Tamkang
University

Social Media Apps Programming

Developing iPhone / iPad Native Apps with Swift (XCode)

1051SMAP04
TLMXM1A (8648) (M2143) (Fall 2016)
(MIS MBA) (2 Credits, Elective) [Full English Course]
Wed 8,9 (15:10-17:00) B310

Min-Yuh Day, Ph.D.
Assistant Professor
Department of Information Management
Tamkang University

http://mail.tku.edu.tw/myday

2016-10-05

Course Schedule (1/3)

Week	Date	Subject/Topics
1	2016/09/14	Course Orientation and Introduction to Social Media and Mobile Apps Programming
2	2016/09/21	Introduction to Android / iOS Apps Programming
3	2016/09/28	Developing Android Native Apps with Java (Eclipse) (MIT App Inventor)
4	2016/10/05	Developing iPhone / iPad Native Apps with Swift (XCode)
5	2016/10/12	Mobile Apps using HTML5/CSS3/JavaScript
6	2016/10/19	jQuery Mobile

Course Schedule (2/3)

Week	Date	Subject/Topics
7	2016/10/26	Create Hybrid Apps with Phonegap
8	2016/11/02	jQuery Mobile/Phonegap
9	2016/11/09	jQuery Mobile/Phonegap
10	2016/11/16	Midterm Exam Week (Midterm Project Report)
11	2016/11/23	Case Study on Social Media Apps Programming and Marketing in Google Play and App Store
12	2016/11/30	Invited Speaker: Prof. Yoshinobu Kano, Associate Professor, Faculty of Informatics, Shizuoka University

Course Schedule (3/3)

Week	Date	Subject/Topics
13	2016/12/07	Google Cloud Platform
14	2016/12/14	Google App Engine and Google Map API
15	2016/12/21	Facebook API (Facebook JavaScript SDK) (Integrate Facebook with iOS/Android Apps)
16	2016/12/28	Twitter API
17	2017/01/04	Final Project Presentation
18	2017/01/11	Final Exam Week (Final Project Presentation)

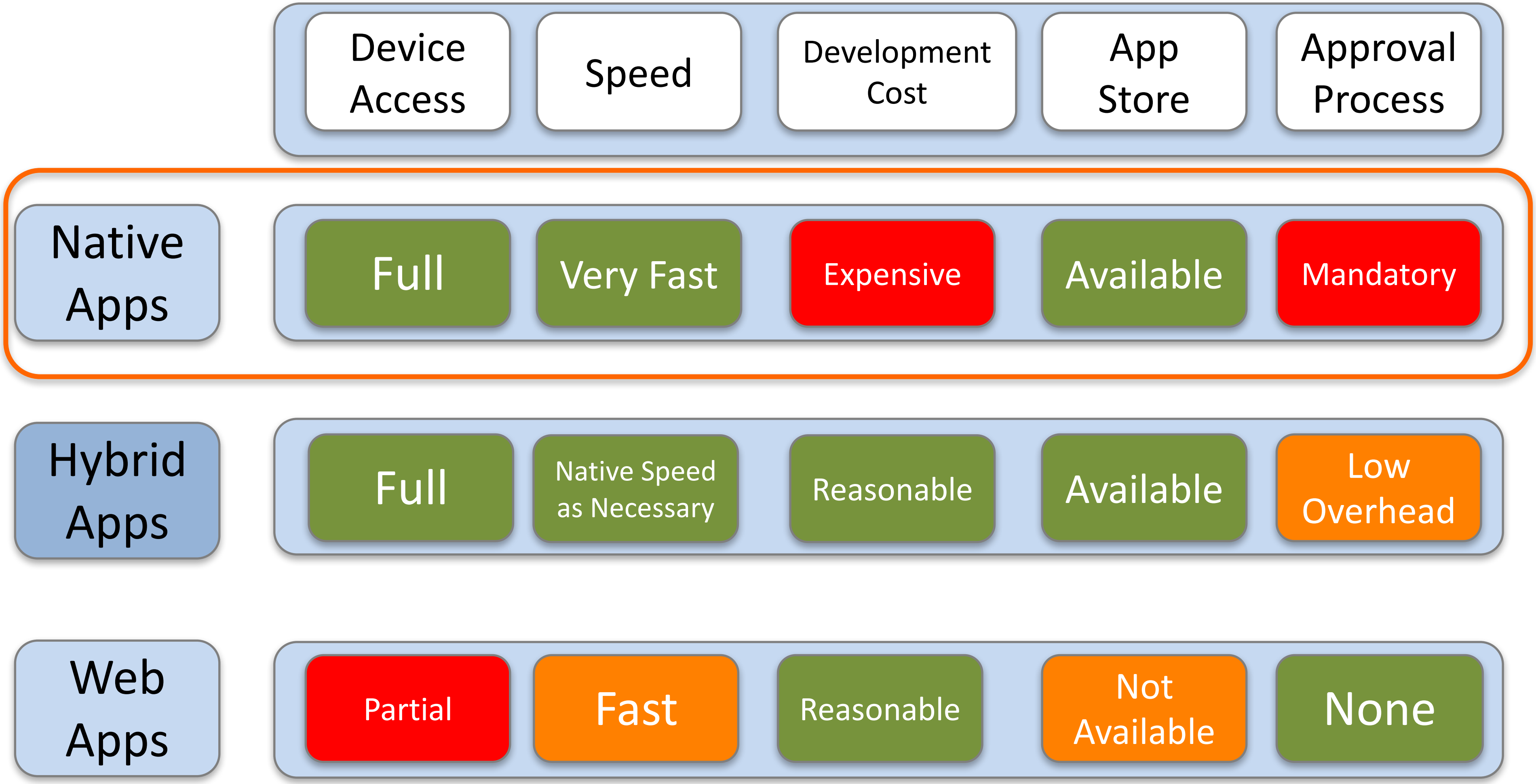
Android /iOS Apps Programming

Native Apps

Hybrid Apps

Mobile Web Apps

App Development Comparison



	Device Access	Speed	Development Cost	App Store	Approval Process
Native Apps	Full	Very Fast	Expensive	Available	Mandatory
Hybrid Apps	Full	Native Speed as Necessary	Reasonable	Available	Low Overhead
Web Apps	Partial	Fast	Reasonable	Not Available	None

Source: http://www.scribd.com/doc/50805466/Native-Web-or-Hybrid-Mobile-App-Development

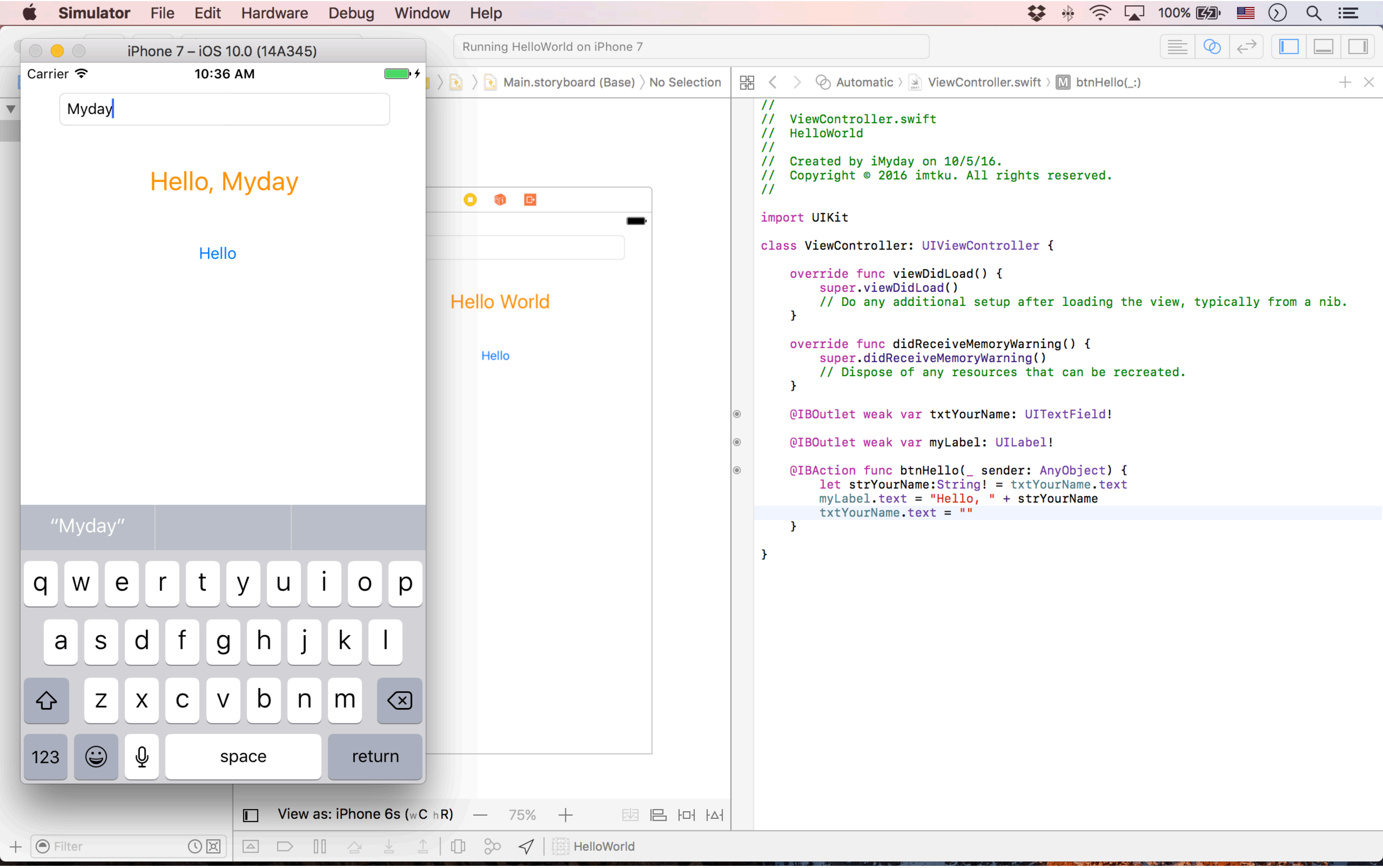
Outline

- Developing iPhone / iPad Native Apps with Swift 3 (Xcode 8)
  - Mac OS X 10.8, 10.9, 10.10, 10.11, 10.12
  - Xcode 6, Xcode 7, Xcode 8
  - iOS 8, iOS 9, iOS 10
- Building Your First iOS App with Xcode 8

Xcode 8

Swift 3

Building Your First iOS App with Xcode 8



Simulator File Edit Hardware Debug Window Help
100%
iPhone 7 – iOS 10.0 (14A345)
Running HelloWorld on iPhone 7
Carrier
10:36 AM
Myday
Hello, Myday
Hello
"Myday"
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
123
space
return
Main.storyboard (Base) 〉 No Selection
Automatic 〉 ViewController.swift 〉 btnHello(_:)
Hello World
Hello
View as: iPhone 6s (wC hR)
75%
Filter
HelloWorld

```
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. 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.
    }

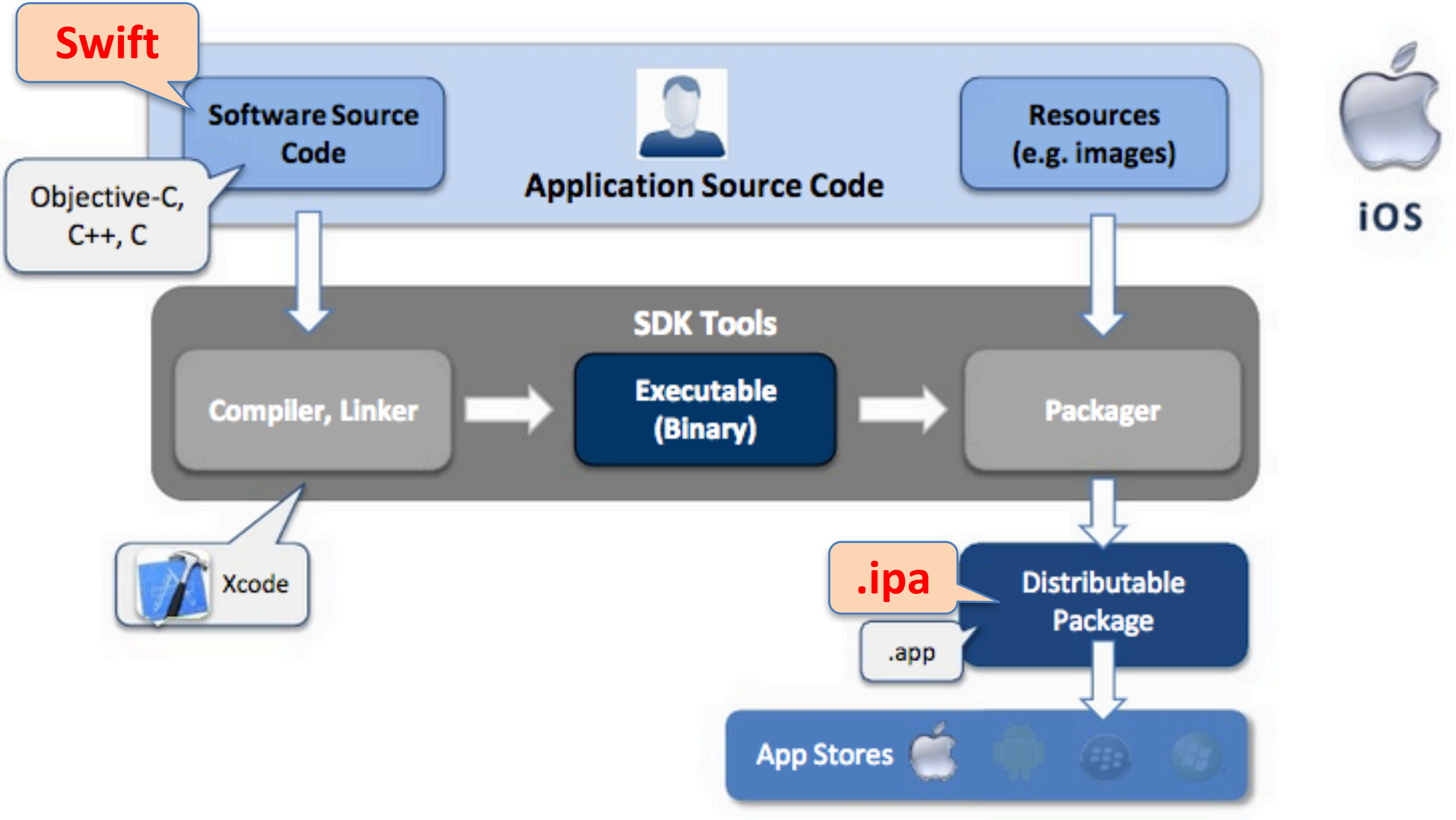
    @IBOutlet weak var txtYourName: UITextField!

    @IBOutlet weak var myLabel: UILabel!

    @IBAction func btnHello(_ sender: AnyObject) {
        let strYourName:String! = txtYourName.text
        myLabel.text = "Hello, " + strYourName
        txtYourName.text = ""
    }

}
```

iOS - Native App Development



Swift

Software Source Code

Objective-C, C++, C

Application Source Code

Resources (e.g. images)

iOS

SDK Tools

Compiler, Linker

Executable (Binary)

Packager

Xcode

.ipa

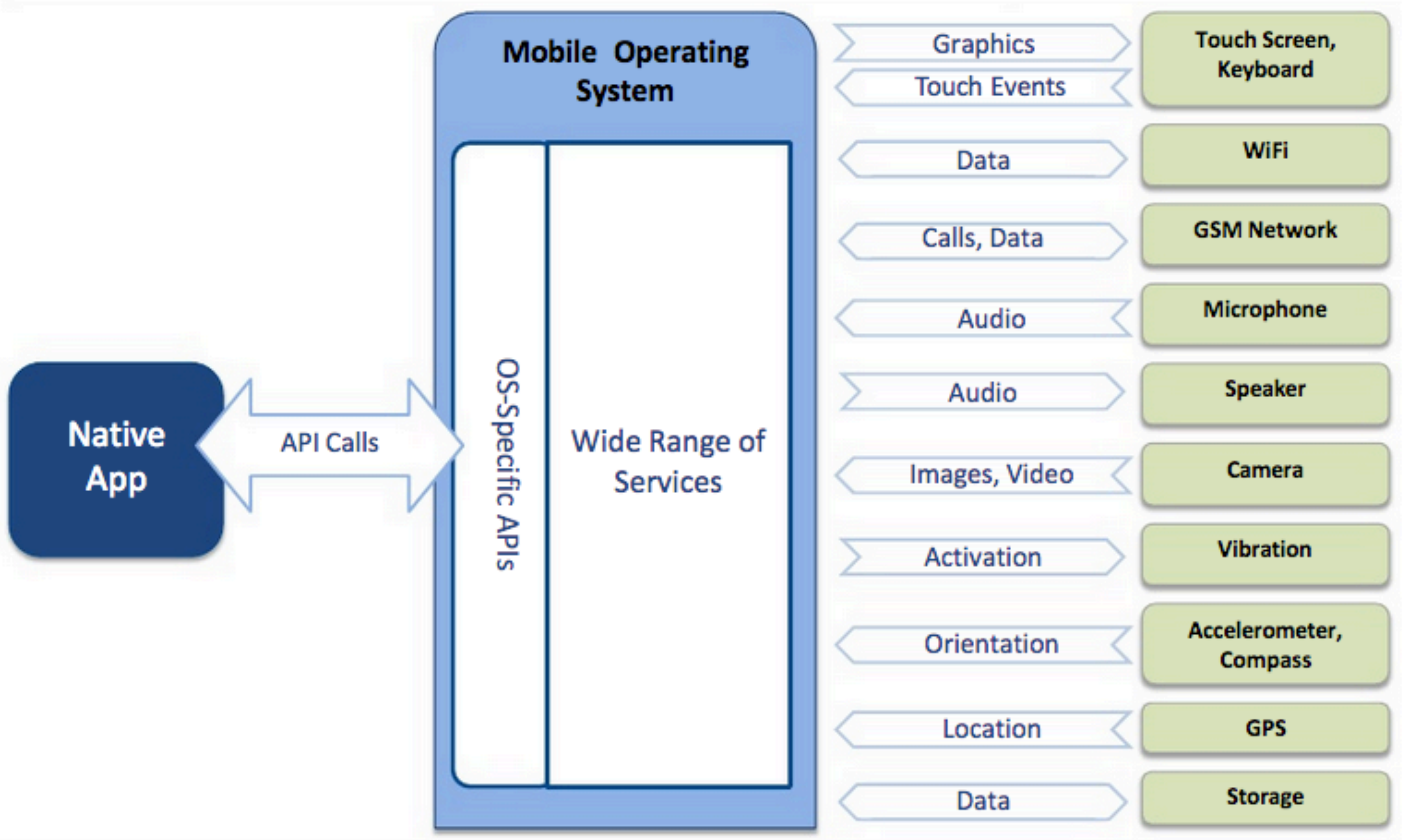
.app

Distributable Package

App Stores

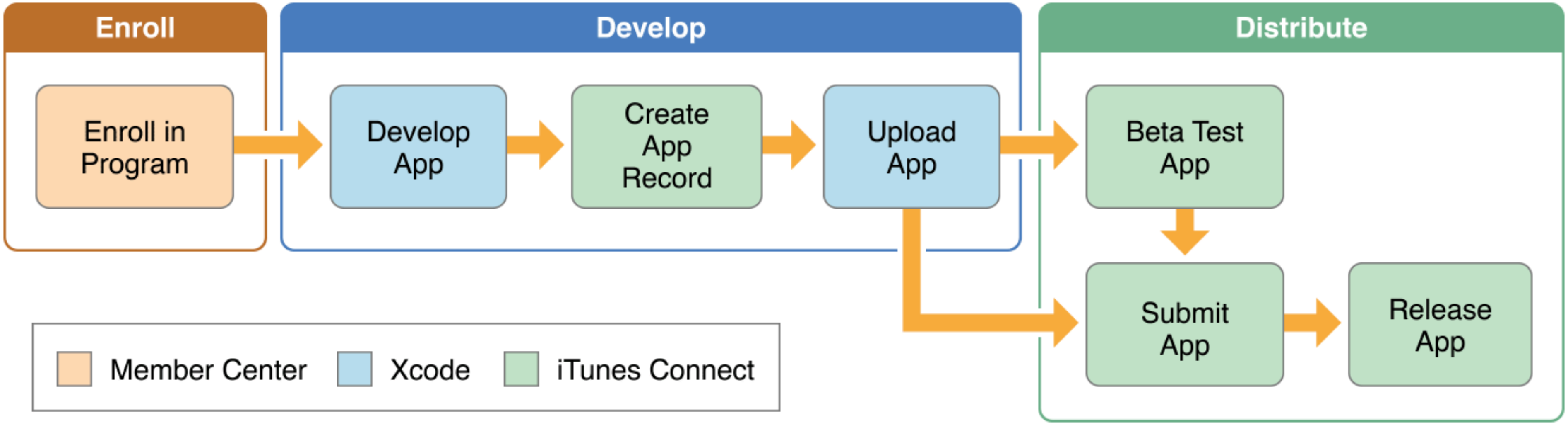
Source: http://www.scribd.com/doc/50805466/Native-Web-or-Hybrid-Mobile-App-Development

Native App – Interaction with Mobile Device



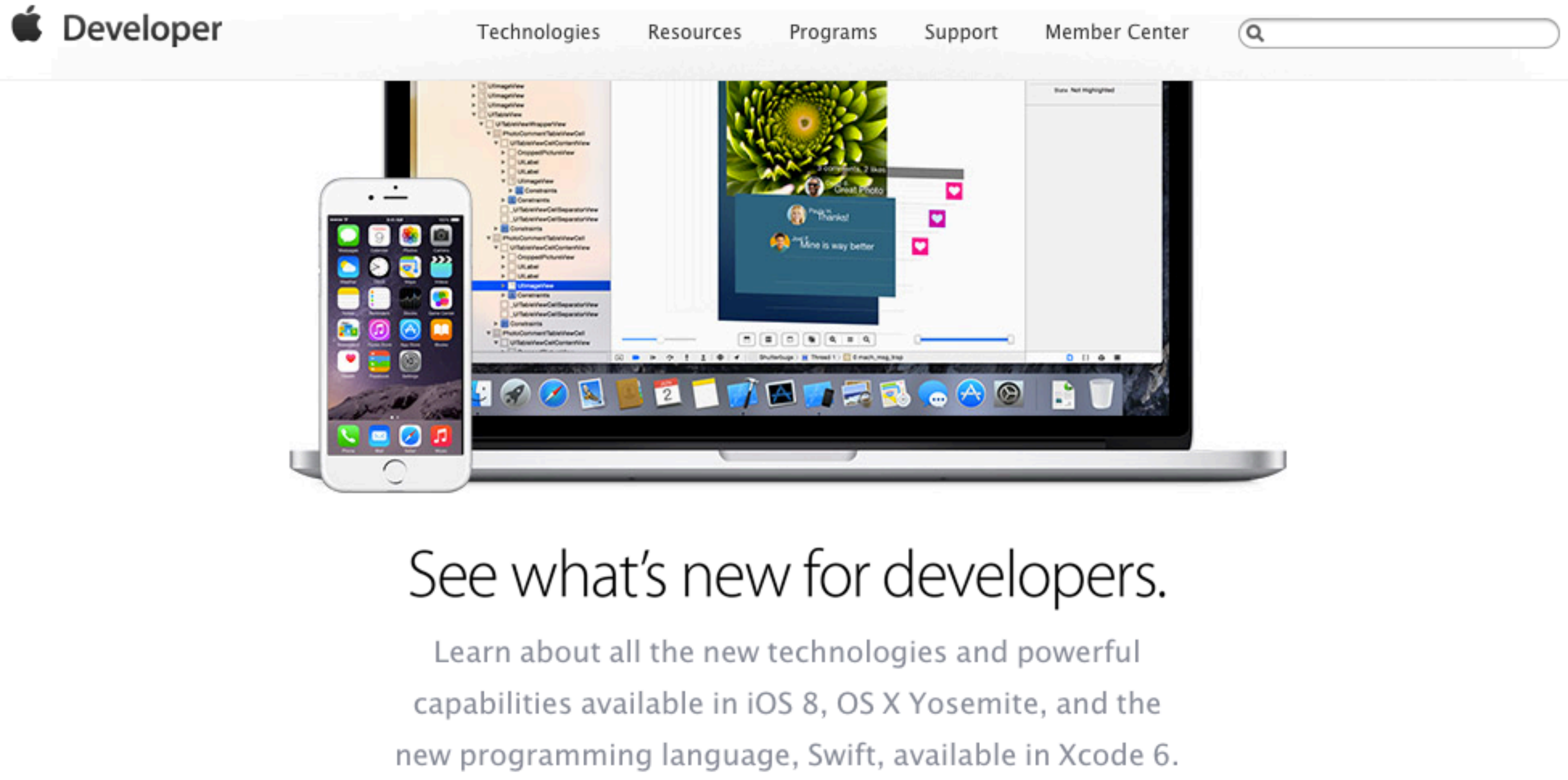
Source: http://www.scribd.com/doc/50805466/Native-Web-or-Hybrid-Mobile-App-Development

Apple App Distribution Workflows



Source: https://developer.apple.com/library/ios/documentation/IDEs/Conceptual/AppDistributionGuide/Introduction/Introduction.html#//apple_ref/doc/uid/TP40012582

developer.apple.com

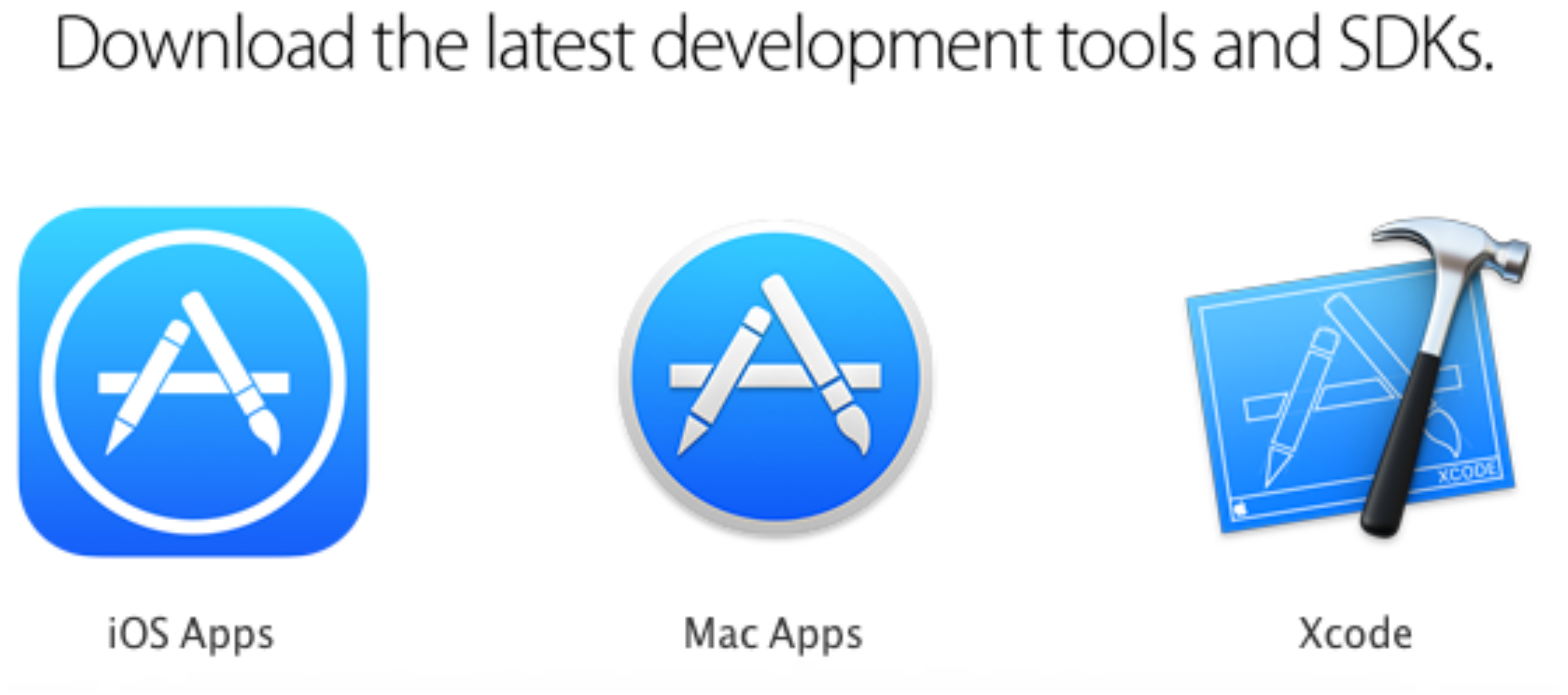


See what’s new for developers.

Learn about all the new technologies and powerful capabilities available in iOS 8, OS X Yosemite, and the new programming language, Swift, available in Xcode 6.

Source: https://developer.apple.com/

developer.apple.com



Download the latest development tools and SDKs.

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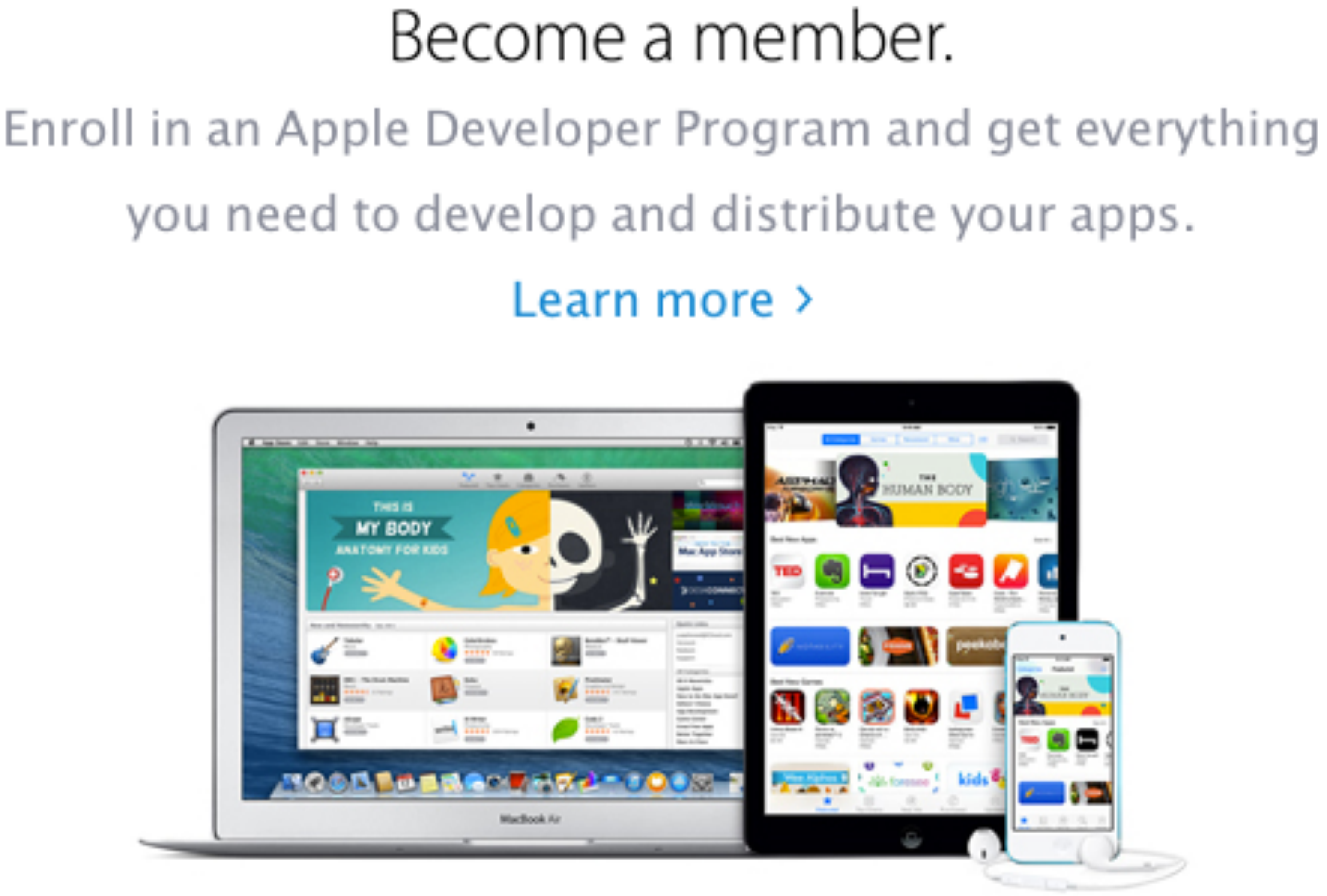


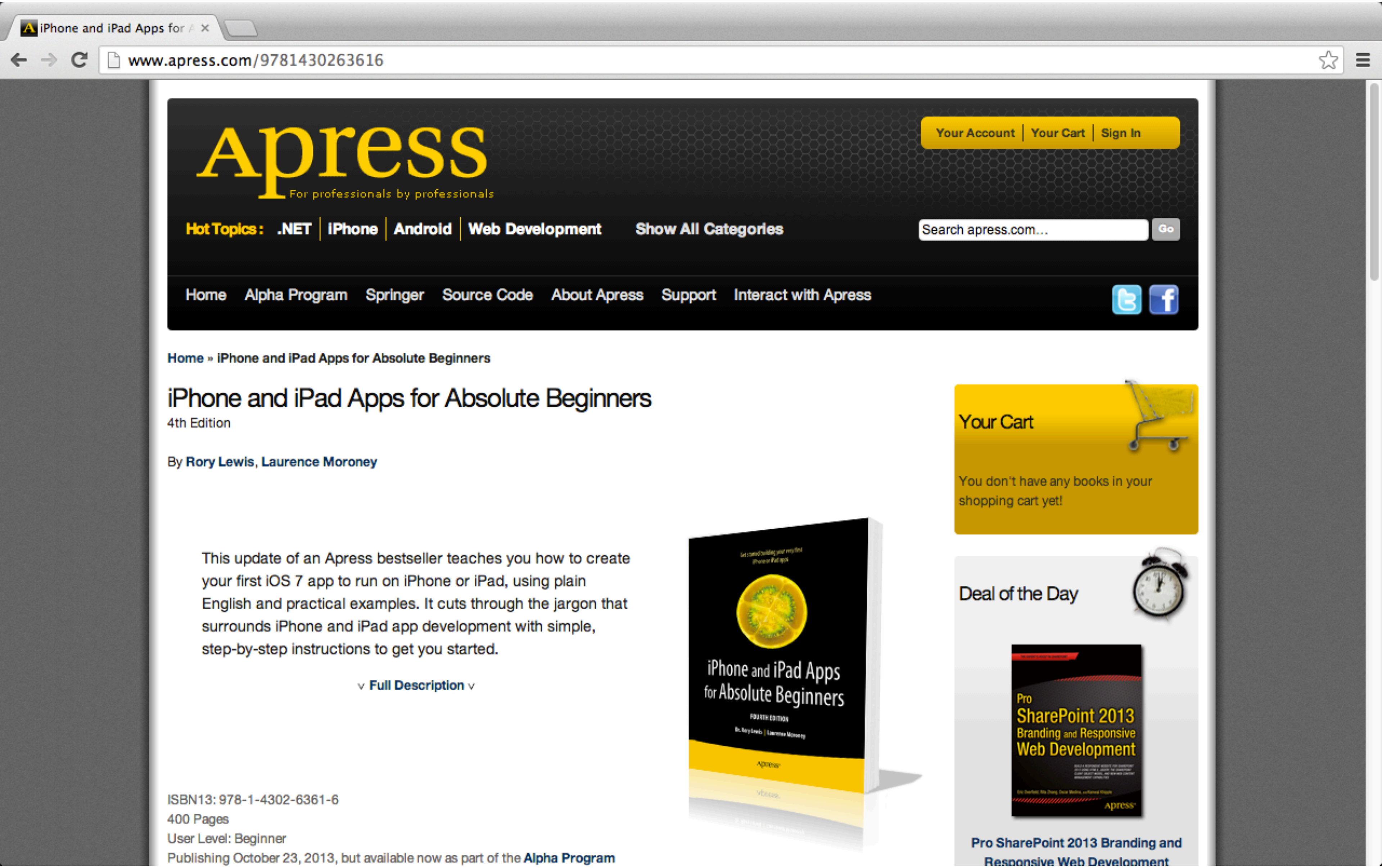
Become a member.

Enroll in an Apple Developer Program and get everything you need to develop and distribute your apps.

Learn more ›

Source: https://developer.apple.com/

Rory Lewis and Laurence Moroney, **iPhone and iPad Apps for Absolute Beginners**, 4th Edition, Apress, 2013


iPhone and iPad Apps for A ×
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FOURTH EDITION
Apress
Pro SharePoint 2013 Branding and Responsive Web Development
Apress

iPhone and iPad Apps for Absolute Beginners

4th Edition

By Rory Lewis, Laurence Moroney

This update of an Apress bestseller teaches you how to create your first iOS 7 app to run on iPhone or iPad, using plain English and practical examples. It cuts through the jargon that surrounds iPhone and iPad app development with simple, step-by-step instructions to get you started.

∨ Full Description ∨

ISBN13: 978-1-4302-6361-6
400 Pages
User Level: Beginner
Publishing October 23, 2013, but available now as part of the Alpha Program

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Deal of the Day

Pro SharePoint 2013 Branding and Responsive Web Development

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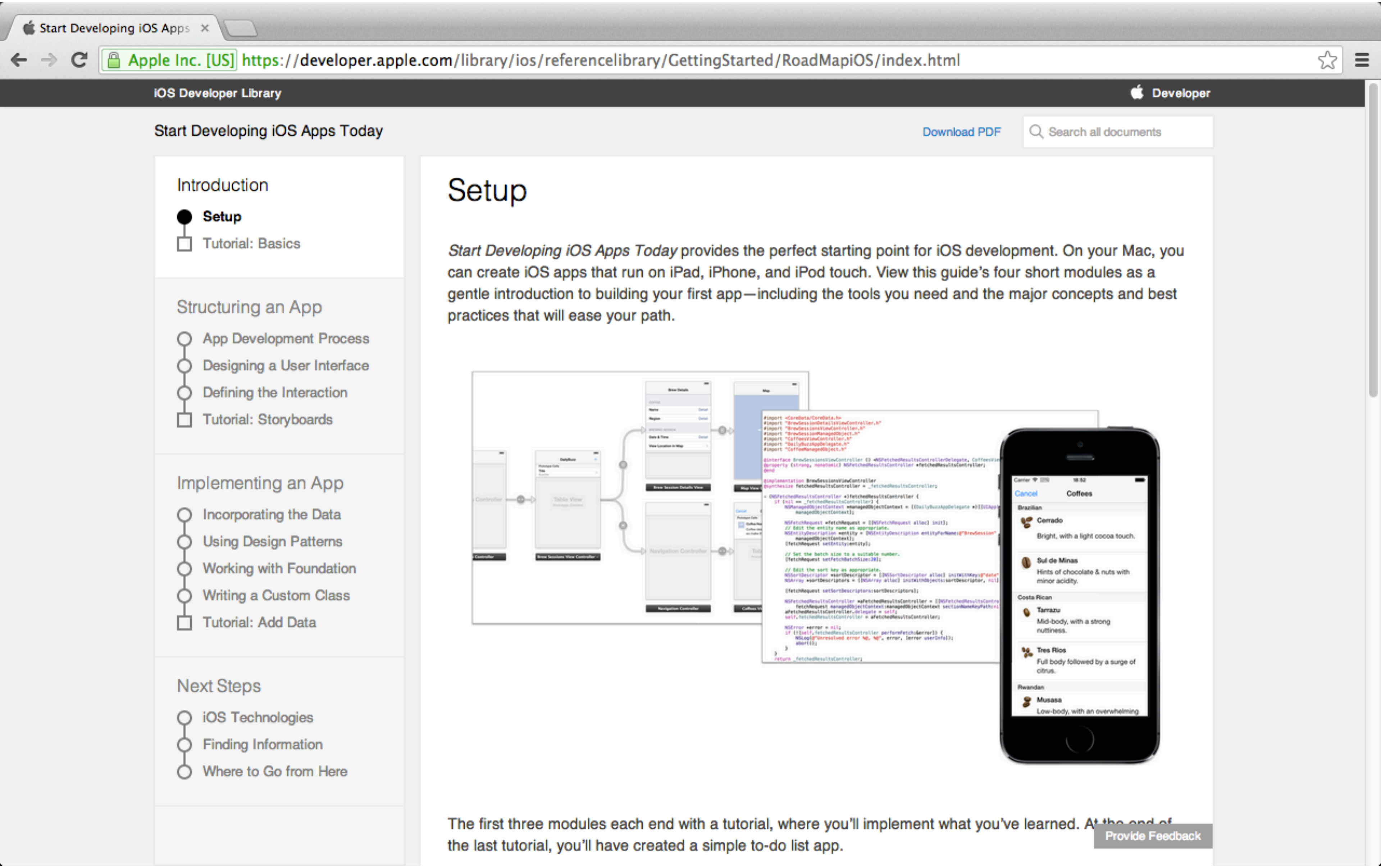
Start Developing iOS Apps Today



Start Developing iOS Apps ×
Apple Inc. [US] https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/index.html
iOS Developer Library
Developer

Start Developing iOS Apps Today

Download PDF
Search all documents

Setup

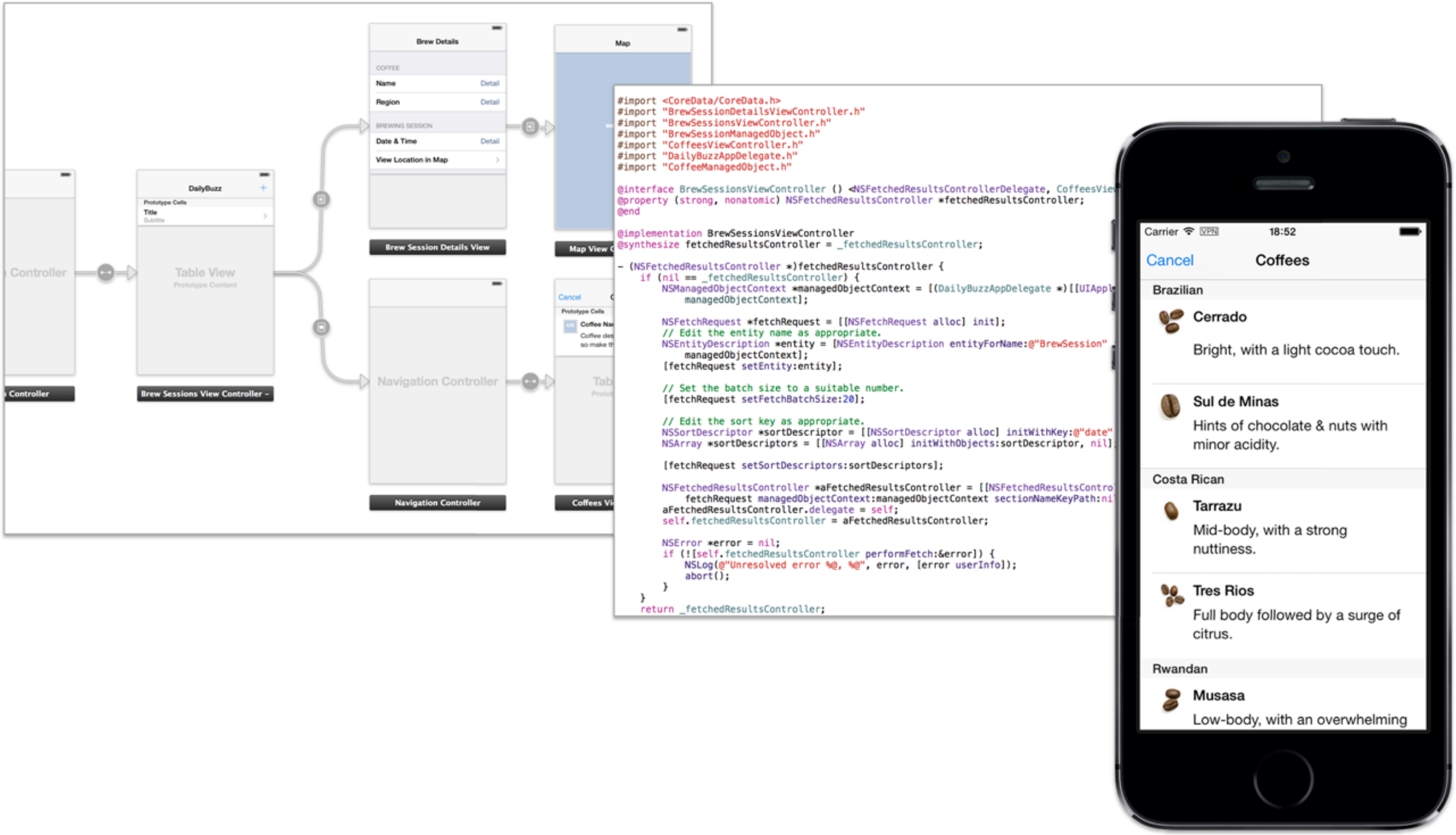
Start Developing iOS Apps Today provides the perfect starting point for iOS development. On your Mac, you can create iOS apps that run on iPad, iPhone, and iPod touch. View this guide's four short modules as a gentle introduction to building your first app—including the tools you need and the major concepts and best practices that will ease your path.

Carrier
18:52
Cancel
Coffees
Brazilian
Cerrado
Bright, with a light cocoa touch.
Sul de Minas
Hints of chocolate & nuts with minor acidity.
Costa Rican
Tarrazu
Mid-body, with a strong nuttiness.
Tres Rios
Full body followed by a surge of citrus.
Rwandan
Musasa
Low-body, with an overwhelming

The first three modules each end with a tutorial, where you'll implement what you've learned. At the end of the last tutorial, you'll have created a simple to-do list app.

Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/index.html

Start Developing iOS Apps Today



```
#import <CoreData/CoreData.h>
#import "BrewSessionDetailsViewController.h"
#import "BrewSessionsViewController.h"
#import "BrewSessionManagedObject.h"
#import "CoffeesViewController.h"
#import "DailyBuzzAppDelegate.h"
#import "CoffeeManagedObject.h"

@interface BrewSessionsViewController () <NSFetchedResultsControllerDelegate, CoffeesVie
@property (strong, nonatomic) NSFetchedResultsController *fetchedResultsController;
@end

@implementation BrewSessionsViewController
@synthesize fetchedResultsController = _fetchedResultsController;

- (NSFetchedResultsController *)fetchedResultsController {
    if (nil == _fetchedResultsController) {
        NSManagedObjectContext *managedObjectContext = [(DailyBuzzAppDelegate *)[[UIAppl
            managedObjectContext];

        NSFetchRequest *fetchRequest = [[NSFetchRequest alloc] init];
        // Edit the entity name as appropriate.
        NSEntityDescription *entity = [NSEntityDescription entityForName:@"BrewSession"
            managedObjectContext];
        [fetchRequest setEntity:entity];

        // Set the batch size to a suitable number.
        [fetchRequest setFetchBatchSize:20];

        // Edit the sort key as appropriate.
        NSSortDescriptor *sortDescriptor = [[NSSortDescriptor alloc] initWithKey:@"date"
        NSArray *sortDescriptors = [[NSArray alloc] initWithObjects:sortDescriptor, nil]

        [fetchRequest setSortDescriptors:sortDescriptors];

        NSFetchedResultsController *aFetchedResultsController = [[NSFetchedResultsContro
            fetchRequest managedObjectContext:managedObjectContext sectionNameKeyPath:ni
        aFetchedResultsController.delegate = self;
        self.fetchedResultsController = aFetchedResultsController;

        NSError *error = nil;
        if (![self.fetchedResultsController performFetch:&error]) {
            NSLog(@"Unresolved error %@, %@", error, [error userInfo]);
            abort();
        }
    }
    return _fetchedResultsController;
```

Carrier VPN 18:52

Cancel **Coffees**

Brazilian

Cerrado

Bright, with a light cocoa touch.

Sul de Minas

Hints of chocolate & nuts with minor acidity.

Costa Rican

Tarrazu

Mid-body, with a strong nuttiness.

Tres Rios

Full body followed by a surge of citrus.

Rwandan

Musasa

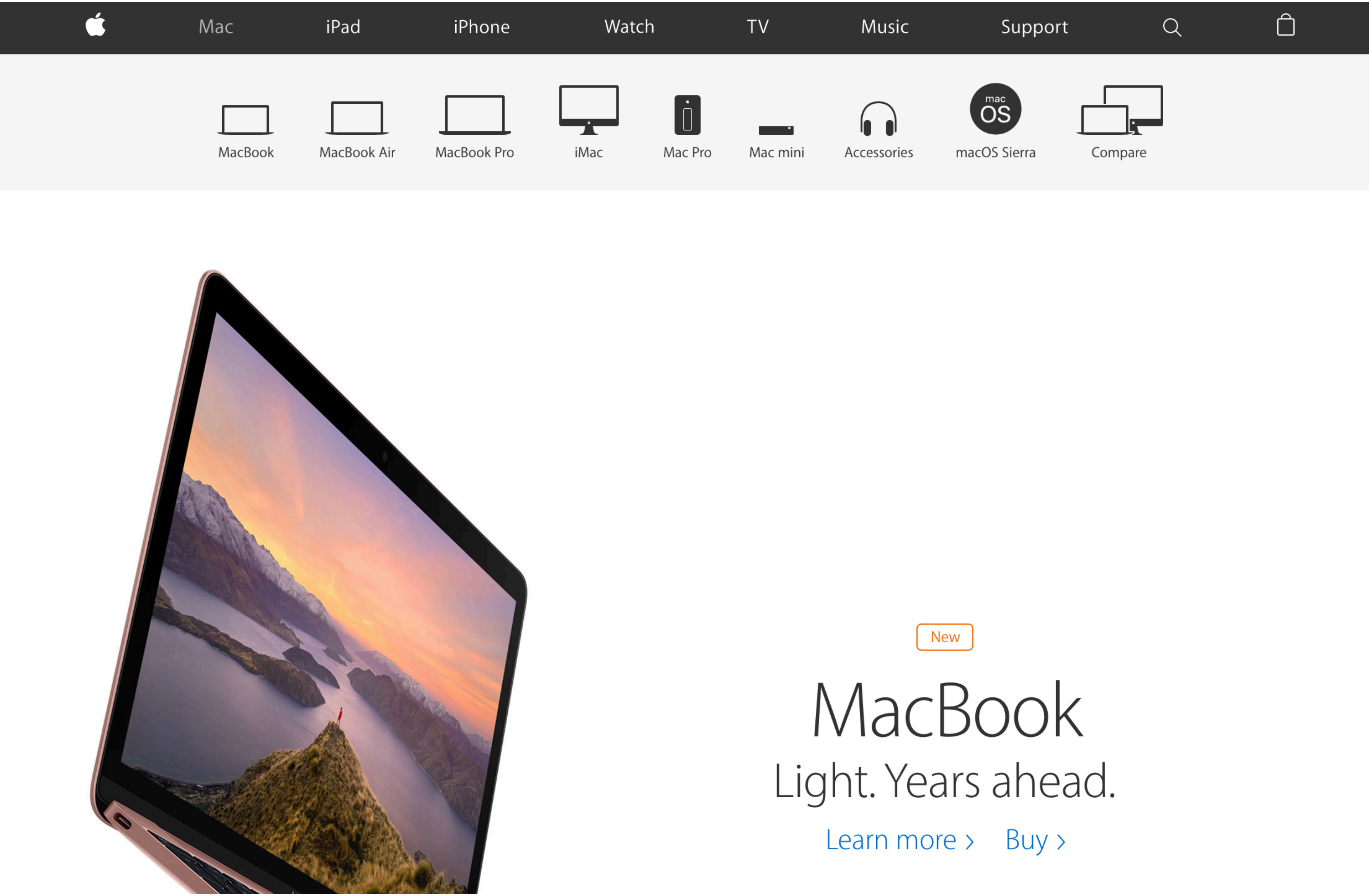
Low-body, with an overwhelming

Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/index.html

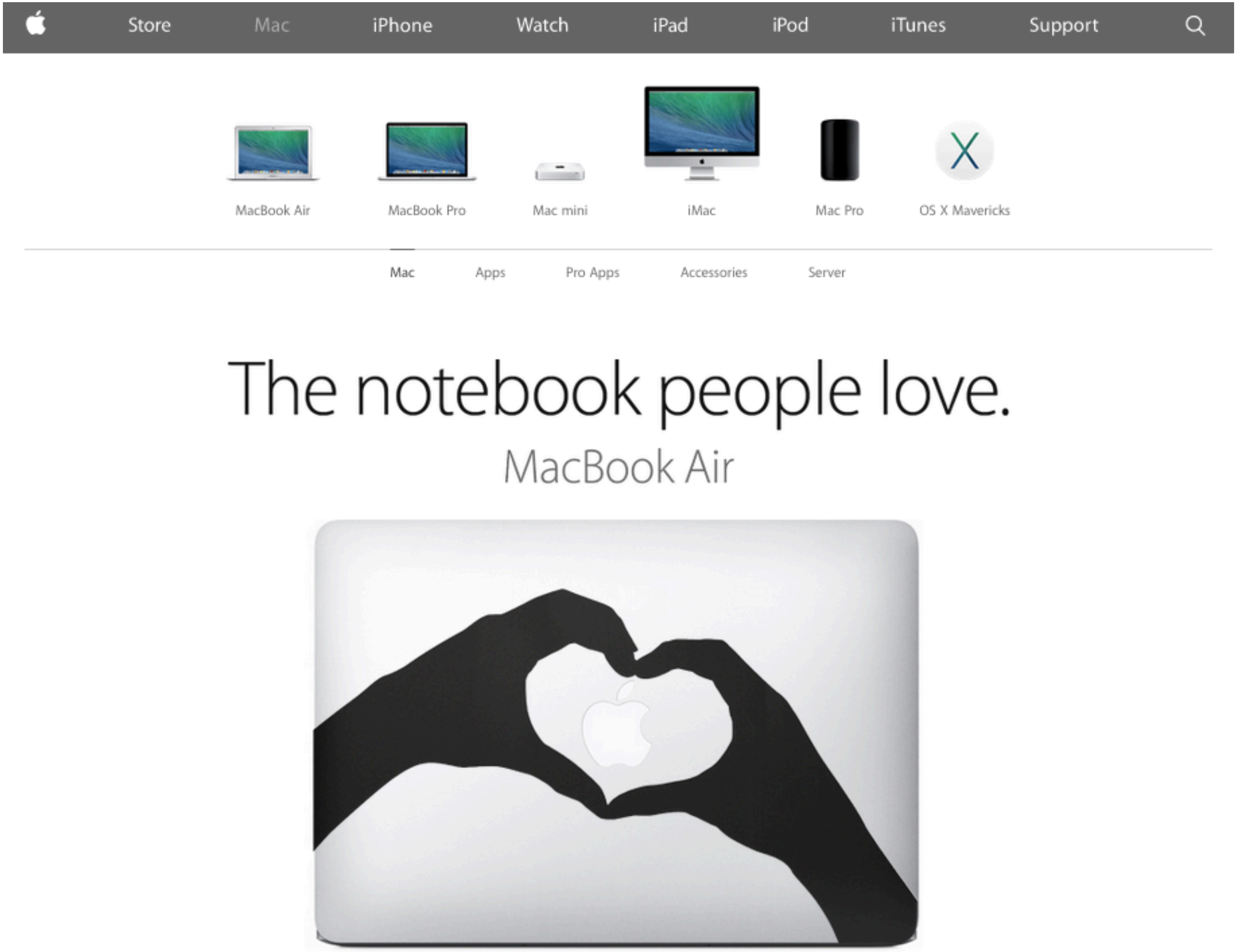
To develop iOS apps, you need:

- A Mac computer running OS X 10.8 or later
  - Mac OS X 10.8 (Mountain Lion)
  - Mac OS X 10.9 (Mavericks)
  - Mac OS X 10.10 (Yosemite)
  - Mac OS X 10.11 (El Capitan)
  - macOS Sierra (10.12)
- Xcode
  - Xcode 6
  - Xcode 7
  - Xcode 8
- iOS SDK

Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/index.html



Source: https://www.apple.com/mac/

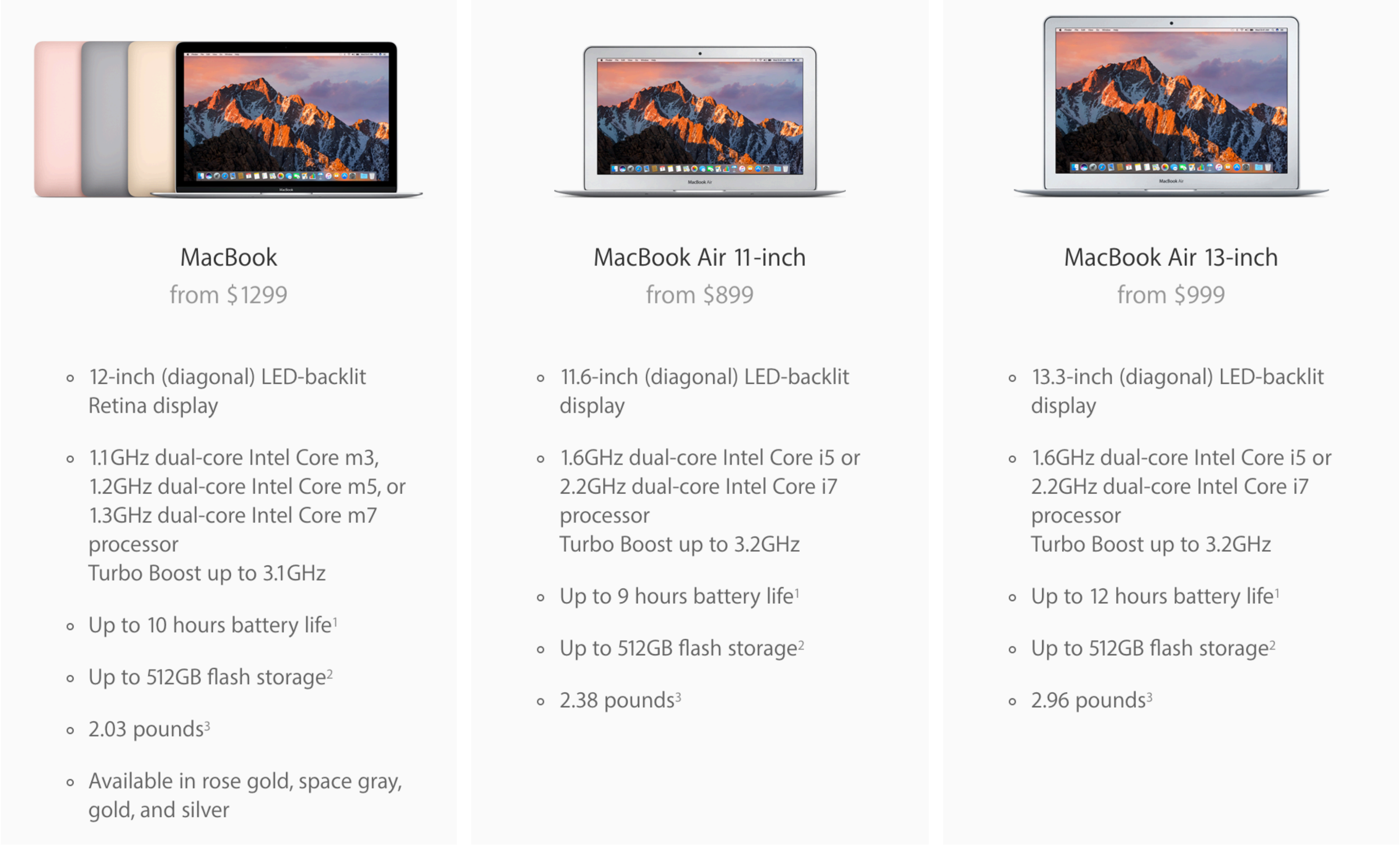


The notebook people love.

