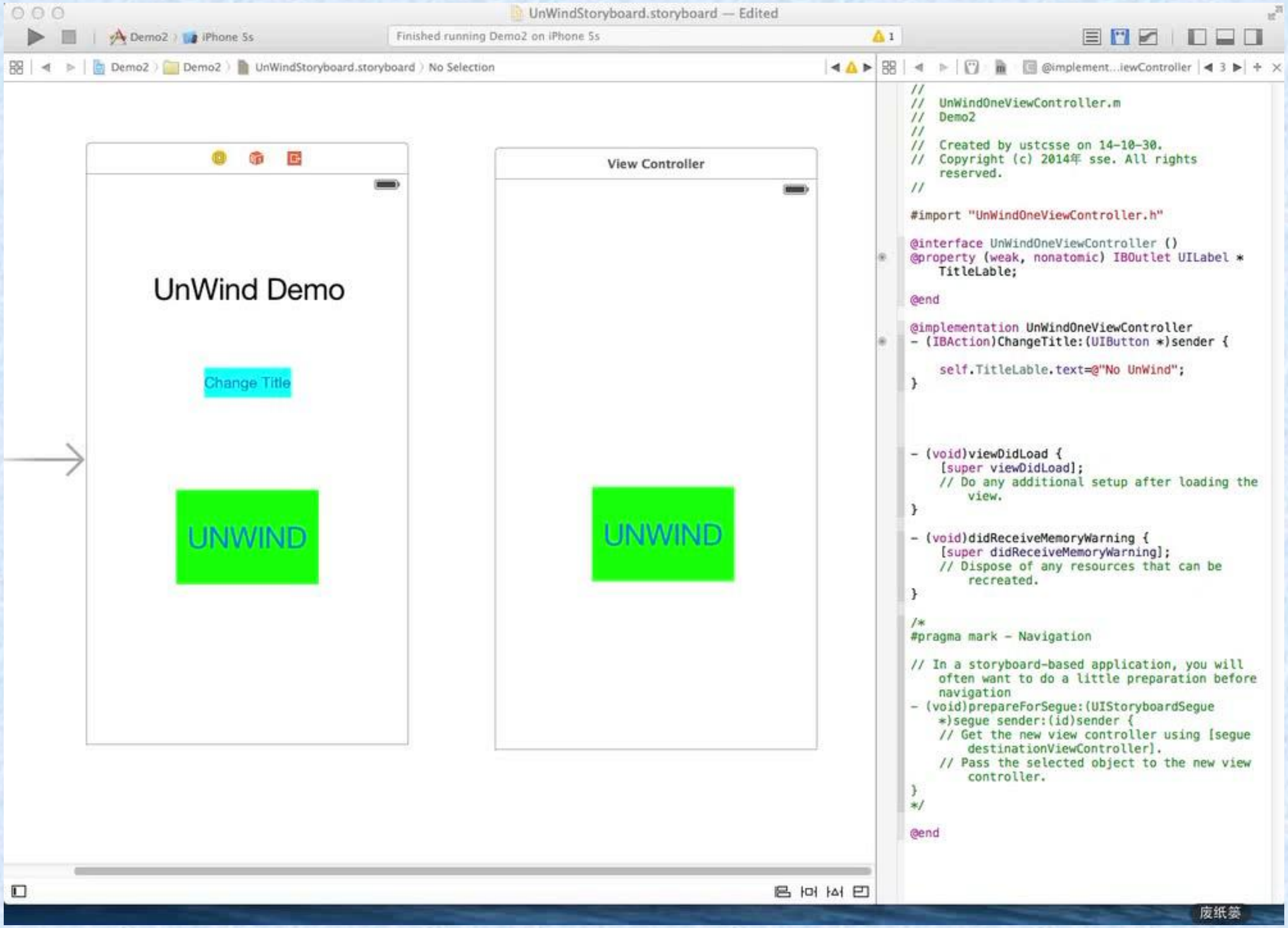
3、UITabBarController




Lesson
iOS Simulator – iPhone 5s
我的所有文件
8...
Carrier
2:58 PM

4、UNWIND Segue

通过UNWIND Segue 可以退回到发起Segue的哪个视图控制器对象


UnWindStoryboard.storyboard — Edited
Demo2
iPhone 5s
Finished running Demo2 on iPhone 5s
1
Demo2 〉 Demo2 〉 UnWindStoryboard.storyboard 〉 No Selection
@implement...iewController
3
UnWind Demo
Change Title
UNWIND
View Controller
UNWIND
废纸篓

```
//
//  UnWindOneViewController.m
//  Demo2
//
//  Created by ustcsse on 14-10-30.
//  Copyright (c) 2014年 sse. All rights
    reserved.
//

#import "UnWindOneViewController.h"

@interface UnWindOneViewController ()
@property (weak, nonatomic) IBOutlet UILabel *
    TitleLable;

@end

@implementation UnWindOneViewController
- (IBAction)ChangeTitle:(UIButton *)sender {

    self.TitleLable.text=@"No UnWind";
}



- (void)viewDidLoad {
