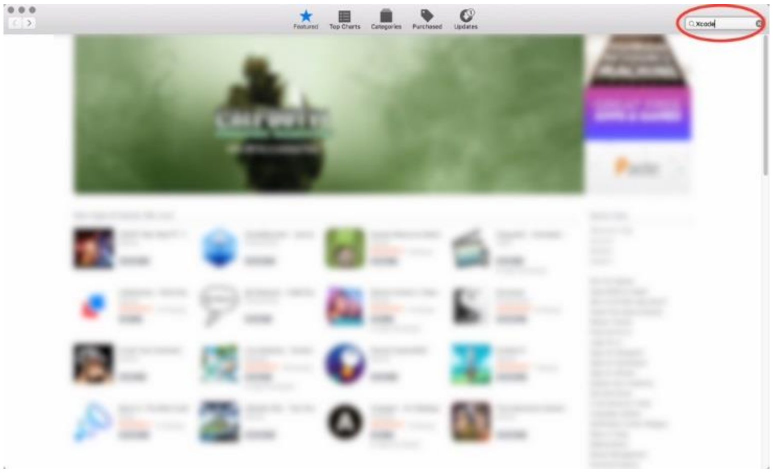
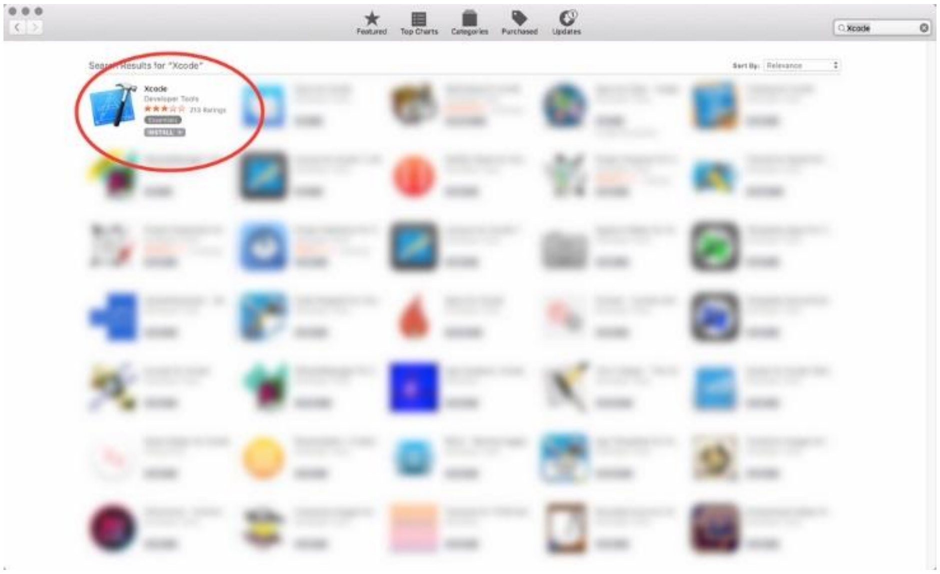
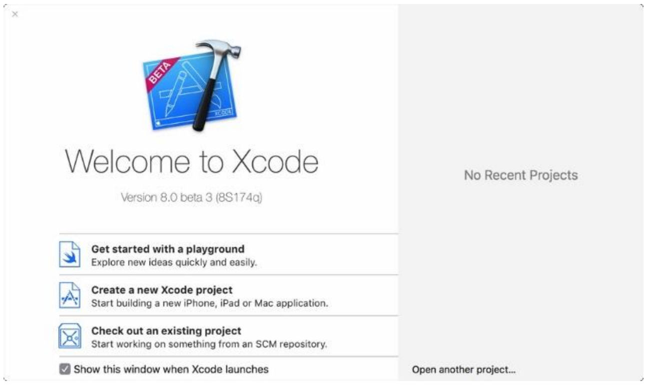
Chapter 1: Getting Familiar with Xcode







Welcome to Xcode

Version 8.0 beta 3 (8S174q)

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

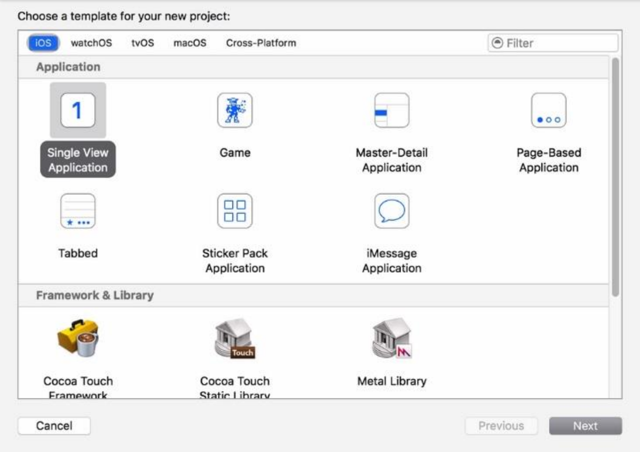
Create a new Xcode project
Start building a new iPhone, iPad or Mac application.

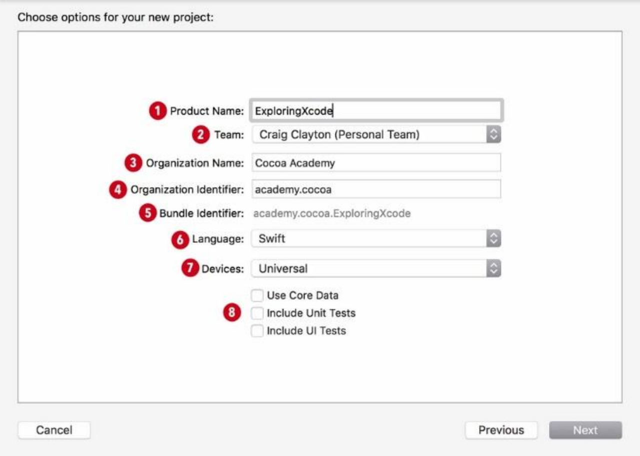
Check out an existing project
Start working on something from an SCM repository.

☑ Show this window when Xcode launches

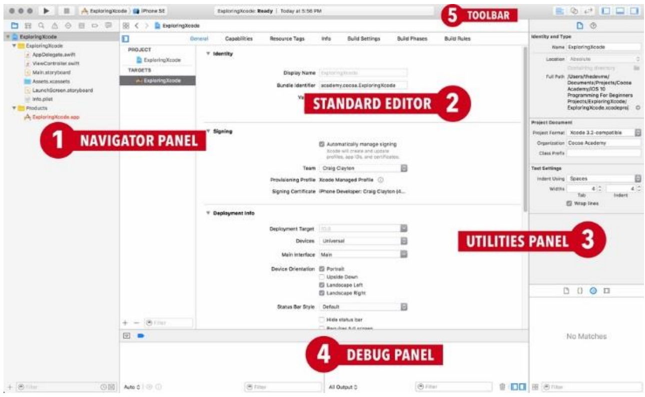
No Recent Projects

Open another project...


Choose a template for your new project:


Choose options for your new project:

1 Product Name: ExploringXcode
2 Team: Craig Clayton (Personal Team)
3 Organization Name: Cocoa Academy
4 Organization Identifier: academy.cocoa
5 Bundle Identifier: academy.cocoa.ExploringXcode
6 Language: Swift
7 Devices: Universal
8 □ Use Core Data
□ Include Unit Tests
□ Include UI Tests

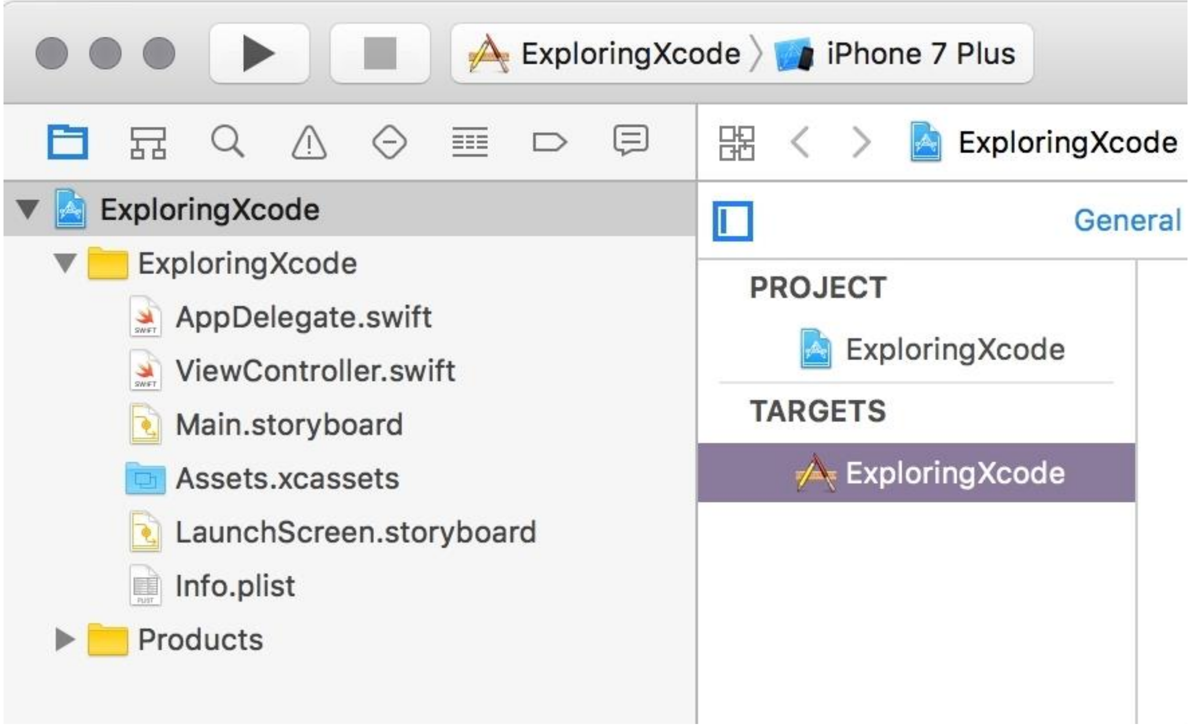


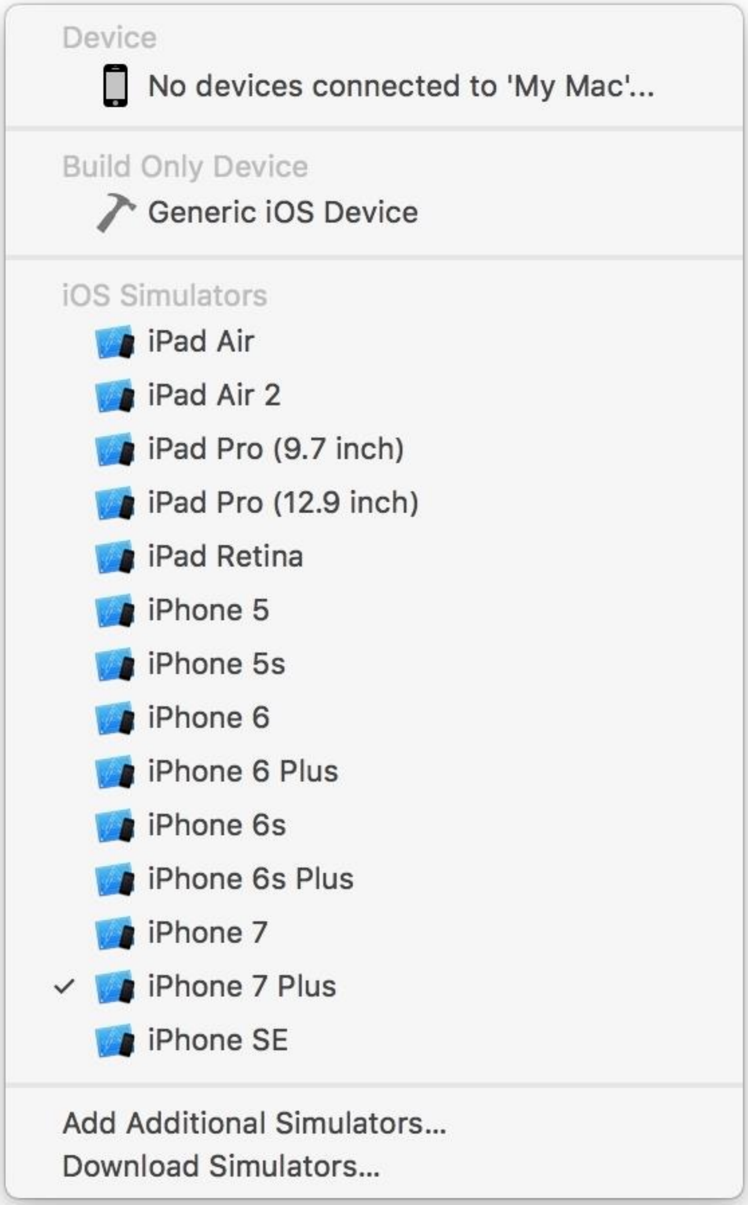
Display Name: ExploringXcode
Bundle Identifier: academy.cocoa.ExploringXcode

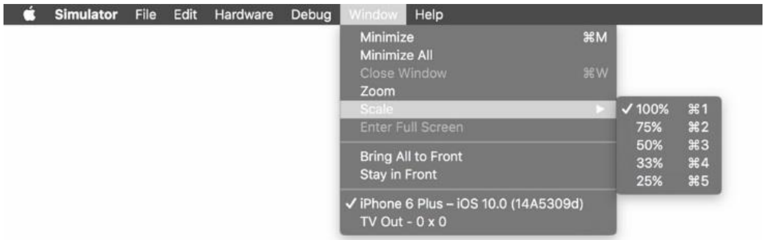
☑ Automatically manage signing
Xcode will create and update profiles, app IDs, and certificates.
Team: Craig Clayton
Provisioning Profile: Xcode Managed Profile
Signing Certificate: iPhone Developer: Craig Clayton (4...

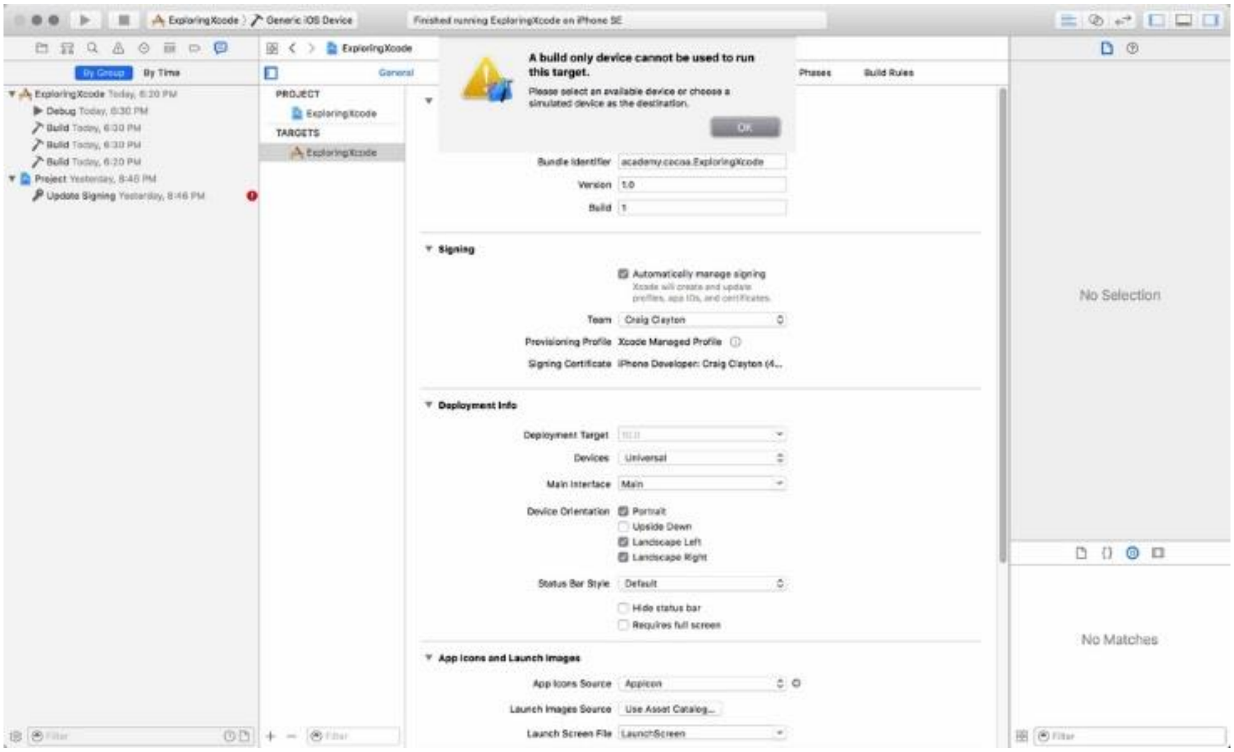
Deployment Target: 10.0
Devices: Universal
Main Interface: Main
Device Orientation: ☑ Portrait
□ Upside Down
☑ Landscape Left
☑ Landscape Right
Status Bar Style: Default
□ Hide status bar

Name: ExploringXcode
Location: Absolute
Full Path: /Users/thedevme/Documents/Projects/Cocoa Academy/iOS 10 Programming For Beginners Projects/ExploringXcode/ExploringXcode.xcodeproj
Project Format: Xcode 3.2-compatible
Organization: Cocoa Academy
Class Prefix:
Indent Using: Spaces
Widths: 4 Tab 4 Indent
☑ Wrap lines


ExploringXcode
iPhone 7 Plus
ExploringXcode
General
ExploringXcode
ExploringXcode
AppDelegate.swift
ViewController.swift
Main.storyboard
Assets.xcassets
LaunchScreen.storyboard
Info.plist
Products
PROJECT
ExploringXcode
TARGETS
ExploringXcode


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...


Simulator
File
Edit
Hardware
Debug
Window
Help
Minimize ⌘M
Minimize All
Close Window ⌘W
Zoom
Scale ▶
Enter Full Screen
Bring All to Front
Stay in Front
✓ iPhone 6 Plus – iOS 10.0 (14A5309d)
TV Out - 0 x 0
✓ 100% ⌘1
75% ⌘2
50% ⌘3
33% ⌘4
25% ⌘5



Finished running ExploringXcode on iPhone SE

A build only device cannot be used to run this target.

Please select an available device or choose a simulated device as the destination.

OK

Bundle Identifier: academy.cocoa.ExploringXcode
Version: 1.0
Build: 1

Signing

☑ Automatically manage signing
Xcode will create and update profiles, app IDs, and certificates.

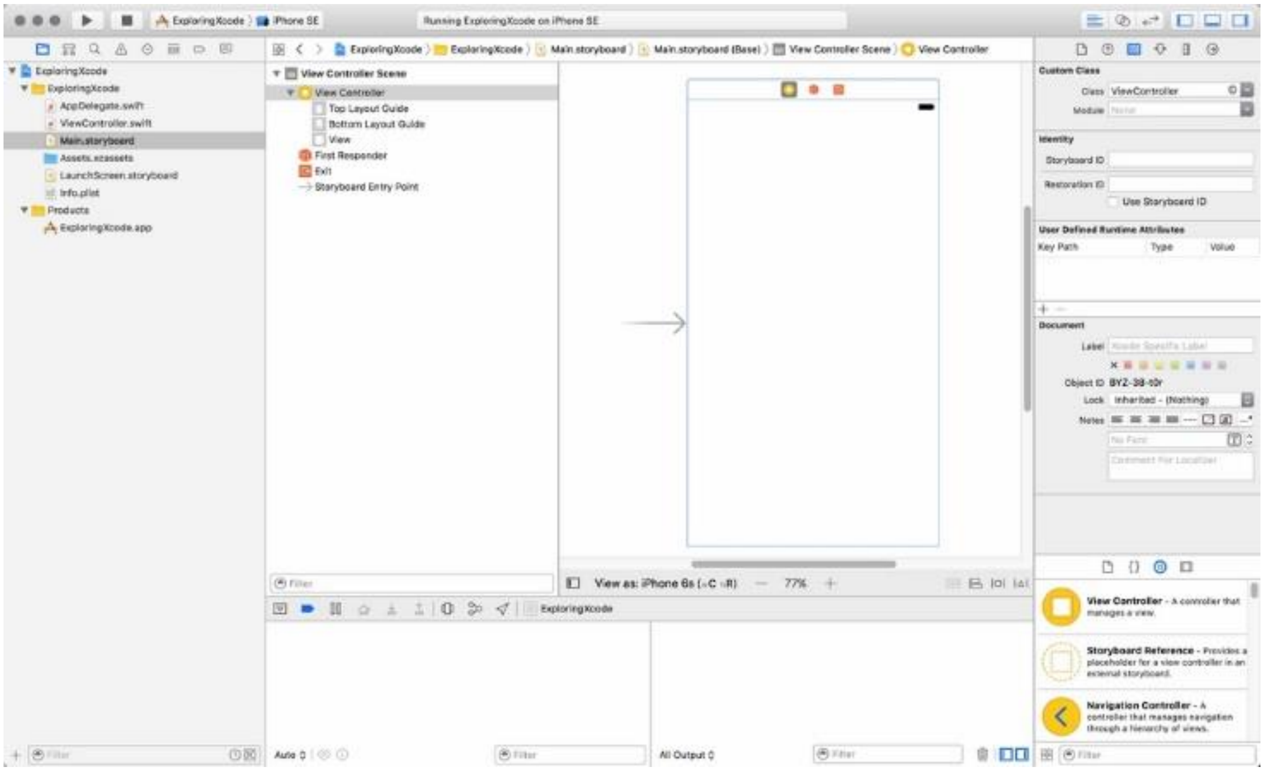
Team: Craig Clayton
Provisioning Profile: Xcode Managed Profile
Signing Certificate: iPhone Developer: Craig Clayton (4...

Deployment Info

Deployment Target: 10.0
Devices: Universal
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
Launch Images Source: Use Asset Catalog...
Launch Screen File: LaunchScreen



Running ExploringXcode on iPhone SE

Custom Class

Class: ViewController
Module: None

Identity

Storyboard ID:
Restoration ID:
☐ Use Storyboard ID

User Defined Runtime Attributes

Key Path	Type	Value

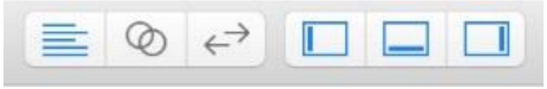
Document

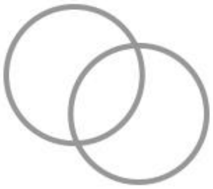
Label: Xcode Specific Label
Object ID: BYZ-38-t0r
Lock: Inherited - (Nothing)
Notes:

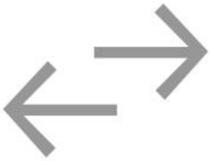
View Controller - A controller that manages a view.

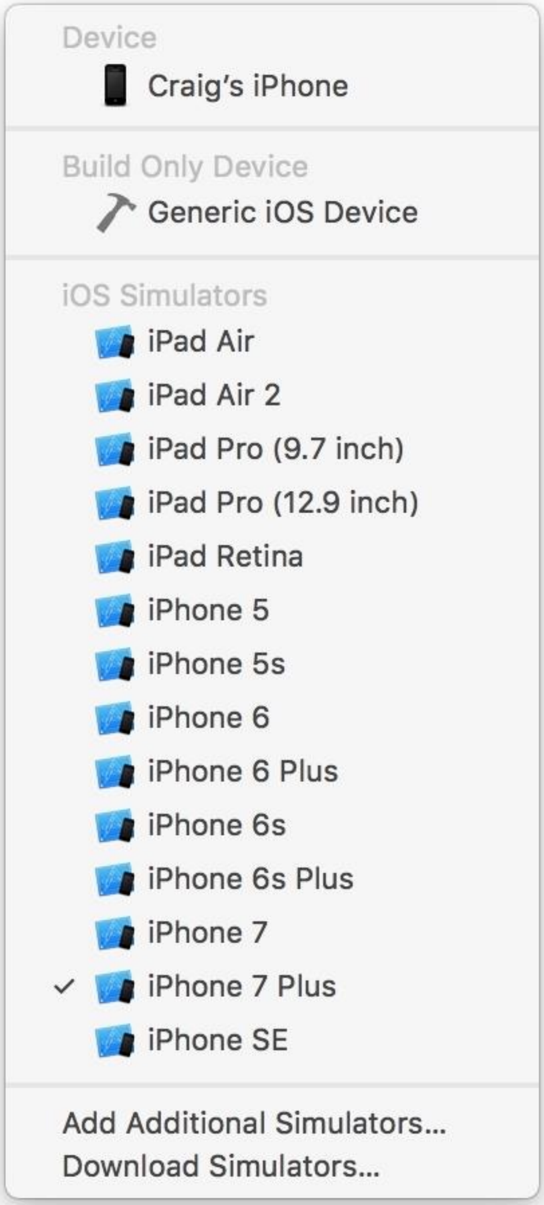
Storyboard Reference - Provides a placeholder for a view controller in an external storyboard.

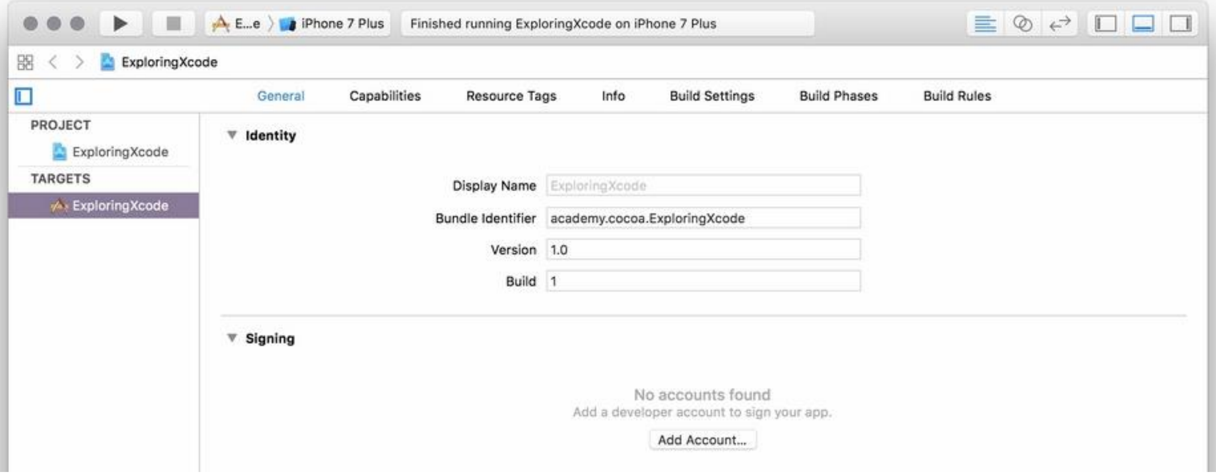
Navigation Controller - A controller that manages navigation through a hierarchy of views.








Device
Craig's iPhone
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...



Finished running ExploringXcode on iPhone 7 Plus

Display Name ExploringXcode

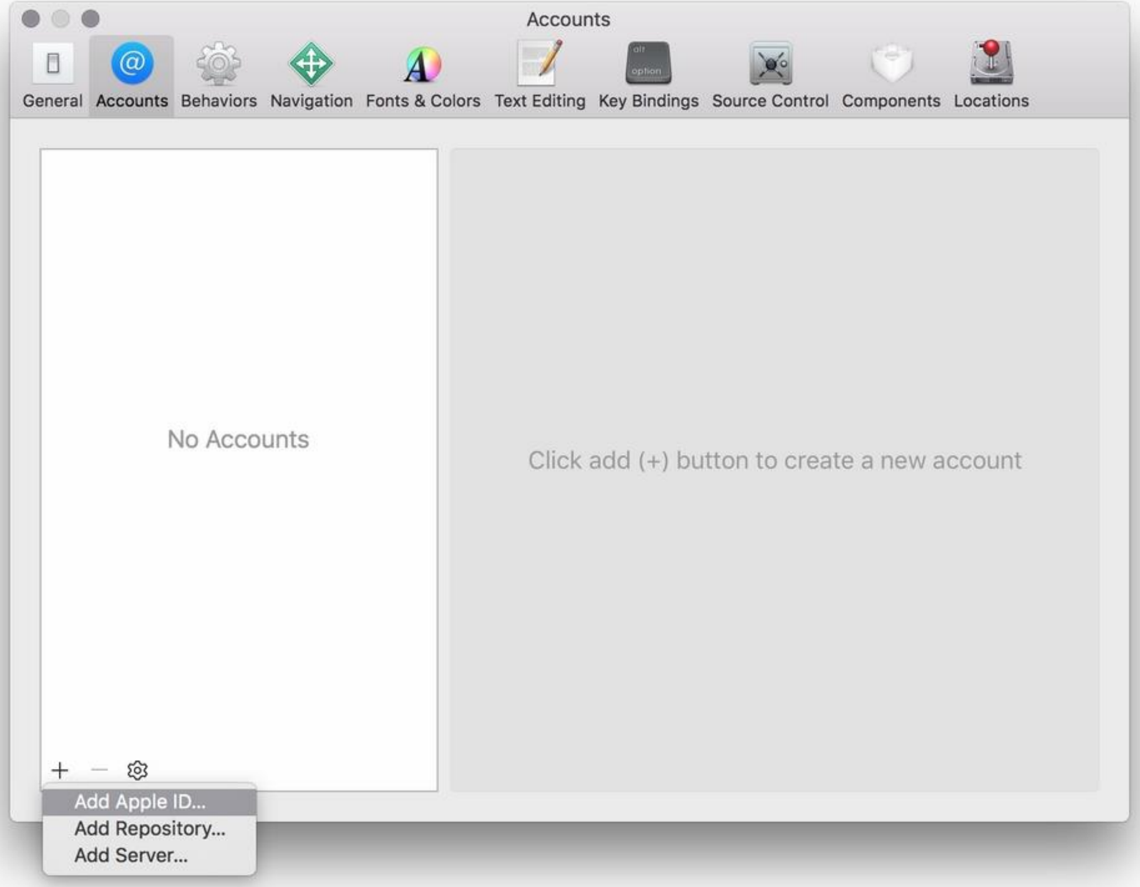
Bundle Identifier academy.cocoa.ExploringXcode

Version 1.0

Build 1

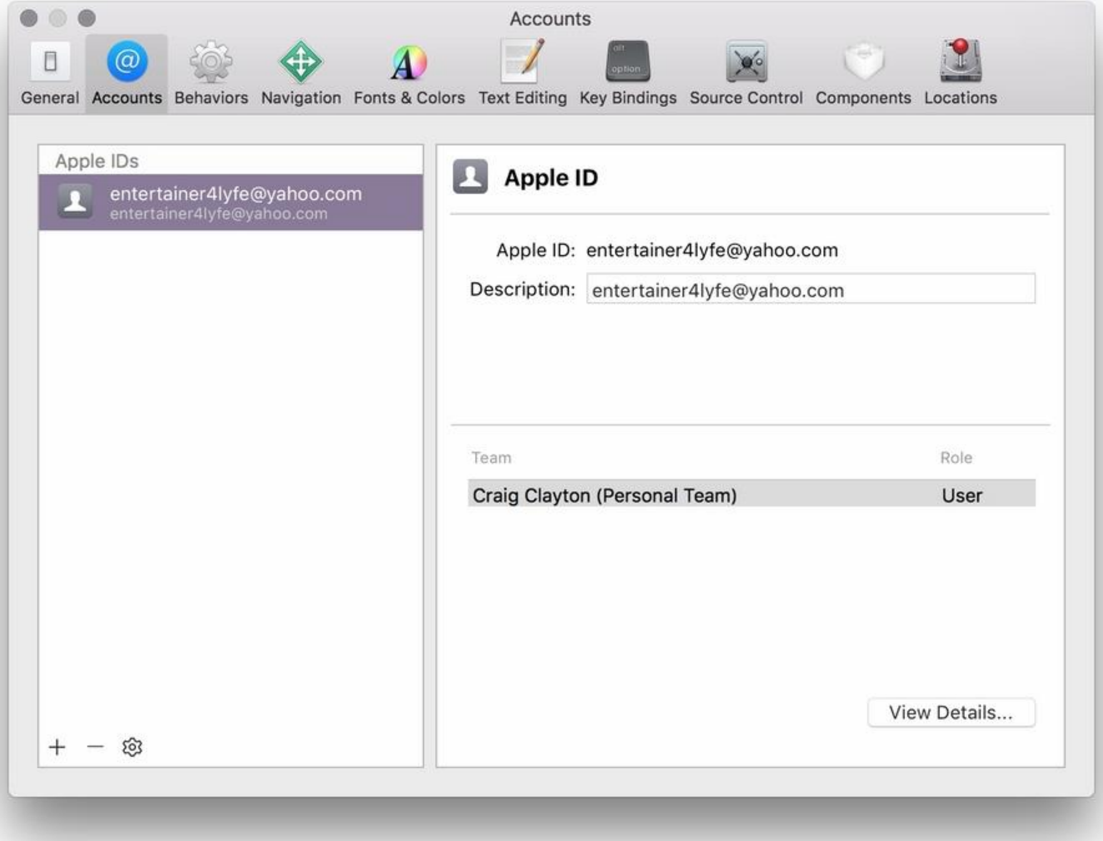
No accounts found

Add a developer account to sign your app.



No Accounts

Click add (+) button to create a new account



entertainer4lyfe@yahoo.com
entertainer4lyfe@yahoo.com

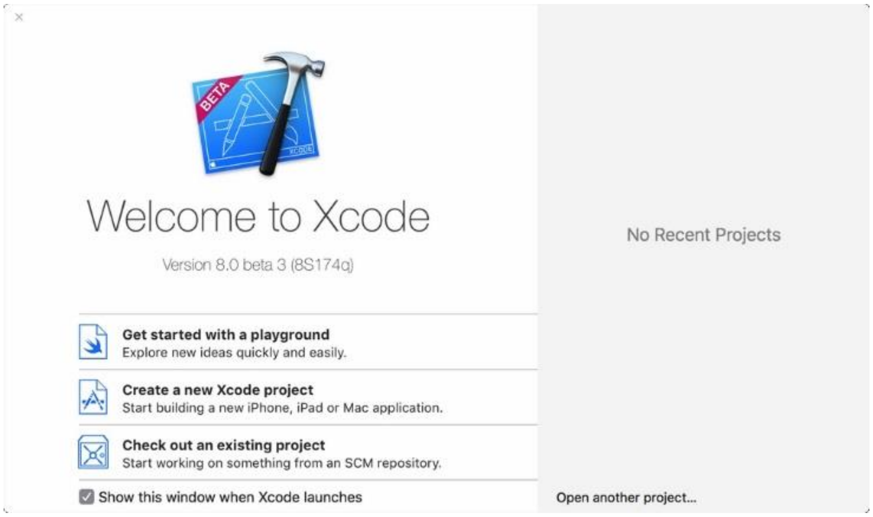
Apple ID

Apple ID: entertainer4lyfe@yahoo.com

Description: entertainer4lyfe@yahoo.com

Team	Role
Craig Clayton (Personal Team)	User

Chapter 2: Building a Foundation with Swift



Welcome to Xcode

Version 8.0 beta 3 (8S174q)

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

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Start building a new iPhone, iPad or Mac application.

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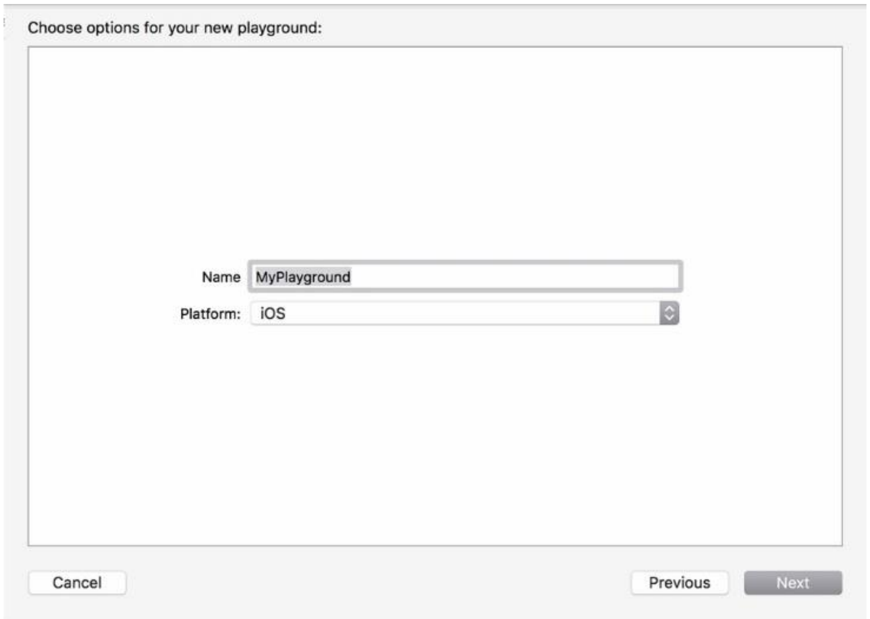
☑ Show this window when Xcode launches

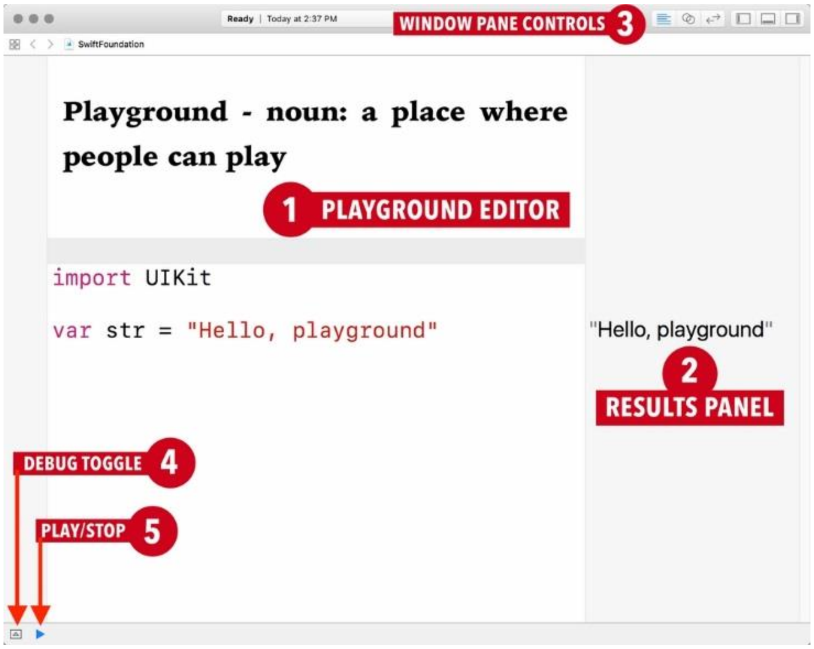
No Recent Projects



Choose options for your new playground:

Name MyPlayground

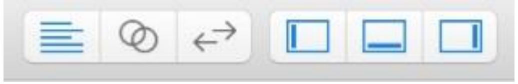
Platform: iOS

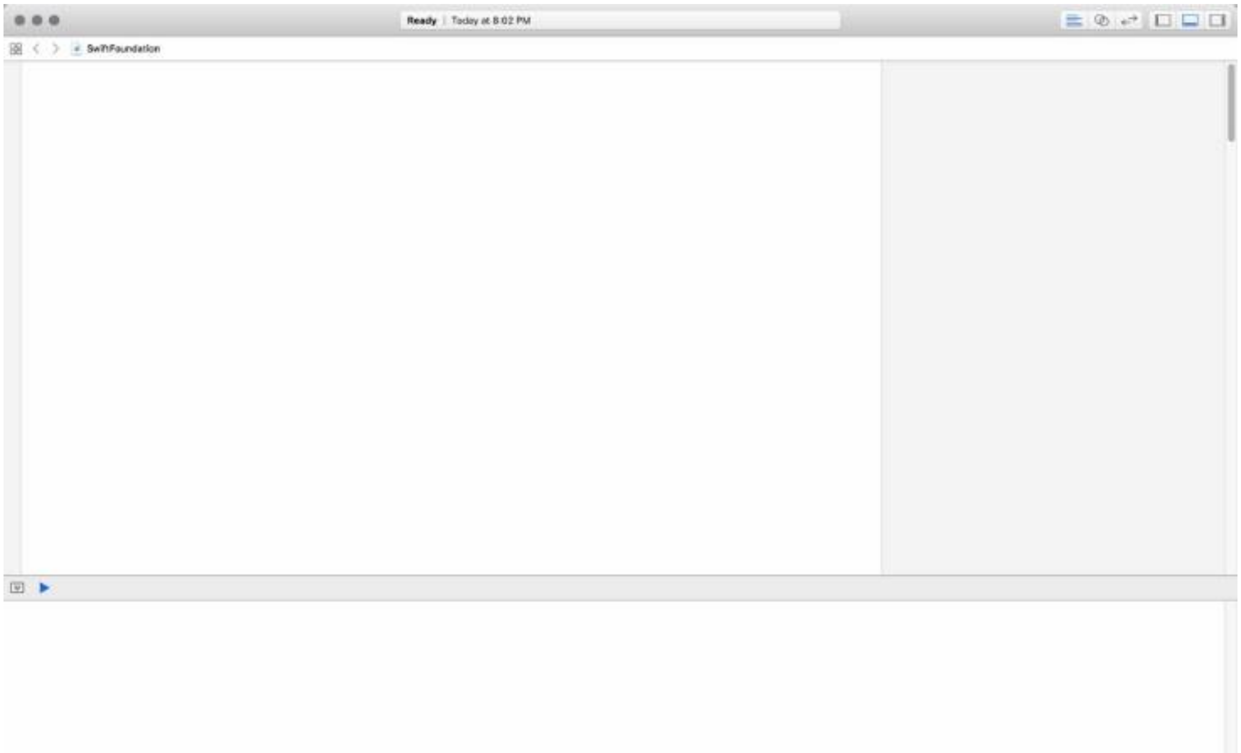


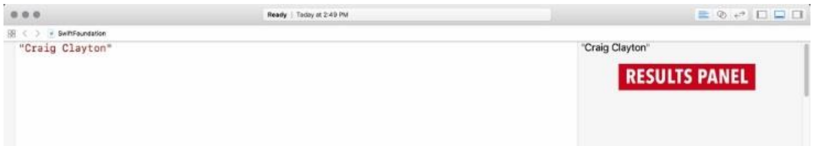
Playground - noun: a place where people can play

```
import UIKit

var str = "Hello, playground"
```

"Hello, playground"



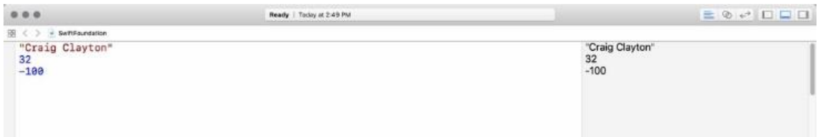




```
"Craig Clayton"
```

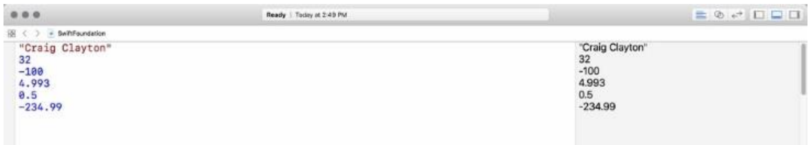
```
"Craig Clayton"
```

RESULTS PANEL



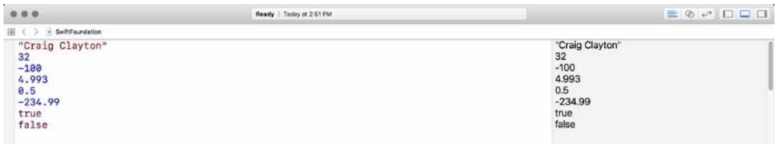
```
"Craig Clayton"
32
-100
```

```
"Craig Clayton"
32
-100
```



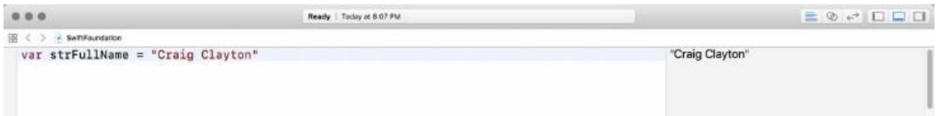
```
"Craig Clayton"
32
-100
4.993
0.5
-234.99
```

```
"Craig Clayton"
32
-100
4.993
0.5
-234.99
```



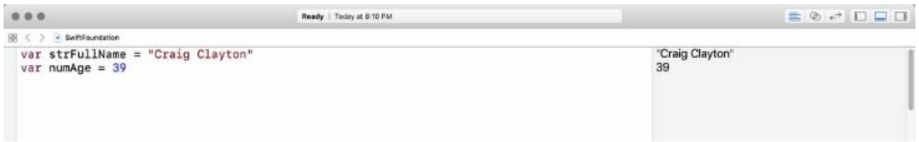
```
"Craig Clayton"
32
-100
4.993
0.5
-234.99
true
false
```

```
"Craig Clayton"
32
-100
4.993
0.5
-234.99
true
false
```



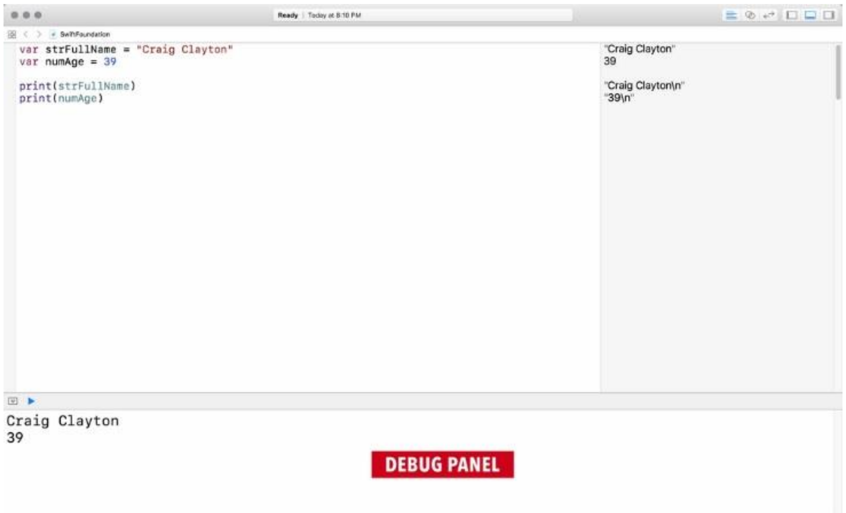
```
var strFullName = "Craig Clayton"
```

```
"Craig Clayton"
```



```
var strFullName = "Craig Clayton"
var numAge = 39
```

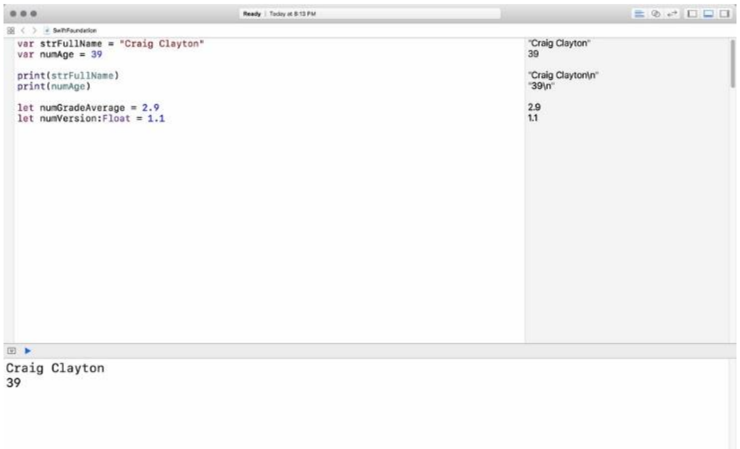
```
"Craig Clayton"
39
```



```
var strFullName = "Craig Clayton"
var numAge = 39

print(strFullName)
print(numAge)
```

```
"Craig Clayton"
39

"Craig Clayton\n"
"39\n"
```

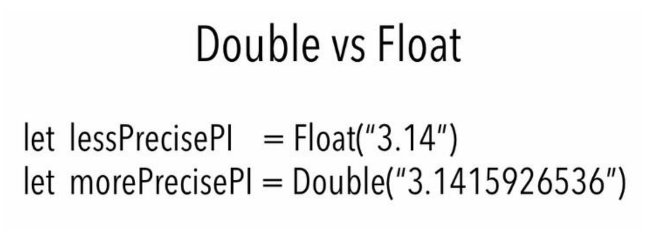
```
Craig Clayton
39
```



```
var strFullName = "Craig Clayton"
var numAge = 39

print(strFullName)
print(numAge)

let numGradeAverage = 2.9
let numVersion:Float = 1.1
```

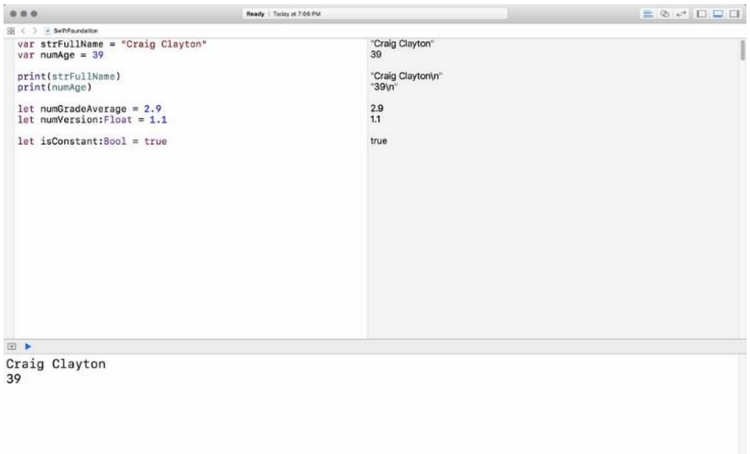
```
"Craig Clayton"
39

"Craig Clayton\n"
"39\n"

2.9
1.1
```

```
Craig Clayton
39
```



Double vs Float

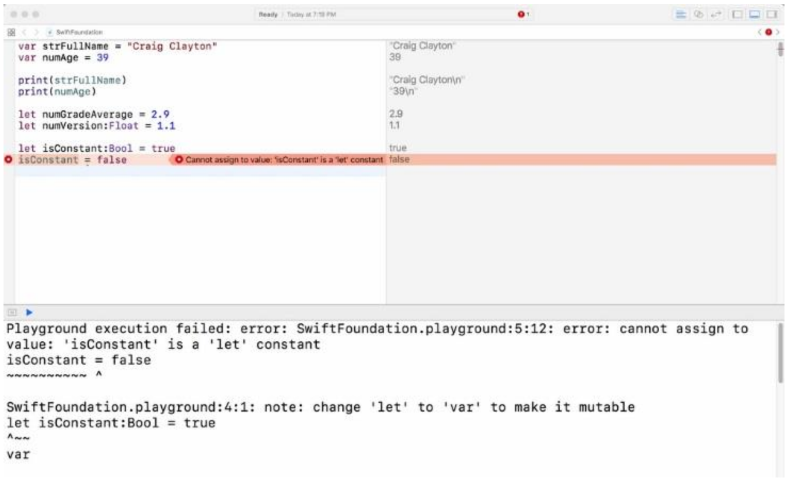
```
let  lessPrecisePI    = Float("3.14")
let  morePrecisePI = Double("3.1415926536")
```



```
var strFullName = "Craig Clayton"
var numAge = 39

print(strFullName)
print(numAge)

let numGradeAverage = 2.9
let numVersion:Float = 1.1

let isConstant:Bool = true
```

```
"Craig Clayton"
39

"Craig Clayton\n"
"39\n"

2.9
1.1

true
```

```
Craig Clayton
39
```

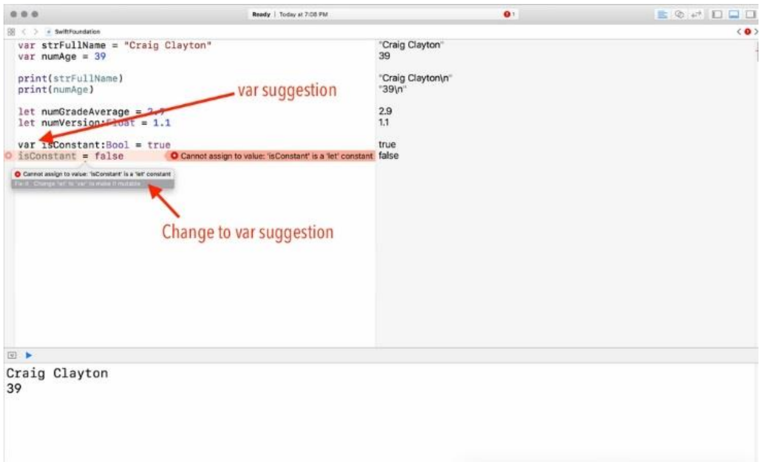


```
var strFullName = "Craig Clayton"
var numAge = 39

print(strFullName)
print(numAge)

let numGradeAverage = 2.9
let numVersion:Float = 1.1

let isConstant:Bool = true
isConstant = false
```

Cannot assign to value: 'isConstant' is a 'let' constant

```
"Craig Clayton"
39

"Craig Clayton\n"
"39\n"

2.9
1.1

true
false
```

```
Playground execution failed: error: SwiftFoundation.playground:5:12: error: cannot assign to
value: 'isConstant' is a 'let' constant
isConstant = false
~~~~~~~~~~ ^

SwiftFoundation.playground:4:1: note: change 'let' to 'var' to make it mutable
let isConstant:Bool = true
^~~
var
```



```
var strFullName = "Craig Clayton"
var numAge = 39

print(strFullName)
print(numAge)

let numGradeAverage = 2.9
let numVersion:Float = 1.1

var isConstant:Bool = true
isConstant = false
```

Cannot assign to value: 'isConstant' is a 'let' constant

Cannot assign to value: 'isConstant' is a 'let' constant

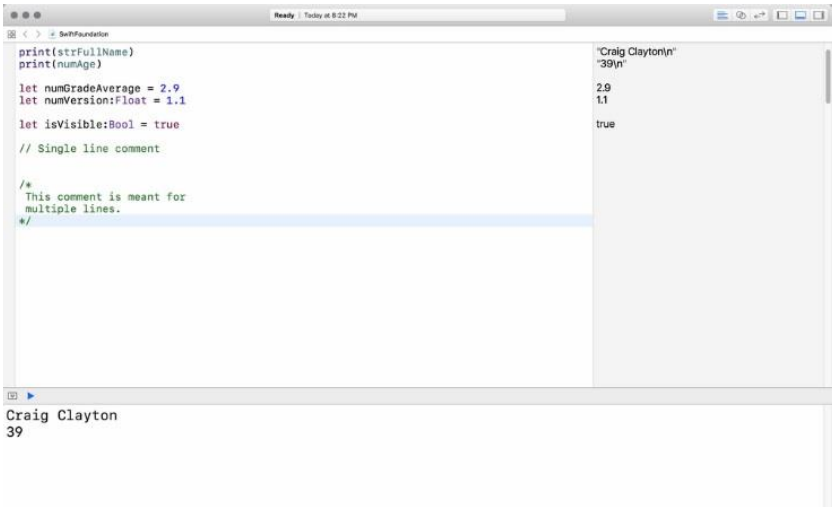
Fix-it Change 'let' to 'var' to make it mutable

```
"Craig Clayton"
39

"Craig Clayton\n"
"39\n"

2.9
1.1

true
false
```

var suggestion

Change to var suggestion

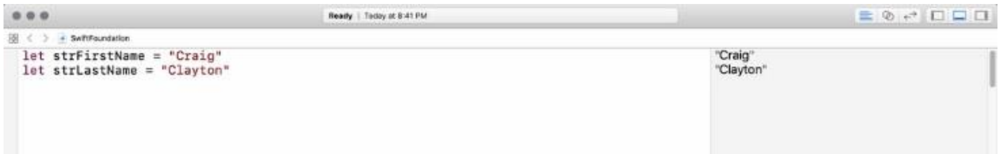
```
Craig Clayton
39
```



```
print(strFullName)
print(numAge)

let numGradeAverage = 2.9
let numVersion:Float = 1.1

let isVisible:Bool = true

// Single line comment


/*
 This comment is meant for
 multiple lines.
*/
```

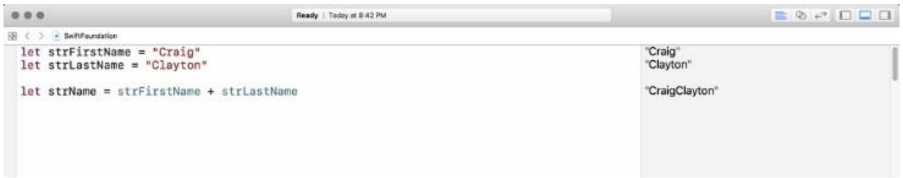
```
"Craig Clayton\n"
"39\n"

2.9
1.1

true
```

```
Craig Clayton
39
```



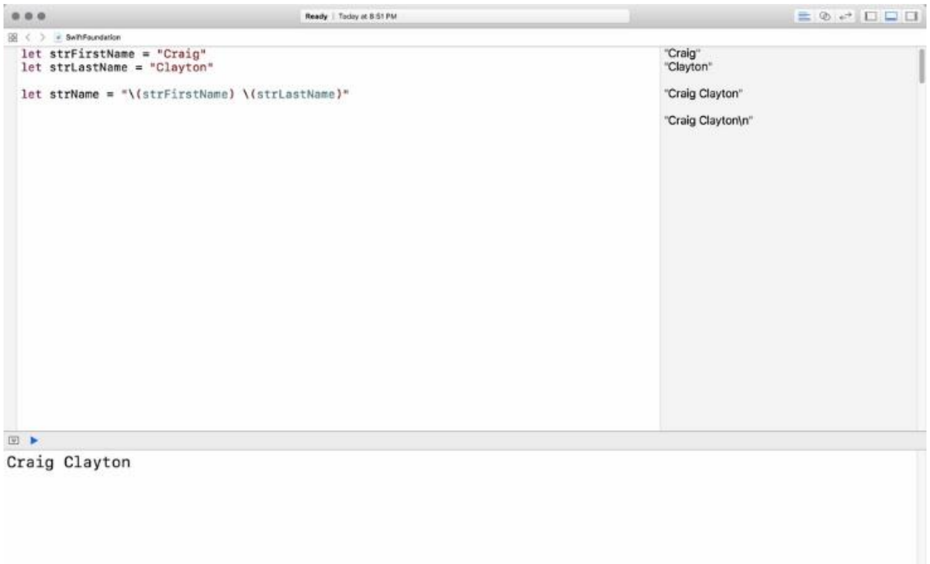
```
let strFirstName = "Craig"
let strLastName = "Clayton"
```

```
"Craig"
"Clayton"
```



```
let strFirstName = "Craig"
let strLastName = "Clayton"

let strName = strFirstName + strLastName
```

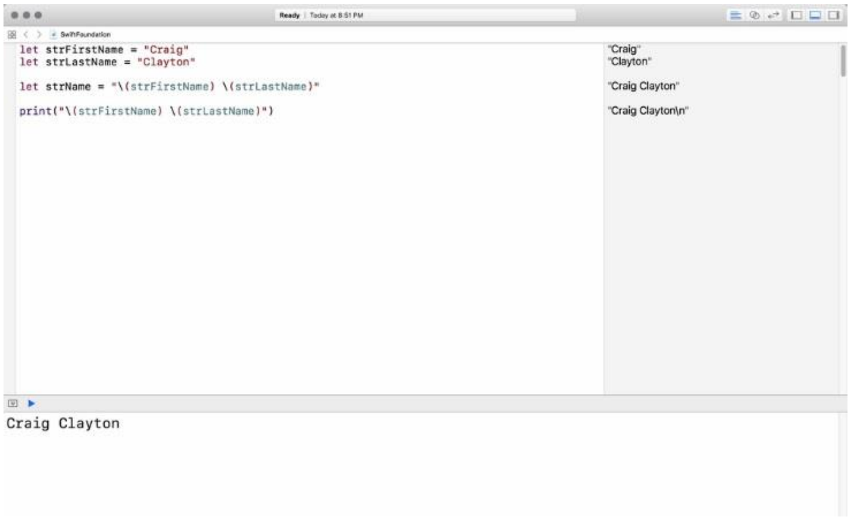
```
"Craig"
"Clayton"

"CraigClayton"
```



```
let strFirstName = "Craig"
let strLastName = "Clayton"

let strName = "\(strFirstName) \(strLastName)"
```

```
"Craig"
"Clayton"

"Craig Clayton"

"Craig Clayton\n"
```

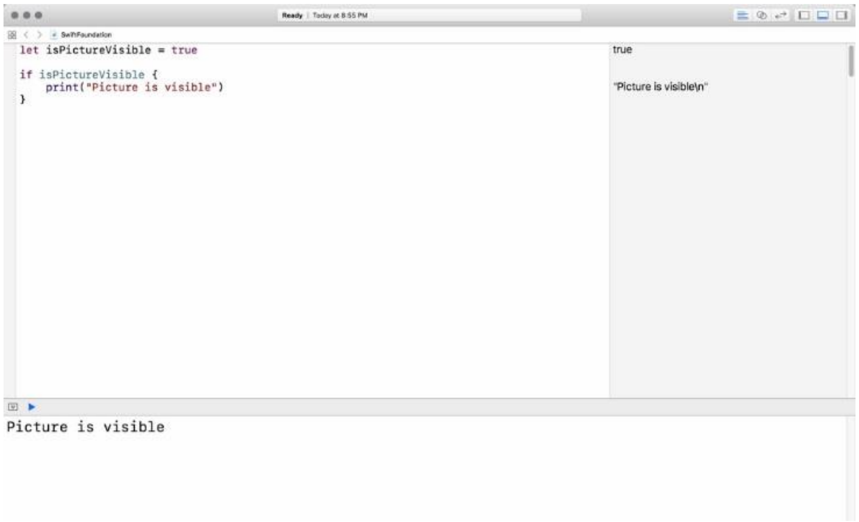
```
Craig Clayton
```



```swift
let strFirstName = "Craig"
let strLastName = "Clayton"

let strName = "\(strFirstName) \(strLastName)"

print("\(strFirstName) \(strLastName)")
```

```
"Craig"
"Clayton"

"Craig Clayton"

"Craig Clayton\n"
```

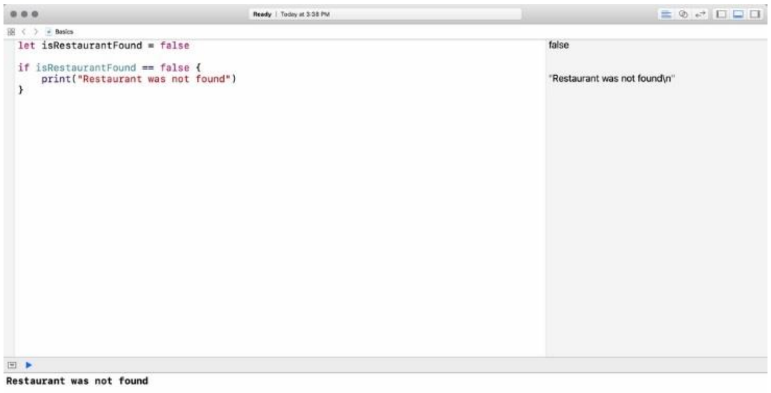
```
Craig Clayton
```



```swift
let isPictureVisible = true

if isPictureVisible {
    print("Picture is visible")
}
```

```
true


"Picture is visible\n"
```

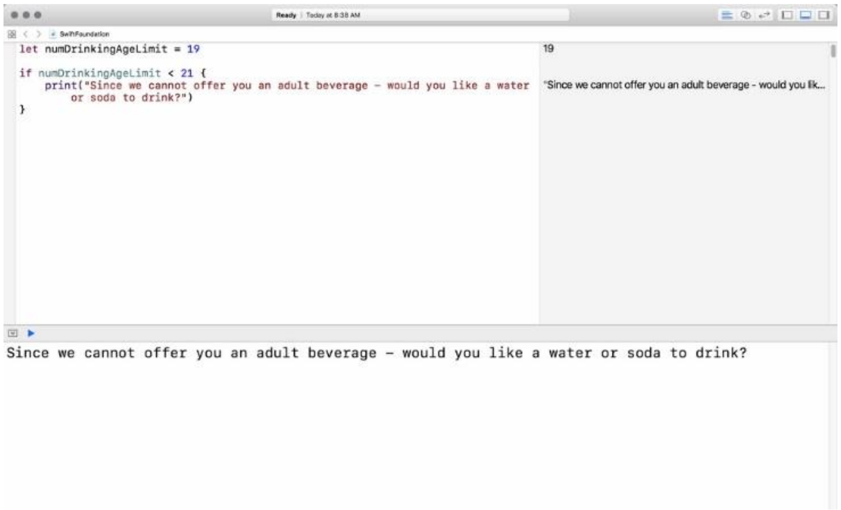
```
Picture is visible
```



```swift
let isRestaurantFound = false

if isRestaurantFound == false {
    print("Restaurant was not found")
}
```

```
false


"Restaurant was not found\n"
```

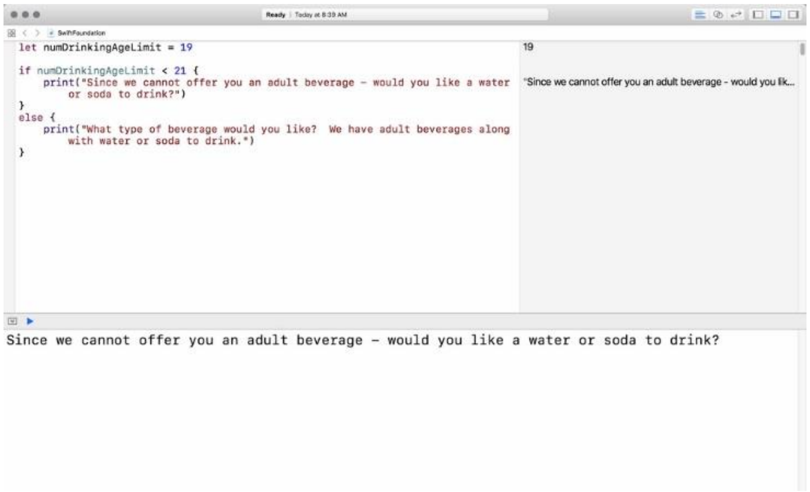
```
Restaurant was not found
```



```
let numDrinkingAgeLimit = 19

if numDrinkingAgeLimit < 21 {
    print("Since we cannot offer you an adult beverage - would you like a water
        or soda to drink?")
}
```

```
19
"Since we cannot offer you an adult beverage - would you lik...
```

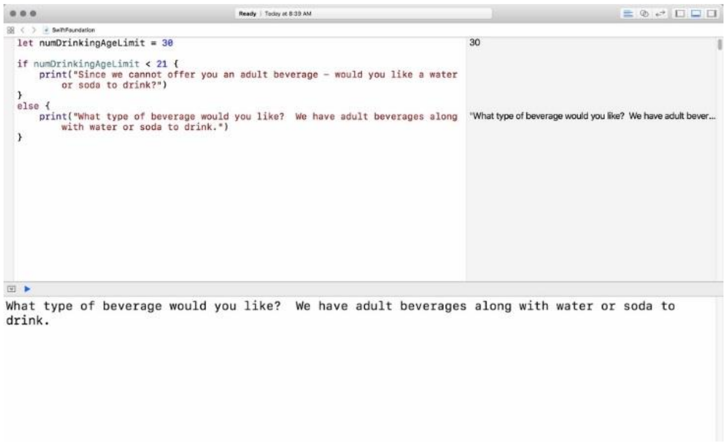
```
Since we cannot offer you an adult beverage - would you like a water or soda to drink?
```



```
let numDrinkingAgeLimit = 19

if numDrinkingAgeLimit < 21 {
    print("Since we cannot offer you an adult beverage - would you like a water
        or soda to drink?")
}
else {
    print("What type of beverage would you like?  We have adult beverages along
        with water or soda to drink.")
}
```

```
19
"Since we cannot offer you an adult beverage - would you lik...
```

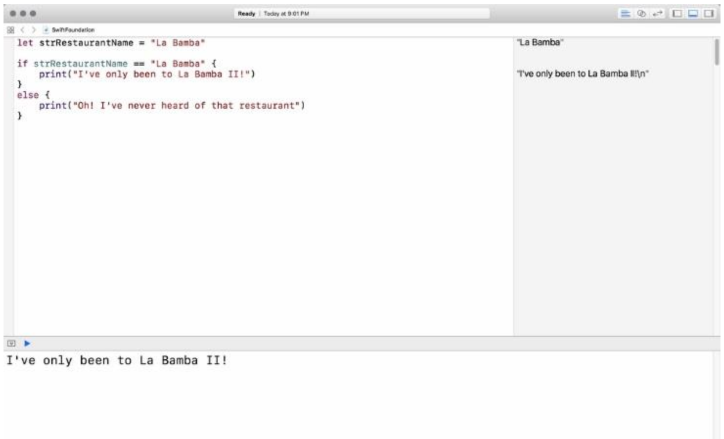
```
Since we cannot offer you an adult beverage - would you like a water or soda to drink?
```



```
let numDrinkingAgeLimit = 30

if numDrinkingAgeLimit < 21 {
    print("Since we cannot offer you an adult beverage - would you like a water
        or soda to drink?")
}
else {
    print("What type of beverage would you like?  We have adult beverages along
        with water or soda to drink.")
}
```

```
30
"What type of beverage would you like?  We have adult bever...
```

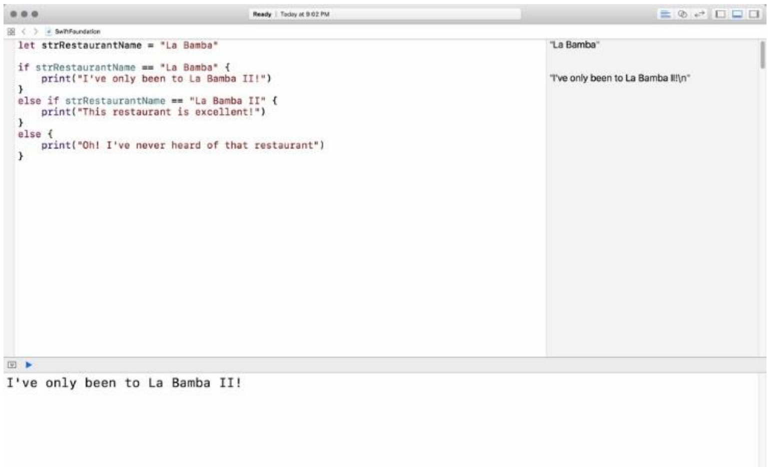
```
What type of beverage would you like?  We have adult beverages along with water or soda to
drink.
```



```
let strRestaurantName = "La Bamba"

if strRestaurantName == "La Bamba" {
    print("I've only been to La Bamba II!")
}
else {
    print("Oh! I've never heard of that restaurant")
}
```

```
"La Bamba"

"I've only been to La Bamba II!\n"
```

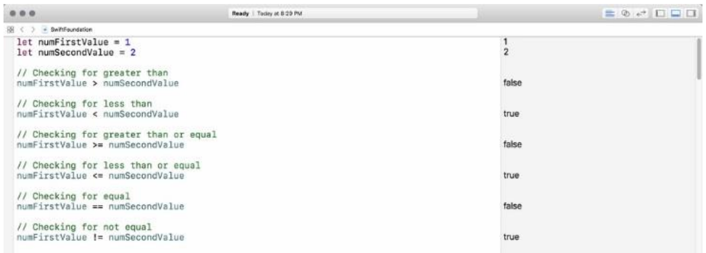
```
I've only been to La Bamba II!
```



```
let strRestaurantName = "La Bamba"

if strRestaurantName == "La Bamba" {
    print("I've only been to La Bamba II!")
}
else if strRestaurantName == "La Bamba II" {
    print("This restaurant is excellent!")
}
else {
    print("Oh! I've never heard of that restaurant")
}
```

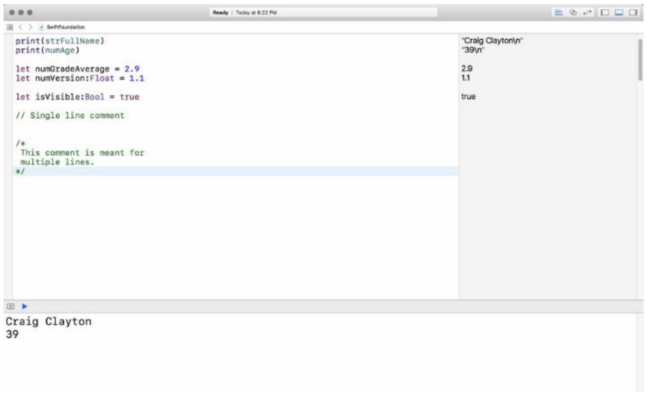
```
"La Bamba"

"I've only been to La Bamba II!\n"
```

```
I've only been to La Bamba II!
```



```
let numFirstValue = 1
let numSecondValue = 2

// Checking for greater than
numFirstValue > numSecondValue

// Checking for less than
numFirstValue < numSecondValue

// Checking for greater than or equal
numFirstValue >= numSecondValue

// Checking for less than or equal
numFirstValue <= numSecondValue

// Checking for equal
numFirstValue == numSecondValue

// Checking for not equal
numFirstValue != numSecondValue
```

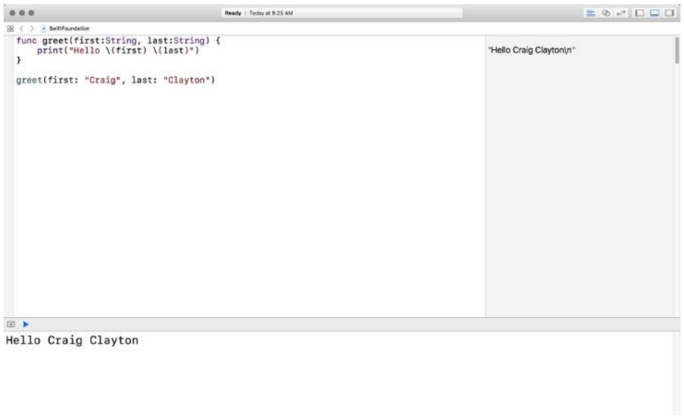
```
1
2


false


true


false


true


false


true
```



```
print(strFullName)
print(numAge)

let numGradeAverage = 2.9
let numVersion:Float = 1.1

let isVisible:Bool = true

// Single line comment


/*
 This comment is meant for
 multiple lines.
*/
```

```
"Craig Clayton\n"
"39\n"

2.9
1.1

true
```

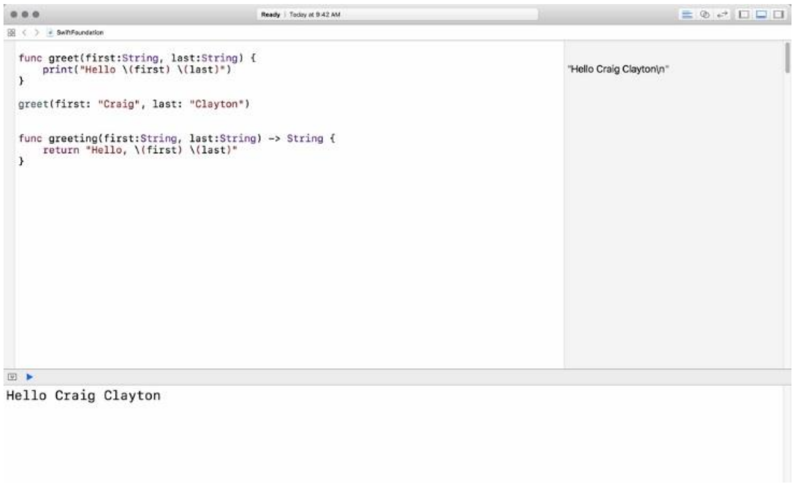
```
Craig Clayton
39
```



```
func greet(first:String, last:String) {
    print("Hello \(first) \(last)")
}

greet(first: "Craig", last: "Clayton")
```

```
"Hello Craig Clayton\n"
```

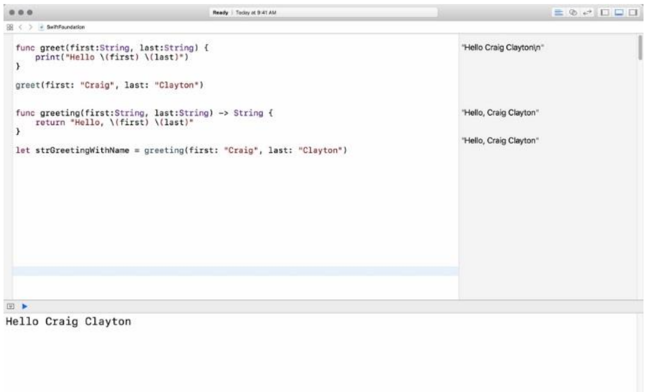
```
Hello Craig Clayton
```



```
func greet(first:String, last:String) {
    print("Hello \(first) \(last)")
}

greet(first: "Craig", last: "Clayton")


func greeting(first:String, last:String) -> String {
    return "Hello, \(first) \(last)"
}
```

```
"Hello Craig Clayton\n"
```

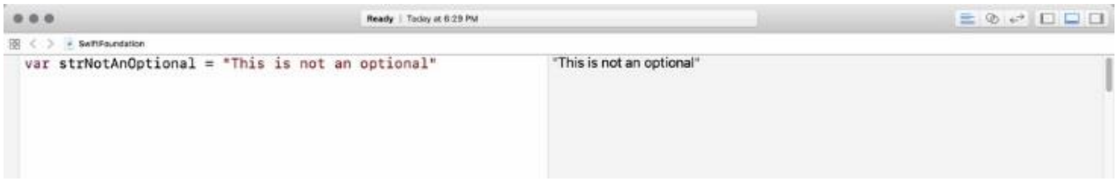
```
Hello Craig Clayton
```



```
func greet(first:String, last:String) {
    print("Hello \(first) \(last)")
}

greet(first: "Craig", last: "Clayton")


func greeting(first:String, last:String) -> String {
    return "Hello, \(first) \(last)"
}

let strGreetingWithName = greeting(first: "Craig", last: "Clayton")
```

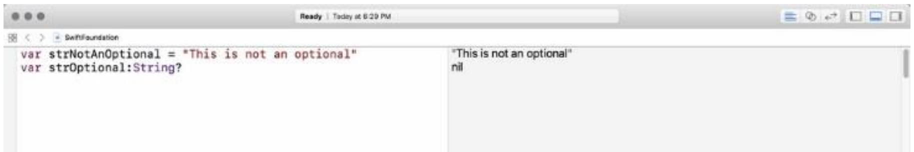
```
"Hello Craig Clayton\n"
"Hello, Craig Clayton"
"Hello, Craig Clayton"
```

```
Hello Craig Clayton
```



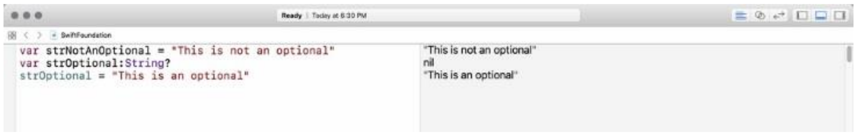
```
var strNotAnOptional = "This is not an optional"
```

```
"This is not an optional"
```



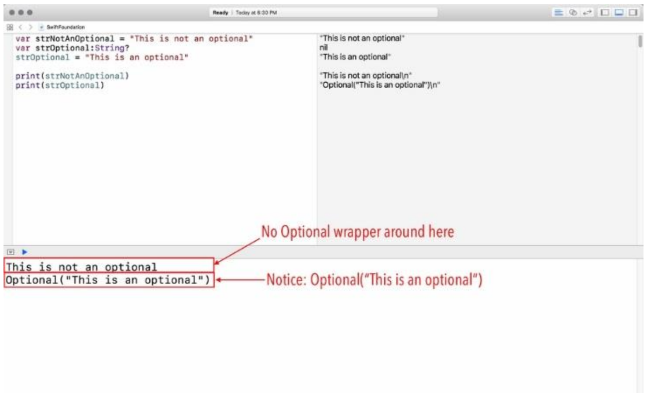
```
var strNotAnOptional = "This is not an optional"
var strOptional:String?
```

```
"This is not an optional"
nil
```



```
var strNotAnOptional = "This is not an optional"
var strOptional:String?
strOptional = "This is an optional"
```

```
"This is not an optional"
nil
"This is an optional"
```



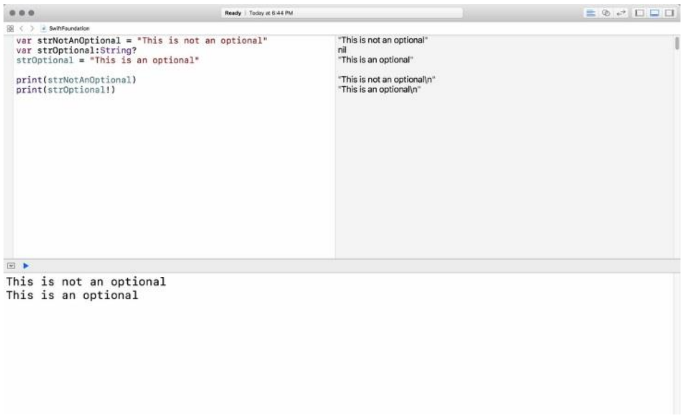
```
var strNotAnOptional = "This is not an optional"
var strOptional:String?
strOptional = "This is an optional"

print(strNotAnOptional)
print(strOptional)
```

```
"This is not an optional"
nil
"This is an optional"

"This is not an optional\n"
"Optional("This is an optional")\n"
```

```
This is not an optional
Optional("This is an optional")
```

No Optional wrapper around here

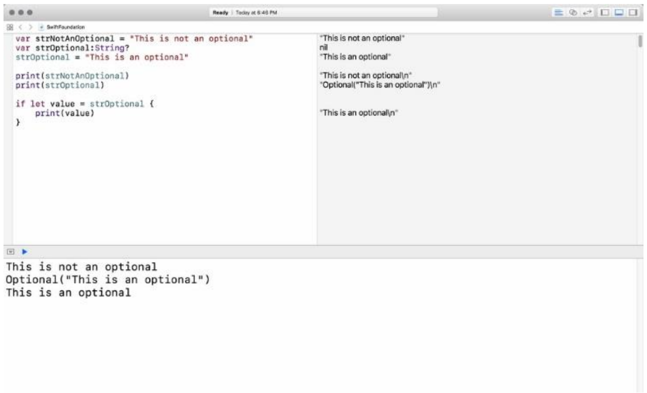
Notice: Optional("This is an optional")



```
var strNotAnOptional = "This is not an optional"
var strOptional:String?
strOptional = "This is an optional"

print(strNotAnOptional)
print(strOptional!)
```

```
"This is not an optional"
nil
"This is an optional"

"This is not an optional\n"
"This is an optional\n"
```

```
This is not an optional
This is an optional
```



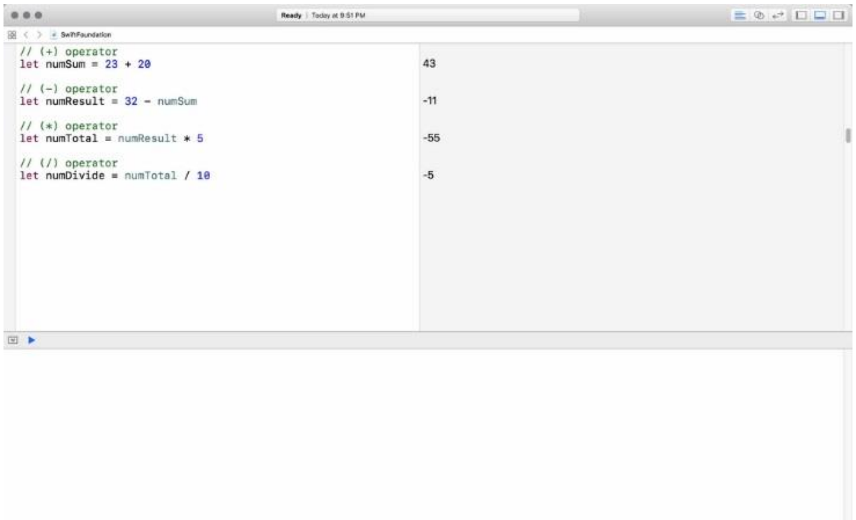
```
var strNotAnOptional = "This is not an optional"
var strOptional:String?
strOptional = "This is an optional"

print(strNotAnOptional)
print(strOptional)

if let value = strOptional {
    print(value)
}
```

```
"This is not an optional"
nil
"This is an optional"

"This is not an optional\n"
"Optional("This is an optional")\n"


"This is an optional\n"
```

```
This is not an optional
Optional("This is an optional")
This is an optional
```

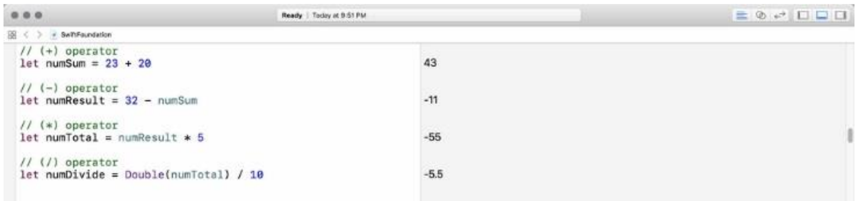
Double vs Float

```
let  lessPrecisePI   = Float(“3.14”)
let  morePrecisePI = Double(“3.1415926536”)
```



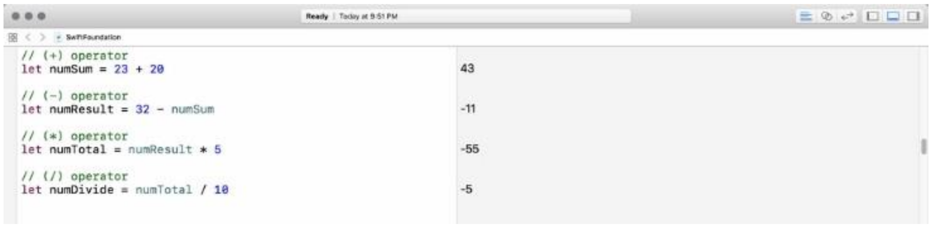
```
// (+) operator
let numSum = 23 + 20

// (-) operator
let numResult = 32 - numSum

// (*) operator
let numTotal = numResult * 5

// (/) operator
let numDivide = numTotal / 10
```

```
43

-11

-55

-5
```



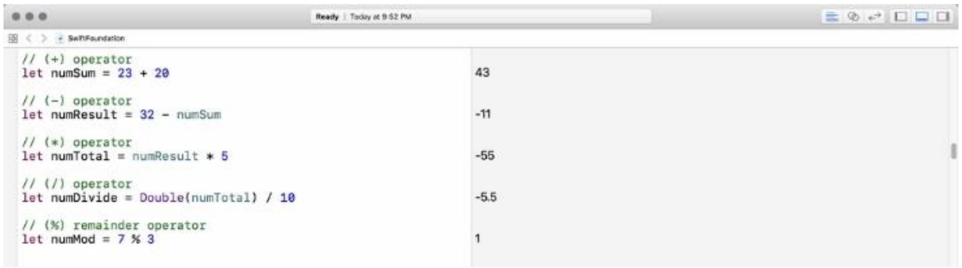
```
// (+) operator
let numSum = 23 + 20

// (-) operator
let numResult = 32 - numSum

// (*) operator
let numTotal = numResult * 5

// (/) operator
let numDivide = Double(numTotal) / 10
```

```
43

-11

-55

-5.5
```



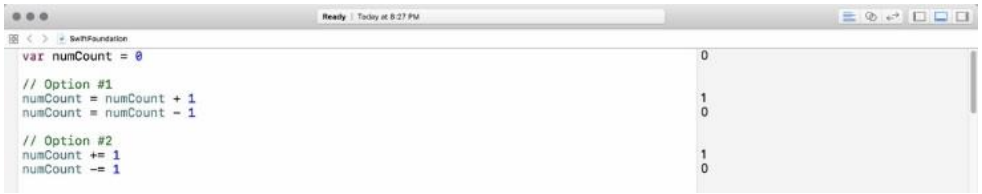
```
// (+) operator
let numSum = 23 + 20

// (-) operator
let numResult = 32 - numSum

// (*) operator
let numTotal = numResult * 5

// (/) operator
let numDivide = numTotal / 10
```

```
43

-11

-55

-5
```



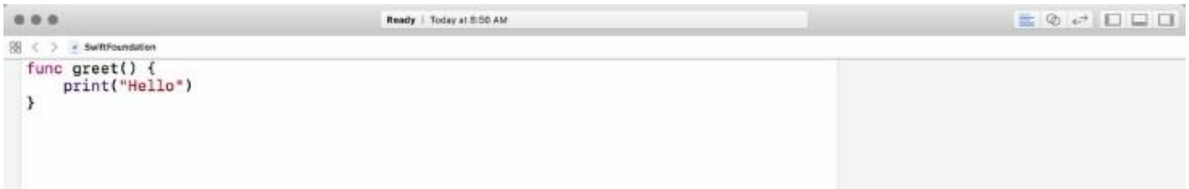
```
// (+) operator
let numSum = 23 + 20

// (-) operator
let numResult = 32 - numSum

// (*) operator
let numTotal = numResult * 5

// (/) operator
let numDivide = Double(numTotal) / 10

// (%) remainder operator
let numMod = 7 % 3
```

```
43

-11

-55

-5.5

1
```

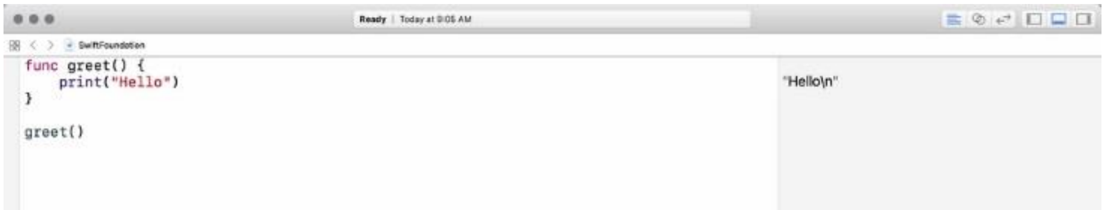


```
var numCount = 0

// Option #1
numCount = numCount + 1
numCount = numCount - 1

// Option #2
numCount += 1
numCount -= 1
```

```
0


1
0


1
0
```

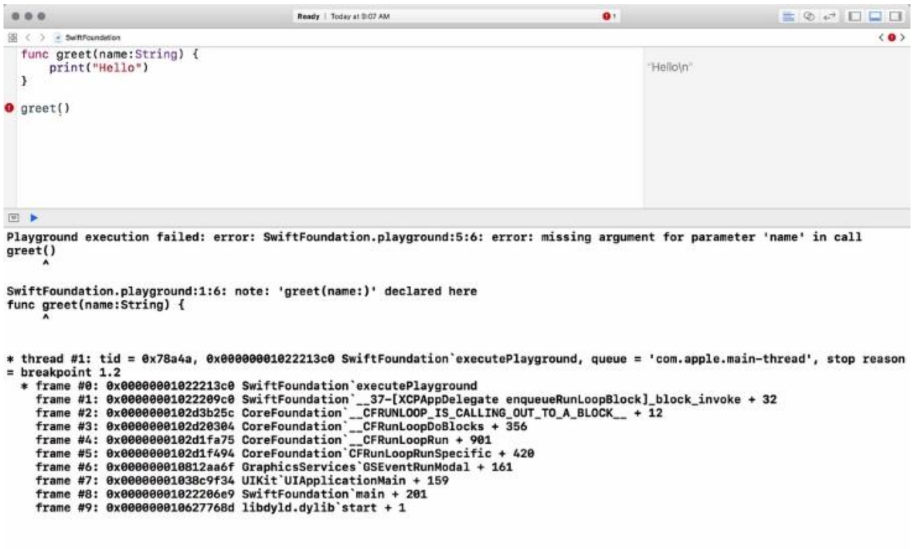


```swift
func greet() {
    print("Hello")
}
```



```swift
func greet() {
    print("Hello")
}

greet()
```

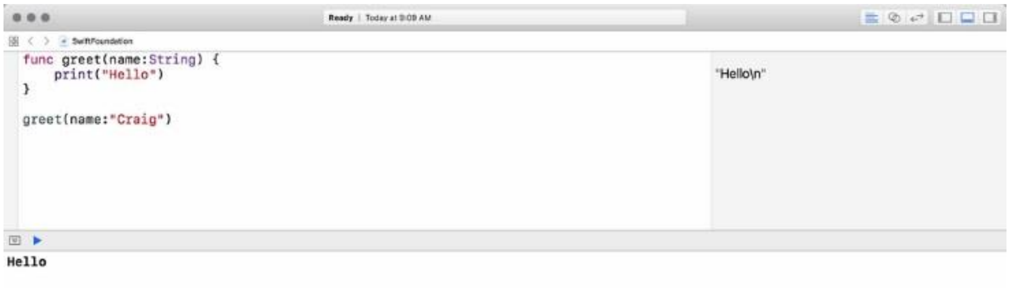
"Hello\n"



```swift
func greet(name:String) {
    print("Hello")
}

greet()
```

"Hello\n"

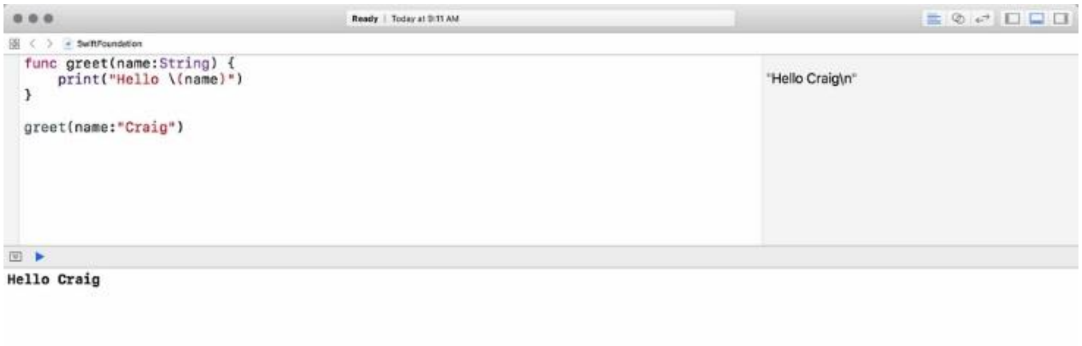
```
Playground execution failed: error: SwiftFoundation.playground:5:6: error: missing argument for parameter 'name' in call
greet()
     ^

SwiftFoundation.playground:1:6: note: 'greet(name:)' declared here
func greet(name:String) {
     ^


* thread #1: tid = 0x78a4a, 0x00000001022213c0 SwiftFoundation`executePlayground, queue = 'com.apple.main-thread', stop reason
= breakpoint 1.2
  * frame #0: 0x00000001022213c0 SwiftFoundation`executePlayground
    frame #1: 0x00000001022209c0 SwiftFoundation`__37-[XCPAppDelegate enqueueRunLoopBlock]_block_invoke + 32
    frame #2: 0x0000000102d3b25c CoreFoundation`__CFRUNLOOP_IS_CALLING_OUT_TO_A_BLOCK__ + 12
    frame #3: 0x0000000102d20304 CoreFoundation`__CFRunLoopDoBlocks + 356
    frame #4: 0x0000000102d1fa75 CoreFoundation`__CFRunLoopRun + 901
    frame #5: 0x0000000102d1f494 CoreFoundation`CFRunLoopRunSpecific + 420
    frame #6: 0x000000010812aa6f GraphicsServices`GSEventRunModal + 161
    frame #7: 0x00000001038c9f34 UIKit`UIApplicationMain + 159
    frame #8: 0x00000001022206e9 SwiftFoundation`main + 201
    frame #9: 0x000000010627768d libdyld.dylib`start + 1
```



```swift
func greet(name:String) {
    print("Hello")
}

greet(name:"Craig")
```

"Hello\n"

```
Hello
```

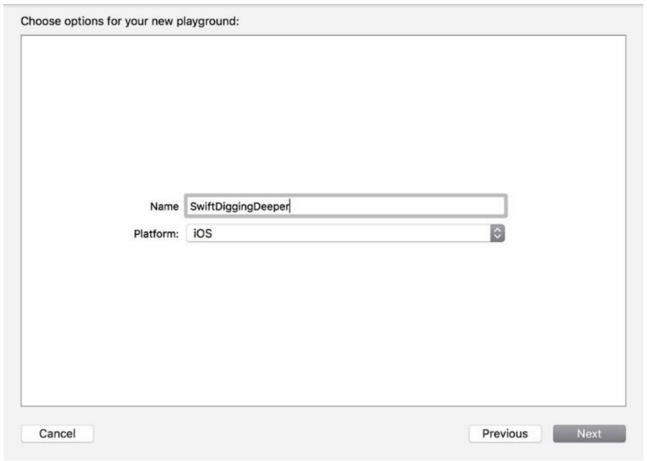


```
func greet(name:String) {
    print("Hello \(name)")
}

greet(name:"Craig")
```

"Hello Craig\n"

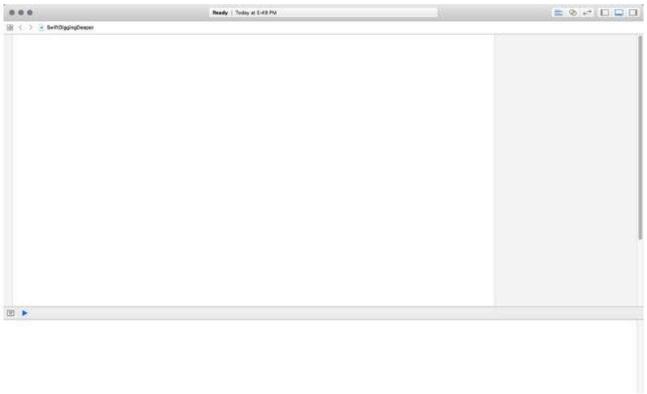
```
Hello Craig
```

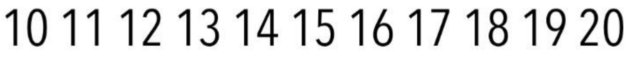
Chapter 3: Digging Deeper

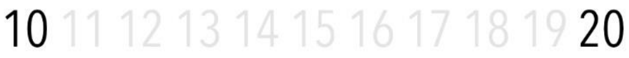

Choose options for your new playground:

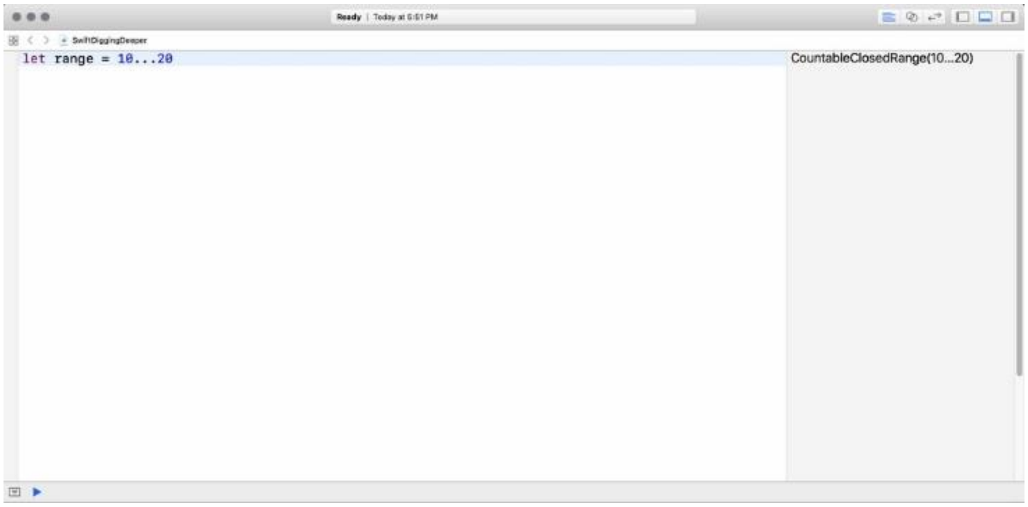
Name: SwiftDiggingDeeper

Platform: iOS



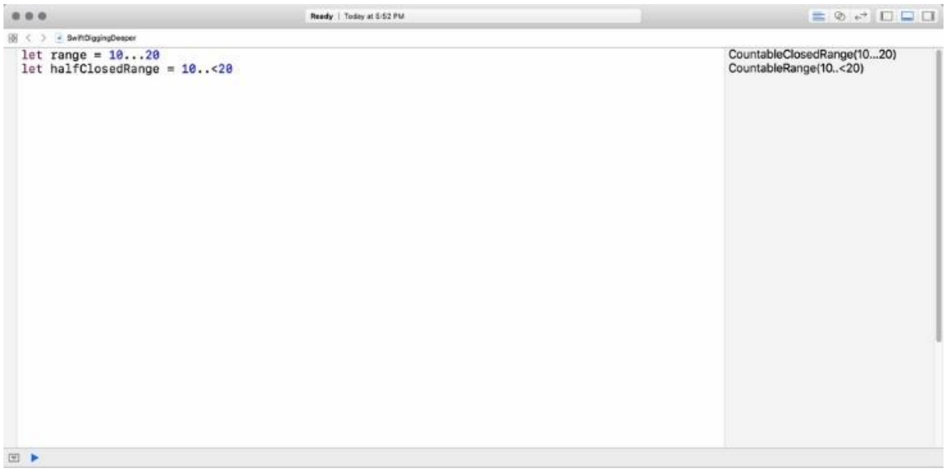






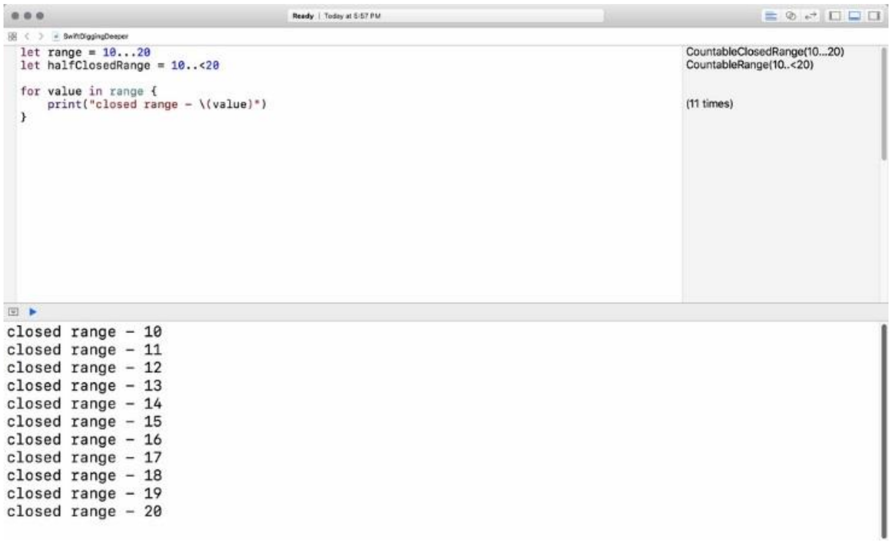
```
let range = 10...20
```

```
CountableClosedRange(10...20)
```



```
let range = 10...20
let halfClosedRange = 10..<20
```

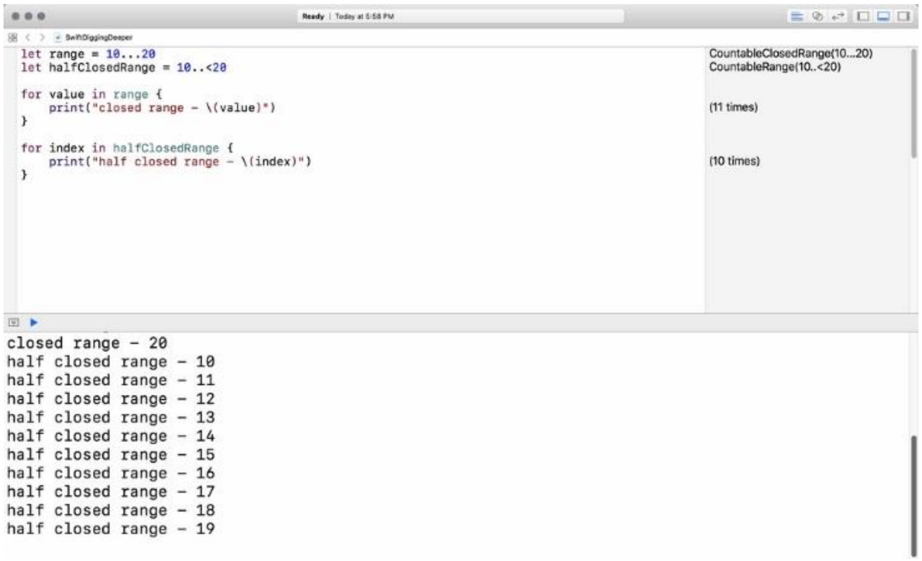
```
CountableClosedRange(10...20)
CountableRange(10..<20)
```



```
let range = 10...20
let halfClosedRange = 10..<20

for value in range {
    print("closed range - \(value)")
}
```

```
CountableClosedRange(10...20)
CountableRange(10..<20)

(11 times)
```

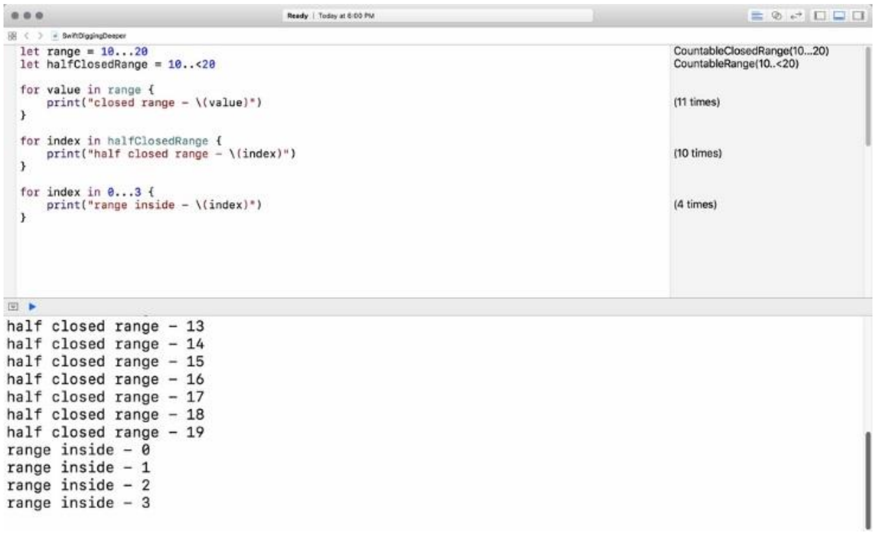
```
closed range - 10
closed range - 11
closed range - 12
closed range - 13
closed range - 14
closed range - 15
closed range - 16
closed range - 17
closed range - 18
closed range - 19
closed range - 20
```



```
let range = 10...20
let halfClosedRange = 10..<20

for value in range {
    print("closed range - \(value)")
}

for index in halfClosedRange {
    print("half closed range - \(index)")
}
```

```
CountableClosedRange(10...20)
CountableRange(10..<20)

(11 times)

(10 times)
```

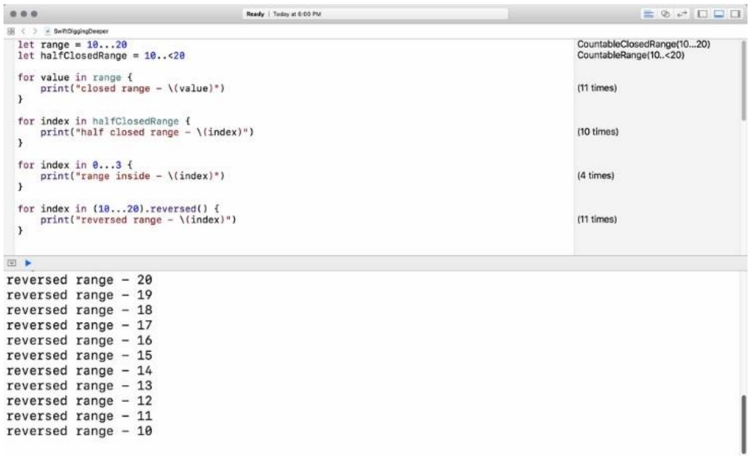
```
closed range - 20
half closed range - 10
half closed range - 11
half closed range - 12
half closed range - 13
half closed range - 14
half closed range - 15
half closed range - 16
half closed range - 17
half closed range - 18
half closed range - 19
```



```
let range = 10...20
let halfClosedRange = 10..<20

for value in range {
    print("closed range - \(value)")
}

for index in halfClosedRange {
    print("half closed range - \(index)")
}

for index in 0...3 {
    print("range inside - \(index)")
}
```

```
CountableClosedRange(10...20)
CountableRange(10..<20)

(11 times)

(10 times)

(4 times)
```

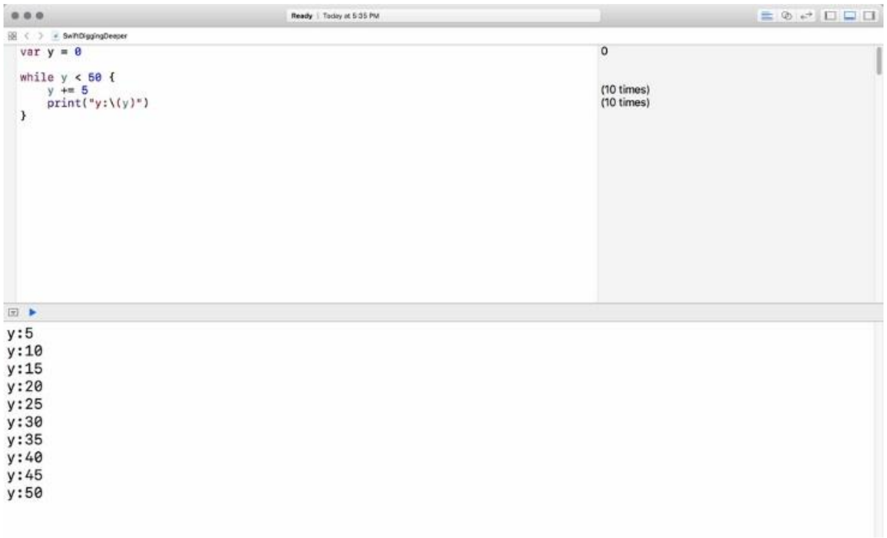
```
half closed range - 13
half closed range - 14
half closed range - 15
half closed range - 16
half closed range - 17
half closed range - 18
half closed range - 19
range inside - 0
range inside - 1
range inside - 2
range inside - 3
```



```
let range = 10...20
let halfClosedRange = 10..<20

for value in range {
    print("closed range - \(value)")
}

for index in halfClosedRange {
    print("half closed range - \(index)")
}

for index in 0...3 {
    print("range inside - \(index)")
}

for index in (10...20).reversed() {
    print("reversed range - \(index)")
}
```

```
CountableClosedRange(10...20)
CountableRange(10..<20)

(11 times)

(10 times)

(4 times)

(11 times)
```

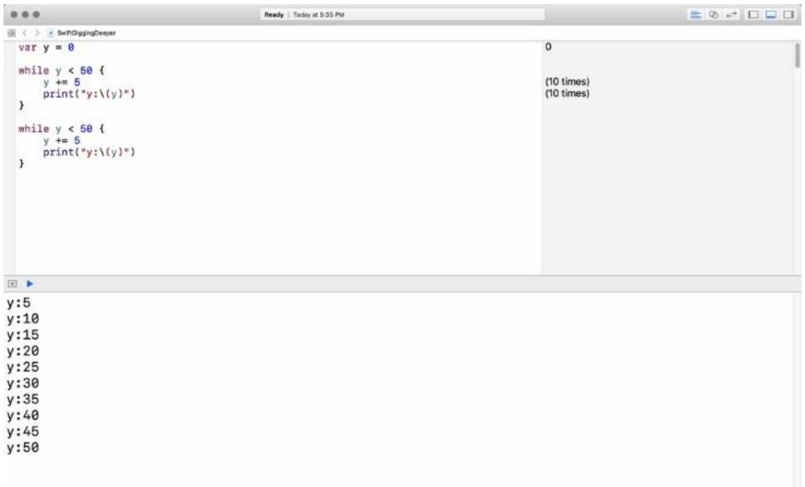
```
reversed range - 20
reversed range - 19
reversed range - 18
reversed range - 17
reversed range - 16
reversed range - 15
reversed range - 14
reversed range - 13
reversed range - 12
reversed range - 11
reversed range - 10
```



```
var y = 0

while y < 50 {
    y += 5
    print("y:\(y)")
}
```

```
0


(10 times)
(10 times)
```

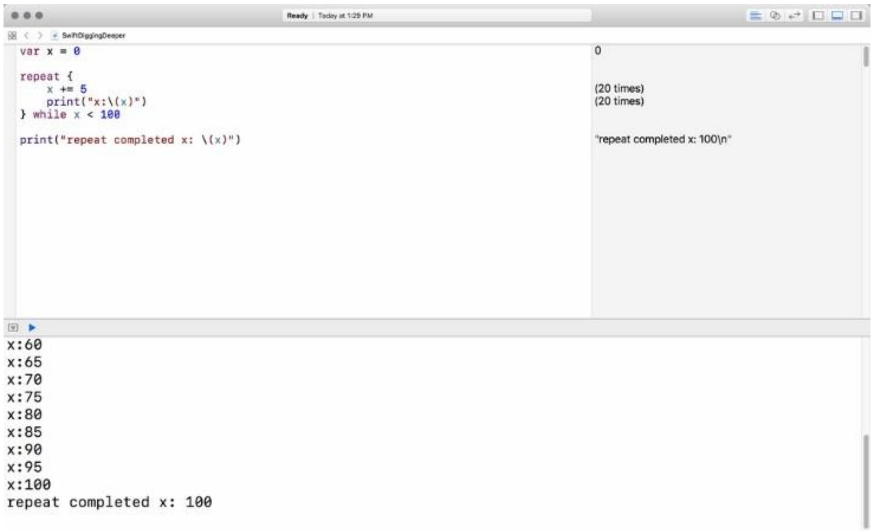
```
y:5
y:10
y:15
y:20
y:25
y:30
y:35
y:40
y:45
y:50
```



```
var y = 0

while y < 50 {
    y += 5
    print("y:\(y)")
}

while y < 50 {
    y += 5
    print("y:\(y)")
}
```

```
0


(10 times)
(10 times)
```

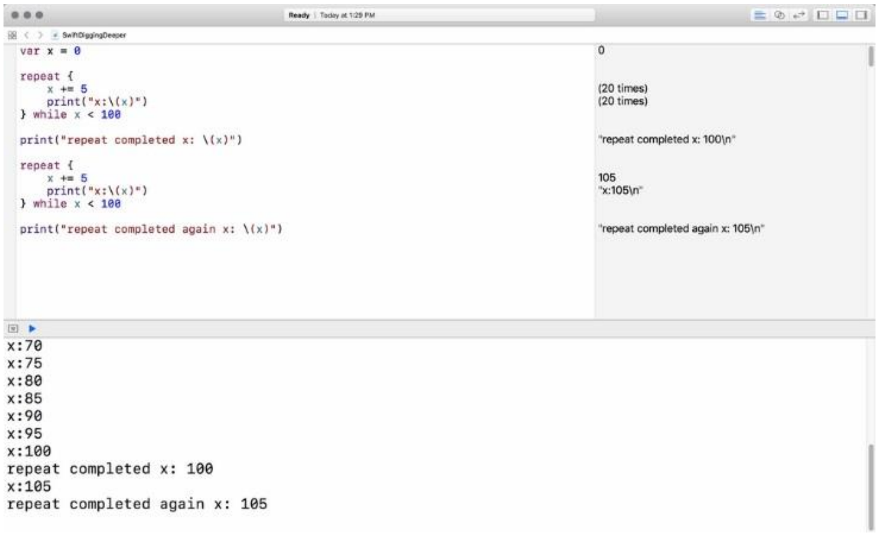
```
y:5
y:10
y:15
y:20
y:25
y:30
y:35
y:40
y:45
y:50
```



```
var x = 0

repeat {
    x += 5
    print("x:\(x)")
} while x < 100

print("repeat completed x: \(x)")
```

```
0

(20 times)
(20 times)

"repeat completed x: 100\n"
```

```
x:60
x:65
x:70
x:75
x:80
x:85
x:90
x:95
x:100
repeat completed x: 100
```

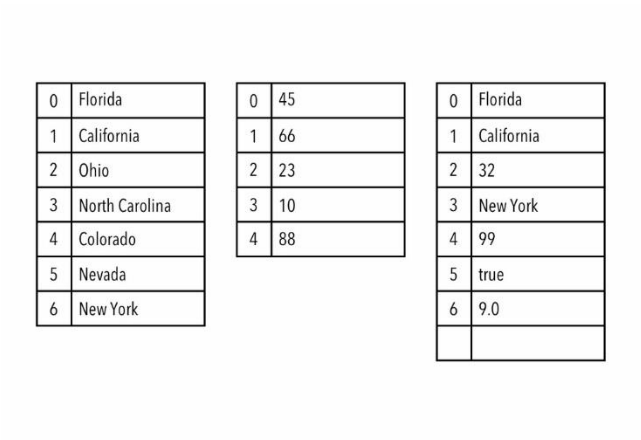


```
var x = 0

repeat {
    x += 5
    print("x:\(x)")
} while x < 100

print("repeat completed x: \(x)")

repeat {
    x += 5
    print("x:\(x)")
} while x < 100

print("repeat completed again x: \(x)")
```

```
0

(20 times)
(20 times)

"repeat completed x: 100\n"

105
"x:105\n"

"repeat completed again x: 105\n"
```

```
x:70
x:75
x:80
x:85
x:90
x:95
x:100
repeat completed x: 100
x:105
repeat completed again x: 105
```

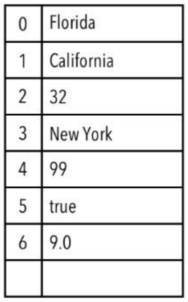
Chapter 4: Digging into Collections



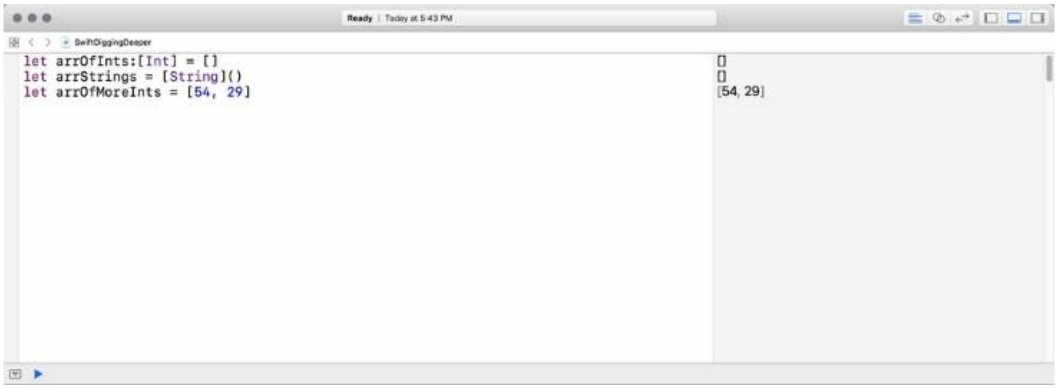
0	Florida
1	California
2	Ohio
3	North Carolina
4	Colorado
5	Nevada
6	New York

0	45
1	66
2	23
3	10
4	88

0	Florida
1	California
2	32
3	New York
4	99
5	true
6	9.0

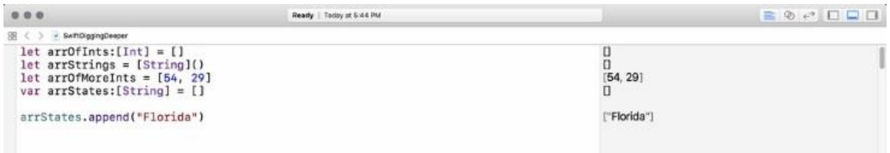


0	Florida
1	California
2	32
3	New York
4	99
5	true
6	9.0



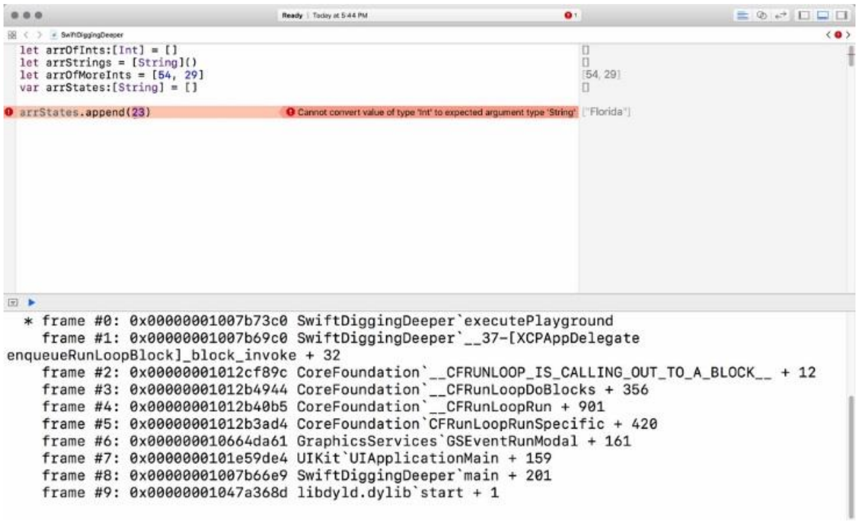
```
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
```

```
[]
[]
[54, 29]
```



```
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []

arrStates.append("Florida")
```

```
[]
[]
[54, 29]
[]

["Florida"]
```

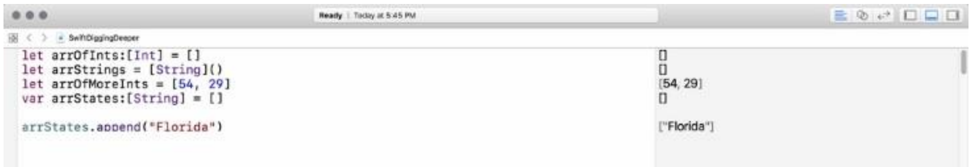


```
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []

arrStates.append(23)
```

Cannot convert value of type 'Int' to expected argument type 'String'

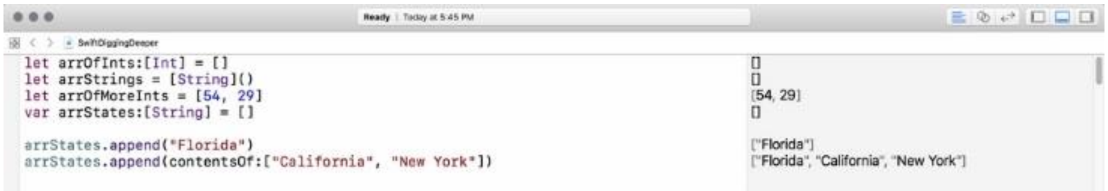
```
[]
[]
[54, 29]
[]

["Florida"]
```

```
  * frame #0: 0x00000001007b73c0 SwiftDiggingDeeper`executePlayground
    frame #1: 0x00000001007b69c0 SwiftDiggingDeeper`__37-[XCPAppDelegate
enqueueRunLoopBlock]_block_invoke + 32
    frame #2: 0x00000001012cf89c CoreFoundation`__CFRUNLOOP_IS_CALLING_OUT_TO_A_BLOCK__ + 12
    frame #3: 0x00000001012b4944 CoreFoundation`__CFRunLoopDoBlocks + 356
    frame #4: 0x00000001012b40b5 CoreFoundation`__CFRunLoopRun + 901
    frame #5: 0x00000001012b3ad4 CoreFoundation`CFRunLoopRunSpecific + 420
    frame #6: 0x000000010664da61 GraphicsServices`GSEventRunModal + 161
    frame #7: 0x0000000101e59de4 UIKit`UIApplicationMain + 159
    frame #8: 0x00000001007b66e9 SwiftDiggingDeeper`main + 201
    frame #9: 0x00000001047a368d libdyld.dylib`start + 1
```



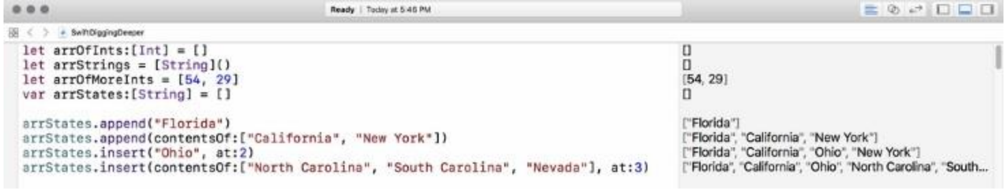
```
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []

arrStates.append("Florida")
```

```
[]
[]
[54, 29]
[]

["Florida"]
```



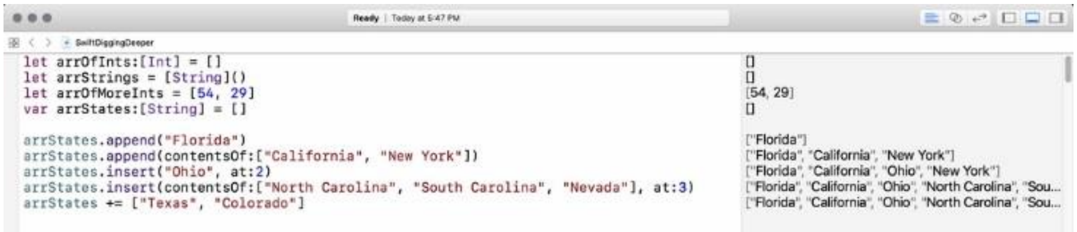
```
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []

arrStates.append("Florida")
arrStates.append(contentsOf:["California", "New York"])
```

```
[]
[]
[54, 29]
[]

["Florida"]
["Florida", "California", "New York"]
```



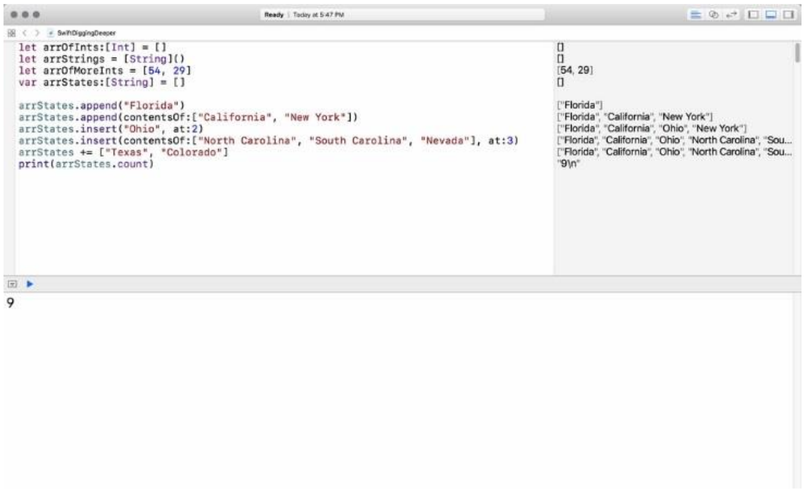
```
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []

arrStates.append("Florida")
arrStates.append(contentsOf:["California", "New York"])
arrStates.insert("Ohio", at:2)
arrStates.insert(contentsOf:["North Carolina", "South Carolina", "Nevada"], at:3)
```

```
[]
[]
[54, 29]
[]

["Florida"]
["Florida", "California", "New York"]
["Florida", "California", "Ohio", "New York"]
["Florida", "California", "Ohio", "North Carolina", "South...
```



```
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []

arrStates.append("Florida")
arrStates.append(contentsOf:["California", "New York"])
arrStates.insert("Ohio", at:2)
arrStates.insert(contentsOf:["North Carolina", "South Carolina", "Nevada"], at:3)
arrStates += ["Texas", "Colorado"]
```

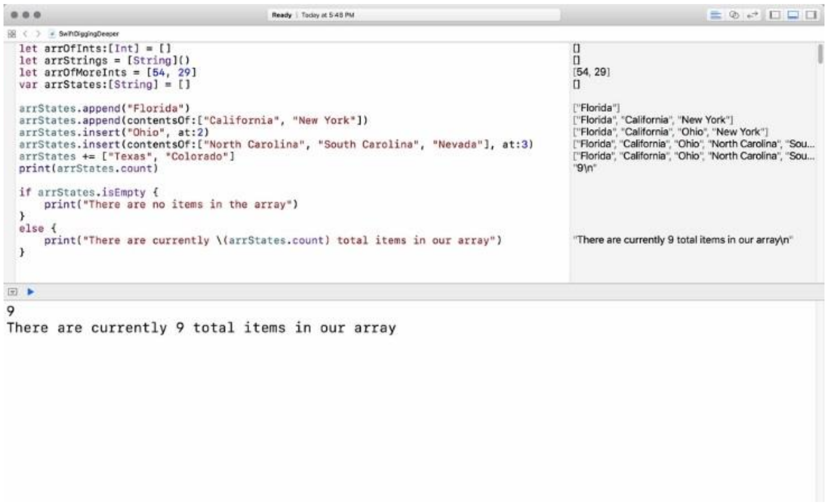
```
[]
[]
[54, 29]
[]

["Florida"]
["Florida", "California", "New York"]
["Florida", "California", "Ohio", "New York"]
["Florida", "California", "Ohio", "North Carolina", "Sou...
["Florida", "California", "Ohio", "North Carolina", "Sou...
```



```
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []

arrStates.append("Florida")
arrStates.append(contentsOf:["California", "New York"])
arrStates.insert("Ohio", at:2)
arrStates.insert(contentsOf:["North Carolina", "South Carolina", "Nevada"], at:3)
arrStates += ["Texas", "Colorado"]
print(arrStates.count)
```

```
[]
[]
[54, 29]
[]

["Florida"]
["Florida", "California", "New York"]
["Florida", "California", "Ohio", "New York"]
["Florida", "California", "Ohio", "North Carolina", "Sou...
["Florida", "California", "Ohio", "North Carolina", "Sou...
"9\n"
```

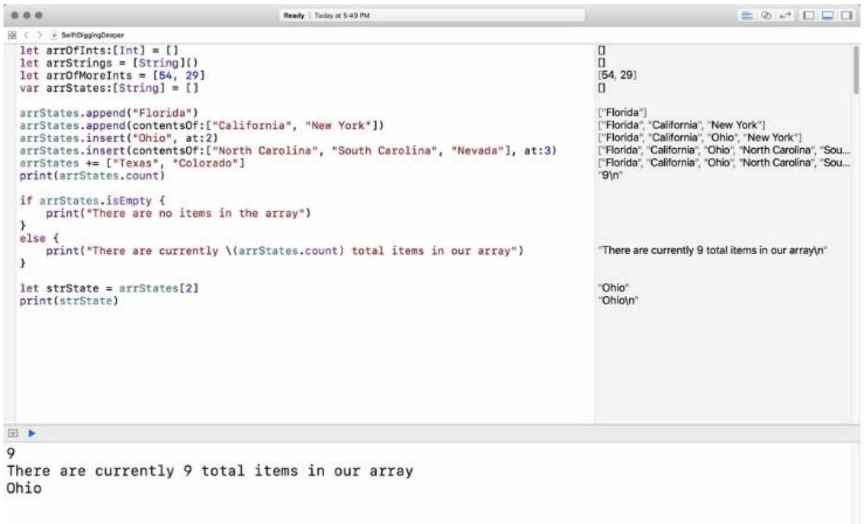
```
9
```



```
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []

arrStates.append("Florida")
arrStates.append(contentsOf:["California", "New York"])
arrStates.insert("Ohio", at:2)
arrStates.insert(contentsOf:["North Carolina", "South Carolina", "Nevada"], at:3)
arrStates += ["Texas", "Colorado"]
print(arrStates.count)

if arrStates.isEmpty {
    print("There are no items in the array")
}
else {
    print("There are currently \(arrStates.count) total items in our array")
}
```

```
[]
[]
[54, 29]
[]

["Florida"]
["Florida", "California", "New York"]
["Florida", "California", "Ohio", "New York"]
["Florida", "California", "Ohio", "North Carolina", "Sou...
["Florida", "California", "Ohio", "North Carolina", "Sou...
"9\n"






"There are currently 9 total items in our array\n"
```

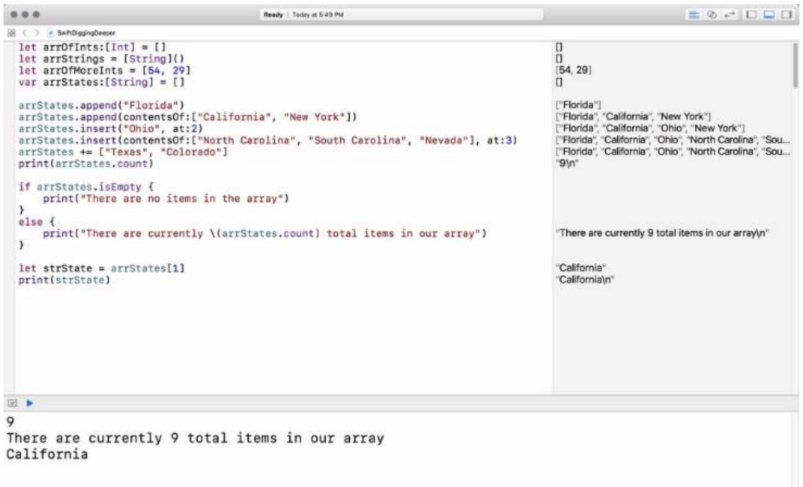
```
9
There are currently 9 total items in our array
```



```swift
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []

arrStates.append("Florida")
arrStates.append(contentsOf:["California", "New York"])
arrStates.insert("Ohio", at:2)
arrStates.insert(contentsOf:["North Carolina", "South Carolina", "Nevada"], at:3)
arrStates += ["Texas", "Colorado"]
print(arrStates.count)

if arrStates.isEmpty {
    print("There are no items in the array")
}
else {
    print("There are currently \(arrStates.count) total items in our array")
}

let strState = arrStates[2]
print(strState)
```

```
[]
[]
[54, 29]
[]

["Florida"]
["Florida", "California", "New York"]
["Florida", "California", "Ohio", "New York"]
["Florida", "California", "Ohio", "North Carolina", "Sou...
["Florida", "California", "Ohio", "North Carolina", "Sou...
"9\n"

"There are currently 9 total items in our array\n"

"Ohio"
"Ohio\n"
```

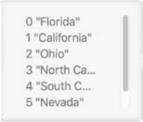
```
9
There are currently 9 total items in our array
Ohio
```



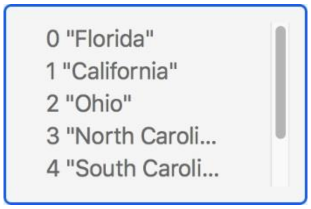
```swift
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []

arrStates.append("Florida")
arrStates.append(contentsOf:["California", "New York"])
arrStates.insert("Ohio", at:2)
arrStates.insert(contentsOf:["North Carolina", "South Carolina", "Nevada"], at:3)
arrStates += ["Texas", "Colorado"]
print(arrStates.count)

if arrStates.isEmpty {
    print("There are no items in the array")
}
else {
    print("There are currently \(arrStates.count) total items in our array")
}

let strState = arrStates[1]
print(strState)
```

```
[]
[]
[54, 29]
[]

["Florida"]
["Florida", "California", "New York"]
["Florida", "California", "Ohio", "New York"]
["Florida", "California", "Ohio", "North Carolina", "Sou...
["Florida", "California", "Ohio", "North Carolina", "Sou...
"9\n"

"There are currently 9 total items in our array\n"

"California"
"California\n"
```

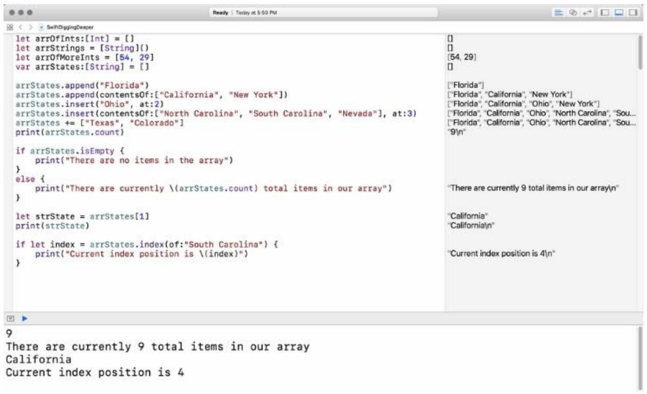
```
9
There are currently 9 total items in our array
California
```



```
0 "Florida"
1 "California"
2 "Ohio"
3 "North Ca...
4 "South C...
5 "Nevada"
```



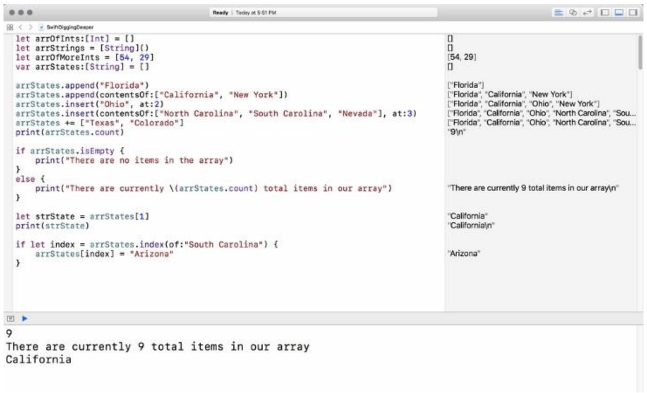
```
0 "Florida"
1 "California"
2 "Ohio"
3 "North Caroli...
4 "South Caroli...
```



```
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []

arrStates.append("Florida")
arrStates.append(contentsOf:["California", "New York"])
arrStates.insert("Ohio", at:2)
arrStates.insert(contentsOf:["North Carolina", "South Carolina", "Nevada"], at:3)
arrStates += ["Texas", "Colorado"]
print(arrStates.count)

if arrStates.isEmpty {
    print("There are no items in the array")
}
else {
    print("There are currently \(arrStates.count) total items in our array")
}

let strState = arrStates[1]
print(strState)

if let index = arrStates.index(of:"South Carolina") {
    print("Current index position is \(index)")
}
```

```
[]
[]
[54, 29]
[]

["Florida"]
["Florida", "California", "New York"]
["Florida", "California", "Ohio", "New York"]
["Florida", "California", "Ohio", "North Carolina", "Sou...
["Florida", "California", "Ohio", "North Carolina", "Sou...
"9\n"

"There are currently 9 total items in our array\n"

"California"
"California\n"

"Current index position is 4\n"
```

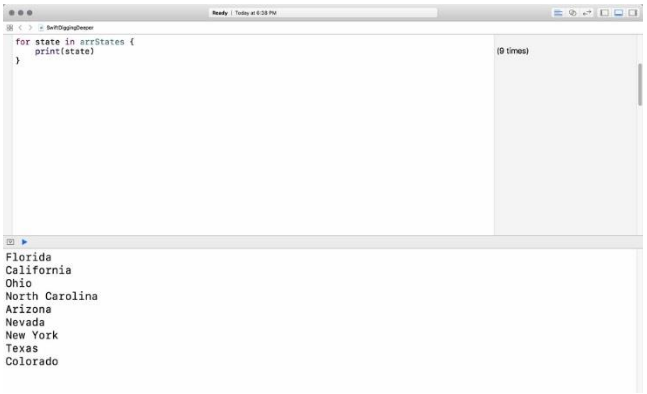
```
9
There are currently 9 total items in our array
California
Current index position is 4
```



```
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []

arrStates.append("Florida")
arrStates.append(contentsOf:["California", "New York"])
arrStates.insert("Ohio", at:2)
arrStates.insert(contentsOf:["North Carolina", "South Carolina", "Nevada"], at:3)
arrStates += ["Texas", "Colorado"]
print(arrStates.count)

if arrStates.isEmpty {
    print("There are no items in the array")
}
else {
    print("There are currently \(arrStates.count) total items in our array")
}

let strState = arrStates[1]
print(strState)

if let index = arrStates.index(of:"South Carolina") {
    arrStates[index] = "Arizona"
}
```

```
[]
[]
[54, 29]
[]

["Florida"]
["Florida", "California", "New York"]
["Florida", "California", "Ohio", "New York"]
["Florida", "California", "Ohio", "North Carolina", "Sou...
["Florida", "California", "Ohio", "North Carolina", "Sou...
"9\n"

"There are currently 9 total items in our array\n"

"California"
"California\n"

"Arizona"
```

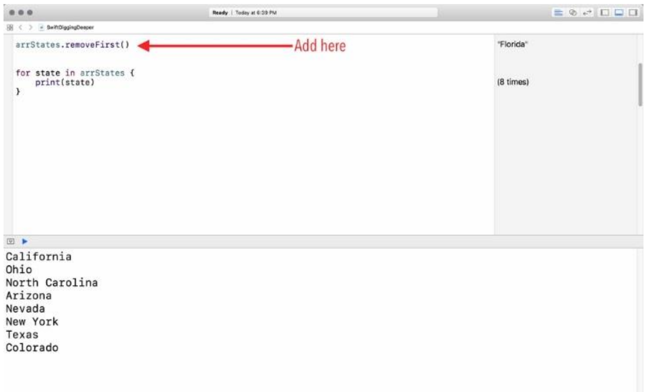
```
9
There are currently 9 total items in our array
California
```



```
for state in arrStates {
    print(state)
}
```

```
(9 times)
```

```
Florida
California
Ohio
North Carolina
Arizona
Nevada
New York
Texas
Colorado
```

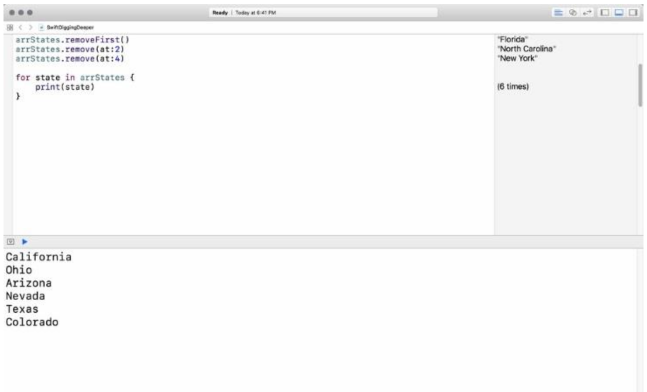


```
arrStates.removeFirst()

for state in arrStates {
    print(state)
}
```

Add here

```
"Florida"

(8 times)
```

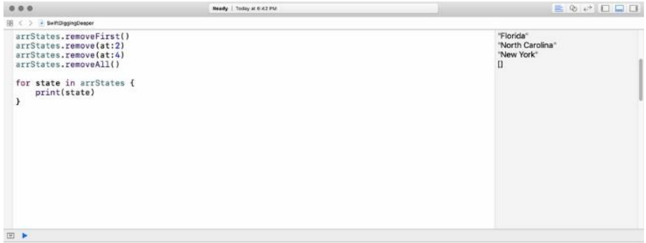
```
California
Ohio
North Carolina
Arizona
Nevada
New York
Texas
Colorado
```



```
arrStates.removeFirst()
arrStates.remove(at:2)
arrStates.remove(at:4)

for state in arrStates {
    print(state)
}
```

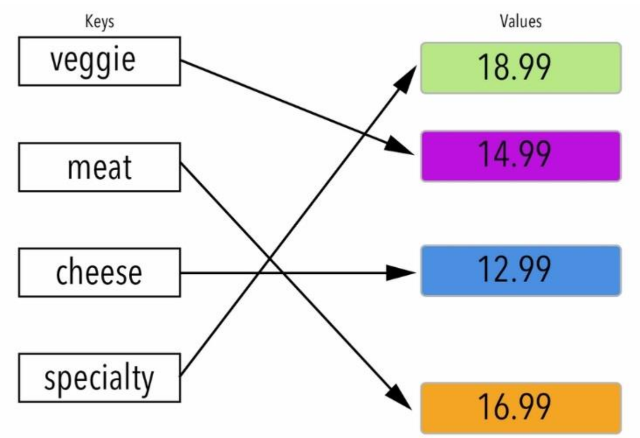
```
"Florida"
"North Carolina"
"New York"

(6 times)
```

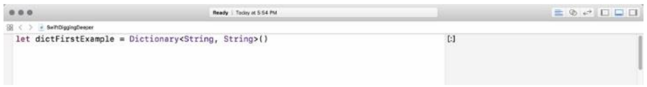
```
California
Ohio
Arizona
Nevada
Texas
Colorado
```



```
arrStates.removeFirst()
arrStates.remove(at:2)
arrStates.remove(at:4)
arrStates.removeAll()

for state in arrStates {
    print(state)
}
```

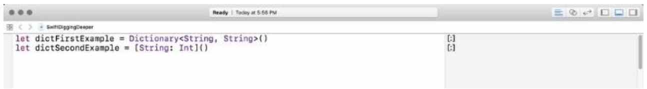
```
"Florida"
"North Carolina"
"New York"
[]
```





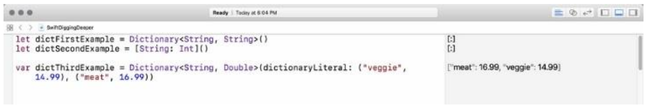
```
let dictFirstExample = Dictionary<String, String>()
```

```
[:]
```



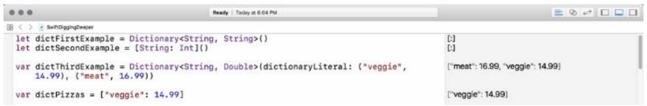
```
let dictFirstExample = Dictionary<String, String>()
let dictSecondExample = [String: Int]()
```

```
[:]
[:]
```



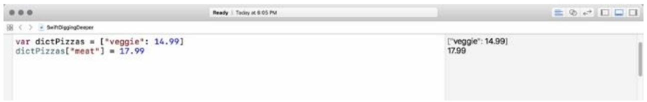
```
let dictFirstExample = Dictionary<String, String>()
let dictSecondExample = [String: Int]()

var dictThirdExample = Dictionary<String, Double>(dictionaryLiteral: ("veggie",
    14.99), ("meat", 16.99))
```

```
[:]
[:]

["meat": 16.99, "veggie": 14.99]
```



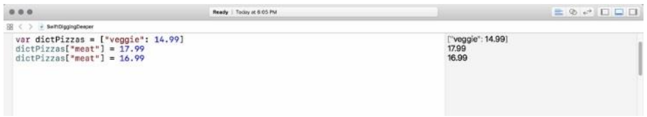
```
let dictFirstExample = Dictionary<String, String>()
let dictSecondExample = [String: Int]()

var dictThirdExample = Dictionary<String, Double>(dictionaryLiteral: ("veggie",
    14.99), ("meat", 16.99))

var dictPizzas = ["veggie": 14.99]
```

```
[:]
[:]

["meat": 16.99, "veggie": 14.99]

["veggie": 14.99]
```



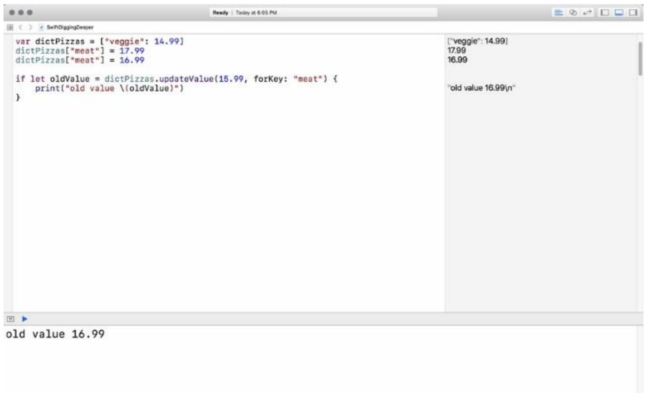
```
var dictPizzas = ["veggie": 14.99]
dictPizzas["meat"] = 17.99
```

```
["veggie": 14.99]
17.99
```



```
var dictPizzas = ["veggie": 14.99]
dictPizzas["meat"] = 17.99
dictPizzas["meat"] = 16.99
```

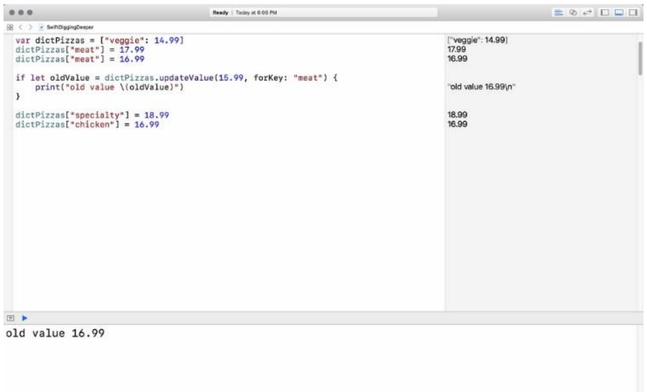
```
["veggie": 14.99]
17.99
16.99
```



```
var dictPizzas = ["veggie": 14.99]
dictPizzas["meat"] = 17.99
dictPizzas["meat"] = 16.99

if let oldValue = dictPizzas.updateValue(15.99, forKey: "meat") {
    print("old value \(oldValue)")
}
```

```
["veggie": 14.99]
17.99
16.99

"old value 16.99\n"
```

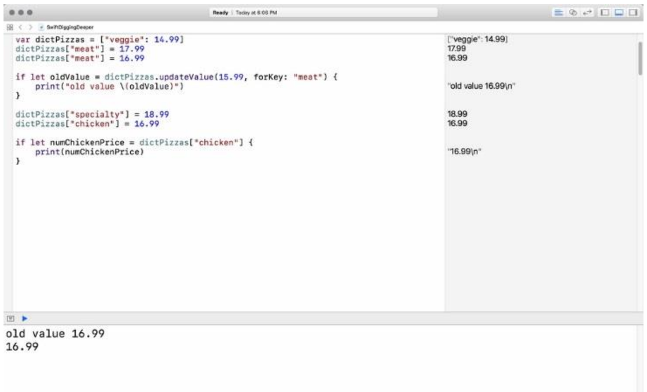
```
old value 16.99
```



```
var dictPizzas = ["veggie": 14.99]
dictPizzas["meat"] = 17.99
dictPizzas["meat"] = 16.99

if let oldValue = dictPizzas.updateValue(15.99, forKey: "meat") {
    print("old value \(oldValue)")
}

dictPizzas["specialty"] = 18.99
dictPizzas["chicken"] = 16.99
```

```
["veggie": 14.99]
17.99
16.99

"old value 16.99\n"

18.99
16.99
```

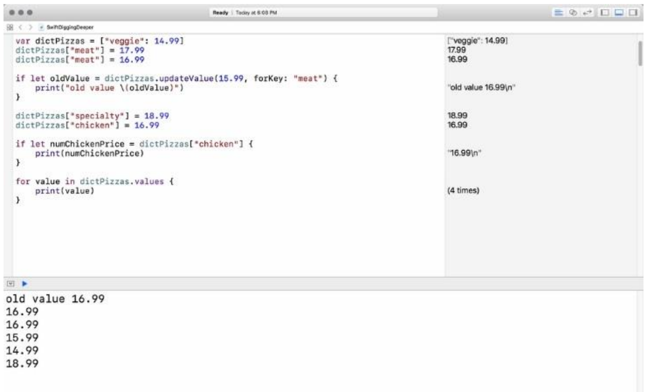
```
old value 16.99
```



```
var dictPizzas = ["veggie": 14.99]
dictPizzas["meat"] = 17.99
dictPizzas["meat"] = 16.99

if let oldValue = dictPizzas.updateValue(15.99, forKey: "meat") {
    print("old value \(oldValue)")
}

dictPizzas["specialty"] = 18.99
dictPizzas["chicken"] = 16.99

if let numChickenPrice = dictPizzas["chicken"] {
    print(numChickenPrice)
}
```

```
["veggie": 14.99]
17.99
16.99

"old value 16.99\n"

18.99
16.99

"16.99\n"
```

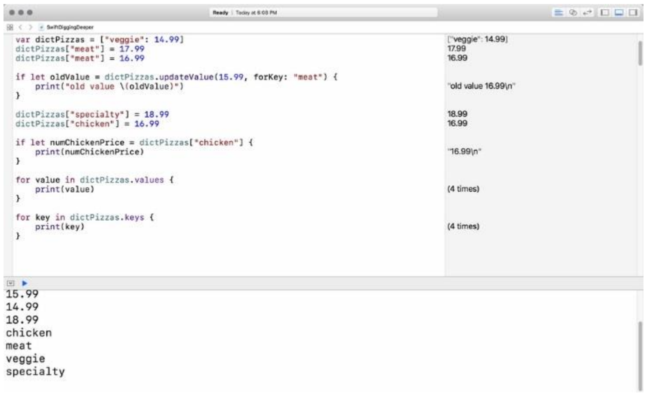
```
old value 16.99
16.99
```



```
var dictPizzas = ["veggie": 14.99]
dictPizzas["meat"] = 17.99
dictPizzas["meat"] = 16.99

if let oldValue = dictPizzas.updateValue(15.99, forKey: "meat") {
    print("old value \(oldValue)")
}

dictPizzas["specialty"] = 18.99
dictPizzas["chicken"] = 16.99

if let numChickenPrice = dictPizzas["chicken"] {
    print(numChickenPrice)
}

for value in dictPizzas.values {
    print(value)
}
```

```
["veggie": 14.99]
17.99
16.99

"old value 16.99\n"

18.99
16.99

"16.99\n"

(4 times)
```

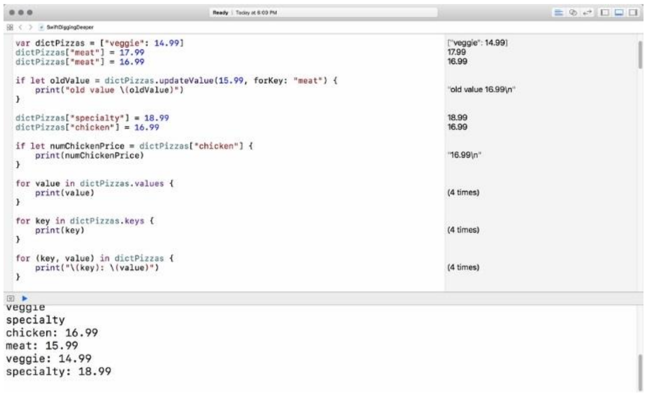
```
old value 16.99
16.99
16.99
15.99
14.99
18.99
```



```swift
var dictPizzas = ["veggie": 14.99]
dictPizzas["meat"] = 17.99
dictPizzas["meat"] = 16.99

if let oldValue = dictPizzas.updateValue(15.99, forKey: "meat") {
    print("old value \(oldValue)")
}

dictPizzas["specialty"] = 18.99
dictPizzas["chicken"] = 16.99

if let numChickenPrice = dictPizzas["chicken"] {
    print(numChickenPrice)
}

for value in dictPizzas.values {
    print(value)
}

for key in dictPizzas.keys {
    print(key)
}
```

```
["veggie": 14.99]
17.99
16.99

"old value 16.99\n"

18.99
16.99

"16.99\n"

(4 times)

(4 times)
```

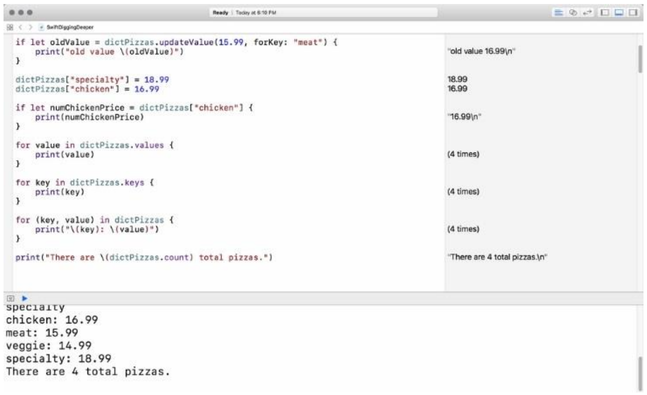
```
15.99
14.99
18.99
chicken
meat
veggie
specialty
```



```swift
var dictPizzas = ["veggie": 14.99]
dictPizzas["meat"] = 17.99
dictPizzas["meat"] = 16.99

if let oldValue = dictPizzas.updateValue(15.99, forKey: "meat") {
    print("old value \(oldValue)")
}

dictPizzas["specialty"] = 18.99
dictPizzas["chicken"] = 16.99

if let numChickenPrice = dictPizzas["chicken"] {
    print(numChickenPrice)
}

for value in dictPizzas.values {
    print(value)
}

for key in dictPizzas.keys {
    print(key)
}

for (key, value) in dictPizzas {
    print("\(key): \(value)")
}
```

```
["veggie": 14.99]
17.99
16.99

"old value 16.99\n"

18.99
16.99

"16.99\n"

(4 times)

(4 times)

(4 times)
```

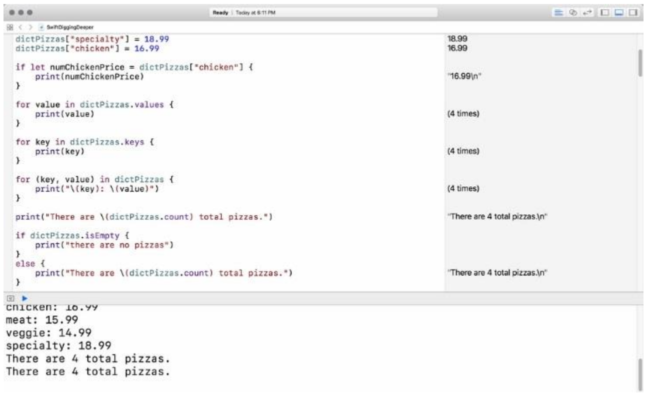
```
veggie
specialty
chicken: 16.99
meat: 15.99
veggie: 14.99
specialty: 18.99
```



```swift
if let oldValue = dictPizzas.updateValue(15.99, forKey: "meat") {
    print("old value \(oldValue)")
}

dictPizzas["specialty"] = 18.99
dictPizzas["chicken"] = 16.99

if let numChickenPrice = dictPizzas["chicken"] {
    print(numChickenPrice)
}

for value in dictPizzas.values {
    print(value)
}

for key in dictPizzas.keys {
    print(key)
}

for (key, value) in dictPizzas {
    print("\(key): \(value)")
}

print("There are \(dictPizzas.count) total pizzas.")
```

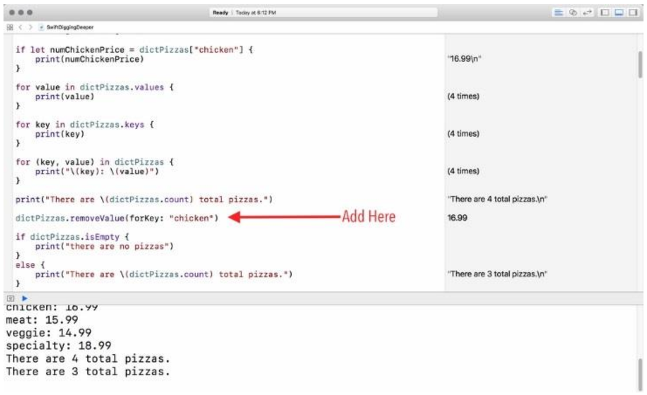
```
"old value 16.99\n"

18.99
16.99

"16.99\n"

(4 times)

(4 times)

(4 times)

"There are 4 total pizzas.\n"
```

```
specialty
chicken: 16.99
meat: 15.99
veggie: 14.99
specialty: 18.99
There are 4 total pizzas.
```



```
dictPizzas["specialty"] = 18.99                                  18.99
dictPizzas["chicken"] = 16.99                                    16.99

if let numChickenPrice = dictPizzas["chicken"] {
    print(numChickenPrice)                                       "16.99\n"
}

for value in dictPizzas.values {
    print(value)                                                 (4 times)
}

for key in dictPizzas.keys {
    print(key)                                                   (4 times)
}

for (key, value) in dictPizzas {
    print("\(key): \(value)")                                    (4 times)
}

print("There are \(dictPizzas.count) total pizzas.")            "There are 4 total pizzas.\n"

if dictPizzas.isEmpty {
    print("there are no pizzas")
}
else {
    print("There are \(dictPizzas.count) total pizzas.")        "There are 4 total pizzas.\n"
}
```

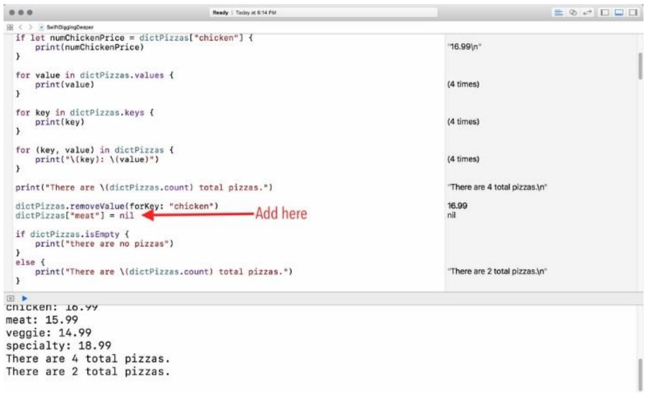
```
chicken: 16.99
meat: 15.99
veggie: 14.99
specialty: 18.99
There are 4 total pizzas.
There are 4 total pizzas.
```



```
if let numChickenPrice = dictPizzas["chicken"] {
    print(numChickenPrice)                                       "16.99\n"
}

for value in dictPizzas.values {
    print(value)                                                 (4 times)
}

for key in dictPizzas.keys {
    print(key)                                                   (4 times)
}

for (key, value) in dictPizzas {
    print("\(key): \(value)")                                    (4 times)
}

print("There are \(dictPizzas.count) total pizzas.")            "There are 4 total pizzas.\n"

dictPizzas.removeValue(forKey: "chicken")                        16.99

if dictPizzas.isEmpty {
    print("there are no pizzas")
}
else {
    print("There are \(dictPizzas.count) total pizzas.")        "There are 3 total pizzas.\n"
}
```

Add Here

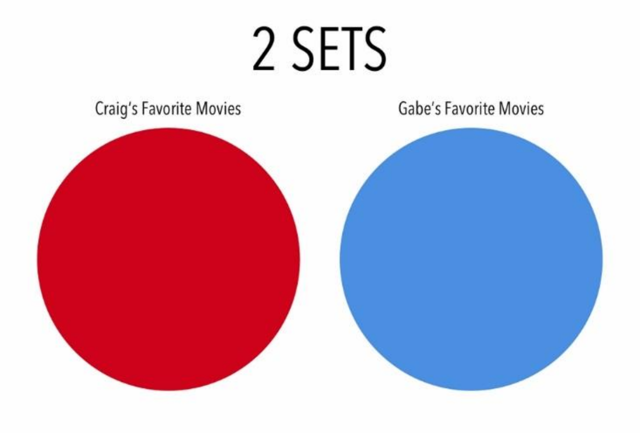
```
chicken: 16.99
meat: 15.99
veggie: 14.99
specialty: 18.99
There are 4 total pizzas.
There are 3 total pizzas.
```



```
if let numChickenPrice = dictPizzas["chicken"] {
    print(numChickenPrice)                                       "16.99\n"
}

for value in dictPizzas.values {
    print(value)                                                 (4 times)
}

for key in dictPizzas.keys {
    print(key)                                                   (4 times)
}

for (key, value) in dictPizzas {
    print("\(key): \(value)")                                    (4 times)
}

print("There are \(dictPizzas.count) total pizzas.")            "There are 4 total pizzas.\n"

dictPizzas.removeValue(forKey: "chicken")                        16.99
dictPizzas["meat"] = nil                                         nil

if dictPizzas.isEmpty {
    print("there are no pizzas")
}
else {
    print("There are \(dictPizzas.count) total pizzas.")        "There are 2 total pizzas.\n"
}
```

Add here

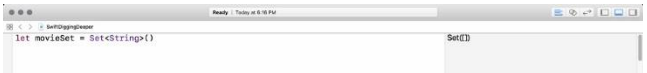
```
chicken: 16.99
meat: 15.99
veggie: 14.99
specialty: 18.99
There are 4 total pizzas.
There are 2 total pizzas.
```



2 SETS

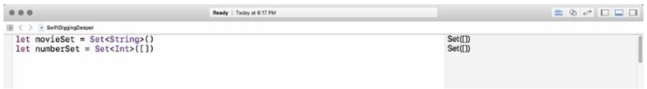
Craig's Favorite Movies

Gabe's Favorite Movies



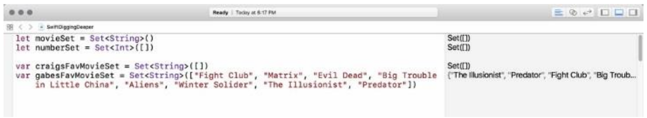
```
let movieSet = Set<String>()
```

```
Set([])
```



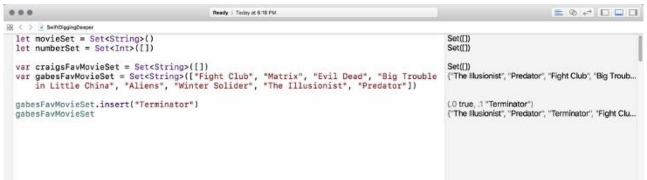
```
let movieSet = Set<String>()
let numberSet = Set<Int>([])
```

```
Set([])
Set([])
```



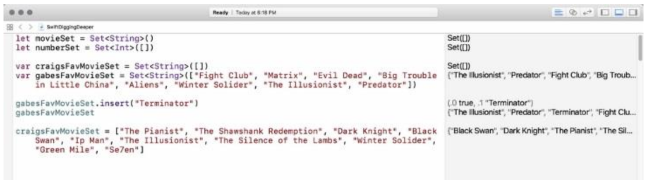
```
let movieSet = Set<String>()
let numberSet = Set<Int>([])

var craigsFavMovieSet = Set<String>([])
var gabesFavMovieSet = Set<String>(["Fight Club", "Matrix", "Evil Dead", "Big Trouble
    in Little China", "Aliens", "Winter Solider", "The Illusionist", "Predator"])
```

```
Set([])
Set([])

Set([])
{"The Illusionist", "Predator", "Fight Club", "Big Troub...
```



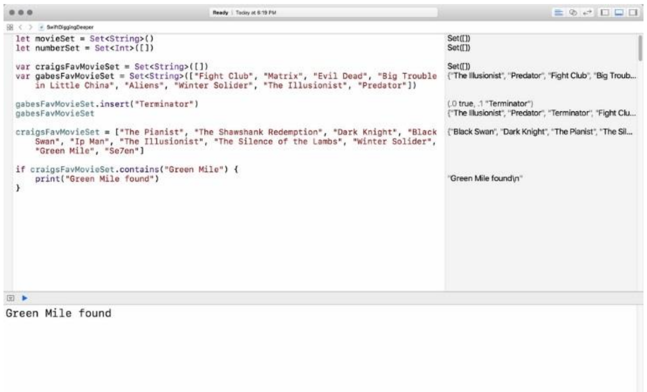
```
let movieSet = Set<String>()
let numberSet = Set<Int>([])

var craigsFavMovieSet = Set<String>([])
var gabesFavMovieSet = Set<String>(["Fight Club", "Matrix", "Evil Dead", "Big Trouble
    in Little China", "Aliens", "Winter Solider", "The Illusionist", "Predator"])

gabesFavMovieSet.insert("Terminator")
gabesFavMovieSet
```

```
Set([])
Set([])

Set([])
{"The Illusionist", "Predator", "Fight Club", "Big Troub...