MacBook Air

Source: https://www.apple.com/mac/

MacBook and MacBook Air



MacBook

from $1299

- 12-inch (diagonal) LED-backlit Retina display
- 1.1GHz dual-core Intel Core m3, 1.2GHz dual-core Intel Core m5, or 1.3GHz dual-core Intel Core m7 processor
  Turbo Boost up to 3.1GHz
- Up to 10 hours battery life[1]
- Up to 512GB flash storage[2]
- 2.03 pounds[3]
- Available in rose gold, space gray, gold, and silver

MacBook Air 11-inch

from $899

- 11.6-inch (diagonal) LED-backlit display
- 1.6GHz dual-core Intel Core i5 or 2.2GHz dual-core Intel Core i7 processor
  Turbo Boost up to 3.2GHz
- Up to 9 hours battery life[1]
- Up to 512GB flash storage[2]
- 2.38 pounds[3]

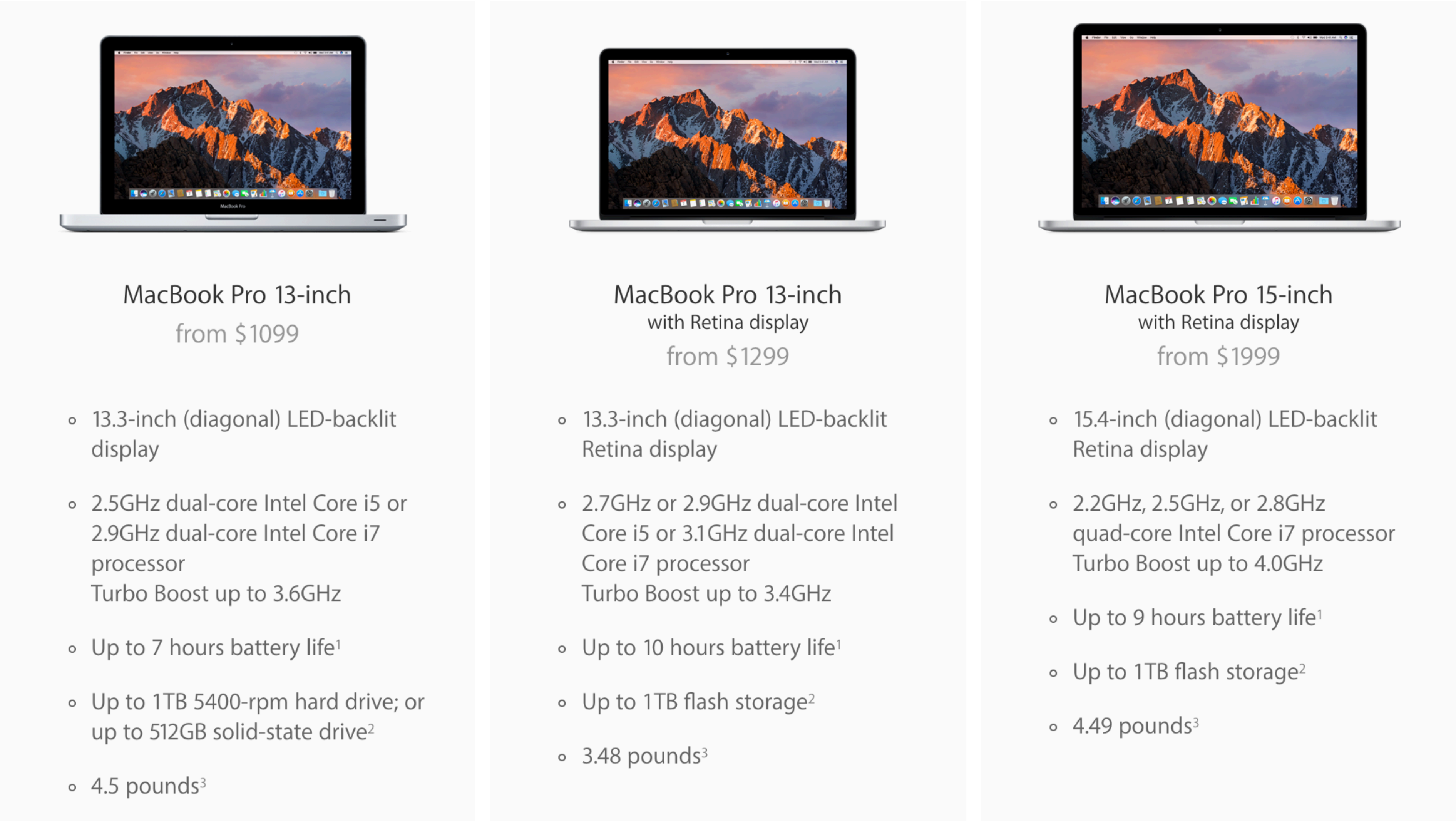
MacBook Air 13-inch

from $999

- 13.3-inch (diagonal) LED-backlit display
- 1.6GHz dual-core Intel Core i5 or 2.2GHz dual-core Intel Core i7 processor
  Turbo Boost up to 3.2GHz
- Up to 12 hours battery life[1]
- Up to 512GB flash storage[2]
- 2.96 pounds[3]

Source: http://www.apple.com/mac/compare/

MacBook Pro



MacBook Pro 13-inch

from $1099

- 13.3-inch (diagonal) LED-backlit display
- 2.5GHz dual-core Intel Core i5 or 2.9GHz dual-core Intel Core i7 processor
  Turbo Boost up to 3.6GHz
- Up to 7 hours battery life[1]
- Up to 1TB 5400-rpm hard drive; or up to 512GB solid-state drive[2]
- 4.5 pounds[3]

MacBook Pro 13-inch

with Retina display

from $1299

- 13.3-inch (diagonal) LED-backlit Retina display
- 2.7GHz or 2.9GHz dual-core Intel Core i5 or 3.1GHz dual-core Intel Core i7 processor
  Turbo Boost up to 3.4GHz
- Up to 10 hours battery life[1]
- Up to 1TB flash storage[2]
- 3.48 pounds[3]

MacBook Pro 15-inch

with Retina display

from $1999

- 15.4-inch (diagonal) LED-backlit Retina display
- 2.2GHz, 2.5GHz, or 2.8GHz quad-core Intel Core i7 processor
  Turbo Boost up to 4.0GHz
- Up to 9 hours battery life[1]
- Up to 1TB flash storage[2]
- 4.49 pounds[3]

Source: http://www.apple.com/mac/compare/

iMac

iMac 21.5-inch

from $1099

- 21.5-inch (diagonal) LED-backlit display
- 1.6GHz dual-core or 2.8GHz quad-core Intel Core i5 processor
  Turbo Boost up to 3.3GHz
- 1TB 5400-rpm hard drive; 1TB or 2TB Fusion Drive; or 256GB flash storage (SSD)[2]
- Magic Keyboard and Magic Mouse 2 or Magic Trackpad 2

iMac 21.5-inch

with Retina 4K display

from $1499

- 21.5-inch (diagonal) LED-backlit Retina 4K display
- 3.1GHz quad-core Intel Core i5 or 3.3GHz quad-core Intel Core i7 processor
  Turbo Boost up to 3.8GHz
- 1TB 5400-rpm hard drive; 1TB or 2TB Fusion Drive; or up to 512GB flash storage (SSD)[2]
- Magic Keyboard and Magic Mouse 2 or Magic Trackpad 2

iMac 27-inch

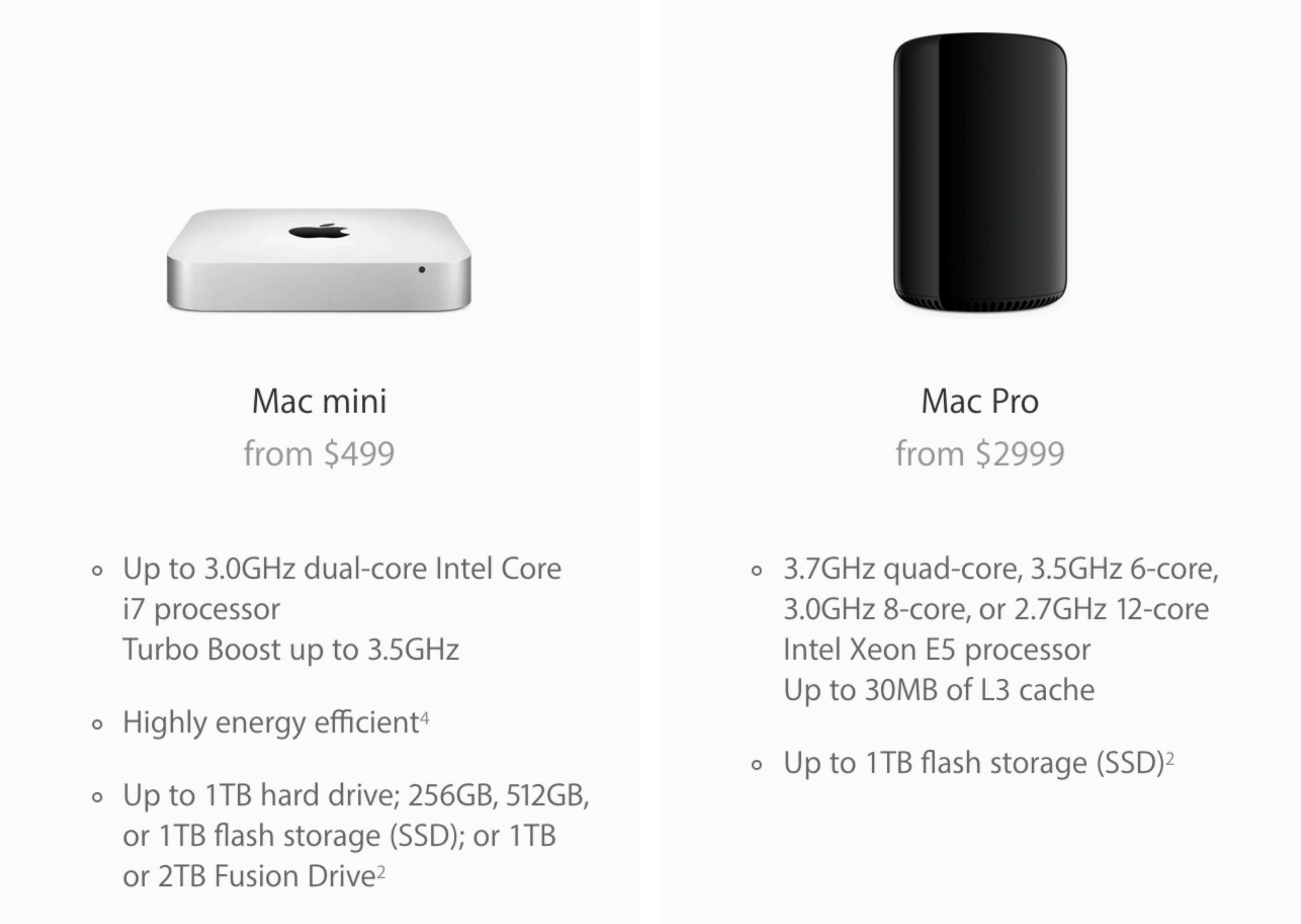
with Retina 5K display

from $1799

- 27-inch (diagonal) LED-backlit Retina 5K display
- 3.2GHz or 3.3GHz quad-core Intel Core i5 or 4.0GHz quad-core Intel Core i7 processor
  Turbo Boost up to 4.2GHz
- 1TB 7200-rpm hard drive; 1TB, 2TB, or 3TB Fusion Drive; or up to 1TB flash storage (SSD)[2]
- Magic Keyboard and Magic Mouse 2 or Magic Trackpad 2

Source: http://www.apple.com/mac/compare/

Mac mini



Mac mini

from $499

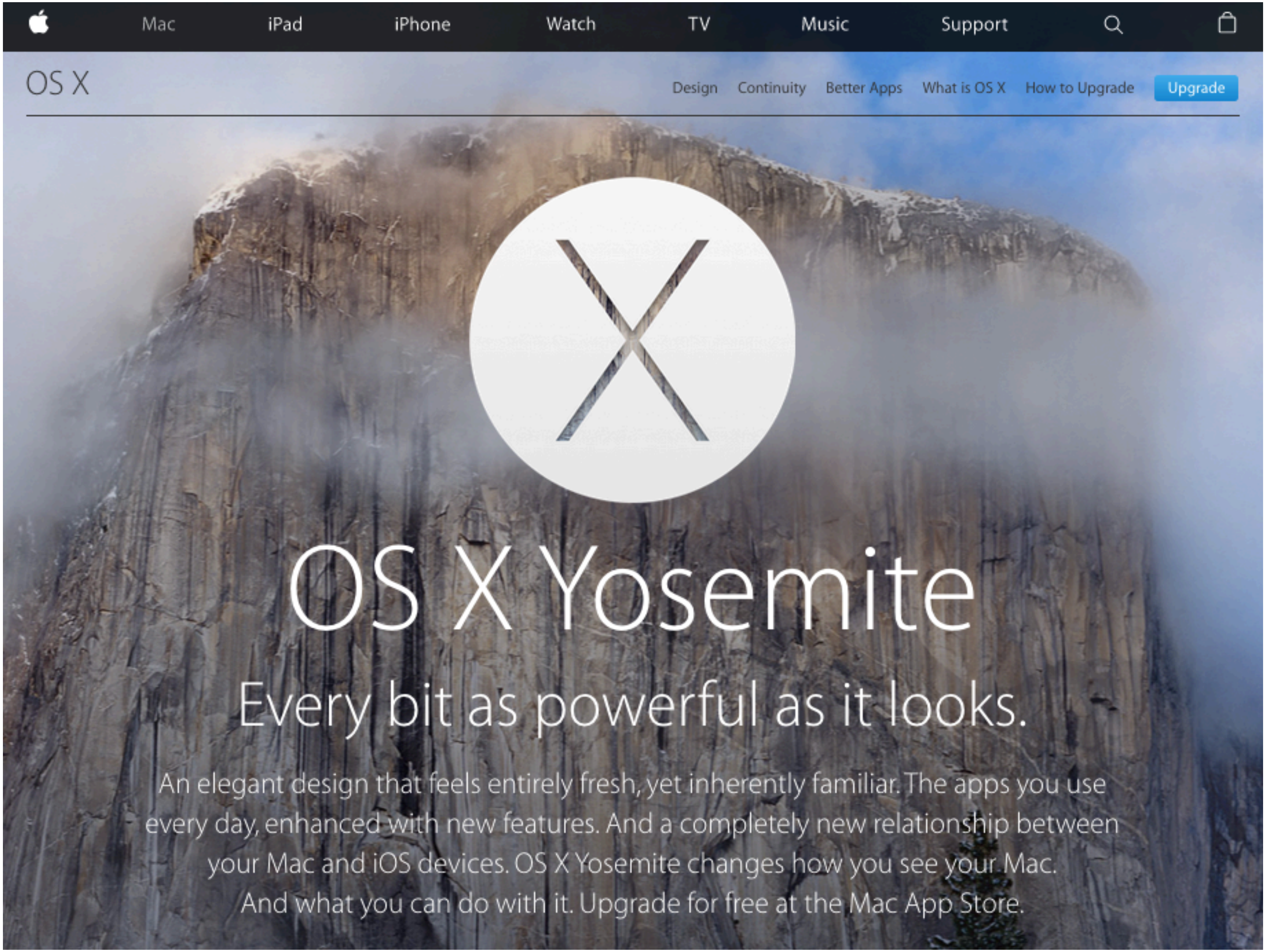
- Up to 3.0GHz dual-core Intel Core i7 processor
  Turbo Boost up to 3.5GHz
- Highly energy efficient[4]
- Up to 1TB hard drive; 256GB, 512GB, or 1TB flash storage (SSD); or 1TB or 2TB Fusion Drive[2]

Mac Pro

from $2999

- 3.7GHz quad-core, 3.5GHz 6-core, 3.0GHz 8-core, or 2.7GHz 12-core Intel Xeon E5 processor
  Up to 30MB of L3 cache
- Up to 1TB flash storage (SSD)[2]

Source: http://www.apple.com/mac/compare/



OS X Yosemite

Every bit as powerful as it looks.

An elegant design that feels entirely fresh, yet inherently familiar. The apps you use every day, enhanced with new features. And a completely new relationship between your Mac and iOS devices. OS X Yosemite changes how you see your Mac. And what you can do with it. Upgrade for free at the Mac App Store.

Source: http://www.apple.com/osx/

OS X El Capitan

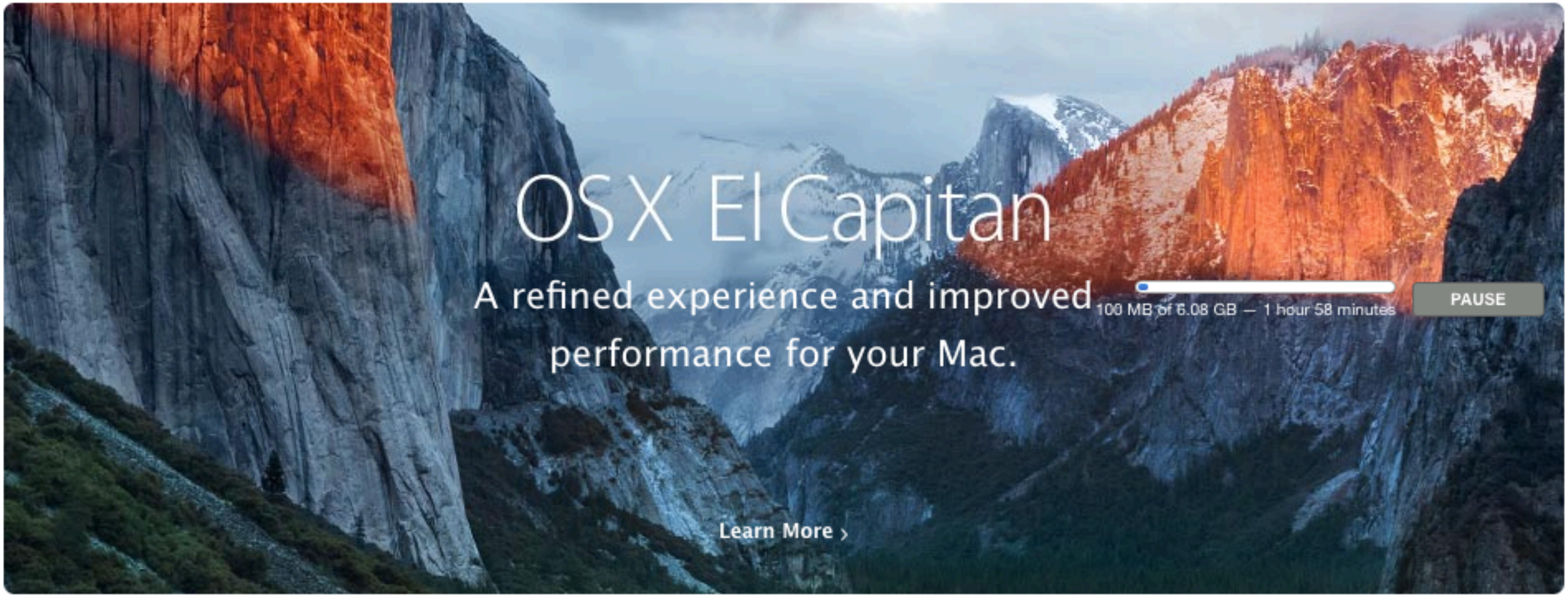
A refined experience and improved performance for your Mac.

Best New Apps & Games

OS X El Capitan

Utilities

★★★★★ 165 Ratings

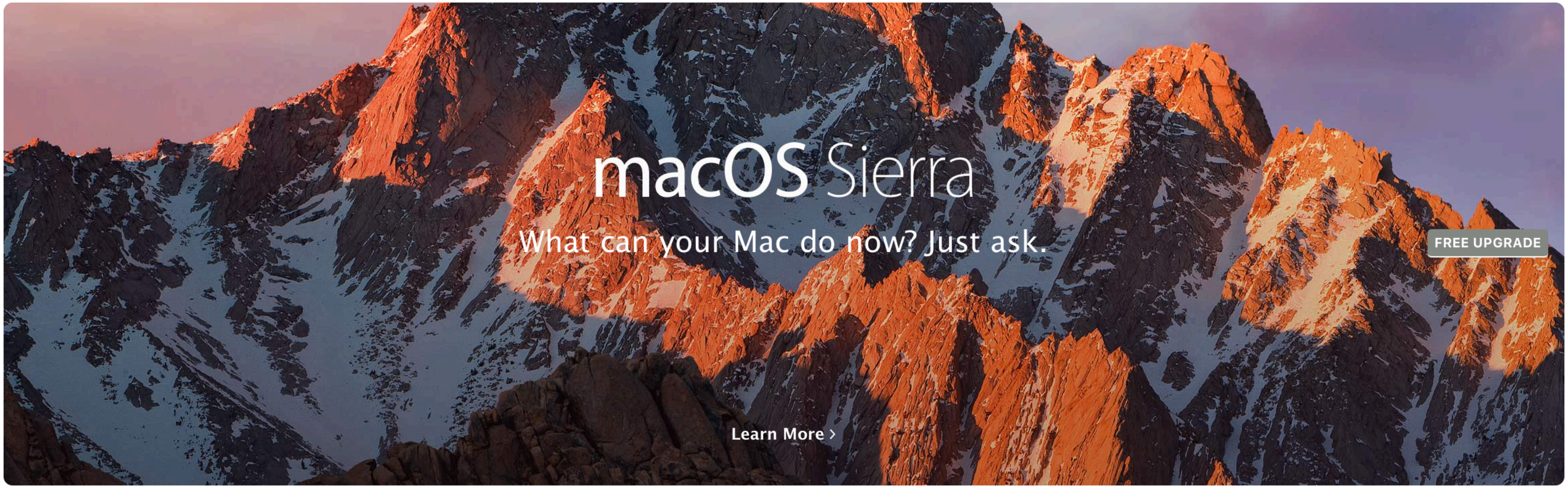


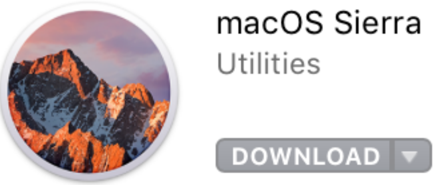
OS X El Capitan

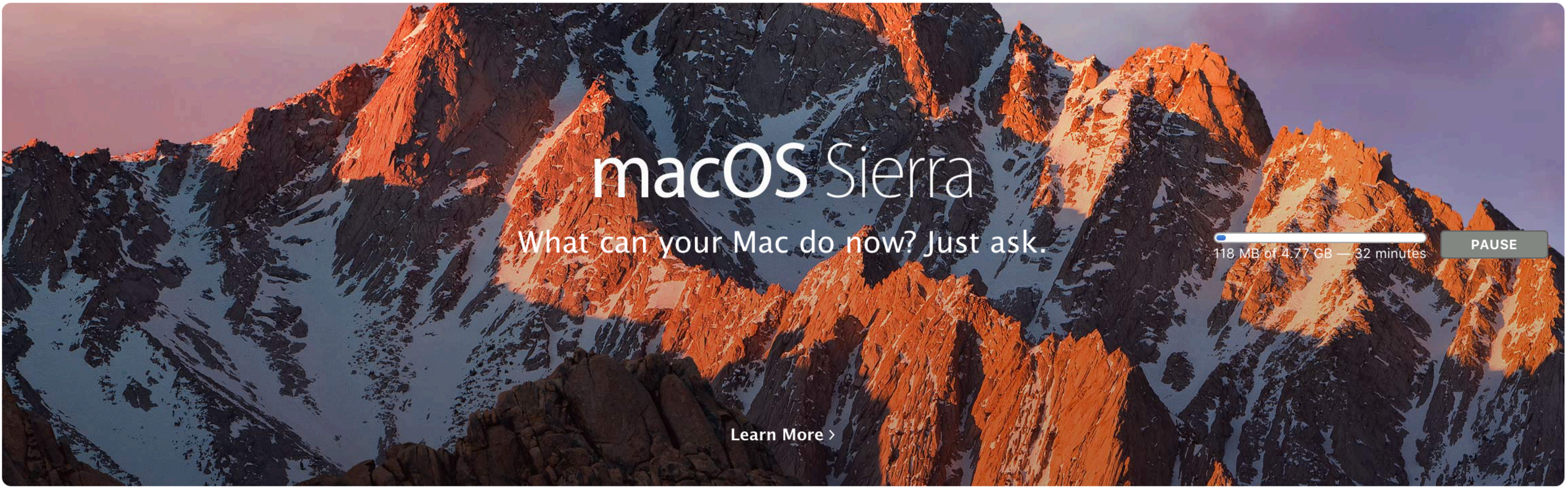
A refined experience and improved performance for your Mac.

100 MB of 6.08 GB — 1 hour 58 minutes

macOS Sierra





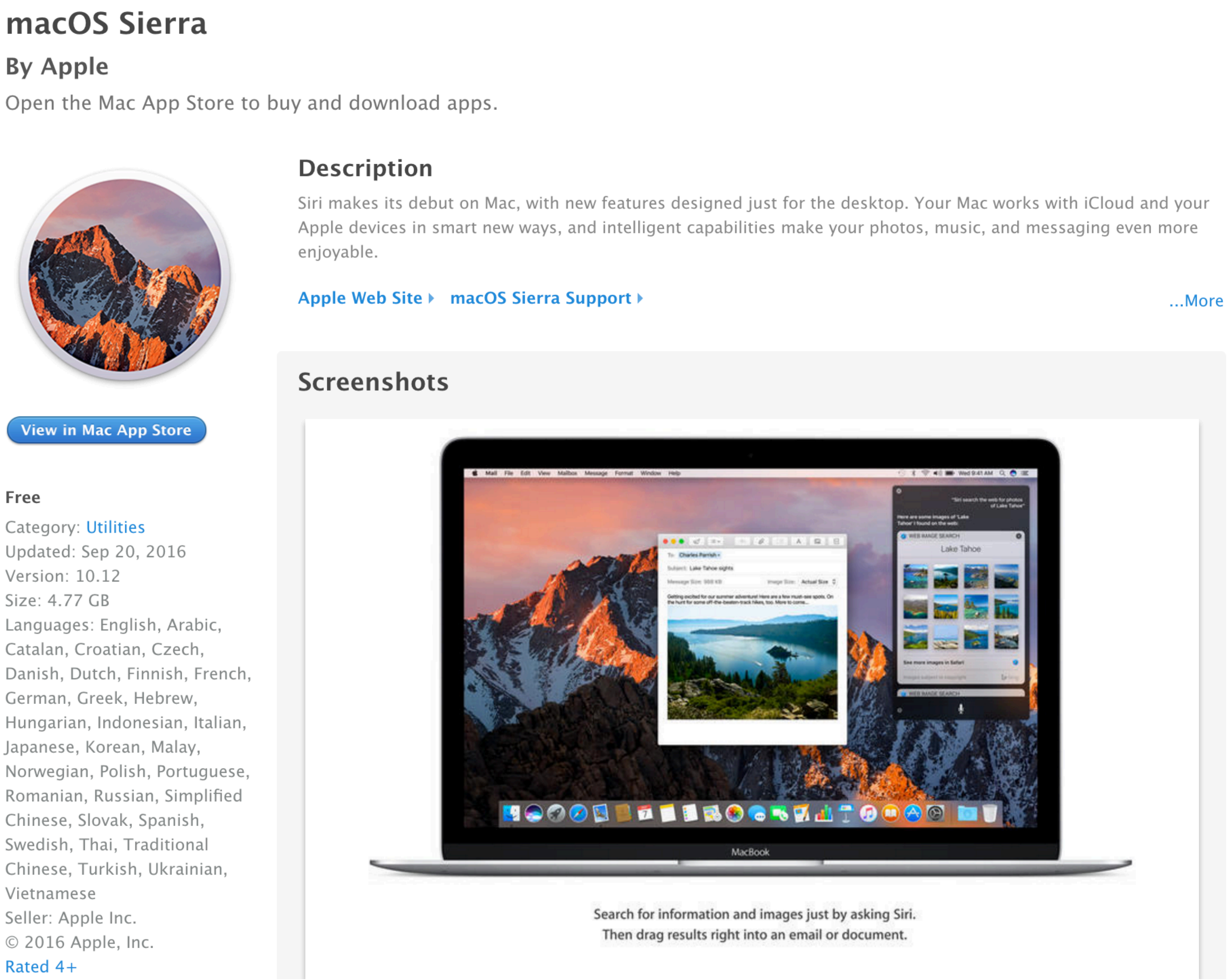


macOS Sierra

What can your Mac do now? Just ask.

118 MB of 4.77 GB — 32 minutes

macOS Sierra



macOS Sierra

By Apple

Open the Mac App Store to buy and download apps.

Description

Siri makes its debut on Mac, with new features designed just for the desktop. Your Mac works with iCloud and your Apple devices in smart new ways, and intelligent capabilities make your photos, music, and messaging even more enjoyable.

Apple Web Site ▸ macOS Sierra Support ▸

...More

Screenshots

Search for information and images just by asking Siri.
Then drag results right into an email or document.

View in Mac App Store

Free

Category: Utilities
Updated: Sep 20, 2016
Version: 10.12
Size: 4.77 GB
Languages: English, Arabic, Catalan, Croatian, Czech, Danish, Dutch, Finnish, French, German, Greek, Hebrew, Hungarian, Indonesian, Italian, Japanese, Korean, Malay, Norwegian, Polish, Portuguese, Romanian, Russian, Simplified Chinese, Slovak, Spanish, Swedish, Thai, Traditional Chinese, Turkish, Ukrainian, Vietnamese
Seller: Apple Inc.
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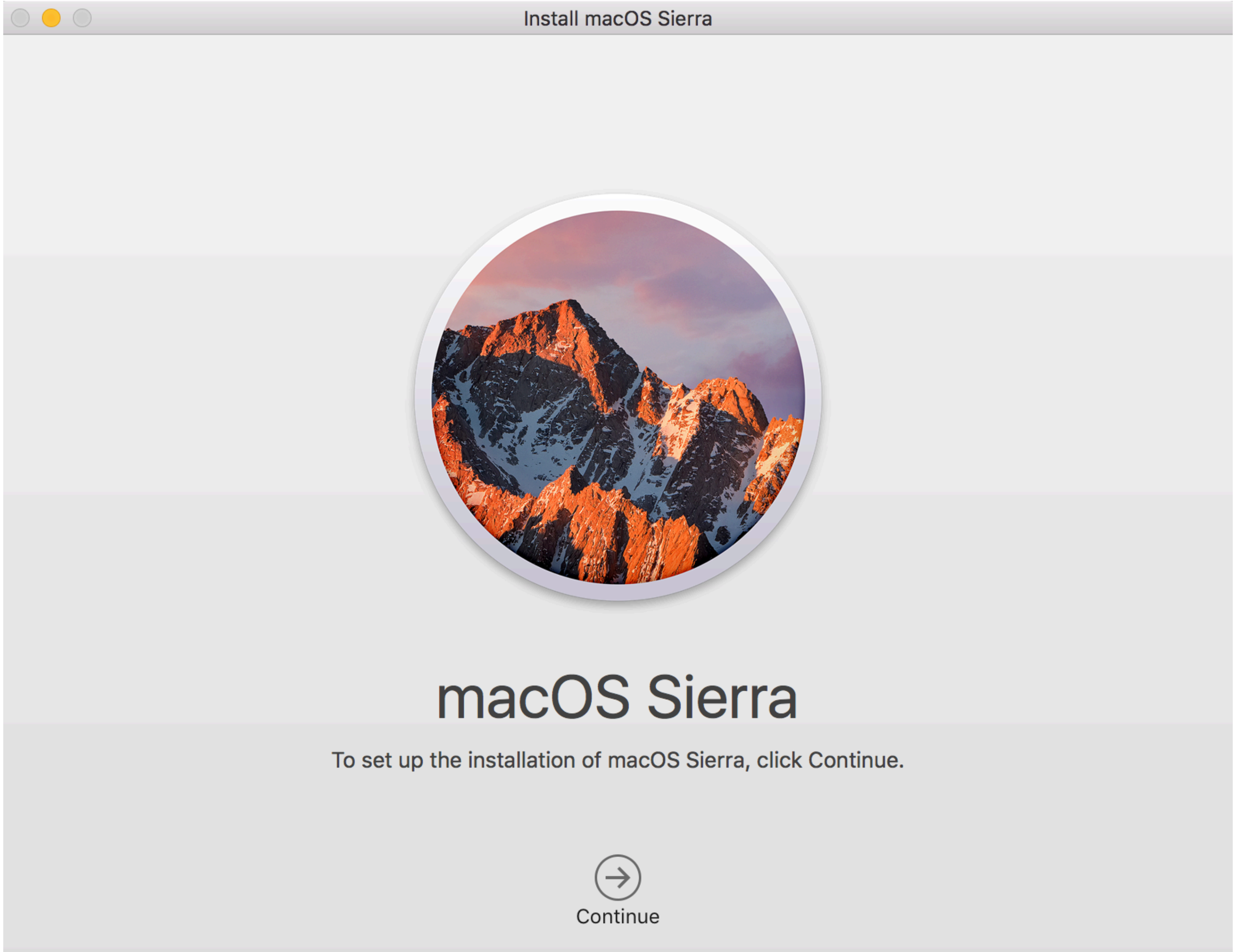
Rated 4+

Source: https://itunes.apple.com/us/app/macos-sierra/id1127487414



Install macOS Sierra

macOS Sierra

To set up the installation of macOS Sierra, click Continue.

OS X El Capitan for Developers

https://developer.apple.com/osx/

Xcode 6

Xcode

The complete toolset for building great apps.

Source: https://developer.apple.com/xcode/

Xcode 7

The complete toolset for building great apps.

Swift 2

Source: https://developer.apple.com/xcode/

OS X Yosemite
for Developers

Source: https://developer.apple.com/osx/whats-new/

iOS 8
for Developers

iOS 8 includes over 4,000 new APIs that let you add amazing new features and capabilities to your apps

Source: https://developer.apple.com/ios8/

iOS 9
for Developers

Developing for iOS 9

iOS 9 SDK includes new APIs and services that enable new categories of apps and features. Multitasking and gaming APIs help enhance app functionality and create immersive games. Expanded search capabilities, and new support for CloudKit, HomeKit, HealthKit, and MapKit extend iOS to more places than ever before.

Source: https://developer.apple.com/ios/

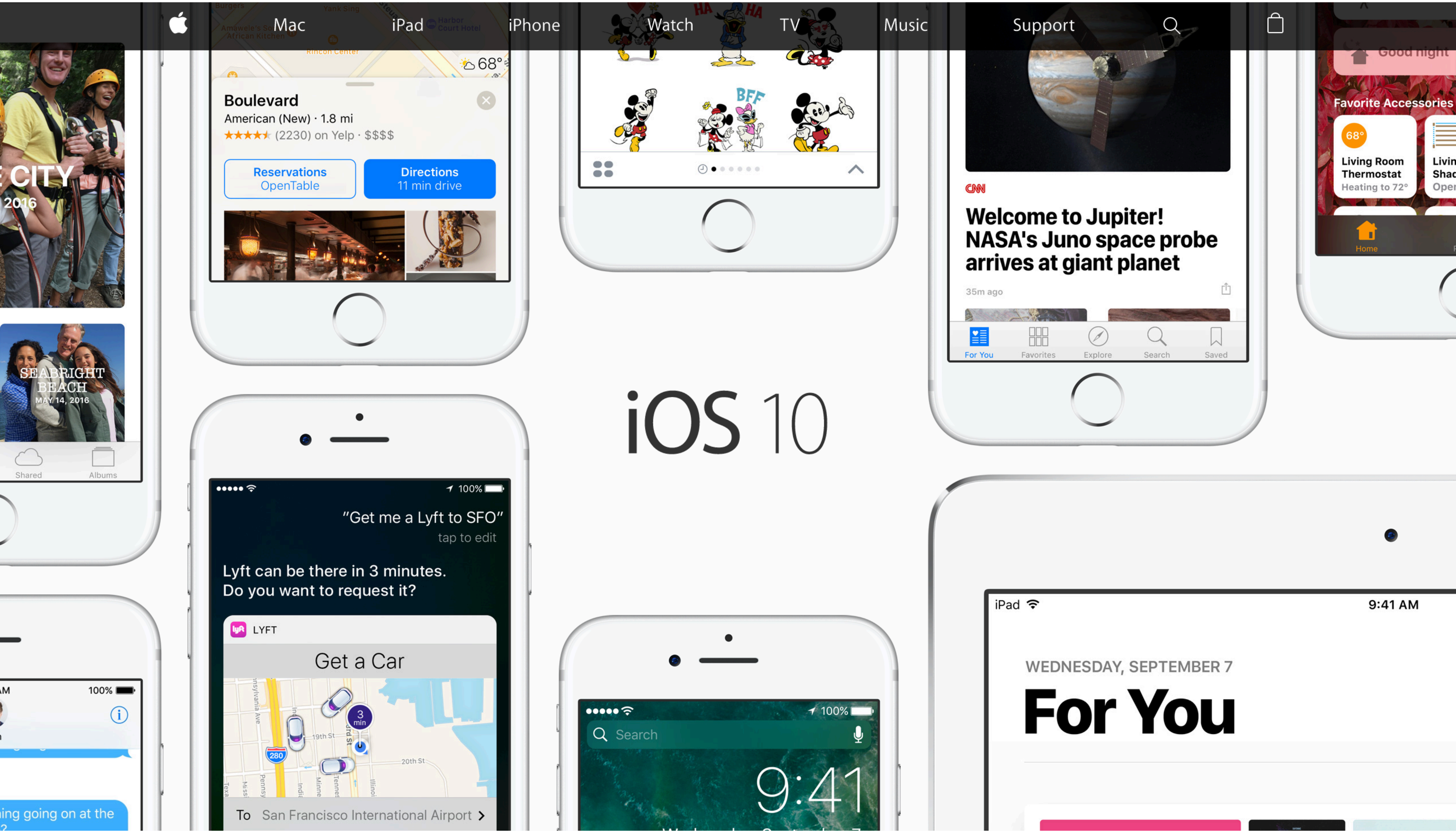
iOS 10
for Developers

Developing for iOS 10

The iOS 10 SDK includes new APIs and services that enable new categories of apps and features. Your apps can now extend to Messages, Siri, Phone, and Maps to provide more engaging functionality like never before.

Source: https://developer.apple.com/ios/

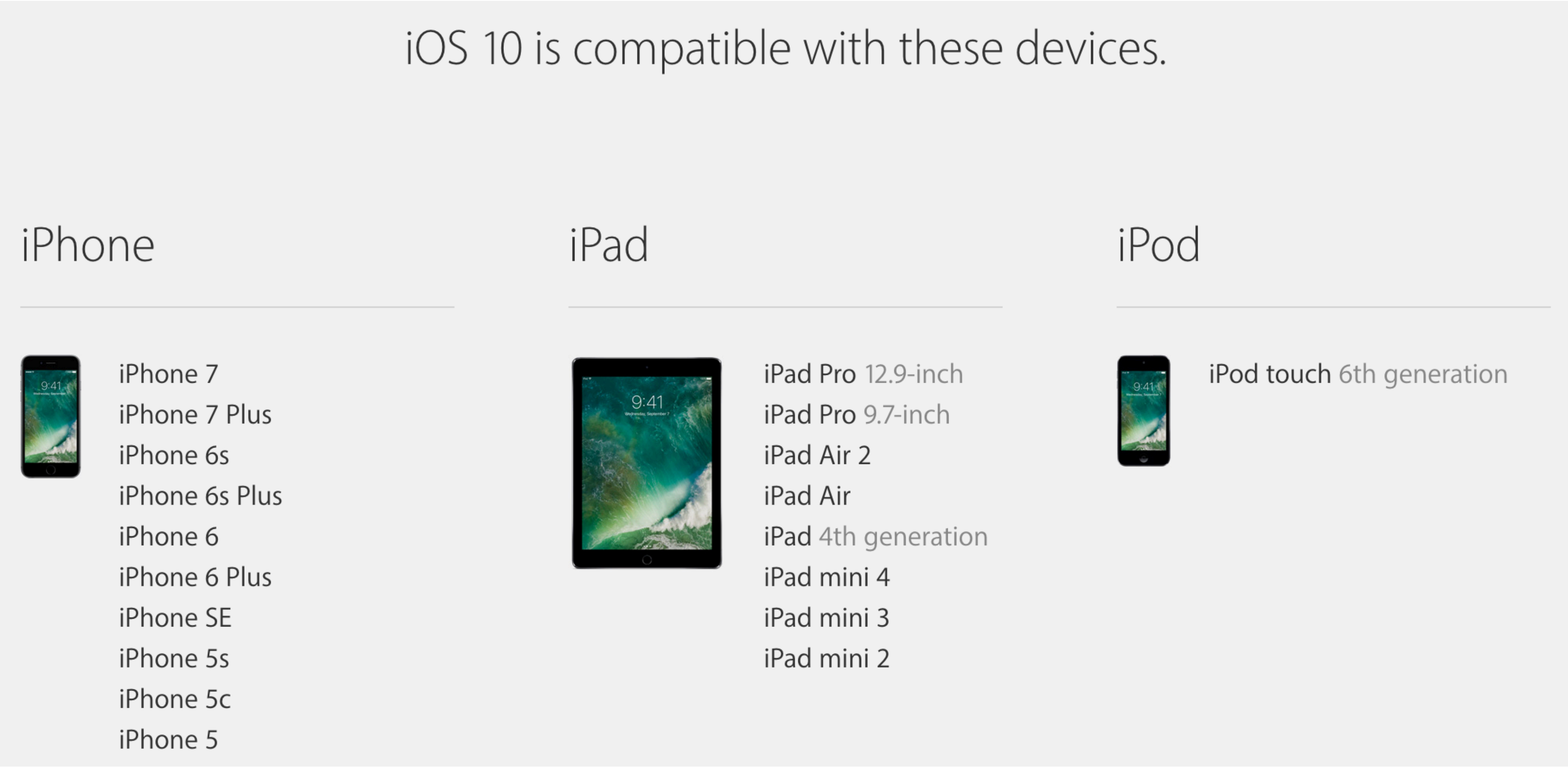
iOS 10



Source: http://www.apple.com/ios/ios-10/

iOS 10

The world's most advanced mobile operating system.



iOS 10 is compatible with these devices.

iPhone

- iPhone 7
- iPhone 7 Plus
- iPhone 6s
- iPhone 6s Plus
- iPhone 6
- iPhone 6 Plus
- iPhone SE
- iPhone 5s
- iPhone 5c
- iPhone 5

iPad

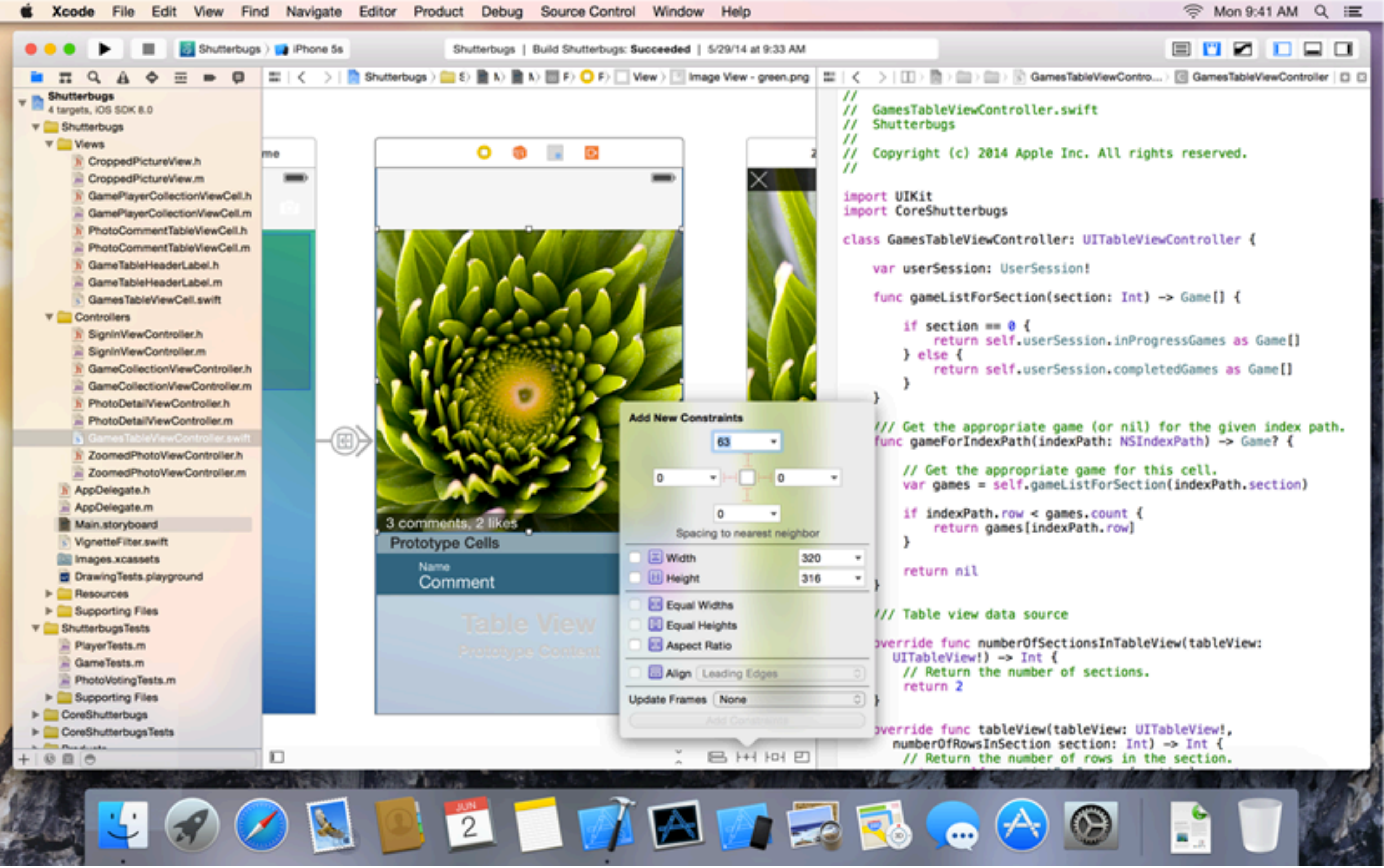
- iPad Pro 12.9-inch
- iPad Pro 9.7-inch
- iPad Air 2
- iPad Air
- iPad 4th generation
- iPad mini 4
- iPad mini 3
- iPad mini 2

iPod

- iPod touch 6th generation

Source: http://www.apple.com/ios/ios-10/

Xcode 6



Add New Constraints

63

0 0

0

Spacing to nearest neighbor

□ Width 320

□ Height 316

□ Equal Widths

□ Equal Heights

□ Aspect Ratio

□ Align Leading Edges

Update Frames None

```
//
//  GamesTableViewController.swift
//  Shutterbugs
//
//  Copyright (c) 2014 Apple Inc. All rights reserved.
//

import UIKit
import CoreShutterbugs

class GamesTableViewController: UITableViewController {

    var userSession: UserSession!

    func gameListForSection(section: Int) -> Game[] {

        if section == 0 {
            return self.userSession.inProgressGames as Game[]
        } else {
            return self.userSession.completedGames as Game[]
        }
    }

    /// Get the appropriate game (or nil) for the given index path.
    func gameForIndexPath(indexPath: NSIndexPath) -> Game? {

        // Get the appropriate game for this cell.
        var games = self.gameListForSection(indexPath.section)

        if indexPath.row < games.count {
            return games[indexPath.row]
        }

        return nil
    }

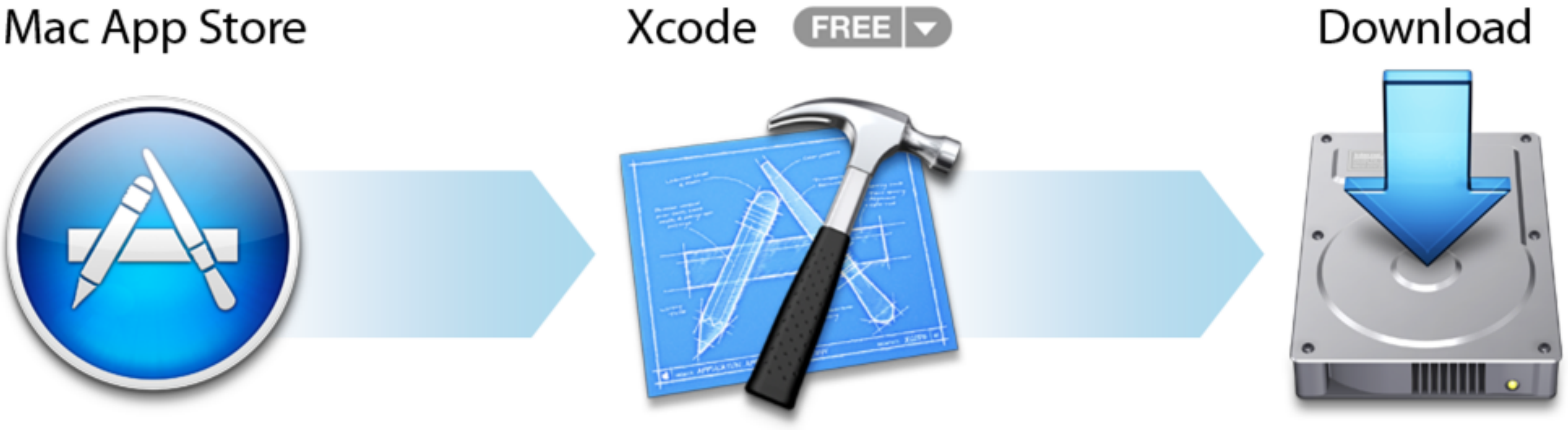
    /// Table view data source

    verride func numberOfSectionsInTableView(tableView:
      UITableView!) -> Int {
        // Return the number of sections.
        return 2
    }

    verride func tableView(tableView: UITableView!,
      numberOfRowsInSection section: Int) -> Int {
        // Return the number of rows in the section.
```

Source: https://developer.apple.com/xcode/

Get the Tools



Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/index.html

Xcode 7

Xcode 7
This release includes the Xcode IDE, Swift 2 compiler, Instruments, Simulator, and latest SDKs for OS X, iOS, and watchOS.

Build
7A220
Posted Date
Sep 16, 2015
SDK
iOS 9
OS X v10.11
watchOS 2

Source: https://developer.apple.com/xcode/download/

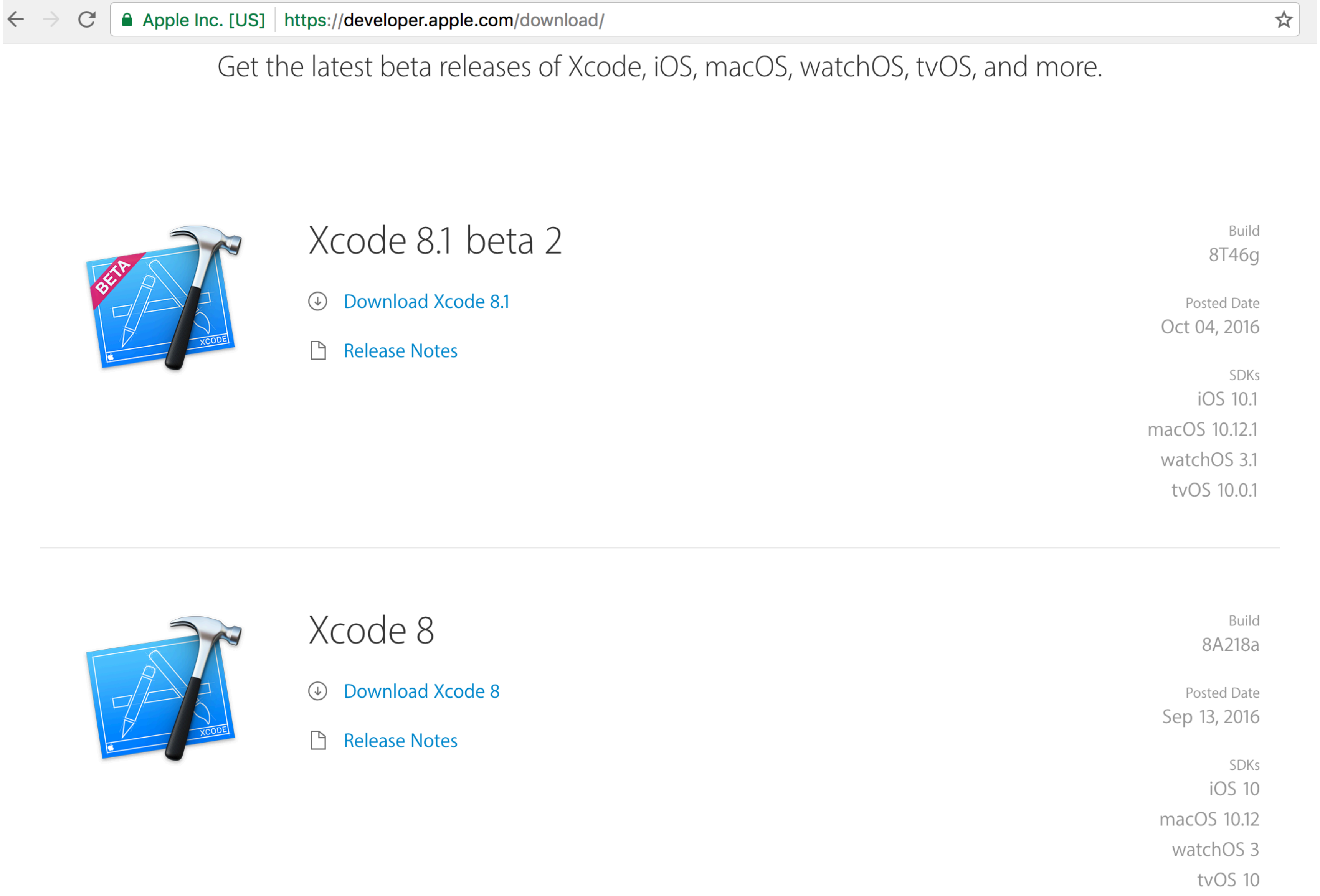
Xcode 8

Xcode 8
requires a Mac running macOS Sierra 10.12 or OS X El Capitan 10.11.5 or later.
Xcode 8 includes SDKs for iOS 10.0, watchOS 3.0, macOS Sierra 10.12, and tvOS 10.0.

Build
8A218a
Posted Date
Sep 13, 2016
SDKs
iOS 10
macOS 10.12
watchOS 3
tvOS 10

Source: https://developer.apple.com/xcode/download/

Xcode 8



Get the latest beta releases of Xcode, iOS, macOS, watchOS, tvOS, and more.

Xcode 8.1 beta 2

Download Xcode 8.1

Release Notes

Build
8T46g

Posted Date
Oct 04, 2016

SDKs
iOS 10.1
macOS 10.12.1
watchOS 3.1
tvOS 10.0.1

Xcode 8

Download Xcode 8

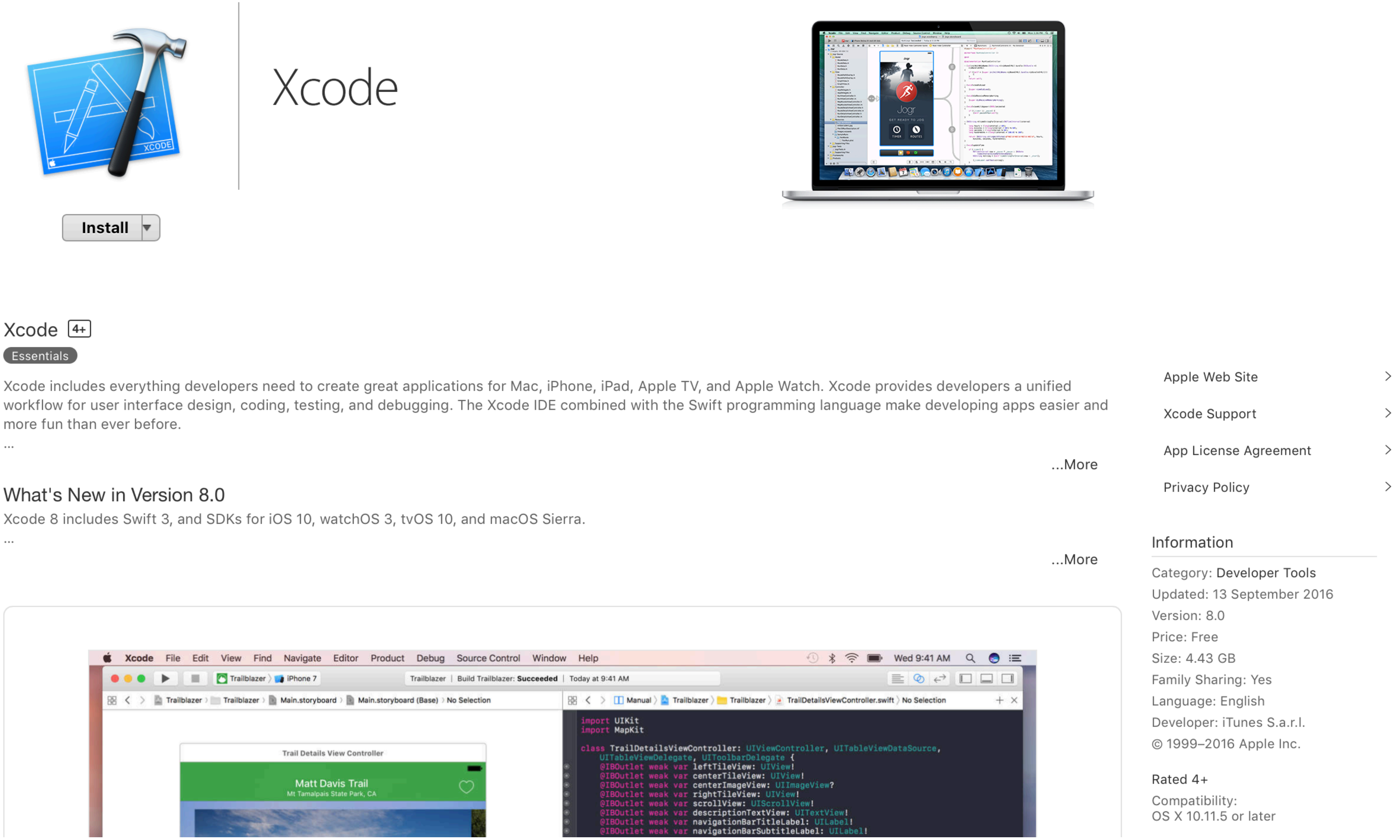
Release Notes

Build
8A218a

Posted Date
Sep 13, 2016

SDKs
iOS 10
macOS 10.12
watchOS 3
tvOS 10

Source: https://developer.apple.com/xcode/download/



Xcode

Xcode 4+

Essentials

Xcode includes everything developers need to create great applications for Mac, iPhone, iPad, Apple TV, and Apple Watch. Xcode provides developers a unified workflow for user interface design, coding, testing, and debugging. The Xcode IDE combined with the Swift programming language make developing apps easier and more fun than ever before.
...

...More

What's New in Version 8.0

Xcode 8 includes Swift 3, and SDKs for iOS 10, watchOS 3, tvOS 10, and macOS Sierra.
...

...More

Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help
Wed 9:41 AM
Trailblazer 〉 iPhone 7
Trailblazer | Build Trailblazer: Succeeded | Today at 9:41 AM
Trailblazer 〉 Trailblazer 〉 Main.storyboard 〉 Main.storyboard (Base) 〉 No Selection
Manual 〉 Trailblazer 〉 Trailblazer 〉 TrailDetailsViewController.swift 〉 No Selection
Trail Details View Controller
Matt Davis Trail
Mt Tamalpais State Park, CA

```
import UIKit
import MapKit

class TrailDetailsViewController: UIViewController, UITableViewDataSource,
    UITableViewDelegate, UIToolbarDelegate {
    @IBOutlet weak var leftTileView: UIView!
    @IBOutlet weak var centerTileView: UIView!
    @IBOutlet weak var centerImageView: UIImageView?
    @IBOutlet weak var rightTileView: UIView!
    @IBOutlet weak var scrollView: UIScrollView!
    @IBOutlet weak var descriptionTextView: UITextView!
    @IBOutlet weak var navigationBarTitleLabel: UILabel!
    @IBOutlet weak var navigationBarSubtitleLabel: UILabel!
```

Apple Web Site 〉

Xcode Support 〉

App License Agreement 〉

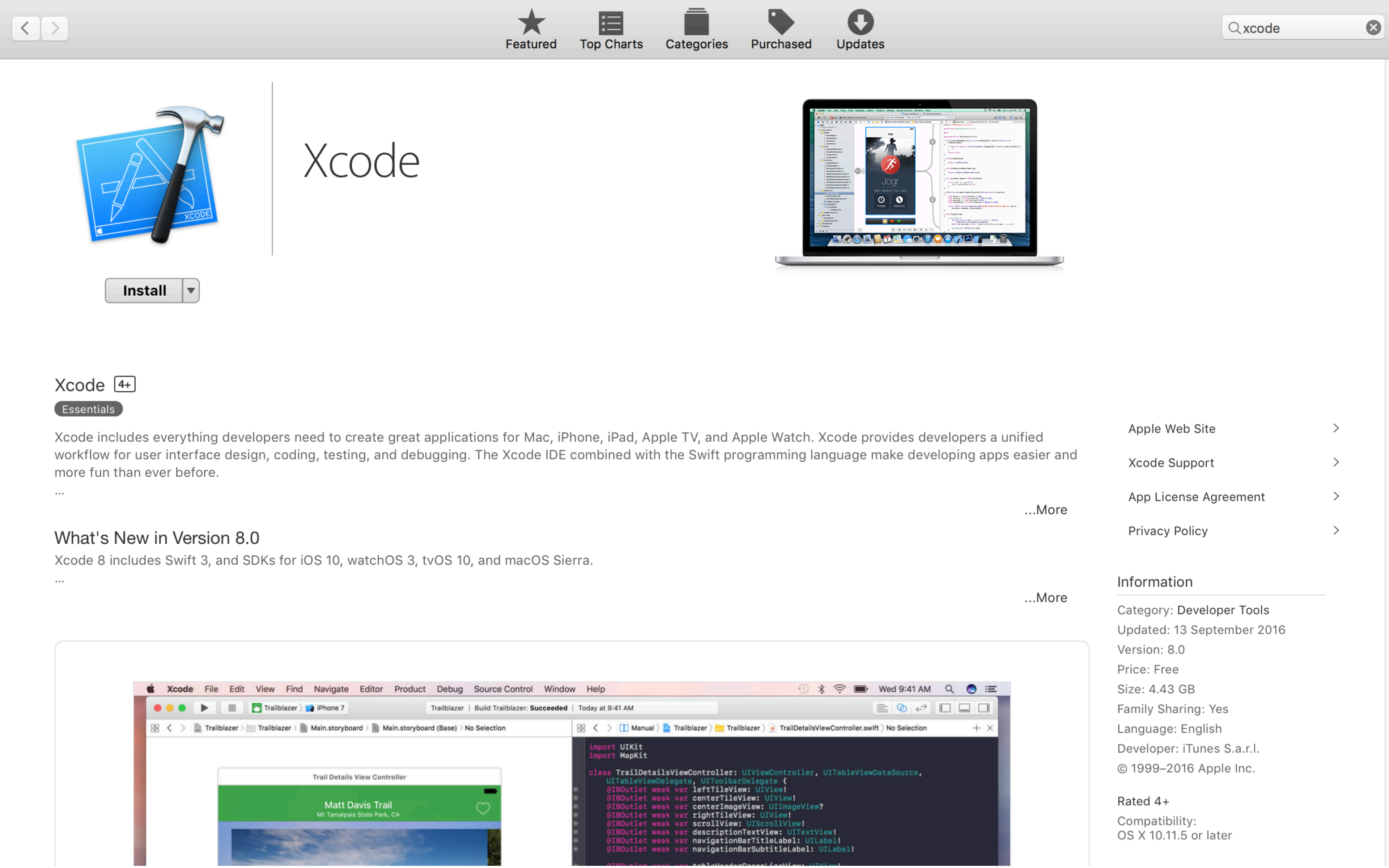
Privacy Policy 〉

Information

Category: Developer Tools
Updated: 13 September 2016
Version: 8.0
Price: Free
Size: 4.43 GB
Family Sharing: Yes
Language: English
Developer: iTunes S.a.r.l.
© 1999–2016 Apple Inc.