    [super viewDidLoad];
    // Do any additional setup after loading the
        view.
}

- (void)didReceiveMemoryWarning {
    [super didReceiveMemoryWarning];
    // Dispose of any resources that can be
        recreated.
}

/*
#pragma mark - Navigation

// In a storyboard-based application, you will
    often want to do a little preparation before
    navigation
- (void)prepareForSegue:(UIStoryboardSegue
    *)segue sender:(id)sender {
    // Get the new view controller using [segue
        destinationViewController].
    // Pass the selected object to the new view
        controller.
}
*/

@end
```

5、Segue的几种类型

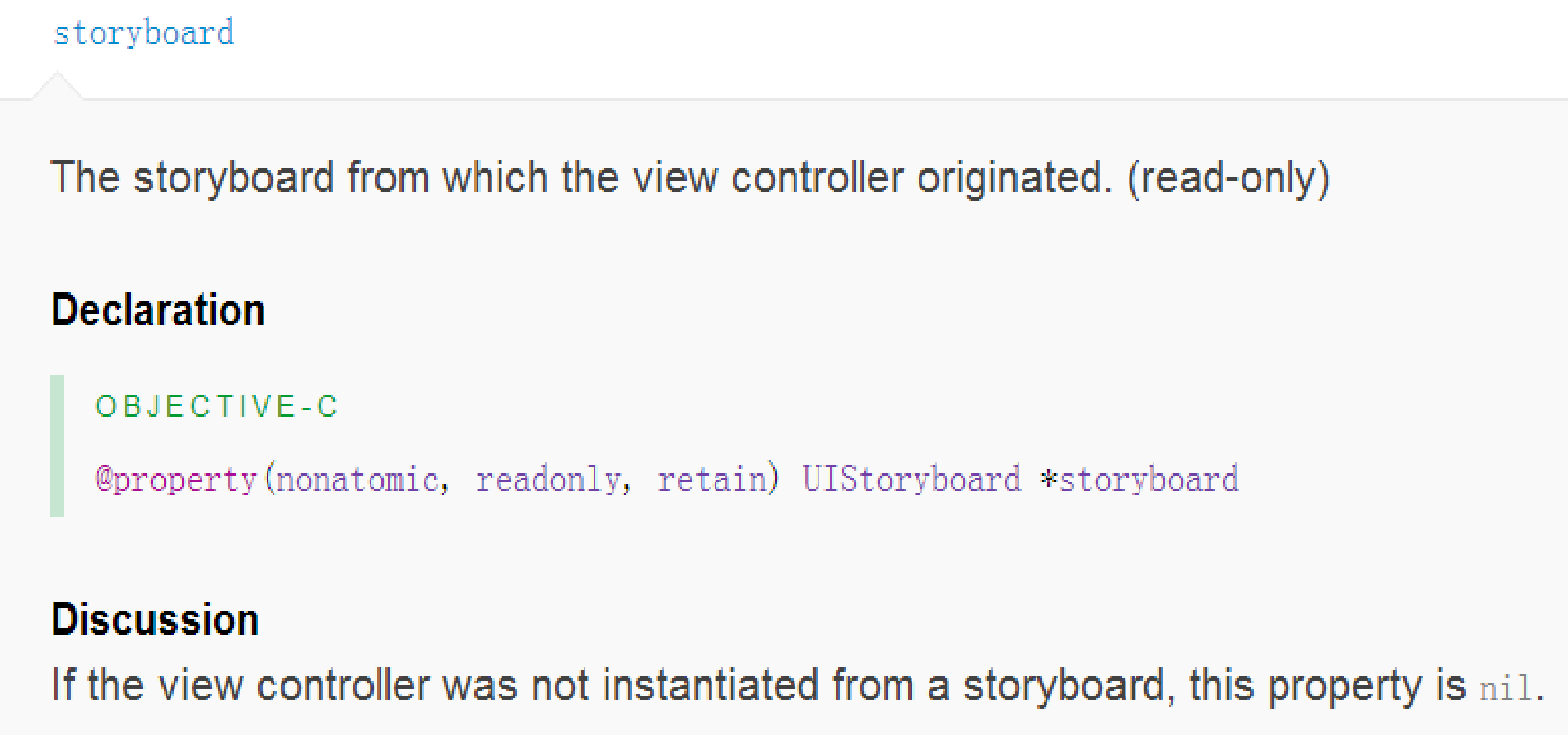
Iphone中：push，modal，custom三种不同的类型。

Ipad中： push，modal，popover，replace和custom五种类型。

三、场景过渡中涉及的代码

1、UIViewController

- storyboard



storyboard

The storyboard from which the view controller originated. (read-only)