(.0 true, .1 "Terminator")
{"The Illusionist", "Predator", "Terminator", "Fight Clu...
```



```
let movieSet = Set<String>()
let numberSet = Set<Int>([])

var craigsFavMovieSet = Set<String>([])
var gabesFavMovieSet = Set<String>(["Fight Club", "Matrix", "Evil Dead", "Big Trouble
    in Little China", "Aliens", "Winter Solider", "The Illusionist", "Predator"])

gabesFavMovieSet.insert("Terminator")
gabesFavMovieSet

craigsFavMovieSet = ["The Pianist", "The Shawshank Redemption", "Dark Knight", "Black
    Swan", "Ip Man", "The Illusionist", "The Silence of the Lambs", "Winter Solider",
    "Green Mile", "Se7en"]
```

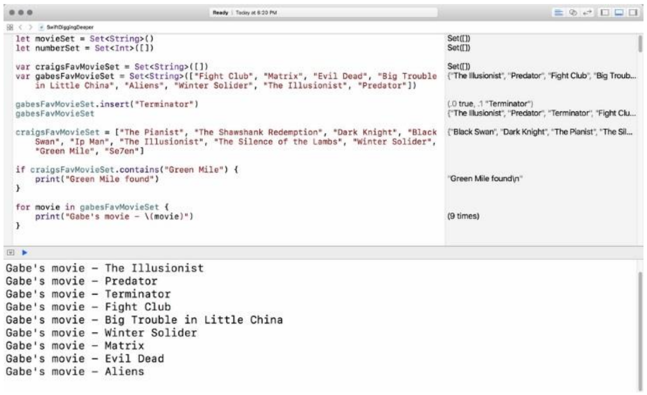
```
Set([])
Set([])

Set([])
{"The Illusionist", "Predator", "Fight Club", "Big Troub...


(.0 true, .1 "Terminator")
{"The Illusionist", "Predator", "Terminator", "Fight Clu...

{"Black Swan", "Dark Knight", "The Pianist", "The Sil...
```



```swift
let movieSet = Set<String>()
let numberSet = Set<Int>([])

var craigsFavMovieSet = Set<String>([])
var gabesFavMovieSet = Set<String>(["Fight Club", "Matrix", "Evil Dead", "Big Trouble
    in Little China", "Aliens", "Winter Solider", "The Illusionist", "Predator"])

gabesFavMovieSet.insert("Terminator")
gabesFavMovieSet

craigsFavMovieSet = ["The Pianist", "The Shawshank Redemption", "Dark Knight", "Black
    Swan", "Ip Man", "The Illusionist", "The Silence of the Lambs", "Winter Solider",
    "Green Mile", "Se7en"]

if craigsFavMovieSet.contains("Green Mile") {
    print("Green Mile found")
}
```

```
Set([])
Set([])

Set([])
{"The Illusionist", "Predator", "Fight Club", "Big Troub...

(.0 true, .1 "Terminator")
{"The Illusionist", "Predator", "Terminator", "Fight Clu...

{"Black Swan", "Dark Knight", "The Pianist", "The Sil...

"Green Mile found\n"
```

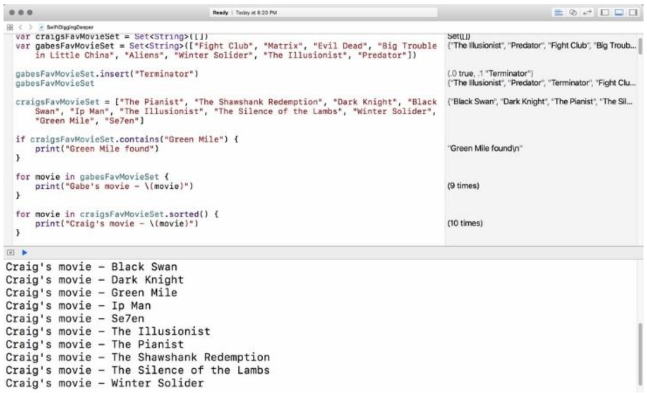
```
Green Mile found
```



```swift
let movieSet = Set<String>()
let numberSet = Set<Int>([])

var craigsFavMovieSet = Set<String>([])
var gabesFavMovieSet = Set<String>(["Fight Club", "Matrix", "Evil Dead", "Big Trouble
    in Little China", "Aliens", "Winter Solider", "The Illusionist", "Predator"])

gabesFavMovieSet.insert("Terminator")
gabesFavMovieSet

craigsFavMovieSet = ["The Pianist", "The Shawshank Redemption", "Dark Knight", "Black
    Swan", "Ip Man", "The Illusionist", "The Silence of the Lambs", "Winter Solider",
    "Green Mile", "Se7en"]

if craigsFavMovieSet.contains("Green Mile") {
    print("Green Mile found")
}

for movie in gabesFavMovieSet {
    print("Gabe's movie - \(movie)")
}
```

```
Set([])
Set([])

Set([])
{"The Illusionist", "Predator", "Fight Club", "Big Troub...

(.0 true, .1 "Terminator")
{"The Illusionist", "Predator", "Terminator", "Fight Clu...

{"Black Swan", "Dark Knight", "The Pianist", "The Sil...

"Green Mile found\n"

(9 times)
```

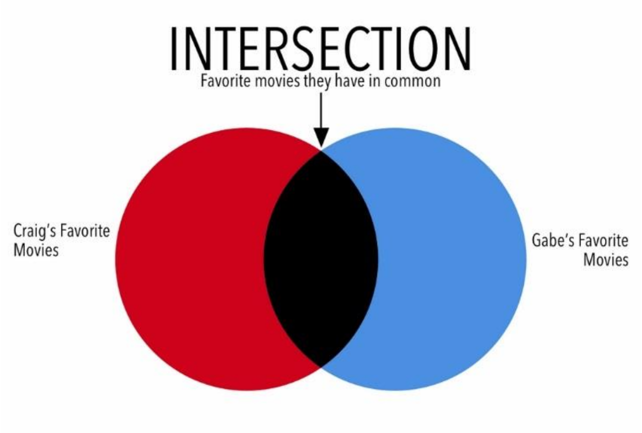
```
Gabe's movie - The Illusionist
Gabe's movie - Predator
Gabe's movie - Terminator
Gabe's movie - Fight Club
Gabe's movie - Big Trouble in Little China
Gabe's movie - Winter Solider
Gabe's movie - Matrix
Gabe's movie - Evil Dead
Gabe's movie - Aliens
```



```swift
var craigsFavMovieSet = Set<String>([])
var gabesFavMovieSet = Set<String>(["Fight Club", "Matrix", "Evil Dead", "Big Trouble
    in Little China", "Aliens", "Winter Solider", "The Illusionist", "Predator"])

gabesFavMovieSet.insert("Terminator")
gabesFavMovieSet

craigsFavMovieSet = ["The Pianist", "The Shawshank Redemption", "Dark Knight", "Black
    Swan", "Ip Man", "The Illusionist", "The Silence of the Lambs", "Winter Solider",
    "Green Mile", "Se7en"]

if craigsFavMovieSet.contains("Green Mile") {
    print("Green Mile found")
}

for movie in gabesFavMovieSet {
    print("Gabe's movie - \(movie)")
}

for movie in craigsFavMovieSet.sorted() {
    print("Craig's movie - \(movie)")
}
```

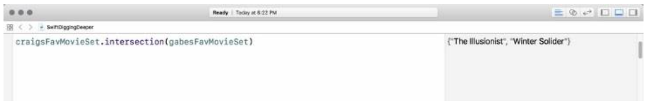
```
Set([])
{"The Illusionist", "Predator", "Fight Club", "Big Troub...

(.0 true, .1 "Terminator")
{"The Illusionist", "Predator", "Terminator", "Fight Clu...

{"Black Swan", "Dark Knight", "The Pianist", "The Sil...

"Green Mile found\n"

(9 times)

(10 times)
```

```
Craig's movie - Black Swan
Craig's movie - Dark Knight
Craig's movie - Green Mile
Craig's movie - Ip Man
Craig's movie - Se7en
Craig's movie - The Illusionist
Craig's movie - The Pianist
Craig's movie - The Shawshank Redemption
Craig's movie - The Silence of the Lambs
Craig's movie - Winter Solider
```



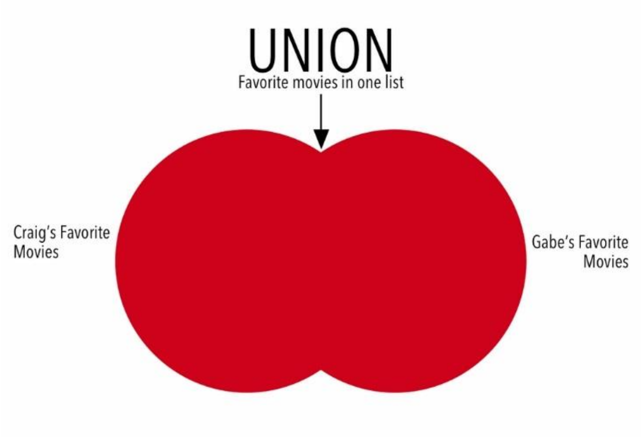
INTERSECTION

Favorite movies they have in common



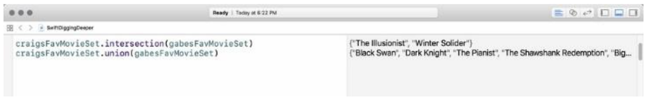
```
craigsFavMovieSet.intersection(gabesFavMovieSet)
```

```
{"The Illusionist", "Winter Solider"}
```



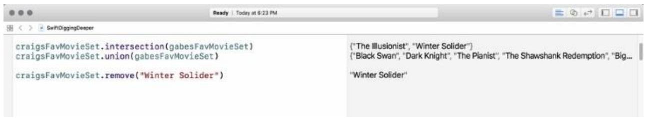
UNION

Favorite movies in one list



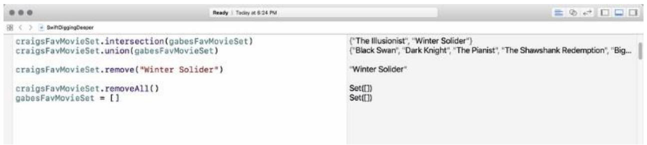
```
craigsFavMovieSet.intersection(gabesFavMovieSet)
craigsFavMovieSet.union(gabesFavMovieSet)
```

```
{"The Illusionist", "Winter Solider"}
{"Black Swan", "Dark Knight", "The Pianist", "The Shawshank Redemption", "Big...
```



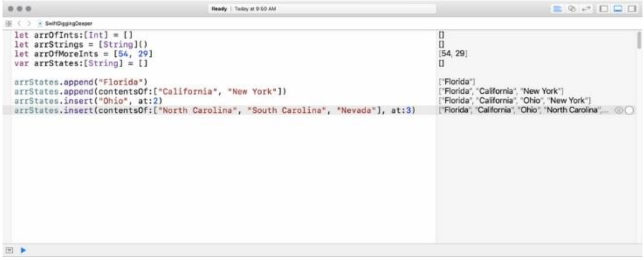
```
craigsFavMovieSet.intersection(gabesFavMovieSet)
craigsFavMovieSet.union(gabesFavMovieSet)

craigsFavMovieSet.remove("Winter Solider")
```

```
{"The Illusionist", "Winter Solider"}
{"Black Swan", "Dark Knight", "The Pianist", "The Shawshank Redemption", "Big...

"Winter Solider"
```



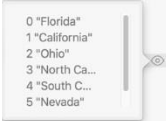
```
craigsFavMovieSet.intersection(gabesFavMovieSet)
craigsFavMovieSet.union(gabesFavMovieSet)

craigsFavMovieSet.remove("Winter Solider")

craigsFavMovieSet.removeAll()
gabesFavMovieSet = []
```

```
{"The Illusionist", "Winter Solider"}
{"Black Swan", "Dark Knight", "The Pianist", "The Shawshank Redemption", "Big...

"Winter Solider"

Set([])
Set([])
```

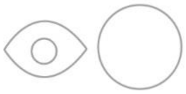


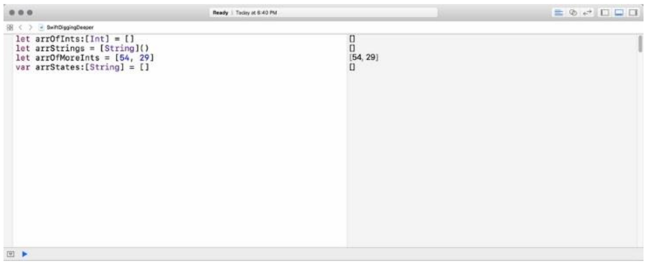
```
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []

arrStates.append("Florida")
arrStates.append(contentsOf:["California", "New York"])
arrStates.insert("Ohio", at:2)
arrStates.insert(contentsOf:["North Carolina", "South Carolina", "Nevada"], at:3)
```

```
[]
[]
[54, 29]
[]

["Florida"]
["Florida", "California", "New York"]
["Florida", "California", "Ohio", "New York"]
["Florida", "California", "Ohio", "North Carolina",...
```



```
0 "Florida"
1 "California"
2 "Ohio"
3 "North Ca...
4 "South C...
5 "Nevada"
```

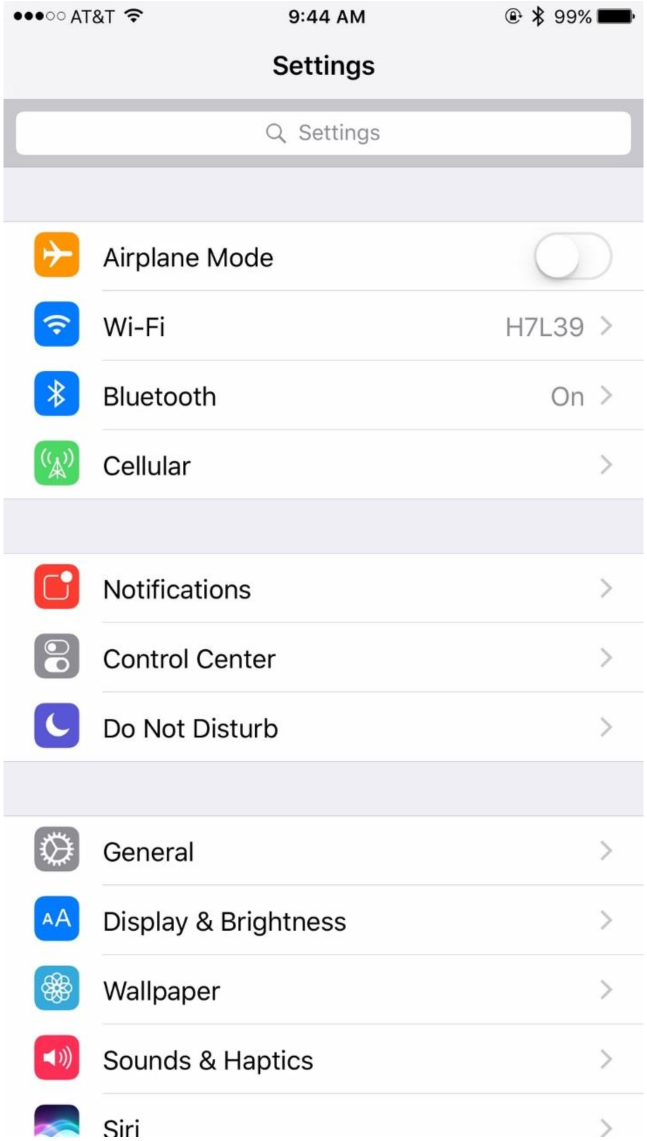




```
let arrOfInts:[Int] = []
let arrStrings = [String]()
let arrOfMoreInts = [54, 29]
var arrStates:[String] = []
```

```
[]
[]
[54, 29]
[]
```

Chapter 5: Starting the UI Setup



●●●○○ AT&T 9:44 AM 99%

Settings

Settings

Airplane Mode

Wi-Fi H7L39

Bluetooth On

Cellular

Notifications

Control Center

Do Not Disturb

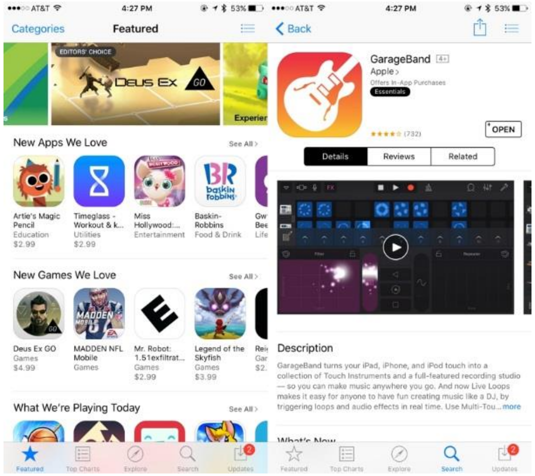
General

Display & Brightness

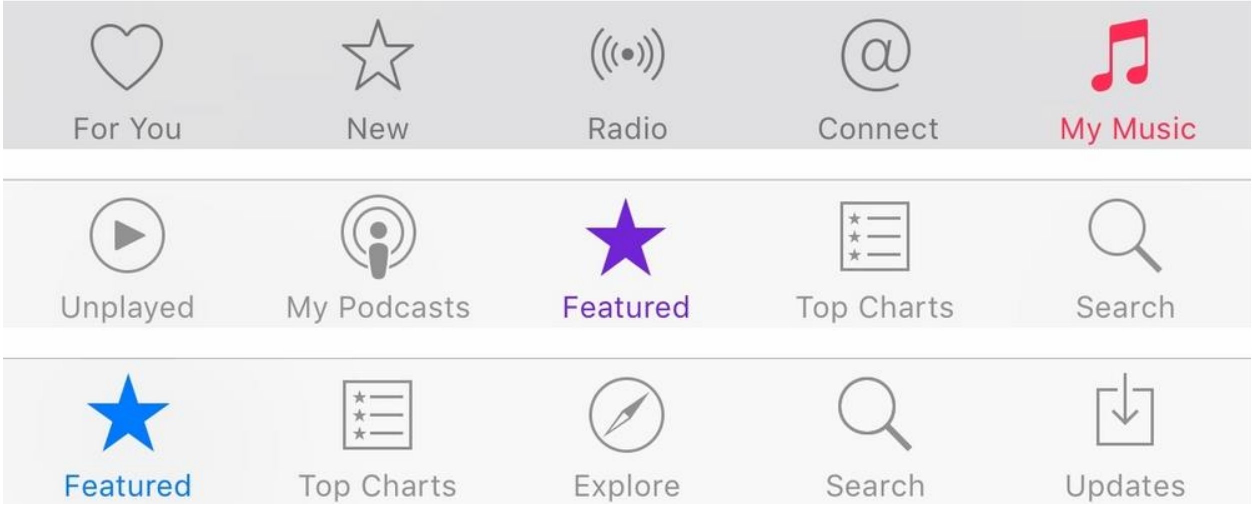
Wallpaper

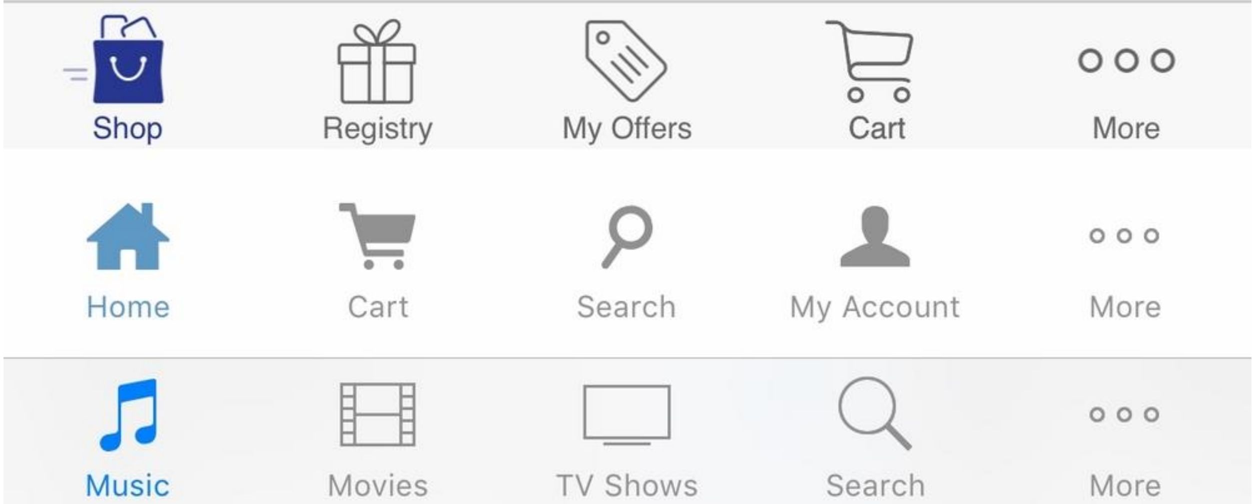
Sounds & Haptics

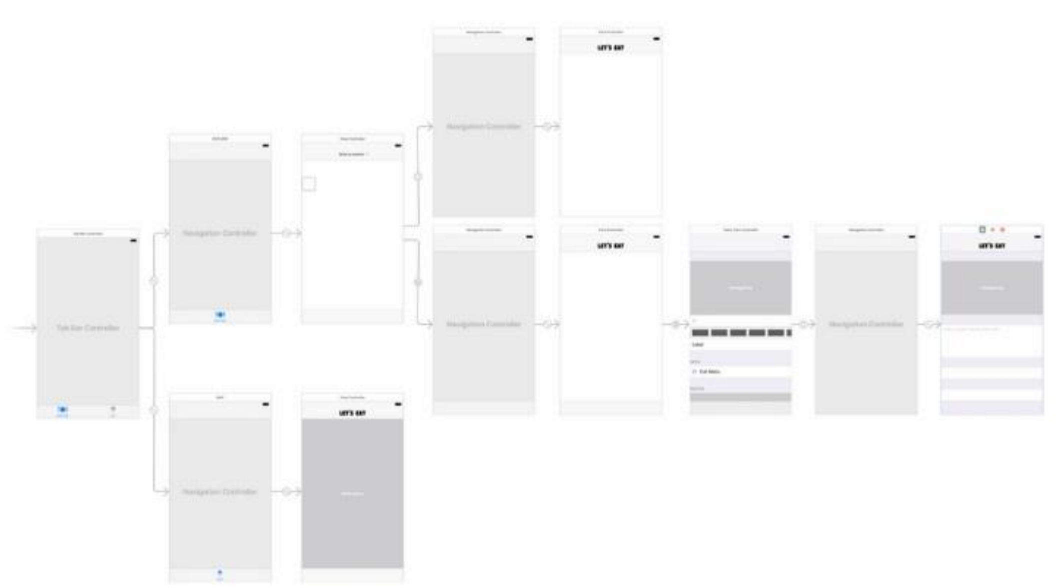
Siri

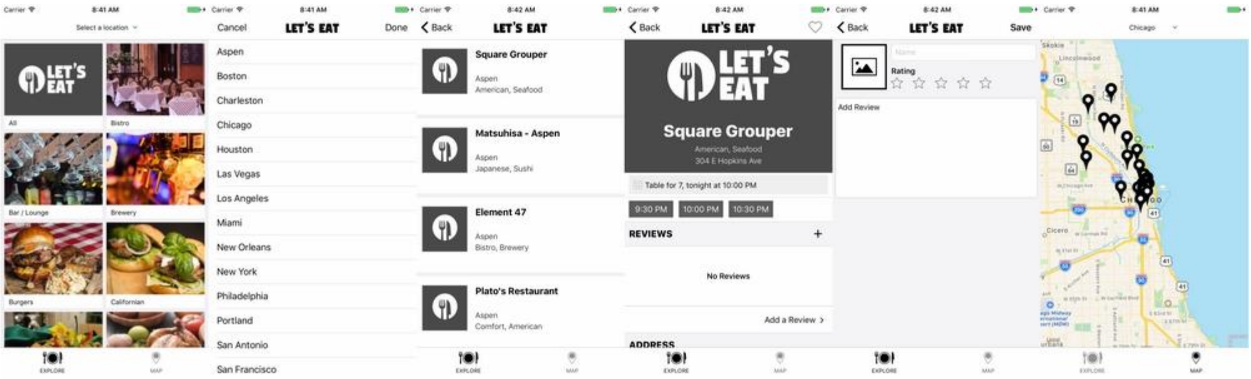


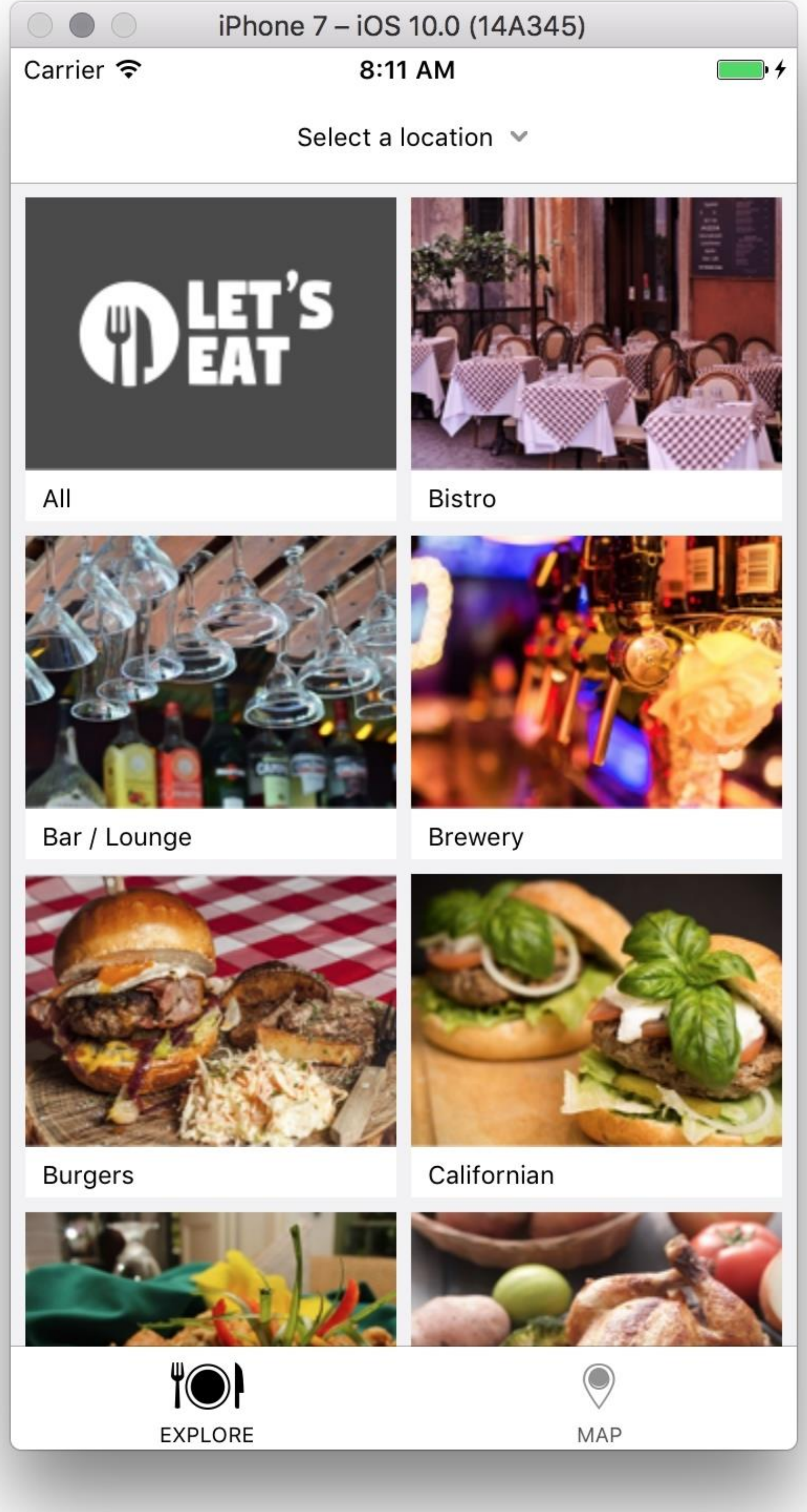
GarageBand turns your iPad, iPhone, and iPod touch into a collection of Touch Instruments and a full-featured recording studio — so you can make music anywhere you go. And now Live Loops makes it easy for anyone to have fun creating music like a DJ, by triggering loops and audio effects in real time. Use Multi-Tou... more

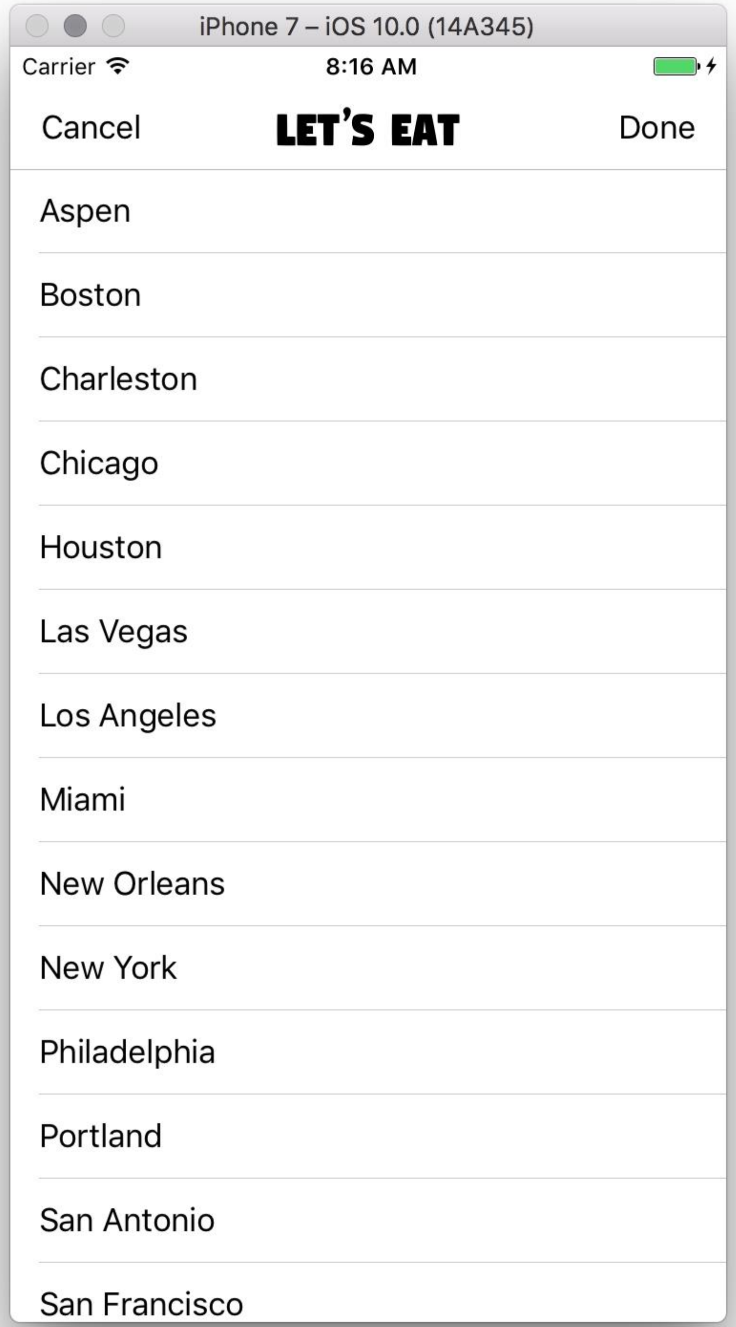







Carrier
8:41 AM
Select a location
LET'S EAT
All
Bistro
Bar / Lounge
Brewery
Burgers
Californian
EXPLORE
MAP
Cancel
LET'S EAT
Done
Aspen
Boston
Charleston
Chicago
Houston
Las Vegas
Los Angeles
Miami
New Orleans
New York
Philadelphia
Portland
San Antonio
San Francisco
8:42 AM
Back
Square Grouper
Aspen
American, Seafood
Matsuhisa - Aspen
Aspen
Japanese, Sushi
Element 47
Aspen
Bistro, Brewery
Plato's Restaurant
Aspen
Comfort, American
Square Grouper
American, Seafood
304 E Hopkins Ave
Table for 7, tonight at 10:00 PM
9:30 PM
10:00 PM
10:30 PM
REVIEWS
+
No Reviews
Add a Review
ADDRESS
Save
Name
Rating
Add Review
Chicago


iPhone 7 – iOS 10.0 (14A345)
Carrier
8:11 AM
Select a location
LET'S EAT
All
Bistro
Bar / Lounge
Brewery
Burgers
Californian
EXPLORE
MAP



Aspen

Boston

Charleston

Chicago

Houston

Las Vegas

Los Angeles

Miami

New Orleans

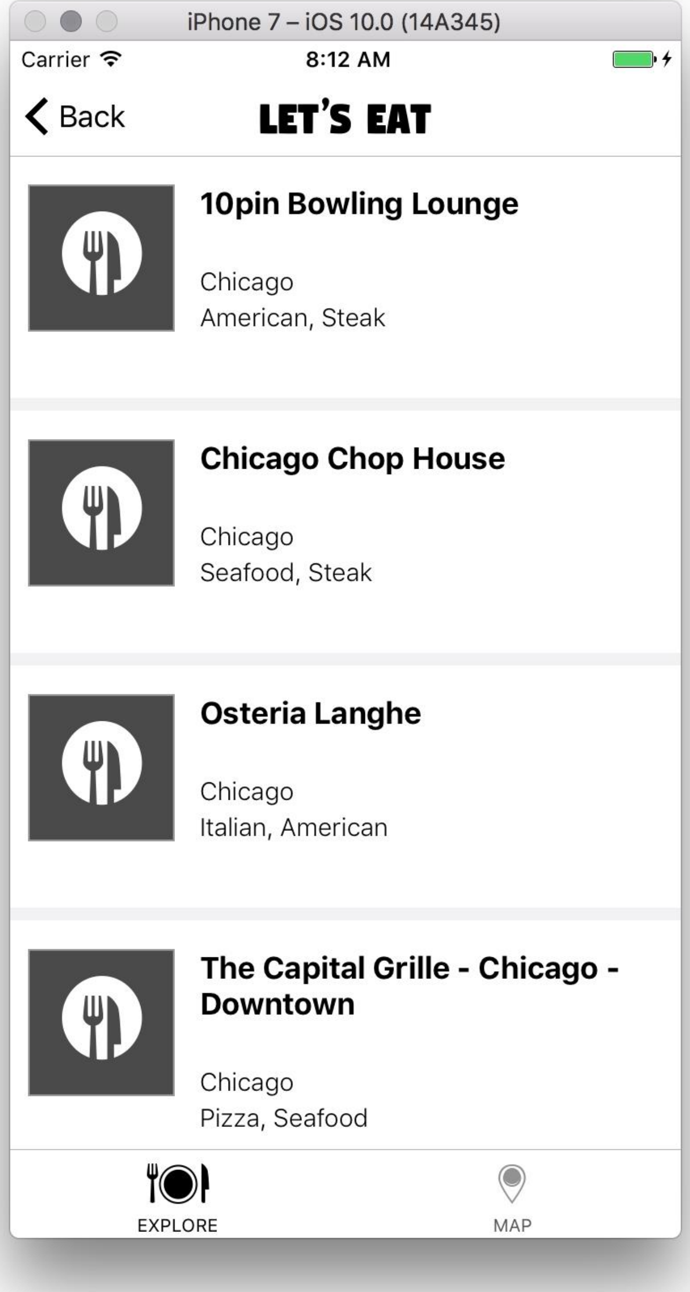
New York

Philadelphia

Portland

San Antonio

San Francisco



LET'S EAT

10pin Bowling Lounge

Chicago
American, Steak

Chicago Chop House

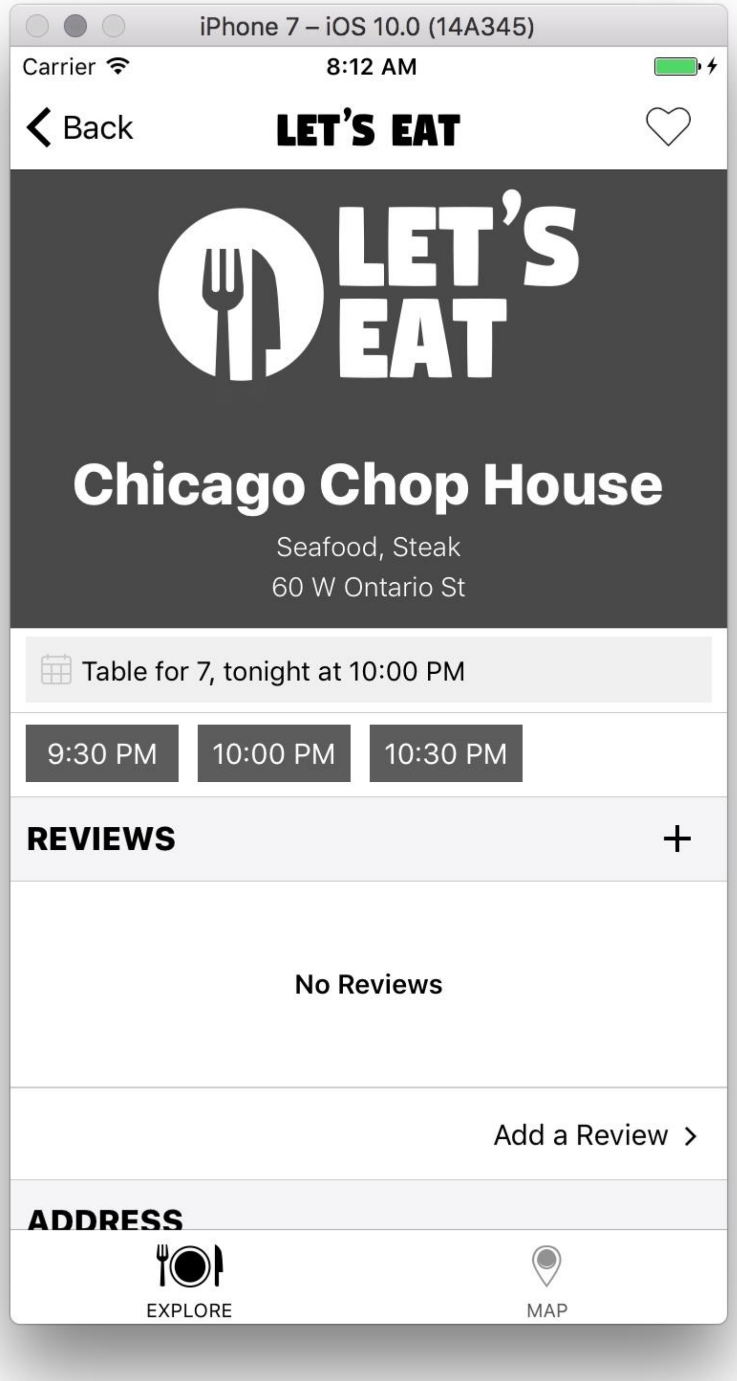
Chicago
Seafood, Steak

Osteria Langhe

Chicago
Italian, American

The Capital Grille - Chicago - Downtown

Chicago
Pizza, Seafood



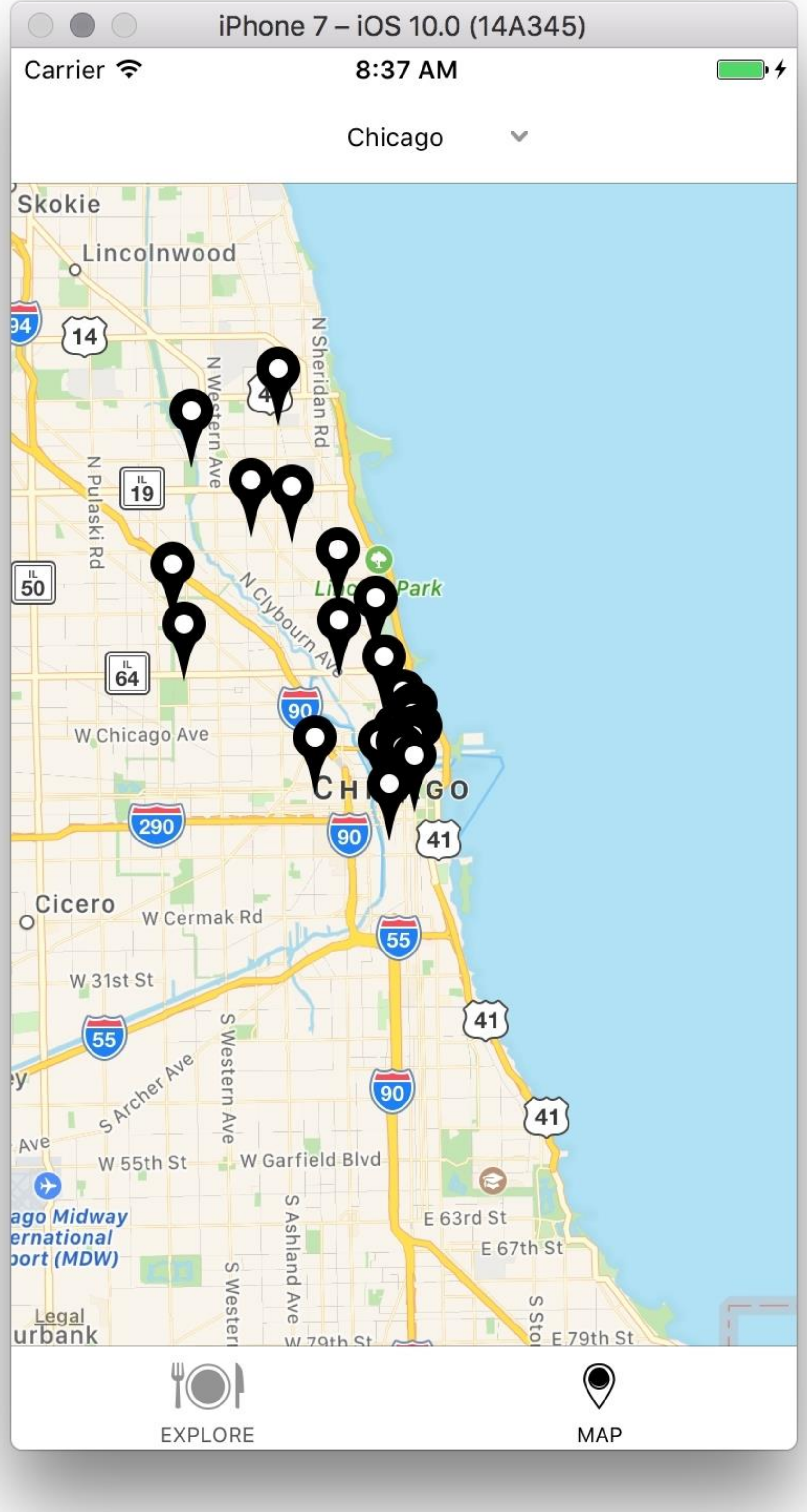
Chicago Chop House

Seafood, Steak

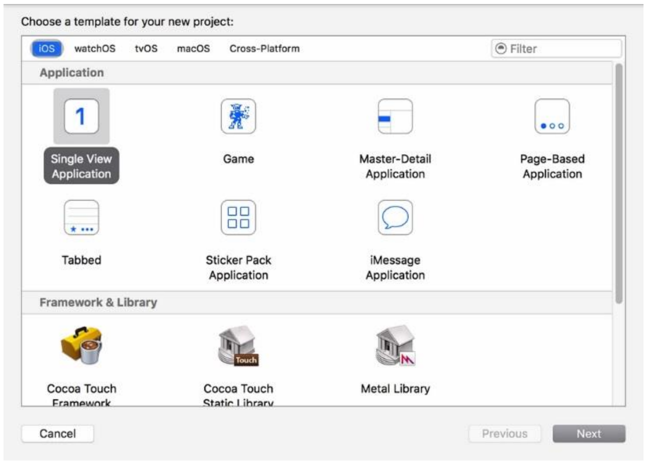
60 W Ontario St

Table for 7, tonight at 10:00 PM

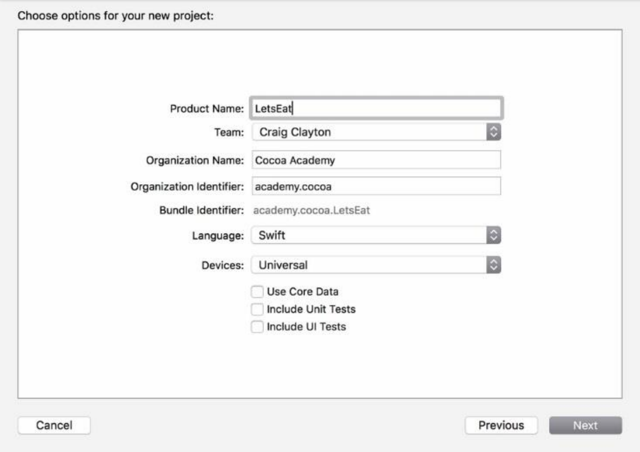
No Reviews



iPhone 7 – iOS 10.0 (14A345)
Carrier
8:37 AM
Chicago
Skokie
Lincolnwood
94
14
N Sheridan Rd
N Western Ave
N Pulaski Rd
19
50
Lincoln Park
N Clybourn Ave
64
90
W Chicago Ave
CHICAGO
290
90
41
Cicero
W Cermak Rd
55
W 31st St
55
S Archer Ave
S Western Ave
41
90
41
W 55th St
W Garfield Blvd
ago Midway
ernational
port (MDW)
S Ashland Ave
E 63rd St
E 67th St
S Western
Legal
urbank
W 79th St
E 79th St
EXPLORE
MAP



Choose a template for your new project:



Choose options for your new project:

Product Name: LetsEat

Team: Craig Clayton

Organization Name: Cocoa Academy

Organization Identifier: academy.cocoa

Bundle Identifier: academy.cocoa.LetsEat

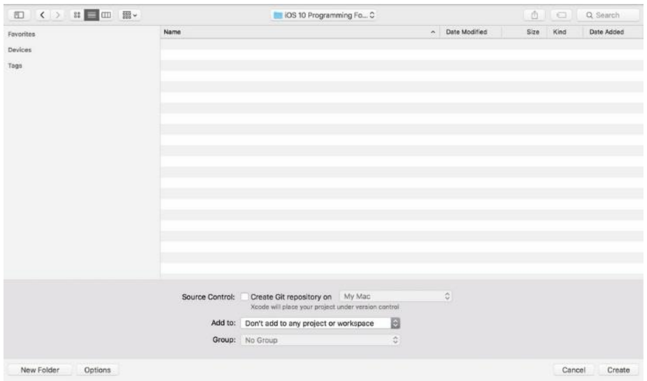
Language: Swift

Devices: Universal

□ Use Core Data

□ Include Unit Tests

□ Include UI Tests

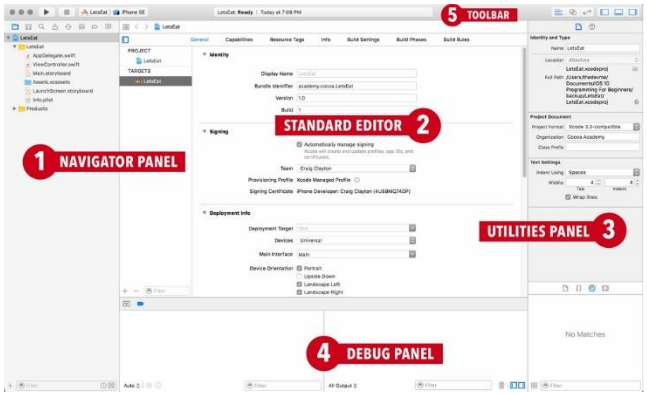


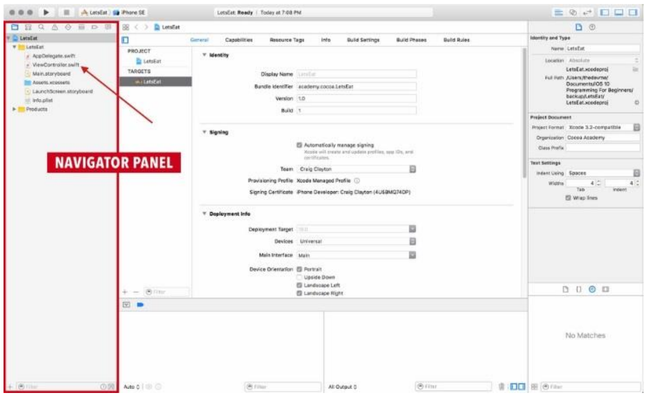
Source Control: □ Create Git repository on My Mac

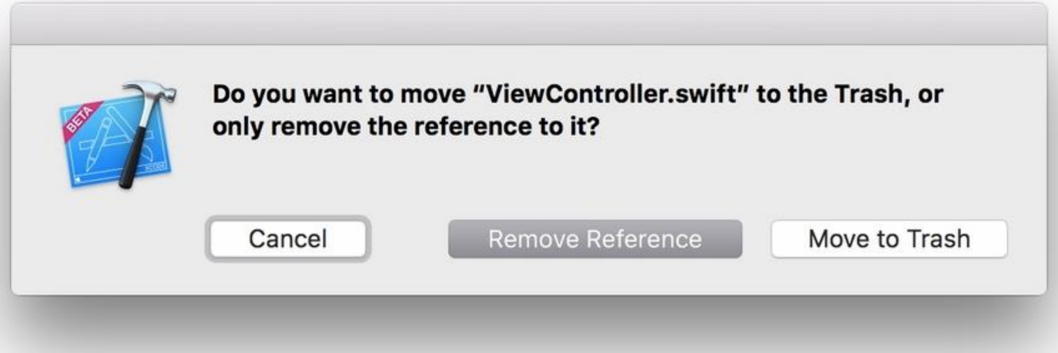
Xcode will place your project under version control

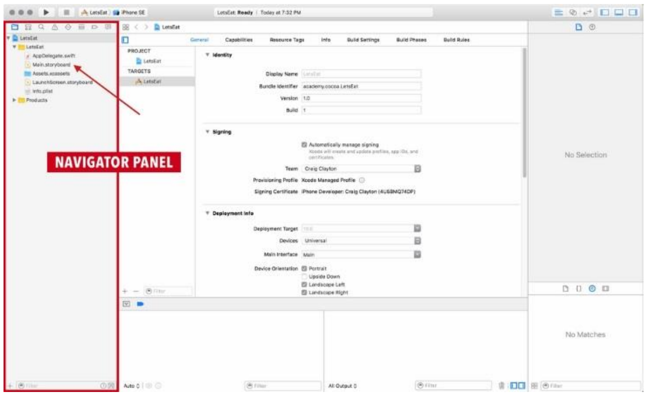
Add to: Don't add to any project or workspace

Group: No Group






Do you want to move "ViewController.swift" to the Trash, or only remove the reference to it?



General | Capabilities | Resource Tags | Info | Build Settings | Build Phases | Build Rules

▼ Identity

Display Name: LetsEat
Bundle Identifier: academy.cocoa.LetsEat
Version: 1.0
Build: 1

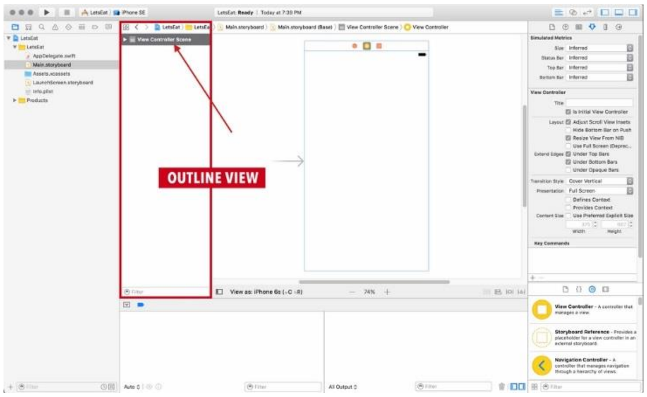
▼ Signing

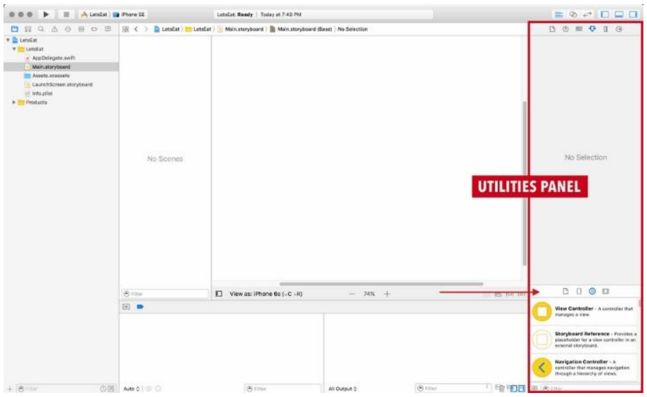
☑ Automatically manage signing
Xcode will create and update profiles, app IDs, and certificates.

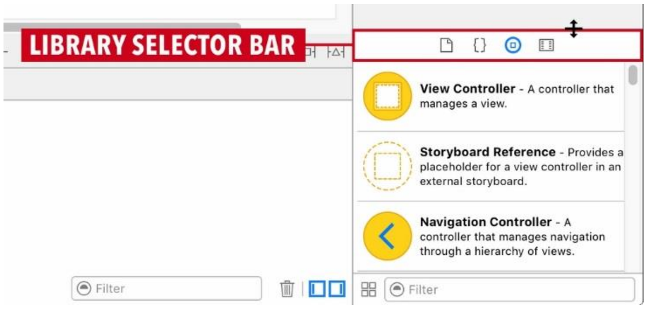
Team: Craig Clayton
Provisioning Profile: Xcode Managed Profile
Signing Certificate: iPhone Developer: Craig Clayton (4USBMQ74DP)

▼ Deployment Info

Deployment Target: 10.0
Devices: Universal
Main Interface: Main
Device Orientation: ☑ Portrait
□ Upside Down
☑ Landscape Left
☑ Landscape Right



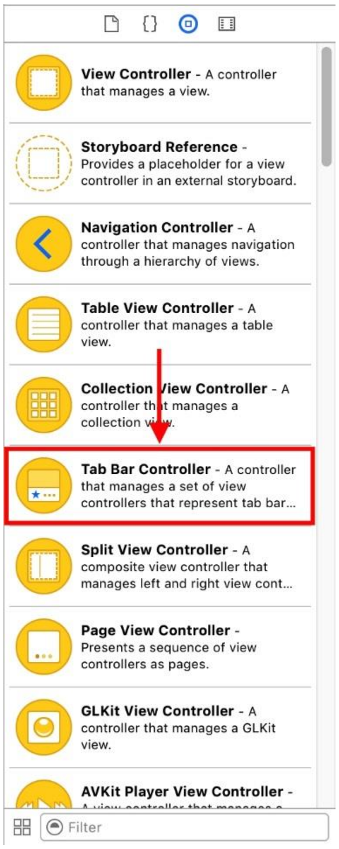




View Controller - A controller that manages a view.

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.



View Controller - A controller that manages a view.

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

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

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

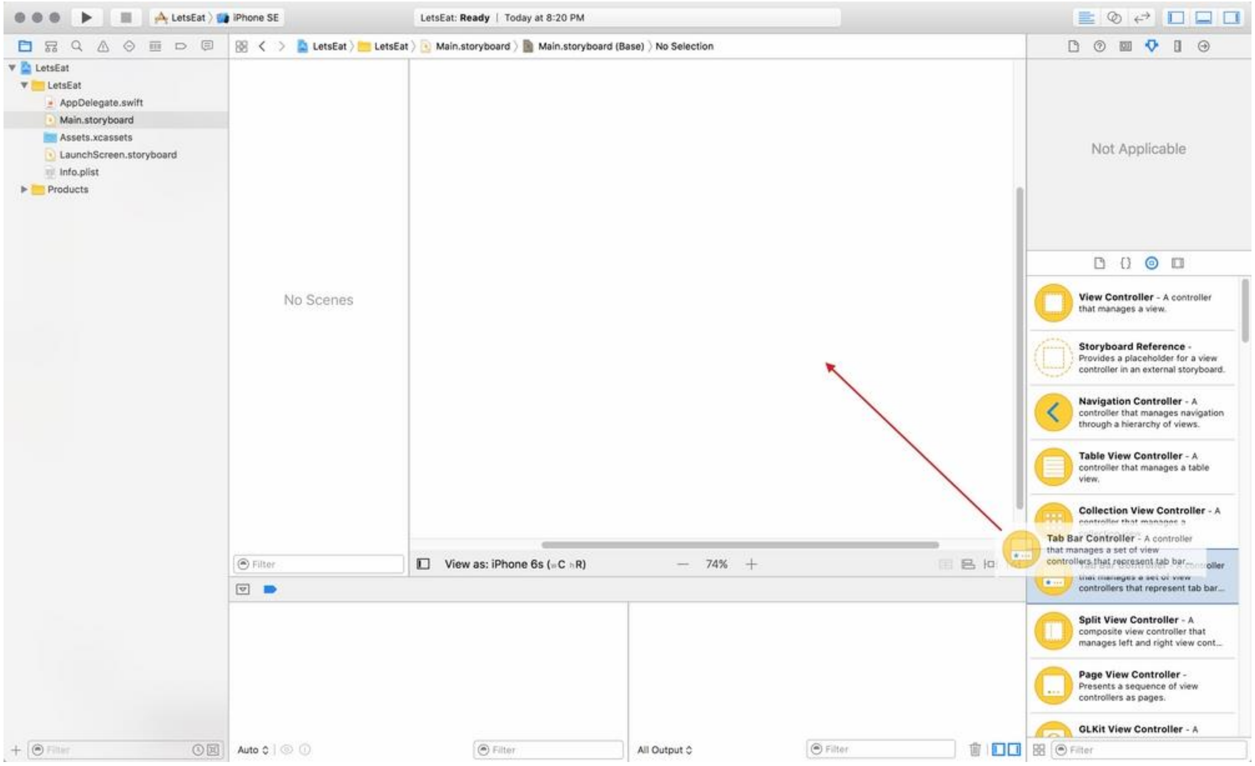
Tab Bar Controller - A controller that manages a set of view controllers that represent tab bar…

Split View Controller - A composite view controller that manages left and right view cont…

Page View Controller - Presents a sequence of view controllers as pages.

GLKit View Controller - A controller that manages a GLKit view.

AVKit Player View Controller -
A view controller that manages a



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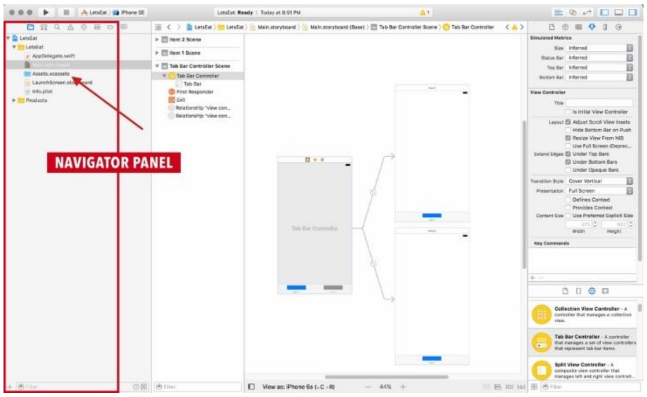
Collection View Controller - A controller that manages a

Tab Bar Controller - A controller that manages a set of view controllers that represent tab bar...

Split View Controller - A composite view controller that manages left and right view cont...

Page View Controller - Presents a sequence of view controllers as pages.

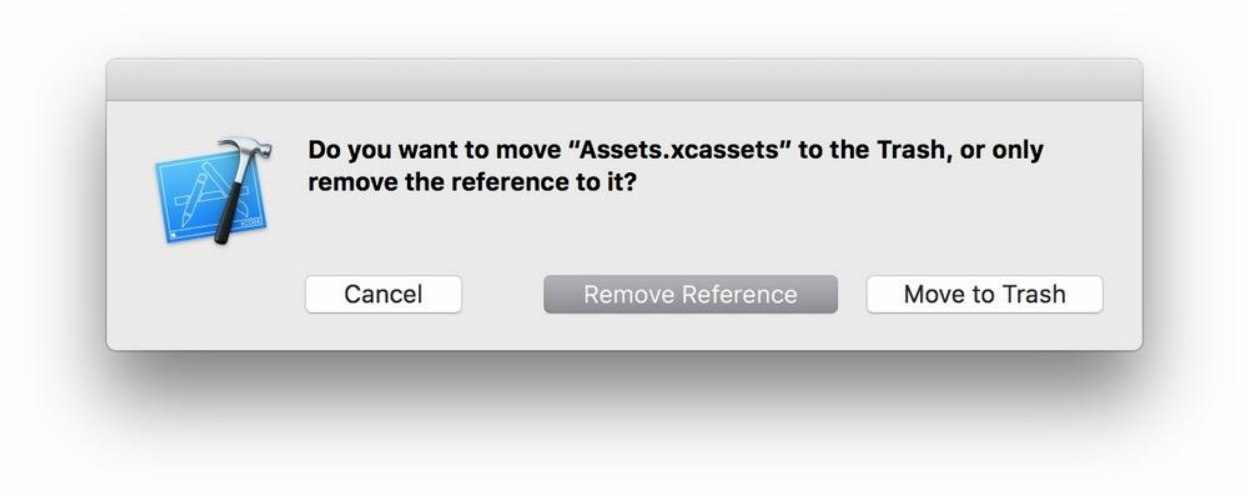
GLKit View Controller - A



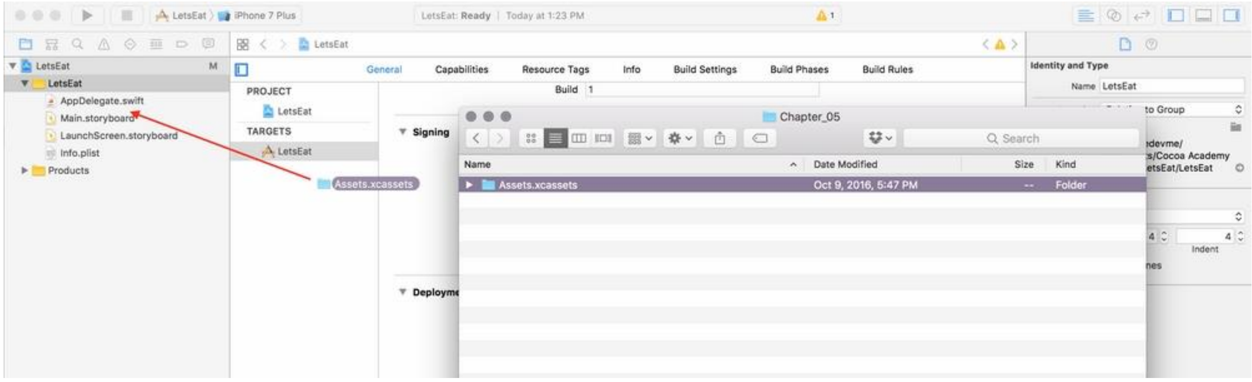
Collection View Controller - A controller that manages a collection view.

Tab Bar Controller - A controller that manages a set of view controllers that represent tab bar items.

Split View Controller - A composite view controller that manages left and right view controll...



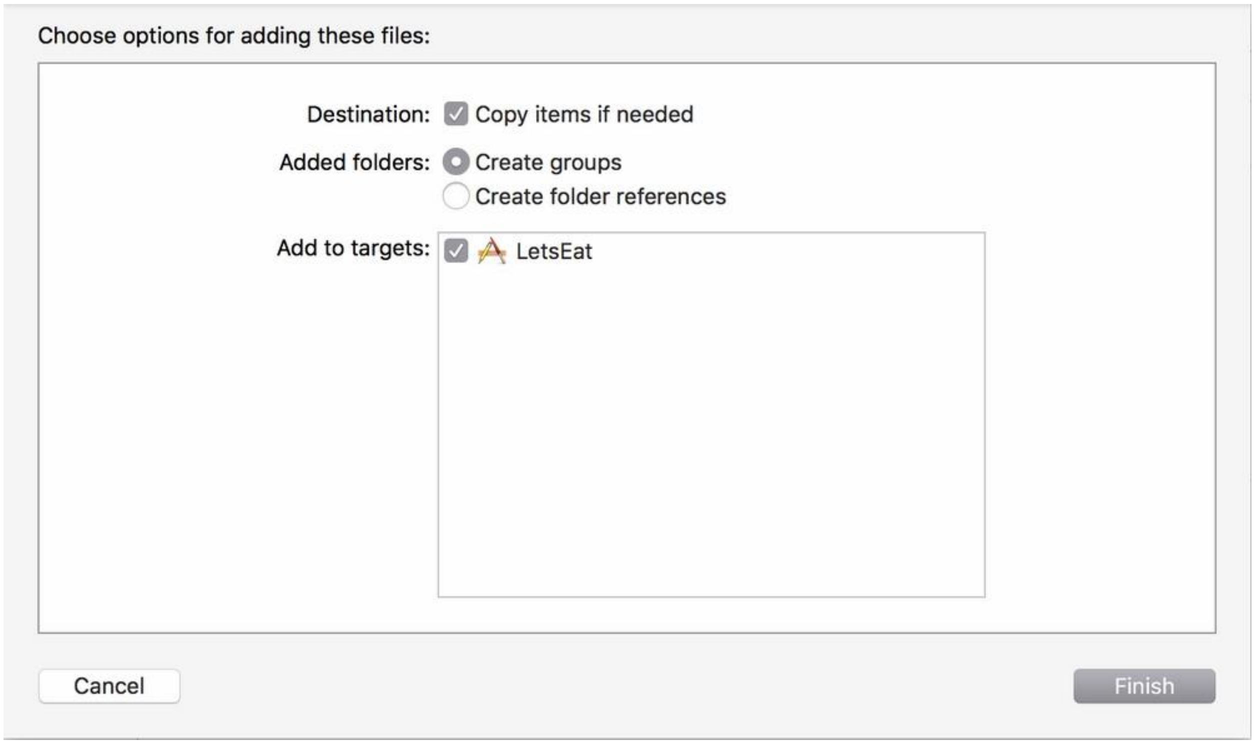
Do you want to move "Assets.xcassets" to the Trash, or only remove the reference to it?



Name LetsEat

Build 1

Name	Date Modified	Size	Kind
Assets.xcassets	Oct 9, 2016, 5:47 PM	--	Folder



Choose options for adding these files:

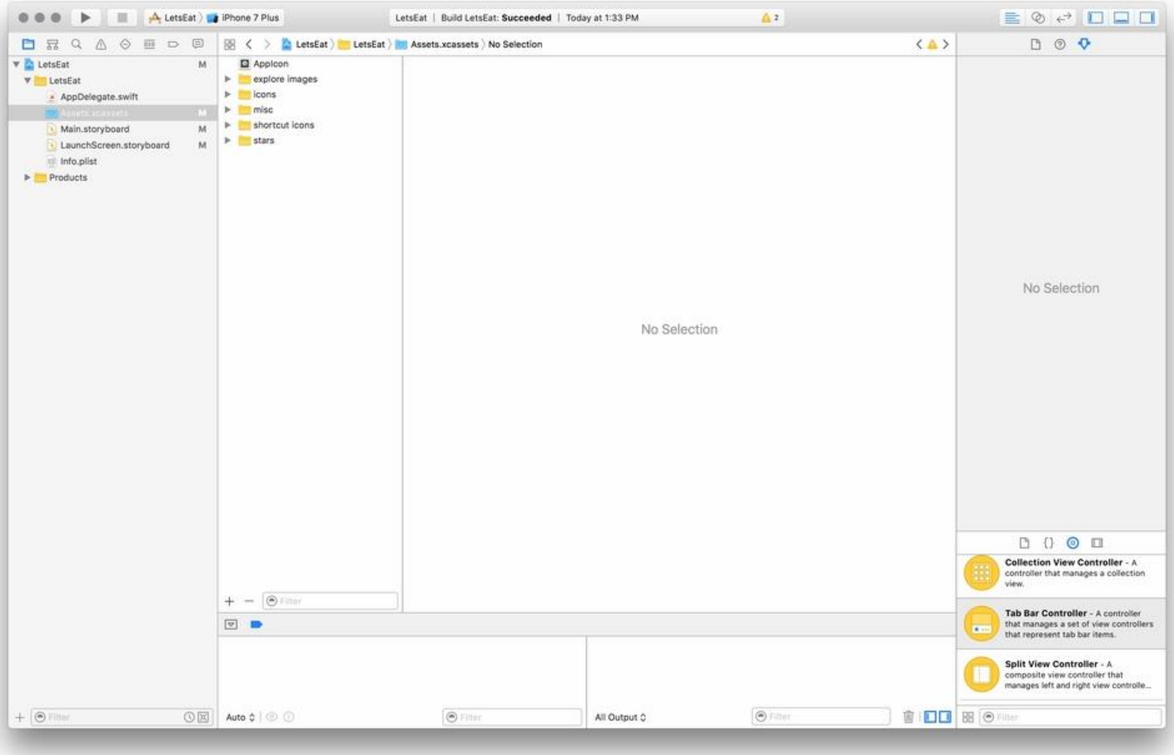
Destination: ☑ Copy items if needed

Added folders: ● Create groups
○ Create folder references

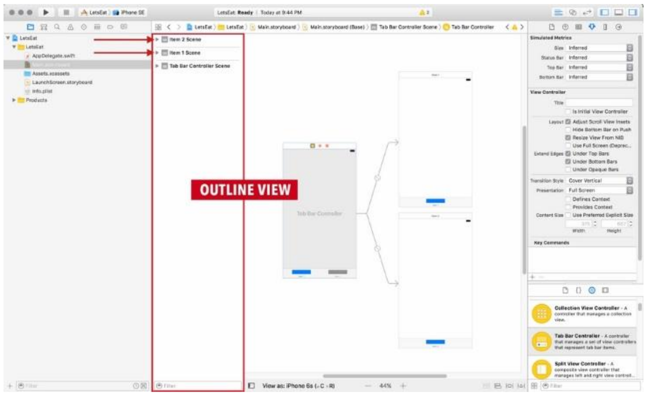
Add to targets: ☑ LetsEat

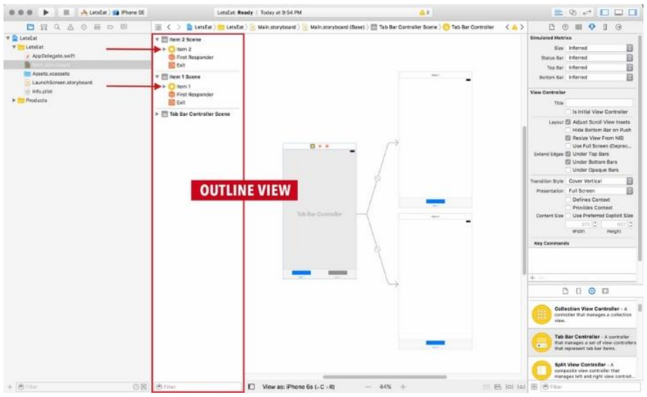
Cancel

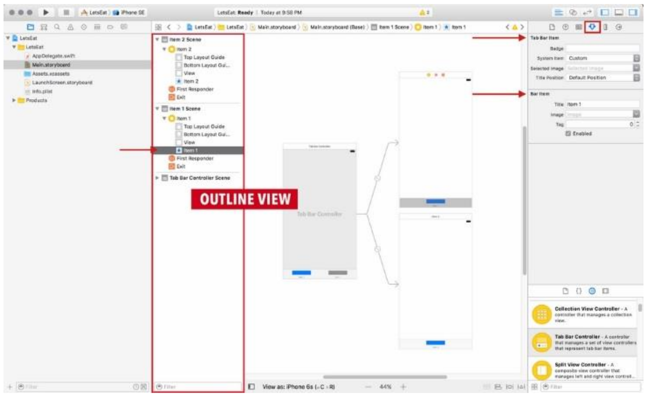
Finish

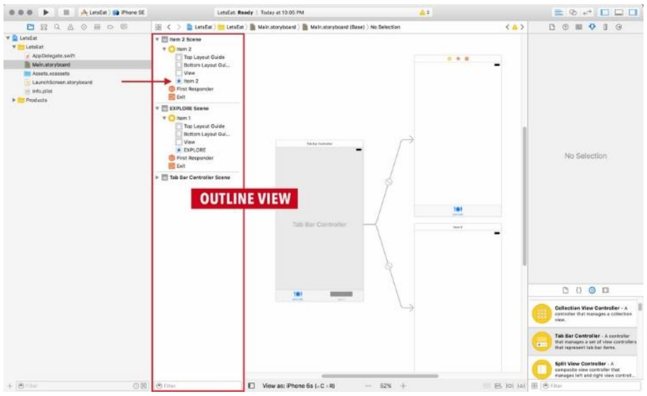


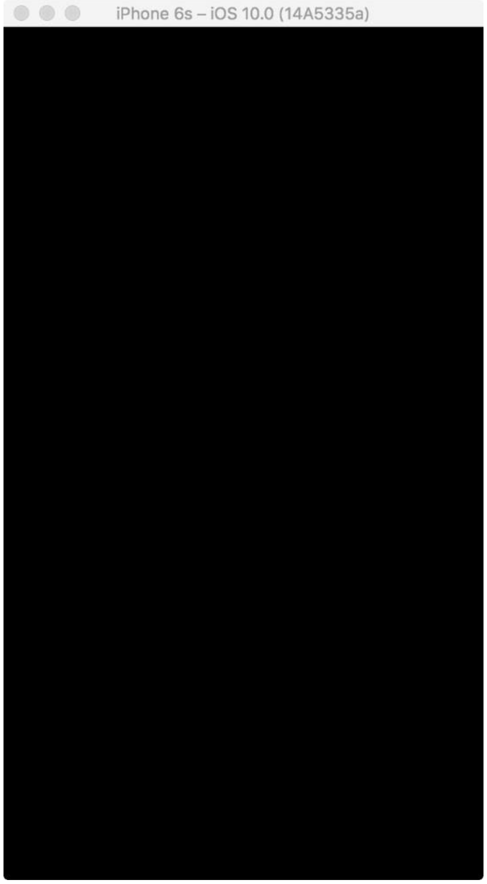
LetsEat
iPhone 7 Plus
LetsEat | Build LetsEat: Succeeded | Today at 1:33 PM
LetsEat
LetsEat
AppDelegate.swift
Assets.xcassets
Main.storyboard
LaunchScreen.storyboard
Info.plist
Products
LetsEat 〉 LetsEat 〉 Assets.xcassets 〉 No Selection
AppIcon
explore images
icons
misc
shortcut icons
stars
No Selection
No Selection
Collection View Controller - A controller that manages a collection view.
Tab Bar Controller - A controller that manages a set of view controllers that represent tab bar items.
Split View Controller - A composite view controller that manages left and right view controlle...
Filter
Auto
All Output

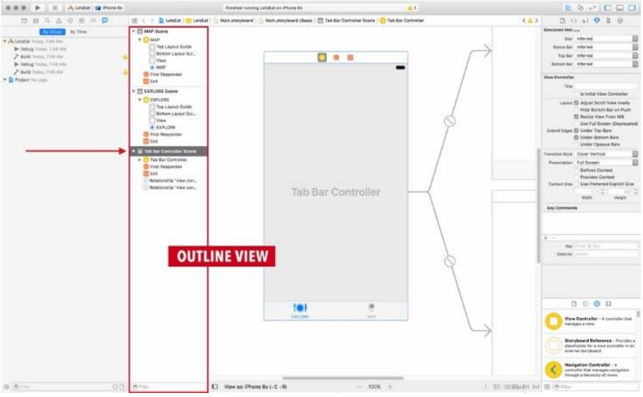

OUTLINE VIEW
Item 2 Scene
Item 1 Scene
Tab Bar Controller Scene


OUTLINE VIEW
Item 2 Scene
Item 2
First Responder
Exit
Item 1 Scene
Item 1
First Responder
Exit
Tab Bar Controller Scene

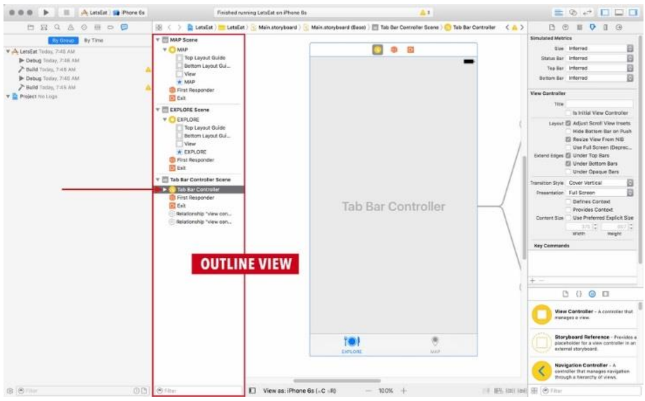

OUTLINE VIEW
Item 2 Scene
Item 2
Top Layout Guide
Bottom Layout Gui...
View
Item 2
First Responder
Exit
Item 1 Scene
Item 1
Top Layout Guide
Bottom Layout Gui...
View
Item 1
First Responder
Exit
Tab Bar Controller Scene
Tab Bar Item
Bar Item


LetsEat
iPhone SE
LetsEat: Ready | Today at 10:05 PM
LetsEat
LetsEat
AppDelegate.swift
Main.storyboard
Assets.xcassets
LaunchScreen.storyboard
Info.plist
Products
LetsEat > LetsEat > Main.storyboard > Main.storyboard (Base) > No Selection
Item 2 Scene
Item 2
Top Layout Guide
Bottom Layout Gui...
View
Item 2
First Responder
Exit
EXPLORE Scene
Item 1
Top Layout Guide
Bottom Layout Gui...
View
EXPLORE
First Responder
Exit
Tab Bar Controller Scene
OUTLINE VIEW
Tab Bar Controller
No Selection
Collection View Controller - A controller that manages a collection view.
Tab Bar Controller - A controller that manages a set of view controllers that represent tab bar items.
Split View Controller - A composite view controller that manages left and right view controll...
View as: iPhone 6s (wC hR)
52%
Filter

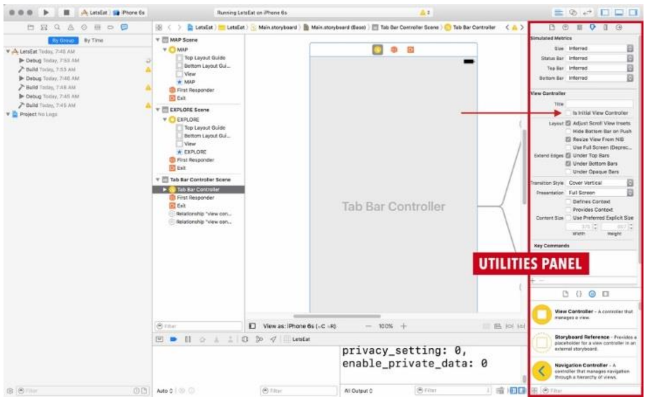

iPhone 6s – iOS 10.0 (14A5335a)



OUTLINE VIEW

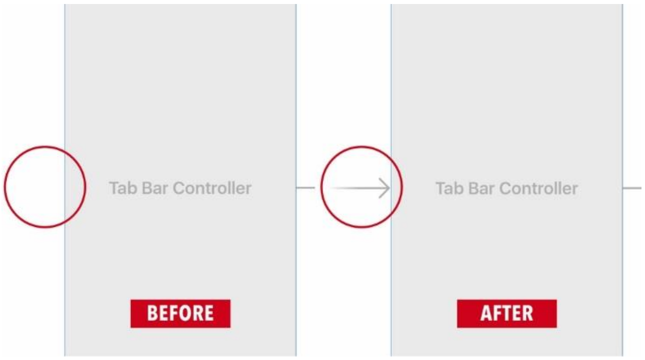


OUTLINE VIEW

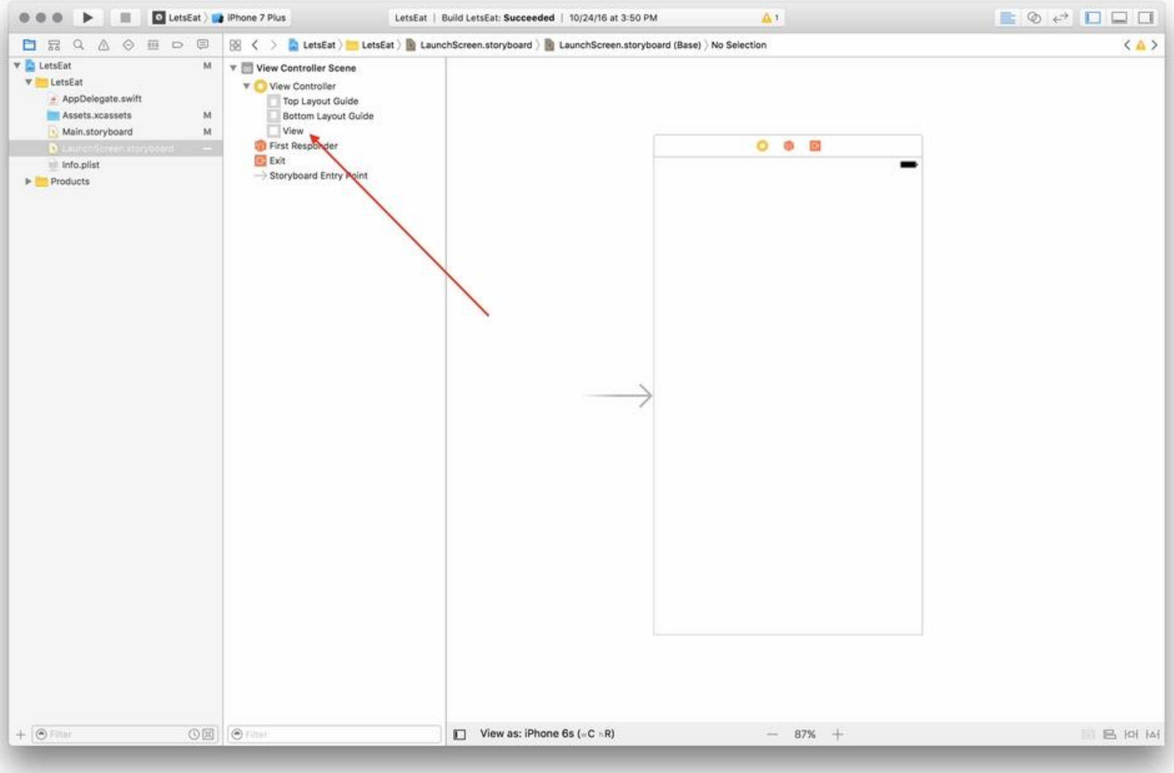


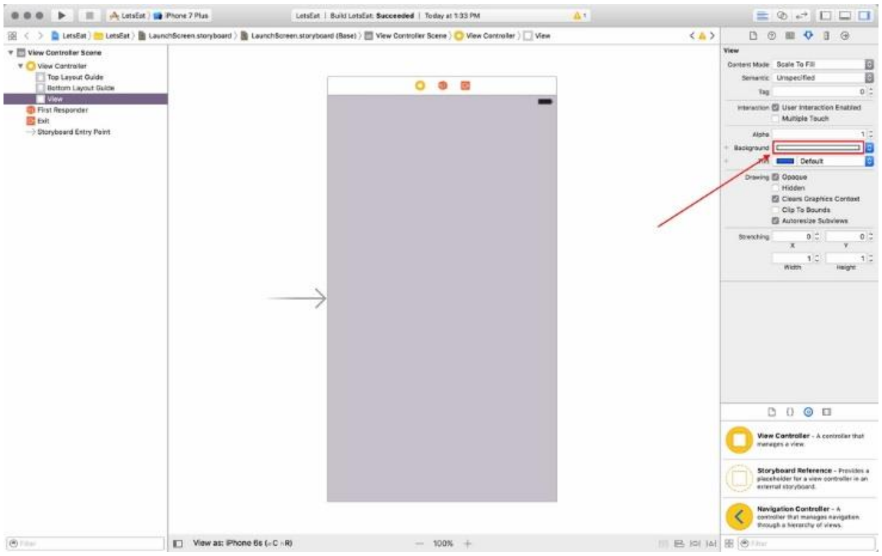
```
privacy_setting: 0,
enable_private_data: 0
```

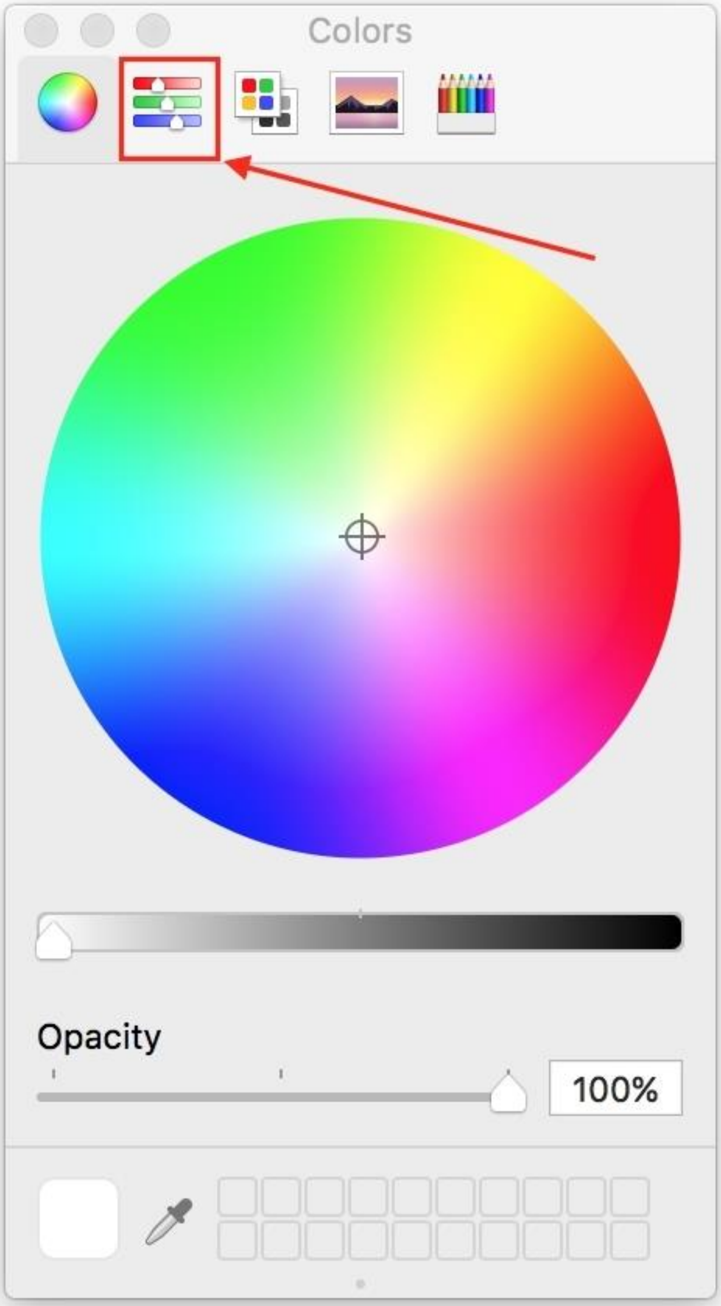
UTILITIES PANEL

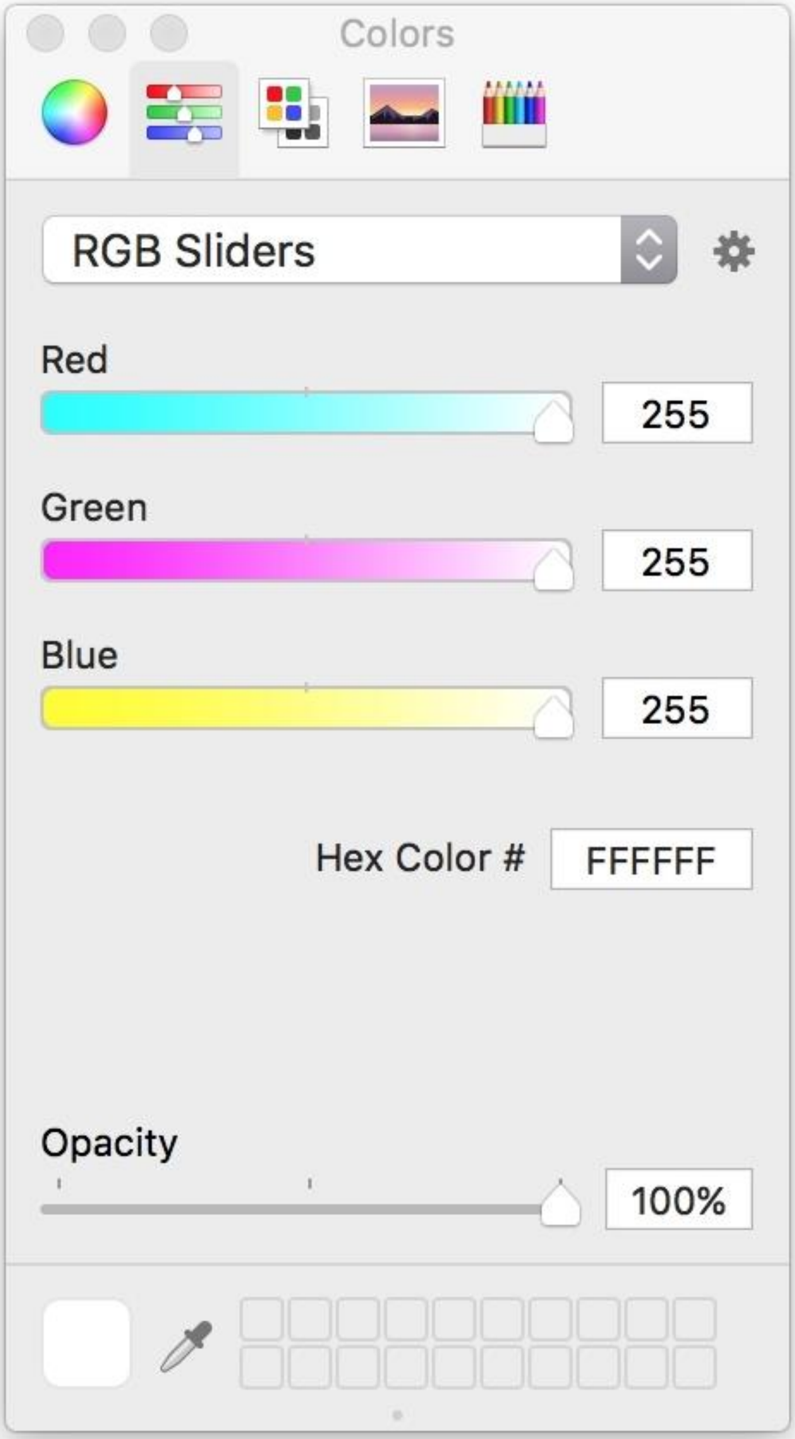

Tab Bar Controller
BEFORE
Tab Bar Controller
AFTER

iPhone 6s – iOS 10.0 (14A5339a)
Carrier
7:53 AM
EXPLORE
MAP


LetsEat 〉 iPhone 7 Plus
LetsEat | Build LetsEat: Succeeded | 10/24/16 at 3:50 PM
LetsEat 〉 LetsEat 〉 LaunchScreen.storyboard 〉 LaunchScreen.storyboard (Base) 〉 No Selection
LetsEat
LetsEat
AppDelegate.swift
Assets.xcassets
Main.storyboard
LaunchScreen.storyboard
Info.plist
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)
87%


LetsEat 〉 iPhone 7 Plus
LetsEat | Build LetsEat: Succeeded | Today at 1:33 PM
LetsEat 〉 LetsEat 〉 LaunchScreen.storyboard 〉 LaunchScreen.storyboard (Base) 〉 View Controller Scene 〉 View Controller 〉 View
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
First Responder
Exit
Storyboard Entry Point
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 0 0
X Y
1 1
Width 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.
View as: iPhone 6s (wC hR)
100%


Colors
Opacity
100%



RGB Sliders

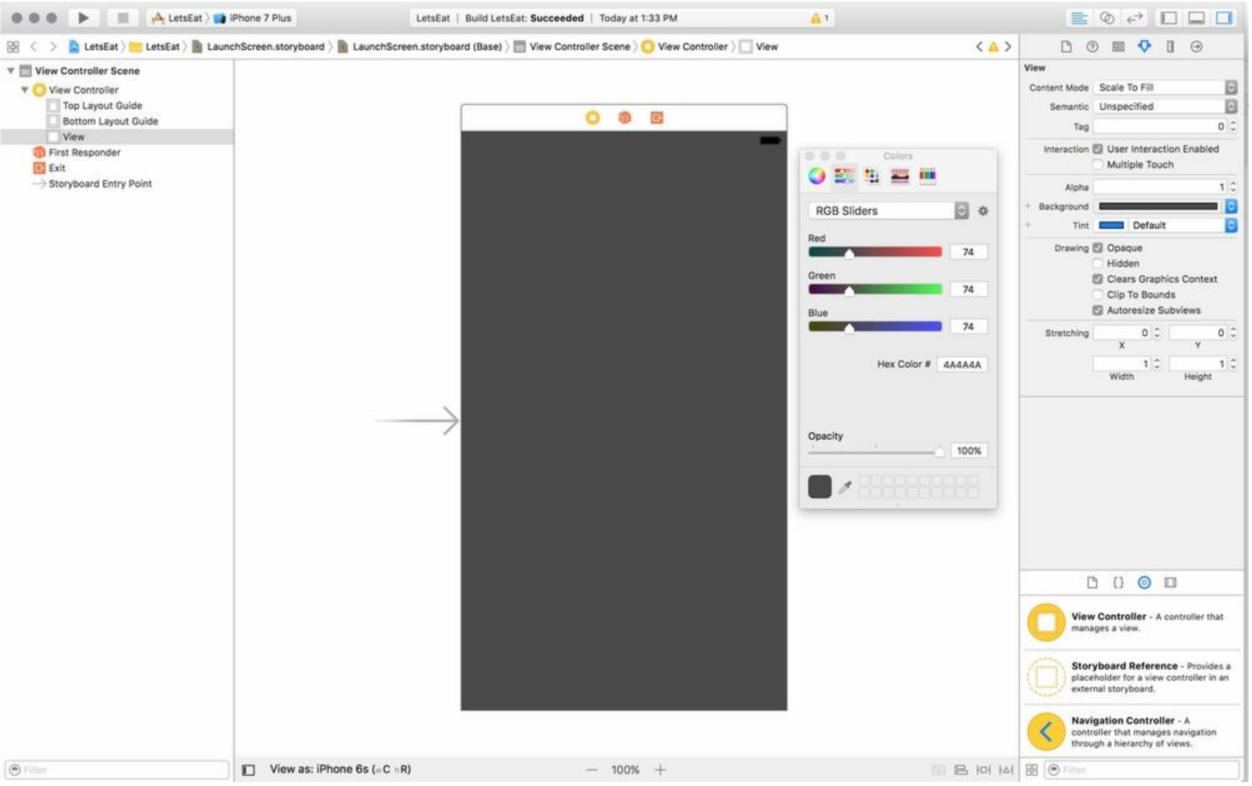
Red 255

Green 255

Blue 255

Hex Color # FFFFFF

Opacity 100%


LetsEat 〉 iPhone 7 Plus
LetsEat | Build LetsEat: Succeeded | Today at 1:33 PM
⚠ 1
LetsEat 〉 LetsEat 〉 LaunchScreen.storyboard 〉 LaunchScreen.storyboard (Base) 〉 View Controller Scene 〉 View Controller 〉 View
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
First Responder
Exit
Storyboard Entry Point
Colors
RGB Sliders
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.
View as: iPhone 6s (wC hR)
100%
Filter
Filter

Red 74

Green 74

Blue 74

Hex Color # 4A4A4A

Opacity 100%

View

Content Mode Scale To Fill

Semantic Unspecified

Tag 0

Interaction ☑ User Interaction Enabled
□ Multiple Touch

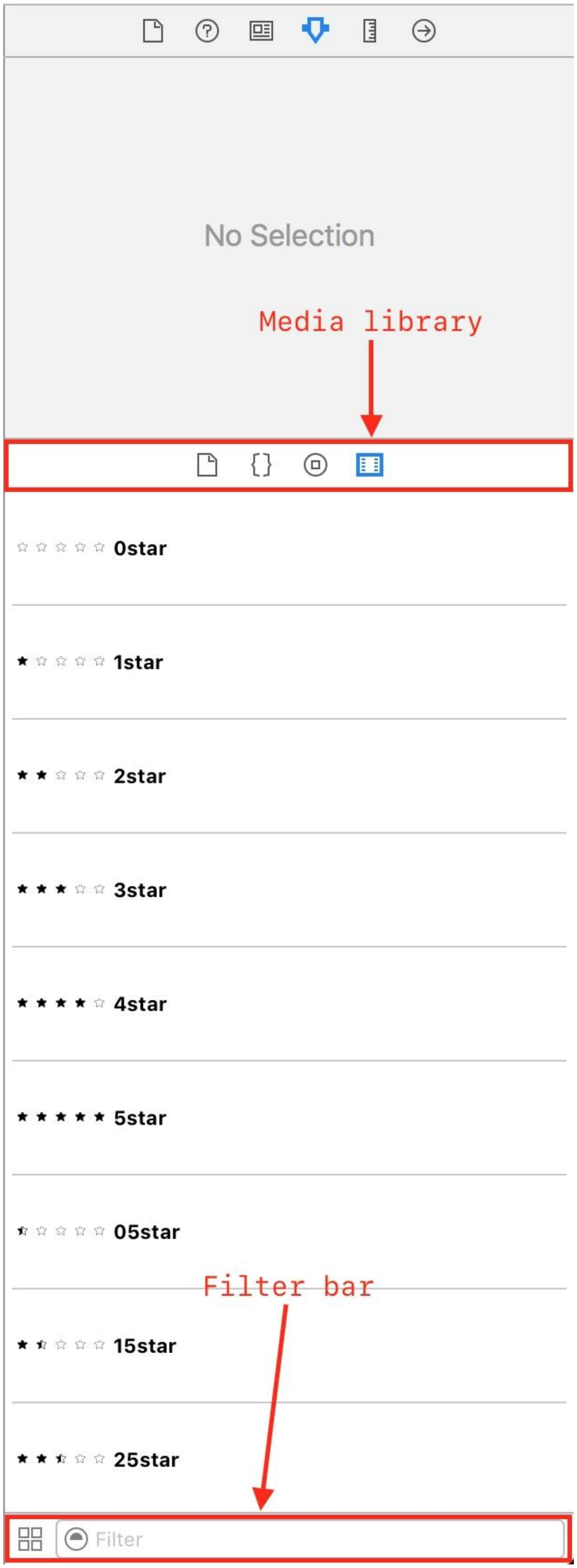
Alpha 1

Background

Tint Default

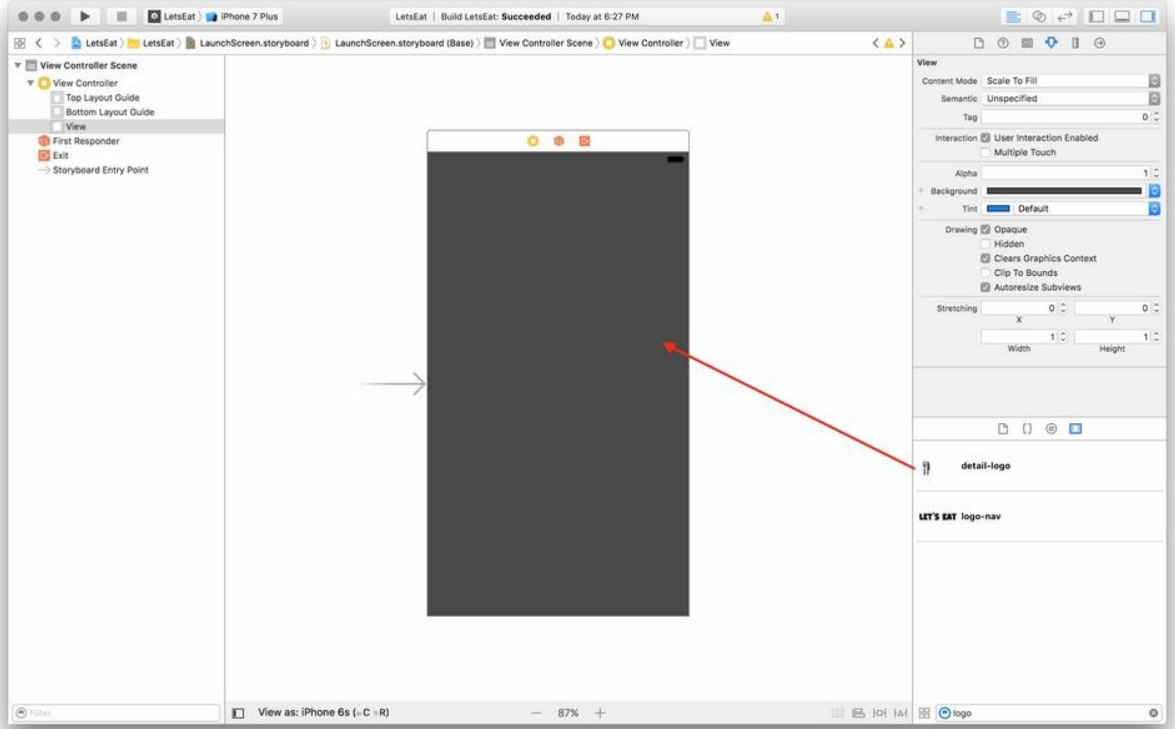
Drawing ☑ Opaque
□ Hidden
☑ Clears Graphics Context
□ Clip To Bounds
☑ Autoresize Subviews

Stretching 0 X 0 Y
1 Width 1 Height



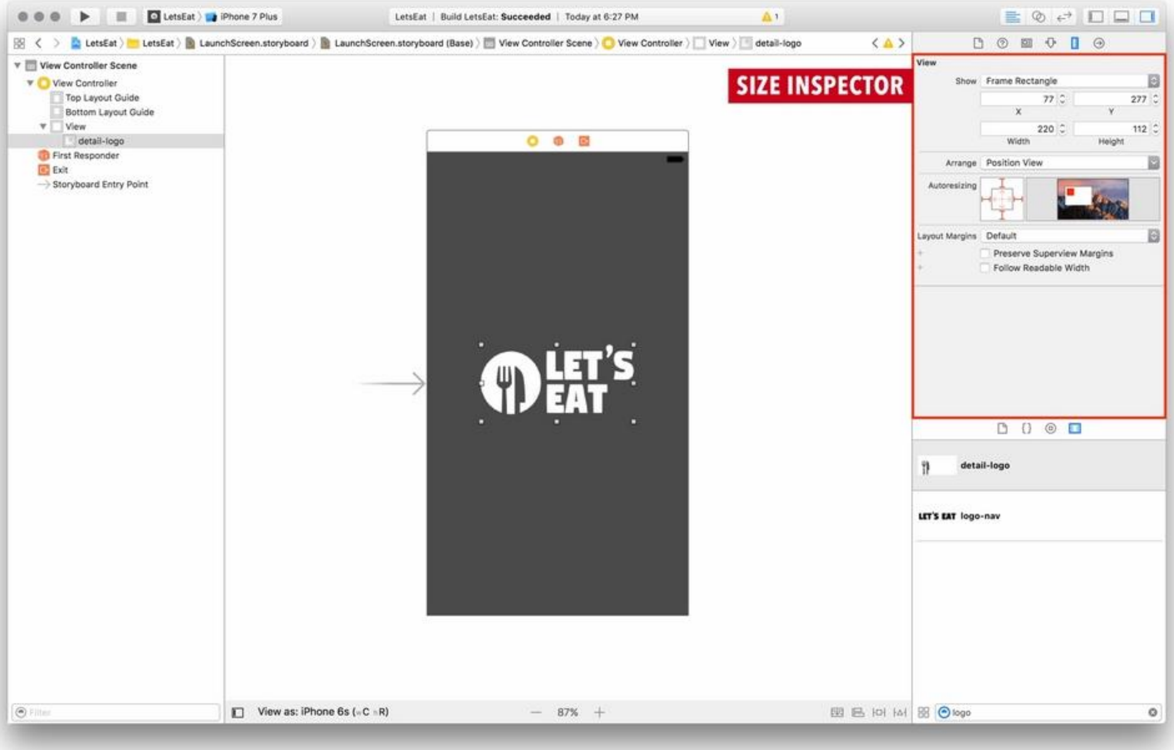
Media library

Filter bar


LetsEat 〉 iPhone 7 Plus
LetsEat | Build LetsEat: **Succeeded** | Today at 6:27 PM
⚠ 1
LetsEat 〉 LetsEat 〉 LaunchScreen.storyboard 〉 LaunchScreen.storyboard (Base) 〉 View Controller Scene 〉 View Controller 〉 View
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
First Responder
Exit
Storyboard Entry Point
Filter
View as: iPhone 6s (wC hR)
87%
detail-logo
LET'S EAT logo-nav
logo

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



SIZE INSPECTOR
LetsEat | Build LetsEat: Succeeded | Today at 6:27 PM
LetsEat 〉 LetsEat 〉 LaunchScreen.storyboard 〉 LaunchScreen.storyboard (Base) 〉 View Controller Scene 〉 View Controller 〉 View 〉 detail-logo
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
detail-logo
First Responder
Exit
Storyboard Entry Point
View as: iPhone 6s (wC hR)
87%
detail-logo
LET'S EAT logo-nav

View

Show: Frame Rectangle

X: 77 Y: 277

Width: 220 Height: 112

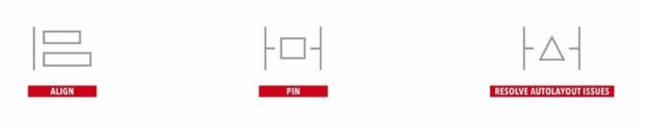
Arrange: Position View

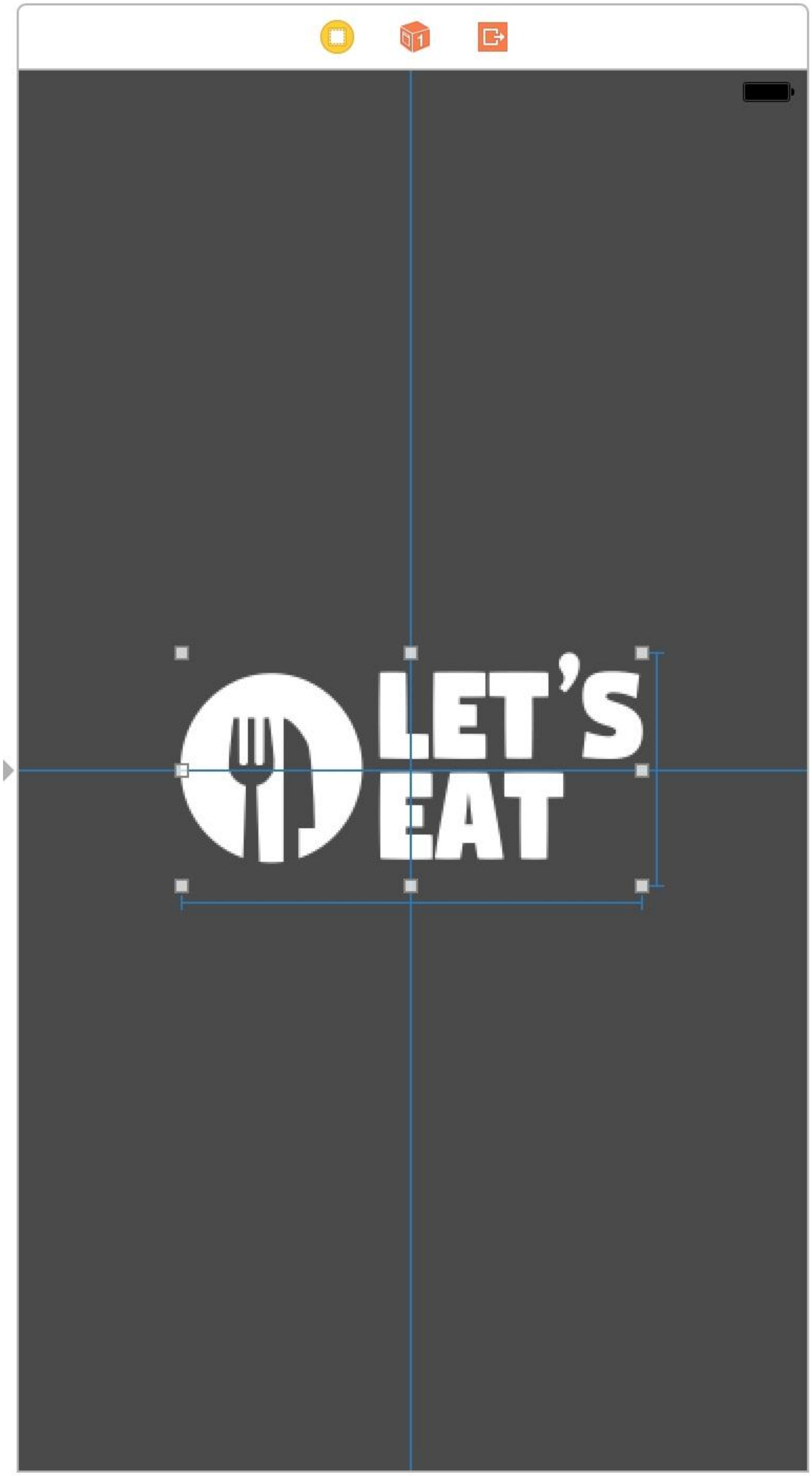
Autoresizing

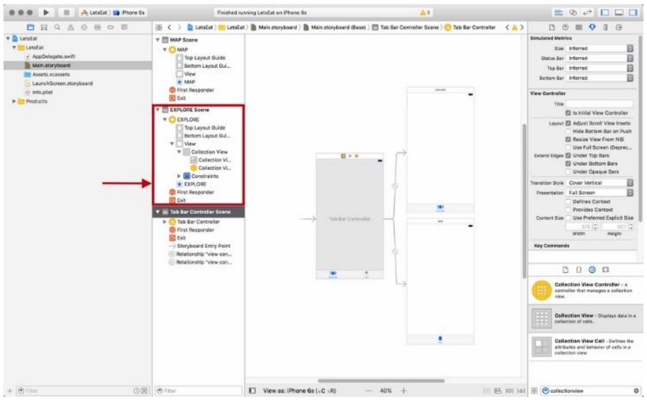
Layout Margins: Default

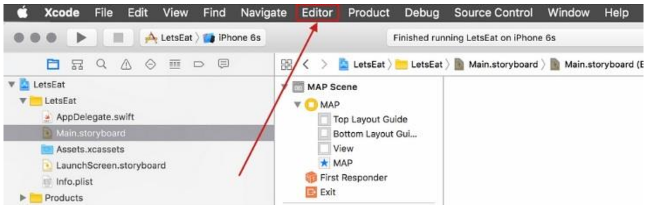
□ Preserve Superview Margins

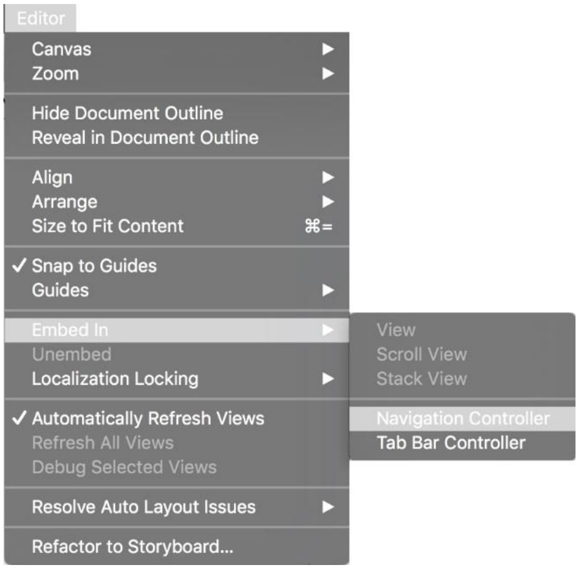
□ Follow Readable Width

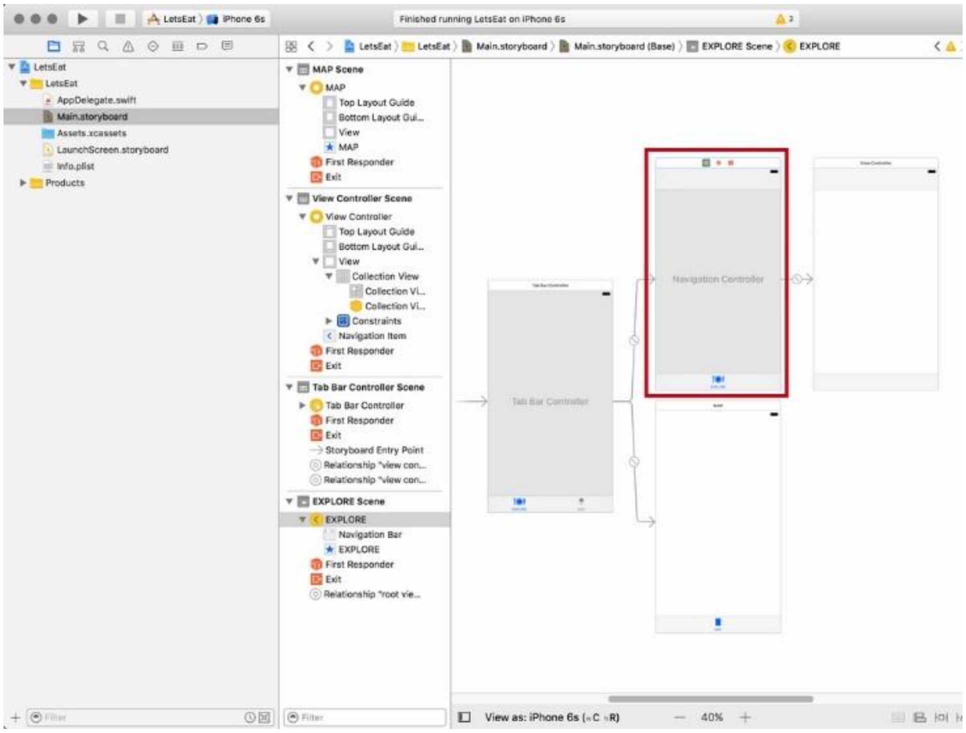


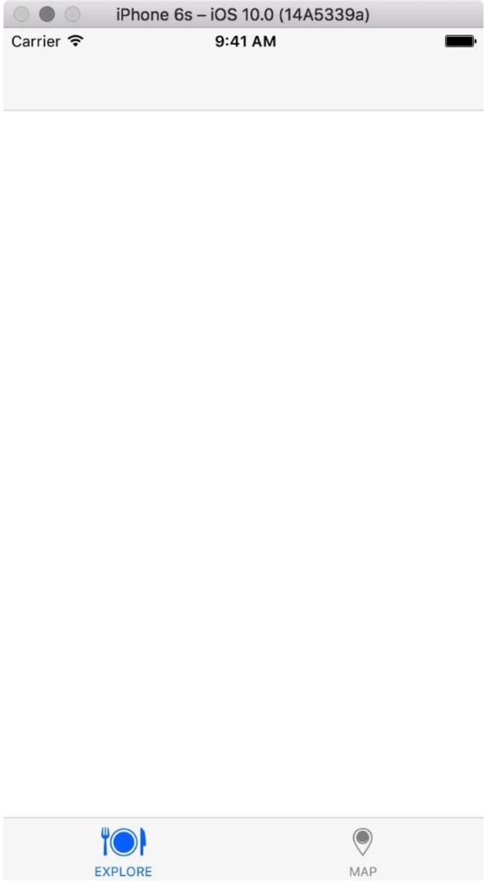

LET'S
EAT

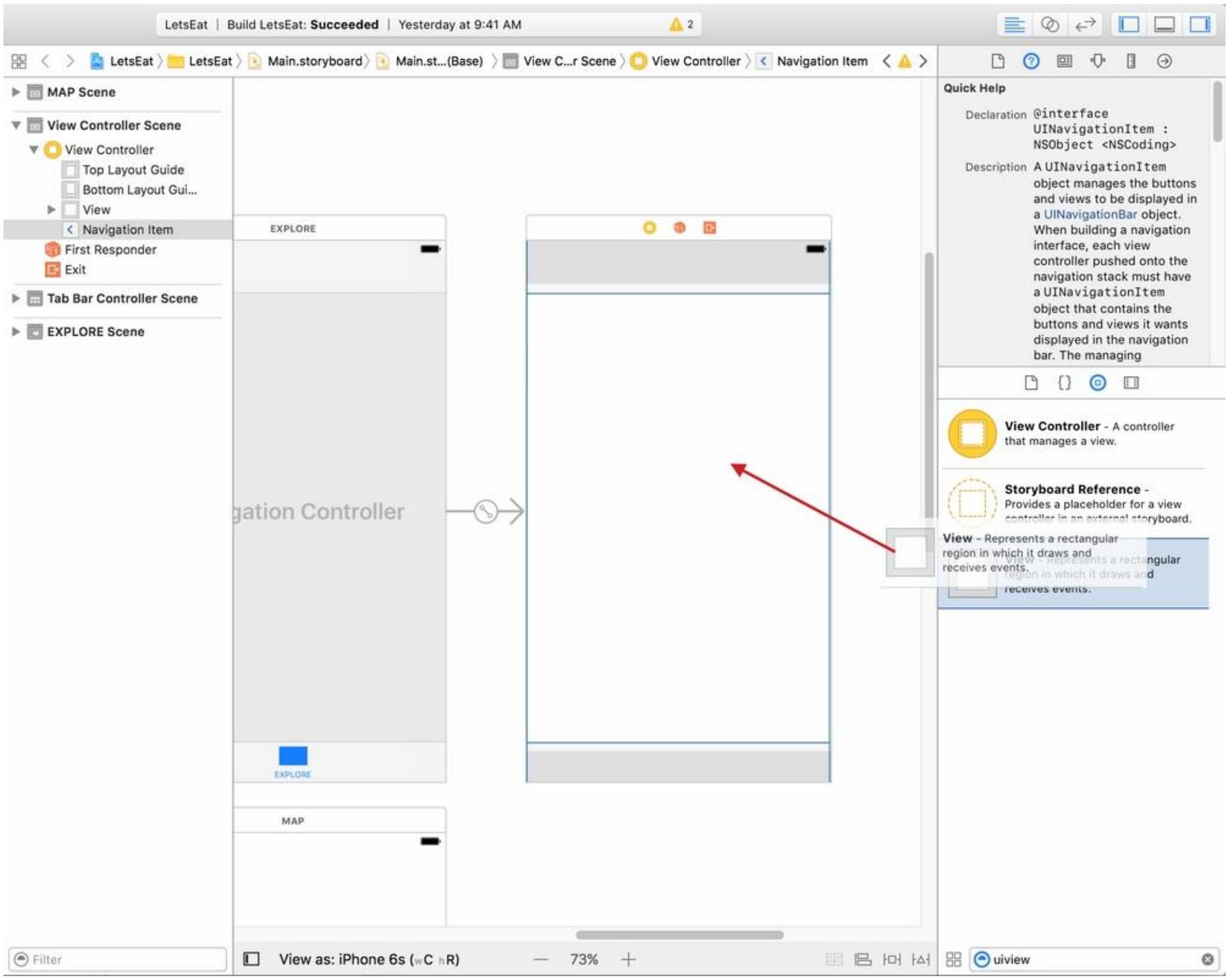

Finished running LetsEat on iPhone 6s
MAP Scene
EXPLORE Scene
Tab Bar Controller Scene
Collection View Controller
Collection View
Collection View Cell
View as: iPhone 6s


Xcode
File
Edit
View
Find
Navigate
Editor
Product
Debug
Source Control
Window
Help
LetsEat
iPhone 6s
Finished running LetsEat on iPhone 6s
LetsEat
LetsEat
Main.storyboard
Main.storyboard (E
LetsEat
LetsEat
AppDelegate.swift
Main.storyboard
Assets.xcassets
LaunchScreen.storyboard
Info.plist
Products
MAP Scene
MAP
Top Layout Guide
Bottom Layout Gui...
View
MAP
First Responder
Exit


Editor
Canvas ▶
Zoom ▶
Hide Document Outline
Reveal in Document Outline
Align ▶
Arrange ▶
Size to Fit Content ⌘=
✓ Snap to Guides
Guides ▶
Embed In ▶
Unembed
Localization Locking ▶
✓ Automatically Refresh Views
Refresh All Views
Debug Selected Views
Resolve Auto Layout Issues ▶
Refactor to Storyboard...
View
Scroll View
Stack View
Navigation Controller
Tab Bar Controller


LetsEat 〉 iPhone 6s
Finished running LetsEat on iPhone 6s
LetsEat 〉 LetsEat 〉 Main.storyboard 〉 Main.storyboard (Base) 〉 EXPLORE Scene 〉 EXPLORE
LetsEat
LetsEat
AppDelegate.swift
Main.storyboard
Assets.xcassets
LaunchScreen.storyboard
Info.plist
Products
MAP Scene
MAP
Top Layout Guide
Bottom Layout Gui...
View
MAP
First Responder
Exit
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Gui...
View
Collection View
Collection Vi...
Collection Vi...
Constraints
Navigation Item
First Responder
Exit
Tab Bar Controller Scene
Tab Bar Controller
First Responder
Exit
Storyboard Entry Point
Relationship "view con...
Relationship "view con...
EXPLORE Scene
EXPLORE
Navigation Bar
EXPLORE
First Responder
Exit
Relationship "root vie...
Tab Bar Controller
Navigation Controller
View as: iPhone 6s (wC hR)
40%
Filter
Filter


iPhone 6s – iOS 10.0 (14A5339a)
Carrier
9:41 AM
EXPLORE
MAP



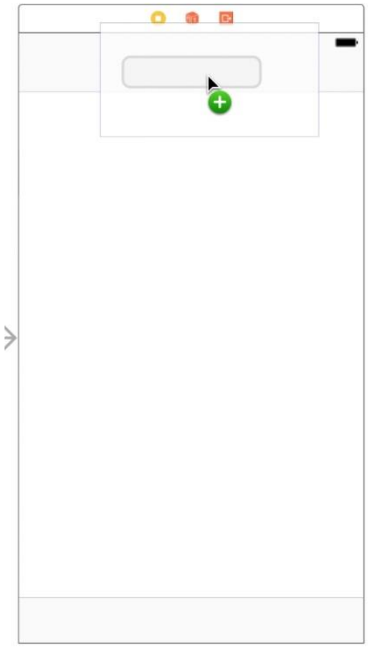
Declaration @interface UINavigationItem : NSObject <NSCoding>

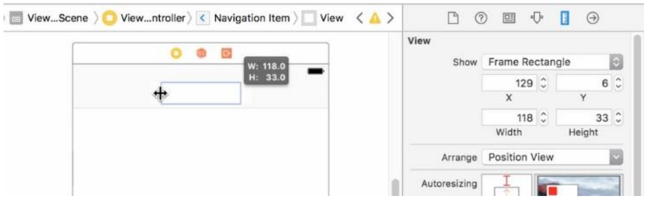
Description A UINavigationItem object manages the buttons and views to be displayed in a UINavigationBar object. When building a navigation interface, each view controller pushed onto the navigation stack must have a UINavigationItem object that contains the buttons and views it wants displayed in the navigation bar. The managing

View Controller - A controller that manages a view.

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

View - Represents a rectangular region in which it draws and receives events.





View

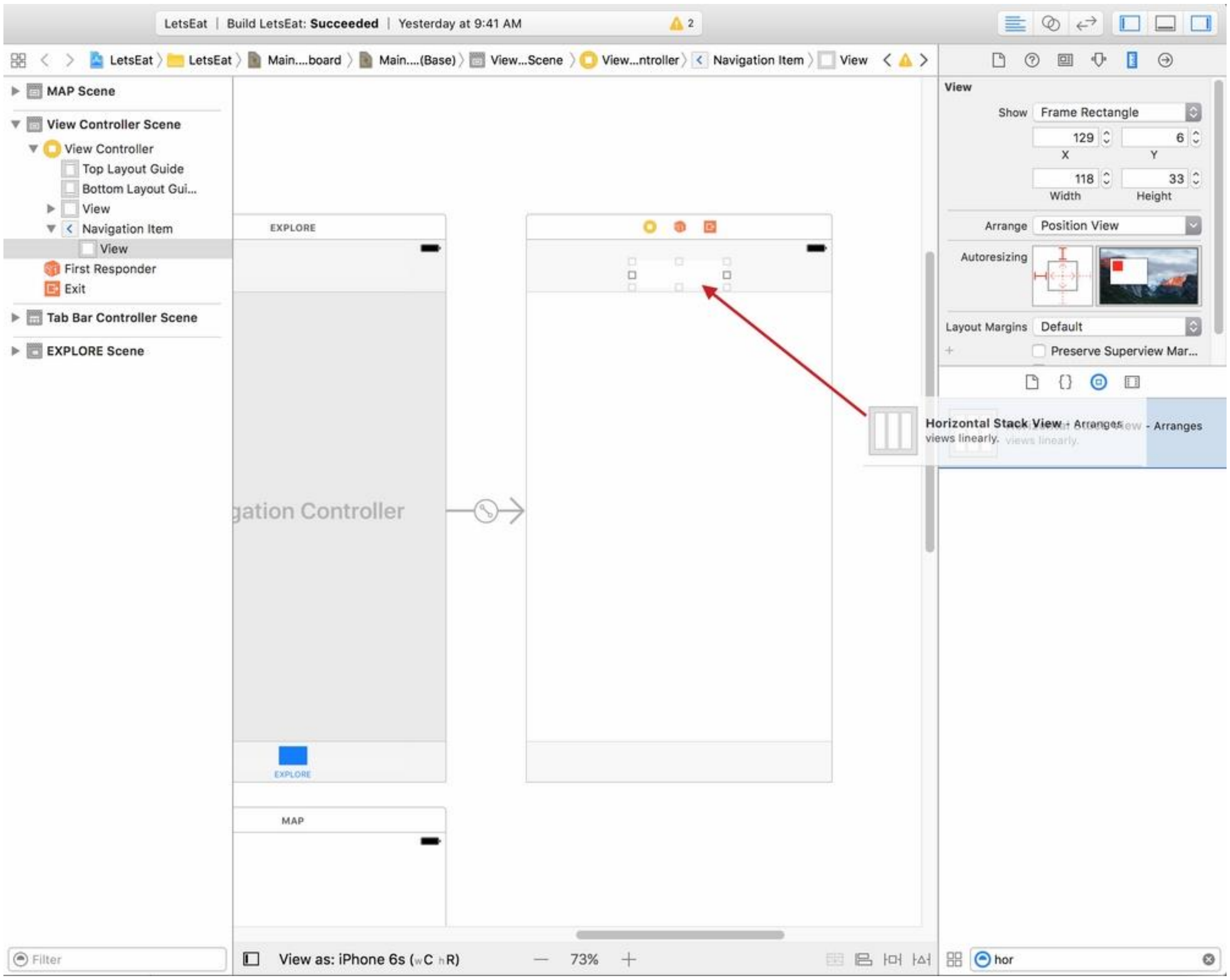
Show: Frame Rectangle

X: 129
Y: 6

Width: 118
Height: 33

Arrange: Position View

Autoresizing


LetsEat | Build LetsEat: Succeeded | Yesterday at 9:41 AM
LetsEat 〉 LetsEat 〉 Main....board 〉 Main....(Base) 〉 View...Scene 〉 View...ntroller 〉 Navigation Item 〉 View
MAP Scene
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Gui...
View
Navigation Item
View
First Responder
Exit
Tab Bar Controller Scene
EXPLORE Scene
EXPLORE
gation Controller
MAP
Horizontal Stack View - Arranges views linearly.
Filter
View as: iPhone 6s (wC hR)
73%
hor

View

Show: Frame Rectangle

X	Y
129	6

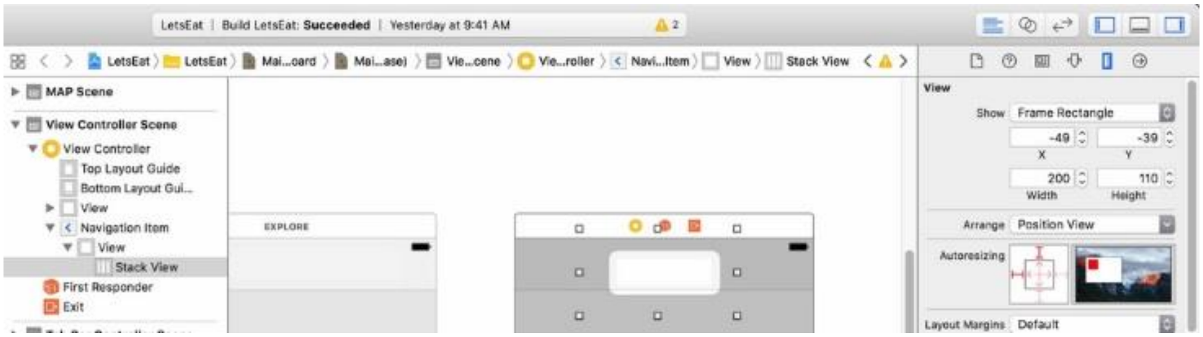
Width	Height
118	33

Arrange: Position View

Autoresizing

Layout Margins: Default

□ Preserve Superview Mar...


LetsEat | Build LetsEat: Succeeded | Yesterday at 9:41 AM
LetsEat 〉 LetsEat 〉 Mai...oard 〉 Mai...ase) 〉 Vie...cene 〉 Vie...roller 〉 Navi...Item 〉 View 〉 Stack View
MAP Scene
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Gui...
View
Navigation Item
View
Stack View
First Responder
Exit
EXPLORE

View

Show: Frame Rectangle

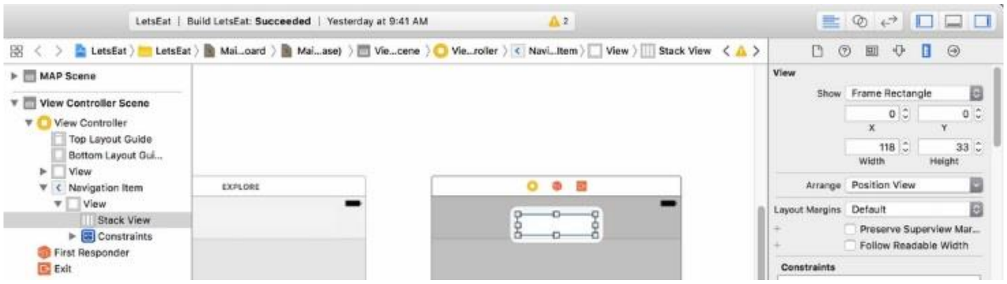
X	Y
-49	-39

Width	Height
200	110

Arrange: Position View

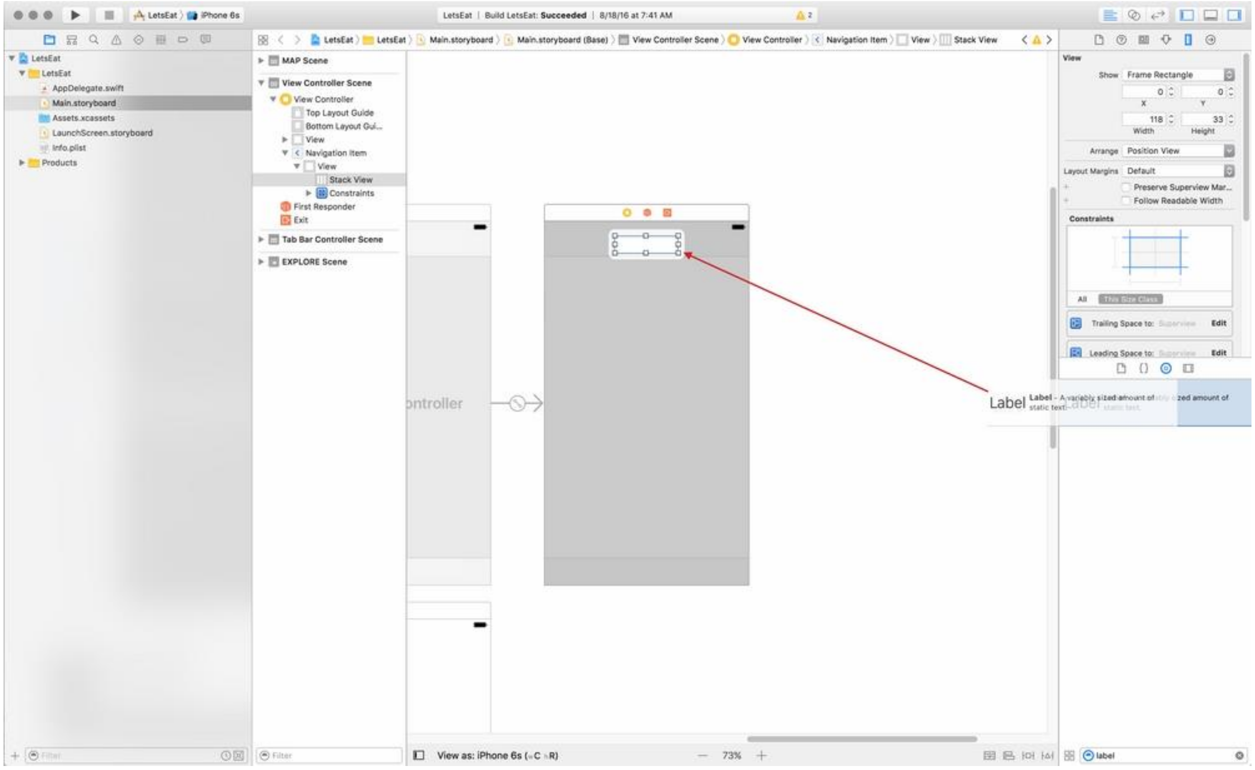
Autoresizing

Layout Margins: Default



LetsEat | Build LetsEat: Succeeded | Yesterday at 9:41 AM

Show: Frame Rectangle
X: 0 Y: 0
Width: 118 Height: 33
Arrange: Position View
Layout Margins: Default
□ Preserve Superview Mar...
□ Follow Readable Width



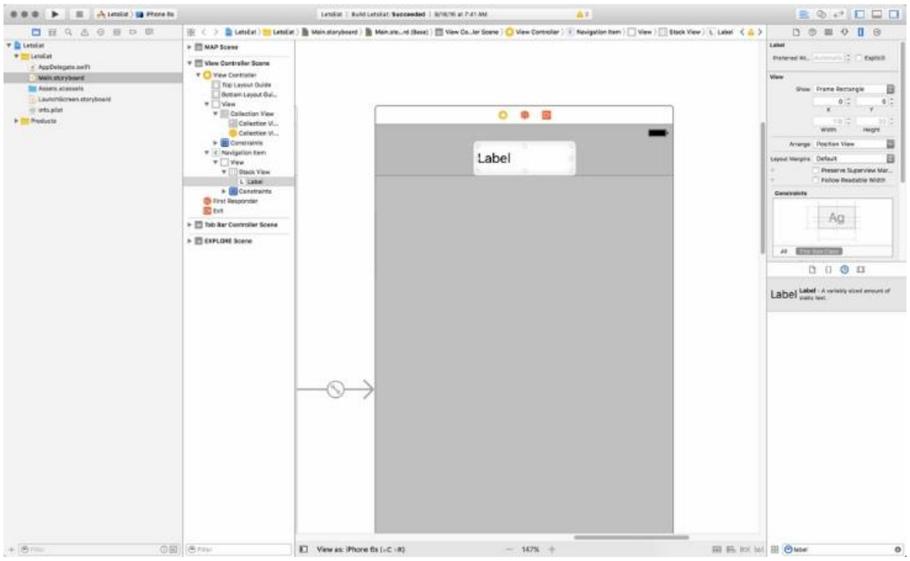
LetsEat | Build LetsEat: Succeeded | 8/18/16 at 7:41 AM

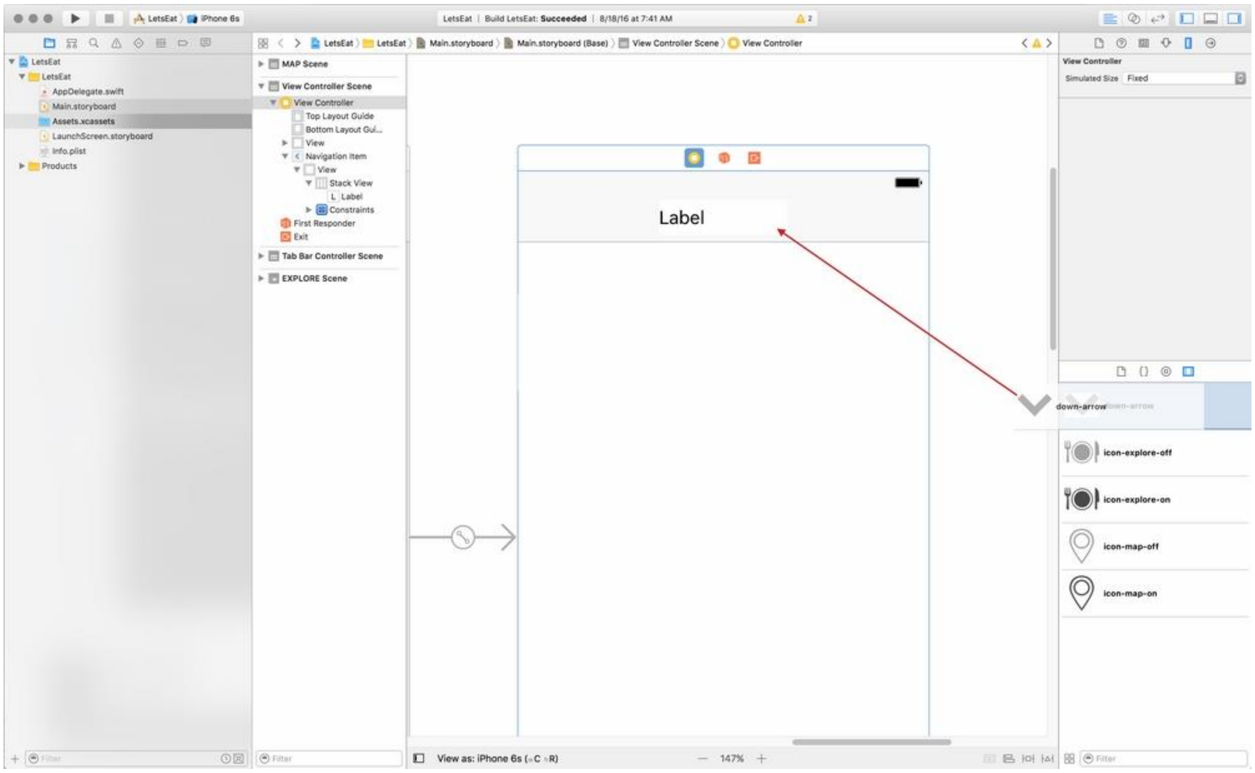
Show: Frame Rectangle
X: 0 Y: 0
Width: 118 Height: 33
Arrange: Position View
Layout Margins: Default
□ Preserve Superview Mar...
□ Follow Readable Width

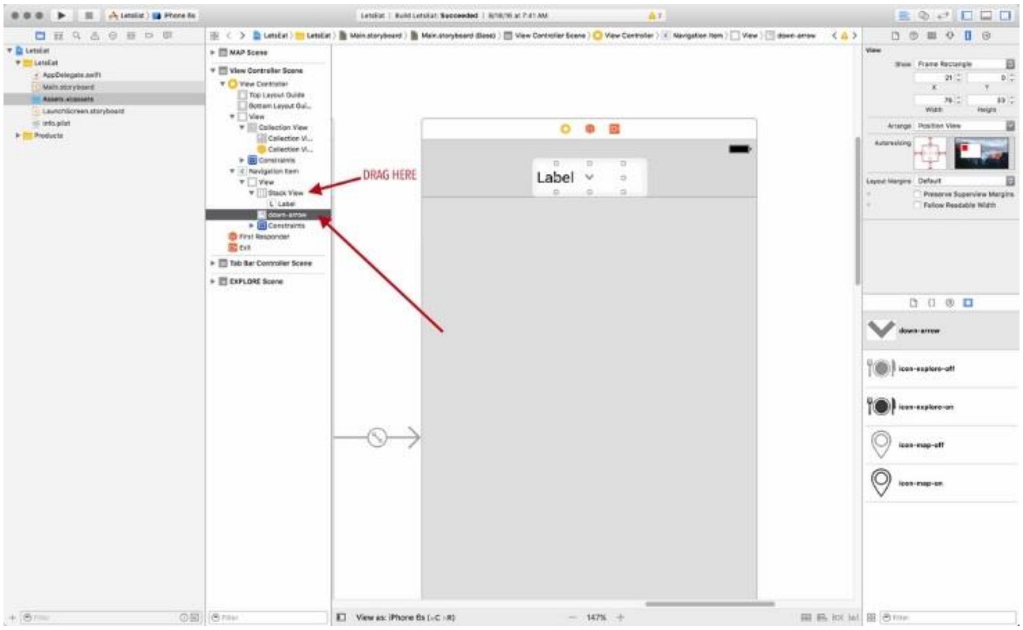
Trailing Space to: Superview Edit
Leading Space to: Superview Edit

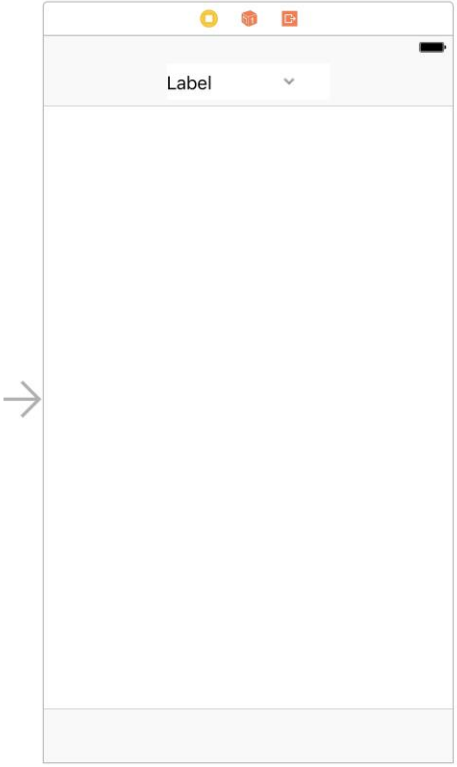
Label - A variably sized amount of static text.

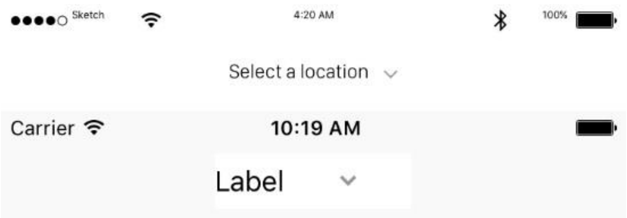
View as: iPhone 6s (wC hR)   73%

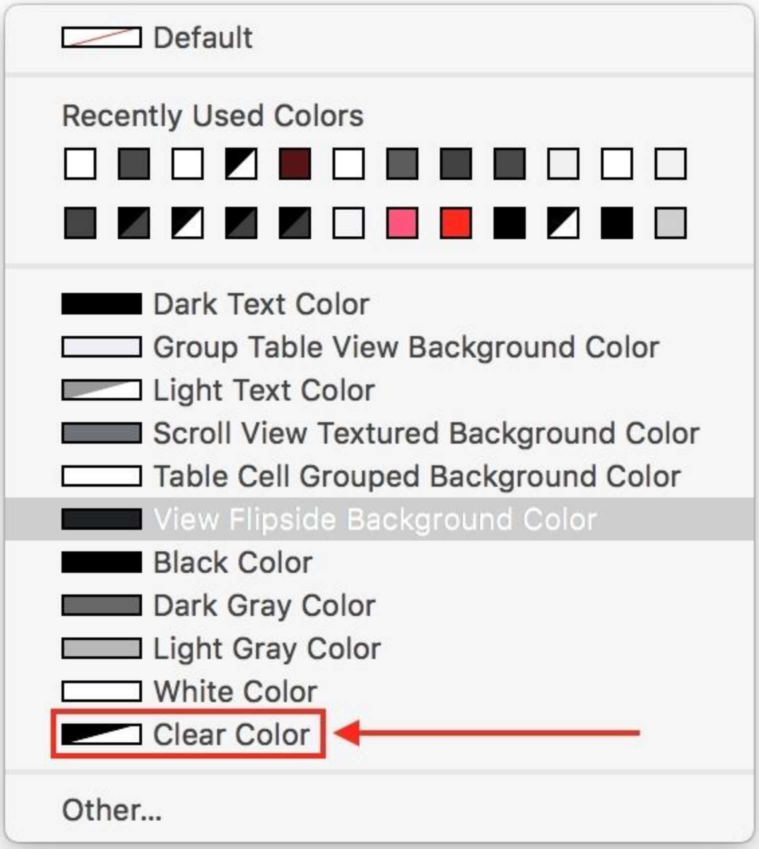

LetsEat
AppDelegate.swift
Main.storyboard
Assets.xcassets
LaunchScreen.storyboard
Info.plist
Products
MAP Scene
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Gui...
View
Collection View
Constraints
Navigation Item
Stack View
Label
First Responder
Exit
Tab Bar Controller Scene
EXPLORE Scene
Label
View as: iPhone 6s
147%
Show: Frame Rectangle
Arrange: Position View
Layout Margins: Default
Preserve Superview Margins
Follow Readable Width
Constraints
Label - A variably sized amount of static text.

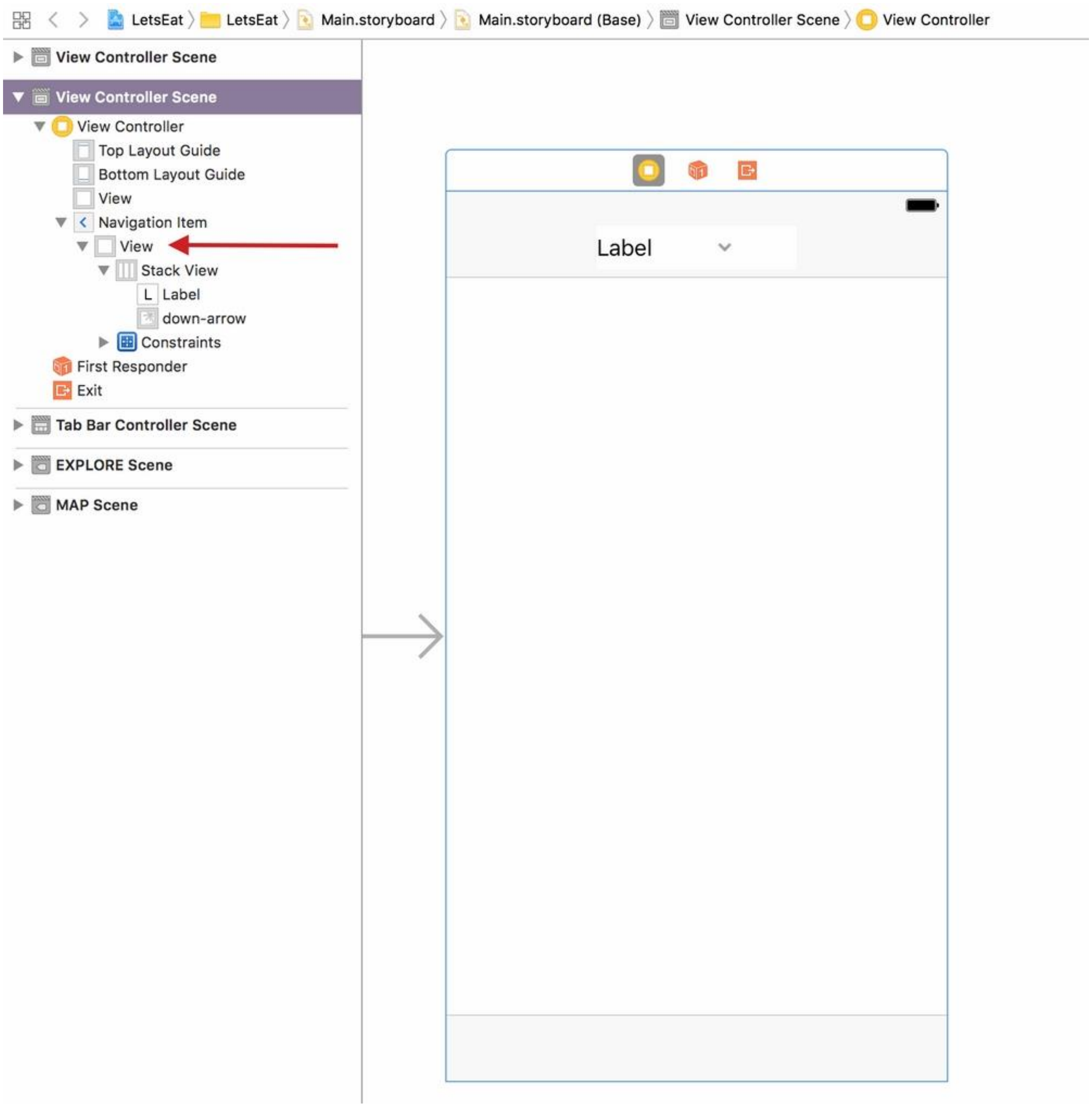

LetsEat
iPhone 6s
LetsEat | Build LetsEat: Succeeded | 8/18/16 at 7:41 AM
LetsEat
Main.storyboard
Main.storyboard (Base)
View Controller Scene
View Controller
LetsEat
AppDelegate.swift
Main.storyboard
Assets.xcassets
LaunchScreen.storyboard
Info.plist
Products
MAP Scene
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Gui...
View
Navigation Item
View
Stack View
Label
Constraints
First Responder
Exit
Tab Bar Controller Scene
EXPLORE Scene
Label
View Controller
Simulated Size
Fixed
down-arrow
icon-explore-off
icon-explore-on
icon-map-off
icon-map-on
View as: iPhone 6s
147%
Filter

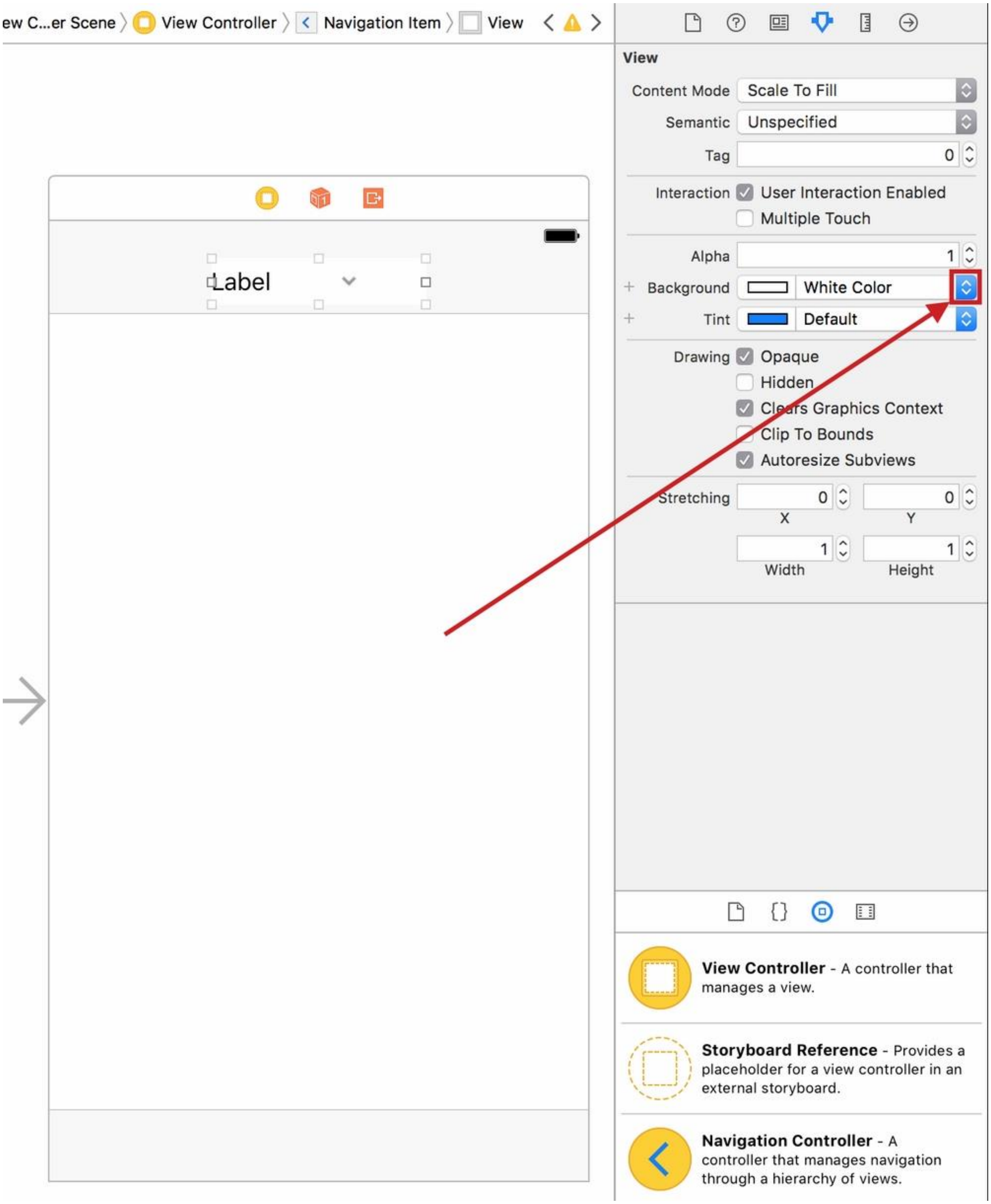

DRAG HERE
View Controller Scene
Stack View
Label
down-arrow
down-arrow
icon-explore-off
icon-explore-on
icon-map-off
icon-map-on
Label


Label


●●●●○ Sketch
4:20 AM
100%
Select a location
Carrier
10:19 AM
Label


Default
Recently Used Colors
Dark Text Color
Group Table View Background Color
Light Text Color
Scroll View Textured Background Color
Table Cell Grouped Background Color
View Flipside Background Color
Black Color
Dark Gray Color
Light Gray Color
White Color
Clear Color
Other...


LetsEat
LetsEat
Main.storyboard
Main.storyboard (Base)
View Controller Scene
View Controller
View Controller Scene
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
Navigation Item
View
Stack View
Label
down-arrow
Constraints
First Responder
Exit
Tab Bar Controller Scene
EXPLORE Scene
MAP Scene
Label



View

Content Mode: Scale To Fill

Semantic: Unspecified

Tag: 0

Interaction: ☑ User Interaction Enabled
□ Multiple Touch

Alpha: 1

Background: White Color

Tint: Default

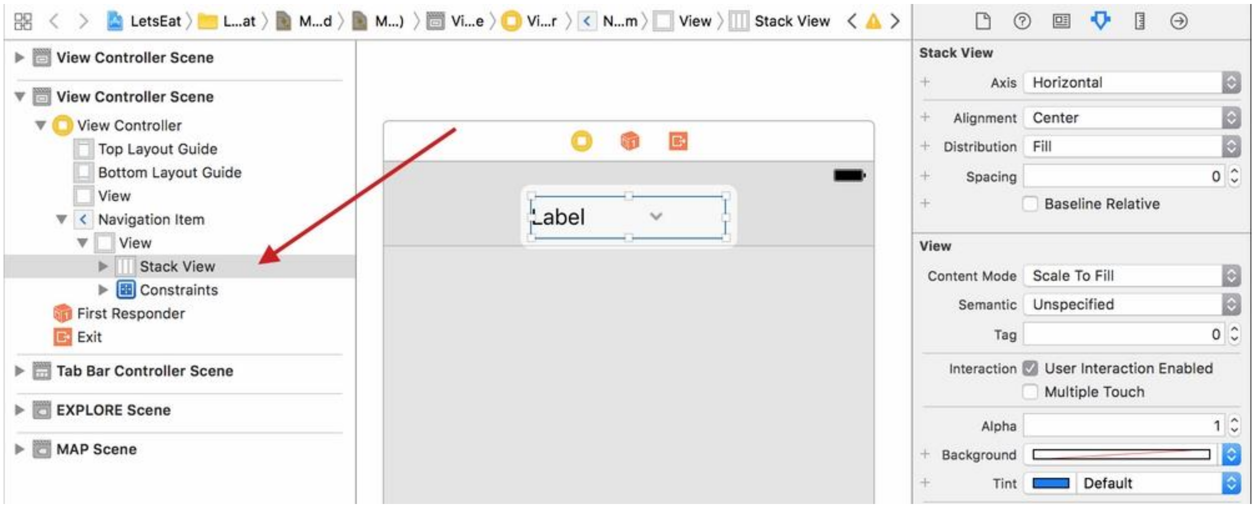
Drawing: ☑ Opaque
□ Hidden
☑ Clears Graphics Context
□ Clip To Bounds
☑ Autoresize Subviews

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.



Stack View

Axis: Horizontal

Alignment: Center

Distribution: Fill

Spacing: 0

□ Baseline Relative

View

Content Mode: Scale To Fill

Semantic: Unspecified

Tag: 0

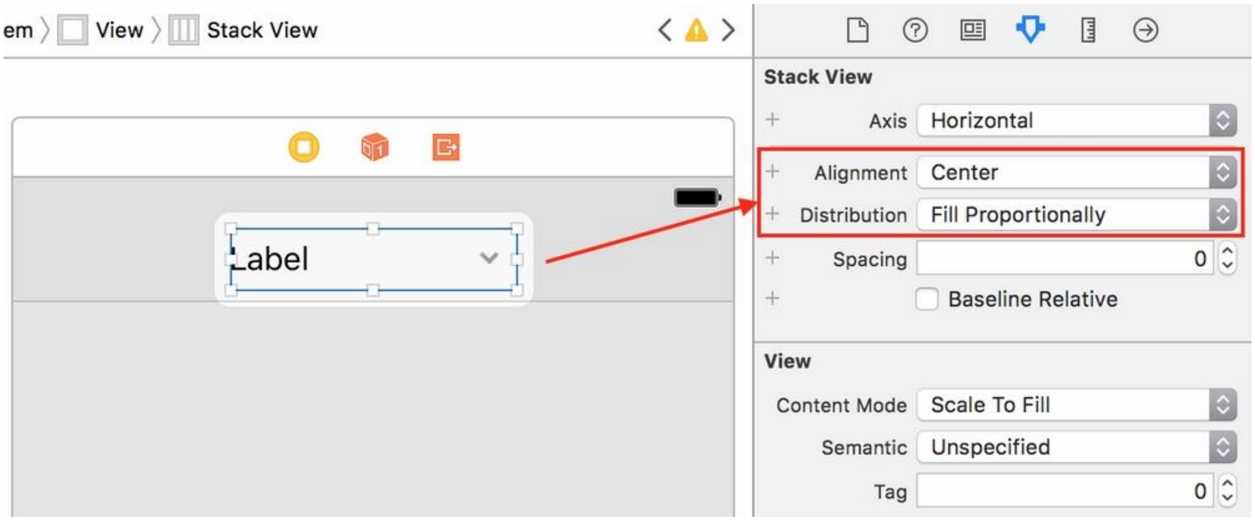
Interaction: ☑ User Interaction Enabled

□ Multiple Touch

Alpha: 1

Background

Tint: Default



Stack View

Axis: Horizontal

Alignment: Center

Distribution: Fill Proportionally

Spacing: 0

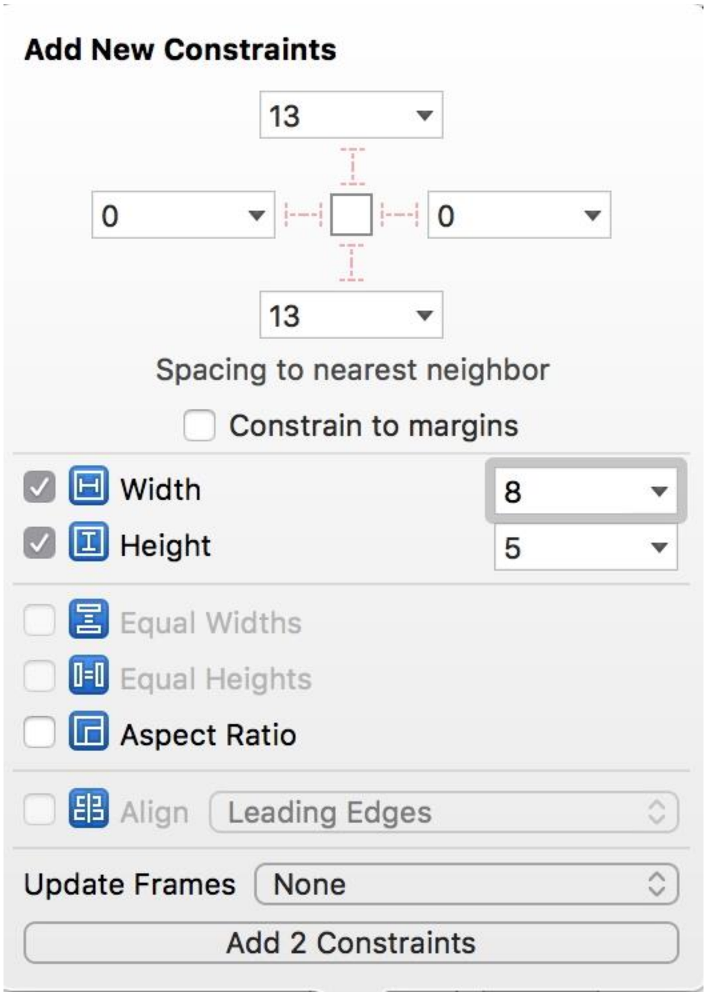
□ Baseline Relative

View

Content Mode: Scale To Fill

Semantic: Unspecified

Tag: 0



Add New Constraints

13

0 | 0

13

Spacing to nearest neighbor

□ Constrain to margins

☑ Width 8

☑ Height 5

□ Equal Widths

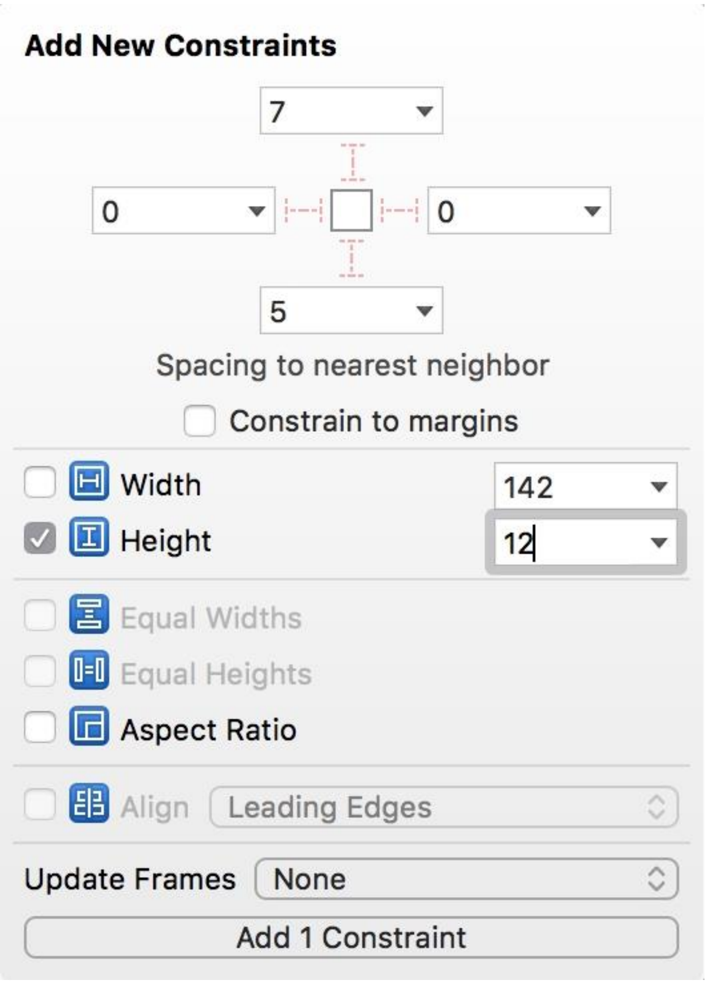
□ Equal Heights

□ Aspect Ratio

□ Align Leading Edges

Update Frames None

Add 2 Constraints



Add New Constraints

7

0 0

5

Spacing to nearest neighbor

□ Constrain to margins

□ Width 142

☑ Height 12

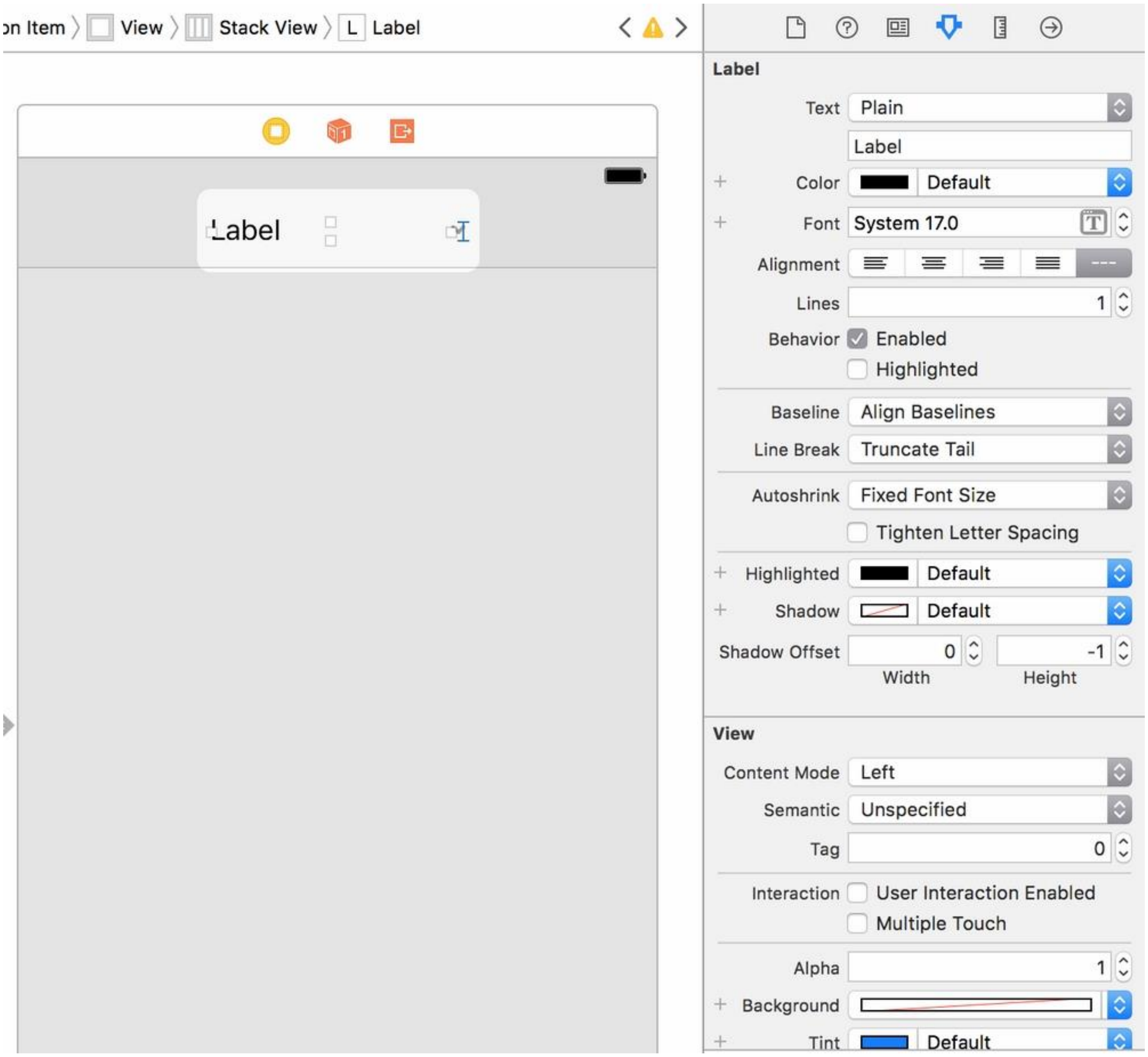
□ Equal Widths

□ Equal Heights

□ Aspect Ratio

□ Align Leading Edges

Update Frames None



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

Content Mode: Left

Semantic: Unspecified

Tag: 0

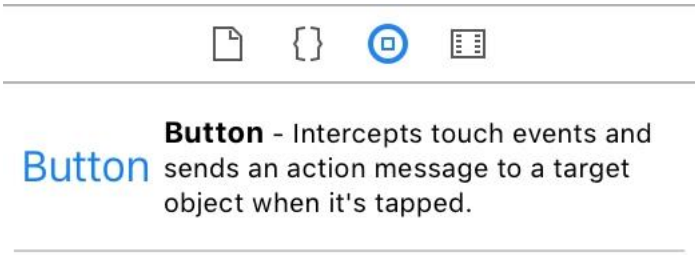
Interaction: ☐ User Interaction Enabled

☐ Multiple Touch

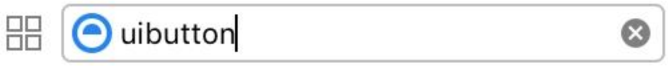
Alpha: 1

Background

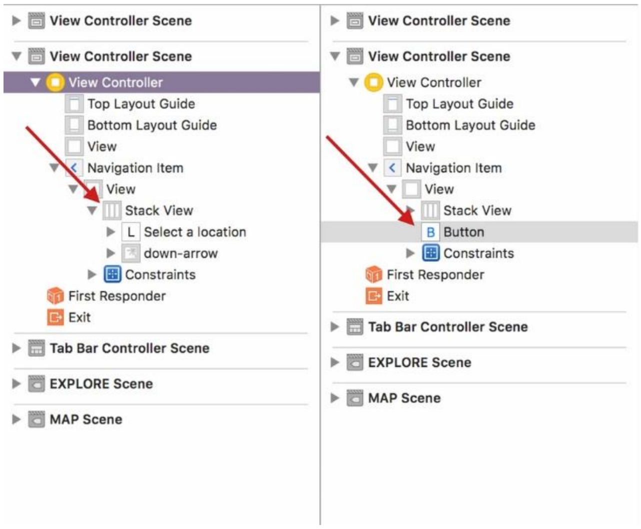
Tint: Default

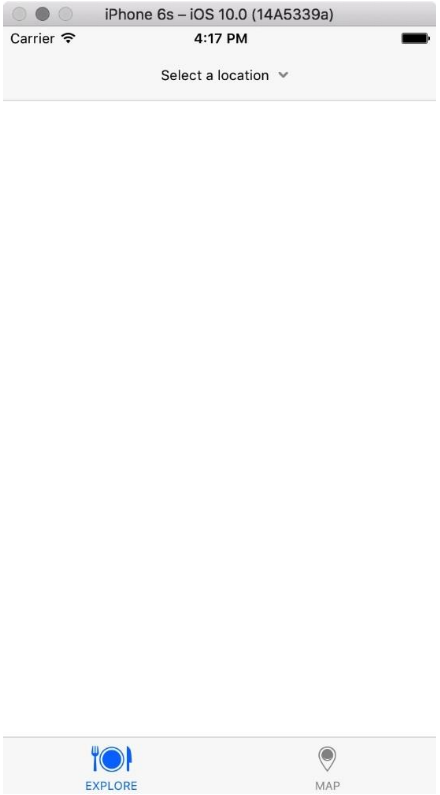


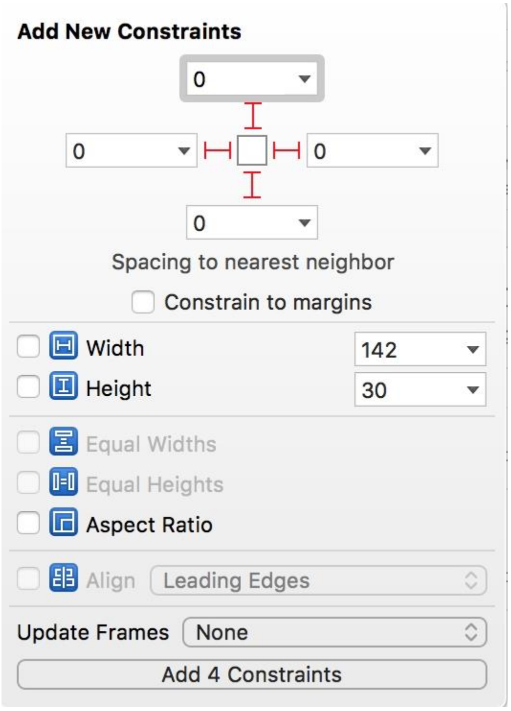
Button - Intercepts touch events and sends an action message to a target object when it's tapped.



uibutton






Add New Constraints

0

0 0

0

Spacing to nearest neighbor

□ Constrain to margins

□ Width 142

□ Height 30

□ Equal Widths

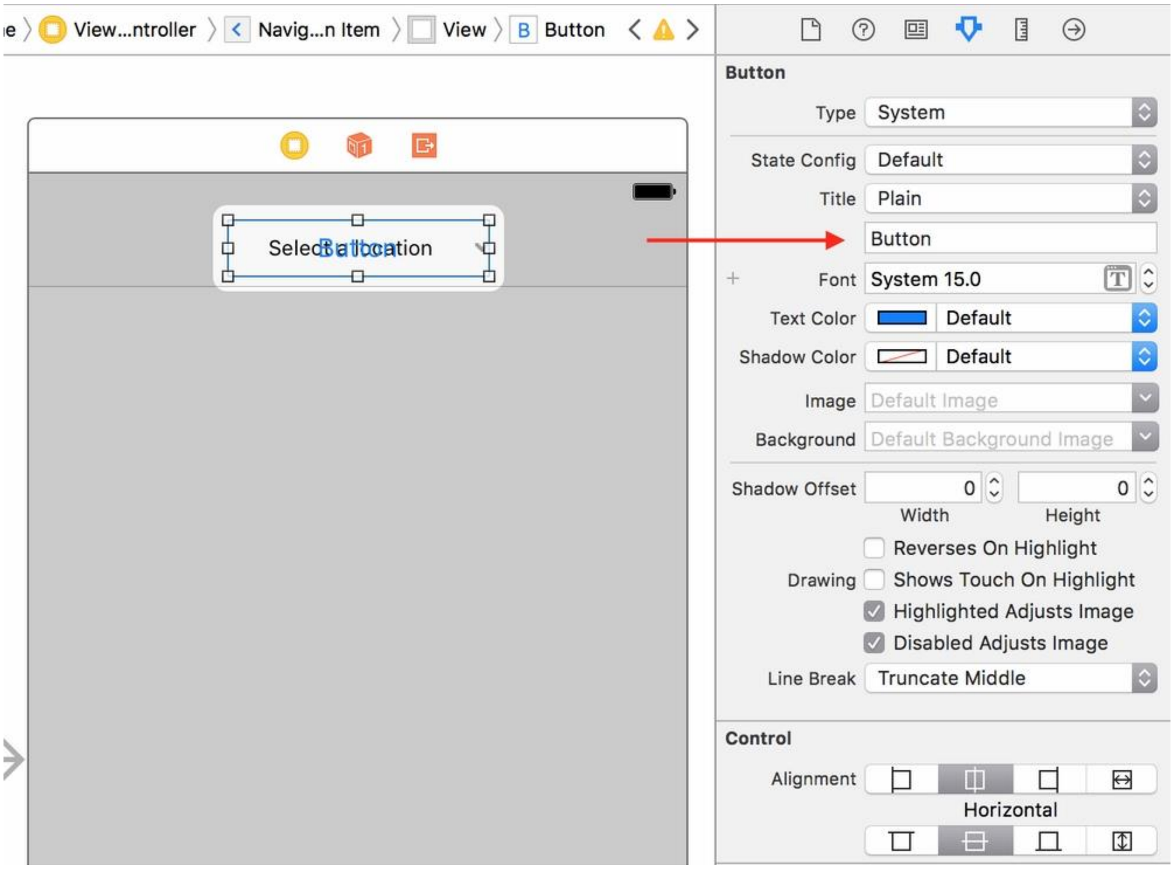
□ Equal Heights

□ Aspect Ratio

□ Align Leading Edges

Update Frames None

Add 4 Constraints



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)

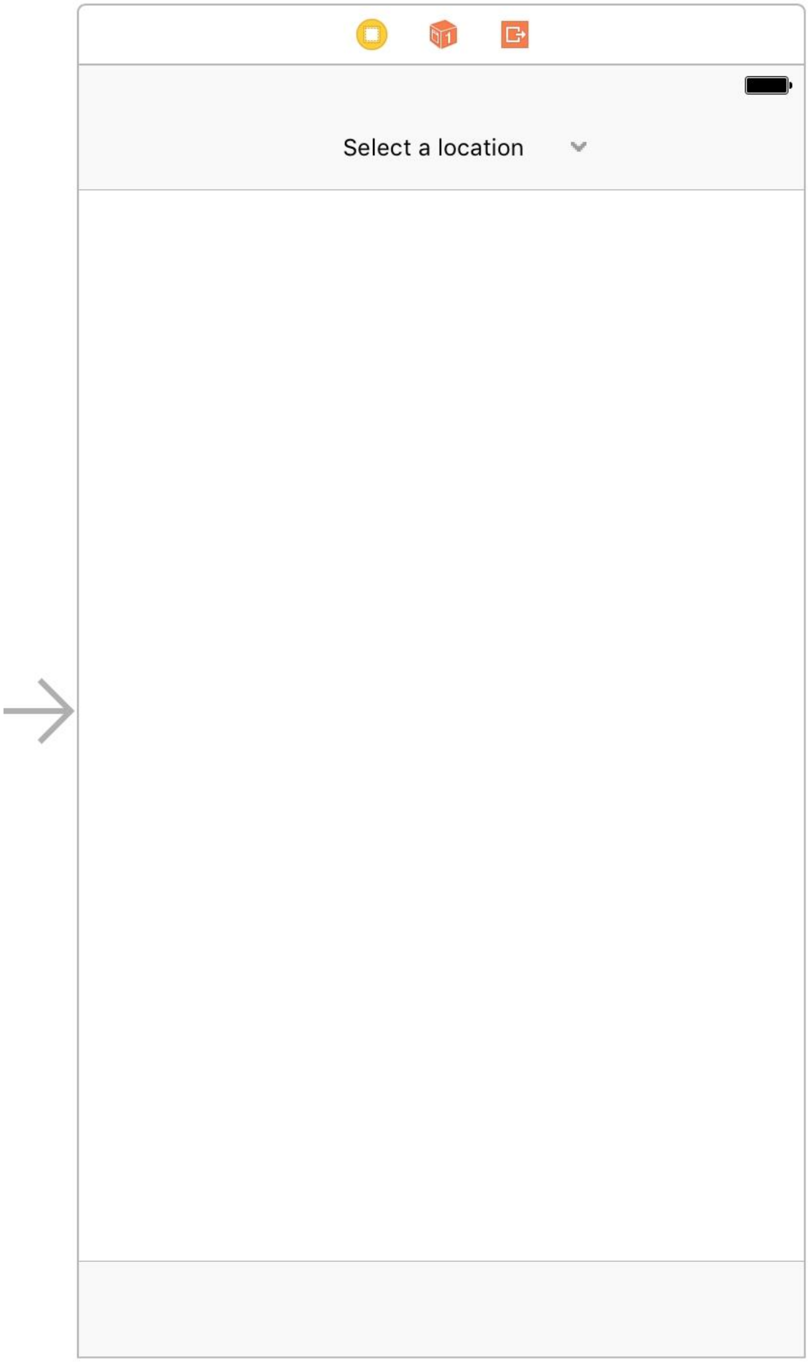
Drawing:
☐ Reverses On Highlight
☐ Shows Touch On Highlight
☑ Highlighted Adjusts Image
☑ Disabled Adjusts Image

Line Break: Truncate Middle

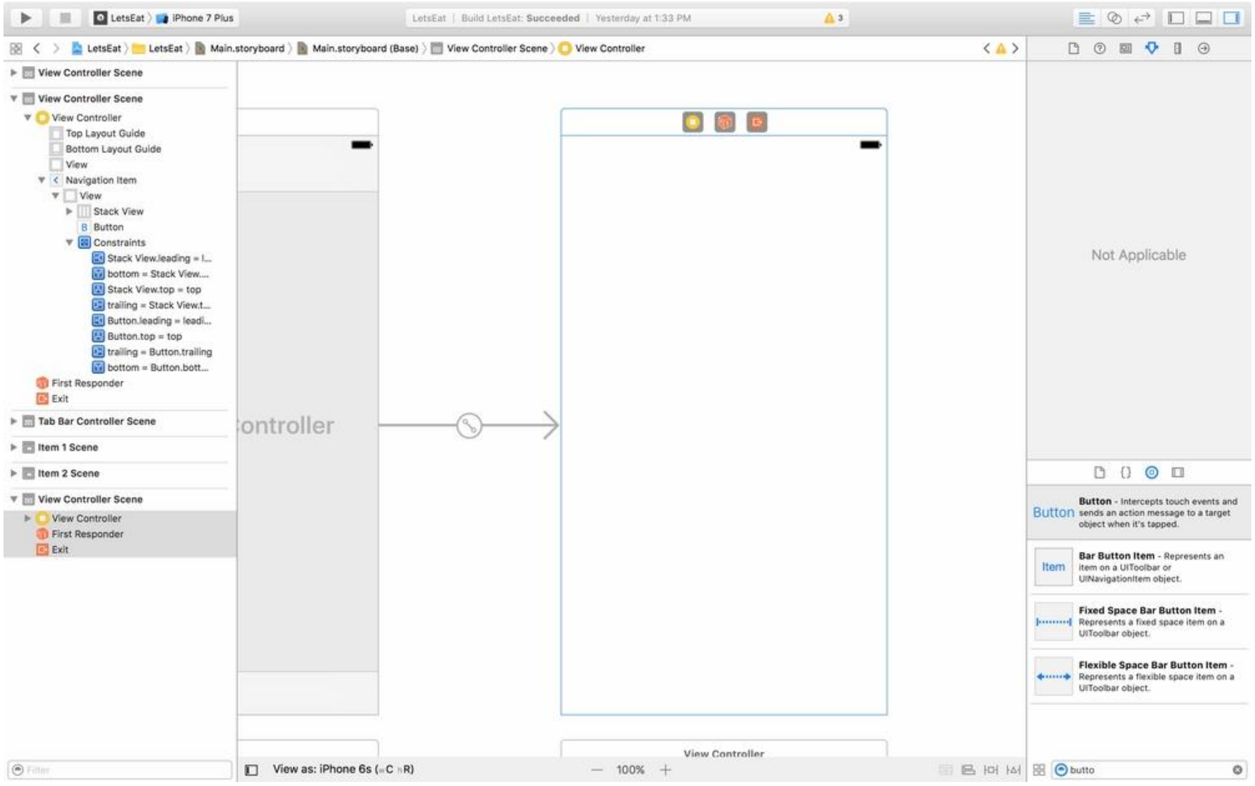
Control

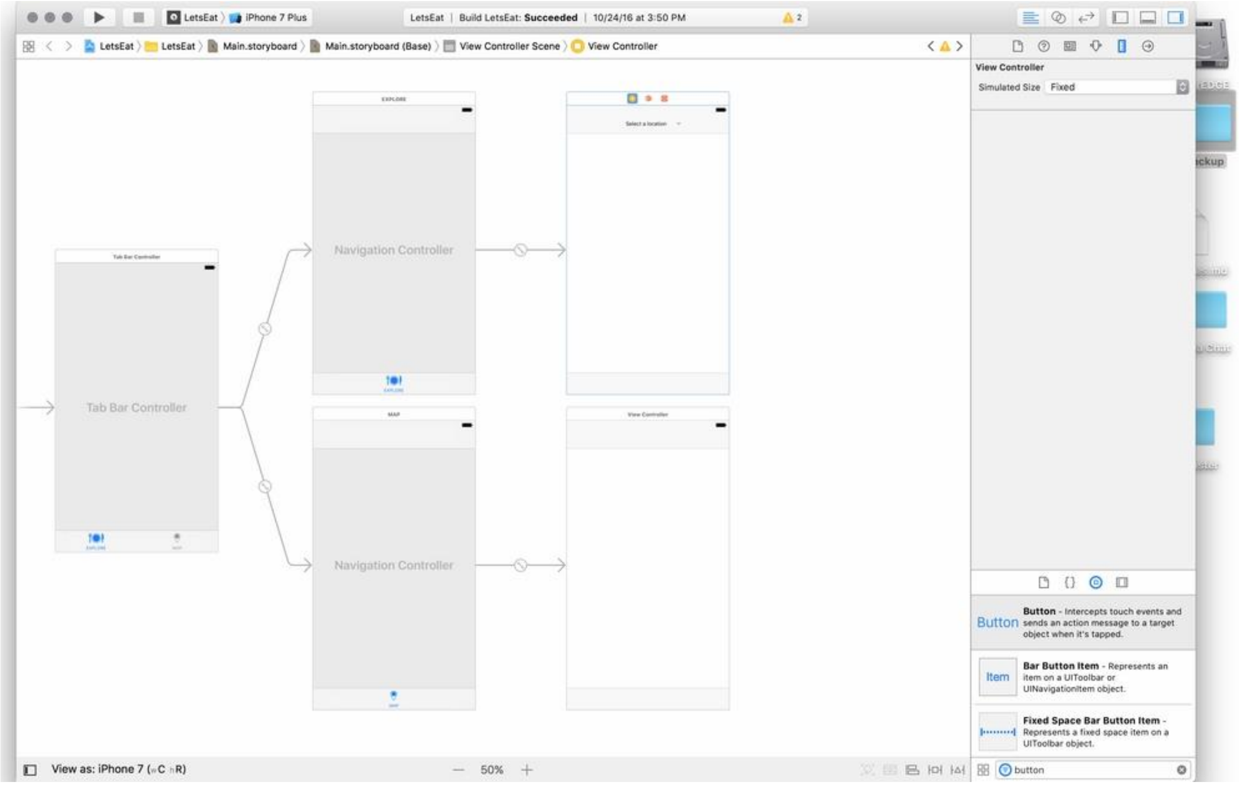
Alignment

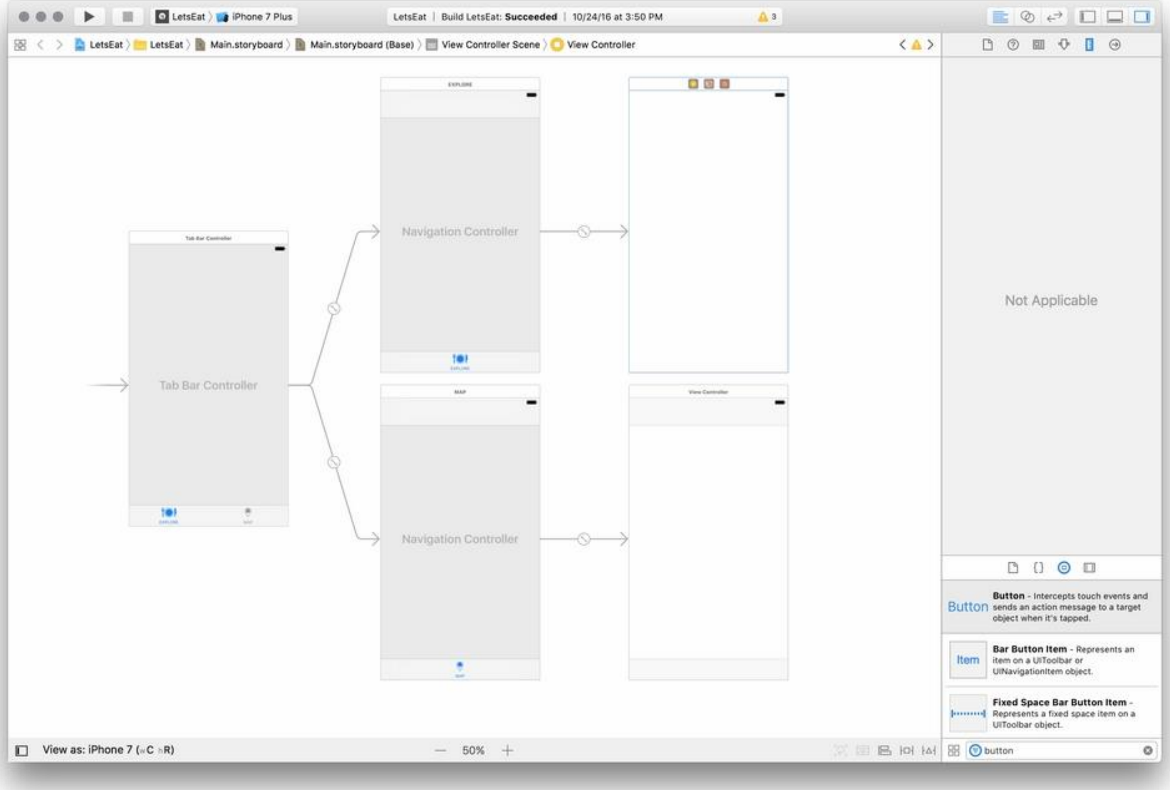
Horizontal



Select a location


LetsEat 〉 iPhone 7 Plus
LetsEat | Build LetsEat: Succeeded | Yesterday at 1:33 PM
3
LetsEat 〉 LetsEat 〉 Main.storyboard 〉 Main.storyboard (Base) 〉 View Controller Scene 〉 View Controller
View Controller Scene
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
Navigation Item
View
Stack View
Button
Constraints
Stack View.leading = l...
bottom = Stack View....
Stack View.top = top
trailing = Stack View.t...
Button.leading = leadi...
Button.top = top
trailing = Button.trailing
bottom = Button.bott...
First Responder
Exit
Tab Bar Controller Scene
Item 1 Scene
Item 2 Scene
View Controller Scene
View Controller
First Responder
Exit
ontroller
View Controller
Not Applicable
Button - Intercepts touch events and sends an action message to a target object when it's tapped.
Item
Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.
Fixed Space Bar Button Item - Represents a fixed space item on a UIToolbar object.
Flexible Space Bar Button Item - Represents a flexible space item on a UIToolbar object.
Filter
View as: iPhone 6s (wC hR)
100%
butto


LetsEat 〉 iPhone 7 Plus
LetsEat | Build LetsEat: Succeeded | 10/24/16 at 3:50 PM
2
LetsEat 〉 LetsEat 〉 Main.storyboard 〉 Main.storyboard (Base) 〉 View Controller Scene 〉 View Controller
View Controller
Simulated Size Fixed
EXPLORE
Select a location
Navigation Controller
Tab Bar Controller
MAP
View Controller
Navigation Controller
EXPLORE
MAP
Button - Intercepts touch events and sends an action message to a target object when it's tapped.
Item
Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.
Fixed Space Bar Button Item - Represents a fixed space item on a UIToolbar object.
View as: iPhone 7 (wC hR)
50%
button

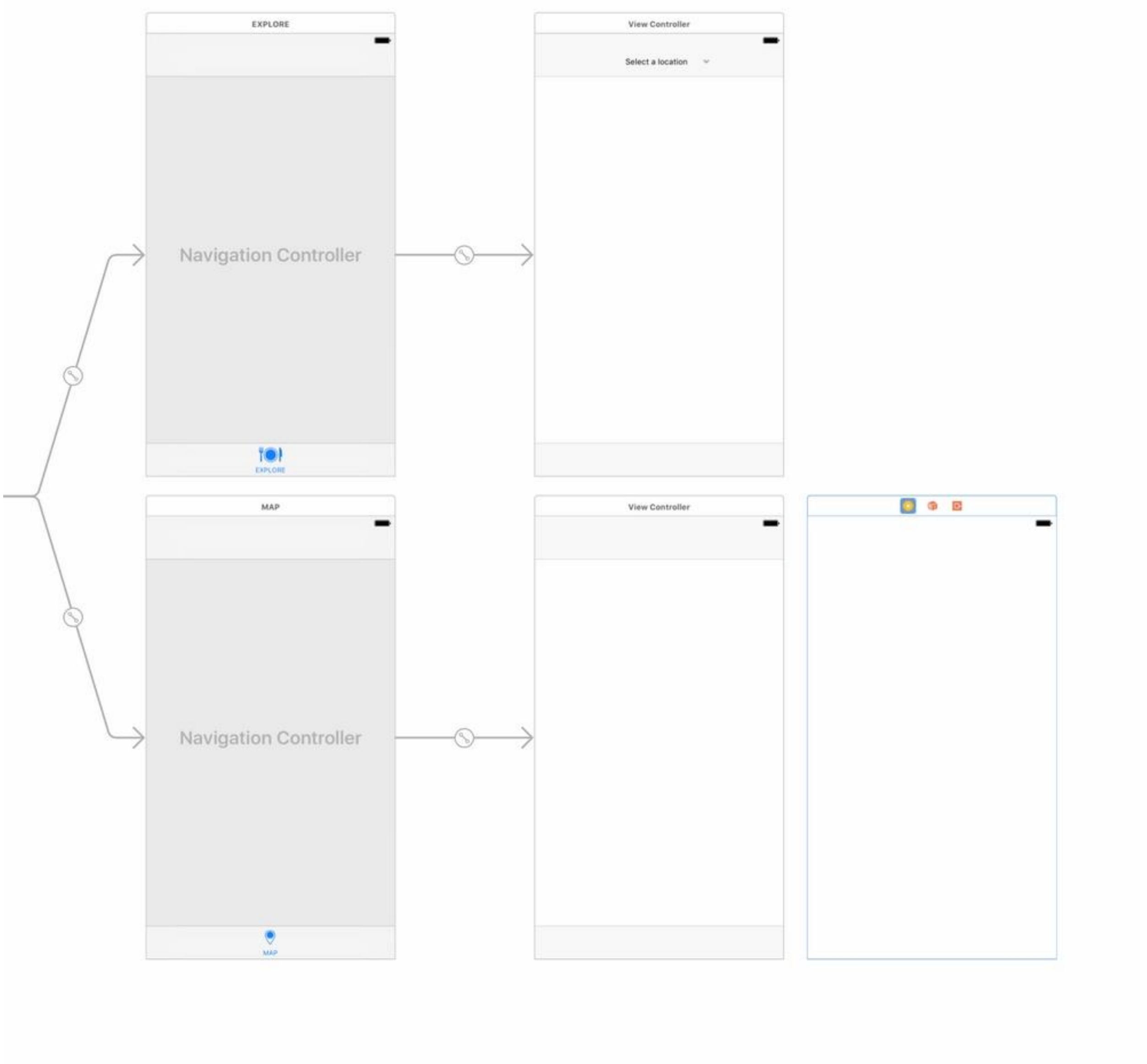

LetsEat 〉 iPhone 7 Plus
LetsEat | Build LetsEat: Succeeded | 10/24/16 at 3:50 PM
3
LetsEat 〉 LetsEat 〉 Main.storyboard 〉 Main.storyboard (Base) 〉 View Controller Scene 〉 View Controller
Tab Bar Controller
Tab Bar Controller
EXPLORE
MAP
EXPLORE
Navigation Controller
EXPLORE
MAP
Navigation Controller
MAP
View Controller
Not Applicable
View as: iPhone 7 (wC hR)
50%
button

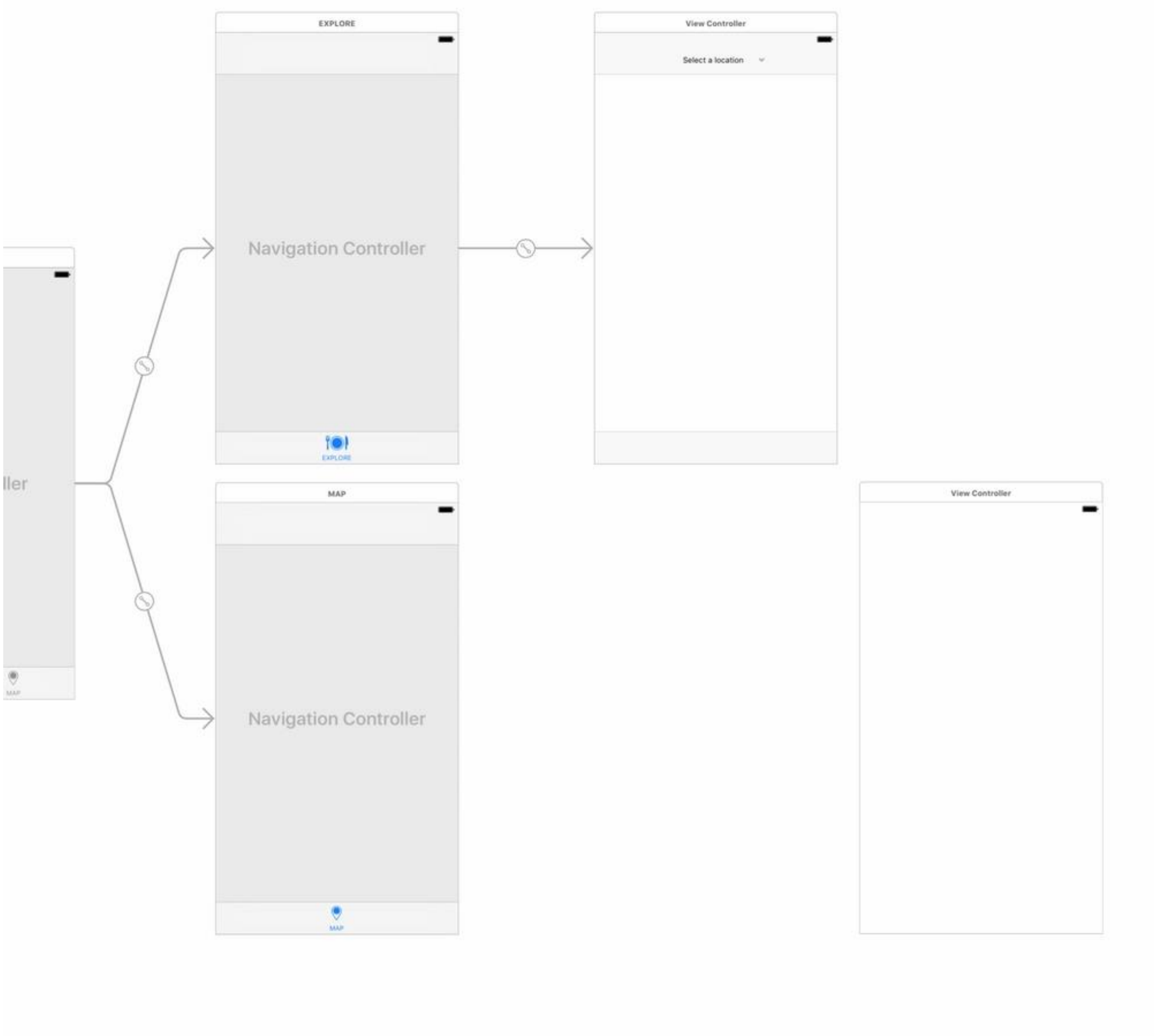
Button - Intercepts touch events and sends an action message to a target object when it's tapped.

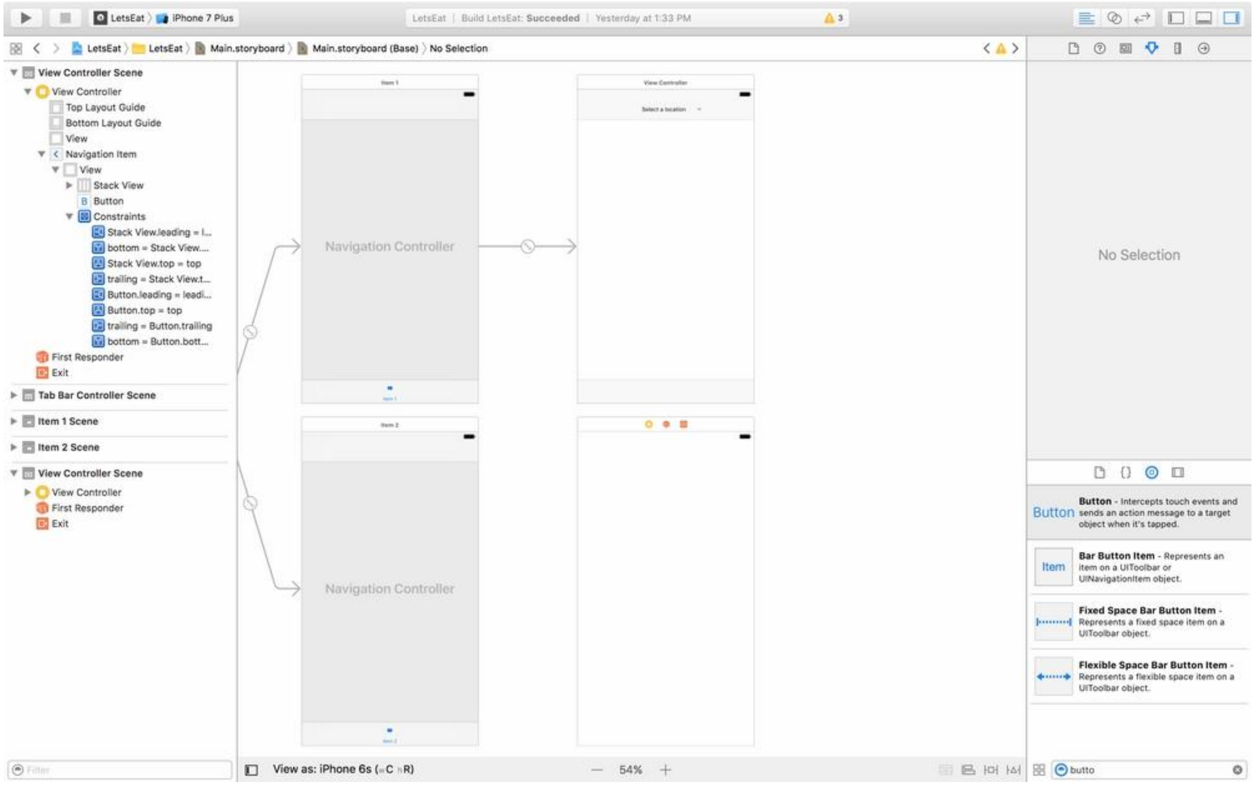
Item

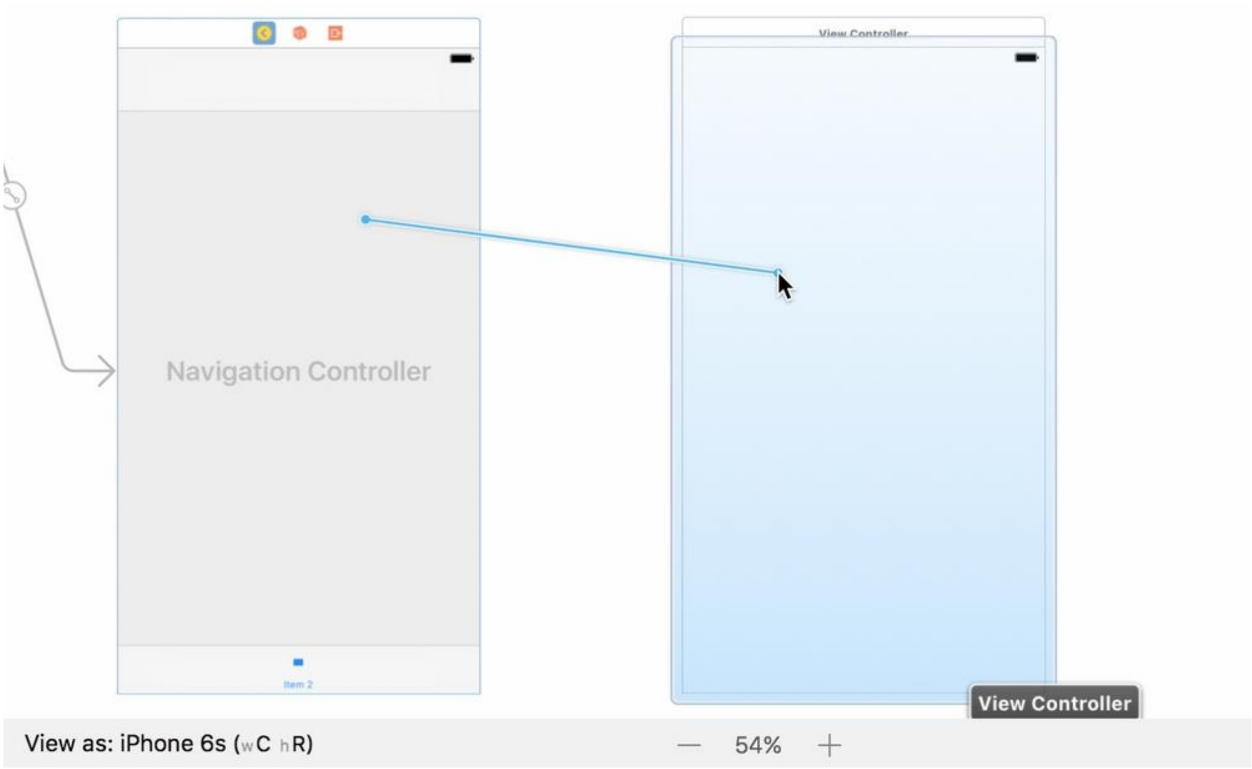
Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.

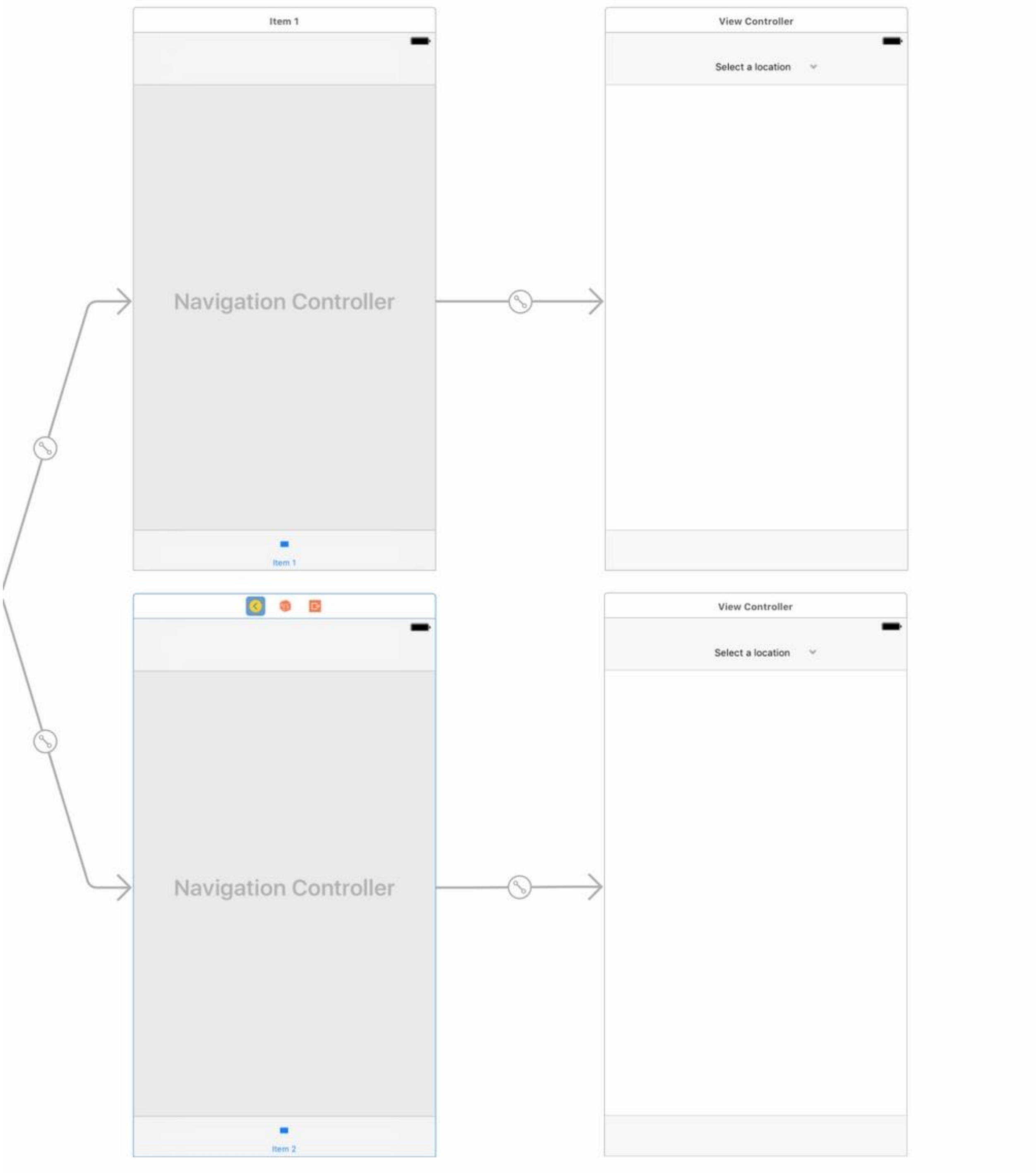
Fixed Space Bar Button Item - Represents a fixed space item on a UIToolbar object.

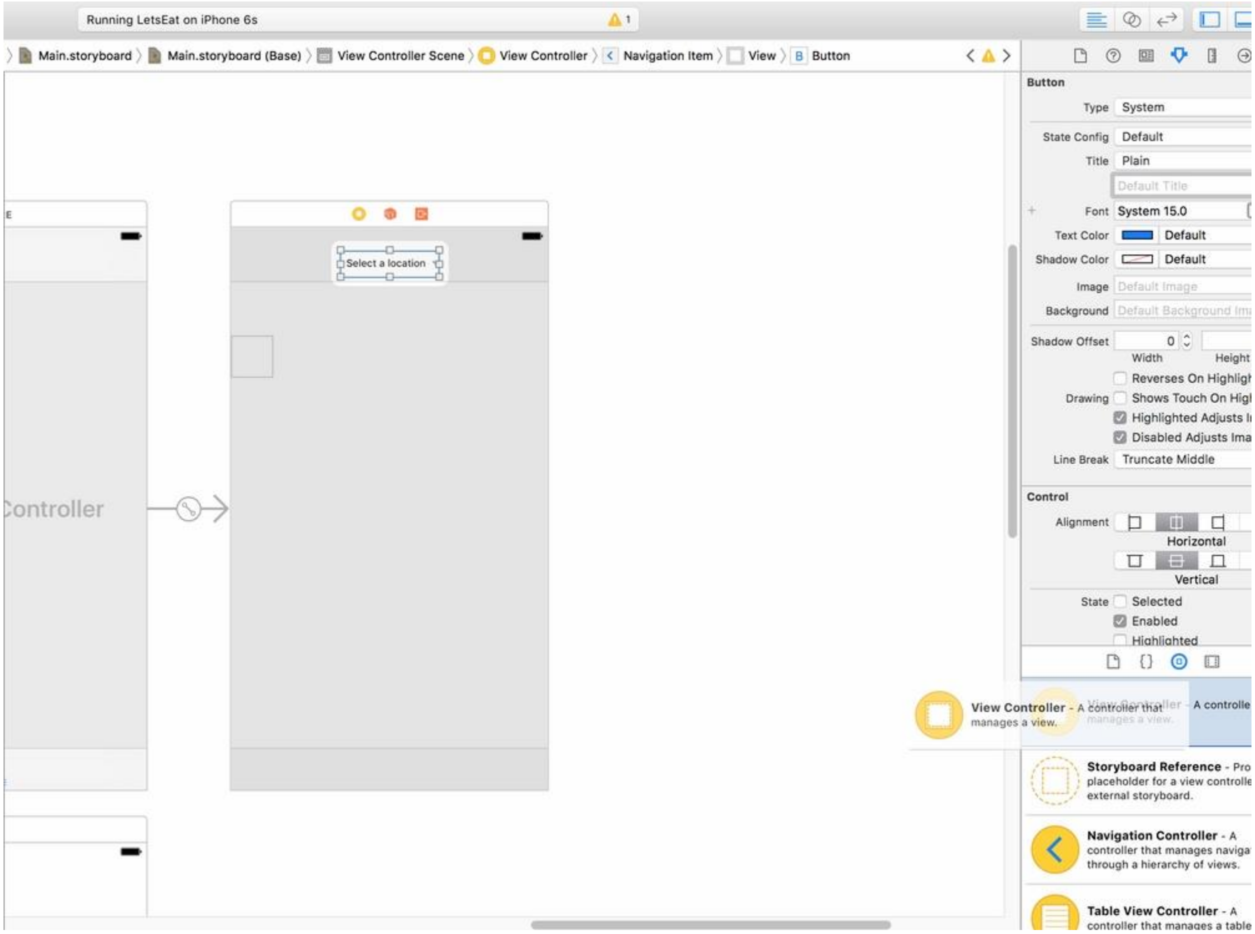

EXPLORE
Navigation Controller
EXPLORE
View Controller
Select a location
MAP
Navigation Controller
MAP
View Controller


EXPLORE
View Controller
Select a location
Navigation Controller
ller
EXPLORE
MAP
MAP
View Controller
Navigation Controller
MAP


LetsEat 〉 iPhone 7 Plus
LetsEat | Build LetsEat: Succeeded | Yesterday at 1:33 PM
3
LetsEat 〉 LetsEat 〉 Main.storyboard 〉 Main.storyboard (Base) 〉 No Selection
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
Navigation Item
View
Stack View
Button
Constraints
Stack View.leading = l...
bottom = Stack View....
Stack View.top = top
trailing = Stack View.t...
Button.leading = leadi...
Button.top = top
trailing = Button.trailing
bottom = Button.bott...
First Responder
Exit
Tab Bar Controller Scene
Item 1 Scene
Item 2 Scene
View Controller Scene
View Controller
First Responder
Exit
Item 1
View Controller
Select a location
Navigation Controller
Item 2
Navigation Controller
No Selection
Button
Button - Intercepts touch events and sends an action message to a target object when it's tapped.
Item
Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.
Fixed Space Bar Button Item - Represents a fixed space item on a UIToolbar object.
Flexible Space Bar Button Item - Represents a flexible space item on a UIToolbar object.
Filter
View as: iPhone 6s (wC hR)
54%
butto


View Controller
Navigation Controller
Item 2
View Controller
View as: iPhone 6s (wC hR)
54%


Item 1
View Controller
Select a location
Navigation Controller
Item 1
View Controller
Select a location
Navigation Controller
Item 2


Running LetsEat on iPhone 6s
Main.storyboard 〉 Main.storyboard (Base) 〉 View Controller Scene 〉 View Controller 〉 Navigation Item 〉 View 〉 Button
Select a location
Controller

Button

Type System

State Config Default

Title Plain

Default Title

Font System 15.0

Text Color Default

Shadow Color Default

Image Default Image

Background Default Background Ima

Shadow Offset 0 Width Height

Drawing
- □ Reverses On Highligh
- □ Shows Touch On High
- ☑ Highlighted Adjusts I
- ☑ Disabled Adjusts Ima

Line Break Truncate Middle

Control

Alignment Horizontal Vertical

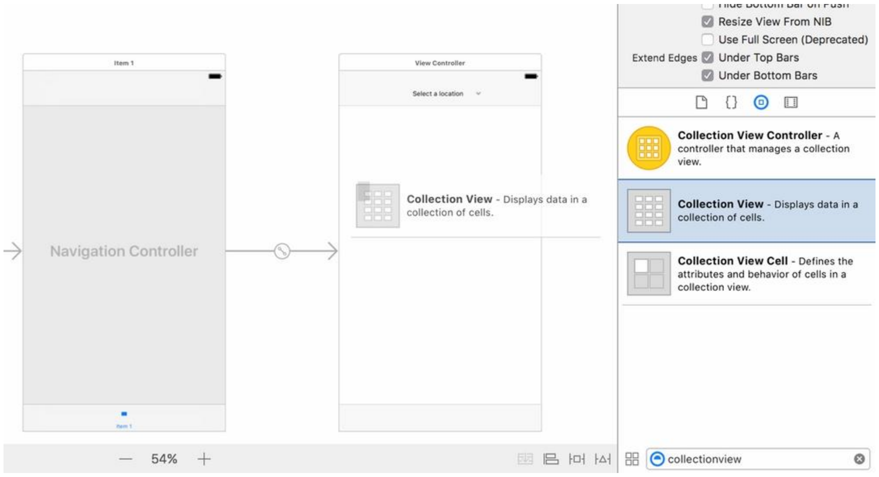
State
- □ Selected
- ☑ Enabled
- □ Highlighted

View Controller - A controller that manages a view.

Storyboard Reference - Pro placeholder for a view controlle external storyboard.

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

Table View Controller - A controller that manages a table



- □ Hide Bottom Bar on Push
- ☑ Resize View From NIB
- □ Use Full Screen (Deprecated)

Extend Edges
- ☑ Under Top Bars
- ☑ Under Bottom Bars

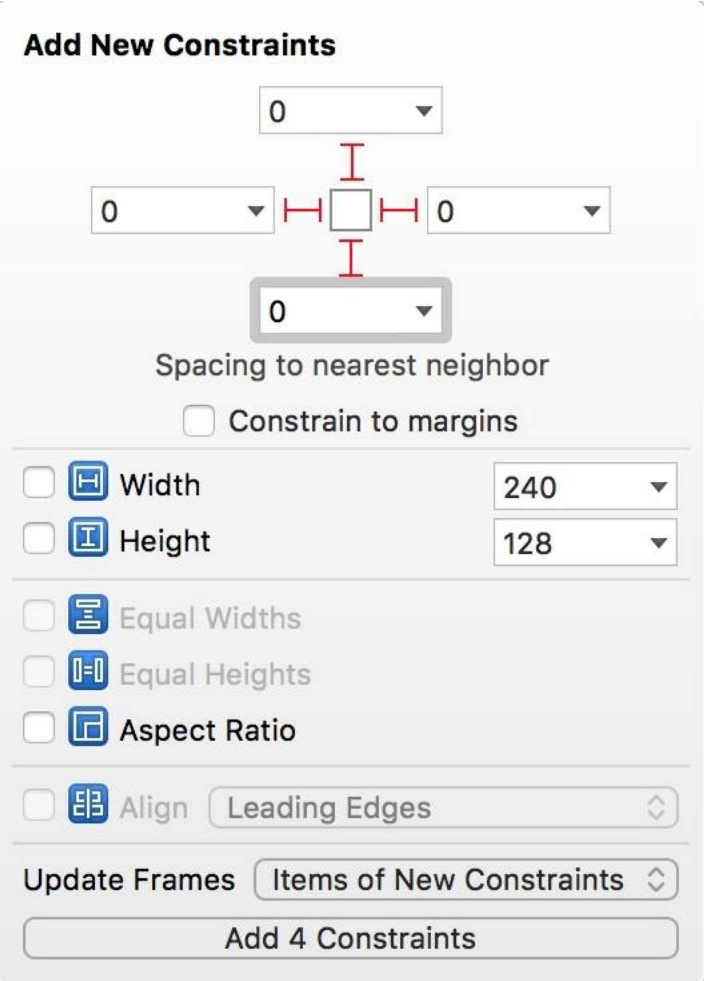
Collection View - Displays data in a collection of cells.

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

Collection View - Displays data in a collection of cells.

Collection View Cell - Defines the attributes and behavior of cells in a collection view.

collectionview



Add New Constraints

0

0 0

0

Spacing to nearest neighbor

□ Constrain to margins

□ Width 240

□ Height 128

□ Equal Widths

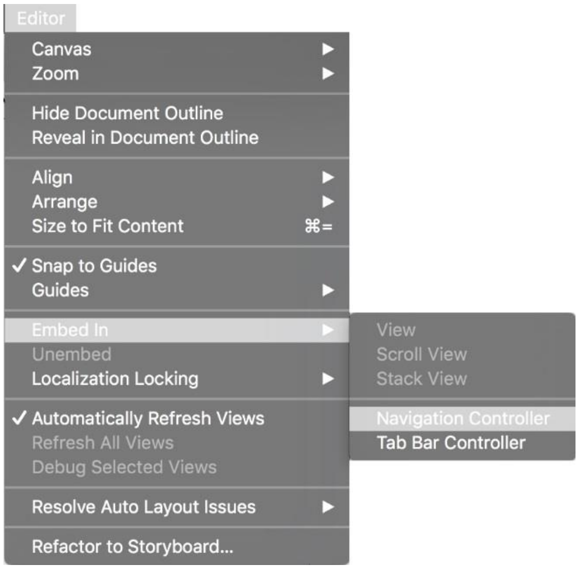
□ Equal Heights

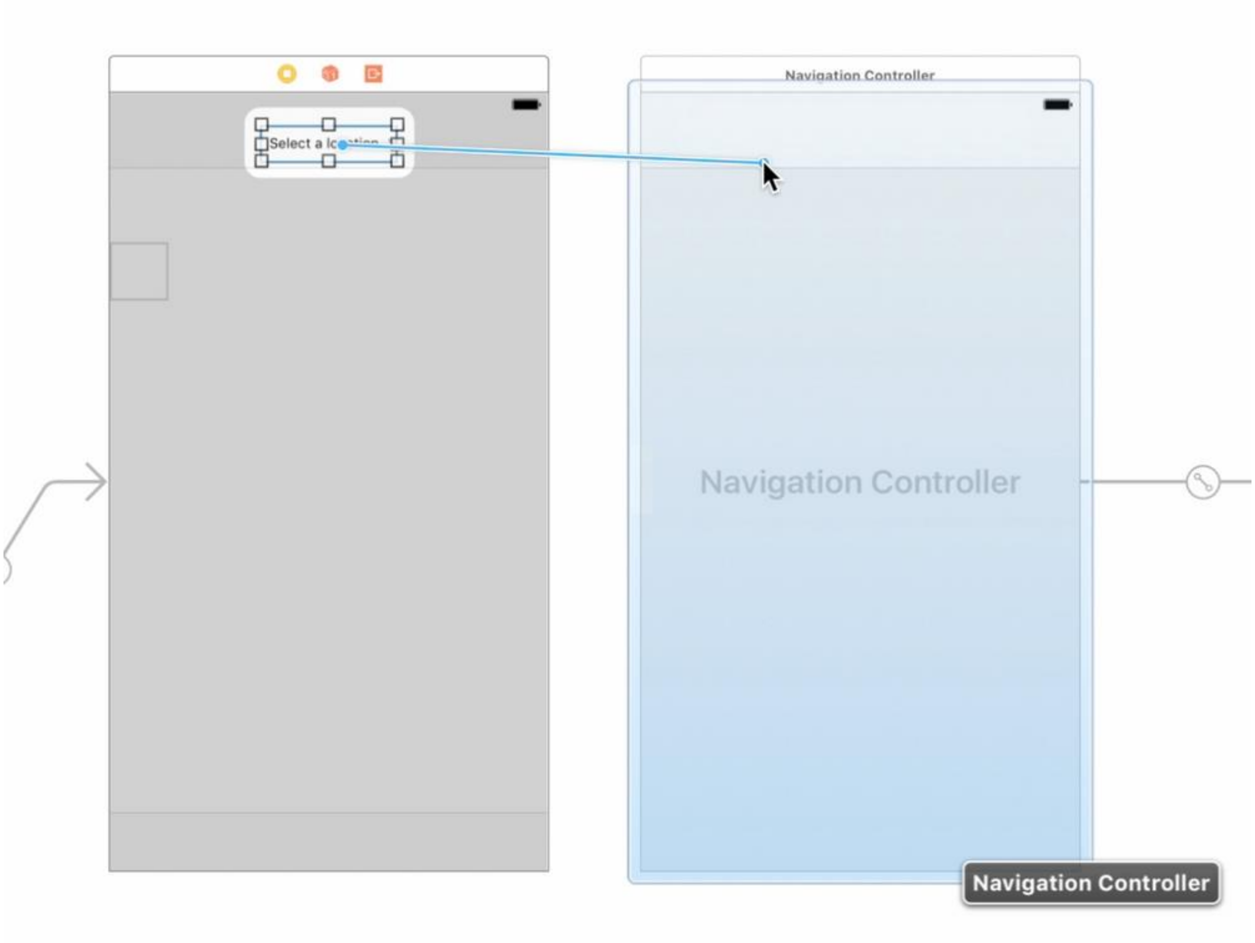
□ Aspect Ratio

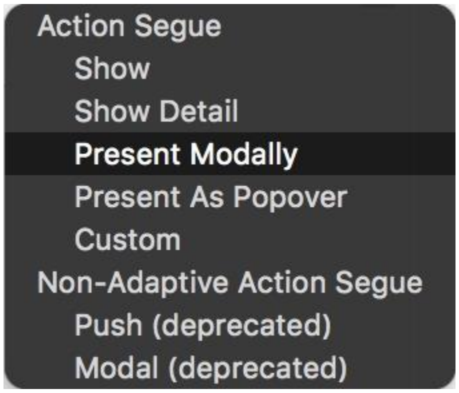
□ Align Leading Edges

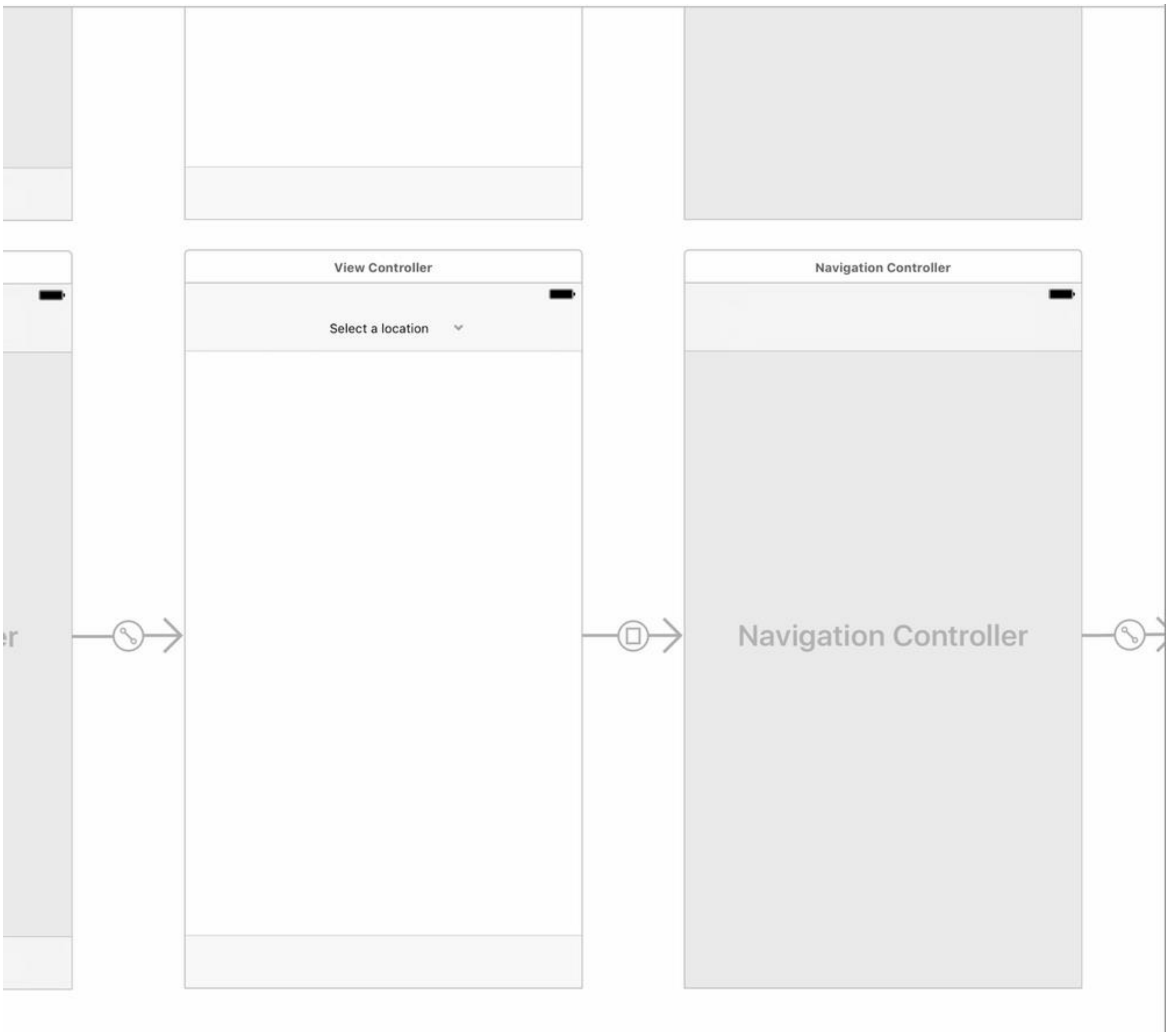
Update Frames Items of New Constraints

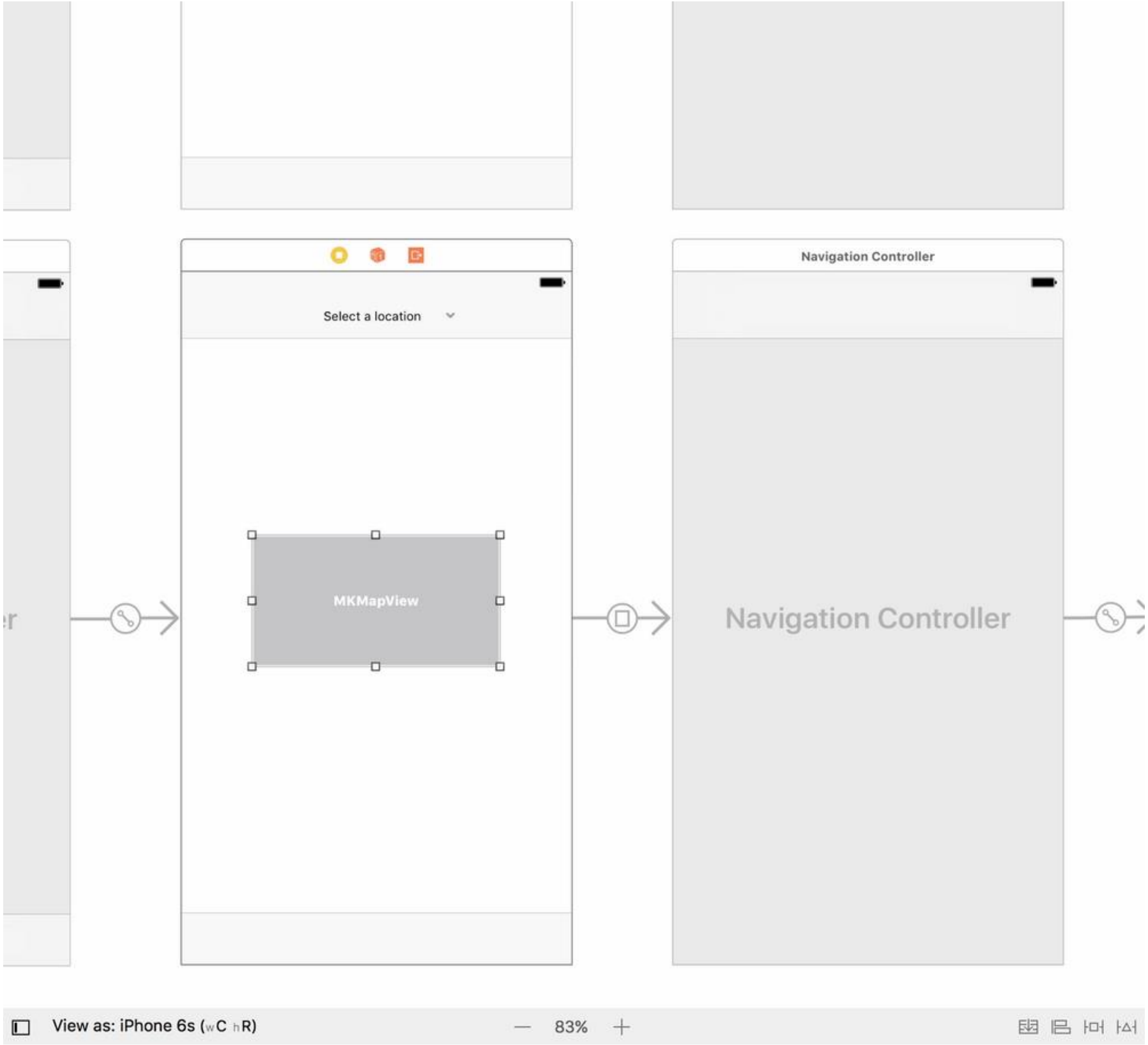
Add 4 Constraints

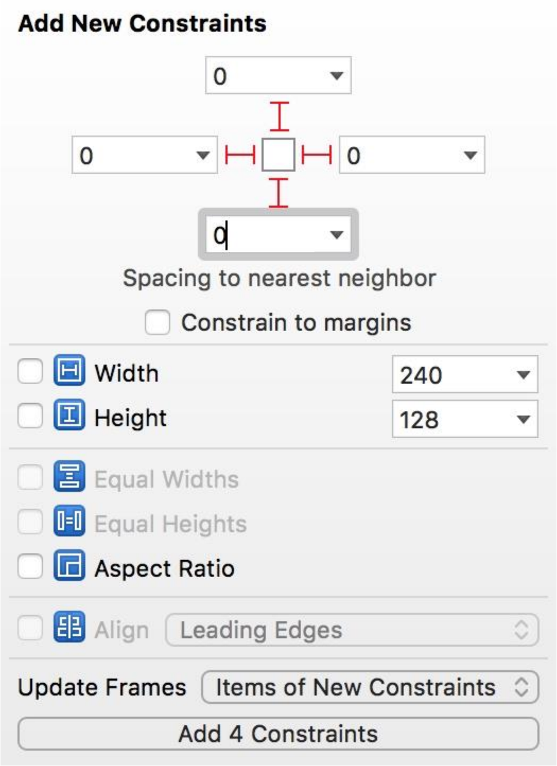



Navigation Controller
Select a location
Navigation Controller
Navigation Controller


Action Segue
Show
Show Detail
Present Modally
Present As Popover
Custom
Non-Adaptive Action Segue
Push (deprecated)
Modal (deprecated)


View Controller
Select a location
Navigation Controller
Navigation Controller
er


er
Navigation Controller
Select a location
MKMapView
Navigation Controller
View as: iPhone 6s (wC hR)
83%



Add New Constraints

0

0 0

0

Spacing to nearest neighbor

□ Constrain to margins

□ Width 240

□ Height 128

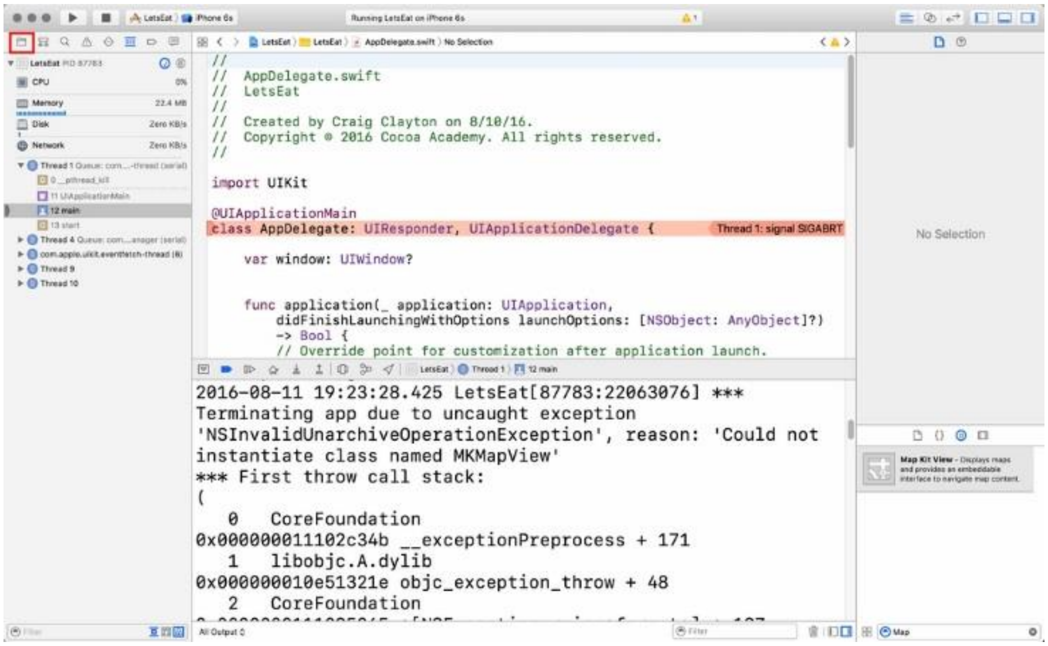
□ Equal Widths

□ Equal Heights

□ Aspect Ratio

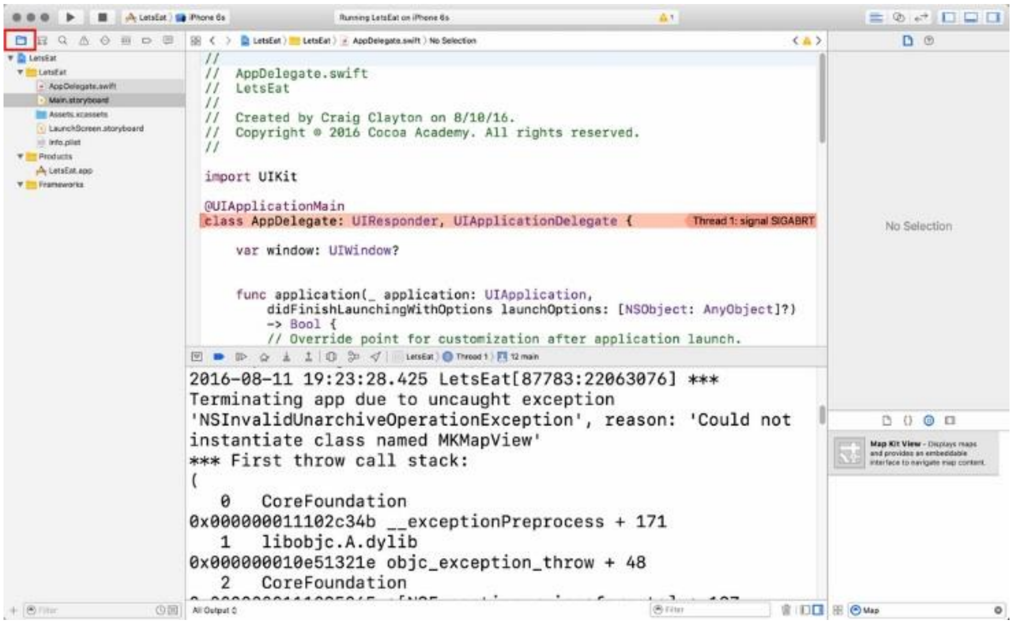
□ Align Leading Edges

Update Frames Items of New Constraints