Rated 4+

Compatibility:
OS X 10.11.5 or later



Xcode

Xcode 4+

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…

...More

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…

...More

Apple Web Site

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Information

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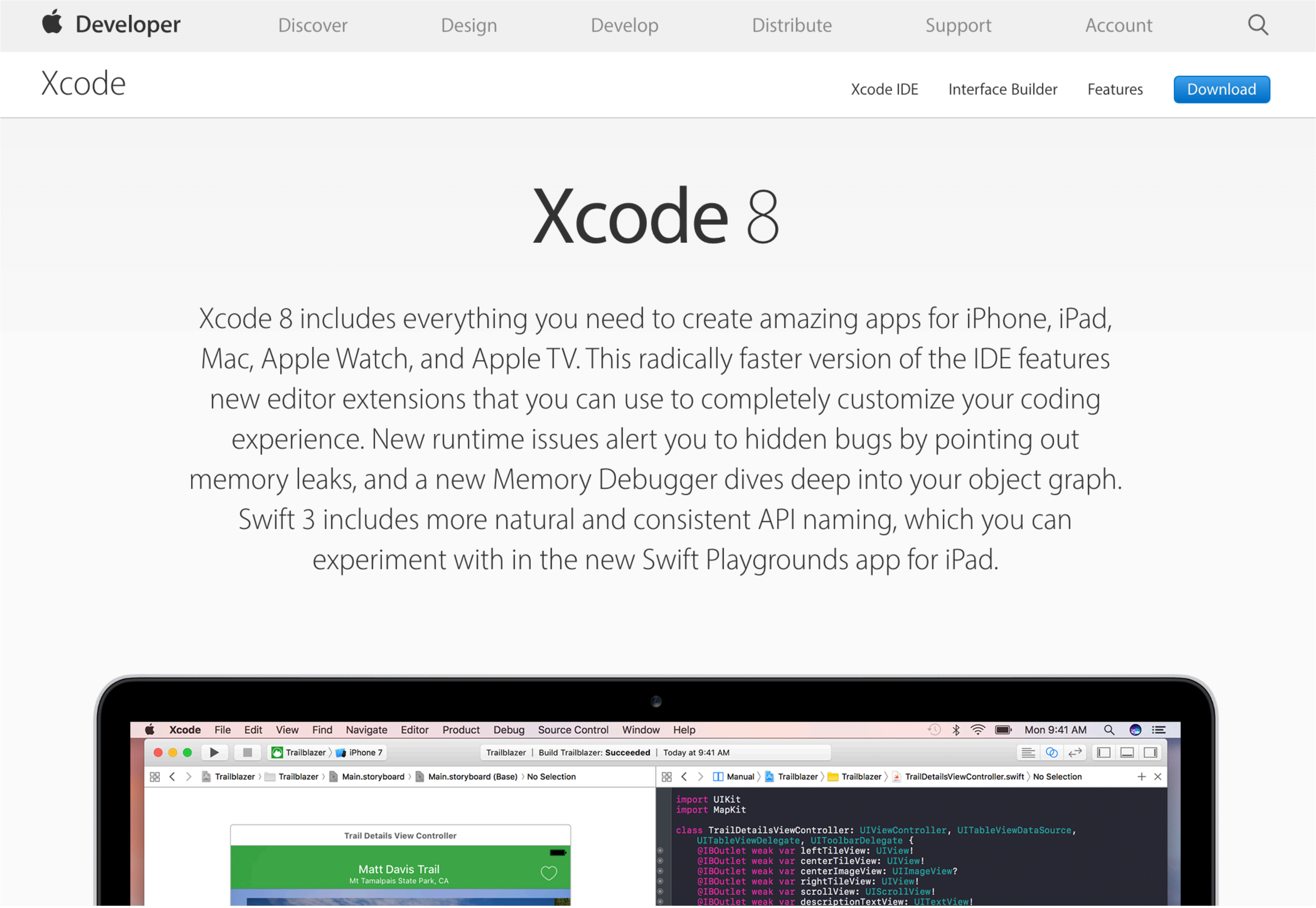
    @IBOutlet weak var rightTileView: UIView!
    @IBOutlet weak var scrollView: UIScrollView!
    @IBOutlet weak var descriptionTextView: UITextView!
    @IBOutlet weak var navigationBarTitleLabel: UILabel!
    @IBOutlet weak var navigationBarSubtitleLabel: UILabel!
```

Xcode 8



Developer
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Xcode
Xcode IDE
Interface Builder
Features
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Mon 9:41 AM
Trailblazer 〉 iPhone 7
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Manual 〉 Trailblazer 〉 Trailblazer 〉 TrailDetailsViewController.swift 〉 No Selection
Trail Details View Controller
Matt Davis Trail
Mt Tamalpais State Park, CA

Xcode 8

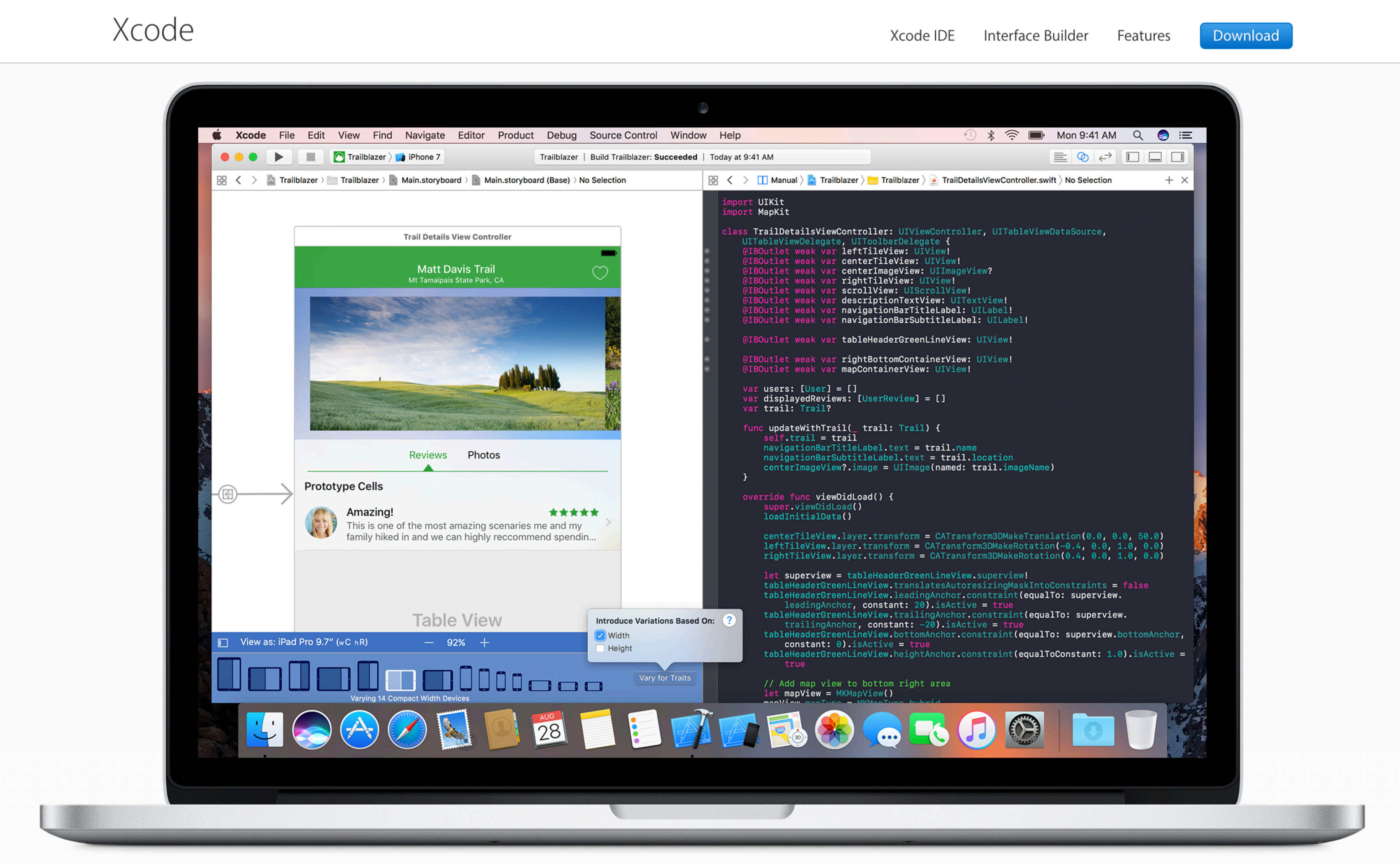
Xcode 8 includes everything you need to create amazing apps for iPhone, iPad, Mac, Apple Watch, and Apple TV. This radically faster version of the IDE features new editor extensions that you can use to completely customize your coding experience. New runtime issues alert you to hidden bugs by pointing out memory leaks, and a new Memory Debugger dives deep into your object graph. Swift 3 includes more natural and consistent API naming, which you can experiment with in the new Swift Playgrounds app for iPad.

```
import UIKit
import MapKit

class TrailDetailsViewController: UIViewController, UITableViewDataSource,
    UITableViewDelegate, UIToolbarDelegate {
    @IBOutlet weak var leftTileView: UIView!
    @IBOutlet weak var centerTileView: UIView!
    @IBOutlet weak var centerImageView: UIImageView?
    @IBOutlet weak var rightTileView: UIView!
    @IBOutlet weak var scrollView: UIScrollView!
    @IBOutlet weak var descriptionTextView: UITextView!
```

Source: https://developer.apple.com/xcode/

Xcode 8



Xcode

Xcode IDE   Interface Builder   Features   Download

Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help
Mon 9:41 AM
Trailblazer 〉 iPhone 7
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Manual 〉 Trailblazer 〉 Trailblazer 〉 TrailDetailsViewController.swift 〉 No Selection
Trail Details View Controller
Matt Davis Trail
Mt Tamalpais State Park, CA
Reviews
Photos
Prototype Cells
Amazing!
This is one of the most amazing scenaries me and my family hiked in and we can highly reccommend spendin...
Table View
View as: iPad Pro 9.7" (wC hR)
92%
Introduce Variations Based On:
☑ Width
□ Height
Vary for Traits
Varying 14 Compact Width Devices
AUG
28

```swift
import UIKit
import MapKit

class TrailDetailsViewController: UIViewController, UITableViewDataSource,
    UITableViewDelegate, UIToolbarDelegate {
    @IBOutlet weak var leftTileView: UIView!
    @IBOutlet weak var centerTileView: UIView!
    @IBOutlet weak var centerImageView: UIImageView?
    @IBOutlet weak var rightTileView: UIView!
    @IBOutlet weak var scrollView: UIScrollView!
    @IBOutlet weak var descriptionTextView: UITextView!
    @IBOutlet weak var navigationBarTitleLabel: UILabel!
    @IBOutlet weak var navigationBarSubtitleLabel: UILabel!

    @IBOutlet weak var tableHeaderGreenLineView: UIView!

    @IBOutlet weak var rightBottomContainerView: UIView!
    @IBOutlet weak var mapContainerView: UIView!

    var users: [User] = []
    var displayedReviews: [UserReview] = []
    var trail: Trail?

    func updateWithTrail(_ trail: Trail) {
        self.trail = trail
        navigationBarTitleLabel.text = trail.name
        navigationBarSubtitleLabel.text = trail.location
        centerImageView?.image = UIImage(named: trail.imageName)
    }

    override func viewDidLoad() {
        super.viewDidLoad()
        loadInitialData()

        centerTileView.layer.transform = CATransform3DMakeTranslation(0.0, 0.0, 50.0)
        leftTileView.layer.transform = CATransform3DMakeRotation(-0.4, 0.0, 1.0, 0.0)
        rightTileView.layer.transform = CATransform3DMakeRotation(0.4, 0.0, 1.0, 0.0)

        let superview = tableHeaderGreenLineView.superview!
        tableHeaderGreenLineView.translatesAutoresizingMaskIntoConstraints = false
        tableHeaderGreenLineView.leadingAnchor.constraint(equalTo: superview.
            leadingAnchor, constant: 20).isActive = true
        tableHeaderGreenLineView.trailingAnchor.constraint(equalTo: superview.
            trailingAnchor, constant: -20).isActive = true
        tableHeaderGreenLineView.bottomAnchor.constraint(equalTo: superview.bottomAnchor,
            constant: 0).isActive = true
        tableHeaderGreenLineView.heightAnchor.constraint(equalToConstant: 1.0).isActive =
            true

        // Add map view to bottom right area
        let mapView = MKMapView()
        mapView.mapType = MKMapType.hybrid
```

Source: https://developer.apple.com/xcode/

Swift 3

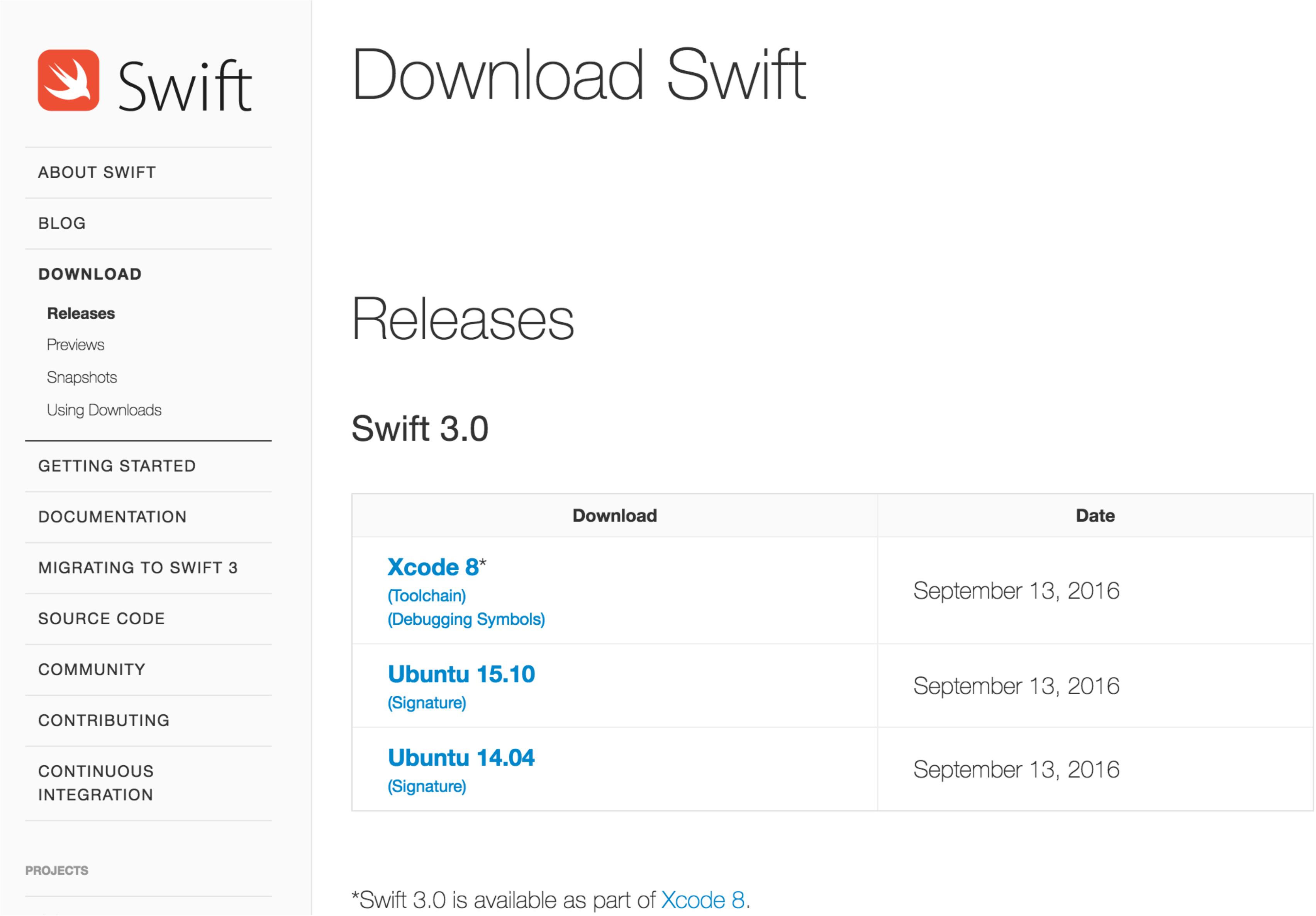
Swift 3 is the first major release of the innovative programming language built completely in the open with the community of developers at Swift.org.

This release unifies core API naming rules under a new public API Naming Guidelines document that makes writing Swift code feel even more natural.

You can also experiment with Swift 3 in the new Swift Playgrounds app for iPad.

Source: https://developer.apple.com/xcode/

Swift 3



Download Swift

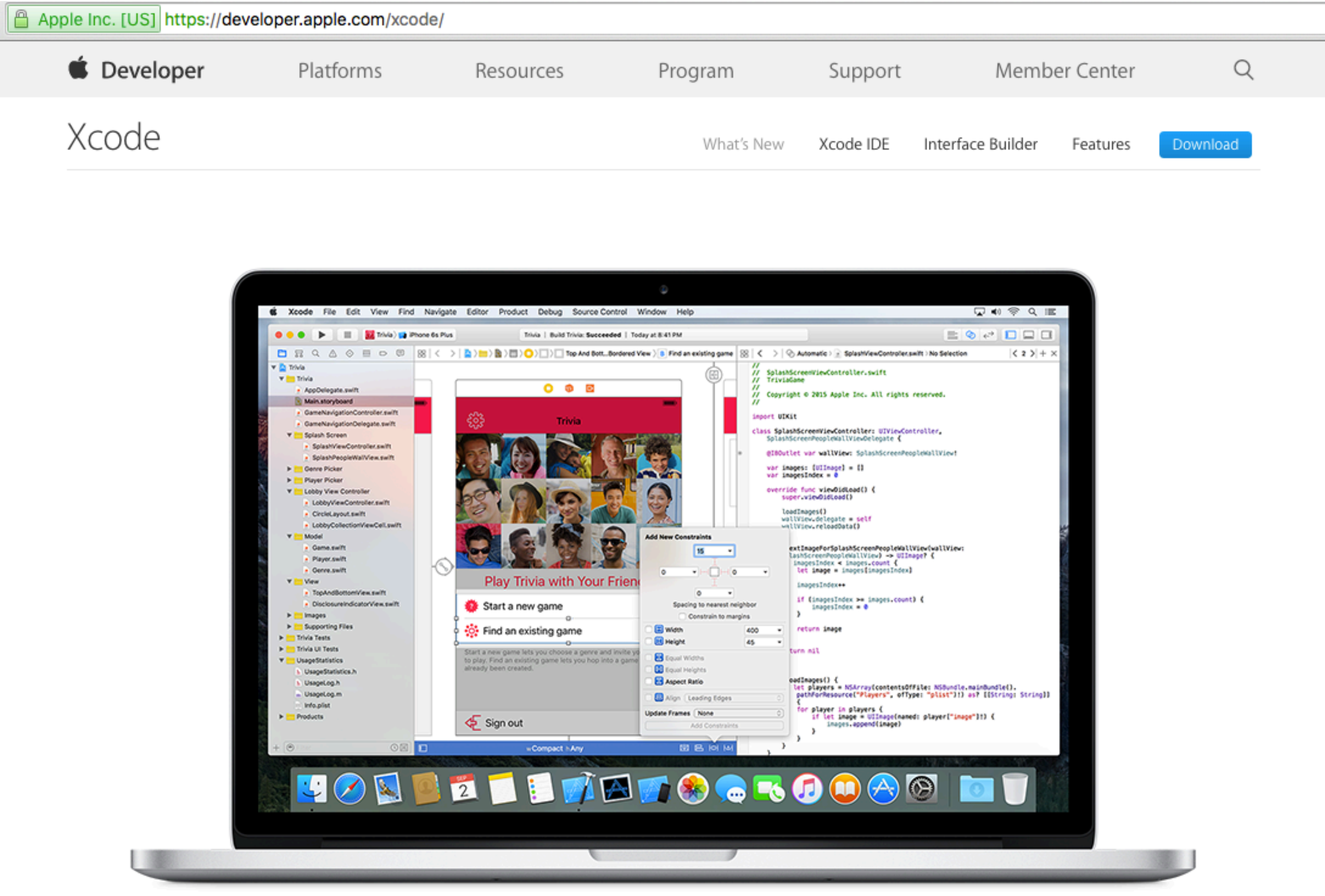
Releases

Swift 3.0

Download	Date
Xcode 8* (Toolchain) (Debugging Symbols)	September 13, 2016
Ubuntu 15.10 (Signature)	September 13, 2016
Ubuntu 14.04 (Signature)	September 13, 2016

*Swift 3.0 is available as part of Xcode 8.

Source: https://swift.org/download/#releases



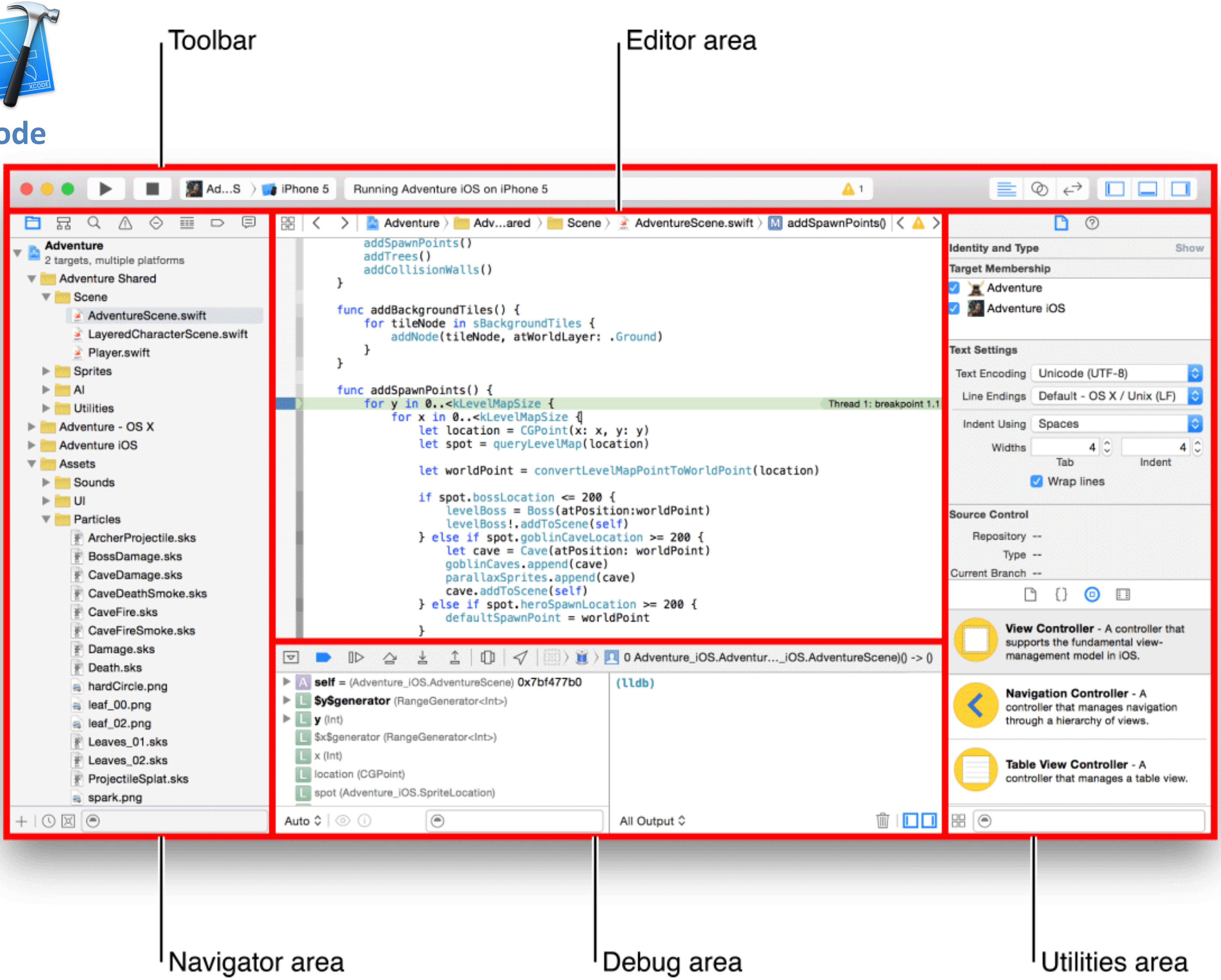
https://developer.apple.com/xcode/

Xcode

```
//
//  SplashScreenViewController.swift
//  TriviaGame
//
//  Copyright © 2015 Apple Inc. All rights reserved.
//

import UIKit

class SplashScreenViewController: UIViewController,
    SplashScreenPeopleWallViewDelegate {

    @IBOutlet var wallView: SplashScreenPeopleWallView!

    var images: [UIImage] = []
    var imagesIndex = 0

    override func viewDidLoad() {
        super.viewDidLoad()

        loadImages()
        wallView.delegate = self
        wallView.reloadData()

         extImageForSplashScreenPeopleWallView(wallView:
         lashScreenPeopleWallView) -> UIImage? {
          imagesIndex < images.count {
           let image = images[imagesIndex]

           imagesIndex++

           if (imagesIndex >= images.count) {
               imagesIndex = 0
           }

           return image

         turn nil

         oadImages() {
          let players = NSArray(contentsOfFile: NSBundle.mainBundle().
           pathForResource("Players", ofType: "plist")!) as? [[String: String]]
           {
           for player in players {
               if let image = UIImage(named: player["image"]!) {
                   images.append(image)
               }
           }
       }
   }
```

Xcode

Xcode



```
        addSpawnPoints()
        addTrees()
        addCollisionWalls()
    }

    func addBackgroundTiles() {
        for tileNode in sBackgroundTiles {
            addNode(tileNode, atWorldLayer: .Ground)
        }
    }

    func addSpawnPoints() {
        for y in 0..<kLevelMapSize {
            for x in 0..<kLevelMapSize {
                let location = CGPoint(x: x, y: y)
                let spot = queryLevelMap(location)

                let worldPoint = convertLevelMapPointToWorldPoint(location)

                if spot.bossLocation <= 200 {
                    levelBoss = Boss(atPosition:worldPoint)
                    levelBoss!.addToScene(self)
                } else if spot.goblinCaveLocation >= 200 {
                    let cave = Cave(atPosition: worldPoint)
                    goblinCaves.append(cave)
                    parallaxSprites.append(cave)
                    cave.addToScene(self)
                } else if spot.heroSpawnLocation >= 200 {
                    defaultSpawnPoint = worldPoint
                }
```

```
self = (Adventure_iOS.AdventureScene) 0x7bf477b0
$y$generator (RangeGenerator<Int>)
y (Int)
$x$generator (RangeGenerator<Int>)
x (Int)
location (CGPoint)
spot (Adventure_iOS.SpriteLocation)
```

```
(lldb)
```

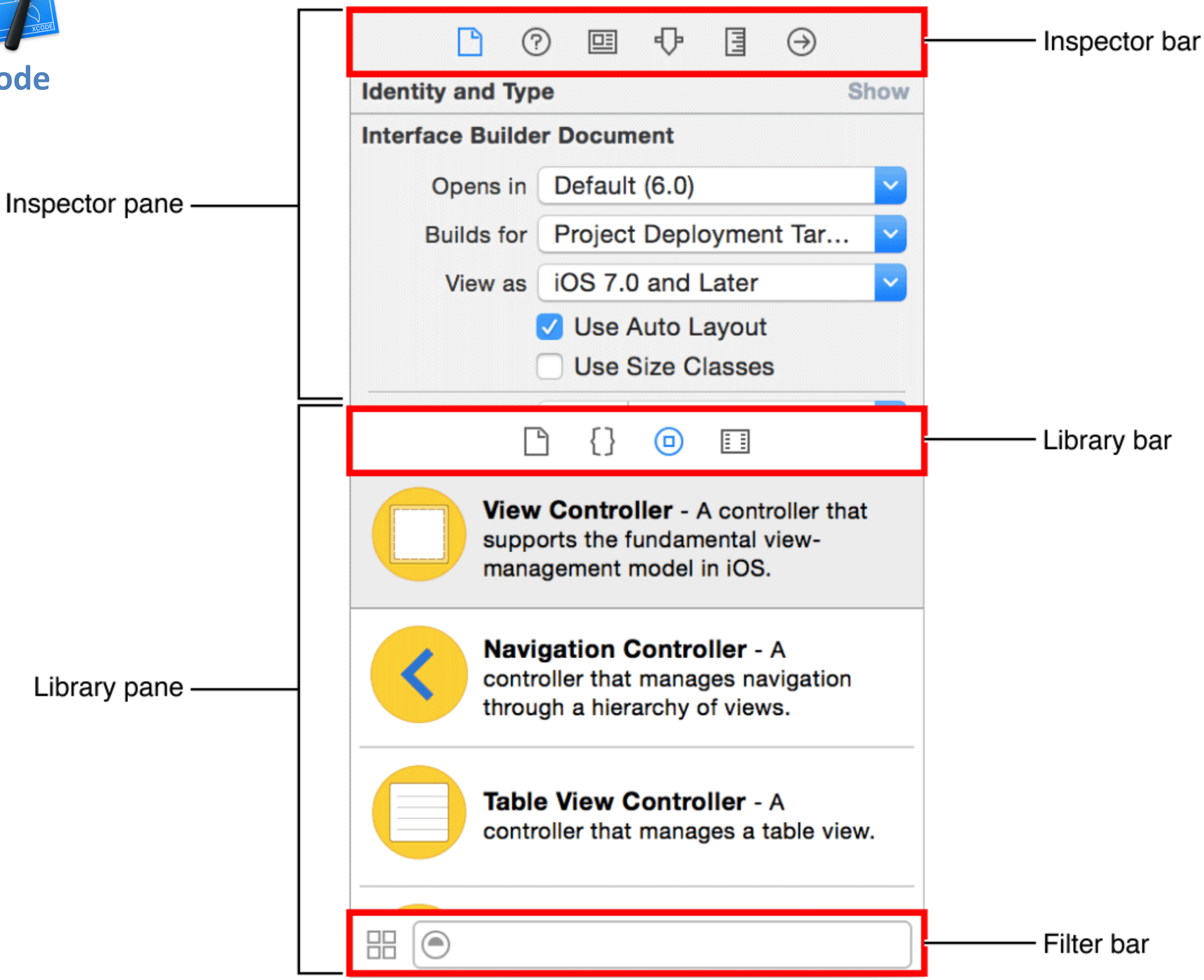
Target Membership: ☑ Adventure ☑ Adventure iOS

Text Encoding: Unicode (UTF-8)
Line Endings: Default - OS X / Unix (LF)
Indent Using: Spaces
Widths: 4 Tab, 4 Indent
☑ Wrap lines

Repository --
Type --
Current Branch --

Source: Xcode 6 Documentation

Xcode



Inspector bar

Inspector pane

Identity and Type Show

Interface Builder Document

Opens in Default (6.0)

Builds for Project Deployment Tar...

View as iOS 7.0 and Later

☑ Use Auto Layout

□ Use Size Classes

Library bar

Library pane

View Controller - A controller that supports the fundamental view-management model in iOS.

Navigation Controller - A controller that manages navigation through a hierarchy of views.

Table View Controller - A controller that manages a table view.

Filter bar

Source: Xcode 6 Documentation

Getting Started with Xcode 8 Development

1. Get a Mac
2. Register as an Apple Developer
3. Install Xcode
4. Enroll in the Apple Developer Program (Optional)

http://www.appcoda.com/learnswift/get-started.html

Swift.

A modern programming language that is safe, fast, and interactive.

https://developer.apple.com/swift/

Swift

- Swift is a powerful and intuitive programming language for iOS, OS X, and watchOS.
- Writing Swift code is interactive and fun, the syntax is concise yet expressive, and apps run lightning-fast.
- Swift is ready for your next project — or addition into your current app — because Swift code works side-by-side with Objective-C.

Source: https://developer.apple.com/swift/

Swift Language

- Swift is a new object-oriented programming language for iOS and OS X development.
- Swift is modern, powerful, expressive, and easy to use.

Source: https://developer.apple.com/swift/

Swift Language

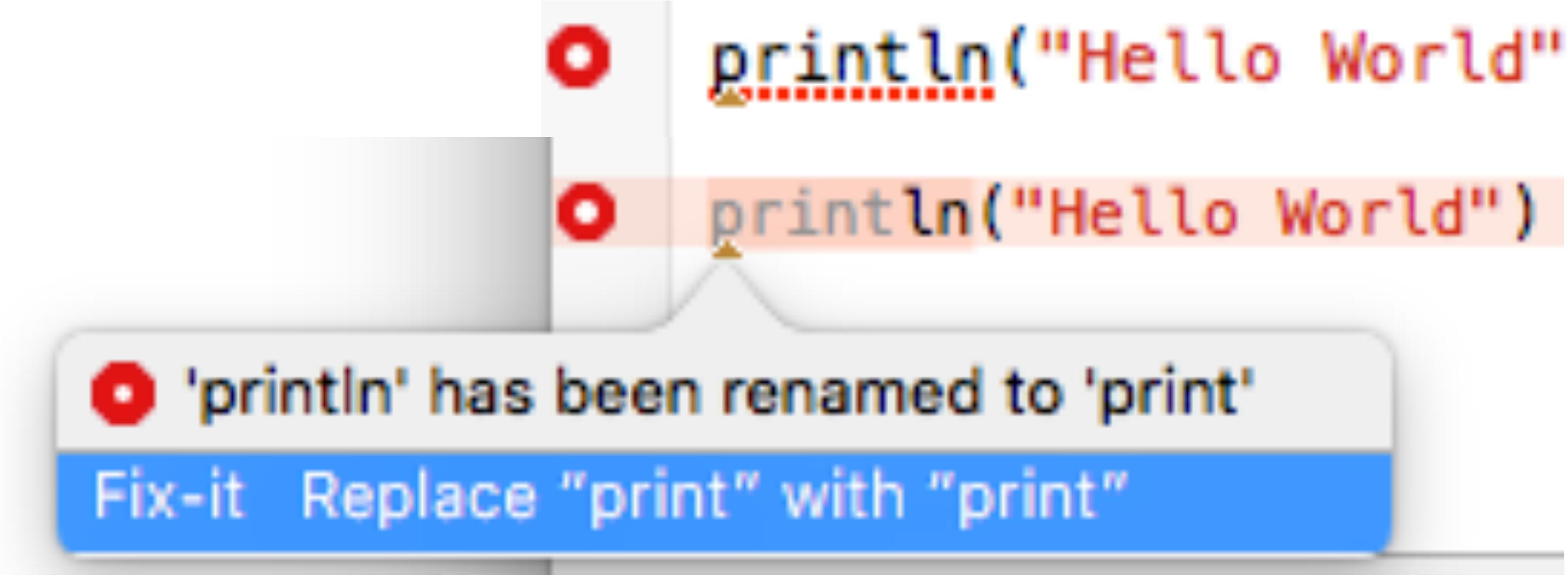
- **Unified**
  A complete replacement for both the C and Objective-C languages.
  - Swift provides full object-oriented features, and includes low-level language primitives such as types, flow control, and operators.
- **Fast**
- **Complete platform**
- **Safe by design**
- **Modern**
- **Interactive**

Source: https://developer.apple.com/swift/

Swift 2

```
print("Hello world")
```

```
println("Hello world")
```



```
println("Hello World")
println("Hello World")
```

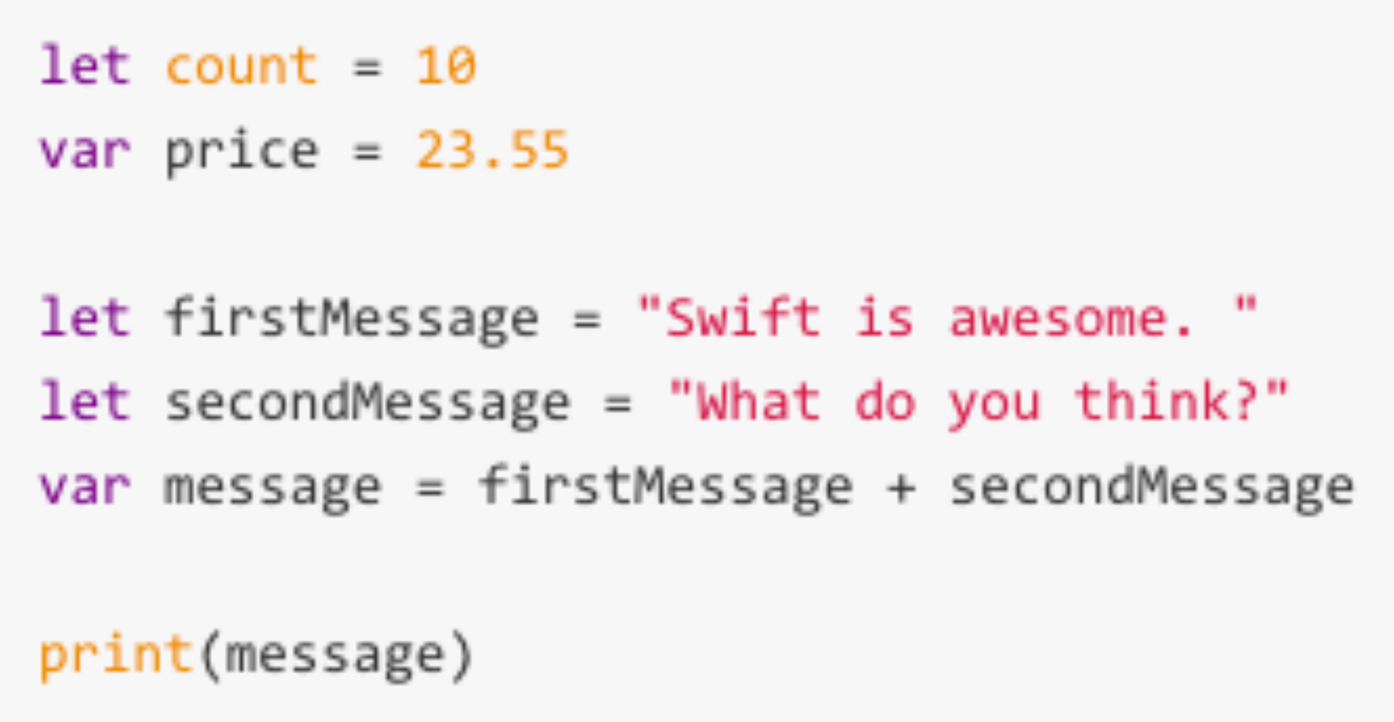
'println' has been renamed to 'print'

Fix-it Replace "print" with "print"

Swift 2

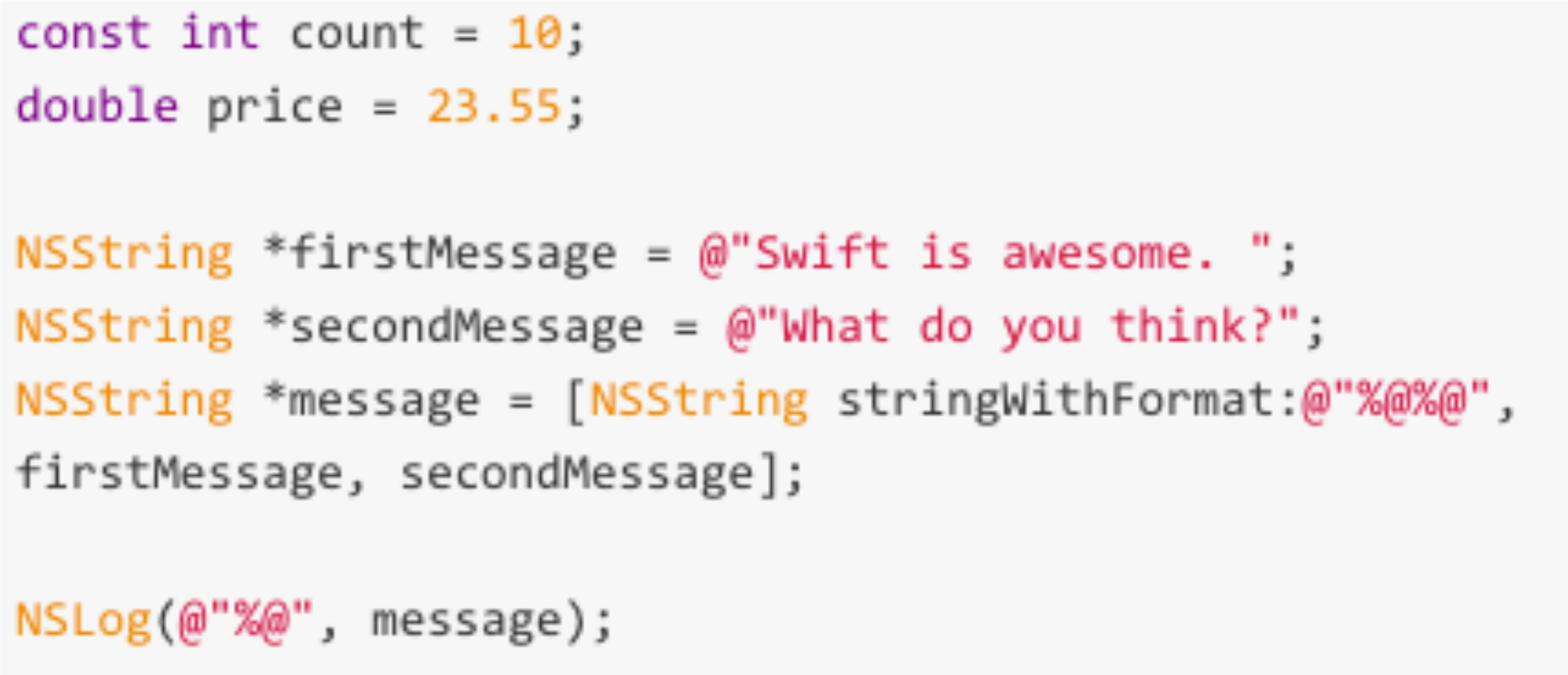
```
print("Hello world")
```

Swift



```swift
let count = 10
var price = 23.55

let firstMessage = "Swift is awesome. "
let secondMessage = "What do you think?"
var message = firstMessage + secondMessage

print(message)
```

Objective-C

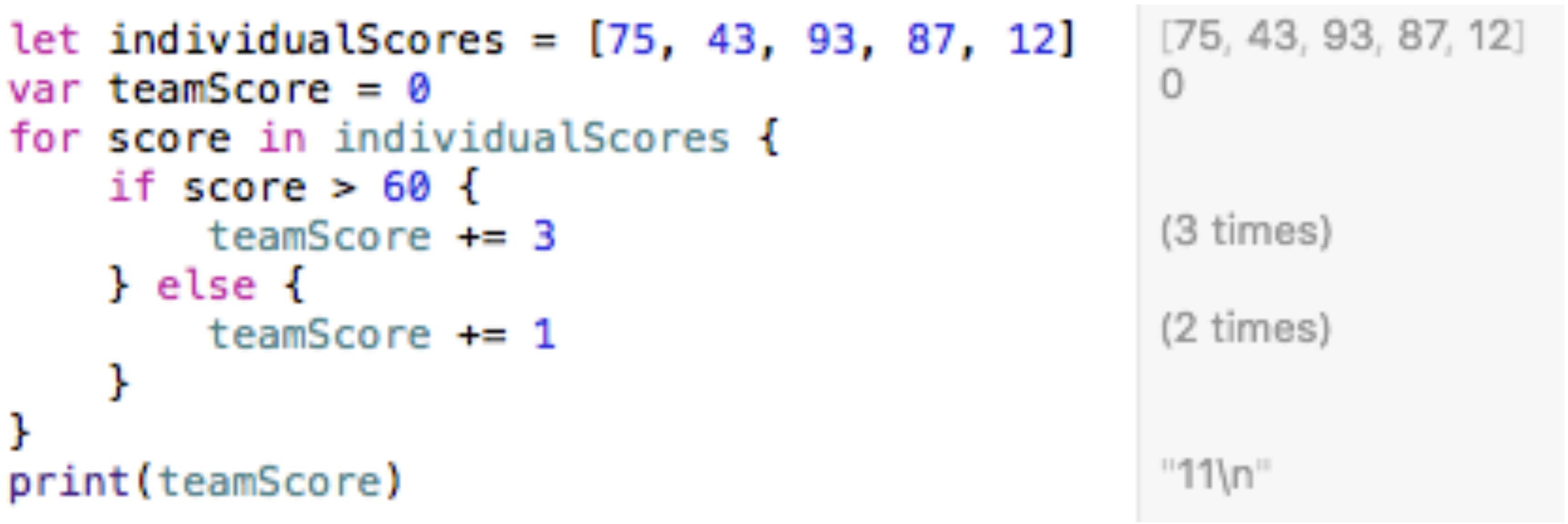


```
const int count = 10;
double price = 23.55;

NSString *firstMessage = @"Swift is awesome. ";
NSString *secondMessage = @"What do you think?";
NSString *message = [NSString stringWithFormat:@"%@%@",
firstMessage, secondMessage];

NSLog(@"%@", message);
```

http://www.appcoda.com/learnswift/playgrounds.html

```
var s = "Hello" + " World"
var myVariable = 82
myVariable = 90
let myConstant = 82
```

```swift
let individualScores = [75, 43, 93, 87, 12]
var teamScore = 0
for score in individualScores {
    if score > 60 {
        teamScore += 3
    } else {
        teamScore += 1
    }
}
print(teamScore)
```



```
let individualScores = [75, 43, 93, 87, 12]
var teamScore = 0
for score in individualScores {
    if score > 60 {
        teamScore += 3
    } else {
        teamScore += 1
    }
}
print(teamScore)
```

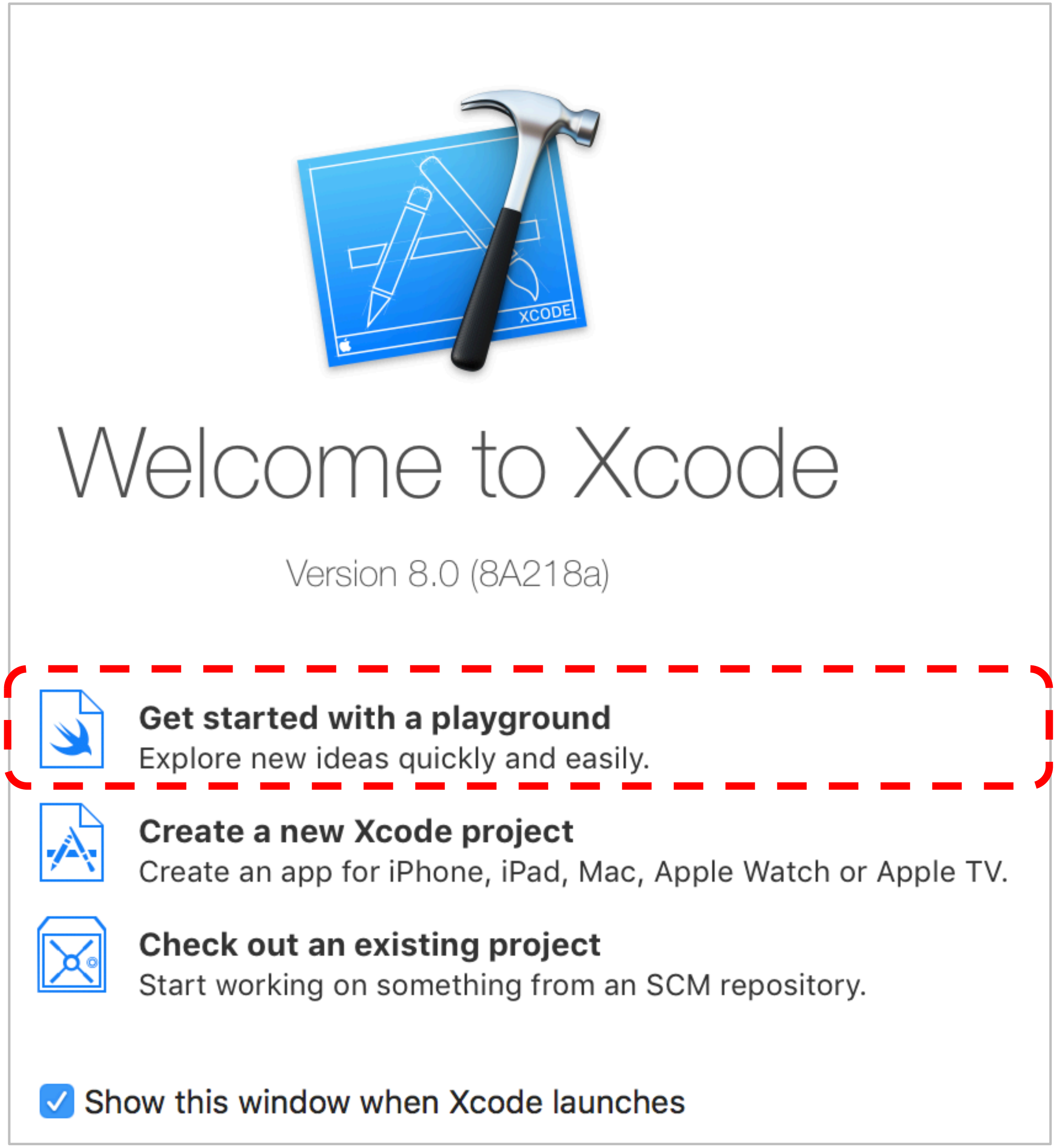
```
[75, 43, 93, 87, 12]
0


(3 times)

(2 times)



"11\n"
```

The Swift Programming Language (Swift 3)

```
print("Hello, world!")
```

Source: https://developer.apple.com/library/content/documentation/Swift/Conceptual/Swift_Programming_Language/GuidedTour.html

Xcode 8



Welcome to Xcode

Version 8.0 (8A218a)

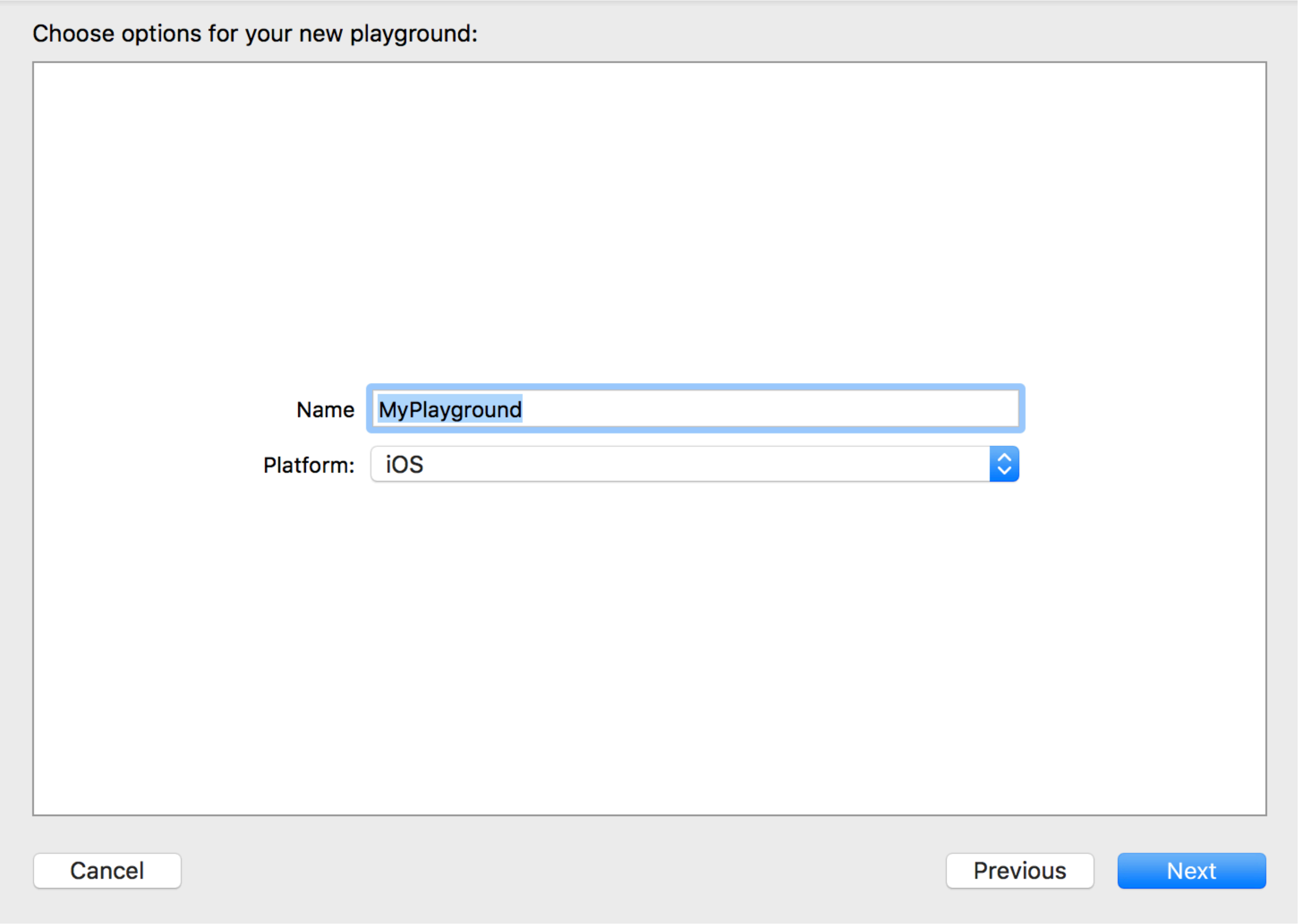
Get started with a playground
Explore new ideas quickly and easily.

Create a new Xcode project
Create an app for iPhone, iPad, Mac, Apple Watch or Apple TV.

Check out an existing project
Start working on something from an SCM repository.

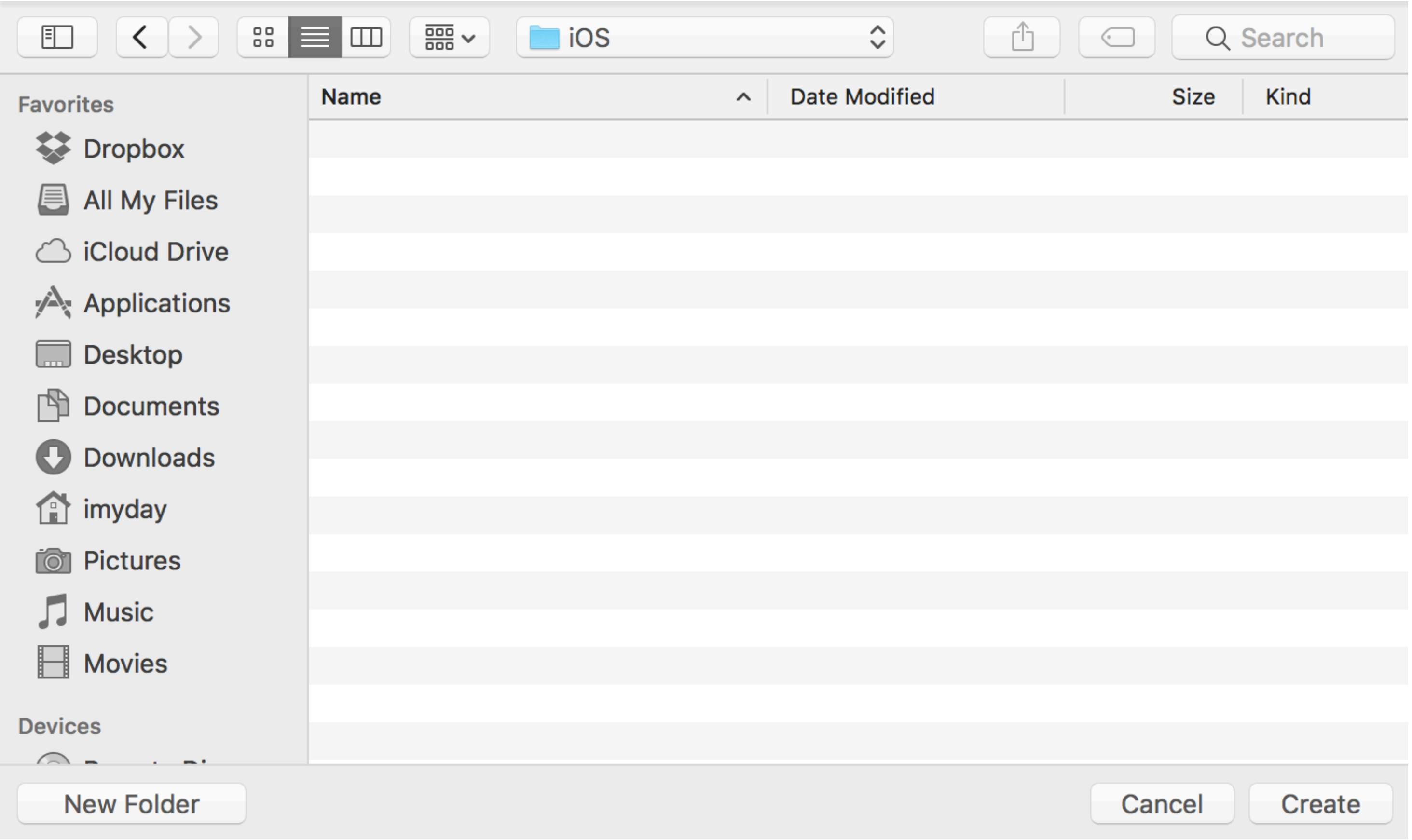
☑ Show this window when Xcode launches

Xcode 8 Playground


Choose options for your new playground:

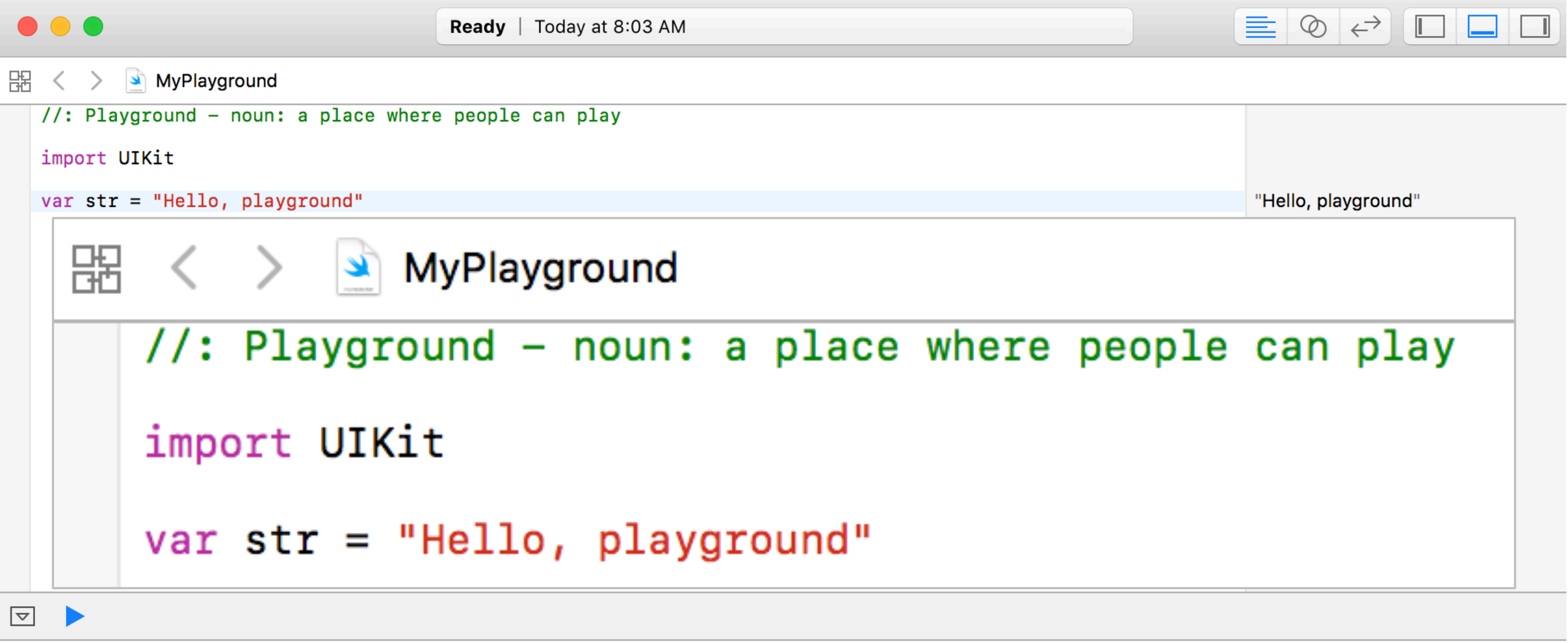
Name MyPlayground

Platform: iOS


iOS
Search
Name
Date Modified
Size
Kind
Favorites
Dropbox
All My Files
iCloud Drive
Applications
Desktop
Documents
Downloads
imyday
Pictures
Music
Movies
Devices
New Folder
Cancel
Create

Swift 3 in Xcode 8 Playground

Swift 3



```
//: Playground - noun: a place where people can play

import UIKit

var str = "Hello, playground"
```

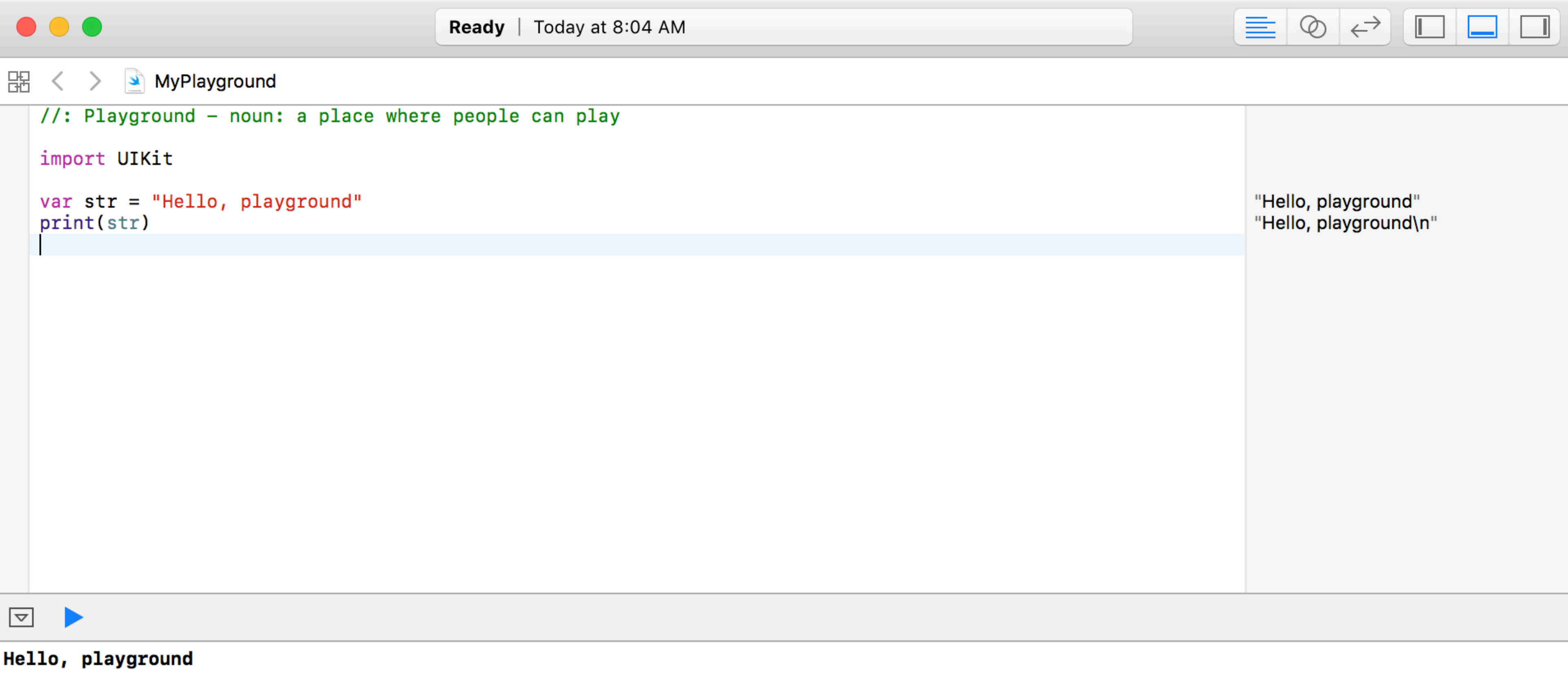
"Hello, playground"

MyPlayground

```
//: Playground - noun: a place where people can play

import UIKit

var str = "Hello, playground"
```

Swift 3 in Xcode 8 Playground

Swift 3



```
//: Playground - noun: a place where people can play

import UIKit

var str = "Hello, playground"
print(str)
```

"Hello, playground"
"Hello, playground\n"