Declaration

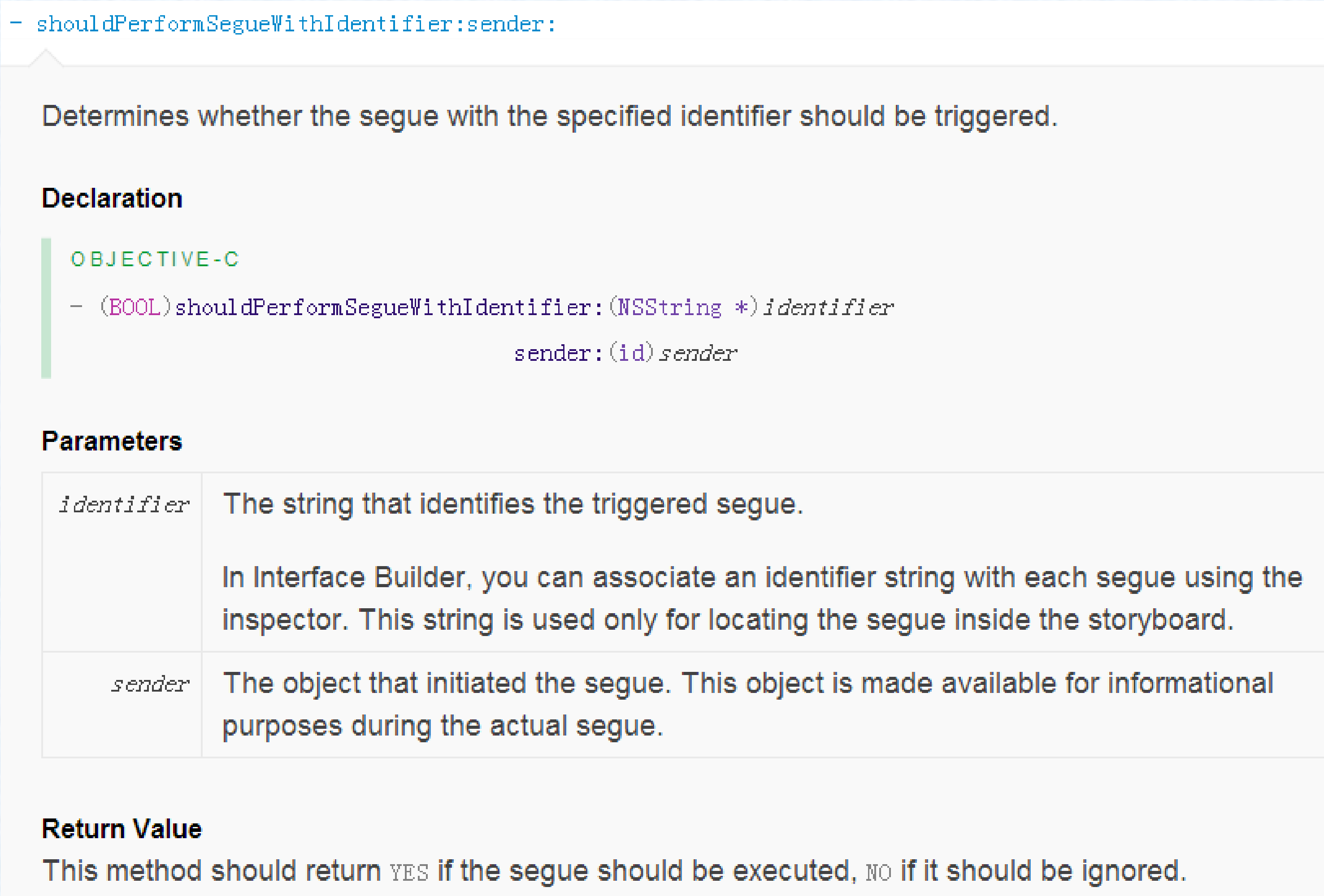
OBJECTIVE-C

```
@property(nonatomic, readonly, retain) UIStoryboard *storyboard
```

Discussion

If the view controller was not instantiated from a storyboard, this property is `nil`.