```
//
//  AppDelegate.swift
//  LetsEat
//
//  Created by Craig Clayton on 8/10/16.
//  Copyright © 2016 Cocoa Academy. All rights reserved.
//

import UIKit

@UIApplicationMain
class AppDelegate: UIResponder, UIApplicationDelegate {

    var window: UIWindow?


    func application(_ application: UIApplication,
        didFinishLaunchingWithOptions launchOptions: [NSObject: AnyObject]?)
        -> Bool {
        // Override point for customization after application launch.
```

```
2016-08-11 19:23:28.425 LetsEat[87783:22063076] ***
Terminating app due to uncaught exception
'NSInvalidUnarchiveOperationException', reason: 'Could not
instantiate class named MKMapView'
*** First throw call stack:
(
   0   CoreFoundation
0x000000011102c34b __exceptionPreprocess + 171
   1   libobjc.A.dylib
0x000000010e51321e objc_exception_throw + 48
   2   CoreFoundation
```



```
//
//  AppDelegate.swift
//  LetsEat
//
//  Created by Craig Clayton on 8/10/16.
//  Copyright © 2016 Cocoa Academy. All rights reserved.
//

import UIKit

@UIApplicationMain
class AppDelegate: UIResponder, UIApplicationDelegate {

    var window: UIWindow?


    func application(_ application: UIApplication,
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2016-08-11 19:23:28.425 LetsEat[87783:22063076] ***
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(
    0   CoreFoundation
0x000000011102c34b __exceptionPreprocess + 171
    1   libobjc.A.dylib
0x000000010e51321e objc_exception_throw + 48
    2   CoreFoundation
```
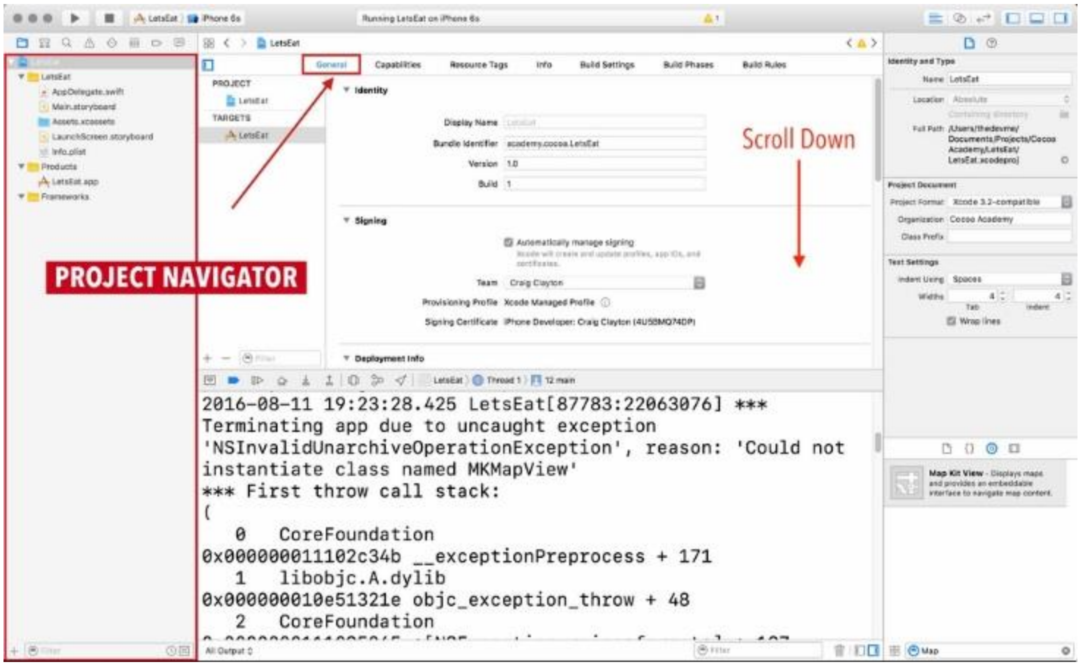

Map Kit View - Displays maps and provides an embeddable interface to navigate map content.



▼ Identity

Display Name: LetsEat
Bundle Identifier: academy.cocoa.LetsEat
Version: 1.0
Build: 1

▼ Signing

☑ Automatically manage signing
Xcode will create and update profiles, app IDs, and certificates.

Team: Craig Clayton
Provisioning Profile: Xcode Managed Profile
Signing Certificate: iPhone Developer: Craig Clayton (4U5BMQ74DP)

▼ Deployment Info

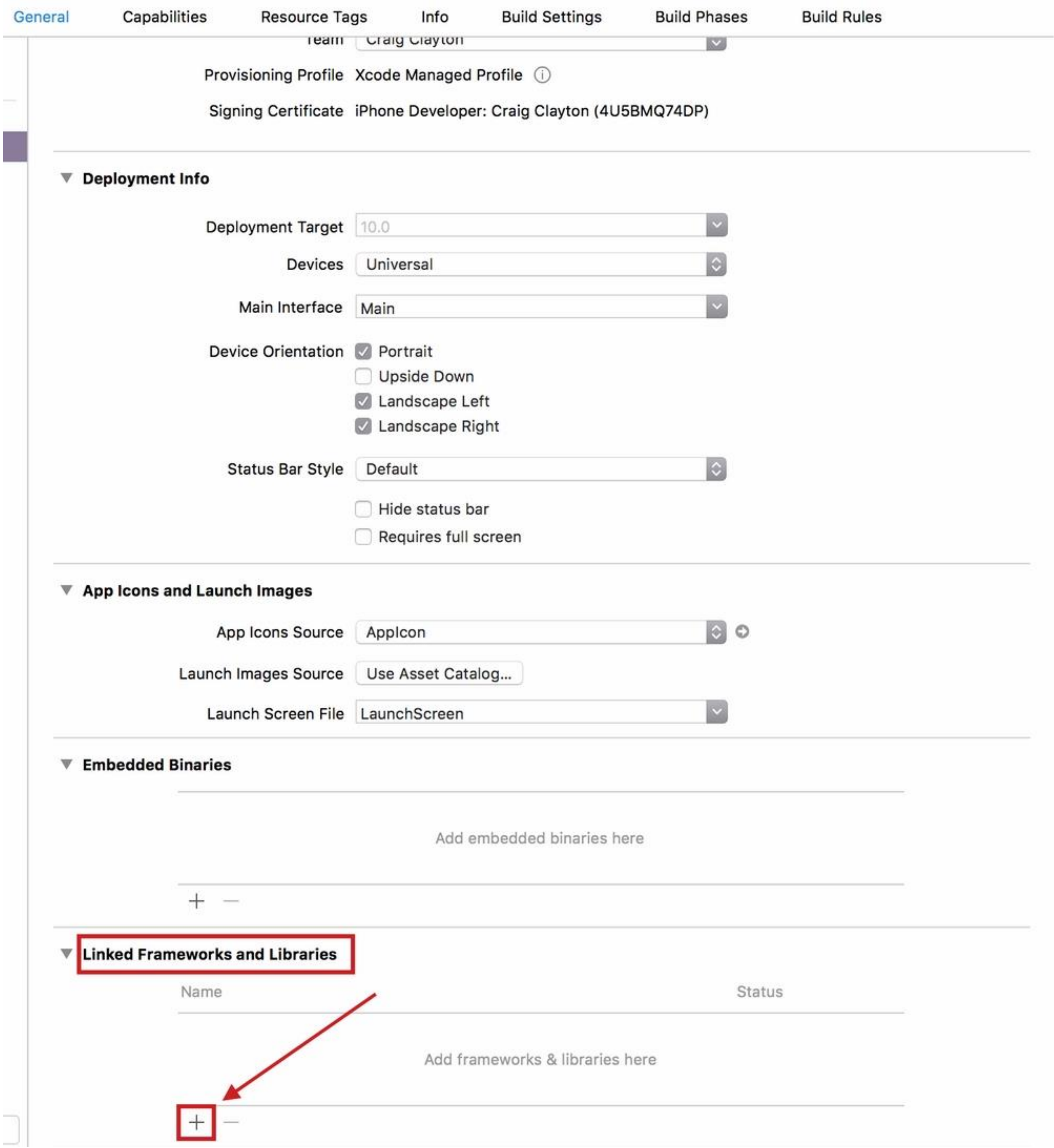
Identity and Type
Name: LetsEat
Location: Absolute
Containing directory
Full Path: /Users/thedevme/Documents/Projects/Cocoa Academy/LetsEat/LetsEat.xcodeproj

Project Document
Project Format: Xcode 3.2-compatible
Organization: Cocoa Academy
Class Prefix:

Text Settings
Indent Using: Spaces
Widths: 4 Tab, 4 Indent
☑ Wrap lines

```
2016-08-11 19:23:28.425 LetsEat[87783:22063076] ***
Terminating app due to uncaught exception
'NSInvalidUnarchiveOperationException', reason: 'Could not
instantiate class named MKMapView'
*** First throw call stack:
(
    0   CoreFoundation
0x000000011102c34b __exceptionPreprocess + 171
    1   libobjc.A.dylib
0x000000010e51321e objc_exception_throw + 48
    2   CoreFoundation
```

Map Kit View - Displays maps and provides an embeddable interface to navigate map content.



Team Craig Clayton

Provisioning Profile Xcode Managed Profile

Signing Certificate iPhone Developer: Craig Clayton (4U5BMQ74DP)

▼ Deployment Info

Deployment Target 10.0

Devices Universal

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

Launch Images Source Use Asset Catalog...

Launch Screen File LaunchScreen

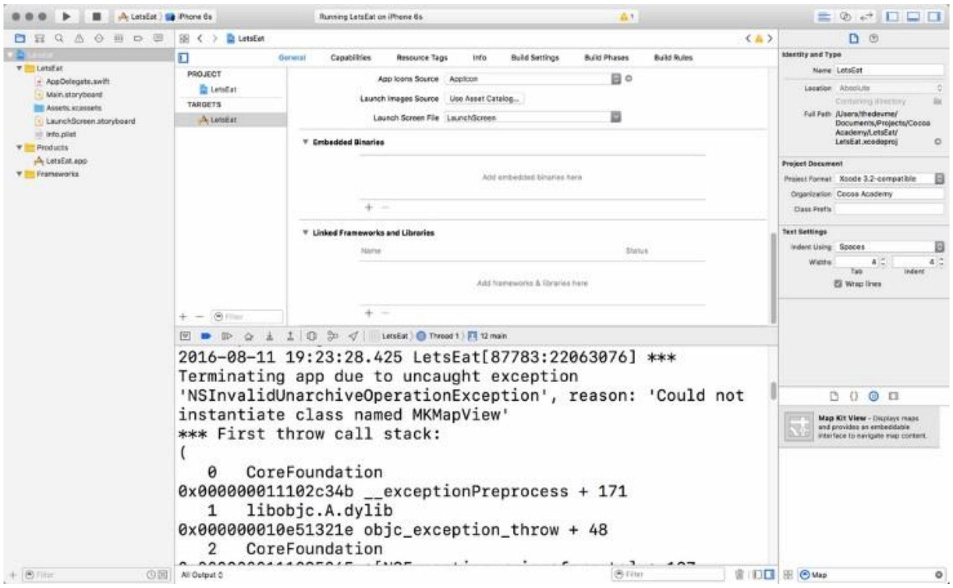
▼ Embedded Binaries

Add embedded binaries here

▼ Linked Frameworks and Libraries

Name	Status

Add frameworks & libraries here



App Icons Source: AppIcon
Launch Images Source: Use Asset Catalog...
Launch Screen File: LaunchScreen

Identity and Type
Name: LetsEat
Location: Absolute
Full Path: /Users/thedevme/Documents/Projects/Cocoa Academy/LetsEat/LetsEat.xcodeproj

Project Document
Project Format: Xcode 3.2-compatible
Organization: Cocoa Academy
Class Prefix:

Text Settings
Indent Using: Spaces
Widths: 4 Tab 4 Indent
☑ Wrap lines

Map Kit View - Displays maps and provides an embeddable interface to navigate map content.

```
2016-08-11 19:23:28.425 LetsEat[87783:22063076] ***
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*** First throw call stack:
(
    0   CoreFoundation
0x000000011102c34b __exceptionPreprocess + 171
    1   libobjc.A.dylib
0x000000010e51321e objc_exception_throw + 48
    2   CoreFoundation
```
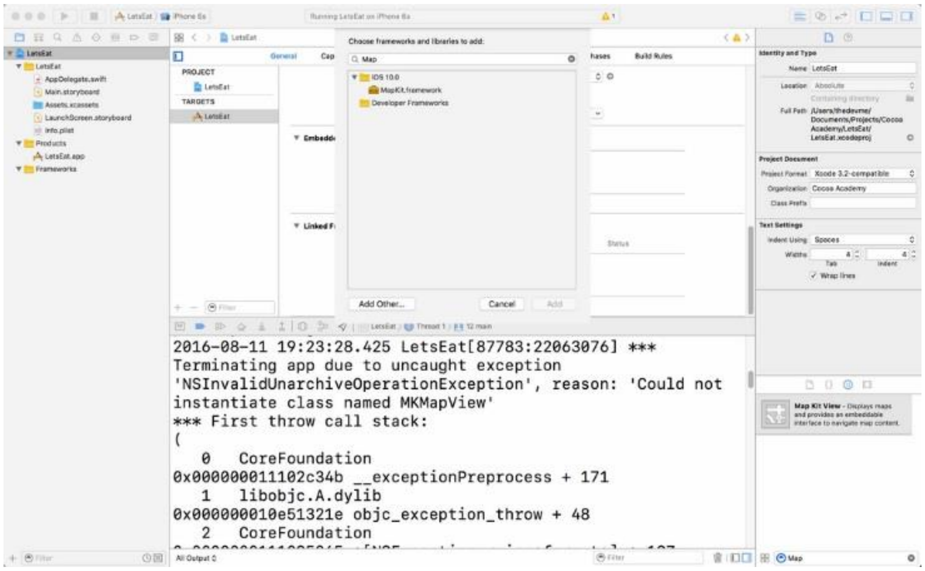



Choose frameworks and libraries to add:

Map

iOS 10.0
MapKit.framework
Developer Frameworks

Add Other...   Cancel   Add

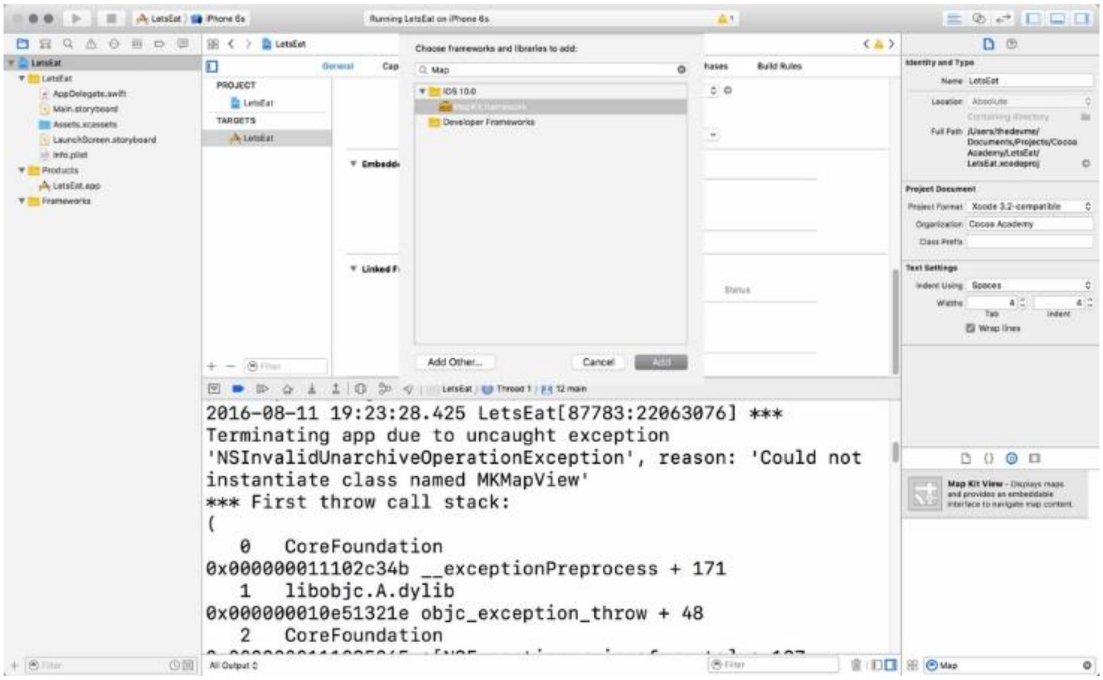
Identity and Type
Name: LetsEat
Location: Absolute
Full Path: /Users/thedevme/Documents/Projects/Cocoa Academy/LetsEat/LetsEat.xcodeproj

Project Document
Project Format: Xcode 3.2-compatible
Organization: Cocoa Academy
Class Prefix:

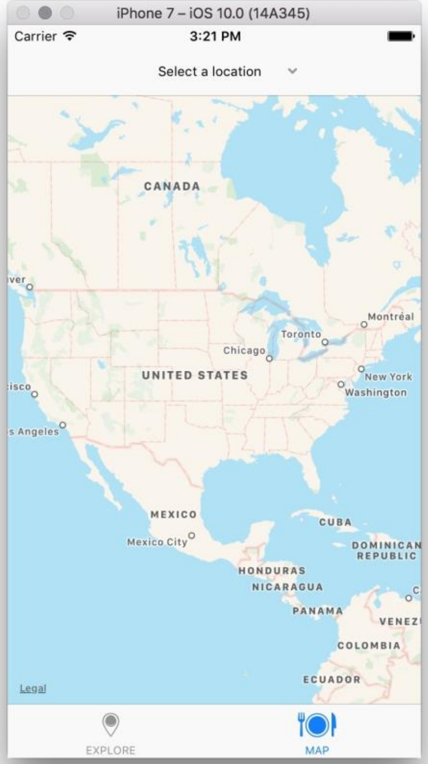
Text Settings
Indent Using: Spaces
Widths: 4 Tab 4 Indent
✓ Wrap lines

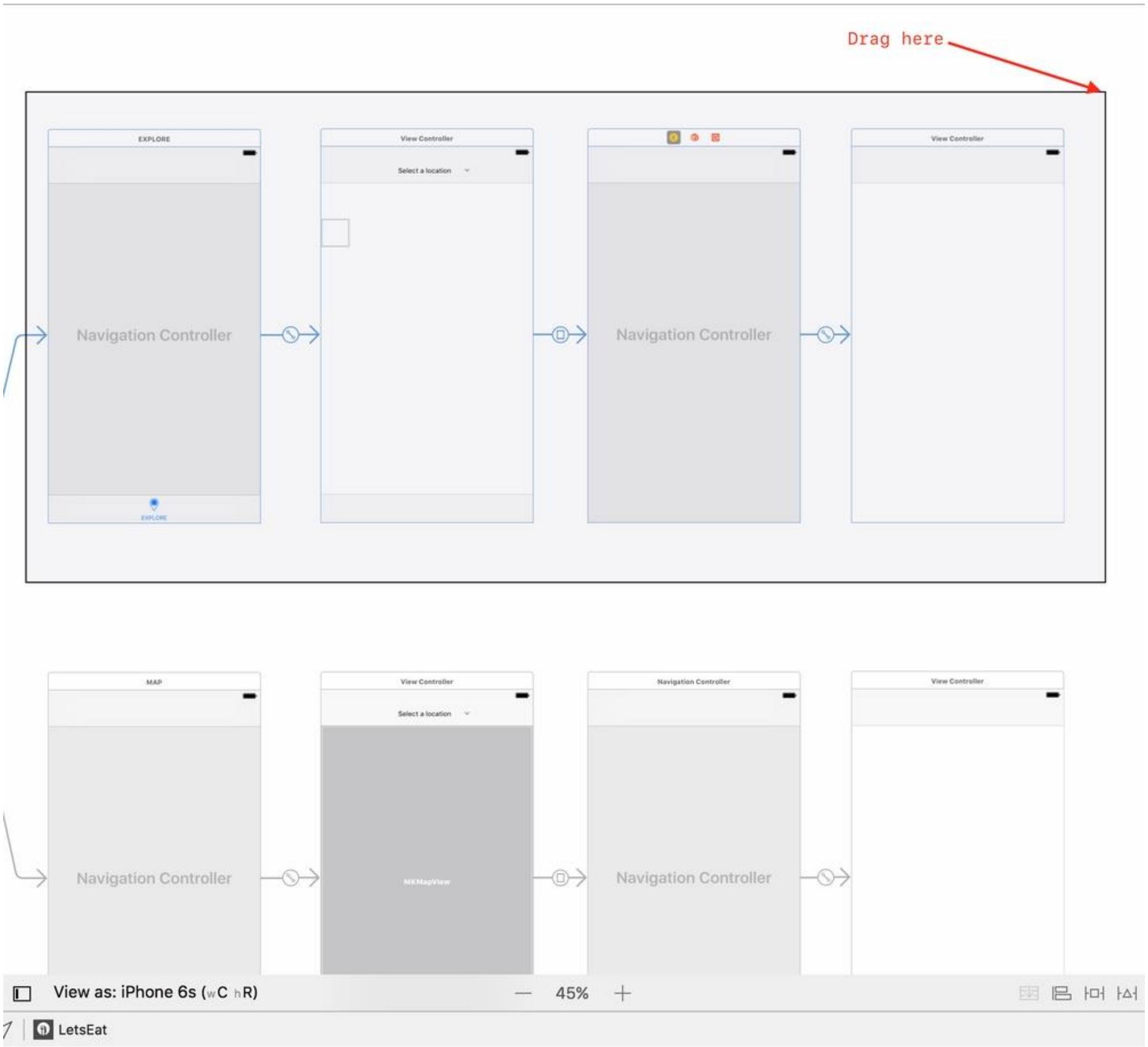
Map Kit View - Displays maps and provides an embeddable interface to navigate map content.

```
2016-08-11 19:23:28.425 LetsEat[87783:22063076] ***
Terminating app due to uncaught exception
'NSInvalidUnarchiveOperationException', reason: 'Could not
instantiate class named MKMapView'
*** First throw call stack:
(
    0   CoreFoundation
0x000000011102c34b __exceptionPreprocess + 171
    1   libobjc.A.dylib
0x000000010e51321e objc_exception_throw + 48
    2   CoreFoundation
```


Running LetsEat on iPhone 6s
Choose frameworks and libraries to add:
Map
iOS 10.0
MapKit.framework
Developer Frameworks
Add Other...
Cancel
Add
Map Kit View - Displays maps and provides an embeddable interface to navigate map content.

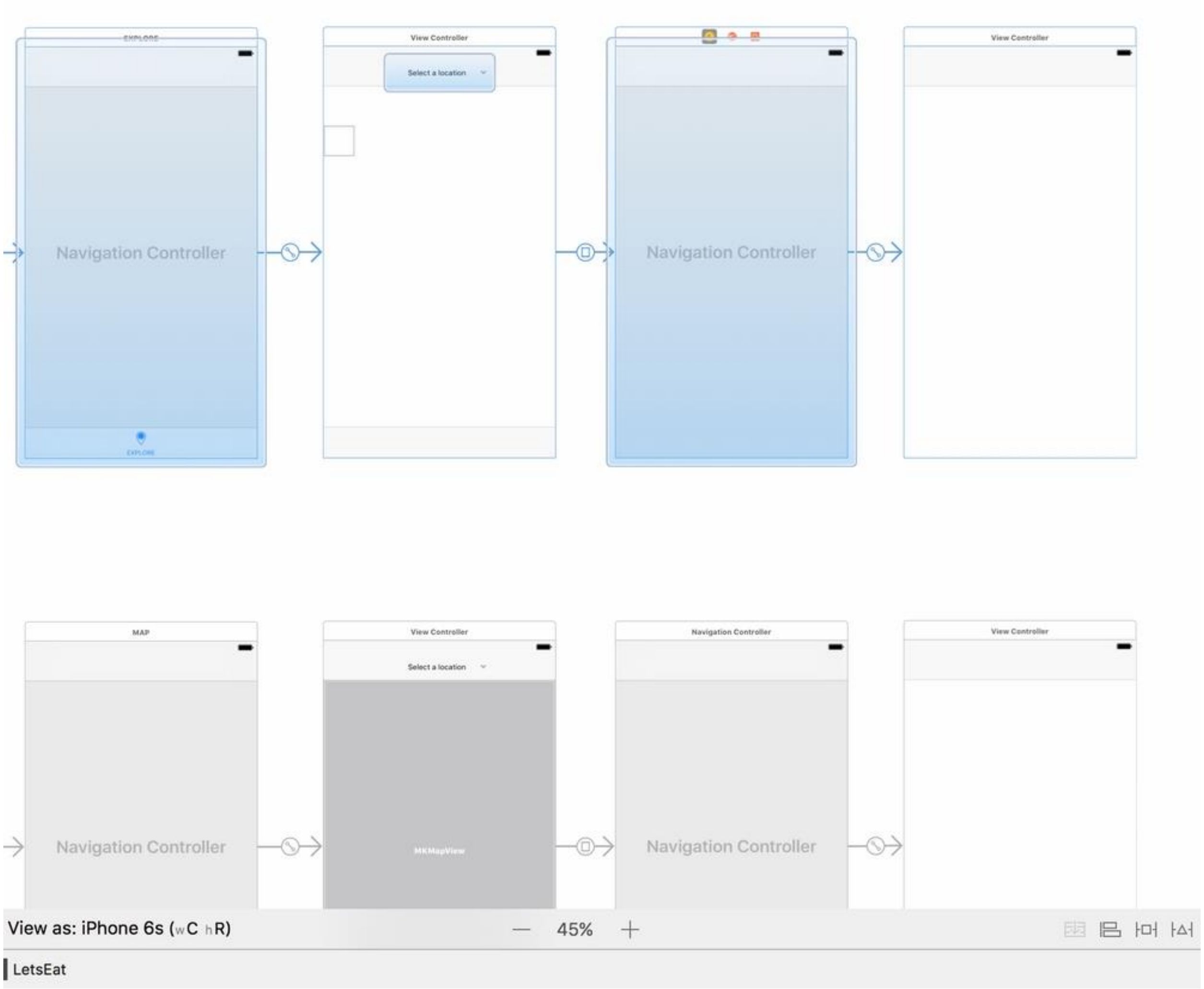
```
2016-08-11 19:23:28.425 LetsEat[87783:22063076] ***
Terminating app due to uncaught exception
'NSInvalidUnarchiveOperationException', reason: 'Could not
instantiate class named MKMapView'
*** First throw call stack:
(
   0   CoreFoundation
0x000000011102c34b __exceptionPreprocess + 171
   1   libobjc.A.dylib
0x000000010e51321e objc_exception_throw + 48
   2   CoreFoundation
```

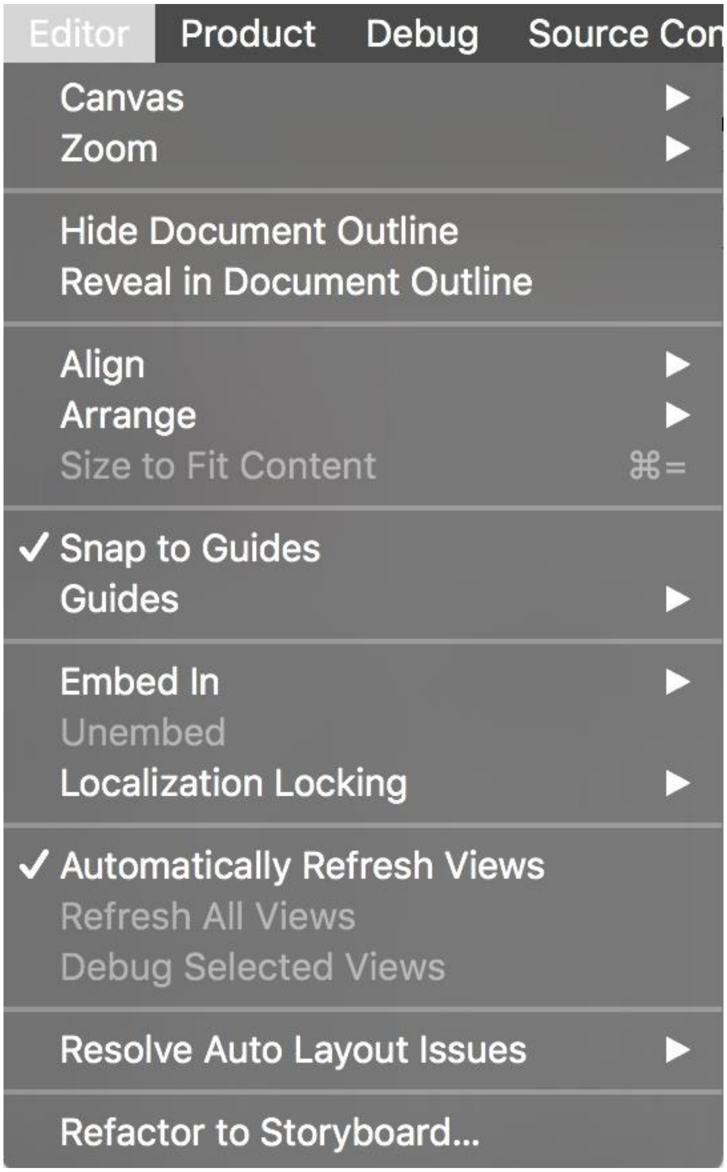


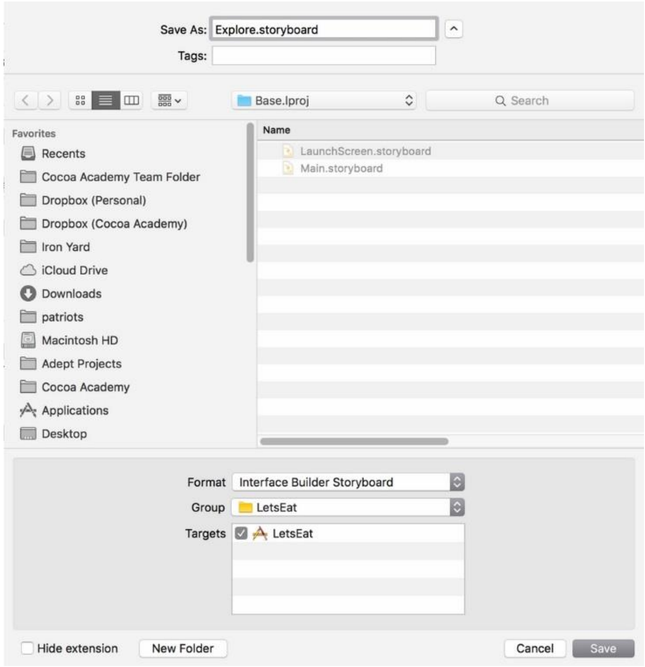


Drag here

EXPLORE
Navigation Controller
EXPLORE
View Controller
Select a location
Navigation Controller
View Controller
MAP
Navigation Controller
View Controller
Select a location
MKMapView
Navigation Controller
Navigation Controller
View Controller
View as: iPhone 6s (wC hR)
45%
LetsEat


EXPLORE
Navigation Controller
EXPLORE
View Controller
Select a location
Navigation Controller
View Controller
MAP
Navigation Controller
View Controller
Select a location
MKMapView
Navigation Controller
Navigation Controller
View Controller
View as: iPhone 6s (wC hR)
45%
LetsEat


Editor
Product
Debug
Source Con
Canvas ▶
Zoom ▶
Hide Document Outline
Reveal in Document Outline
Align ▶
Arrange ▶
Size to Fit Content ⌘=
✓ Snap to Guides
Guides ▶
Embed In ▶
Unembed
Localization Locking ▶
✓ Automatically Refresh Views
Refresh All Views
Debug Selected Views
Resolve Auto Layout Issues ▶
Refactor to Storyboard...



Save As: Explore.storyboard

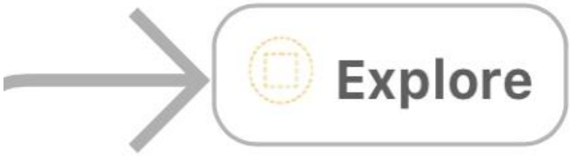
Tags:

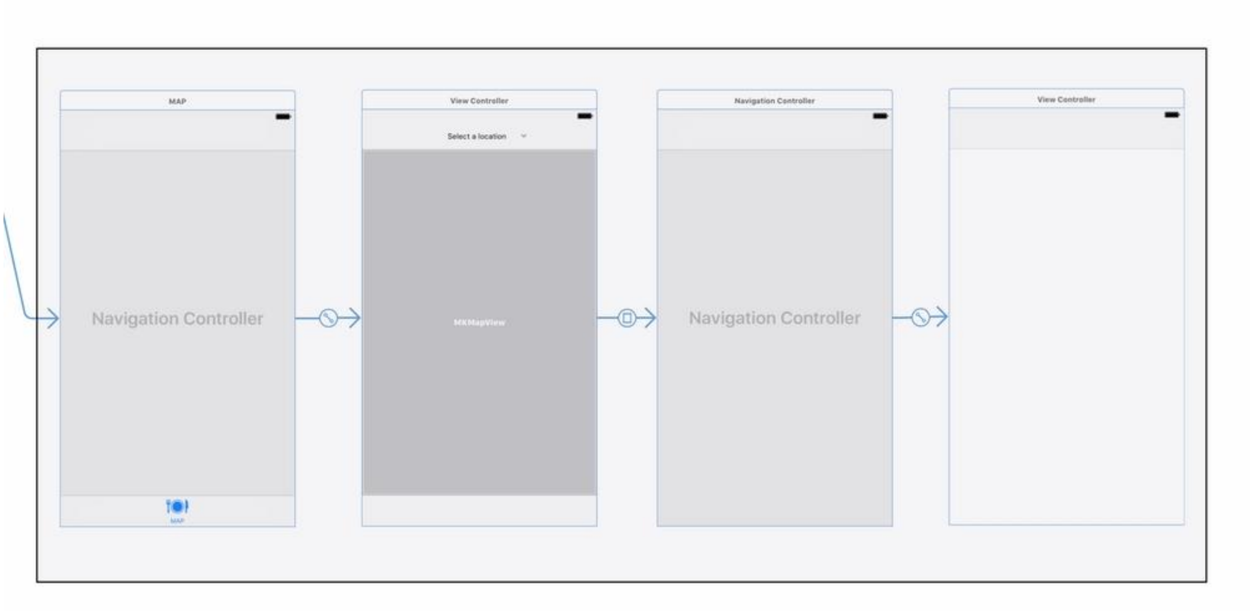
Format: Interface Builder Storyboard

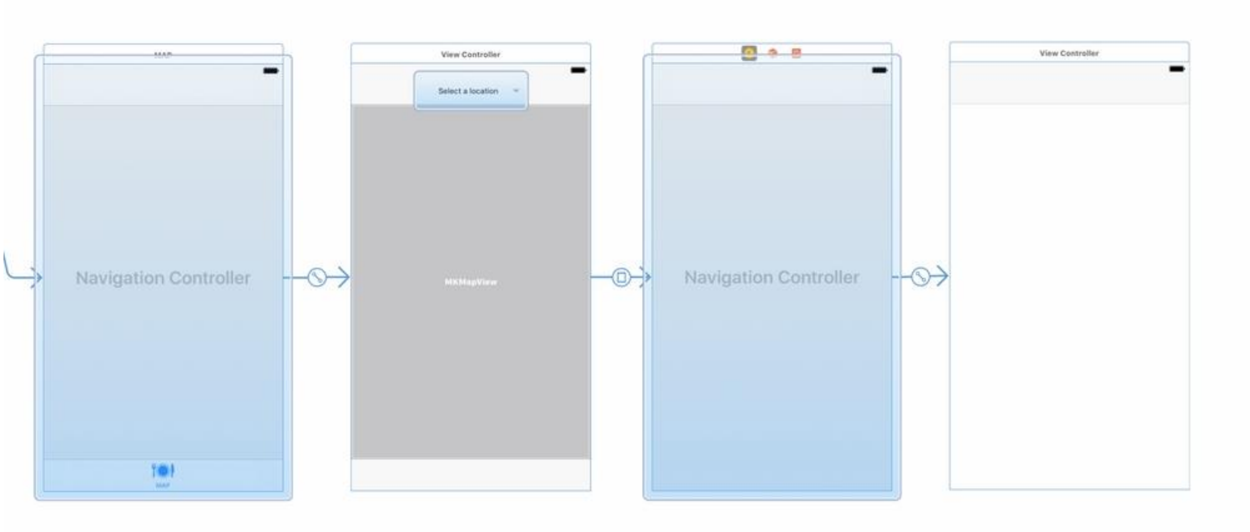
Group: LetsEat

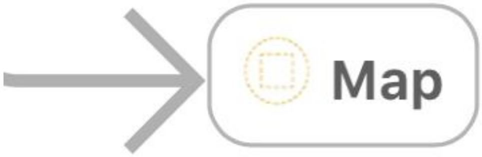
Targets: ☑ LetsEat

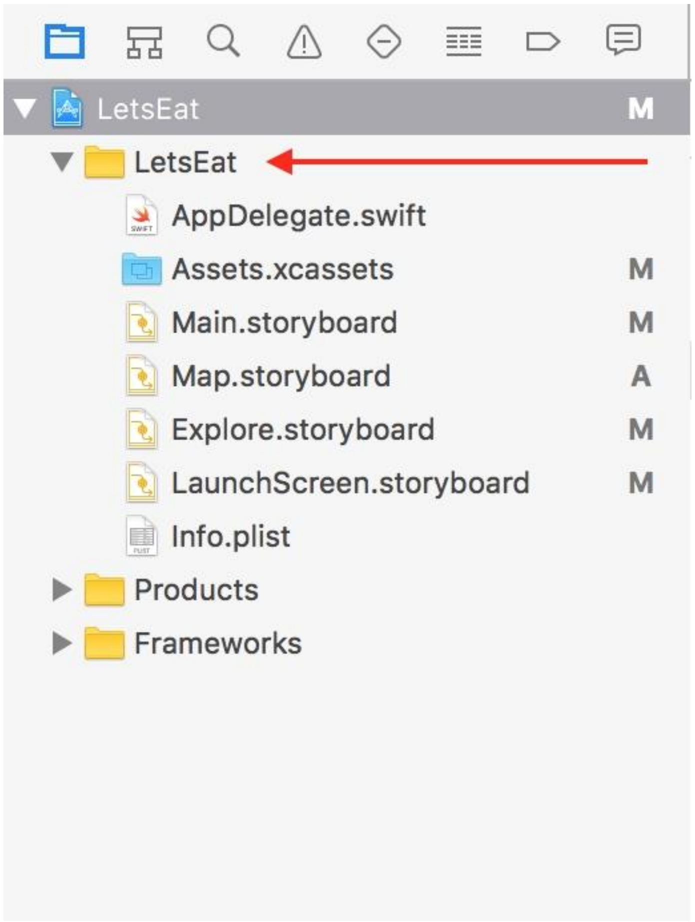
□ Hide extension



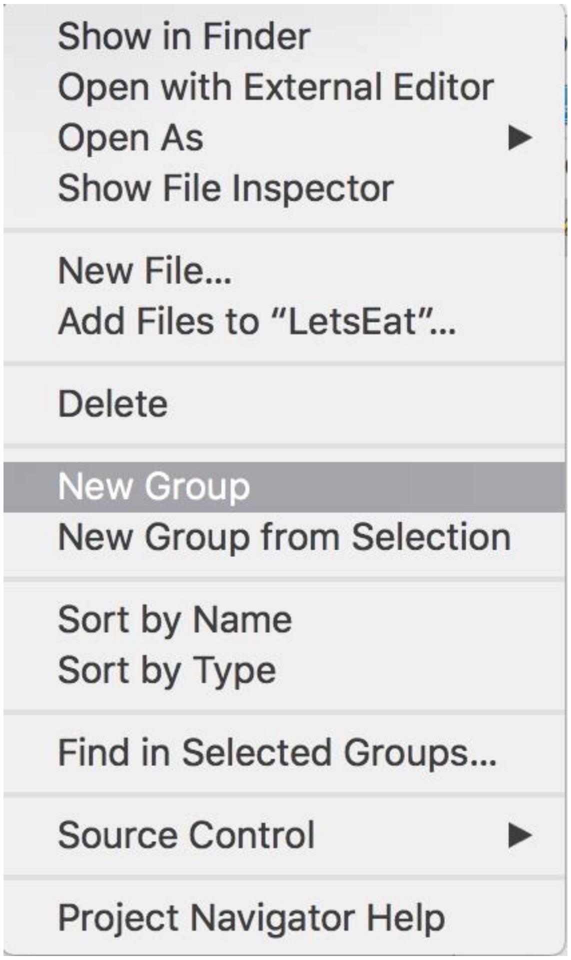

MAP
Navigation Controller
MAP
View Controller
Select a location
MKMapView
Navigation Controller
Navigation Controller
View Controller

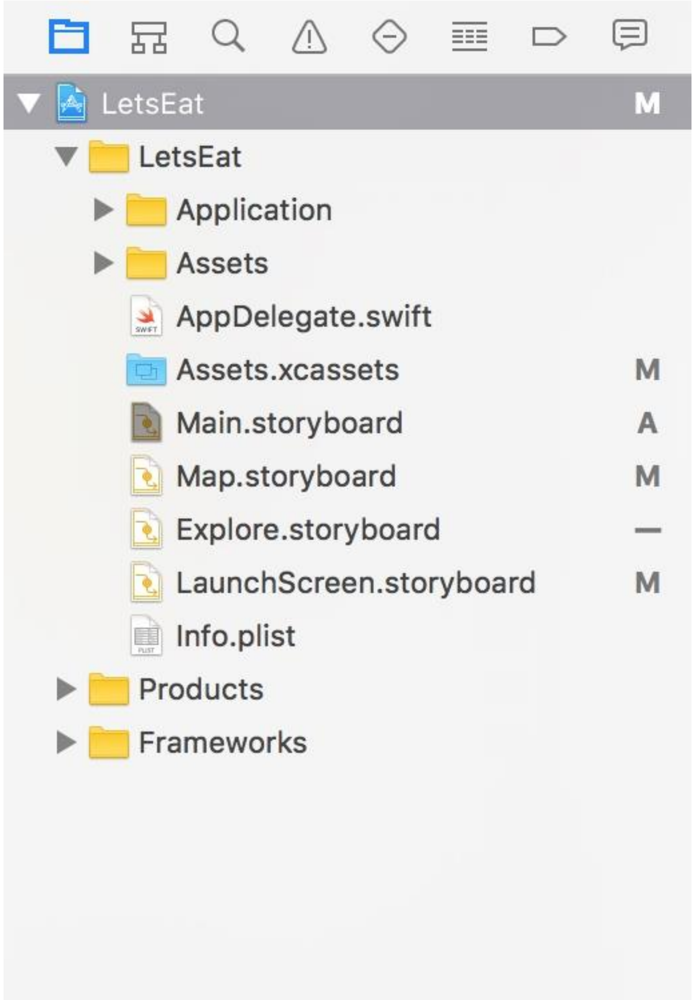

MAP
Navigation Controller
MAP
View Controller
Select a location
MKMapView
Navigation Controller
View Controller



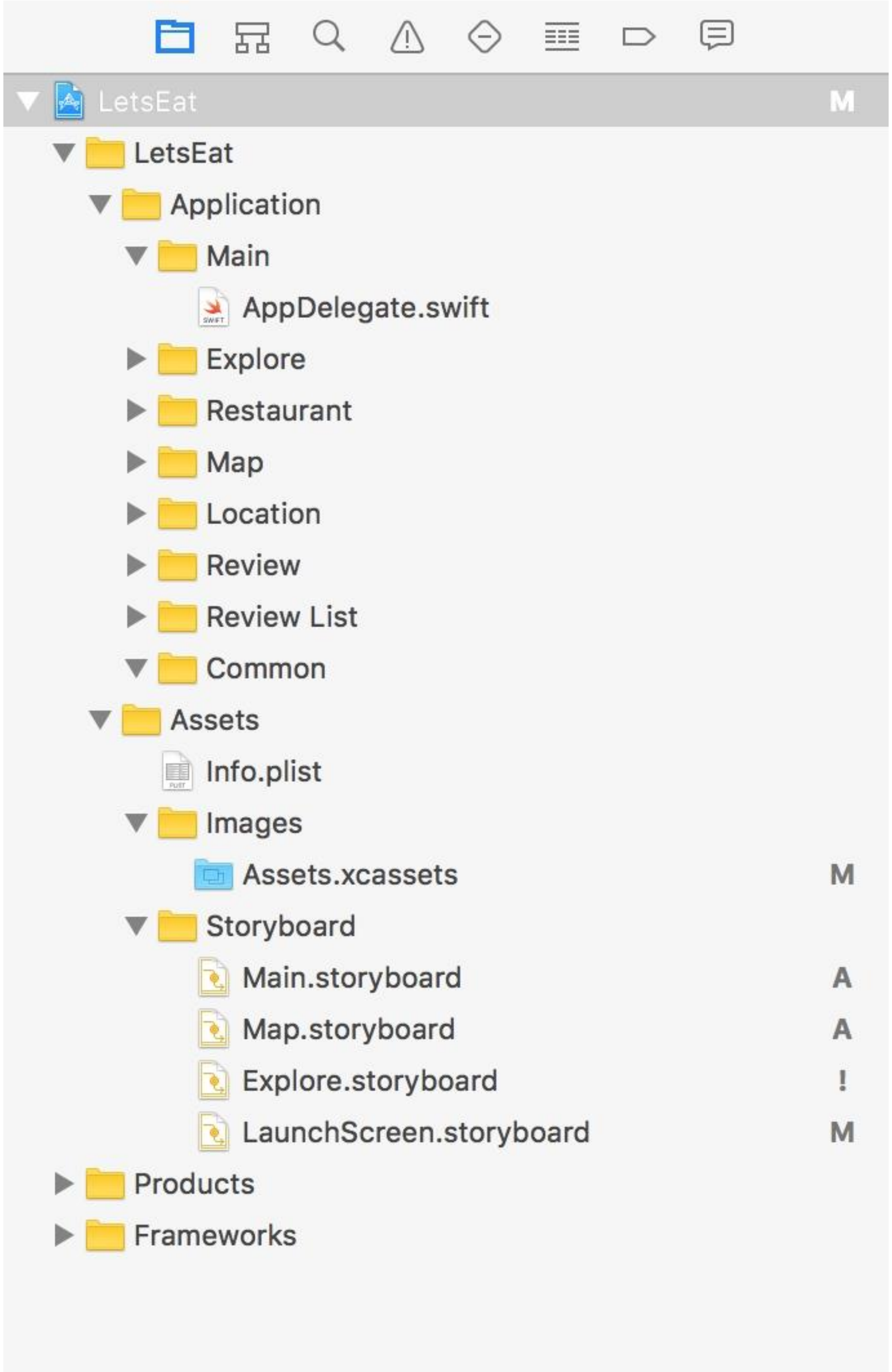


LetsEat	M
LetsEat	
AppDelegate.swift	
Assets.xcassets	M
Main.storyboard	M
Map.storyboard	A
Explore.storyboard	M
LaunchScreen.storyboard	M
Info.plist	
Products	
Frameworks	

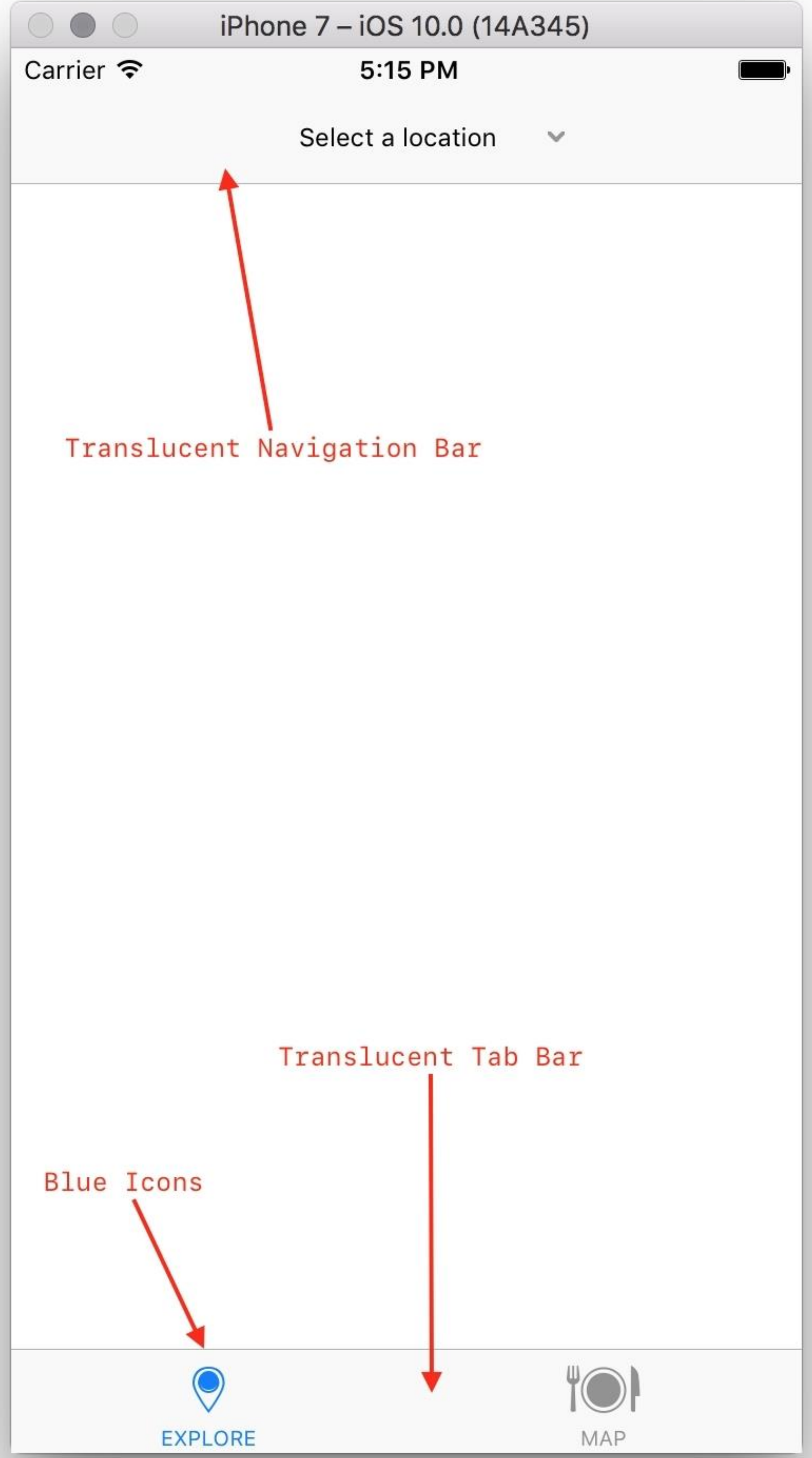

Show in Finder
Open with External Editor
Open As ▶
Show File Inspector
New File...
Add Files to “LetsEat”...
Delete
New Group
New Group from Selection
Sort by Name
Sort by Type
Find in Selected Groups...
Source Control ▶
Project Navigator Help

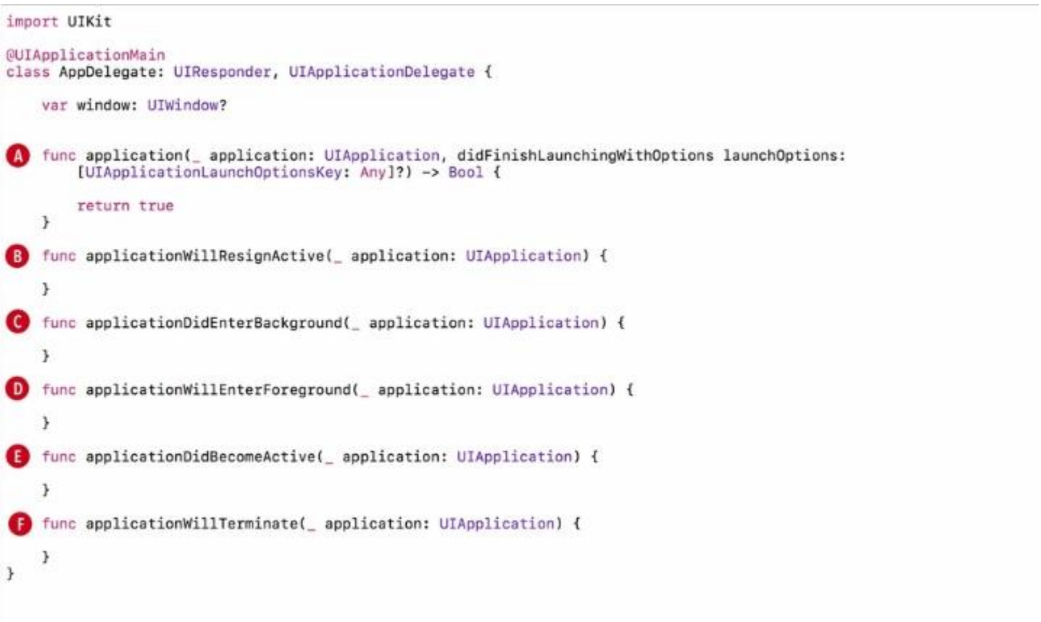


```
▼ LetsEat                              M
  ▼ LetsEat
    ▶ Application
    ▶ Assets
      AppDelegate.swift
      Assets.xcassets                  M
      Main.storyboard                  A
      Map.storyboard                   M
      Explore.storyboard               —
      LaunchScreen.storyboard          M
      Info.plist
  ▶ Products
  ▶ Frameworks
```

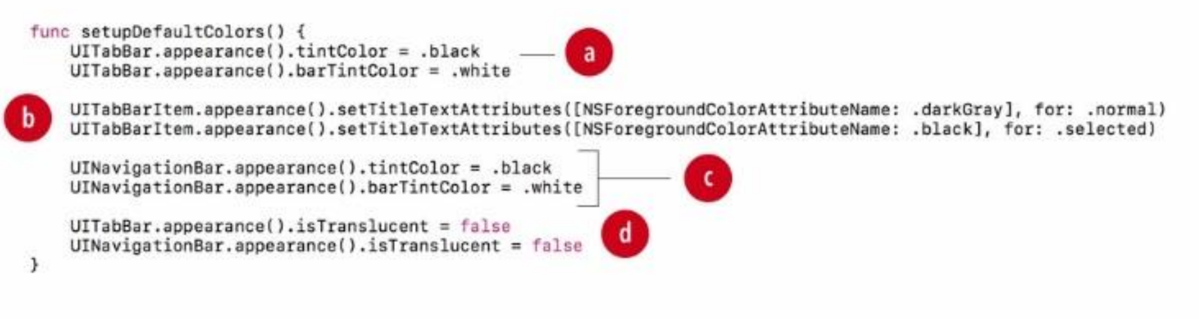


```
▼ LetsEat                                   M
  ▼ LetsEat
    ▼ Application
      ▼ Main
          AppDelegate.swift
      ▶ Explore
      ▶ Restaurant
      ▶ Map
      ▶ Location
      ▶ Review
      ▶ Review List
      ▼ Common
    ▼ Assets
        Info.plist
      ▼ Images
          Assets.xcassets                   M
      ▼ Storyboard
          Main.storyboard                   A
          Map.storyboard                    A
          Explore.storyboard                !
          LaunchScreen.storyboard           M
  ▶ Products
  ▶ Frameworks
```

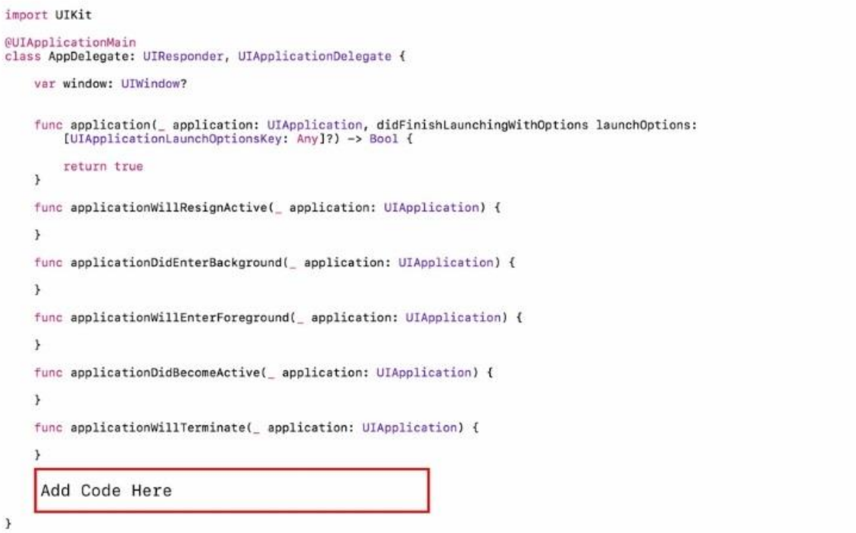

iPhone 7 – iOS 10.0 (14A345)
Carrier
5:15 PM
Select a location
Translucent Navigation Bar
Translucent Tab Bar
Blue Icons
EXPLORE
MAP



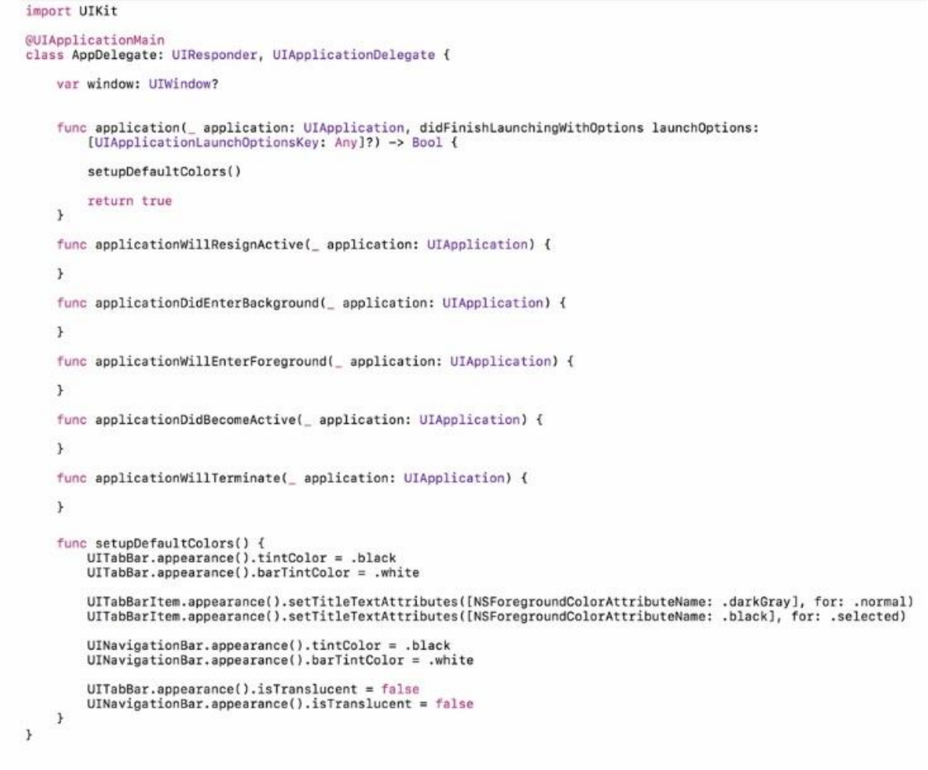
```
import UIKit

@UIApplicationMain
class AppDelegate: UIResponder, UIApplicationDelegate {

    var window: UIWindow?

    func application(_ application: UIApplication, didFinishLaunchingWithOptions launchOptions:
        [UIApplicationLaunchOptionsKey: Any]?) -> Bool {

        return true
    }

    func applicationWillResignActive(_ application: UIApplication) {

    }

    func applicationDidEnterBackground(_ application: UIApplication) {

    }

    func applicationWillEnterForeground(_ application: UIApplication) {

    }

    func applicationDidBecomeActive(_ application: UIApplication) {

    }

    func applicationWillTerminate(_ application: UIApplication) {

    }
}
```



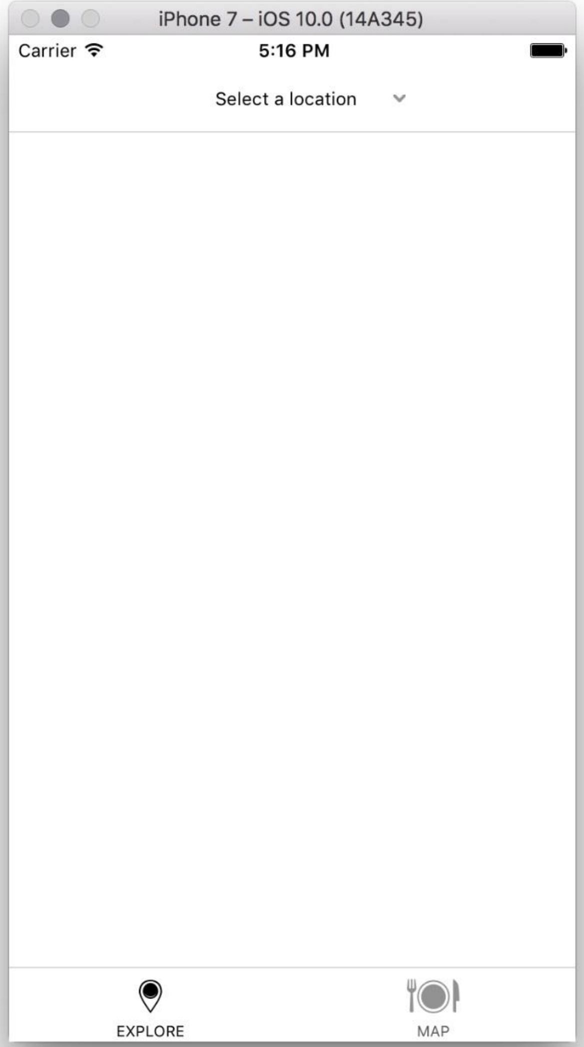
```
func setupDefaultColors() {
    UITabBar.appearance().tintColor = .black
    UITabBar.appearance().barTintColor = .white

    UITabBarItem.appearance().setTitleTextAttributes([NSForegroundColorAttributeName: .darkGray], for: .normal)
    UITabBarItem.appearance().setTitleTextAttributes([NSForegroundColorAttributeName: .black], for: .selected)

    UINavigationBar.appearance().tintColor = .black
    UINavigationBar.appearance().barTintColor = .white

    UITabBar.appearance().isTranslucent = false
    UINavigationBar.appearance().isTranslucent = false
}
```



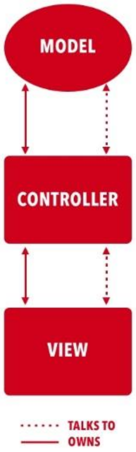
```
import UIKit

@UIApplicationMain
class AppDelegate: UIResponder, UIApplicationDelegate {

    var window: UIWindow?

    func application(_ application: UIApplication, didFinishLaunchingWithOptions launchOptions:
        [UIApplicationLaunchOptionsKey: Any]?) -> Bool {

        return true
    }

    func applicationWillResignActive(_ application: UIApplication) {

    }

    func applicationDidEnterBackground(_ application: UIApplication) {

    }

    func applicationWillEnterForeground(_ application: UIApplication) {

    }

    func applicationDidBecomeActive(_ application: UIApplication) {

    }

    func applicationWillTerminate(_ application: UIApplication) {

    }
    Add Code Here
}
```

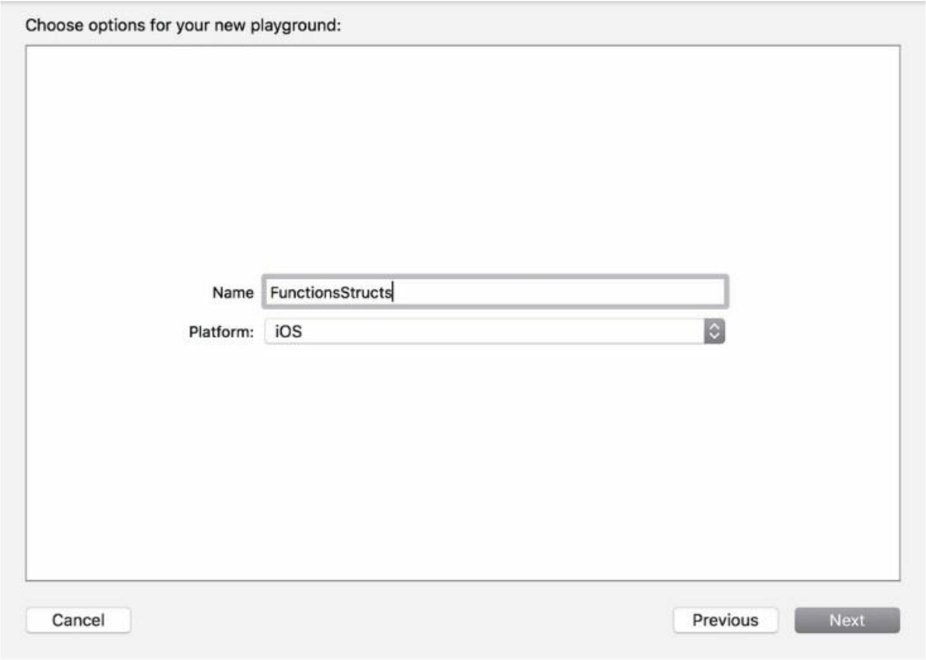


```
import UIKit

@UIApplicationMain
class AppDelegate: UIResponder, UIApplicationDelegate {

    var window: UIWindow?


    func application(_ application: UIApplication, didFinishLaunchingWithOptions launchOptions:
        [UIApplicationLaunchOptionsKey: Any]?) -> Bool {

        setupDefaultColors()

        return true
    }

    func applicationWillResignActive(_ application: UIApplication) {

    }

    func applicationDidEnterBackground(_ application: UIApplication) {

    }

    func applicationWillEnterForeground(_ application: UIApplication) {

    }

    func applicationDidBecomeActive(_ application: UIApplication) {

    }

    func applicationWillTerminate(_ application: UIApplication) {

    }

    func setupDefaultColors() {
        UITabBar.appearance().tintColor = .black
        UITabBar.appearance().barTintColor = .white

        UITabBarItem.appearance().setTitleTextAttributes([NSForegroundColorAttributeName: .darkGray], for: .normal)
        UITabBarItem.appearance().setTitleTextAttributes([NSForegroundColorAttributeName: .black], for: .selected)

        UINavigationBar.appearance().tintColor = .black
        UINavigationBar.appearance().barTintColor = .white