```
Hello, playground
```

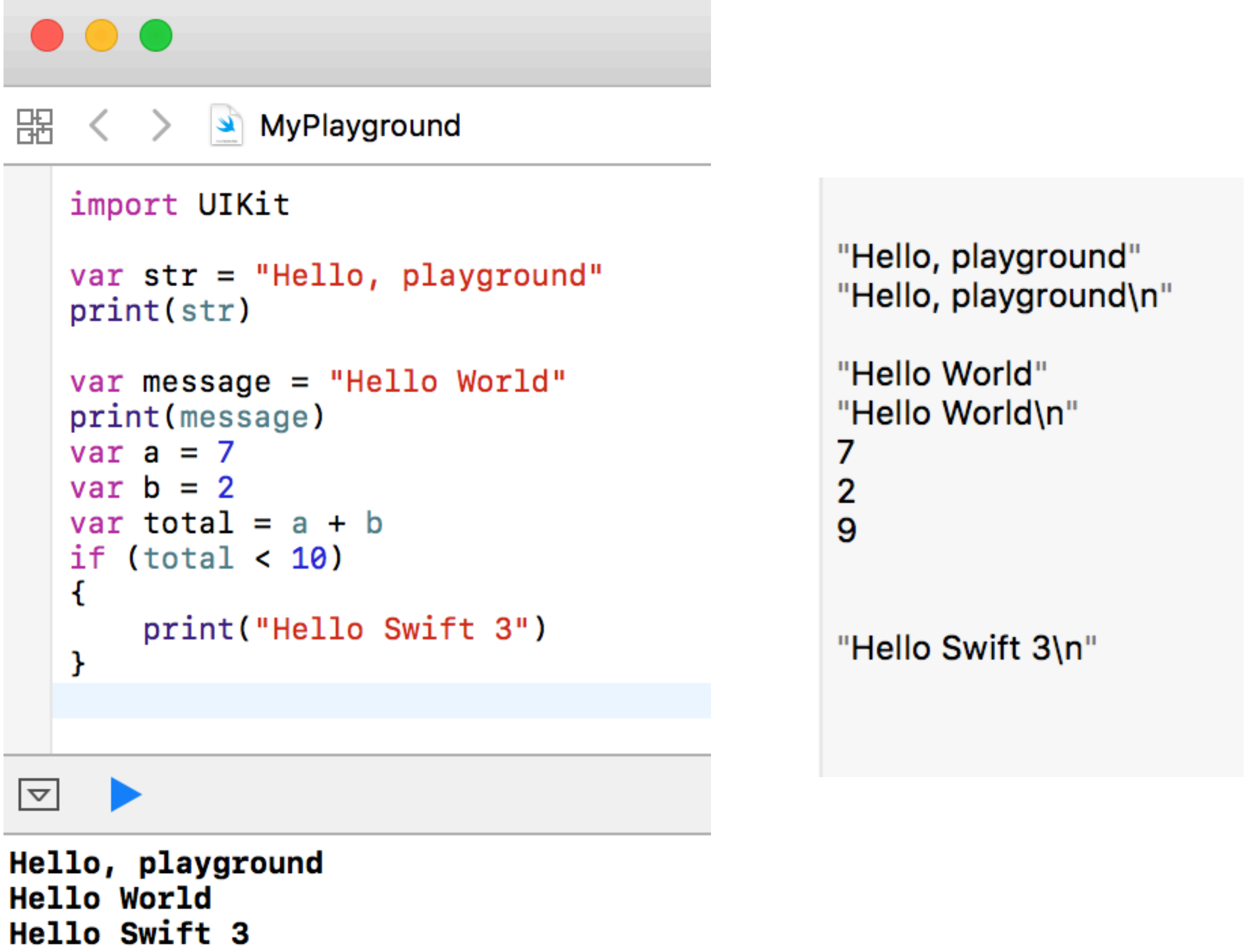
Swift 3 in Xcode 8 Playground

Swift 3

```
var message = "Hello World"
print(message)
var a = 7
var b = 2
var total = a + b
if (total < 10)
{
    print("Hello Swift 3")
}
```

Swift 3 in Xcode 8 Playground

Swift 3



```swift
import UIKit

var str = "Hello, playground"
print(str)

var message = "Hello World"
print(message)
var a = 7
var b = 2
var total = a + b
if (total < 10)
{
    print("Hello Swift 3")
}
```

```
"Hello, playground"
"Hello, playground\n"

"Hello World"
"Hello World\n"
7
2
9


"Hello Swift 3\n"
```

```
Hello, playground
Hello World
Hello Swift 3
```

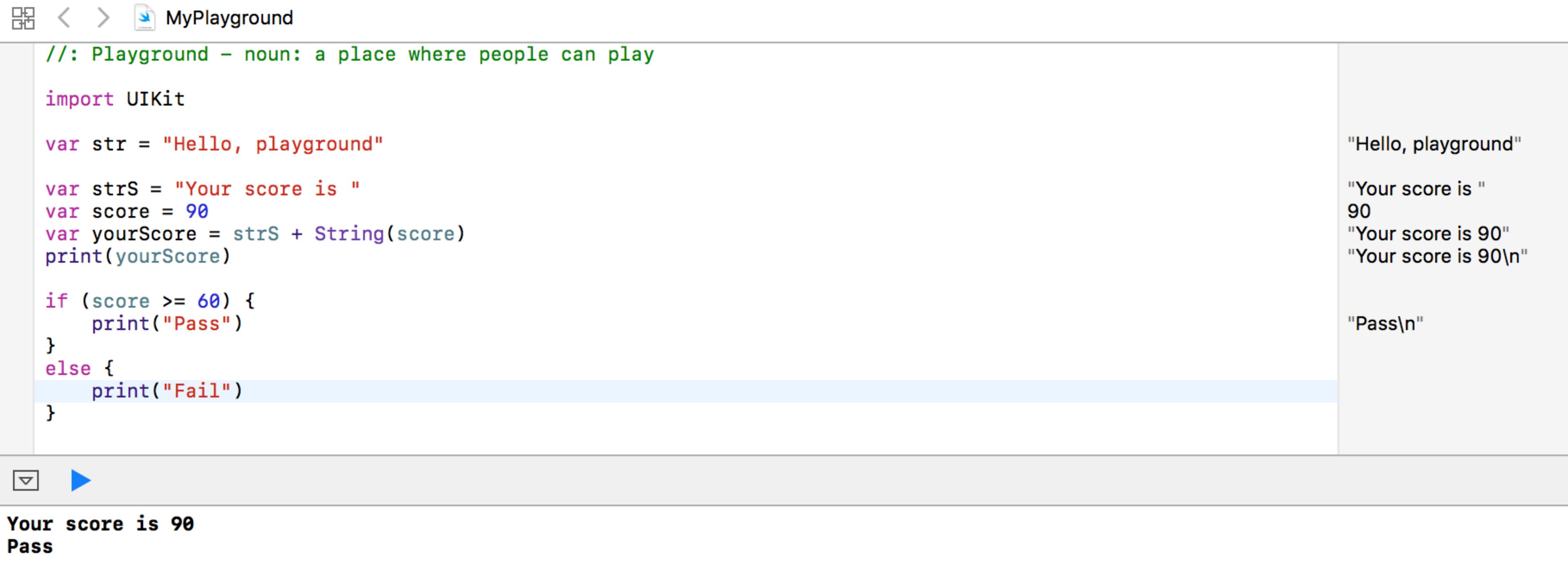
Swift 3 in Xcode 8 Playground

Swift 3

```
var strS = "Your score is "
var score = 90
var yourScore = strS + String(score)
print(yourScore)
if (score >= 60) {
    print("Pass")
}
else {
    print("Fail")
}
```

Swift 3 in Xcode 8 Playground

Swift 3

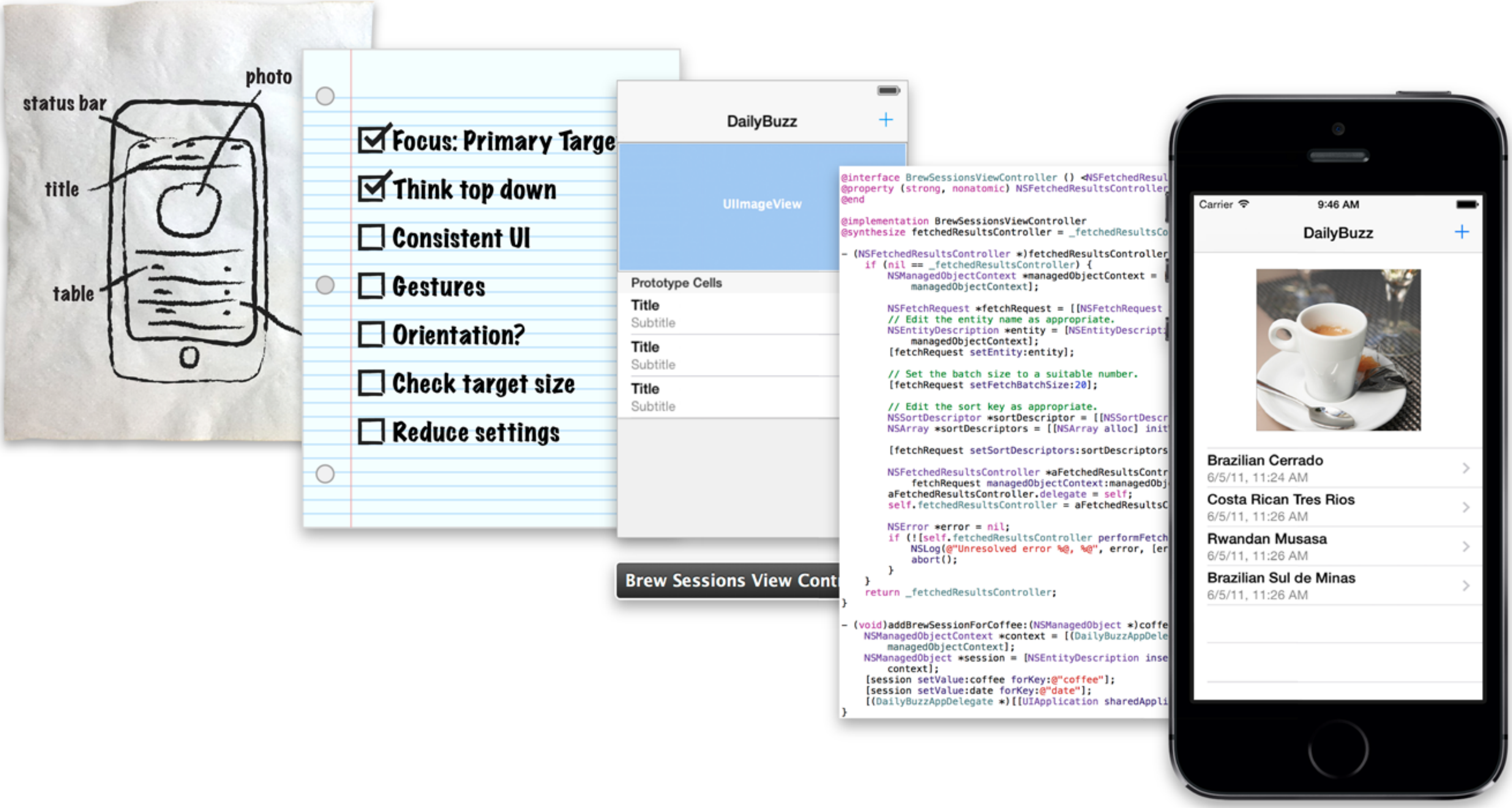


```
//: Playground - noun: a place where people can play

import UIKit

var str = "Hello, playground"

var strS = "Your score is "
var score = 90
var yourScore = strS + String(score)
print(yourScore)

if (score >= 60) {
    print("Pass")
}
else {
    print("Fail")
}
```

```
"Hello, playground"

"Your score is "
90
"Your score is 90"
"Your score is 90\n"


"Pass\n"
```

```
Your score is 90
Pass
```

iOS App Development Process



☑ Focus: Primary Targe
☑ Think top down
□ Consistent UI
□ Gestures
□ Orientation?
□ Check target size
□ Reduce settings

```
@interface BrewSessionsViewController () <NSFetchedResul
@property (strong, nonatomic) NSFetchedResultsController
@end

@implementation BrewSessionsViewController
@synthesize fetchedResultsController = _fetchedResultsCo

- (NSFetchedResultsController *)fetchedResultsController
    if (nil == _fetchedResultsController) {
        NSManagedObjectContext *managedObjectContext = 
            managedObjectContext];

        NSFetchRequest *fetchRequest = [[NSFetchRequest
        // Edit the entity name as appropriate.
        NSEntityDescription *entity = [NSEntityDescripti
            managedObjectContext];
        [fetchRequest setEntity:entity];

        // Set the batch size to a suitable number.
        [fetchRequest setFetchBatchSize:20];

        // Edit the sort key as appropriate.
        NSSortDescriptor *sortDescriptor = [[NSSortDescr
        NSArray *sortDescriptors = [[NSArray alloc] init

        [fetchRequest setSortDescriptors:sortDescriptors

        NSFetchedResultsController *aFetchedResultsContr
            fetchRequest managedObjectContext:managedObj
        aFetchedResultsController.delegate = self;
        self.fetchedResultsController = aFetchedResultsC

        NSError *error = nil;
        if (![self.fetchedResultsController performFetch
            NSLog(@"Unresolved error %@, %@", error, [er
            abort();
        }
    }
    return _fetchedResultsController;
}

- (void)addBrewSessionForCoffee:(NSManagedObject *)coffe
    NSManagedObjectContext *context = [(DailyBuzzAppDele
        managedObjectContext];
    NSManagedObject *session = [NSEntityDescription inse
        context];
    [session setValue:coffee forKey:@"coffee"];
    [session setValue:date forKey:@"date"];
    [(DailyBuzzAppDelegate *)[[UIApplication sharedAppli
}
```

Brazilian Cerrado
6/5/11, 11:24 AM

Costa Rican Tres Rios
6/5/11, 11:26 AM

Rwandan Musasa
6/5/11, 11:26 AM

Brazilian Sul de Minas
6/5/11, 11:26 AM

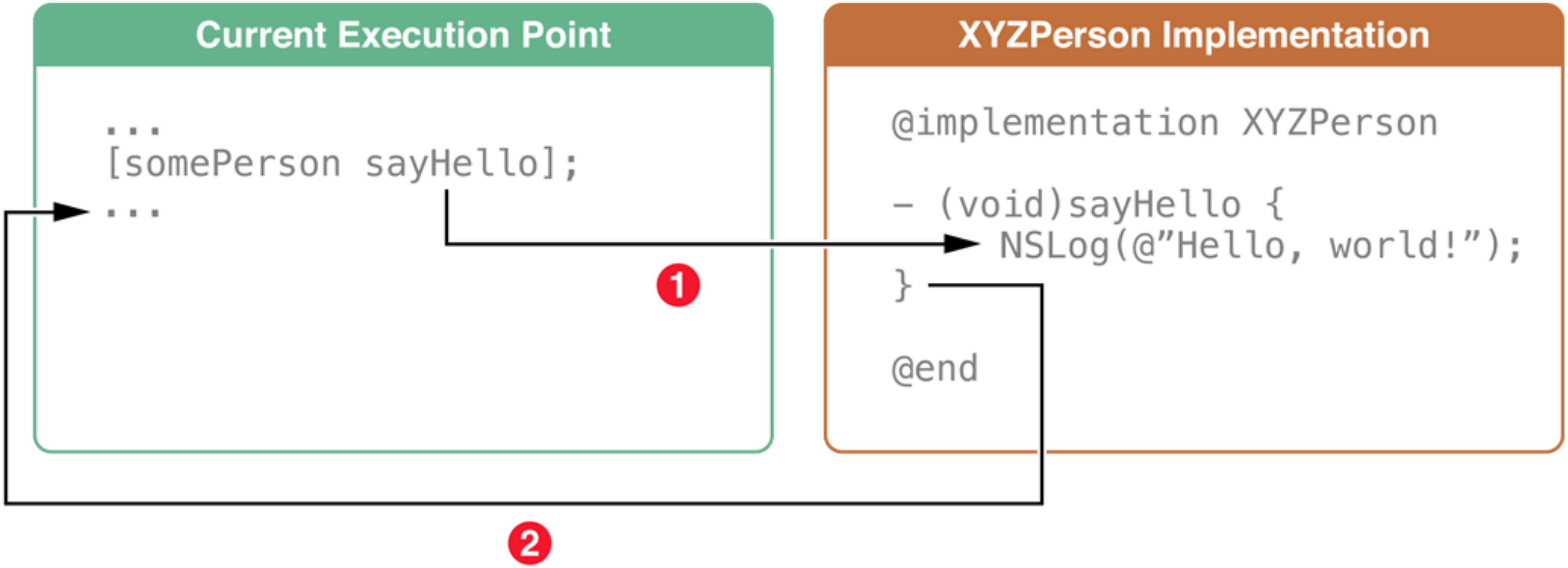
Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/AppDevelopmentProcess.htm

iOS App Development Process

- Defining the Concept
- Designing a User Interface
- Defining the Interaction
- Implementing the Behavior

Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/AppDevelopmentProcess.htm

Objects Communicate Through Messages

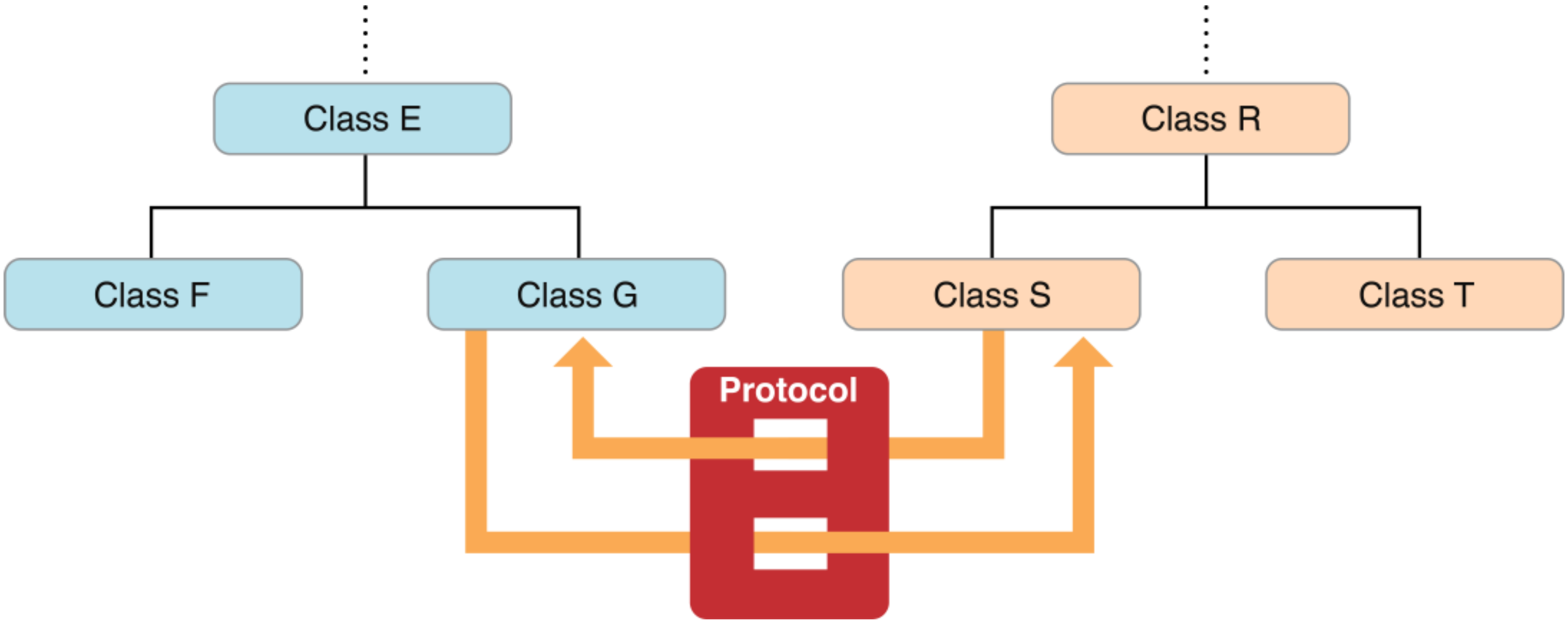


```
...
[somePerson sayHello];
...
```

```
@implementation XYZPerson

- (void)sayHello {
    NSLog(@”Hello, world!”);
}

@end
```

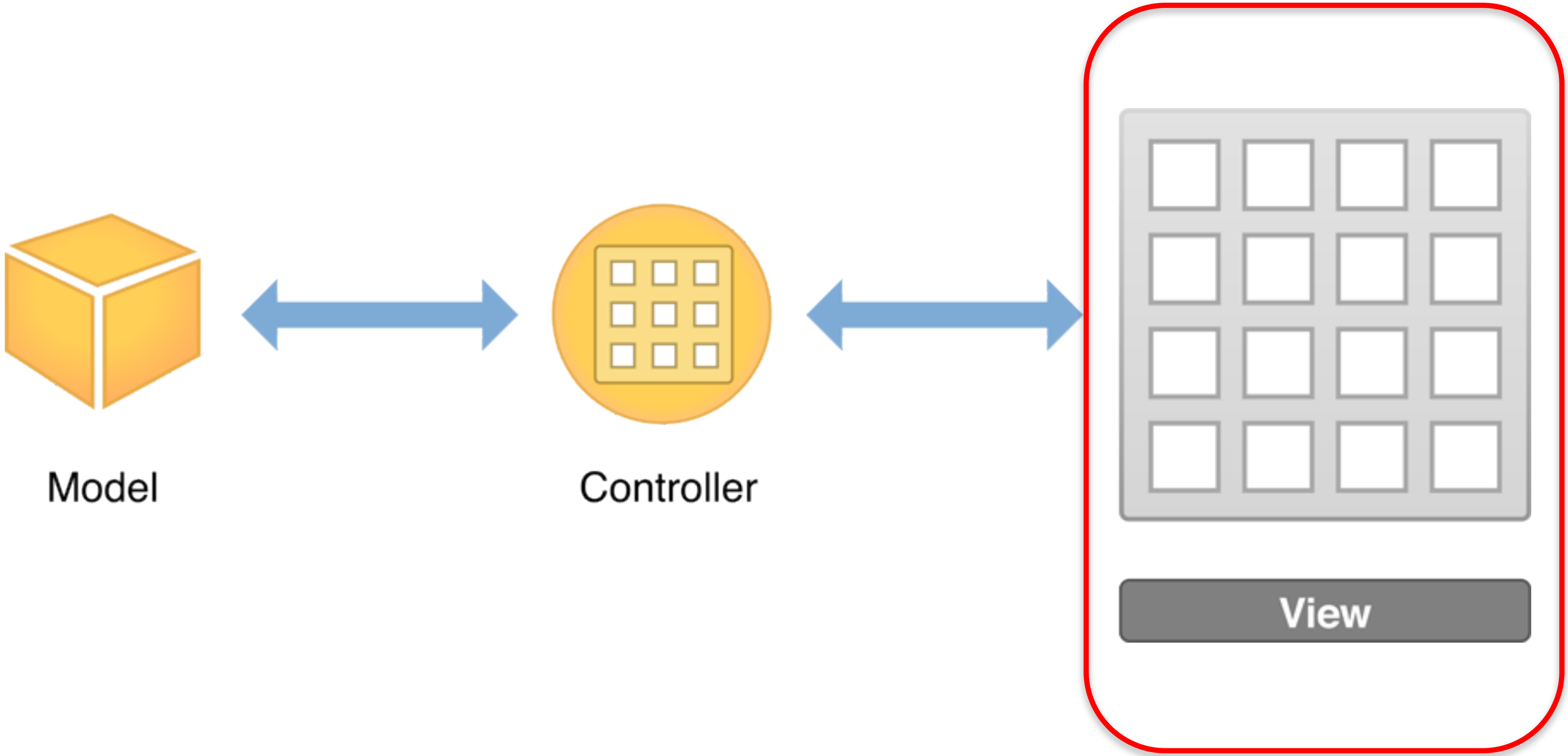
Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/AppDevelopmentProcess.htm

Protocols Define Messaging Contracts



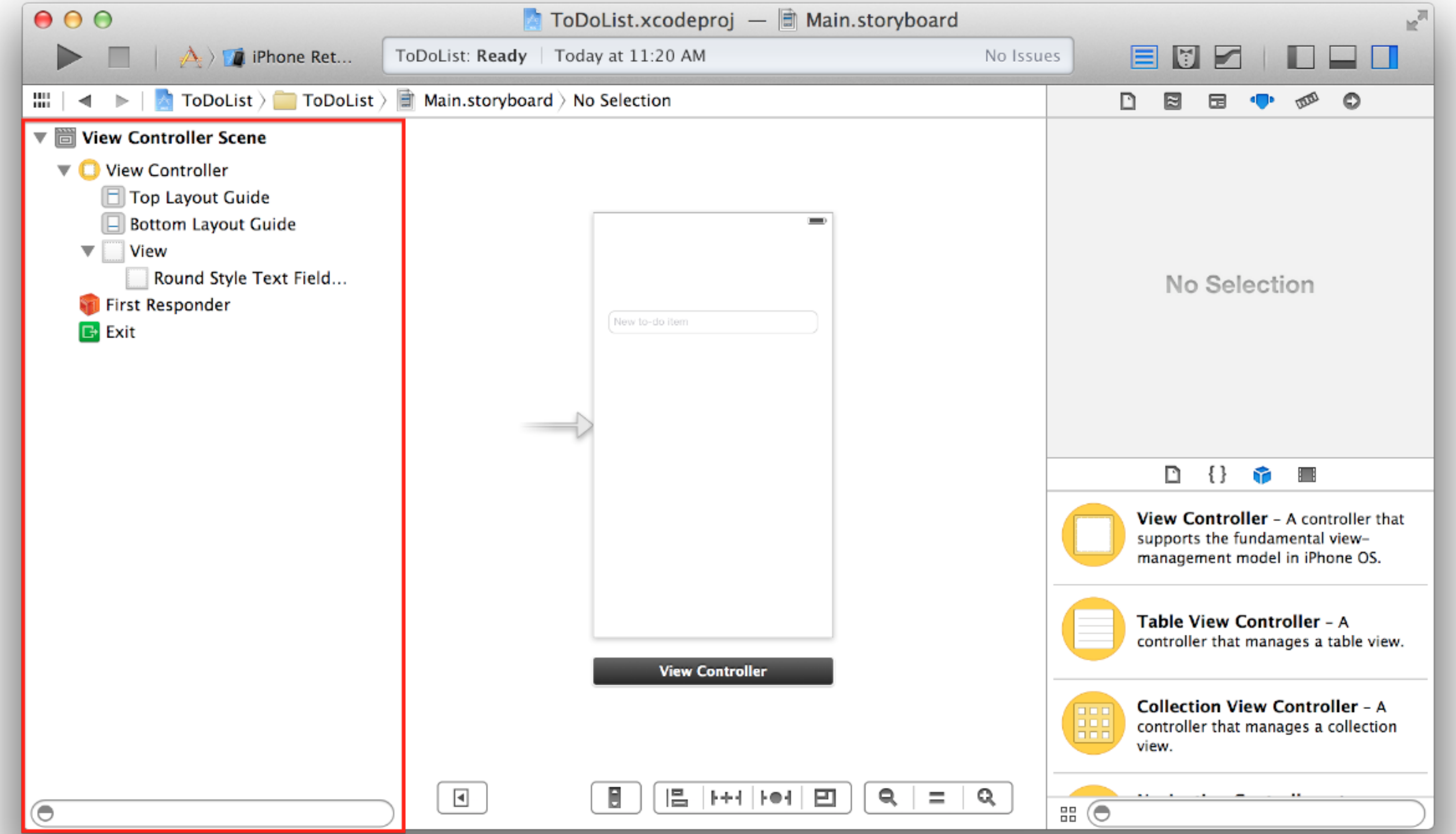
Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/AppDevelopmentProcess.htm

Designing a User Interface



Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/DesigningaUserInterface.html

Use Storyboards to Lay Out Views



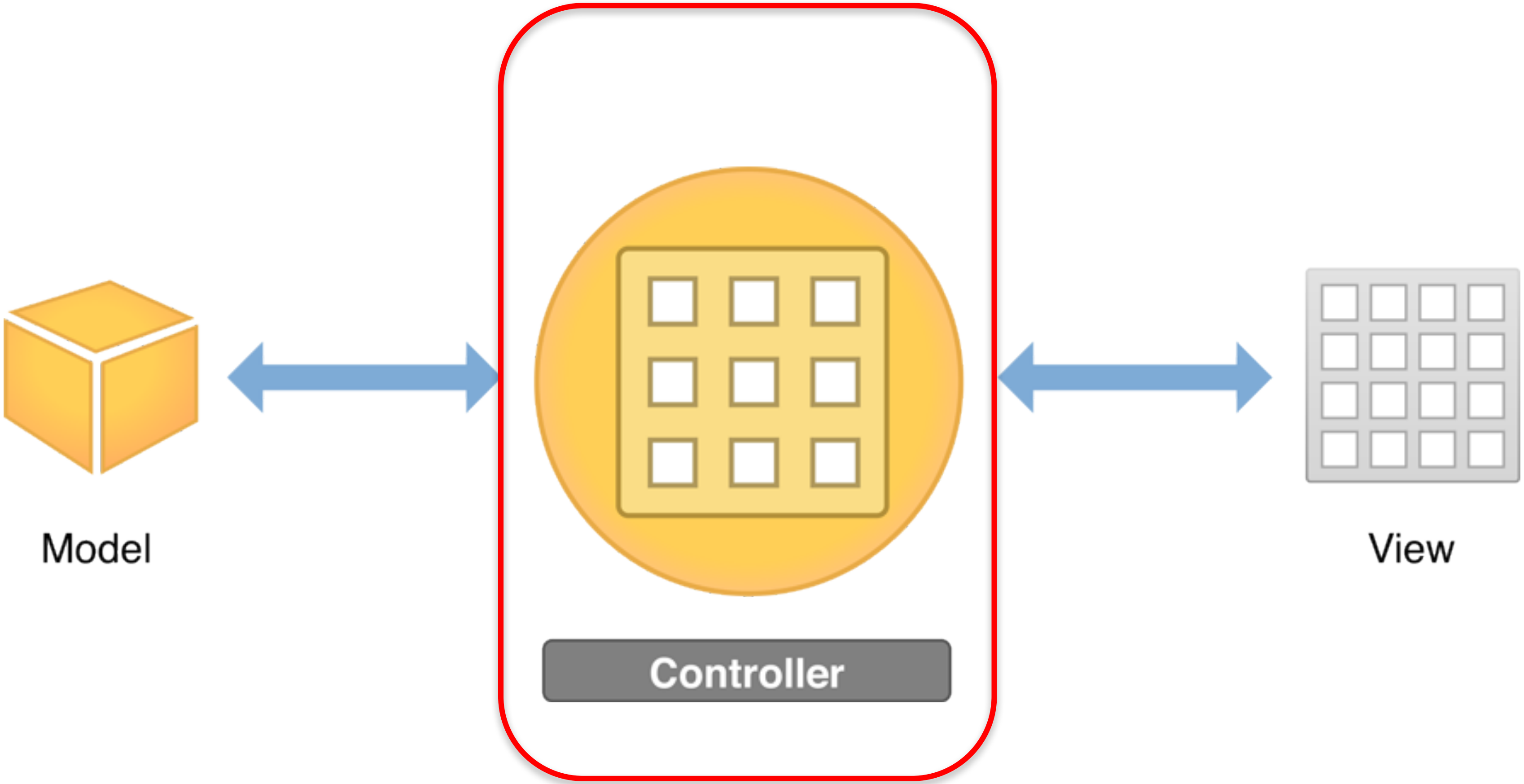
View Controller – A controller that supports the fundamental view-management model in iPhone OS.

Table View Controller – A controller that manages a table view.

Collection View Controller – A controller that manages a collection view.

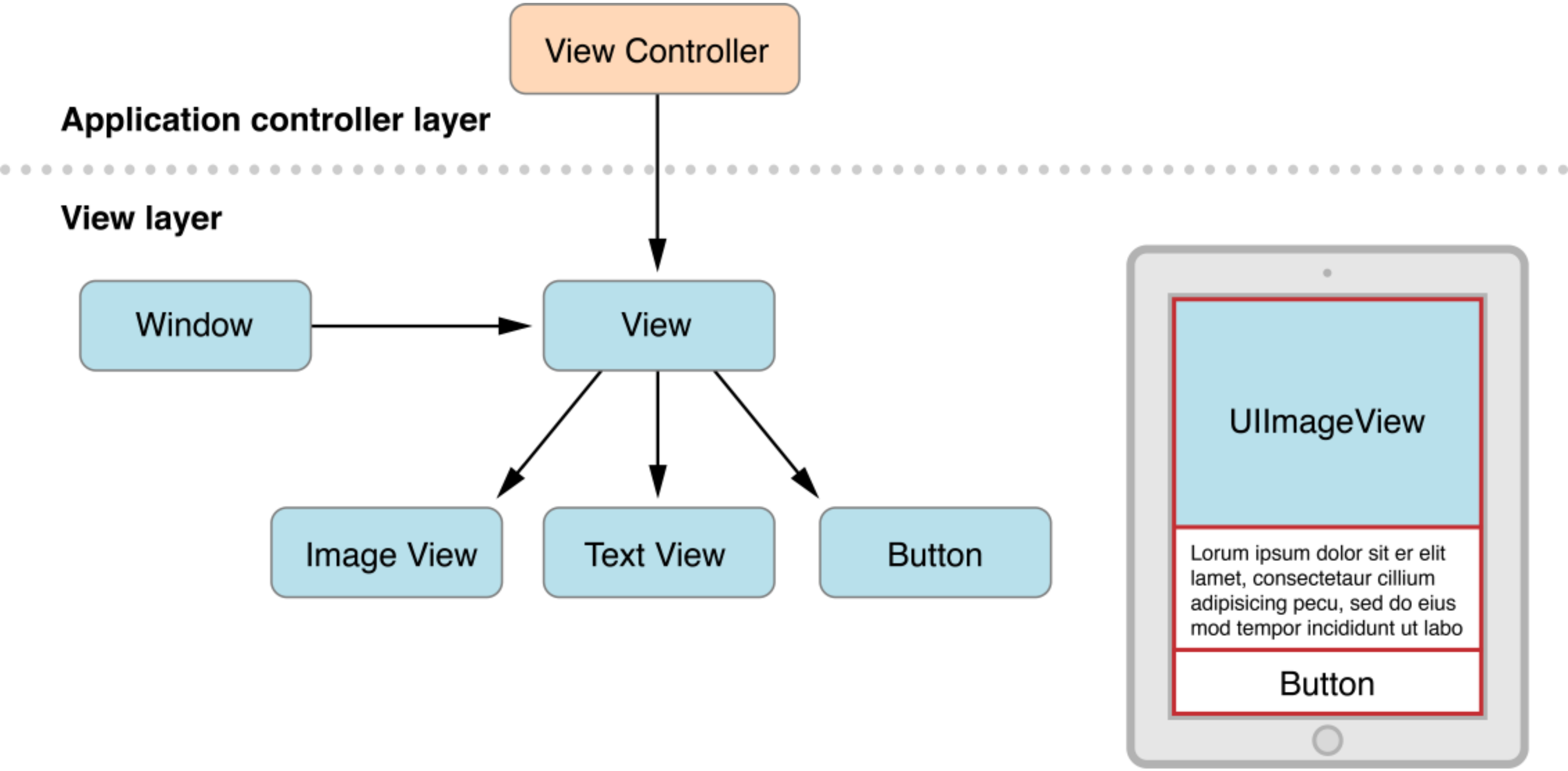
Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/DesigningaUserInterface.html

Defining the Interaction



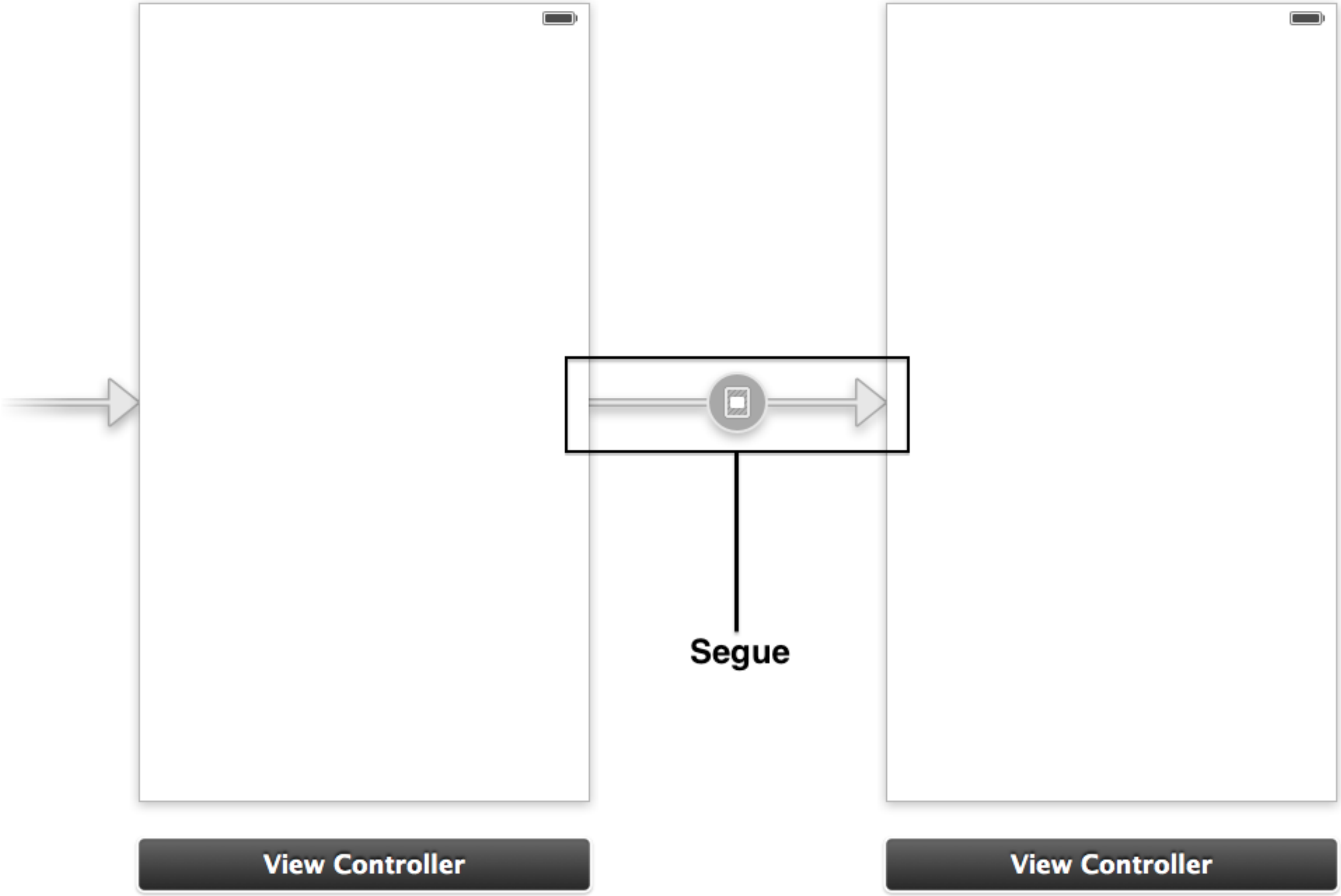
Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/DefiningtheInteraction.html

View Controllers


View Controller
Application controller layer
View layer
Window
View
Image View
Text View
Button
UIImageView
Lorum ipsum dolor sit er elit lamet, consectetaur cillium adipisicing pecu, sed do eius mod tempor incididunt ut labo
Button

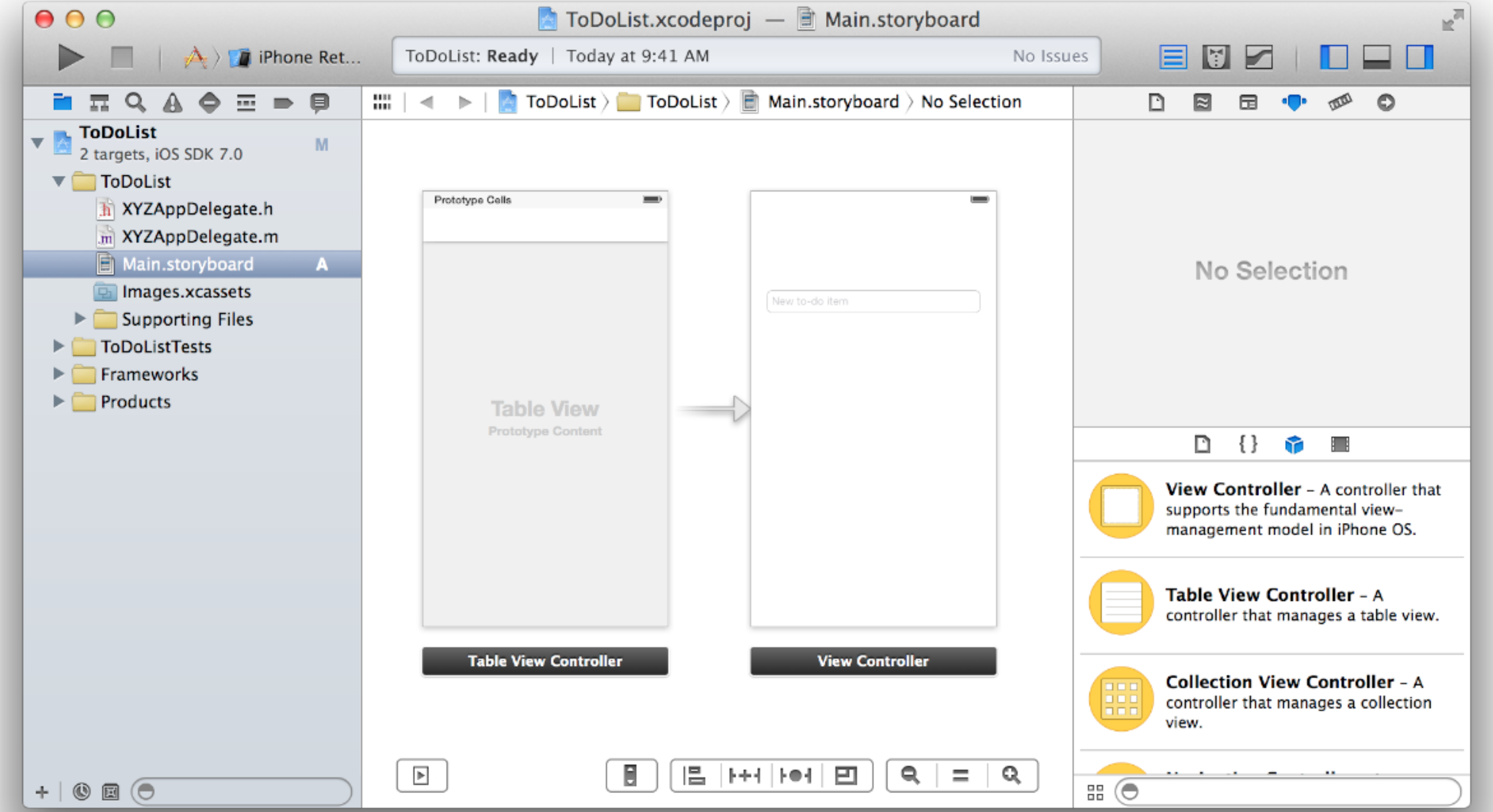
Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/DesigningaUserInterface.html

Use Storyboards to Define Navigation



Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/DesigningaUserInterface.html

Storyboards



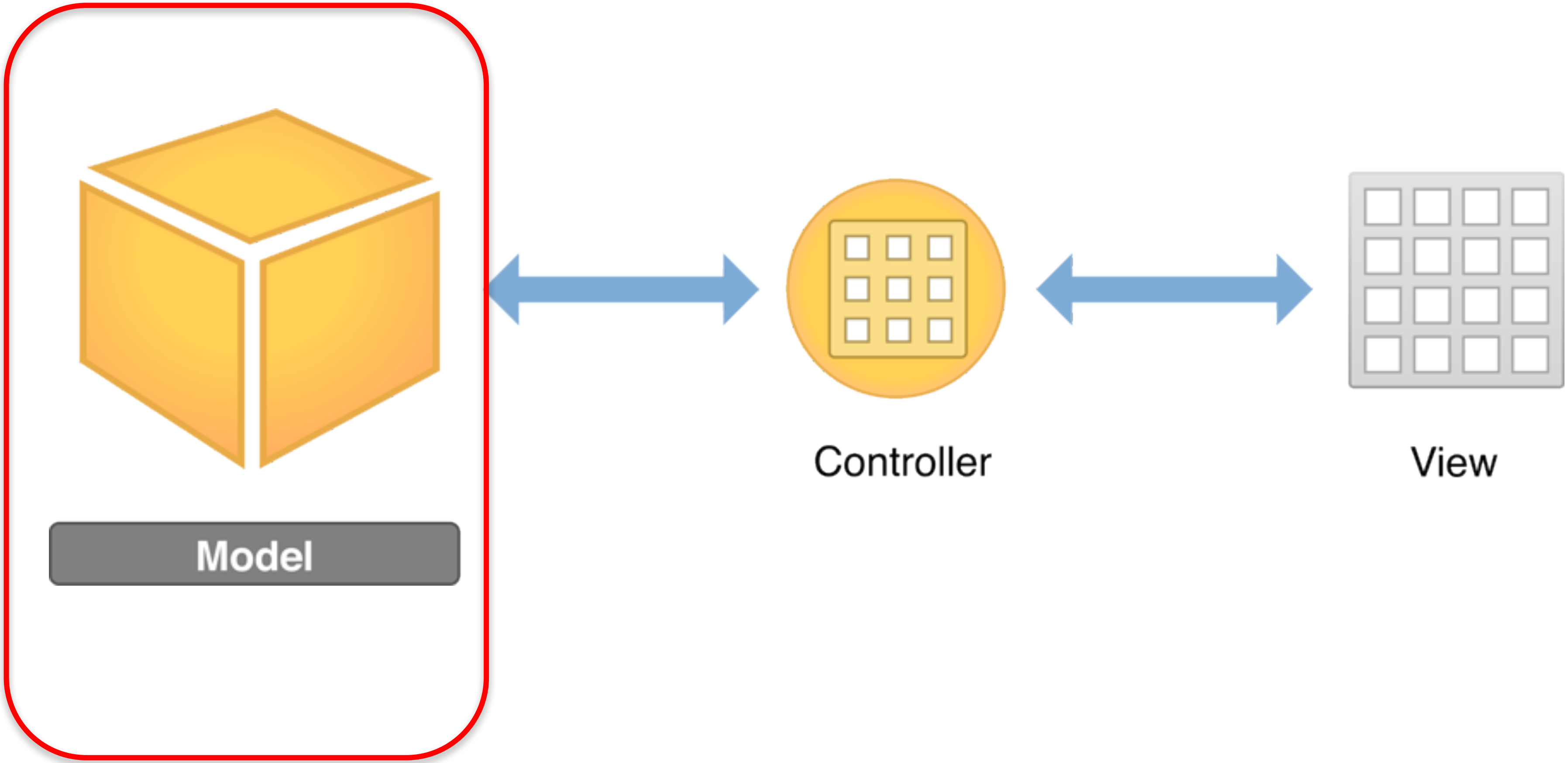
View Controller – A controller that supports the fundamental view-management model in iPhone OS.

Table View Controller – A controller that manages a table view.

Collection View Controller – A controller that manages a collection view.

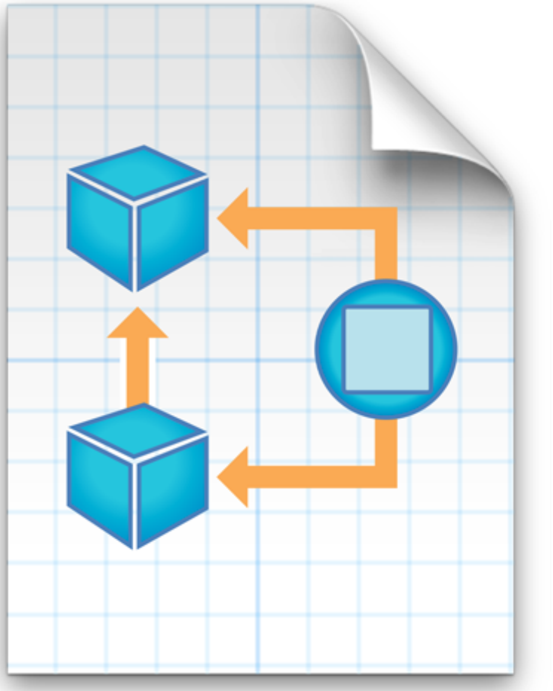
Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/DesigningaUserInterface.html

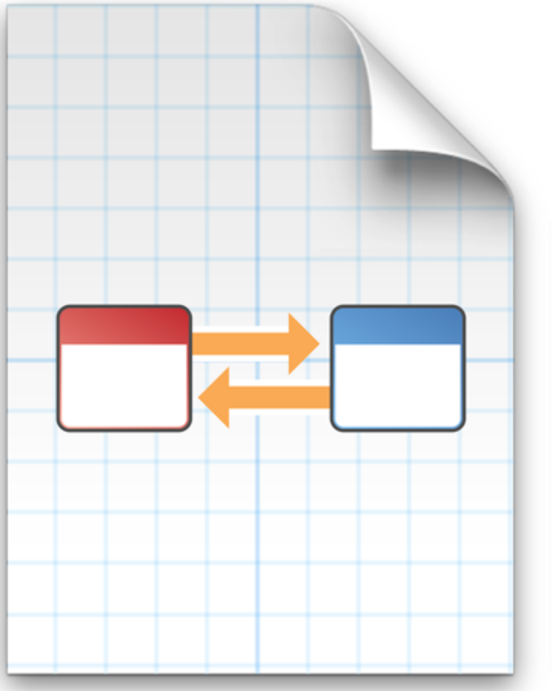
Incorporating the Data

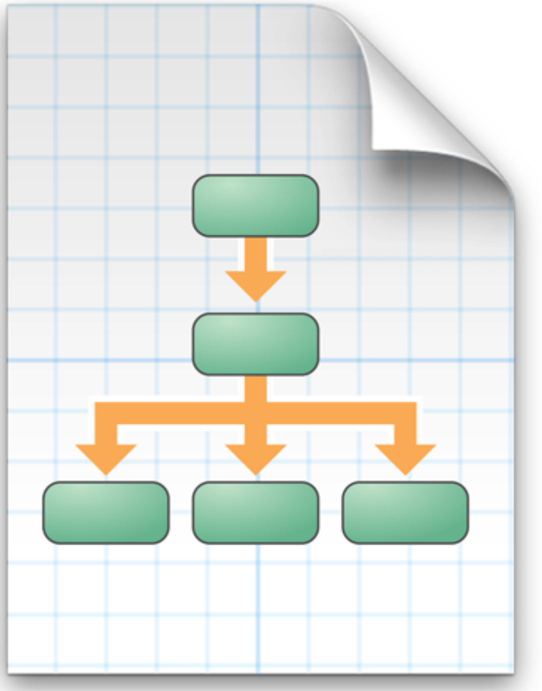


Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/IncorporatingtheData.html

Using Design Patterns

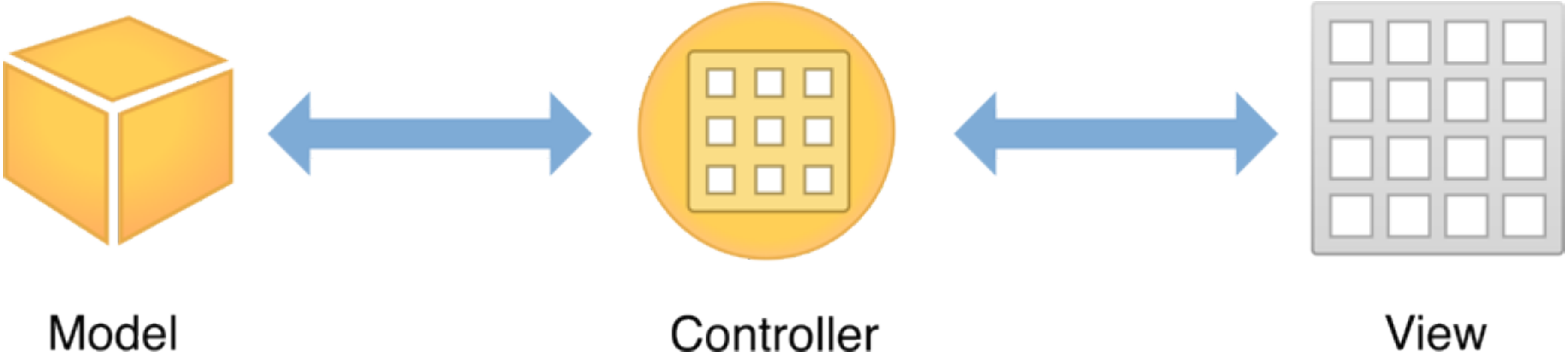






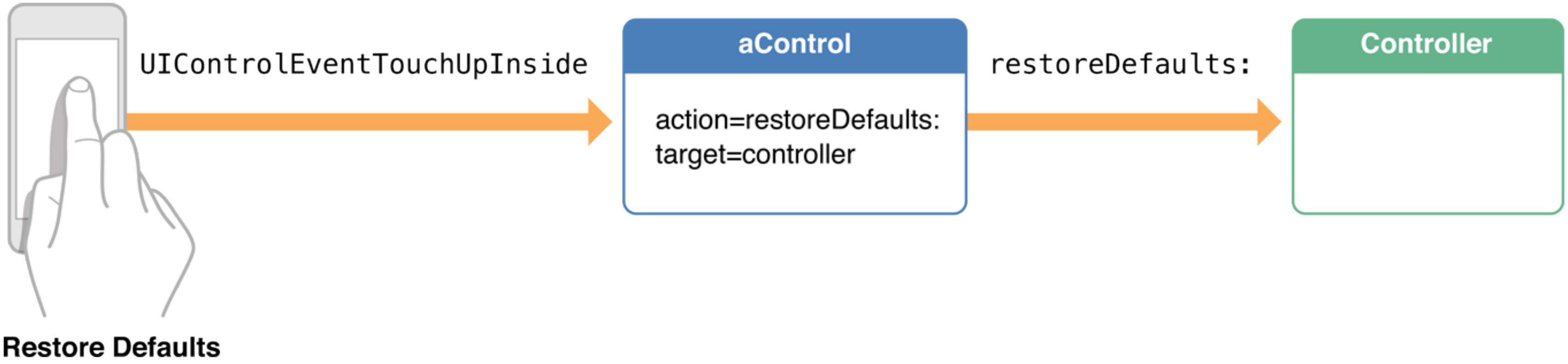
Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/DesignPatterns.html

Model-View-Controller (MVC)



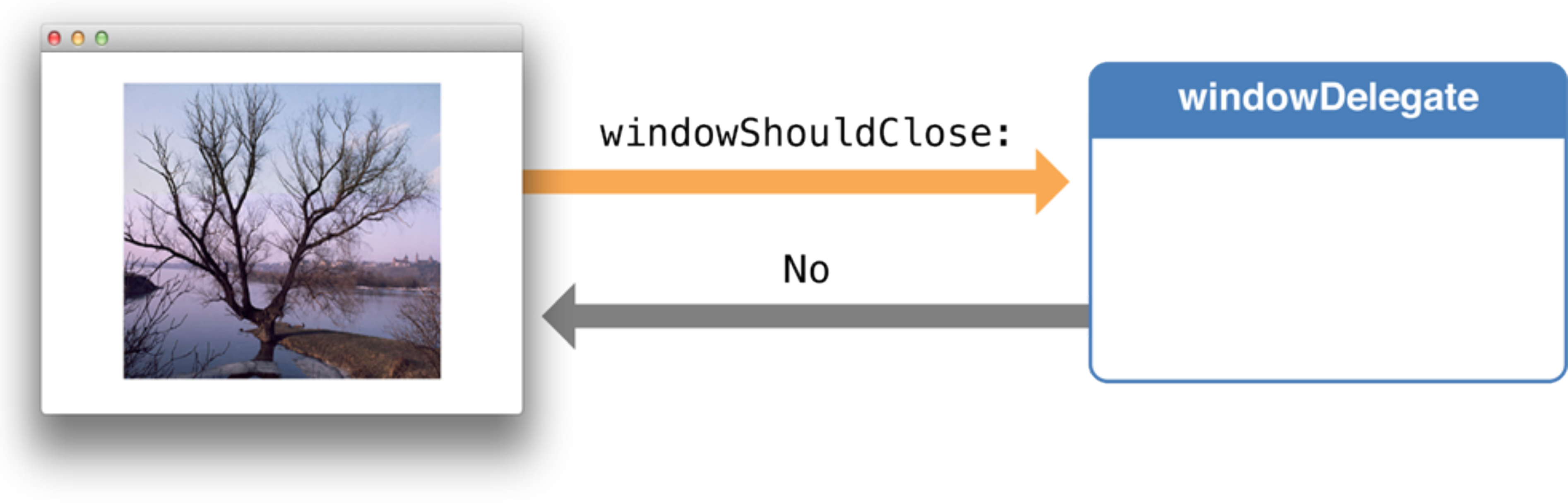
Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/DesignPatterns.html

Target-Action



Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/DesignPatterns.html

Delegation



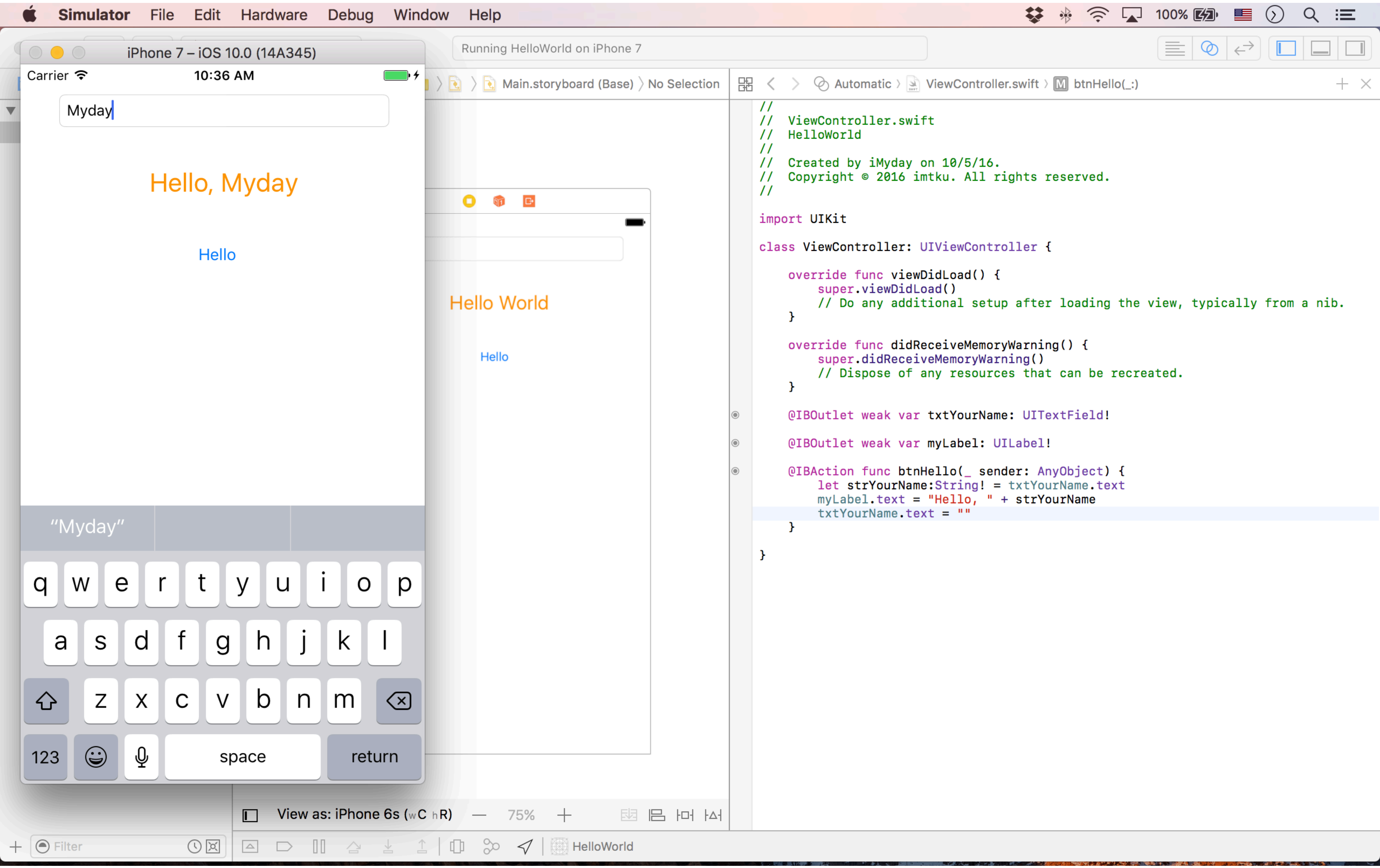
Source: https://developer.apple.com/library/ios/referencelibrary/GettingStarted/RoadMapiOS/DesignPatterns.html

IBOutlet and IBAction

- IBOutlet
  - Interface Builder Outlet
- IBAction
  - Interface Builder Action

Demo:
Building Your First iOS App with Xcode 8 (Swift 3)

Building Your First iOS App with Xcode 8



```swift
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. 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.
    }

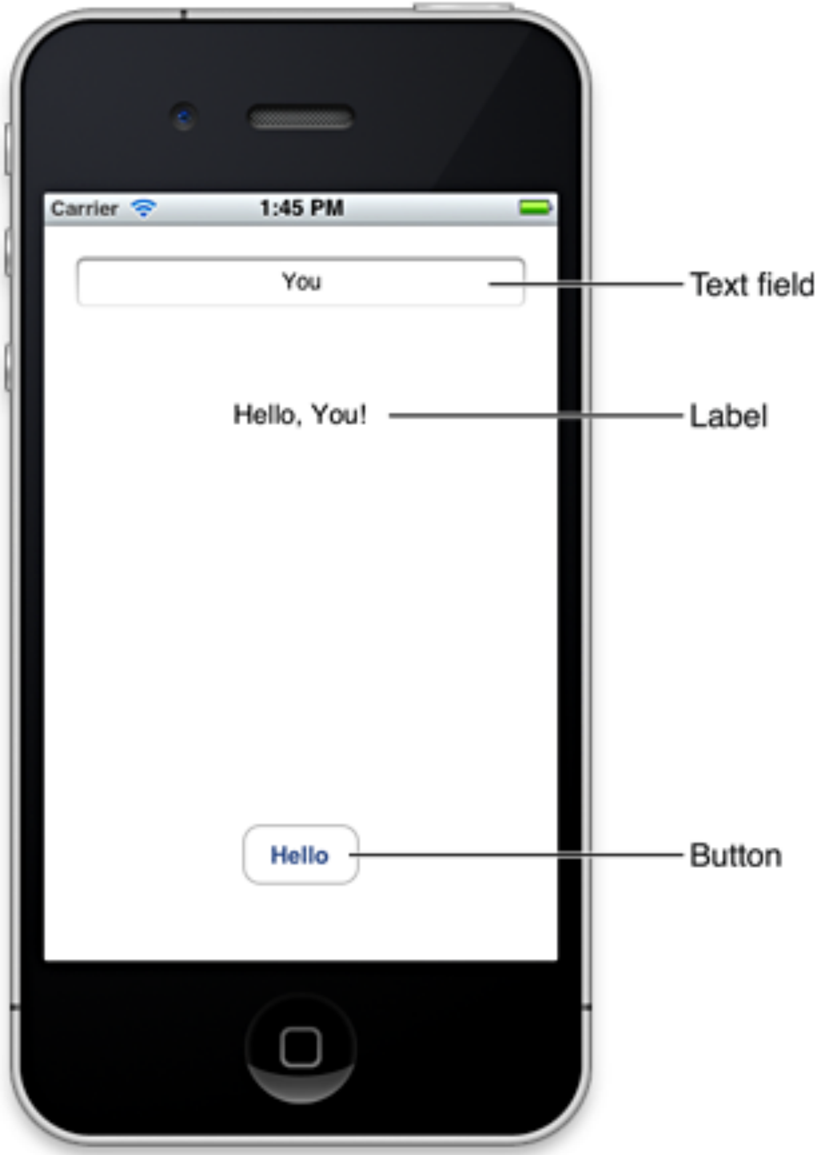
    @IBOutlet weak var txtYourName: UITextField!