- shouldPerformSegueWithIdentifier:sender:



- shouldPerformSegueWithIdentifier:sender:

Determines whether the segue with the specified identifier should be triggered.

Declaration

OBJECTIVE-C

```
- (BOOL)shouldPerformSegueWithIdentifier:(NSString *)identifier
                                  sender:(id)sender
```

Parameters

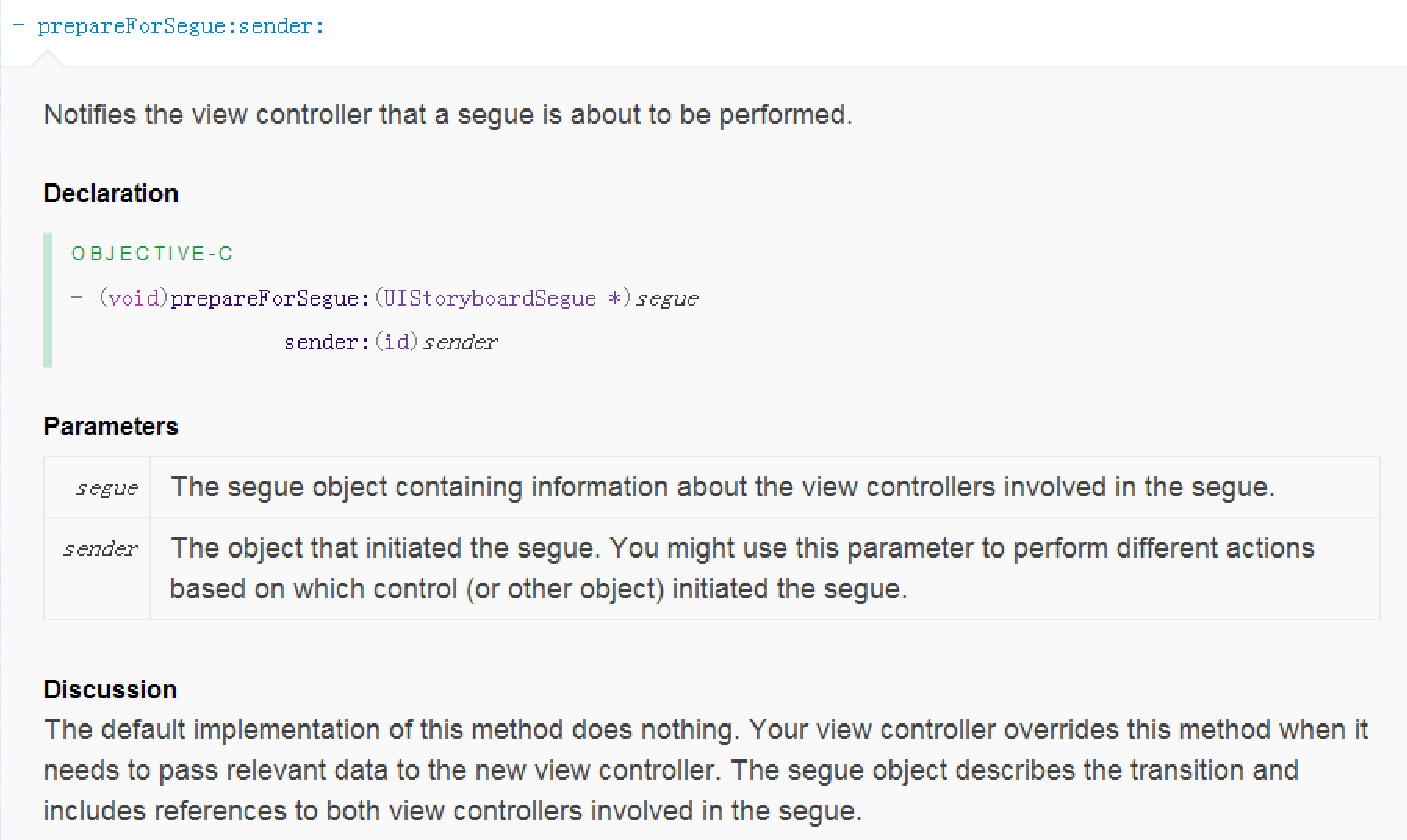
identifier	The string that identifies the triggered segue. In Interface Builder, you can associate an identifier string with each segue using the inspector. This string is used only for locating the segue inside the storyboard.
sender	The object that initiated the segue. This object is made available for informational purposes during the actual segue.