        UITabBar.appearance().isTranslucent = false
        UINavigationBar.appearance().isTranslucent = false
    }
}
```


iPhone 7 – iOS 10.0 (14A345)
Carrier
5:16 PM
Select a location
EXPLORE
MAP

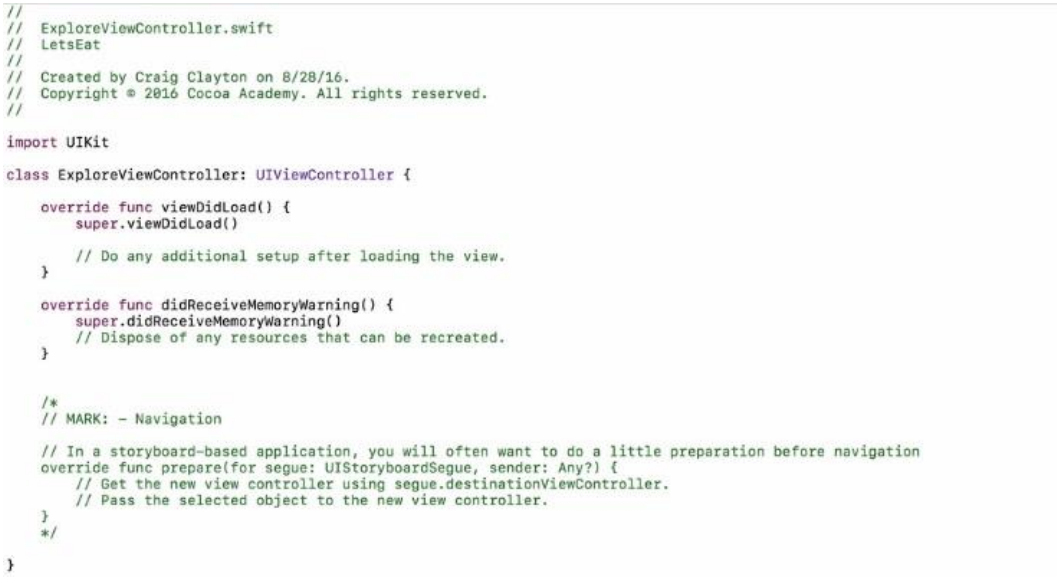
Chapter 7: Getting Started with the Grid



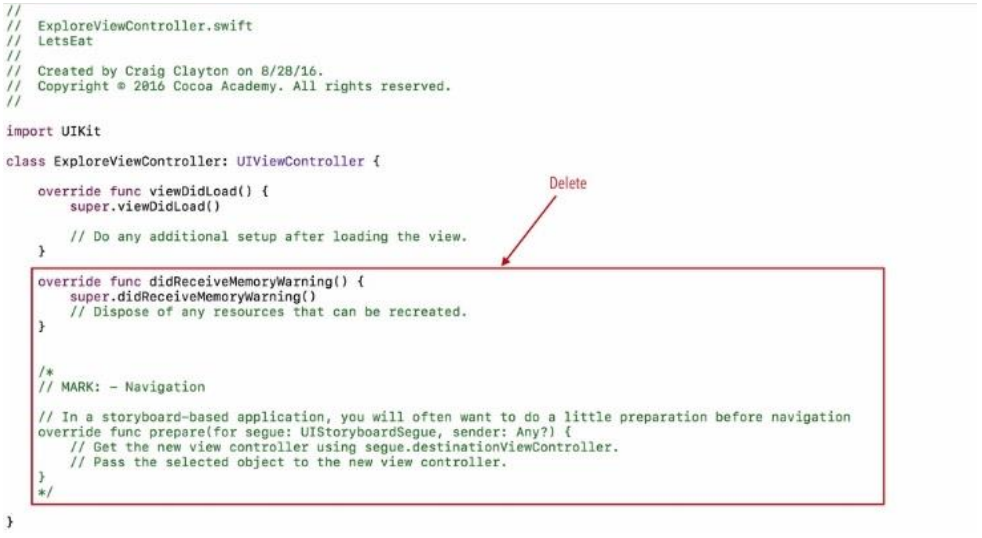

Choose options for your new playground:

Name: FunctionsStructs

Platform: iOS

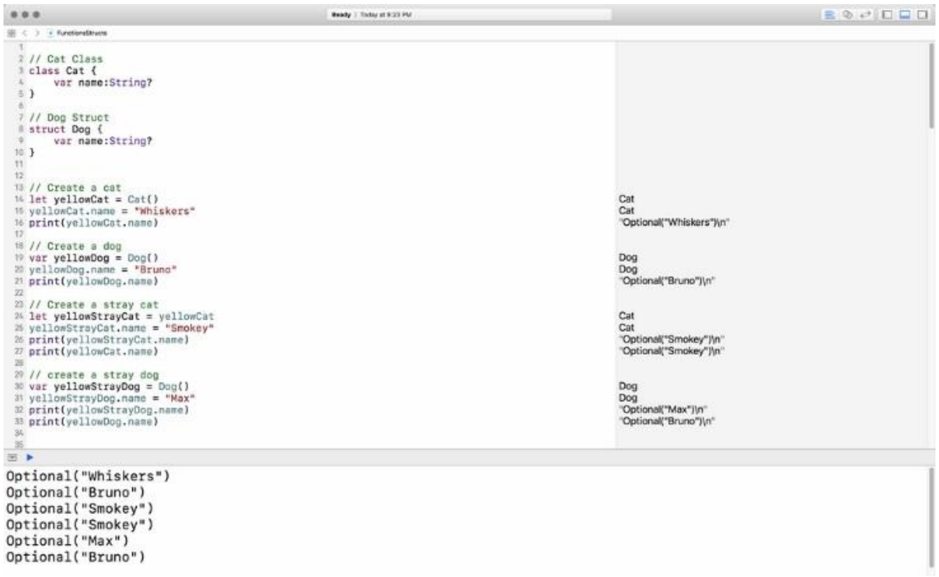


```
//
//  ExploreViewController.swift
//  LetsEat
//
//  Created by Craig Clayton on 8/28/16.
//  Copyright © 2016 Cocoa Academy. All rights reserved.
//

import UIKit

class ExploreViewController: UIViewController {

    override func viewDidLoad() {
        super.viewDidLoad()

        // Do any additional setup after loading the view.
    }

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


    /*
    // MARK: - Navigation

    // In a storyboard-based application, you will often want to do a little preparation before navigation
    override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
        // Get the new view controller using segue.destinationViewController.
        // Pass the selected object to the new view controller.
    }
    */

}
```



```
//
//  ExploreViewController.swift
//  LetsEat
//
//  Created by Craig Clayton on 8/28/16.
//  Copyright © 2016 Cocoa Academy. All rights reserved.
//

import UIKit

class ExploreViewController: UIViewController {

    override func viewDidLoad() {
        super.viewDidLoad()

        // Do any additional setup after loading the view.
    }

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


    /*
    // MARK: - Navigation

    // In a storyboard-based application, you will often want to do a little preparation before navigation
    override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
        // Get the new view controller using segue.destinationViewController.
        // Pass the selected object to the new view controller.
    }
    */

}
```

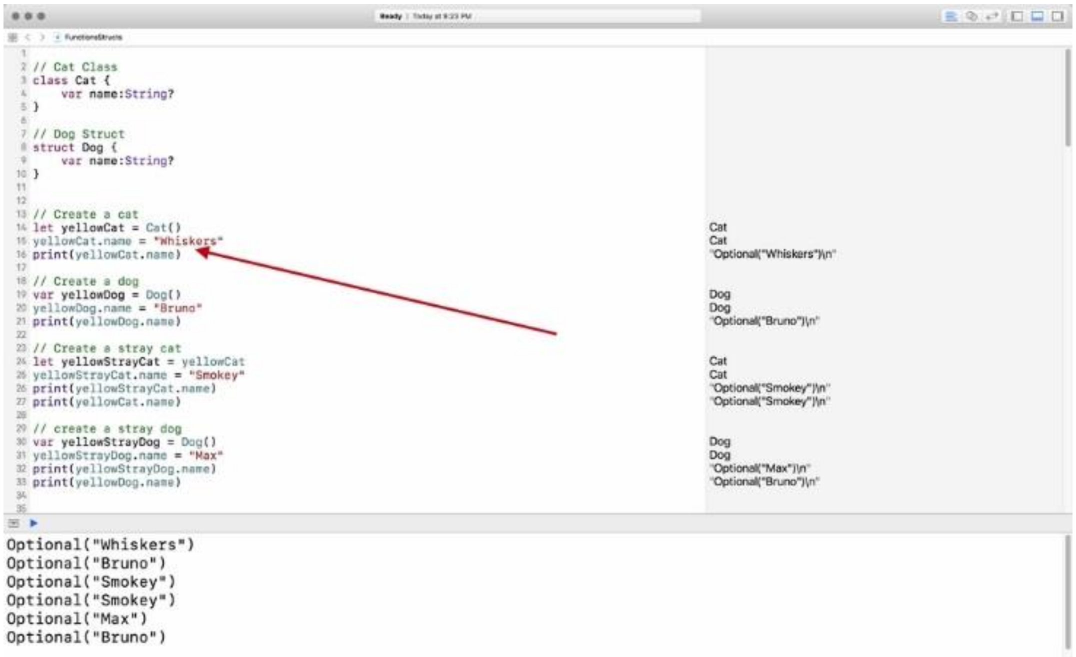
Delete



```
// Cat Class
class Cat {
    var name:String?
}

// Dog Struct
struct Dog {
    var name:String?
}


// Create a cat
let yellowCat = Cat()
yellowCat.name = "Whiskers"
print(yellowCat.name)

// Create a dog
var yellowDog = Dog()
yellowDog.name = "Bruno"
print(yellowDog.name)

// Create a stray cat
let yellowStrayCat = yellowCat
yellowStrayCat.name = "Smokey"
print(yellowStrayCat.name)
print(yellowCat.name)

// create a stray dog
var yellowStrayDog = Dog()
yellowStrayDog.name = "Max"
print(yellowStrayDog.name)
print(yellowDog.name)
```

```
Cat
Cat
"Optional("Whiskers")\n"

Dog
Dog
"Optional("Bruno")\n"

Cat
Cat
"Optional("Smokey")\n"
"Optional("Smokey")\n"

Dog
Dog
"Optional("Max")\n"
"Optional("Bruno")\n"
```

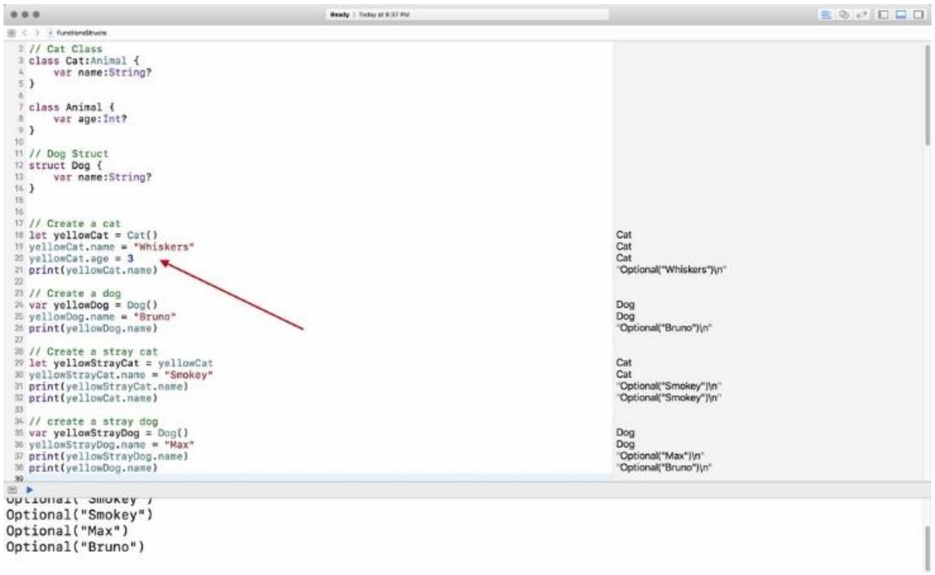
```
Optional("Whiskers")
Optional("Bruno")
Optional("Smokey")
Optional("Smokey")
Optional("Max")
Optional("Bruno")
```



```
// Cat Class
class Cat {
    var name:String?
}

// Dog Struct
struct Dog {
    var name:String?
}


// Create a cat
let yellowCat = Cat()
yellowCat.name = "Whiskers"
print(yellowCat.name)

// Create a dog
var yellowDog = Dog()
yellowDog.name = "Bruno"
print(yellowDog.name)

// Create a stray cat
let yellowStrayCat = yellowCat
yellowStrayCat.name = "Smokey"
print(yellowStrayCat.name)
print(yellowCat.name)

// create a stray dog
var yellowStrayDog = Dog()
yellowStrayDog.name = "Max"
print(yellowStrayDog.name)
print(yellowDog.name)
```

```
Cat
Cat
"Optional("Whiskers")\n"

Dog
Dog
"Optional("Bruno")\n"

Cat
Cat
"Optional("Smokey")\n"
"Optional("Smokey")\n"

Dog
Dog
"Optional("Max")\n"
"Optional("Bruno")\n"
```

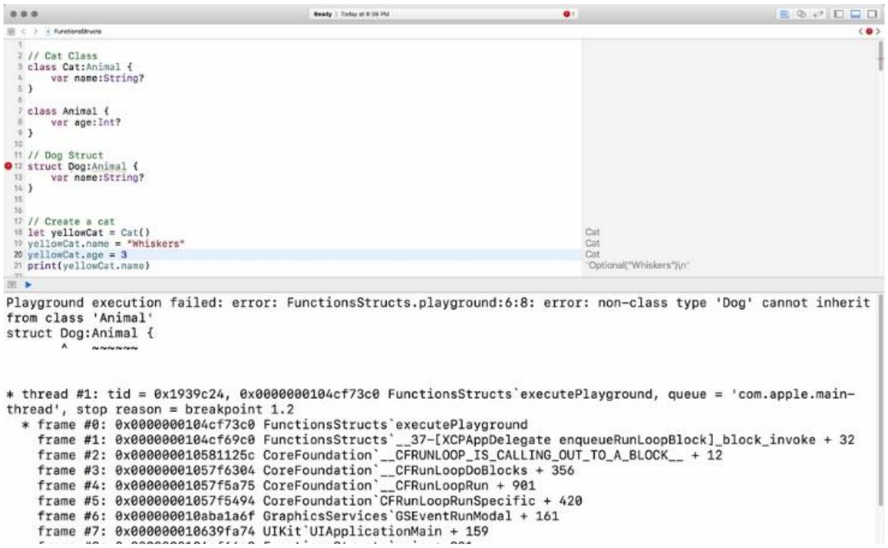
```
Optional("Whiskers")
Optional("Bruno")
Optional("Smokey")
Optional("Smokey")
Optional("Max")
Optional("Bruno")
```



```swift
// Cat Class
class Cat:Animal {
    var name:String?
}

class Animal {
    var age:Int?
}

// Dog Struct
struct Dog {
    var name:String?
}


// Create a cat
let yellowCat = Cat()
yellowCat.name = "Whiskers"
yellowCat.age = 3
print(yellowCat.name)

// Create a dog
var yellowDog = Dog()
yellowDog.name = "Bruno"
print(yellowDog.name)

// Create a stray cat
let yellowStrayCat = yellowCat
yellowStrayCat.name = "Smokey"
print(yellowStrayCat.name)
print(yellowCat.name)

// create a stray dog
var yellowStrayDog = Dog()
yellowStrayDog.name = "Max"
print(yellowStrayDog.name)
print(yellowDog.name)
```

```
Cat
Cat
Cat
"Optional("Whiskers")\n"

Dog
Dog
"Optional("Bruno")\n"

Cat
Cat
"Optional("Smokey")\n"
"Optional("Smokey")\n"

Dog
Dog
"Optional("Max")\n"
"Optional("Bruno")\n"
```

```
Optional("Smokey")
Optional("Smokey")
Optional("Max")
Optional("Bruno")
```



```swift

// Cat Class
class Cat:Animal {
    var name:String?
}

class Animal {
    var age:Int?
}

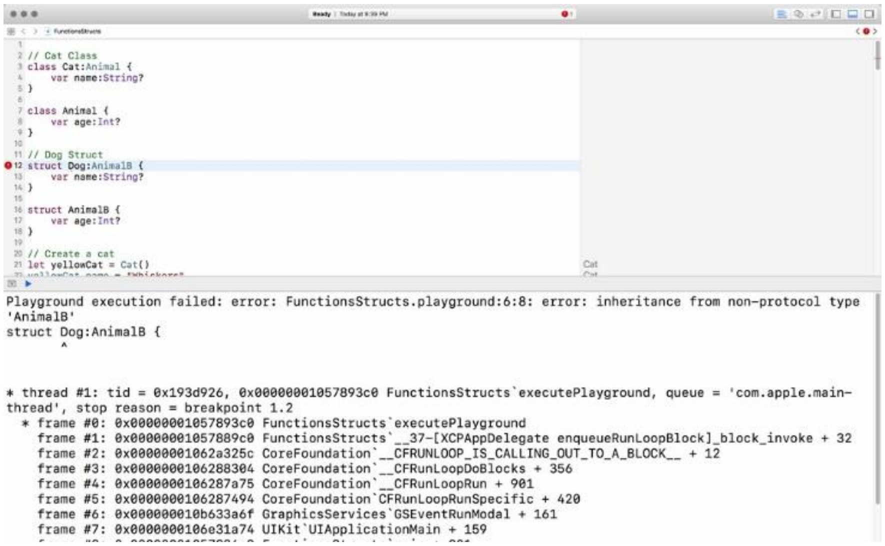
// Dog Struct
struct Dog:Animal {
    var name:String?
}


// Create a cat
let yellowCat = Cat()
yellowCat.name = "Whiskers"
yellowCat.age = 3
print(yellowCat.name)
```

```
Cat
Cat
Cat
"Optional("Whiskers")\n"
```

```
Playground execution failed: error: FunctionsStructs.playground:6:8: error: non-class type 'Dog' cannot inherit
from class 'Animal'
struct Dog:Animal {
       ^   ~~~~~~


* thread #1: tid = 0x1939c24, 0x0000000104cf73c0 FunctionsStructs`executePlayground, queue = 'com.apple.main-
thread', stop reason = breakpoint 1.2
  * frame #0: 0x0000000104cf73c0 FunctionsStructs`executePlayground
    frame #1: 0x0000000104cf69c0 FunctionsStructs`__37-[XCPAppDelegate enqueueRunLoopBlock]_block_invoke + 32
    frame #2: 0x000000010581125c CoreFoundation`__CFRUNLOOP_IS_CALLING_OUT_TO_A_BLOCK__ + 12
    frame #3: 0x00000001057f6304 CoreFoundation`__CFRunLoopDoBlocks + 356
    frame #4: 0x00000001057f5a75 CoreFoundation`__CFRunLoopRun + 901
    frame #5: 0x00000001057f5494 CoreFoundation`CFRunLoopRunSpecific + 420
    frame #6: 0x000000010aba1a6f GraphicsServices`GSEventRunModal + 161
    frame #7: 0x000000010639fa74 UIKit`UIApplicationMain + 159
```



```
// Cat Class
class Cat:Animal {
    var name:String?
}

class Animal {
    var age:Int?
}

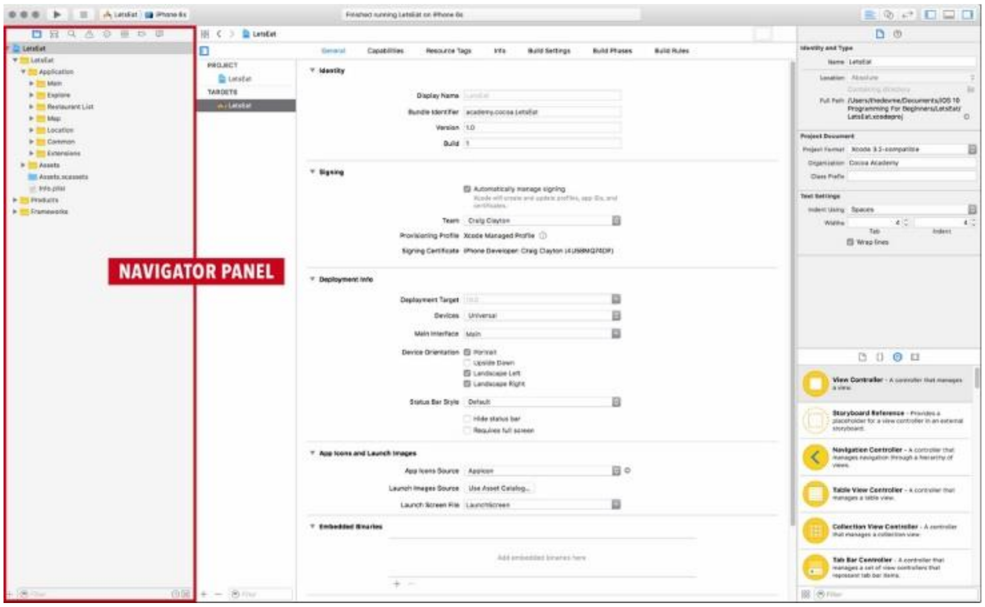
// Dog Struct
struct Dog:AnimalB {
    var name:String?
}

struct AnimalB {
    var age:Int?
}

// Create a cat
let yellowCat = Cat()
yellowCat.name = "Whiskers"
```

```
Playground execution failed: error: FunctionsStructs.playground:6:8: error: inheritance from non-protocol type
'AnimalB'
struct Dog:AnimalB {
       ^


* thread #1: tid = 0x193d926, 0x00000001057893c0 FunctionsStructs`executePlayground, queue = 'com.apple.main-
thread', stop reason = breakpoint 1.2
  * frame #0: 0x00000001057893c0 FunctionsStructs`executePlayground
    frame #1: 0x00000001057889c0 FunctionsStructs`__37-[XCPAppDelegate enqueueRunLoopBlock]_block_invoke + 32
    frame #2: 0x00000001062a325c CoreFoundation`__CFRUNLOOP_IS_CALLING_OUT_TO_A_BLOCK__ + 12
    frame #3: 0x0000000106288304 CoreFoundation`__CFRunLoopDoBlocks + 356
    frame #4: 0x0000000106287a75 CoreFoundation`__CFRunLoopRun + 901
    frame #5: 0x0000000106287494 CoreFoundation`CFRunLoopRunSpecific + 420
    frame #6: 0x000000010b633a6f GraphicsServices`GSEventRunModal + 161
    frame #7: 0x0000000106e31a74 UIKit`UIApplicationMain + 159
```



NAVIGATOR PANEL

Identity

Display Name LetsEat
Bundle Identifier academy.cocoa.LetsEat
Version 1.0
Build 1

Signing

☑ Automatically manage signing
Xcode will create and update profiles, app IDs, and certificates.
Team Craig Clayton
Provisioning Profile Xcode Managed Profile
Signing Certificate iPhone Developer: Craig Clayton (4U98MQ7KDF)

Deployment Info

Deployment Target 10.0
Devices Universal
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
Launch Images Source Use Asset Catalog...
Launch Screen File LaunchScreen

Embedded Binaries

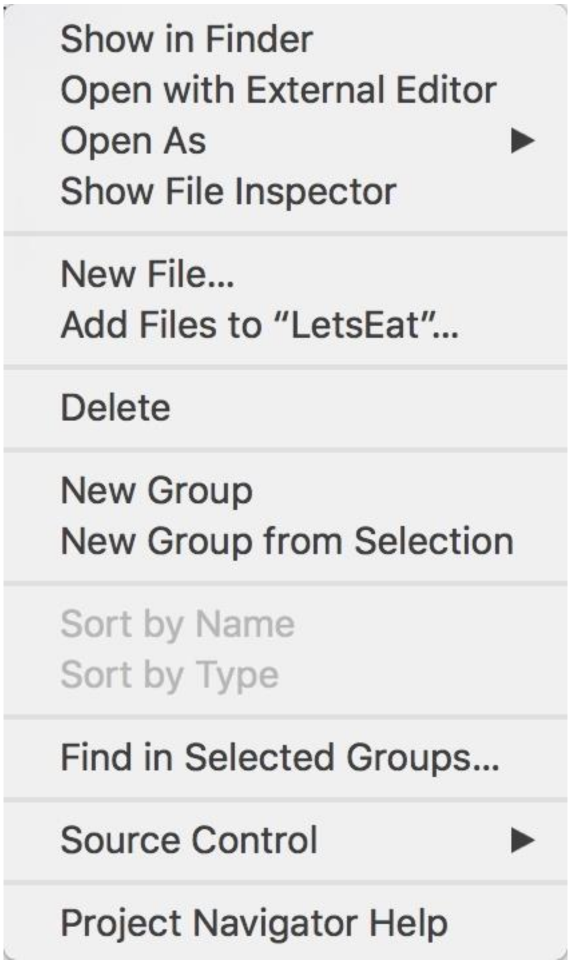
Add embedded binaries here

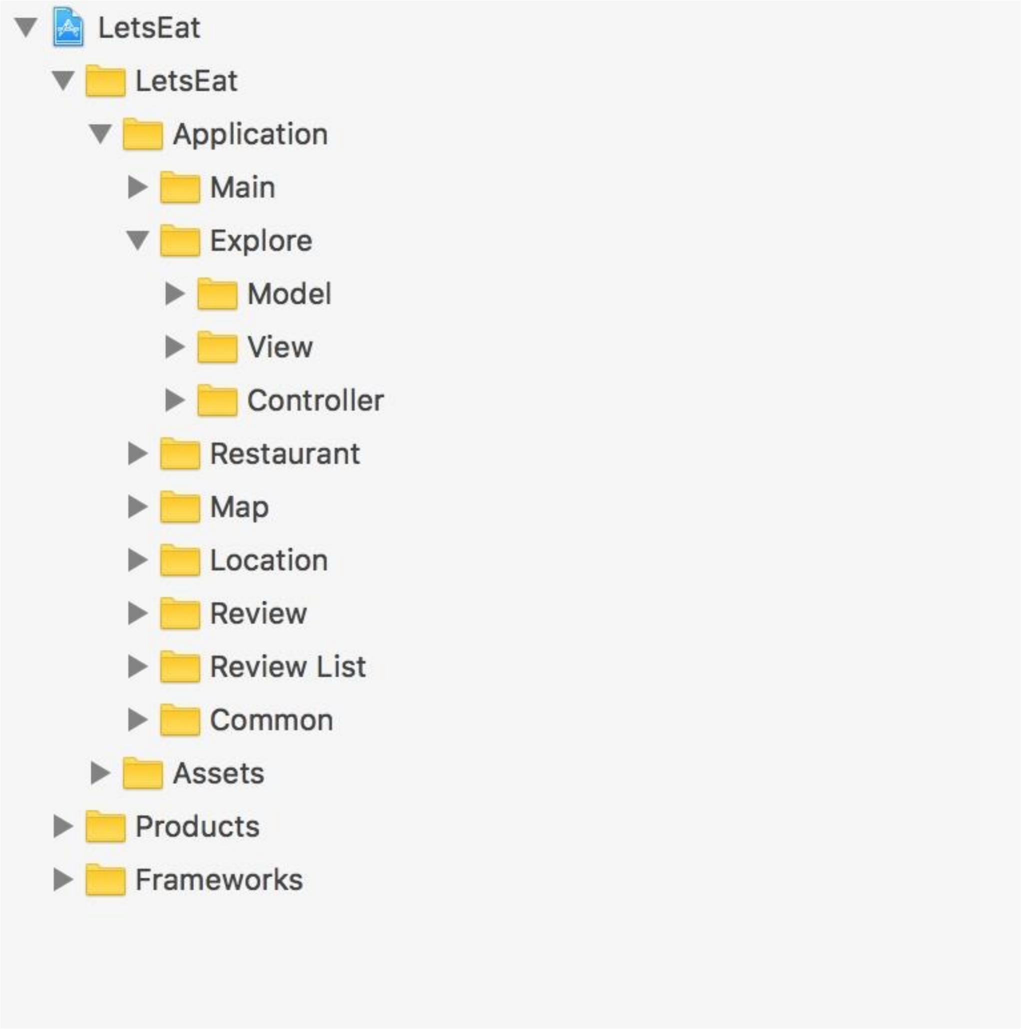
Identity and Type
Name LetsEat
Location Absolute
Containing directory
Full Path /Users/thedevme/Documents/iOS 10 Programming For Beginners/LetsEat/LetsEat.xcodeproj

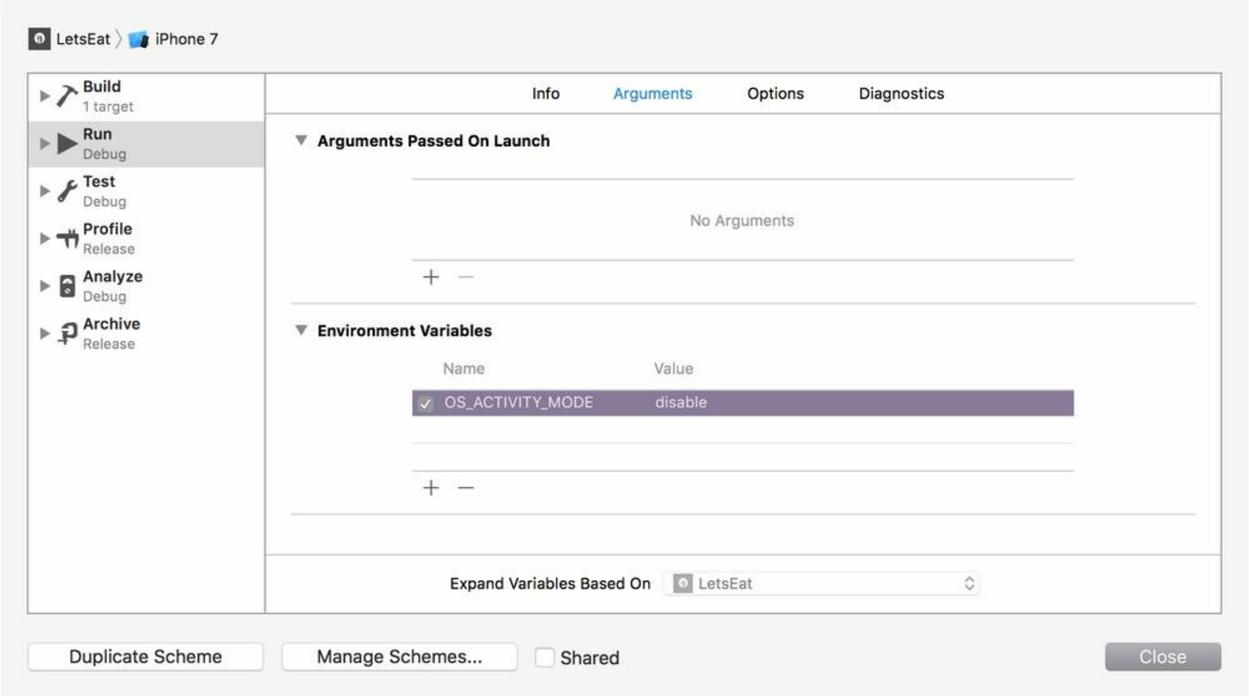
Project Document
Project Format Xcode 3.2-compatible
Organization Cocoa Academy
Class Prefix

Text Settings
Indent Using Spaces
Widths 4 Tab 4 Indent
☑ Wrap lines

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.
Table View Controller - A controller that manages a table view.
Collection View Controller - A controller that manages a collection view.
Tab Bar Controller - A controller that manages a set of view controllers that represent tab bar items.


Show in Finder
Open with External Editor
Open As ▶
Show File Inspector
New File...
Add Files to "LetsEat"...
Delete
New Group
New Group from Selection
Sort by Name
Sort by Type
Find in Selected Groups...
Source Control ▶
Project Navigator Help

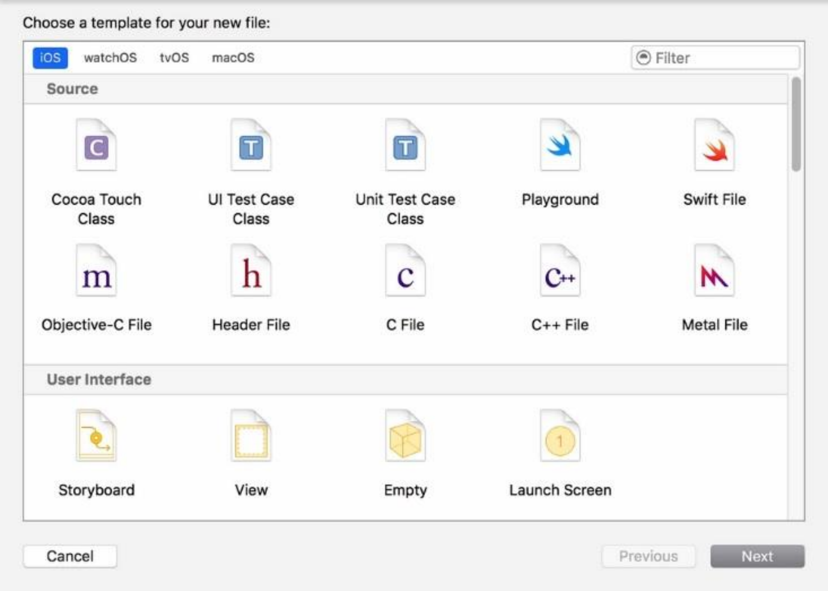

LetsEat
LetsEat
Application
Main
Explore
Model
View
Controller
Restaurant
Map
Location
Review
Review List
Common
Assets
Products
Frameworks

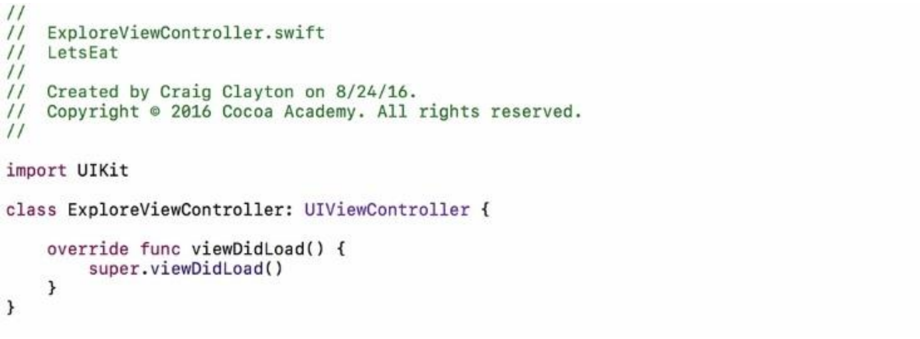


☑ OS_ACTIVITY_MODE disable

Expand Variables Based On LetsEat

□ Shared


Choose a template for your new file:

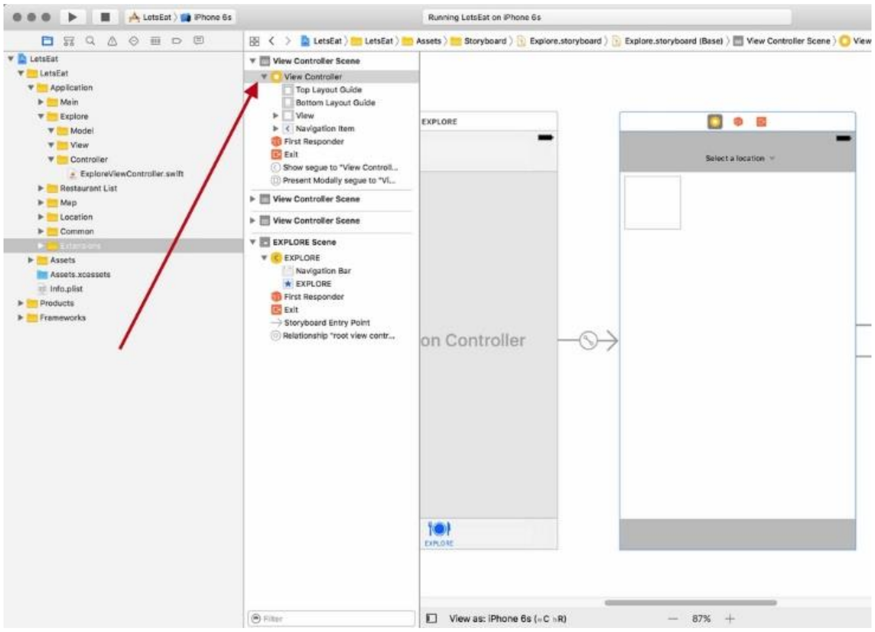


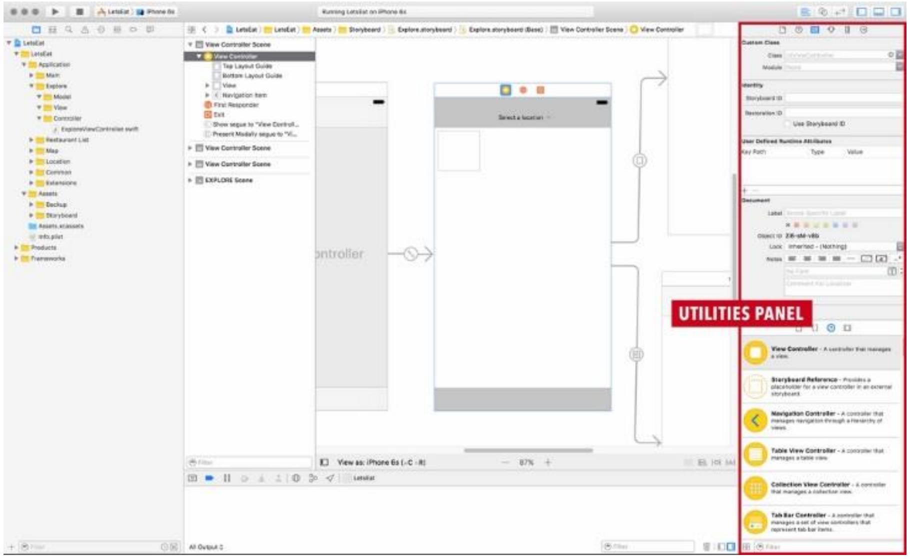
```
//
//  ExploreViewController.swift
//  LetsEat
//
//  Created by Craig Clayton on 8/24/16.
//  Copyright © 2016 Cocoa Academy. All rights reserved.
//

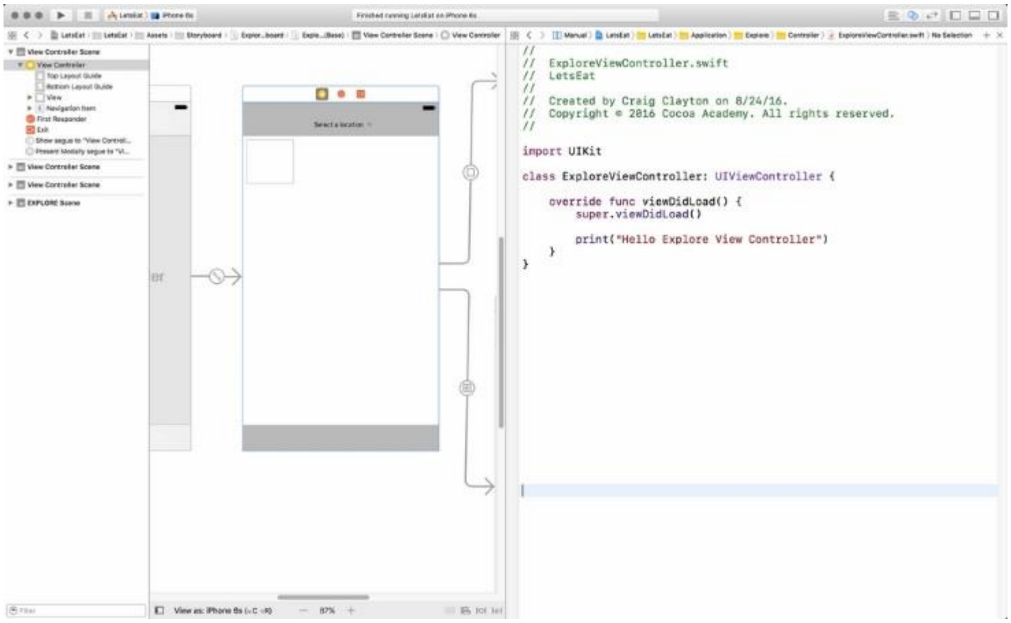
import UIKit

class ExploreViewController: UIViewController {

    override func viewDidLoad() {
        super.viewDidLoad()
    }
}
```




UTILITIES PANEL
Custom Class
Class
Module
Identity
Storyboard ID
Restoration ID
Use Storyboard ID
User Defined Runtime Attributes
Key Path
Type
Value
Document
Label
Object ID
Lock
Notes
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.
Table View Controller - A controller that manages a table view.
Collection View Controller - A controller that manages a collection view.
Tab Bar Controller - A controller that manages a set of view controllers that represent tab bar items.
View as: iPhone 6s (wC hR)
87%
All Output



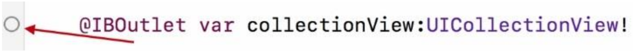
```
//
//  ExploreViewController.swift
//  LetsEat
//
//  Created by Craig Clayton on 8/24/16.
//  Copyright © 2016 Cocoa Academy. All rights reserved.
//

import UIKit

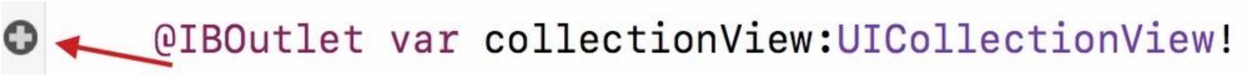
class ExploreViewController: UIViewController {

    override func viewDidLoad() {
        super.viewDidLoad()

        print("Hello Explore View Controller")
    }
}
```



```
@IBOutlet var collectionView:UICollectionView!
```



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@IBOutlet var collectionView:UICollectionView!
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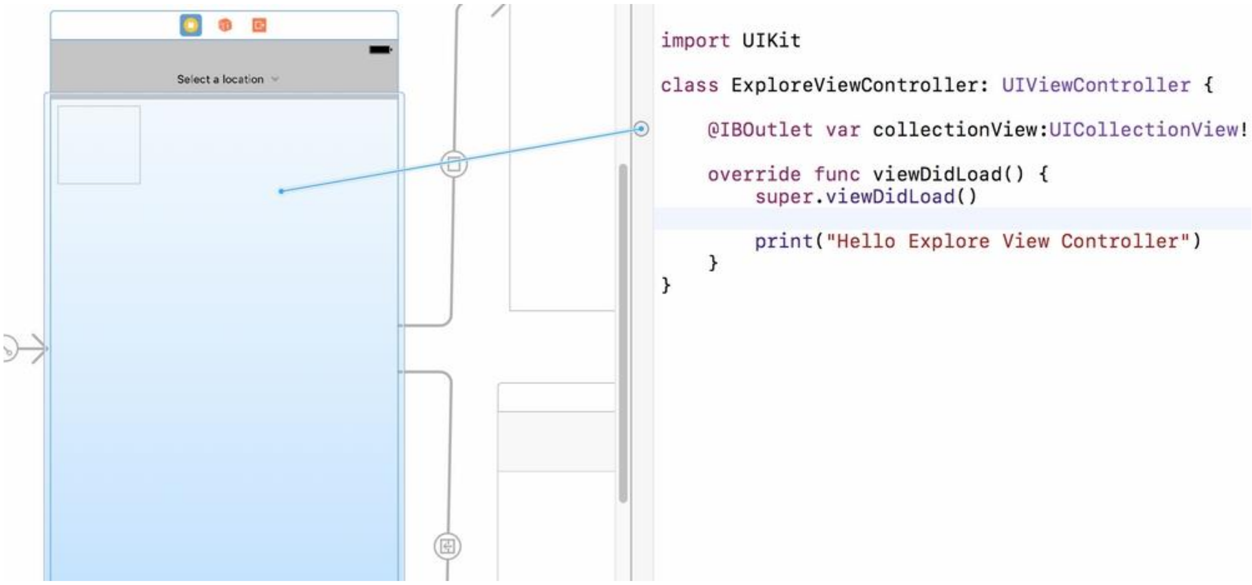

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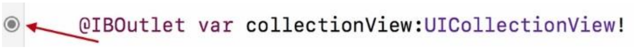
import UIKit

class ExploreViewController: UIViewController {

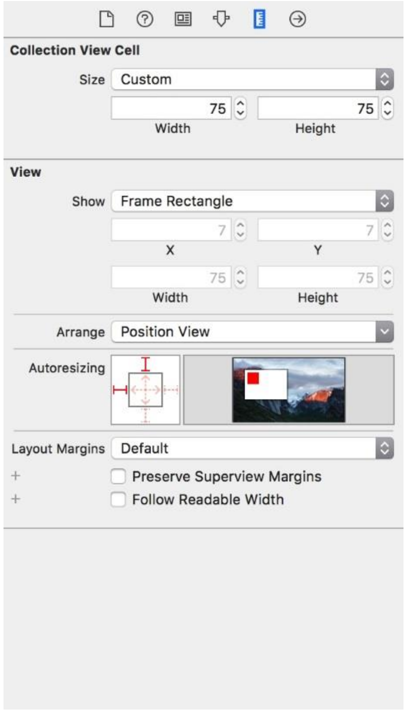
    @IBOutlet var collectionView:UICollectionView!

    override func viewDidLoad() {
        super.viewDidLoad()

        print("Hello Explore View Controller")
    }
}
```



```
@IBOutlet var collectionView:UICollectionView!
```



Collection View Cell

Size: Custom

75	75
Width	Height

View

Show: Frame Rectangle

7	7
X	Y
75	75
Width	Height

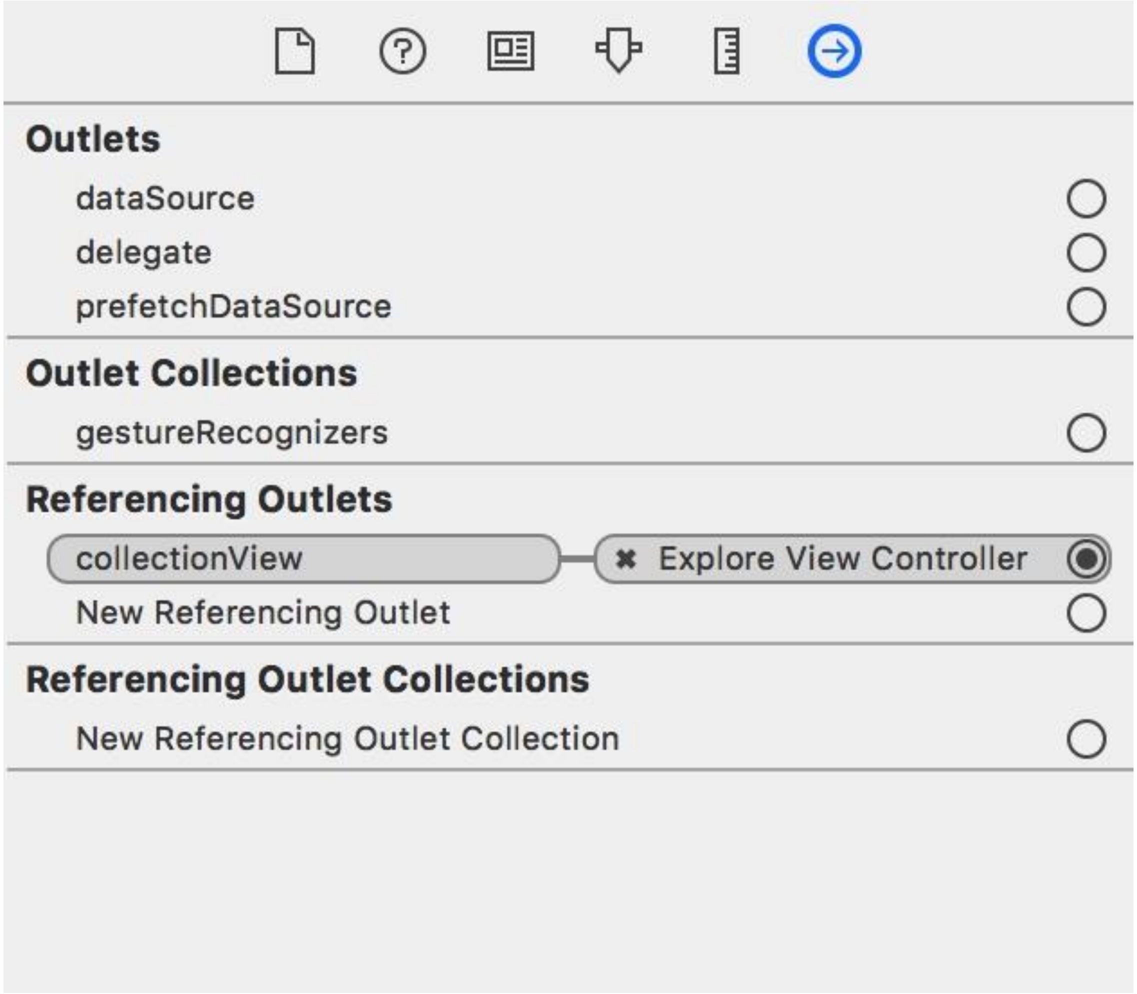
Arrange: Position View

Autoresizing

Layout Margins: Default

□ Preserve Superview Margins

□ Follow Readable Width



Outlets

dataSource ○
delegate ○
prefetchDataSource ○

Outlet Collections

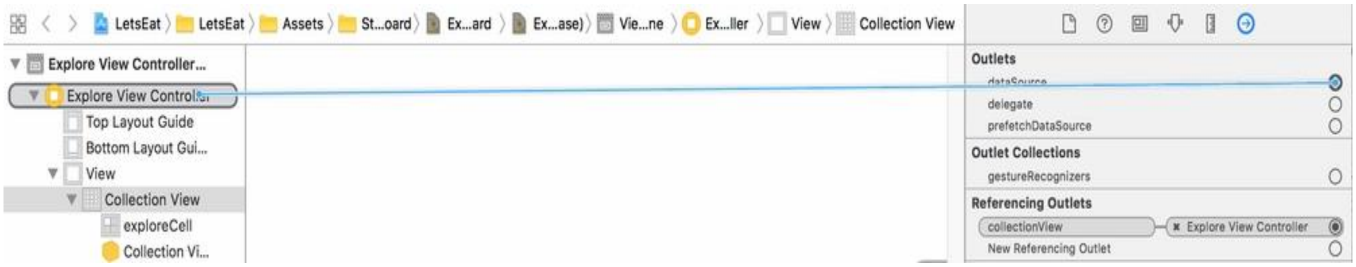
gestureRecognizers ○

Referencing Outlets

collectionView — ✖ Explore View Controller ●
New Referencing Outlet ○

Referencing Outlet Collections

New Referencing Outlet Collection ○



LetsEat 〉 LetsEat 〉 Assets 〉 St...oard 〉 Ex...ard 〉 Ex...ase) 〉 Vie...ne 〉 Ex...ller 〉 View 〉 Collection View

- ▼ Explore View Controller...
  - ▼ Explore View Controller
    - Top Layout Guide
    - Bottom Layout Gui...
    - ▼ View
      - ▼ Collection View
        - exploreCell
        - Collection Vi...

Outlets

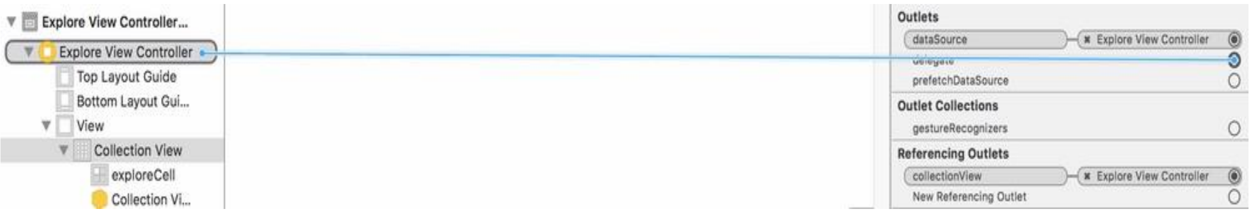
dataSource ●
delegate ○
prefetchDataSource ○

Outlet Collections

gestureRecognizers ○

Referencing Outlets

collectionView — ✖ Explore View Controller ●
New Referencing Outlet ○



- ▼ Explore View Controller...
  - ▼ Explore View Controller
    - Top Layout Guide
    - Bottom Layout Gui...
    - ▼ View
      - ▼ Collection View
        - exploreCell
        - Collection Vi...

Outlets

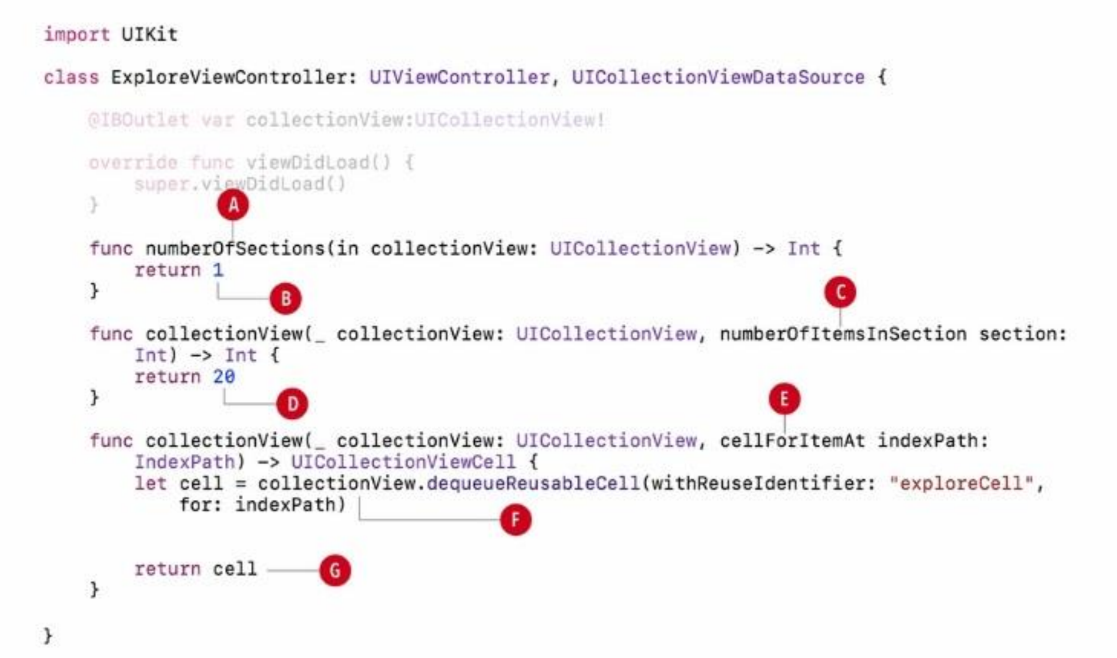
dataSource — ✖ Explore View Controller ●
delegate ●
prefetchDataSource ○

Outlet Collections

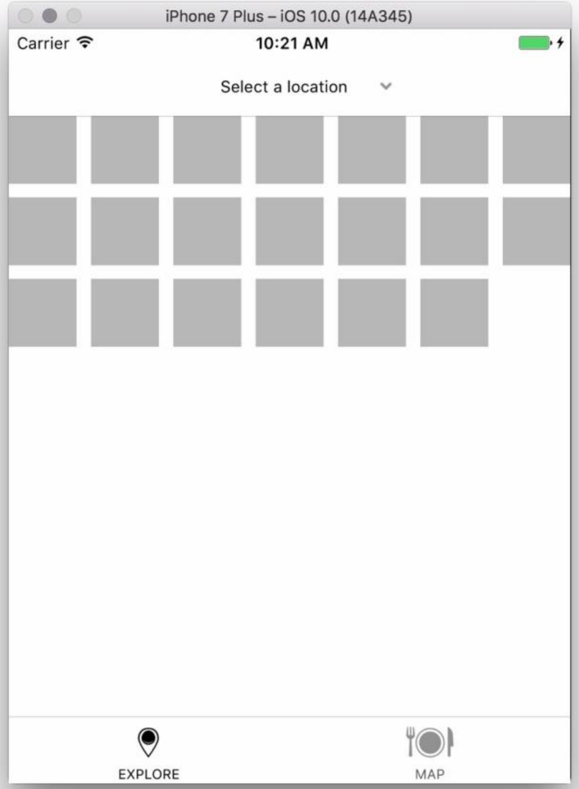
gestureRecognizers ○

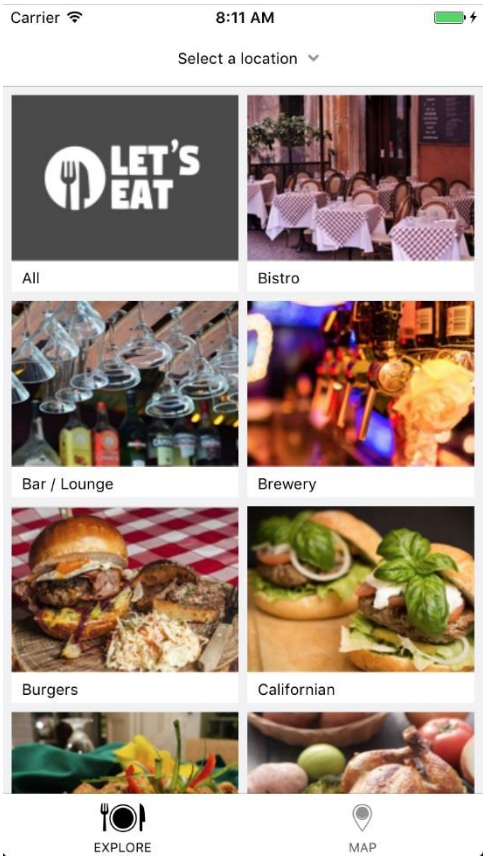
Referencing Outlets

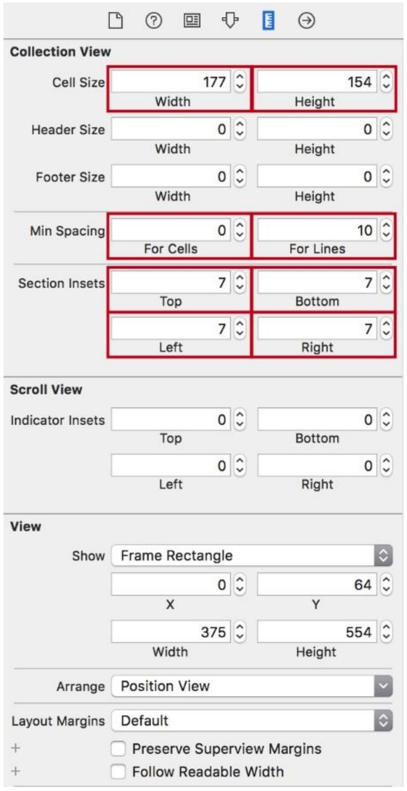
collectionView — ✖ Explore View Controller ●
New Referencing Outlet ○



```swift
import UIKit

class ExploreViewController: UIViewController, UICollectionViewDataSource {

    @IBOutlet var collectionView:UICollectionView!

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

    func numberOfSections(in collectionView: UICollectionView) -> Int {
        return 1
    }

    func collectionView(_ collectionView: UICollectionView, numberOfItemsInSection section:
        Int) -> Int {
        return 20
    }

    func collectionView(_ collectionView: UICollectionView, cellForItemAt indexPath:
        IndexPath) -> UICollectionViewCell {
        let cell = collectionView.dequeueReusableCell(withReuseIdentifier: "exploreCell",
            for: indexPath)

        return cell
    }

}
```







Collection View

Cell Size: Width 177, Height 154

Header Size: Width 0, Height 0

Footer Size: Width 0, Height 0

Min Spacing: For Cells 0, For Lines 10

Section Insets: Top 7, Bottom 7, Left 7, Right 7

Scroll View

Indicator Insets: Top 0, Bottom 0, Left 0, Right 0

View

Show: Frame Rectangle

X 0, Y 64

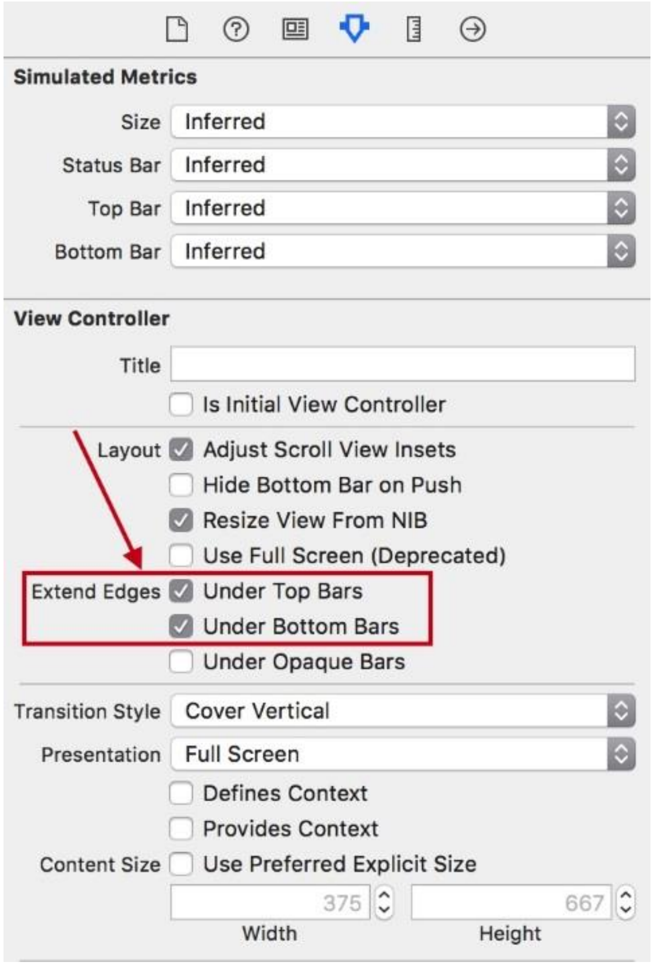
Width 375, Height 554

Arrange: Position View

Layout Margins: Default

+ □ Preserve Superview Margins

+ □ Follow Readable Width



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

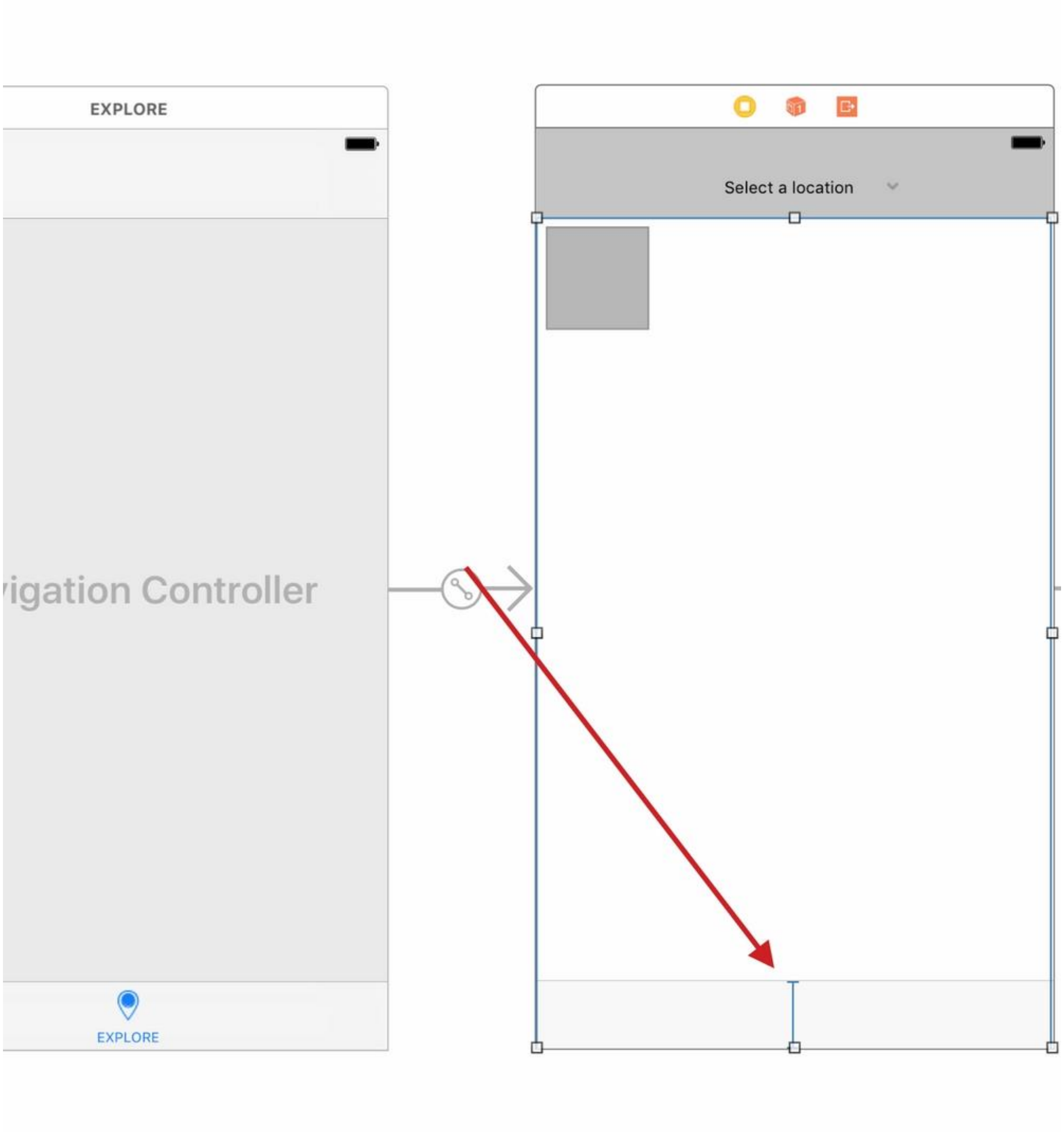
□ Defines Context

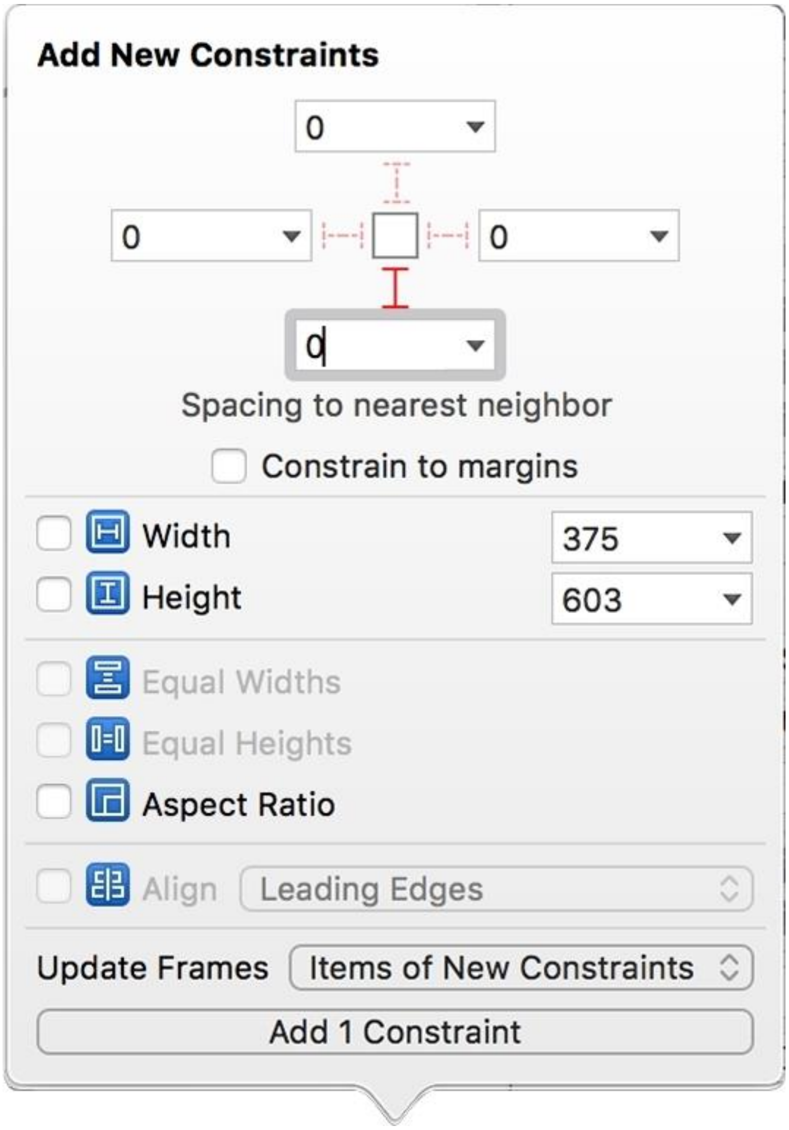
□ Provides Context

Content Size □ Use Preferred Explicit Size

Width: 375

Height: 667


EXPLORE
vigation Controller
EXPLORE
Select a location



Add New Constraints

0

0 0

0

Spacing to nearest neighbor

□ Constrain to margins

□ Width 375

□ Height 603

□ Equal Widths

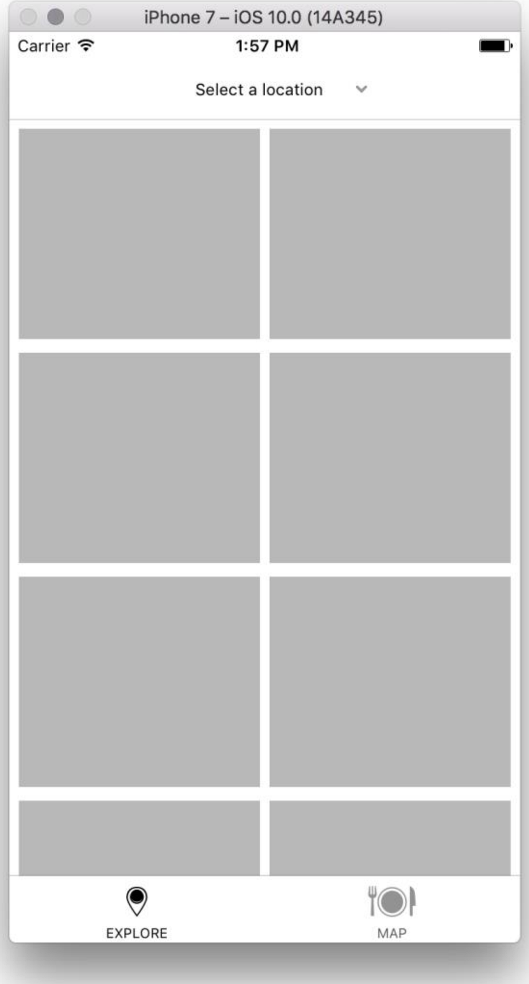
□ Equal Heights

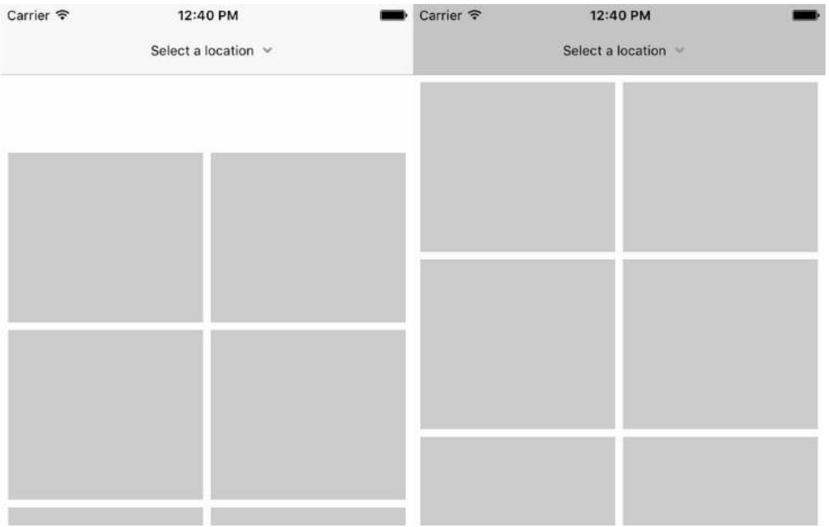
□ Aspect Ratio

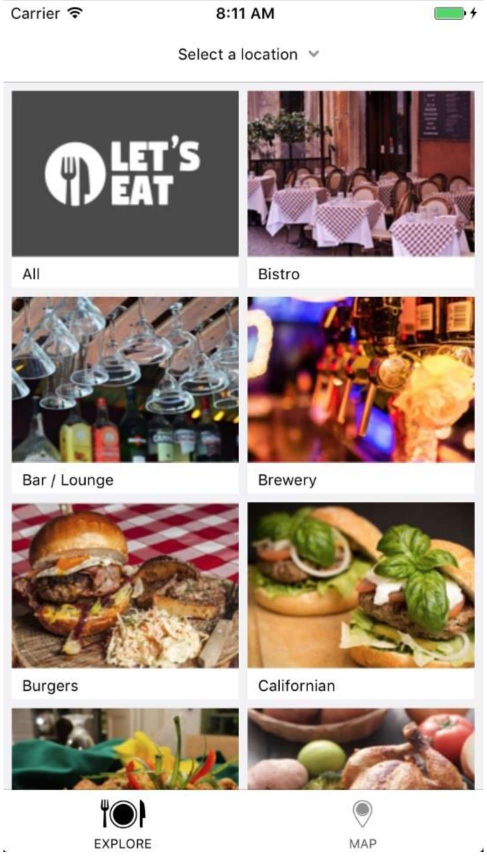
□ Align Leading Edges

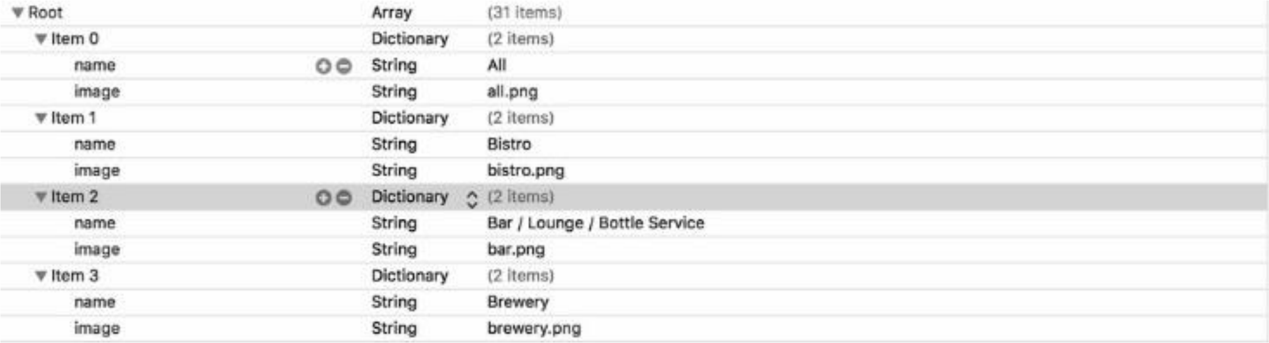
Update Frames Items of New Constraints

Add 1 Constraint

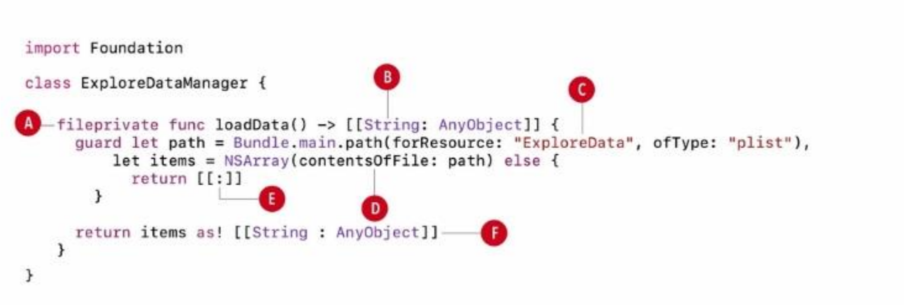

iPhone 7 – iOS 10.0 (14A345)
Carrier
1:57 PM
Select a location
EXPLORE
MAP


Carrier
12:40 PM
Select a location
Carrier
12:40 PM
Select a location

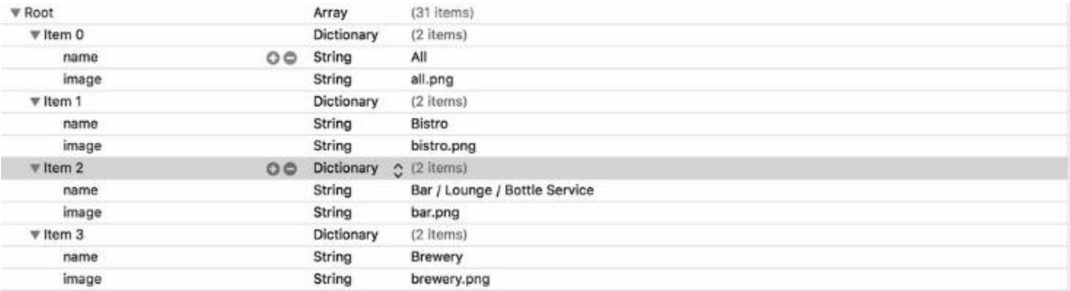




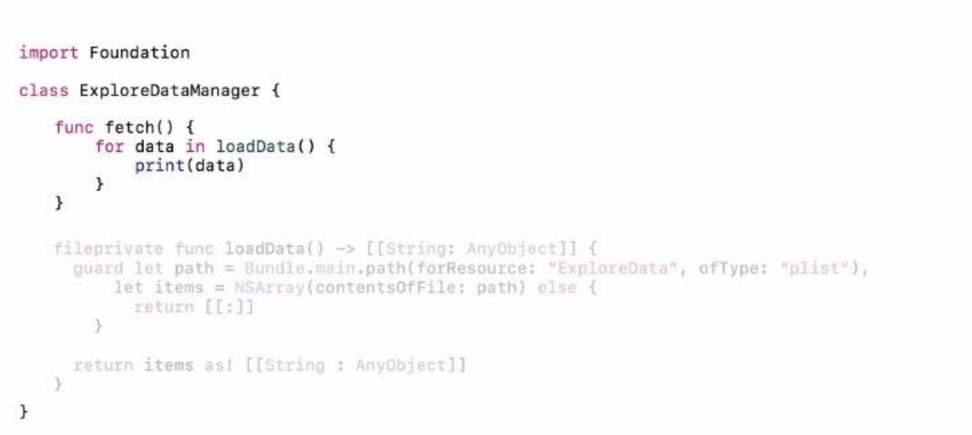
▼ Root	Array	(31 items)
▼ Item 0	Dictionary	(2 items)
name	String	All
image	String	all.png
▼ Item 1	Dictionary	(2 items)
name	String	Bistro
image	String	bistro.png
▼ Item 2	Dictionary	(2 items)
name	String	Bar / Lounge / Bottle Service
image	String	bar.png
▼ Item 3	Dictionary	(2 items)
name	String	Brewery
image	String	brewery.png



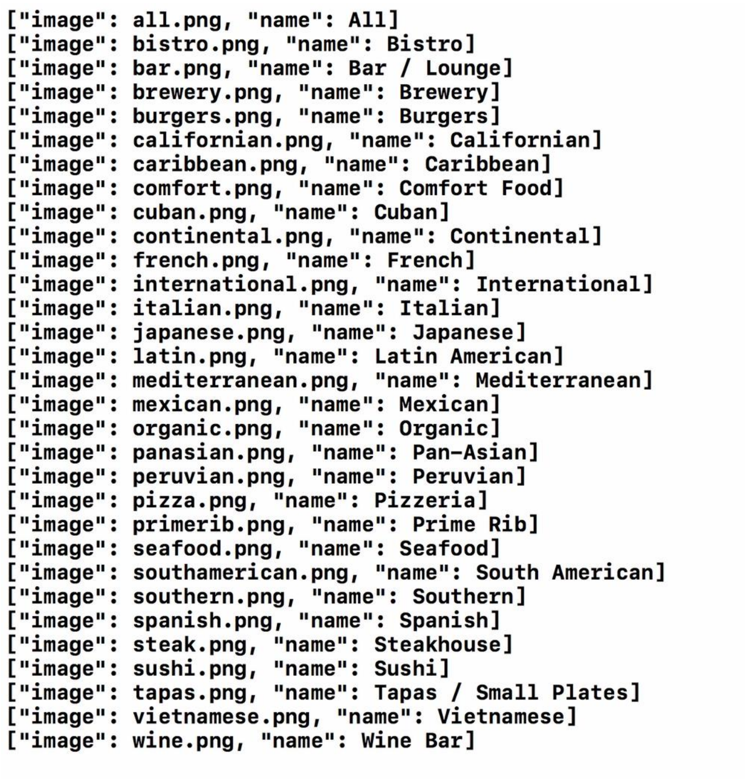
```
import Foundation

class ExploreDataManager {

    fileprivate func loadData() -> [[String: AnyObject]] {
      guard let path = Bundle.main.path(forResource: "ExploreData", ofType: "plist"),
          let items = NSArray(contentsOfFile: path) else {
            return [[:]]
        }

      return items as! [[String : AnyObject]]
    }
}
```



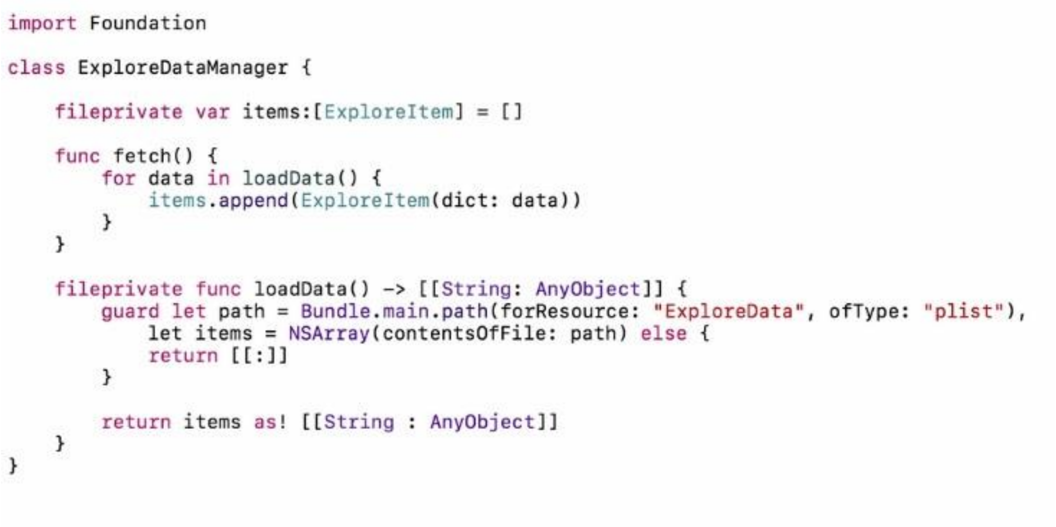
▼ Root	Array	(31 items)
▼ Item 0	Dictionary	(2 items)
name	String	All
image	String	all.png
▼ Item 1	Dictionary	(2 items)
name	String	Bistro
image	String	bistro.png
▼ Item 2	Dictionary	(2 items)
name	String	Bar / Lounge / Bottle Service
image	String	bar.png
▼ Item 3	Dictionary	(2 items)
name	String	Brewery
image	String	brewery.png



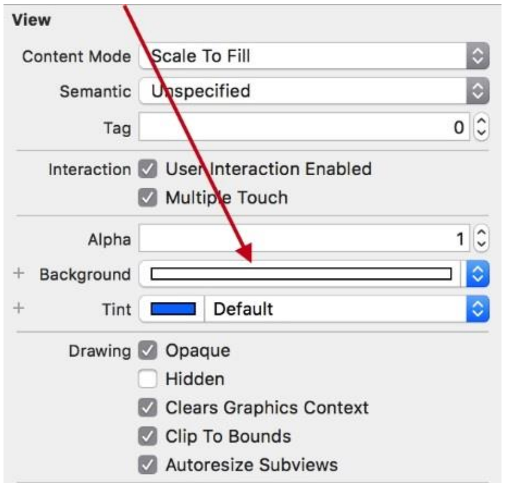
```
import Foundation

class ExploreDataManager {

    func fetch() {
        for data in loadData() {
            print(data)
        }
    }

    fileprivate func loadData() -> [[String: AnyObject]] {
      guard let path = Bundle.main.path(forResource: "ExploreData", ofType: "plist"),
          let items = NSArray(contentsOfFile: path) else {
            return [[:]]
        }

      return items as! [[String : AnyObject]]
    }
}
```



```
["image": all.png, "name": All]
["image": bistro.png, "name": Bistro]
["image": bar.png, "name": Bar / Lounge]
["image": brewery.png, "name": Brewery]
["image": burgers.png, "name": Burgers]
["image": californian.png, "name": Californian]
["image": caribbean.png, "name": Caribbean]
["image": comfort.png, "name": Comfort Food]
["image": cuban.png, "name": Cuban]
["image": continental.png, "name": Continental]
["image": french.png, "name": French]
["image": international.png, "name": International]
["image": italian.png, "name": Italian]
["image": japanese.png, "name": Japanese]
["image": latin.png, "name": Latin American]
["image": mediterranean.png, "name": Mediterranean]
["image": mexican.png, "name": Mexican]
["image": organic.png, "name": Organic]
["image": panasian.png, "name": Pan-Asian]
["image": peruvian.png, "name": Peruvian]
["image": pizza.png, "name": Pizzeria]
["image": primerib.png, "name": Prime Rib]
["image": seafood.png, "name": Seafood]
["image": southamerican.png, "name": South American]
["image": southern.png, "name": Southern]
["image": spanish.png, "name": Spanish]
["image": steak.png, "name": Steakhouse]
["image": sushi.png, "name": Sushi]
["image": tapas.png, "name": Tapas / Small Plates]
["image": vietnamese.png, "name": Vietnamese]
["image": wine.png, "name": Wine Bar]
```



```
import Foundation

class ExploreDataManager {

    fileprivate var items:[ExploreItem] = []

    func fetch() {
        for data in loadData() {
            items.append(ExploreItem(dict: data))
        }
    }

    fileprivate func loadData() -> [[String: AnyObject]] {
        guard let path = Bundle.main.path(forResource: "ExploreData", ofType: "plist"),
            let items = NSArray(contentsOfFile: path) else {
            return [[:]]
        }

        return items as! [[String : AnyObject]]
    }
}
```



View

Content Mode Scale To Fill

Semantic Unspecified

Tag 0

Interaction ☑ User Interaction Enabled

☑ Multiple Touch

Alpha 1

+ Background

+ Tint Default

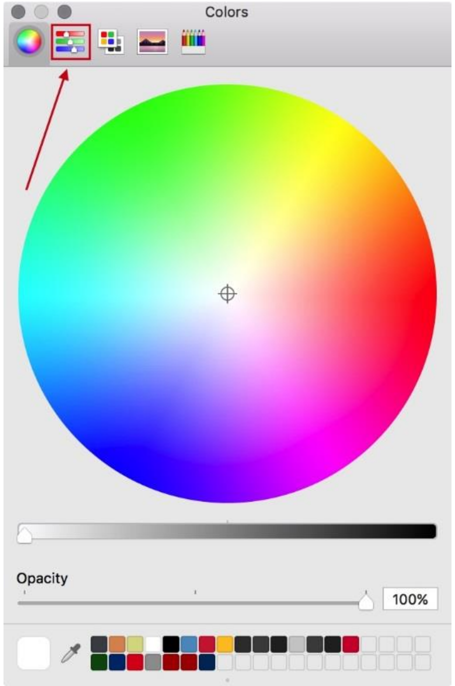
Drawing ☑ Opaque

□ Hidden

☑ Clears Graphics Context

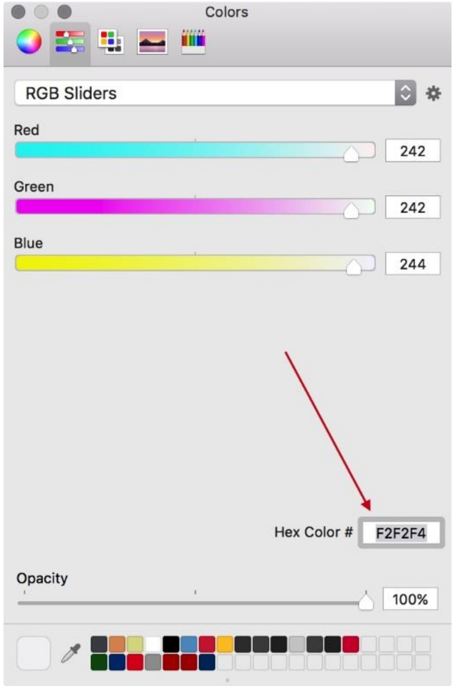
☑ Clip To Bounds

☑ Autoresize Subviews



Colors

Opacity 100%



Colors

RGB Sliders

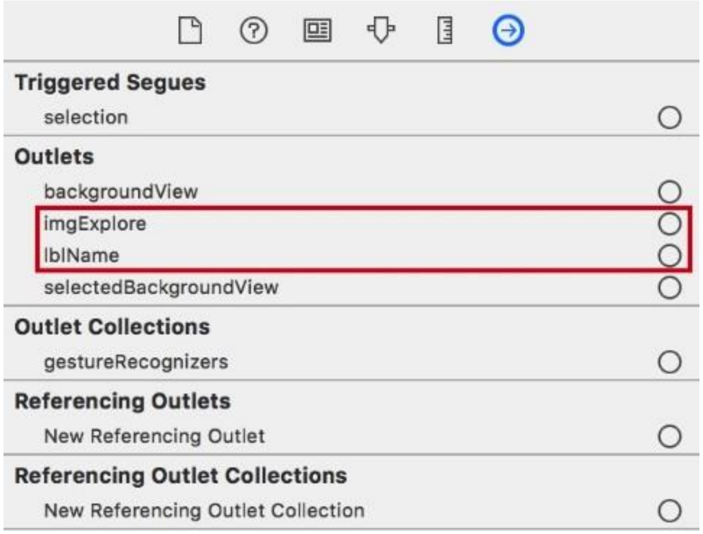
Red 242

Green 242

Blue 244

Hex Color # F2F2F4

Opacity 100%



Triggered Segues

selection ○

Outlets

backgroundView ○

imgExplore ○

lblName ○

selectedBackgroundView ○

Outlet Collections

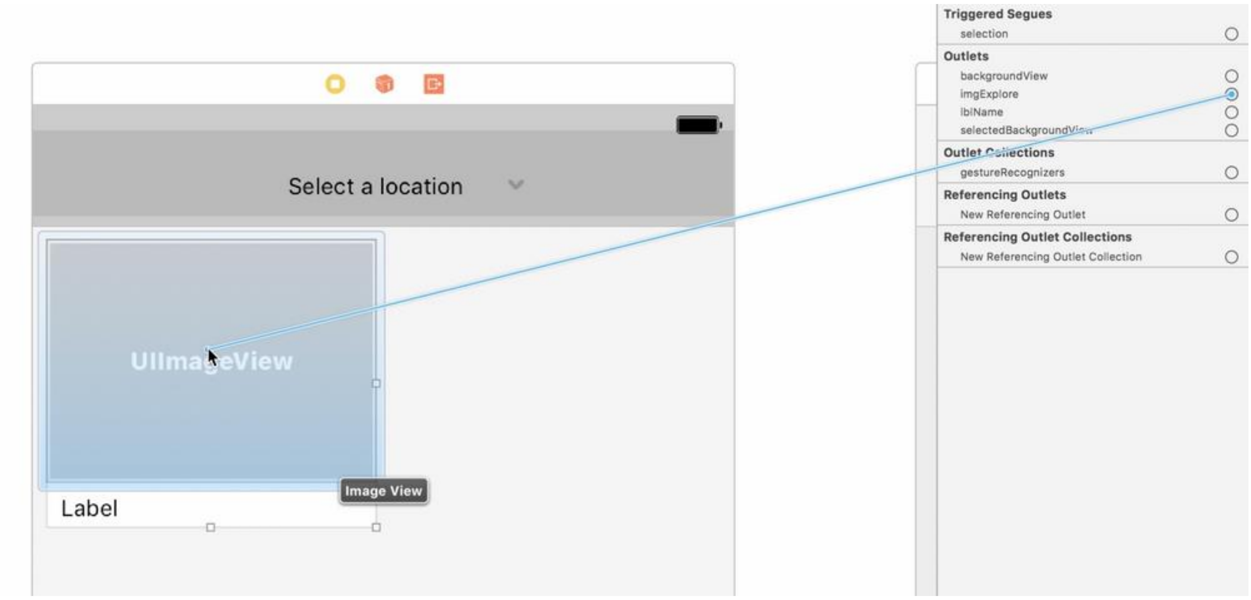
gestureRecognizers ○

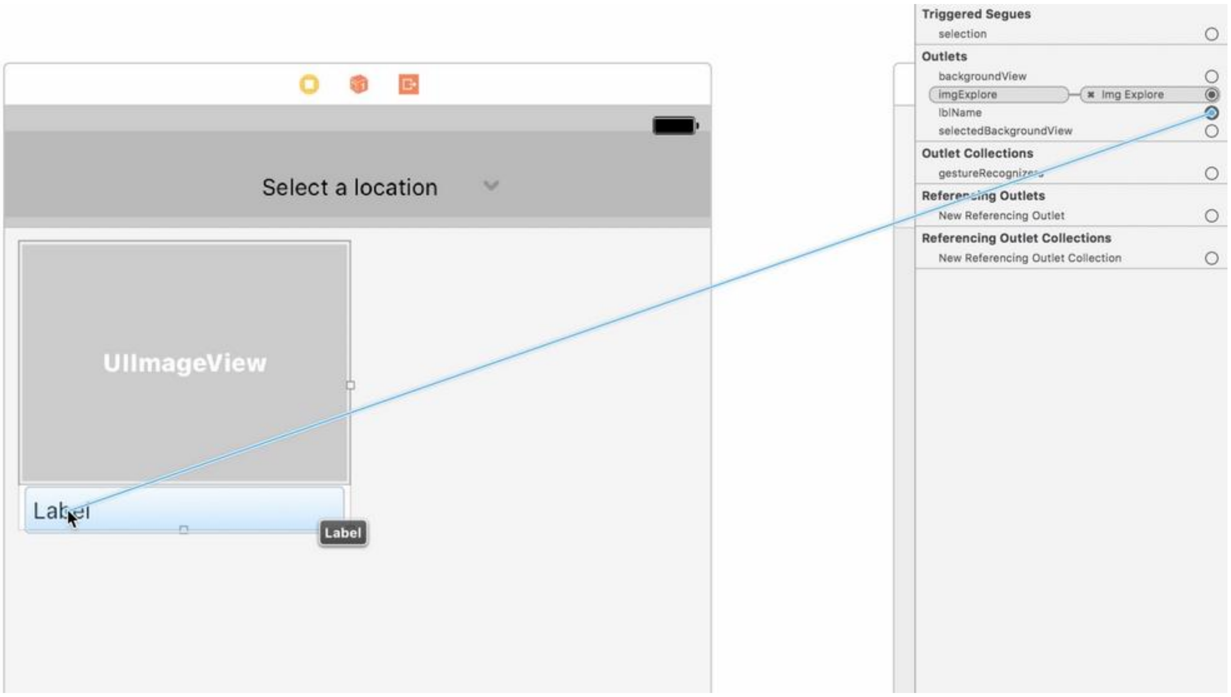
Referencing Outlets

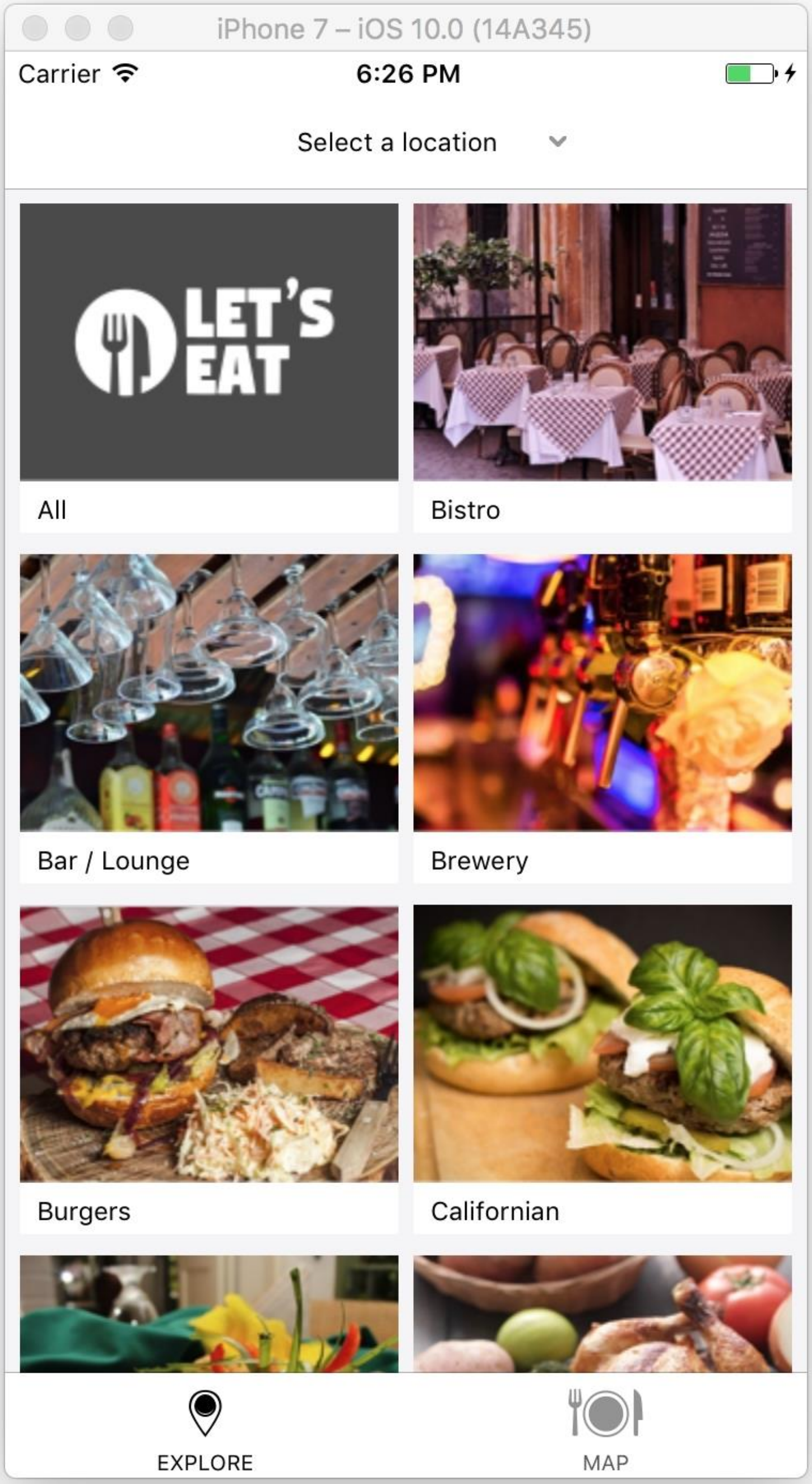
New Referencing Outlet ○

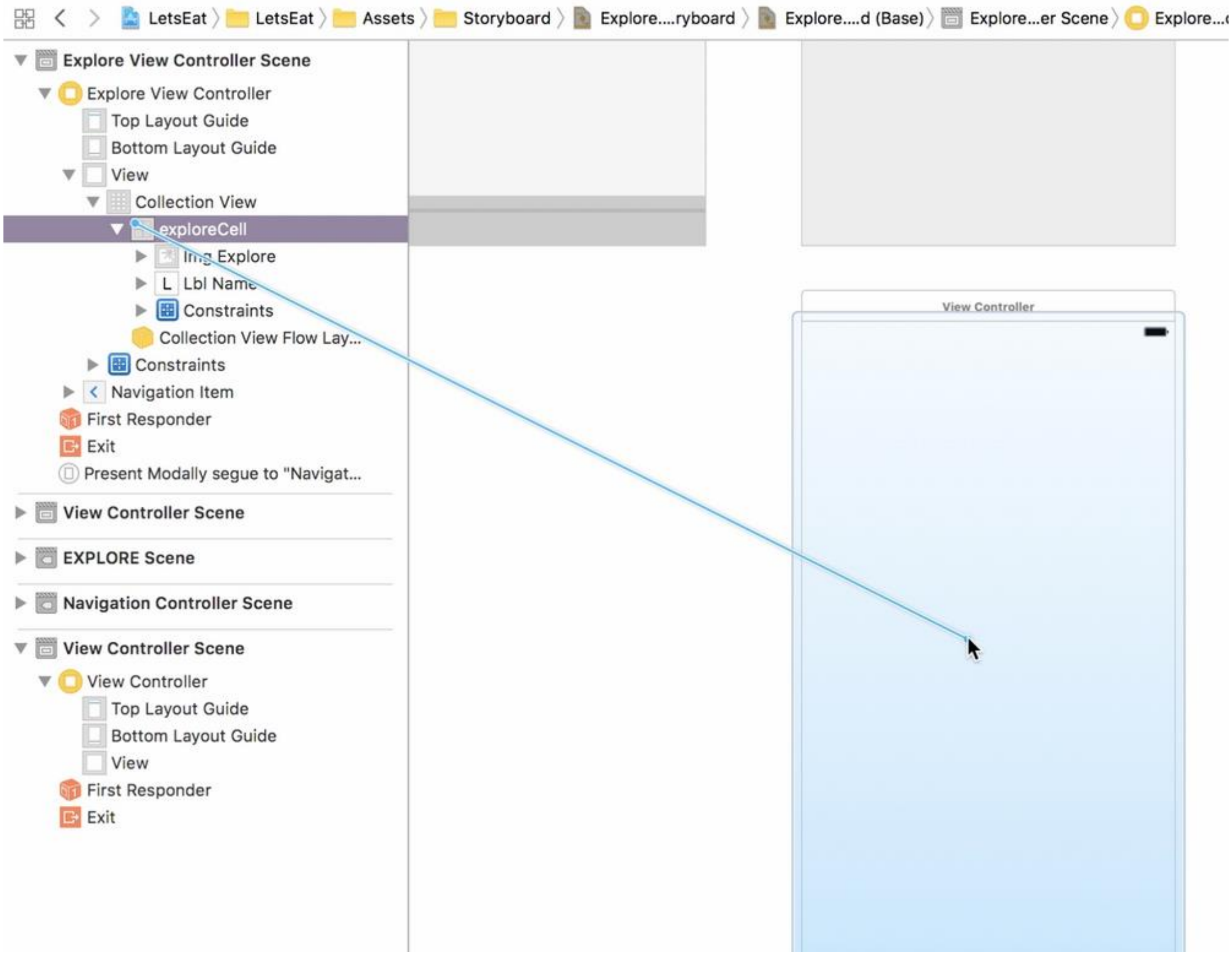
Referencing Outlet Collections

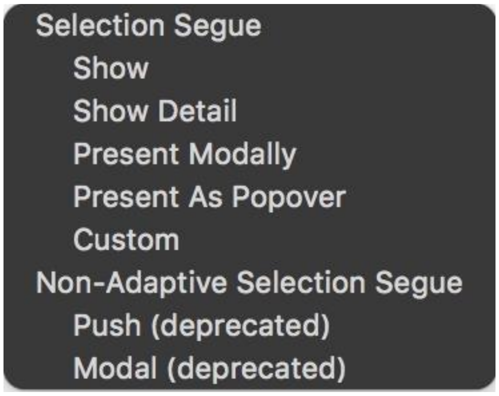
New Referencing Outlet Collection ○

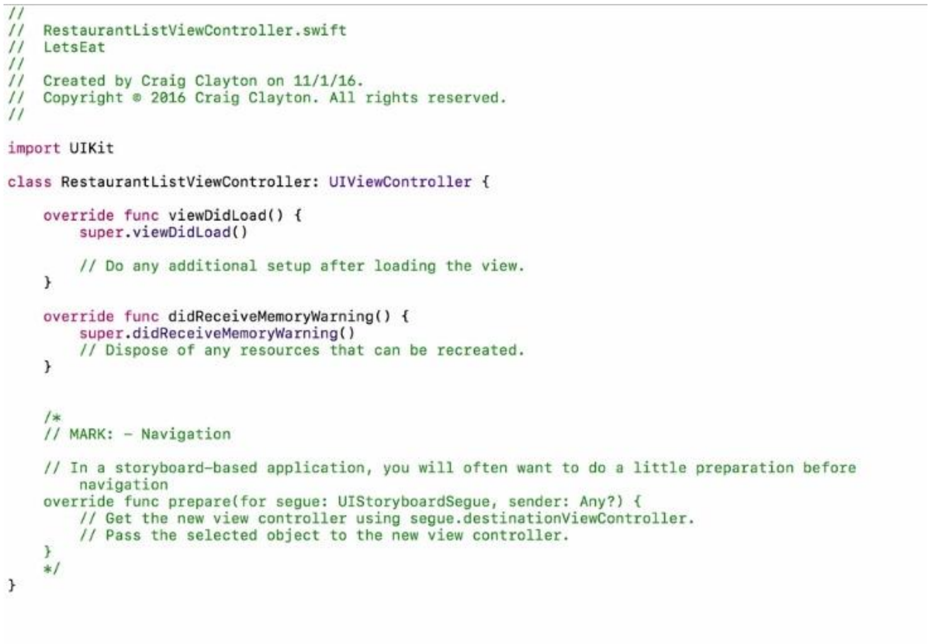

Select a location
UIImageView
Image View
Label
Triggered Segues
selection
Outlets
backgroundView
imgExplore
lblName
selectedBackgroundView
Outlet Collections
gestureRecognizers
Referencing Outlets
New Referencing Outlet
Referencing Outlet Collections
New Referencing Outlet Collection


Select a location
UIImageView
Label
Label
Triggered Segues
selection
Outlets
backgroundView
imgExplore
Img Explore
lblName
selectedBackgroundView
Outlet Collections
gestureRecognizers
Referencing Outlets
New Referencing Outlet
Referencing Outlet Collections
New Referencing Outlet Collection

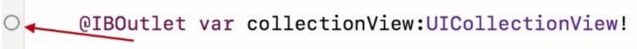

iPhone 7 – iOS 10.0 (14A345)
Carrier
6:26 PM
Select a location
LET'S EAT
All
Bistro
Bar / Lounge
Brewery
Burgers
Californian
EXPLORE
MAP


LetsEat 〉 LetsEat 〉 Assets 〉 Storyboard 〉 Explore....ryboard 〉 Explore....d (Base) 〉 Explore...er Scene 〉 Explore...
Explore View Controller Scene
Explore View Controller
Top Layout Guide
Bottom Layout Guide
View
Collection View
exploreCell
Img Explore
Lbl Name
Constraints
Collection View Flow Lay...
Constraints
Navigation Item
First Responder
Exit
Present Modally segue to "Navigat...
View Controller Scene
EXPLORE Scene
Navigation Controller Scene
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
First Responder
Exit
View Controller

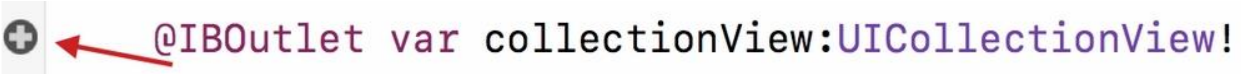

Selection Segue
Show
Show Detail
Present Modally
Present As Popover
Custom
Non-Adaptive Selection Segue
Push (deprecated)
Modal (deprecated)



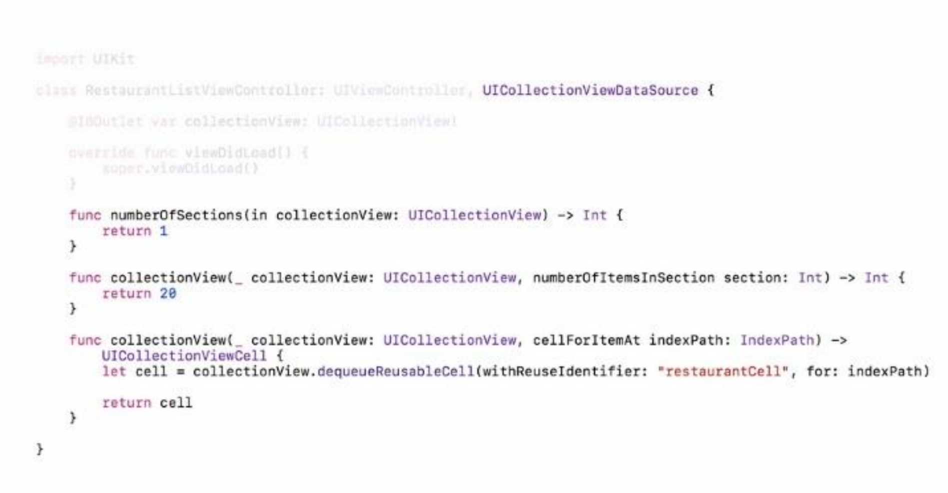
```
//
//  RestaurantListViewController.swift
//  LetsEat
//
//  Created by Craig Clayton on 11/1/16.
//  Copyright © 2016 Craig Clayton. All rights reserved.
//

import UIKit

class RestaurantListViewController: UIViewController {

    override func viewDidLoad() {
        super.viewDidLoad()

        // Do any additional setup after loading the view.
    }

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


    /*
    // MARK: - Navigation

    // In a storyboard-based application, you will often want to do a little preparation before
        navigation
    override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
        // Get the new view controller using segue.destinationViewController.
        // Pass the selected object to the new view controller.
    }
    */
}
```



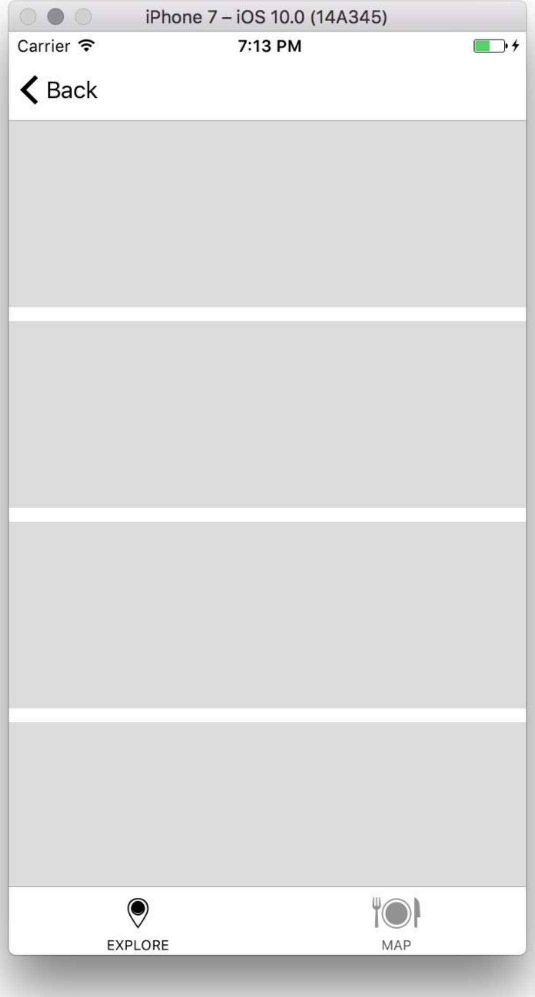
```
@IBOutlet var collectionView:UICollectionView!
```



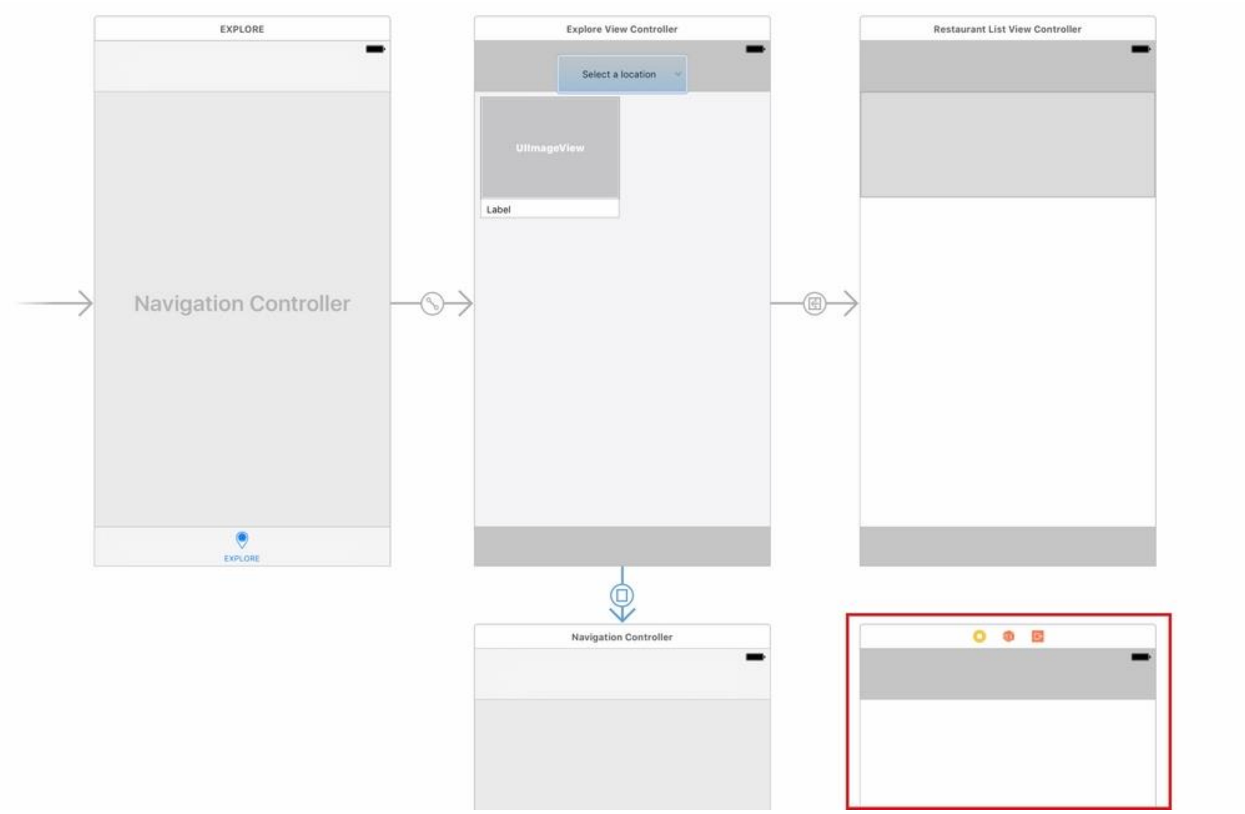
```
@IBOutlet var collectionView:UICollectionView!
```

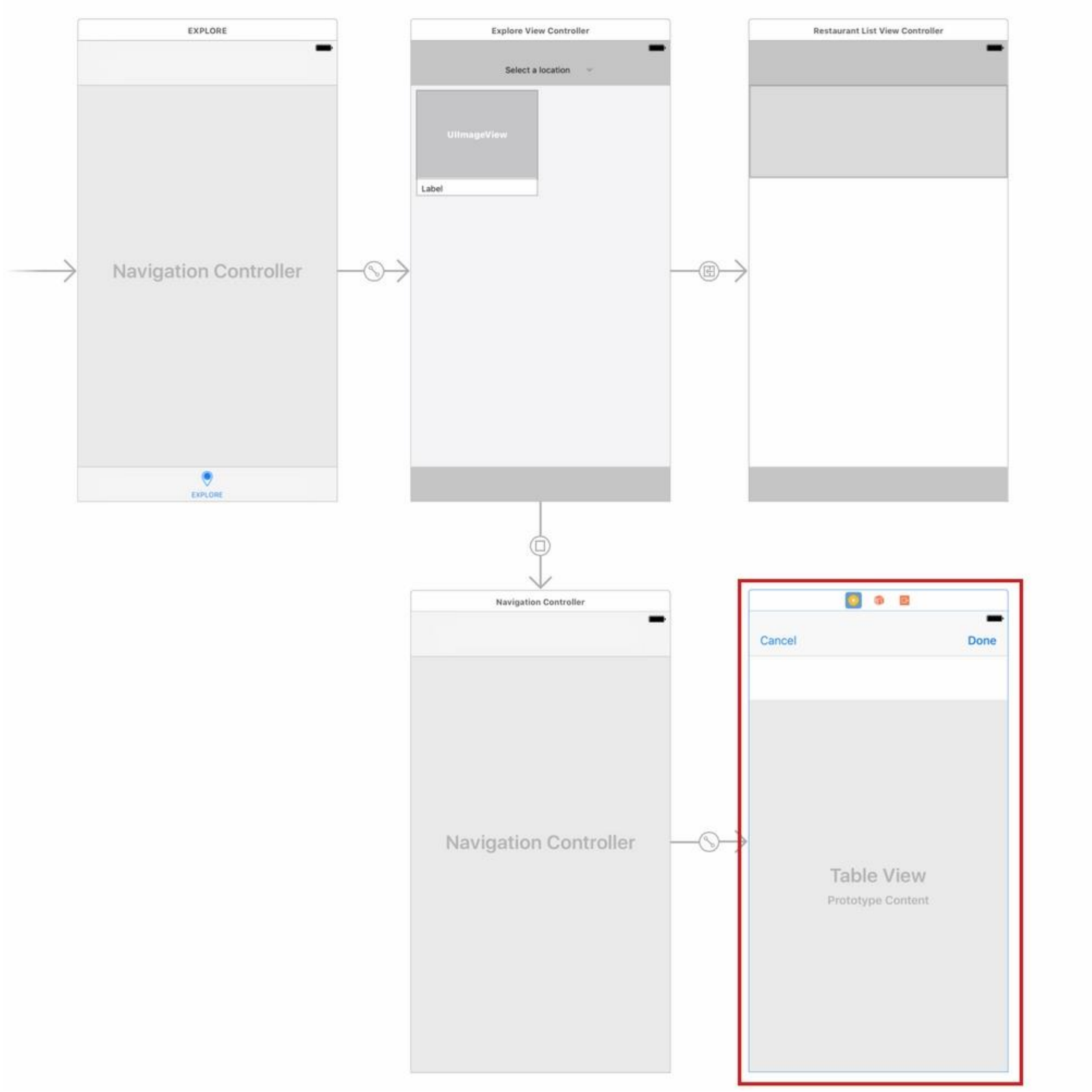


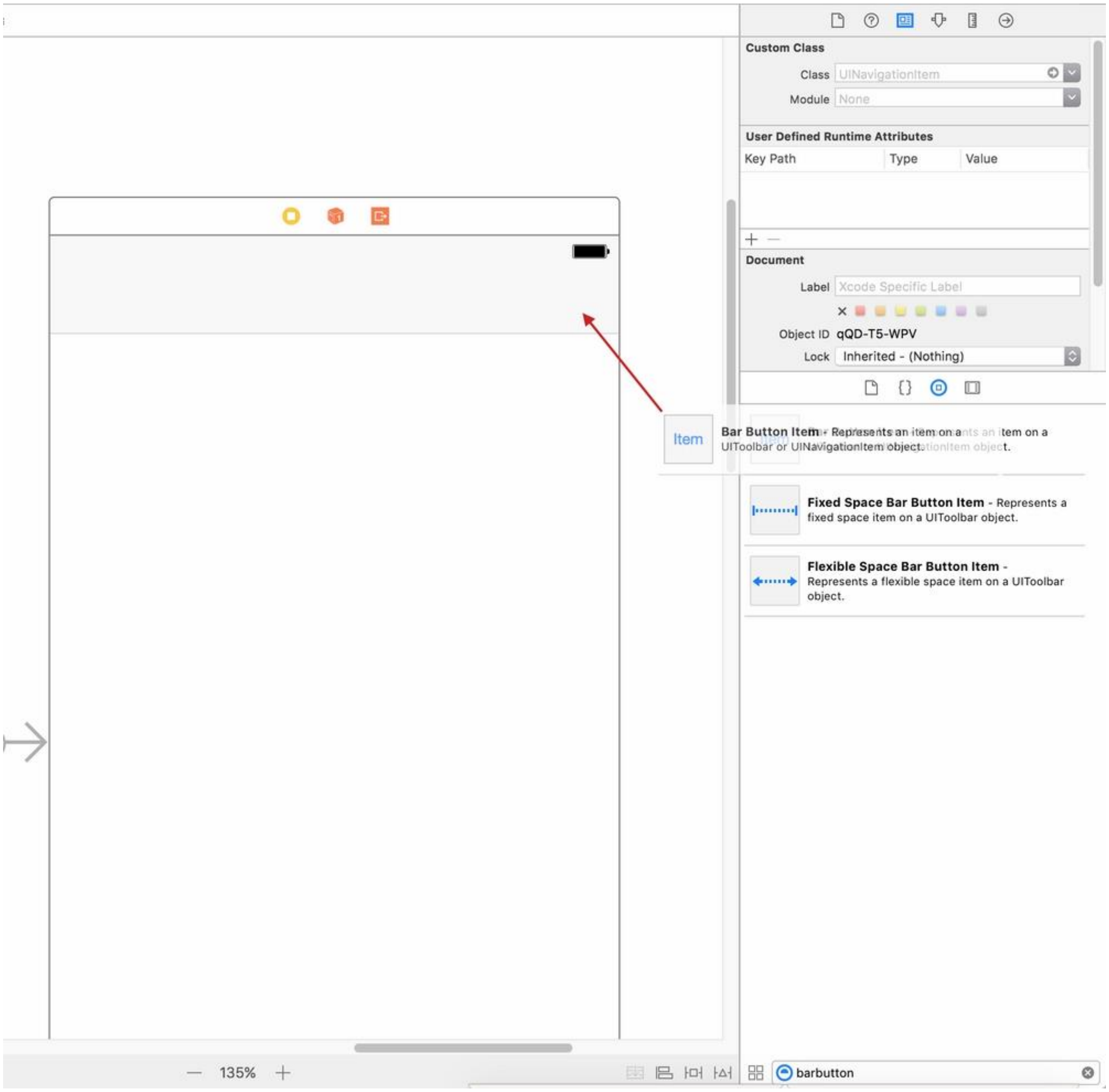
```
import UIKit

class RestaurantListViewController: UIViewController, UICollectionViewDataSource {

    @IBOutlet var collectionView: UICollectionView!

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

    func numberOfSections(in collectionView: UICollectionView) -> Int {
        return 1
    }

    func collectionView(_ collectionView: UICollectionView, numberOfItemsInSection section: Int) -> Int {
        return 20
    }

    func collectionView(_ collectionView: UICollectionView, cellForItemAt indexPath: IndexPath) ->
        UICollectionViewCell {
        let cell = collectionView.dequeueReusableCell(withReuseIdentifier: "restaurantCell", for: indexPath)

        return cell
    }

}
```


iPhone 7 – iOS 10.0 (14A345)
Carrier
7:13 PM
Back
EXPLORE
MAP

Chapter 8: Getting Started with the List




EXPLORE
Navigation Controller
EXPLORE
Explore View Controller
Select a location
UIImageView
Label
Restaurant List View Controller
Navigation Controller
Navigation Controller
Cancel
Done
Table View
Prototype Content



Custom Class

Class: UINavigationItem

Module: None

User Defined Runtime Attributes

Key Path	Type	Value

Document

Label: Xcode Specific Label

Object ID: qQD-T5-WPV

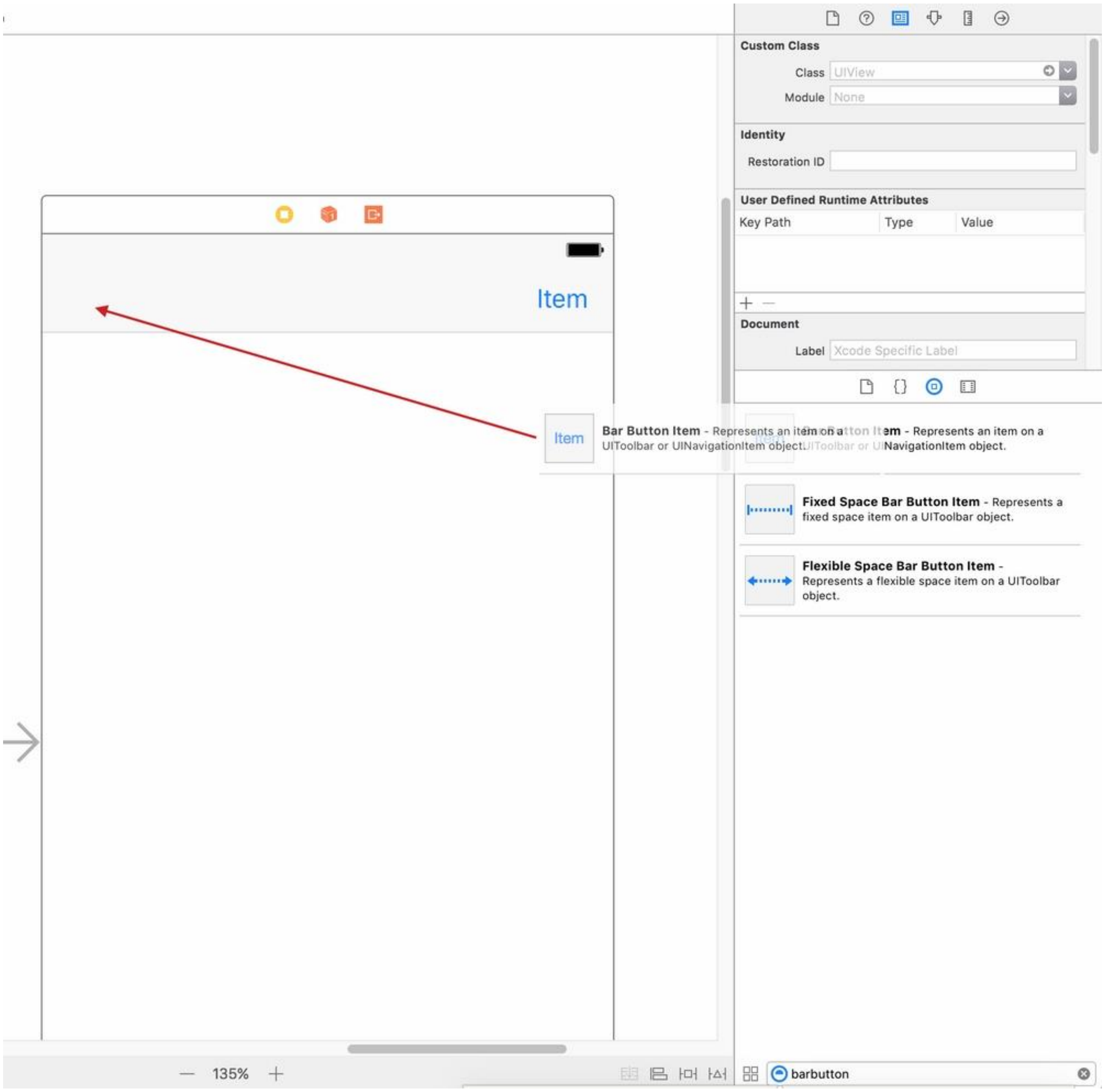
Lock: Inherited - (Nothing)

Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.

Fixed Space Bar Button Item - Represents a fixed space item on a UIToolbar object.

Flexible Space Bar Button Item - Represents a flexible space item on a UIToolbar object.

barbutton



Custom Class

Class UIView

Module None

Identity

Restoration ID

User Defined Runtime Attributes

Key Path	Type	Value

Document

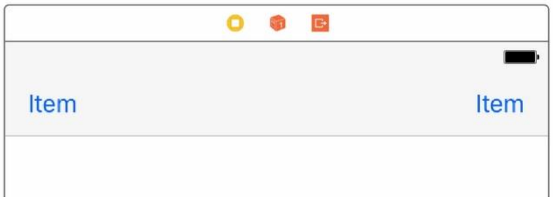
Label Xcode Specific Label

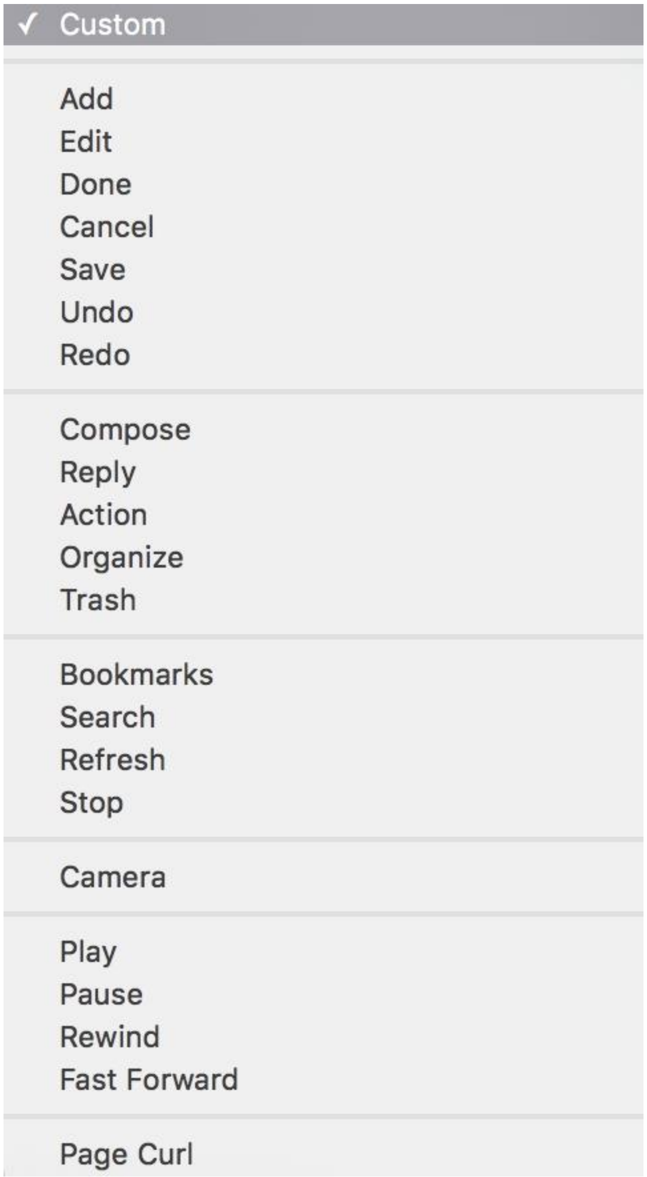
Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.

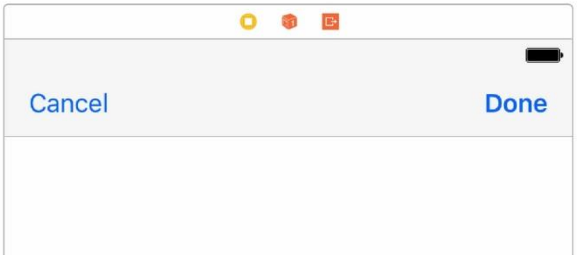
Fixed Space Bar Button Item - Represents a fixed space item on a UIToolbar object.

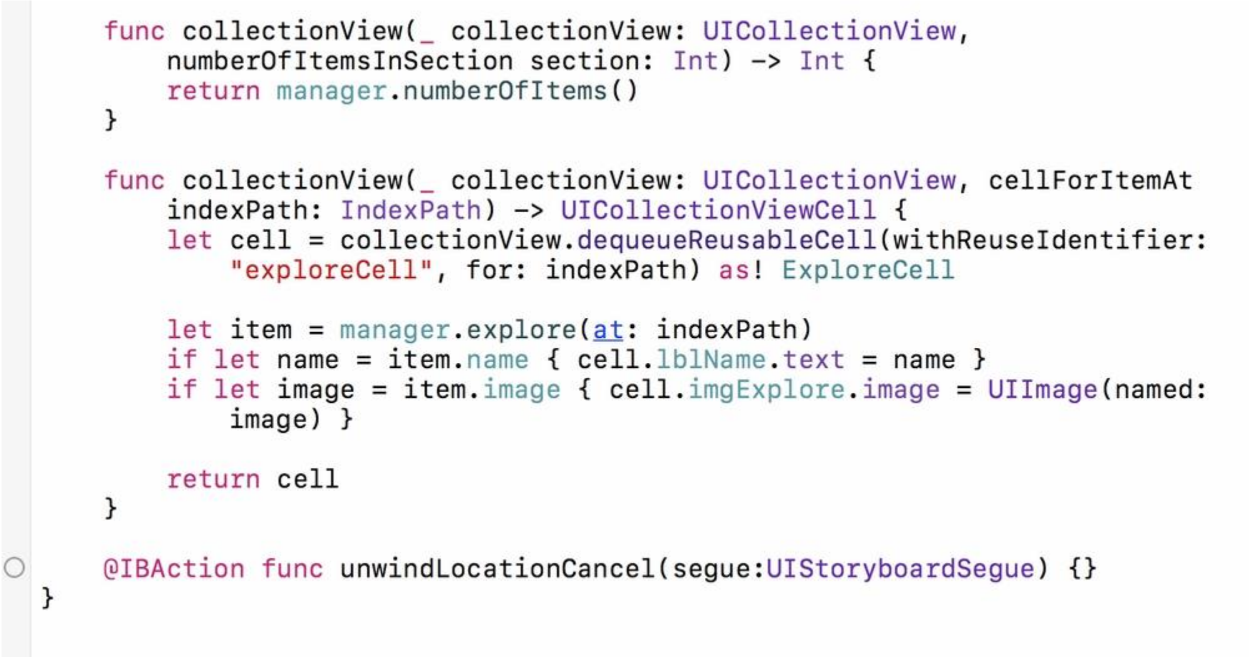
Flexible Space Bar Button Item - Represents a flexible space item on a UIToolbar object.

barbutton

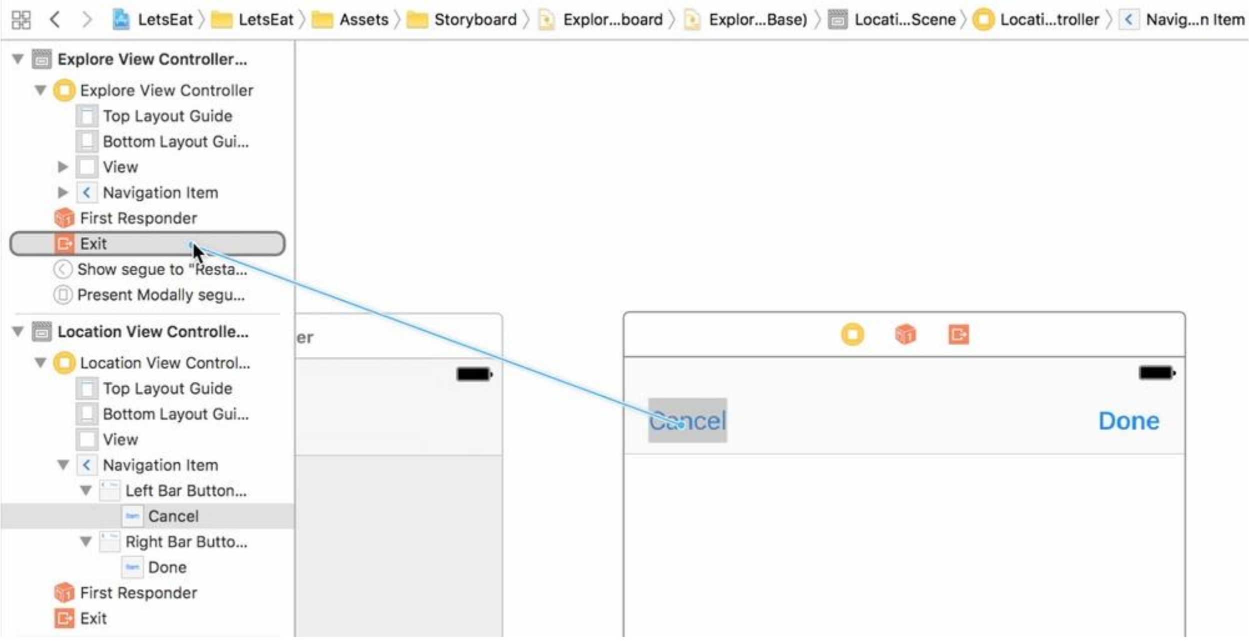


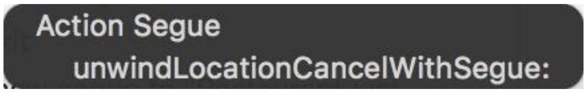

✓ Custom
Add
Edit
Done
Cancel
Save
Undo
Redo
Compose
Reply
Action
Organize
Trash
Bookmarks
Search
Refresh
Stop
Camera
Play
Pause
Rewind
Fast Forward
Page Curl


Cancel
Done



```
    func collectionView(_ collectionView: UICollectionView,
        numberOfItemsInSection section: Int) -> Int {
        return manager.numberOfItems()
    }

    func collectionView(_ collectionView: UICollectionView, cellForItemAt
        indexPath: IndexPath) -> UICollectionViewCell {
        let cell = collectionView.dequeueReusableCell(withReuseIdentifier:
            "exploreCell", for: indexPath) as! ExploreCell

        let item = manager.explore(at: indexPath)
        if let name = item.name { cell.lblName.text = name }
        if let image = item.image { cell.imgExplore.image = UIImage(named:
            image) }

        return cell
    }

    @IBAction func unwindLocationCancel(segue:UIStoryboardSegue) {}
}
```





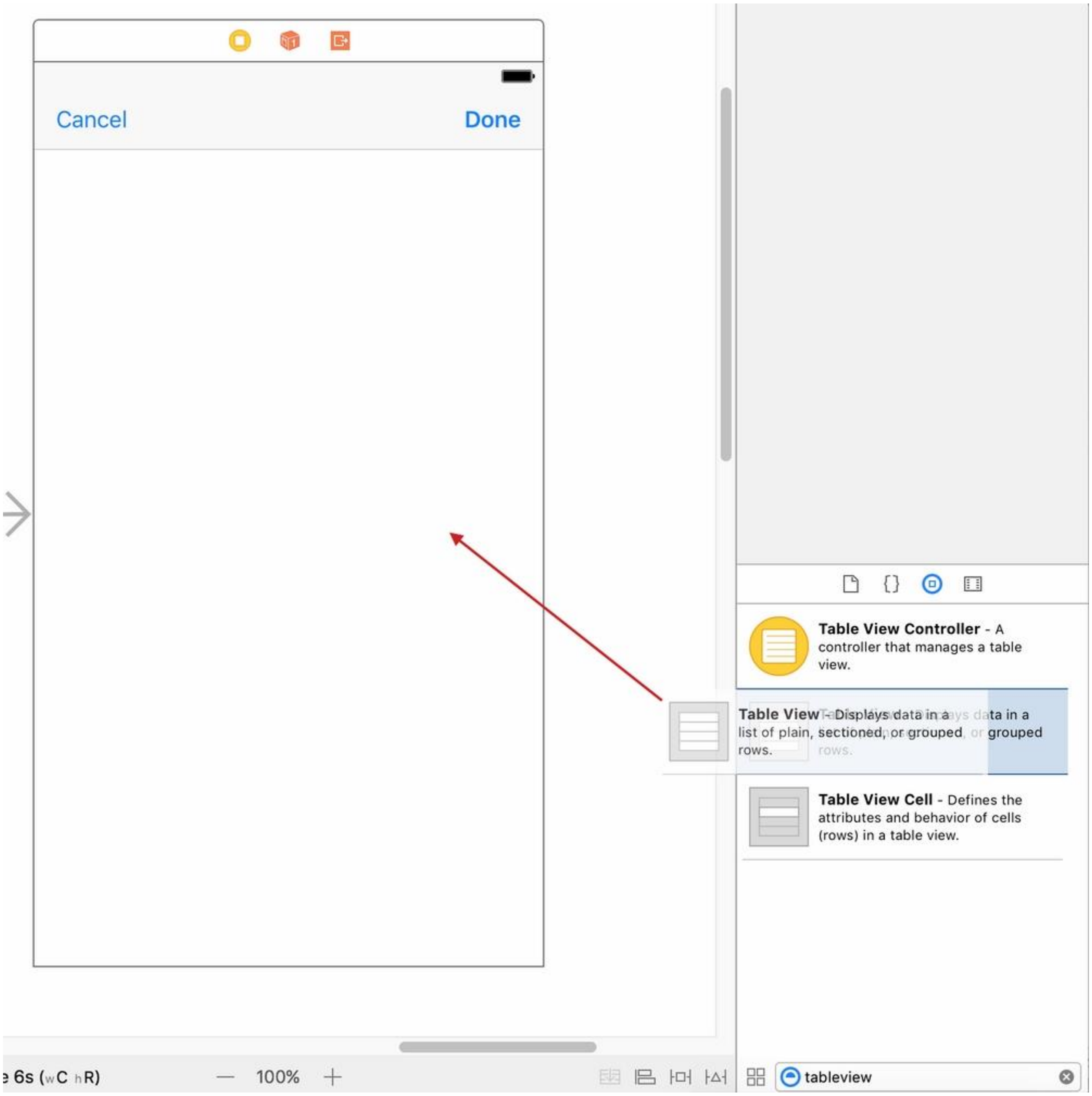
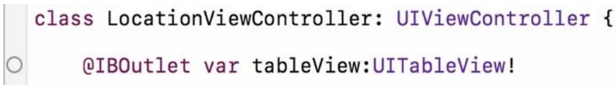


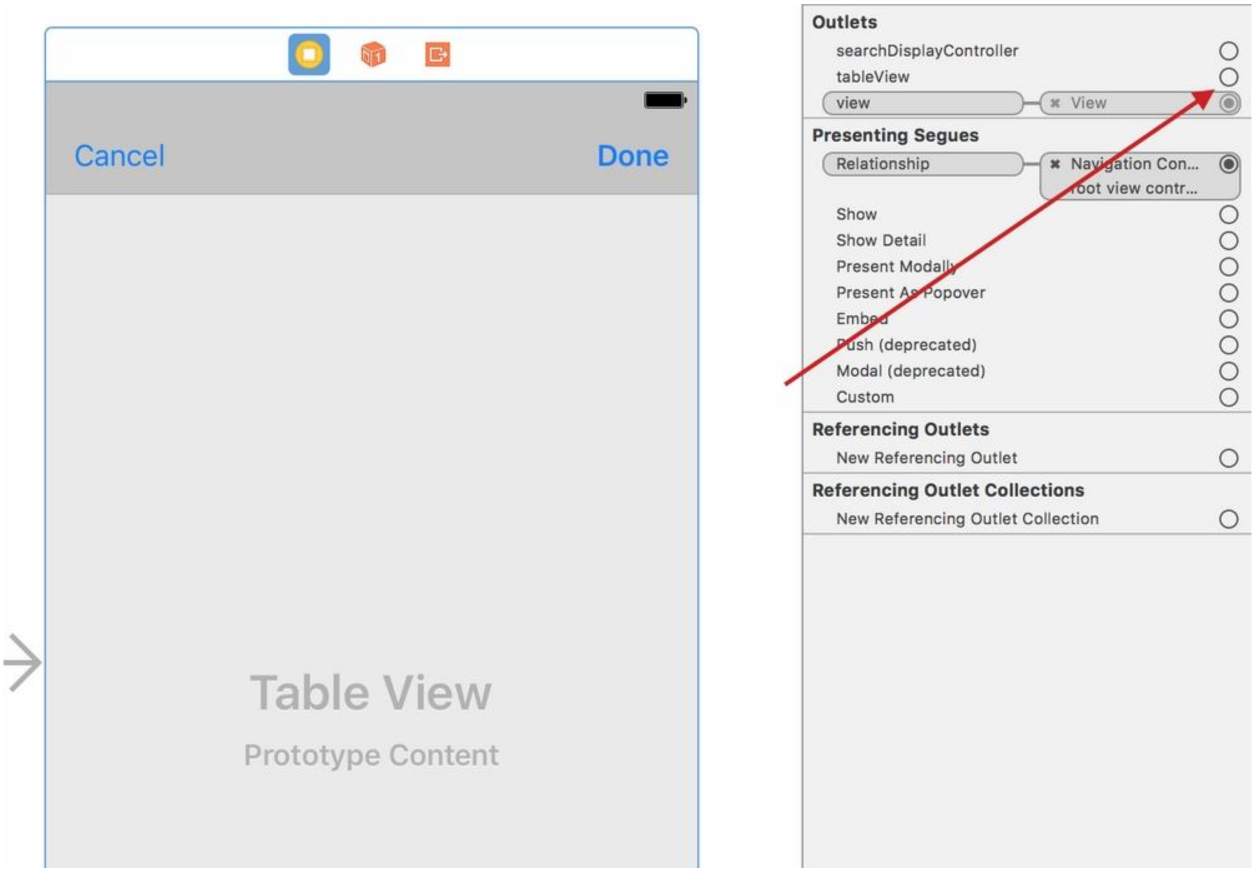
Table View Controller - A controller that manages a table view.

Table View - Displays data in a list of plain, sectioned, or grouped rows.

Table View Cell - Defines the attributes and behavior of cells (rows) in a table view.



```
class LocationViewController: UIViewController {

    @IBOutlet var tableView:UITableView!
```



Outlets

searchDisplayController ○
tableView ○
view — View ●

Presenting Segues

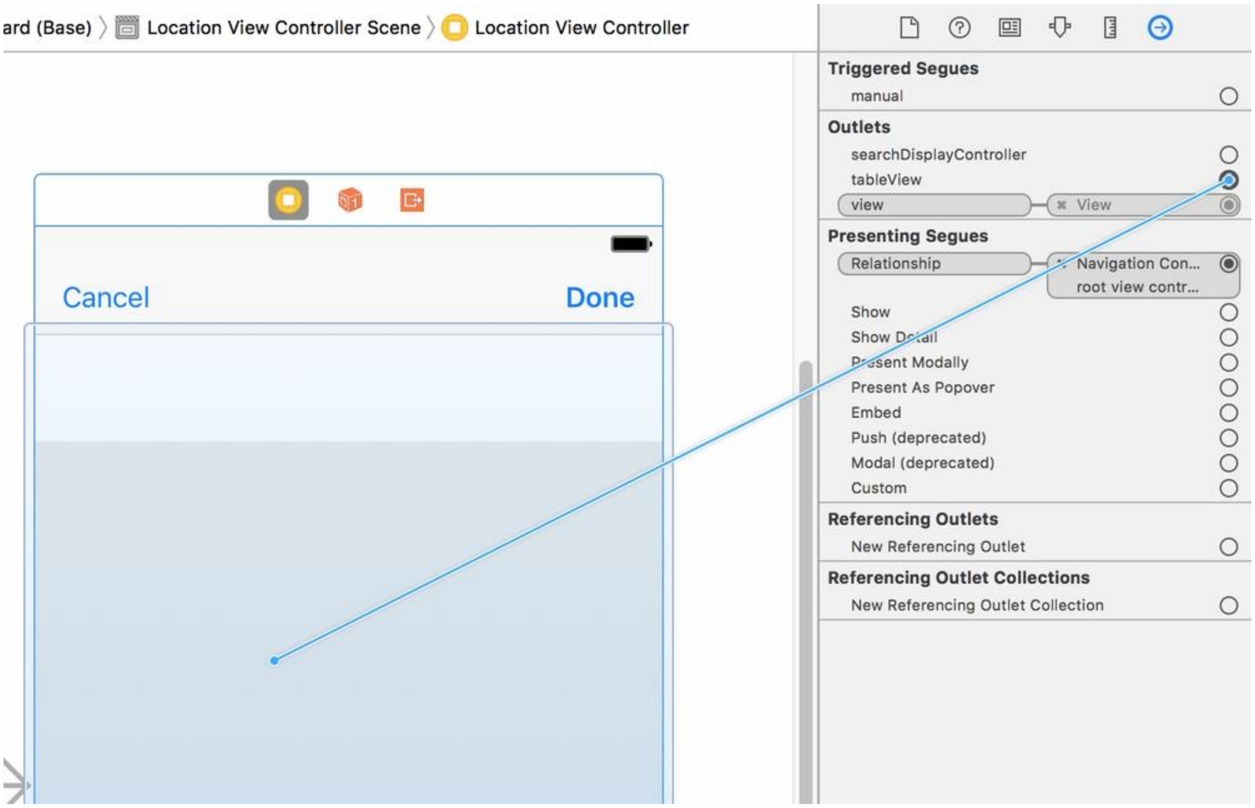
Relationship — Navigation Con... root view contr... ●
Show ○
Show Detail ○
Present Modally ○
Present As Popover ○
Embed ○
Push (deprecated) ○
Modal (deprecated) ○
Custom ○

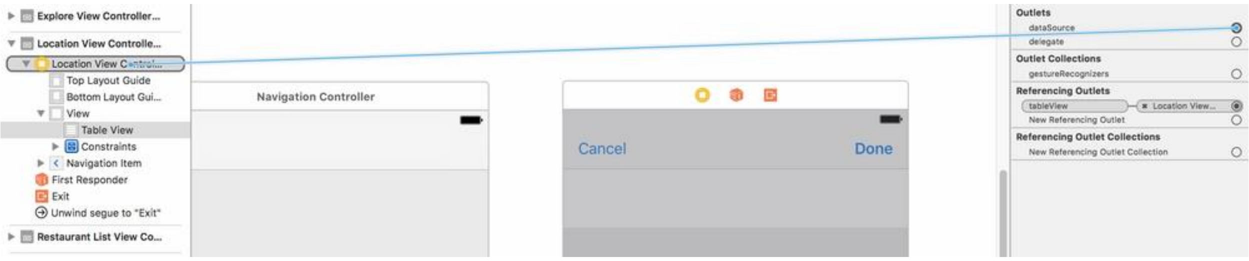
Referencing Outlets

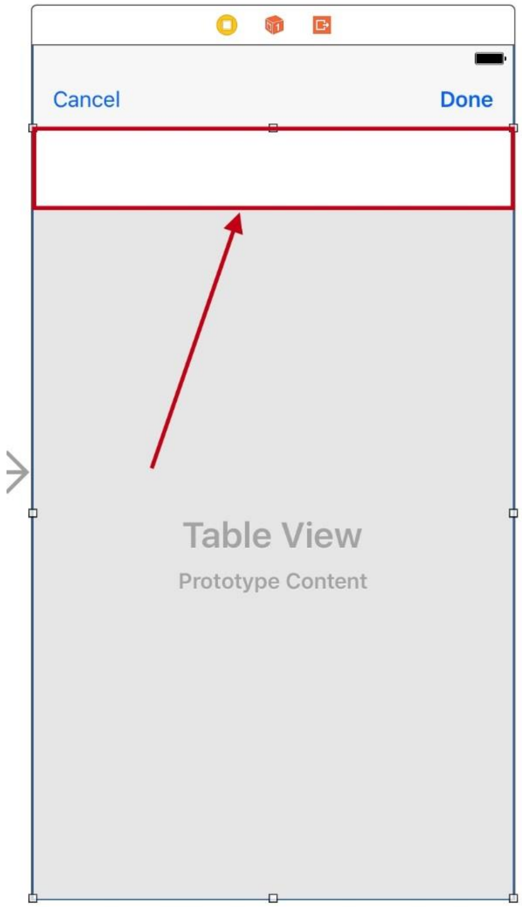
New Referencing Outlet ○

Referencing Outlet Collections

New Referencing Outlet Collection ○


ard (Base) 〉 Location View Controller Scene 〉 Location View Controller
Cancel
Done
Triggered Segues
manual
Outlets
searchDisplayController
tableView
view
View
Presenting Segues
Relationship
Navigation Con...
root view contr...
Show
Show Detail
Present Modally
Present As Popover
Embed
Push (deprecated)
Modal (deprecated)
Custom
Referencing Outlets
New Referencing Outlet
Referencing Outlet Collections
New Referencing Outlet Collection


Explore View Controller...
Location View Controlle...
Location View Control...
Top Layout Guide
Bottom Layout Gui...
View
Table View
Constraints
Navigation Item
First Responder
Exit
Unwind segue to "Exit"
Restaurant List View Co...
Navigation Controller
Cancel
Done
Outlets
dataSource
delegate
Outlet Collections
gestureRecognizers
Referencing Outlets
tableView
Location View...
New Referencing Outlet
Referencing Outlet Collections
New Referencing Outlet Collection



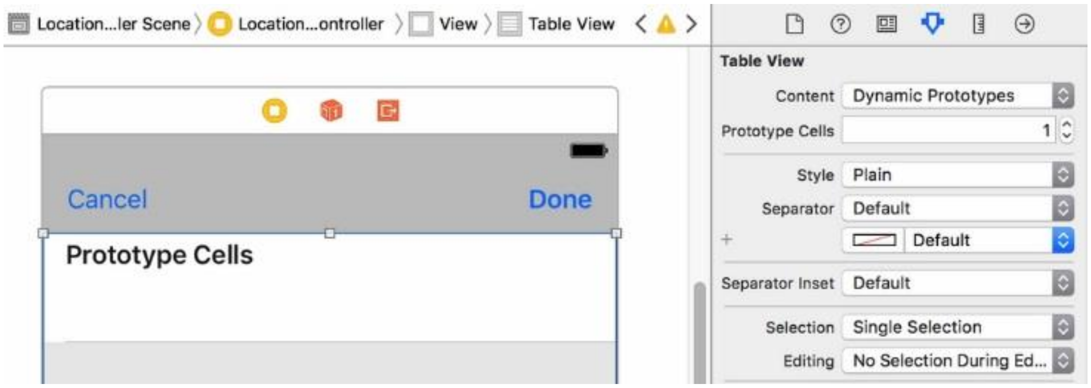


Table View

Content	Dynamic Prototypes
Prototype Cells	1
Style	Plain
Separator	Default
	Default
Separator Inset	Default
Selection	Single Selection
Editing	No Selection During Ed...