    @IBOutlet weak var myLabel: UILabel!

    @IBAction func btnHello(_ sender: AnyObject) {
        let strYourName:String! = txtYourName.text
        myLabel.text = "Hello, " + strYourName
        txtYourName.text = ""
    }

}
```

Your First iOS App



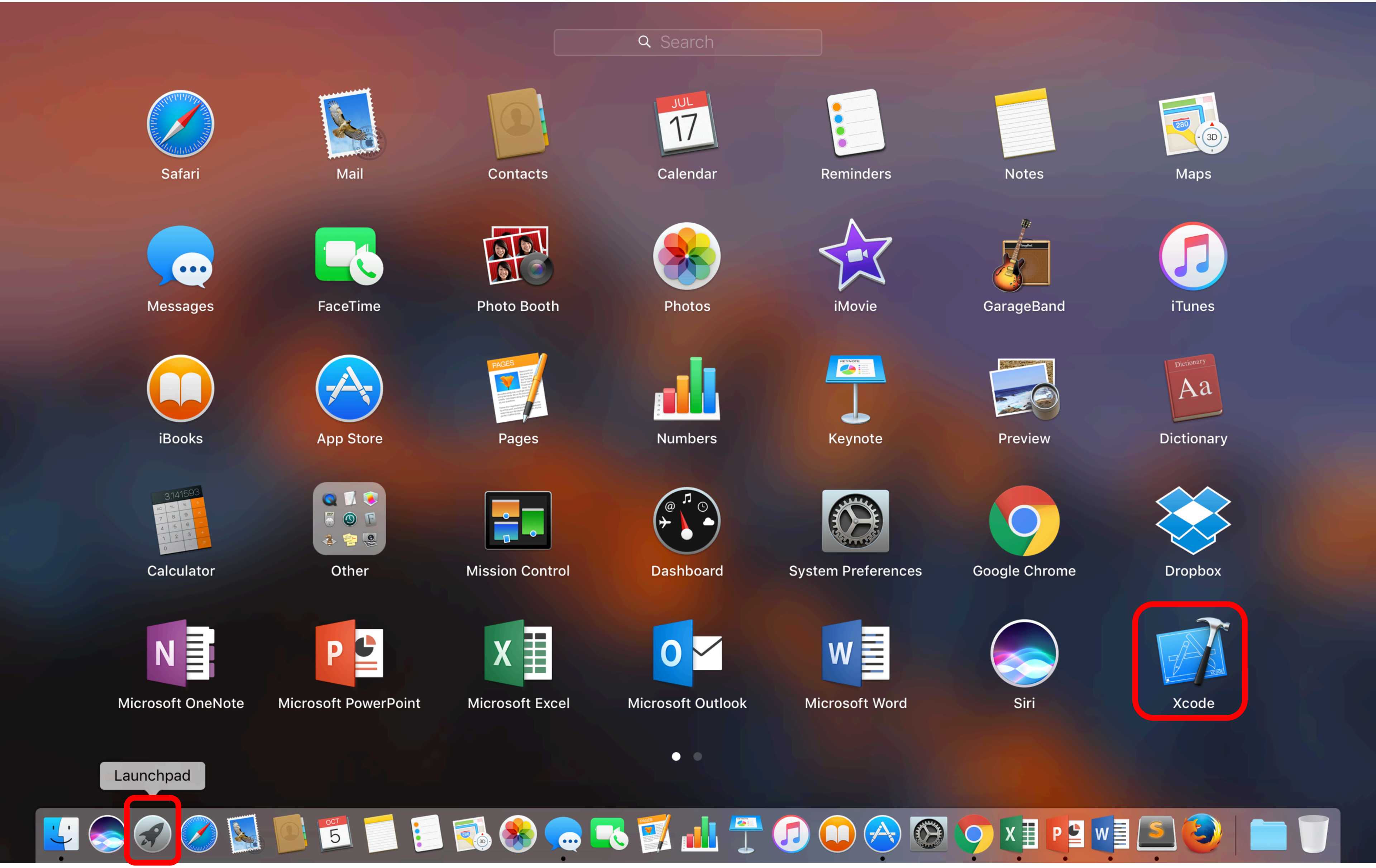
https://developer.apple.com/library/ios/documentation/iphone/conceptual/iphone101/Articles/00_Introduction.html

Xcode 8 with Swift 3

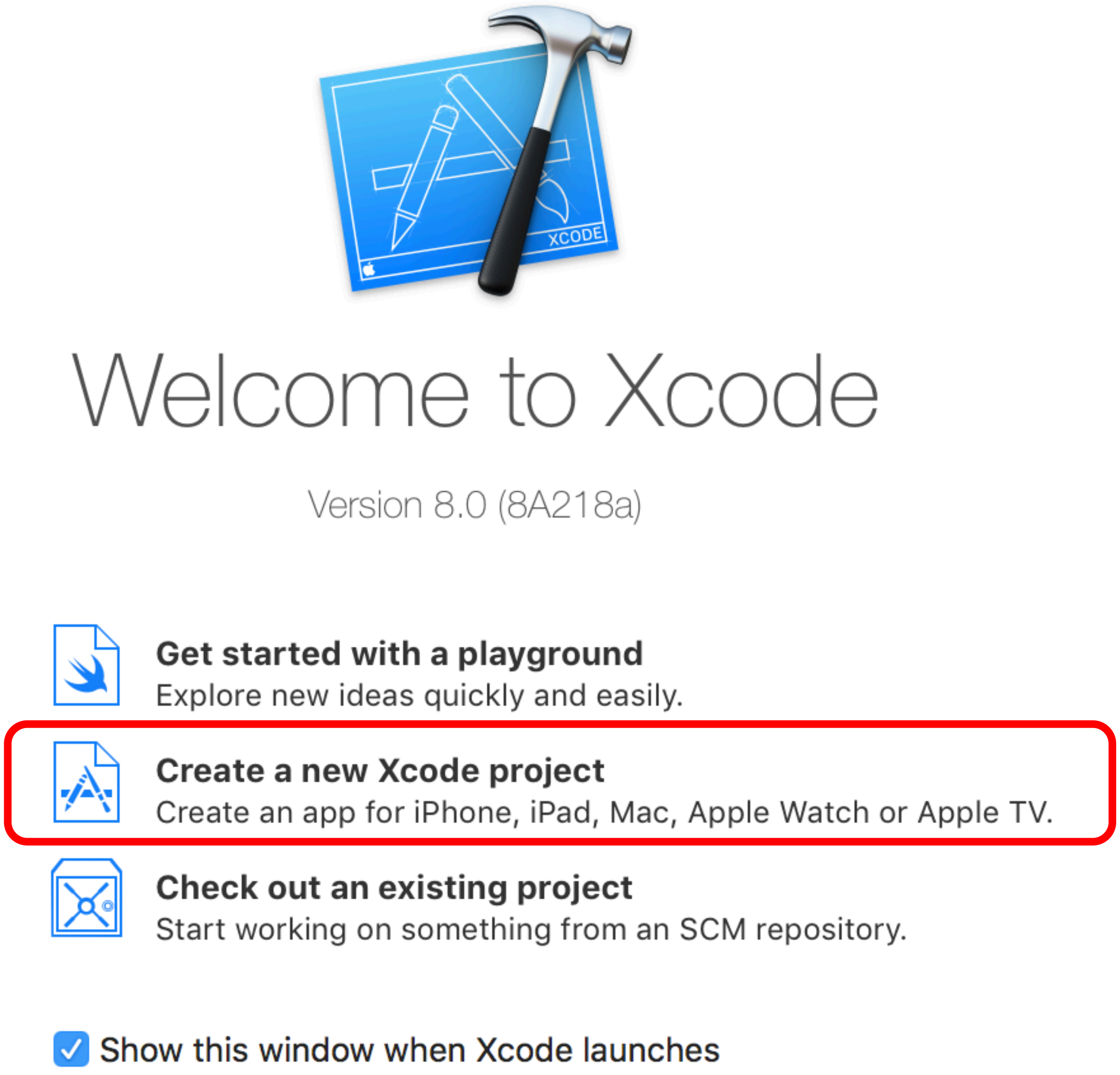
Xcode 8

Swift 3

Launchpad → Xcode



Xcode 8



Welcome to Xcode

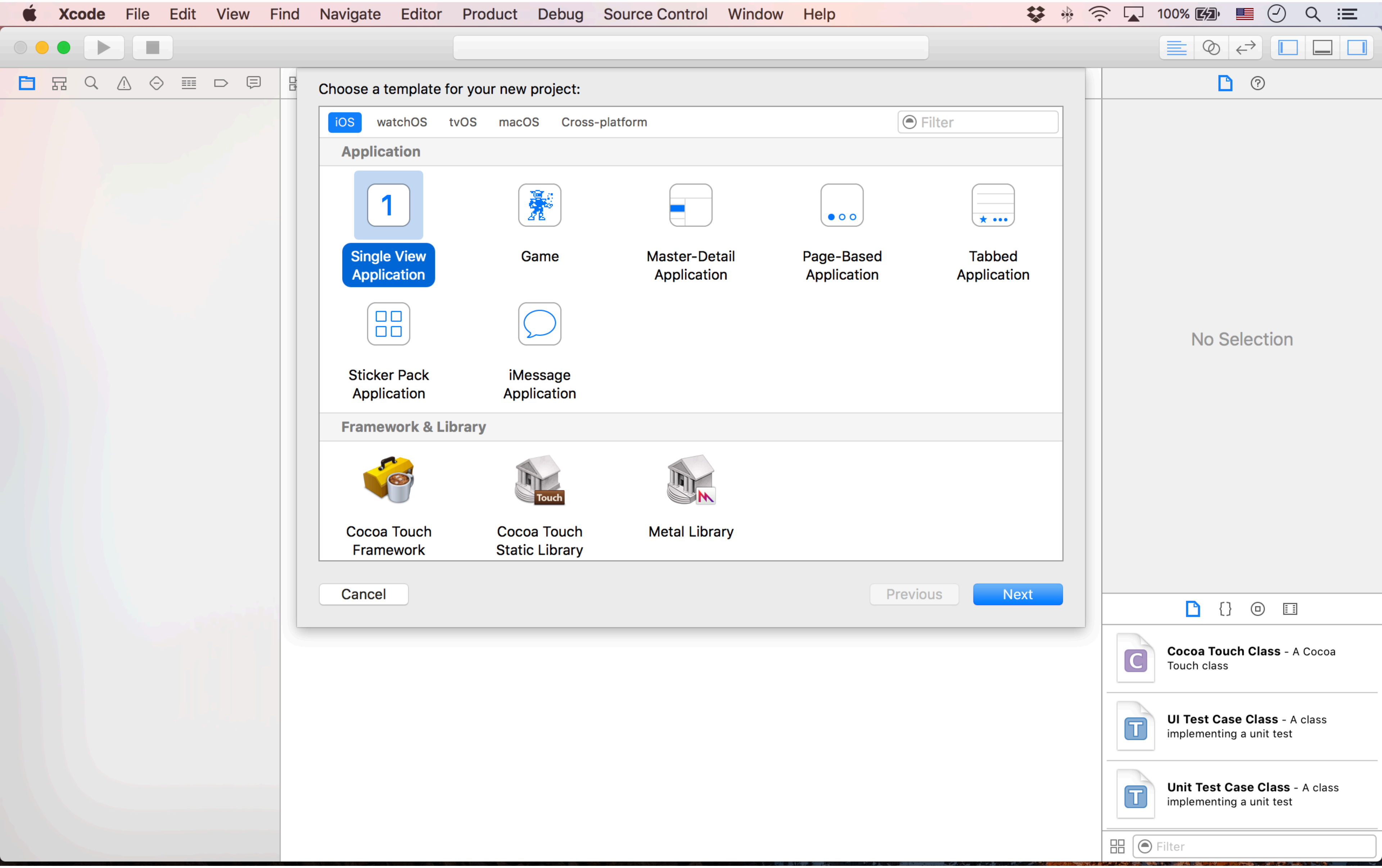
Version 8.0 (8A218a)

Get started with a playground
Explore new ideas quickly and easily.

Create a new Xcode project
Create an app for iPhone, iPad, Mac, Apple Watch or Apple TV.

Check out an existing project
Start working on something from an SCM repository.

☑ Show this window when Xcode launches



Choose a template for your new project:

iOS watchOS tvOS macOS Cross-platform

Filter

Application

- Single View Application
- Game
- Master-Detail Application
- Page-Based Application
- Tabbed Application
- Sticker Pack Application
- iMessage Application

Framework & Library

- Cocoa Touch Framework
- Cocoa Touch Static Library
- Metal Library

Cancel Previous Next

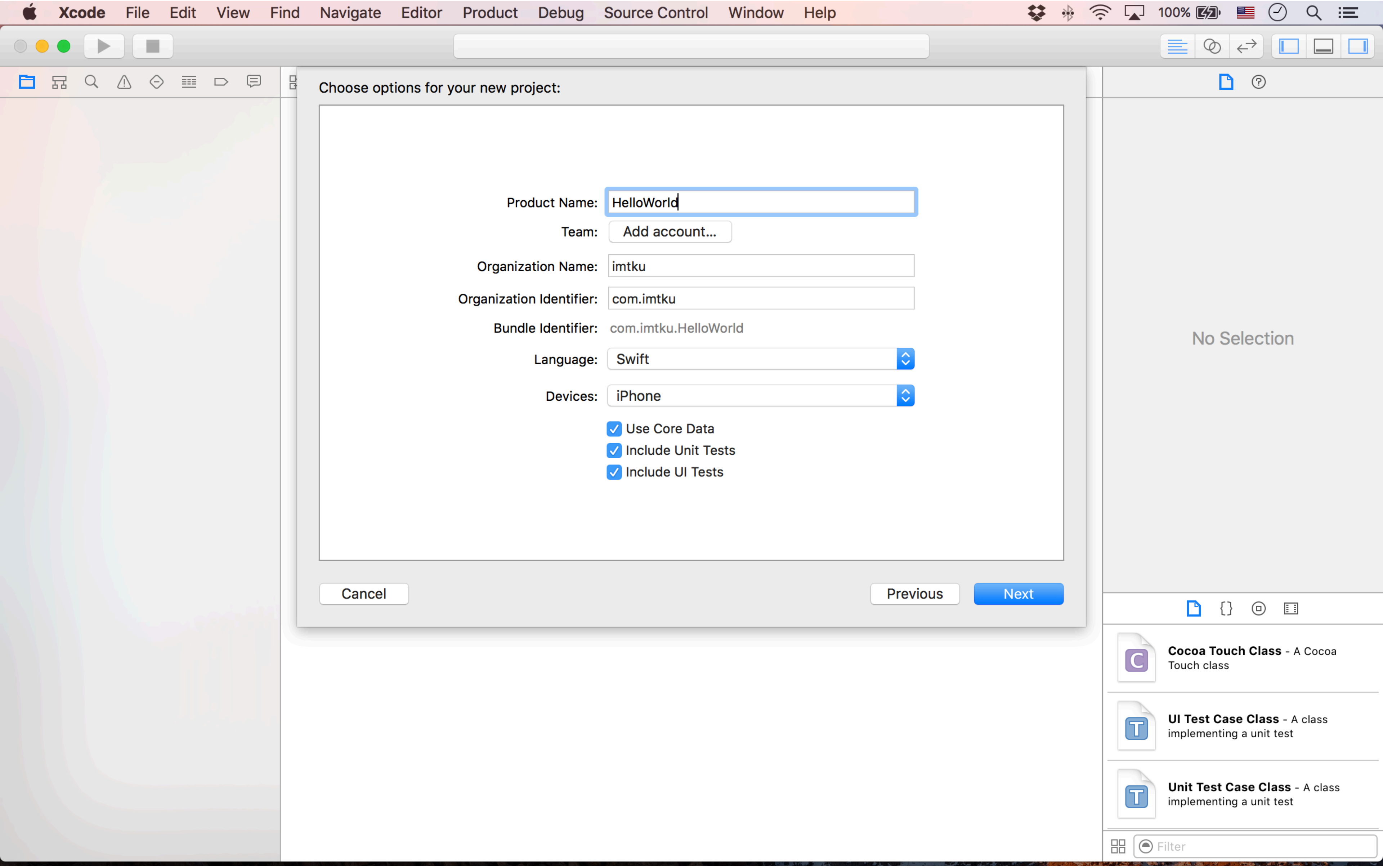
Cocoa Touch Class - A Cocoa Touch class

UI Test Case Class - A class implementing a unit test

Unit Test Case Class - A class implementing a unit test

Filter

Swift Language



Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help

Choose options for your new project:

Product Name: HelloWorld

Team: Add account...

Organization Name: imtku

Organization Identifier: com.imtku

Bundle Identifier: com.imtku.HelloWorld

Language: Swift

Devices: iPhone

☑ Use Core Data

☑ Include Unit Tests

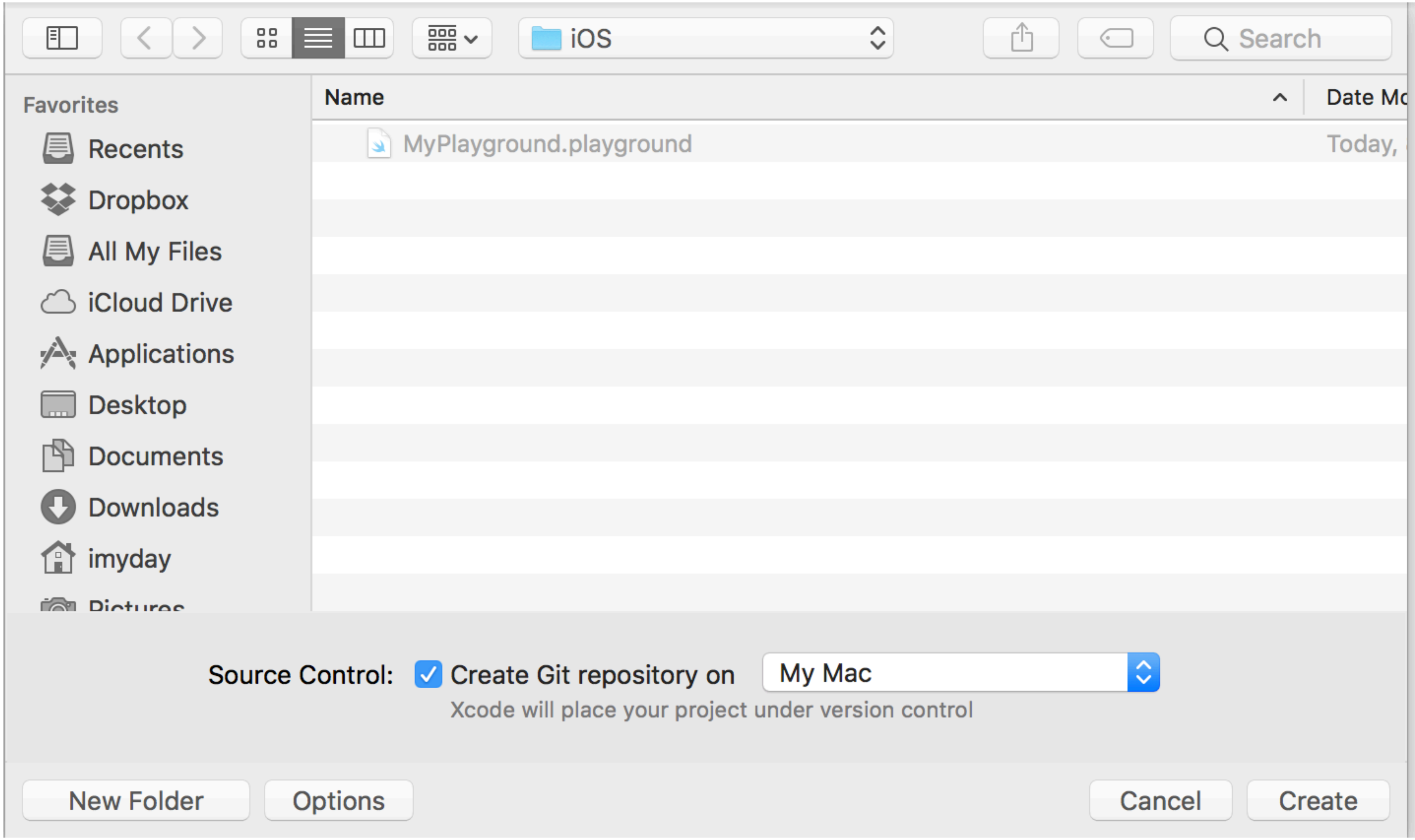
☑ Include UI Tests

No Selection

Cocoa Touch Class - A Cocoa Touch class

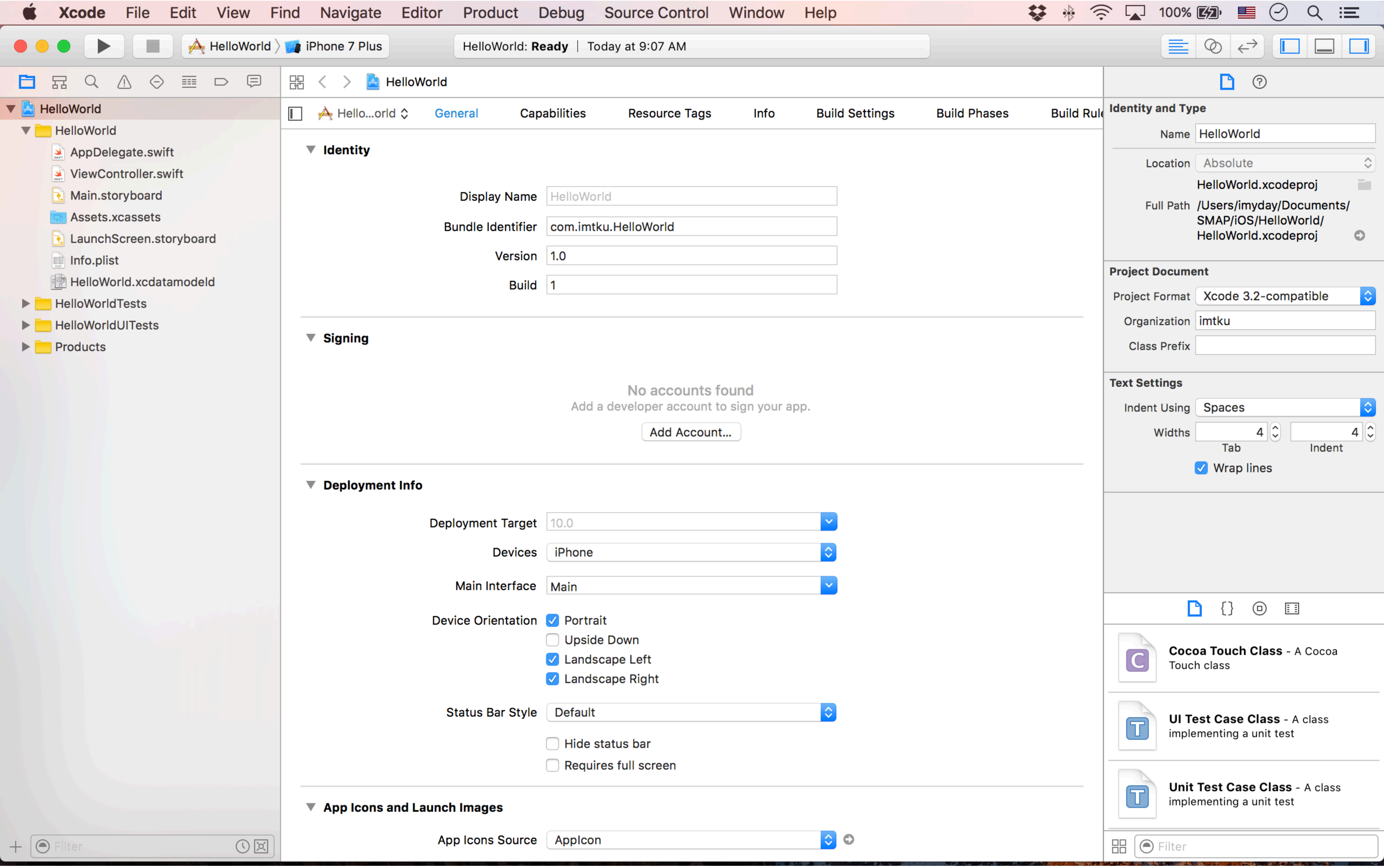
UI Test Case Class - A class implementing a unit test

Unit Test Case Class - A class implementing a unit test



Source Control: ☑ Create Git repository on My Mac

Xcode will place your project under version control



Identity

Display Name: HelloWorld

Bundle Identifier: com.imtku.HelloWorld

Version: 1.0

Build: 1

Signing

No accounts found

Add a developer account to sign your app.

Deployment Info

Deployment Target: 10.0

Devices: iPhone

Main Interface: Main

Device Orientation:
☑ Portrait
□ Upside Down
☑ Landscape Left
☑ Landscape Right

Status Bar Style: Default

□ Hide status bar

□ Requires full screen

App Icons and Launch Images

App Icons Source: AppIcon

Identity and Type

Name: HelloWorld

Location: Absolute

HelloWorld.xcodeproj

Full Path: /Users/imyday/Documents/SMAP/iOS/HelloWorld/HelloWorld.xcodeproj

Project Document

Project Format: Xcode 3.2-compatible

Organization: imtku

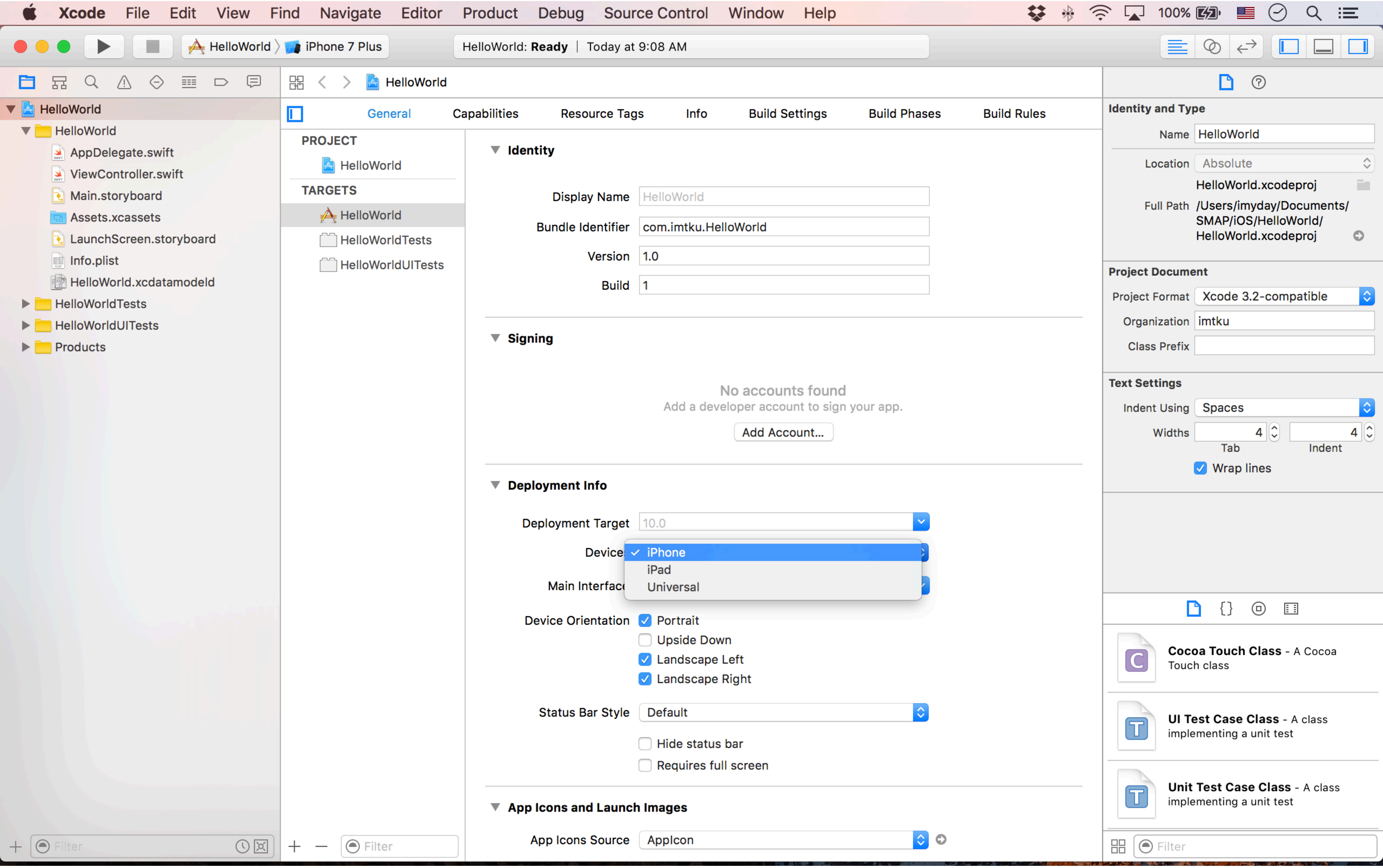
Class Prefix:

Text Settings

Indent Using: Spaces

Widths: 4 Tab, 4 Indent

☑ Wrap lines



Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help
100%
HelloWorld 〉 iPhone 7 Plus
HelloWorld: Ready | Today at 9:08 AM
HelloWorld
General Capabilities Resource Tags Info Build Settings Build Phases Build Rules
Filter
Filter
Filter

- HelloWorld
  - HelloWorld
    - AppDelegate.swift
    - ViewController.swift
    - Main.storyboard
    - Assets.xcassets
    - LaunchScreen.storyboard
    - Info.plist
    - HelloWorld.xcdatamodeld
  - HelloWorldTests
  - HelloWorldUITests
  - Products

PROJECT

- HelloWorld

TARGETS

- HelloWorld
- HelloWorldTests
- HelloWorldUITests

Identity

Display Name	HelloWorld
Bundle Identifier	com.imtku.HelloWorld
Version	1.0
Build	1

Signing

No accounts found
Add a developer account to sign your app.
Add Account...

Deployment Info

Deployment Target	10.0
Devices	✓ iPhone iPad Universal
Main Interface	
Device Orientation	☑ Portrait □ Upside Down ☑ Landscape Left ☑ Landscape Right
Status Bar Style	Default
	□ Hide status bar □ Requires full screen

App Icons and Launch Images

App Icons Source	AppIcon

Identity and Type

Name	HelloWorld
Location	Absolute
	HelloWorld.xcodeproj
Full Path	/Users/imyday/Documents/SMAP/iOS/HelloWorld/HelloWorld.xcodeproj

Project Document

Project Format	Xcode 3.2-compatible
Organization	imtku
Class Prefix	

Text Settings

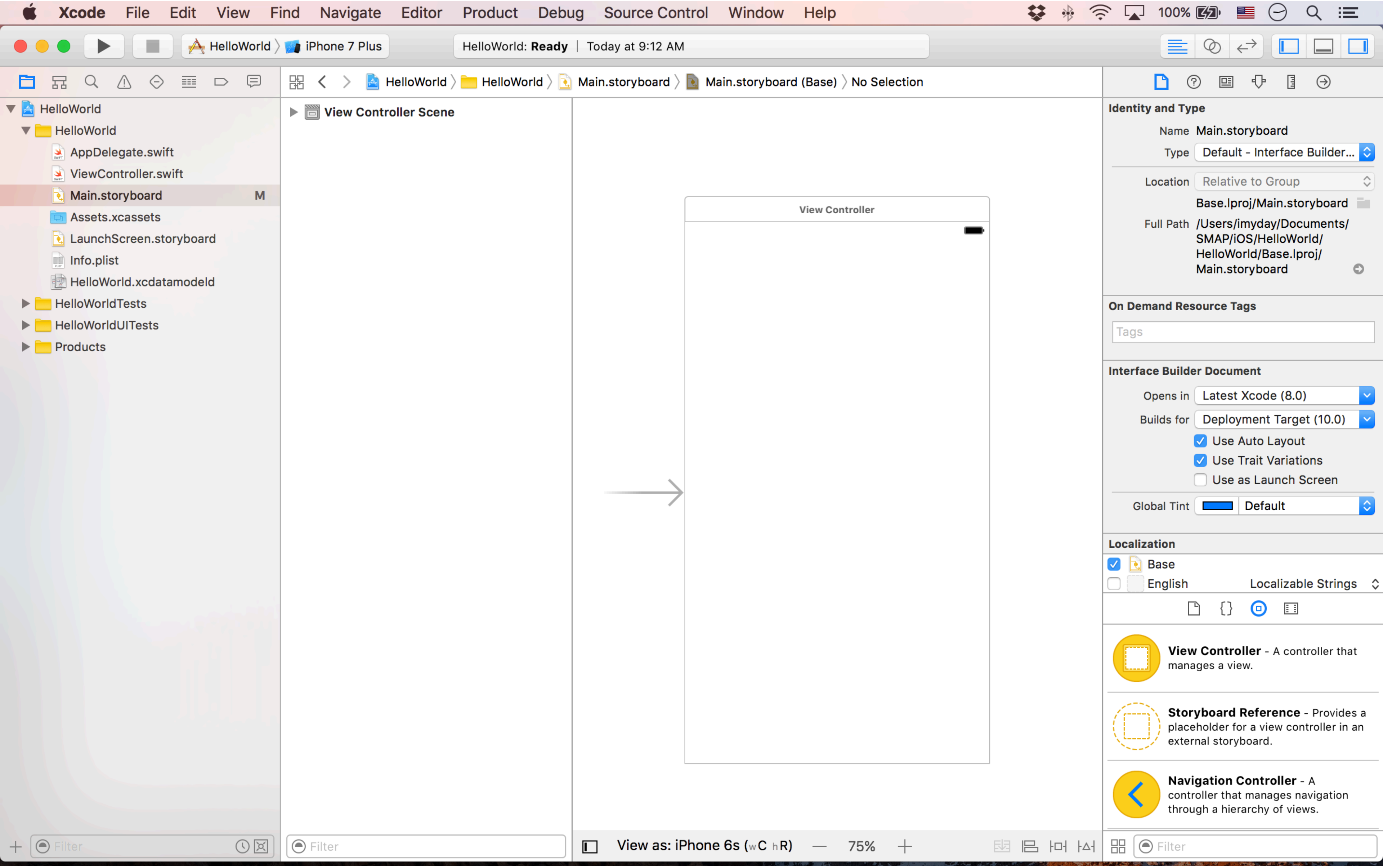
Indent Using	Spaces
Widths	4 Tab, 4 Indent
	☑ Wrap lines

Cocoa Touch Class - A Cocoa Touch class

UI Test Case Class - A class implementing a unit test

Unit Test Case Class - A class implementing a unit test

Main.storyboard (UI)



Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help

HelloWorld 〉 iPhone 7 Plus

HelloWorld: **Ready** | Today at 9:12 AM

HelloWorld 〉 HelloWorld 〉 Main.storyboard 〉 Main.storyboard (Base) 〉 No Selection

- HelloWorld
  - HelloWorld
    - AppDelegate.swift
    - ViewController.swift
    - Main.storyboard M
    - Assets.xcassets
    - LaunchScreen.storyboard
    - Info.plist
    - HelloWorld.xcdatamodeld
  - HelloWorldTests
  - HelloWorldUITests
  - Products

View Controller Scene

View Controller

View as: iPhone 6s (wC hR) — 75% +

Identity and Type

Name: Main.storyboard

Type: Default - Interface Builder...

Location: Relative to Group

Base.lproj/Main.storyboard

Full Path: /Users/imyday/Documents/SMAP/iOS/HelloWorld/HelloWorld/Base.lproj/Main.storyboard

On Demand Resource Tags

Tags

Interface Builder Document

Opens in: Latest Xcode (8.0)

Builds for: Deployment Target (10.0)

☑ Use Auto Layout

☑ Use Trait Variations

☐ Use as Launch Screen

Global Tint: Default

Localization

☑ Base

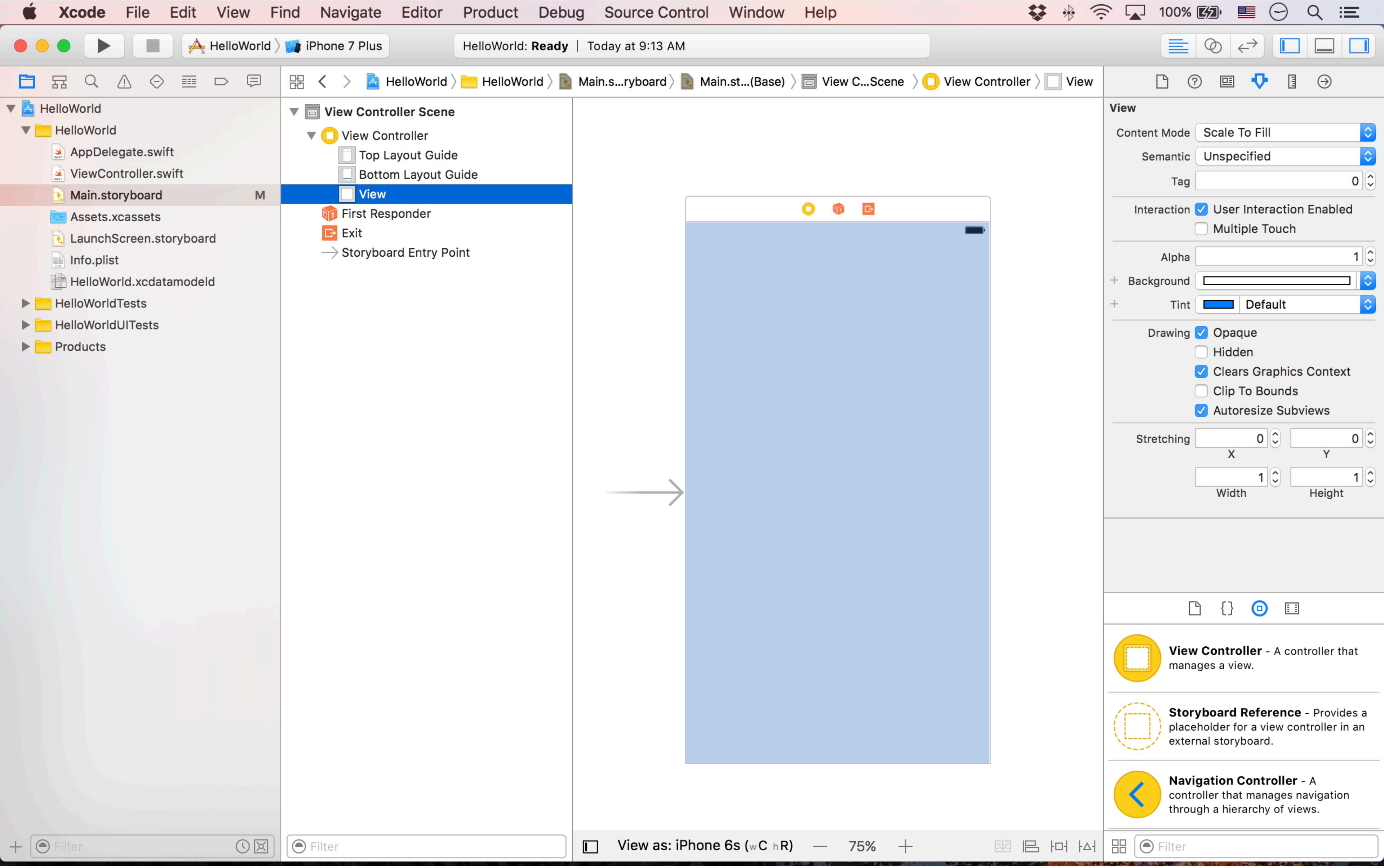
☐ English — Localizable Strings

View Controller - A controller that manages a view.

Storyboard Reference - Provides a placeholder for a view controller in an external storyboard.

Navigation Controller - A controller that manages navigation through a hierarchy of views.

Main.storyboard (UI)



Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help

HelloWorld 〉 iPhone 7 Plus

HelloWorld: **Ready** | Today at 9:13 AM

HelloWorld 〉 HelloWorld 〉 Main.s...ryboard 〉 Main.st...(Base) 〉 View C...Scene 〉 View Controller 〉 View

- HelloWorld
  - HelloWorld
    - AppDelegate.swift
    - ViewController.swift
    - Main.storyboard M
    - Assets.xcassets
    - LaunchScreen.storyboard
    - Info.plist
    - HelloWorld.xcdatamodeld
  - HelloWorldTests
  - HelloWorldUITests
  - Products

- **View Controller Scene**
  - View Controller
    - Top Layout Guide
    - Bottom Layout Guide
    - View
  - First Responder
  - Exit
  - Storyboard Entry Point

View as: iPhone 6s (wC hR) — 75% +

View

Content Mode: Scale To Fill
Semantic: Unspecified
Tag: 0
Interaction: ☑ User Interaction Enabled
☐ Multiple Touch
Alpha: 1
Background:
Tint: Default
Drawing: ☑ Opaque
☐ Hidden
☑ Clears Graphics Context
☐ Clip To Bounds
☑ Autoresize Subviews
Stretching: X 0, Y 0, Width 1, Height 1

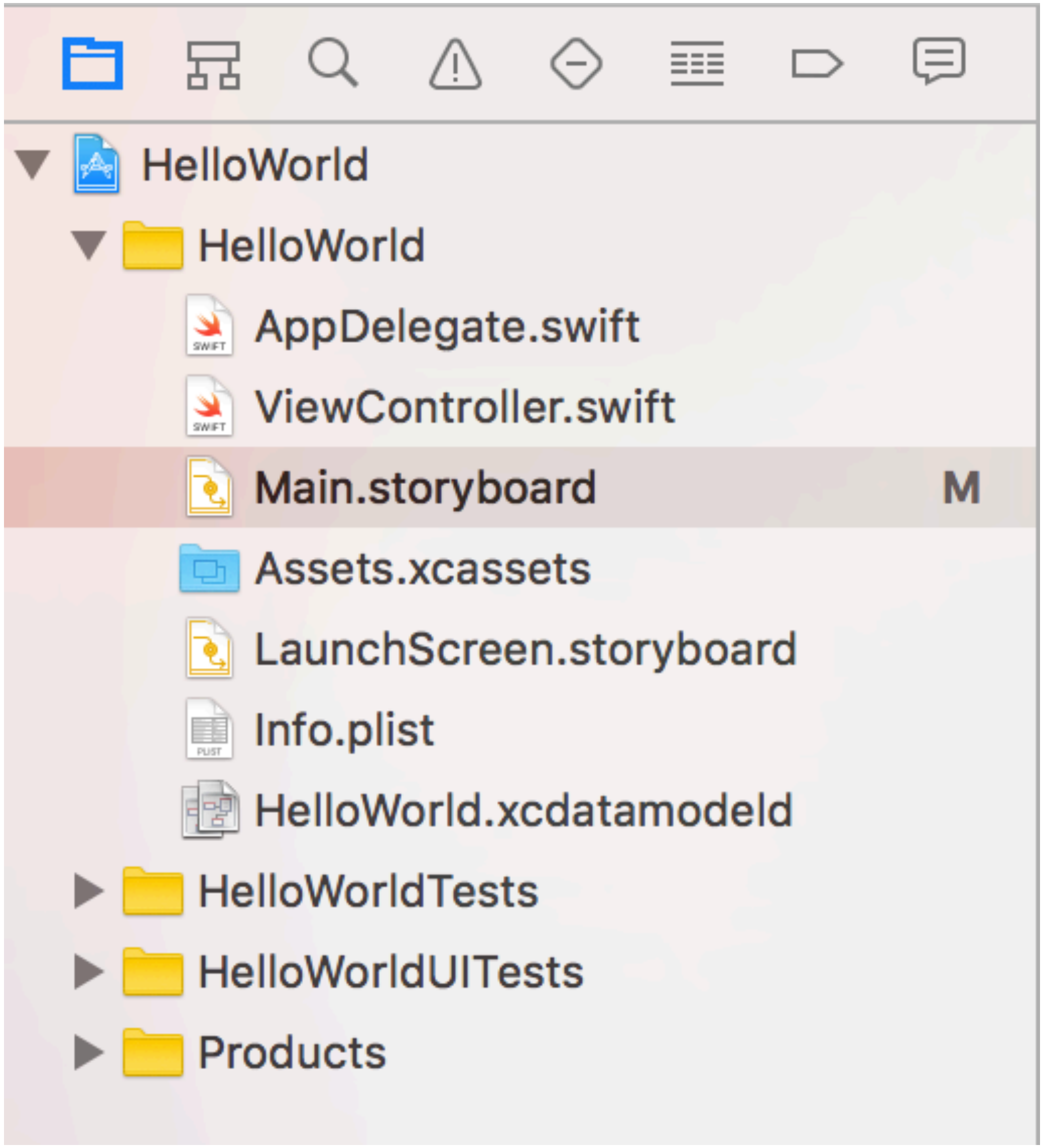
View Controller - A controller that manages a view.

Storyboard Reference - Provides a placeholder for a view controller in an external storyboard.

Navigation Controller - A controller that manages navigation through a hierarchy of views.

Main.storyboard (UI)

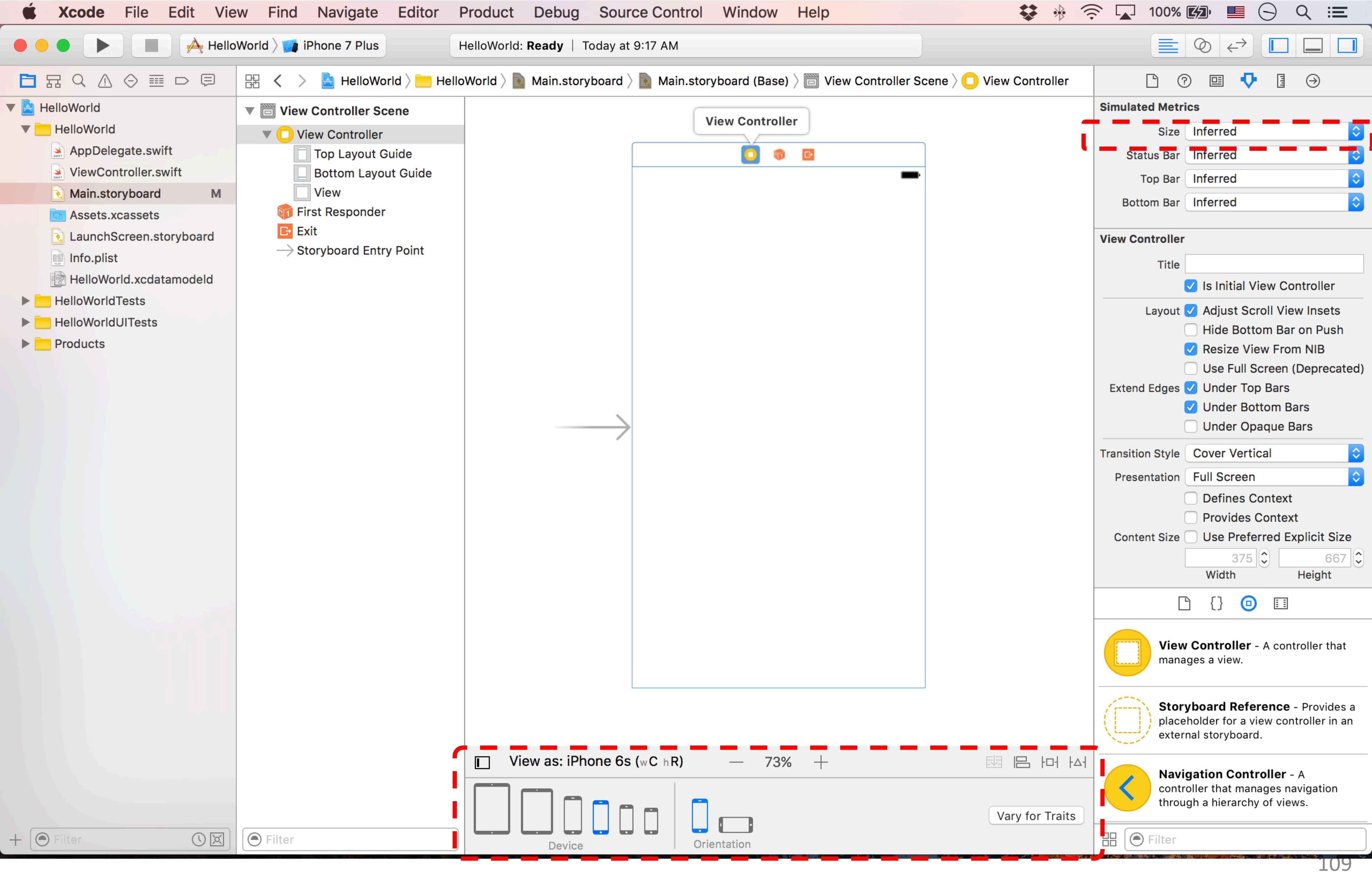
ViewController.swift (Code)



- HelloWorld
  - HelloWorld
    - AppDelegate.swift
    - ViewController.swift
    - Main.storyboard M
    - Assets.xcassets
    - LaunchScreen.storyboard
    - Info.plist
    - HelloWorld.xcdatamodeld
  - HelloWorldTests
  - HelloWorldUITests
  - Products

Main.storyboard (UI)

ViewController.swift (Code)



Simulated Metrics

Size: Inferred

Status Bar: Inferred

Top Bar: Inferred

Bottom Bar: Inferred

View Controller

Title:

☑ Is Initial View Controller

Layout: ☑ Adjust Scroll View Insets
☐ Hide Bottom Bar on Push
☑ Resize View From NIB
☐ Use Full Screen (Deprecated)

Extend Edges: ☑ Under Top Bars
☑ Under Bottom Bars
☐ Under Opaque Bars

Transition Style: Cover Vertical

Presentation: Full Screen

☐ Defines Context
☐ Provides Context

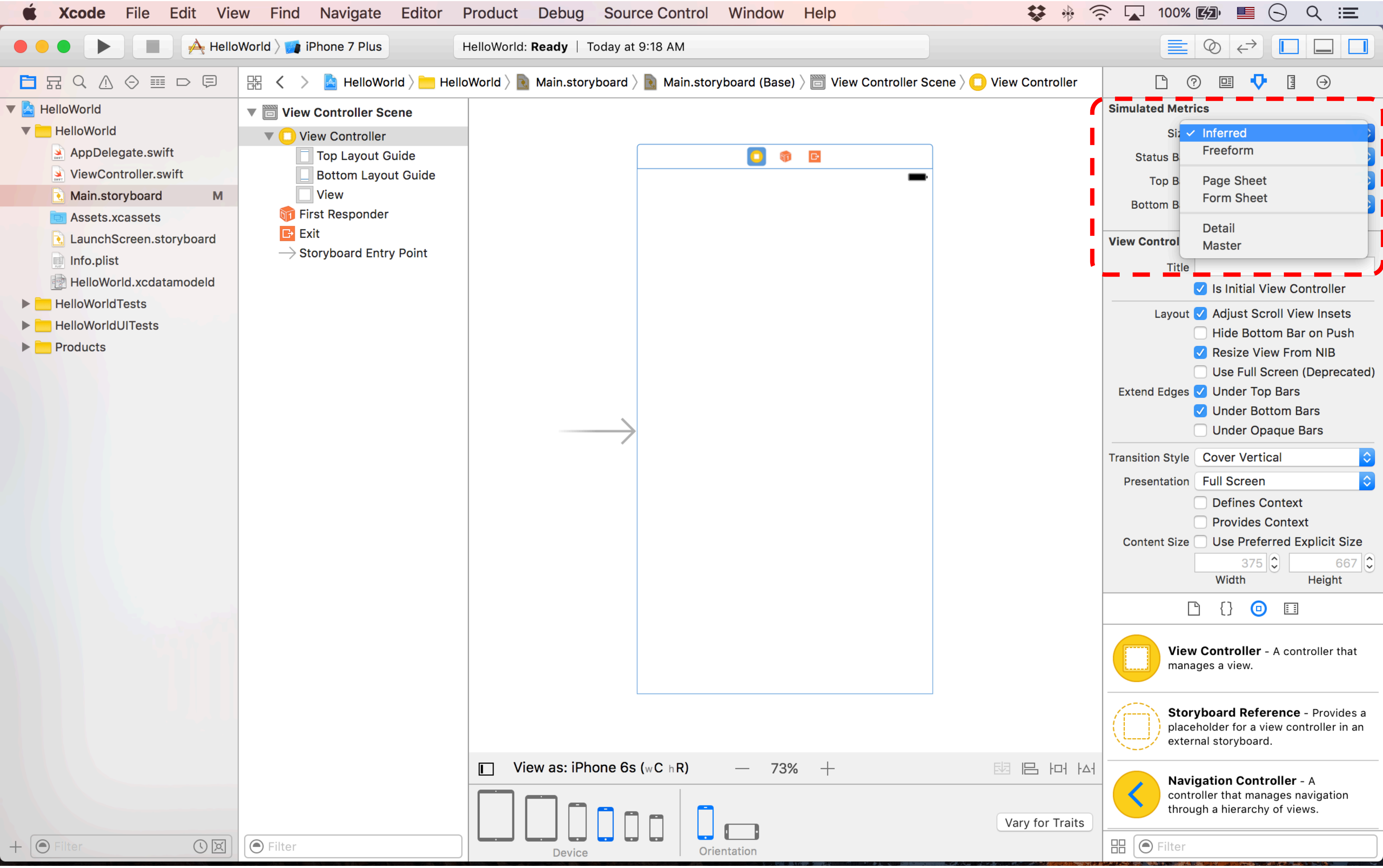
Content Size: ☐ Use Preferred Explicit Size

375 Width 667 Height

View Controller - A controller that manages a view.

Storyboard Reference - Provides a placeholder for a view controller in an external storyboard.

Navigation Controller - A controller that manages navigation through a hierarchy of views.



Simulated Metrics

Si ✓ Inferred
Freeform
Page Sheet
Form Sheet
Detail
Master

Status B

Top B

Bottom B

View Control

Title

☑ Is Initial View Controller

Layout ☑ Adjust Scroll View Insets

☐ Hide Bottom Bar on Push

☑ Resize View From NIB

☐ Use Full Screen (Deprecated)

Extend Edges ☑ Under Top Bars

☑ Under Bottom Bars

☐ Under Opaque Bars

Transition Style: Cover Vertical

Presentation: Full Screen

☐ Defines Context

☐ Provides Context

Content Size ☐ Use Preferred Explicit Size

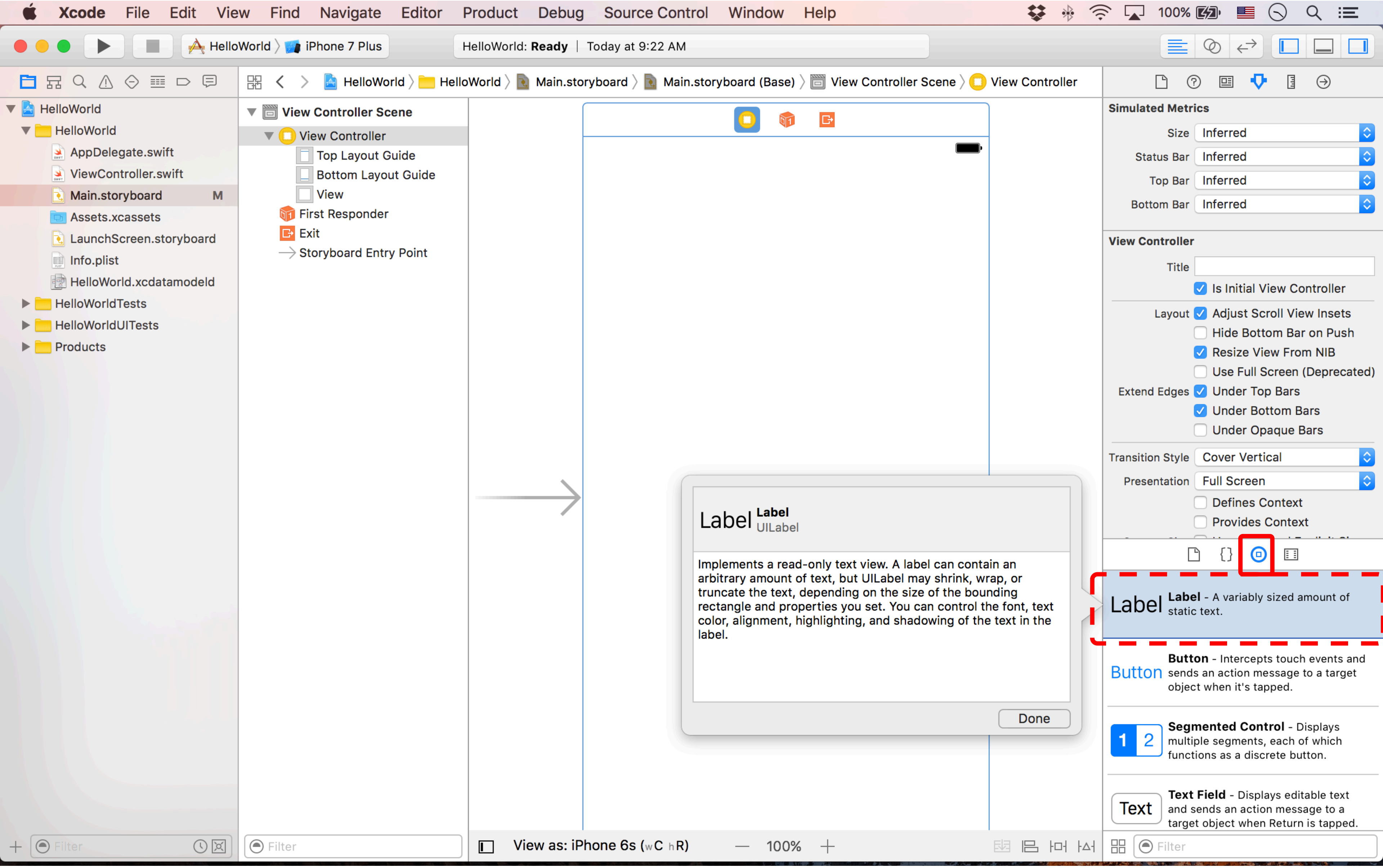
Width: 375 Height: 667

View Controller - A controller that manages a view.

Storyboard Reference - Provides a placeholder for a view controller in an external storyboard.

Navigation Controller - A controller that manages navigation through a hierarchy of views.

Label



Label
UILabel

Implements a read-only text view. A label can contain an arbitrary amount of text, but UILabel may shrink, wrap, or truncate the text, depending on the size of the bounding rectangle and properties you set. You can control the font, text color, alignment, highlighting, and shadowing of the text in the label.

Label - A variably sized amount of static text.

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

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

Text Field - Displays editable text and sends an action message to a target object when Return is tapped.

Simulated Metrics

Size: Inferred

Status Bar: Inferred

Top Bar: Inferred

Bottom Bar: Inferred

View Controller

Title:

☑ Is Initial View Controller

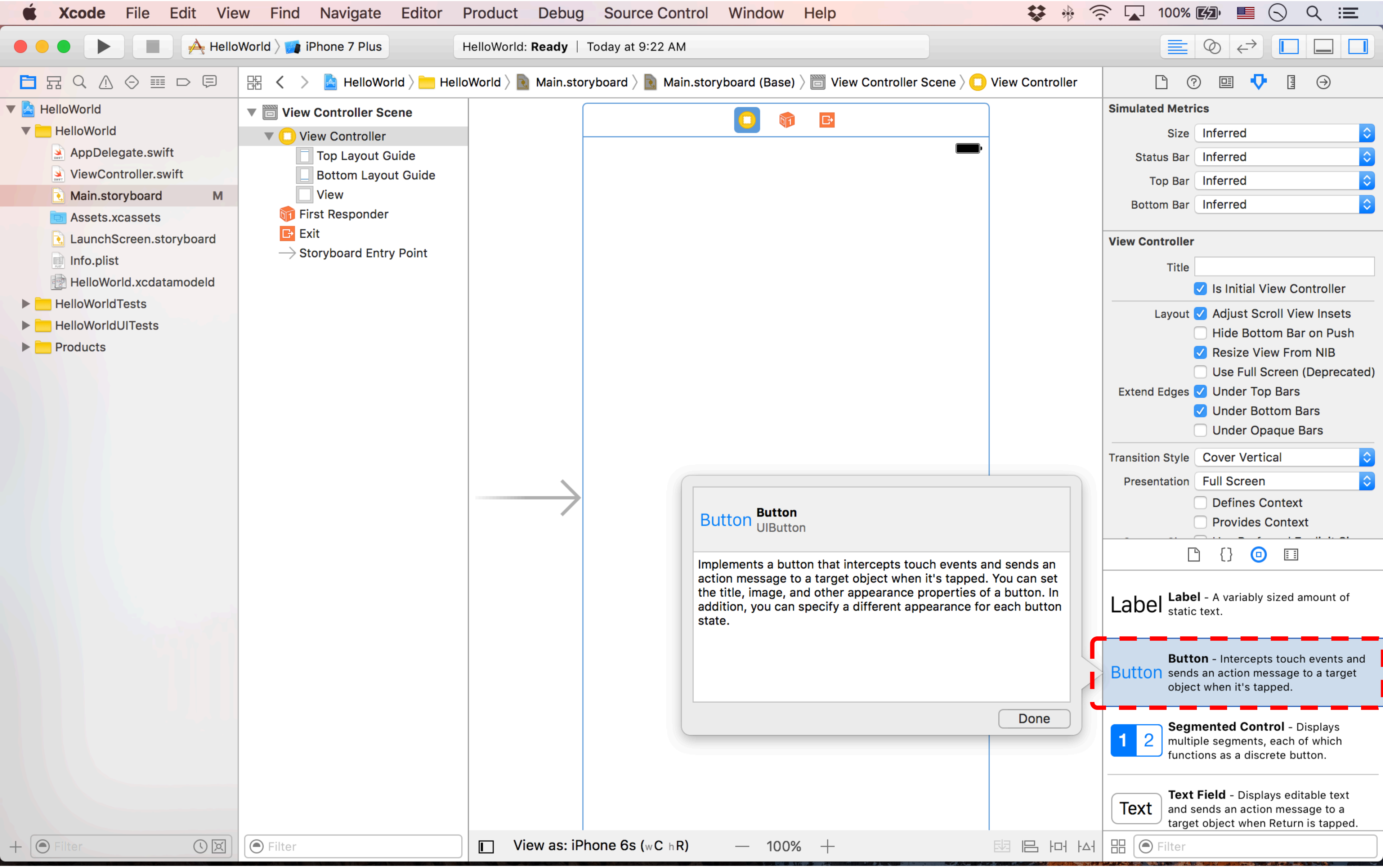
Layout: ☑ Adjust Scroll View Insets
☐ Hide Bottom Bar on Push
☑ Resize View From NIB
☐ Use Full Screen (Deprecated)

Extend Edges: ☑ Under Top Bars
☑ Under Bottom Bars
☐ Under Opaque Bars

Transition Style: Cover Vertical

Presentation: Full Screen
☐ Defines Context
☐ Provides Context

Button



Button Button UIButton

Implements a button that intercepts touch events and sends an action message to a target object when it's tapped. You can set the title, image, and other appearance properties of a button. In addition, you can specify a different appearance for each button state.

Simulated Metrics

Size: Inferred
Status Bar: Inferred
Top Bar: Inferred
Bottom Bar: Inferred

View Controller

Title:
☑ Is Initial View Controller
Layout ☑ Adjust Scroll View Insets
☐ Hide Bottom Bar on Push
☑ Resize View From NIB
☐ Use Full Screen (Deprecated)
Extend Edges ☑ Under Top Bars
☑ Under Bottom Bars
☐ Under Opaque Bars
Transition Style: Cover Vertical
Presentation: Full Screen
☐ Defines Context
☐ Provides Context

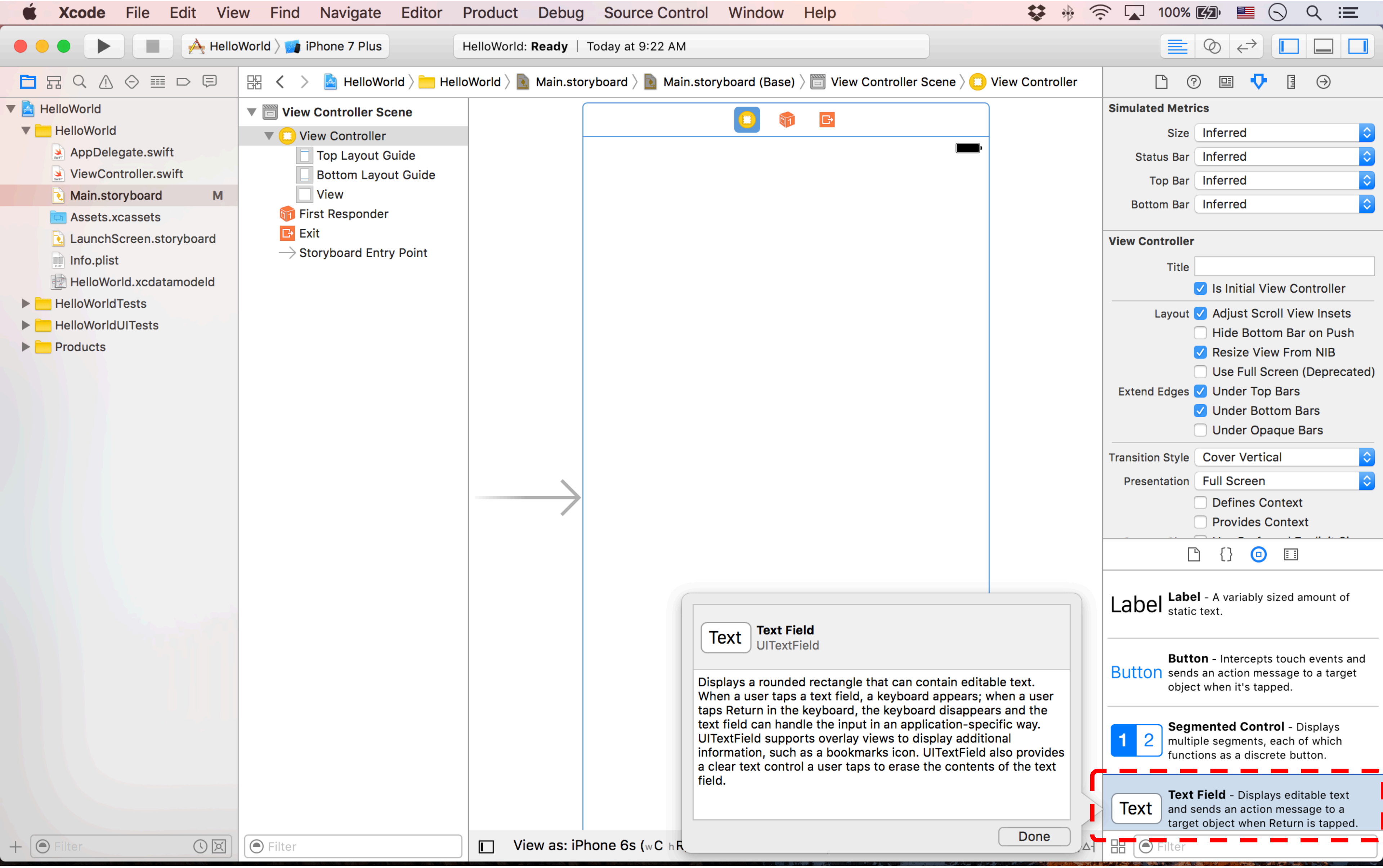
Label **Label** - A variably sized amount of static text.

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

1 2 **Segmented Control** - Displays multiple segments, each of which functions as a discrete button.

Text **Text Field** - Displays editable text and sends an action message to a target object when Return is tapped.

Text Field



HelloWorld: **Ready** | Today at 9:22 AM

Simulated Metrics

Size	Inferred
Status Bar	Inferred
Top Bar	Inferred
Bottom Bar	Inferred

View Controller

Title

☑ Is Initial View Controller

Layout ☑ Adjust Scroll View Insets
☐ Hide Bottom Bar on Push
☑ Resize View From NIB
☐ Use Full Screen (Deprecated)

Extend Edges ☑ Under Top Bars
☑ Under Bottom Bars
☐ Under Opaque Bars

Transition Style: Cover Vertical

Presentation: Full Screen

☐ Defines Context
☐ Provides Context

Text Field
UITextField

Displays a rounded rectangle that can contain editable text. When a user taps a text field, a keyboard appears; when a user taps Return in the keyboard, the keyboard disappears and the text field can handle the input in an application-specific way. UITextField supports overlay views to display additional information, such as a bookmarks icon. UITextField also provides a clear text control a user taps to erase the contents of the text field.

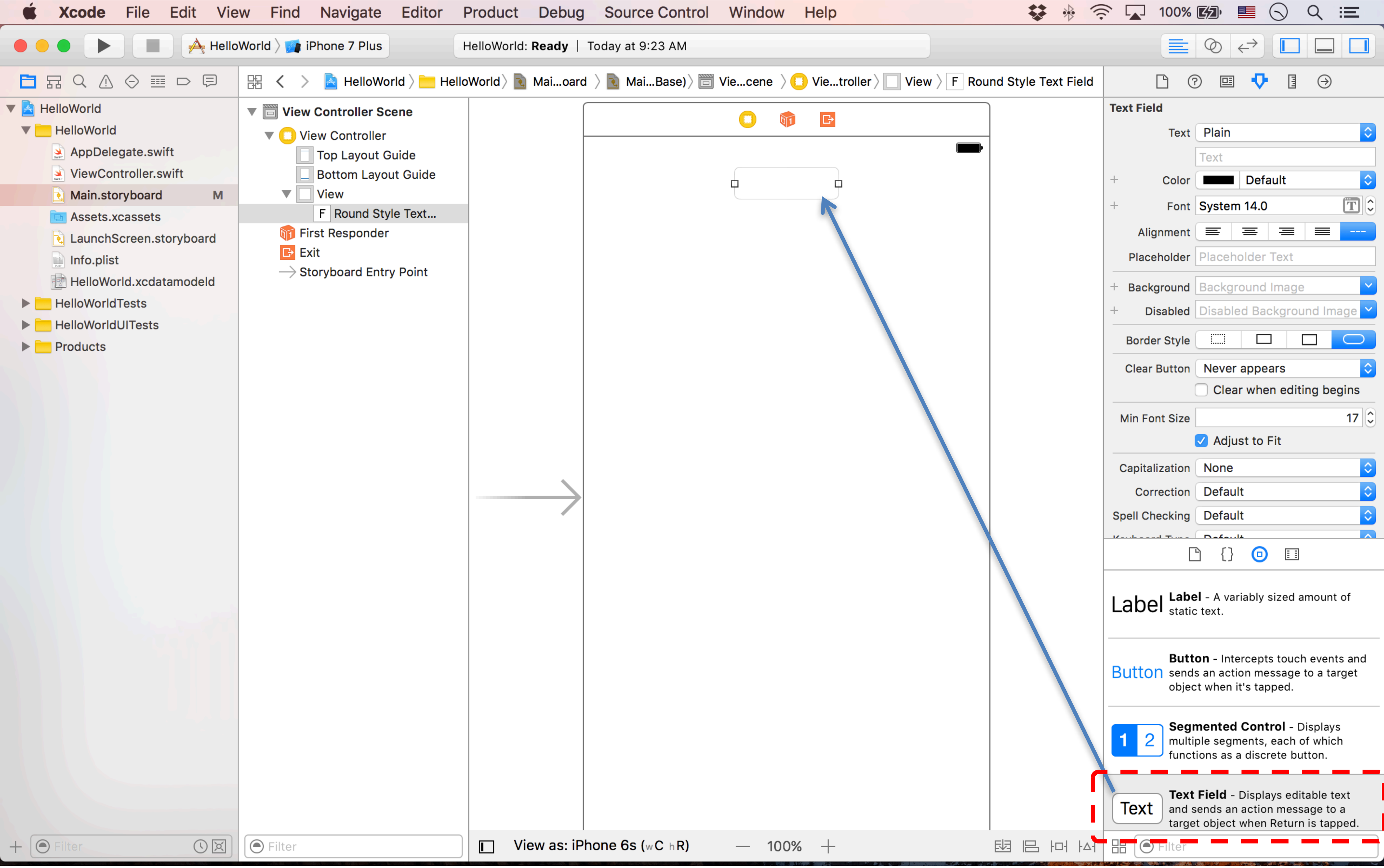
Label - A variably sized amount of static text.

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

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

Text Field - Displays editable text and sends an action message to a target object when Return is tapped.

Text Field



HelloWorld: **Ready** | Today at 9:23 AM

Text Field

- Text: Plain
- Text
- Color: Default
- Font: System 14.0
- Alignment
- Placeholder: Placeholder Text
- Background: Background Image
- Disabled: Disabled Background Image
- Border Style
- Clear Button: Never appears
- □ Clear when editing begins
- Min Font Size: 17
- ☑ Adjust to Fit
- Capitalization: None
- Correction: Default
- Spell Checking: Default
- Keyboard Type: Default

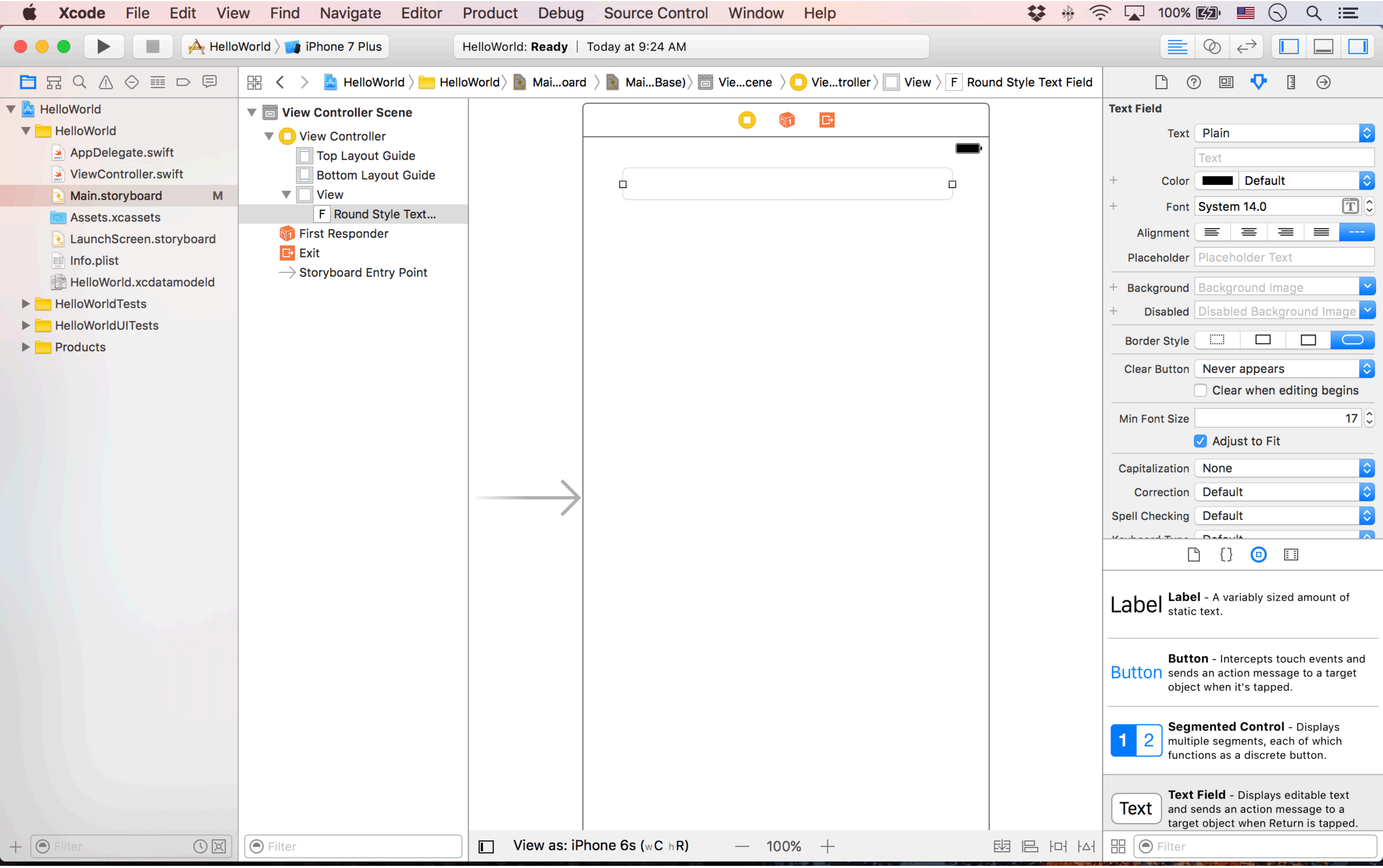
Label **Label** - A variably sized amount of static text.

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

1 2 **Segmented Control** - Displays multiple segments, each of which functions as a discrete button.

Text **Text Field** - Displays editable text and sends an action message to a target object when Return is tapped.

Text Field



HelloWorld: **Ready** | Today at 9:24 AM

Text Field

- Text: Plain
- Text
- Color: Default
- Font: System 14.0
- Alignment
- Placeholder: Placeholder Text
- Background: Background Image
- Disabled: Disabled Background Image
- Border Style
- Clear Button: Never appears
- ☐ Clear when editing begins
- Min Font Size: 17
- ☑ Adjust to Fit
- Capitalization: None
- Correction: Default
- Spell Checking: Default
- Keyboard Type: Default

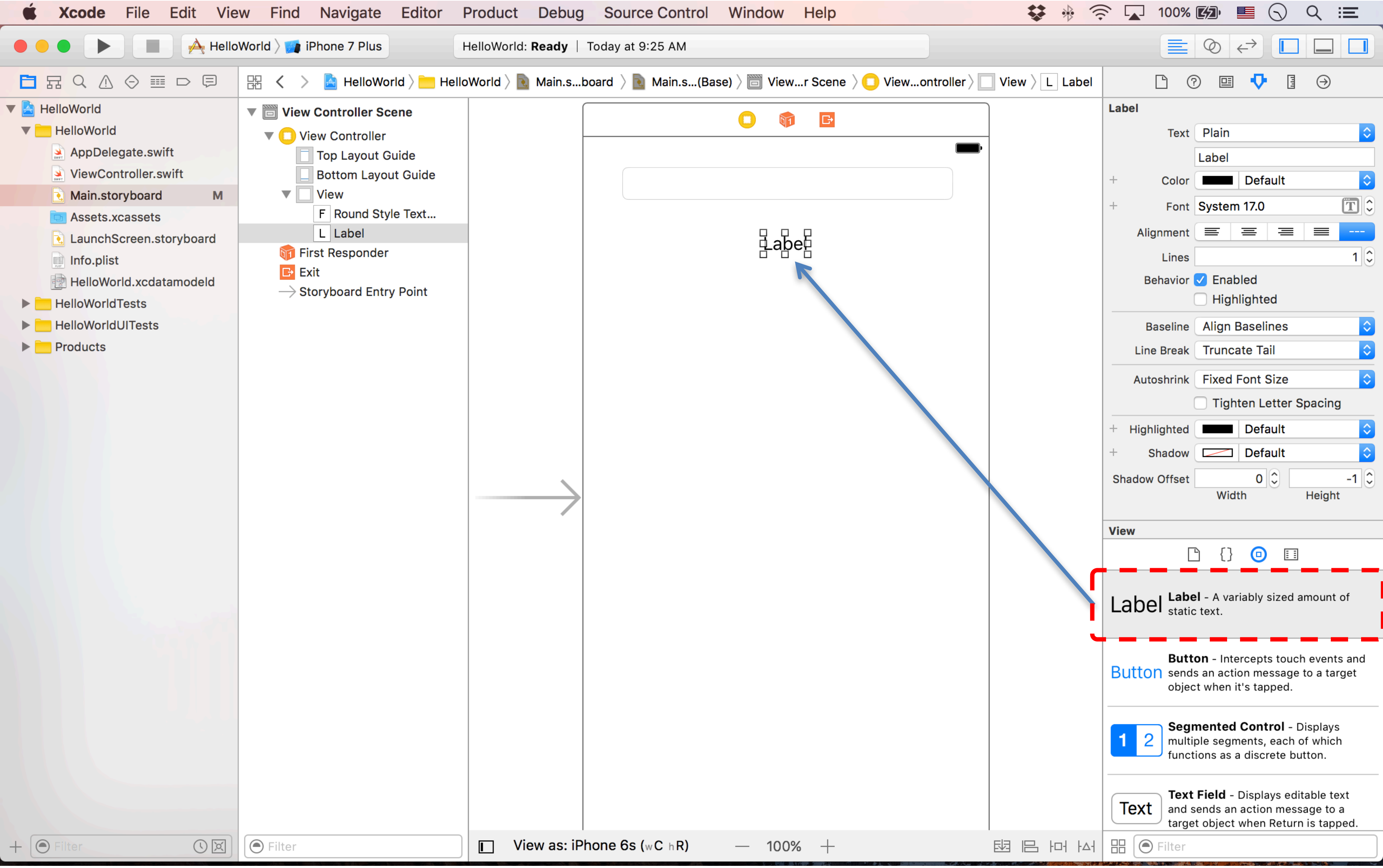
Label **Label** - A variably sized amount of static text.

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

1 2 **Segmented Control** - Displays multiple segments, each of which functions as a discrete button.

Text **Text Field** - Displays editable text and sends an action message to a target object when Return is tapped.

Label



Label

Text: Plain

Label

Color: Default

Font: System 17.0

Alignment

Lines: 1

Behavior: ☑ Enabled

☐ Highlighted

Baseline: Align Baselines

Line Break: Truncate Tail

Autoshrink: Fixed Font Size

☐ Tighten Letter Spacing

Highlighted: Default

Shadow: Default

Shadow Offset: 0 Width, -1 Height

View

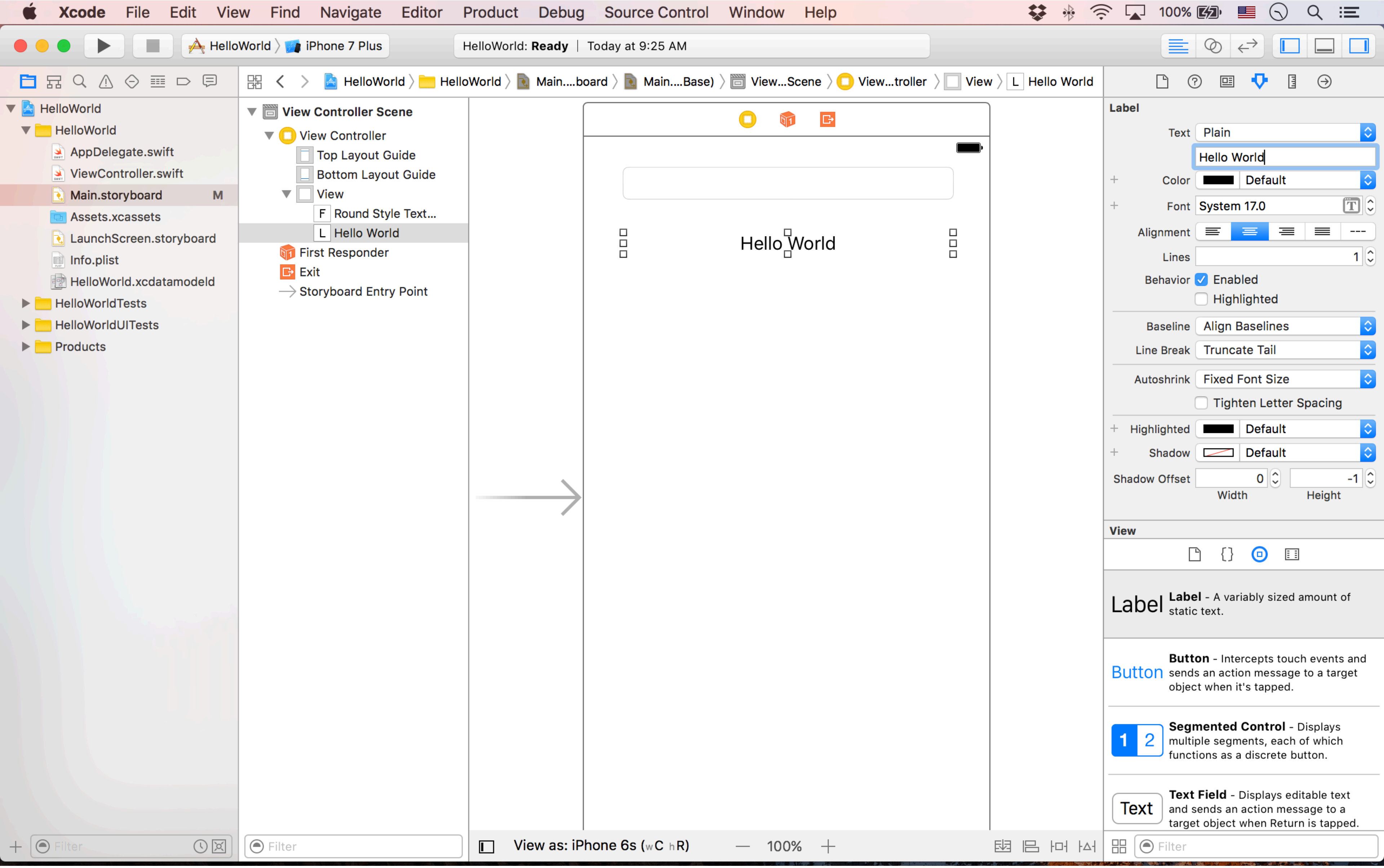
Label **Label** - A variably sized amount of static text.

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

1 2 **Segmented Control** - Displays multiple segments, each of which functions as a discrete button.

Text **Text Field** - Displays editable text and sends an action message to a target object when Return is tapped.

Label



Label

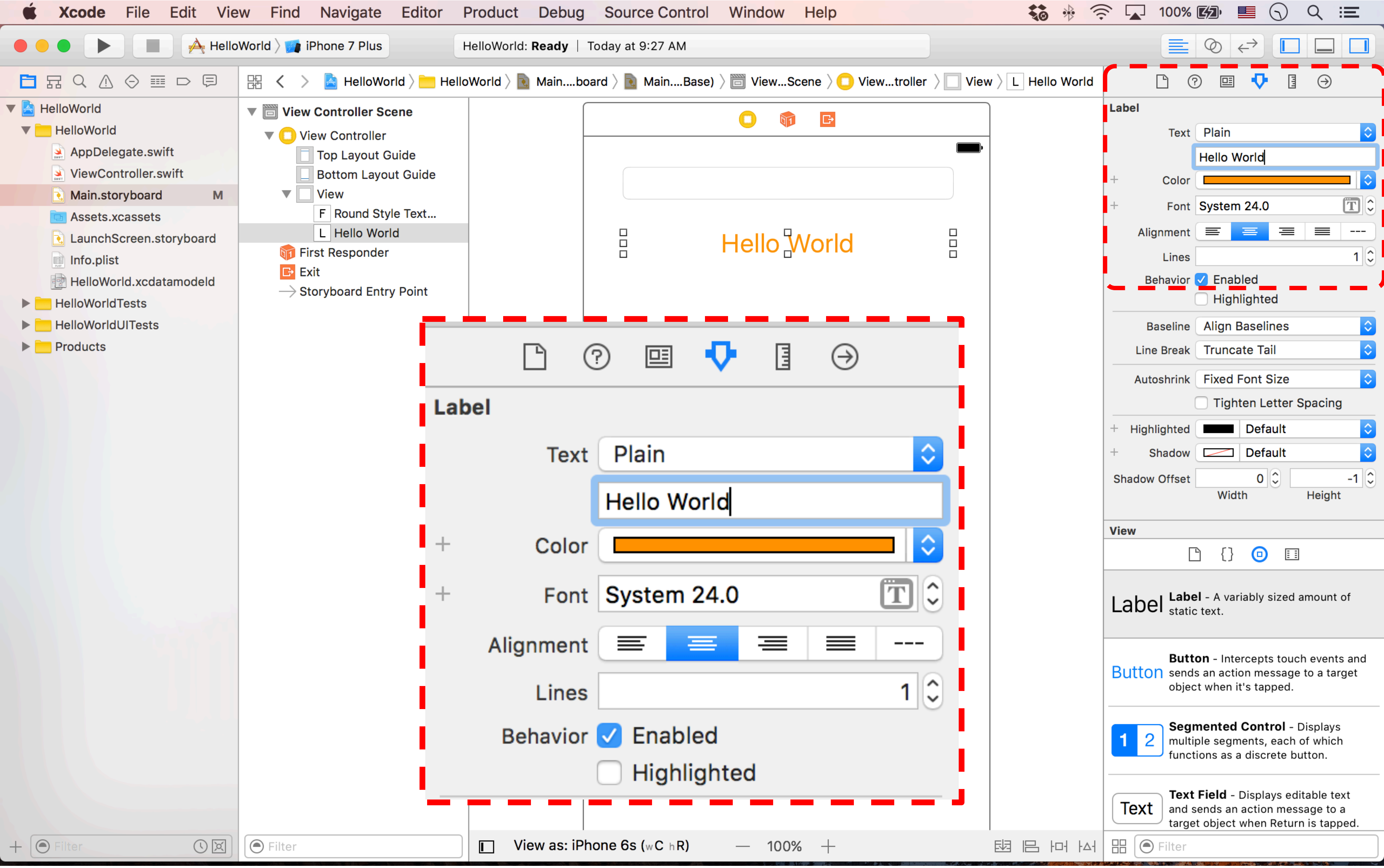
Text	Plain
	Hello World
Color	Default
Font	System 17.0
Alignment	
Lines	1
Behavior	☑ Enabled
	□ Highlighted
Baseline	Align Baselines
Line Break	Truncate Tail
Autoshrink	Fixed Font Size
	□ Tighten Letter Spacing
Highlighted	Default
Shadow	Default
Shadow Offset	0 Width, -1 Height

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.

1 2 **Segmented Control** - Displays multiple segments, each of which functions as a discrete button.

Text **Text Field** - Displays editable text and sends an action message to a target object when Return is tapped.



Label

Text: Plain

Hello World

Color: 🟧

Font: System 24.0

Alignment: centre

Lines: 1

Behavior: ☑ Enabled

☐ Highlighted

Baseline: Align Baselines

Line Break: Truncate Tail

Autoshrink: Fixed Font Size

☐ Tighten Letter Spacing

Highlighted: Default

Shadow: Default

Shadow Offset: 0 (Width), -1 (Height)

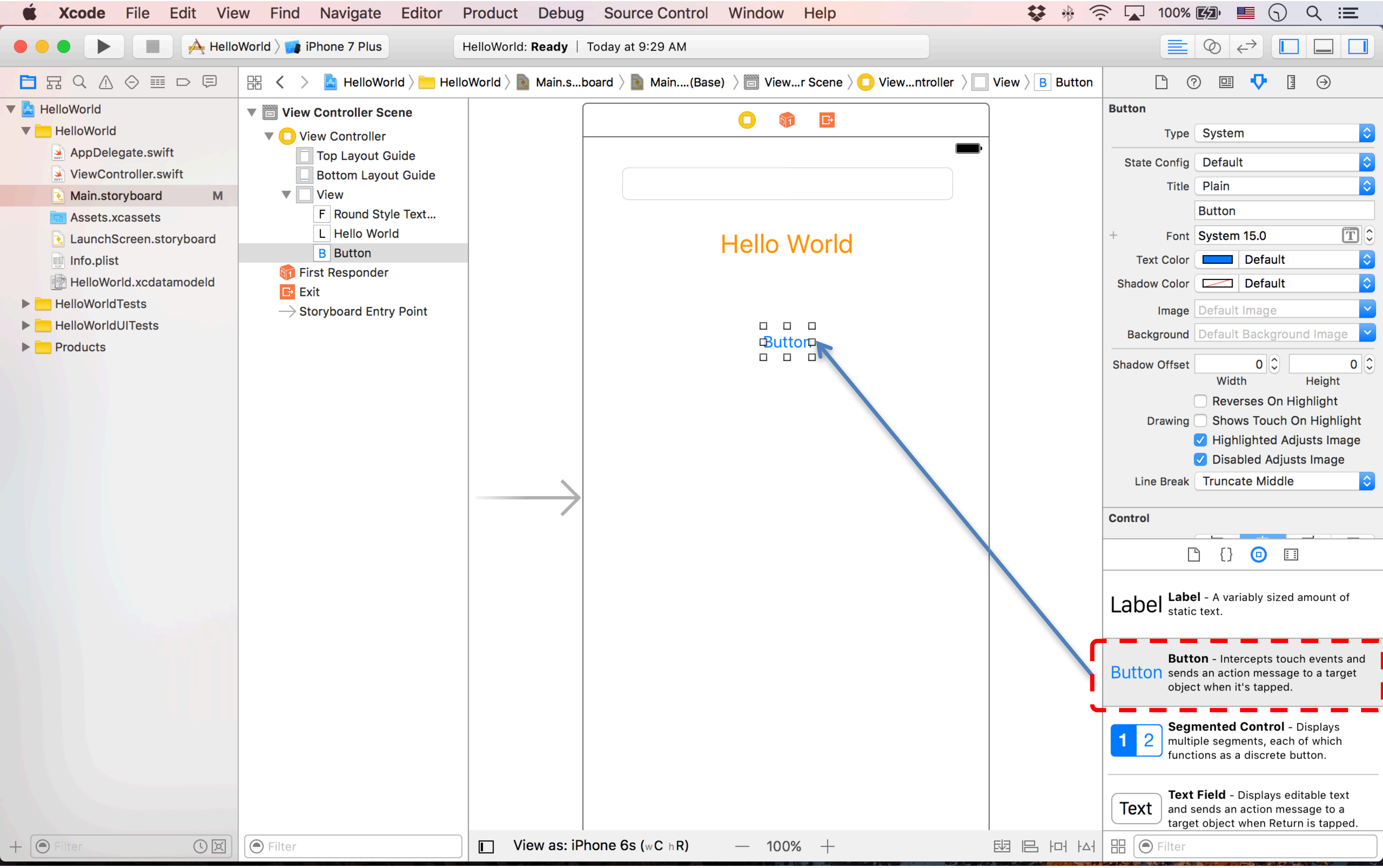
Label - A variably sized amount of static text.

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

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

Text Field - Displays editable text and sends an action message to a target object when Return is tapped.

Button



Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help

HelloWorld > iPhone 7 Plus | HelloWorld: **Ready** | Today at 9:29 AM

HelloWorld > HelloWorld > Main.s...board > Main....(Base) > View...r Scene > View...ntroller > View > Button

- HelloWorld
  - HelloWorld
    - AppDelegate.swift
    - ViewController.swift
    - Main.storyboard M
    - Assets.xcassets
    - LaunchScreen.storyboard
    - Info.plist
    - HelloWorld.xcdatamodeld
  - HelloWorldTests
  - HelloWorldUITests
  - Products

- View Controller Scene
  - View Controller
    - Top Layout Guide
    - Bottom Layout Guide
    - View
      - F Round Style Text...
      - L Hello World
      - B Button
  - First Responder
  - Exit
  - Storyboard Entry Point

Button

Type: System

State Config: Default

Title: Plain

Button

Font: System 15.0

Text Color: Default

Shadow Color: Default

Image: Default Image

Background: Default Background Image

Shadow Offset: 0 (Width) 0 (Height)

Drawing: □ Reverses On Highlight
□ Shows Touch On Highlight
☑ Highlighted Adjusts Image
☑ Disabled Adjusts Image

Line Break: Truncate Middle

Control

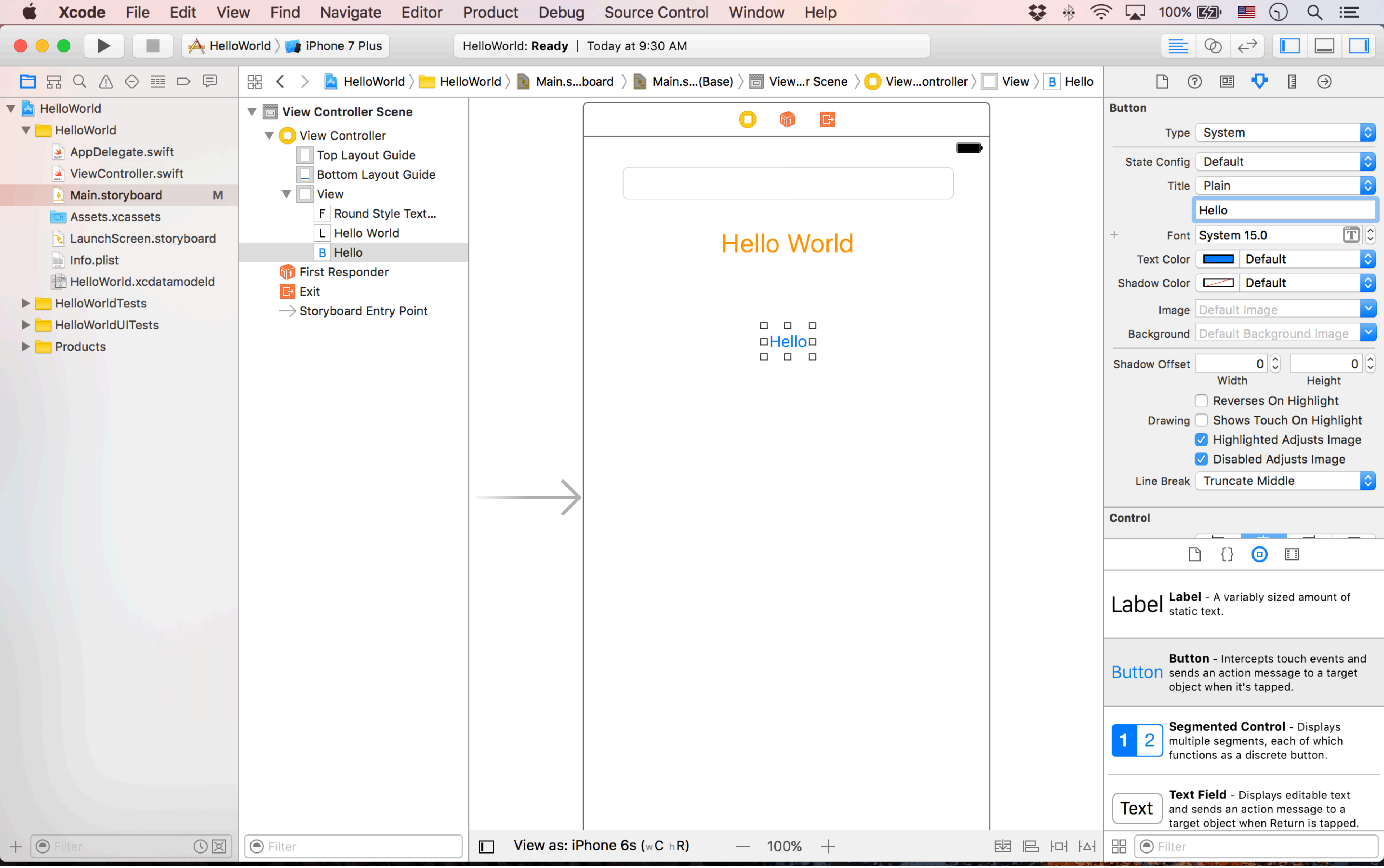
Label — **Label** - A variably sized amount of static text.

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

1 2 — **Segmented Control** - Displays multiple segments, each of which functions as a discrete button.

Text — **Text Field** - Displays editable text and sends an action message to a target object when Return is tapped.

Button



Button

Type: System

State Config: Default

Title: Plain

Hello

Font: System 15.0

Text Color: Default

Shadow Color: Default

Image: Default Image

Background: Default Background Image

Shadow Offset: Width 0, Height 0

Drawing:
- ☐ Reverses On Highlight
- ☐ Shows Touch On Highlight
- ☑ Highlighted Adjusts Image
- ☑ Disabled Adjusts Image

Line Break: Truncate Middle

Control

Label **Label** - A variably sized amount of static text.

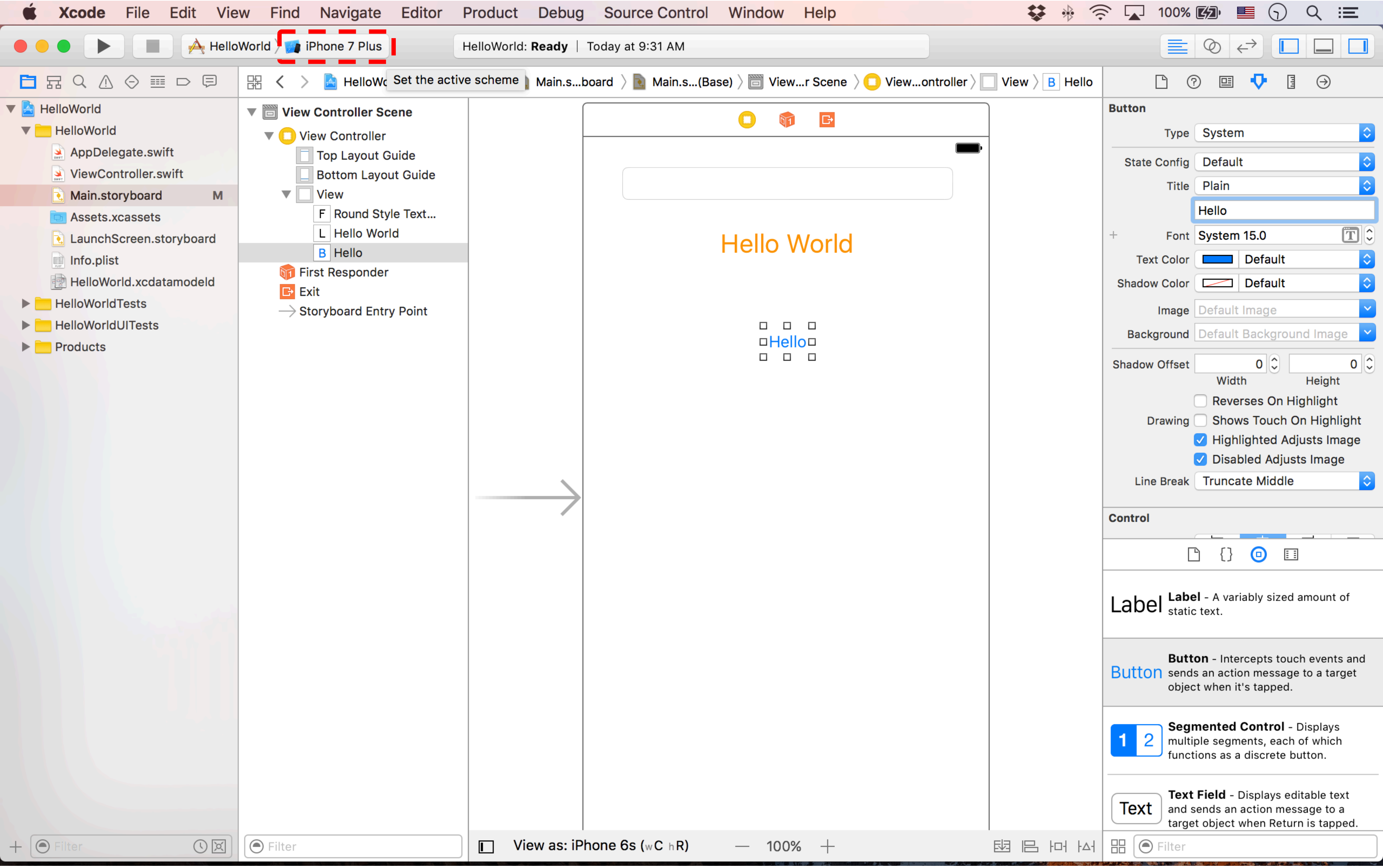
Button **Button** - Intercepts touch events and sends an action message to a target object when it's tapped.

1 2 **Segmented Control** - Displays multiple segments, each of which functions as a discrete button.

Text **Text Field** - Displays editable text and sends an action message to a target object when Return is tapped.

Set the active scheme

iOS Simulator: iPhone



Button

Type: System

State Config: Default

Title: Plain

Hello

Font: System 15.0

Text Color: Default

Shadow Color: Default

Image: Default Image

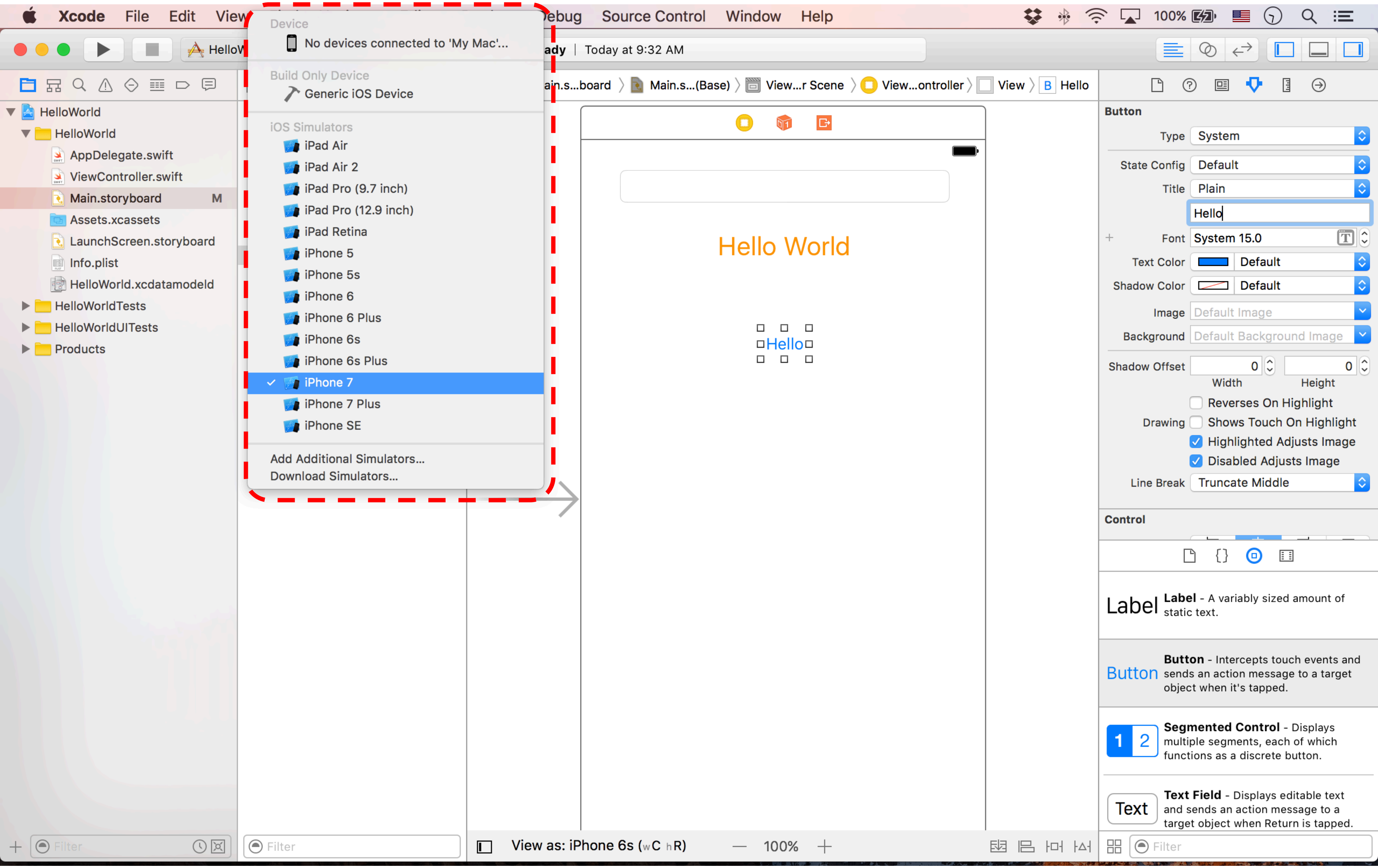
Background: Default Background Image

Shadow Offset: 0 (Width) 0 (Height)

Drawing:
- ☐ Reverses On Highlight
- ☐ Shows Touch On Highlight
- ☑ Highlighted Adjusts Image
- ☑ Disabled Adjusts Image

Line Break: Truncate Middle

iOS Simulators: iPhone 7


Xcode File Edit View Debug Source Control Window Help
Device
No devices connected to 'My Mac'...
Build Only Device
Generic iOS Device
iOS Simulators
iPad Air
iPad Air 2
iPad Pro (9.7 inch)
iPad Pro (12.9 inch)
iPad Retina
iPhone 5
iPhone 5s
iPhone 6
iPhone 6 Plus
iPhone 6s
iPhone 6s Plus
✓ iPhone 7
iPhone 7 Plus
iPhone SE
Add Additional Simulators...
Download Simulators...
Today at 9:32 AM
HelloWorld
AppDelegate.swift
ViewController.swift
Main.storyboard M
Assets.xcassets
LaunchScreen.storyboard
Info.plist
HelloWorld.xcdatamodeld
HelloWorldTests
HelloWorldUITests
Products
Hello World
Hello
View as: iPhone 6s (wC hR)
100%
Label - A variably sized amount of static text.
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Segmented Control - Displays multiple segments, each of which functions as a discrete button.
Text Field - Displays editable text and sends an action message to a target object when Return is tapped.

Button

Type: System

State Config: Default

Title: Plain

Hello

Font: System 15.0

Text Color: Default

Shadow Color: Default

Image: Default Image

Background: Default Background Image

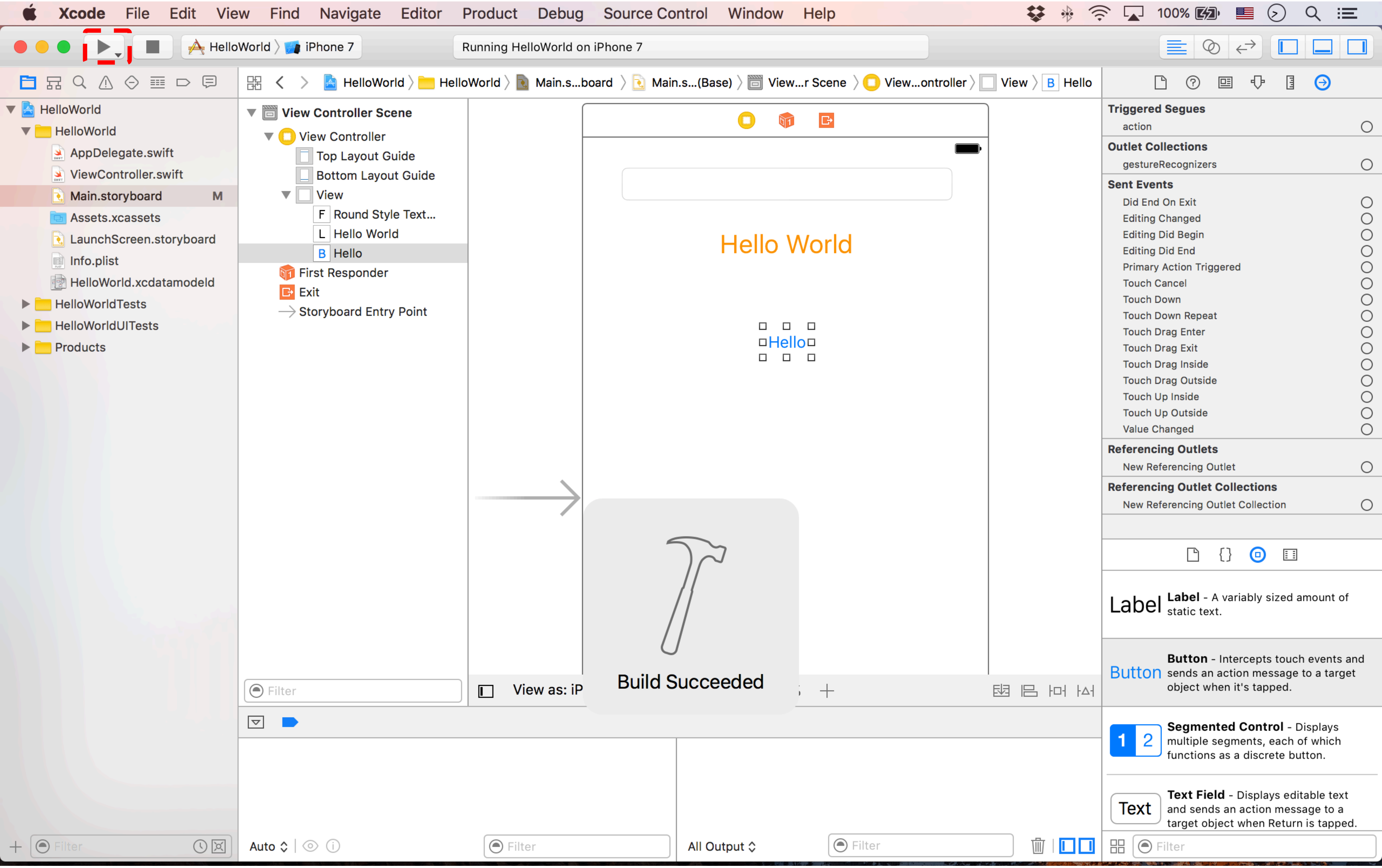
Shadow Offset: Width 0, Height 0

Drawing: □ Reverses On Highlight
□ Shows Touch On Highlight
☑ Highlighted Adjusts Image
☑ Disabled Adjusts Image

Line Break: Truncate Middle

Control

Build and Run



Running HelloWorld on iPhone 7

Build Succeeded

Label - A variably sized amount of static text.

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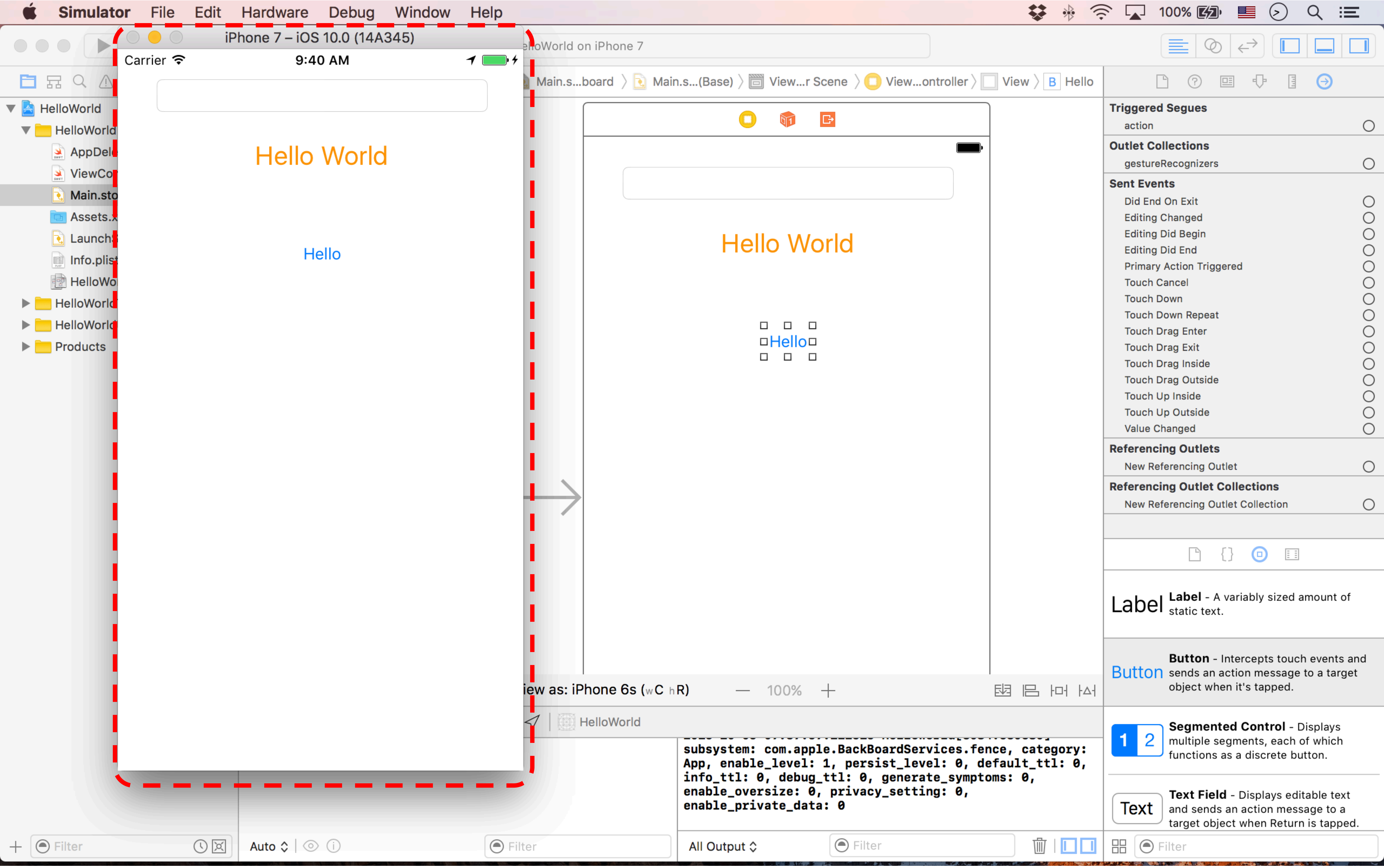
Segmented Control - Displays multiple segments, each of which functions as a discrete button.

Text Field - Displays editable text and sends an action message to a target object when Return is tapped.

iOS Simulator: iPhone 7 - iOS 10