Return Value

This method should return `YES` if the segue should be executed, `NO` if it should be ignored.

返回NO将阻止Segue

●prepareForSegue:sender:



- prepareForSegue:sender:

Notifies the view controller that a segue is about to be performed.

Declaration

```
OBJECTIVE-C
- (void)prepareForSegue:(UIStoryboardSegue *)segue
                 sender:(id)sender
```

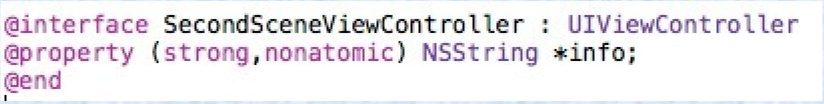
Parameters

segue	The segue object containing information about the view controllers involved in the segue.
sender	The object that initiated the segue. You might use this parameter to perform different actions based on which control (or other object) initiated the segue.

Discussion

The default implementation of this method does nothing. Your view controller overrides this method when it needs to pass relevant data to the new view controller. The segue object describes the transition and includes references to both view controllers involved in the segue.

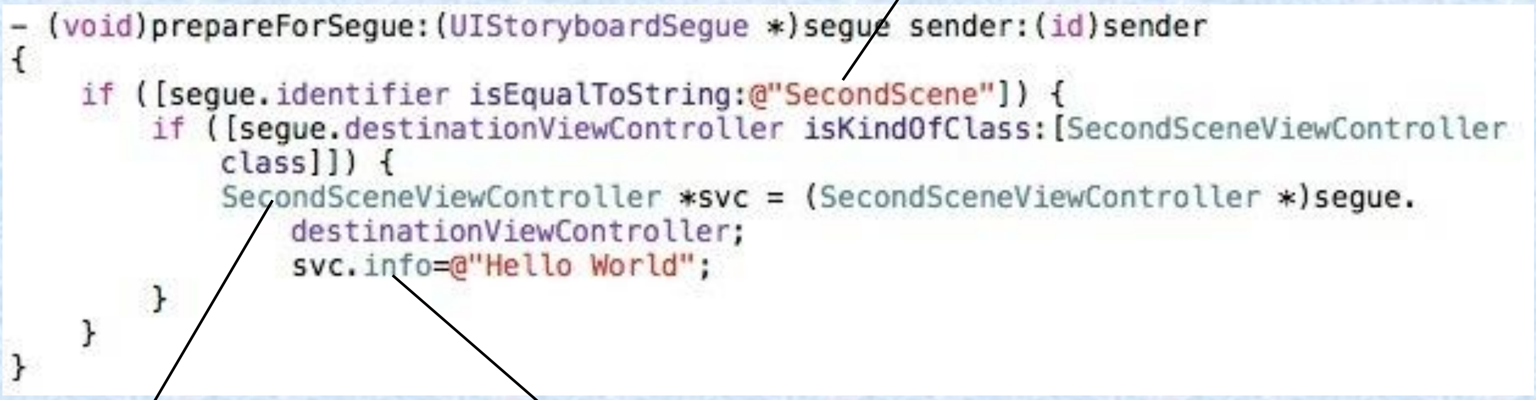
SecondSceneViewController.h



```
@interface SecondSceneViewController : UIViewController
@property (strong,nonatomic) NSString *info;
@end
```