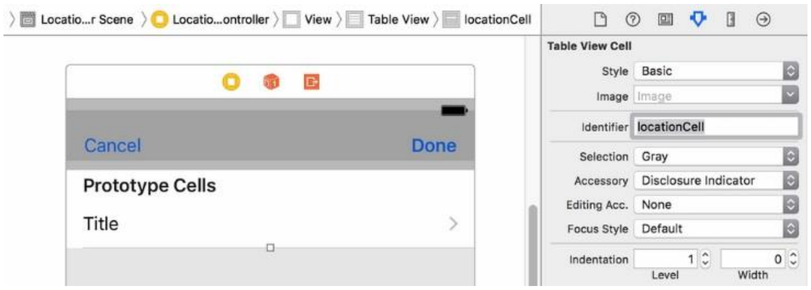

Locatio...r Scene 〉 Locatio...ontroller 〉 View 〉 Table View 〉 locationCell
Cancel
Done
Prototype Cells
Title

Table View Cell

Style: Basic

Image: Image

Identifier: locationCell

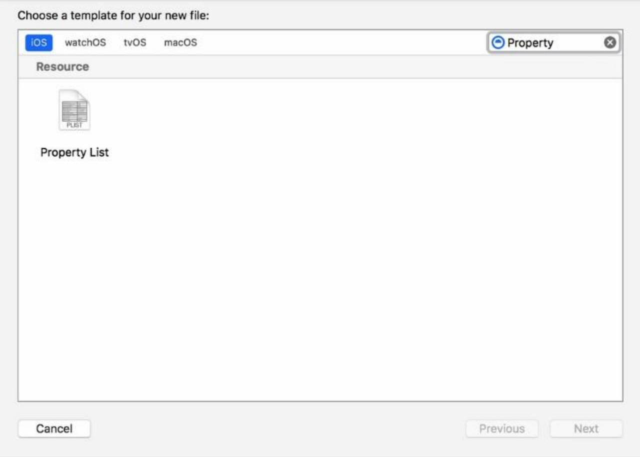
Selection: Gray

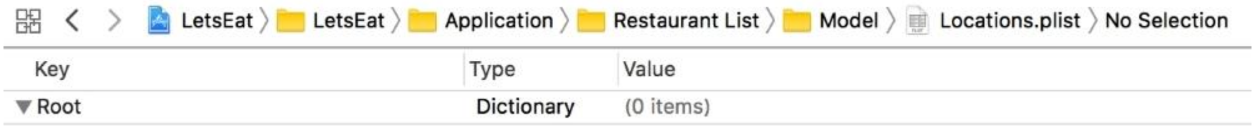
Accessory: Disclosure Indicator

Editing Acc.: None

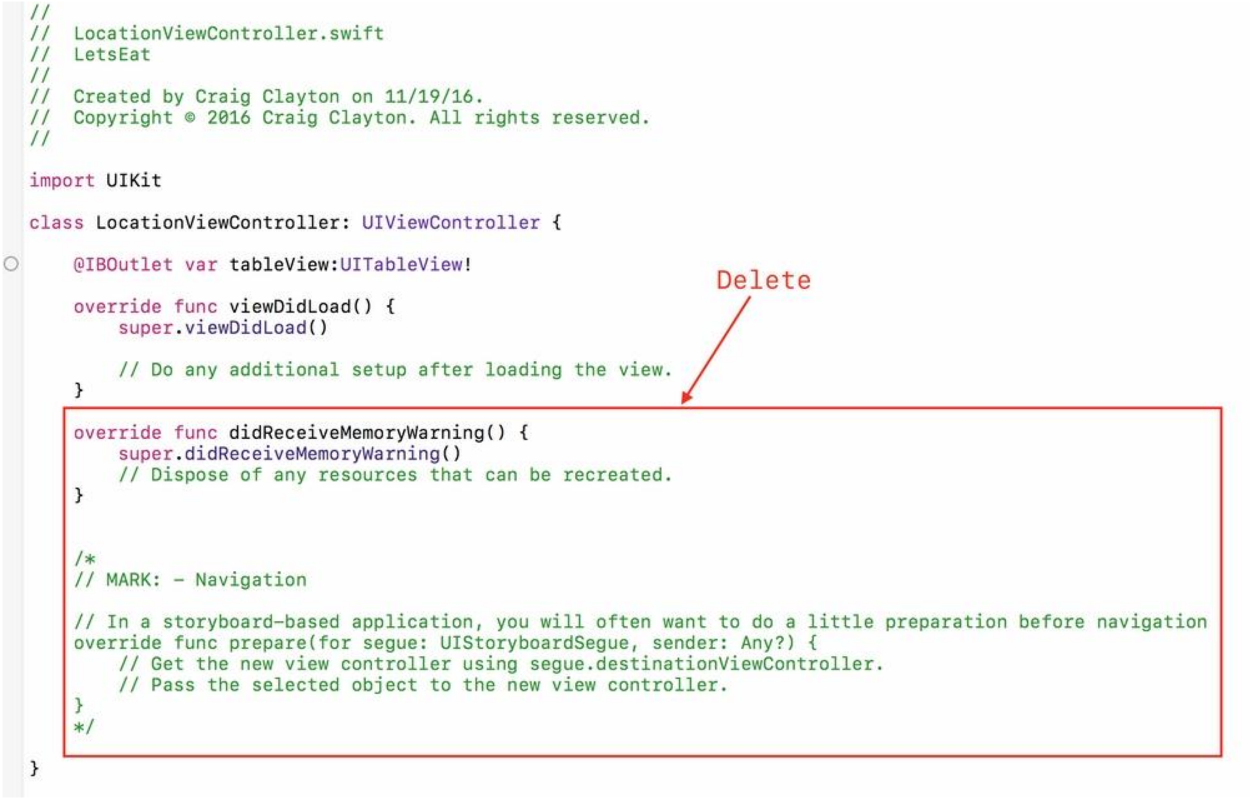
Focus Style: Default

Indentation: 1 (Level) 0 (Width)

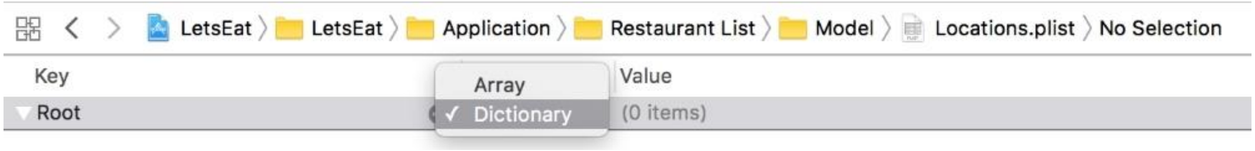

Choose a template for your new file:

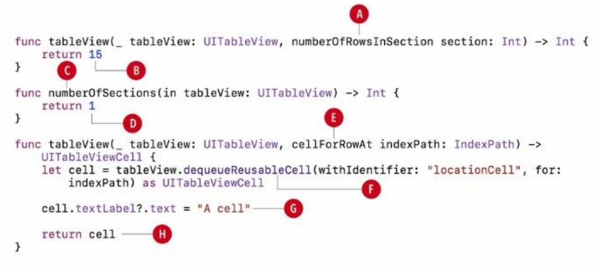

LetsEat 〉 LetsEat 〉 Application 〉 Restaurant List 〉 Model 〉 Locations.plist 〉 No Selection

Key	Type	Value
▼ Root	Dictionary	(0 items)

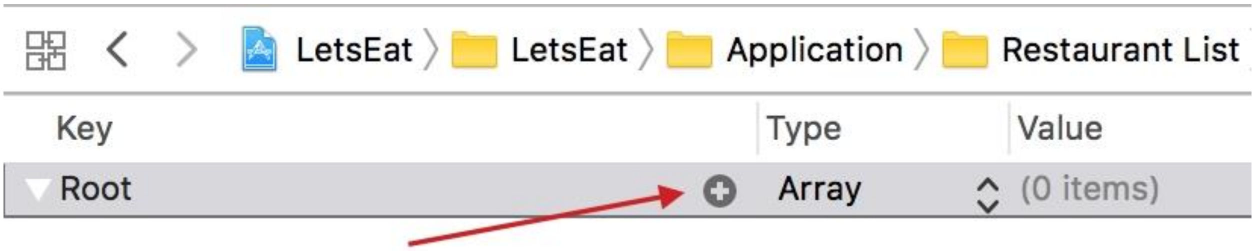


```
//
//  LocationViewController.swift
//  LetsEat
//
//  Created by Craig Clayton on 11/19/16.
//  Copyright © 2016 Craig Clayton. All rights reserved.
//

import UIKit

class LocationViewController: UIViewController {

    @IBOutlet var tableView:UITableView!

    override func viewDidLoad() {
        super.viewDidLoad()

        // Do any additional setup after loading the view.
    }

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


    /*
    // MARK: - Navigation

    // In a storyboard-based application, you will often want to do a little preparation before navigation
    override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
        // Get the new view controller using segue.destinationViewController.
        // Pass the selected object to the new view controller.
    }
    */

}
```



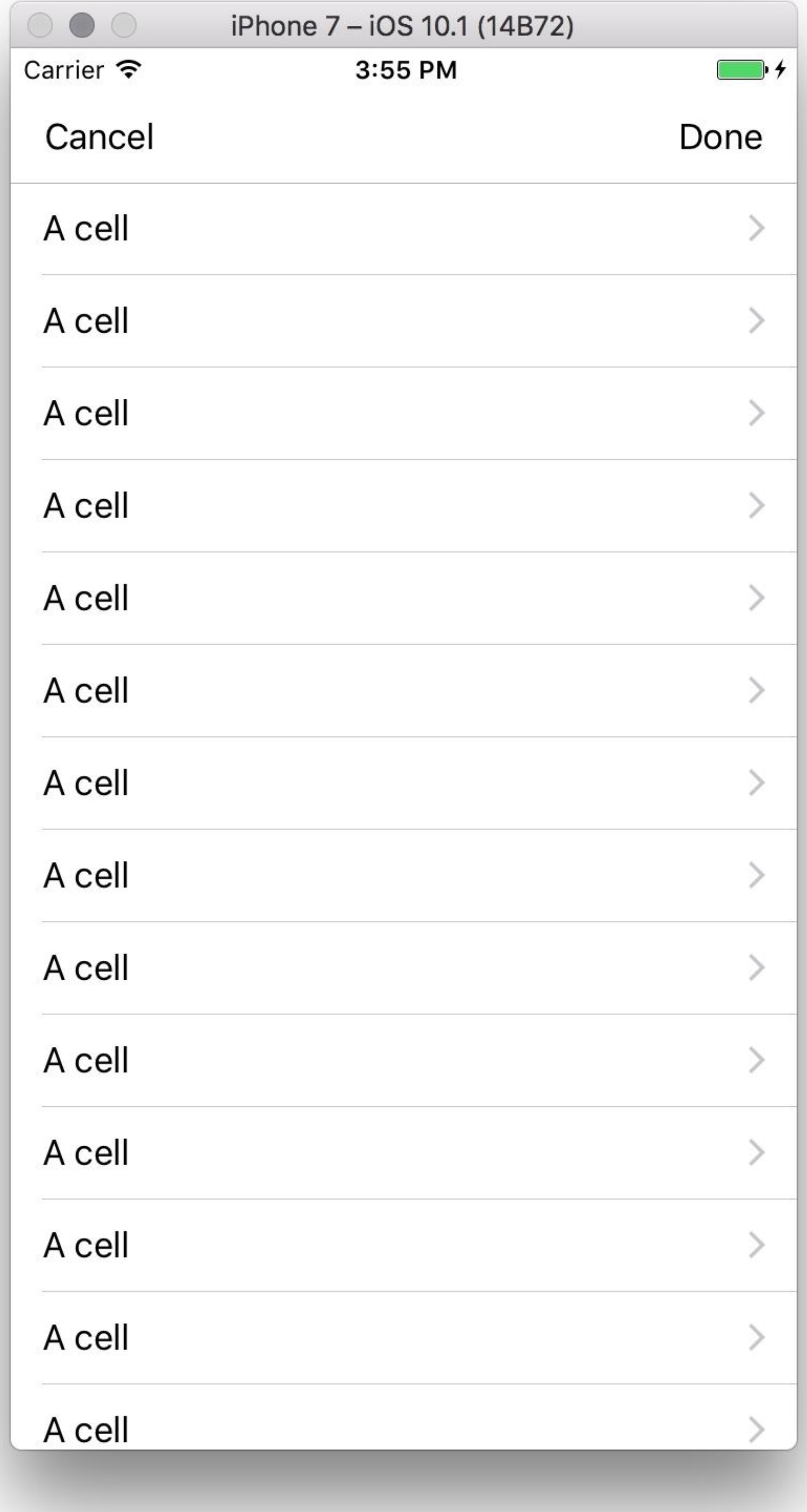


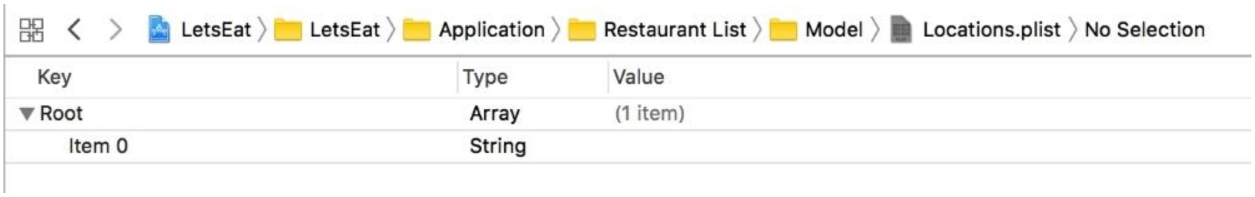
```
func tableView(_ tableView: UITableView, numberOfRowsInSection section: Int) -> Int {
    return 15
}

func numberOfSections(in tableView: UITableView) -> Int {
    return 1
}

func tableView(_ tableView: UITableView, cellForRowAt indexPath: IndexPath) ->
    UITableViewCell {
    let cell = tableView.dequeueReusableCell(withIdentifier: "locationCell", for:
        indexPath) as UITableViewCell

    cell.textLabel?.text = "A cell"

    return cell
}
```



LetsEat 〉 LetsEat 〉 Application 〉 Restaurant List

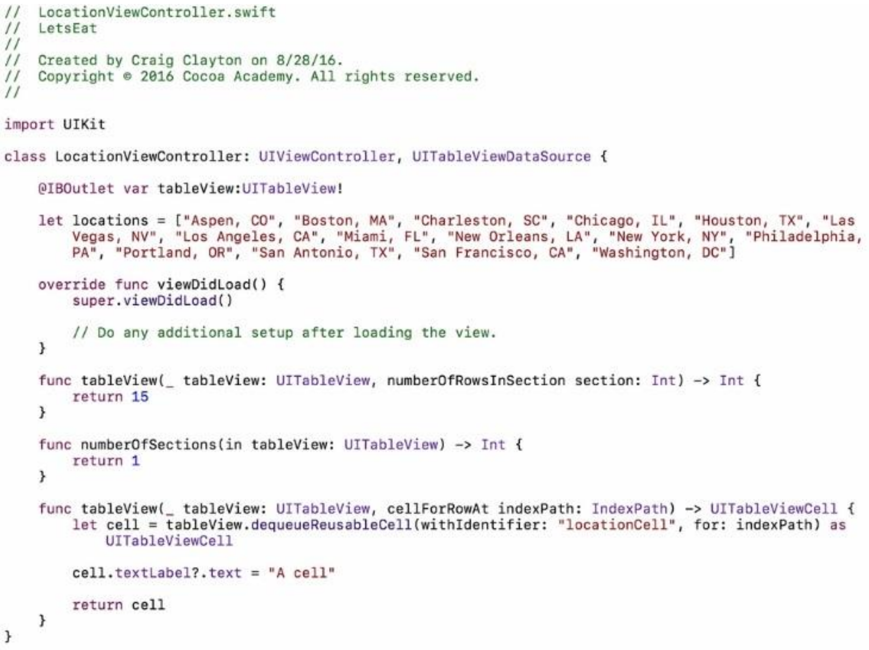
Key	Type	Value
Root	Array	(0 items)


iPhone 7 – iOS 10.1 (14B72)
Carrier
3:55 PM
Cancel
Done
A cell
A cell
A cell
A cell
A cell
A cell
A cell
A cell
A cell
A cell
A cell
A cell
A cell
A cell

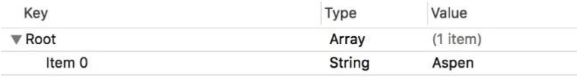


LetsEat 〉 LetsEat 〉 Application 〉 Restaurant List 〉 Model 〉 Locations.plist 〉 No Selection

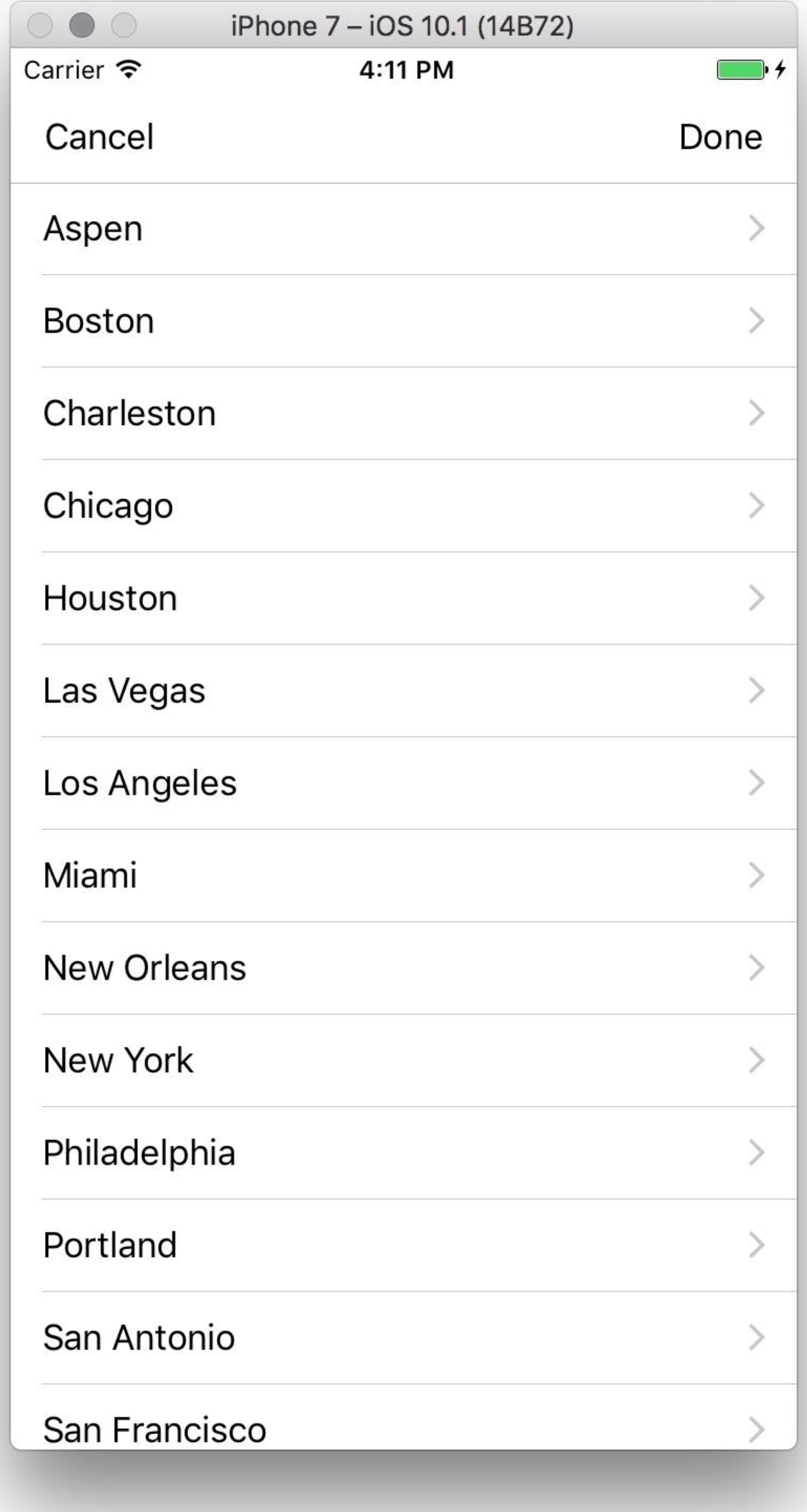
Key	Type	Value
▼ Root	Array	(1 item)
Item 0	String	



```
//  LocationViewController.swift
//  LetsEat
//
//  Created by Craig Clayton on 8/28/16.
//  Copyright © 2016 Cocoa Academy. All rights reserved.
//

import UIKit

class LocationViewController: UIViewController, UITableViewDataSource {

    @IBOutlet var tableView:UITableView!

    let locations = ["Aspen, CO", "Boston, MA", "Charleston, SC", "Chicago, IL", "Houston, TX", "Las
        Vegas, NV", "Los Angeles, CA", "Miami, FL", "New Orleans, LA", "New York, NY", "Philadelphia,
        PA", "Portland, OR", "San Antonio, TX", "San Francisco, CA", "Washington, DC"]

    override func viewDidLoad() {
        super.viewDidLoad()

        // Do any additional setup after loading the view.
    }

    func tableView(_ tableView: UITableView, numberOfRowsInSection section: Int) -> Int {
        return 15
    }

    func numberOfSections(in tableView: UITableView) -> Int {
        return 1
    }

    func tableView(_ tableView: UITableView, cellForRowAt indexPath: IndexPath) -> UITableViewCell {
        let cell = tableView.dequeueReusableCell(withIdentifier: "locationCell", for: indexPath) as
            UITableViewCell

        cell.textLabel?.text = "A cell"

        return cell
    }
}
```



Key	Type	Value
▼ Root	Array	(1 item)
Item 0	String	Aspen



Aspen

Boston

Charleston

Chicago

Houston

Las Vegas

Los Angeles

Miami

New Orleans

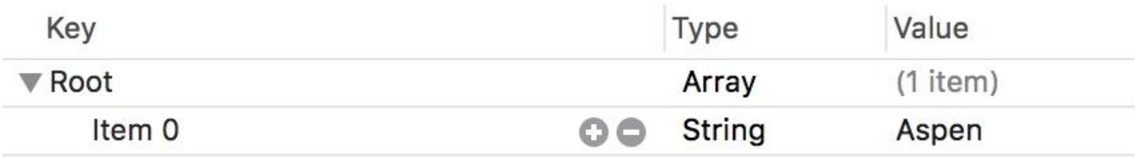
New York

Philadelphia

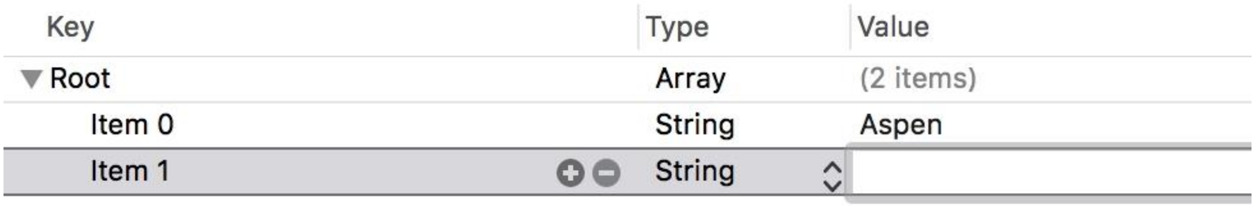
Portland

San Antonio

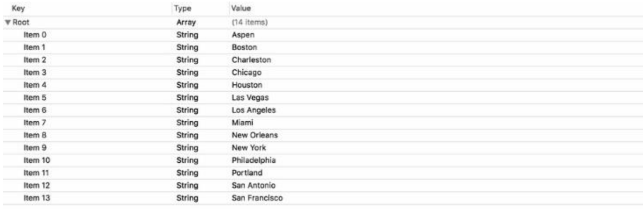
San Francisco



Key	Type	Value
▼ Root	Array	(1 item)
Item 0	String	Aspen

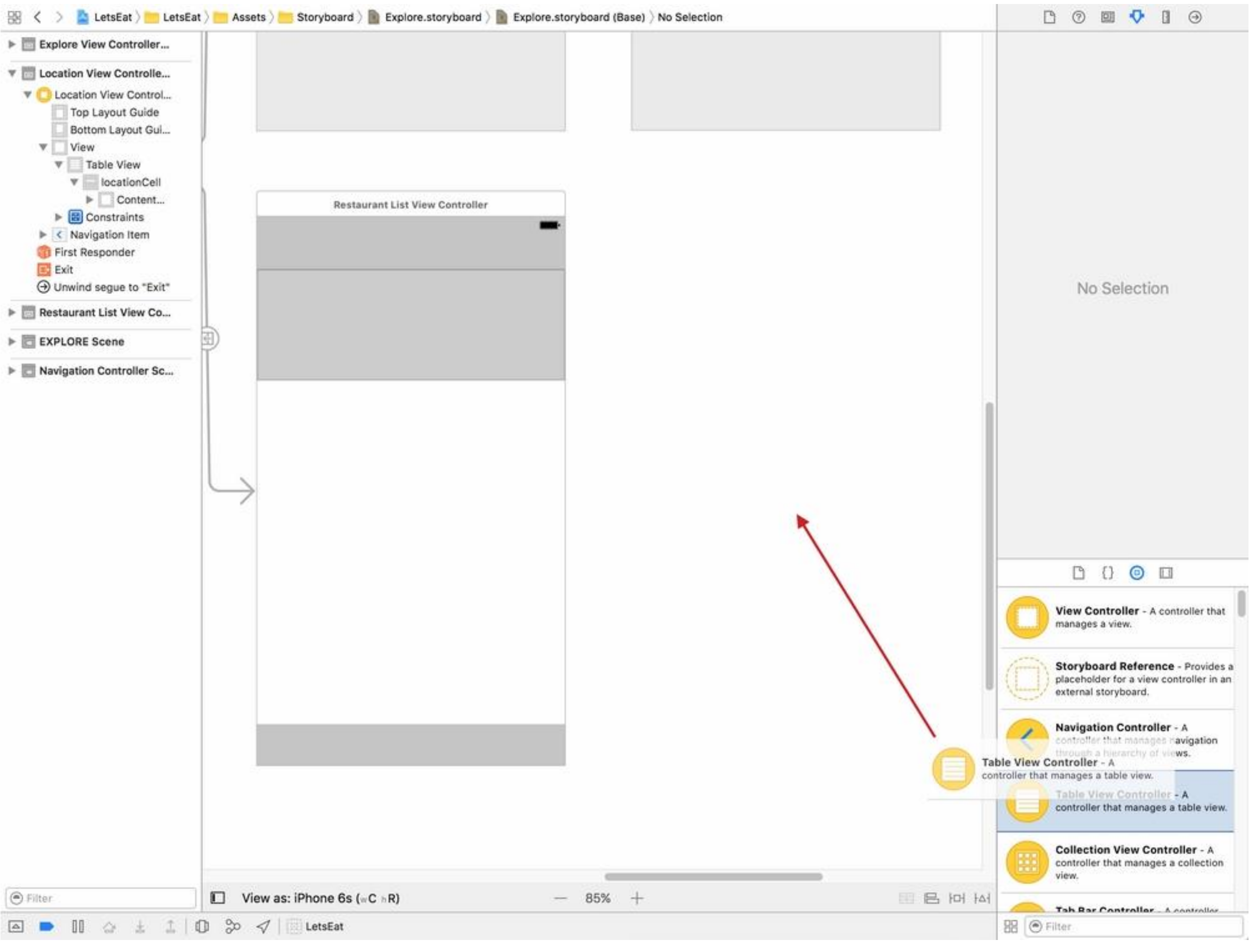


Key	Type	Value
▼ Root	Array	(2 items)
Item 0	String	Aspen
Item 1	String	



Key	Type	Value
▼ Root	Array	(14 items)
Item 0	String	Aspen
Item 1	String	Boston
Item 2	String	Charleston
Item 3	String	Chicago
Item 4	String	Houston
Item 5	String	Las Vegas
Item 6	String	Los Angeles
Item 7	String	Miami
Item 8	String	New Orleans
Item 9	String	New York
Item 10	String	Philadelphia
Item 11	String	Portland
Item 12	String	San Antonio
Item 13	String	San Francisco

Chapter 9: Working More with Lists



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.

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

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

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

Tab Bar Controller - A controller

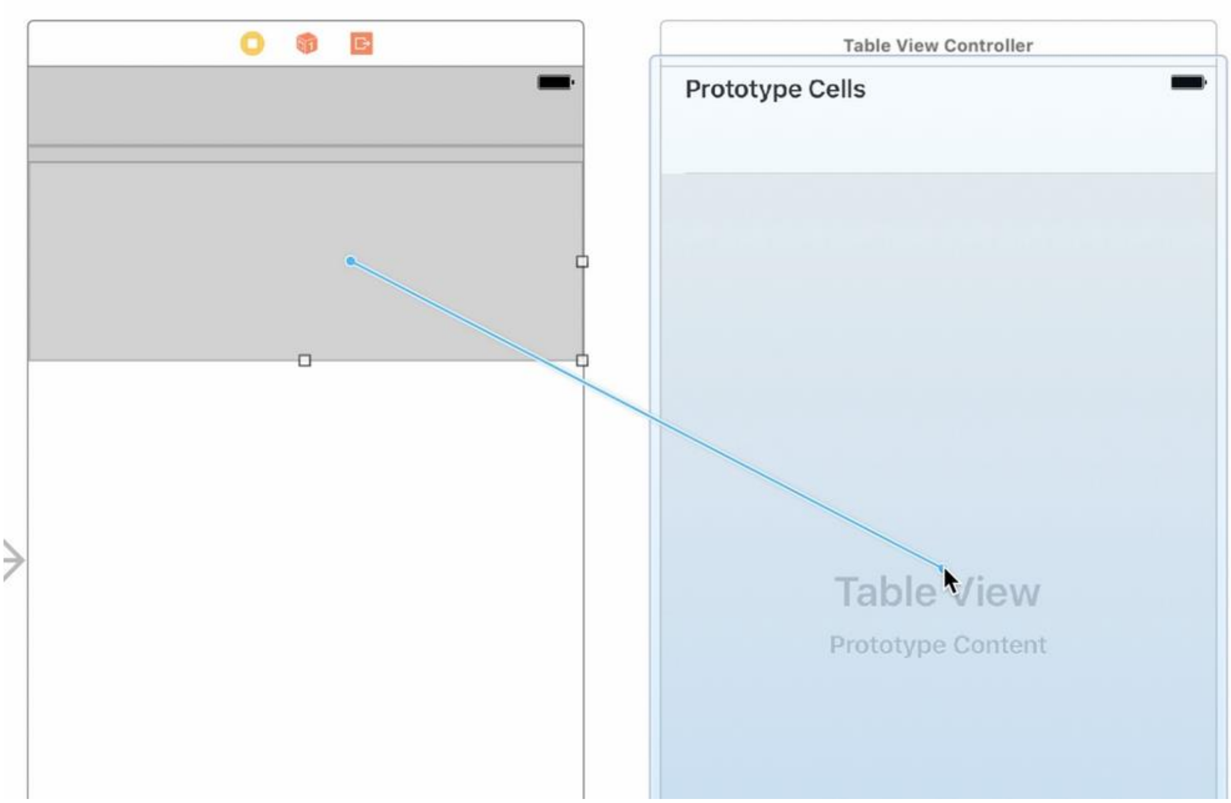
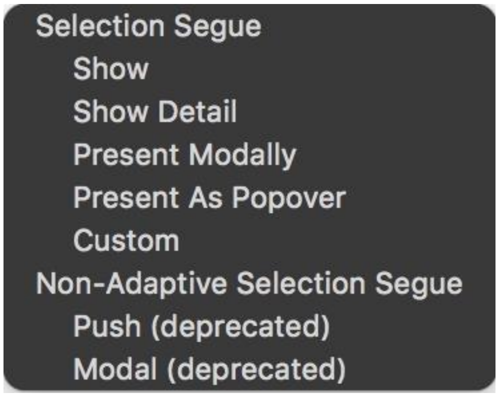
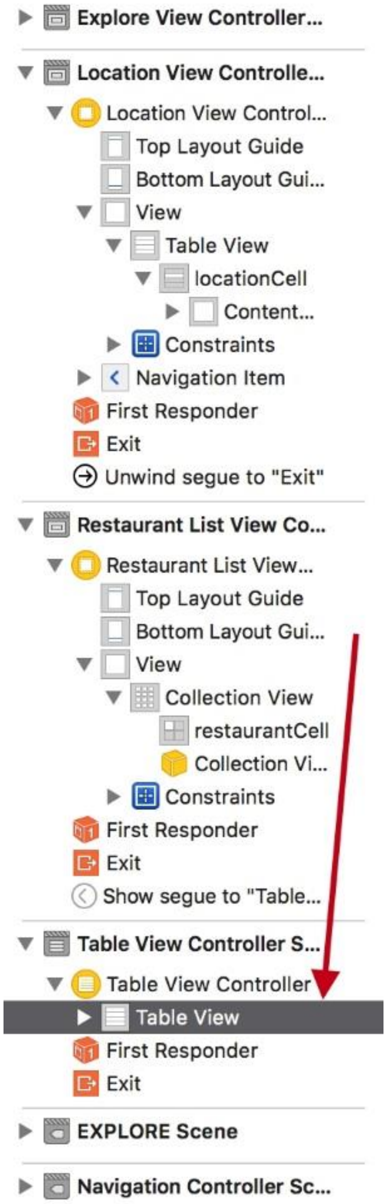


Table View Controller
Prototype Cells
Table View
Prototype Content


Selection Segue
Show
Show Detail
Present Modally
Present As Popover
Custom
Non-Adaptive Selection Segue
Push (deprecated)
Modal (deprecated)


Explore View Controller...
Location View Controlle...
Location View Control...
Top Layout Guide
Bottom Layout Gui...
View
Table View
locationCell
Content...
Constraints
Navigation Item
First Responder
Exit
Unwind segue to "Exit"
Restaurant List View Co...
Restaurant List View...
Top Layout Guide
Bottom Layout Gui...
View
Collection View
restaurantCell
Collection Vi...
Constraints
First Responder
Exit
Show segue to "Table...
Table View Controller S...
Table View Controller
Table View
First Responder
Exit
EXPLORE Scene
Navigation Controller Sc...

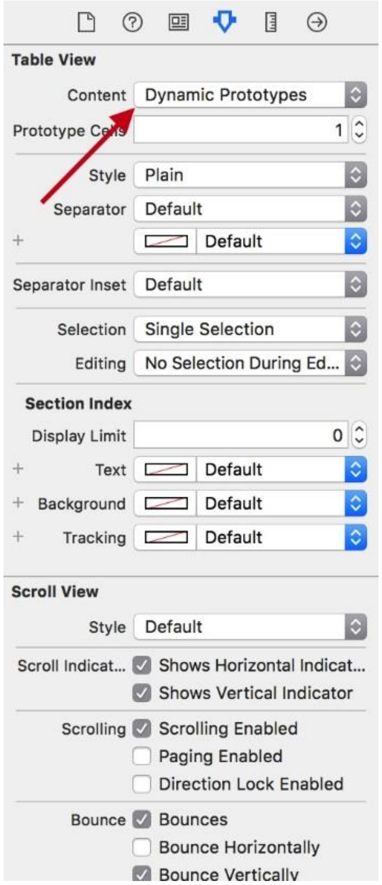


Table View

Content: Dynamic Prototypes

Prototype Cells: 1

Style: Plain

Separator: Default

Default

Separator Inset: Default

Selection: Single Selection

Editing: No Selection During Ed...

Section Index

Display Limit: 0

Text: Default

Background: Default

Tracking: Default

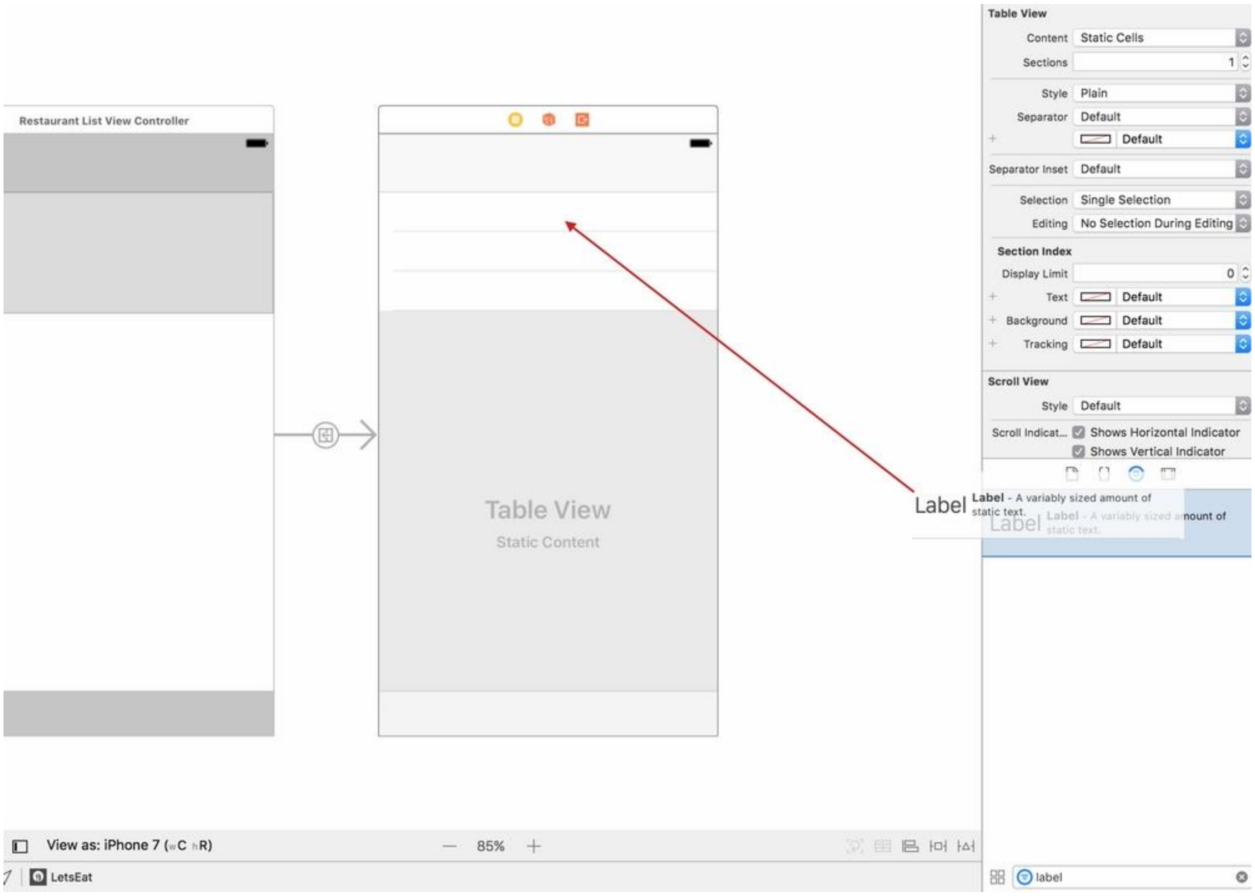
Scroll View

Style: Default

Scroll Indicat... ☑ Shows Horizontal Indicat...
☑ Shows Vertical Indicator

Scrolling ☑ Scrolling Enabled
□ Paging Enabled
□ Direction Lock Enabled

Bounce ☑ Bounces
□ Bounce Horizontally
☑ Bounce Vertically



Restaurant List View Controller
Table View
Static Content
Label
Label - A variably sized amount of static text.
View as: iPhone 7 (wC hR)
85%
LetsEat
label

Table View

Content: Static Cells

Sections: 1

Style: Plain

Separator: Default

Default

Separator Inset: Default

Selection: Single Selection

Editing: No Selection During Editing

Section Index

Display Limit: 0

Text: Default

Background: Default

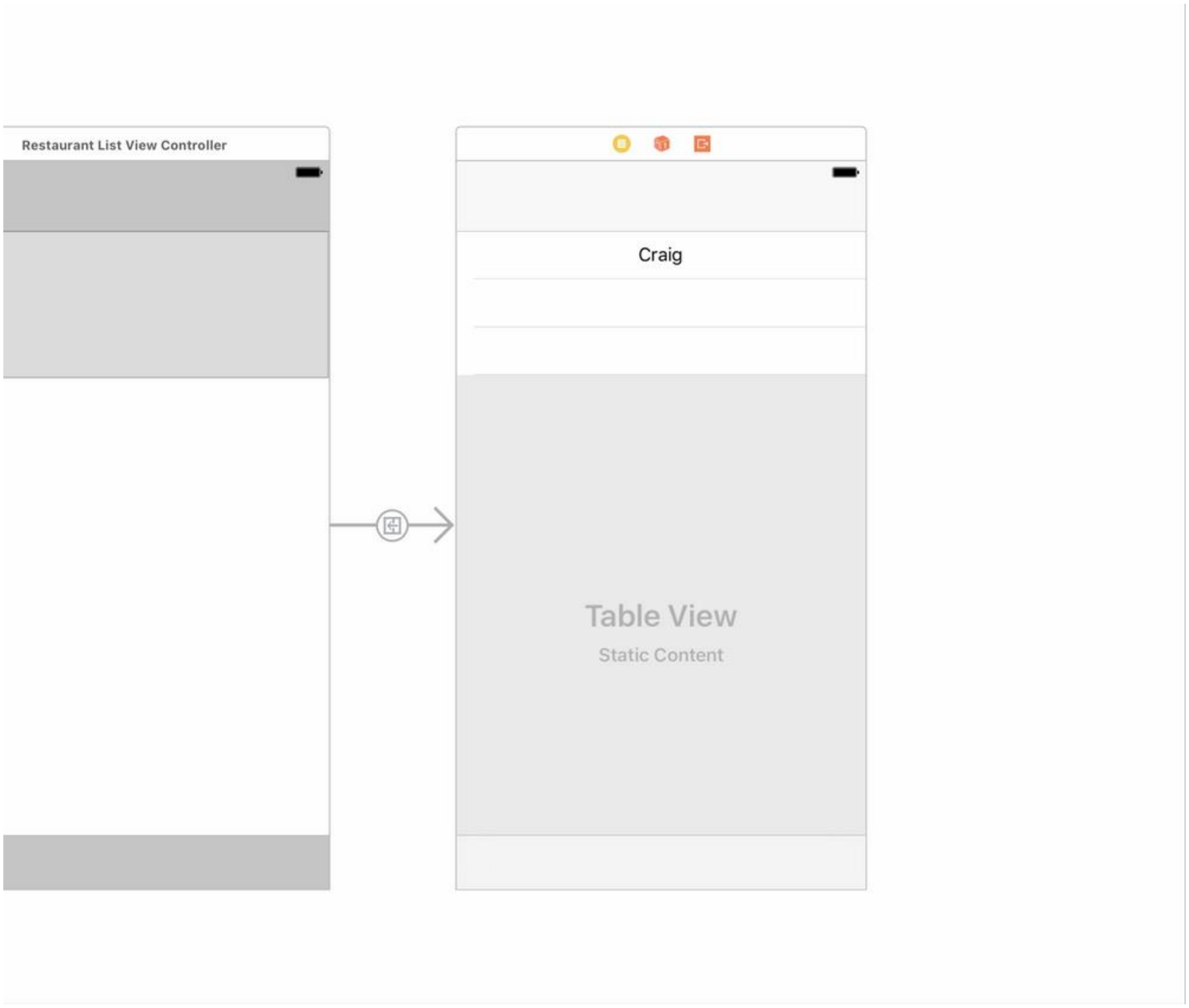
Tracking: Default

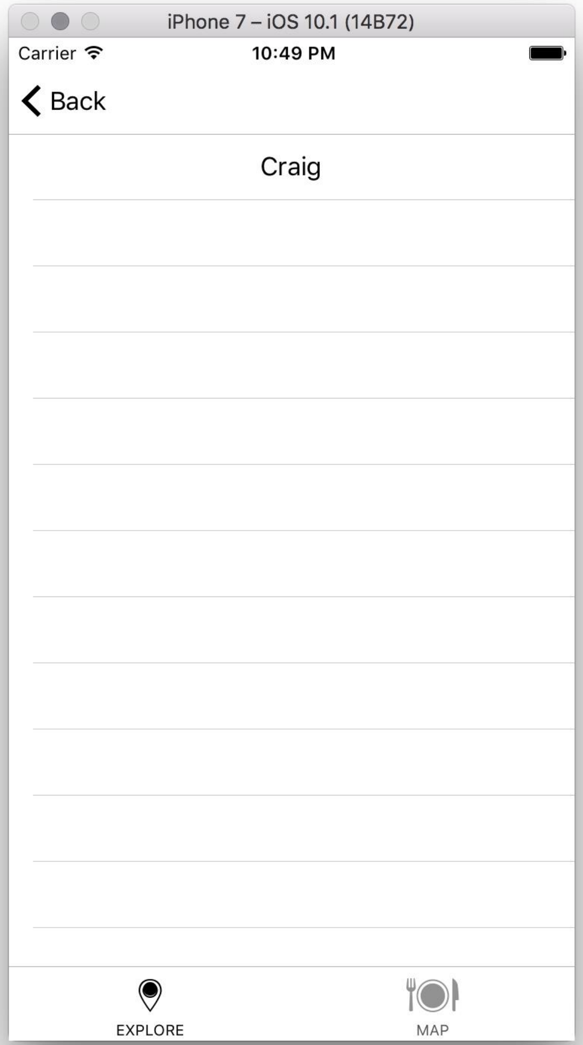
Scroll View

Style: Default

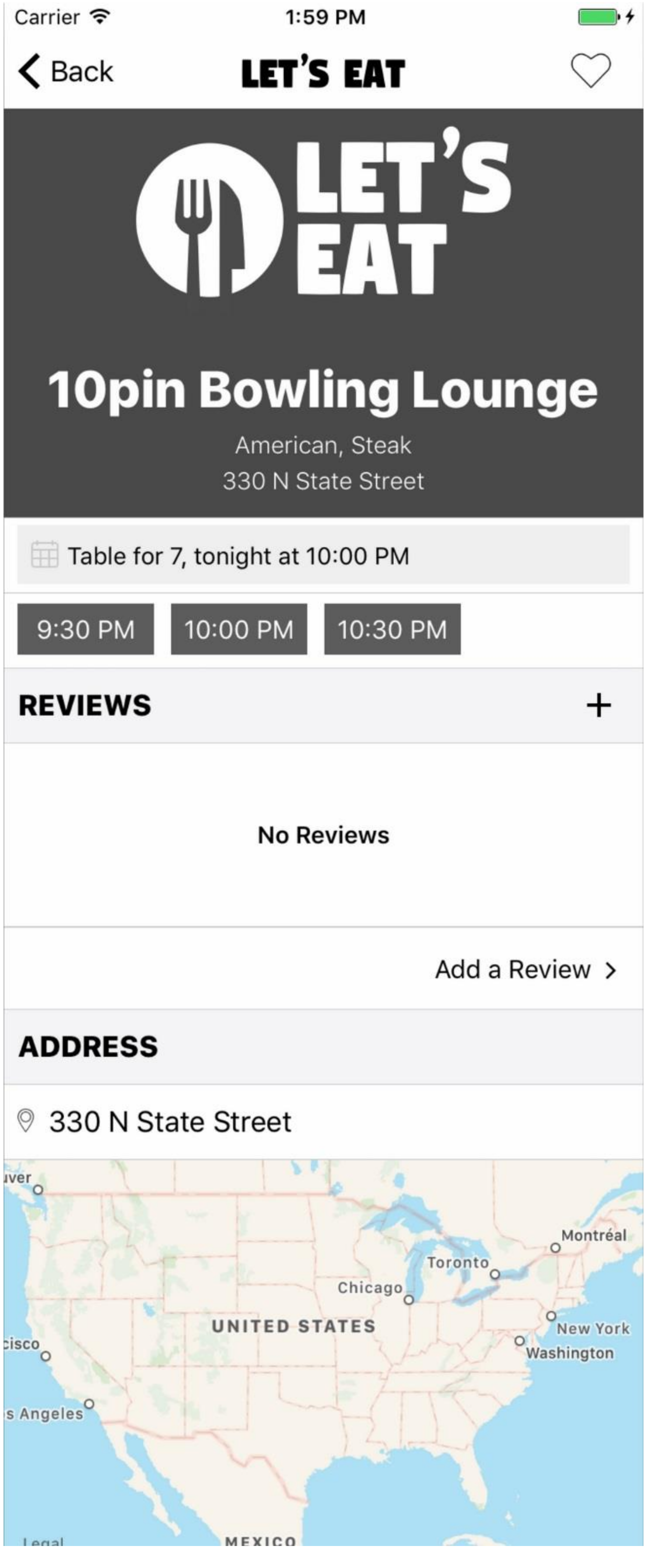
Scroll Indicat... ☑ Shows Horizontal Indicator

☑ Shows Vertical Indicator


Restaurant List View Controller
Craig
Table View
Static Content



Craig



Carrier 1:59 PM

Back LET'S EAT

LET'S EAT

10pin Bowling Lounge

American, Steak

330 N State Street

Table for 7, tonight at 10:00 PM

9:30 PM 10:00 PM 10:30 PM

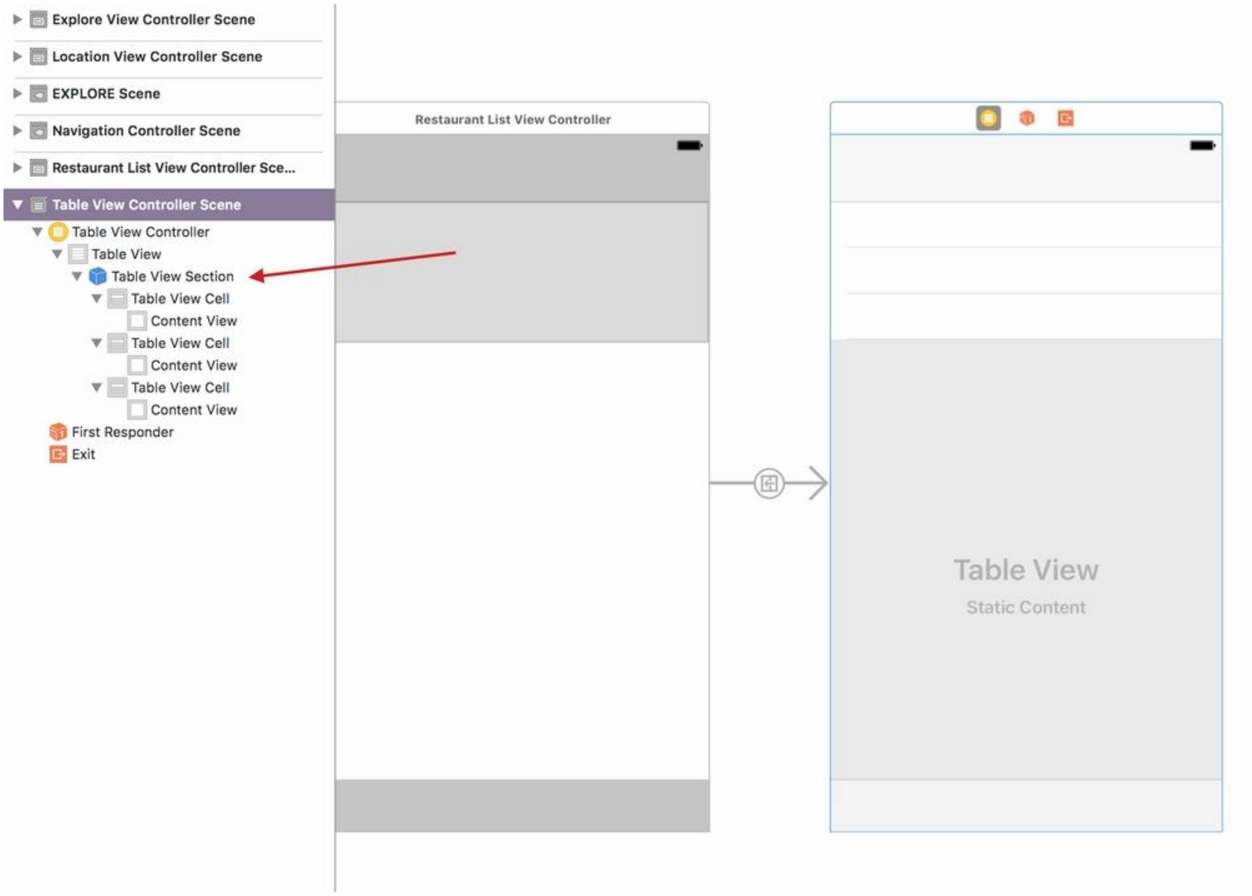
REVIEWS +

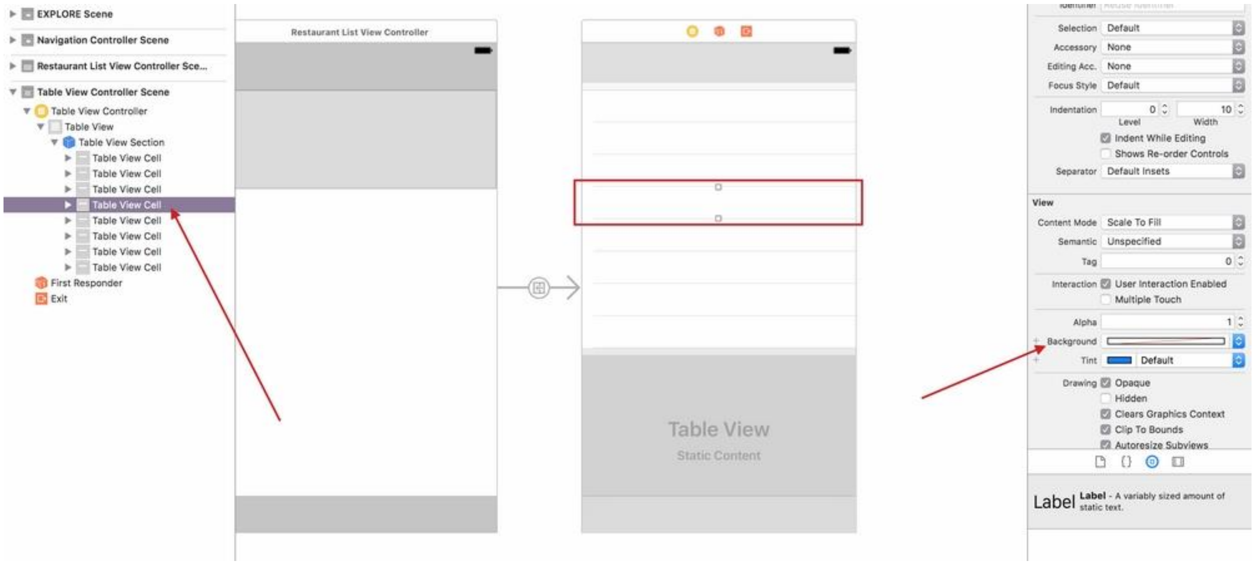
No Reviews

Add a Review >

ADDRESS

330 N State Street

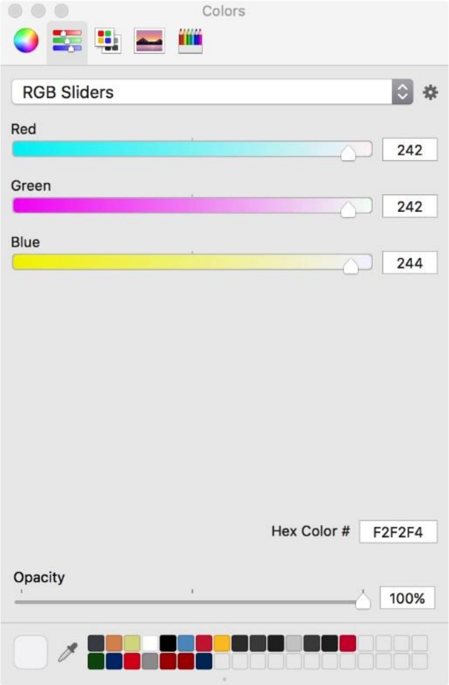




Selection Default
Accessory None
Editing Acc. None
Focus Style Default
Indentation 0 Level 10 Width
☑ Indent While Editing
☐ Shows Re-order Controls
Separator Default Insets

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

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



RGB Sliders

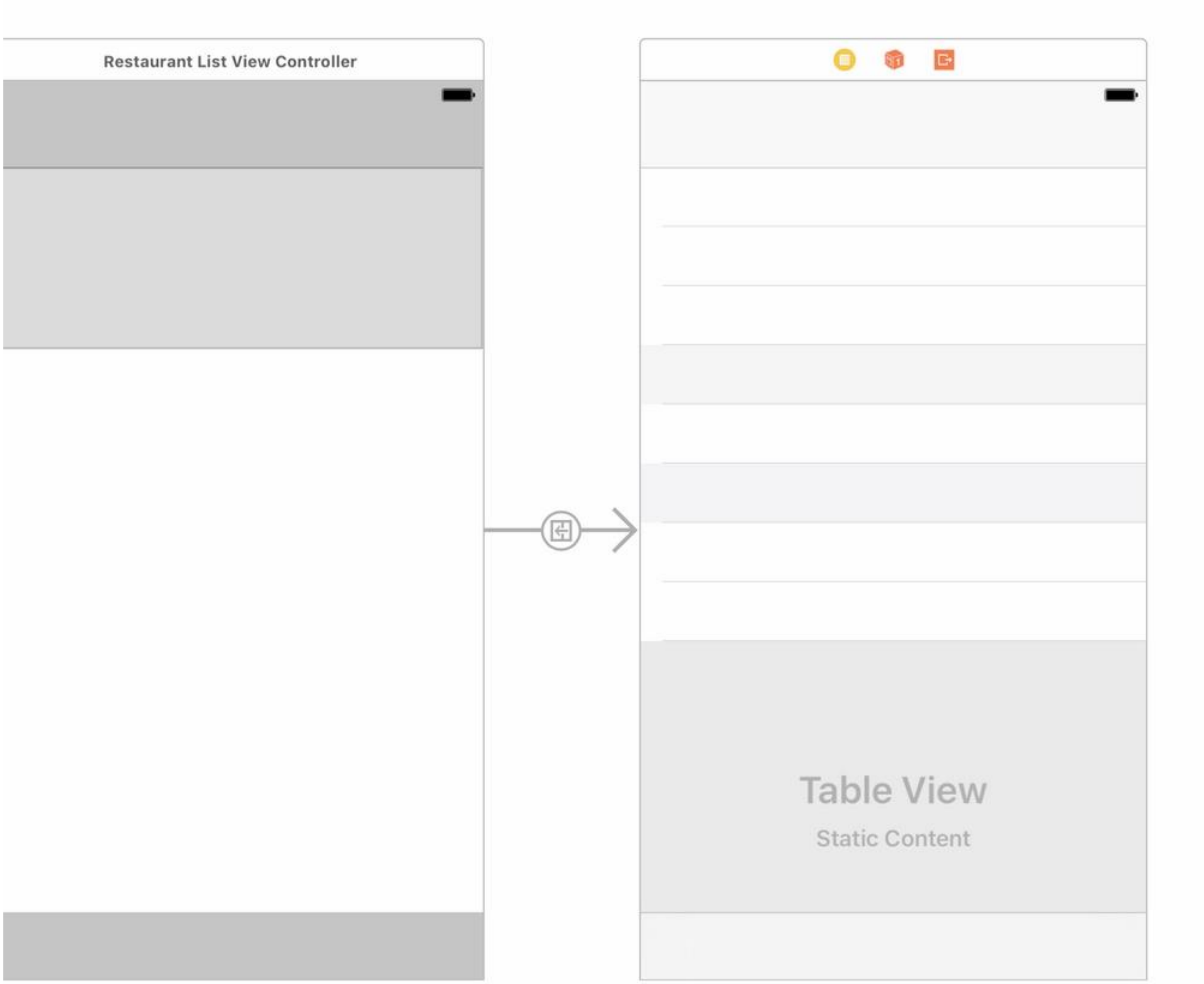
Red 242

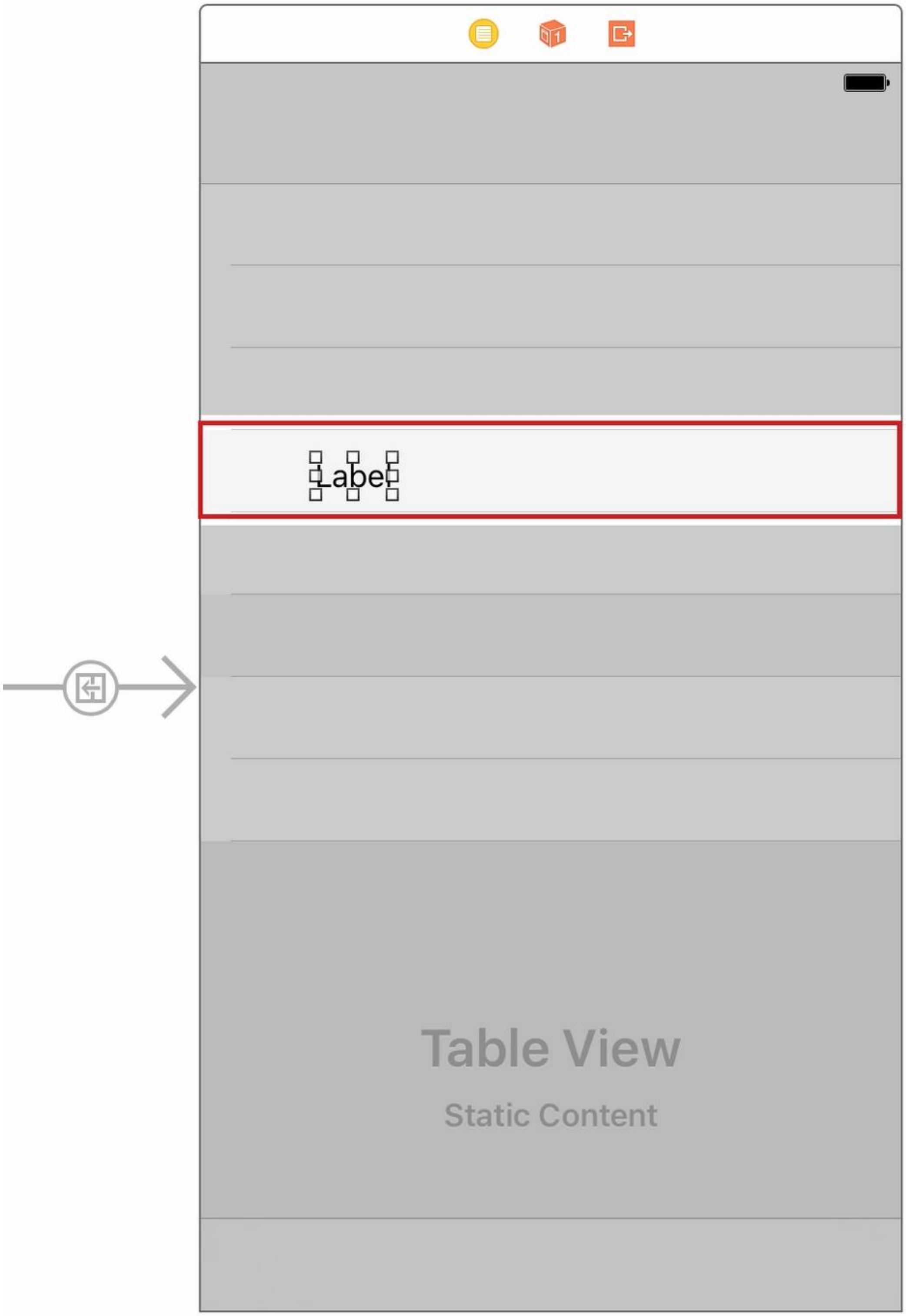
Green 242

Blue 244

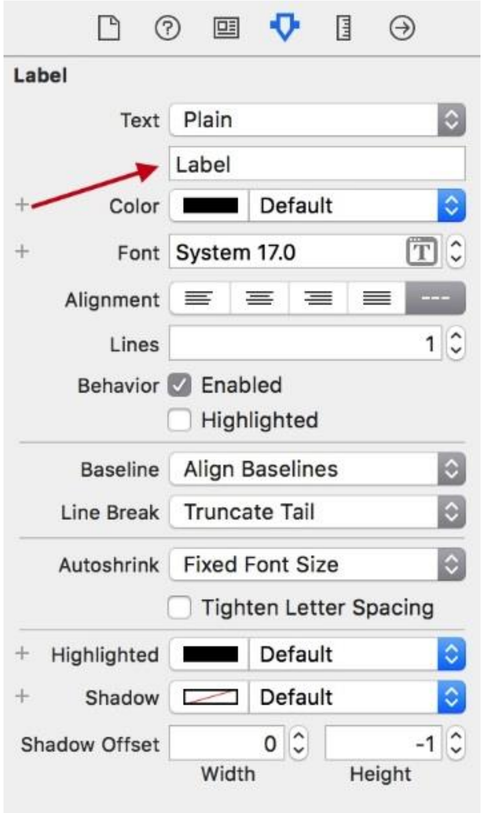
Hex Color # F2F2F4

Opacity 100%


Restaurant List View Controller
Table View
Static Content



Label
Table View
Static Content



Label

Text: Plain

Label

Color: Default

Font: System 17.0

Alignment

Lines: 1

Behavior: ☑ Enabled

□ Highlighted

Baseline: Align Baselines

Line Break: Truncate Tail

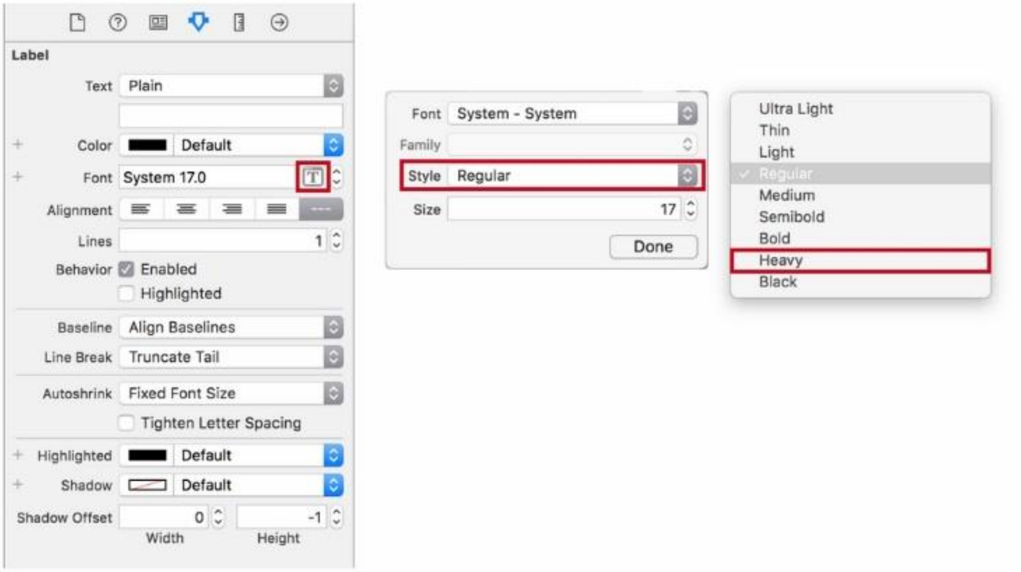
Autoshrink: Fixed Font Size

□ Tighten Letter Spacing

Highlighted: Default

Shadow: Default

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



Label

Text: Plain

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

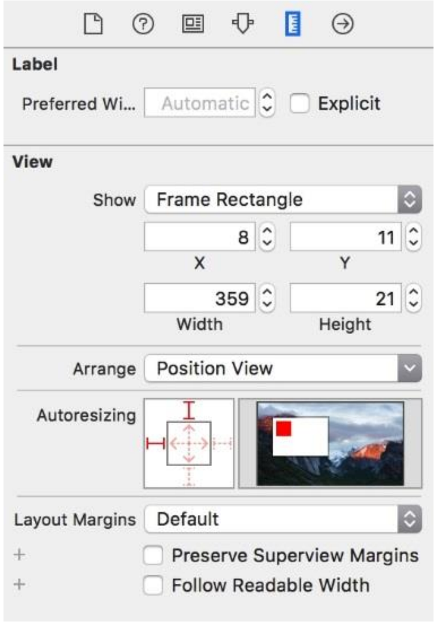
Shadow Offset: 0 (Width) -1 (Height)

Font: System - System

Family

Style: Regular

Size: 17



Label

Preferred Wi... Automatic ☐ Explicit

View

Show: Frame Rectangle

X: 8

Y: 11

Width: 359

Height: 21

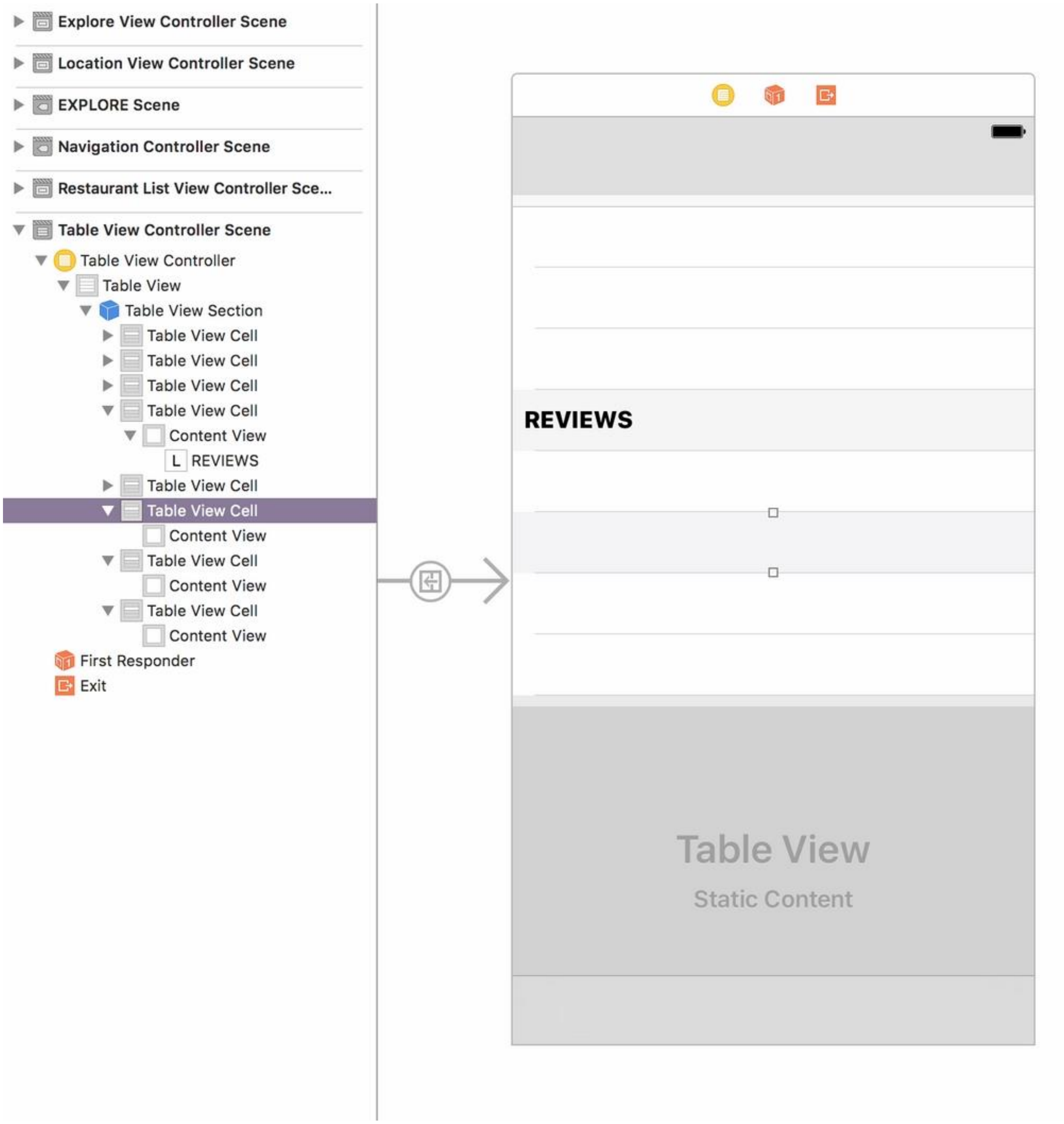
Arrange: Position View

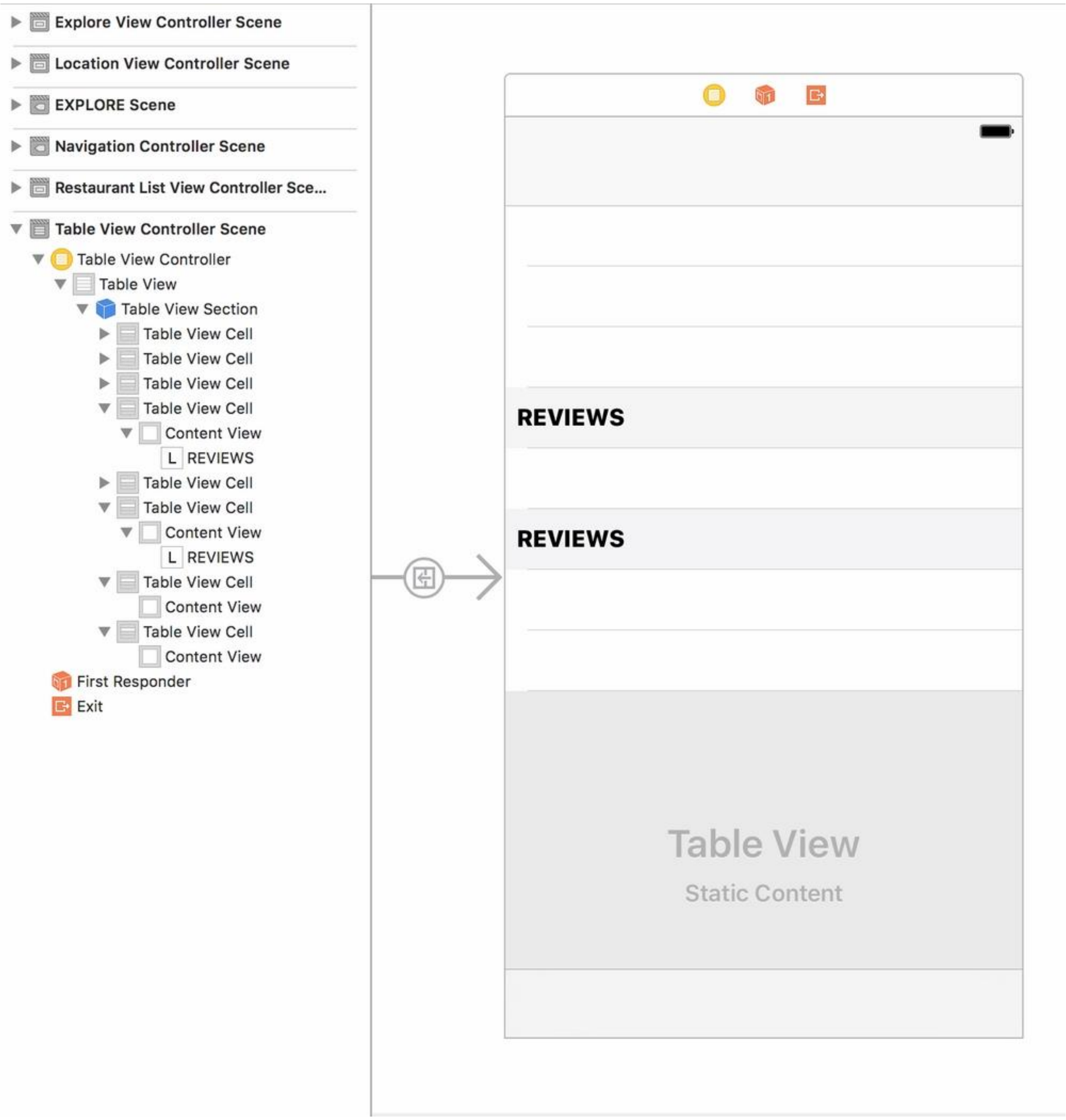
Autoresizing

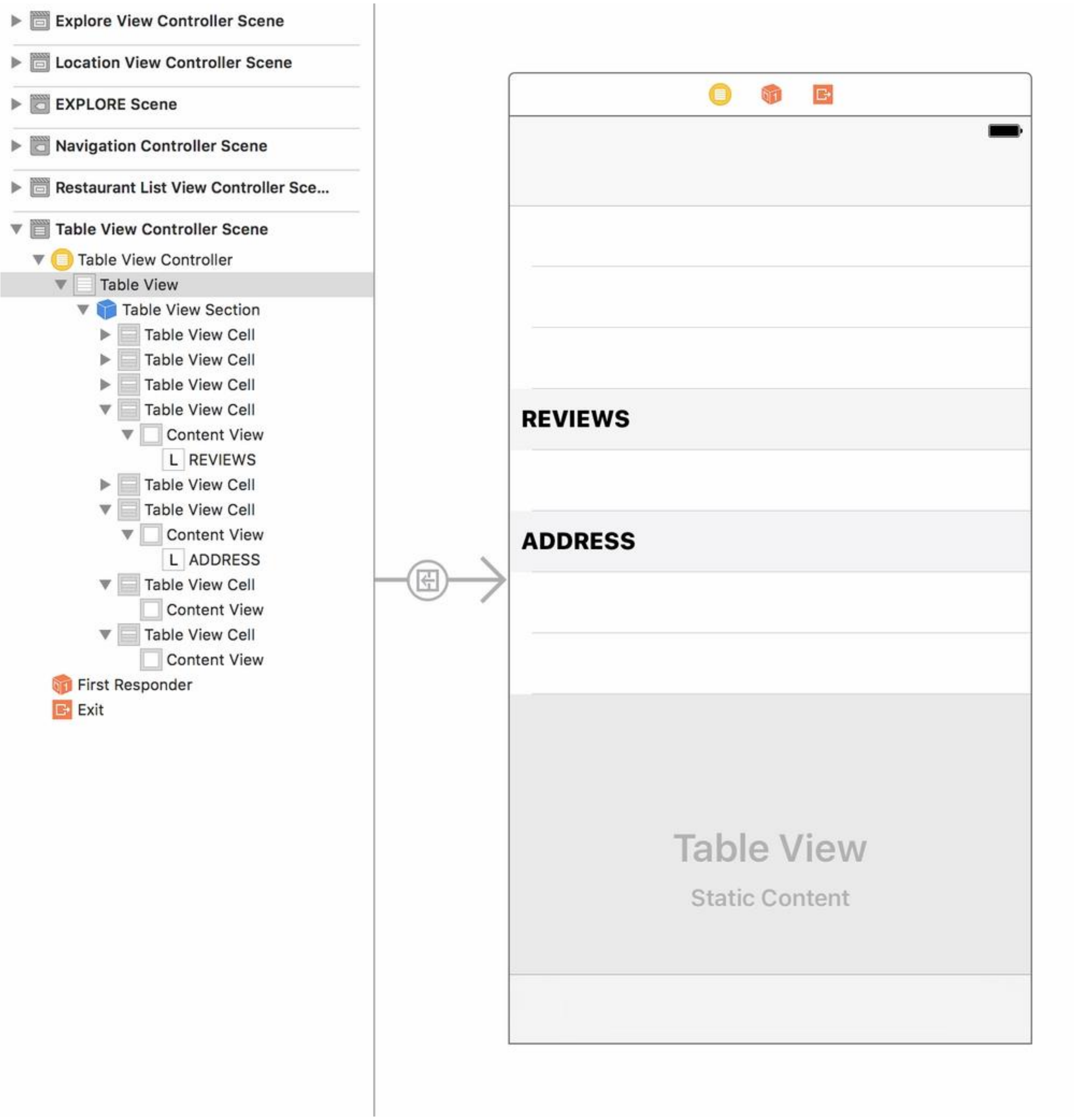
Layout Margins: Default

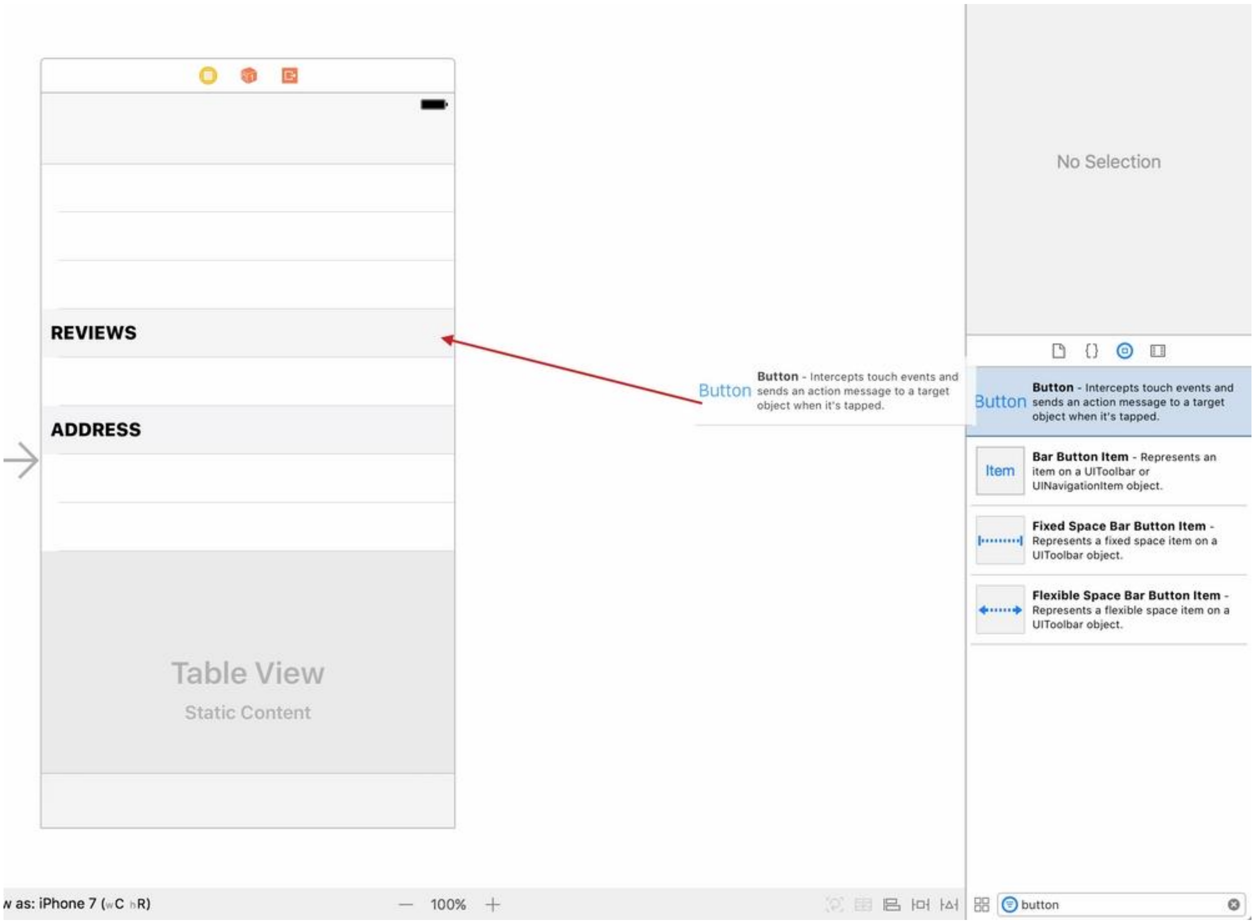
☐ Preserve Superview Margins

☐ Follow Readable Width


Explore View Controller Scene
Location View Controller Scene
EXPLORE Scene
Navigation Controller Scene
Restaurant List View Controller Sce...
Table View Controller Scene
Table View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
L REVIEWS
Table View Cell
Table View Cell
Content View
Table View Cell
Content View
Table View Cell
Content View
First Responder
Exit
REVIEWS
Table View
Static Content


Explore View Controller Scene
Location View Controller Scene
EXPLORE Scene
Navigation Controller Scene
Restaurant List View Controller Sce...
Table View Controller Scene
Table View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
REVIEWS
Table View Cell
Table View Cell
Content View
REVIEWS
Table View Cell
Content View
Table View Cell
Content View
First Responder
Exit
REVIEWS
REVIEWS
Table View
Static Content


Explore View Controller Scene
Location View Controller Scene
EXPLORE Scene
Navigation Controller Scene
Restaurant List View Controller Sce...
Table View Controller Scene
Table View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
L REVIEWS
Table View Cell
Table View Cell
Content View
L ADDRESS
Table View Cell
Content View
Table View Cell
Content View
First Responder
Exit
REVIEWS
ADDRESS
Table View
Static Content



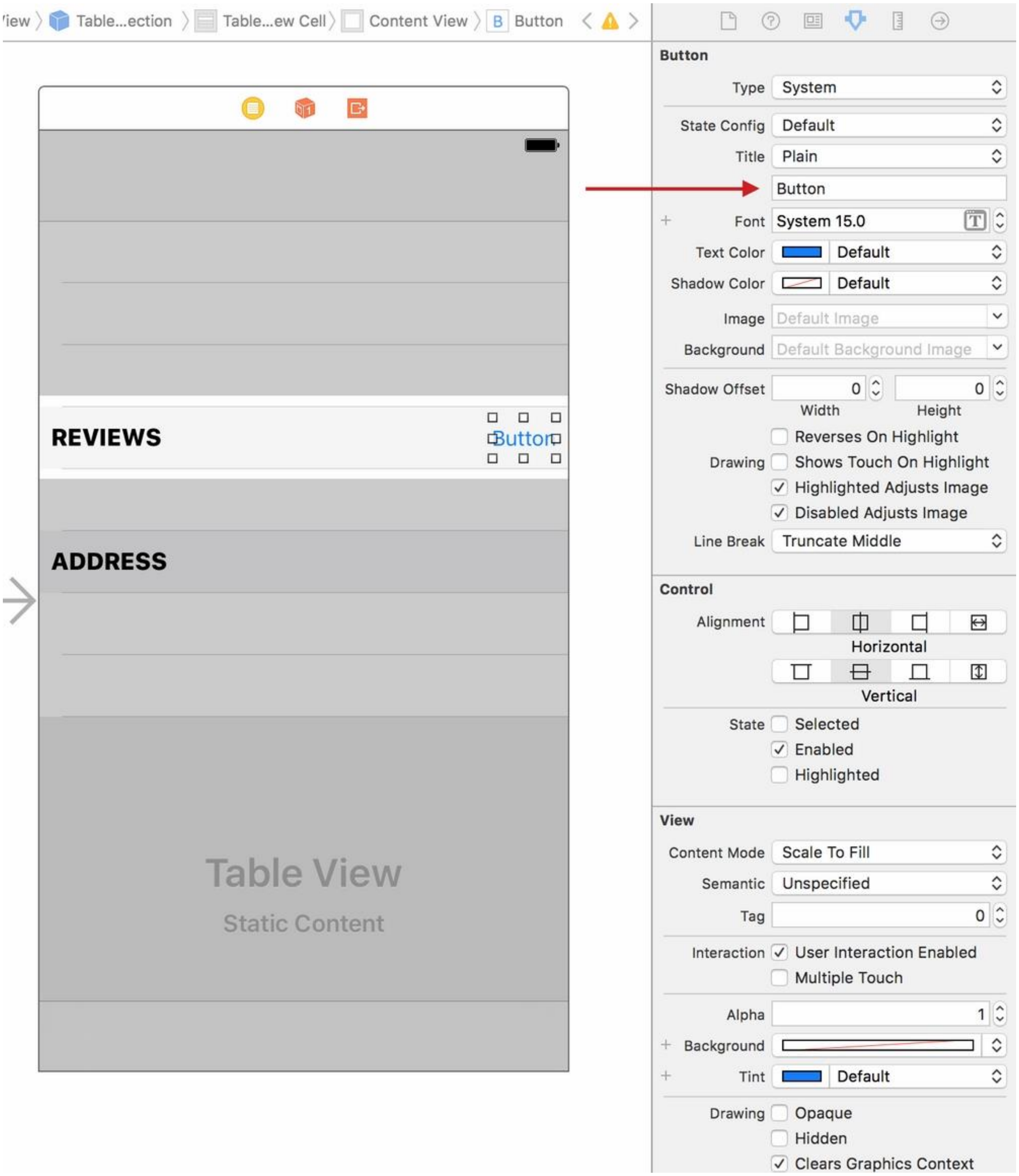
Button - Intercepts touch events and sends an action message to a target object when it's tapped.

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

Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.

Fixed Space Bar Button Item - Represents a fixed space item on a UIToolbar object.

Flexible Space Bar Button Item - Represents a flexible space item on a UIToolbar object.



'iew 〉 Table...ection 〉 Table...ew Cell 〉 Content View 〉 B Button
REVIEWS
Button
ADDRESS
Table View
Static Content

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

Alignment: Horizontal, Vertical

State:
☐ Selected
☑ Enabled
☐ Highlighted

View

Content Mode: Scale To Fill

Semantic: Unspecified

Tag: 0

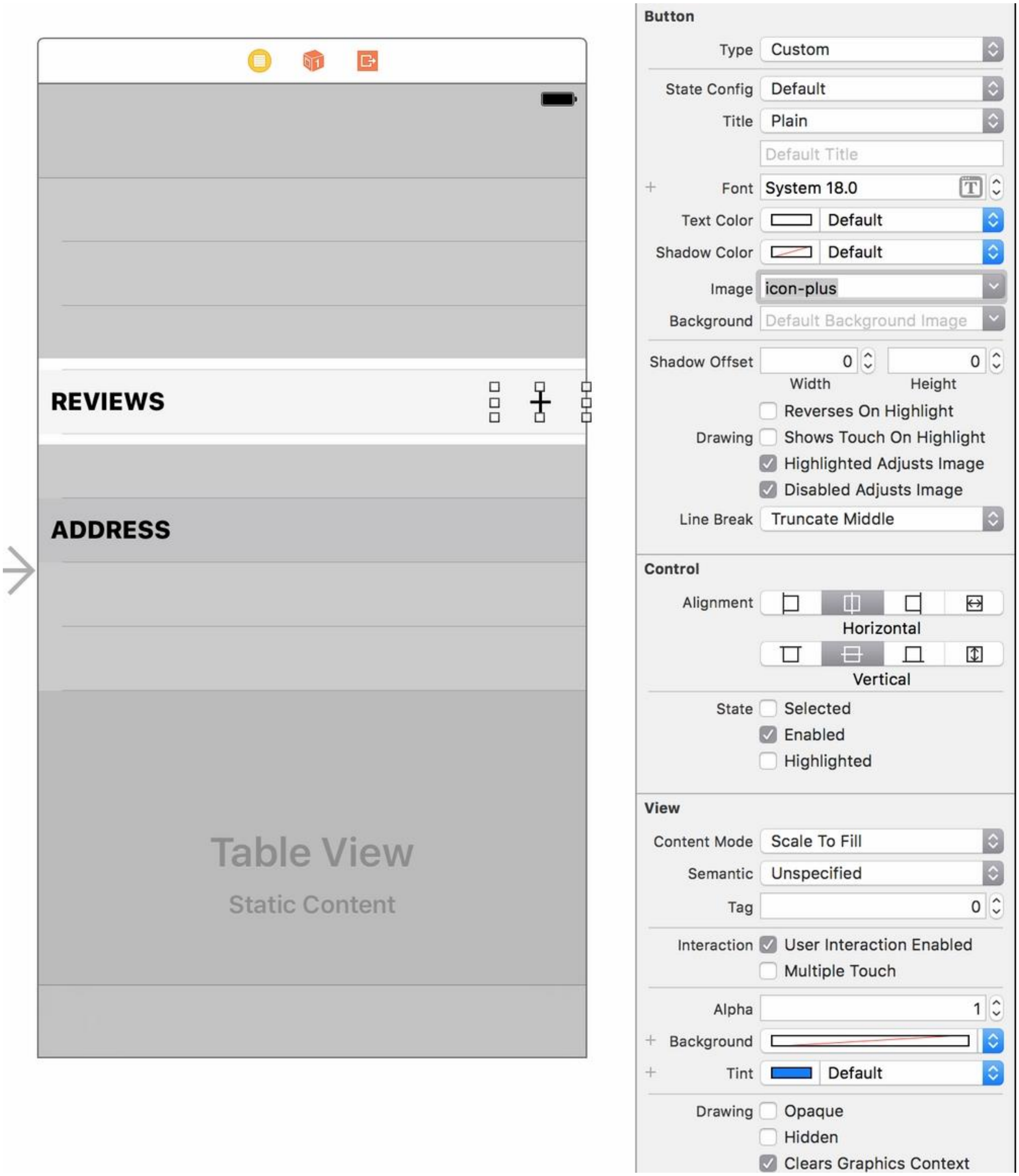
Interaction:
☑ User Interaction Enabled
☐ Multiple Touch

Alpha: 1

Background

Tint: Default

Drawing:
☐ Opaque
☐ Hidden
☑ Clears Graphics Context



Button

Type: Custom

State Config: Default

Title: Plain

Default Title

Font: System 18.0

Text Color: Default

Shadow Color: Default

Image: icon-plus

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

Alignment: Horizontal, Vertical

State:
☐ Selected
☑ Enabled
☐ Highlighted

View

Content Mode: Scale To Fill

Semantic: Unspecified

Tag: 0

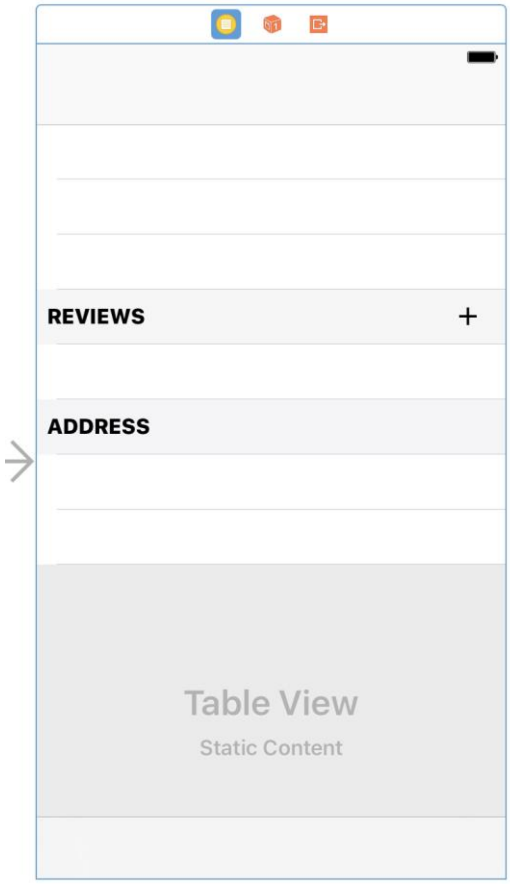
Interaction:
☑ User Interaction Enabled
☐ Multiple Touch

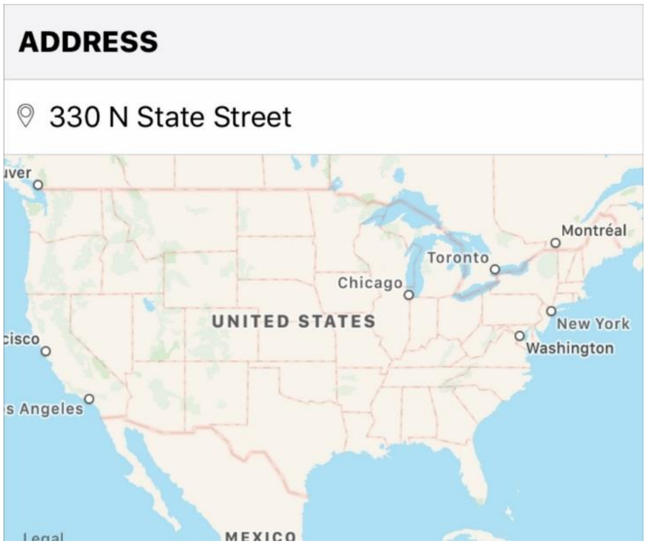
Alpha: 1

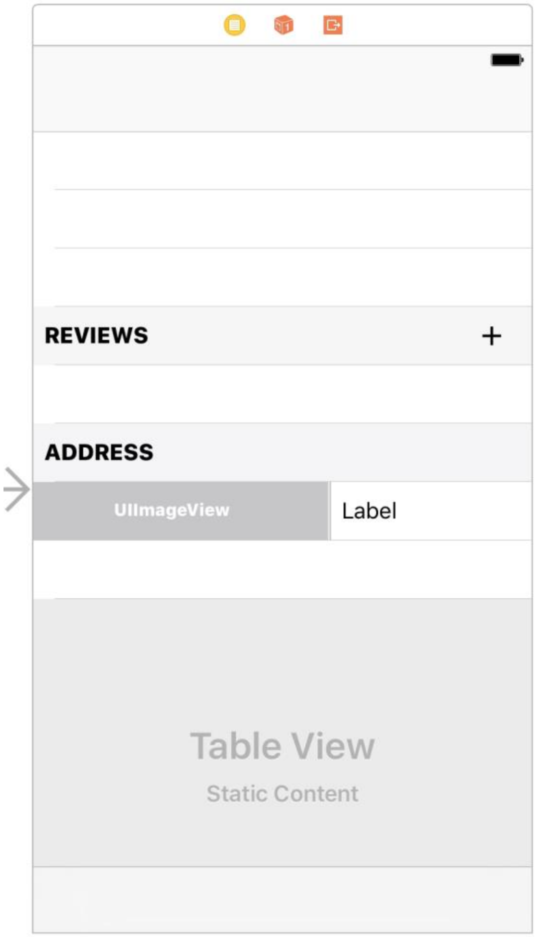
Background

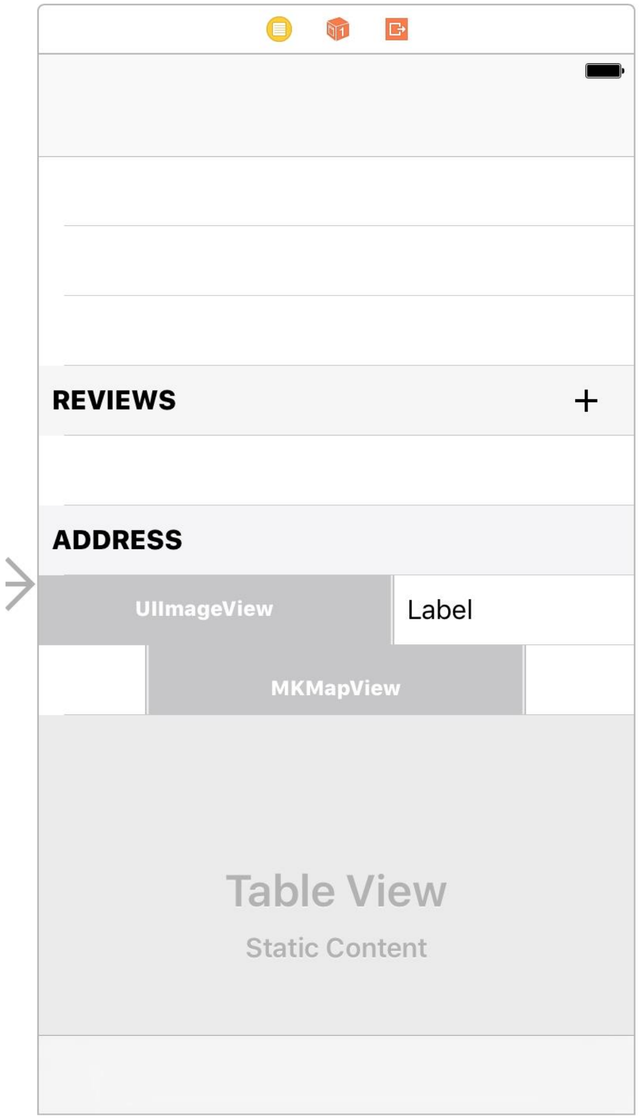
Tint: Default

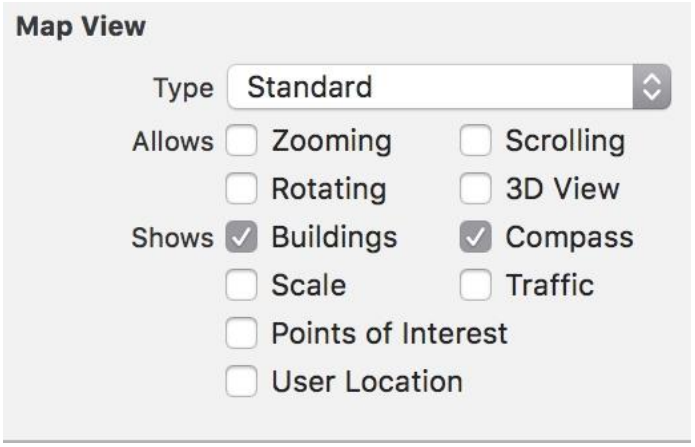
Drawing:
☐ Opaque
☐ Hidden
☑ Clears Graphics Context


REVIEWS
+
ADDRESS
Table View
Static Content


ADDRESS
330 N State Street
uver
Montréal
Toronto
Chicago
UNITED STATES
New York
Washington
cisco
s Angeles
Legal
MEXICO


REVIEWS
+
ADDRESS
UIImageView
Label
Table View
Static Content





Map View

Type: Standard

Allows: □ Zooming □ Scrolling

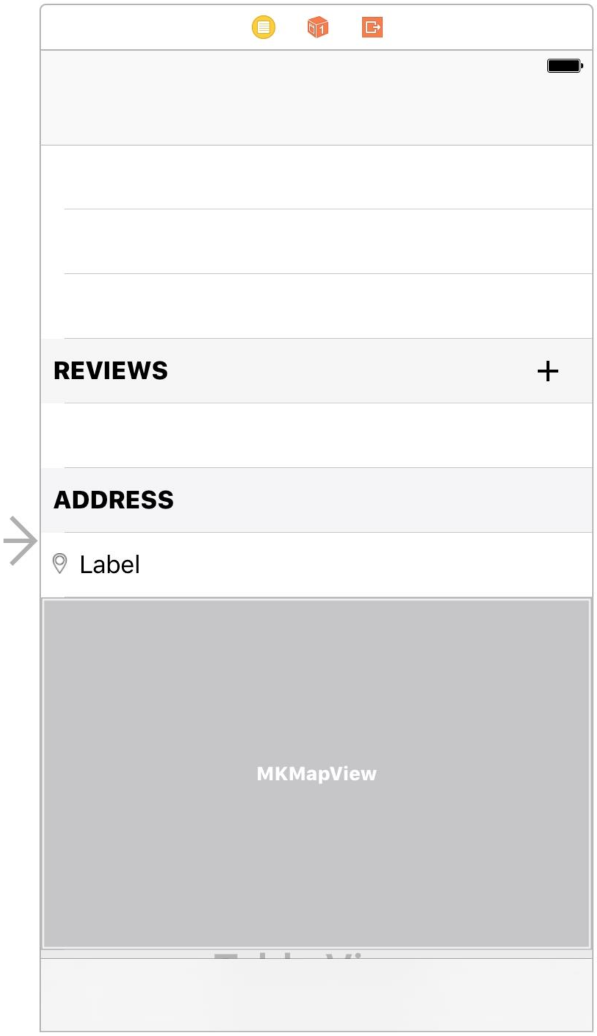
□ Rotating □ 3D View

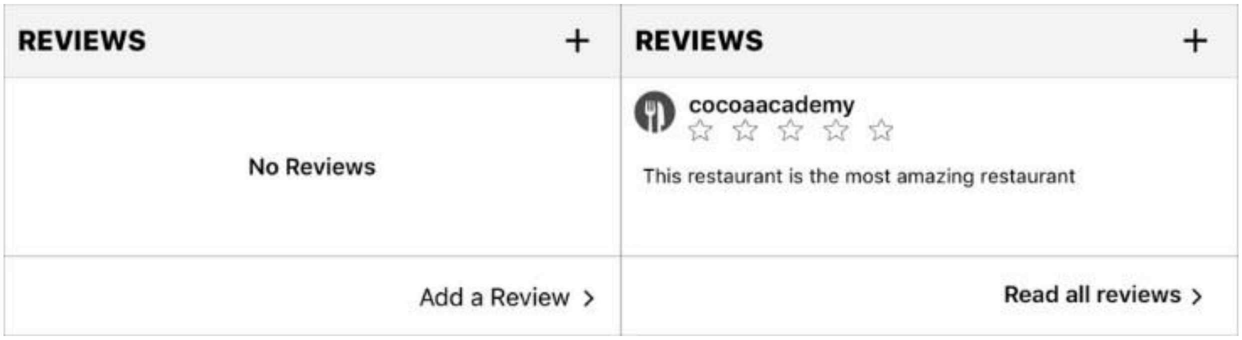
Shows: ☑ Buildings ☑ Compass

□ Scale □ Traffic

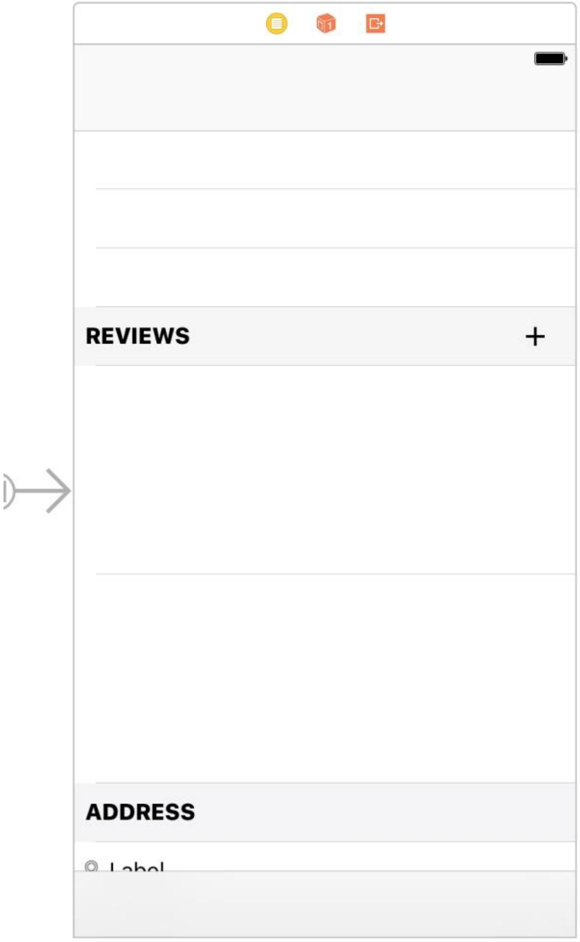
□ Points of Interest

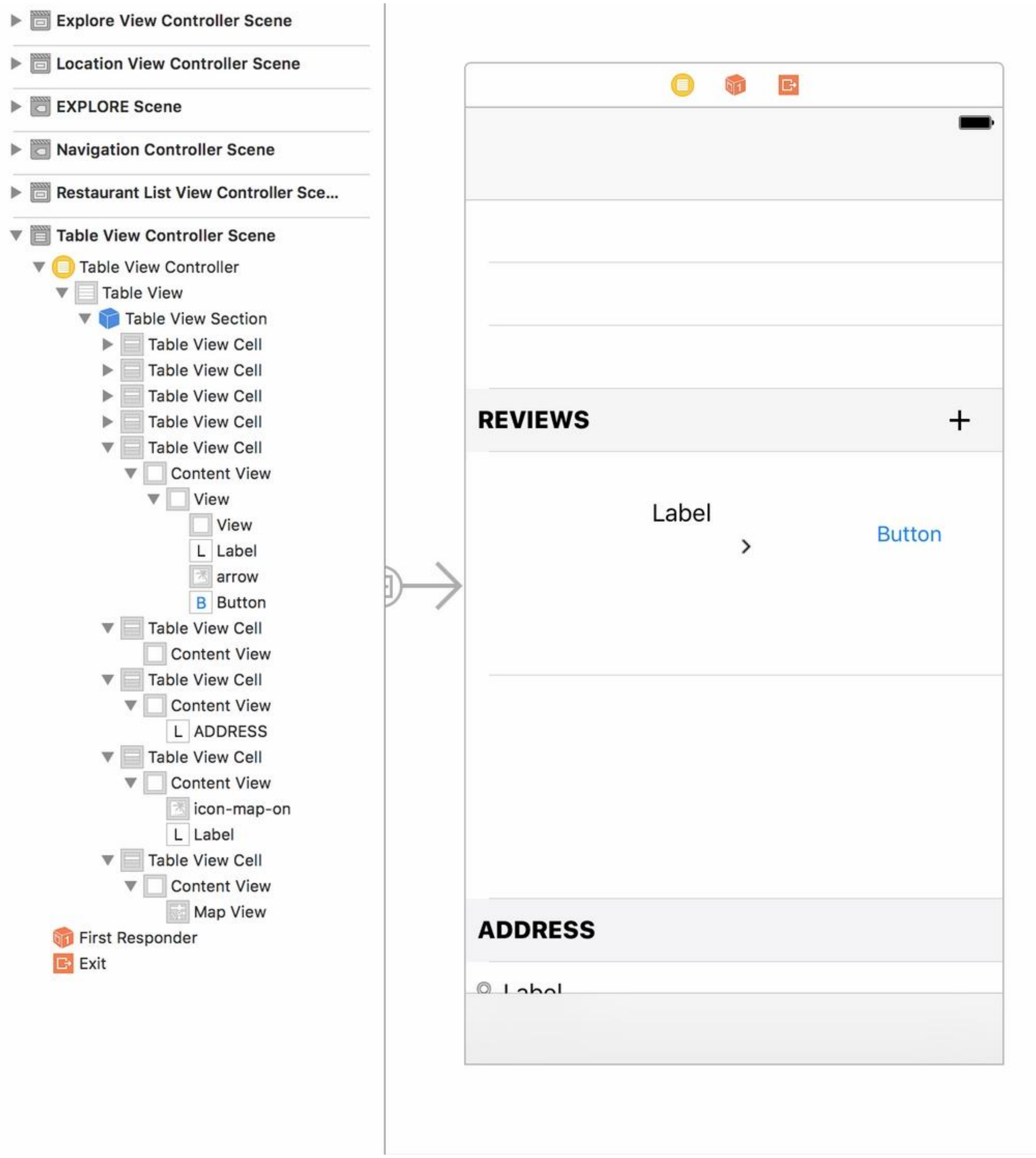
□ User Location

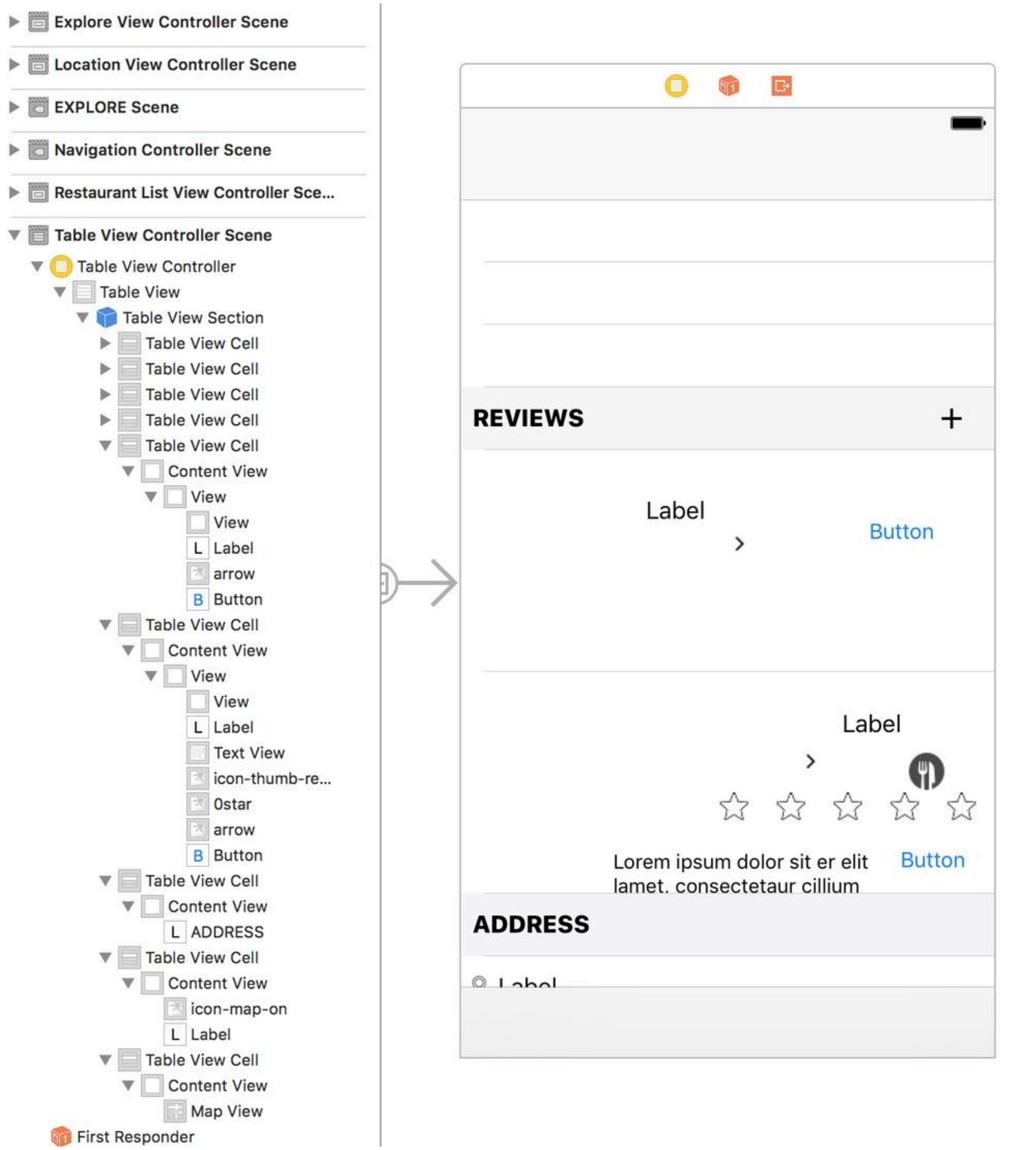


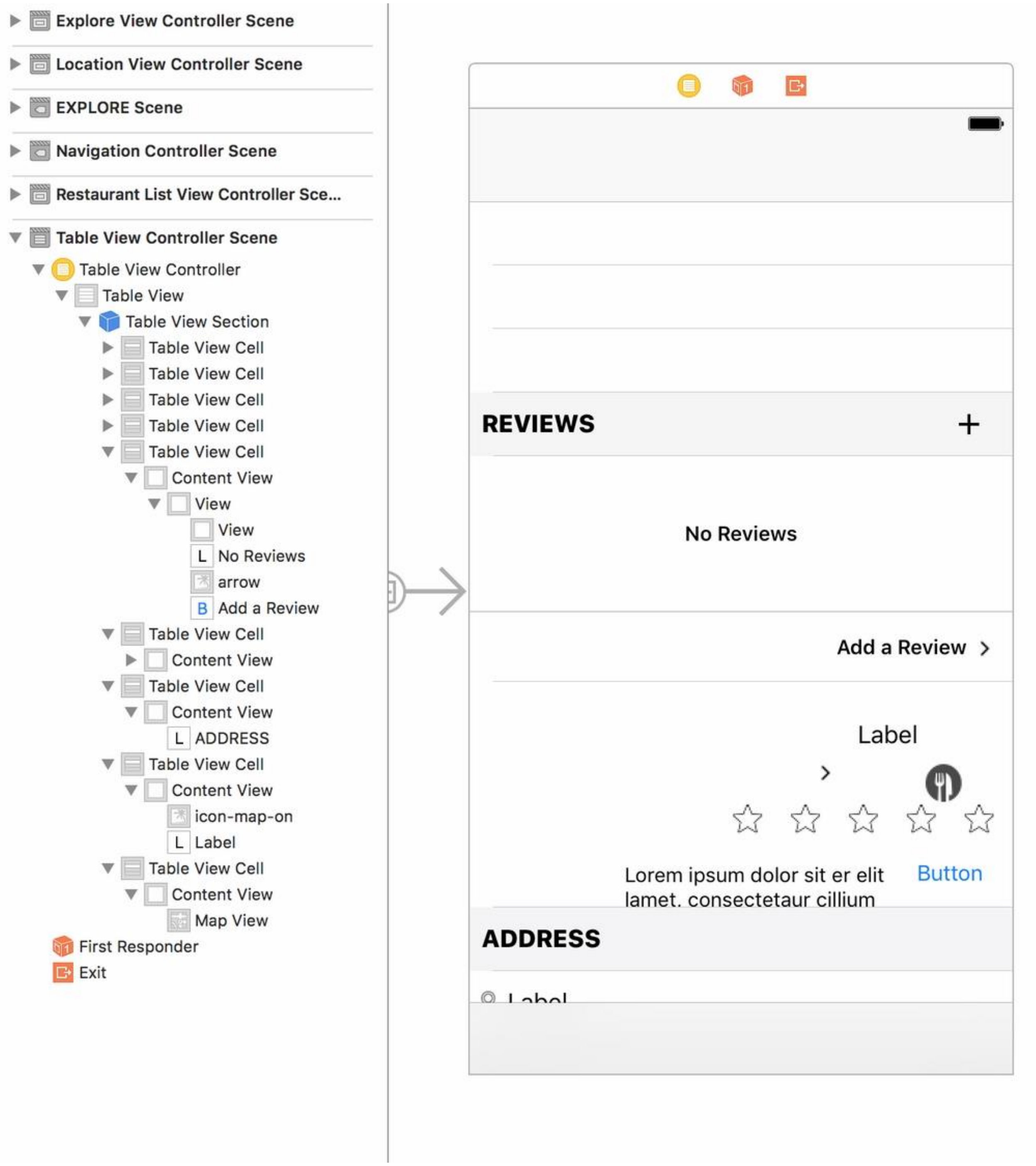


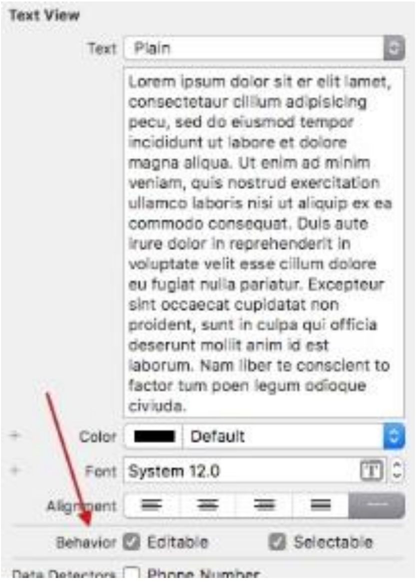
This restaurant is the most amazing restaurant


REVIEWS
+
ADDRESS
Label


Explore View Controller Scene
Location View Controller Scene
EXPLORE Scene
Navigation Controller Scene
Restaurant List View Controller Sce...
Table View Controller Scene
Table View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
View
View
Label
arrow
Button
Table View Cell
Content View
Table View Cell
Content View
ADDRESS
Table View Cell
Content View
icon-map-on
Label
Table View Cell
Content View
Map View
First Responder
Exit
REVIEWS
+
Label
Button
ADDRESS
Label


Explore View Controller Scene
Location View Controller Scene
EXPLORE Scene
Navigation Controller Scene
Restaurant List View Controller Sce...
Table View Controller Scene
Table View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
View
View
Label
arrow
Button
Table View Cell
Content View
View
View
Label
Text View
icon-thumb-re...
0star
arrow
Button
Table View Cell
Content View
ADDRESS
Table View Cell
Content View
icon-map-on
Label
Table View Cell
Content View
Map View
First Responder
REVIEWS
+
Label
Button
Label
Lorem ipsum dolor sit er elit lamet. consectetaur cillium
Button
ADDRESS
Label


Explore View Controller Scene
Location View Controller Scene
EXPLORE Scene
Navigation Controller Scene
Restaurant List View Controller Sce...
Table View Controller Scene
Table View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
View
View
No Reviews
arrow
Add a Review
Table View Cell
Content View
Table View Cell
Content View
ADDRESS
Table View Cell
Content View
icon-map-on
Label
Table View Cell
Content View
Map View
First Responder
Exit
REVIEWS
+
No Reviews
Add a Review
Label
Lorem ipsum dolor sit er elit lamet, consectetaur cillium
Button
ADDRESS
Label



Text View

Text Plain

Lorem ipsum dolor sit er elit lamet, consectetaur cillium adipisicing pecu, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum. Nam liber te conscient to factor tum poen legum odioque civiuda.

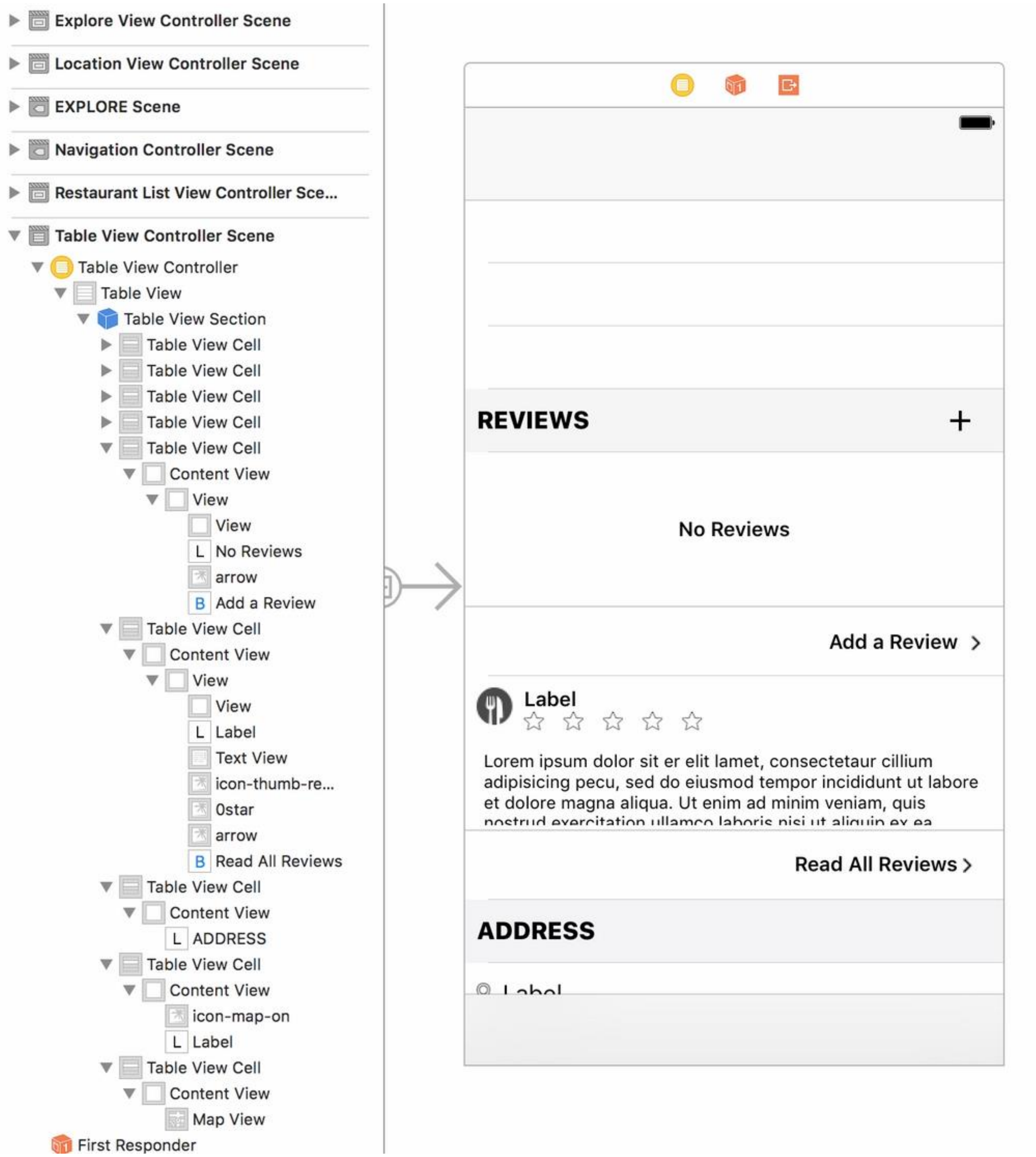
Color Default

Font System 12.0

Alignment

Behavior ☑ Editable ☑ Selectable

Data Detectors ☐ Phone Number



Lorem ipsum dolor sit er elit lamet, consectetaur cillium adipisicing pecu, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea

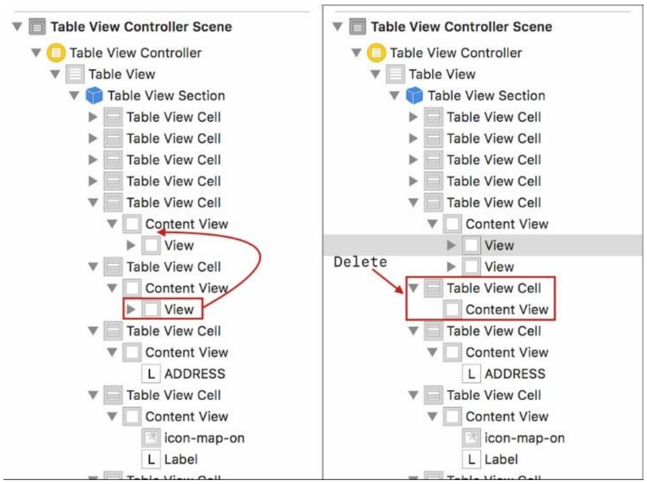


Table View Controller Scene
Table View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
View
Table View Cell
Content View
View
Table View Cell
Content View
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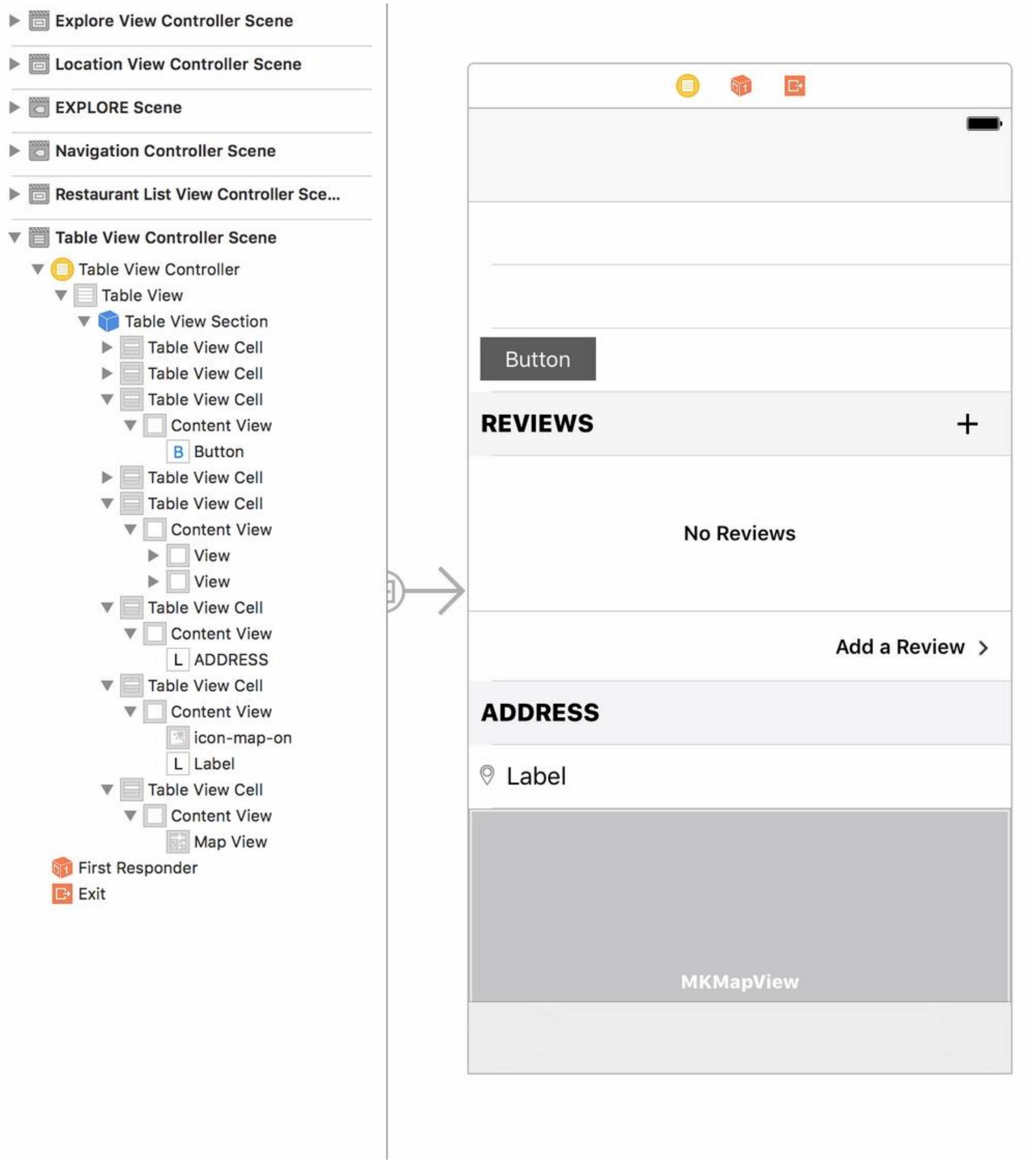
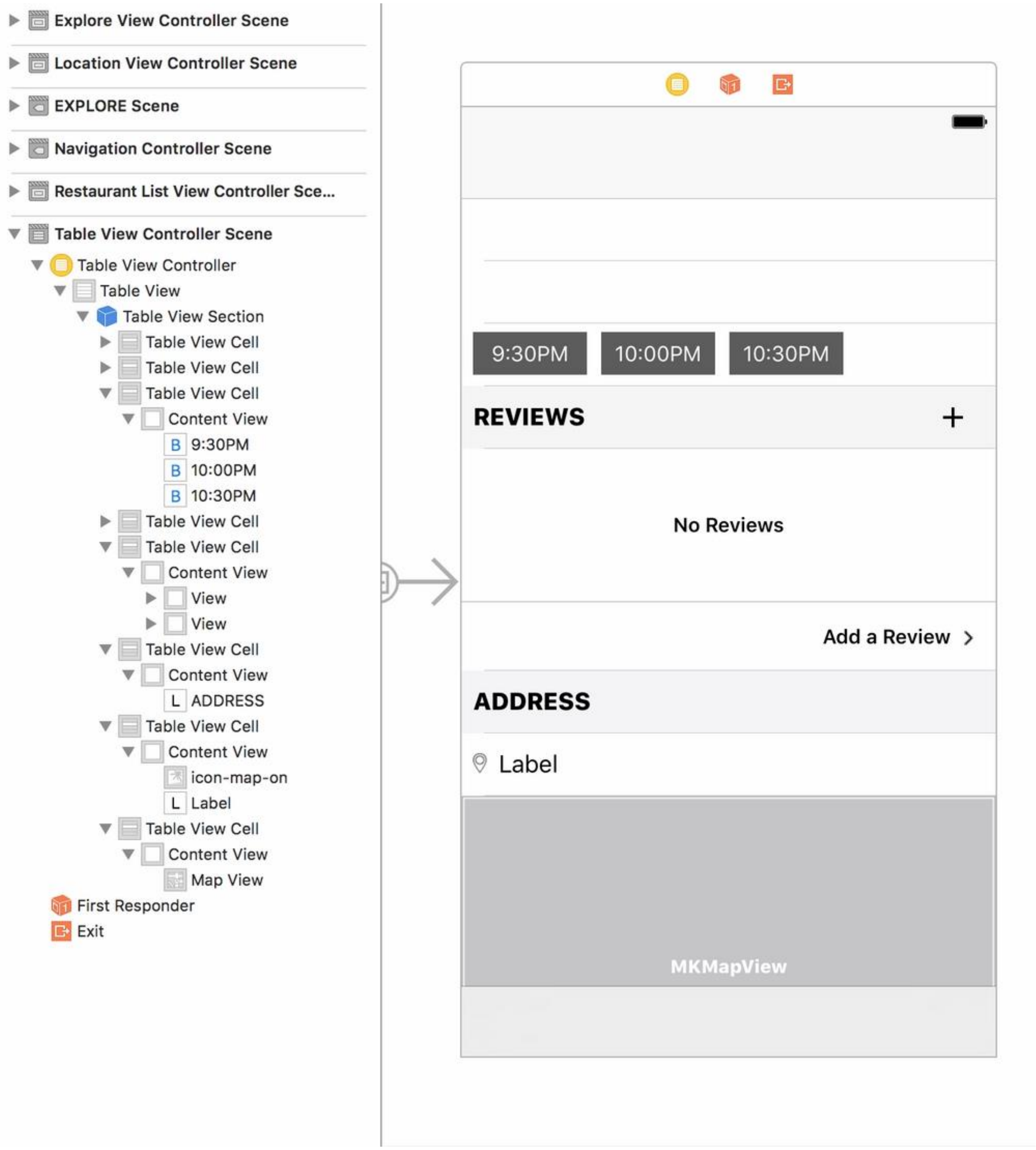
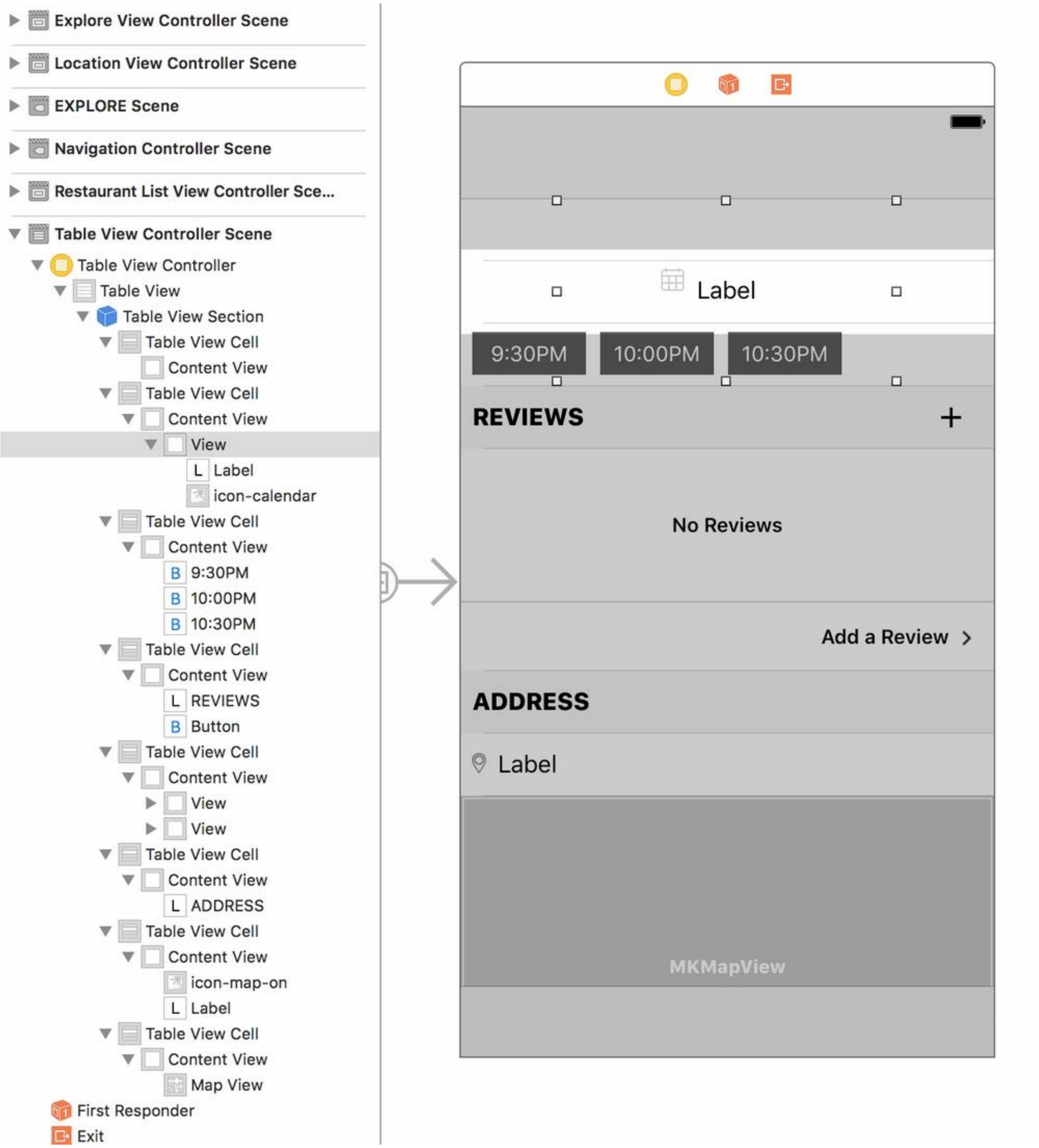
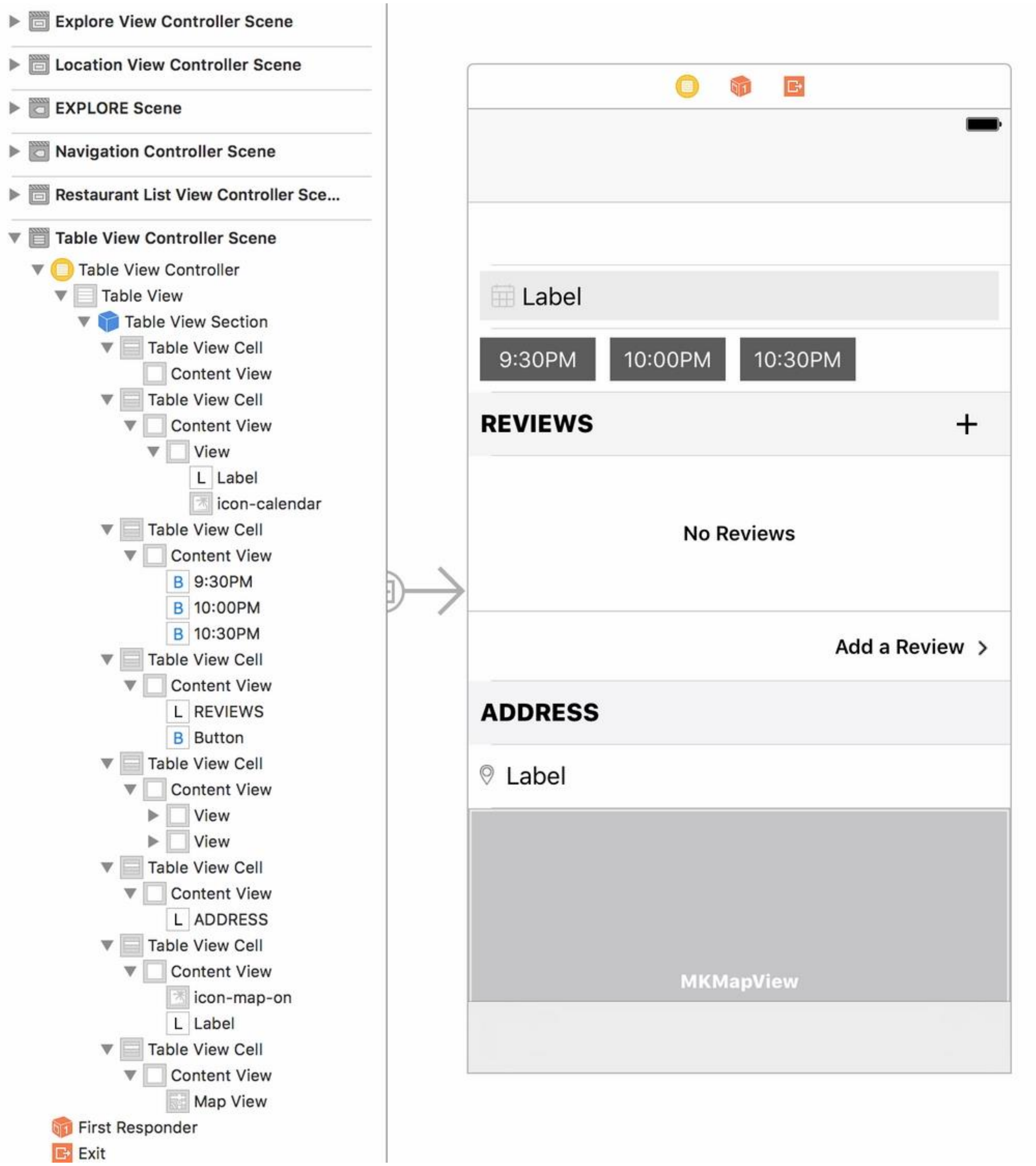
Table View Cell
Content View
icon-map-on
Label
Table View Controller Scene
Table View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
View
View
Delete
Table View Cell
Content View
Table View Cell
Content View
ADDRESS
Table View Cell
Content View
icon-map-on
Label

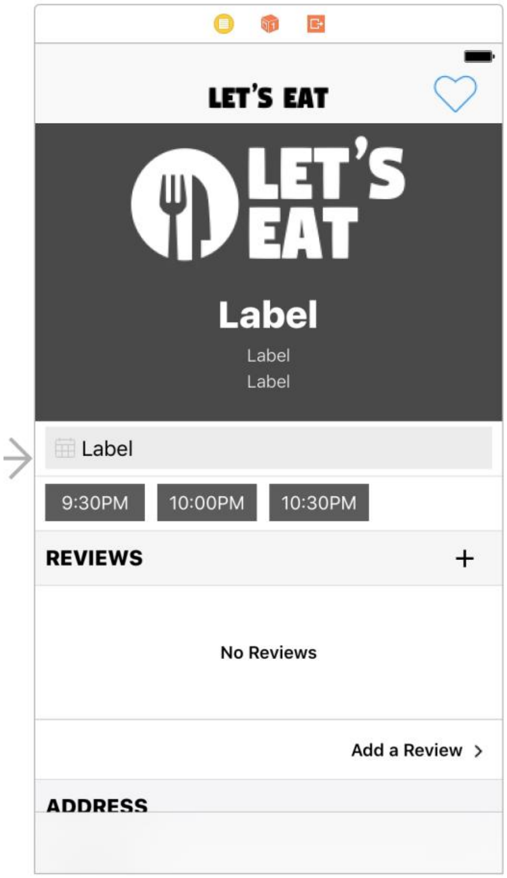

Explore View Controller Scene
Location View Controller Scene
EXPLORE Scene
Navigation Controller Scene
Restaurant List View Controller Sce...
Table View Controller Scene
Table View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Content View
B Button
Table View Cell
Table View Cell
Content View
View
View
Table View Cell
Content View
L ADDRESS
Table View Cell
Content View
icon-map-on
L Label
Table View Cell
Content View
Map View
First Responder
Exit
Button
REVIEWS
+
No Reviews
Add a Review >
ADDRESS
Label
MKMapView


Explore View Controller Scene
Location View Controller Scene
EXPLORE Scene
Navigation Controller Scene
Restaurant List View Controller Sce...
Table View Controller Scene
Table View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Content View
9:30PM
10:00PM
10:30PM
Table View Cell
Table View Cell
Content View
View
View
Table View Cell
Content View
ADDRESS
Table View Cell
Content View
icon-map-on
Label
Table View Cell
Content View
Map View
First Responder
Exit
9:30PM
10:00PM
10:30PM
REVIEWS
+
No Reviews
Add a Review
ADDRESS
Label
MKMapView


Explore View Controller Scene
Location View Controller Scene
EXPLORE Scene
Navigation Controller Scene
Restaurant List View Controller Sce...
Table View Controller Scene
Table View Controller
Table View
Table View Section
Table View Cell
Content View
Table View Cell
Content View
View
Label
icon-calendar
Table View Cell
Content View
9:30PM
10:00PM
10:30PM
Table View Cell
Content View
REVIEWS
Button
Table View Cell
Content View
View
View
Table View Cell
Content View
ADDRESS
Table View Cell
Content View
icon-map-on
Label
Table View Cell
Content View
Map View
First Responder
Exit
Label
9:30PM
10:00PM
10:30PM
REVIEWS
+
No Reviews
Add a Review
ADDRESS
Label
MKMapView



- Explore View Controller Scene
- Location View Controller Scene
- EXPLORE Scene
- Navigation Controller Scene
- Restaurant List View Controller Sce...
- Table View Controller Scene
  - Table View Controller
    - Table View
      - Table View Section
        - Table View Cell
          - Content View
        - Table View Cell
          - Content View
            - View
              - L Label
              - icon-calendar
        - Table View Cell
          - Content View
            - B 9:30PM
            - B 10:00PM
            - B 10:30PM
        - Table View Cell
          - Content View
            - L REVIEWS
            - B Button
        - Table View Cell
          - Content View
            - View
            - View
        - Table View Cell
          - Content View
            - L ADDRESS
        - Table View Cell
          - Content View
            - icon-map-on
            - L Label
        - Table View Cell
          - Content View
            - Map View
  - First Responder
  - Exit



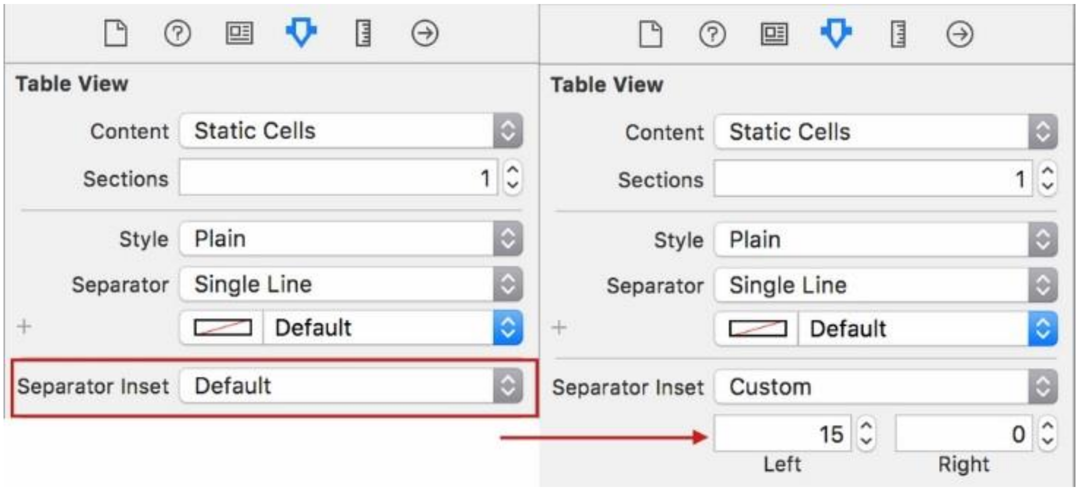


Table View

Content: Static Cells

Sections: 1

Style: Plain

Separator: Single Line

Default

Separator Inset: Default

Table View

Content: Static Cells

Sections: 1

Style: Plain

Separator: Single Line

Default

Separator Inset: Custom

Left: 15

Right: 0

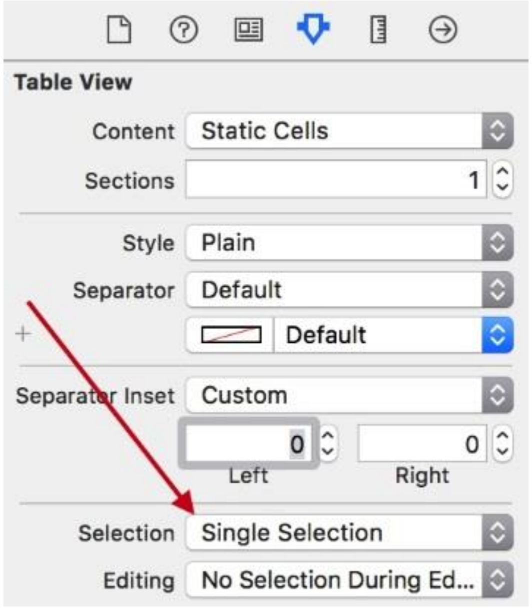


Table View

Content: Static Cells

Sections: 1

Style: Plain

Separator: Default

Default

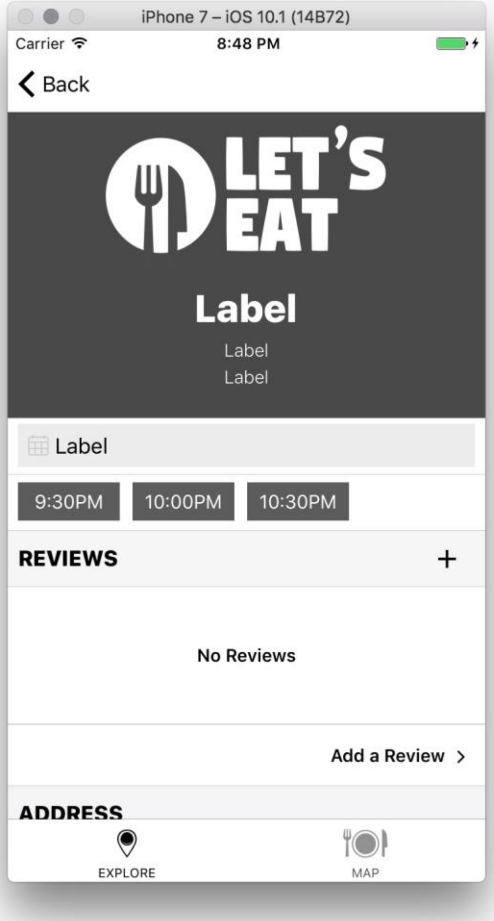
Separator Inset: Custom

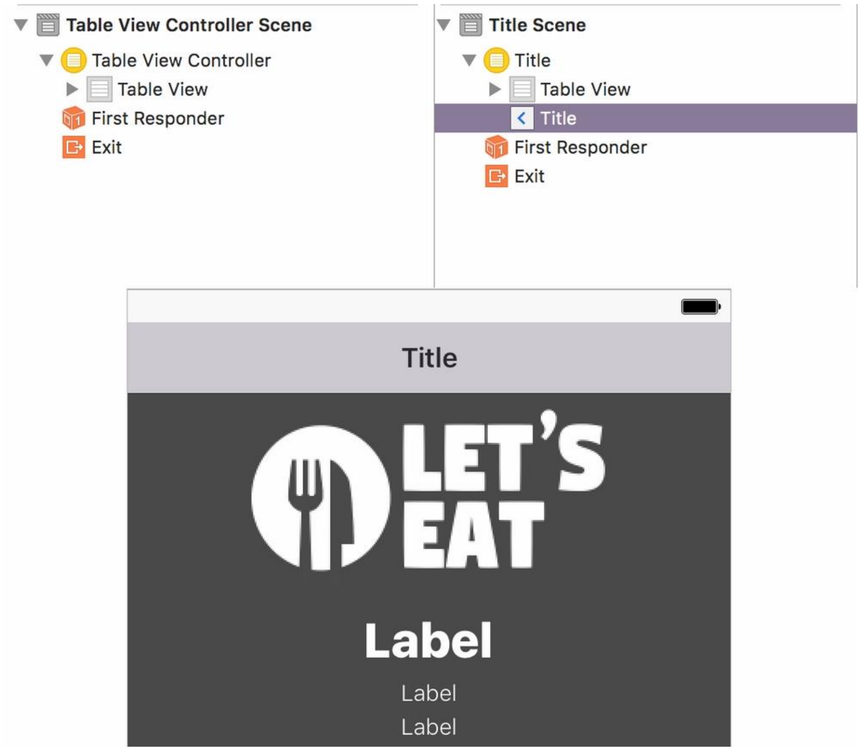
Left: 0

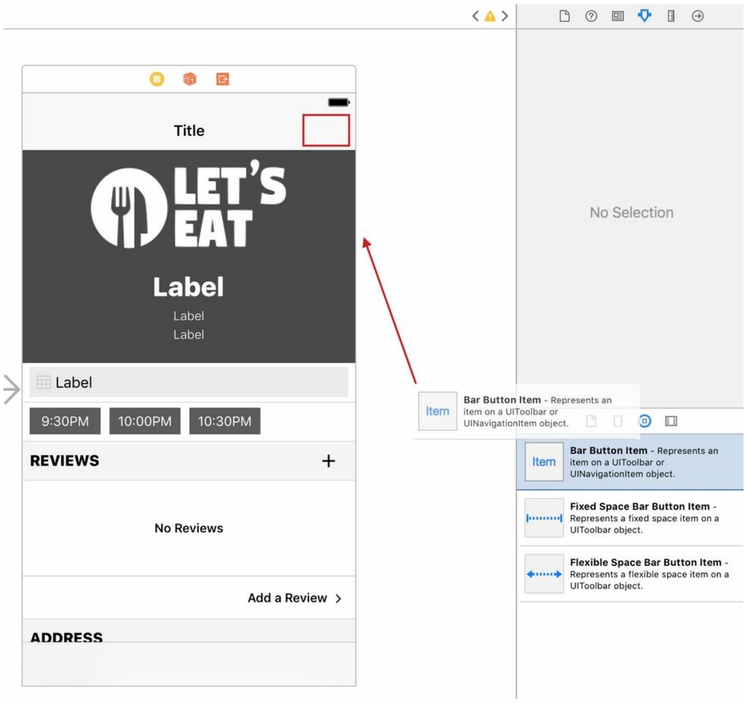
Right: 0

Selection: Single Selection

Editing: No Selection During Ed...





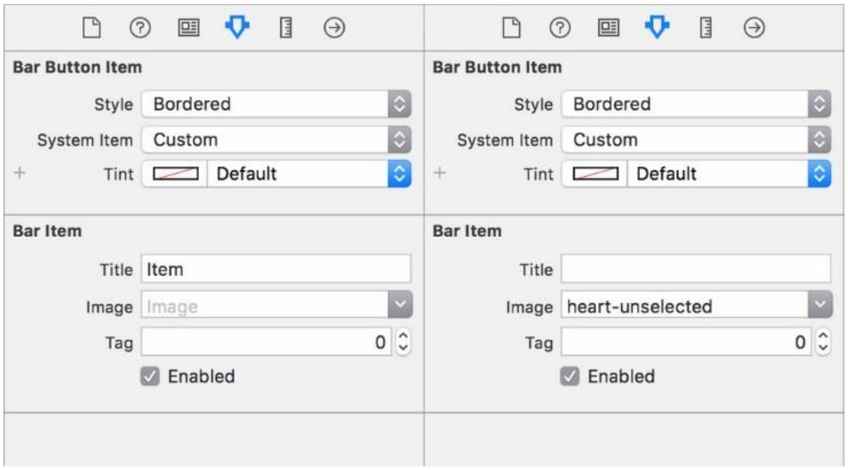


Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.

Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.

Fixed Space Bar Button Item - Represents a fixed space item on a UIToolbar object.

Flexible Space Bar Button Item - Represents a flexible space item on a UIToolbar object.



Bar Button Item

Style: Bordered

System Item: Custom

Tint: Default

Bar Item

Title: Item

Image: Image

Tag: 0

☑ Enabled

Bar Button Item

Style: Bordered

System Item: Custom

Tint: Default

Bar Item

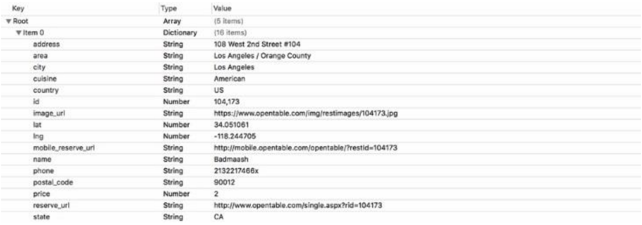
Title:

Image: heart-unselected

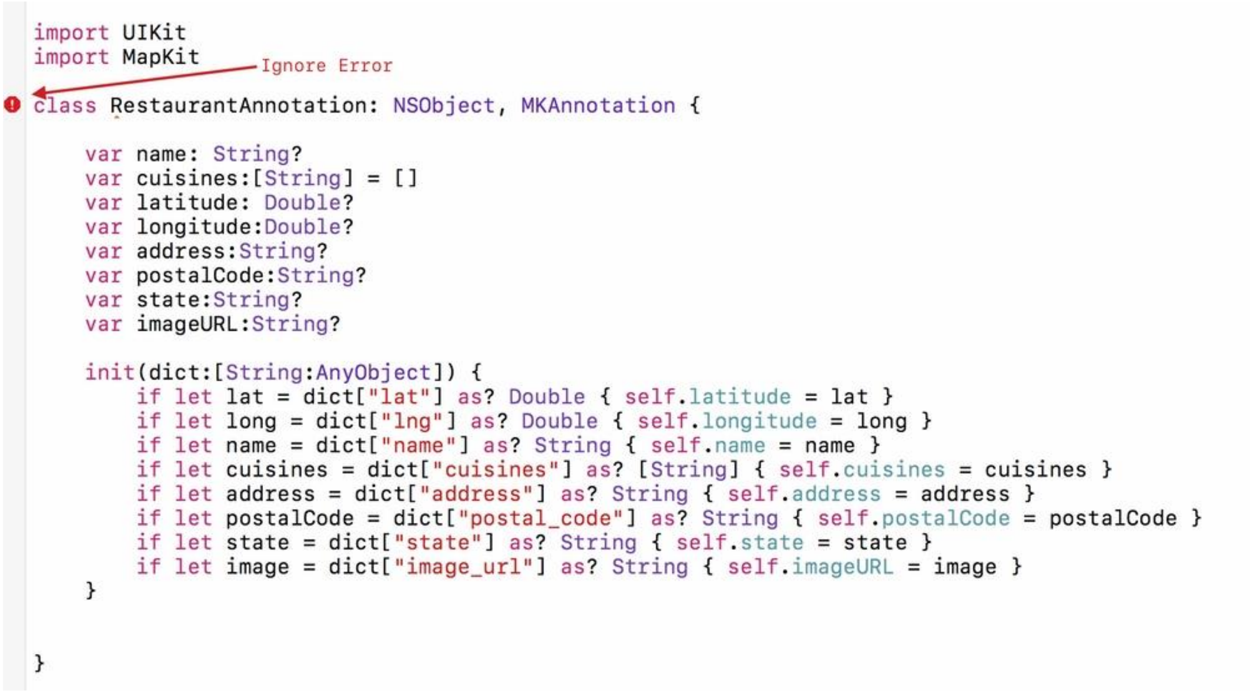
Tag: 0

☑ Enabled

Chapter 10: Where Are We?