```
subsystem: com.apple.BackBoardServices.fence, category:
App, enable_level: 1, persist_level: 0, default_ttl: 0,
info_ttl: 0, debug_ttl: 0, generate_symptoms: 0,
enable_oversize: 0, privacy_setting: 0,
enable_private_data: 0
```

Label - A variably sized amount of static text.

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

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

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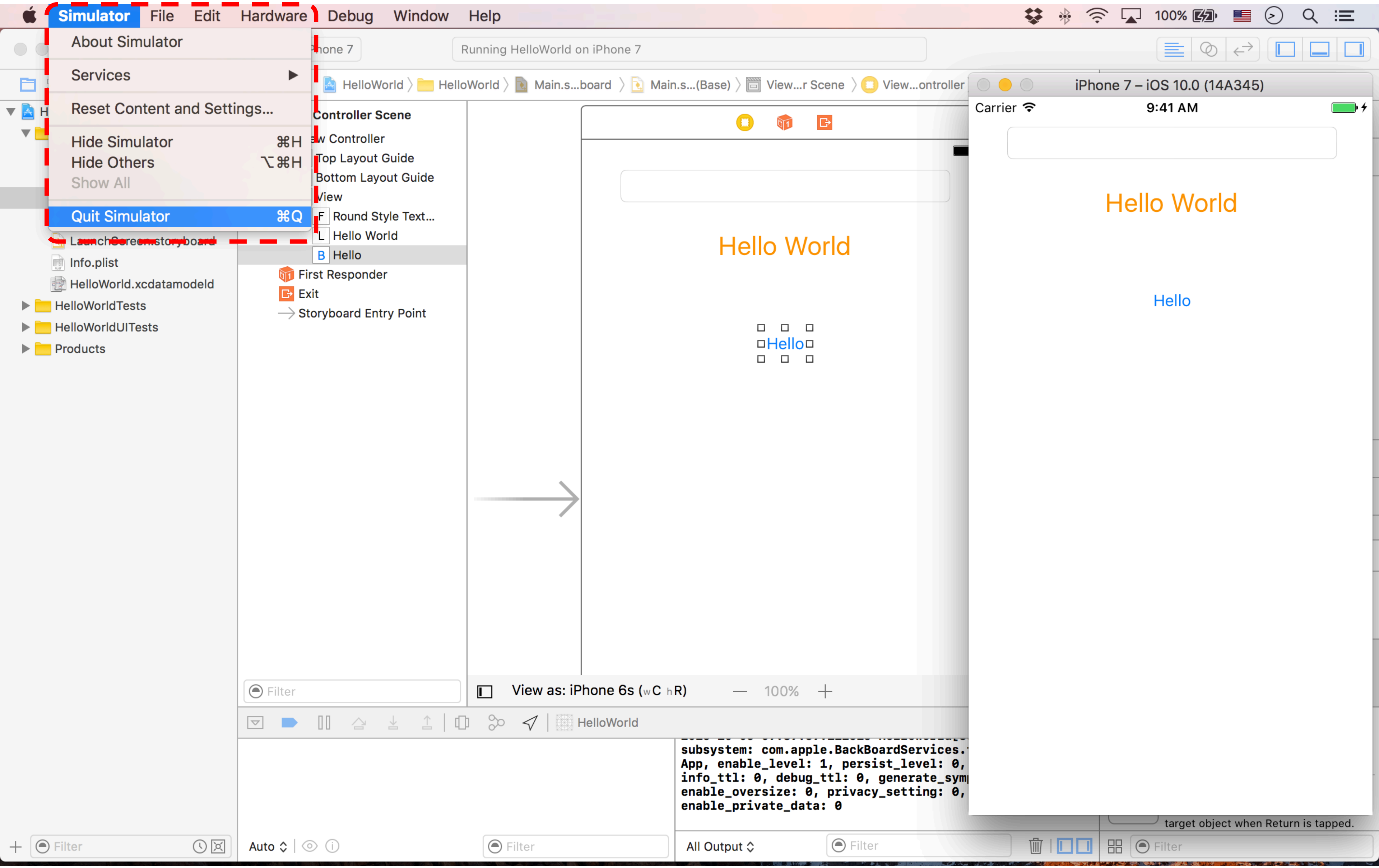
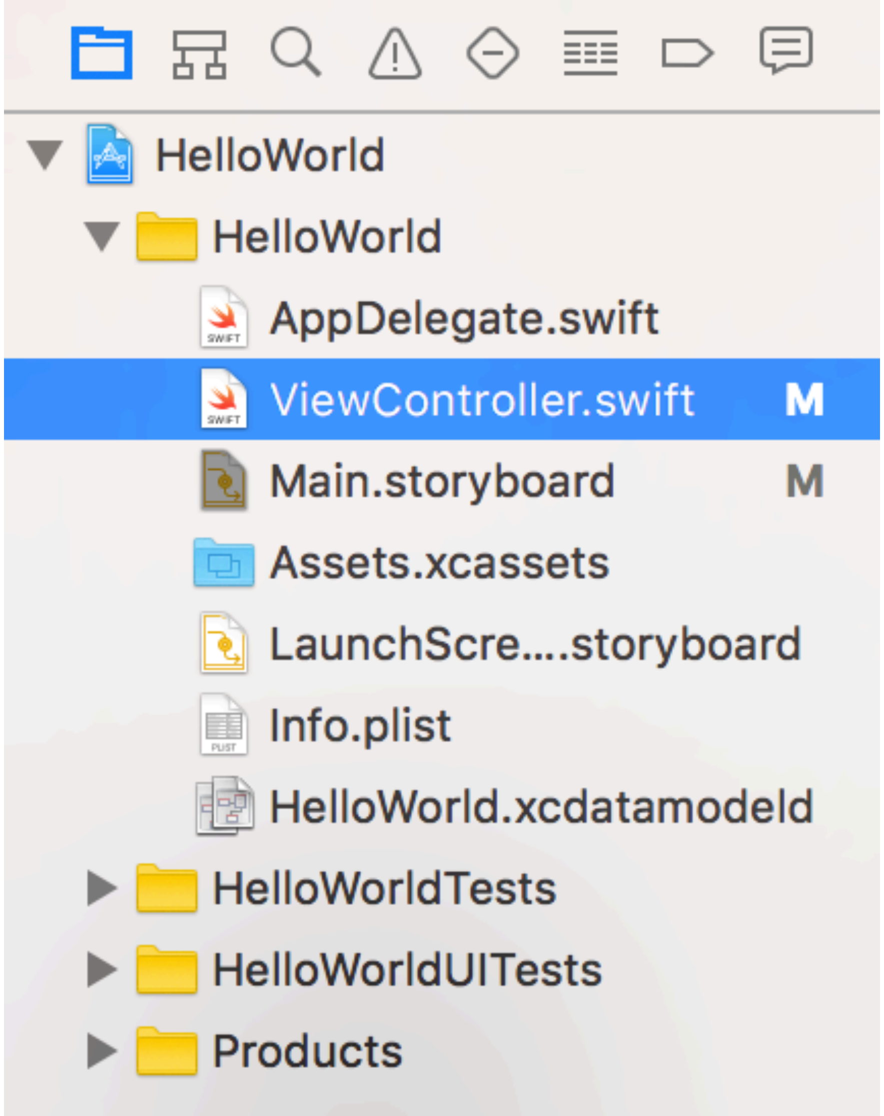
Simulator: Quit Simulator



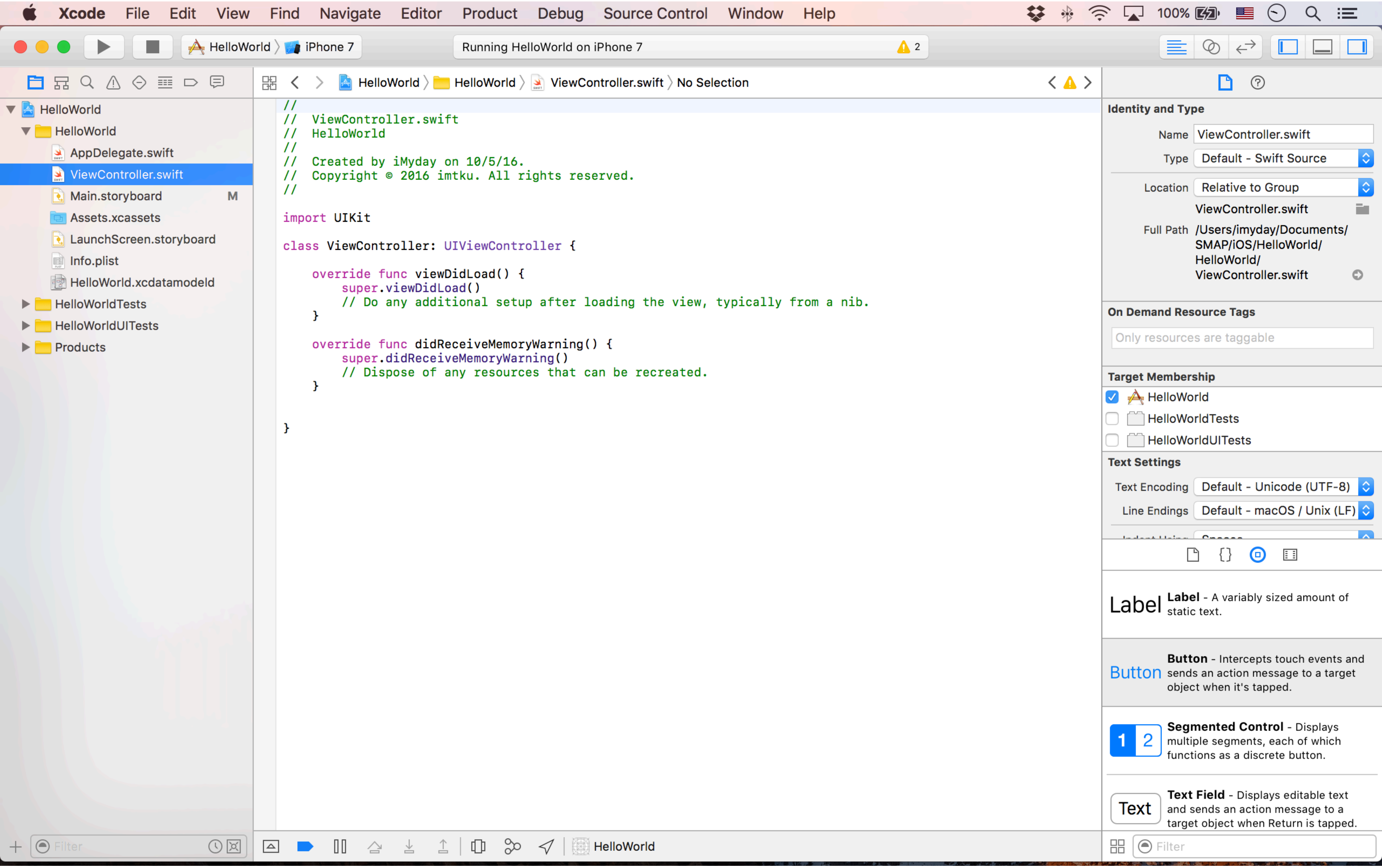
```
subsystem: com.apple.BackBoardServices.
App, enable_level: 1, persist_level: 0,
info_ttl: 0, debug_ttl: 0, generate_sym
enable_oversize: 0, privacy_setting: 0,
enable_private_data: 0
```

Main.storyboard (UI)
ViewController.swift (Code)



HelloWorld
HelloWorld
AppDelegate.swift
ViewController.swift M
Main.storyboard M
Assets.xcassets
LaunchScre....storyboard
Info.plist
HelloWorld.xcdatamodeld
HelloWorldTests
HelloWorldUITests
Products

ViewController.swift (Code)