Segue标识

ViewController.m

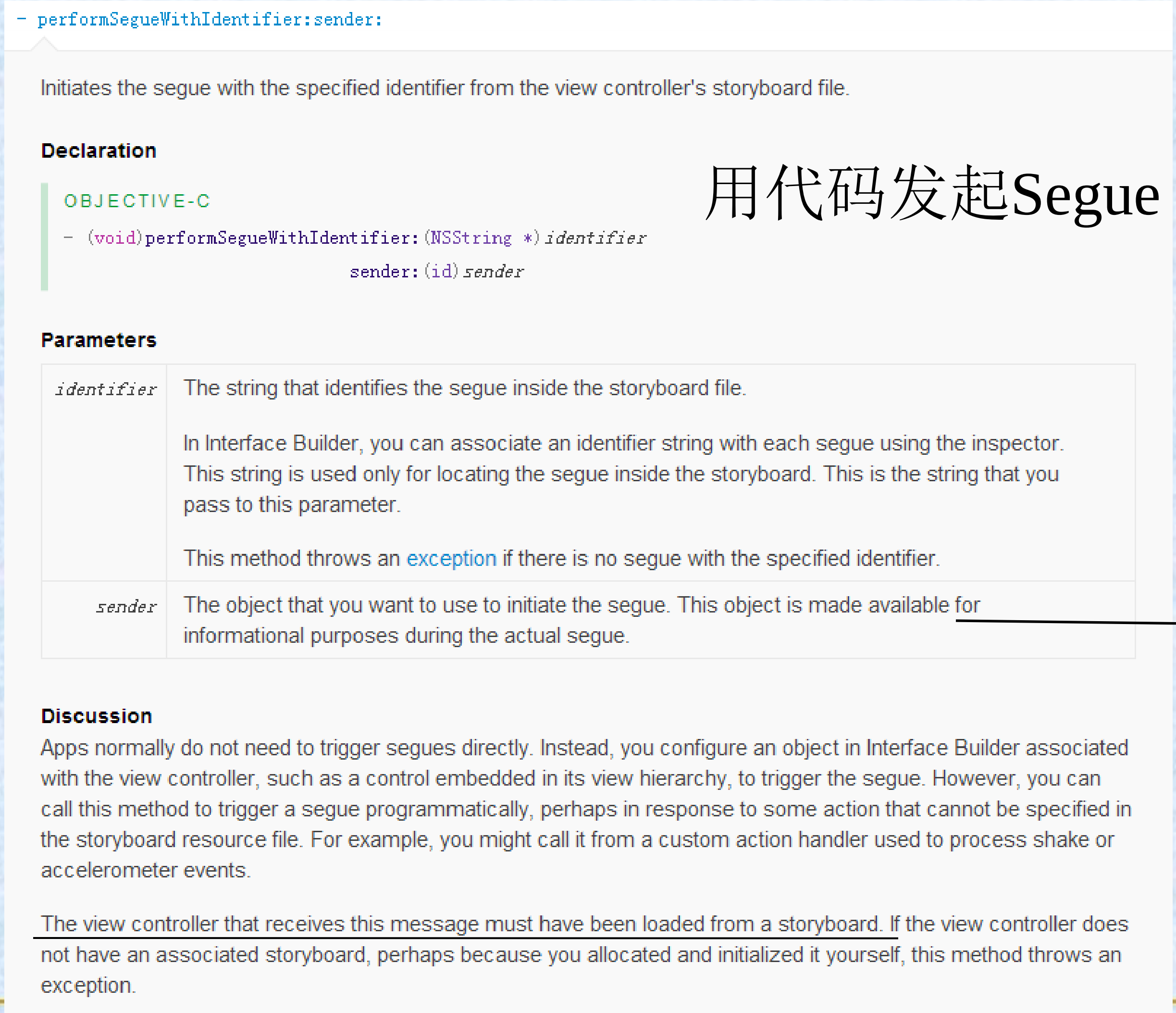


```
- (void)prepareForSegue:(UIStoryboardSegue *)segue sender:(id)sender
{
    if ([segue.identifier isEqualToString:@"SecondScene"]) {
        if ([segue.destinationViewController isKindOfClass:[SecondSceneViewController
            class]]) {
            SecondSceneViewController *svc = (SecondSceneViewController *)segue.
                destinationViewController;
                svc.info=@"Hello World";
        }
    }
}
```

下一个场景控制器

下个场景的属性

- performSegueWithIdentifier:sender:



- performSegueWithIdentifier:sender:

Initiates the segue with the specified identifier from the view controller's storyboard file.

Declaration

OBJECTIVE-C

```
- (void)performSegueWithIdentifier:(NSString *)identifier
                            sender:(id)sender
```

用代码发起Segue

Parameters

identifier	The string that identifies the segue inside the storyboard file. In Interface Builder, you can associate an identifier string with each segue using the inspector. This string is used only for locating the segue inside the storyboard. This is the string that you pass to this parameter. This method throws an exception if there is no segue with the specified identifier.
sender	The object that you want to use to initiate the segue. This object is made available for informational purposes during the actual segue.