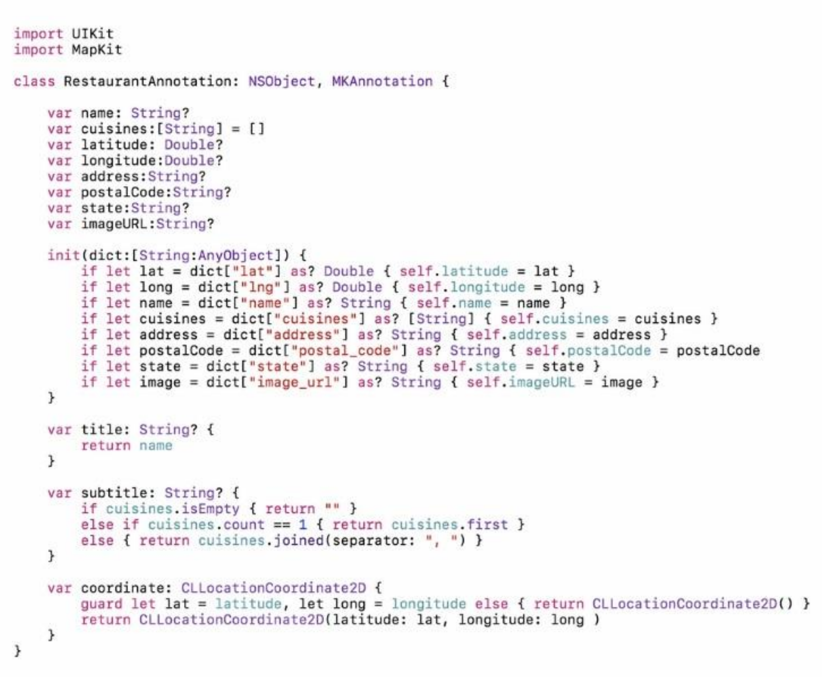


Key	Type	Value
▼ Root	Array	(5 items)
▼ Item 0	Dictionary	(16 items)
address	String	108 West 2nd Street #104
area	String	Los Angeles / Orange County
city	String	Los Angeles
cuisine	String	American
country	String	US
id	Number	104,173
image_url	String	https://www.opentable.com/img/restimages/104173.jpg
lat	Number	34.051061
lng	Number	-118.244705
mobile_reserve_url	String	http://mobile.opentable.com/opentable/?restId=104173
name	String	Badmaash
phone	String	2132217466x
postal_code	String	90012
price	Number	2
reserve_url	String	http://www.opentable.com/single.aspx?rid=104173
state	String	CA

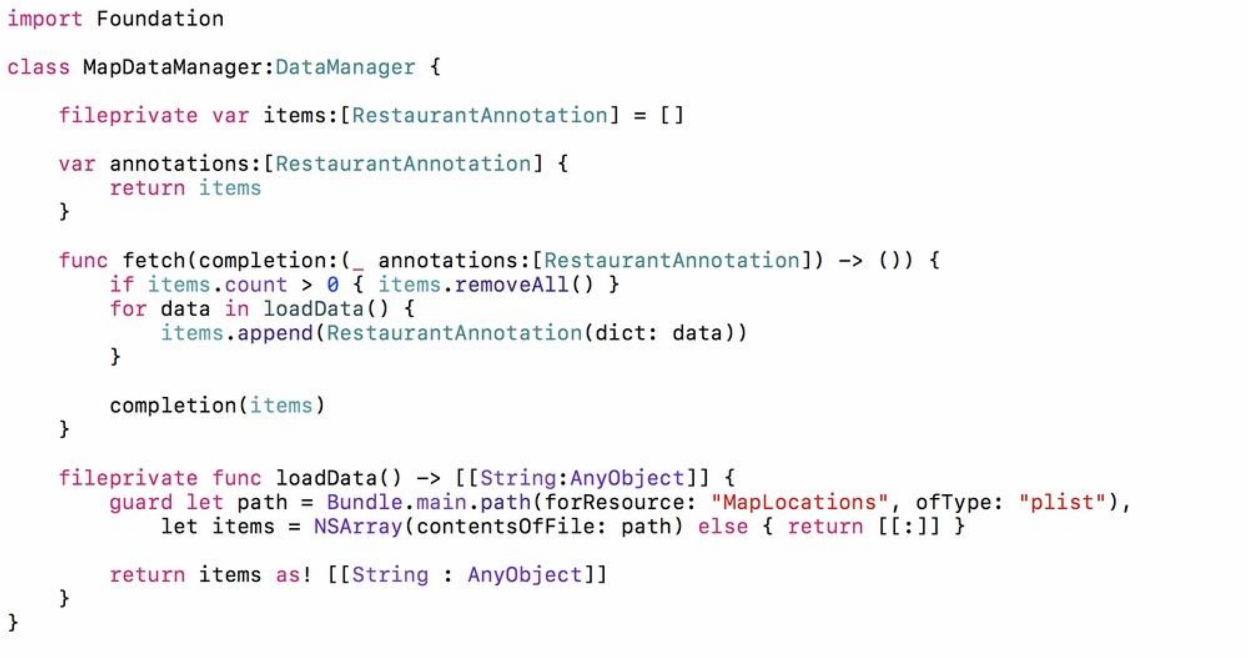


Ignore Error

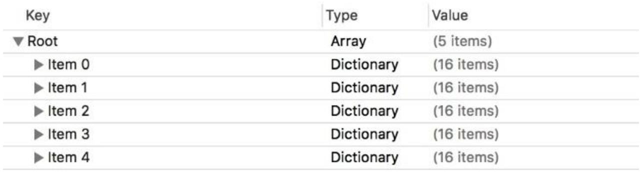
```
import UIKit
import MapKit

class RestaurantAnnotation: NSObject, MKAnnotation {

    var name: String?
    var cuisines:[String] = []
    var latitude: Double?
    var longitude:Double?
    var address:String?
    var postalCode:String?
    var state:String?
    var imageURL:String?

    init(dict:[String:AnyObject]) {
        if let lat = dict["lat"] as? Double { self.latitude = lat }
        if let long = dict["lng"] as? Double { self.longitude = long }
        if let name = dict["name"] as? String { self.name = name }
        if let cuisines = dict["cuisines"] as? [String] { self.cuisines = cuisines }
        if let address = dict["address"] as? String { self.address = address }
        if let postalCode = dict["postal_code"] as? String { self.postalCode = postalCode }
        if let state = dict["state"] as? String { self.state = state }
        if let image = dict["image_url"] as? String { self.imageURL = image }
    }


}
```



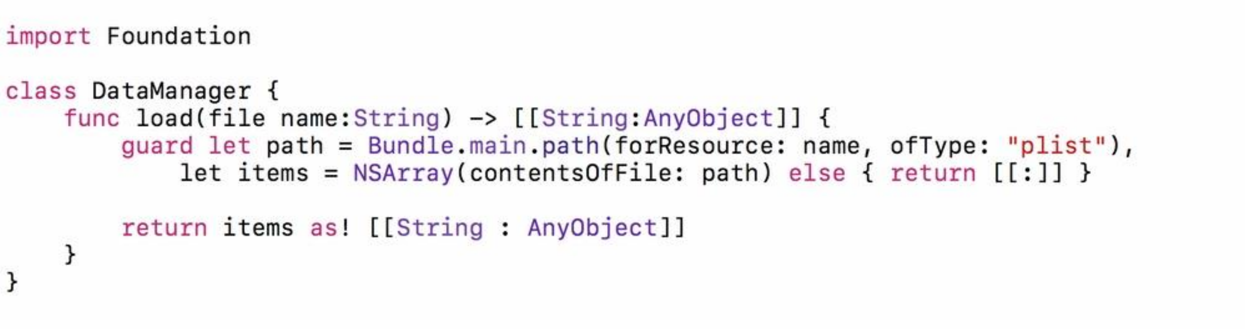
```
import UIKit
import MapKit

class RestaurantAnnotation: NSObject, MKAnnotation {

    var name: String?
    var cuisines:[String] = []
    var latitude: Double?
    var longitude:Double?
    var address:String?
    var postalCode:String?
    var state:String?
    var imageURL:String?

    init(dict:[String:AnyObject]) {
        if let lat = dict["lat"] as? Double { self.latitude = lat }
        if let long = dict["lng"] as? Double { self.longitude = long }
        if let name = dict["name"] as? String { self.name = name }
        if let cuisines = dict["cuisines"] as? [String] { self.cuisines = cuisines }
        if let address = dict["address"] as? String { self.address = address }
        if let postalCode = dict["postal_code"] as? String { self.postalCode = postalCode
        if let state = dict["state"] as? String { self.state = state }
        if let image = dict["image_url"] as? String { self.imageURL = image }
    }

    var title: String? {
        return name
    }

    var subtitle: String? {
        if cuisines.isEmpty { return "" }
        else if cuisines.count == 1 { return cuisines.first }
        else { return cuisines.joined(separator: ", ") }
    }

    var coordinate: CLLocationCoordinate2D {
        guard let lat = latitude, let long = longitude else { return CLLocationCoordinate2D() }
        return CLLocationCoordinate2D(latitude: lat, longitude: long )
    }
}
```



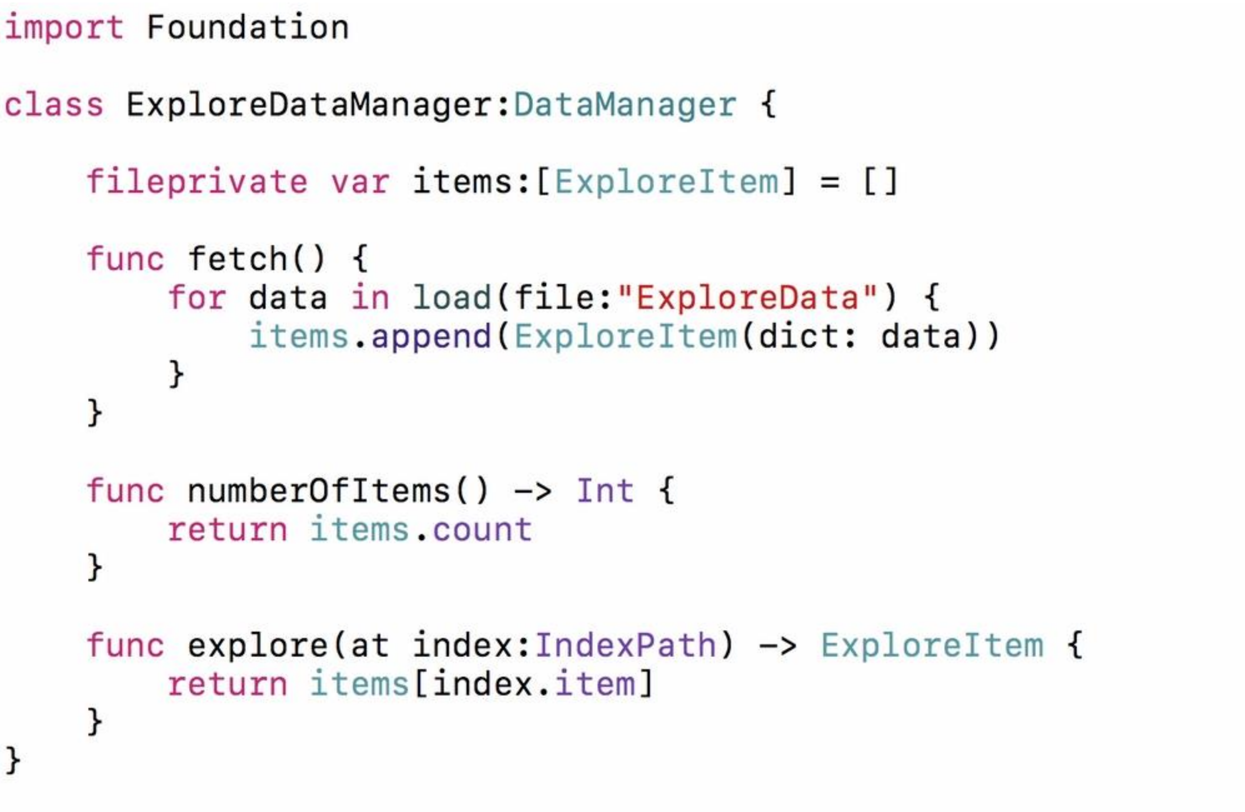
```
import Foundation

class MapDataManager:DataManager {

    fileprivate var items:[RestaurantAnnotation] = []

    var annotations:[RestaurantAnnotation] {
        return items
    }

    func fetch(completion:(_ annotations:[RestaurantAnnotation]) -> ()) {
        if items.count > 0 { items.removeAll() }
        for data in loadData() {
            items.append(RestaurantAnnotation(dict: data))
        }

        completion(items)
    }

    fileprivate func loadData() -> [[String:AnyObject]] {
        guard let path = Bundle.main.path(forResource: "MapLocations", ofType: "plist"),
            let items = NSArray(contentsOfFile: path) else { return [[:]] }

        return items as! [[String : AnyObject]]
    }
}
```



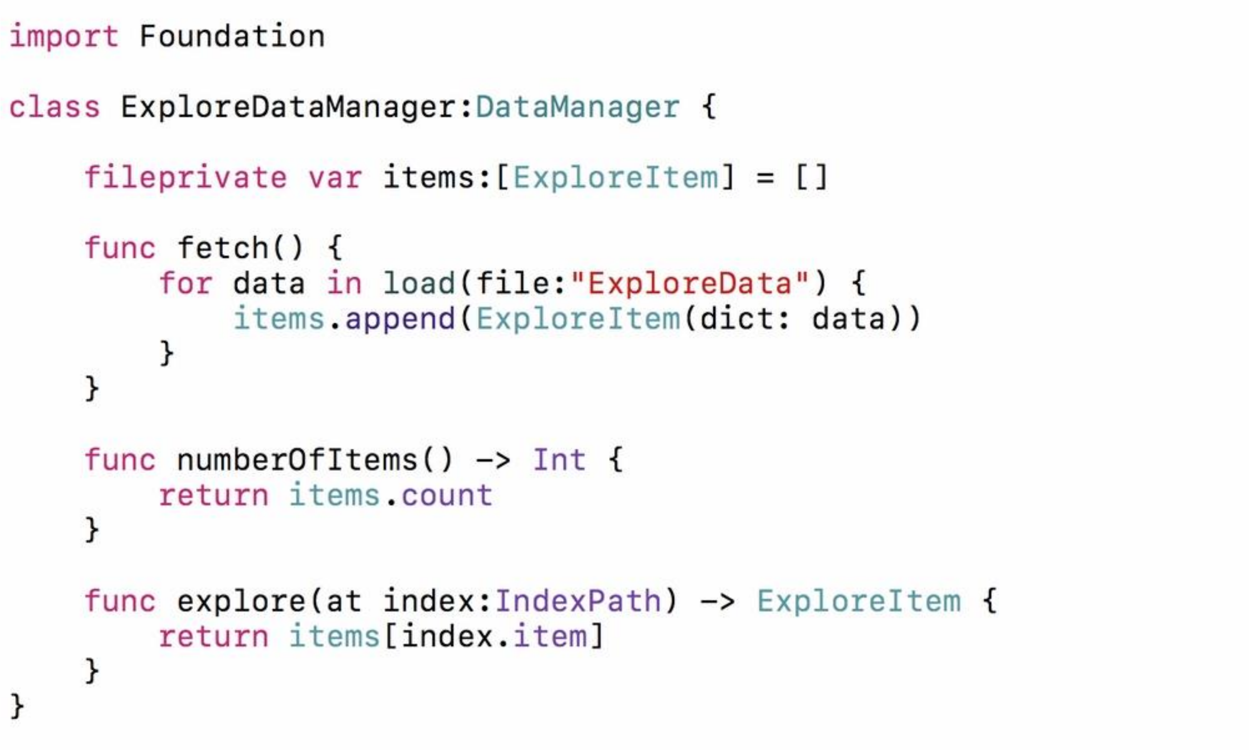
Key	Type	Value
▼Root	Array	(5 items)
▶ Item 0	Dictionary	(16 items)
▶ Item 1	Dictionary	(16 items)
▶ Item 2	Dictionary	(16 items)
▶ Item 3	Dictionary	(16 items)
▶ Item 4	Dictionary	(16 items)



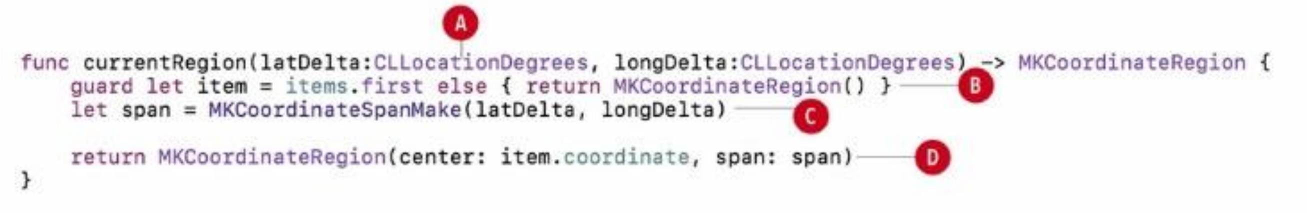
```
import Foundation

class DataManager {
    func load(file name:String) -> [[String:AnyObject]] {
        guard let path = Bundle.main.path(forResource: name, ofType: "plist"),
            let items = NSArray(contentsOfFile: path) else { return [[:]] }

        return items as! [[String : AnyObject]]
    }
}
```



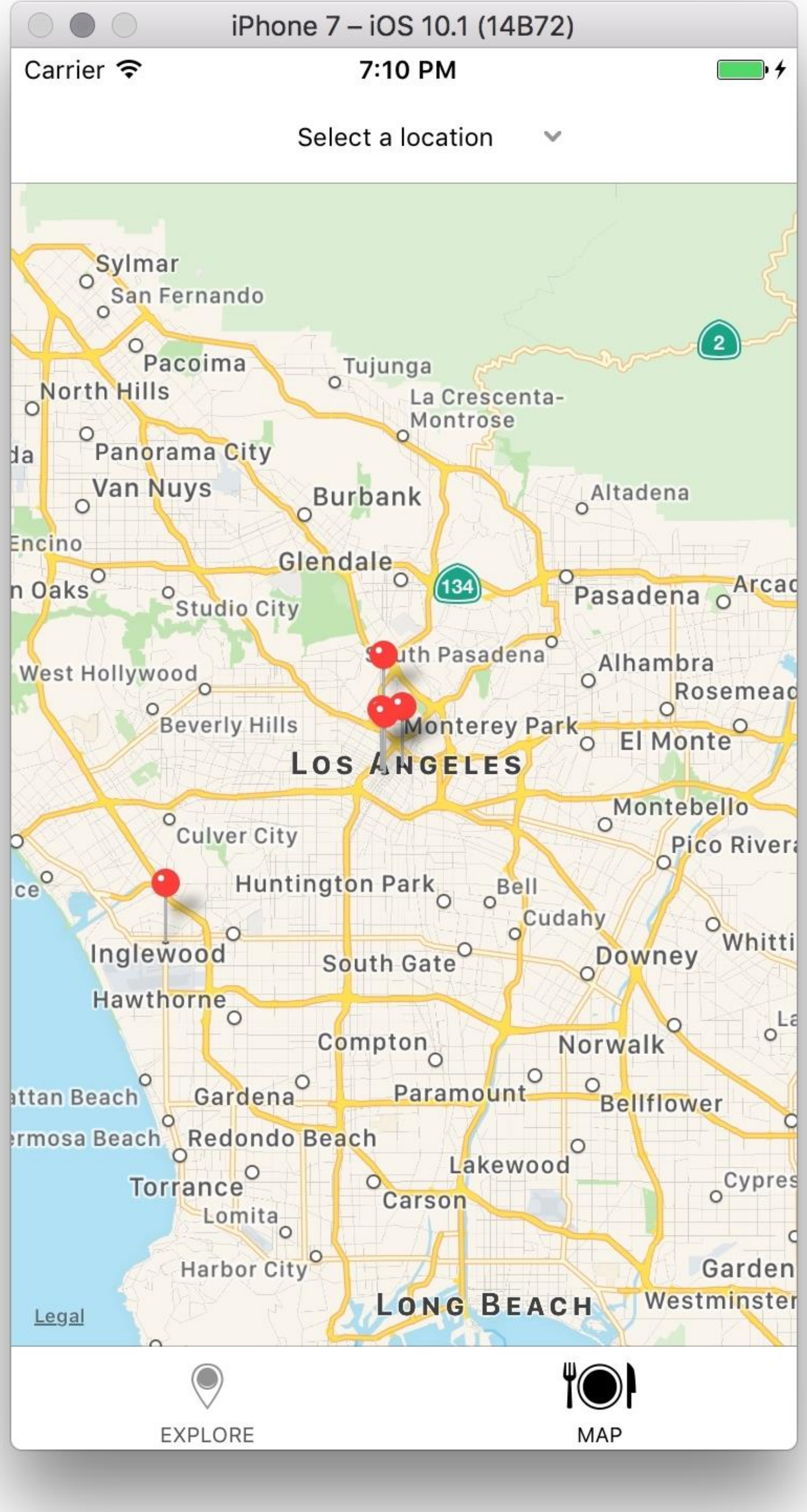
```
import Foundation

class ExploreDataManager:DataManager {

    fileprivate var items:[ExploreItem] = []

    func fetch() {
        for data in load(file:"ExploreData") {
            items.append(ExploreItem(dict: data))
        }
    }

    func numberOfItems() -> Int {
        return items.count
    }

    func explore(at index:IndexPath) -> ExploreItem {
        return items[index.item]
    }
}
```

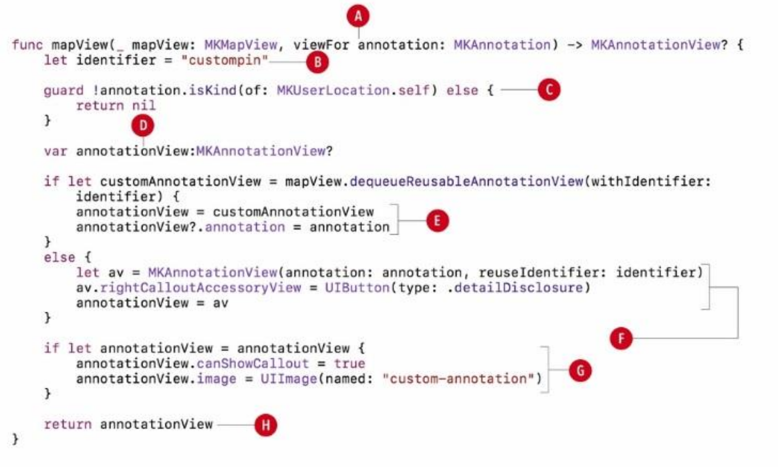


```swift
import Foundation

class ExploreDataManager:DataManager {

    fileprivate var items:[ExploreItem] = []

    func fetch() {
        for data in load(file:"ExploreData") {
            items.append(ExploreItem(dict: data))
        }
    }

    func numberOfItems() -> Int {
        return items.count
    }

    func explore(at index:IndexPath) -> ExploreItem {
        return items[index.item]
    }
}
```

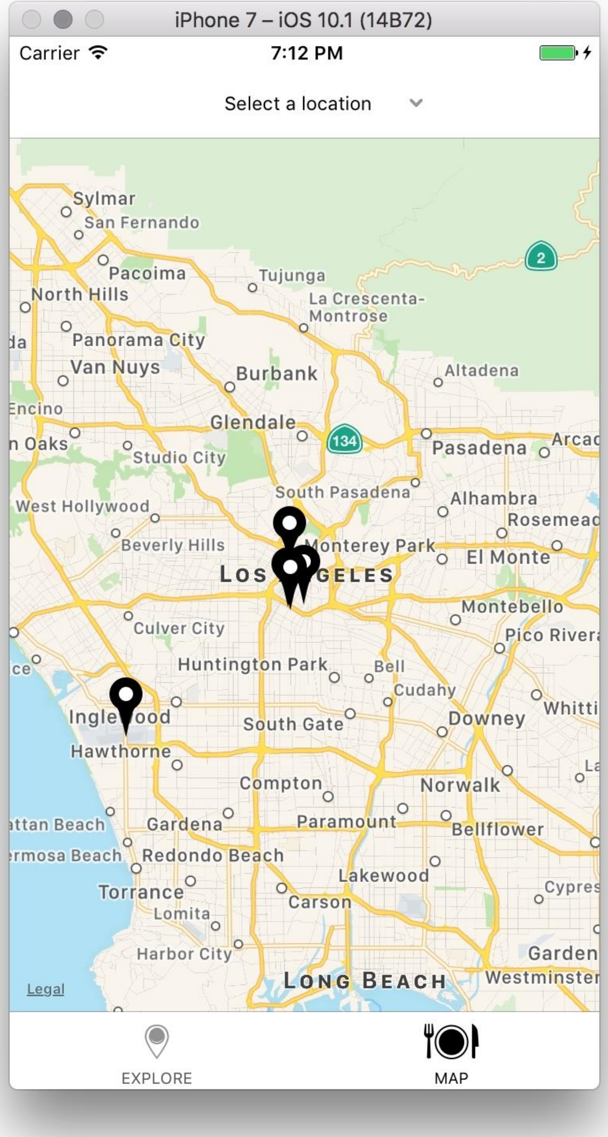


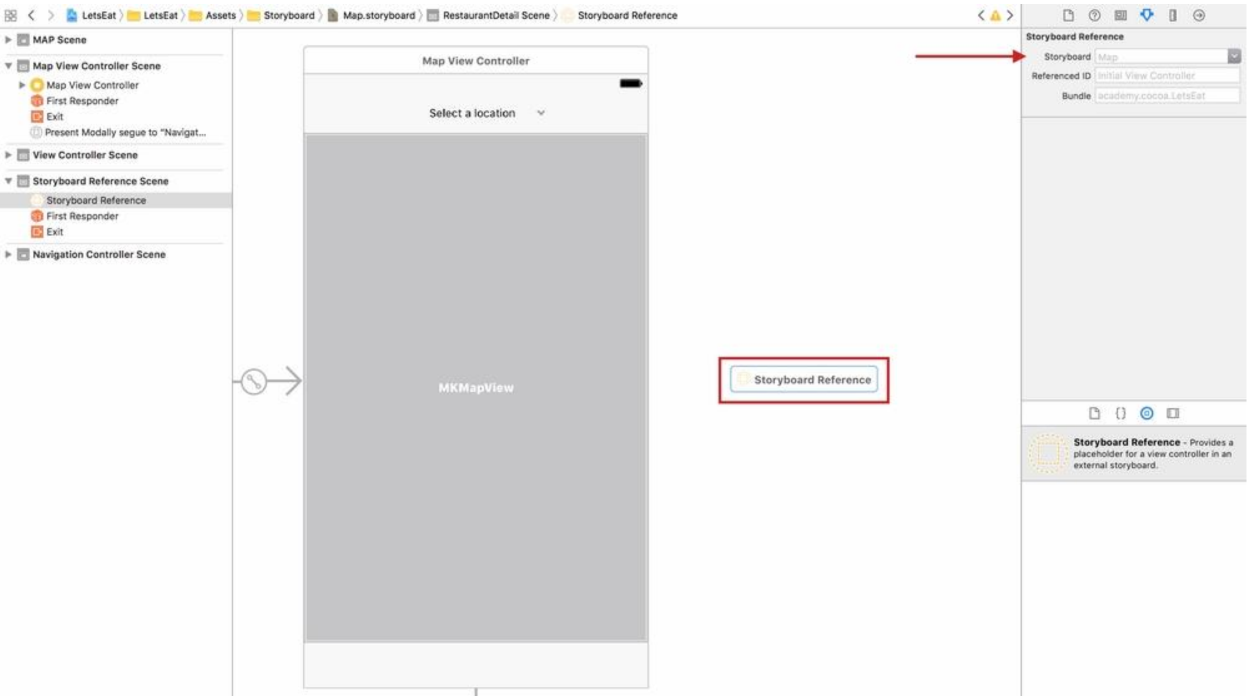
```swift
func currentRegion(latDelta:CLLocationDegrees, longDelta:CLLocationDegrees) -> MKCoordinateRegion {
    guard let item = items.first else { return MKCoordinateRegion() }
    let span = MKCoordinateSpanMake(latDelta, longDelta)

    return MKCoordinateRegion(center: item.coordinate, span: span)
}
```


iPhone 7 – iOS 10.1 (14B72)
Carrier
7:10 PM
Select a location
Sylmar
San Fernando
Pacoima
Tujunga
North Hills
La Crescenta-Montrose
2
Panorama City
Van Nuys
Burbank
Altadena
Encino
Glendale
134
Pasadena
Studio City
South Pasadena
Alhambra
West Hollywood
Rosemead
Beverly Hills
Monterey Park
El Monte
Los Angeles
Montebello
Culver City
Pico Rivera
Huntington Park
Bell
Cudahy
Inglewood
South Gate
Downey
Hawthorne
Compton
Norwalk
Gardena
Paramount
Bellflower
Redondo Beach
Lakewood
Torrance
Carson
Lomita
Harbor City
Long Beach
Westminster
Legal
EXPLORE
MAP



```
func mapView(_ mapView: MKMapView, viewFor annotation: MKAnnotation) -> MKAnnotationView? {
    let identifier = "custompin"

    guard !annotation.isKind(of: MKUserLocation.self) else {
        return nil
    }

    var annotationView:MKAnnotationView?

    if let customAnnotationView = mapView.dequeueReusableAnnotationView(withIdentifier:
        identifier) {
        annotationView = customAnnotationView
        annotationView?.annotation = annotation
    }
    else {
        let av = MKAnnotationView(annotation: annotation, reuseIdentifier: identifier)
        av.rightCalloutAccessoryView = UIButton(type: .detailDisclosure)
        annotationView = av
    }

    if let annotationView = annotationView {
        annotationView.canShowCallout = true
        annotationView.image = UIImage(named: "custom-annotation")
    }

    return annotationView
}
```


iPhone 7 – iOS 10.1 (14B72)
Carrier
7:12 PM
Select a location
Sylmar
San Fernando
Pacoima
Tujunga
North Hills
La Crescenta-Montrose
Panorama City
Van Nuys
Burbank
Altadena
Encino
Glendale
134
Pasadena
Studio City
South Pasadena
West Hollywood
Alhambra
Rosemead
Beverly Hills
Monterey Park
El Monte
Los Angeles
Montebello
Culver City
Pico Rivera
Huntington Park
Bell
Cudahy
Whittier
Inglewood
South Gate
Downey
Hawthorne
Compton
Norwalk
Gardena
Paramount
Bellflower
Redondo Beach
Lakewood
Torrance
Carson
Lomita
Harbor City
Long Beach
Westminster
Garden
2
Legal
EXPLORE
MAP


LetsEat 〉 LetsEat 〉 Assets 〉 Storyboard 〉 Map.storyboard 〉 RestaurantDetail Scene 〉 Storyboard Reference
MAP Scene
Map View Controller Scene
Map View Controller
First Responder
Exit
Present Modally segue to "Navigat...
View Controller Scene
Storyboard Reference Scene
Storyboard Reference
First Responder
Exit
Navigation Controller Scene
Map View Controller
Select a location
MKMapView
Storyboard Reference

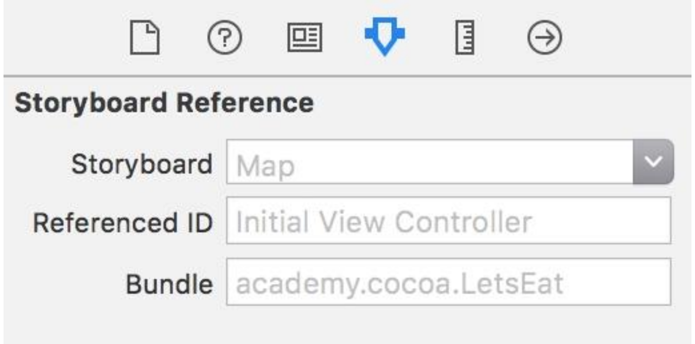
Storyboard Reference

Storyboard: Map

Referenced ID: Initial View Controller

Bundle: academy.cocoa.LetsEat

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

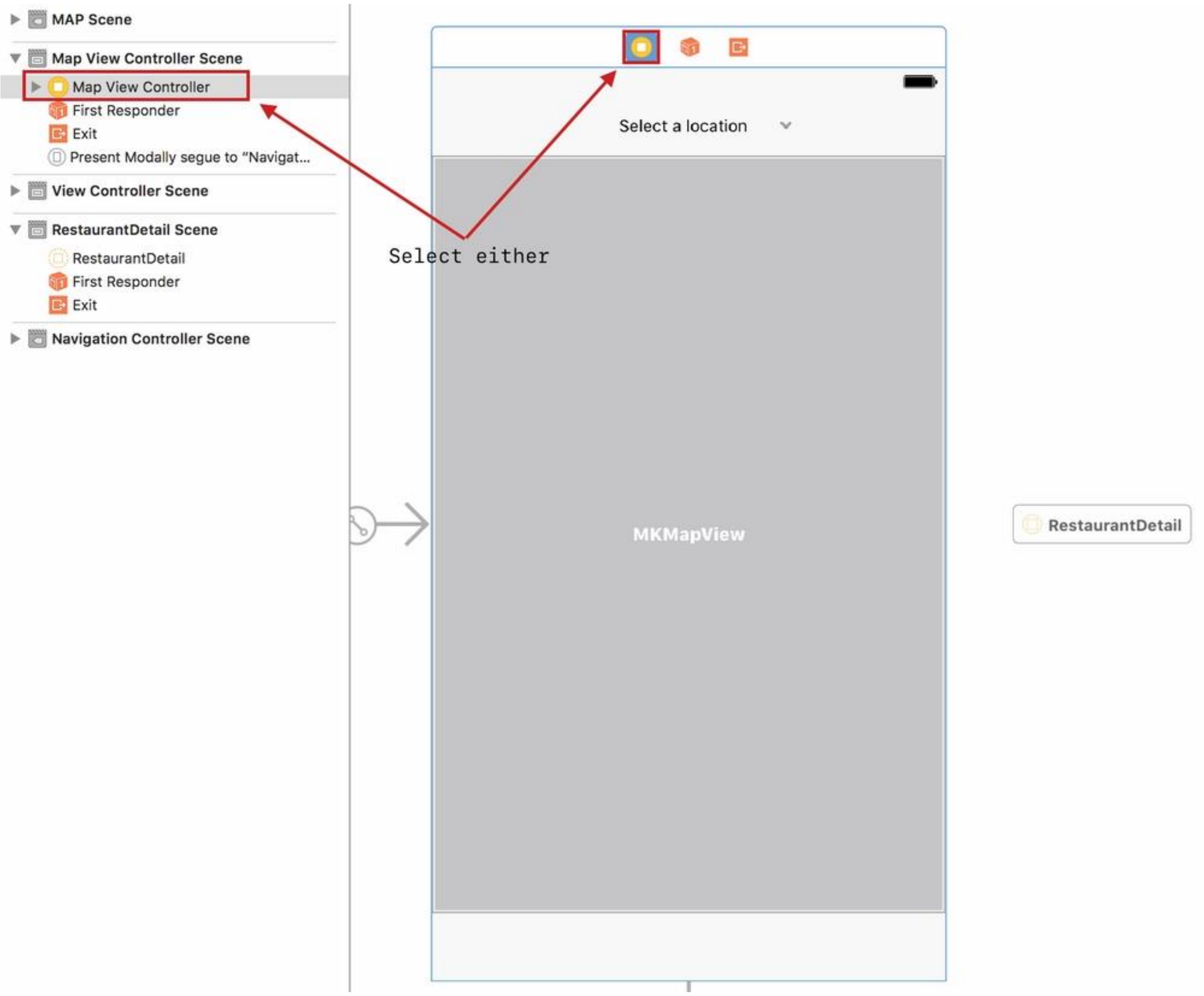


Storyboard Reference

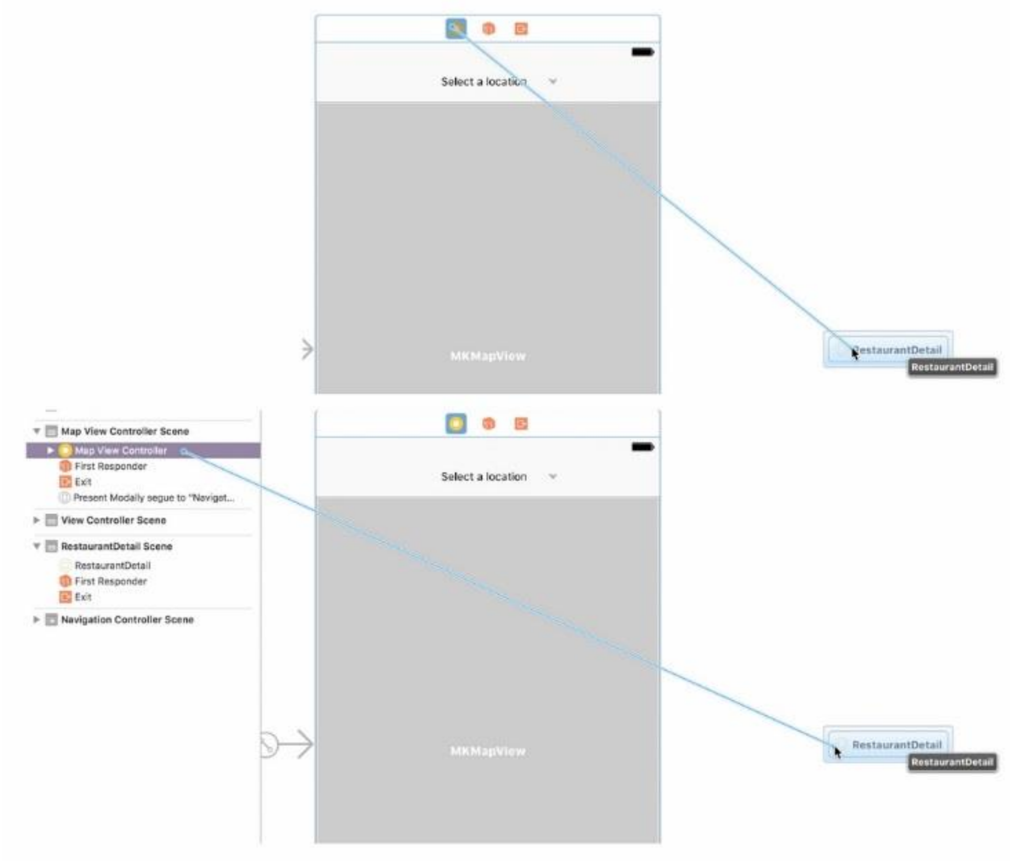
Storyboard: Map

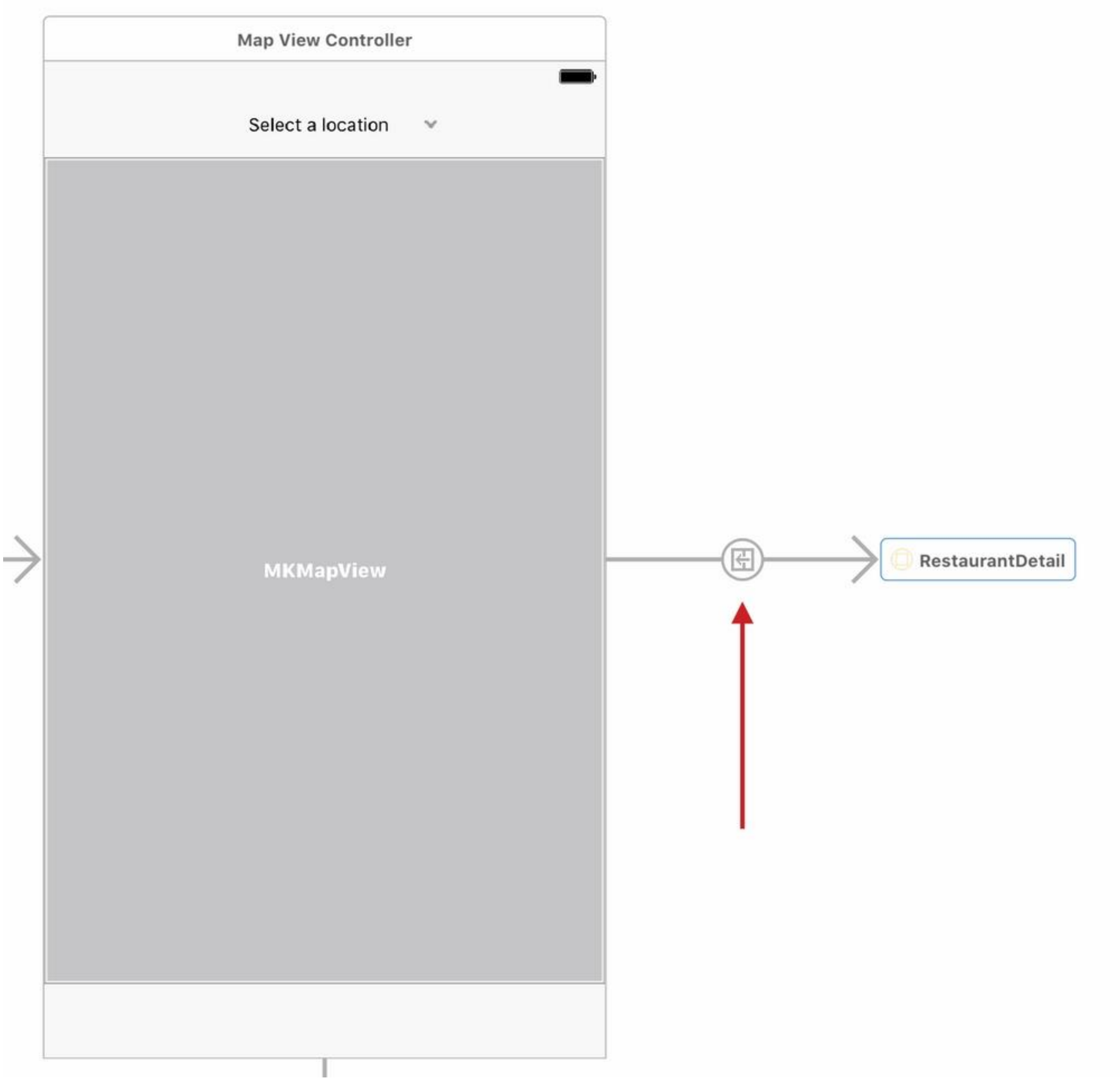
Referenced ID: Initial View Controller

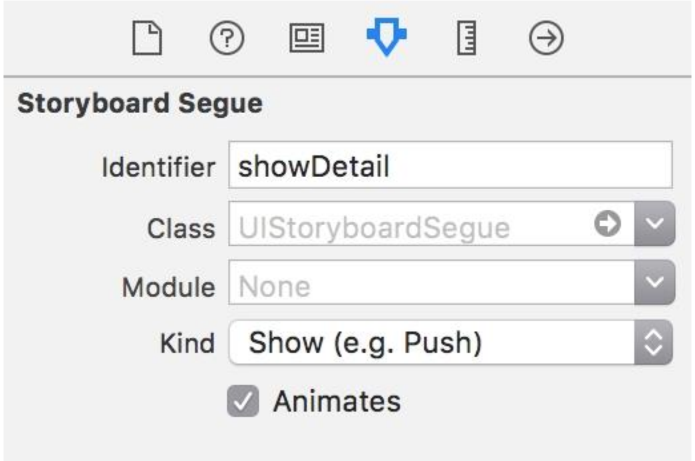
Bundle: academy.cocoa.LetsEat



Select either


Select a location
MKMapView
RestaurantDetail
RestaurantDetail
Map View Controller Scene
Map View Controller
First Responder
Exit
Present Modally segue to "Navigat...
View Controller Scene
RestaurantDetail Scene
RestaurantDetail
First Responder
Exit
Navigation Controller Scene
Select a location
MKMapView
RestaurantDetail
RestaurantDetail


Map View Controller
Select a location
MKMapView
RestaurantDetail



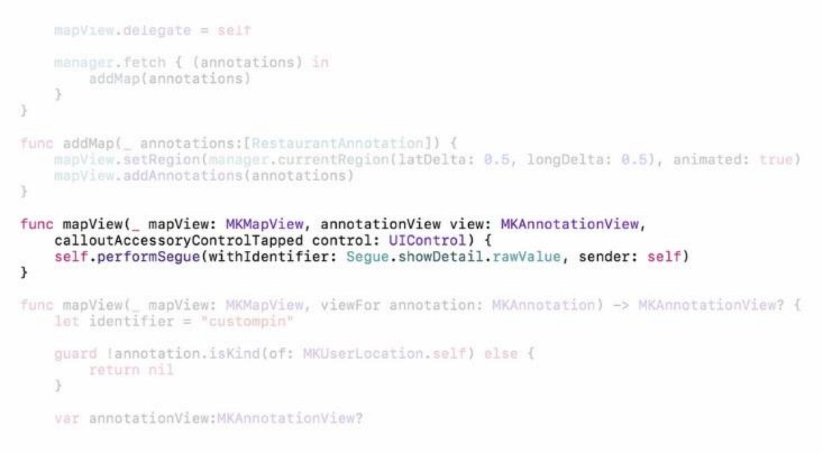
Identifier: showDetail

Class: UIStoryboardSegue

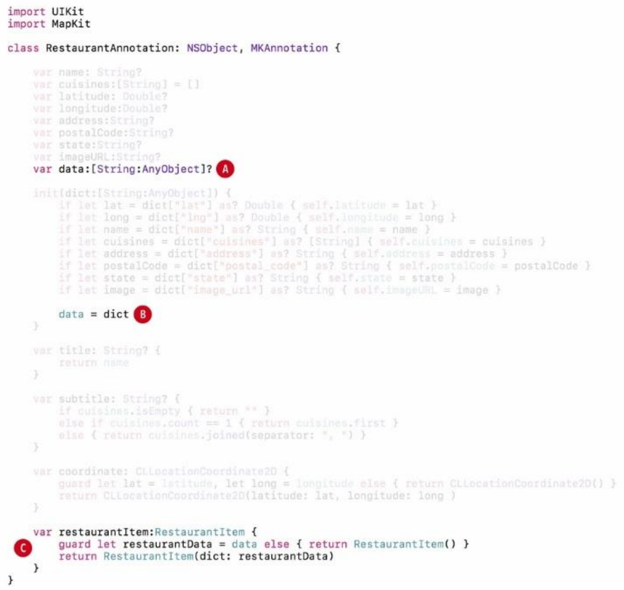
Module: None

Kind: Show (e.g. Push)

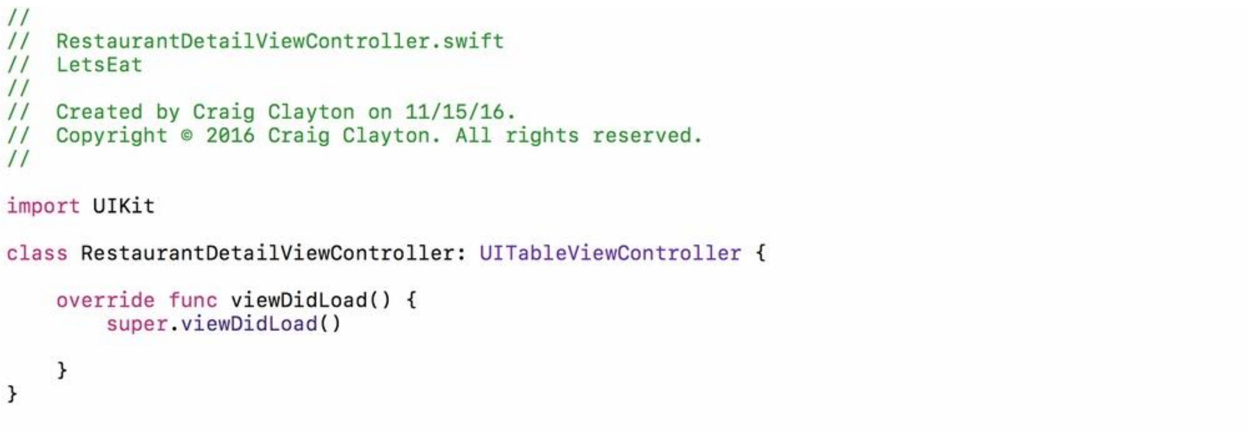
☑ Animates



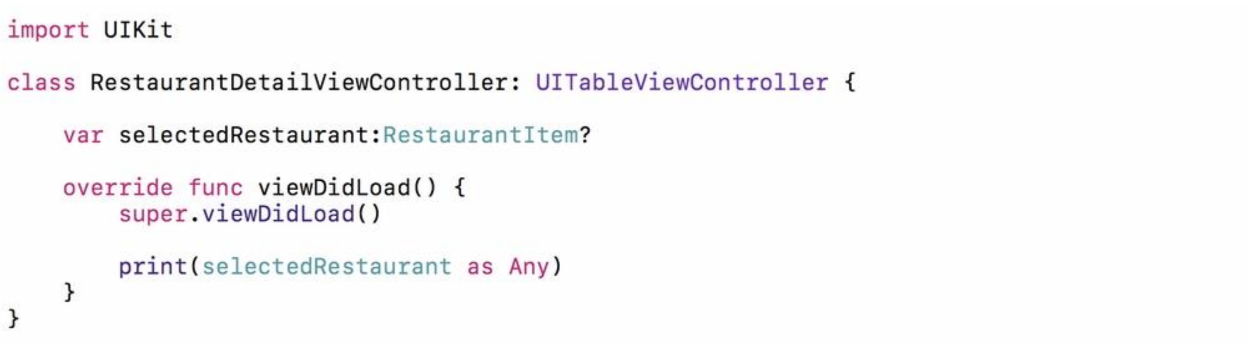
```
    mapView.delegate = self

    manager.fetch { (annotations) in
        addMap(annotations)
    }
}

func addMap(_ annotations:[RestaurantAnnotation]) {
    mapView.setRegion(manager.currentRegion(latDelta: 0.5, longDelta: 0.5), animated: true)
    mapView.addAnnotations(annotations)
}

func mapView(_ mapView: MKMapView, annotationView view: MKAnnotationView,
    calloutAccessoryControlTapped control: UIControl) {
    self.performSegue(withIdentifier: Segue.showDetail.rawValue, sender: self)
}

func mapView(_ mapView: MKMapView, viewFor annotation: MKAnnotation) -> MKAnnotationView? {
    let identifier = "custompin"

    guard !annotation.isKind(of: MKUserLocation.self) else {
        return nil
    }

    var annotationView:MKAnnotationView?
```



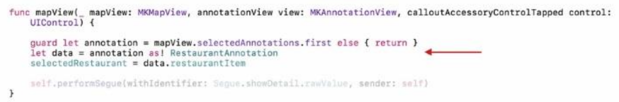
```
import UIKit
import MapKit

class RestaurantAnnotation: NSObject, MKAnnotation {

    var name: String?
    var cuisines:[String] = []
    var latitude: Double?
    var longitude:Double?
    var address:String?
    var postalCode:String?
    var state:String?
    var imageURL:String?
    var data:[String:AnyObject]? A

    init(dict:[String:AnyObject]) {
        if let lat = dict["lat"] as? Double { self.latitude = lat }
        if let long = dict["lng"] as? Double { self.longitude = long }
        if let name = dict["name"] as? String { self.name = name }
        if let cuisines = dict["cuisines"] as? [String] { self.cuisines = cuisines }
        if let address = dict["address"] as? String { self.address = address }
        if let postalCode = dict["postal_code"] as? String { self.postalCode = postalCode }
        if let state = dict["state"] as? String { self.state = state }
        if let image = dict["image_url"] as? String { self.imageURL = image }

        data = dict B
    }

    var title: String? {
        return name
    }

    var subtitle: String? {
        if cuisines.isEmpty { return "" }
        else if cuisines.count == 1 { return cuisines.first }
        else { return cuisines.joined(separator: ", ") }
    }

    var coordinate: CLLocationCoordinate2D {
        guard let lat = latitude, let long = longitude else { return CLLocationCoordinate2D() }
        return CLLocationCoordinate2D(latitude: lat, longitude: long )
    }

    var restaurantItem:RestaurantItem {
C       guard let restaurantData = data else { return RestaurantItem() }
        return RestaurantItem(dict: restaurantData)
    }
}
```



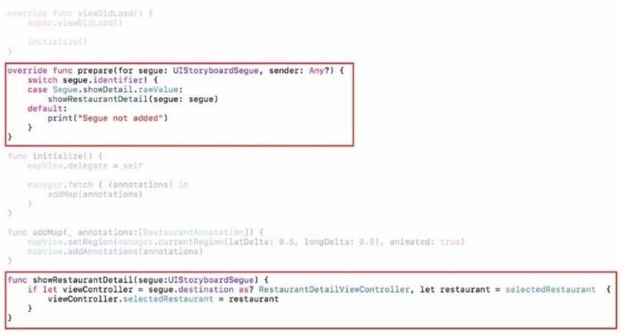
```
//
//  RestaurantDetailViewController.swift
//  LetsEat
//
//  Created by Craig Clayton on 11/15/16.
//  Copyright © 2016 Craig Clayton. All rights reserved.
//

import UIKit

class RestaurantDetailViewController: UITableViewController {

    override func viewDidLoad() {
        super.viewDidLoad()

    }
}
```



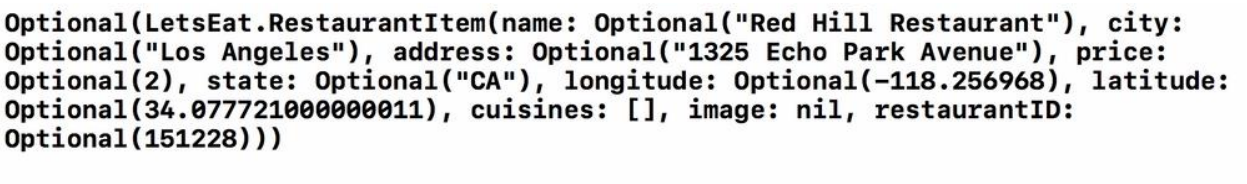
```
import UIKit

class RestaurantDetailViewController: UITableViewController {

    var selectedRestaurant:RestaurantItem?

    override func viewDidLoad() {
        super.viewDidLoad()

        print(selectedRestaurant as Any)
    }
}
```



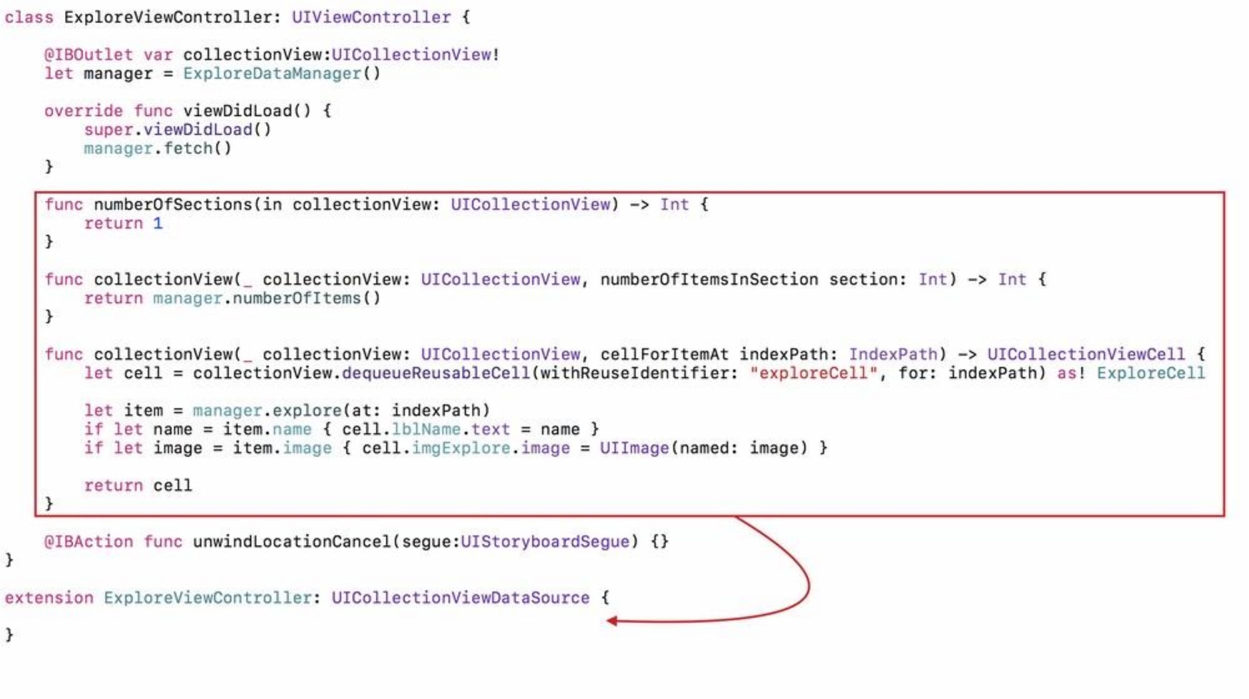
```
func mapView(_ mapView: MKMapView, annotationView view: MKAnnotationView, calloutAccessoryControlTapped control:
    UIControl) {

    guard let annotation = mapView.selectedAnnotations.first else { return }
    let data = annotation as! RestaurantAnnotation
    selectedRestaurant = data.restaurantItem

    self.performSegue(withIdentifier: Segue.showDetail.rawValue, sender: self)
}
```



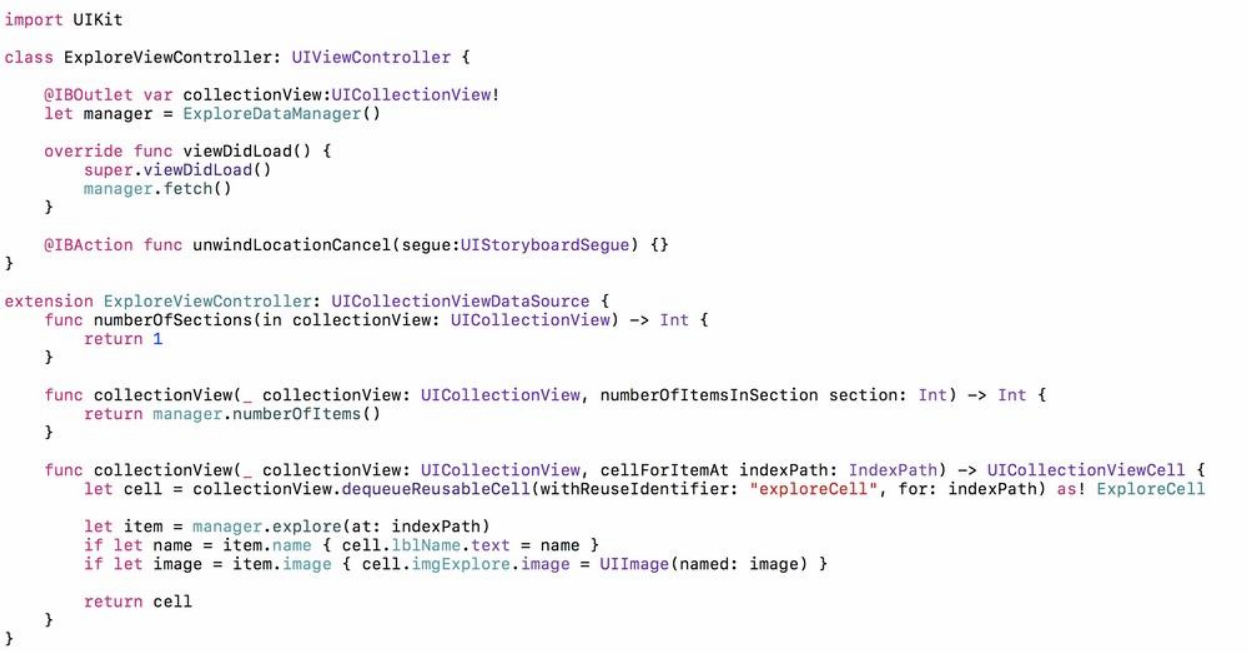
```
override func viewDidLoad() {
    super.viewDidLoad()

    initialize()
}

override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
    switch segue.identifier! {
    case Segue.showDetail.rawValue:
        showRestaurantDetail(segue: segue)
    default:
        print("Segue not added")
    }
}

func initialize() {
    mapView.delegate = self

    manager.fetch { (annotations) in
        addMap(annotations)
    }
}

func addMap(_ annotations:[RestaurantAnnotation]) {
    mapView.setRegion(manager.currentRegion(latDelta: 0.5, longDelta: 0.5), animated: true)
    mapView.addAnnotations(annotations)
}

func showRestaurantDetail(segue:UIStoryboardSegue) {
    if let viewController = segue.destination as? RestaurantDetailViewController, let restaurant = selectedRestaurant  {
        viewController.selectedRestaurant = restaurant
    }
}
```



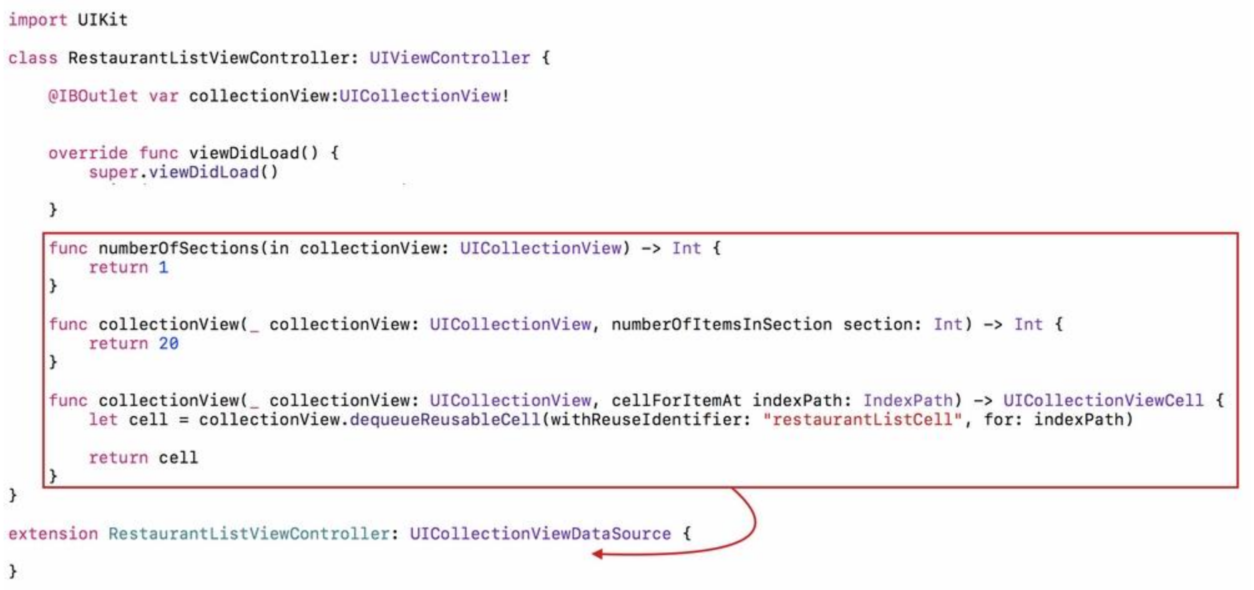
```
Optional(LetsEat.RestaurantItem(name: Optional("Red Hill Restaurant"), city:
Optional("Los Angeles"), address: Optional("1325 Echo Park Avenue"), price:
Optional(2), state: Optional("CA"), longitude: Optional(-118.256968), latitude:
Optional(34.077721000000011), cuisines: [], image: nil, restaurantID:
Optional(151228)))
```



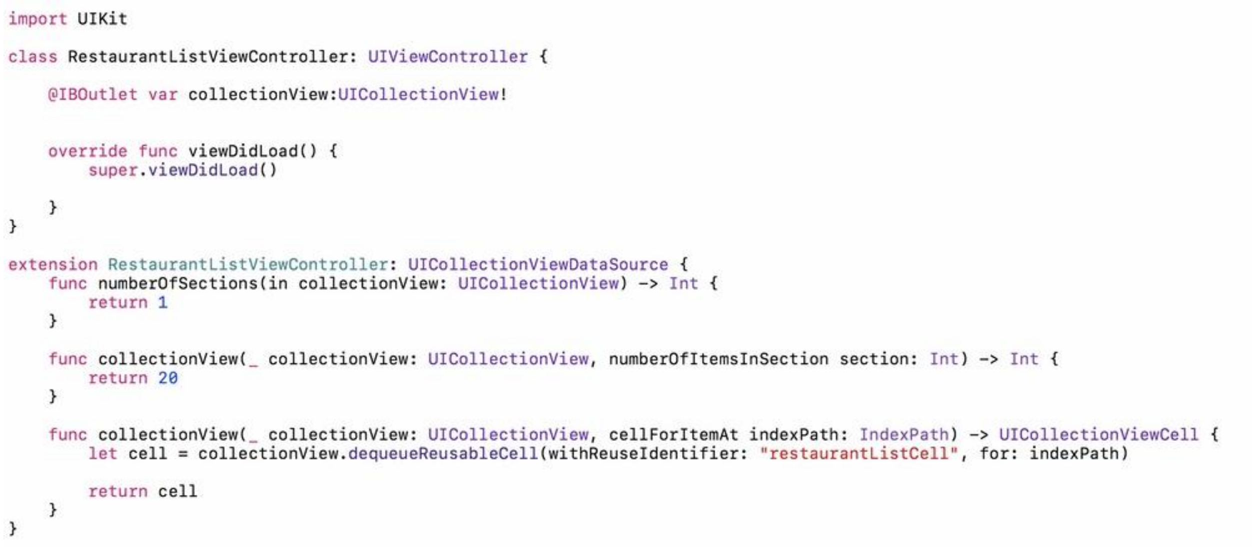
```
class ExploreViewController: UIViewController {

    @IBOutlet var collectionView:UICollectionView!
    let manager = ExploreDataManager()

    override func viewDidLoad() {
        super.viewDidLoad()
        manager.fetch()
    }

    func numberOfSections(in collectionView: UICollectionView) -> Int {
        return 1
    }

    func collectionView(_ collectionView: UICollectionView, numberOfItemsInSection section: Int) -> Int {
        return manager.numberOfItems()
    }

    func collectionView(_ collectionView: UICollectionView, cellForItemAt indexPath: IndexPath) -> UICollectionViewCell {
        let cell = collectionView.dequeueReusableCell(withReuseIdentifier: "exploreCell", for: indexPath) as! ExploreCell

        let item = manager.explore(at: indexPath)
        if let name = item.name { cell.lblName.text = name }
        if let image = item.image { cell.imgExplore.image = UIImage(named: image) }

        return cell
    }

    @IBAction func unwindLocationCancel(segue:UIStoryboardSegue) {}
}

extension ExploreViewController: UICollectionViewDataSource {

}
```



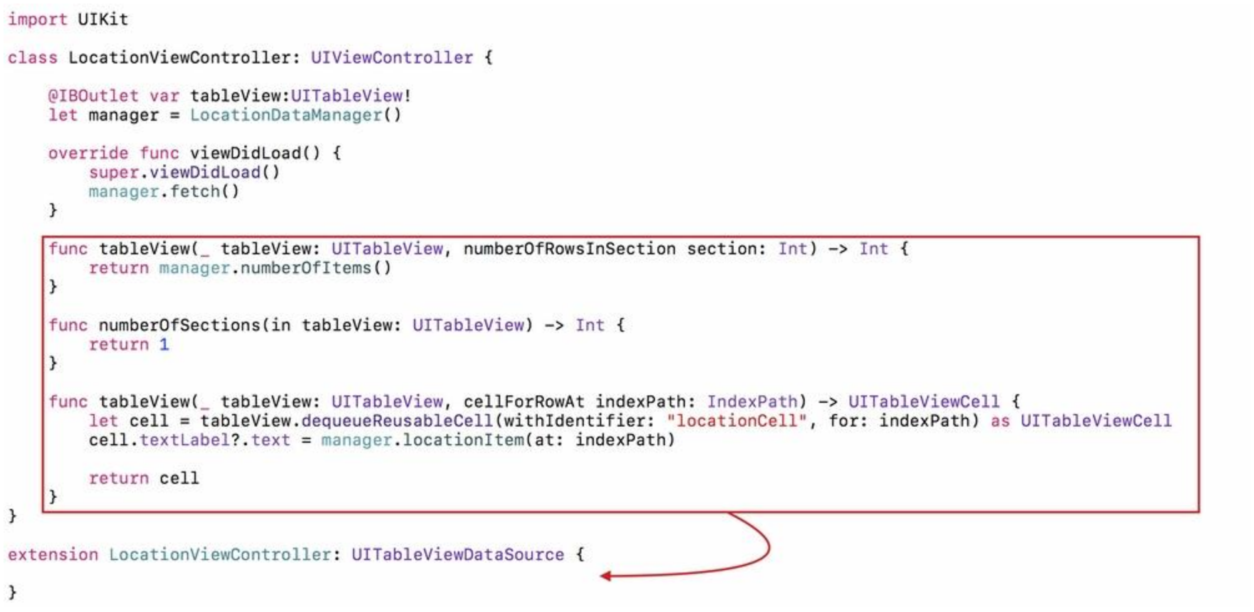
```
import UIKit

class ExploreViewController: UIViewController {

    @IBOutlet var collectionView:UICollectionView!
    let manager = ExploreDataManager()

    override func viewDidLoad() {
        super.viewDidLoad()
        manager.fetch()
    }

    @IBAction func unwindLocationCancel(segue:UIStoryboardSegue) {}
}

extension ExploreViewController: UICollectionViewDataSource {
    func numberOfSections(in collectionView: UICollectionView) -> Int {
        return 1
    }

    func collectionView(_ collectionView: UICollectionView, numberOfItemsInSection section: Int) -> Int {
        return manager.numberOfItems()
    }

    func collectionView(_ collectionView: UICollectionView, cellForItemAt indexPath: IndexPath) -> UICollectionViewCell {
        let cell = collectionView.dequeueReusableCell(withReuseIdentifier: "exploreCell", for: indexPath) as! ExploreCell

        let item = manager.explore(at: indexPath)
        if let name = item.name { cell.lblName.text = name }
        if let image = item.image { cell.imgExplore.image = UIImage(named: image) }

        return cell
    }
}
```



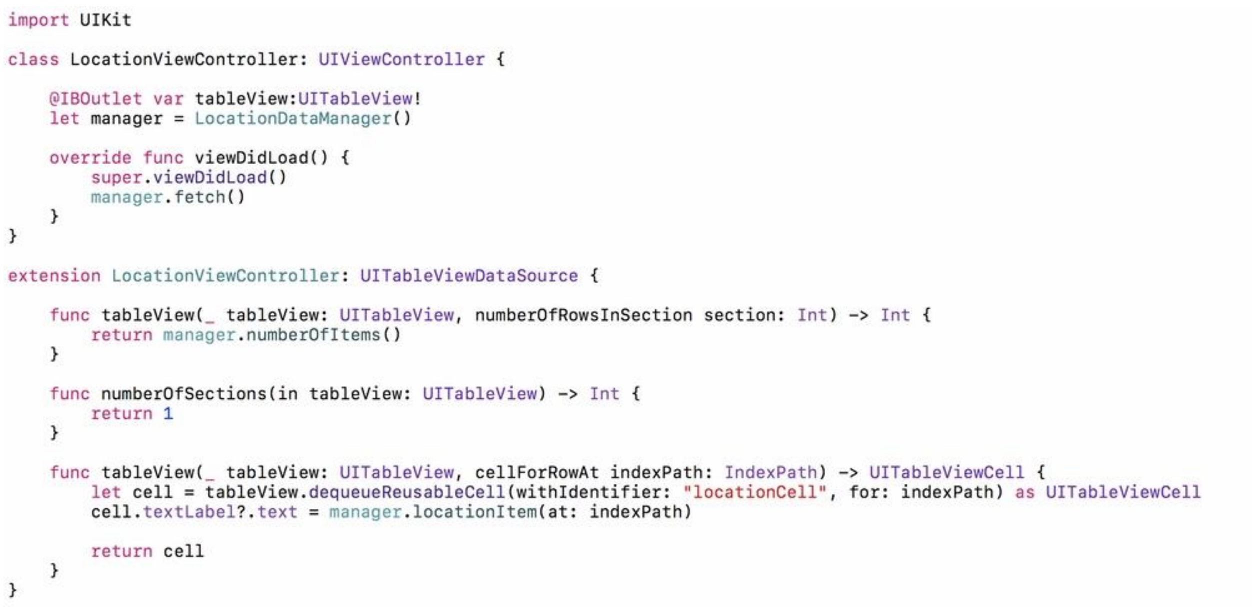
```
import UIKit

class RestaurantListViewController: UIViewController {

    @IBOutlet var collectionView:UICollectionView!


    override func viewDidLoad() {
        super.viewDidLoad()

    }

    func numberOfSections(in collectionView: UICollectionView) -> Int {
        return 1
    }

    func collectionView(_ collectionView: UICollectionView, numberOfItemsInSection section: Int) -> Int {
        return 20
    }

    func collectionView(_ collectionView: UICollectionView, cellForItemAt indexPath: IndexPath) -> UICollectionViewCell {
        let cell = collectionView.dequeueReusableCell(withReuseIdentifier: "restaurantListCell", for: indexPath)

        return cell
    }
}

extension RestaurantListViewController: UICollectionViewDataSource {

}
```



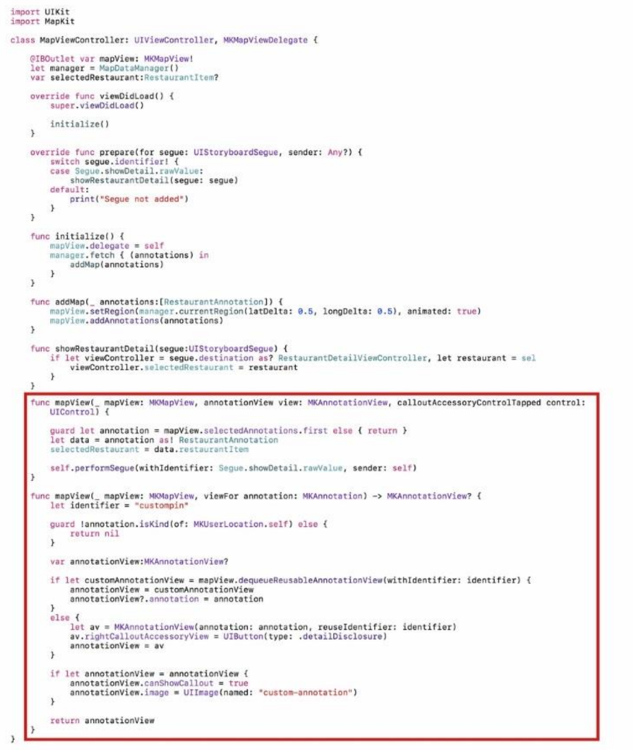
```
import UIKit

class RestaurantListViewController: UIViewController {

    @IBOutlet var collectionView:UICollectionView!


    override func viewDidLoad() {
        super.viewDidLoad()

    }
}

extension RestaurantListViewController: UICollectionViewDataSource {
    func numberOfSections(in collectionView: UICollectionView) -> Int {
        return 1
    }

    func collectionView(_ collectionView: UICollectionView, numberOfItemsInSection section: Int) -> Int {
        return 20
    }

    func collectionView(_ collectionView: UICollectionView, cellForItemAt indexPath: IndexPath) -> UICollectionViewCell {
        let cell = collectionView.dequeueReusableCell(withReuseIdentifier: "restaurantListCell", for: indexPath)

        return cell
    }
}
```



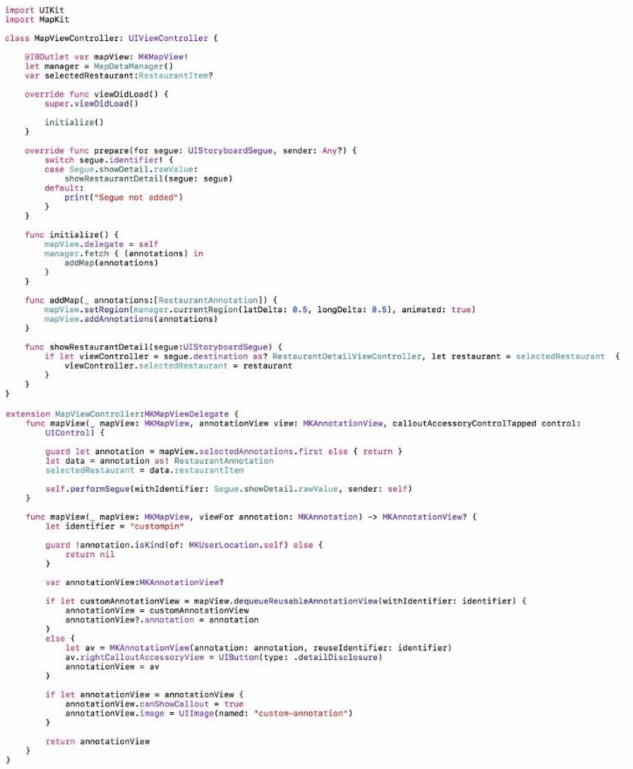
```swift
import UIKit

class LocationViewController: UIViewController {

    @IBOutlet var tableView:UITableView!
    let manager = LocationDataManager()

    override func viewDidLoad() {
        super.viewDidLoad()
        manager.fetch()
    }

    func tableView(_ tableView: UITableView, numberOfRowsInSection section: Int) -> Int {
        return manager.numberOfItems()
    }

    func numberOfSections(in tableView: UITableView) -> Int {
        return 1
    }

    func tableView(_ tableView: UITableView, cellForRowAt indexPath: IndexPath) -> UITableViewCell {
        let cell = tableView.dequeueReusableCell(withIdentifier: "locationCell", for: indexPath) as UITableViewCell
        cell.textLabel?.text = manager.locationItem(at: indexPath)

        return cell
    }
}

extension LocationViewController: UITableViewDataSource {

}
```



```swift
import UIKit

class LocationViewController: UIViewController {

    @IBOutlet var tableView:UITableView!
    let manager = LocationDataManager()

    override func viewDidLoad() {
        super.viewDidLoad()
        manager.fetch()
    }
}

extension LocationViewController: UITableViewDataSource {

    func tableView(_ tableView: UITableView, numberOfRowsInSection section: Int) -> Int {
        return manager.numberOfItems()
    }

    func numberOfSections(in tableView: UITableView) -> Int {
        return 1
    }

    func tableView(_ tableView: UITableView, cellForRowAt indexPath: IndexPath) -> UITableViewCell {
        let cell = tableView.dequeueReusableCell(withIdentifier: "locationCell", for: indexPath) as UITableViewCell
        cell.textLabel?.text = manager.locationItem(at: indexPath)

        return cell
    }
}
```

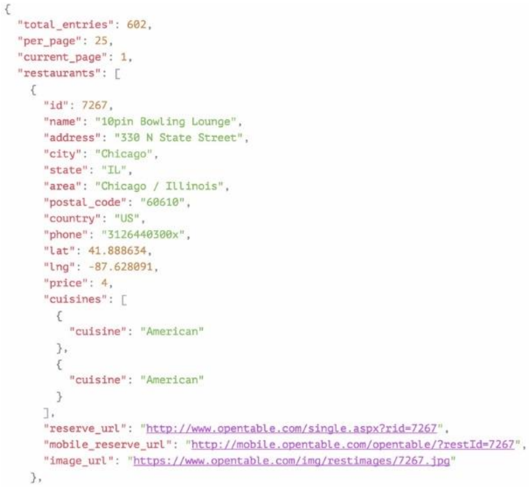


```
import UIKit
import MapKit

class MapViewController: UIViewController, MKMapViewDelegate {

    @IBOutlet var mapView: MKMapView!
    let manager = MapDataManager()
    var selectedRestaurant:RestaurantItem?

    override func viewDidLoad() {
        super.viewDidLoad()

        initialize()
    }

    override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
        switch segue.identifier! {
        case Segue.showDetail.rawValue:
            showRestaurantDetail(segue: segue)
        default:
            print("Segue not added")
        }
    }

    func initialize() {
        mapView.delegate = self
        manager.fetch { (annotations) in
            addMap(annotations)
        }
    }

    func addMap(_ annotations:[RestaurantAnnotation]) {
        mapView.setRegion(manager.currentRegion(latDelta: 0.5, longDelta: 0.5), animated: true)
        mapView.addAnnotations(annotations)
    }

    func showRestaurantDetail(segue:UIStoryboardSegue) {
        if let viewController = segue.destination as? RestaurantDetailViewController, let restaurant = sel
            viewController.selectedRestaurant = restaurant
        }
    }
    func mapView(_ mapView: MKMapView, annotationView view: MKAnnotationView, calloutAccessoryControlTapped control:
        UIControl) {

        guard let annotation = mapView.selectedAnnotations.first else { return }
        let data = annotation as! RestaurantAnnotation
        selectedRestaurant = data.restaurantItem

        self.performSegue(withIdentifier: Segue.showDetail.rawValue, sender: self)
    }

    func mapView(_ mapView: MKMapView, viewFor annotation: MKAnnotation) -> MKAnnotationView? {
        let identifier = "custompin"

        guard !annotation.isKind(of: MKUserLocation.self) else {
            return nil
        }

        var annotationView:MKAnnotationView?

        if let customAnnotationView = mapView.dequeueReusableAnnotationView(withIdentifier: identifier) {
            annotationView = customAnnotationView
            annotationView?.annotation = annotation
        }
        else {
            let av = MKAnnotationView(annotation: annotation, reuseIdentifier: identifier)
            av.rightCalloutAccessoryView = UIButton(type: .detailDisclosure)
            annotationView = av
        }

        if let annotationView = annotationView {
            annotationView.canShowCallout = true
            annotationView.image = UIImage(named: "custom-annotation")
        }

        return annotationView
    }
}
```

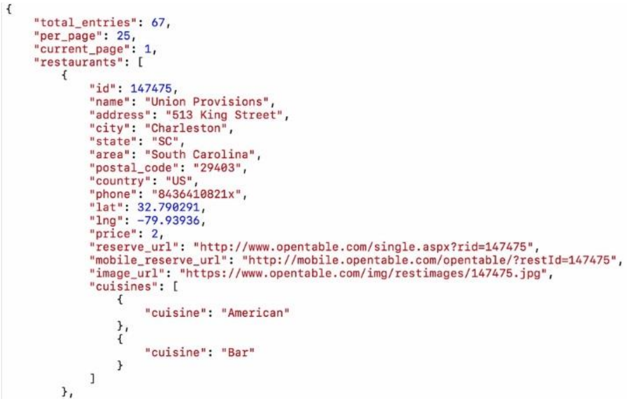


```
import UIKit
import MapKit

class MapViewController: UIViewController {

    @IBOutlet var mapView: MKMapView!
    let manager = MapDataManager()
    var selectedRestaurant:RestaurantItem?

    override func viewDidLoad() {
        super.viewDidLoad()

        initialize()
    }

    override func prepare(for segue: UIStoryboardSegue, sender: Any?) {
        switch segue.identifier! {
        case Segue.showDetail.rawValue:
            showRestaurantDetail(segue: segue)
        default:
            print("Segue not added")
        }
    }

    func initialize() {
        mapView.delegate = self
        manager.fetch { (annotations) in
            addMap(annotations)
        }
    }

    func addMap(_ annotations:[RestaurantAnnotation]) {
        mapView.setRegion(manager.currentRegion(latDelta: 0.5, longDelta: 0.5), animated: true)
        mapView.addAnnotations(annotations)
    }

    func showRestaurantDetail(segue:UIStoryboardSegue) {
        if let viewController = segue.destination as? RestaurantDetailViewController, let restaurant = selectedRestaurant  {
            viewController.selectedRestaurant = restaurant
        }
    }
}

extension MapViewController:MKMapViewDelegate {
    func mapView(_ mapView: MKMapView, annotationView view: MKAnnotationView, calloutAccessoryControlTapped control:
        UIControl) {

        guard let annotation = mapView.selectedAnnotations.first else { return }
        let data = annotation as! RestaurantAnnotation
        selectedRestaurant = data.restaurantItem

        self.performSegue(withIdentifier: Segue.showDetail.rawValue, sender: self)
    }

    func mapView(_ mapView: MKMapView, viewFor annotation: MKAnnotation) -> MKAnnotationView? {
        let identifier = "custompin"

        guard !annotation.isKind(of: MKUserLocation.self) else {
            return nil
        }

        var annotationView:MKAnnotationView?

        if let customAnnotationView = mapView.dequeueReusableAnnotationView(withIdentifier: identifier) {
            annotationView = customAnnotationView
            annotationView?.annotation = annotation
        }
        else {
            let av = MKAnnotationView(annotation: annotation, reuseIdentifier: identifier)
            av.rightCalloutAccessoryView = UIButton(type: .detailDisclosure)
            annotationView = av
        }

        if let annotationView = annotationView {
            annotationView.canShowCallout = true
            annotationView.image = UIImage(named: "custom-annotation")
        }

        return annotationView
    }
}
```

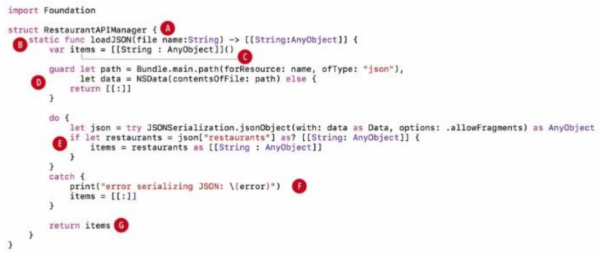
Chapter 11: Where's My Data?



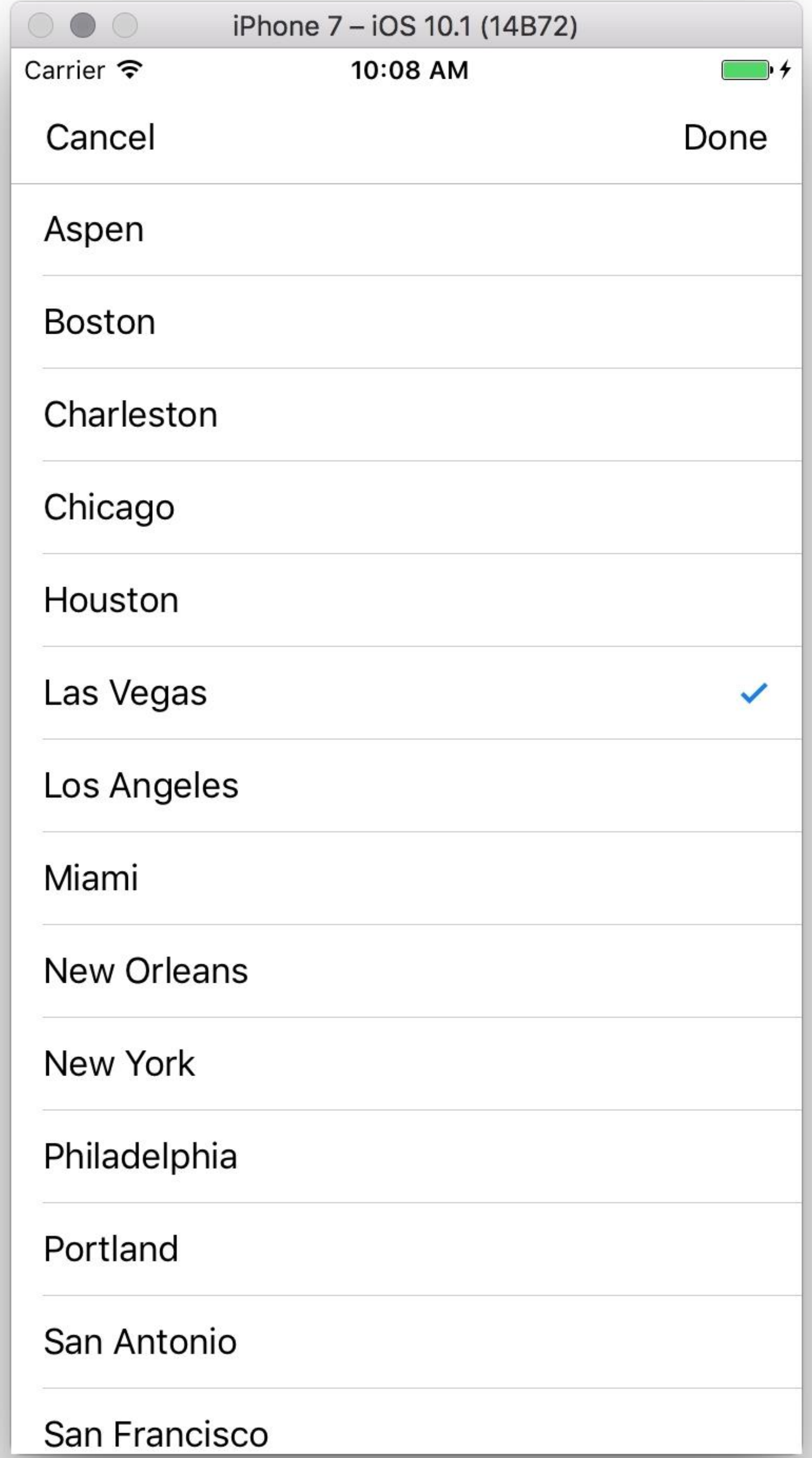
```
{
  "total_entries": 602,
  "per_page": 25,
  "current_page": 1,
  "restaurants": [
    {
      "id": 7267,
      "name": "10pin Bowling Lounge",
      "address": "330 N State Street",
      "city": "Chicago",
      "state": "IL",
      "area": "Chicago / Illinois",
      "postal_code": "60610",
      "country": "US",
      "phone": "3126440300x",
      "lat": 41.888634,
      "lng": -87.628091,
      "price": 4,
      "cuisines": [
        {
          "cuisine": "American"
        },
        {
          "cuisine": "American"
        }
      ],
      "reserve_url": "http://www.opentable.com/single.aspx?rid=7267",
      "mobile_reserve_url": "http://mobile.opentable.com/opentable/?restId=7267",
      "image_url": "https://www.opentable.com/img/restimages/7267.jpg"
    },
```



```
{
    "total_entries": 67,
    "per_page": 25,
    "current_page": 1,
    "restaurants": [
        {
            "id": 147475,
            "name": "Union Provisions",
            "address": "513 King Street",
            "city": "Charleston",
            "state": "SC",
            "area": "South Carolina",
            "postal_code": "29403",
            "country": "US",
            "phone": "8436410821x",
            "lat": 32.790291,
            "lng": -79.93936,
            "price": 2,
            "reserve_url": "http://www.opentable.com/single.aspx?rid=147475",
            "mobile_reserve_url": "http://mobile.opentable.com/opentable/?restId=147475",
            "image_url": "https://www.opentable.com/img/restimages/147475.jpg",
            "cuisines": [
                {
                    "cuisine": "American"
                },
                {
                    "cuisine": "Bar"
                }
            ]
        },
```



```
import Foundation

struct RestaurantAPIManager {
    static func loadJSON(file name:String) -> [[String:AnyObject]] {
        var items = [[String : AnyObject]]()

        guard let path = Bundle.main.path(forResource: name, ofType: "json"),
              let data = NSData(contentsOfFile: path) else {
            return [[:]]
        }

        do {
            let json = try JSONSerialization.jsonObject(with: data as Data, options: .allowFragments) as AnyObject
            if let restaurants = json["restaurants"] as? [[String: AnyObject]] {
                items = restaurants as [[String : AnyObject]]
            }
        }
        catch {
            print("error serializing JSON: \(error)")
            items = [[:]]
        }

        return items
    }
}
```



Aspen

Boston

Charleston

Chicago

Houston

Las Vegas ✓

Los Angeles

Miami

New Orleans

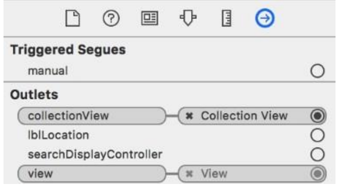
New York

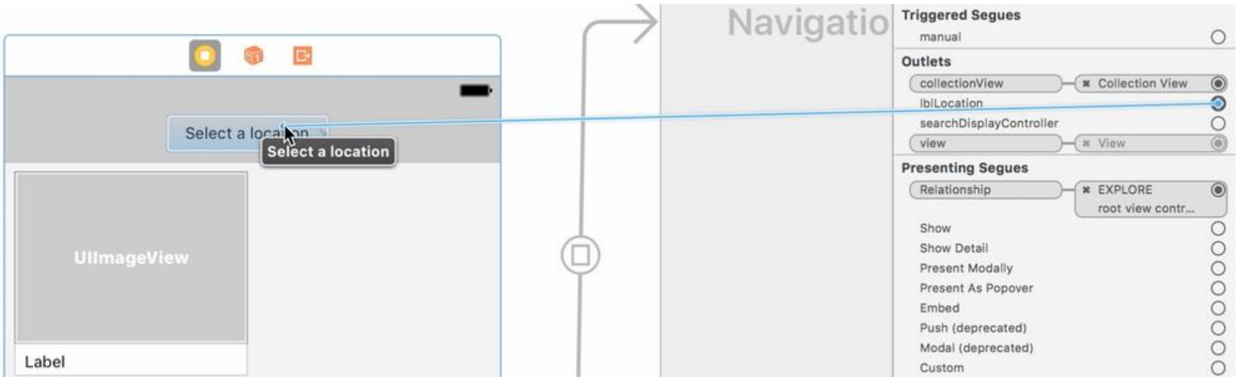
Philadelphia

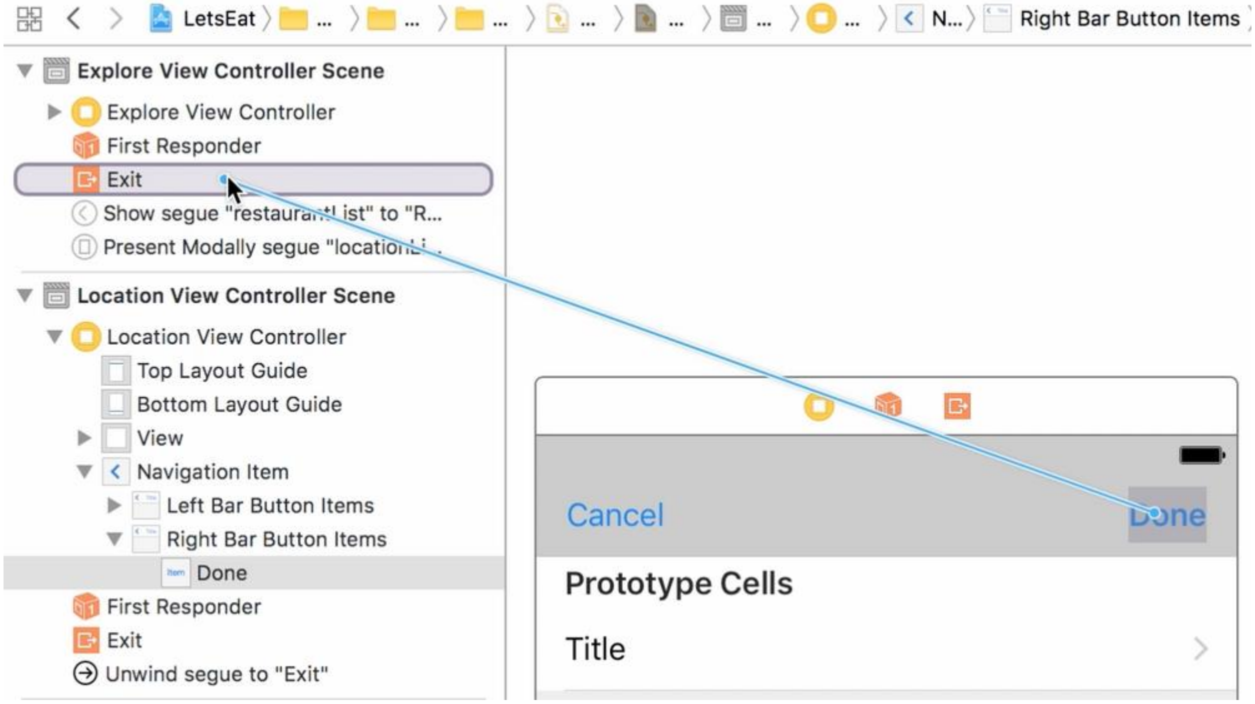
Portland

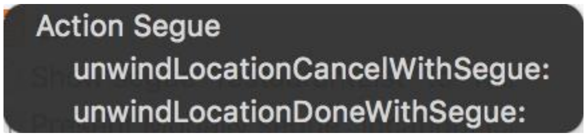
San Antonio

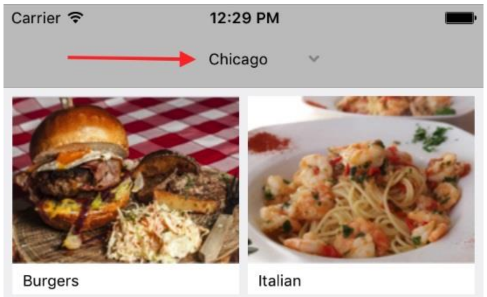
San Francisco

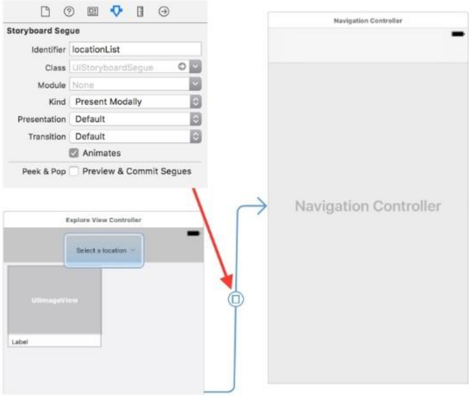

Triggered Segues
manual
Outlets
collectionView
Collection View
lblLocation
searchDisplayController
view
View


Select a location
Select a location
UIImageView
Label
Navigatio
Triggered Segues
manual
Outlets
collectionView
Collection View
lblLocation
searchDisplayController
view
View
Presenting Segues
Relationship
EXPLORE
root view contr...
Show
Show Detail
Present Modally
Present As Popover
Embed
Push (deprecated)
Modal (deprecated)
Custom


LetsEat
N...
Right Bar Button Items
Explore View Controller Scene
Explore View Controller
First Responder
Exit
Show segue "restaurantList" to "R...
Present Modally segue "locationLi...
Location View Controller Scene
Location View Controller
Top Layout Guide
Bottom Layout Guide
View
Navigation Item
Left Bar Button Items
Right Bar Button Items
Done
First Responder
Exit
Unwind segue to "Exit"
Cancel
Done
Prototype Cells
Title


Action Segue
unwindLocationCancelWithSegue:
unwindLocationDoneWithSegue:




Storyboard Segue

Identifier locationList

Class UIStoryboardSegue

Module None

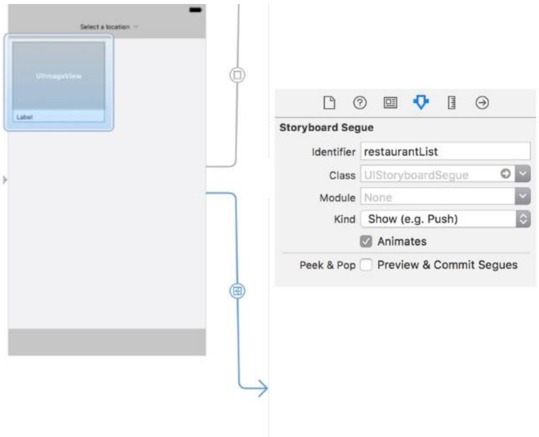
Kind Present Modally

Presentation Default

Transition Default

☑ Animates

Peek & Pop □ Preview & Commit Segues


Storyboard Segue

Identifier restaurantList

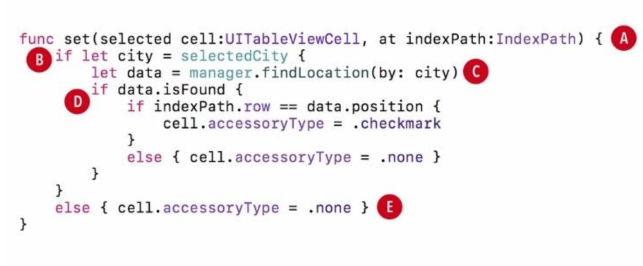
Class UIStoryboardSegue

Module None

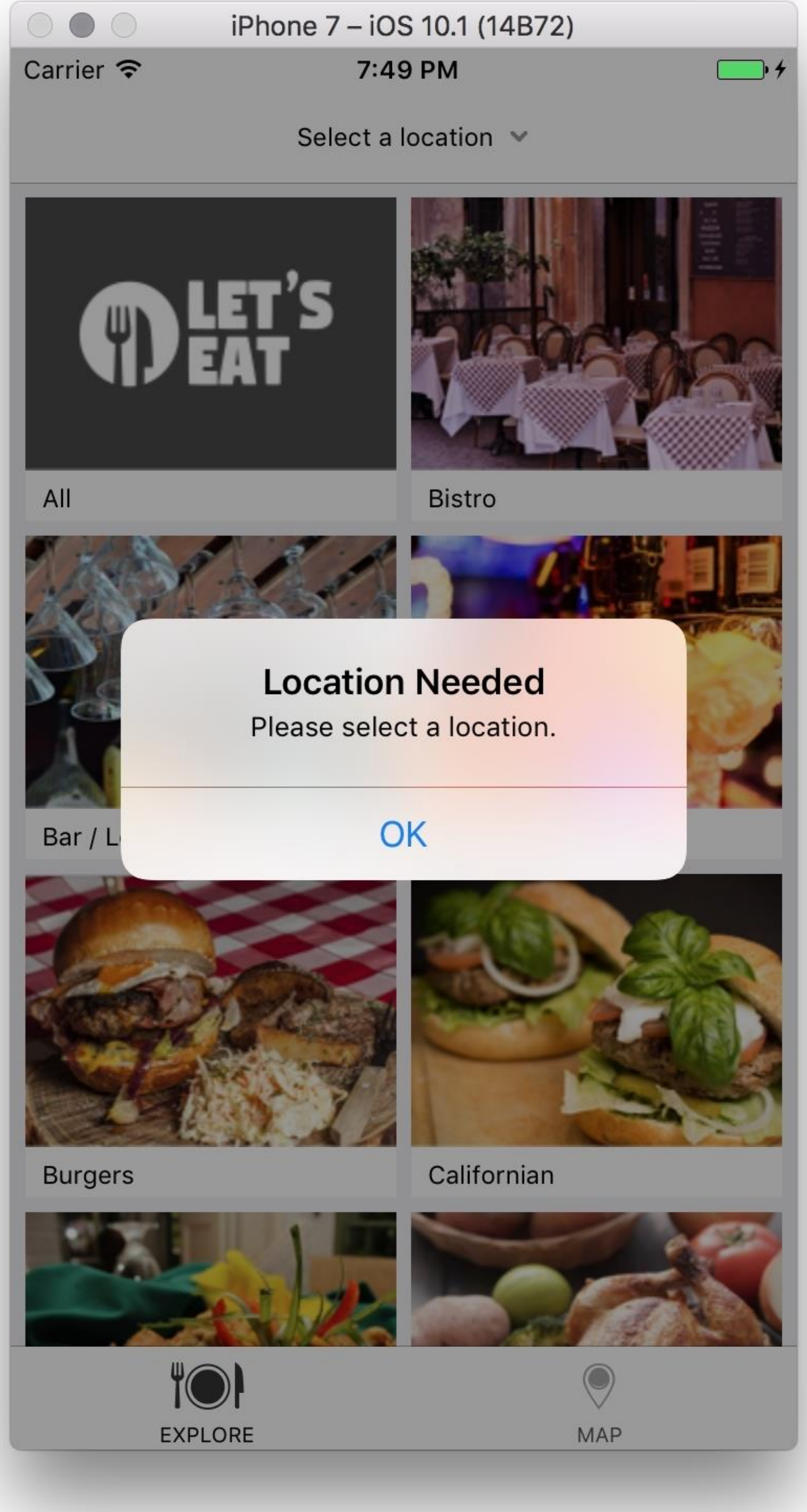
Kind Show (e.g. Push)

☑ Animates

Peek & Pop □ Preview & Commit Segues

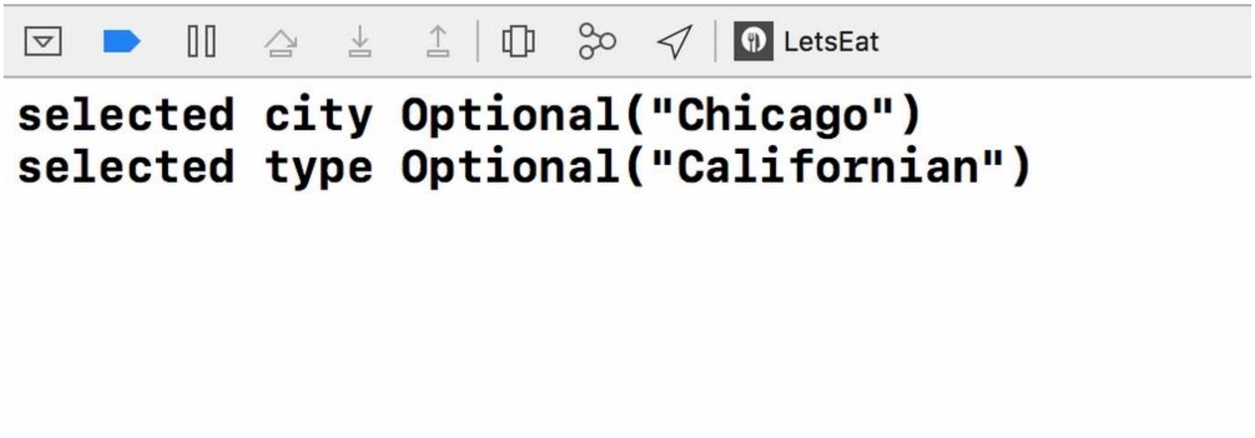


```
func set(selected cell:UITableViewCell, at indexPath:IndexPath) {
    if let city = selectedCity {
        let data = manager.findLocation(by: city)
        if data.isFound {
            if indexPath.row == data.position {
                cell.accessoryType = .checkmark
            }
            else { cell.accessoryType = .none }
        }
    }
    else { cell.accessoryType = .none }
}
```

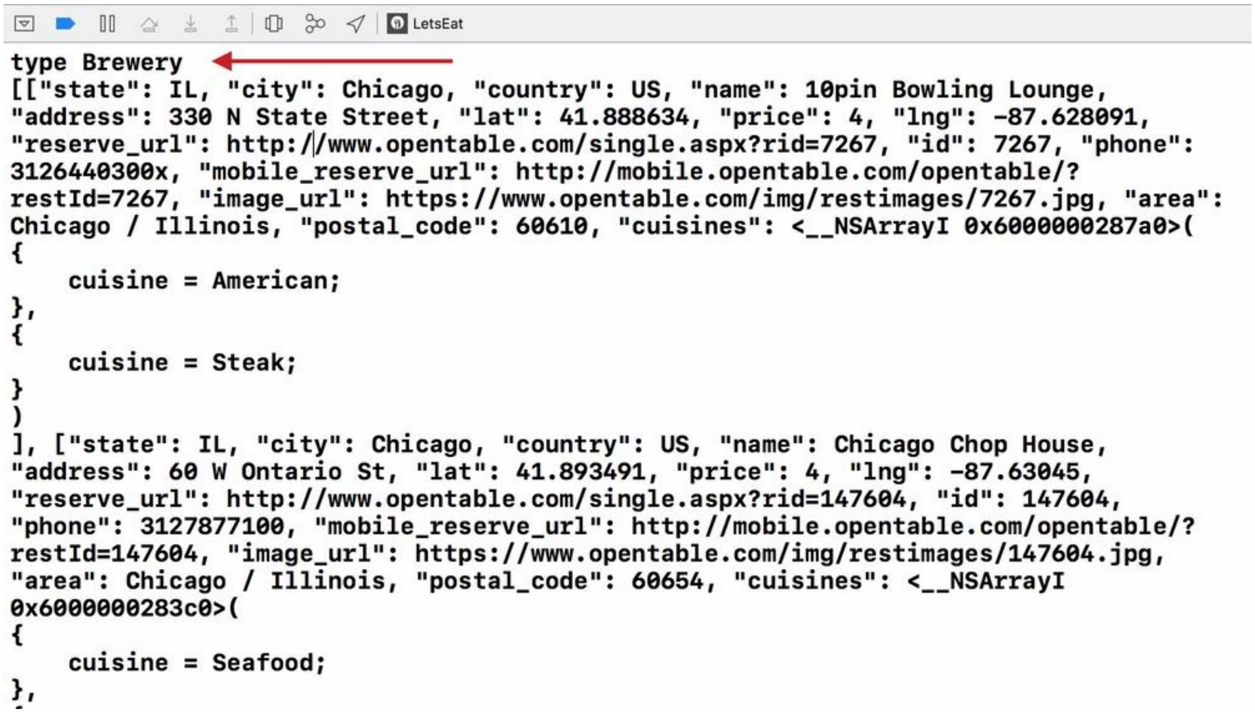


Location Needed

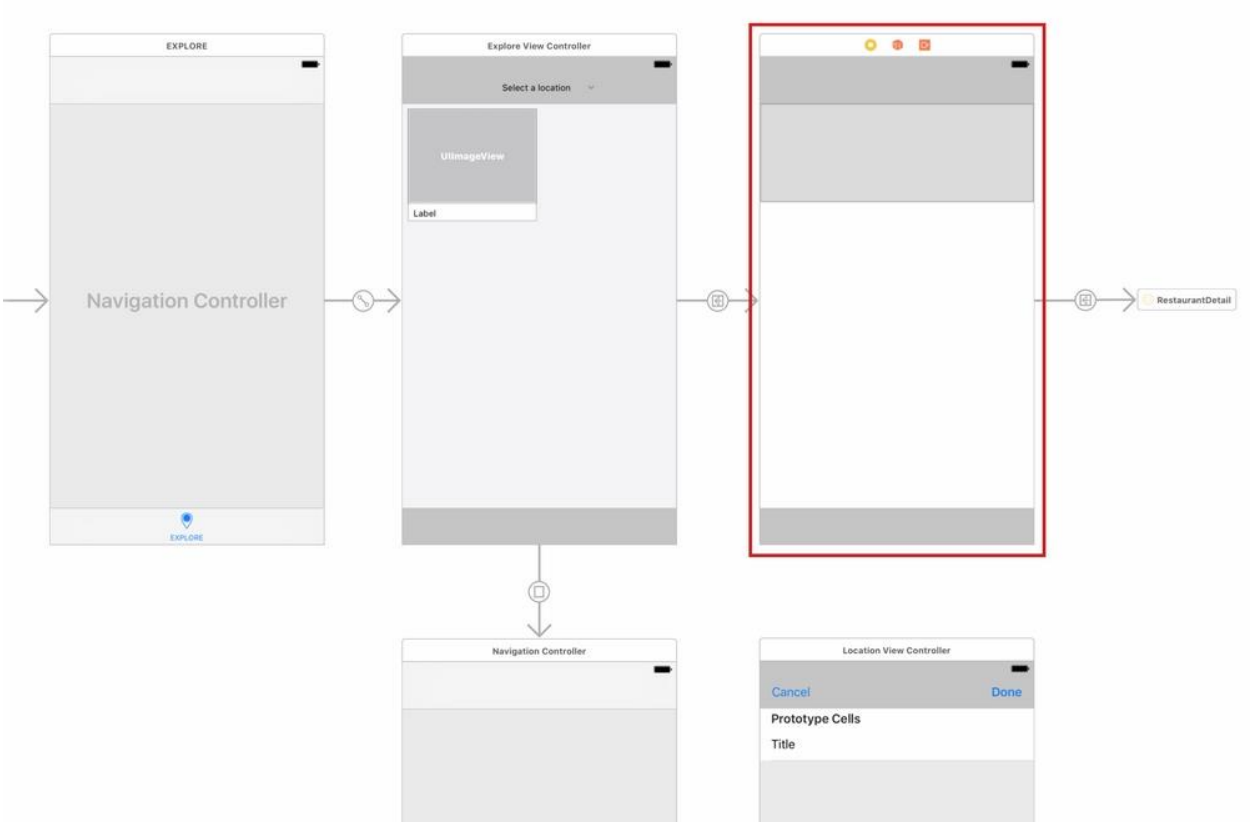
Please select a location.

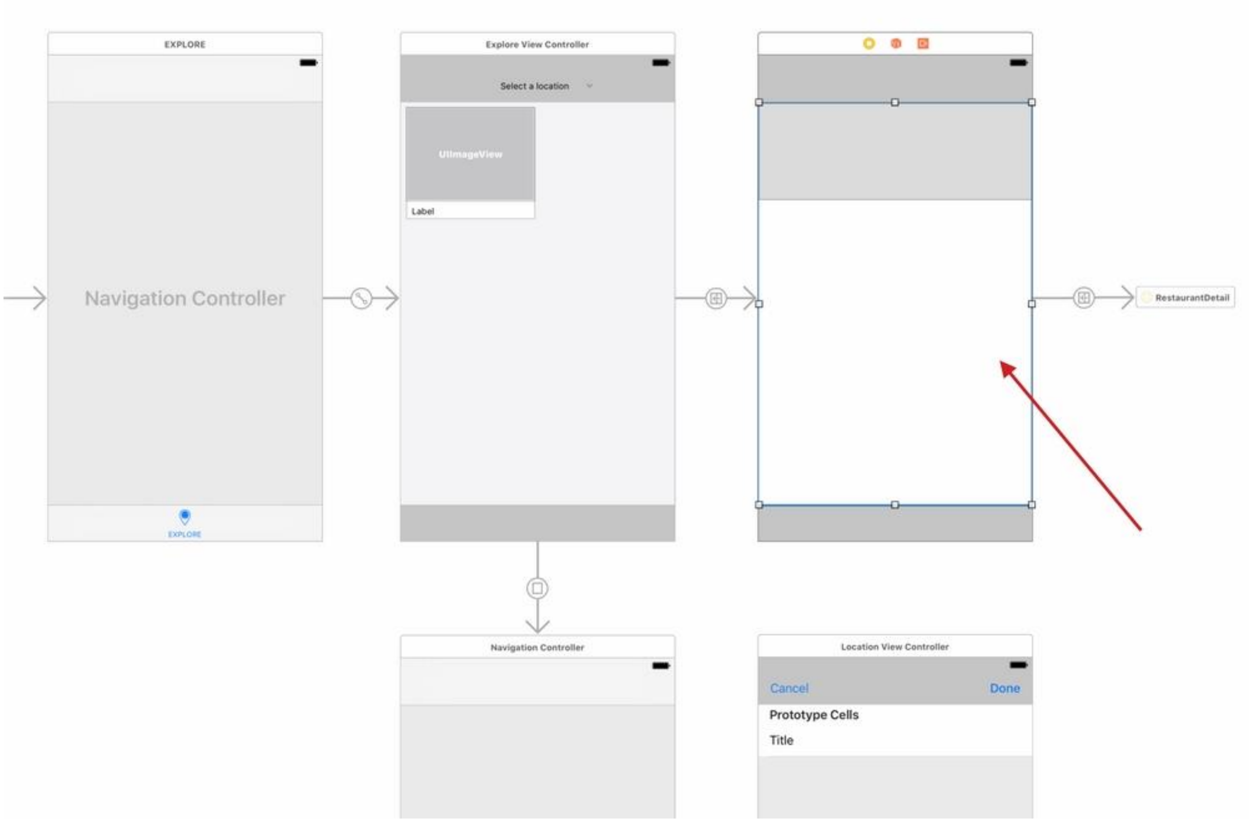


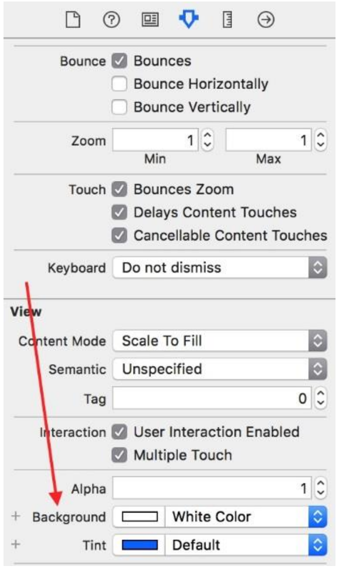
```
selected city Optional("Chicago")
selected type Optional("Californian")
```



```
type Brewery
[["state": IL, "city": Chicago, "country": US, "name": 10pin Bowling Lounge,
"address": 330 N State Street, "lat": 41.888634, "price": 4, "lng": -87.628091,
"reserve_url": http://www.opentable.com/single.aspx?rid=7267, "id": 7267, "phone":
3126440300x, "mobile_reserve_url": http://mobile.opentable.com/opentable/?
restId=7267, "image_url": https://www.opentable.com/img/restimages/7267.jpg, "area":
Chicago / Illinois, "postal_code": 60610, "cuisines": <__NSArrayI 0x6000000287a0>(
{
    cuisine = American;
},
{
    cuisine = Steak;
}
)
], ["state": IL, "city": Chicago, "country": US, "name": Chicago Chop House,
"address": 60 W Ontario St, "lat": 41.893491, "price": 4, "lng": -87.63045,
"reserve_url": http://www.opentable.com/single.aspx?rid=147604, "id": 147604,
"phone": 3127877100, "mobile_reserve_url": http://mobile.opentable.com/opentable/?
restId=147604, "image_url": https://www.opentable.com/img/restimages/147604.jpg,
"area": Chicago / Illinois, "postal_code": 60654, "cuisines": <__NSArrayI
0x6000000283c0>(
{
    cuisine = Seafood;
},
```


EXPLORE
Navigation Controller
EXPLORE
Explore View Controller
Select a location
UIImageView
Label
RestaurantDetail
Navigation Controller
Location View Controller
Cancel
Done
Prototype Cells
Title





Bounce ☑ Bounces
□ Bounce Horizontally
□ Bounce Vertically

Zoom 1 Min 1 Max

Touch ☑ Bounces Zoom
☑ Delays Content Touches
☑ Cancellable Content Touches

Keyboard Do not dismiss

View

Content Mode Scale To Fill

Semantic Unspecified

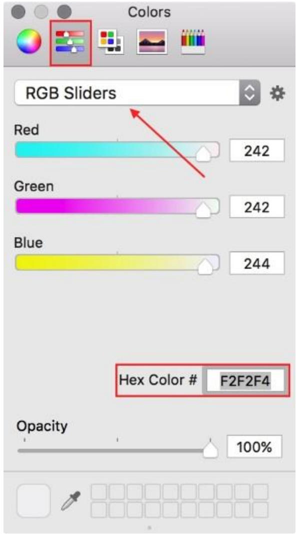
Tag 0

Interaction ☑ User Interaction Enabled
☑ Multiple Touch

Alpha 1

Background White Color

Tint Default



RGB Sliders

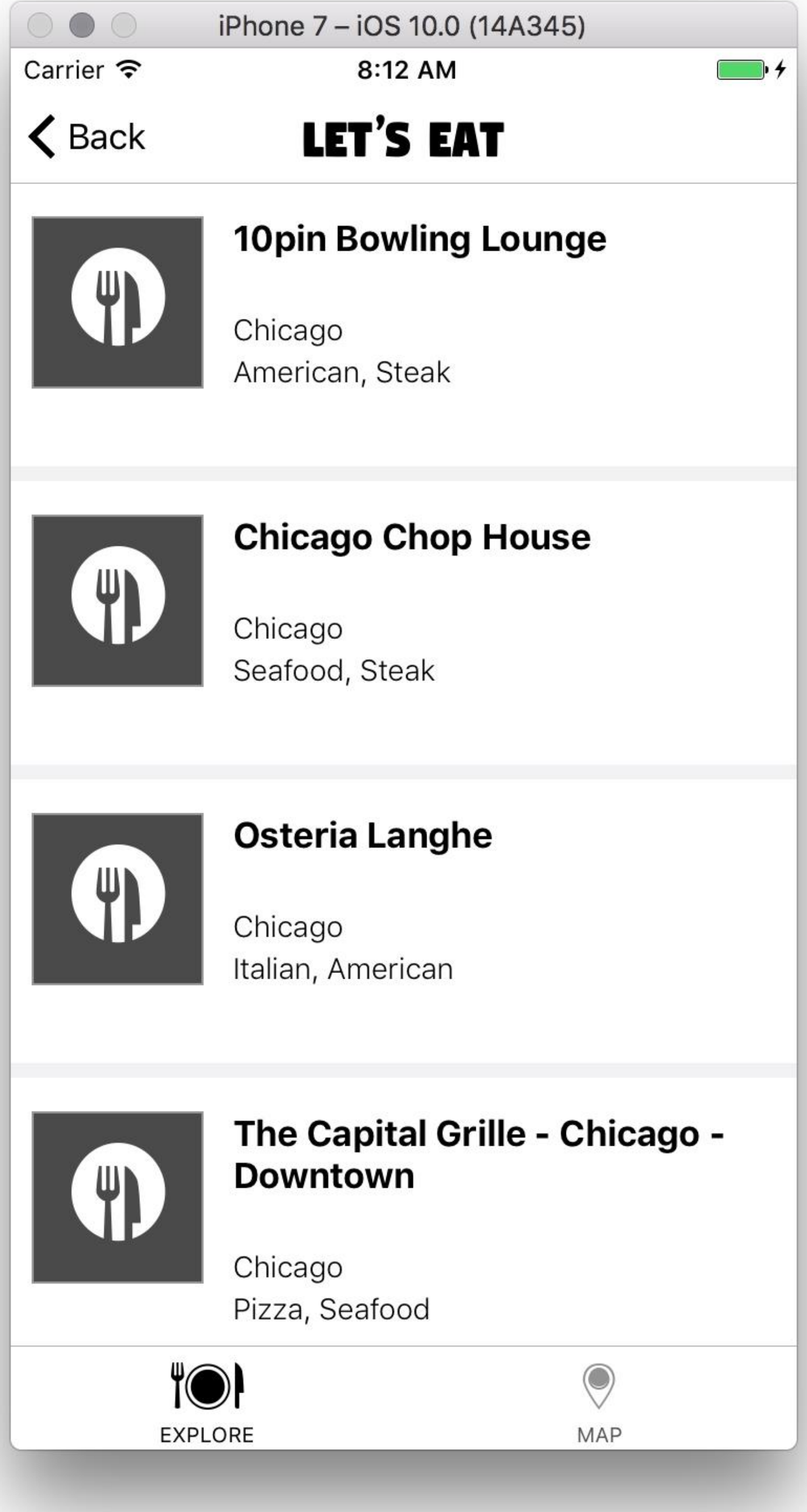
Red 242

Green 242

Blue 244

Hex Color # F2F2F4

Opacity 100%



iPhone 7 – iOS 10.0 (14A345)

Carrier 8:12 AM

Back LET'S EAT

10pin Bowling Lounge

Chicago
American, Steak

Chicago Chop House

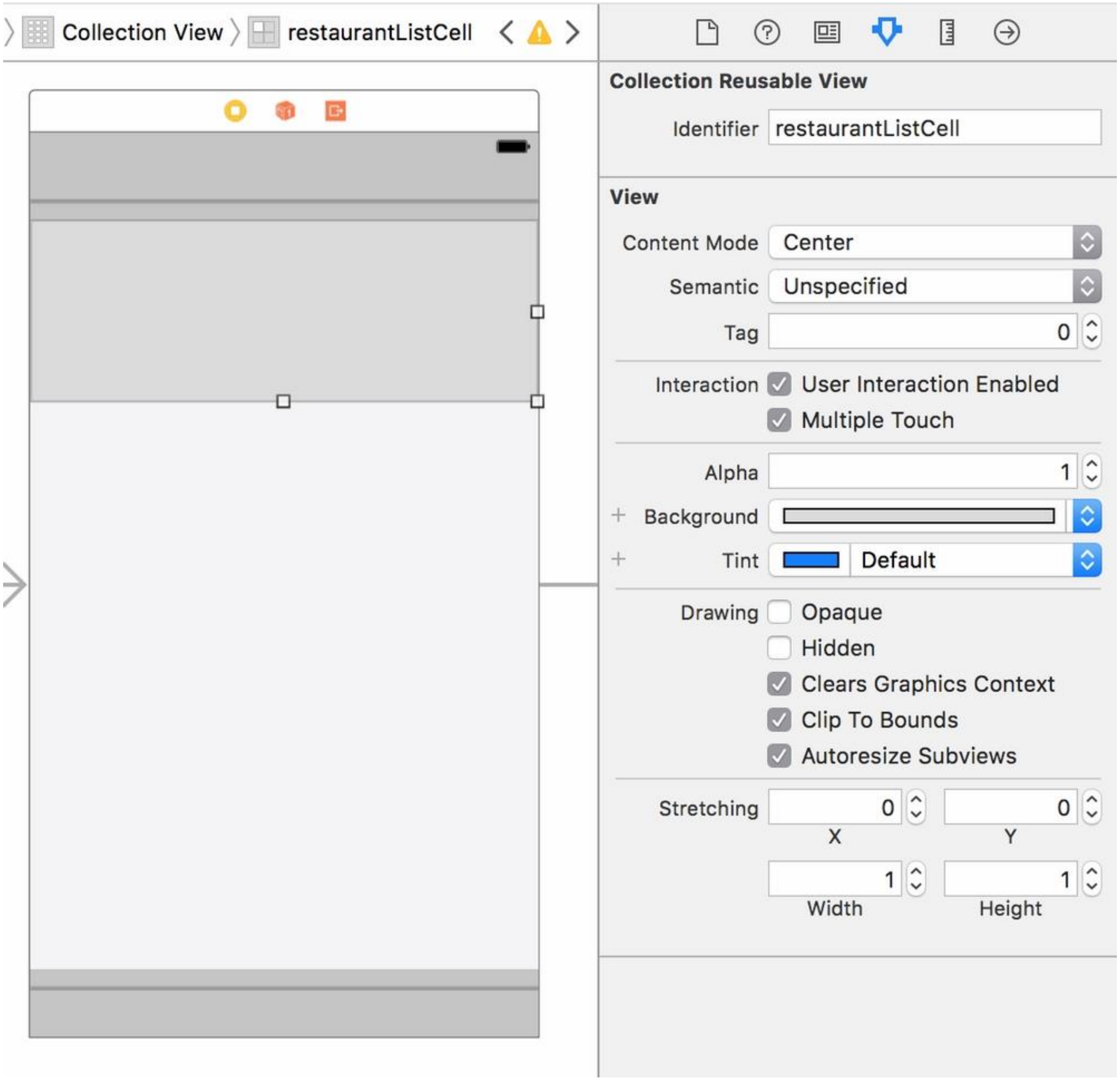
Chicago
Seafood, Steak

Osteria Langhe

Chicago
Italian, American

The Capital Grille - Chicago - Downtown

Chicago
Pizza, Seafood



Collection Reusable View

Identifier restaurantListCell

View

Content Mode Center

Semantic Unspecified

Tag 0

Interaction ☑ User Interaction Enabled

☑ Multiple Touch

Alpha 1

Background

Tint Default

Drawing □ Opaque

□ Hidden

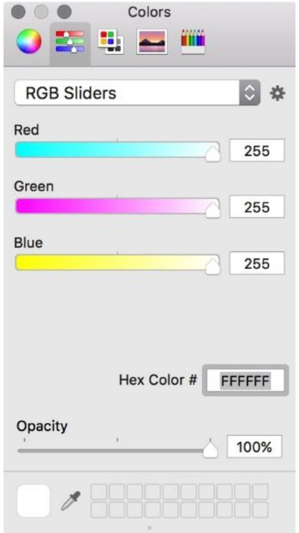
☑ Clears Graphics Context

☑ Clip To Bounds

☑ Autoresize Subviews

Stretching 0 X 0 Y

1 Width 1 Height



RGB Sliders

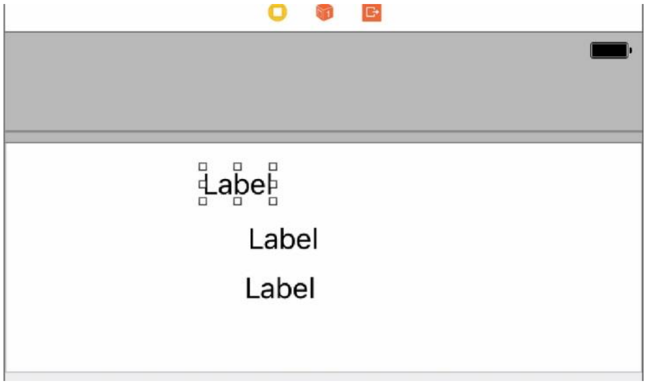
Red 255

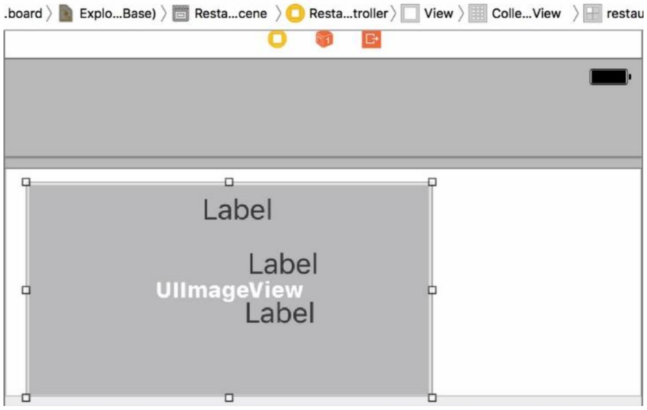
Green 255

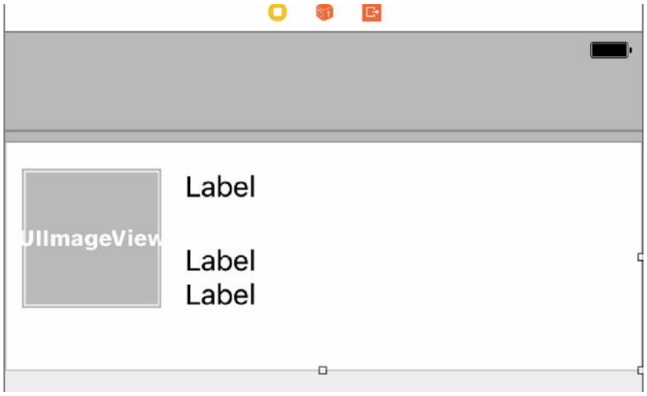
Blue 255

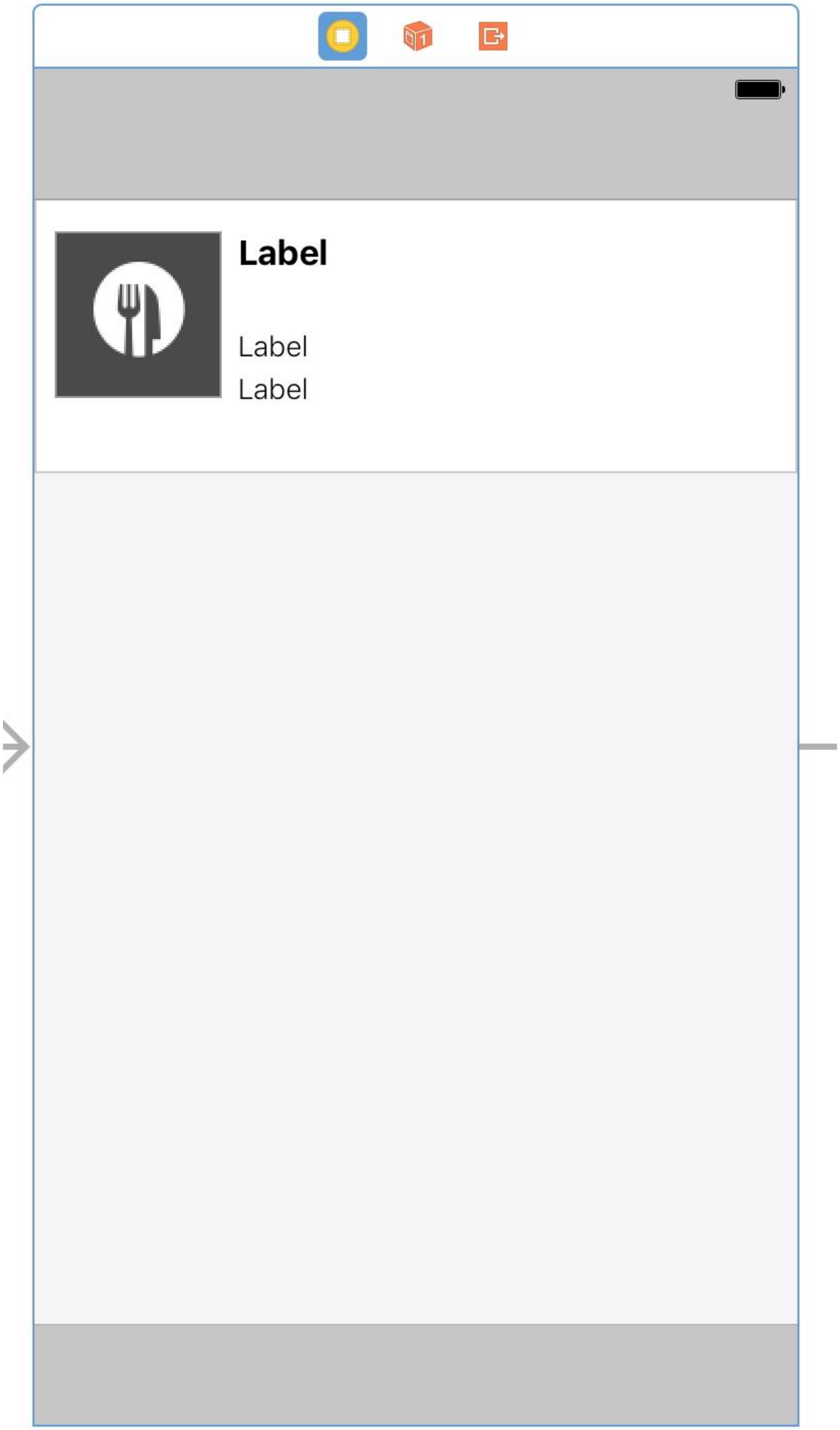
Hex Color # FFFFFF

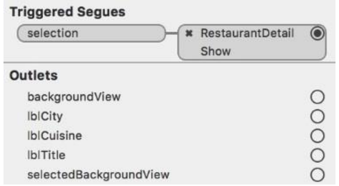
Opacity 100%




.board 〉 Explo...Base) 〉 Resta...cene 〉 Resta...troller 〉 View 〉 Colle...View 〉 restau
Label
Label
UIImageView
Label

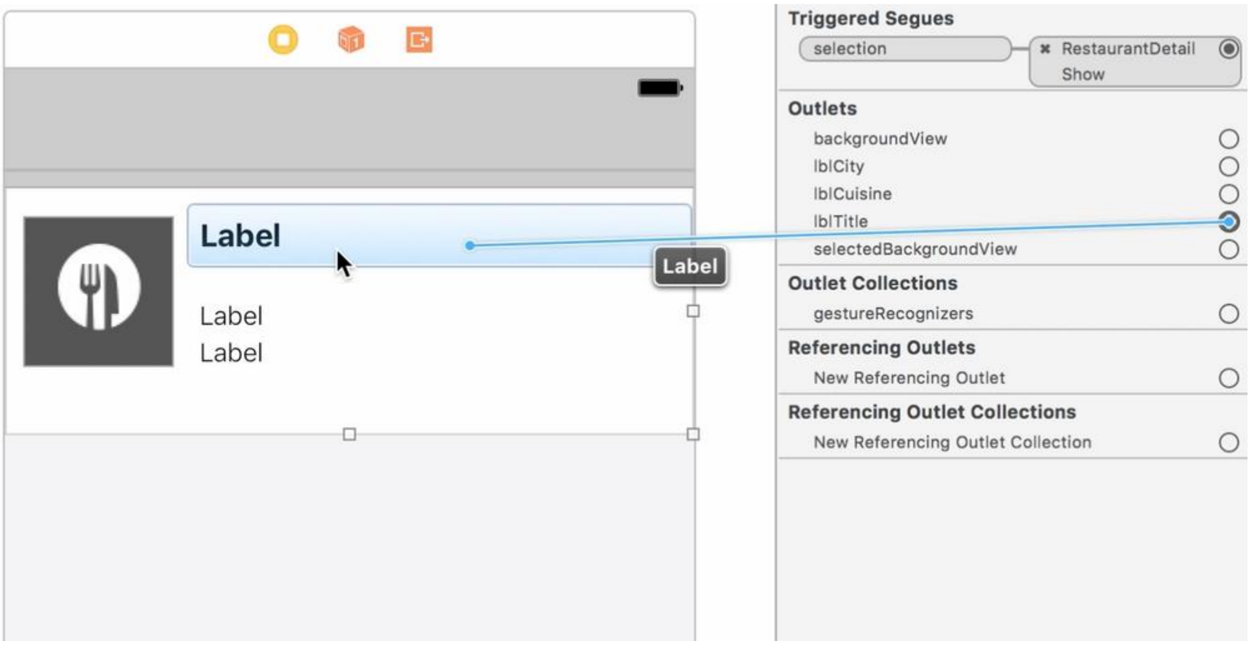

UIImageView
Label
Label
Label


Label
Label
Label



Triggered Segues
selection — RestaurantDetail Show

Outlets
backgroundView ○
lblCity ○
lblCuisine ○
lblTitle ○
selectedBackgroundView ○



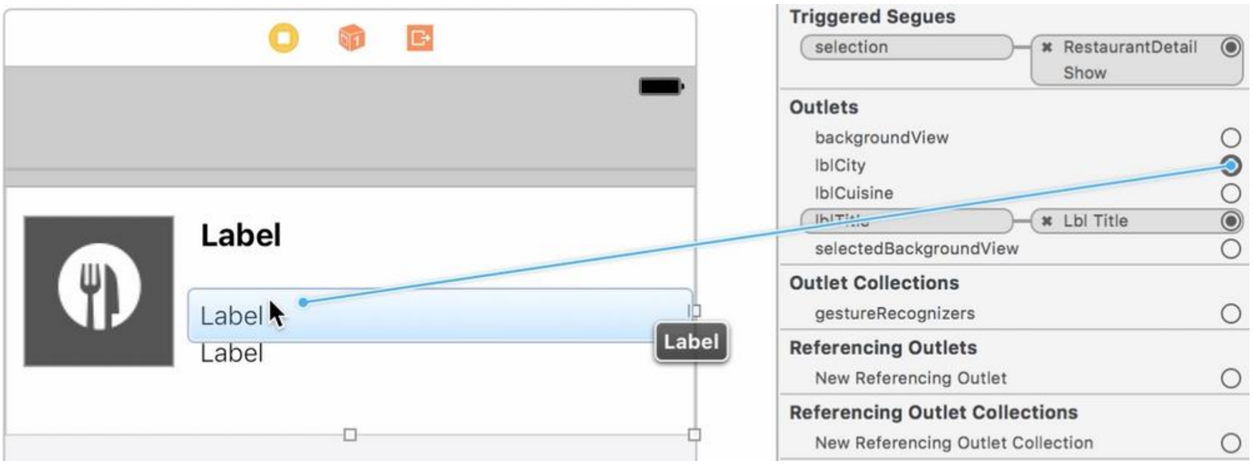
Triggered Segues
selection — RestaurantDetail Show

Outlets
backgroundView ○
lblCity ○
lblCuisine ○
lblTitle ●
selectedBackgroundView ○

Outlet Collections
gestureRecognizers ○

Referencing Outlets
New Referencing Outlet ○

Referencing Outlet Collections
New Referencing Outlet Collection ○



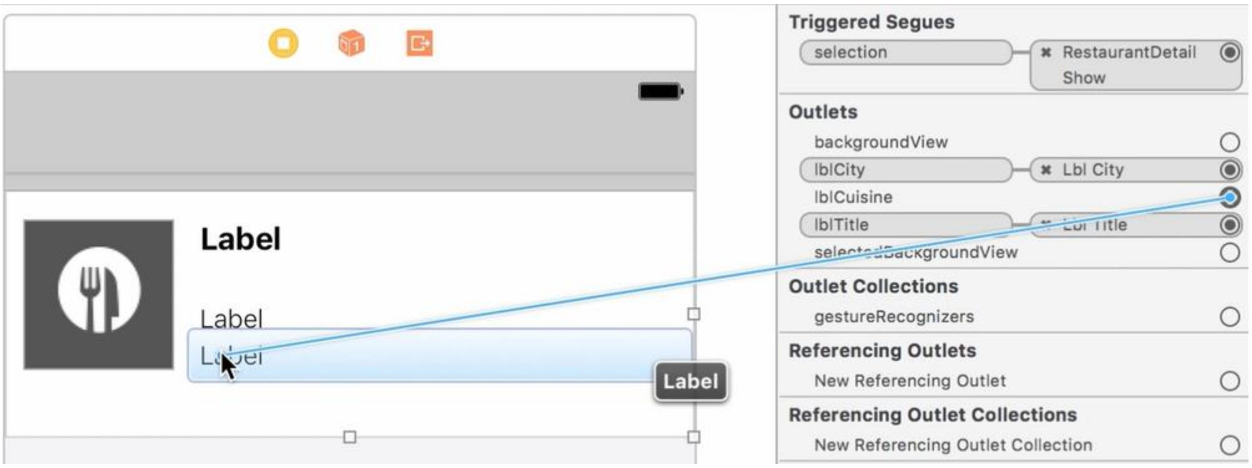
Triggered Segues
selection — RestaurantDetail Show

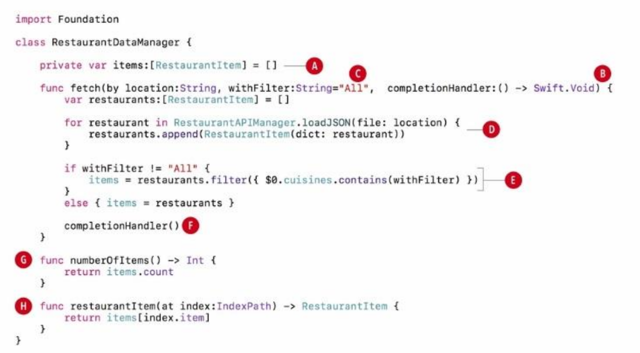
Outlets
backgroundView ○
lblCity ●
lblCuisine ○
lblTitle — Lbl Title ●
selectedBackgroundView ○

Outlet Collections
gestureRecognizers ○

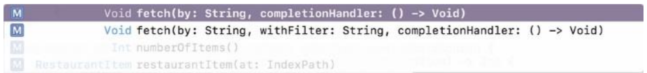
Referencing Outlets
New Referencing Outlet ○

Referencing Outlet Collections
New Referencing Outlet Collection ○

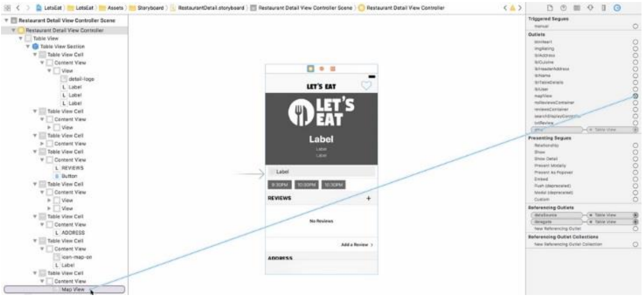


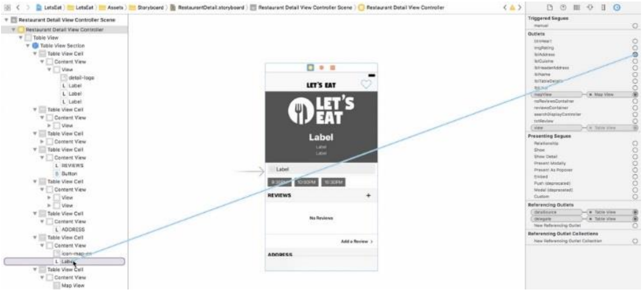


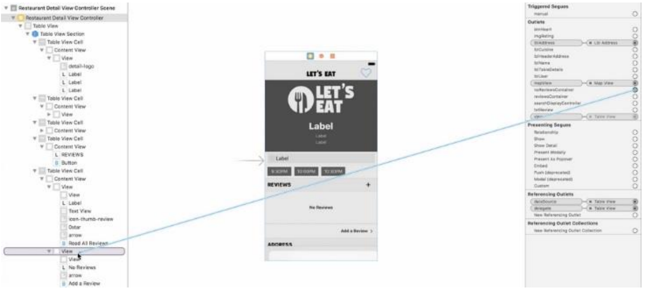
```
import Foundation

class RestaurantDataManager {

    private var items:[RestaurantItem] = []

    func fetch(by location:String, withFilter:String="All",  completionHandler:() -> Swift.Void) {
        var restaurants:[RestaurantItem] = []

        for restaurant in RestaurantAPIManager.loadJSON(file: location) {
            restaurants.append(RestaurantItem(dict: restaurant))
        }

        if withFilter != "All" {
            items = restaurants.filter({ $0.cuisines.contains(withFilter) })
        }
        else { items = restaurants }

        completionHandler()
    }

    func numberOfItems() -> Int {
        return items.count
    }

    func restaurantItem(at index:IndexPath) -> RestaurantItem {
        return items[index.item]
    }
}
```

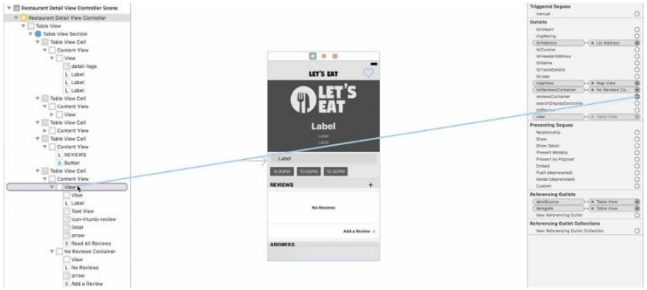


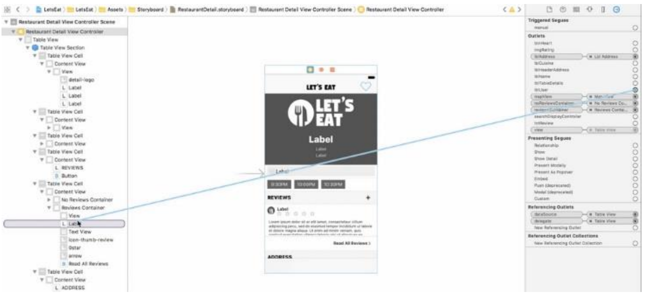
```
M    Void fetch(by: String, completionHandler: () -> Void)
M    Void fetch(by: String, withFilter: String, completionHandler: () -> Void)
M     Int numberOfItems()
M RestaurantItem restaurantItem(at: IndexPath)
```

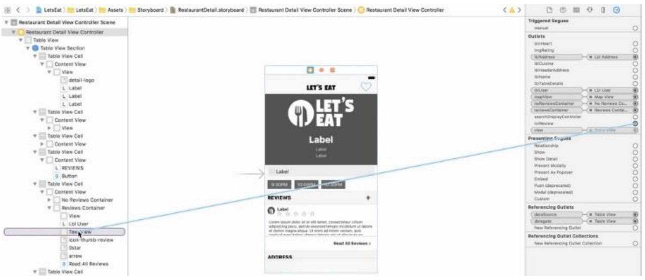


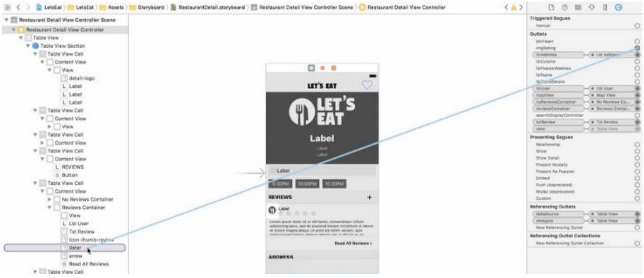

LetsEat
LetsEat
Assets
Storyboard
RestaurantDetail.storyboard
Restaurant Detail View Controller Scene
Restaurant Detail View Controller
Restaurant Detail View Controller Scene
Restaurant Detail View Controller
Table View
Table View Section
Table View Cell
Content View
View
detail-logo
Label
REVIEWS
Button
ADDRESS
icon-map-m
Map View
LET'S EAT
Label
No Reviews
Add a Review
Triggered Segues
manual
Outlets
btnHeart
imgRating
lblAddress
lblCuisine
lblHeaderAddress
lblName
lblTableDetails
lblUser
mapView
Map View
noReviewsContainer
reviewsContainer
searchDisplayController
txtReview
view
Table View
Presenting Segues
Relationship
Show
Show Detail
Present Modally
Present As Popover
Embed
Push (deprecated)
Modal (deprecated)
Custom
Referencing Outlets
dataSource
delegate
New Referencing Outlet
Referencing Outlet Collections
New Referencing Outlet Collection

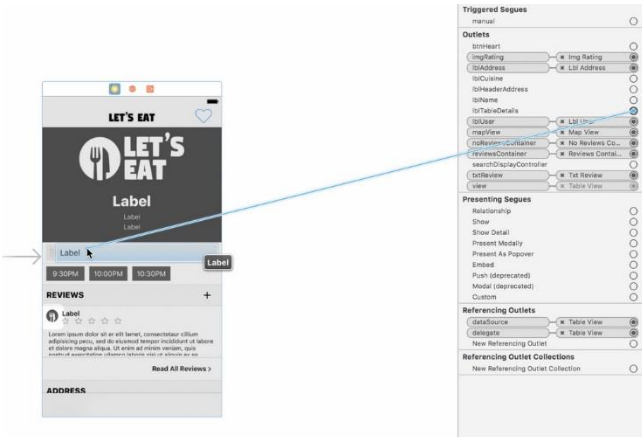

Restaurant Detail View Controller Scene
Restaurant Detail View Controller
Label
Text View
icon-thumb-review
0star
arrow
Read All Reviews
View
No Reviews
Add a Review
lblAddress
Lbl Address
mapView
Map View
noReviewsContainer


Restaurant Detail View Controller Scene
Restaurant Detail View Controller
View
No Reviews Container
lblAddress
Lbl Address
mapView
Map View
noReviewsContainer
No Reviews Co...
reviewsContainer


LetsEat
Assets
Storyboard
RestaurantDetail.storyboard
Restaurant Detail View Controller Scene
Restaurant Detail View Controller
No Reviews Container
Reviews Container
Label
Text View
icon-thumb-review
0star
arrow
Read All Reviews
ADDRESS
REVIEWS
Read All Reviews
lblAddress
Lbl Address
mapView
Map View
noReviewsContainer
No Reviews Co...
reviewsContainer
Reviews Conta...