```
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. 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.
    }


}
```

Identity and Type

Name: ViewController.swift

Type: Default - Swift Source

Location: Relative to Group

ViewController.swift

Full Path: /Users/imyday/Documents/SMAP/iOS/HelloWorld/HelloWorld/ViewController.swift

On Demand Resource Tags

Only resources are taggable

Target Membership

☑ HelloWorld

□ HelloWorldTests

□ HelloWorldUITests

Text Settings

Text Encoding: Default - Unicode (UTF-8)

Line Endings: Default - macOS / Unix (LF)

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.

1 2 — **Segmented Control** - Displays multiple segments, each of which functions as a discrete button.

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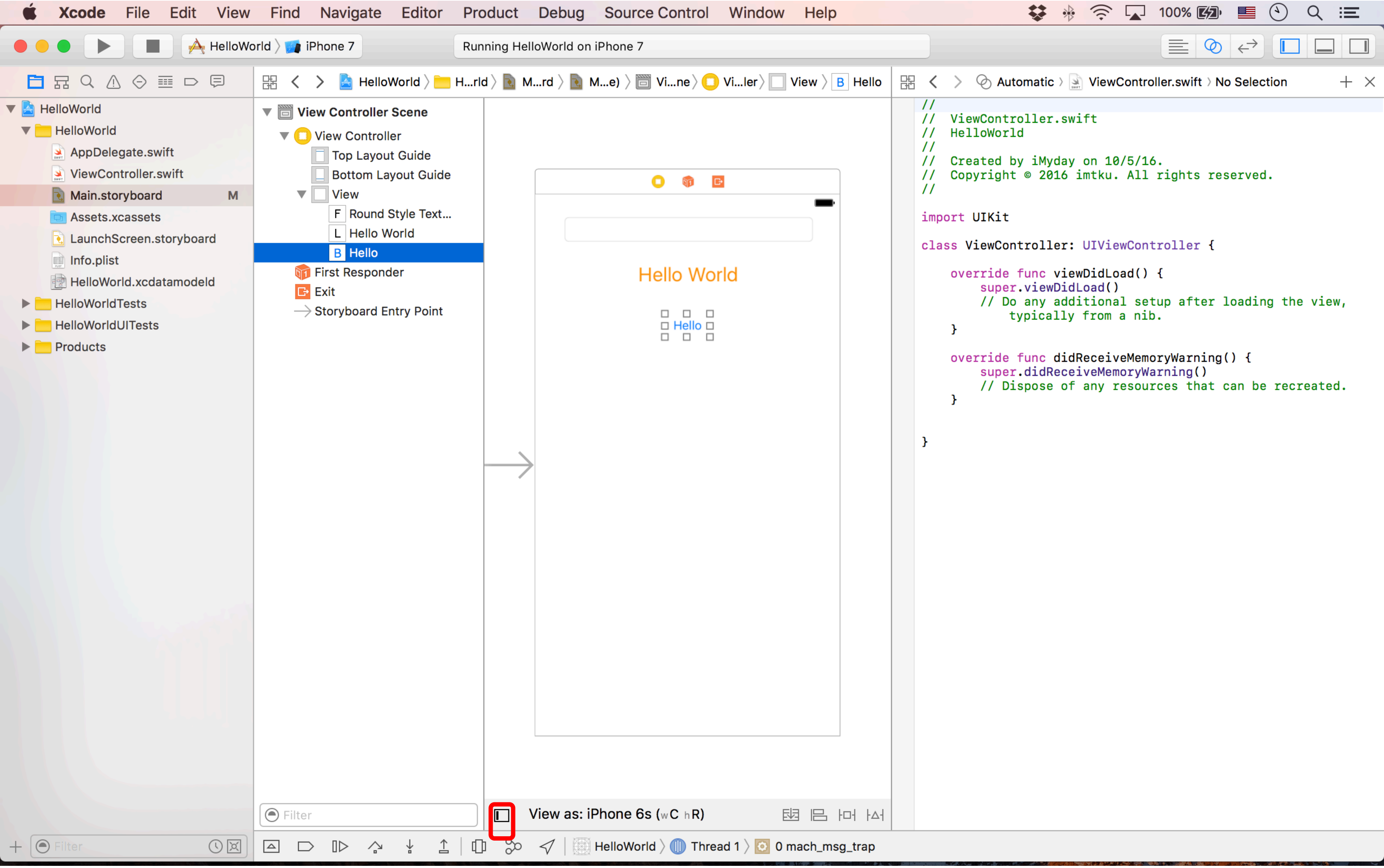
IBOutlet and IBAction

- IBOutlet
  - Interface Builder Outlet
- IBAction
  - Interface Builder Action



```
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//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. All rights reserved.
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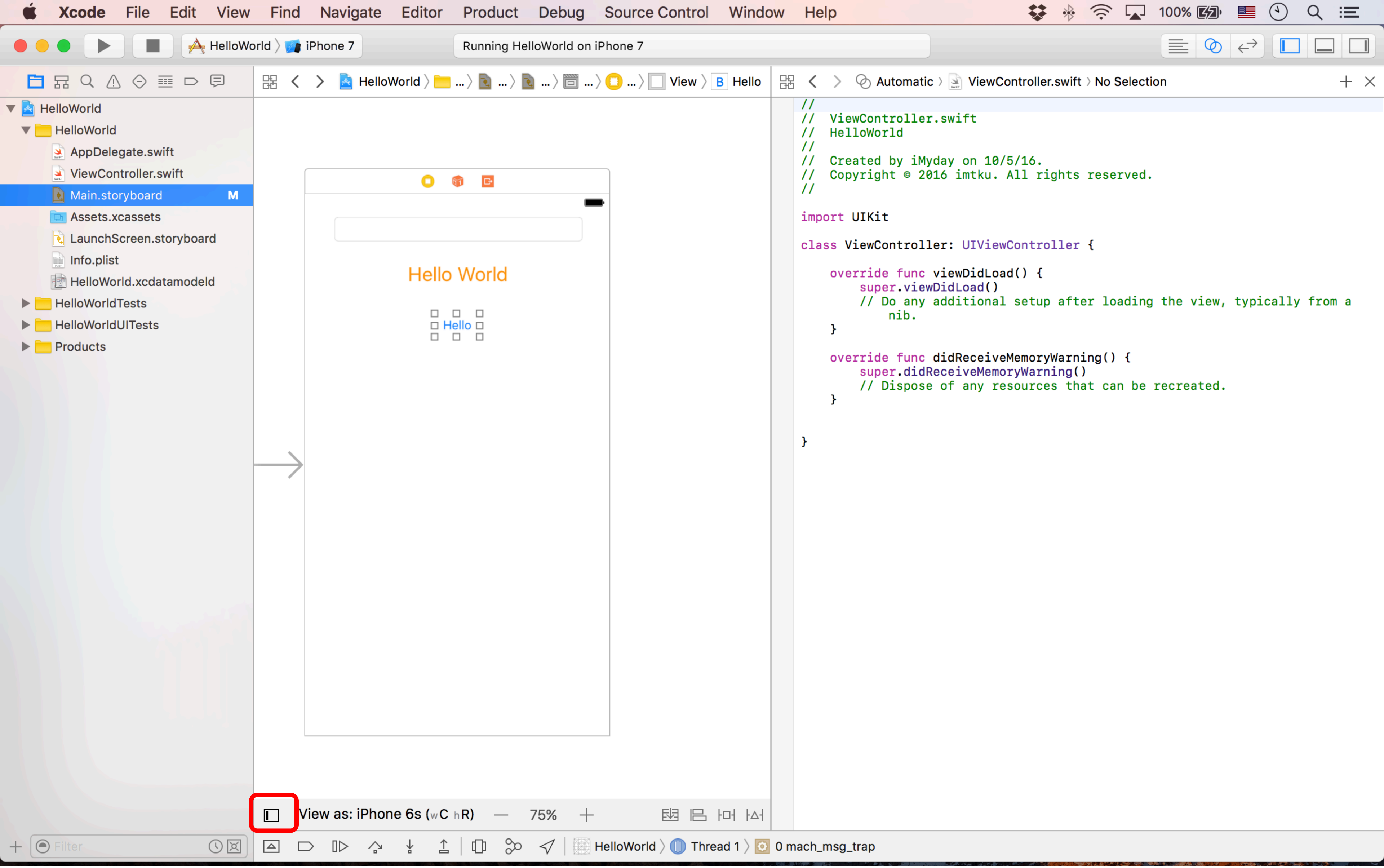
    }


}
```



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//  HelloWorld
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//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. All rights reserved.
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            nib.
    }

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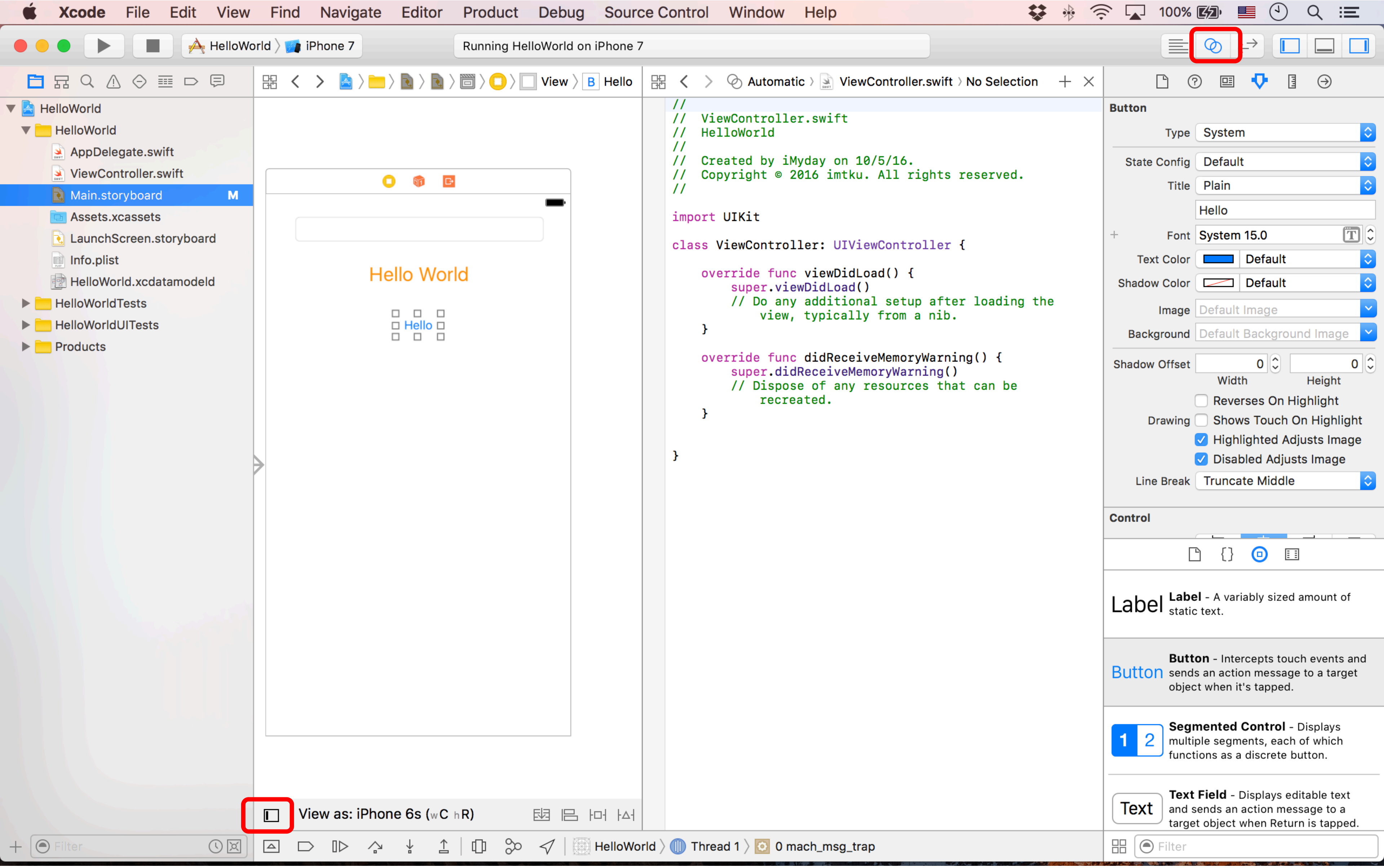
        super.didReceiveMemoryWarning()
        // Dispose of any resources that can be recreated.
    }


}
```



```
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. 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.
    }


}
```

Button

Type: System

State Config: Default

Title: Plain

Hello

Font: System 15.0

Text Color: Default

Shadow Color: Default

Image: Default Image

Background: Default Background Image

Shadow Offset: 0 (Width) 0 (Height)

Drawing: ☐ Reverses On Highlight ☐ Shows Touch On Highlight ☑ Highlighted Adjusts Image ☑ Disabled Adjusts Image

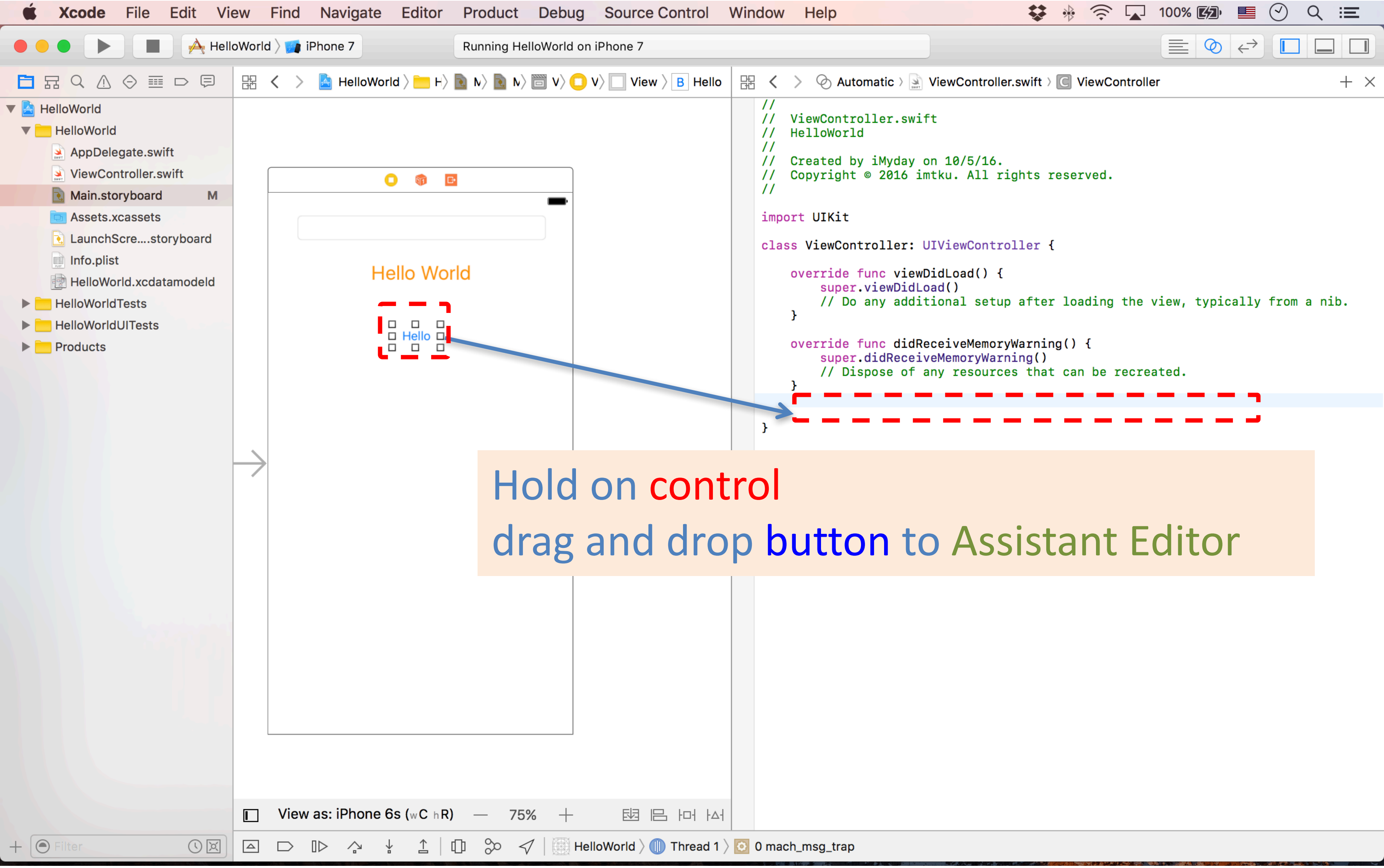
Line Break: Truncate Middle

Label - A variably sized amount of static text.

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

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

Text Field - Displays editable text and sends an action message to a target object when Return is tapped.



```
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. All rights reserved.
//

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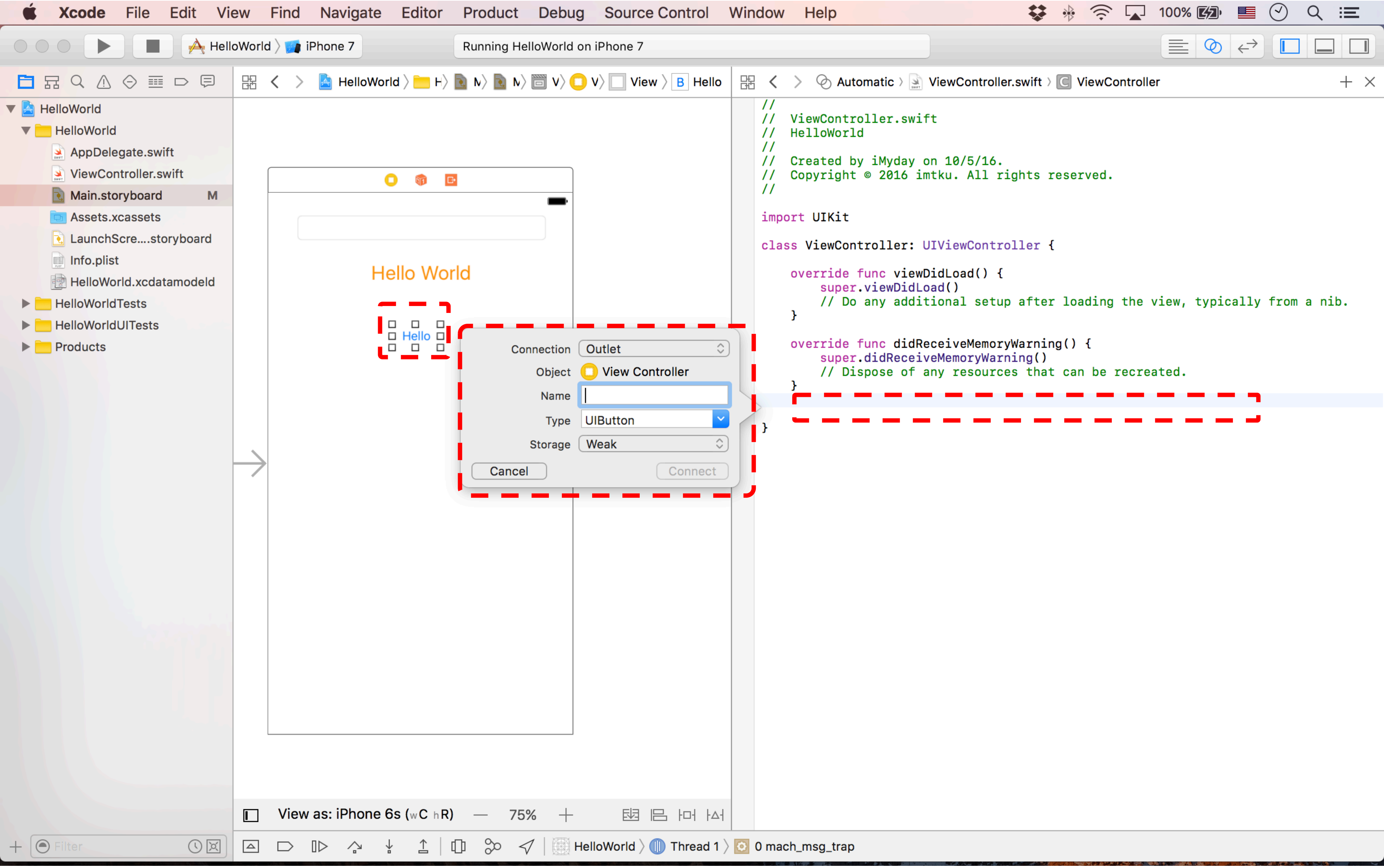
    }

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

}
```

Hold on control

drag and drop button to Assistant Editor



Connection: Outlet
Object: View Controller
Name:
Type: UIButton
Storage: Weak

```
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. All rights reserved.
//

import UIKit

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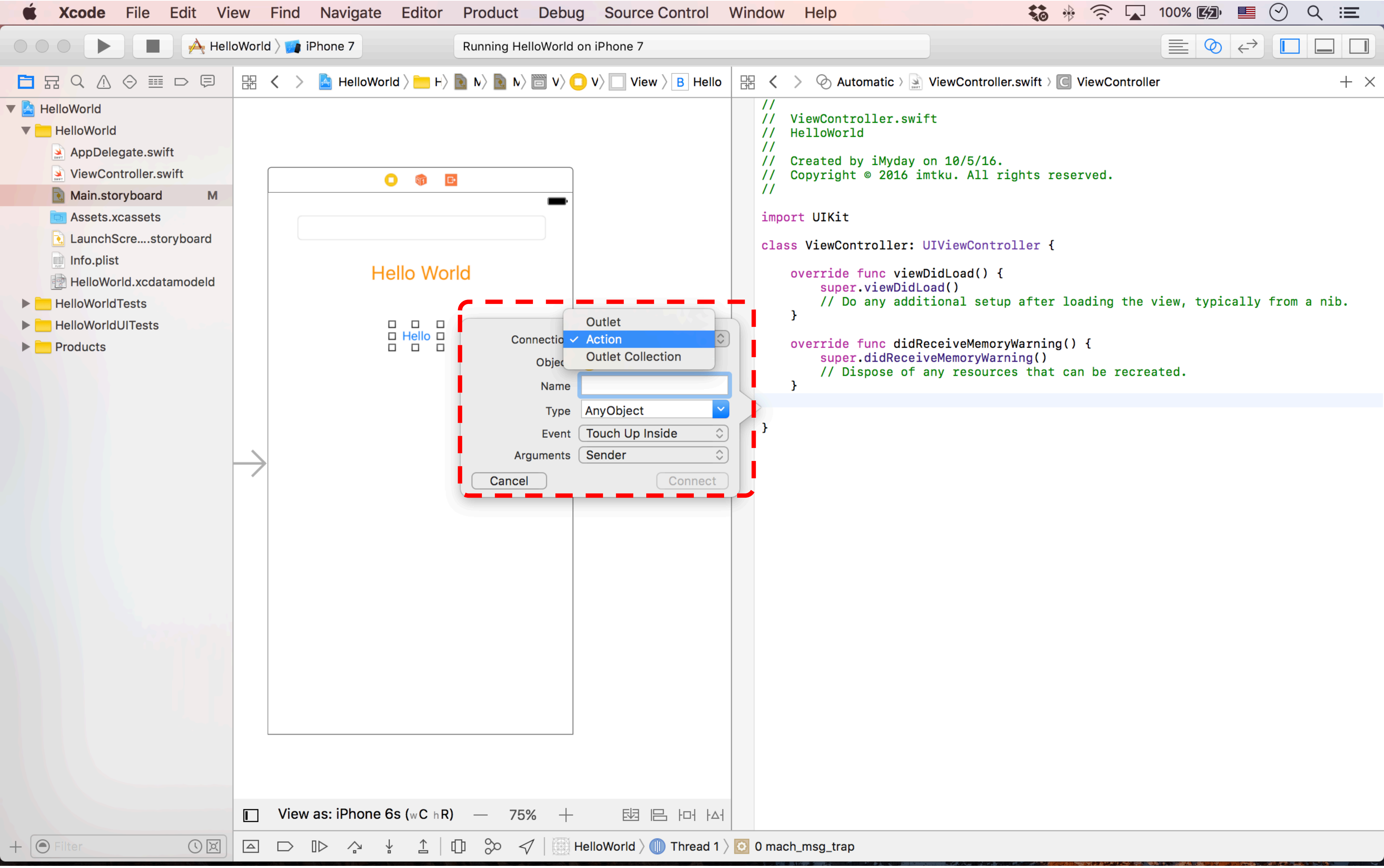
        super.viewDidLoad()
        // Do any additional setup after loading the view, typically from a nib.
    }

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

}
```



Connectio: Action

Objec

Name:

Type: AnyObject

Event: Touch Up Inside

Arguments: Sender

```
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. All rights reserved.
//

import UIKit

class ViewController: UIViewController {

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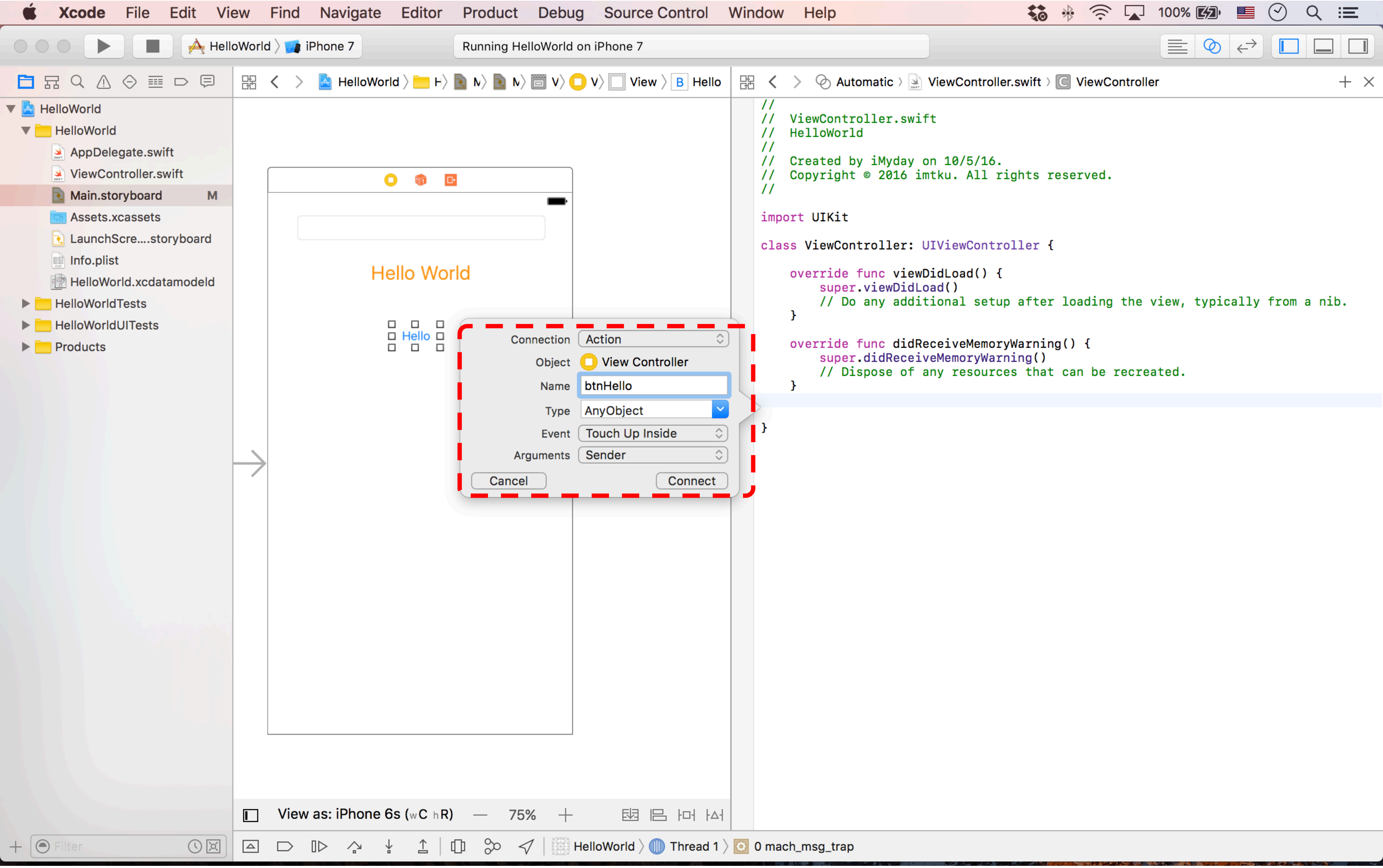
        super.viewDidLoad()
        // Do any additional setup after loading the view, typically from a nib.
    }

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

}
```

btnHello



Connection: Action
Object: View Controller
Name: btnHello
Type: AnyObject
Event: Touch Up Inside
Arguments: Sender

```
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. All rights reserved.
//

import UIKit

class ViewController: UIViewController {

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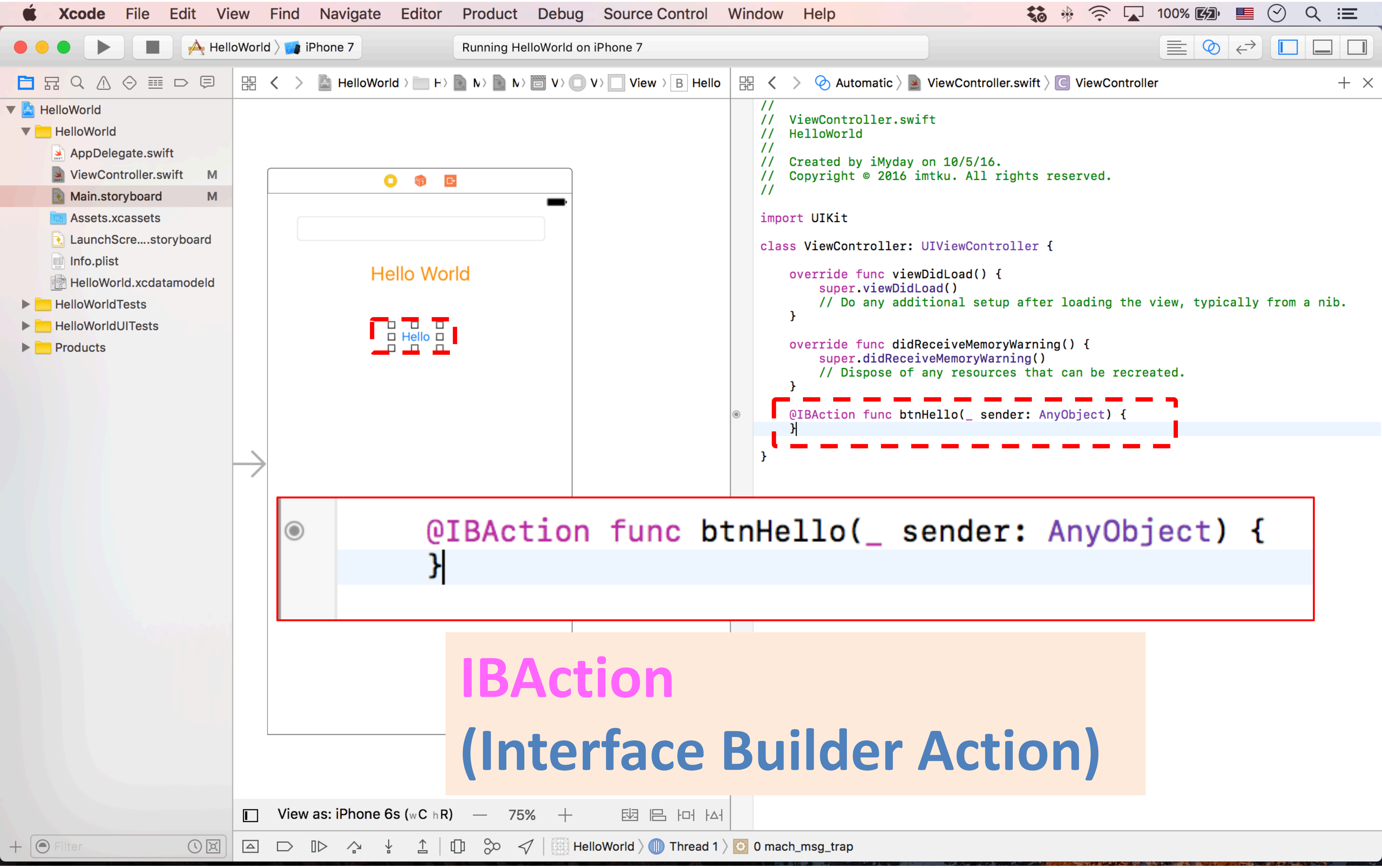
        // Dispose of any resources that can be recreated.
    }

}
```

btnHello


Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help
100%
HelloWorld › iPhone 7
Running HelloWorld on iPhone 7
HelloWorld
HelloWorld
AppDelegate.swift
ViewController.swift M
Main.storyboard M
Assets.xcassets
LaunchScre....storyboard
Info.plist
HelloWorld.xcdatamodeld
HelloWorldTests
HelloWorldUITests
Products
HelloWorld › View › Hello
Automatic › ViewController.swift › ViewController
Hello World
Hello
View as: iPhone 6s (wC hR)
75%
Filter
HelloWorld › Thread 1 › 0 mach_msg_trap

```swift
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. All rights reserved.
//

import UIKit

class ViewController: UIViewController {

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

    @IBAction func btnHello(_ sender: AnyObject) {
    }
}
```
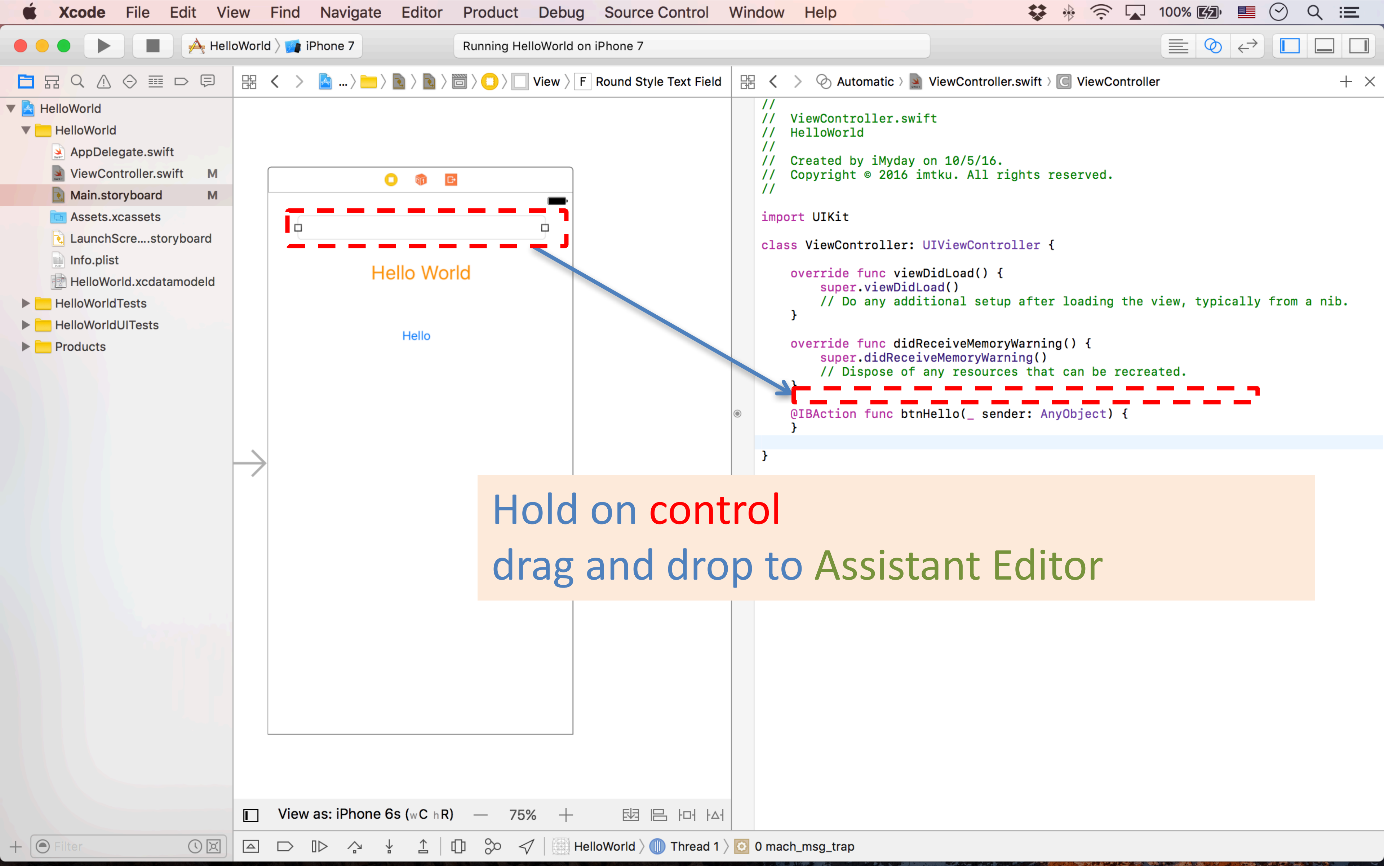

```swift
    @IBAction func btnHello(_ sender: AnyObject) {
    }
```

IBAction

(Interface Builder Action)



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    }

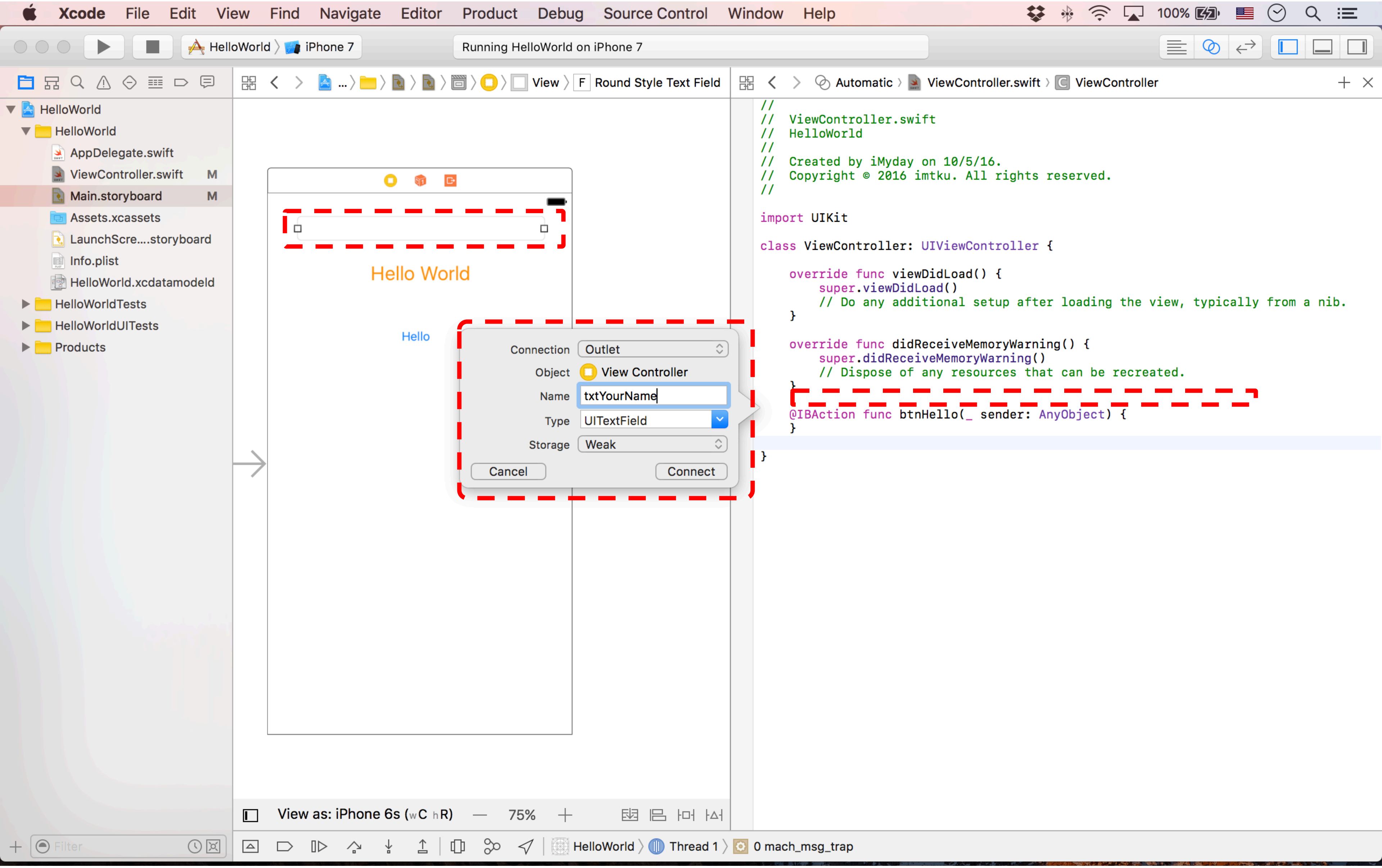
    @IBAction func btnHello(_ sender: AnyObject) {
    }

}
```

Hold on control

drag and drop to Assistant Editor

txtYourName


Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help
100%
HelloWorld 〉 iPhone 7
Running HelloWorld on iPhone 7
… 〉 View 〉 F Round Style Text Field
Automatic 〉 ViewController.swift 〉 ViewController
HelloWorld
HelloWorld
AppDelegate.swift
ViewController.swift M
Main.storyboard M
Assets.xcassets
LaunchScre....storyboard
Info.plist
HelloWorld.xcdatamodeld
HelloWorldTests
HelloWorldUITests
Products
Hello World
Hello
Cancel
Connect
View as: iPhone 6s (wC hR)
75%
Filter
HelloWorld 〉 Thread 1 〉 0 mach_msg_trap

Connection: Outlet

Object: View Controller

Name: txtYourName

Type: UITextField

Storage: Weak

```
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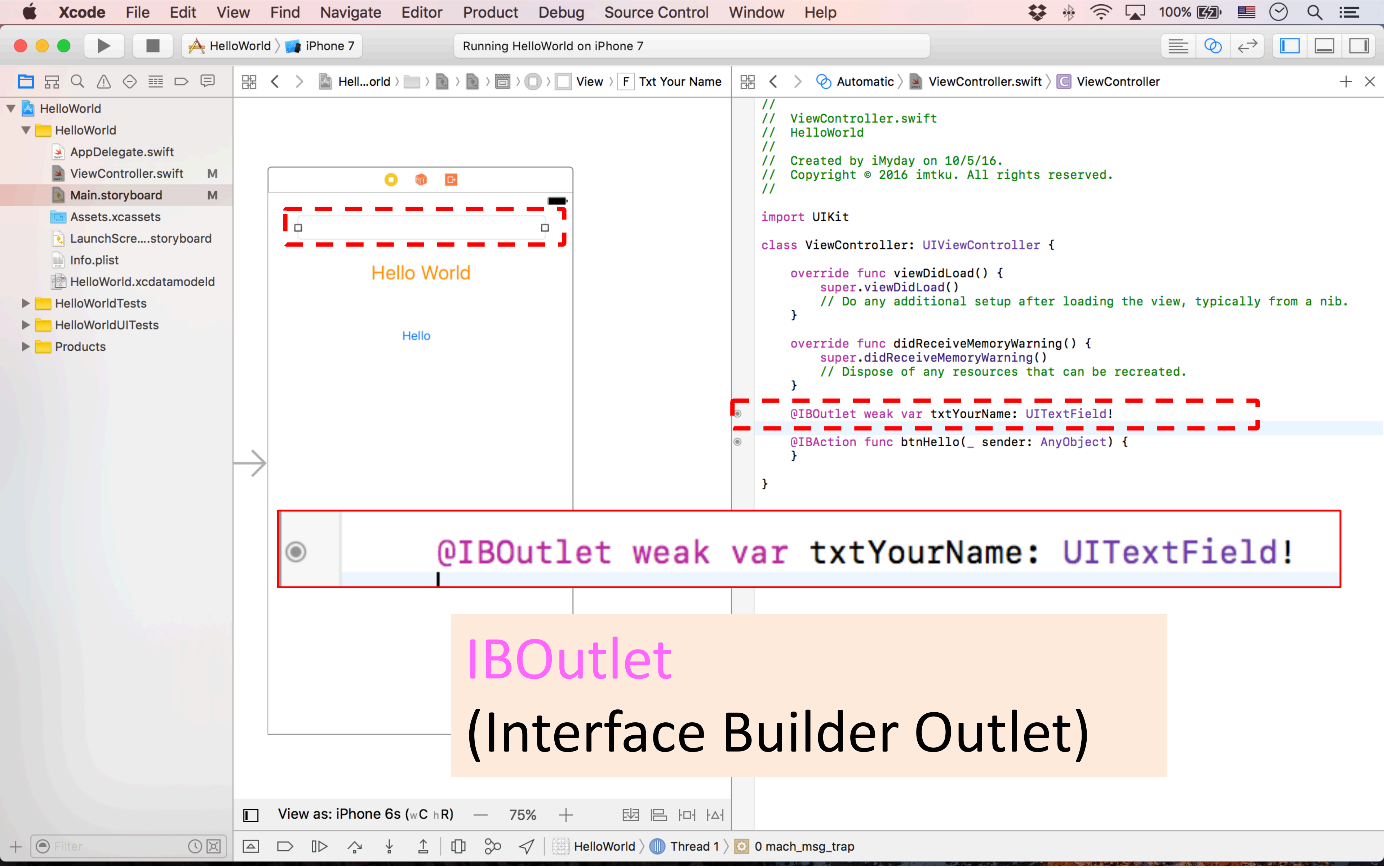
    }

}
```

txtYourName



Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help
HelloWorld 〉 iPhone 7
Running HelloWorld on iPhone 7
Hell...orld 〉 View 〉 Txt Your Name
Automatic 〉 ViewController.swift 〉 ViewController
HelloWorld
HelloWorld
AppDelegate.swift
ViewController.swift M
Main.storyboard M
Assets.xcassets
LaunchScre....storyboard
Info.plist
HelloWorld.xcdatamodeld
HelloWorldTests
HelloWorldUITests
Products
Hello World
Hello
View as: iPhone 6s (wC hR)
75%
Filter
HelloWorld 〉 Thread 1 〉 0 mach_msg_trap

```swift
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    }

    @IBOutlet weak var txtYourName: UITextField!
    @IBAction func btnHello(_ sender: AnyObject) {
    }

}
```
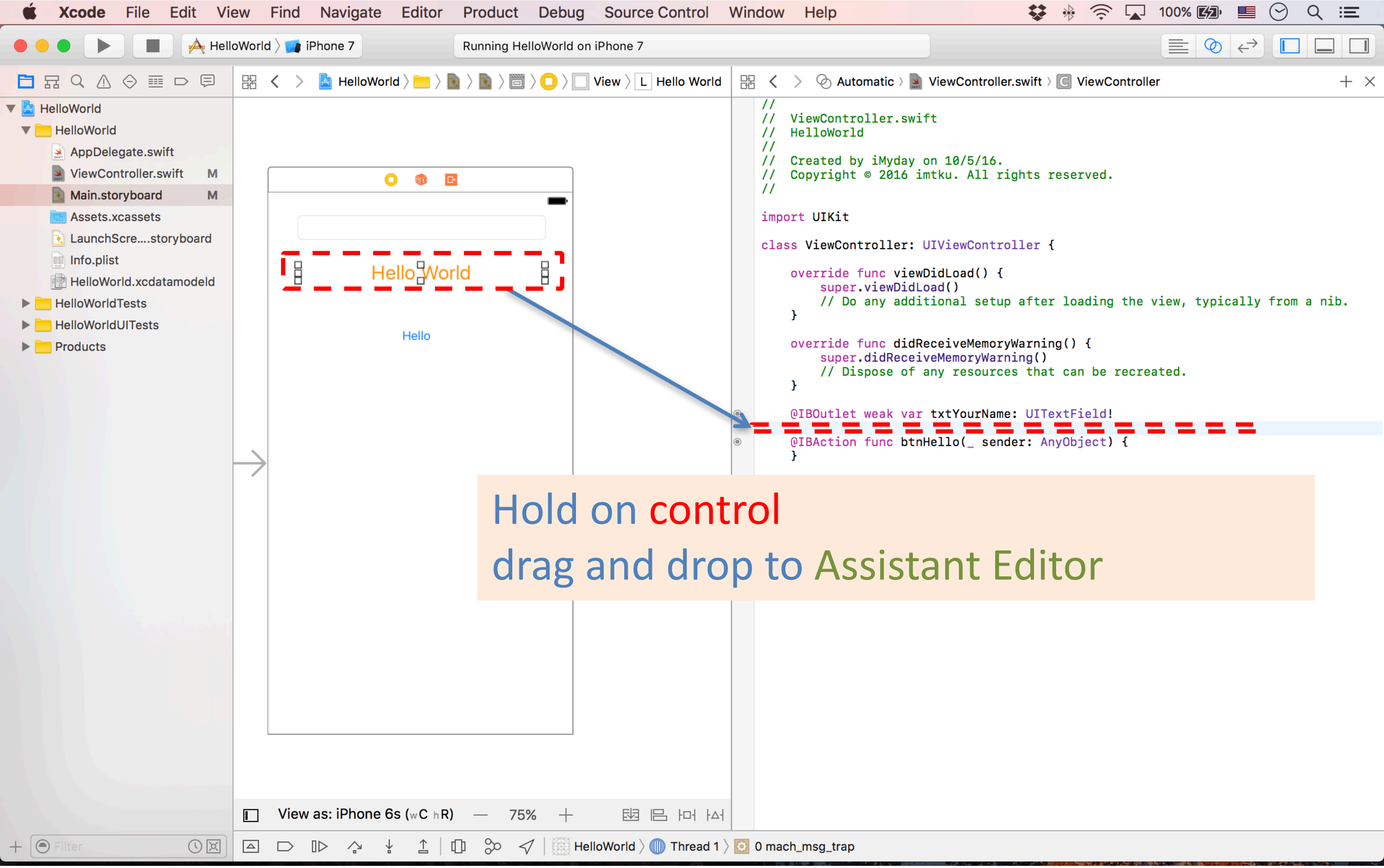

```swift
@IBOutlet weak var txtYourName: UITextField!
```

IBOutlet

(Interface Builder Outlet)


Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help
HelloWorld 〉 iPhone 7
Running HelloWorld on iPhone 7
HelloWorld 〉 View 〉 L Hello World
Automatic 〉 ViewController.swift 〉 ViewController
HelloWorld
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ViewController.swift M
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HelloWorldUITests
Products
Hello World
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Filter
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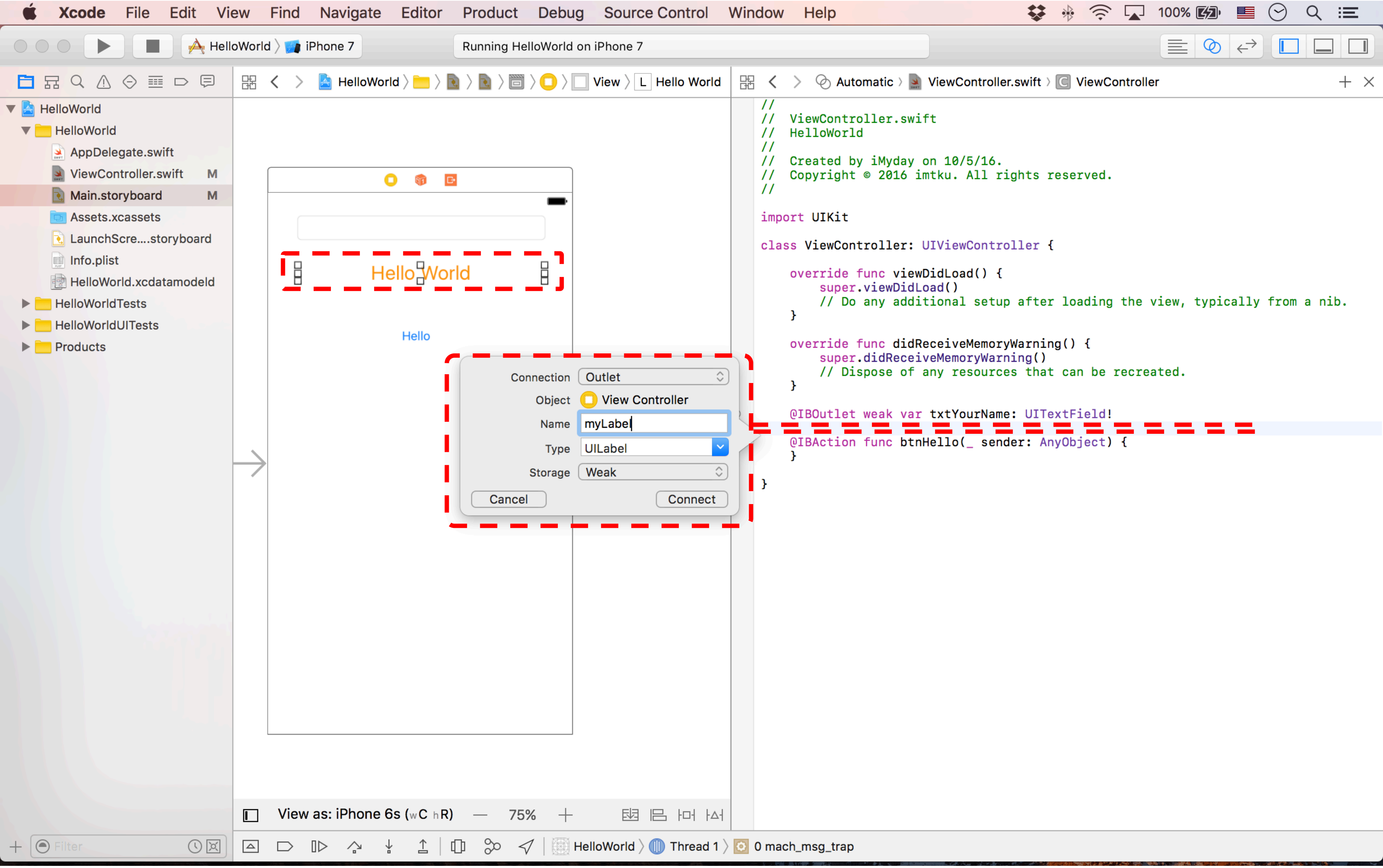
    }
```

Hold on control

drag and drop to Assistant Editor

myLabel



Connection: Outlet
Object: View Controller
Name: myLabel
Type: UILabel
Storage: Weak

```
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//  HelloWorld
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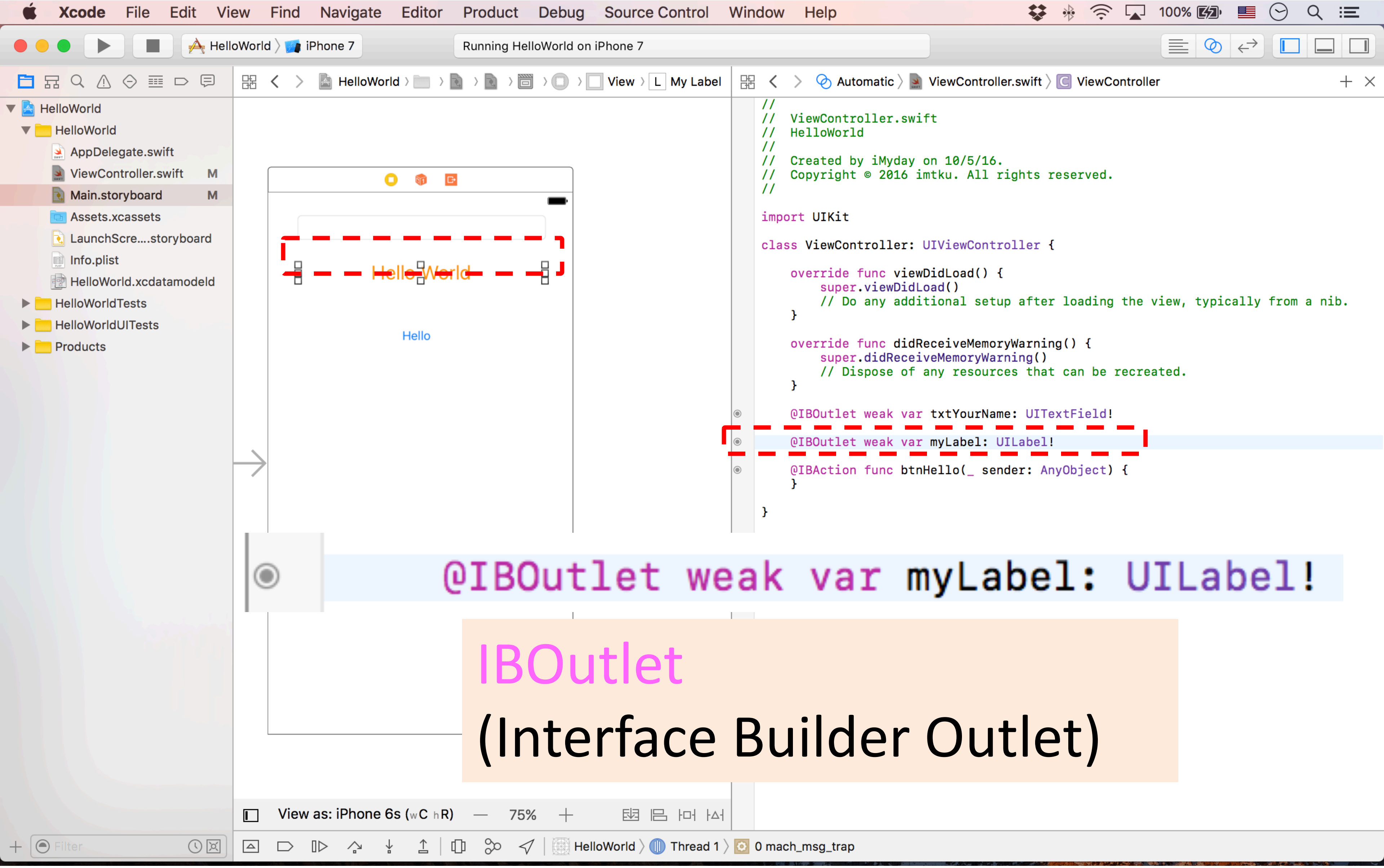
    }

    @IBOutlet weak var txtYourName: UITextField!

    @IBAction func btnHello(_ sender: AnyObject) {
    }

}
```

myLabel



Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help
100%
HelloWorld 〉 iPhone 7
Running HelloWorld on iPhone 7
HelloWorld 〉 View 〉 L My Label
Automatic 〉 ViewController.swift 〉 C ViewController
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HelloWorld
AppDelegate.swift
ViewController.swift M
Main.storyboard M
Assets.xcassets
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HelloWorldTests
HelloWorldUITests
Products
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View as: iPhone 6s (wC hR)
75%
Filter
HelloWorld 〉 Thread 1 〉 0 mach_msg_trap