→ Segue的发起者

Discussion

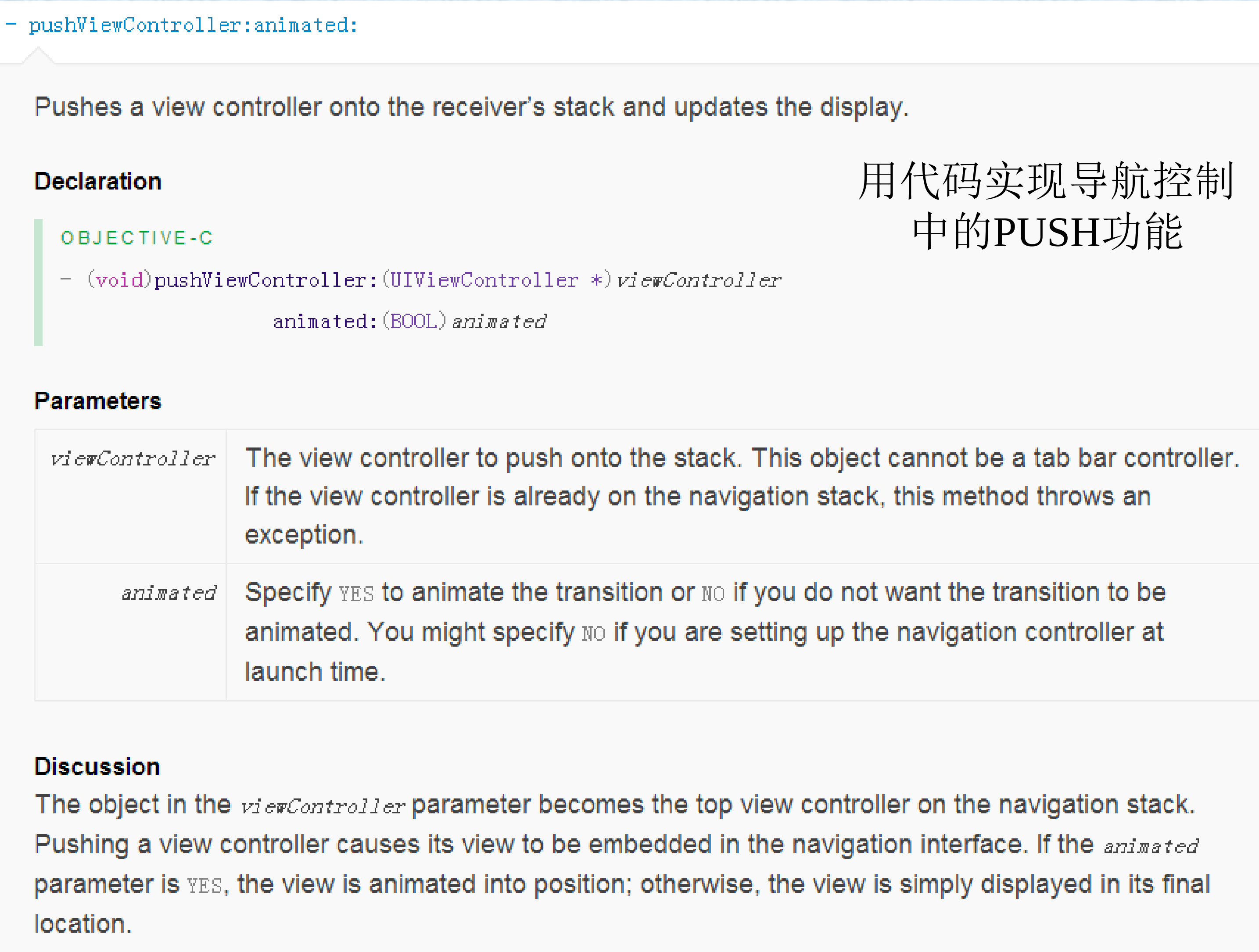
Apps normally do not need to trigger segues directly. Instead, you configure an object in Interface Builder associated with the view controller, such as a control embedded in its view hierarchy, to trigger the segue. However, you can call this method to trigger a segue programmatically, perhaps in response to some action that cannot be specified in the storyboard resource file. For example, you might call it from a custom action handler used to process shake or accelerometer events.

The view controller that receives this message must have been loaded from a storyboard. If the view controller does not have an associated storyboard, perhaps because you allocated and initialized it yourself, this method throws an exception.

[self performSegueWithIdentifier:@“SecondScene” sender:self];

2、UINavigationController

- pushViewController:animated:



- pushViewController:animated:

Pushes a view controller onto the receiver's stack and updates the display.

Declaration

OBJECTIVE-C

```
- (void)pushViewController:(UIViewController *)viewController
                  animated:(BOOL)animated
```