LetsEat
LetsEat
Assets
Storyboard
RestaurantDetail.storyboard
Restaurant Detail View Controller Scene
Restaurant Detail View Controller
Table View
Table View Section
Table View Cell
Content View
View
detail-logo
Label
REVIEWS
Button
No Reviews Container
Reviews Container
Lbl User
icon-thumb-review
0star
arrow
Read All Reviews
LET'S EAT
Label
9:30PM
10:00PM
10:30PM
Read All Reviews ›
ADDRESS
Triggered Segues
Outlets
Presenting Segues
Referencing Outlets
Referencing Outlet Collections


LetsEat
LetsEat
Assets
Storyboard
RestaurantDetail.storyboard
Restaurant Detail View Controller Scene
Restaurant Detail View Controller
Table View
Table View Section
Table View Cell
Content View
View
detail-logo
Label
REVIEWS
Button
No Reviews Container
Reviews Container
Lbl User
Txt Review
icon-thumb-review
0star
arrow
Read All Reviews
LET'S EAT
Label
9:30PM
10:00PM
10:30PM
Read All Reviews ›
ADDRESS
Triggered Segues
Outlets
Presenting Segues
Referencing Outlets
Referencing Outlet Collections


LET'S EAT
Label
Label
Label
Label
Label
9:30PM
10:00PM
10:30PM
REVIEWS
+
Label
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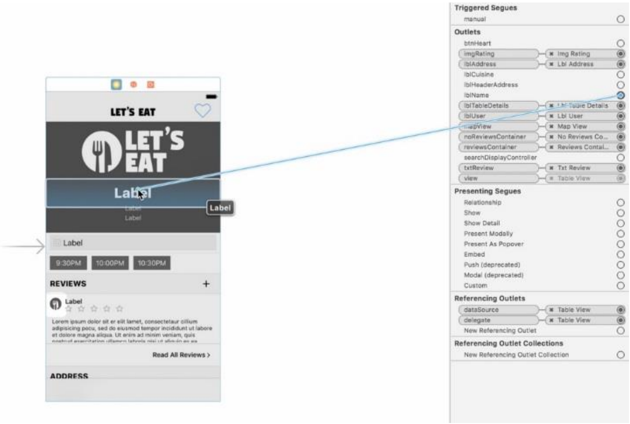
Read All Reviews ›
ADDRESS
Triggered Segues
manual
Outlets
btnHeart
imgRating
Img Rating
lblAddress
Lbl Address
lblCuisine
lblHeaderAddress
lblName
lblTableDetails
lblUser
Lbl User
mapView
Map View
noReviewsContainer
No Reviews Co...
reviewsContainer
Reviews Contai...
searchDisplayController
txtReview
Txt Review
view
Table View
Presenting Segues
Relationship
Show
Show Detail
Present Modally
Present As Popover
Embed
Push (deprecated)
Modal (deprecated)
Custom
Referencing Outlets
dataSource
Table View
delegate
Table View
New Referencing Outlet
Referencing Outlet Collections
New Referencing Outlet Collection


LET'S EAT
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Label
Label
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10:00PM
10:30PM
REVIEWS
+
Label
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Read All Reviews ›
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Triggered Segues
manual
Outlets
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imgRating
Img Rating
lblAddress
Lbl Address
lblCuisine
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lblName
lblTableDetails
Lbl Table Details
lblUser
Lbl User
mapView
Map View
noReviewsContainer
No Reviews Co...
reviewsContainer
Reviews Contai...
searchDisplayController
txtReview
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view
Table View
Presenting Segues
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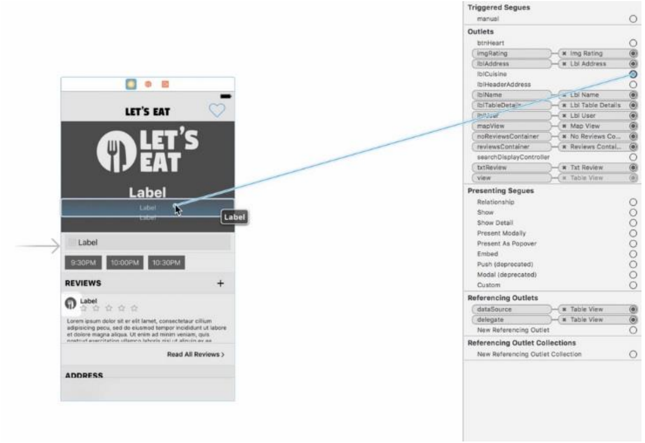
Show
Show Detail
Present Modally
Present As Popover
Embed
Push (deprecated)
Modal (deprecated)
Custom
Referencing Outlets
dataSource
Table View
delegate
Table View
New Referencing Outlet
Referencing Outlet Collections
New Referencing Outlet Collection


LET'S EAT
LET'S EAT
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9:30PM
10:00PM
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REVIEWS
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Label
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Read All Reviews ›
ADDRESS

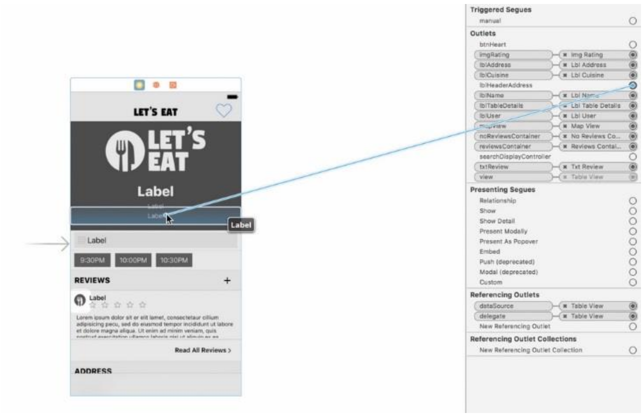
Triggered Segues
manual ○

Outlets
btnHeart ○
imgRating — Img Rating ●
lblAddress — Lbl Address ●
lblCuisine ○
lblHeaderAddress ○
lblName — Lbl Name ●
lblTableDetails — Lbl Table Details ●
lblUser — Lbl User ●
mapView — Map View ●
noReviewsContainer — No Reviews Co... ●
reviewsContainer — Reviews Contai... ●
searchDisplayController ○
txtReview — Txt Review ●
view — Table View ●

Presenting Segues
Relationship ○
Show ○
Show Detail ○
Present Modally ○
Present As Popover ○
Embed ○
Push (deprecated) ○
Modal (deprecated) ○
Custom ○

Referencing Outlets
dataSource — Table View ●
delegate — Table View ●
New Referencing Outlet ○

Referencing Outlet Collections
New Referencing Outlet Collection ○


LET'S EAT
LET'S EAT
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Read All Reviews ›
ADDRESS

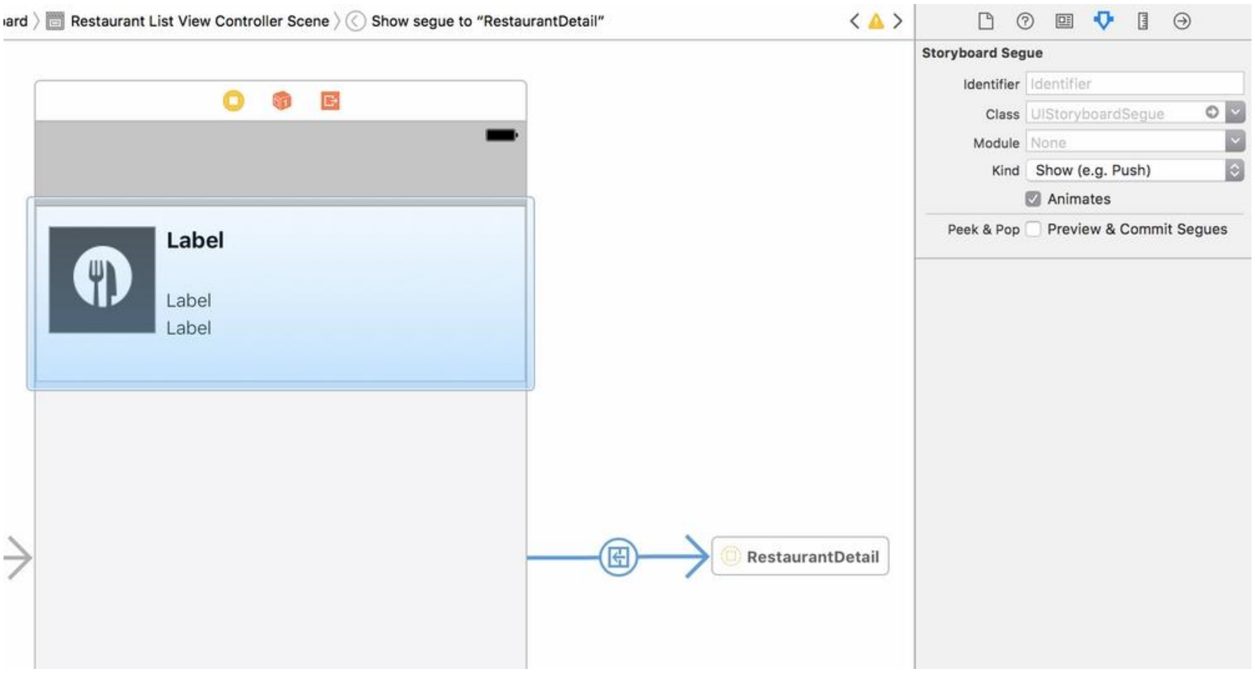
Triggered Segues
manual ○

Outlets
btnHeart ○
imgRating — Img Rating ●
lblAddress — Lbl Address ●
lblCuisine — Lbl Cuisine ●
lblHeaderAddress ○
lblName — Lbl Name ●
lblTableDetails — Lbl Table Details ●
lblUser — Lbl User ●
mapView — Map View ●
noReviewsContainer — No Reviews Co... ●
reviewsContainer — Reviews Contai... ●
searchDisplayController ○
txtReview — Txt Review ●
view — Table View ●

Presenting Segues
Relationship ○
Show ○
Show Detail ○
Present Modally ○
Present As Popover ○
Embed ○
Push (deprecated) ○
Modal (deprecated) ○
Custom ○

Referencing Outlets
dataSource — Table View ●
delegate — Table View ●
New Referencing Outlet ○

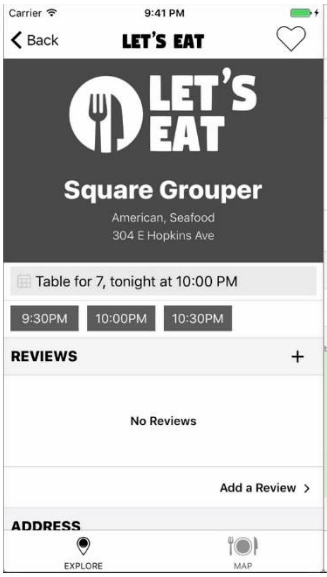
Referencing Outlet Collections
New Referencing Outlet Collection ○



ard 〉 Restaurant List View Controller Scene 〉 Show segue to “RestaurantDetail”

Storyboard Segue

Identifier: Identifier
Class: UIStoryboardSegue
Module: None
Kind: Show (e.g. Push)
☑ Animates
Peek & Pop: □ Preview & Commit Segues

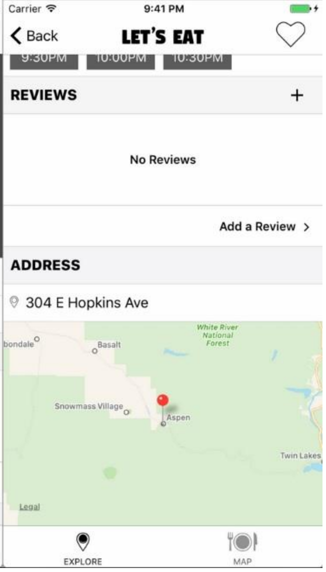


Square Grouper

American, Seafood
304 E Hopkins Ave

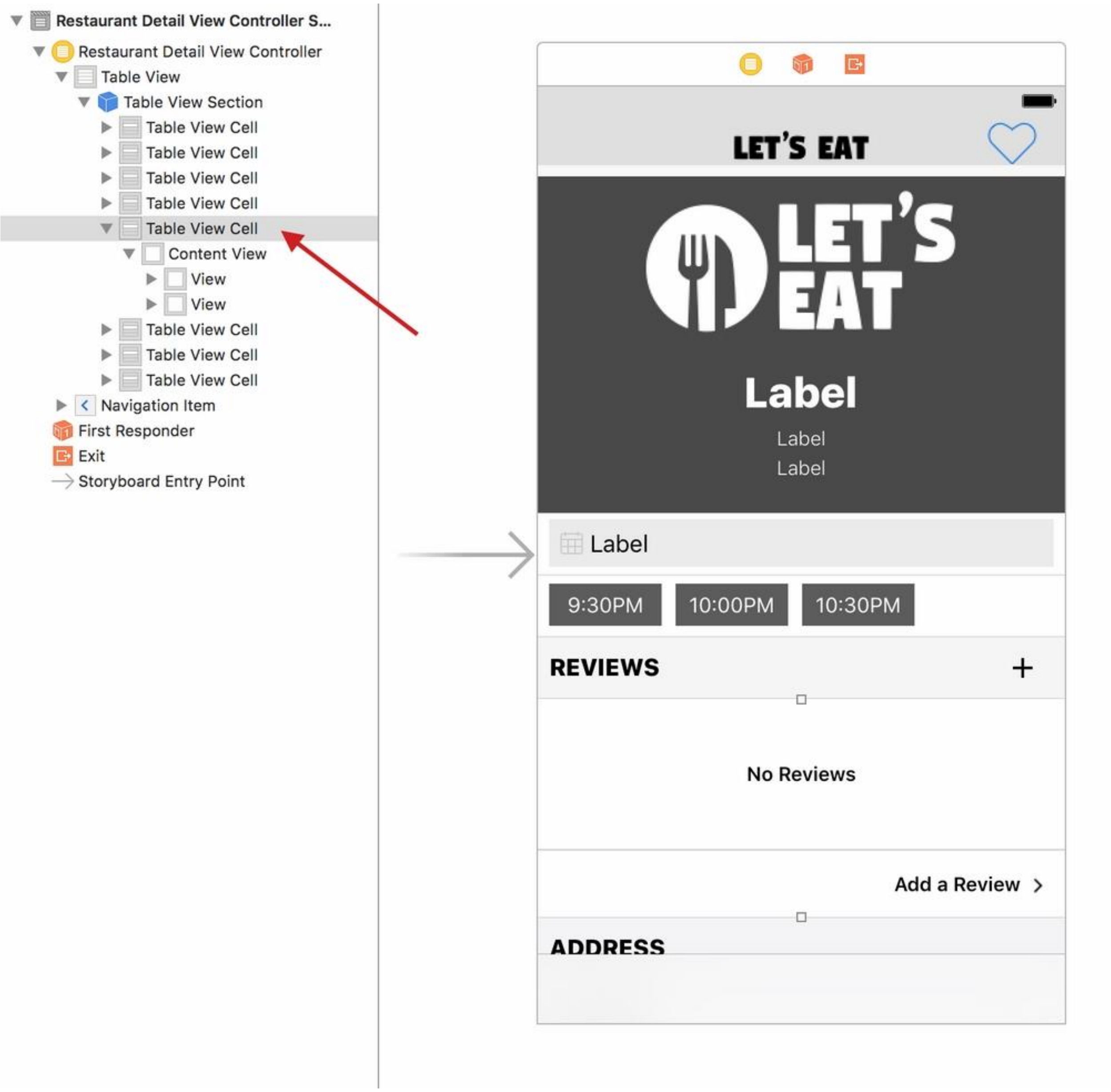
Table for 7, tonight at 10:00 PM

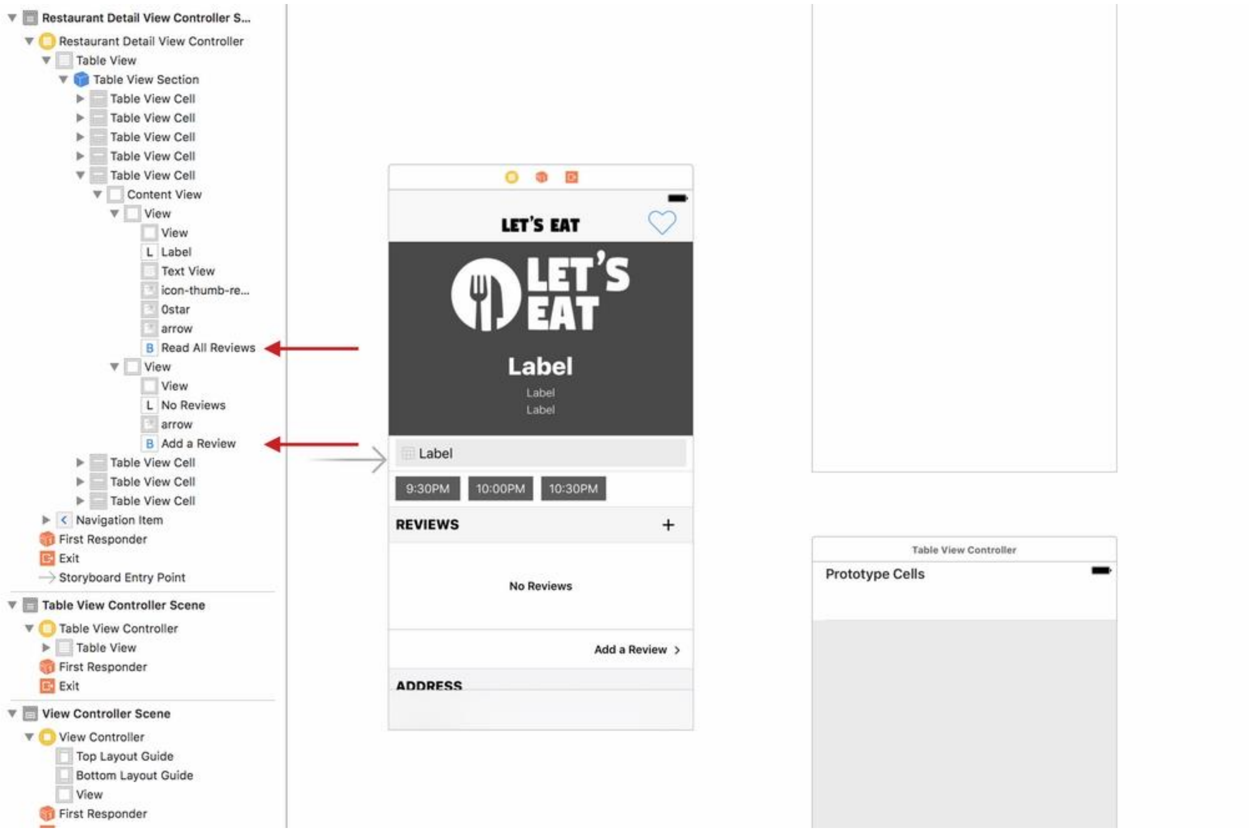
No Reviews

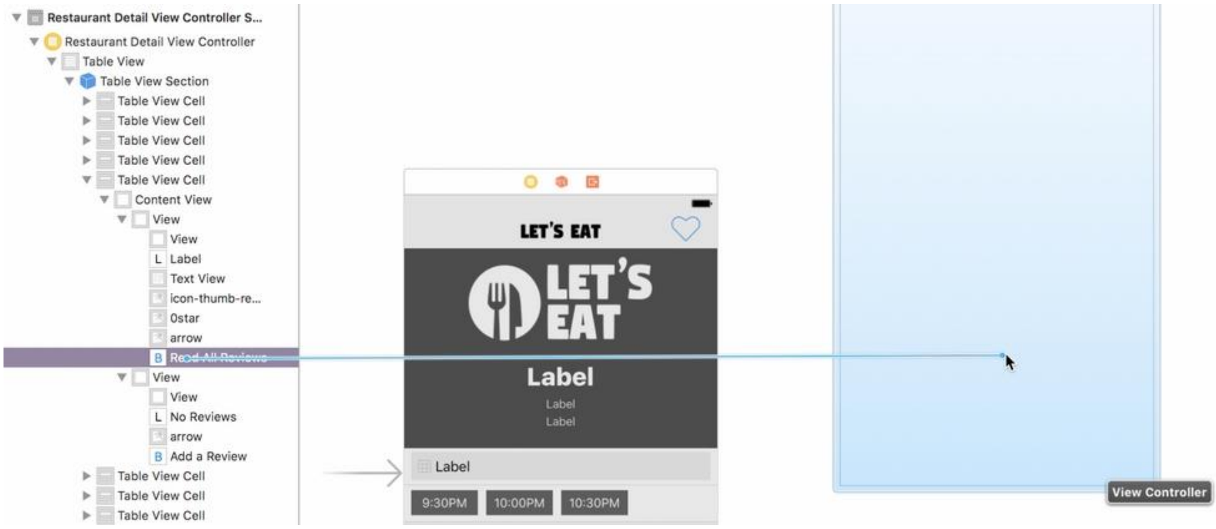


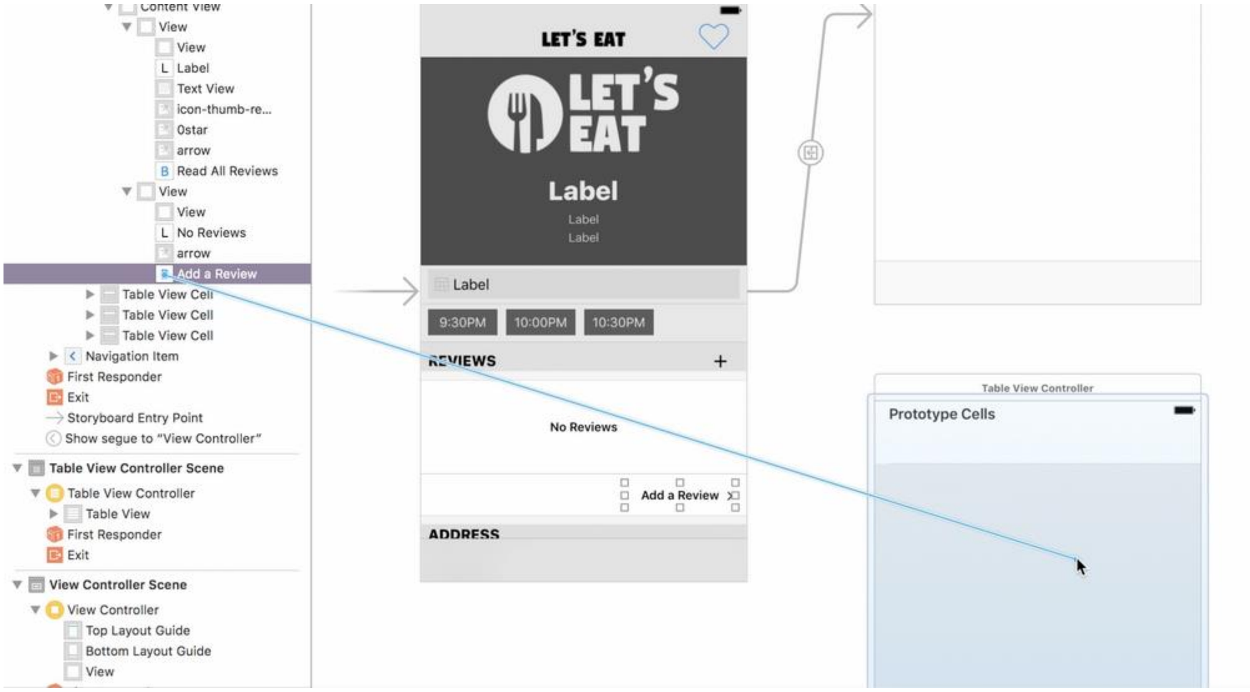
No Reviews

304 E Hopkins Ave


Restaurant Detail View Controller S...
Restaurant Detail View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
View
View
Table View Cell
Table View Cell
Table View Cell
Navigation Item
First Responder
Exit
Storyboard Entry Point
LET'S EAT
LET'S EAT
Label
Label
Label
Label
9:30PM
10:00PM
10:30PM
REVIEWS
+
No Reviews
Add a Review
ADDRESS


Restaurant Detail View Controller S...
Restaurant Detail View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
View
View
Label
Text View
icon-thumb-re...
0star
arrow
Read All Reviews
View
View
No Reviews
arrow
Add a Review
Table View Cell
Table View Cell
Table View Cell
Navigation Item
First Responder
Exit
Storyboard Entry Point
Table View Controller Scene
Table View Controller
Table View
First Responder
Exit
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
First Responder
LET'S EAT
LET'S EAT
Label
Label
Label
Label
9:30PM
10:00PM
10:30PM
REVIEWS
+
No Reviews
Add a Review
ADDRESS
Table View Controller
Prototype Cells


Restaurant Detail View Controller S...
Restaurant Detail View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
View
View
Label
Text View
icon-thumb-re...
0star
arrow
Read All Reviews
View
View
No Reviews
arrow
Add a Review
Table View Cell
Table View Cell
Table View Cell
LET'S EAT
LET'S EAT
Label
Label
Label
Label
9:30PM
10:00PM
10:30PM
View Controller


Content View
View
View
Label
Text View
icon-thumb-re...
0star
arrow
Read All Reviews
View
View
No Reviews
arrow
Add a Review
Table View Cell
Table View Cell
Table View Cell
Navigation Item
First Responder
Exit
Storyboard Entry Point
Show segue to "View Controller"
Table View Controller Scene
Table View Controller
Table View
First Responder
Exit
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
LET'S EAT
LET'S EAT
Label
Label
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9:30PM
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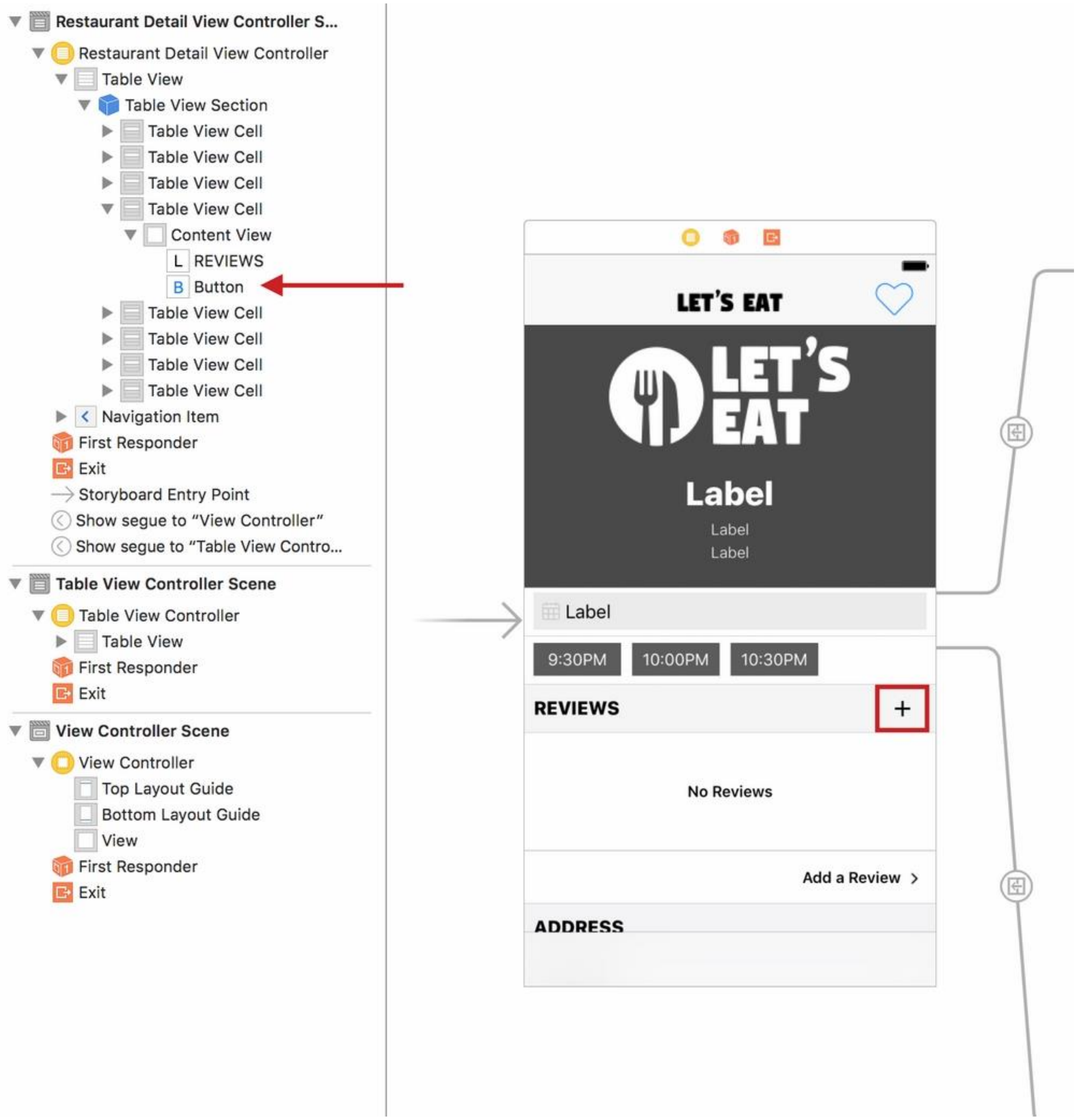
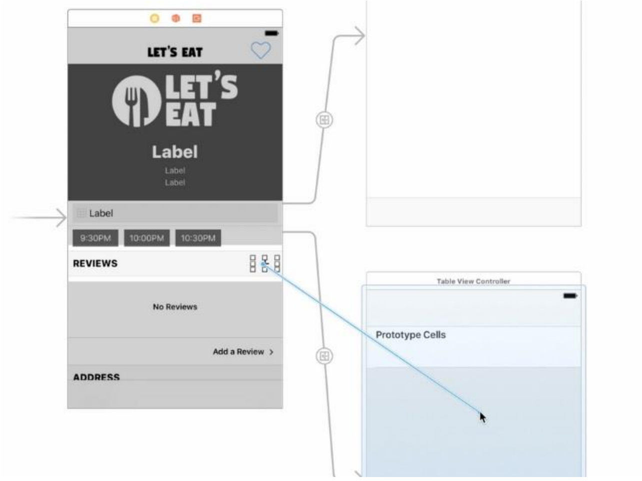
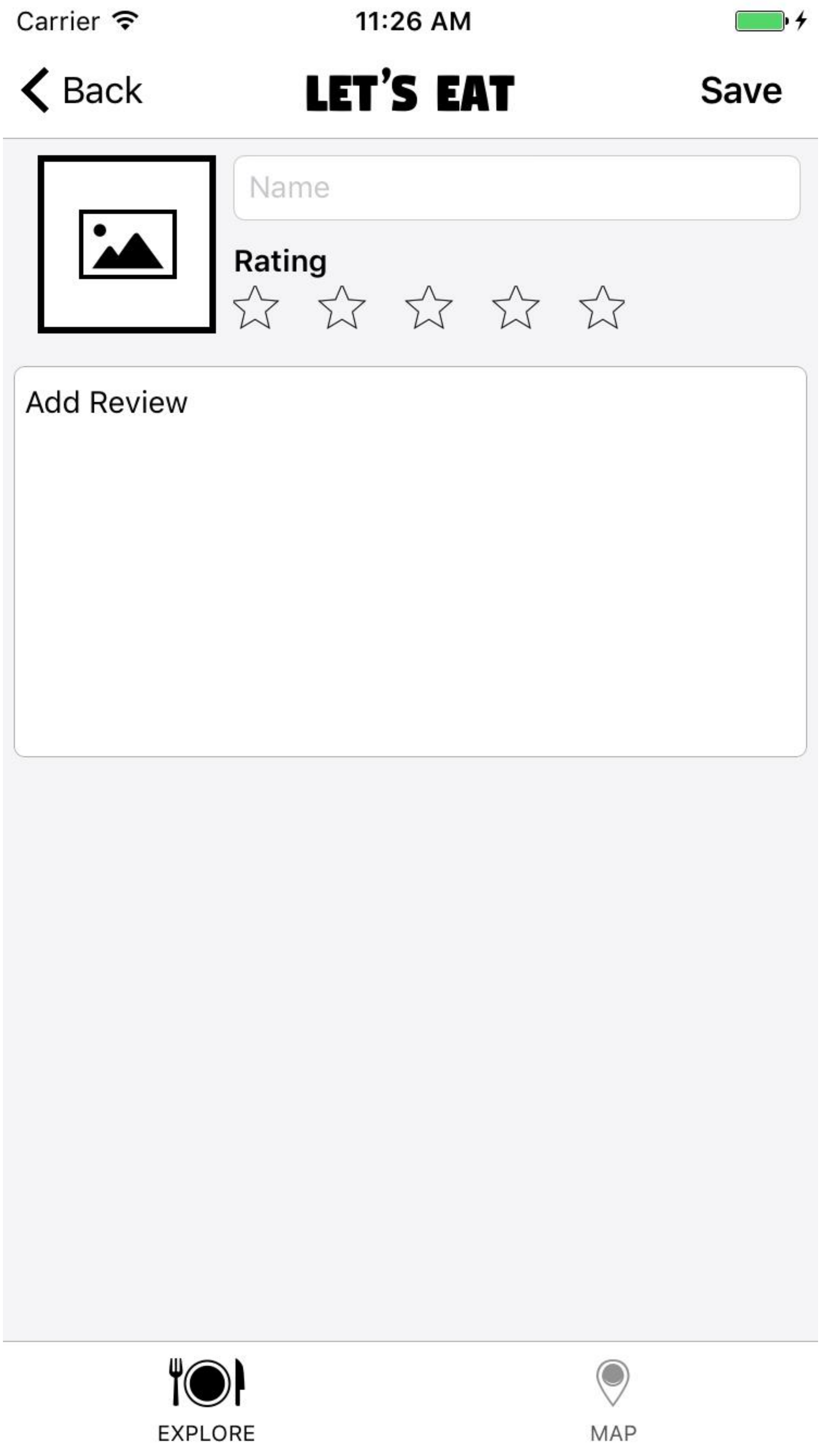
REVIEWS
+
No Reviews
Add a Review
ADDRESS
Table View Controller
Prototype Cells


Restaurant Detail View Controller S...
Restaurant Detail View Controller
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
L REVIEWS
B Button
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Navigation Item
First Responder
Exit
Storyboard Entry Point
Show segue to "View Controller"
Show segue to "Table View Contro...
Table View Controller Scene
Table View Controller
Table View
First Responder
Exit
View Controller Scene
View Controller
Top Layout Guide
Bottom Layout Guide
View
First Responder
Exit
LET'S EAT
LET'S EAT
Label
Label
Label
Label
9:30PM
10:00PM
10:30PM
REVIEWS
+
No Reviews
Add a Review >
ADDRESS


LET'S EAT
LET'S EAT
Label
Label
Label
Label
9:30PM
10:00PM
10:30PM
REVIEWS
No Reviews
Add a Review
ADDRESS
Table View Controller
Prototype Cells


Carrier
11:26 AM
Back
LET'S EAT
Save
Name
Rating
☆ ☆ ☆ ☆ ☆
Add Review
EXPLORE
MAP

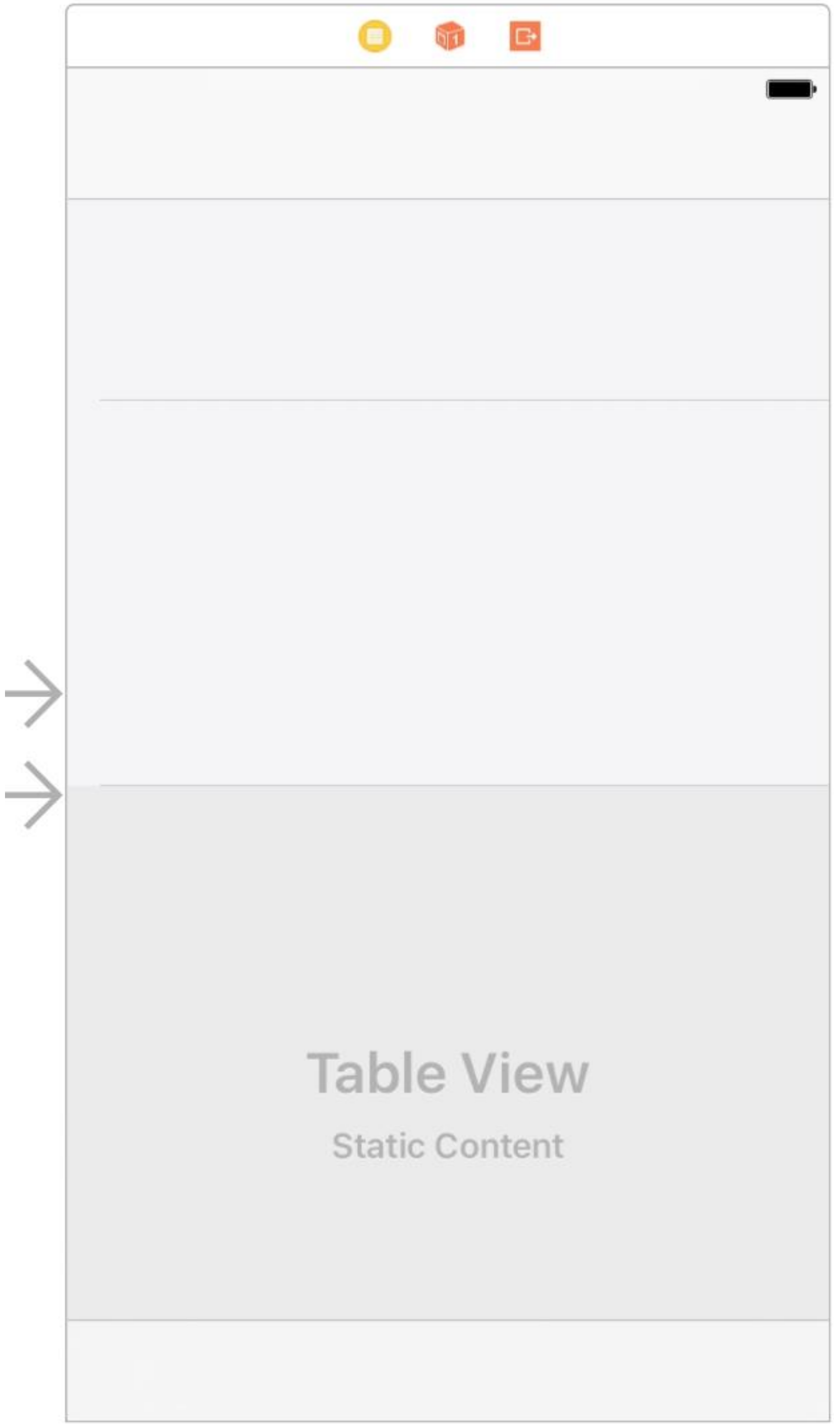
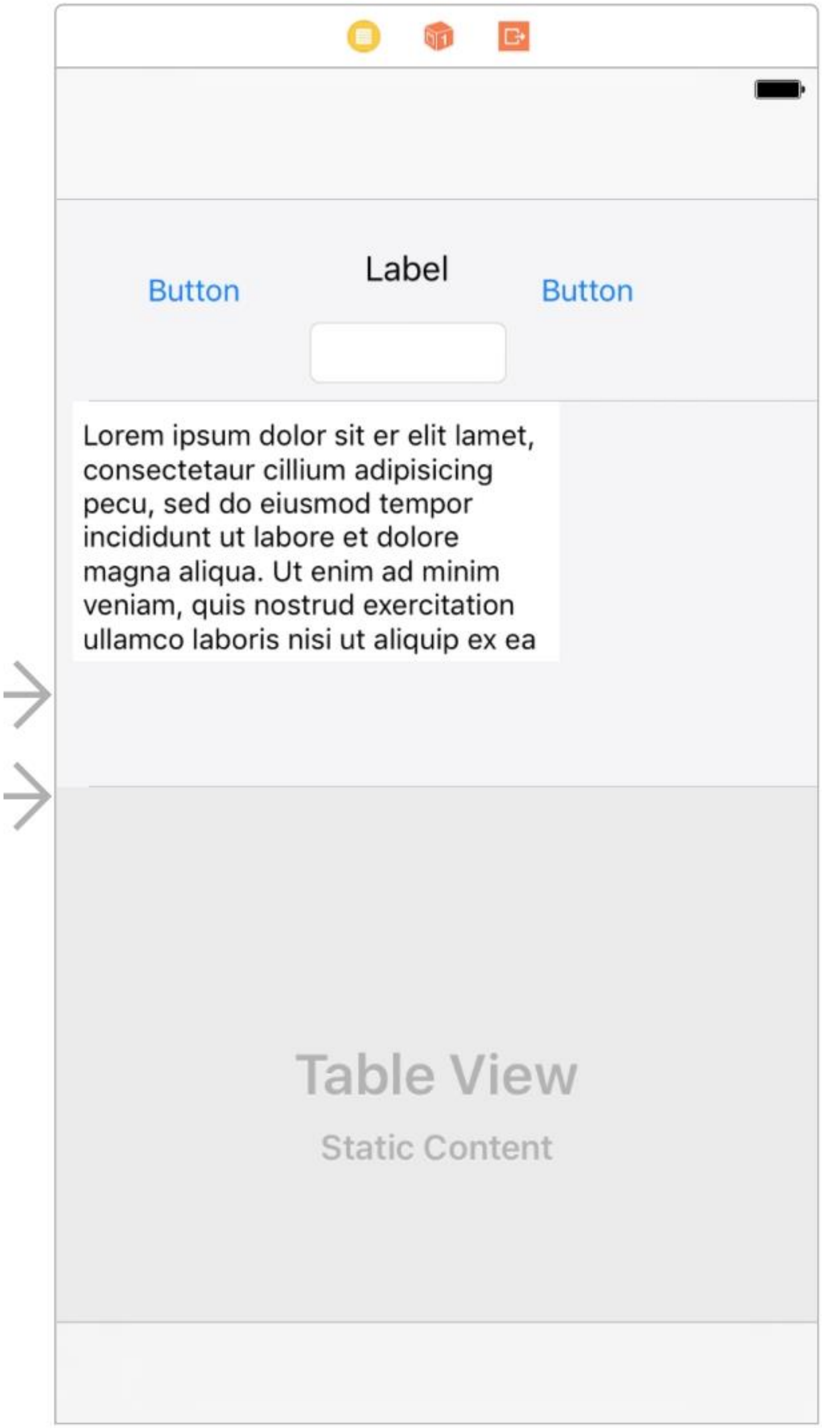


Table View
Static Content



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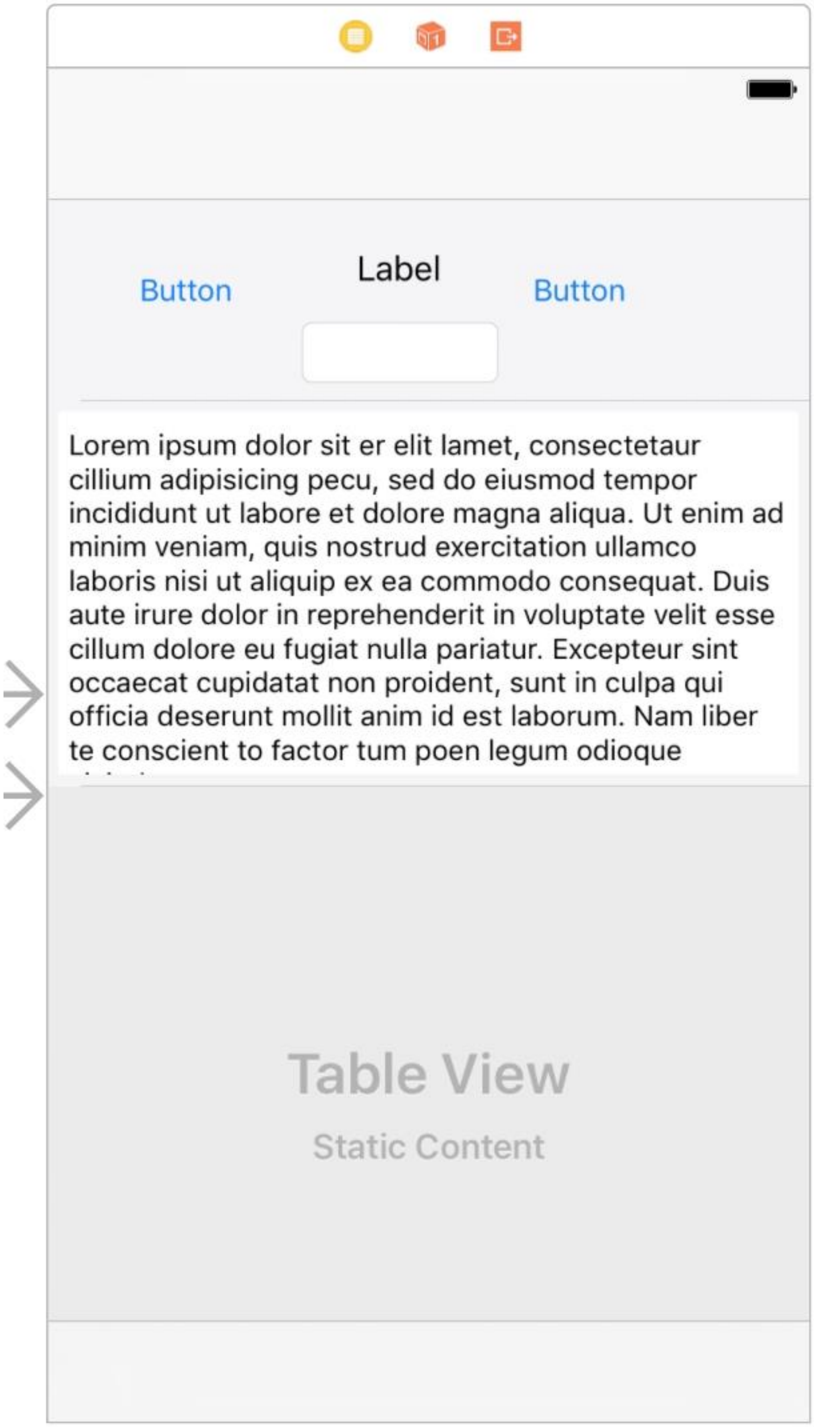

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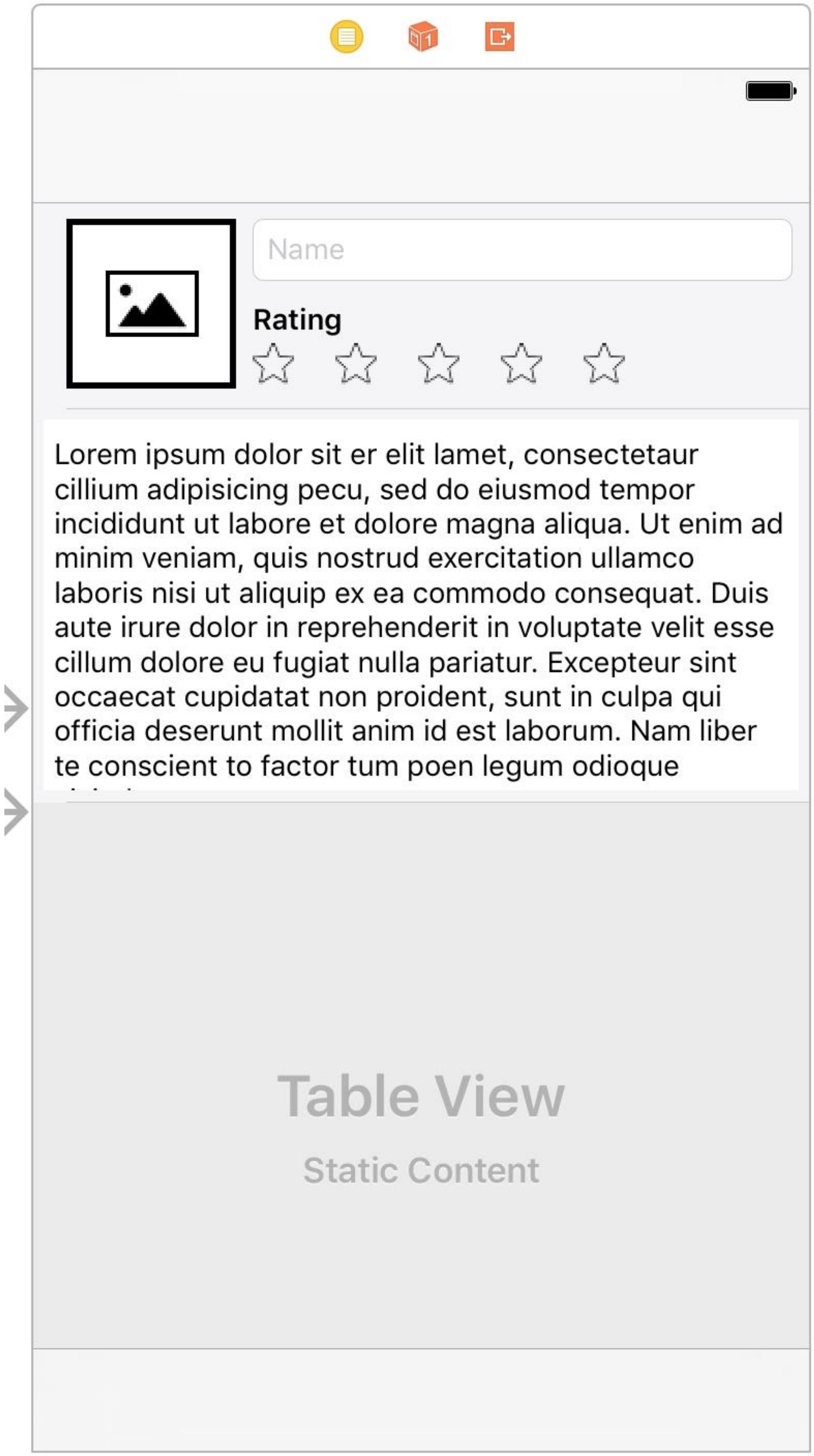

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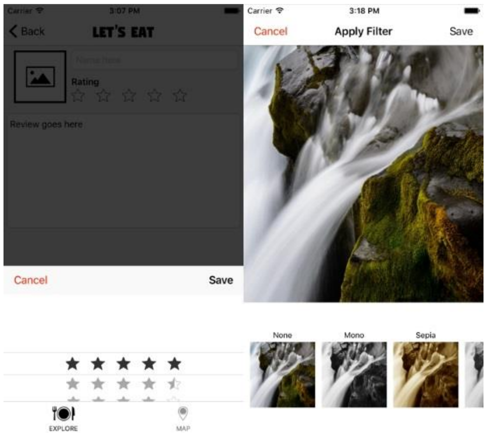
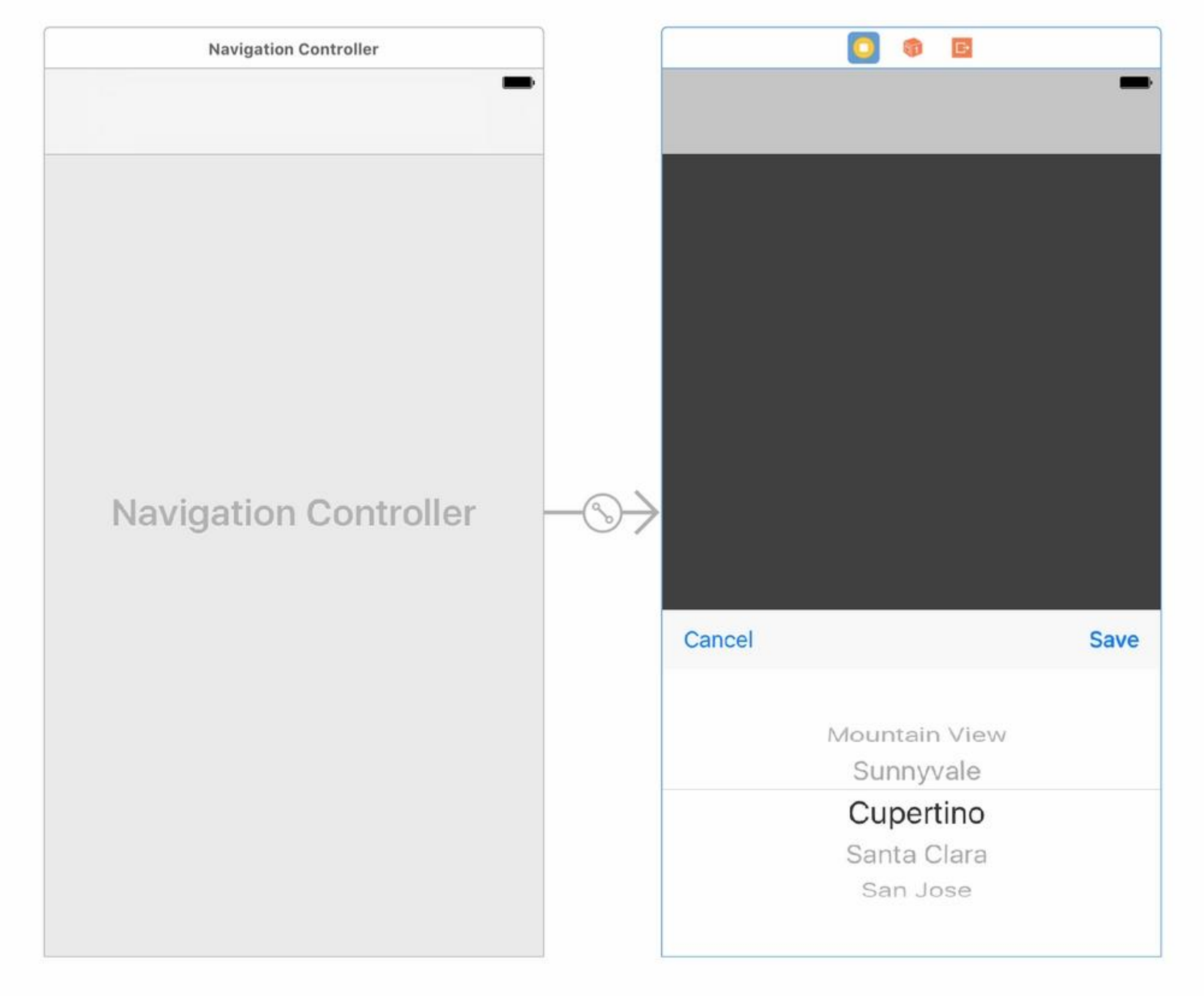
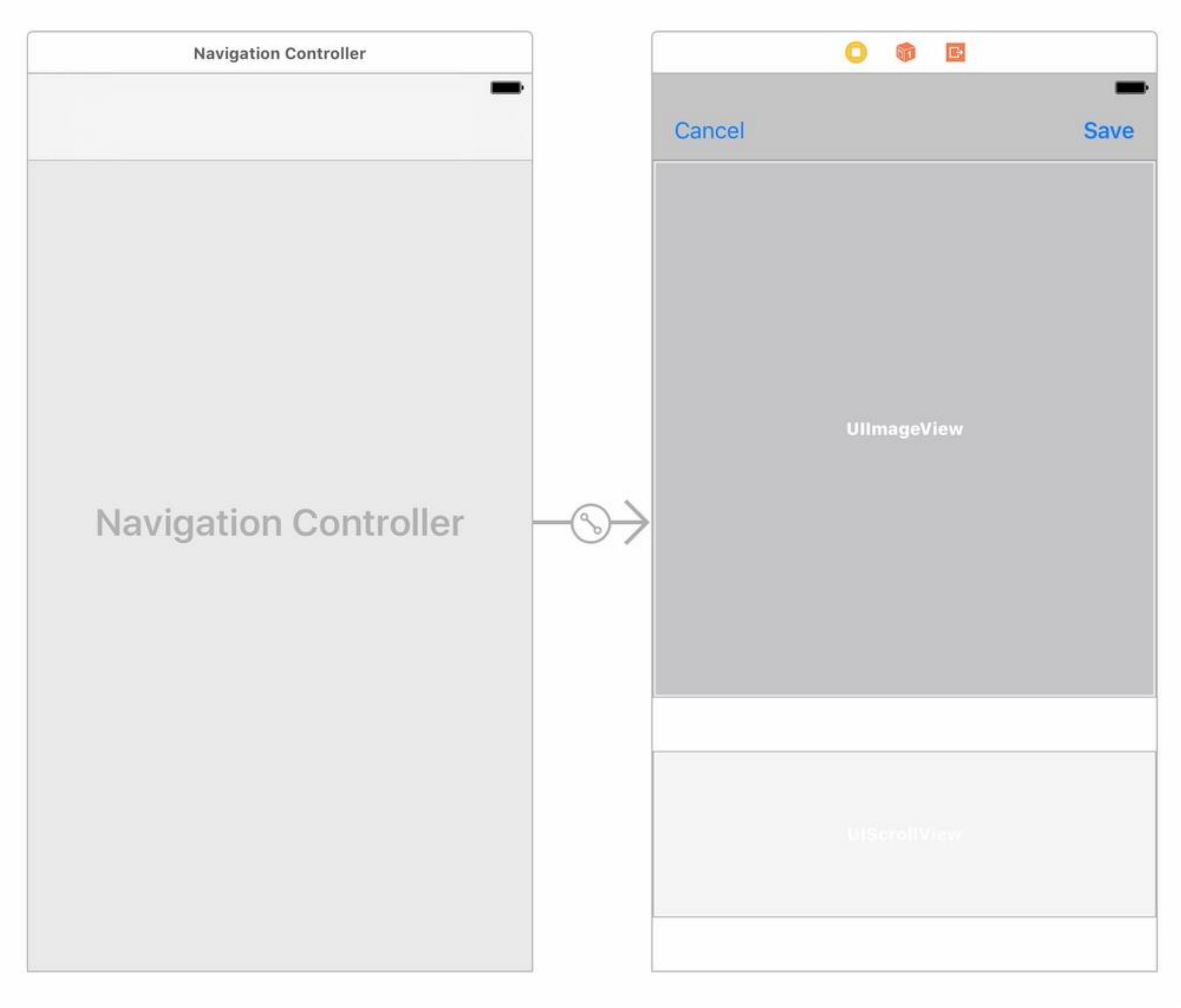
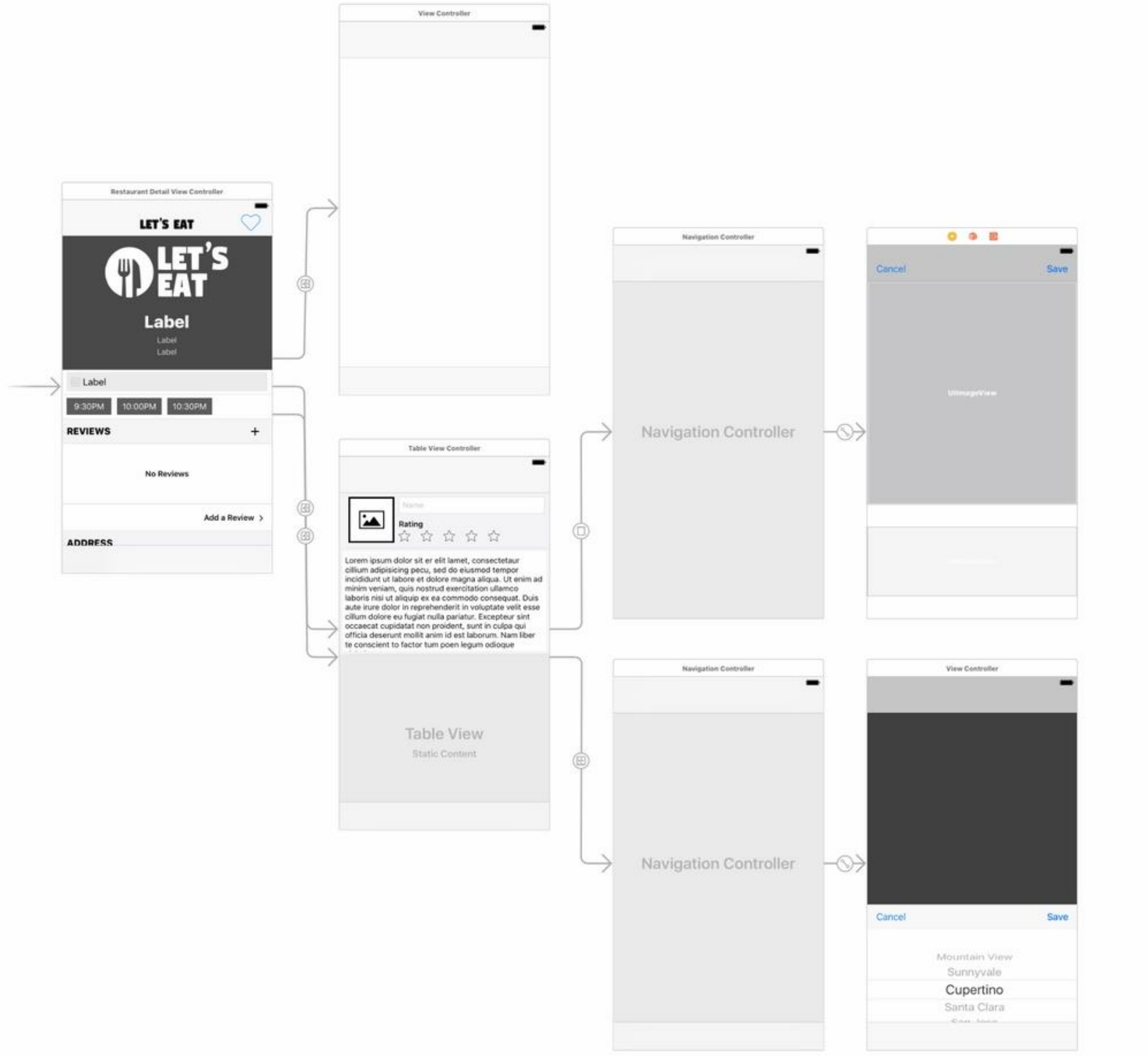

Carrier
3:07 PM
Back
LET'S EAT
Name here
Rating
Review goes here
Cancel
Save
EXPLORE
MAP
Carrier
3:18 PM
Cancel
Apply Filter
Save
None
Mono
Sepia


Navigation Controller
Navigation Controller
Cancel
Save
Mountain View
Sunnyvale
Cupertino
Santa Clara
San Jose


Navigation Controller
Navigation Controller
Cancel
Save
UIImageView
UIScrollView



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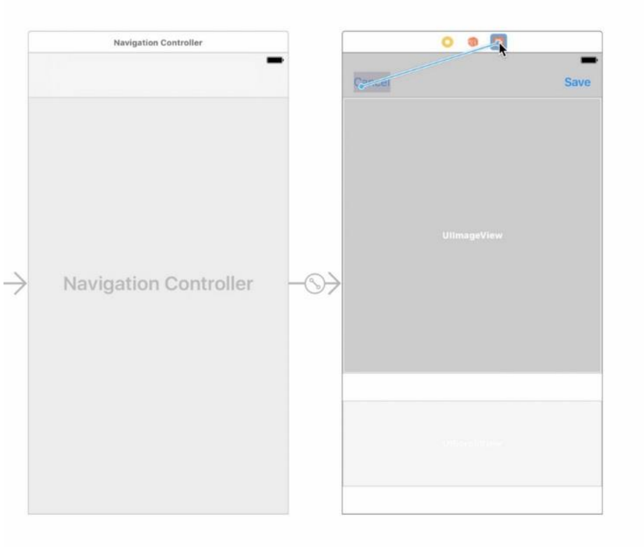
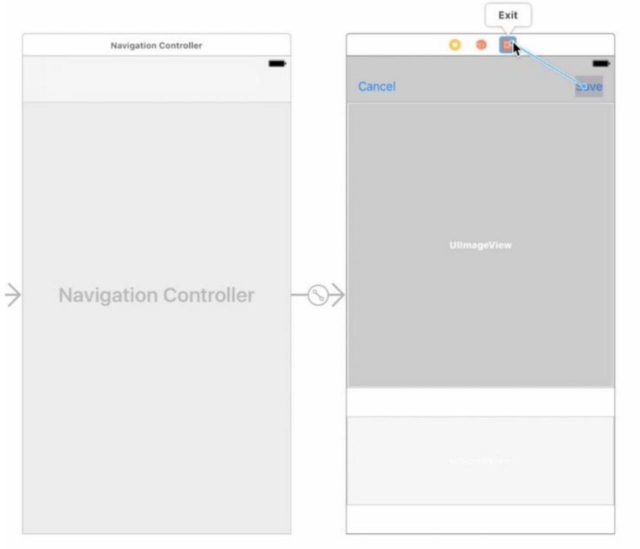
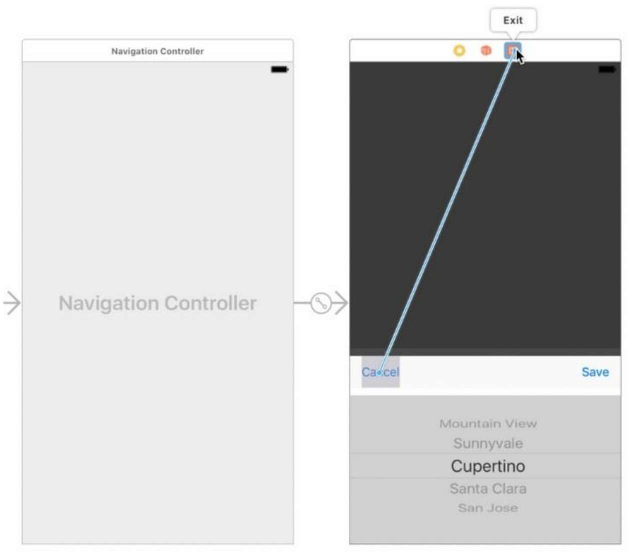
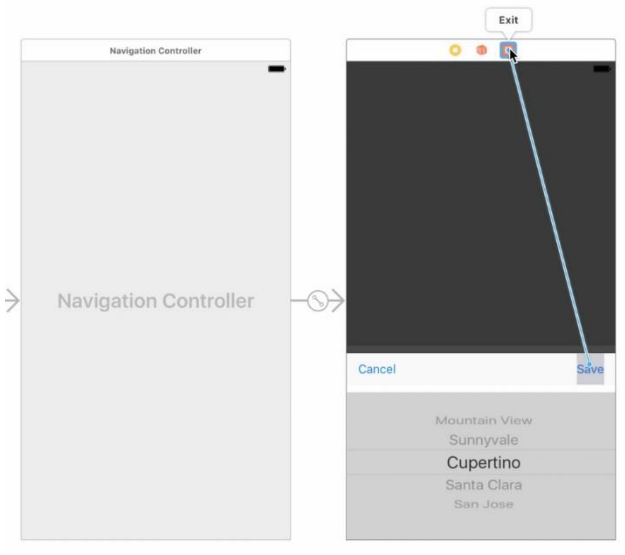
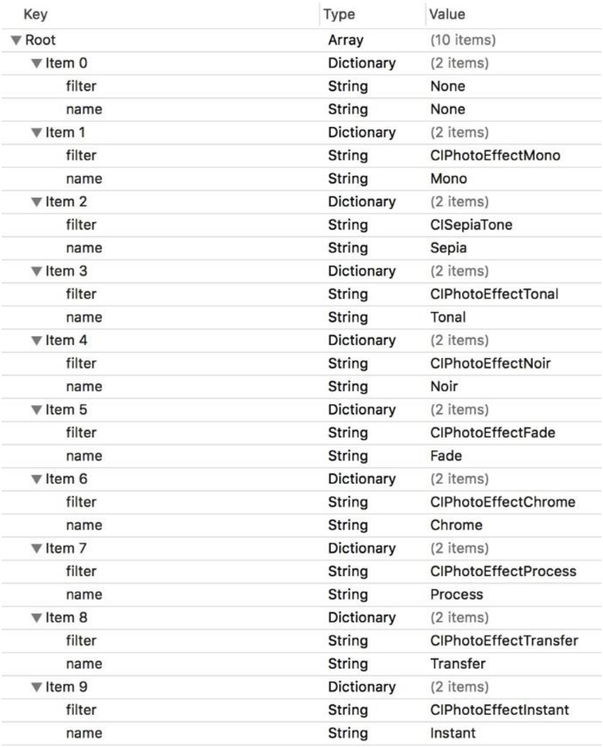

Navigation Controller
Navigation Controller
Cancel
Save
UIImageView

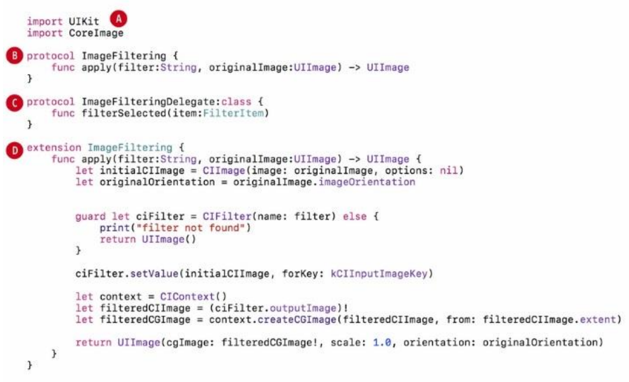

Exit
Navigation Controller
Navigation Controller
Cancel
Save
UIImageView


Exit
Navigation Controller
Navigation Controller
Cancel
Save
Mountain View
Sunnyvale
Cupertino
Santa Clara
San Jose

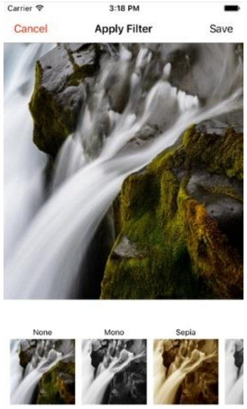

Exit
Navigation Controller
Navigation Controller
Cancel
Save
Mountain View
Sunnyvale
Cupertino
Santa Clara
San Jose

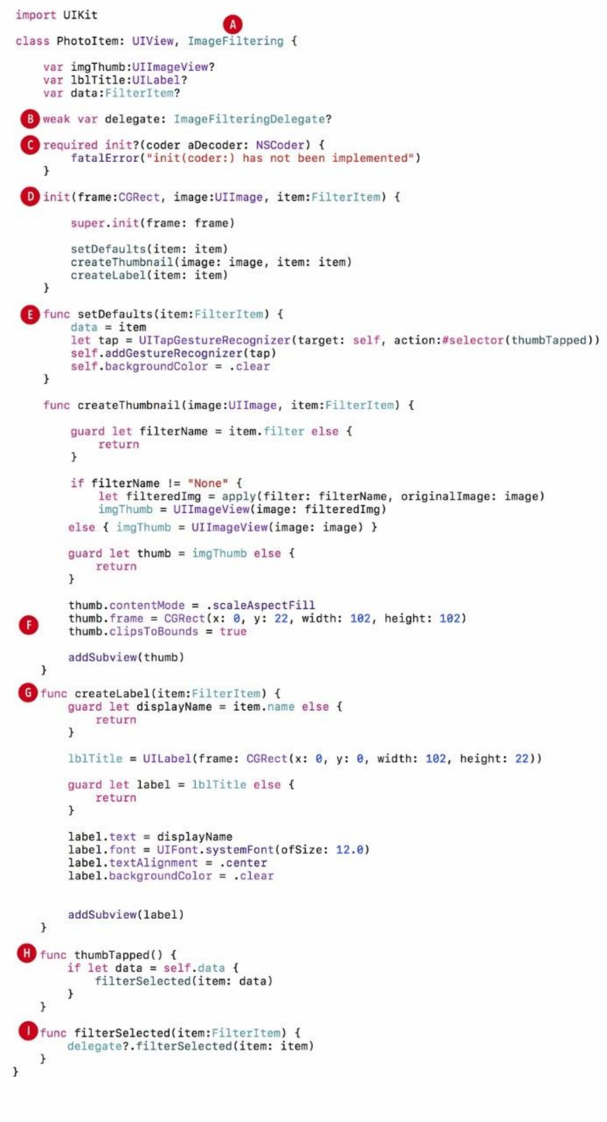


Key	Type	Value
▼ Root	Array	(10 items)
▼ Item 0	Dictionary	(2 items)
filter	String	None
name	String	None
▼ Item 1	Dictionary	(2 items)
filter	String	CIPhotoEffectMono
name	String	Mono
▼ Item 2	Dictionary	(2 items)
filter	String	CISepiaTone
name	String	Sepia
▼ Item 3	Dictionary	(2 items)
filter	String	CIPhotoEffectTonal
name	String	Tonal
▼ Item 4	Dictionary	(2 items)
filter	String	CIPhotoEffectNoir
name	String	Noir
▼ Item 5	Dictionary	(2 items)
filter	String	CIPhotoEffectFade
name	String	Fade
▼ Item 6	Dictionary	(2 items)
filter	String	CIPhotoEffectChrome
name	String	Chrome
▼ Item 7	Dictionary	(2 items)
filter	String	CIPhotoEffectProcess
name	String	Process
▼ Item 8	Dictionary	(2 items)
filter	String	CIPhotoEffectTransfer
name	String	Transfer
▼ Item 9	Dictionary	(2 items)
filter	String	CIPhotoEffectInstant
name	String	Instant

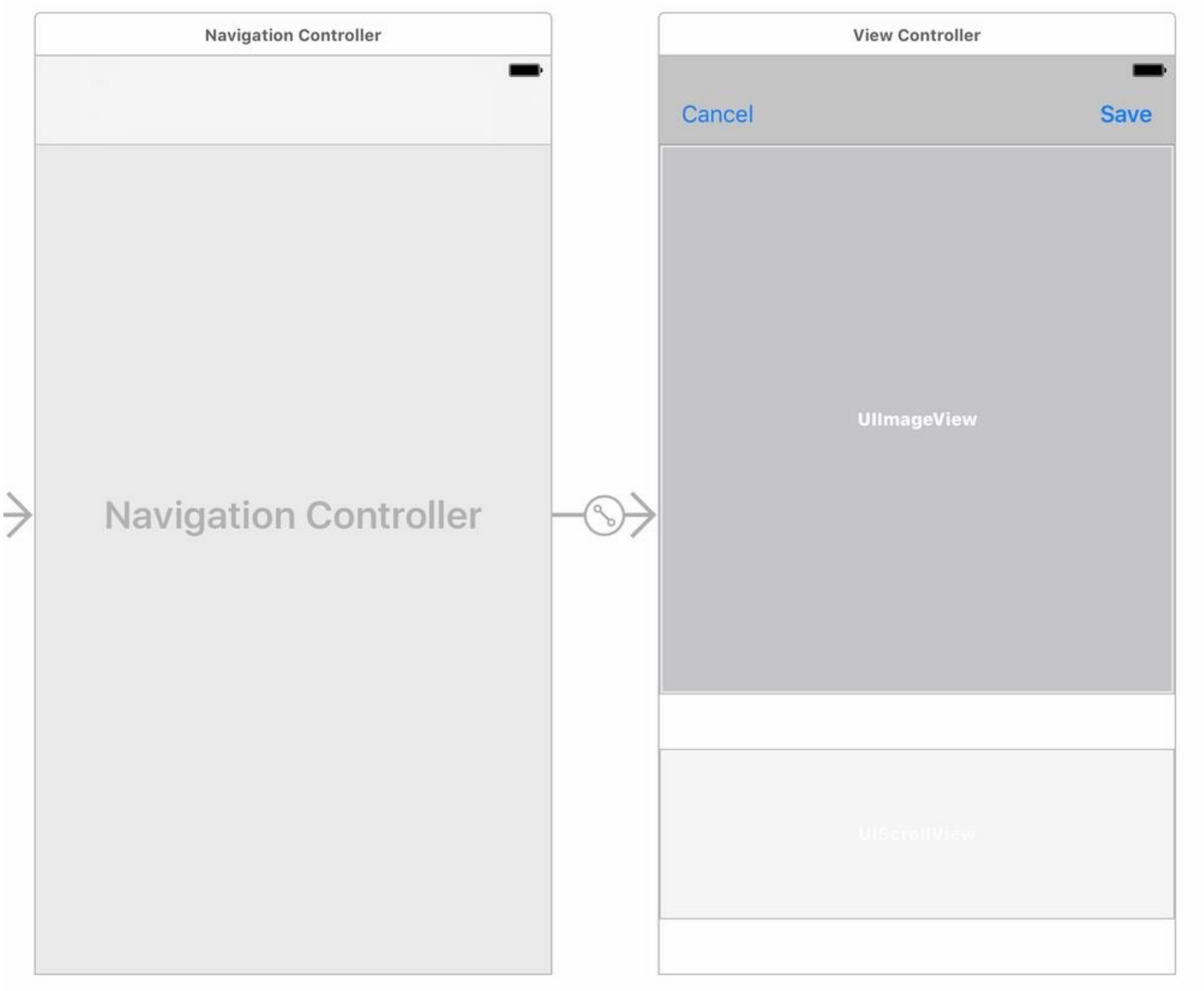


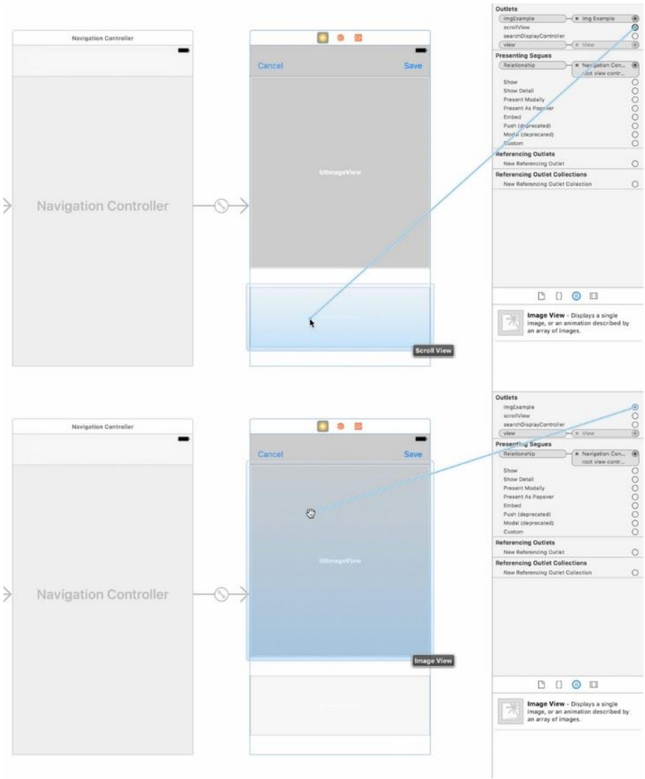
```
import UIKit
import CoreImage

protocol ImageFiltering {
    func apply(filter:String, originalImage:UIImage) -> UIImage
}

protocol ImageFilteringDelegate:class {
    func filterSelected(item:FilterItem)
}

extension ImageFiltering {
    func apply(filter:String, originalImage:UIImage) -> UIImage {
        let initialCIImage = CIImage(image: originalImage, options: nil)
        let originalOrientation = originalImage.imageOrientation


        guard let ciFilter = CIFilter(name: filter) else {
            print("filter not found")
            return UIImage()
        }

        ciFilter.setValue(initialCIImage, forKey: kCIInputImageKey)

        let context = CIContext()
        let filteredCIImage = (ciFilter.outputImage)!
        let filteredCGImage = context.createCGImage(filteredCIImage, from: filteredCIImage.extent)

        return UIImage(cgImage: filteredCGImage!, scale: 1.0, orientation: originalOrientation)
    }
}
```

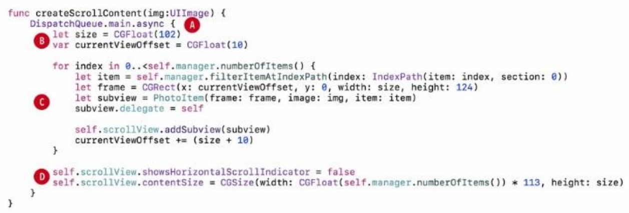




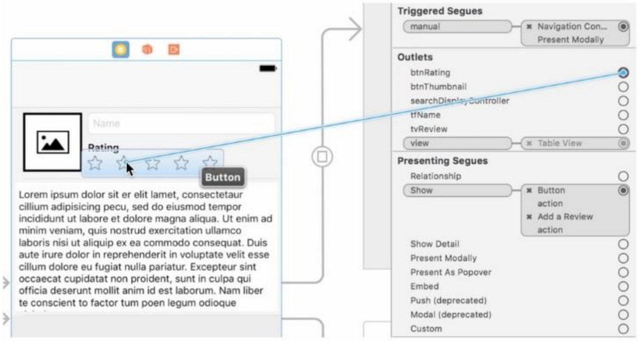
```
import UIKit

class PhotoItem: UIView, ImageFiltering {

    var imgThumb:UIImageView?
    var lblTitle:UILabel?
    var data:FilterItem?

    weak var delegate: ImageFilteringDelegate?

    required init?(coder aDecoder: NSCoder) {
        fatalError("init(coder:) has not been implemented")
    }

    init(frame:CGRect, image:UIImage, item:FilterItem) {

        super.init(frame: frame)

        setDefaults(item: item)
        createThumbnail(image: image, item: item)
        createLabel(item: item)
    }

    func setDefaults(item:FilterItem) {
        data = item
        let tap = UITapGestureRecognizer(target: self, action:#selector(thumbTapped))
        self.addGestureRecognizer(tap)
        self.backgroundColor = .clear
    }

    func createThumbnail(image:UIImage, item:FilterItem) {

        guard let filterName = item.filter else {
            return
        }

        if filterName != "None" {
            let filteredImg = apply(filter: filterName, originalImage: image)
            imgThumb = UIImageView(image: filteredImg)
       else { imgThumb = UIImageView(image: image) }

       guard let thumb = imgThumb else {
           return
       }

       thumb.contentMode = .scaleAspectFill
       thumb.frame = CGRect(x: 0, y: 22, width: 102, height: 102)
       thumb.clipsToBounds = true

       addSubview(thumb)
    }

    func createLabel(item:FilterItem) {
       guard let displayName = item.name else {
           return
       }

       lblTitle = UILabel(frame: CGRect(x: 0, y: 0, width: 102, height: 22))

       guard let label = lblTitle else {
           return
       }

       label.text = displayName
       label.font = UIFont.systemFont(ofSize: 12.0)
       label.textAlignment = .center
       label.backgroundColor = .clear


       addSubview(label)
    }

    func thumbTapped() {
       if let data = self.data {
           filterSelected(item: data)
       }
    }

    func filterSelected(item:FilterItem) {
       delegate?.filterSelected(item: item)
    }
}
```


Navigation Controller
View Controller
Cancel
Save
UIImageView
Navigation Controller
UIScrollView





```
func createScrollContent(img:UIImage) {
    DispatchQueue.main.async {
        let size = CGFloat(102)
        var currentViewOffset = CGFloat(10)

        for index in 0..<self.manager.numberOfItems() {
            let item = self.manager.filterItemAtIndexPath(index: IndexPath(item: index, section: 0))
            let frame = CGRect(x: currentViewOffset, y: 0, width: size, height: 124)
            let subview = PhotoItem(frame: frame, image: img, item: item)
            subview.delegate = self

            self.scrollView.addSubview(subview)
            currentViewOffset += (size + 10)
        }

        self.scrollView.showsHorizontalScrollIndicator = false
        self.scrollView.contentSize = CGSize(width: CGFloat(self.manager.numberOfItems()) * 113, height: size)
    }
}
```



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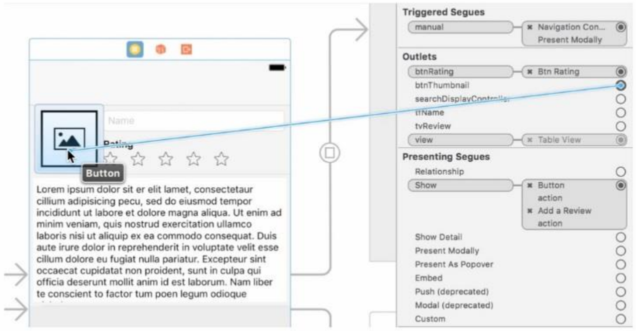

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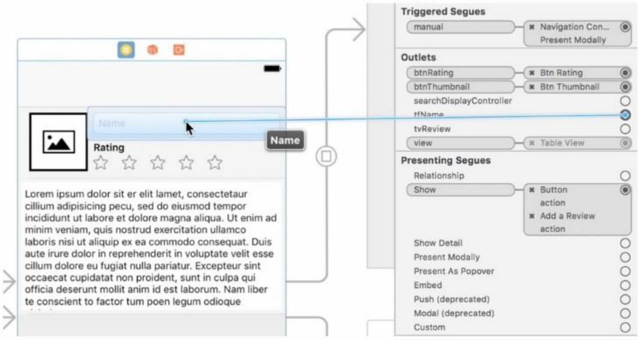

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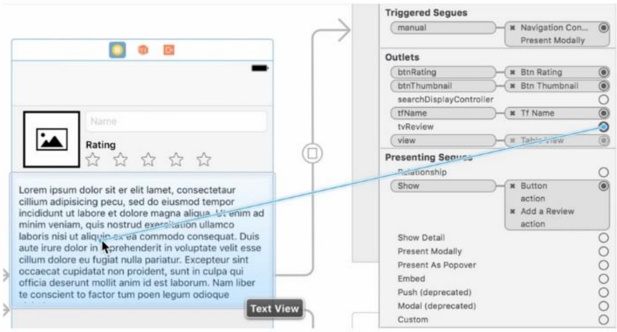

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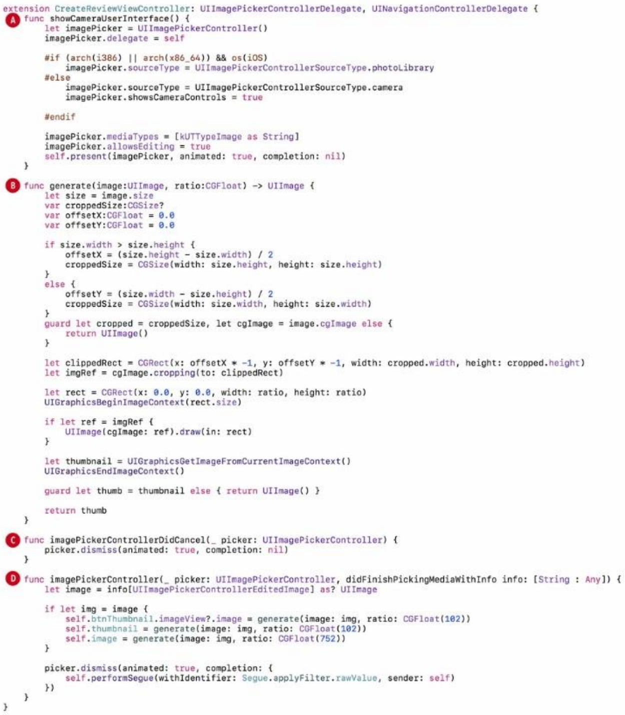
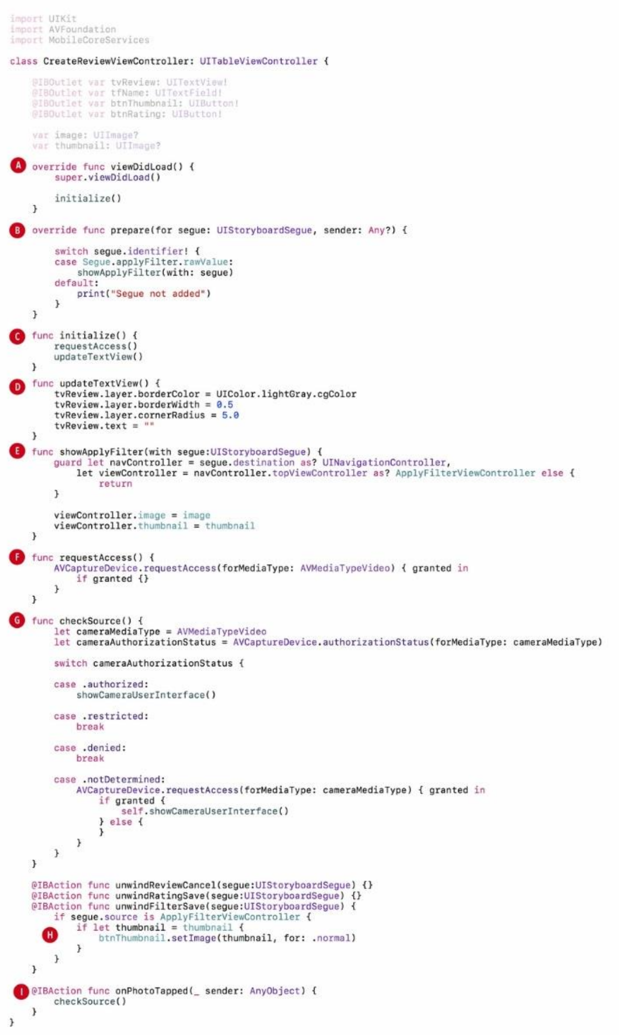


```
extension CreateReviewViewController: UIImagePickerControllerDelegate, UINavigationControllerDelegate {
A   func showCameraUserInterface() {
        let imagePicker = UIImagePickerController()
        imagePicker.delegate = self

        #if (arch(i386) || arch(x86_64)) && os(iOS)
            imagePicker.sourceType = UIImagePickerControllerSourceType.photoLibrary
        #else
            imagePicker.sourceType = UIImagePickerControllerSourceType.camera
            imagePicker.showsCameraControls = true

        #endif

        imagePicker.mediaTypes = [kUTTypeImage as String]
        imagePicker.allowsEditing = true
        self.present(imagePicker, animated: true, completion: nil)
    }

B   func generate(image:UIImage, ratio:CGFloat) -> UIImage {
        let size = image.size
        var croppedSize:CGSize?
        var offsetX:CGFloat = 0.0
        var offsetY:CGFloat = 0.0

        if size.width > size.height {
            offsetX = (size.height - size.width) / 2
            croppedSize = CGSize(width: size.height, height: size.height)
        }
        else {
            offsetY = (size.width - size.height) / 2
            croppedSize = CGSize(width: size.width, height: size.width)
        }
        guard let cropped = croppedSize, let cgImage = image.cgImage else {
            return UIImage()
        }

        let clippedRect = CGRect(x: offsetX * -1, y: offsetY * -1, width: cropped.width, height: cropped.height)
        let imgRef = cgImage.cropping(to: clippedRect)

        let rect = CGRect(x: 0.0, y: 0.0, width: ratio, height: ratio)
        UIGraphicsBeginImageContext(rect.size)

        if let ref = imgRef {
            UIImage(cgImage: ref).draw(in: rect)
        }

        let thumbnail = UIGraphicsGetImageFromCurrentImageContext()
        UIGraphicsEndImageContext()

        guard let thumb = thumbnail else { return UIImage() }

        return thumb
    }

C   func imagePickerControllerDidCancel(_ picker: UIImagePickerController) {
        picker.dismiss(animated: true, completion: nil)
    }

D   func imagePickerController(_ picker: UIImagePickerController, didFinishPickingMediaWithInfo info: [String : Any]) {
        let image = info[UIImagePickerControllerEditedImage] as? UIImage

        if let img = image {
            self.btnThumbnail.imageView?.image = generate(image: img, ratio: CGFloat(102))
            self.thumbnail = generate(image: img, ratio: CGFloat(102))
            self.image = generate(image: img, ratio: CGFloat(752))
        }

        picker.dismiss(animated: true, completion: {
            self.performSegue(withIdentifier: Segue.applyFilter.rawValue, sender: self)
        })
    }
}
```



```swift
import UIKit
import AVFoundation
import MobileCoreServices

class CreateReviewViewController: UITableViewController {

    @IBOutlet var tvReview: UITextView!
    @IBOutlet var tfName: UITextField!
    @IBOutlet var btnThumbnail: UIButton!
    @IBOutlet var btnRating: UIButton!

    var image: UIImage?
    var thumbnail: UIImage?

    override func viewDidLoad() {
        super.viewDidLoad()

        initialize()
    }

    override func prepare(for segue: UIStoryboardSegue, sender: Any?) {

        switch segue.identifier! {
        case Segue.applyFilter.rawValue:
            showApplyFilter(with: segue)
        default:
            print("Segue not added")
        }
    }

    func initialize() {
        requestAccess()
        updateTextView()
    }

    func updateTextView() {
        tvReview.layer.borderColor = UIColor.lightGray.cgColor
        tvReview.layer.borderWidth = 0.5
        tvReview.layer.cornerRadius = 5.0
        tvReview.text = ""
    }
    func showApplyFilter(with segue:UIStoryboardSegue) {
        guard let navController = segue.destination as? UINavigationController,
            let viewController = navController.topViewController as? ApplyFilterViewController else {
                return
        }

        viewController.image = image
        viewController.thumbnail = thumbnail
    }

    func requestAccess() {
        AVCaptureDevice.requestAccess(forMediaType: AVMediaTypeVideo) { granted in
            if granted {}
        }
    }

    func checkSource() {
        let cameraMediaType = AVMediaTypeVideo
        let cameraAuthorizationStatus = AVCaptureDevice.authorizationStatus(forMediaType: cameraMediaType)

        switch cameraAuthorizationStatus {

        case .authorized:
            showCameraUserInterface()

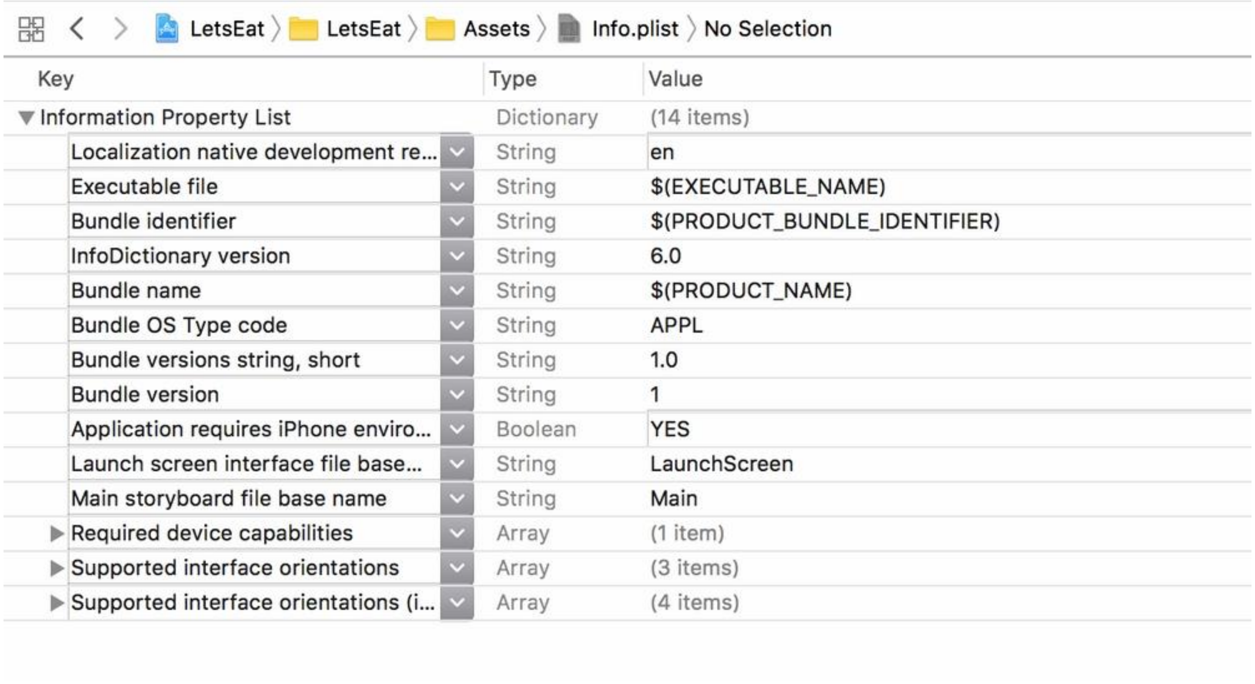
        case .restricted:
            break

        case .denied:
            break

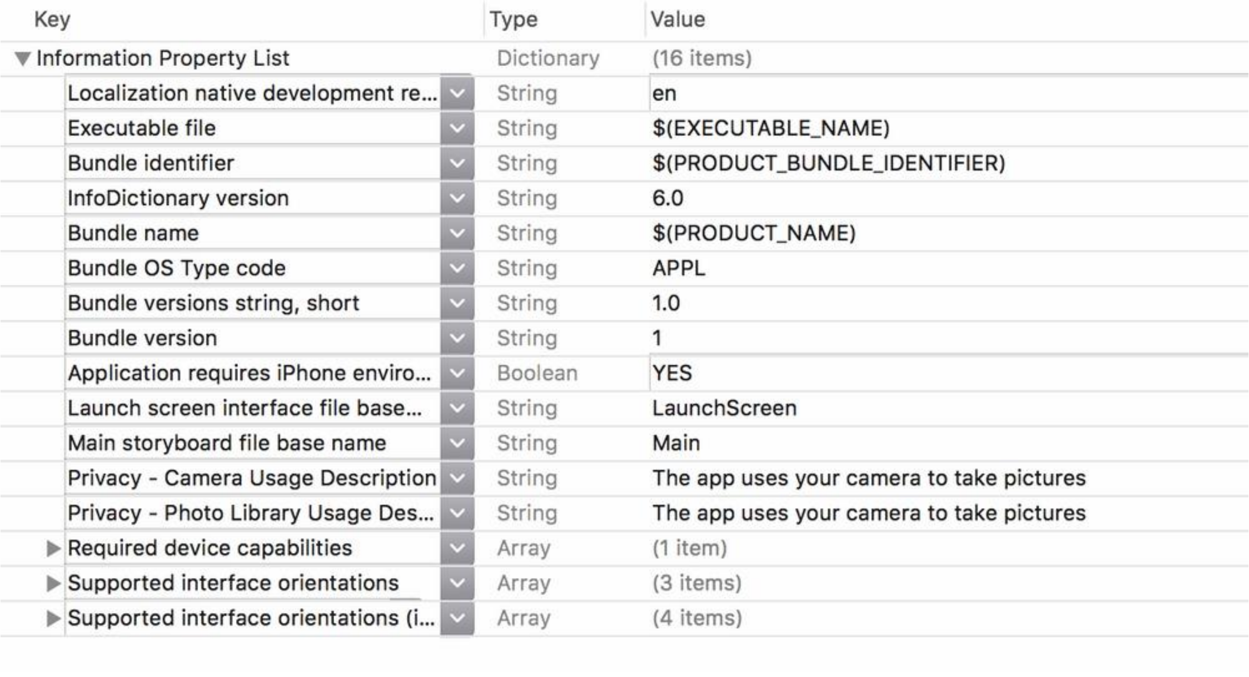
        case .notDetermined:
            AVCaptureDevice.requestAccess(forMediaType: cameraMediaType) { granted in
                if granted {
                    self.showCameraUserInterface()
                } else {
                }
            }
        }
    }

    @IBAction func unwindReviewCancel(segue:UIStoryboardSegue) {}
    @IBAction func unwindRatingSave(segue:UIStoryboardSegue) {}
    @IBAction func unwindFilterSave(segue:UIStoryboardSegue) {
        if segue.source is ApplyFilterViewController {
            if let thumbnail = thumbnail {
                btnThumbnail.setImage(thumbnail, for: .normal)
            }
        }
    }

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

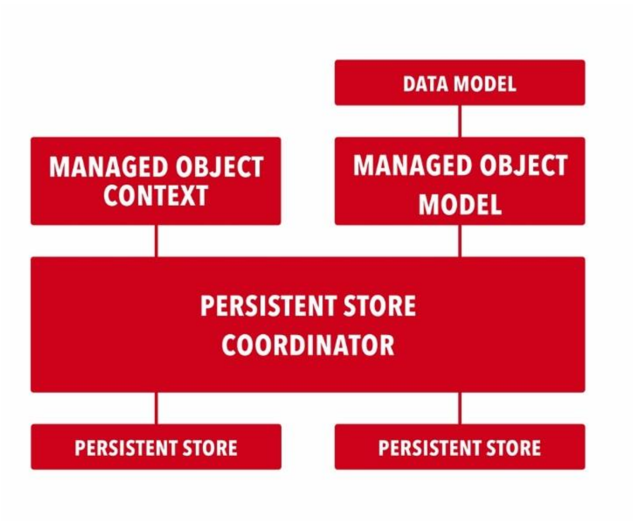


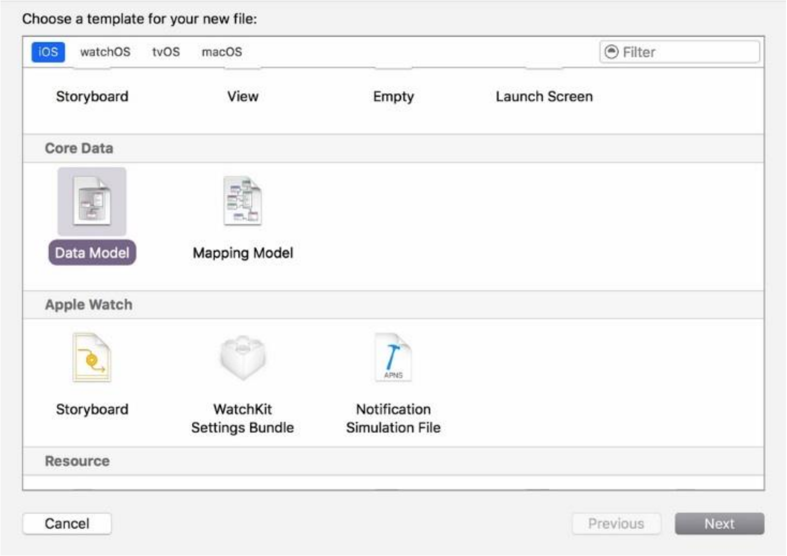
Key	Type	Value
▼ Information Property List	Dictionary	(14 items)
Localization native development re...	String	en
Executable file	String	$(EXECUTABLE_NAME)
Bundle identifier	String	$(PRODUCT_BUNDLE_IDENTIFIER)
InfoDictionary version	String	6.0
Bundle name	String	$(PRODUCT_NAME)
Bundle OS Type code	String	APPL
Bundle versions string, short	String	1.0
Bundle version	String	1
Application requires iPhone enviro...	Boolean	YES
Launch screen interface file base...	String	LaunchScreen
Main storyboard file base name	String	Main
▶ Required device capabilities	Array	(1 item)
▶ Supported interface orientations	Array	(3 items)
▶ Supported interface orientations (i...	Array	(4 items)

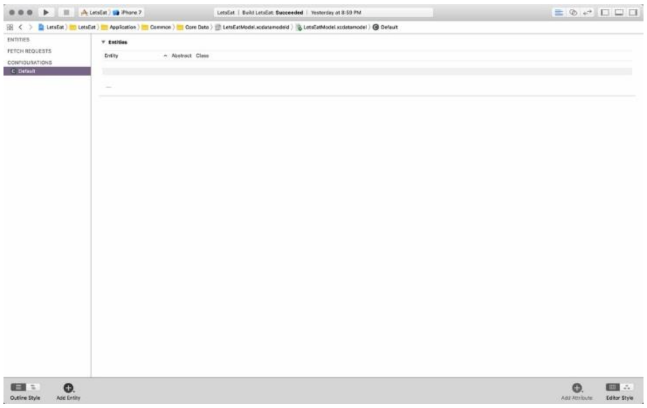


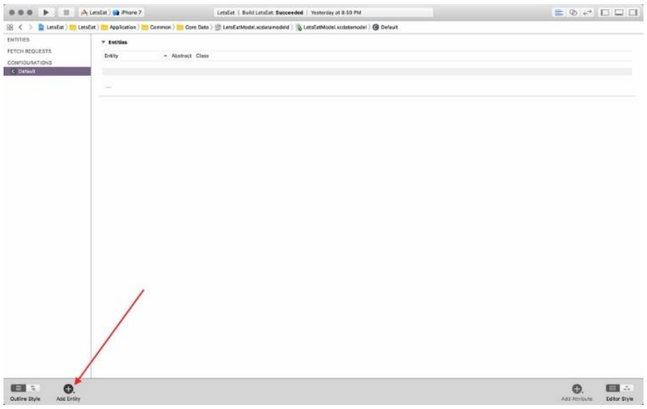
Key	Type	Value
▼ Information Property List	Dictionary	(16 items)
Localization native development re...	String	en
Executable file	String	$(EXECUTABLE_NAME)
Bundle identifier	String	$(PRODUCT_BUNDLE_IDENTIFIER)
InfoDictionary version	String	6.0
Bundle name	String	$(PRODUCT_NAME)
Bundle OS Type code	String	APPL
Bundle versions string, short	String	1.0
Bundle version	String	1
Application requires iPhone enviro...	Boolean	YES
Launch screen interface file base...	String	LaunchScreen
Main storyboard file base name	String	Main
Privacy - Camera Usage Description	String	The app uses your camera to take pictures
Privacy - Photo Library Usage Des...	String	The app uses your camera to take pictures
▶ Required device capabilities	Array	(1 item)
▶ Supported interface orientations	Array	(3 items)
▶ Supported interface orientations (i...	Array	(4 items)

Chapter 13: Saving Reviews




Choose a template for your new file:


LetsEat | iPhone 7
LetsEat | Build LetsEat: Succeeded | Yesterday at 8:59 PM
LetsEat > LetsEat > Application > Common > Core Data > LetsEatModel.xcdatamodeld > LetsEatModel.xcdatamodel > Default
ENTITIES
FETCH REQUESTS
CONFIGURATIONS
Default
Entities
Entity
Abstract
Class
Outline Style
Add Entity
Add Attribute
Editor Style


LetsEat | iPhone 7
LetsEat | Build LetsEat: Succeeded | Yesterday at 8:59 PM
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CONFIGURATIONS
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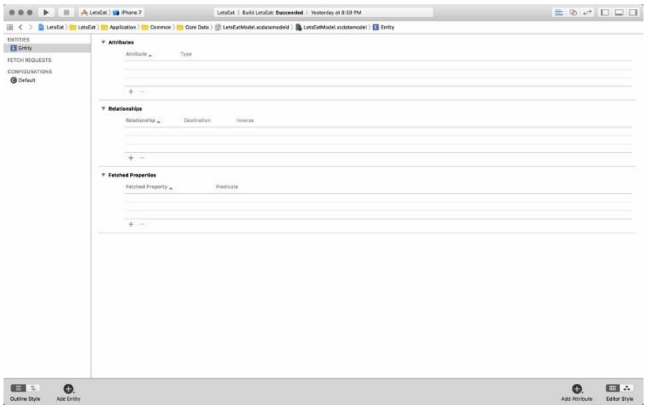
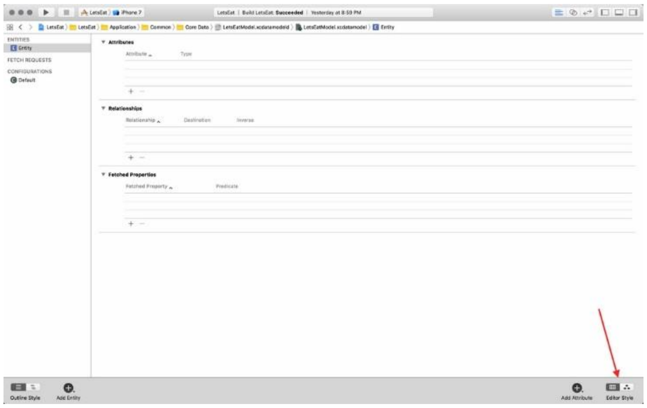
Abstract
Class
Outline Style
Add Entity
Add Attribute
Editor Style


LetsEat | iPhone 7
LetsEat | Build LetsEat: Succeeded | Yesterday at 8:59 PM
LetsEat > LetsEat > Application > Common > Core Data > LetsEatModel.xcdatamodeld > LetsEatModel.xcdatamodel > Entity
ENTITIES
Entity
FETCH REQUESTS
CONFIGURATIONS
Default
Attributes
Attribute
Type
Relationships
Relationship
Destination
Inverse
Fetched Properties
Fetched Property
Predicate
Outline Style
Add Entity
Add Attribute
Editor Style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Relationships
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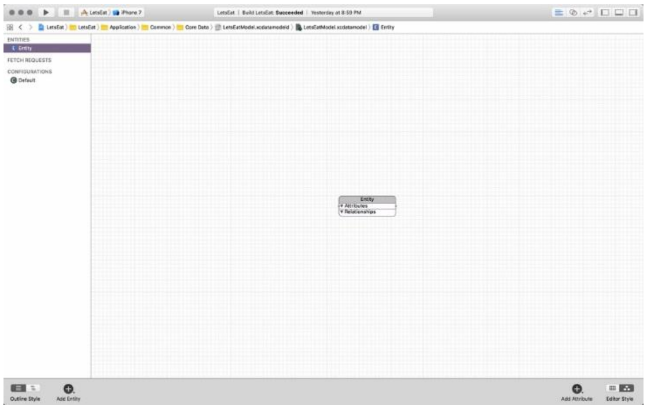
Inverse
Fetched Properties
Fetched Property
Predicate
Outline Style
Add Entity
Add Attribute
Editor Style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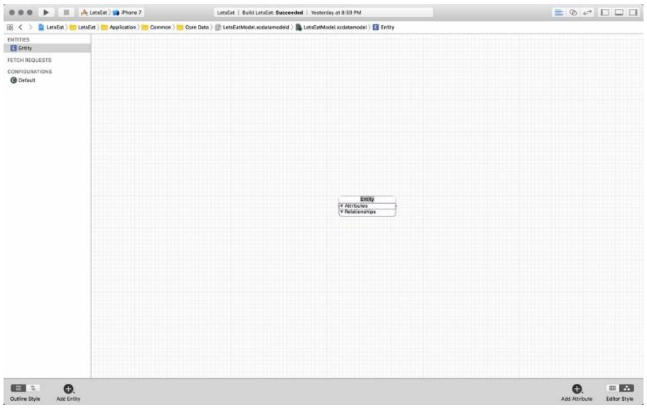
Add Entity
Add Attribute
Editor Style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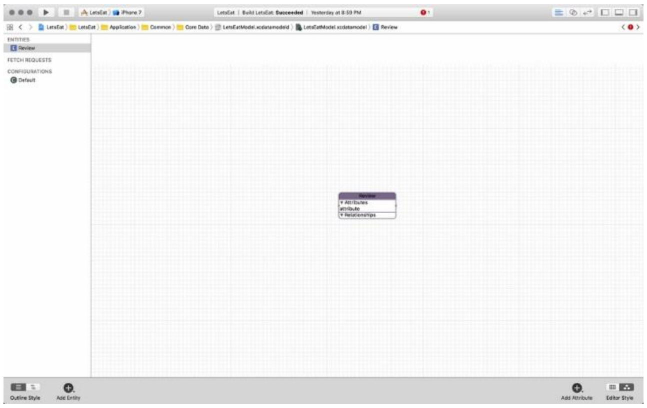
Add Entity
Add Attribute
Editor Style



LetsEat | Build LetsEat: Succeeded | Yesterday at 8:59 PM
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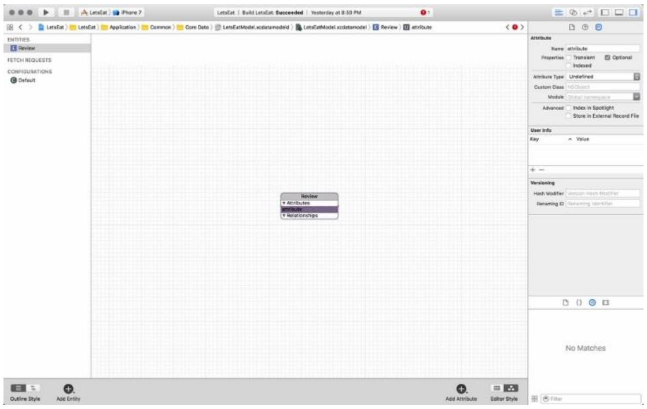
Editor Style



LetsEat | Build LetsEat: Succeeded | Yesterday at 8:59 PM
LetsEat 〉 LetsEat 〉 Application 〉 Common 〉 Core Data 〉 LetsEatModel.xcdatamodeld 〉 LetsEatModel.xcdatamodel 〉 Review 〉 attribute
ENTITIES
Review
FETCH REQUESTS
CONFIGURATIONS
Default
Review
▼ Attributes
attribute
▼ Relationships
Outline Style
Add Entity
Add Attribute
Editor Style
No Matches
Filter

Attribute

Name attribute

Properties □ Transient ☑ Optional

□ Indexed

Attribute Type Undefined

Custom Class NSObject

Module Global namespace

Advanced □ Index in Spotlight

□ Store in External Record File

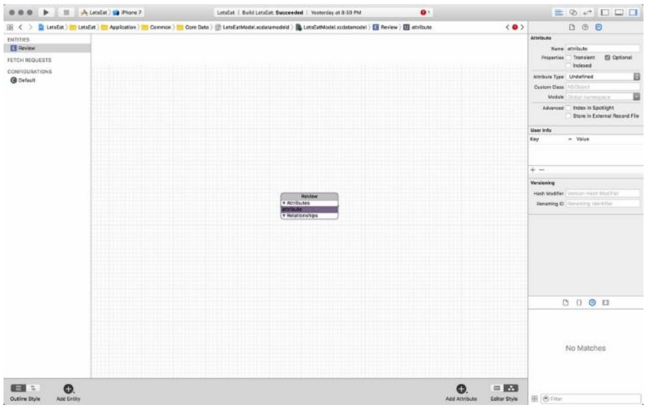
User Info

Key ^ Value

Versioning

Hash Modifier Version Hash Modifier

Renaming ID Renaming Identifier



LetsEat | Build LetsEat: Succeeded | Yesterday at 8:59 PM
LetsEat 〉 LetsEat 〉 Application 〉 Common 〉 Core Data 〉 LetsEatModel.xcdatamodeld 〉 LetsEatModel.xcdatamodel 〉 Review 〉 attribute
ENTITIES
Review
FETCH REQUESTS
CONFIGURATIONS
Default
Review
▼ Attributes
attribute
▼ Relationships
Outline Style
Add Entity
Add Attribute
Editor Style
No Matches
Filter

Attribute

Name attribute

Properties □ Transient ☑ Optional

□ Indexed

Attribute Type Undefined

Custom Class NSObject

Module Global namespace

Advanced □ Index in Spotlight

□ Store in External Record File

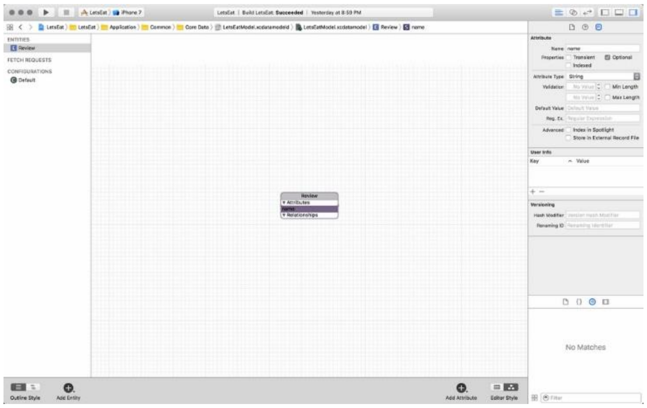
User Info

Key ^ Value

Versioning

Hash Modifier Version Hash Modifier

Renaming ID Renaming Identifier


LetsEat | iPhone 7
LetsEat | Build LetsEat: Succeeded | Yesterday at 8:59 PM
LetsEat 〉 LetsEat 〉 Application 〉 Common 〉 Core Data 〉 LetsEatModel.xcdatamodeld 〉 LetsEatModel.xcdatamodel 〉 Review 〉 name
ENTITIES
Review
FETCH REQUESTS
CONFIGURATIONS
Default
Review
Attributes
name
Relationships
Outline Style
Add Entity
Add Attribute
Editor Style
No Matches
Filter

Attribute

Name: name

Properties: □ Transient ☑ Optional
□ Indexed

Attribute Type: String

Validation: No Value □ Min Length
No Value □ Max Length

Default Value: Default Value

Reg. Ex.: Regular Expression

Advanced: □ Index in Spotlight
□ Store in External Record File

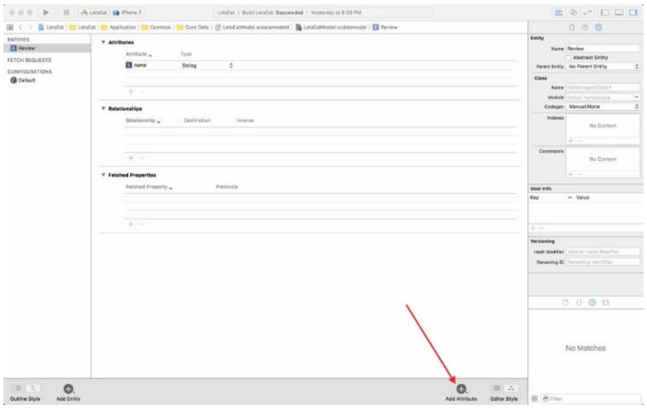
User Info

Key	Value

Versioning

Hash Modifier: Version Hash Modifier

Renaming ID: Renaming Identifier


LetsEat | iPhone 7
LetsEat | Build LetsEat: Succeeded | Yesterday at 8:59 PM
LetsEat 〉 LetsEat 〉 Application 〉 Common 〉 Core Data 〉 LetsEatModel.xcdatamodeld 〉 LetsEatModel.xcdatamodel 〉 Review
ENTITIES
Review
FETCH REQUESTS
CONFIGURATIONS
Default
Outline Style
Add Entity
Add Attribute
Editor Style
No Matches
Filter

Attributes

Attribute	Type
name	String

Relationships

Relationship	Destination	Inverse

Fetched Properties

Fetched Property	Predicate

Entity

Name: Review

□ Abstract Entity

Parent Entity: No Parent Entity

Class

Name: NSManagedObject

Module: Global namespace

Codegen: Manual/None

Indexes: No Content

Constraints: No Content

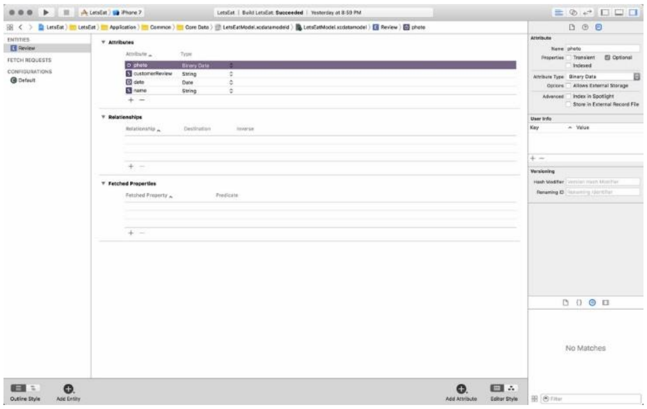
User Info

Key	Value

Versioning

Hash Modifier: Version Hash Modifier

Renaming ID: Renaming Identifier


LetsEat | iPhone 7
LetsEat | Build LetsEat: Succeeded | Yesterday at 8:59 PM
LetsEat 〉 LetsEat 〉 Application 〉 Common 〉 Core Data 〉 LetsEatModel.xcdatamodeld 〉 LetsEatModel.xcdatamodel 〉 Review 〉 photo
ENTITIES
Review
FETCH REQUESTS
CONFIGURATIONS
Default
Outline Style
Add Entity
Add Attribute
Editor Style
No Matches
Filter

Attributes

Attribute	Type
photo	Binary Data
customerReview	String
date	Date
name	String

Relationships

Relationship	Destination	Inverse

Fetched Properties

Fetched Property	Predicate

Attribute

Name: photo

Properties: □ Transient ☑ Optional
□ Indexed

Attribute Type: Binary Data

Options: □ Allows External Storage

Advanced: □ Index in Spotlight
□ Store in External Record File

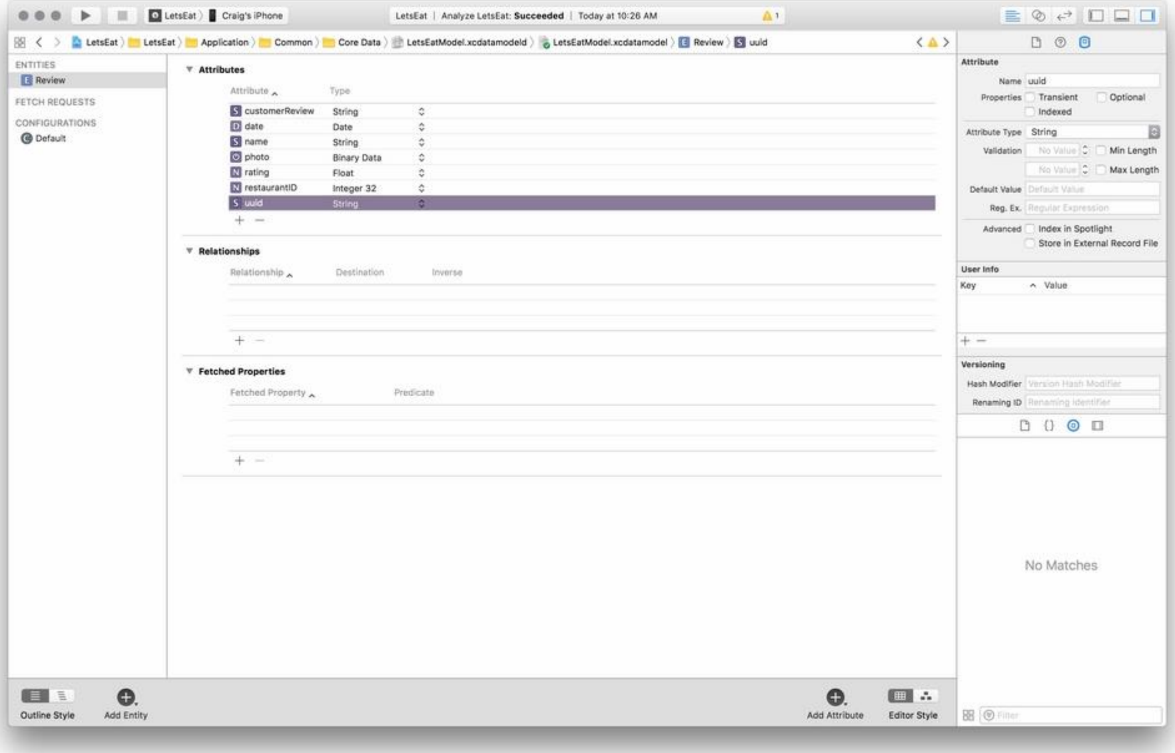
User Info

Key	Value

Versioning

Hash Modifier: Version Hash Modifier

Renaming ID: Renaming Identifier



LetsEat 〉 Craig's iPhone | LetsEat | Analyze LetsEat: **Succeeded** | Today at 10:26 AM

LetsEat 〉 LetsEat 〉 Application 〉 Common 〉 Core Data 〉 LetsEatModel.xcdatamodeld 〉 LetsEatModel.xcdatamodel 〉 Review 〉 uuid

ENTITIES
- Review

FETCH REQUESTS

CONFIGURATIONS
- Default

Attributes

Attribute	Type
customerReview	String
date	Date
name	String
photo	Binary Data
rating	Float
restaurantID	Integer 32
uuid	String

Relationships

Relationship	Destination	Inverse

Fetched Properties

Fetched Property	Predicate

Attribute

Name: uuid

Properties: □ Transient □ Optional □ Indexed

Attribute Type: String

Validation: No Value □ Min Length; No Value □ Max Length

Default Value: Default Value

Reg. Ex.: Regular Expression

Advanced: □ Index in Spotlight □ Store in External Record File

User Info

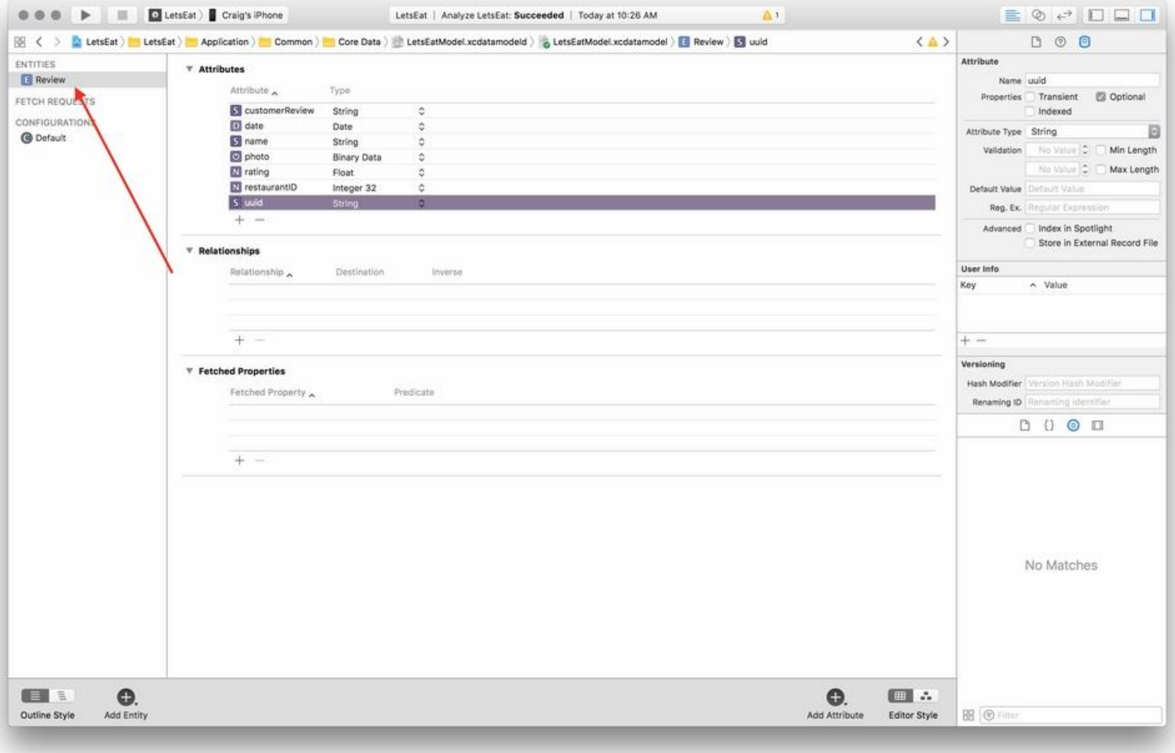
Key	Value

Versioning

Hash Modifier: Version Hash Modifier

Renaming ID: Renaming Identifier

No Matches



LetsEat 〉 Craig's iPhone | LetsEat | Analyze LetsEat: **Succeeded** | Today at 10:26 AM

LetsEat 〉 LetsEat 〉 Application 〉 Common 〉 Core Data 〉 LetsEatModel.xcdatamodeld 〉 LetsEatModel.xcdatamodel 〉 Review 〉 uuid

ENTITIES
- Review

FETCH REQUESTS

CONFIGURATIONS
- Default

Attributes

Attribute	Type
customerReview	String
date	Date
name	String
photo	Binary Data
rating	Float
restaurantID	Integer 32
uuid	String

Relationships

Relationship	Destination	Inverse

Fetched Properties

Fetched Property	Predicate

Attribute

Name: uuid

Properties: □ Transient ☑ Optional □ Indexed

Attribute Type: String

Validation: No Value □ Min Length; No Value □ Max Length

Default Value: Default Value

Reg. Ex.: Regular Expression

Advanced: □ Index in Spotlight □ Store in External Record File

User Info

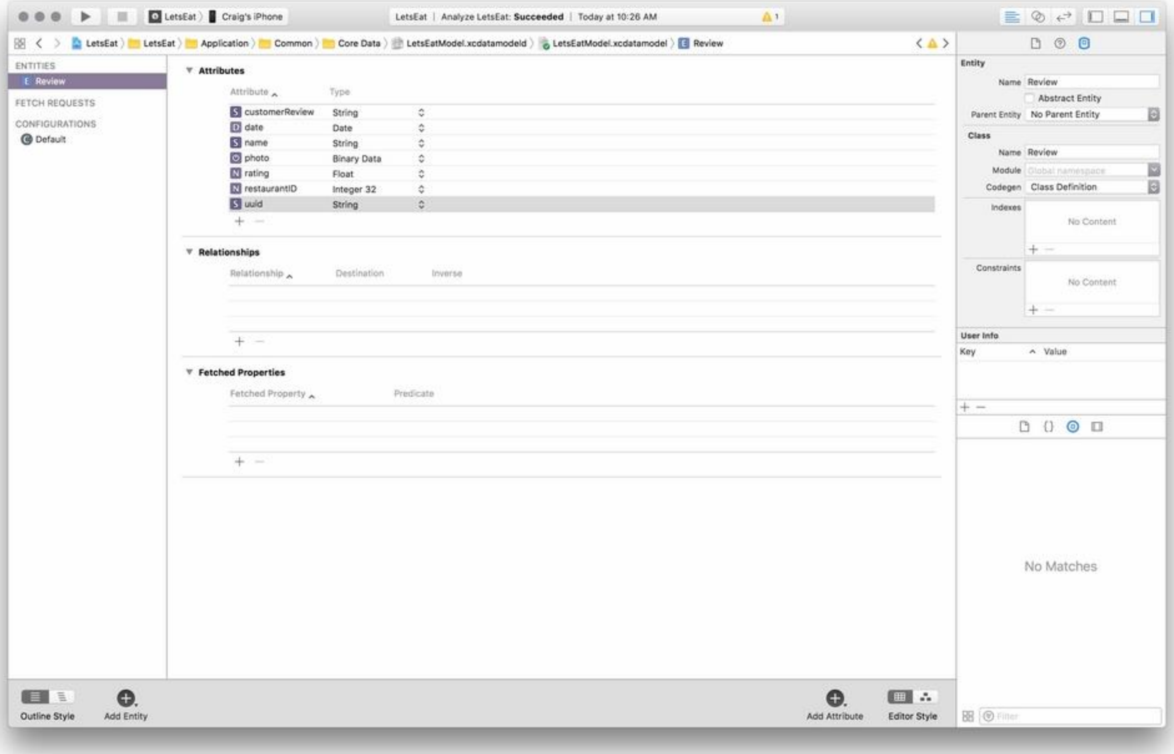
Key	Value

Versioning

Hash Modifier: Version Hash Modifier

Renaming ID: Renaming Identifier

No Matches


LetsEat 〉 Craig's iPhone
LetsEat | Analyze LetsEat: **Succeeded** | Today at 10:26 AM
⚠ 1
LetsEat 〉 LetsEat 〉 Application 〉 Common 〉 Core Data 〉 LetsEatModel.xcdatamodeld 〉 LetsEatModel.xcdatamodel 〉 Review
ENTITIES
E Review
FETCH REQUESTS
CONFIGURATIONS
C Default
Outline Style
Add Entity
Add Attribute
Editor Style
No Matches
Filter

Attributes

Attribute	Type
S customerReview	String
D date	Date
S name	String
photo	Binary Data
N rating	Float
N restaurantID	Integer 32
S uuid	String

Relationships

Relationship	Destination	Inverse

Fetched Properties

Fetched Property	Predicate

Entity

Name: Review

□ Abstract Entity

Parent Entity: No Parent Entity

Class

Name: Review

Module: Global namespace

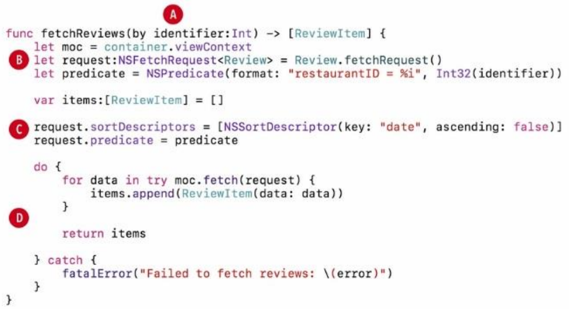
Codegen: Class Definition

Indexes: No Content

Constraints: No Content

User Info

Key	Value



```
func fetchReviews(by identifier:Int) -> [ReviewItem] {
    let moc = container.viewContext
    let request:NSFetchRequest<Review> = Review.fetchRequest()
    let predicate = NSPredicate(format: "restaurantID = %i", Int32(identifier))

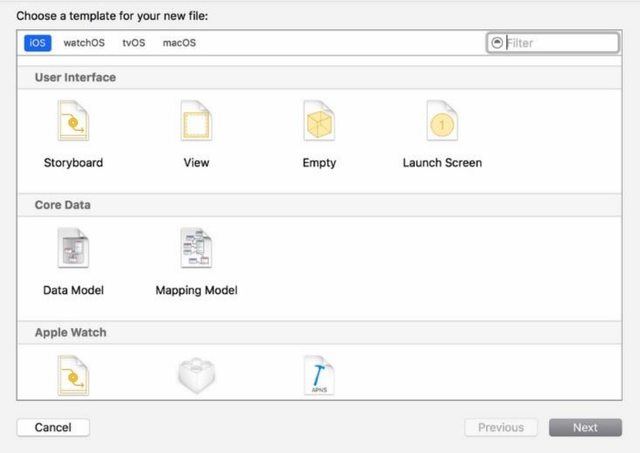
    var items:[ReviewItem] = []

    request.sortDescriptors = [NSSortDescriptor(key: "date", ascending: false)]
    request.predicate = predicate

    do {
        for data in try moc.fetch(request) {
            items.append(ReviewItem(data: data))
        }

        return items

    } catch {
        fatalError("Failed to fetch reviews: \(error)")
    }
}
```



Choose a template for your new file:

iOS | watchOS | tvOS | macOS

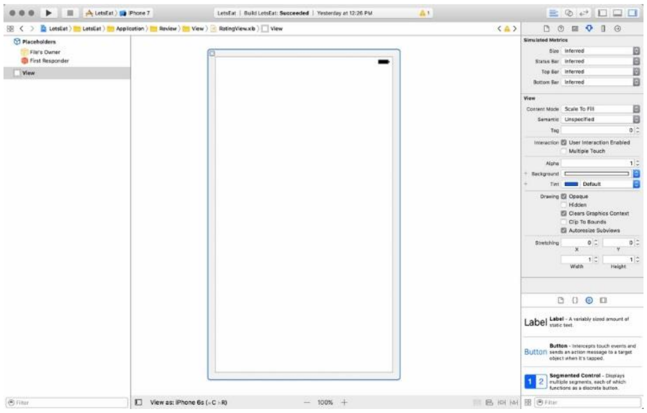
User Interface

Storyboard | View | Empty | Launch Screen

Core Data

Data Model | Mapping Model

Apple Watch



LetsEat | Build LetsEat: Succeeded | Yesterday at 12:26 PM

LetsEat > LetsEat > Application > Review > View > RatingView.xib > View

Placeholders
File's Owner
First Responder
View

View as: iPhone 6s (wC hR) — 100% +

Simulated Metrics

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

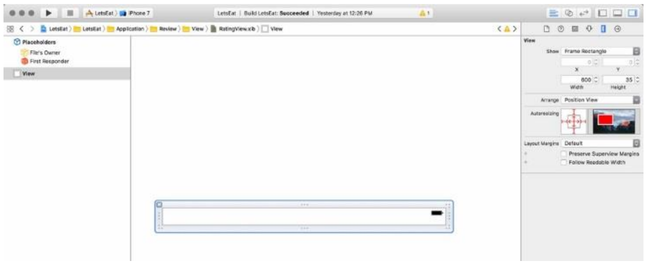
View

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: 0 X, 0 Y, 1 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.



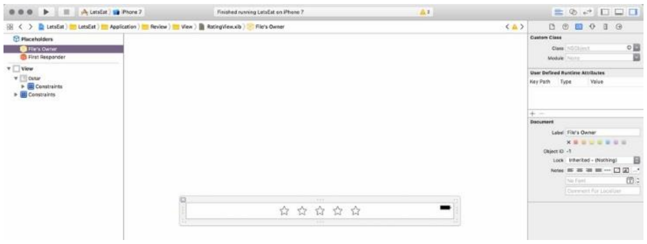
LetsEat | Build LetsEat: Succeeded | Yesterday at 12:26 PM

LetsEat > LetsEat > Application > Review > View > RatingView.xib > View

Placeholders
File's Owner
First Responder
View

View

Show: Frame Rectangle
X: 0, Y: 0
Width: 600, Height: 35
Arrange: Position View
Autoresizing
Layout Margins: Default
☐ Preserve Superview Margins
☐ Follow Readable Width



Finished running LetsEat on iPhone 7

LetsEat > LetsEat > Application > Review > View > RatingView.xib > File's Owner

Placeholders
File's Owner
First Responder
View
Constraints
Constraints

Custom Class

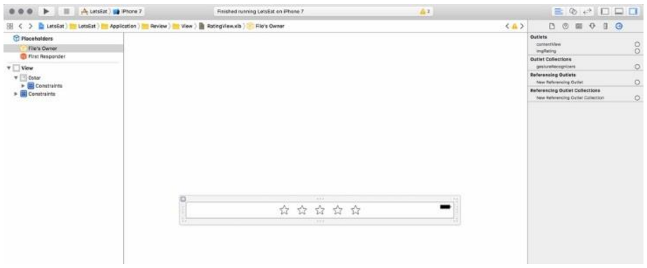
Class: NSObject
Module: None

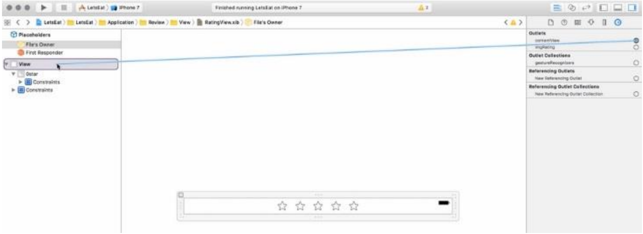
User Defined Runtime Attributes

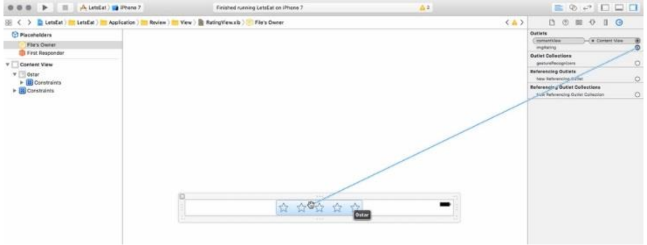
Key Path | Type | Value

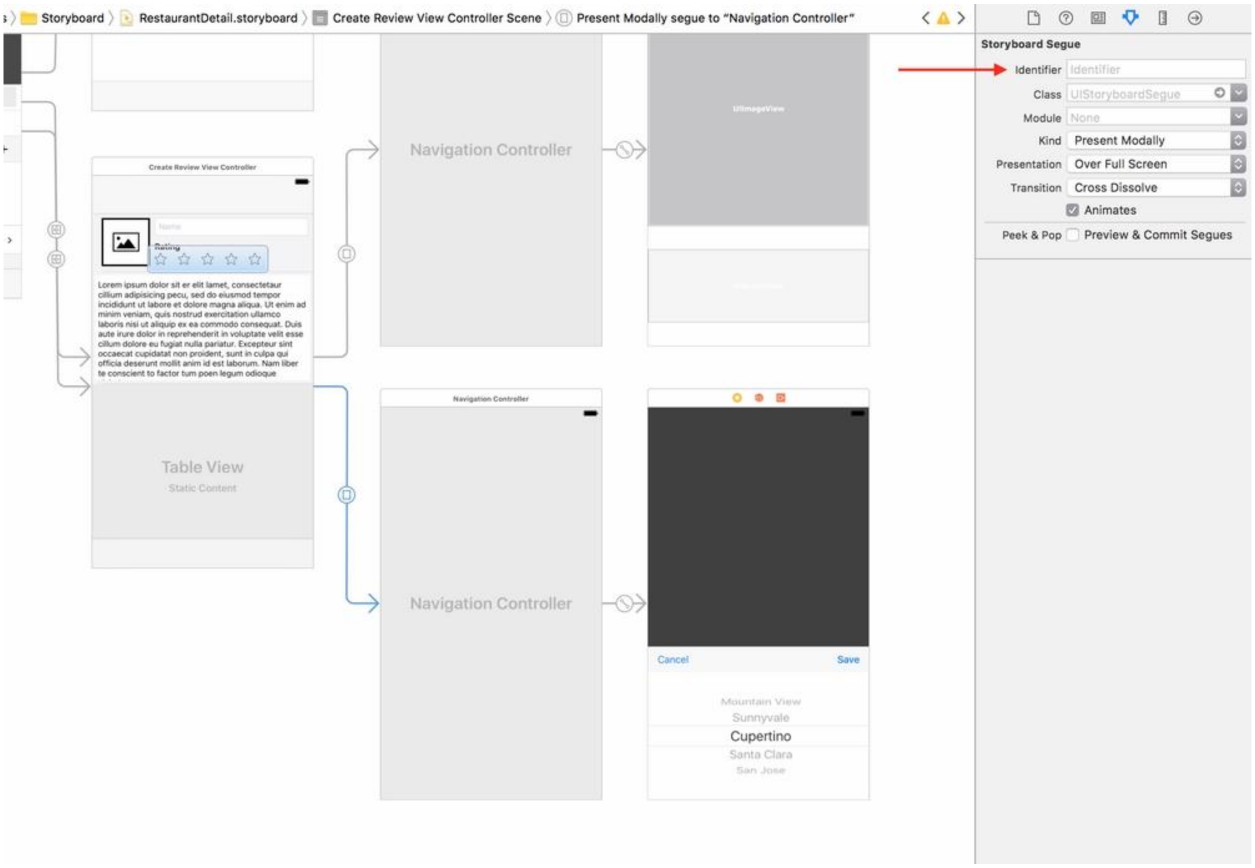
Document

Label: File's Owner
Object ID: -1
Lock: Inherited - (Nothing)
Notes
No Font
Comment For Localizer


LetsEat
iPhone 7
Finished running LetsEat on iPhone 7
LetsEat 〉 LetsEat 〉 Application 〉 Review 〉 View 〉 RatingView.xib 〉 File's Owner
Placeholders
File's Owner
First Responder
View
Dstar
Constraints
Constraints
Outlets
contentView
imgRating
Outlet Collections
gestureRecognizers
Referencing Outlets
New Referencing Outlet
Referencing Outlet Collections
New Referencing Outlet Collection


LetsEat
iPhone 7
Finished running LetsEat on iPhone 7
LetsEat 〉 LetsEat 〉 Application 〉 Review 〉 View 〉 RatingView.xib 〉 File's Owner
Placeholders
File's Owner
First Responder
View
Dstar
Constraints
Constraints
Outlets
contentView
imgRating
Outlet Collections
gestureRecognizers
Referencing Outlets
New Referencing Outlet
Referencing Outlet Collections
New Referencing Outlet Collection


LetsEat
iPhone 7
Finished running LetsEat on iPhone 7
LetsEat 〉 LetsEat 〉 Application 〉 Review 〉 View 〉 RatingView.xib 〉 File's Owner
Placeholders
File's Owner
First Responder
Content View
Dstar
Constraints
Constraints
Outlets
contentView
Content View
imgRating
Outlet Collections
gestureRecognizers
Referencing Outlets
New Referencing Outlet
Referencing Outlet Collections
New Referencing Outlet Collection
Dstar



Storyboard 〉 RestaurantDetail.storyboard 〉 Create Review View Controller Scene 〉 Present Modally segue to "Navigation Controller"
Navigation Controller
UIImageView
Create Review View Controller
Name
Rating
Lorem ipsum dolor sit er elit lamet, consectetaur cillium adipisicing pecu, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum. Nam liber te conscient to factor tum poen legum odioque
Table View
Static Content
Navigation Controller
Navigation Controller
Cancel
Save
Mountain View
Sunnyvale
Cupertino
Santa Clara
San Jose

Storyboard Segue

Identifier: Identifier

Class: UIStoryboardSegue

Module: None

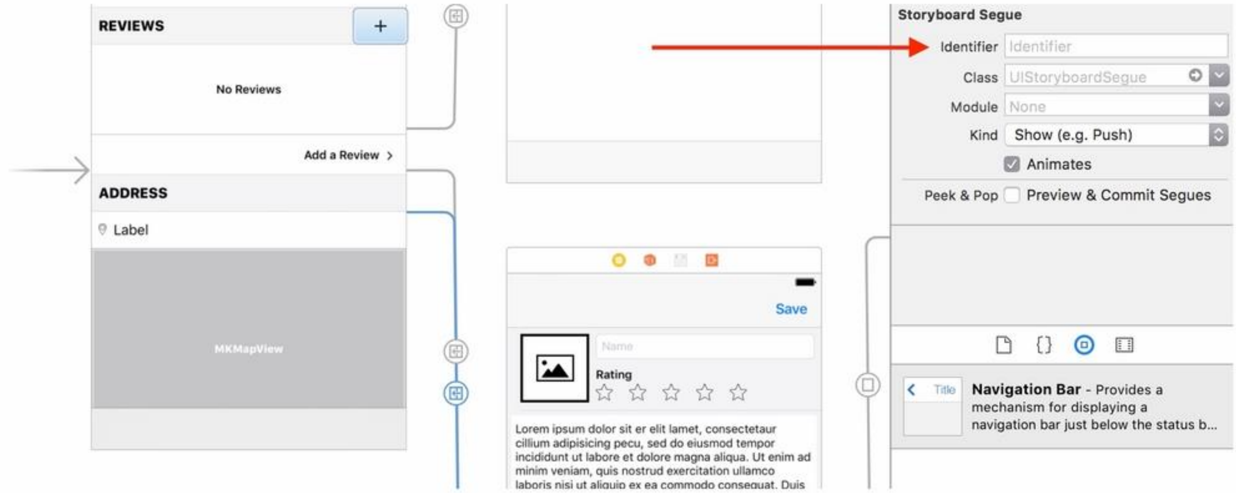
Kind: Present Modally

Presentation: Over Full Screen

Transition: Cross Dissolve

☑ Animates

Peek & Pop □ Preview & Commit Segues


REVIEWS
+
No Reviews
Add a Review >
ADDRESS
Label
MKMapView
Save
Name
Rating
Lorem ipsum dolor sit er elit lamet, consectetaur cillium adipisicing pecu, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis
Title
Navigation Bar - Provides a mechanism for displaying a navigation bar just below the status b...

Storyboard Segue

Identifier: Identifier

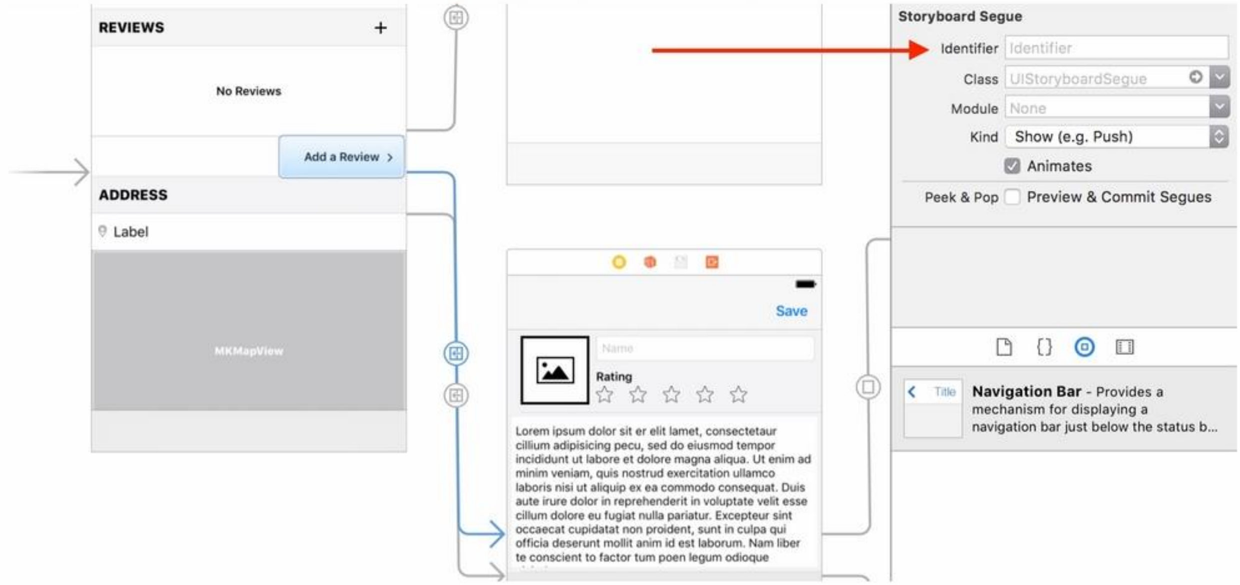
Class: UIStoryboardSegue

Module: None

Kind: Show (e.g. Push)

☑ Animates

Peek & Pop: □ Preview & Commit Segues


REVIEWS
+
No Reviews
Add a Review >
ADDRESS
Label
MKMapView
Save
Name
Rating
Lorem ipsum dolor sit er elit lamet, consectetaur cillium adipisicing pecu, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum. Nam liber te conscient to factor tum poen legum odioque
Title
Navigation Bar - Provides a mechanism for displaying a navigation bar just below the status b...

Storyboard Segue

Identifier: Identifier

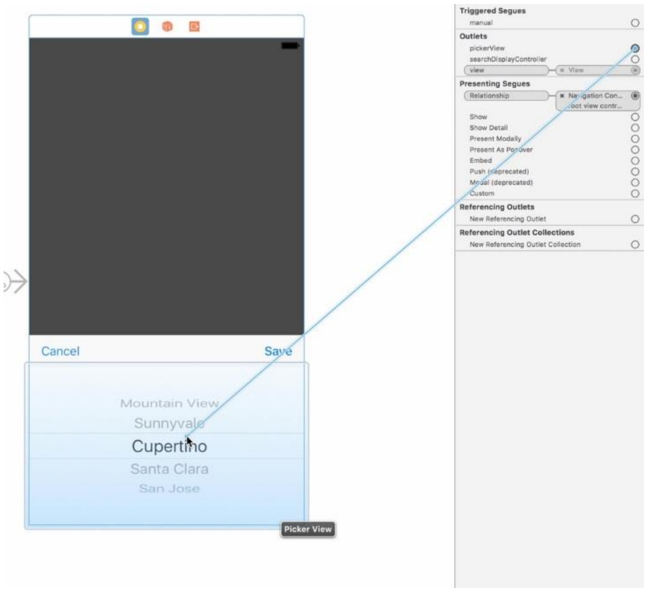
Class: UIStoryboardSegue

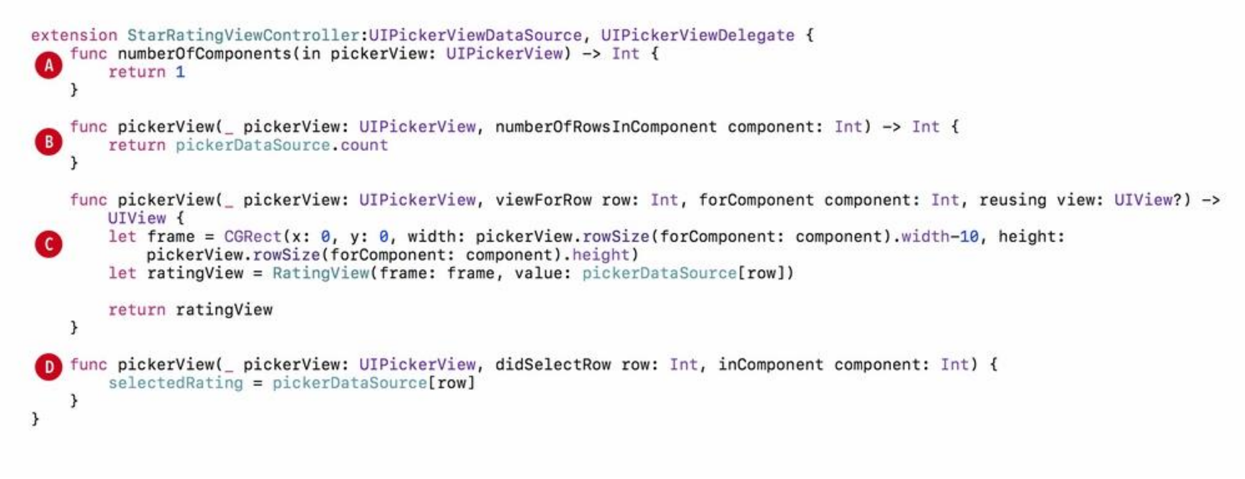
Module: None

Kind: Show (e.g. Push)

☑ Animates

Peek & Pop: □ Preview & Commit Segues





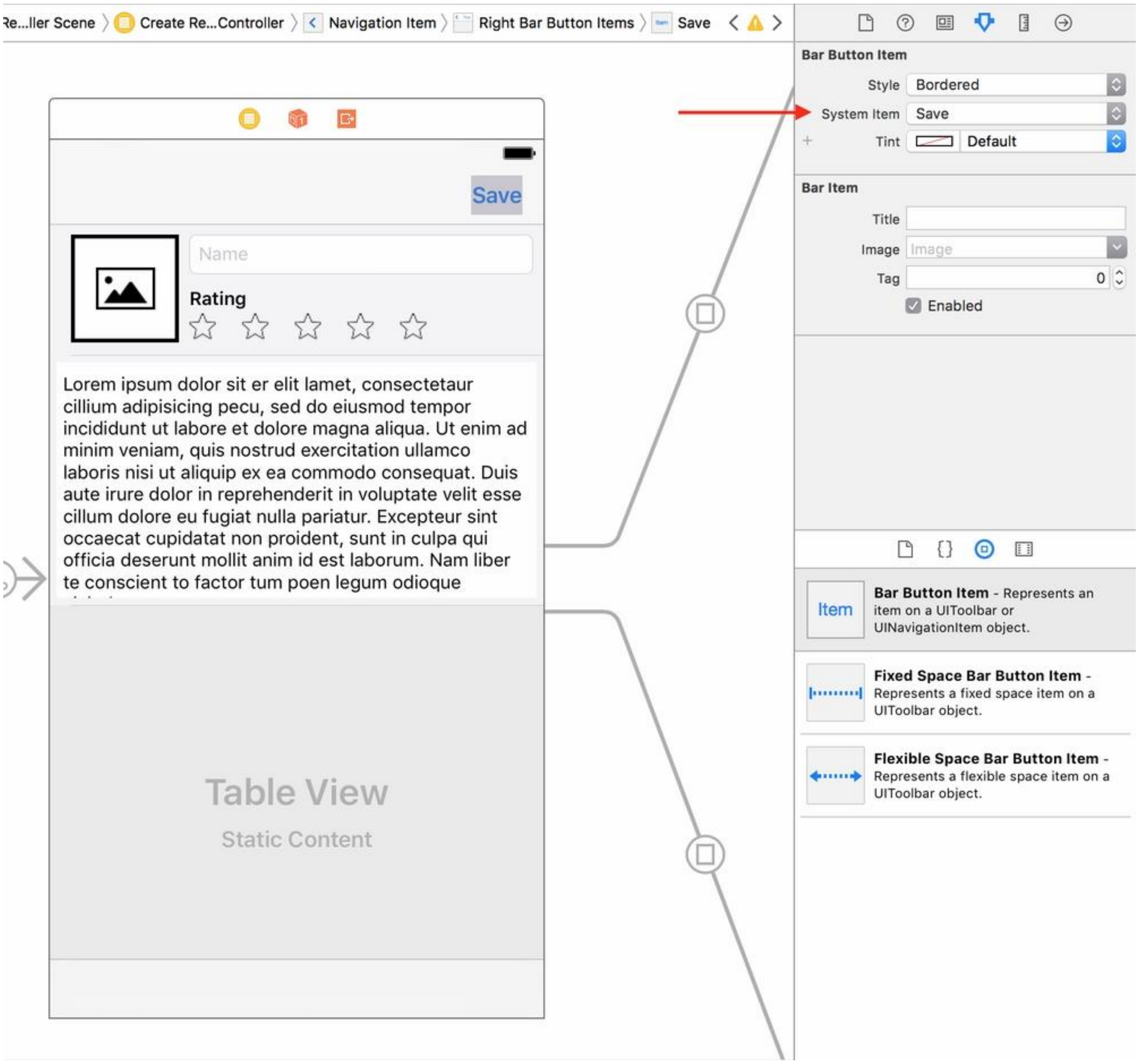
```
extension StarRatingViewController:UIPickerViewDataSource, UIPickerViewDelegate {
    func numberOfComponents(in pickerView: UIPickerView) -> Int {
        return 1
    }

    func pickerView(_ pickerView: UIPickerView, numberOfRowsInComponent component: Int) -> Int {
        return pickerDataSource.count
    }

    func pickerView(_ pickerView: UIPickerView, viewForRow row: Int, forComponent component: Int, reusing view: UIView?) ->
        UIView {
        let frame = CGRect(x: 0, y: 0, width: pickerView.rowSize(forComponent: component).width-10, height:
            pickerView.rowSize(forComponent: component).height)
        let ratingView = RatingView(frame: frame, value: pickerDataSource[row])