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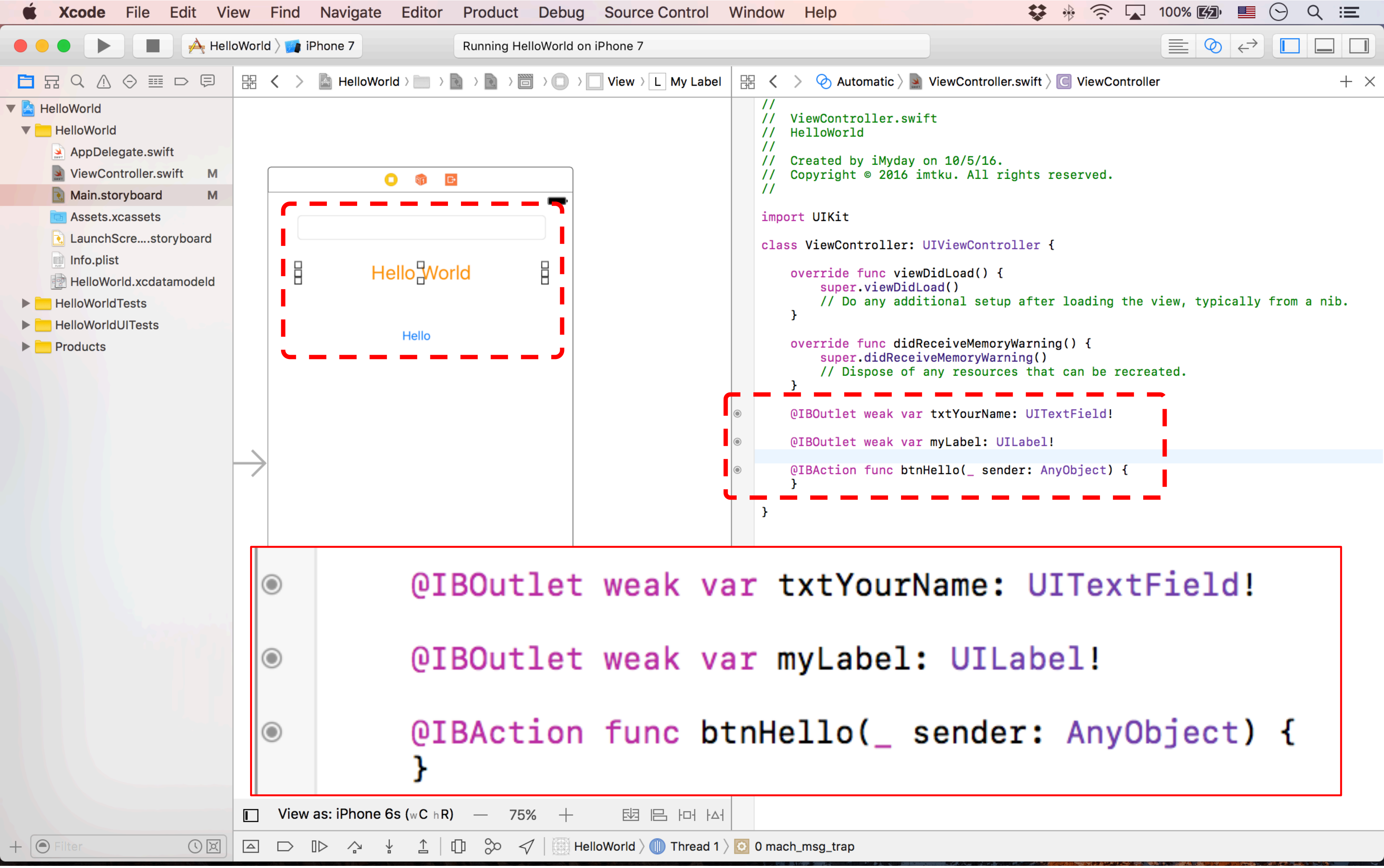
    }

}
```

```
@IBOutlet weak var myLabel: UILabel!
```

IBOutlet

(Interface Builder Outlet)



Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help
100%
HelloWorld 〉 iPhone 7
Running HelloWorld on iPhone 7
HelloWorld 〉 View 〉 L My Label
Automatic 〉 ViewController.swift 〉 ViewController
HelloWorld
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AppDelegate.swift
ViewController.swift M
Main.storyboard M
Assets.xcassets
LaunchScre....storyboard
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HelloWorldTests
HelloWorldUITests
Products
Hello World
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View as: iPhone 6s (wC hR)
75%
Filter
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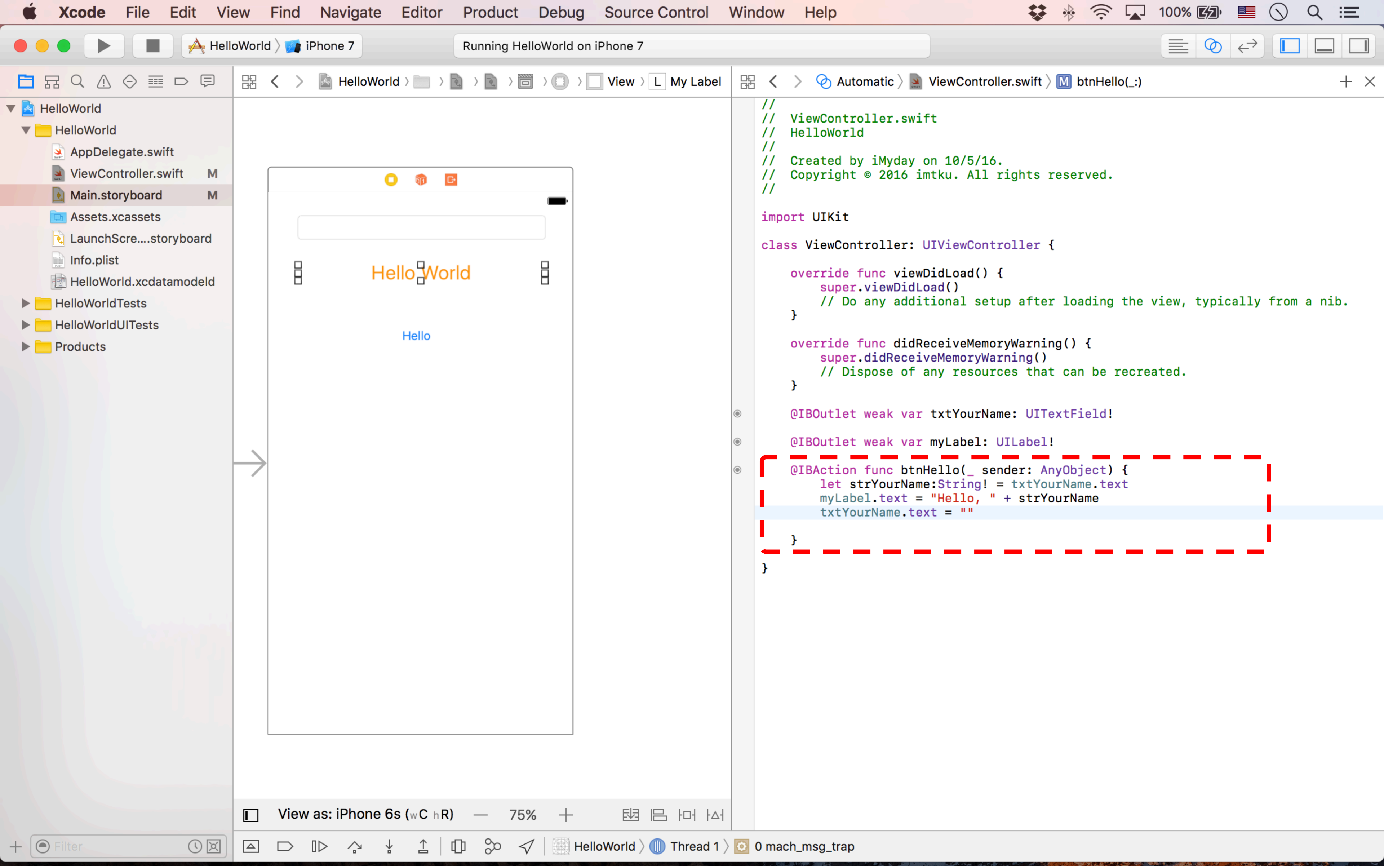
```

@IBAction func btnHello()



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        txtYourName.text = ""

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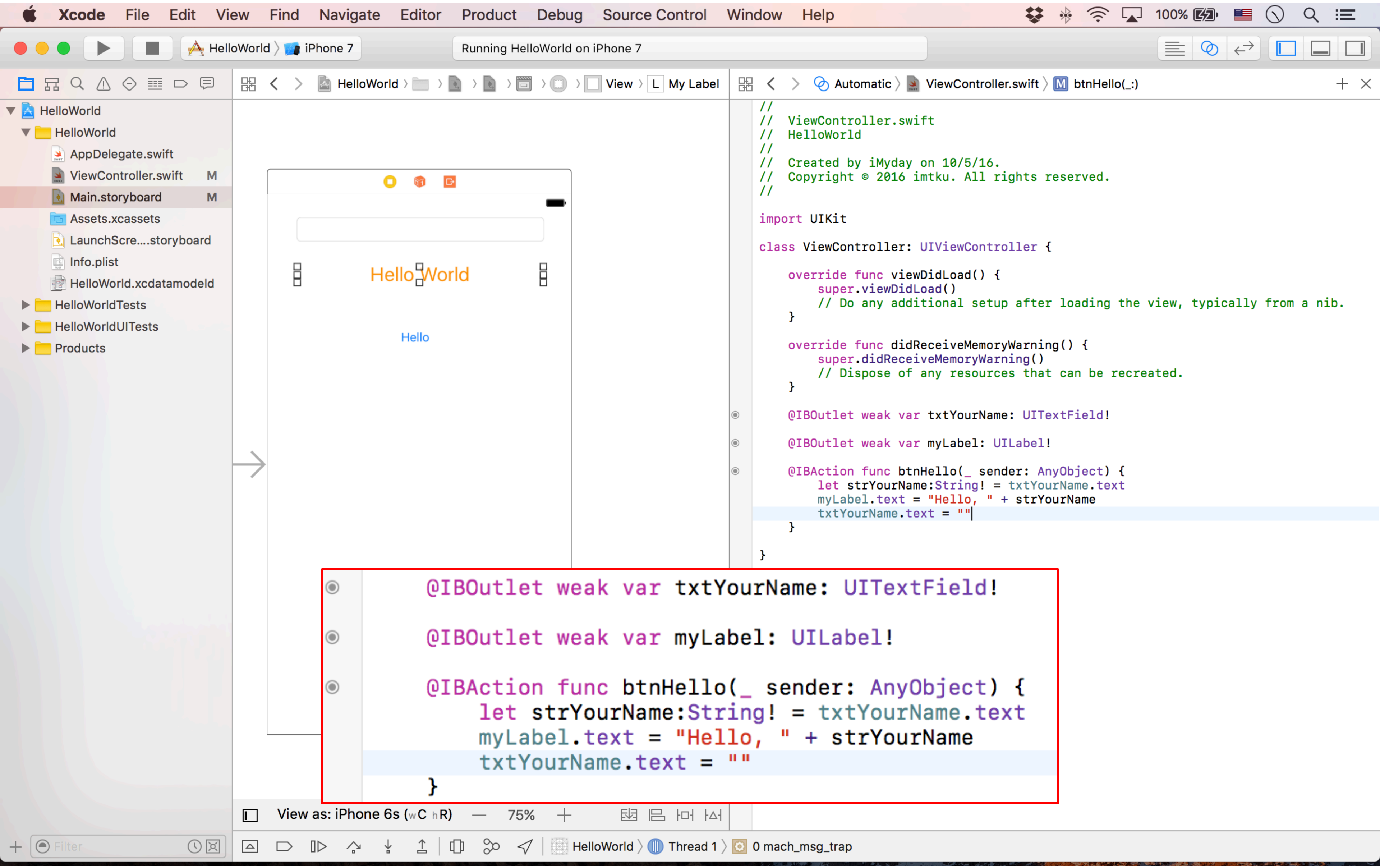
```

@IBAction func btnHello()



Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help
100%
HelloWorld 〉 iPhone 7
Running HelloWorld on iPhone 7
HelloWorld 〉 View 〉 L My Label
Automatic 〉 ViewController.swift 〉 M btnHello(_:)
HelloWorld
HelloWorld
AppDelegate.swift
ViewController.swift M
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Assets.xcassets
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HelloWorldTests
HelloWorldUITests
Products
HelloWorld
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75%
Filter
HelloWorld 〉 Thread 1 〉 0 mach_msg_trap

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        txtYourName.text = ""
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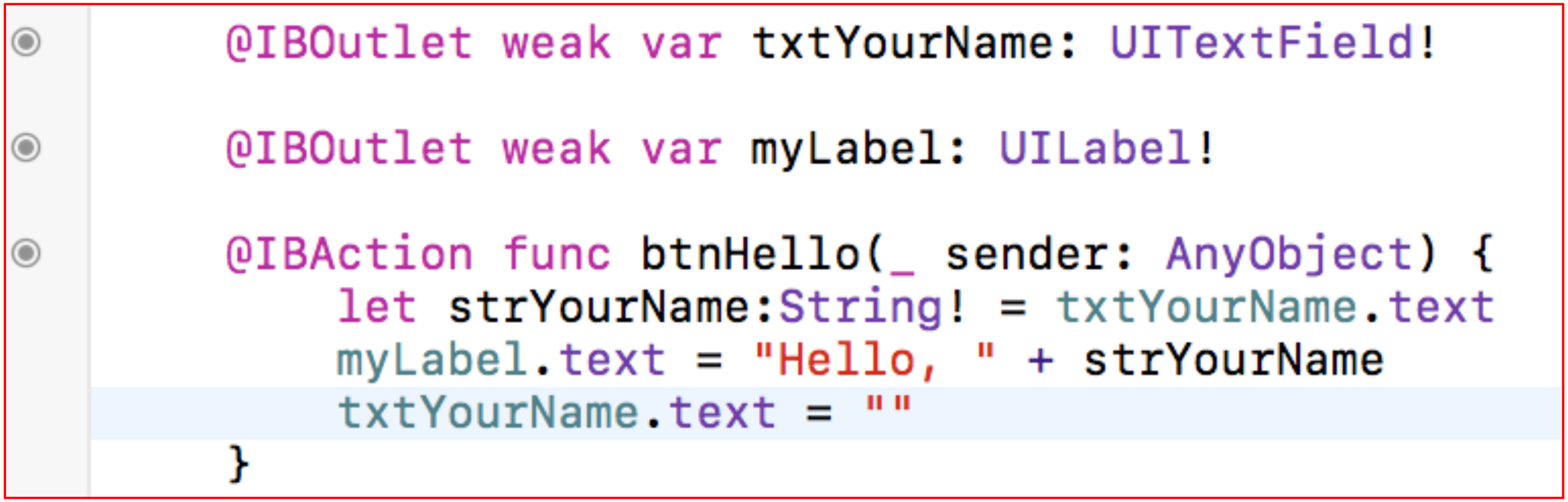
```

@IBAction func btnHello()



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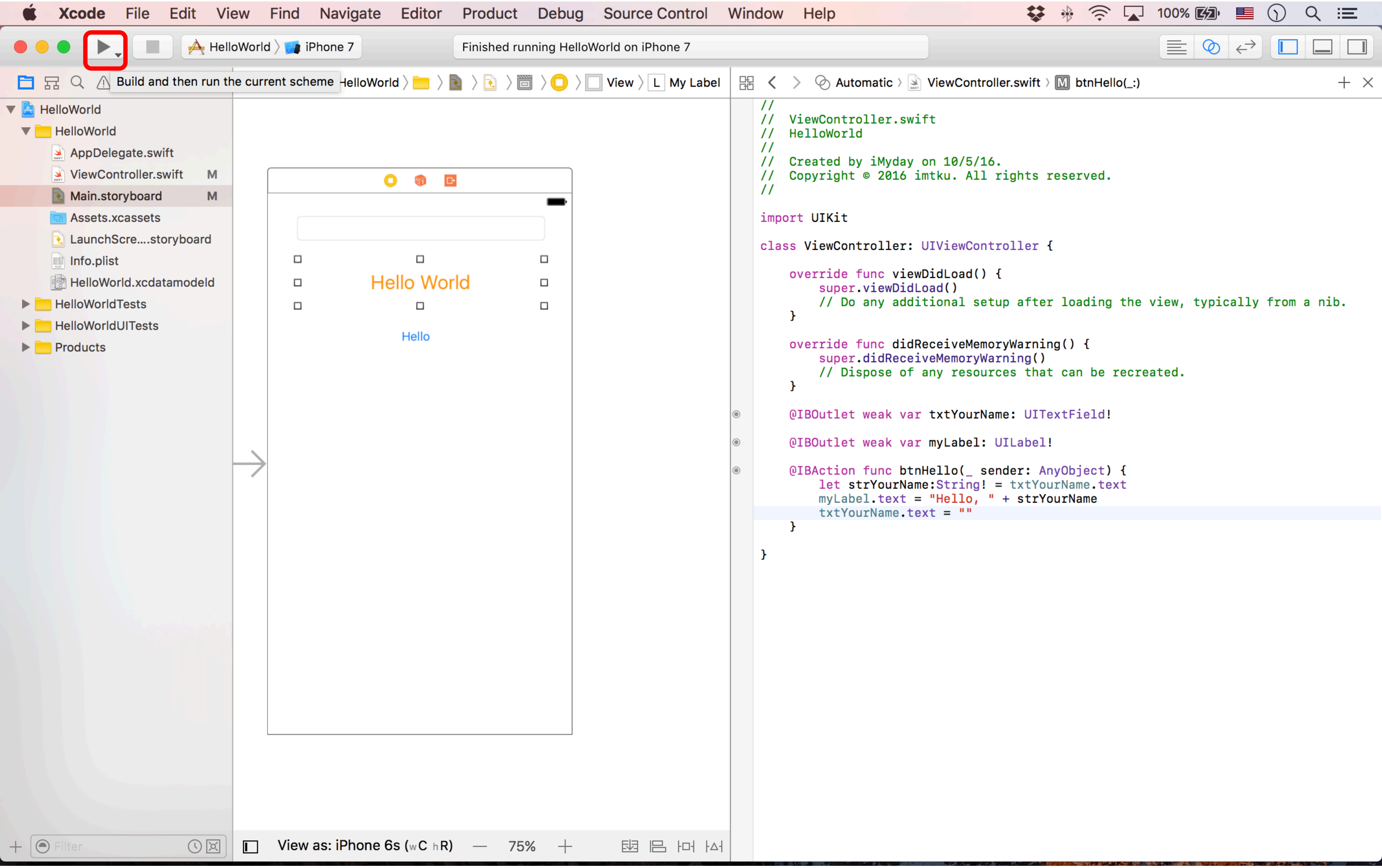
```

Build and Run



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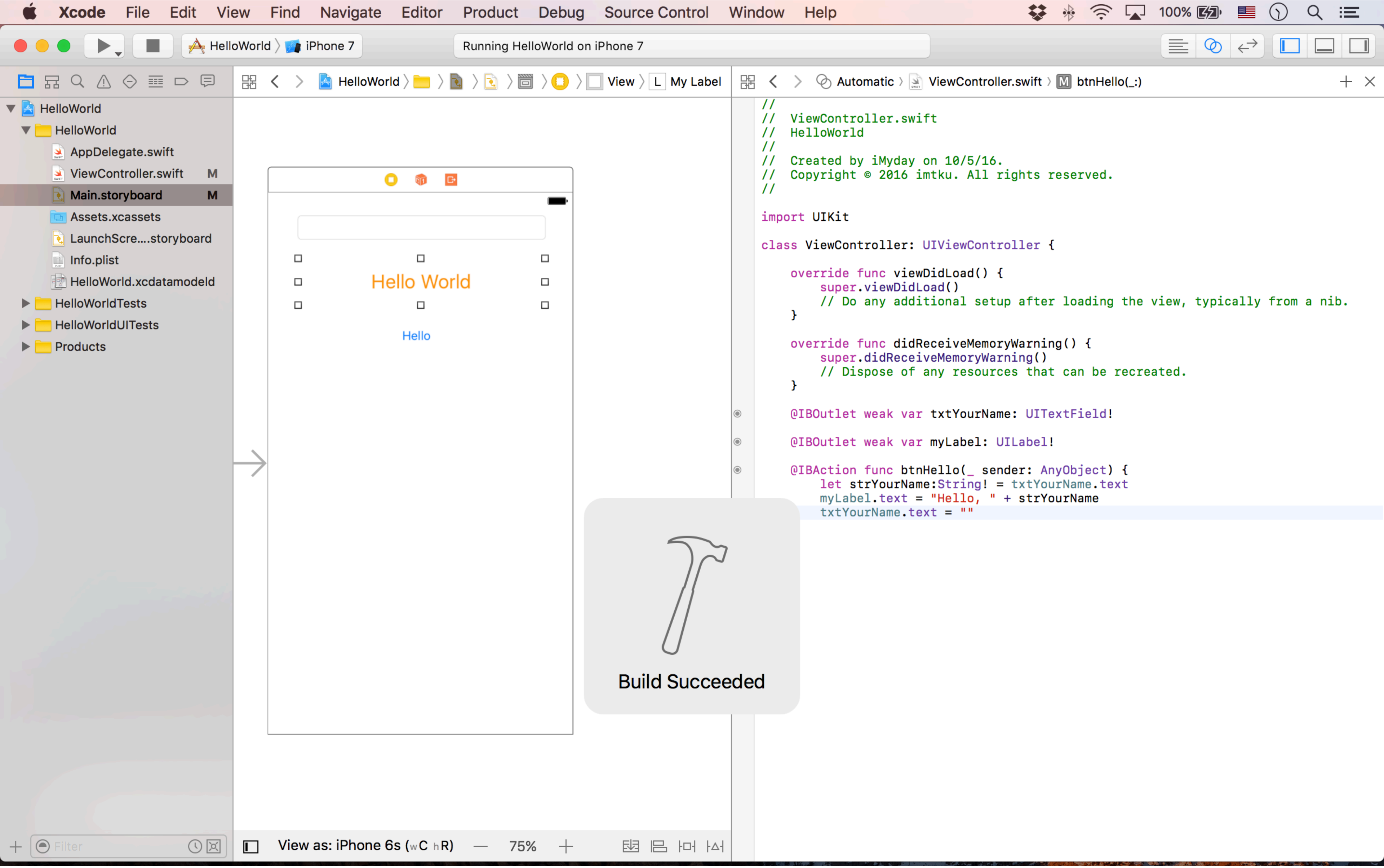

Running HelloWorld on iPhone 7

```
//
//  ViewController.swift
//  HelloWorld
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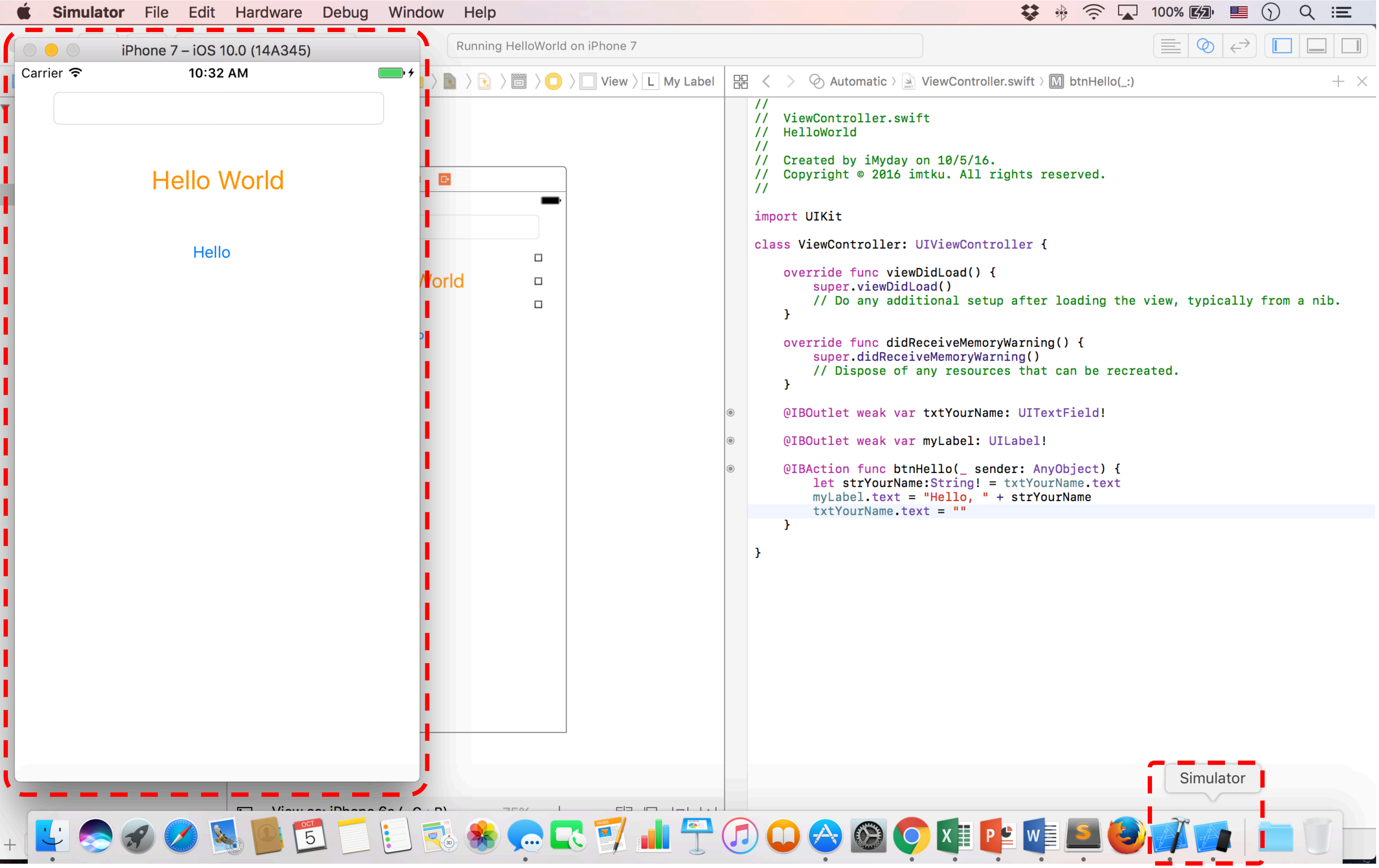
```

Build Succeeded



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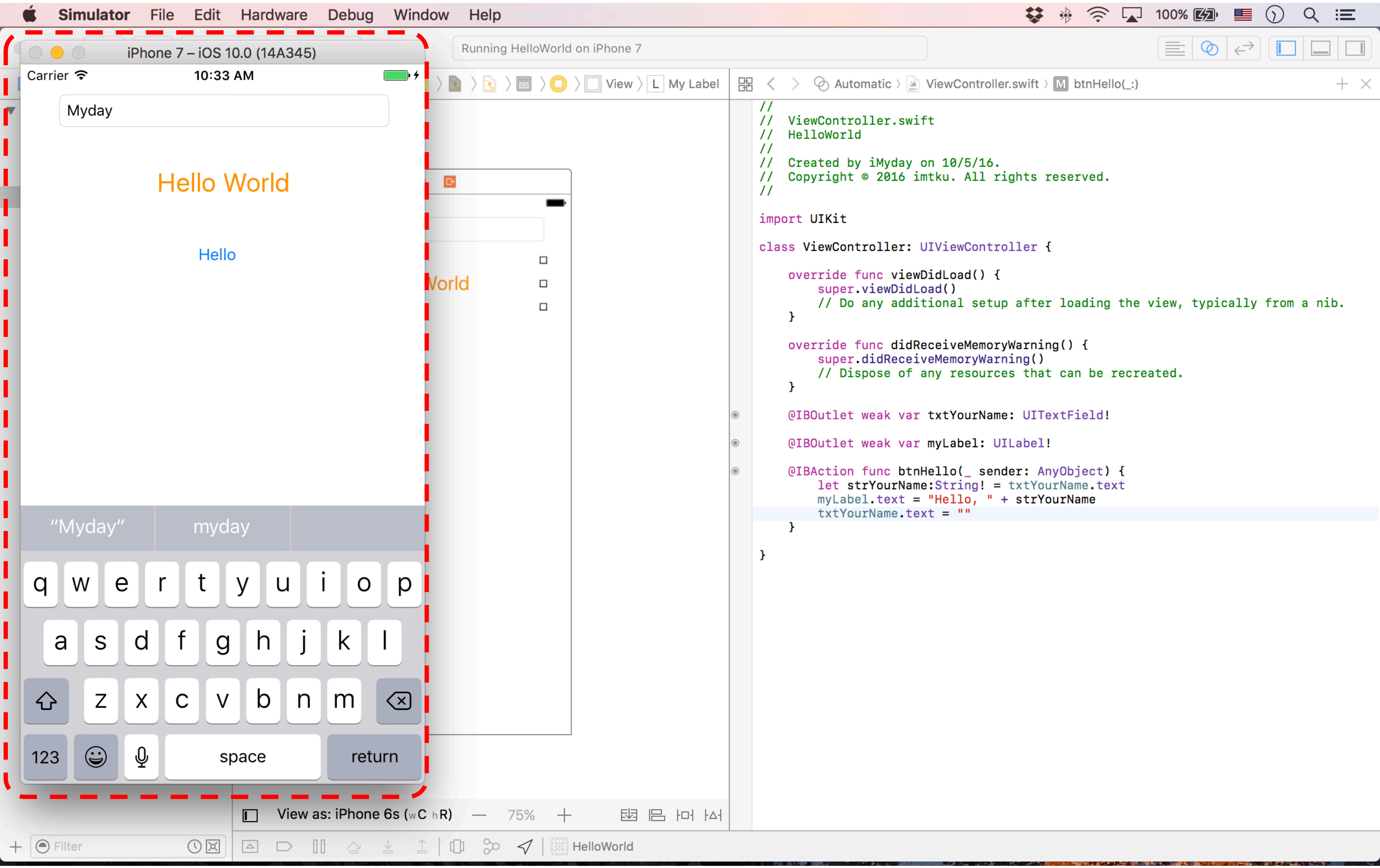

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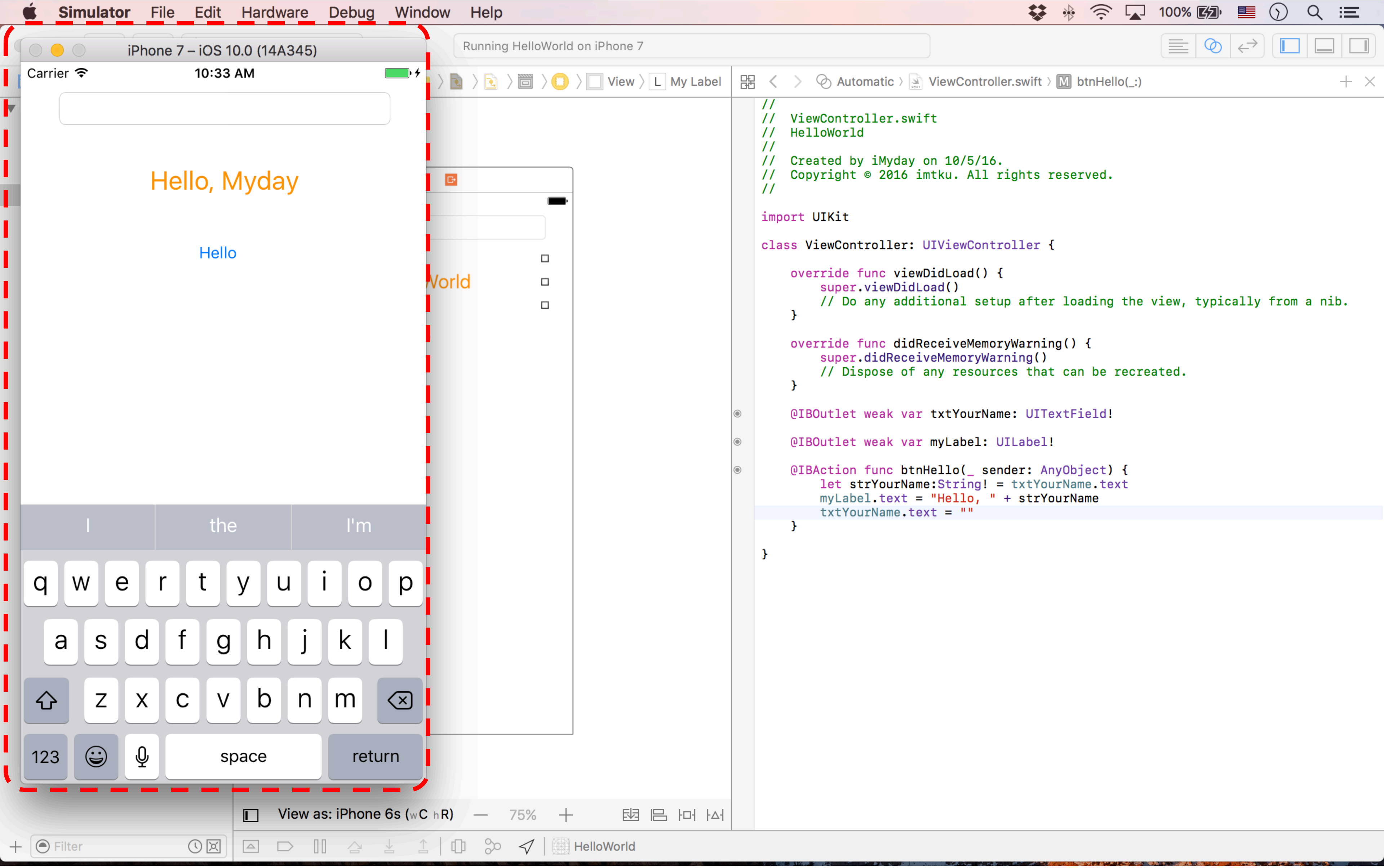

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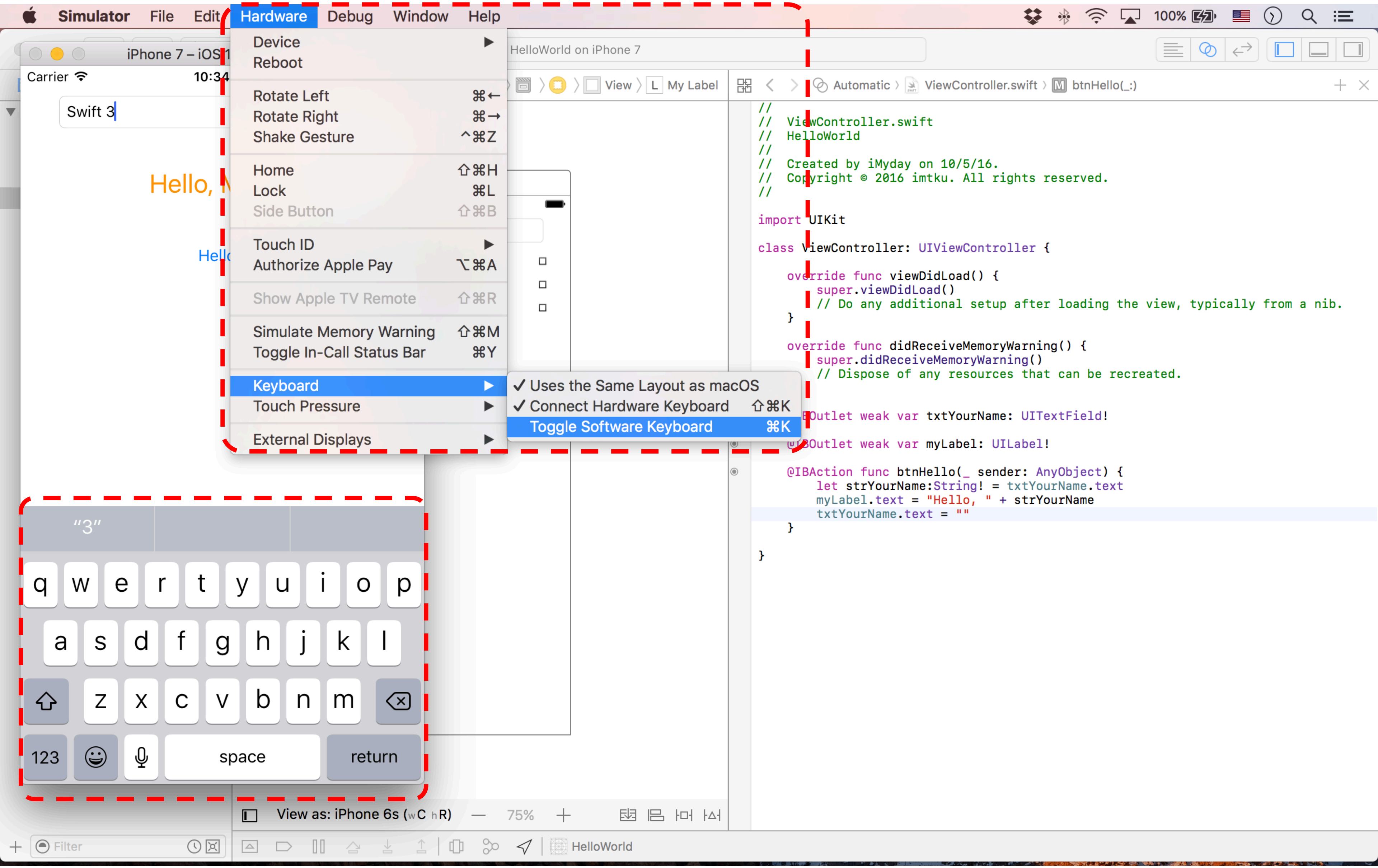

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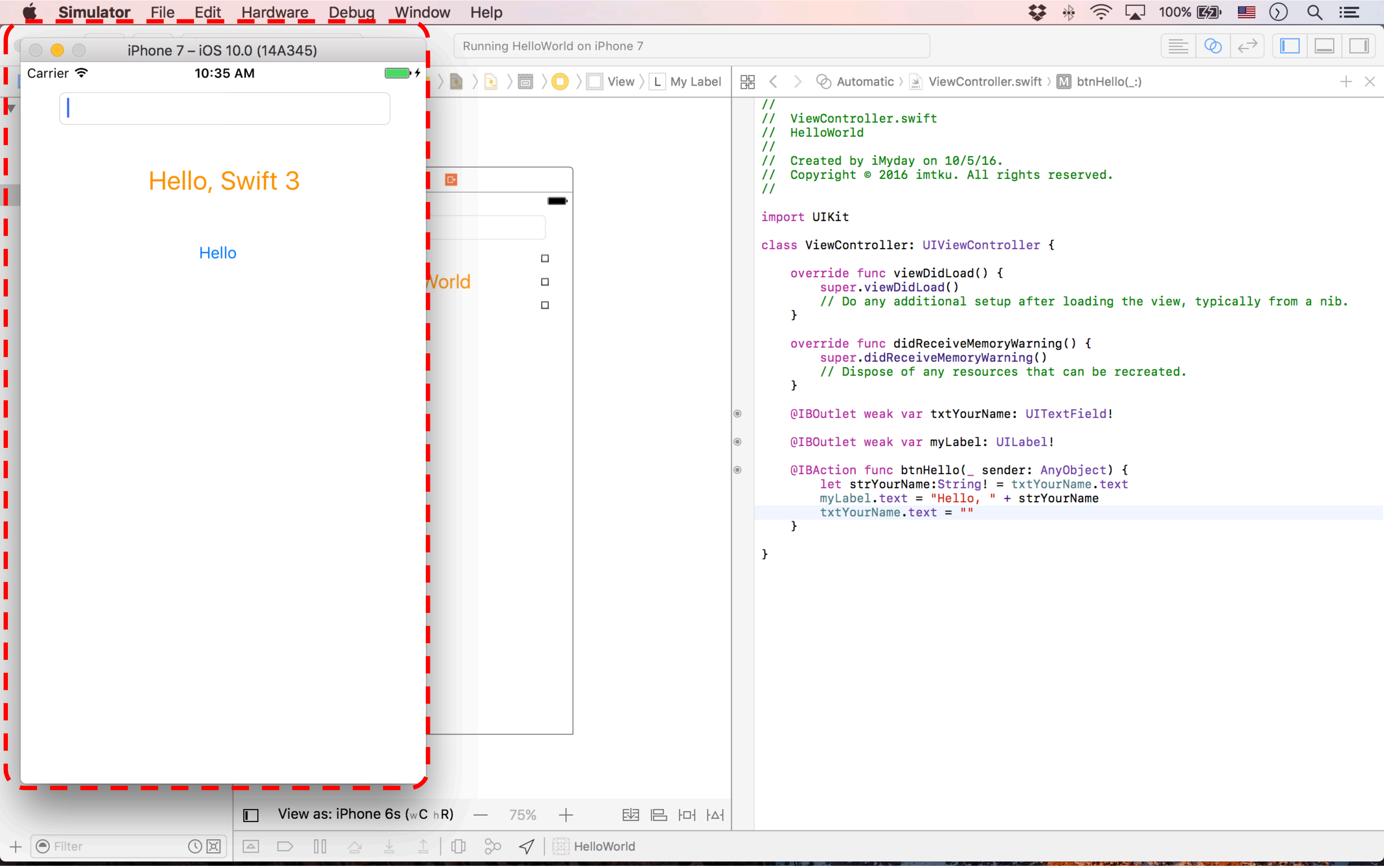

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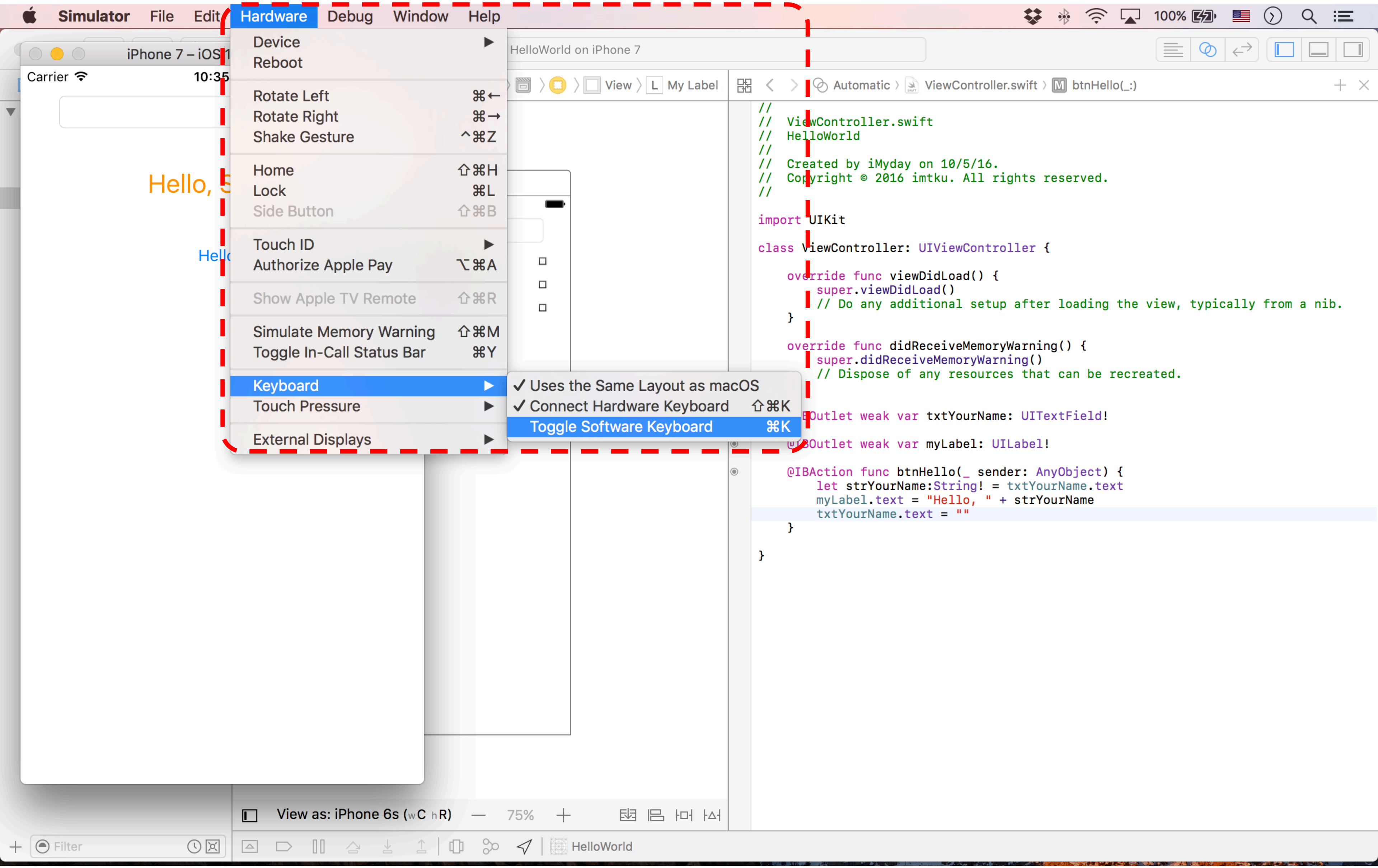

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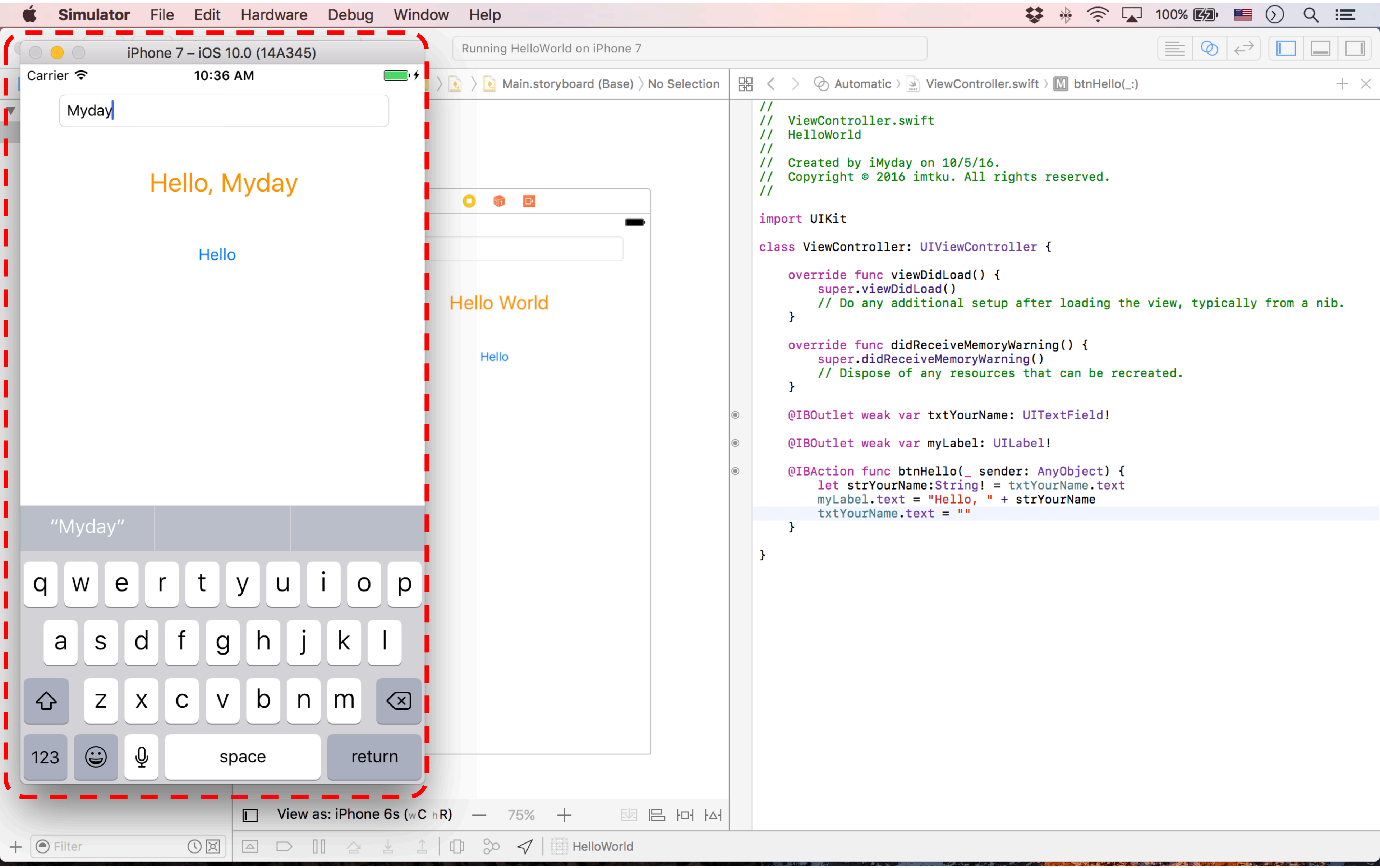

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    }

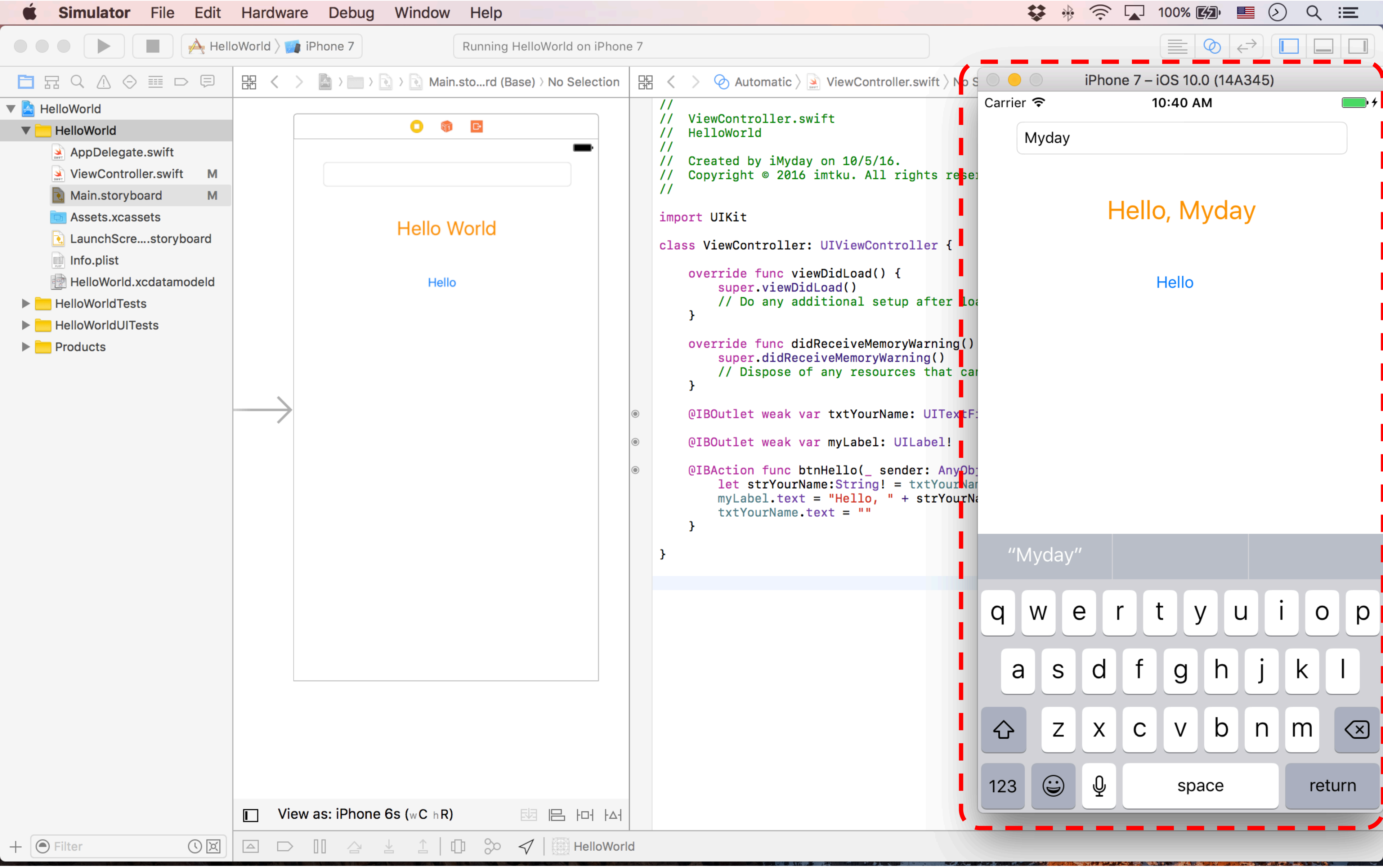
    override func didReceiveMemoryWarning() {
        super.didReceiveMemoryWarning()
        // Dispose of any resources that can be recreated.
    }

    @IBOutlet weak var txtYourName: UITextField!

    @IBOutlet weak var myLabel: UILabel!

    @IBAction func btnHello(_ sender: AnyObject) {
        let strYourName:String! = txtYourName.text
        myLabel.text = "Hello, " + strYourName
        txtYourName.text = ""
    }

}
```



```
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. All rights rese
//

import UIKit

class ViewController: UIViewController {

    override func viewDidLoad() {
        super.viewDidLoad()
        // Do any additional setup after loa
    }

    override func didReceiveMemoryWarning()
        super.didReceiveMemoryWarning()
        // Dispose of any resources that ca
    }

    @IBOutlet weak var txtYourName: UITextFi

    @IBOutlet weak var myLabel: UILabel!

    @IBAction func btnHello(_ sender: AnyObj
        let strYourName:String! = txtYourNa
        myLabel.text = "Hello, " + strYourNa
        txtYourName.text = ""
    }

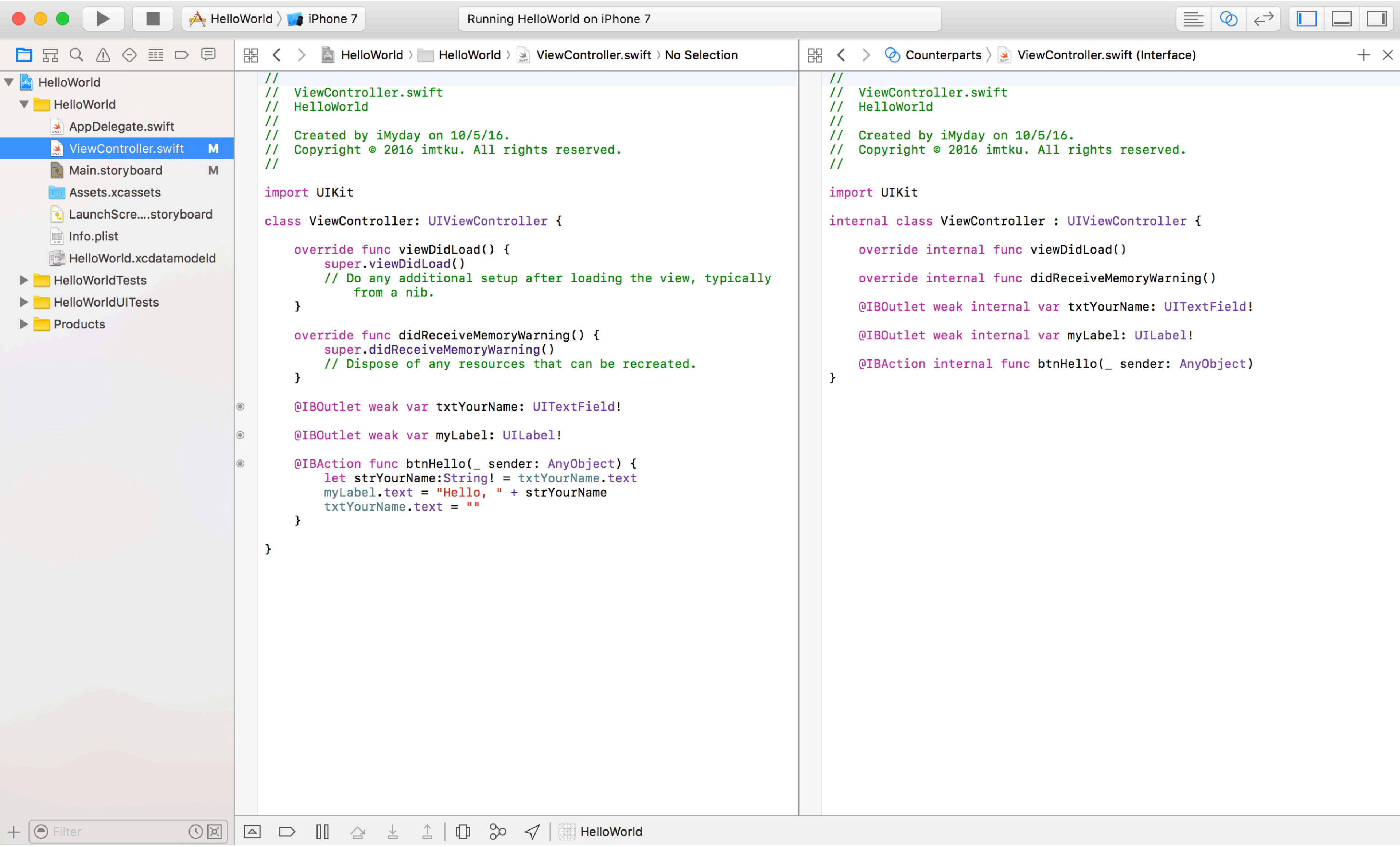
}
```

Myday

Hello, Myday

Hello

ViewController.swift



```
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. 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.
    }

    @IBOutlet weak var txtYourName: UITextField!

    @IBOutlet weak var myLabel: UILabel!

    @IBAction func btnHello(_ sender: AnyObject) {
        let strYourName:String! = txtYourName.text
        myLabel.text = "Hello, " + strYourName
        txtYourName.text = ""
    }

}
```

```
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. All rights reserved.
//

import UIKit

internal class ViewController : UIViewController {

    override internal func viewDidLoad()

    override internal func didReceiveMemoryWarning()

    @IBOutlet weak internal var txtYourName: UITextField!

    @IBOutlet weak internal var myLabel: UILabel!

    @IBAction internal func btnHello(_ sender: AnyObject)
}
```

ViewController.swift

```swift
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. 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.
    }

    @IBOutlet weak var txtYourName: UITextField!

    @IBOutlet weak var myLabel: UILabel!

    @IBAction func btnHello(_ sender: AnyObject) {
        let strYourName:String! = txtYourName.text
        myLabel.text = "Hello, " + strYourName
        txtYourName.text = ""
    }

}
```

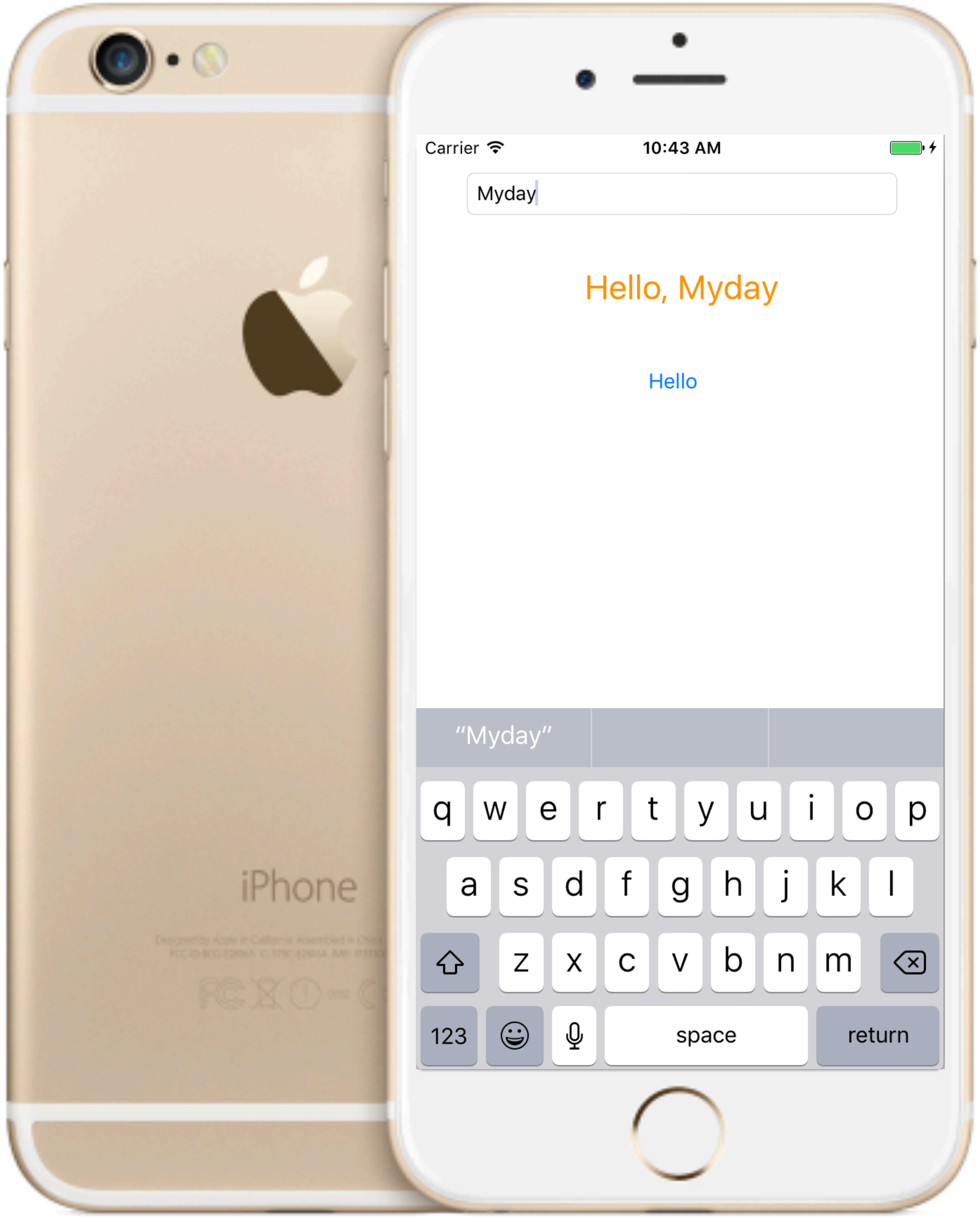
ViewController.swift

```swift
@IBOutlet weak var txtYourName: UITextField!

@IBOutlet weak var myLabel: UILabel!

@IBAction func btnHello(_ sender: AnyObject) {
        let strYourName:String! = txtYourName.text
        myLabel.text = "Hello, " + strYourName
       txtYourName.text = ""
```

ViewController.swift (Interface)

```
//
//  ViewController.swift
//  HelloWorld
//
//  Created by iMyday on 10/5/16.
//  Copyright © 2016 imtku. All rights reserved.
//

import UIKit

internal class ViewController : UIViewController {

    override internal func viewDidLoad()

    override internal func didReceiveMemoryWarning()

    @IBOutlet weak internal var txtYourName: UITextField!

    @IBOutlet weak internal var myLabel: UILabel!

    @IBAction internal func btnHello(_ sender: AnyObject)
}
```

iPhone
9:41 AM
100%
Tuesday
9
Messages
Calendar
Photos
Camera
Weather
Clock
Maps
Videos
Notes
Reminders
Stocks
Game Center
Newsstand
iTunes Store
App Store
iBooks
Health
Passbook
Settings
Phone
Mail
Safari
Music



Myday

Hello, Myday

Summary

- Developing iPhone / iPad Native Apps with Swift 3 (Xcode 8)
  - – Mac OS X 10.8, 10.9, 10.10, 10.11, 10.12
  - – Xcode 6, Xcode 7, Xcode 8
  - – iOS 8, iOS 9, iOS 10
- Building Your First iOS App with Xcode 8

Xcode 8

Swift 3

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- Apple - WWDC 2015
  - https://www.youtube.com/watch?v=_p8AsQhaVKI
- Apple - WWDC 2016 Keynote
  - https://www.youtube.com/watch?v=n5jXg_NNiCA