Parameters

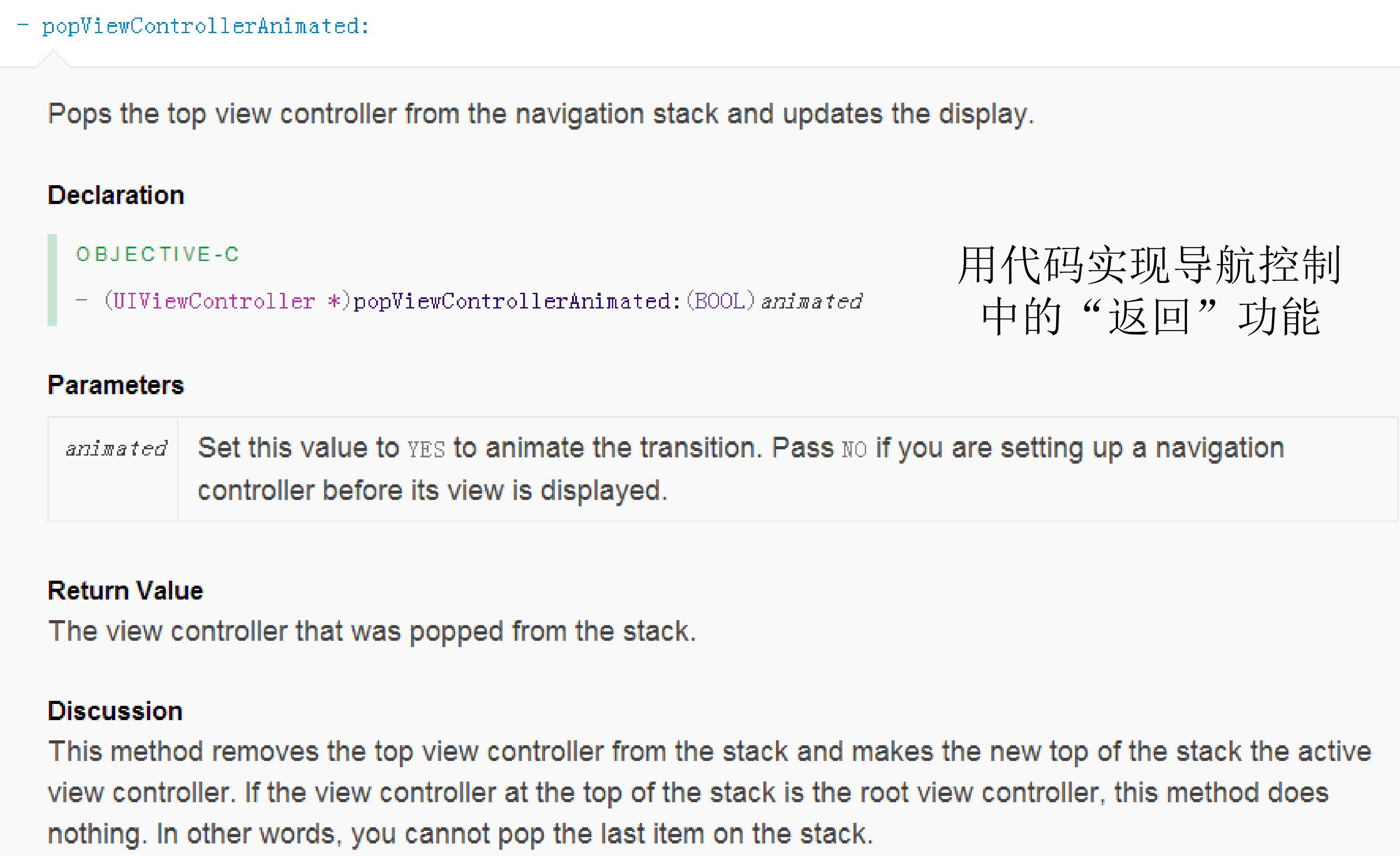
viewController	The view controller to push onto the stack. This object cannot be a tab bar controller. If the view controller is already on the navigation stack, this method throws an exception.
animated	Specify `YES` to animate the transition or `NO` if you do not want the transition to be animated. You might specify `NO` if you are setting up the navigation controller at launch time.

Discussion

The object in the *viewController* parameter becomes the top view controller on the navigation stack. Pushing a view controller causes its view to be embedded in the navigation interface. If the *animated* parameter is `YES`, the view is animated into position; otherwise, the view is simply displayed in its final location.

用代码实现导航控制中的PUSH功能

- popViewControllerAnimated:



- popViewControllerAnimated:

Pops the top view controller from the navigation stack and updates the display.

Declaration

OBJECTIVE-C

```
- (UIViewController *)popViewControllerAnimated:(BOOL)animated
```

用代码实现导航控制中的“返回”功能

Parameters

animated	Set this value to `YES` to animate the transition. Pass `NO` if you are setting up a navigation controller before its view is displayed.

Return Value

The view controller that was popped from the stack.

Discussion

This method removes the top view controller from the stack and makes the new top of the stack the active view controller. If the view controller at the top of the stack is the root view controller, this method does nothing. In other words, you cannot pop the last item on the stack.