        return ratingView
    }

    func pickerView(_ pickerView: UIPickerView, didSelectRow row: Int, inComponent component: Int) {
        selectedRating = pickerDataSource[row]
    }
}
```



Re...ller Scene 〉 Create Re...Controller 〉 Navigation Item 〉 Right Bar Button Items 〉 Save

Bar Button Item

Style: Bordered

System Item: Save

Tint: Default

Bar Item

Title:

Image: Image

Tag: 0

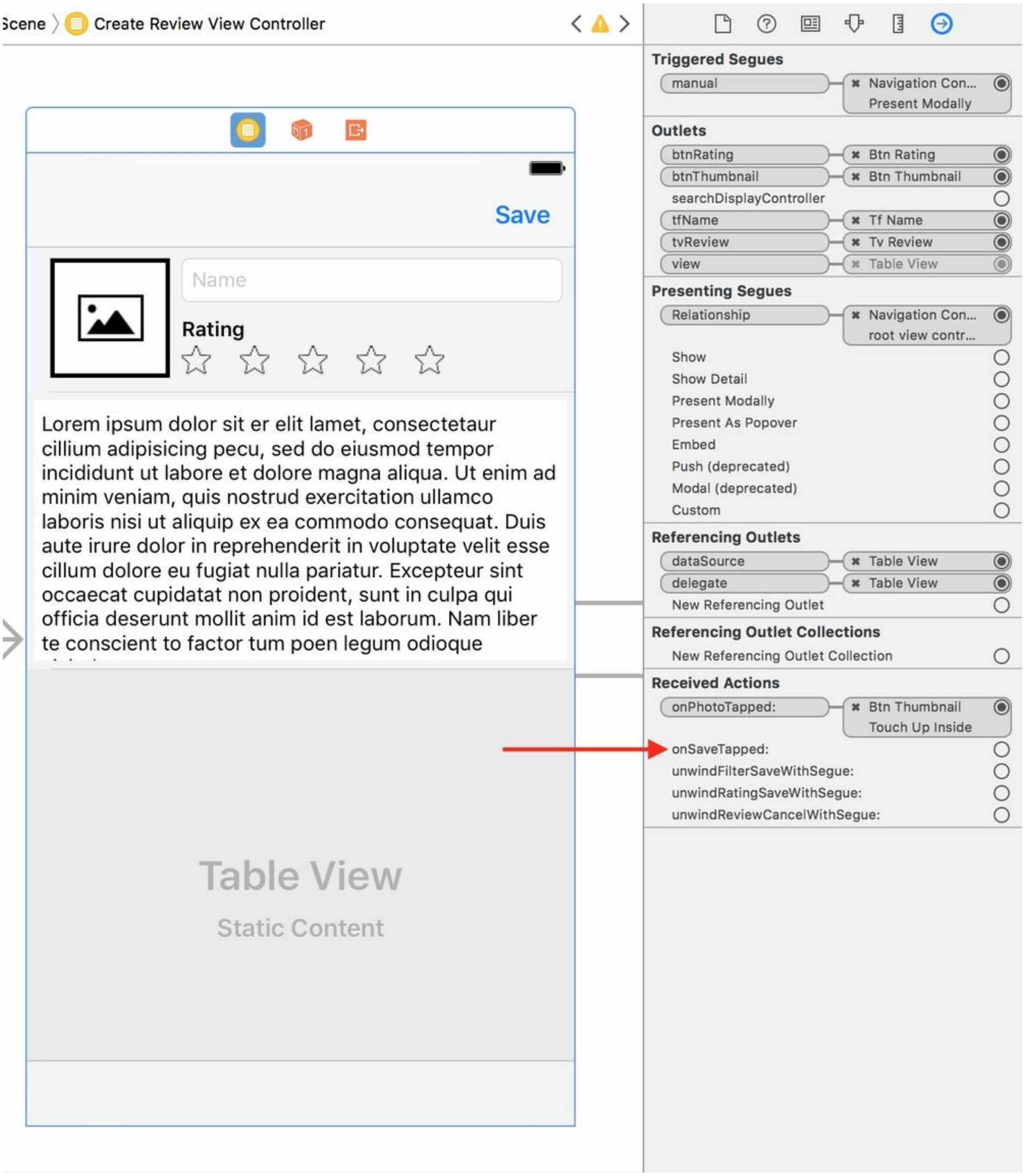
☑ Enabled

Lorem ipsum dolor sit er elit lamet, consectetaur cillium adipisicing pecu, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum. Nam liber te conscient to factor tum poen legum odioque

Bar Button Item - Represents an item on a UIToolbar or UINavigationItem object.

Fixed Space Bar Button Item - Represents a fixed space item on a UIToolbar object.

Flexible Space Bar Button Item - Represents a flexible space item on a UIToolbar object.



Lorem ipsum dolor sit er elit lamet, consectetaur cillium adipisicing pecu, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum. Nam liber te conscient to factor tum poen legum odioque

Triggered Segues

- manual — Navigation Con... Present Modally ●

Outlets

- btnRating — Btn Rating ●
- btnThumbnail — Btn Thumbnail ●
- searchDisplayController ○
- tfName — Tf Name ●
- tvReview — Tv Review ●
- view — Table View ●

Presenting Segues

- Relationship — Navigation Con... root view contr... ●
- Show ○
- Show Detail ○
- Present Modally ○
- Present As Popover ○
- Embed ○
- Push (deprecated) ○
- Modal (deprecated) ○
- Custom ○

Referencing Outlets

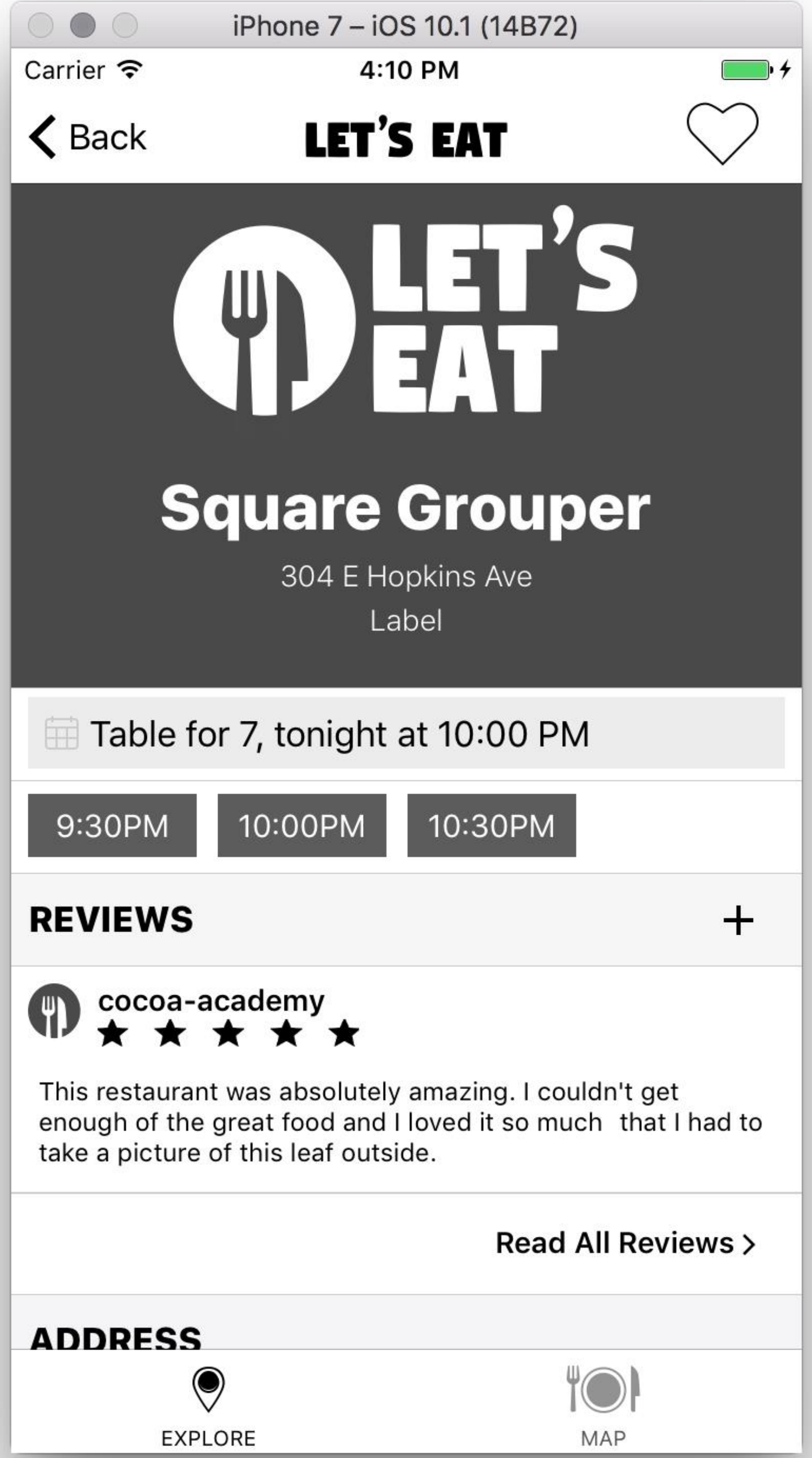
- dataSource — Table View ●
- delegate — Table View ●
- New Referencing Outlet ○

Referencing Outlet Collections

- New Referencing Outlet Collection ○

Received Actions

- onPhotoTapped: — Btn Thumbnail Touch Up Inside ●
- onSaveTapped: ○
- unwindFilterSaveWithSegue: ○
- unwindRatingSaveWithSegue: ○
- unwindReviewCancelWithSegue: ○



Square Grouper

304 E Hopkins Ave

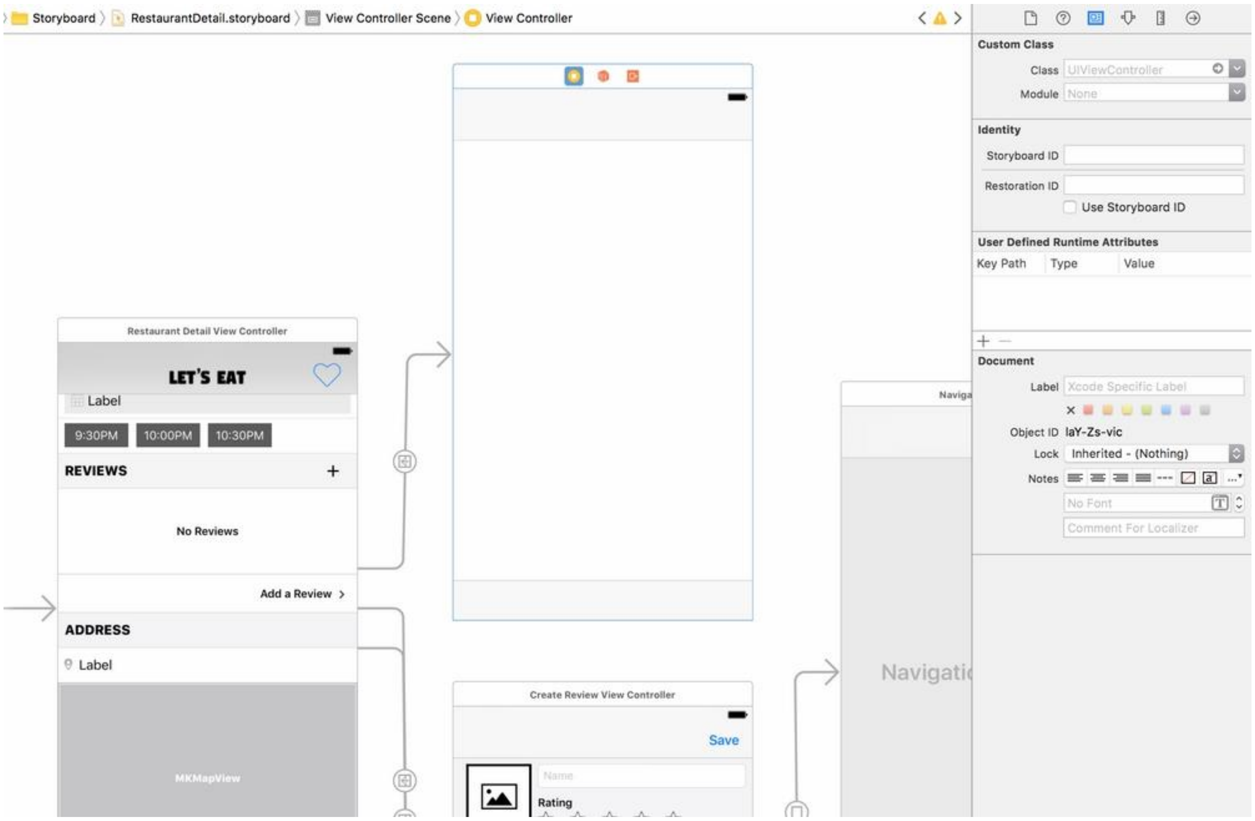
Label

Table for 7, tonight at 10:00 PM

cocoa-academy

★ ★ ★ ★ ★

This restaurant was absolutely amazing. I couldn't get enough of the great food and I loved it so much that I had to take a picture of this leaf outside.



Storyboard 〉 RestaurantDetail.storyboard 〉 View Controller Scene 〉 View Controller

Custom Class

Class UIViewController

Module None

Identity

Storyboard ID

Restoration ID

□ Use Storyboard ID

User Defined Runtime Attributes

Key Path	Type	Value

Document

Label Xcode Specific Label

Object ID IaY-Zs-vic

Lock Inherited - (Nothing)

Notes

No Font

Comment For Localizer

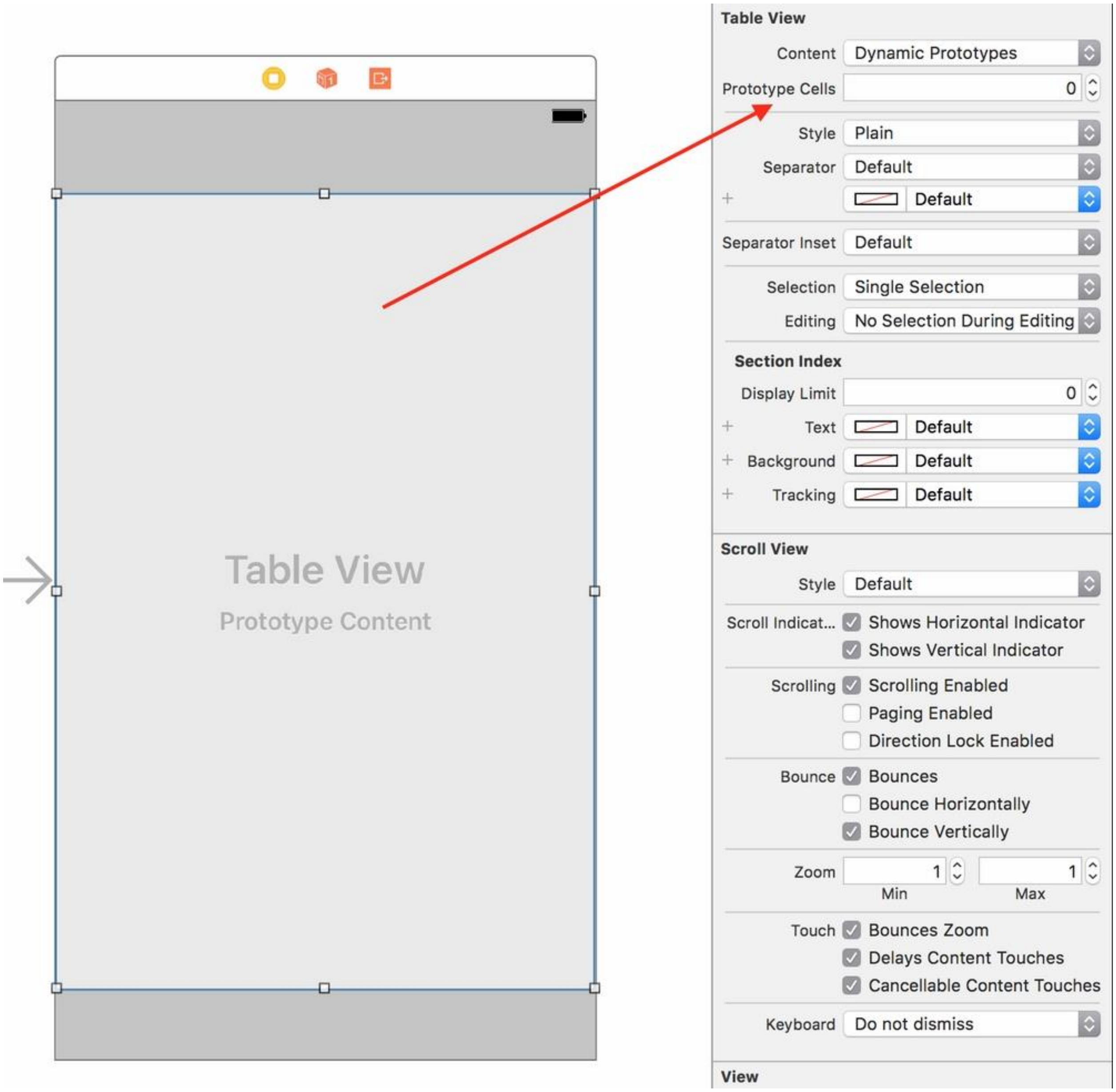


Table View

Content: Dynamic Prototypes

Prototype Cells: 0

Style: Plain

Separator: Default

Default

Separator Inset: Default

Selection: Single Selection

Editing: No Selection During Editing

Section Index

Display Limit: 0

Text: Default

Background: Default

Tracking: Default

Scroll View

Style: Default

Scroll Indicat... ☑ Shows Horizontal Indicator

☑ Shows Vertical Indicator

Scrolling ☑ Scrolling Enabled

□ Paging Enabled

□ Direction Lock Enabled

Bounce ☑ Bounces

□ Bounce Horizontally

☑ Bounce Vertically

Zoom: 1 (Min) 1 (Max)

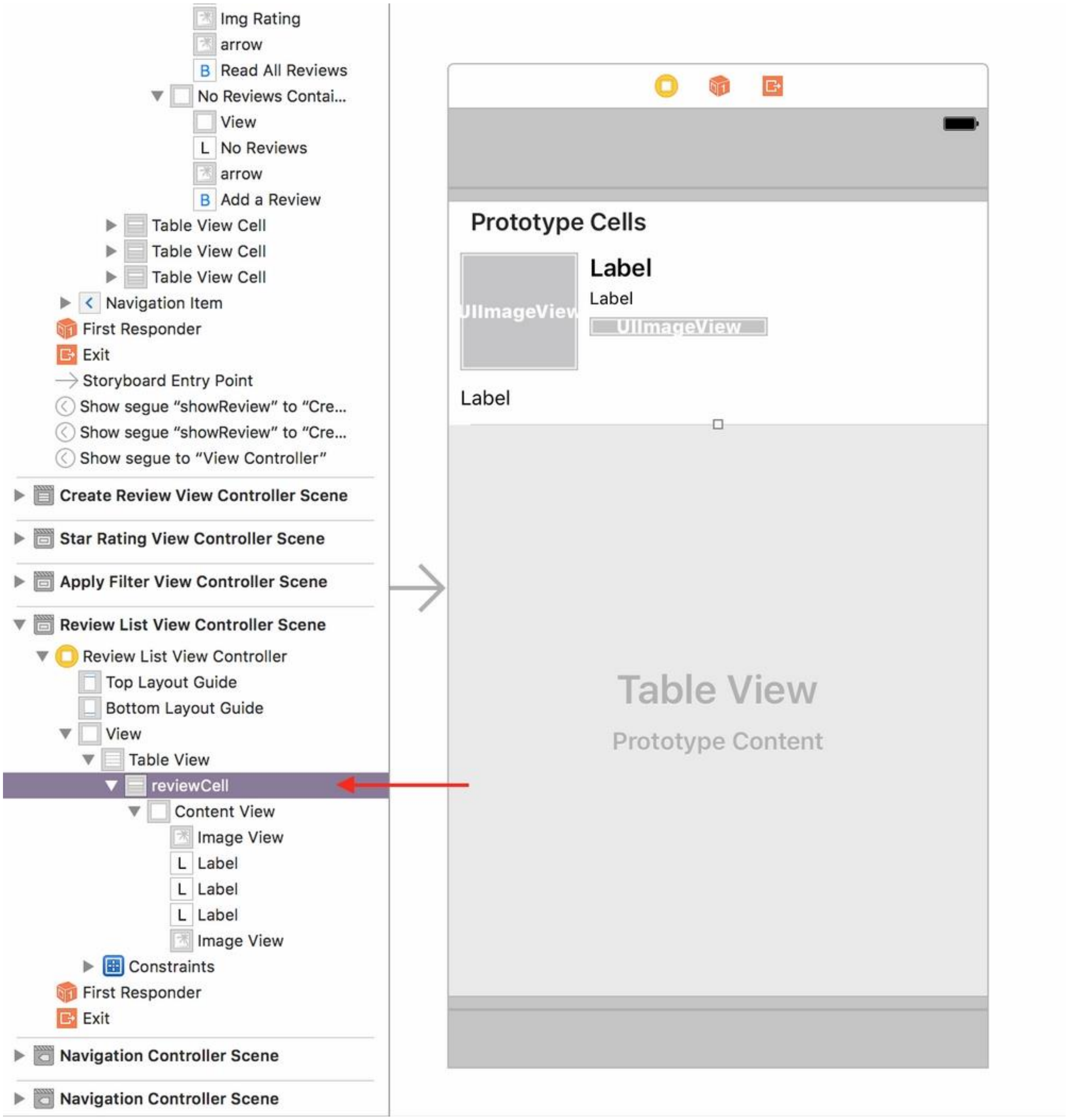
Touch ☑ Bounces Zoom

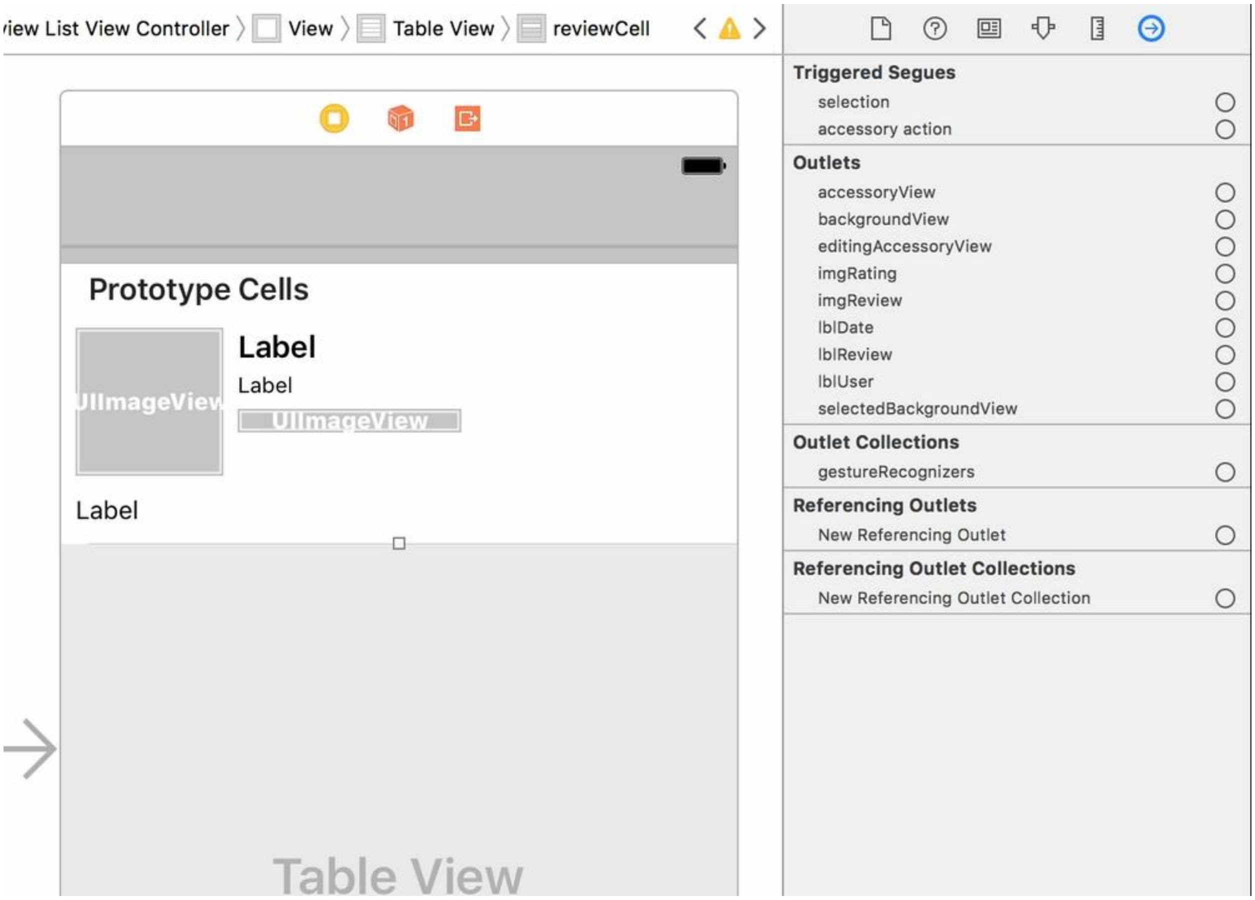
☑ Delays Content Touches

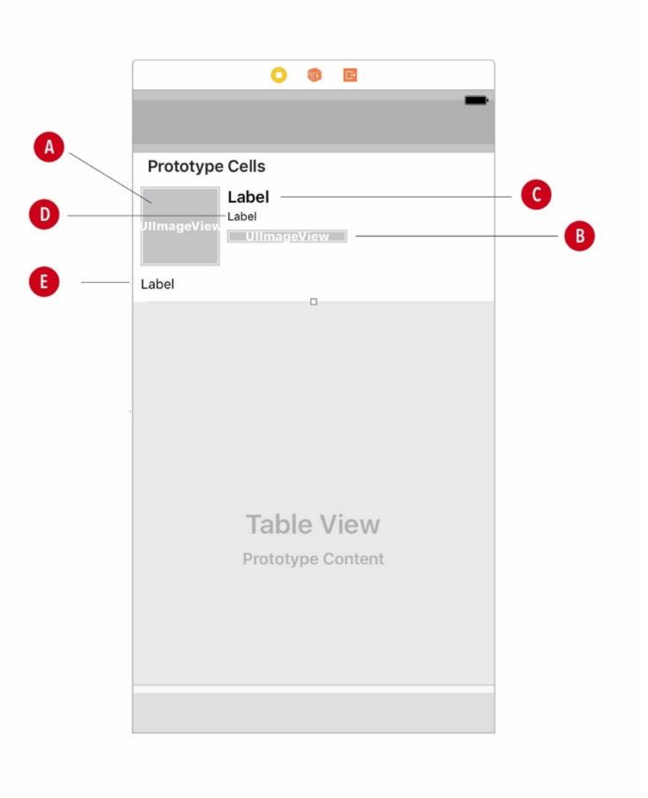
☑ Cancellable Content Touches

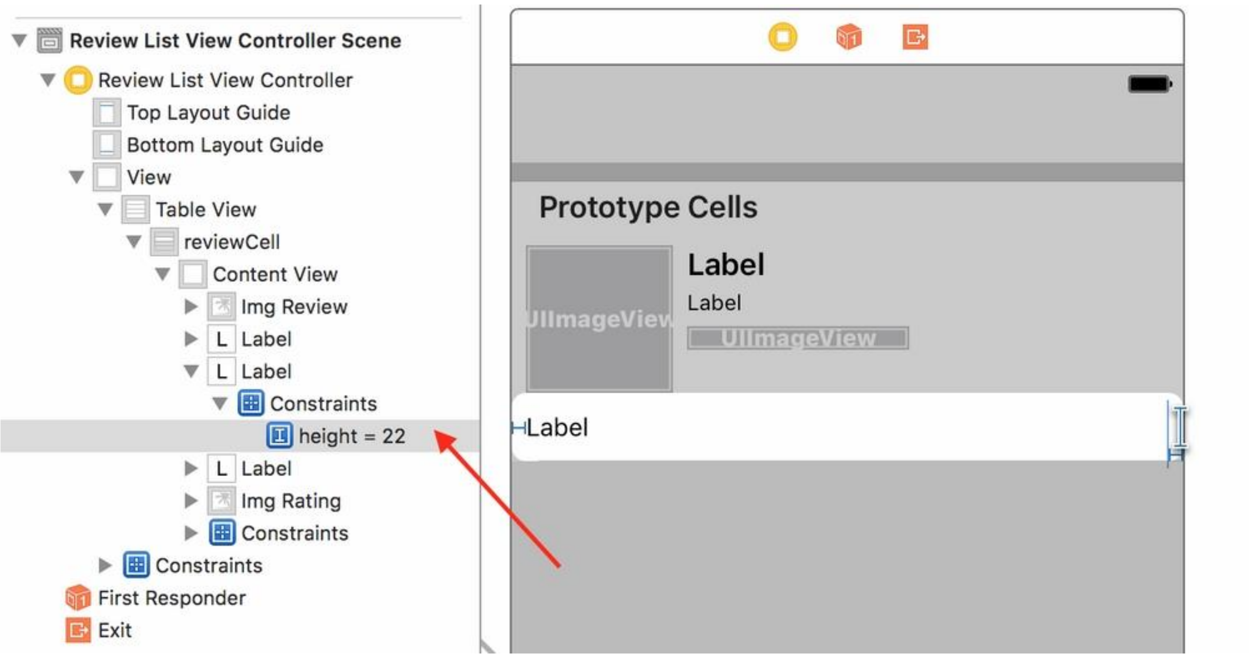
Keyboard: Do not dismiss

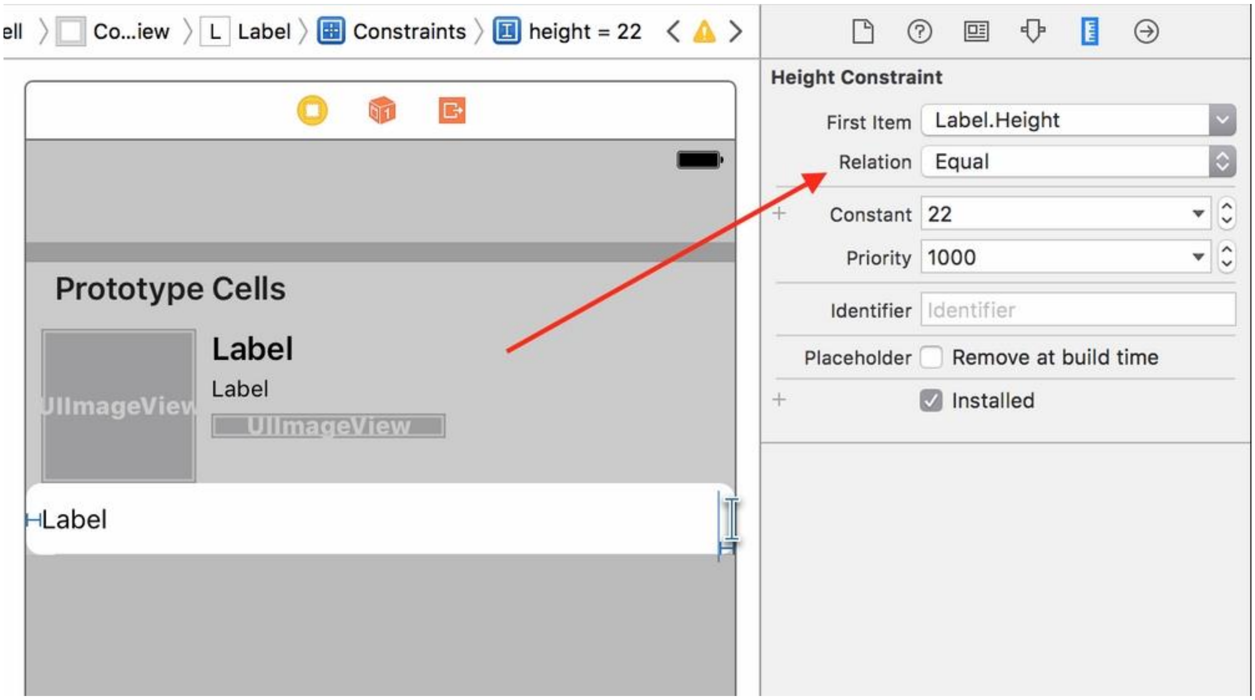
View


Img Rating
arrow
Read All Reviews
No Reviews Contai...
View
No Reviews
arrow
Add a Review
Table View Cell
Table View Cell
Table View Cell
Navigation Item
First Responder
Exit
Storyboard Entry Point
Show segue "showReview" to "Cre...
Show segue "showReview" to "Cre...
Show segue to "View Controller"
Create Review View Controller Scene
Star Rating View Controller Scene
Apply Filter View Controller Scene
Review List View Controller Scene
Review List View Controller
Top Layout Guide
Bottom Layout Guide
View
Table View
reviewCell
Content View
Image View
Label
Label
Label
Image View
Constraints
First Responder
Exit
Navigation Controller Scene
Navigation Controller Scene
Prototype Cells
UIImageView
Label
Label
UIImageView
Label
Table View
Prototype Content


iew List View Controller
View
Table View
reviewCell
Prototype Cells
UIImageView
Label
Label
UIImageView
Label
Table View
Triggered Segues
selection
accessory action
Outlets
accessoryView
backgroundView
editingAccessoryView
imgRating
imgReview
lblDate
lblReview
lblUser
selectedBackgroundView
Outlet Collections
gestureRecognizers
Referencing Outlets
New Referencing Outlet
Referencing Outlet Collections
New Referencing Outlet Collection


Prototype Cells
A
Label
C
D
Label
UIImageView
UIImageView
B
E
Label
Table View
Prototype Content


Review List View Controller Scene
Review List View Controller
Top Layout Guide
Bottom Layout Guide
View
Table View
reviewCell
Content View
Img Review
Label
Label
Constraints
height = 22
Label
Img Rating
Constraints
Constraints
First Responder
Exit
Prototype Cells
Label
Label
UIImageView
UIImageView
Label



Height Constraint

First Item: Label.Height

Relation: Equal

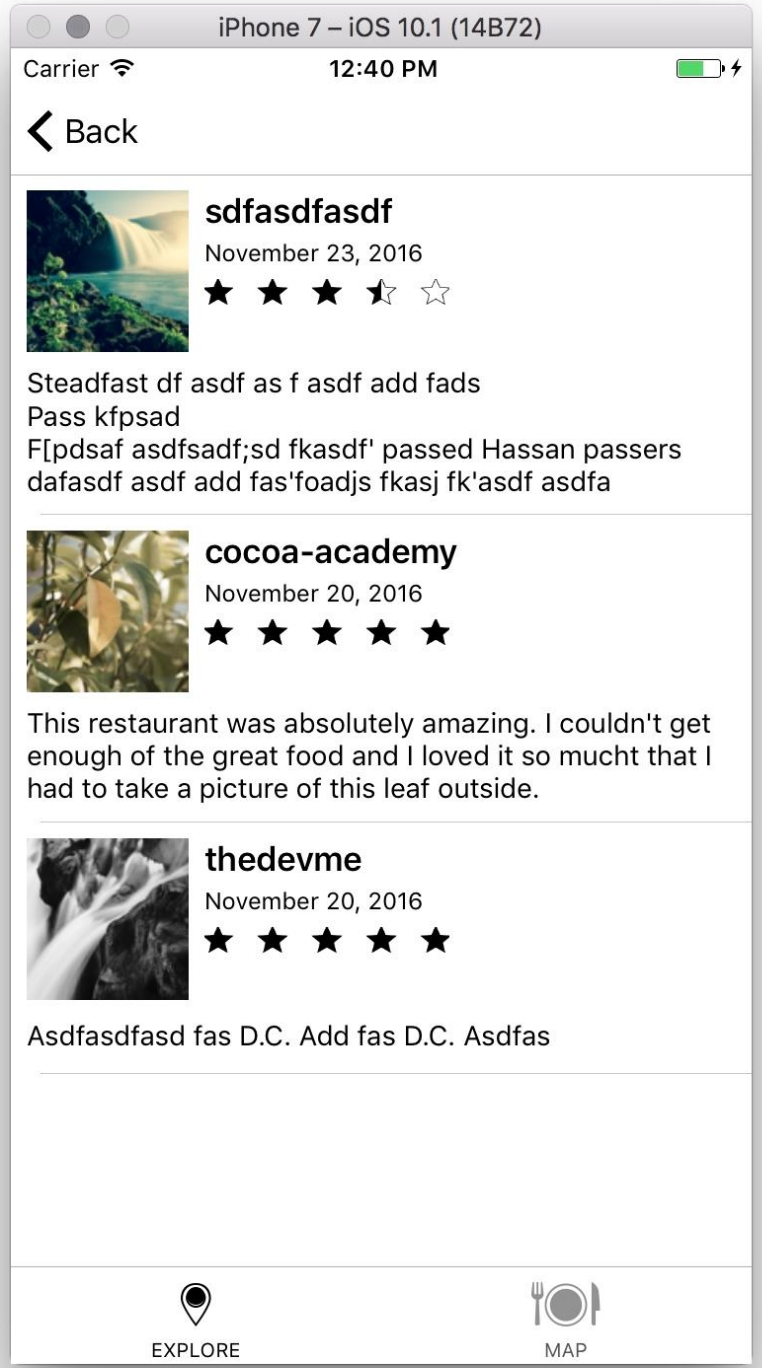
Constant: 22

Priority: 1000

Identifier: Identifier

Placeholder: □ Remove at build time

☑ Installed



sdfasdfasdf
November 23, 2016
★ ★ ★ ⯪ ☆

Steadfast df asdf as f asdf add fads
Pass kfpsad
F[pdsaf asdfsadf;sd fkasdf' passed Hassan passers dafasdf asdf add fas'foadjs fkasj fk'asdf asdfa

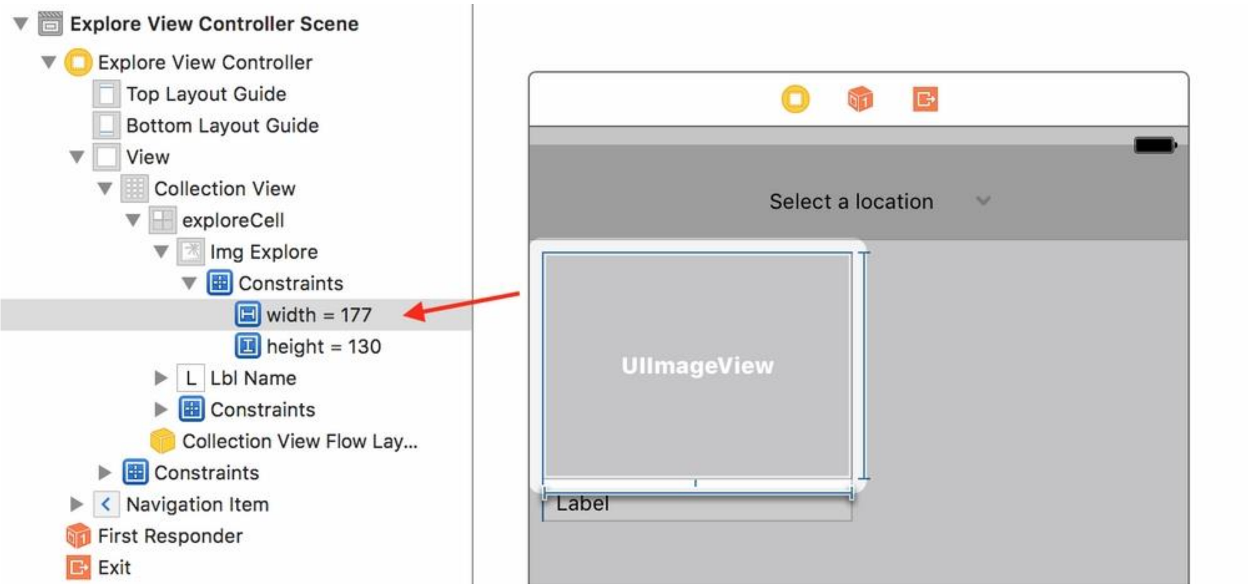
cocoa-academy
November 20, 2016
★ ★ ★ ★ ★

This restaurant was absolutely amazing. I couldn't get enough of the great food and I loved it so mucht that I had to take a picture of this leaf outside.

thedevme
November 20, 2016
★ ★ ★ ★ ★

Asdfasdfasd fas D.C. Add fas D.C. Asdfas

Chapter 14: Universal



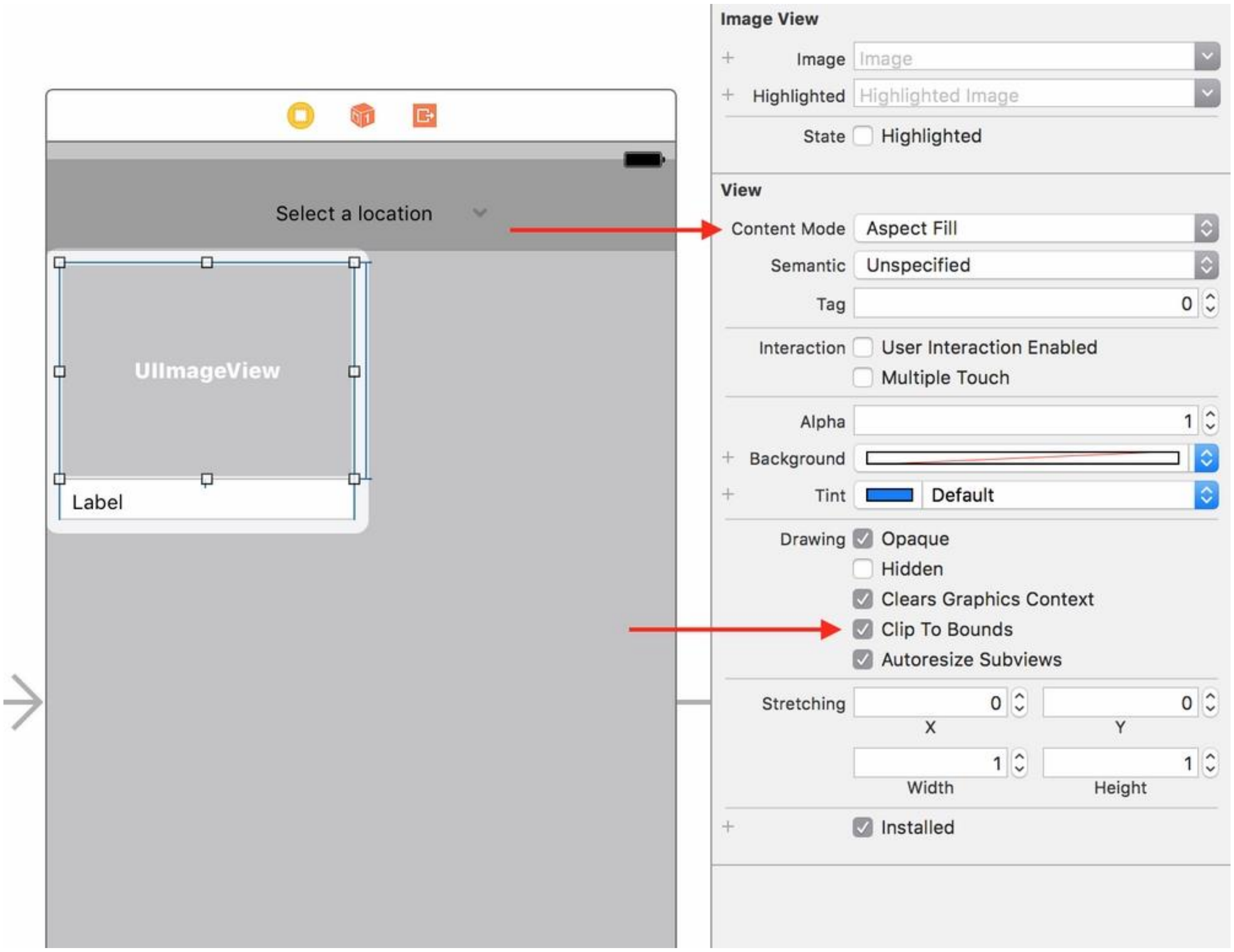


Image View

Image: Image

Highlighted: Highlighted Image

State: □ Highlighted

View

Content Mode: Aspect Fill

Semantic: Unspecified

Tag: 0

Interaction: □ User Interaction Enabled
□ Multiple Touch

Alpha: 1

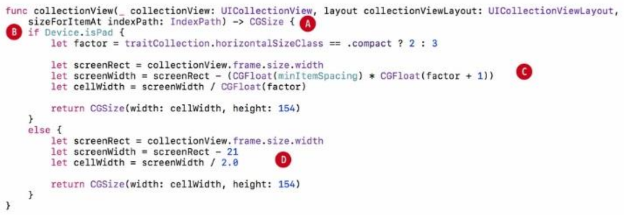
Background:

Tint: Default

Drawing: ☑ Opaque
□ Hidden
☑ Clears Graphics Context
☑ Clip To Bounds
☑ Autoresize Subviews

Stretching: X 0, Y 0, Width 1, Height 1

☑ Installed

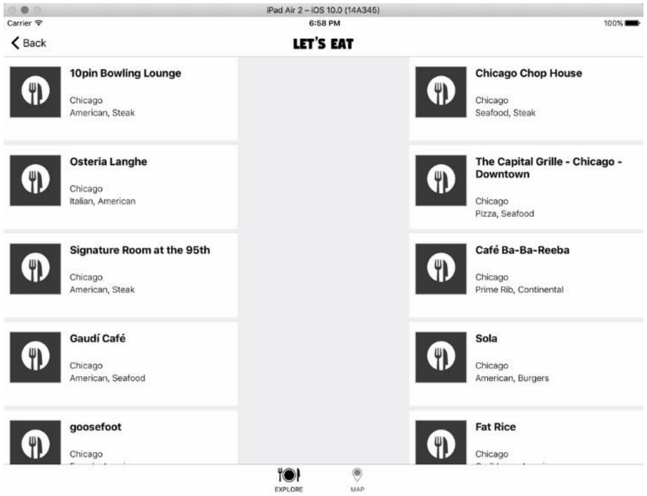


```
func collectionView(_ collectionView: UICollectionView, layout collectionViewLayout: UICollectionViewLayout,
    sizeForItemAt indexPath: IndexPath) -> CGSize {
    if Device.isPad {
        let factor = traitCollection.horizontalSizeClass == .compact ? 2 : 3

        let screenRect = collectionView.frame.size.width
        let screenWidth = screenRect - (CGFloat(minItemSpacing) * CGFloat(factor + 1))
        let cellWidth = screenWidth / CGFloat(factor)

        return CGSize(width: cellWidth, height: 154)
    }
    else {
        let screenRect = collectionView.frame.size.width
        let screenWidth = screenRect - 21
        let cellWidth = screenWidth / 2.0

        return CGSize(width: cellWidth, height: 154)
    }
}
```



10pin Bowling Lounge
Chicago
American, Steak

Chicago Chop House
Chicago
Seafood, Steak

Osteria Langhe
Chicago
Italian, American

The Capital Grille - Chicago - Downtown
Chicago
Pizza, Seafood

Signature Room at the 95th
Chicago
American, Steak

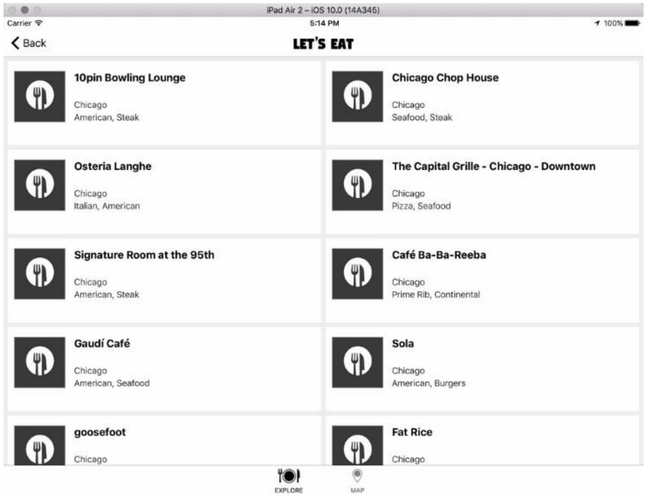
Café Ba-Ba-Reeba
Chicago
Prime Rib, Continental

Gaudí Café
Chicago
American, Seafood

Sola
Chicago
American, Burgers

goosefoot
Chicago

Fat Rice
Chicago



10pin Bowling Lounge
Chicago
American, Steak

Chicago Chop House
Chicago
Seafood, Steak

Osteria Langhe
Chicago
Italian, American

The Capital Grille - Chicago - Downtown
Chicago
Pizza, Seafood

Signature Room at the 95th
Chicago
American, Steak

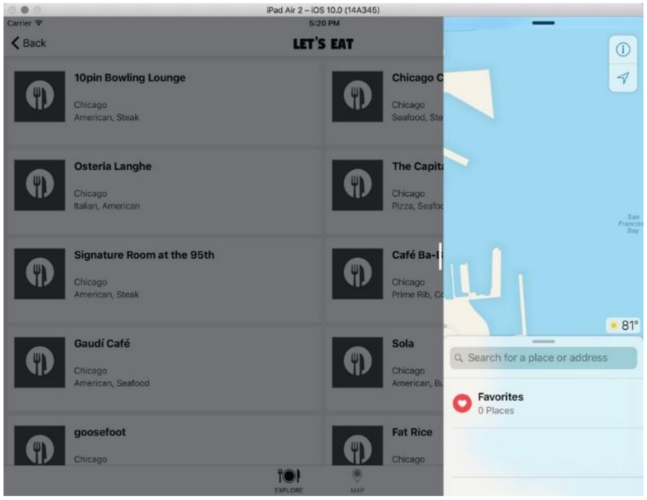
Café Ba-Ba-Reeba
Chicago
Prime Rib, Continental

Gaudí Café
Chicago
American, Seafood

Sola
Chicago
American, Burgers

goosefoot
Chicago

Fat Rice
Chicago



10pin Bowling Lounge
Chicago
American, Steak

Chicago C
Chicago
Seafood, Ste

Osteria Langhe
Chicago
Italian, American

The Capit
Chicago
Pizza, Seafoo

Signature Room at the 95th
Chicago
American, Steak

Café Ba-
Chicago
Prime Rib, C

Gaudí Café
Chicago
American, Seafood

Sola
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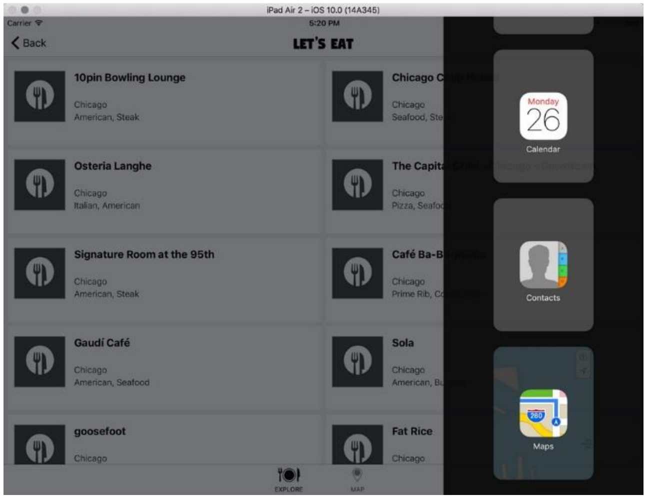
American, Bu

goosefoot
Chicago

Fat Rice
Chicago



iPad Air 2 – iOS 10.0 (14A345)

Carrier 5:20 PM

Back LET'S EAT

10pin Bowling Lounge
Chicago
American, Steak

Chicago C
Chicago
Seafood, Ste

Osteria Langhe
Chicago
Italian, American

The Capit
Chicago
Pizza, Seafo

Signature Room at the 95th
Chicago
American, Steak

Café Ba-B
Chicago
Prime Rib, C

Gaudí Café
Chicago
American, Seafood

Sola
Chicago
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goosefoot
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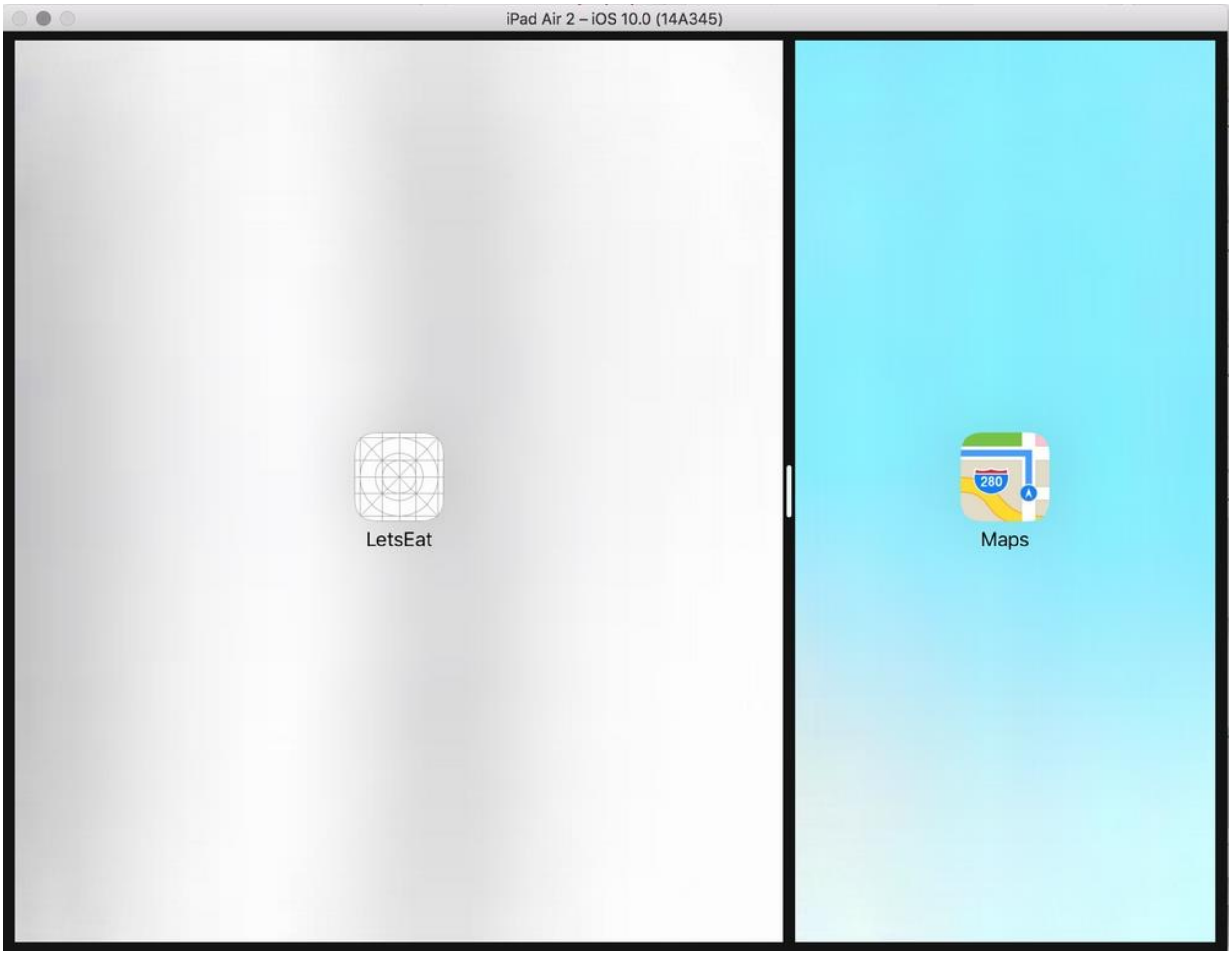
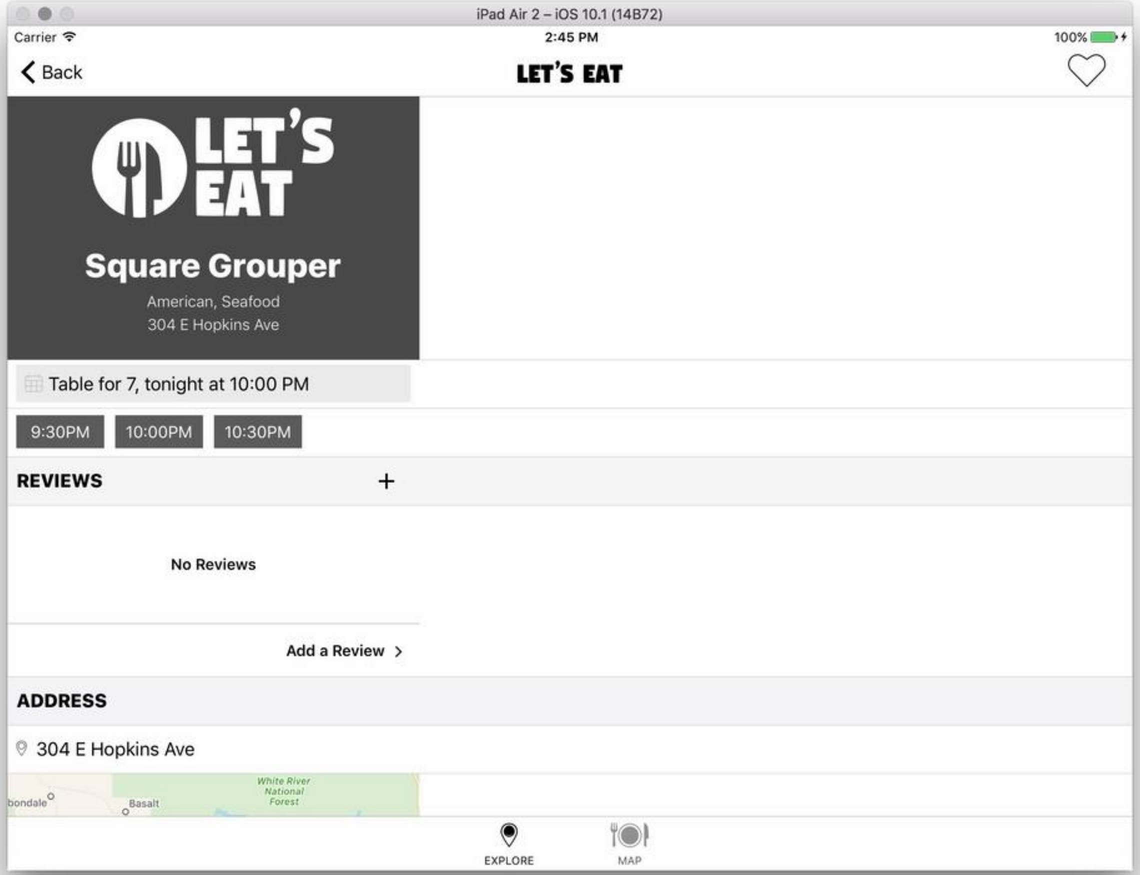
Fat Rice
Chicago



iPad Air 2 – iOS 10.0 (14A345)



Square Grouper

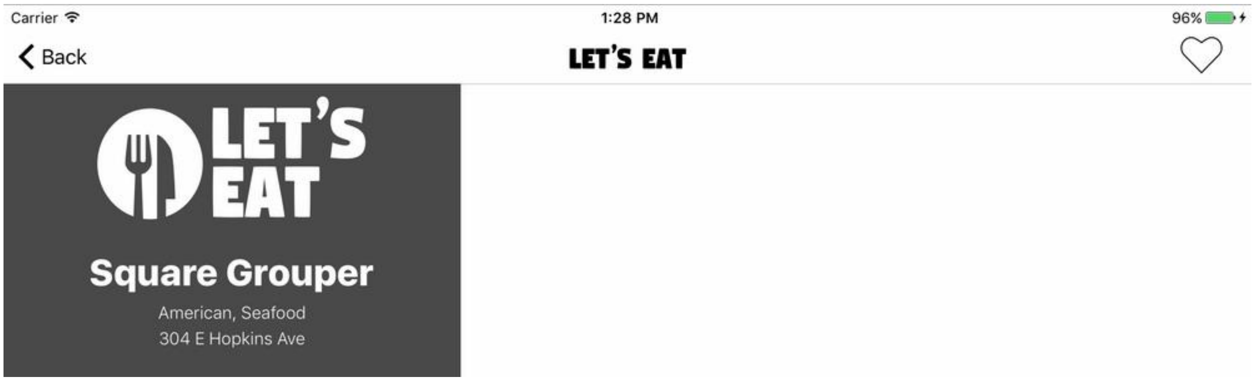
American, Seafood
304 E Hopkins Ave

Table for 7, tonight at 10:00 PM

9:30PM 10:00PM 10:30PM

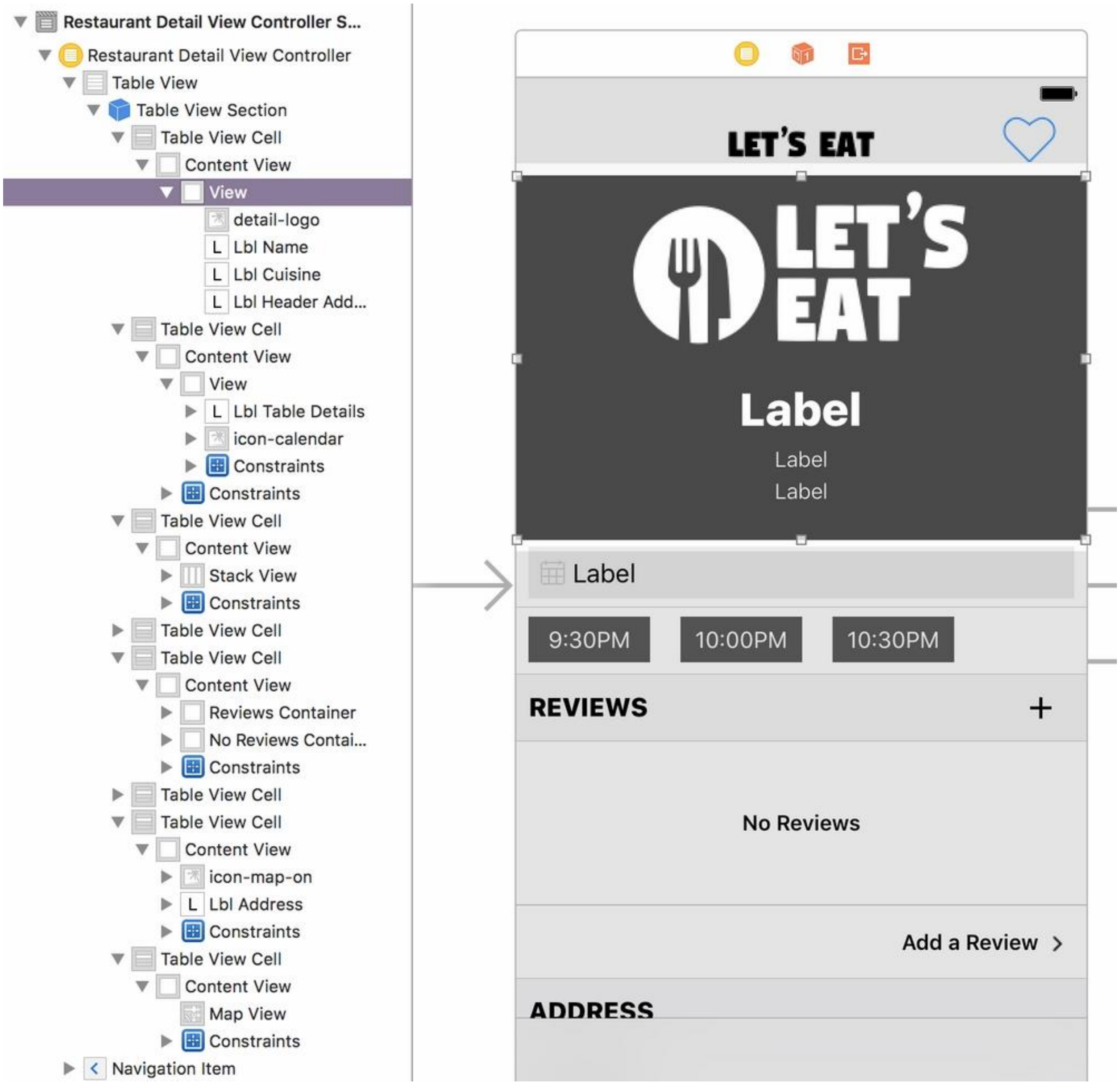
No Reviews

304 E Hopkins Ave



Square Grouper

American, Seafood
304 E Hopkins Ave


Restaurant Detail View Controller S...
Restaurant Detail View Controller
Table View
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detail-logo
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Lbl Header Add...
Table View Cell
Content View
View
Lbl Table Details
icon-calendar
Constraints
Constraints
Table View Cell
Content View
Stack View
Constraints
Table View Cell
Table View Cell
Content View
Reviews Container
No Reviews Contai...
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Table View Cell
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Content View
icon-map-on
Lbl Address
Constraints
Table View Cell
Content View
Map View
Constraints
Navigation Item
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LET'S EAT
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Label
Label
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9:30PM
10:00PM
10:30PM
REVIEWS
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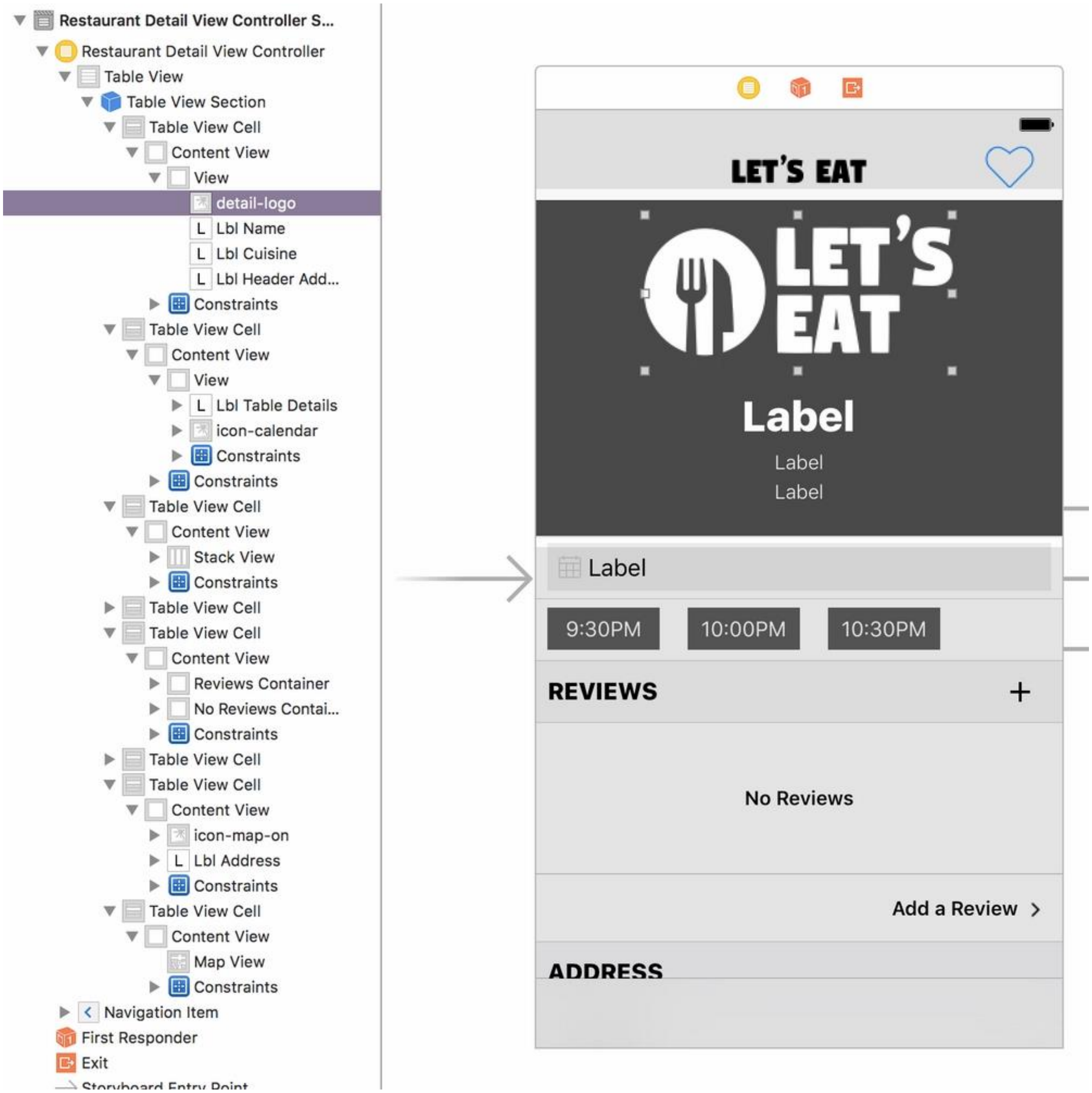
No Reviews
Add a Review >
ADDRESS


Restaurant Detail View Controller S...
Restaurant Detail View Controller
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Content View
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Map View
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Storyboard Entry Point
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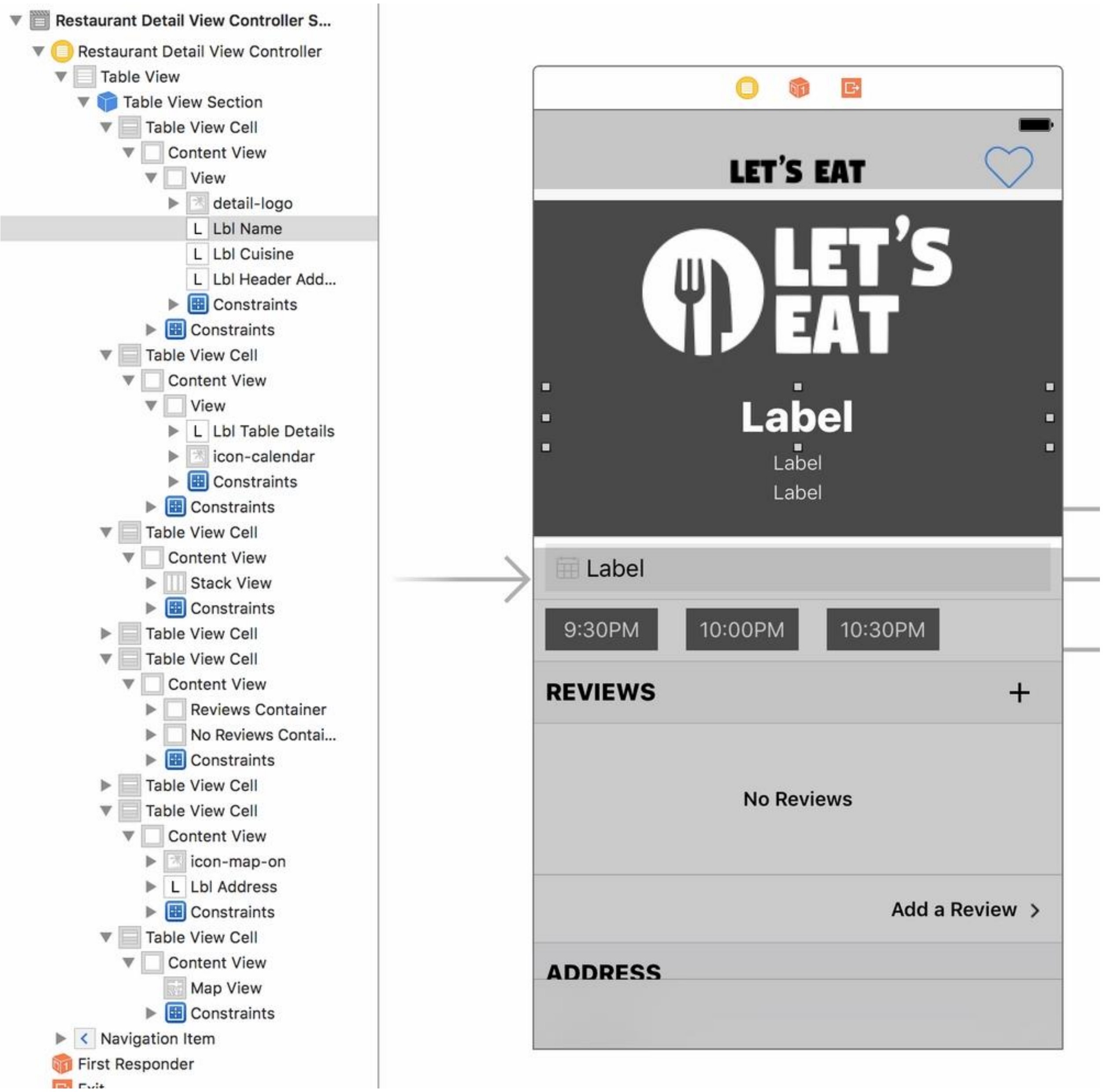
Restaurant Detail View Controller S...
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Table View Cell
Table View Cell
Content View
icon-map-on
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Content View
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Navigation Item
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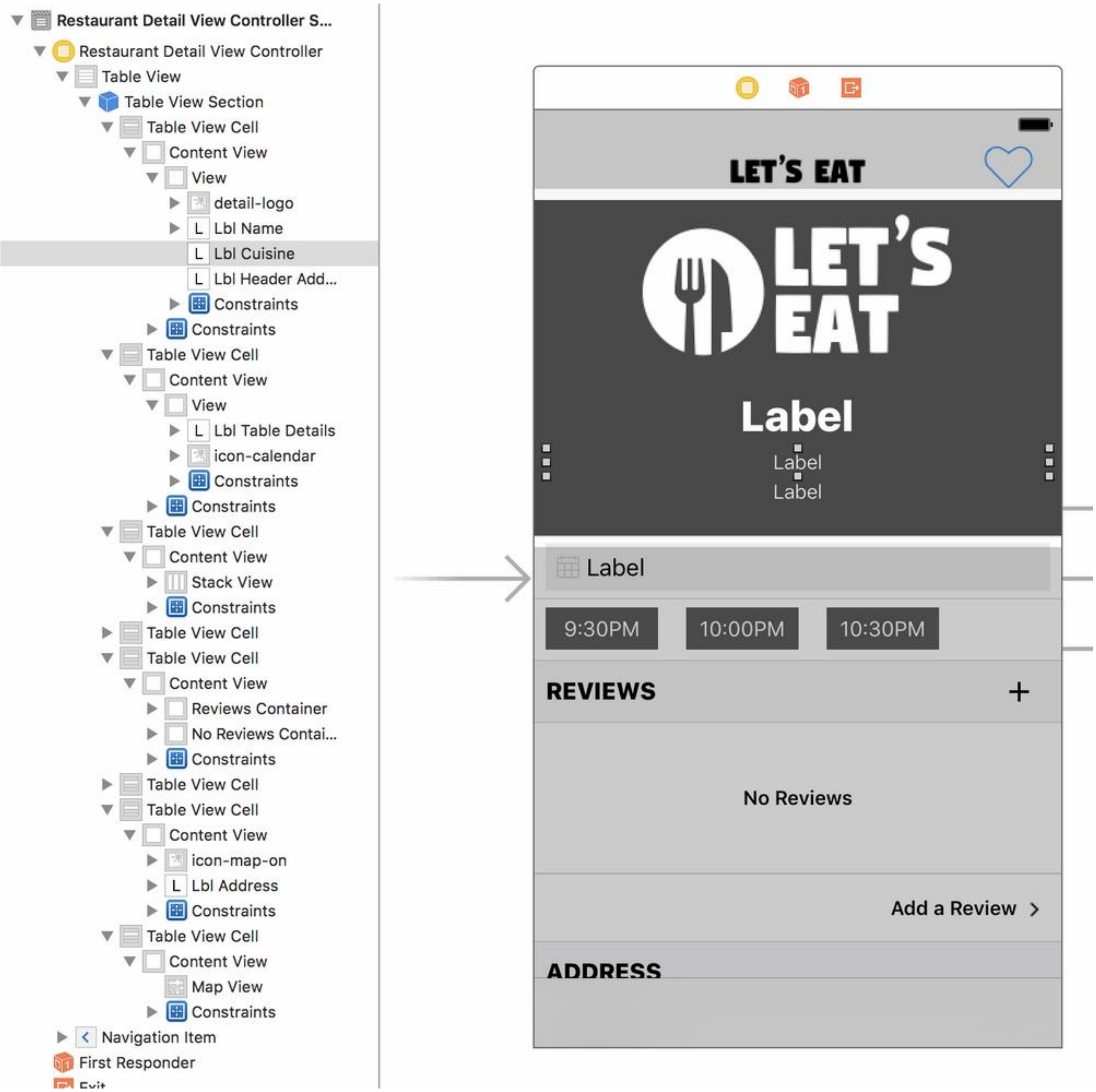
Restaurant Detail View Controller S...
Restaurant Detail View Controller
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Reviews Container
No Reviews Contai...
Constraints
Table View Cell
Table View Cell
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LET'S EAT
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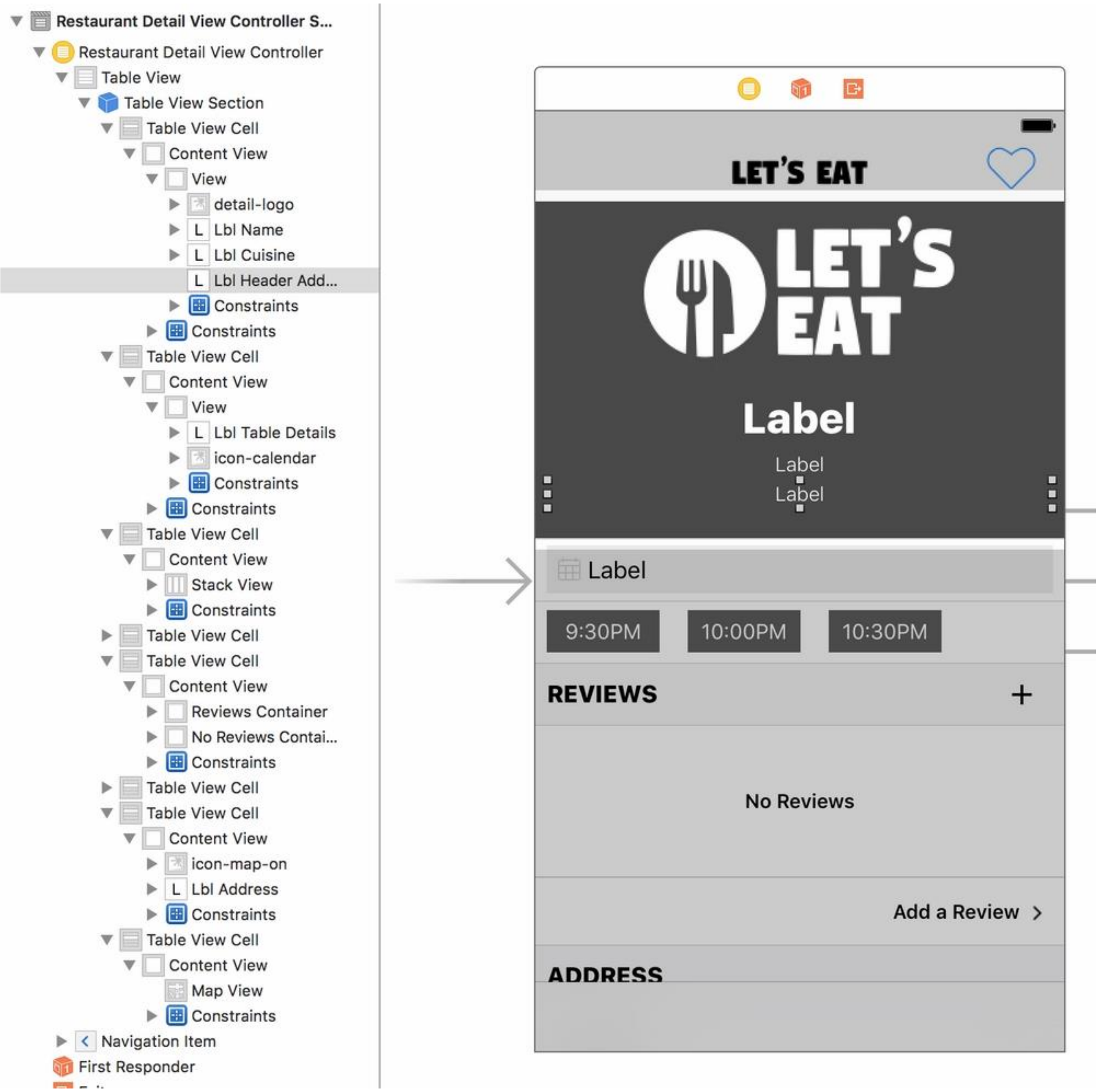


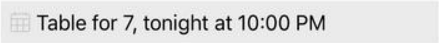
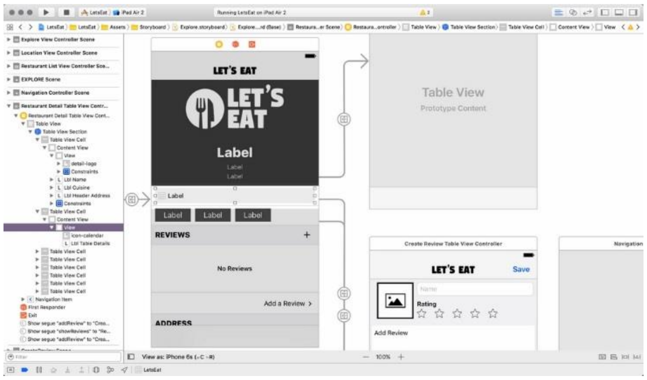
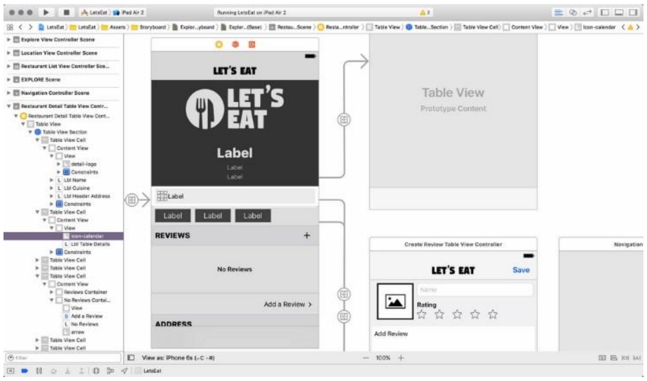


Table for 7, tonight at 10:00 PM


Running LetsEat on iPad Air 2
Explore View Controller Scene
Location View Controller Scene
Restaurant List View Controller Sce...
EXPLORE Scene
Navigation Controller Scene
Restaurant Detail Table View Contr...
Table View
Table View Section
Table View Cell
Content View
View
detail-logo
Constraints
Lbl Name
Lbl Cuisine
Lbl Header Address
icon-calendar
Lbl Table Details
Navigation Item
First Responder
Exit
LET'S EAT
Label
REVIEWS
No Reviews
Add a Review
ADDRESS
Table View
Prototype Content
Create Review Table View Controller
Save
Name
Rating
Add Review
Navigation
View as: iPhone 6s
100%


Running LetsEat on iPad Air 2
Explore View Controller Scene
Location View Controller Scene
Restaurant List View Controller Sce...
EXPLORE Scene
Navigation Controller Scene
Restaurant Detail Table View Contr...
Table View
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Add a Review
No Reviews
arrow
LET'S EAT
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Add a Review
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Table View
Prototype Content
Create Review Table View Controller
Save
Name
Rating
Add Review
Navigation
View as: iPhone 6s
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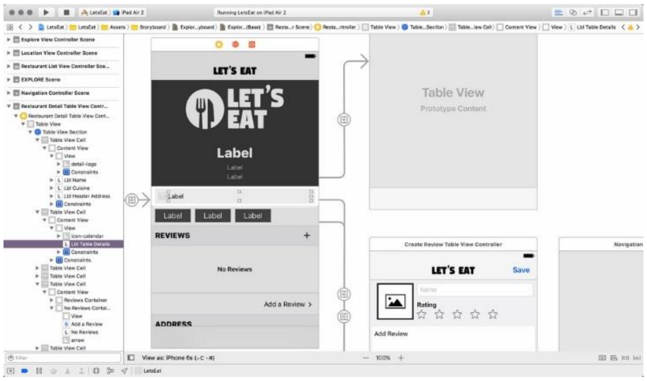
Running LetsEat on iPad Air 2
Explore View Controller Scene
Location View Controller Scene
Restaurant List View Controller Sce...
EXPLORE Scene
Navigation Controller Scene
Restaurant Detail Table View Contr...
Table View
Table View Section
Table View Cell
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Constraints
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icon-calendar
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LET'S EAT
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Table View
Prototype Content
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Name
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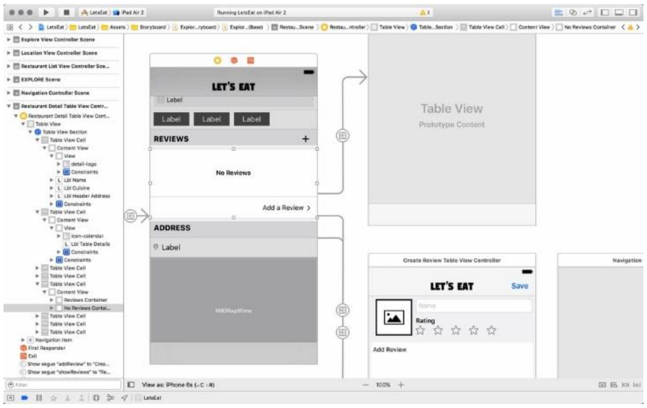

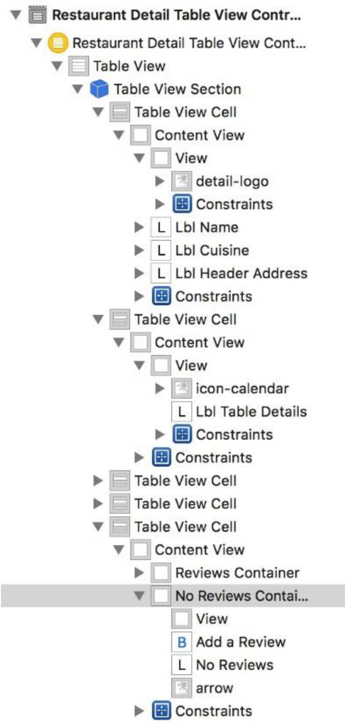

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▼ Restaurant Detail Table View Contr...
  ▼ Restaurant Detail Table View Cont...
    ▼ Table View
      ▼ Table View Section
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            ▼ View
              ▶ detail-logo
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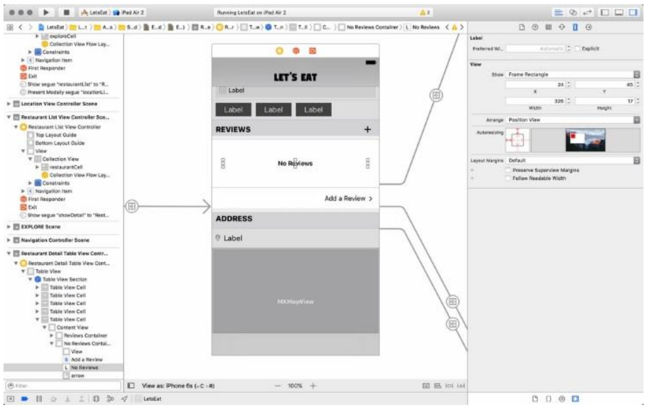
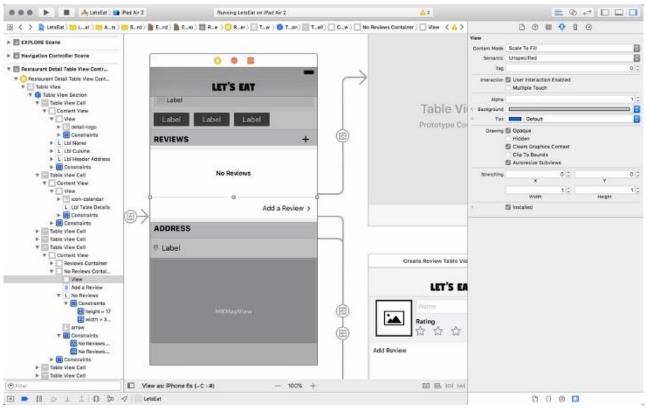
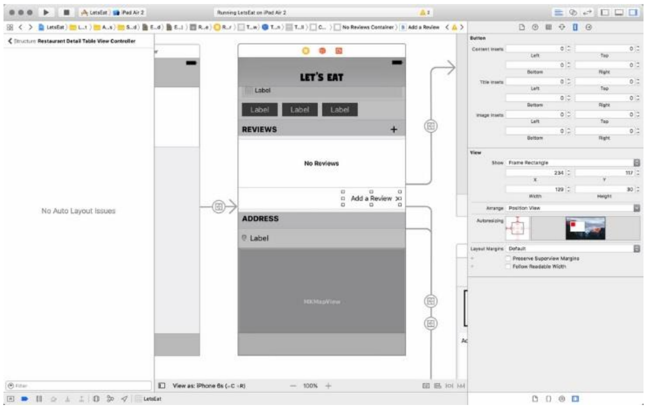



Running LetsEat on iPad Air 2
LET'S EAT
Label
REVIEWS
No Reviews
Add a Review
ADDRESS
MKMapView
Table View
Prototype Content
Create Review Table View
Rating
Add Review
View as: iPhone 6s
100%


Running LetsEat on iPad Air 2
Structure Restaurant Detail Table View Controller
No Auto Layout Issues
LET'S EAT
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MKMapView
View as: iPhone 6s
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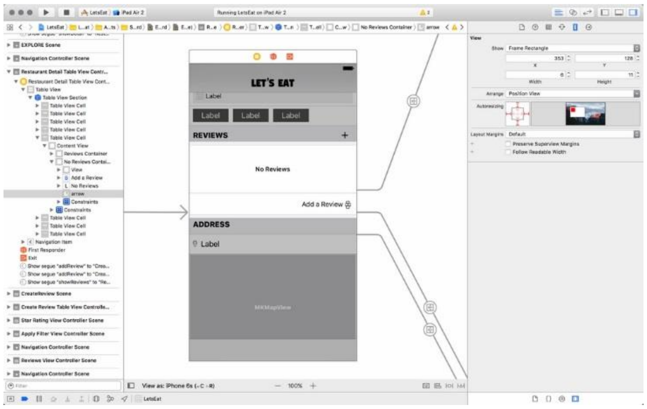
Running LetsEat on iPad Air 2
LET'S EAT
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View as: iPhone 6s
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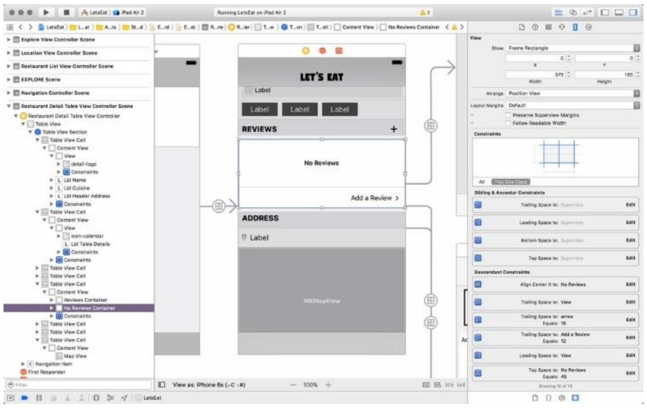

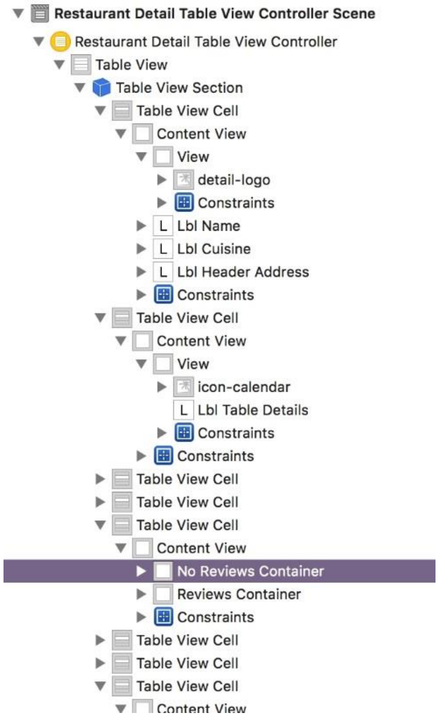

- Restaurant Detail Table View Controller Scene
  - Restaurant Detail Table View Controller
    - Table View
      - Table View Section
        - Table View Cell
          - Content View
            - View
              - detail-logo
              - Constraints
            - Lbl Name
            - Lbl Cuisine
            - Lbl Header Address
            - Constraints
        - Table View Cell
          - Content View
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              - icon-calendar
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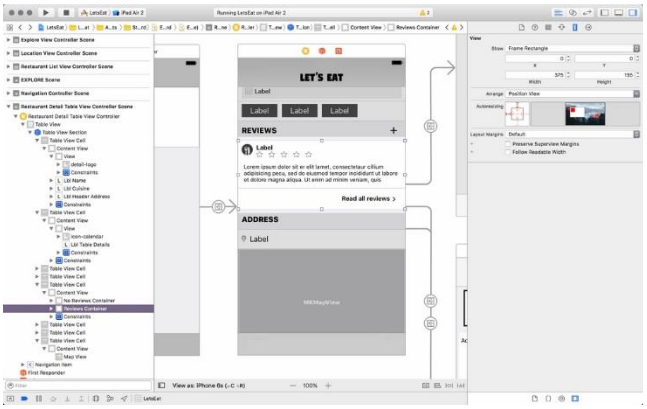
LET'S EAT
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Read all reviews
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MKMapView
View as: iPhone 6s
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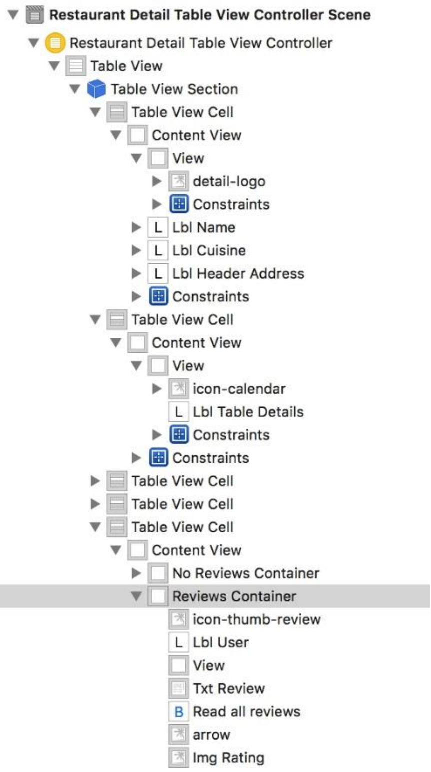

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▼ Restaurant Detail Table View Controller Scene
  ▼ Restaurant Detail Table View Controller
    ▼ Table View
      ▼ Table View Section
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          ▼ Content View
            ▼ View
              ▶ detail-logo
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                Txt Review
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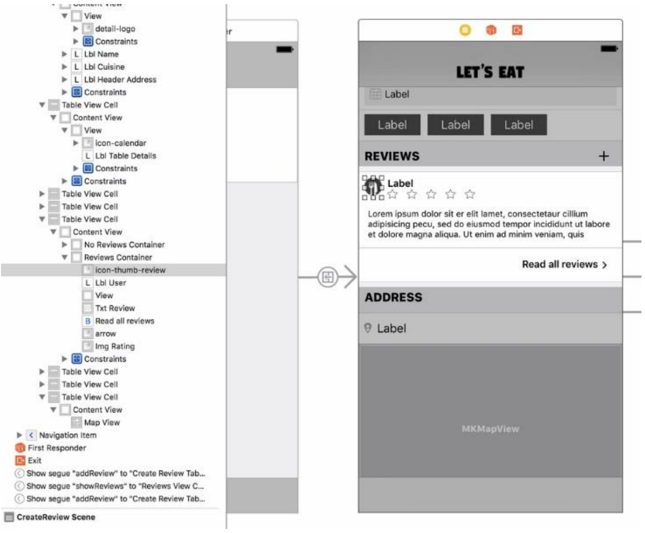
```



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            ▼ View
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          ▼ Content View
              Map View
  ▶ Navigation Item
  First Responder
  Exit
  Show segue "addReview" to "Create Review Tab...
  Show segue "showReviews" to "Reviews View C...
  Show segue "addReview" to "Create Review Tab...
CreateReview Scene
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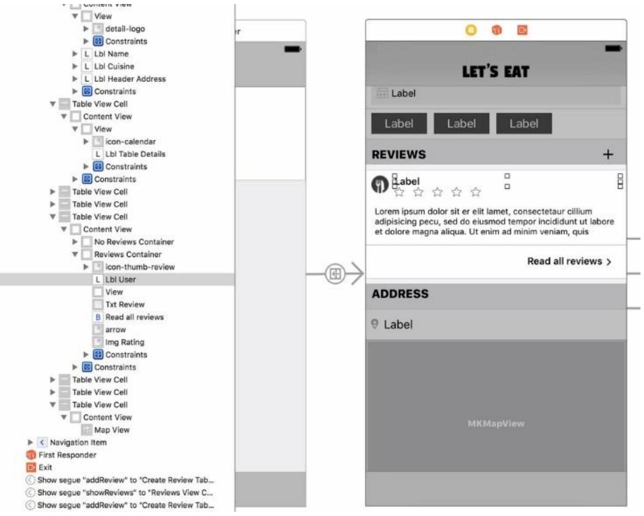

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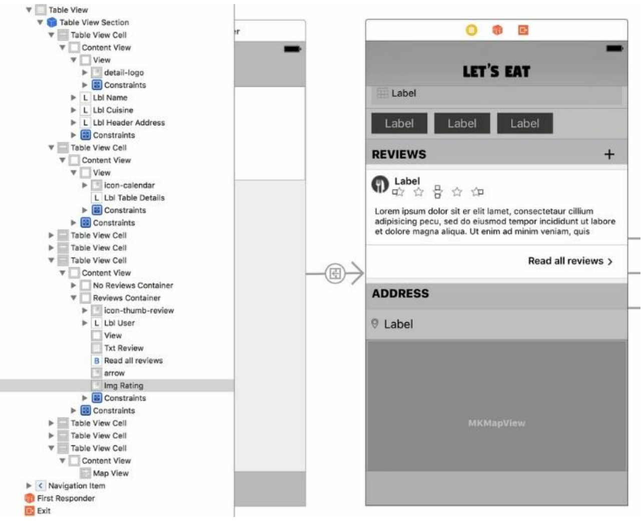

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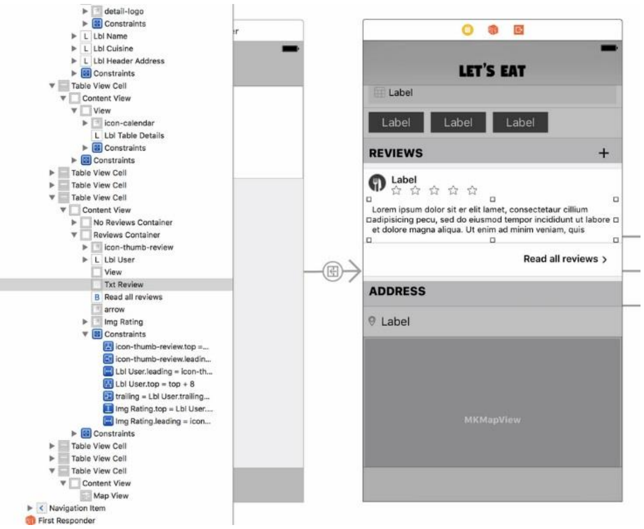

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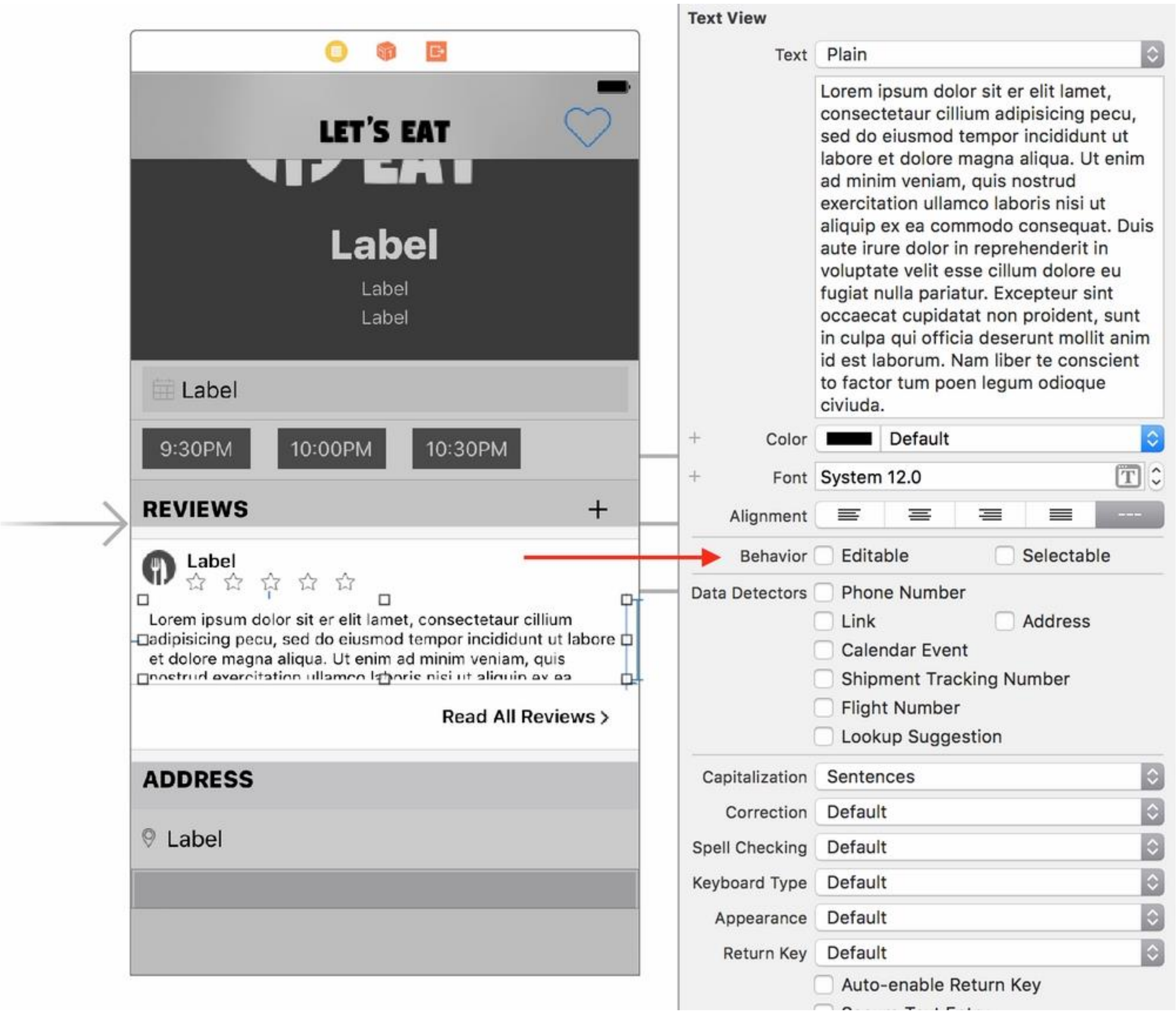
LET'S EAT
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Text View

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Color: Default

Font: System 12.0

Alignment

Behavior: □ Editable □ Selectable

Data Detectors: □ Phone Number
□ Link □ Address
□ Calendar Event
□ Shipment Tracking Number
□ Flight Number
□ Lookup Suggestion

Capitalization: Sentences

Correction: Default

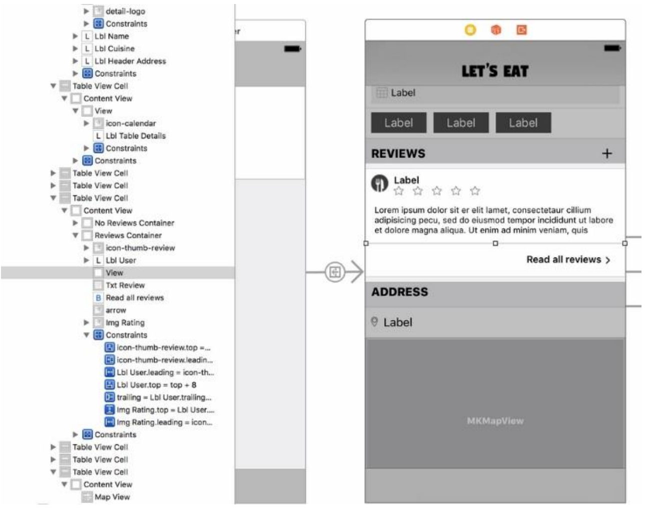
Spell Checking: Default

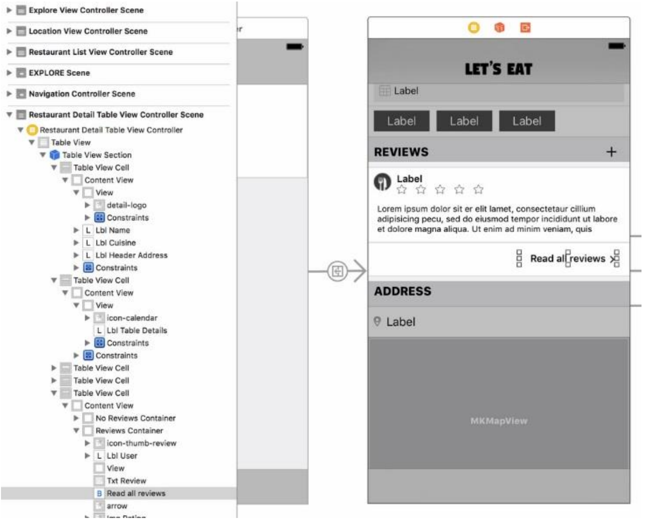
Keyboard Type: Default

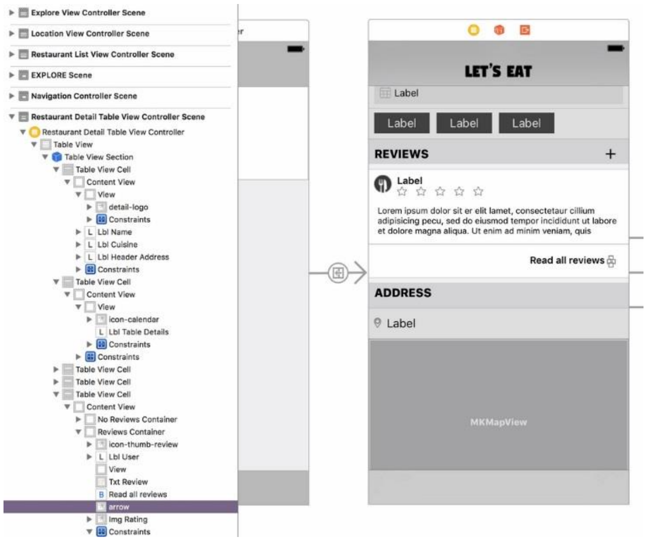
Appearance: Default

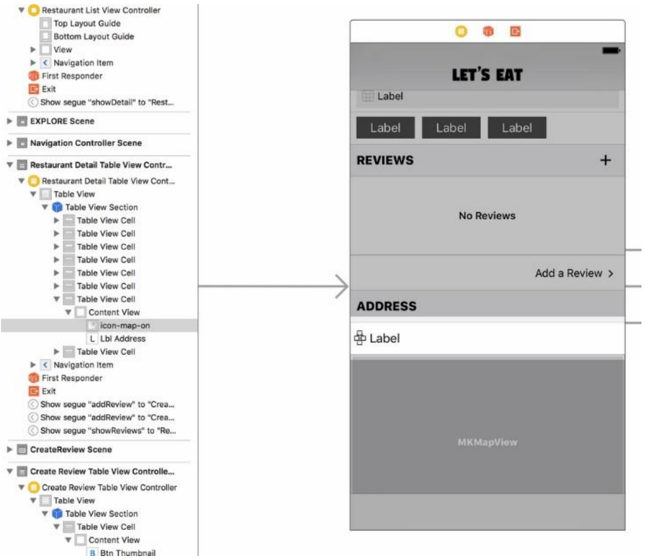
Return Key: Default

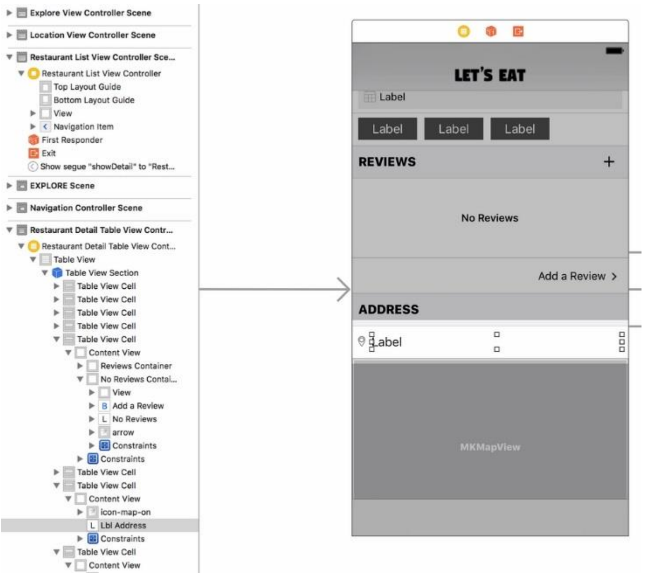
□ Auto-enable Return Key

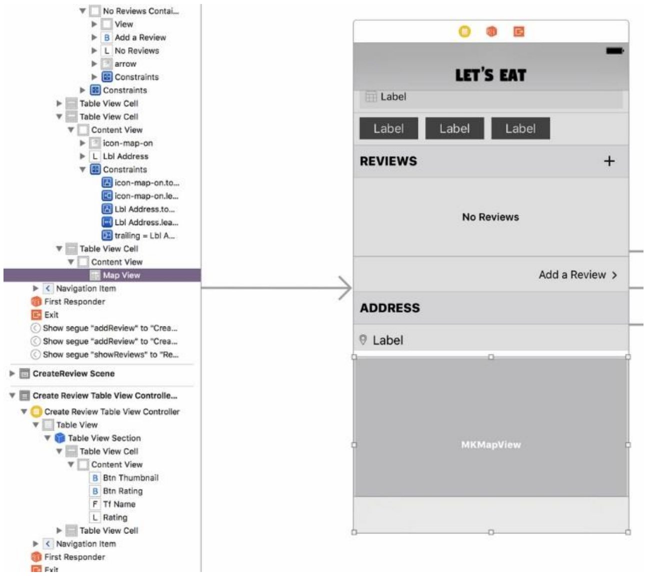

```
▶ detail-logo
▶ Constraints
▶ L Lbl Name
▶ L Lbl Cuisine
▶ L Lbl Header Address
▶ Constraints
▼ Table View Cell
  ▼ Content View
    ▼ View
      ▶ icon-calendar
        L Lbl Table Details
      ▶ Constraints
    ▶ Constraints
▶ Table View Cell
▶ Table View Cell
▼ Table View Cell
  ▼ Content View
    ▶ No Reviews Container
    ▼ Reviews Container
      ▶ icon-thumb-review
      ▶ L Lbl User
        View
        Txt Review
        B Read all reviews
        arrow
      ▶ Img Rating
      ▼ Constraints
          icon-thumb-review.top =...
          icon-thumb-review.leadin...
          Lbl User.leading = icon-th...
          Lbl User.top = top + 8
          trailing = Lbl User.trailing...
          Img Rating.top = Lbl User....
          Img Rating.leading = icon...
    ▶ Constraints
▶ Table View Cell
▶ Table View Cell
▼ Table View Cell
  ▼ Content View
      Map View
```
LET'S EAT
Label
Label
Label
Label
REVIEWS
+
Label
Lorem ipsum dolor sit er elit lamet, consectetaur cillium adipisicing pecu, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis
Read all reviews >
ADDRESS
Label
MKMapView

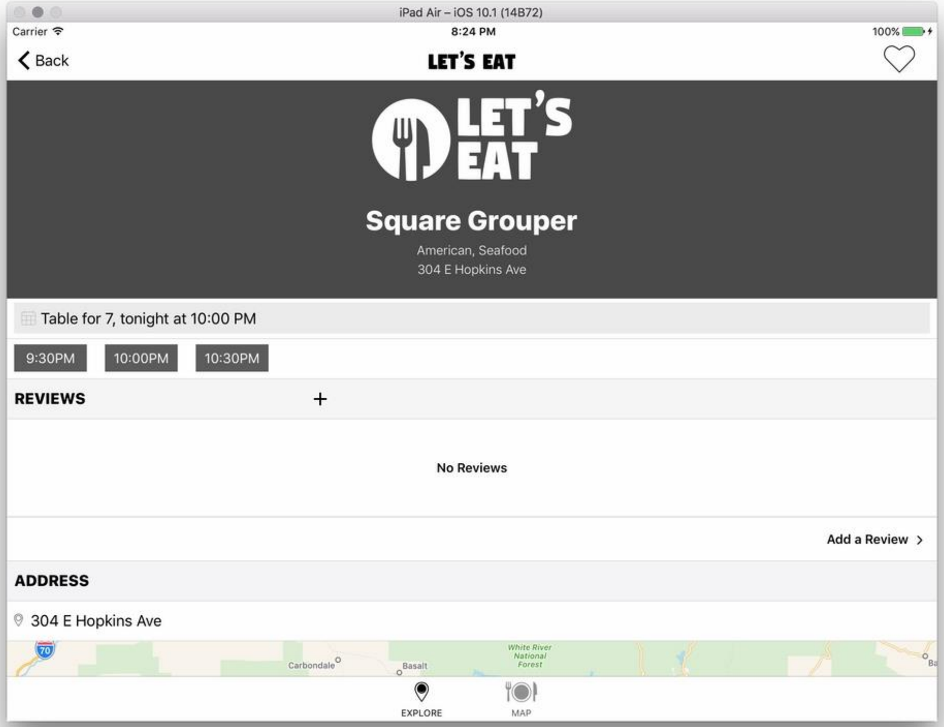

Explore View Controller Scene
Location View Controller Scene
Restaurant List View Controller Scene
EXPLORE Scene
Navigation Controller Scene
Restaurant Detail Table View Controller Scene
Restaurant Detail Table View Controller
Table View
Table View Section
Table View Cell
Content View
View
detail-logo
Constraints
Lbl Name
Lbl Cuisine
Lbl Header Address
Constraints
Table View Cell
Content View
View
icon-calendar
Lbl Table Details
Constraints
Constraints
Table View Cell
Table View Cell
Table View Cell
Content View
No Reviews Container
Reviews Container
icon-thumb-review
Lbl User
View
Txt Review
Read all reviews
arrow
LET'S EAT
Label
Label
Label
Label
REVIEWS
+
Label
Lorem ipsum dolor sit er elit lamet, consectetaur cillium adipisicing pecu, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis
Read all reviews
ADDRESS
Label
MKMapView


Explore View Controller Scene
Location View Controller Scene
Restaurant List View Controller Scene
EXPLORE Scene
Navigation Controller Scene
Restaurant Detail Table View Controller Scene
Restaurant Detail Table View Controller
Table View
Table View Section
Table View Cell
Content View
View
detail-logo
Constraints
Lbl Name
Lbl Cuisine
Lbl Header Address
Constraints
Table View Cell
Content View
View
icon-calendar
Lbl Table Details
Constraints
Constraints
Table View Cell
Table View Cell
Table View Cell
Content View
No Reviews Container
Reviews Container
icon-thumb-review
Lbl User
View
Txt Review
Read all reviews
arrow
Img Rating
Constraints
LET'S EAT
Label
Label
Label
Label
REVIEWS
+
Label
Lorem ipsum dolor sit er elit lamet, consectetaur cillium adipisicing pecu, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis
Read all reviews
ADDRESS
Label
MKMapView

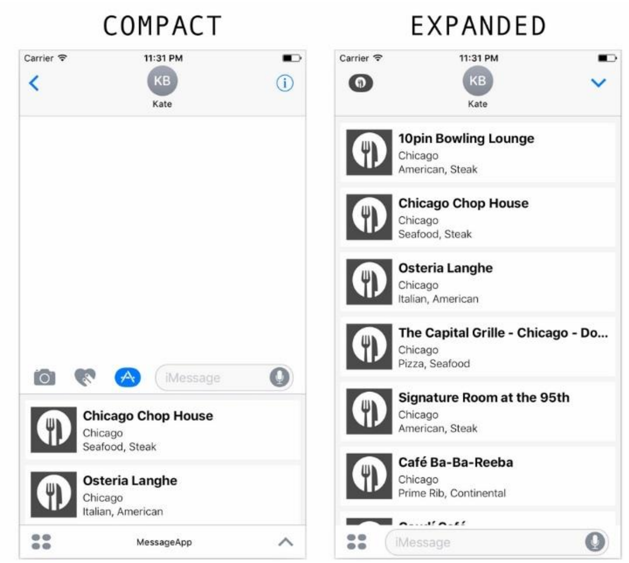

Restaurant List View Controller
Top Layout Guide
Bottom Layout Guide
View
Navigation Item
First Responder
Exit
Show segue "showDetail" to "Rest...
EXPLORE Scene
Navigation Controller Scene
Restaurant Detail Table View Contr...
Restaurant Detail Table View Cont...
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
icon-map-on
Lbl Address
Table View Cell
Navigation Item
First Responder
Exit
Show segue "addReview" to "Crea...
Show segue "addReview" to "Crea...
Show segue "showReviews" to "Re...
CreateReview Scene
Create Review Table View Controlle...
Create Review Table View Controller
Table View
Table View Section
Table View Cell
Content View
Btn Thumbnail
LET'S EAT
Label
Label
Label
Label
REVIEWS
+
No Reviews
Add a Review >
ADDRESS
Label
MKMapView


Explore View Controller Scene
Location View Controller Scene
Restaurant List View Controller Sce...
Restaurant List View Controller
Top Layout Guide
Bottom Layout Guide
View
Navigation Item
First Responder
Exit
Show segue "showDetail" to "Rest...
EXPLORE Scene
Navigation Controller Scene
Restaurant Detail Table View Contr...
Restaurant Detail Table View Cont...
Table View
Table View Section
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Table View Cell
Content View
Reviews Container
No Reviews Contai...
View
Add a Review
No Reviews
arrow
Constraints
Constraints
Table View Cell
Table View Cell
Content View
icon-map-on
Lbl Address
Constraints
Table View Cell
Content View
LET'S EAT
Label
Label
Label
Label
REVIEWS
+
No Reviews
Add a Review >
ADDRESS
Label
MKMapView


No Reviews Contai...
View
Add a Review
No Reviews
arrow
Constraints
Constraints
Table View Cell
Table View Cell
Content View
icon-map-on
Lbl Address
Constraints
icon-map-on.to...
icon-map-on.le...
Lbl Address.to...
Lbl Address.lea...
trailing = Lbl A...
Table View Cell
Content View
Map View
Navigation Item
First Responder
Exit
Show segue "addReview" to "Crea...
Show segue "addReview" to "Crea...
Show segue "showReviews" to "Re...
CreateReview Scene
Create Review Table View Controlle...
Create Review Table View Controller
Table View
Table View Section
Table View Cell
Content View
Btn Thumbnail
Btn Rating
Tf Name
Rating
Table View Cell
Navigation Item
First Responder
Exit
LET'S EAT
Label
Label
Label
Label
REVIEWS
+
No Reviews
Add a Review
ADDRESS
Label
MKMapView


iPad Air – iOS 10.1 (14B72)
Carrier
8:24 PM
100%
Back
LET'S EAT
LET'S EAT
Square Grouper
American, Seafood
304 E Hopkins Ave
Table for 7, tonight at 10:00 PM
9:30PM
10:00PM
10:30PM
REVIEWS
+
No Reviews
Add a Review
ADDRESS
304 E Hopkins Ave
70
Carbondale
Basalt
White River National Forest
EXPLORE
MAP

Chapter 15: iMessages



COMPACT

Carrier 11:31 PM

KB Kate

Chicago Chop House
Chicago
Seafood, Steak

Osteria Langhe
Chicago
Italian, American

MessageApp

EXPANDED

Carrier 11:31 PM

KB Kate

10pin Bowling Lounge
Chicago
American, Steak

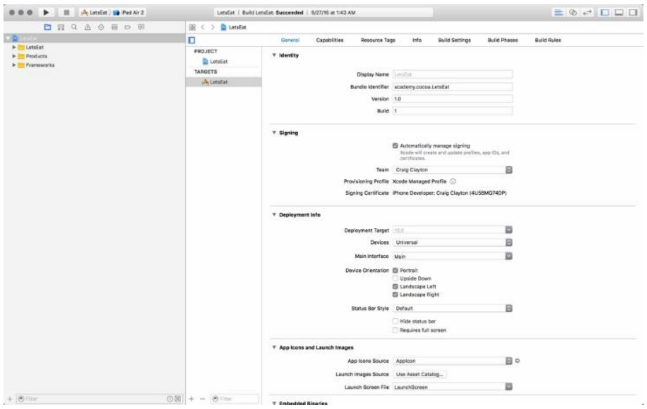
Chicago Chop House
Chicago
Seafood, Steak

Osteria Langhe
Chicago
Italian, American

The Capital Grille - Chicago - Do...
Chicago
Pizza, Seafood

Signature Room at the 95th
Chicago
American, Steak

Café Ba-Ba-Reeba
Chicago
Prime Rib, Continental



LetsEat | Build LetsEat: Succeeded | 9/27/16 at 1:43 AM

Identity

Display Name LetsEat
Bundle Identifier academy.cocoa.LetsEat
Version 1.0
Build 1

Signing

☑ Automatically manage signing
Xcode will create and update profiles, app IDs, and certificates.
Team Craig Clayton
Provisioning Profile Xcode Managed Profile
Signing Certificate iPhone Developer: Craig Clayton (4U5BMQ74DP)

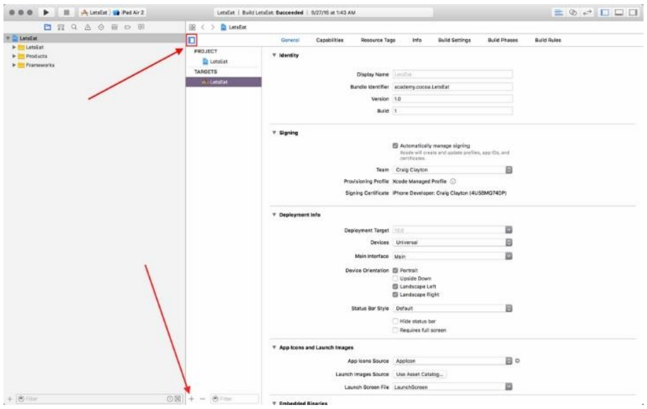
Deployment Info

Deployment Target 10.0
Devices Universal
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
Launch Images Source Use Asset Catalog...
Launch Screen File LaunchScreen

Embedded Binaries



LetsEat | Build LetsEat: Succeeded | 9/27/16 at 1:43 AM

Identity

Display Name LetsEat
Bundle Identifier academy.cocoa.LetsEat
Version 1.0
Build 1

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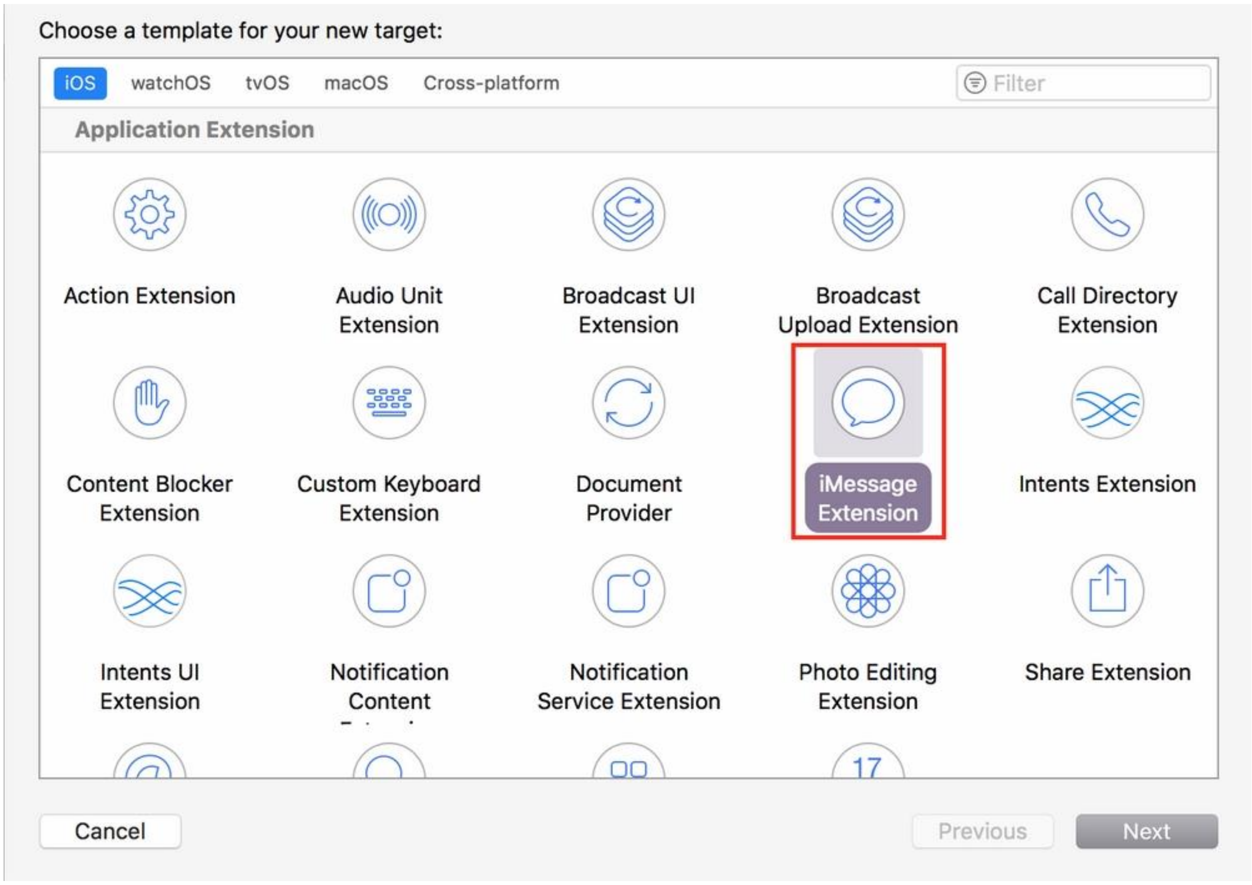
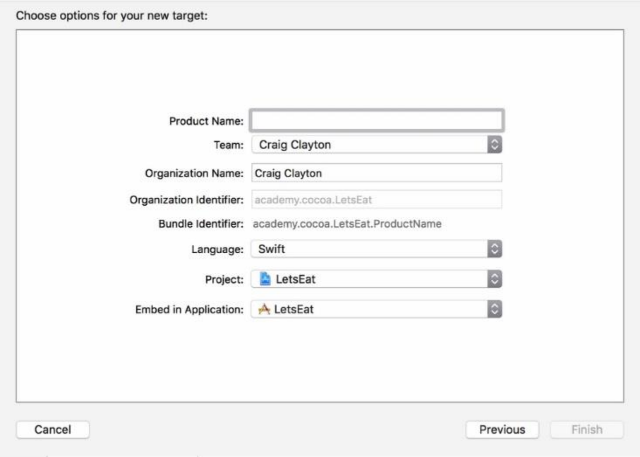
App Icons and Launch Images

App Icons Source AppIcon
Launch Images Source Use Asset Catalog...
Launch Screen File LaunchScreen

Embedded Binaries

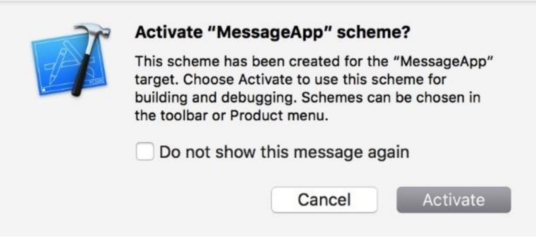


Choose a template for your new target:



Choose options for your new target:

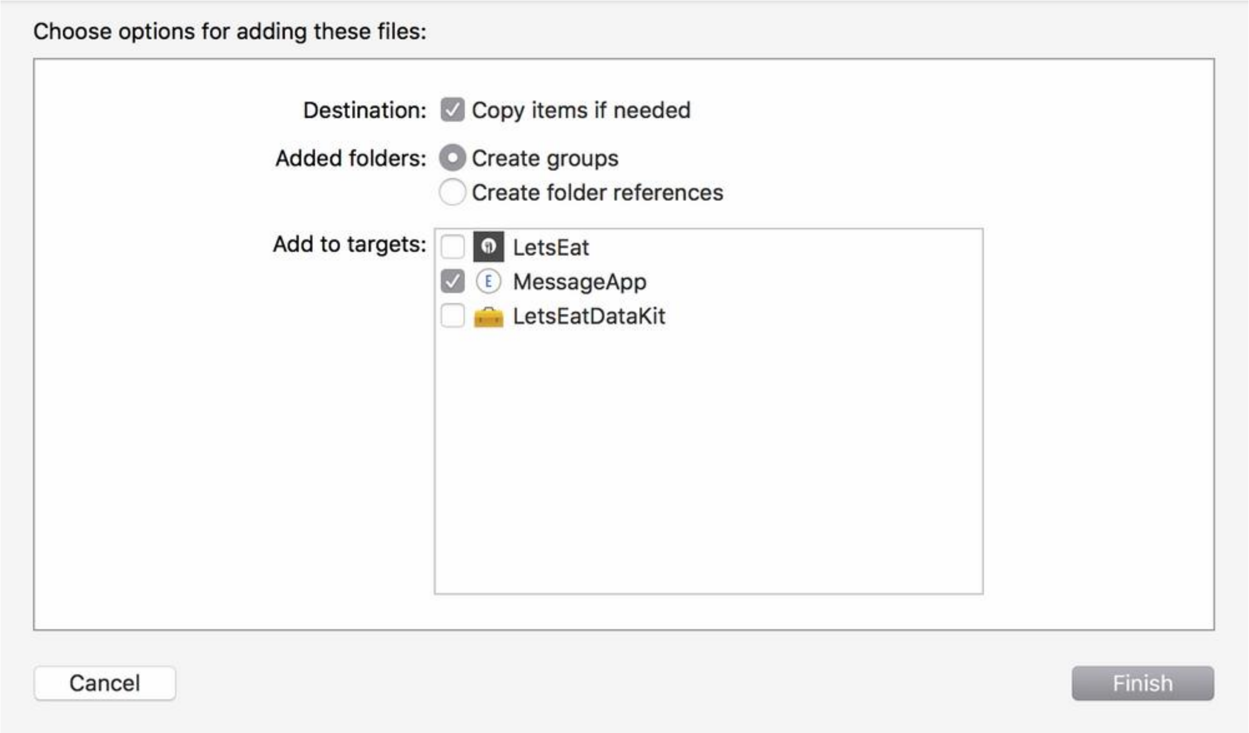
Product Name:
Team: Craig Clayton
Organization Name: Craig Clayton
Organization Identifier: academy.cocoa.LetsEat
Bundle Identifier: academy.cocoa.LetsEat.ProductName
Language: Swift
Project: LetsEat
Embed in Application: LetsEat



Activate "MessageApp" scheme?

This scheme has been created for the "MessageApp" target. Choose Activate to use this scheme for building and debugging. Schemes can be chosen in the toolbar or Product menu.

□ Do not show this message again

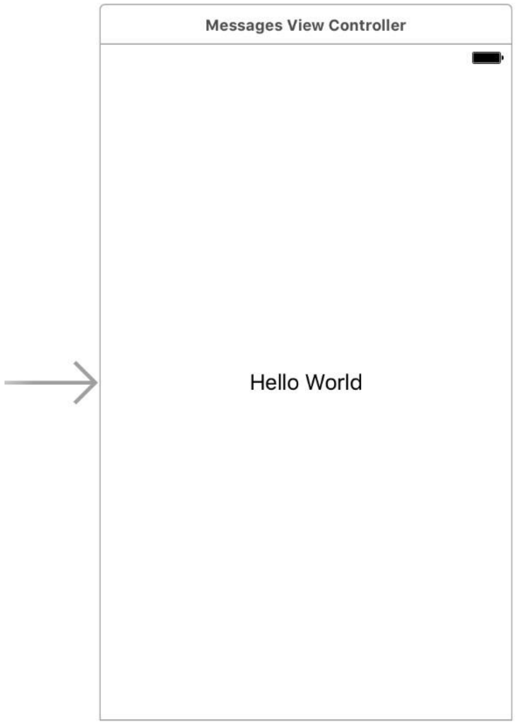


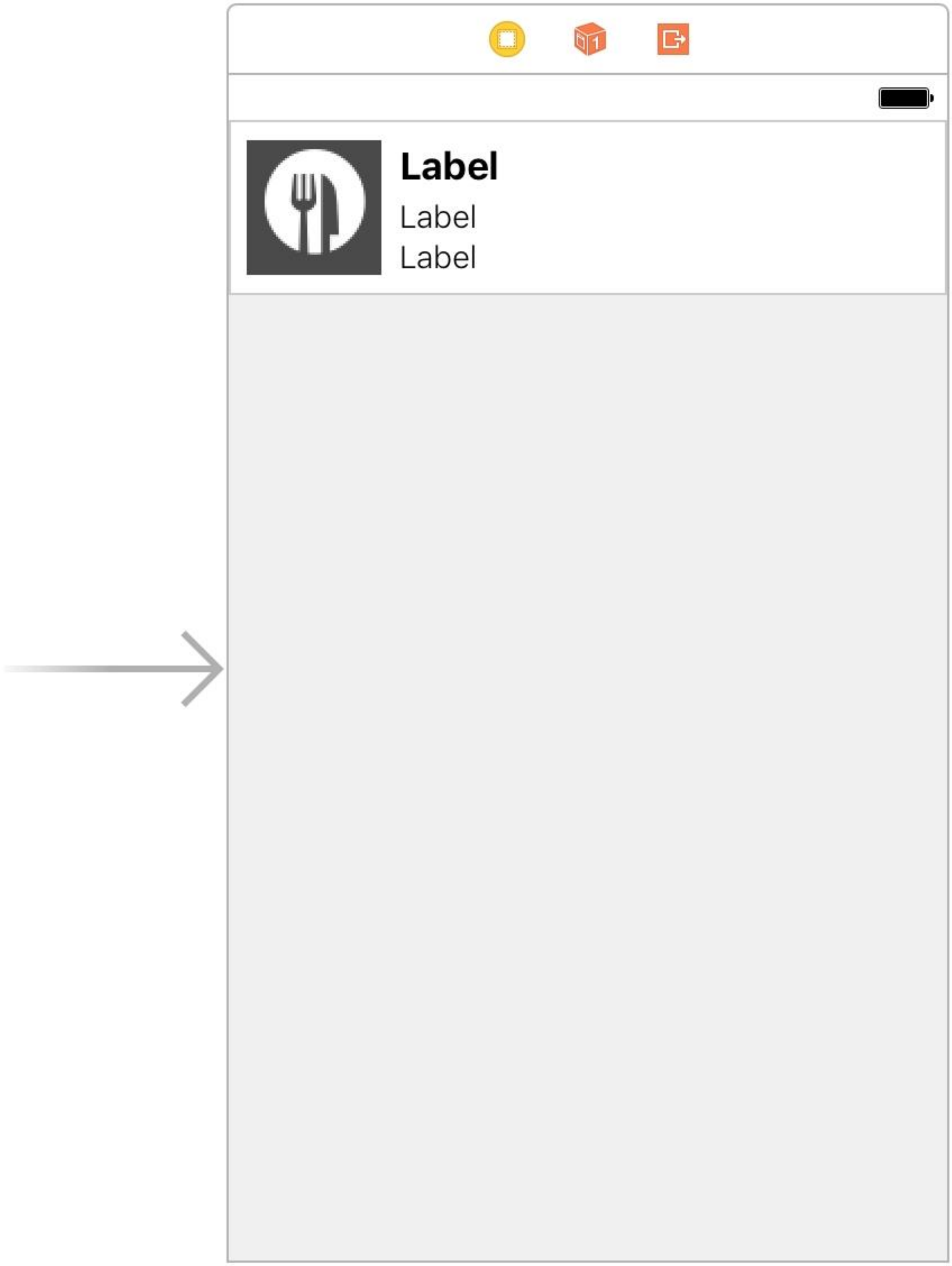
Choose options for adding these files:

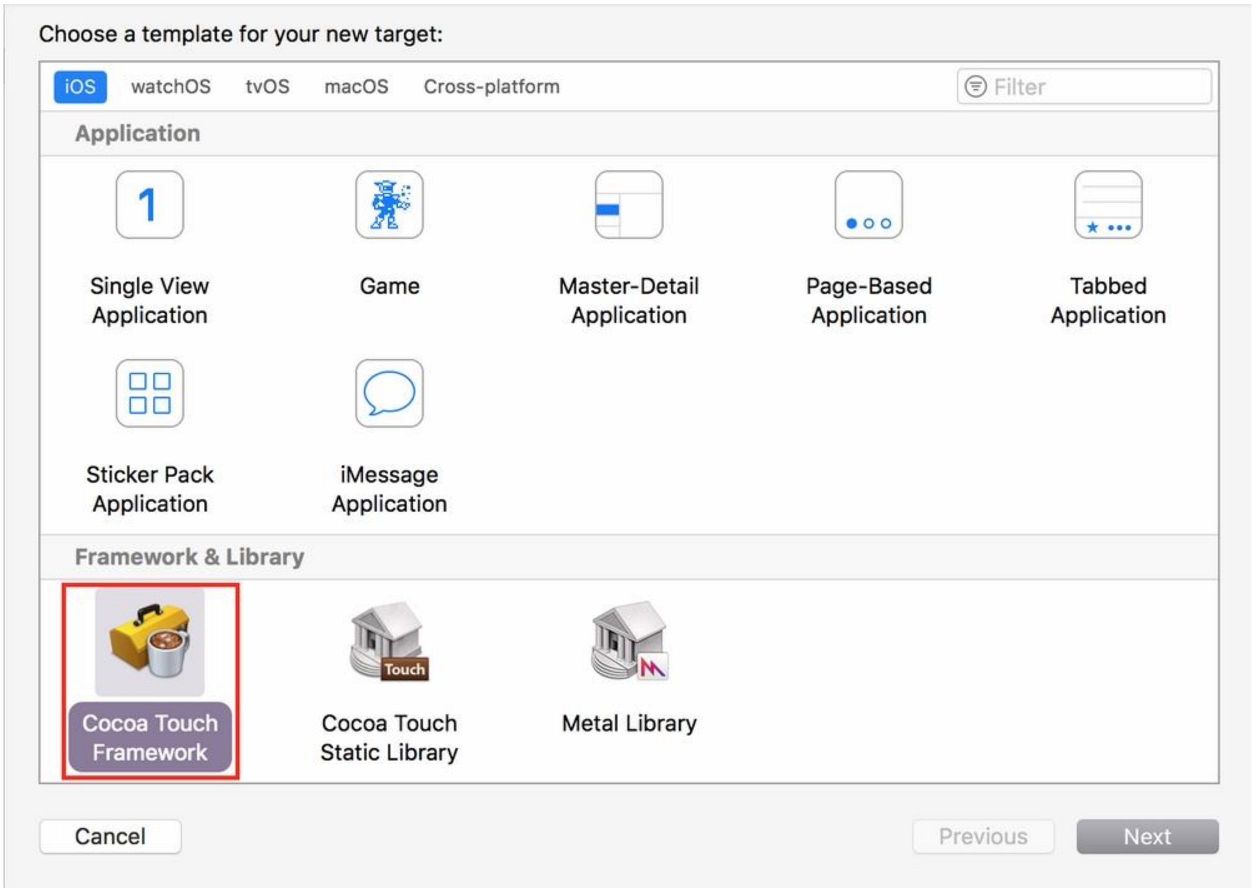
Destination: ☑ Copy items if needed

Added folders: ● Create groups
○ Create folder references

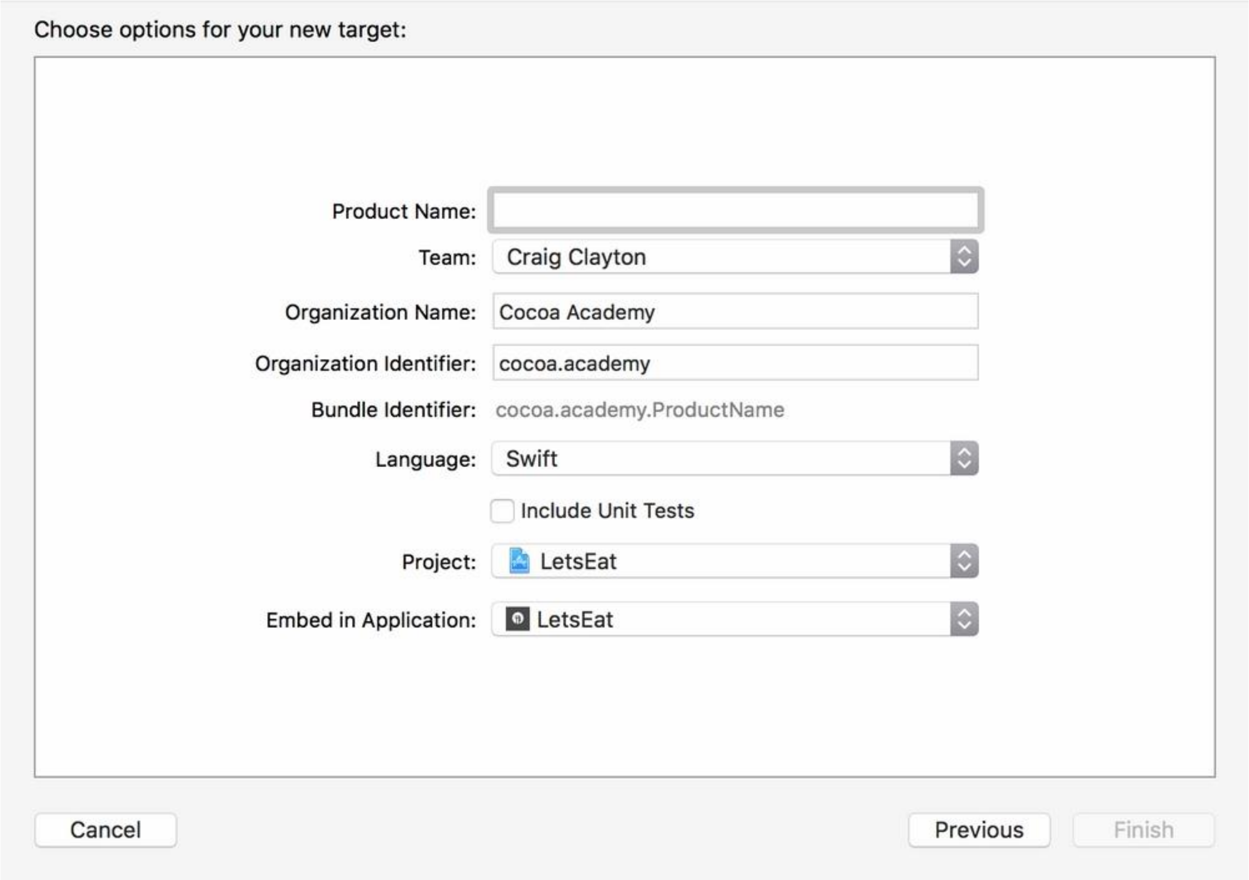
Add to targets:
□ LetsEat
☑ MessageApp
□ LetsEatDataKit


Messages View Controller
Hello World


Label
Label
Label



Choose a template for your new target:



Choose options for your new target:

Product Name:

Team: Craig Clayton

Organization Name: Cocoa Academy

Organization Identifier: cocoa.academy

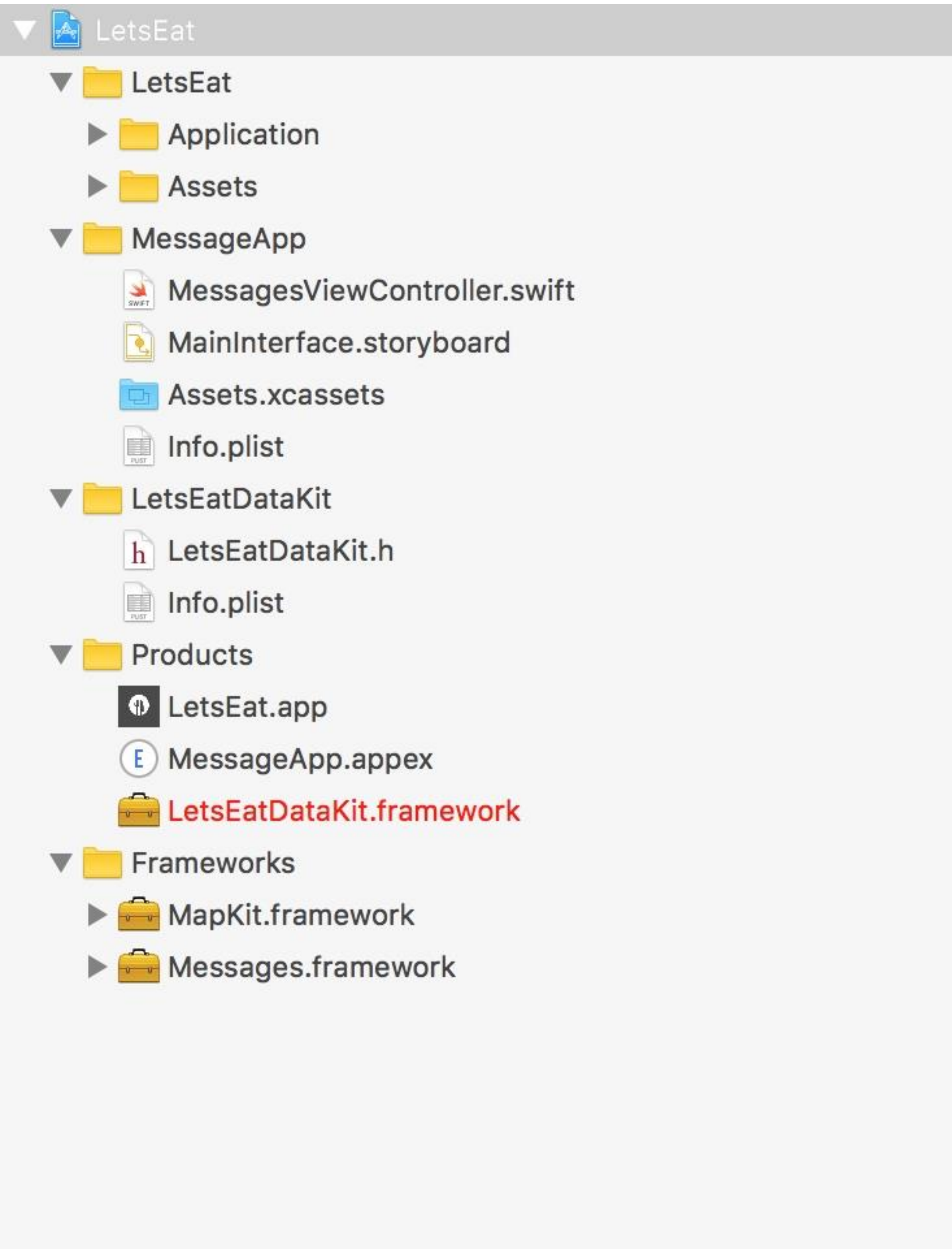
Bundle Identifier: cocoa.academy.ProductName

Language: Swift

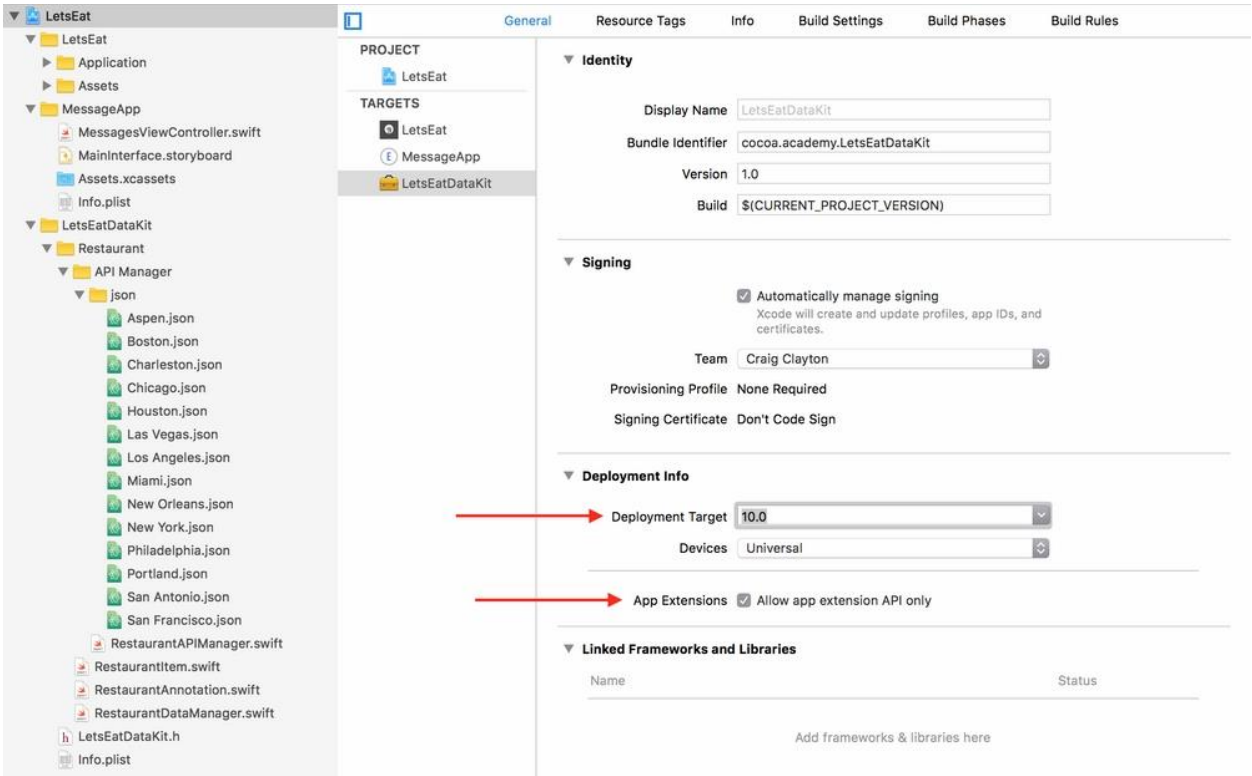
□ Include Unit Tests

Project: LetsEat

Embed in Application: LetsEat



```
▼ LetsEat
  ▼ LetsEat
    ▶ Application
    ▶ Assets
  ▼ MessageApp
      MessagesViewController.swift
      MainInterface.storyboard
      Assets.xcassets
      Info.plist
  ▼ LetsEatDataKit
      LetsEatDataKit.h
      Info.plist
  ▼ Products
      LetsEat.app
      MessageApp.appex
      LetsEatDataKit.framework
  ▼ Frameworks
    ▶ MapKit.framework
    ▶ Messages.framework
```



Identity

Display Name LetsEatDataKit

Bundle Identifier cocoa.academy.LetsEatDataKit

Version 1.0

Build $(CURRENT_PROJECT_VERSION)

Signing

☑ Automatically manage signing
Xcode will create and update profiles, app IDs, and certificates.

Team Craig Clayton

Provisioning Profile None Required

Signing Certificate Don't Code Sign

Deployment Info

Deployment Target 10.0

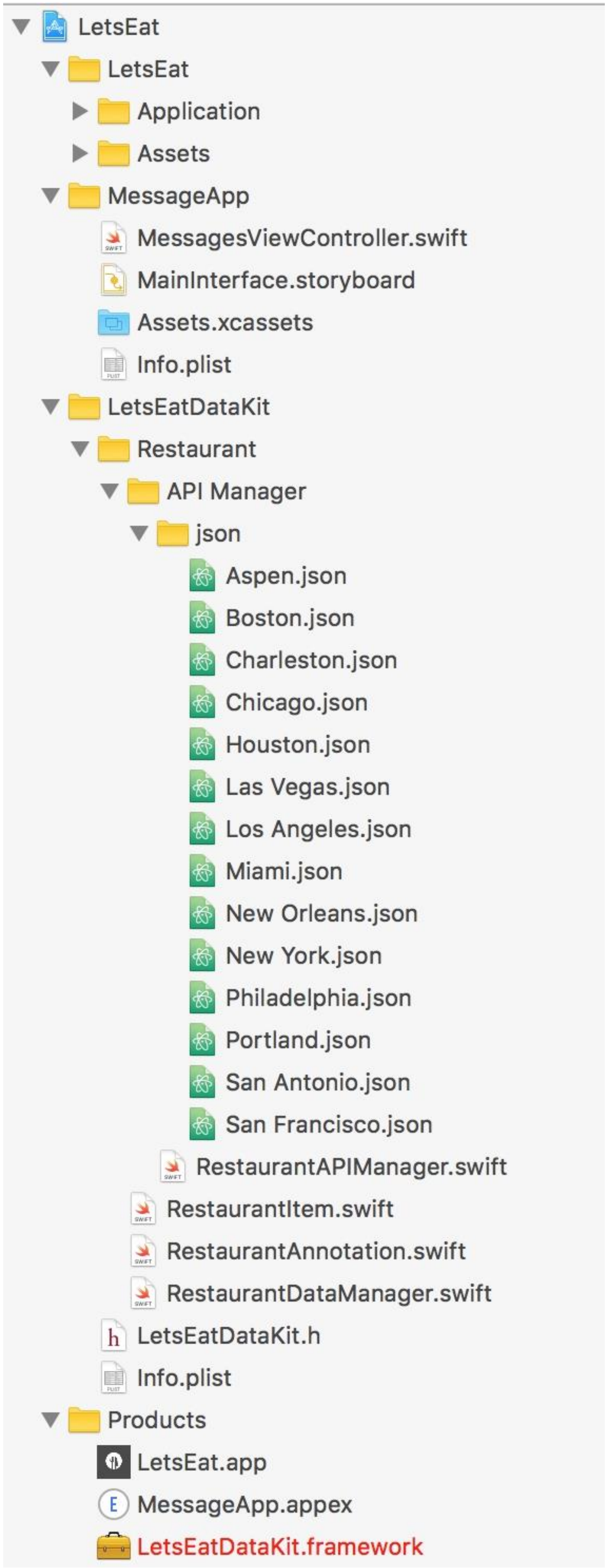
Devices Universal

App Extensions ☑ Allow app extension API only

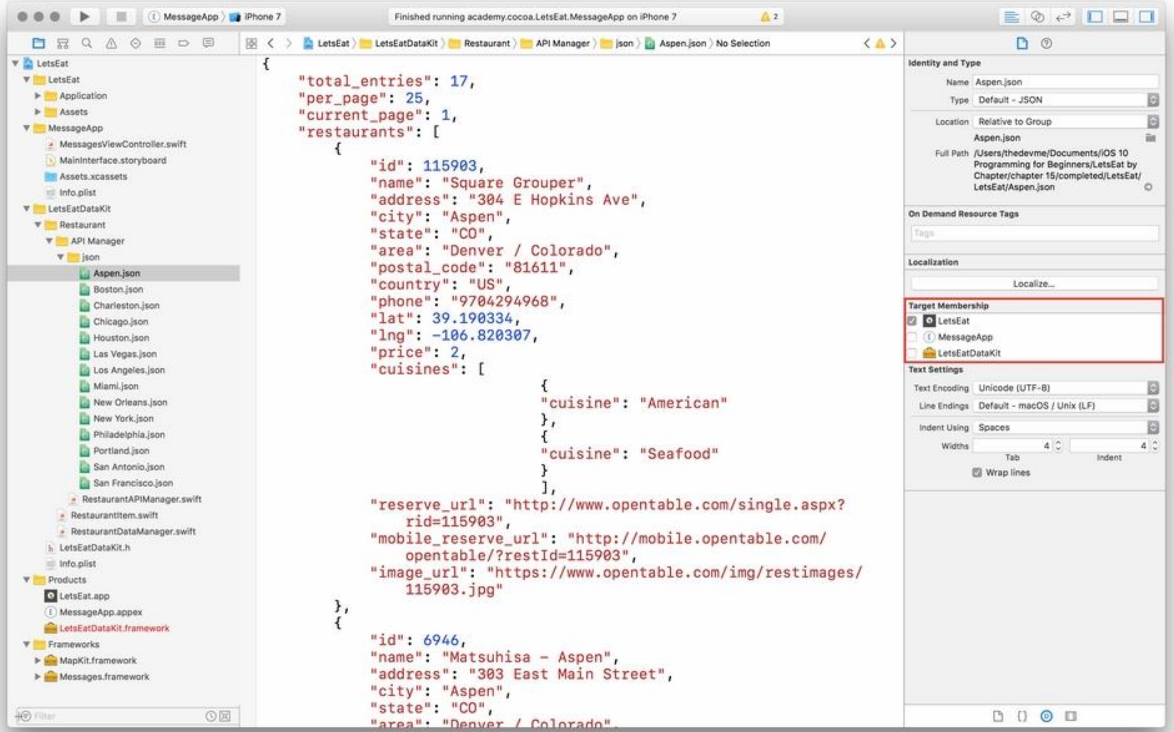
Linked Frameworks and Libraries

Name Status

Add frameworks & libraries here



```
▼ LetsEat
  ▼ LetsEat
    ▶ Application
    ▶ Assets
  ▼ MessageApp
      MessagesViewController.swift
      MainInterface.storyboard
      Assets.xcassets
      Info.plist
  ▼ LetsEatDataKit
    ▼ Restaurant
      ▼ API Manager
        ▼ json
            Aspen.json
            Boston.json
            Charleston.json
            Chicago.json
            Houston.json
            Las Vegas.json
            Los Angeles.json
            Miami.json
            New Orleans.json
            New York.json
            Philadelphia.json
            Portland.json
            San Antonio.json
            San Francisco.json
          RestaurantAPIManager.swift
        RestaurantItem.swift
        RestaurantAnnotation.swift
        RestaurantDataManager.swift
      LetsEatDataKit.h
      Info.plist
  ▼ Products
      LetsEat.app
      MessageApp.appex
      LetsEatDataKit.framework
```



```
{
    "total_entries": 17,
    "per_page": 25,
    "current_page": 1,
    "restaurants": [
        {
            "id": 115903,
            "name": "Square Grouper",
            "address": "304 E Hopkins Ave",
            "city": "Aspen",
            "state": "CO",
            "area": "Denver / Colorado",
            "postal_code": "81611",
            "country": "US",
            "phone": "9704294968",
            "lat": 39.190334,
            "lng": -106.820307,
            "price": 2,
            "cuisines": [
                                    {
                                    "cuisine": "American"
                                    },
                                    {
                                    "cuisine": "Seafood"
                                    }
                                    ],
            "reserve_url": "http://www.opentable.com/single.aspx?
                rid=115903",
            "mobile_reserve_url": "http://mobile.opentable.com/
                opentable/?restId=115903",
            "image_url": "https://www.opentable.com/img/restimages/
                115903.jpg"
        },
        {
            "id": 6946,
            "name": "Matsuhisa - Aspen",
            "address": "303 East Main Street",
            "city": "Aspen",
            "state": "CO",
            "area": "Denver / Colorado",
```

Identity and Type

Name: Aspen.json

Type: Default - JSON

Location: Relative to Group

Aspen.json

Full Path: /Users/thedevme/Documents/iOS 10 Programming for Beginners/LetsEat by Chapter/chapter 15/completed/LetsEat/LetsEat/Aspen.json

On Demand Resource Tags

Tags

Localization

Localize...

Target Membership

☑ LetsEat
☐ MessageApp
☐ LetsEatDataKit

Text Settings

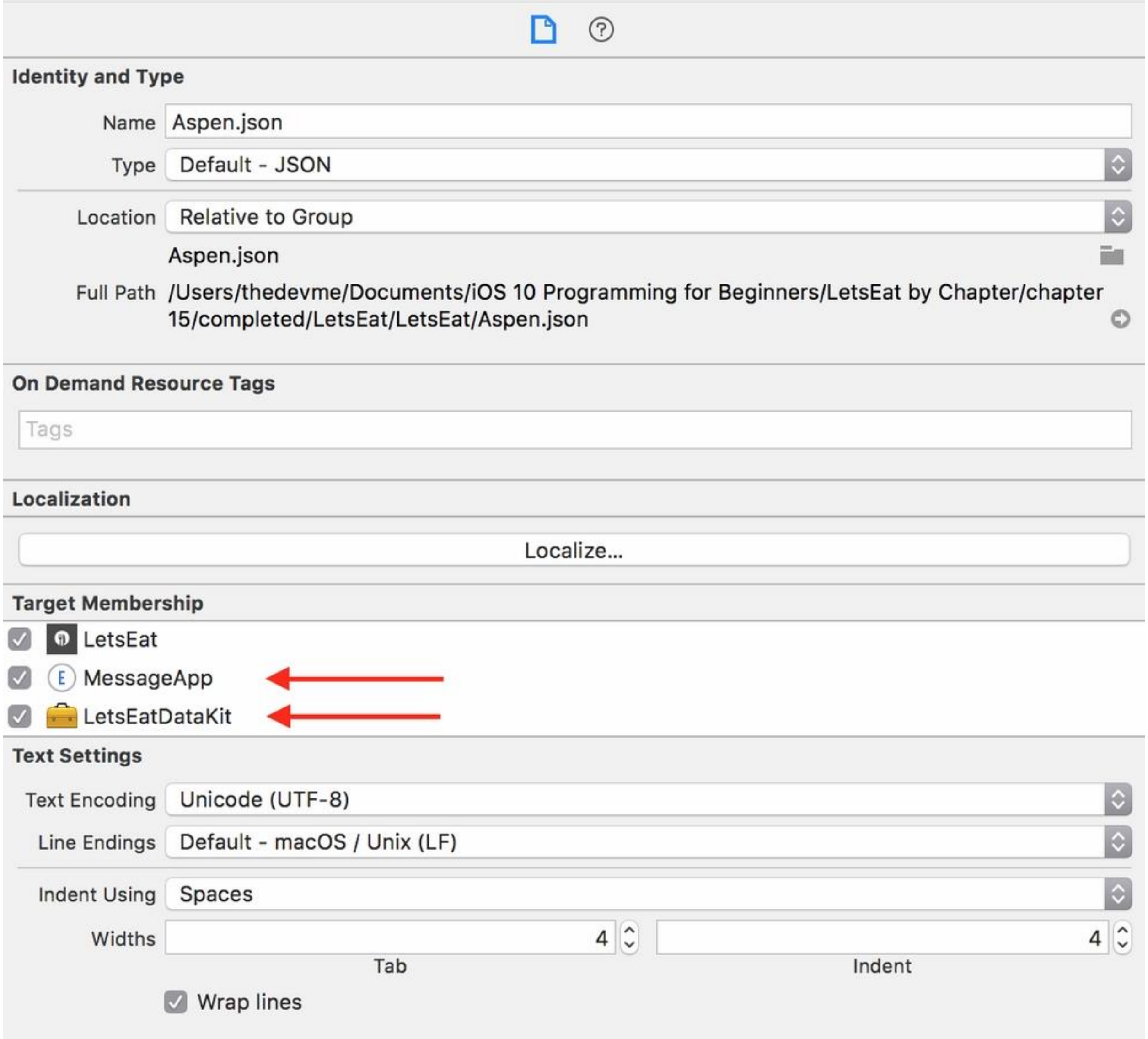
Text Encoding: Unicode (UTF-8)

Line Endings: Default - macOS / Unix (LF)

Indent Using: Spaces

Widths: 4 Tab, 4 Indent

☑ Wrap lines



Identity and Type

Name: Aspen.json

Type: Default - JSON

Location: Relative to Group

Aspen.json

Full Path: /Users/thedevme/Documents/iOS 10 Programming for Beginners/LetsEat by Chapter/chapter 15/completed/LetsEat/LetsEat/Aspen.json

On Demand Resource Tags

Tags

Localization

Target Membership

☑ LetsEat

☑ MessageApp

☑ LetsEatDataKit

Text Settings

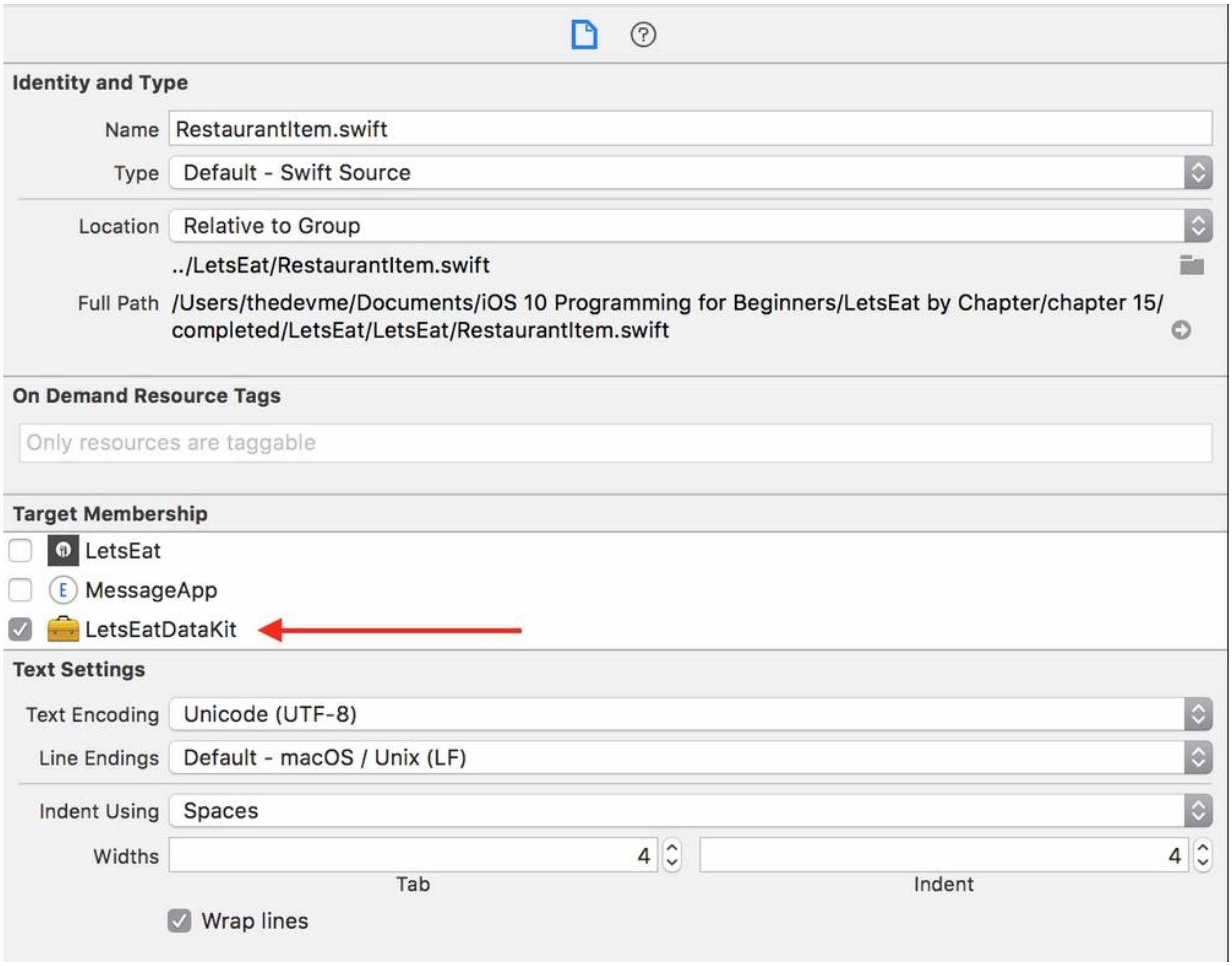
Text Encoding: Unicode (UTF-8)

Line Endings: Default - macOS / Unix (LF)

Indent Using: Spaces

Widths: 4 (Tab) 4 (Indent)

☑ Wrap lines



Identity and Type

Name RestaurantItem.swift

Type Default - Swift Source

Location Relative to Group

../LetsEat/RestaurantItem.swift

Full Path /Users/thedevme/Documents/iOS 10 Programming for Beginners/LetsEat by Chapter/chapter 15/completed/LetsEat/LetsEat/RestaurantItem.swift

On Demand Resource Tags

Only resources are taggable

Target Membership

□ LetsEat

□ MessageApp

☑ LetsEatDataKit

Text Settings

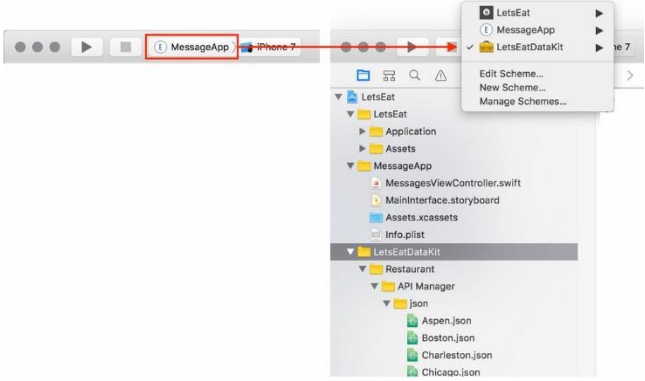
Text Encoding Unicode (UTF-8)

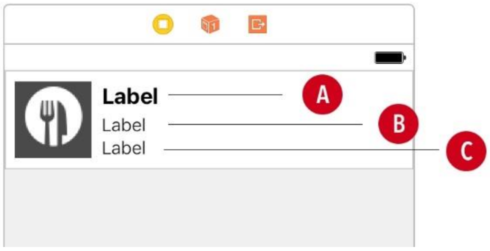
Line Endings Default - macOS / Unix (LF)

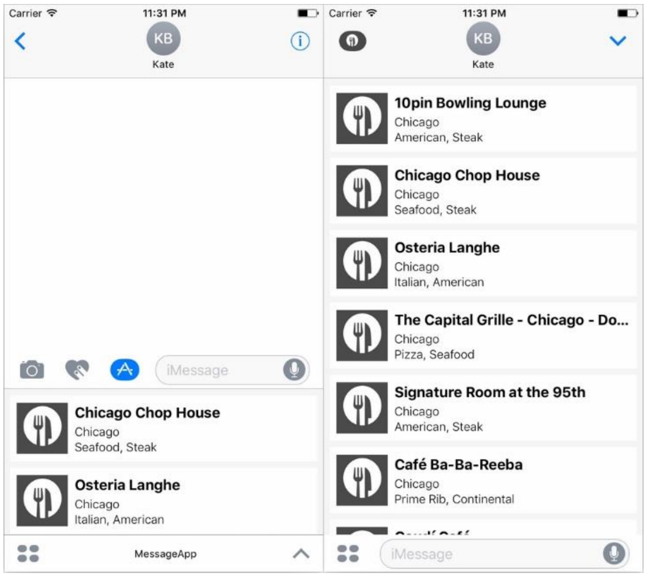
Indent Using Spaces

Widths 4 Tab 4 Indent

☑ Wrap lines







Carrier 11:31 PM

KB
Kate

iMessage

Chicago Chop House
Chicago
Seafood, Steak

Osteria Langhe
Chicago
Italian, American

MessageApp

Carrier 11:31 PM

KB
Kate

10pin Bowling Lounge
Chicago
American, Steak

Chicago Chop House
Chicago
Seafood, Steak

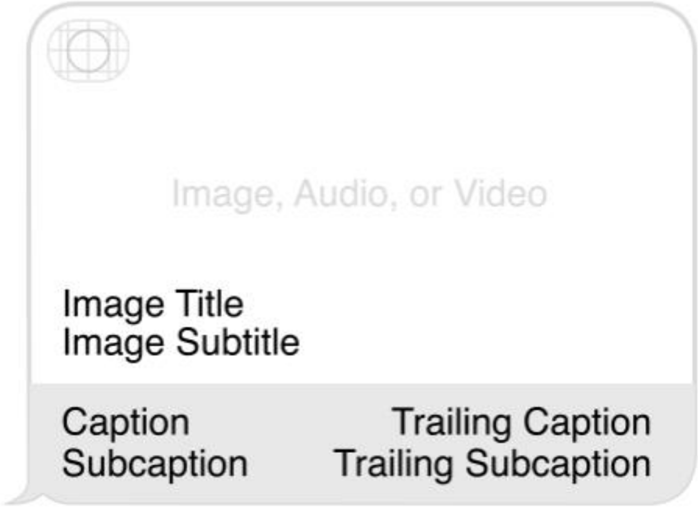
Osteria Langhe
Chicago
Italian, American

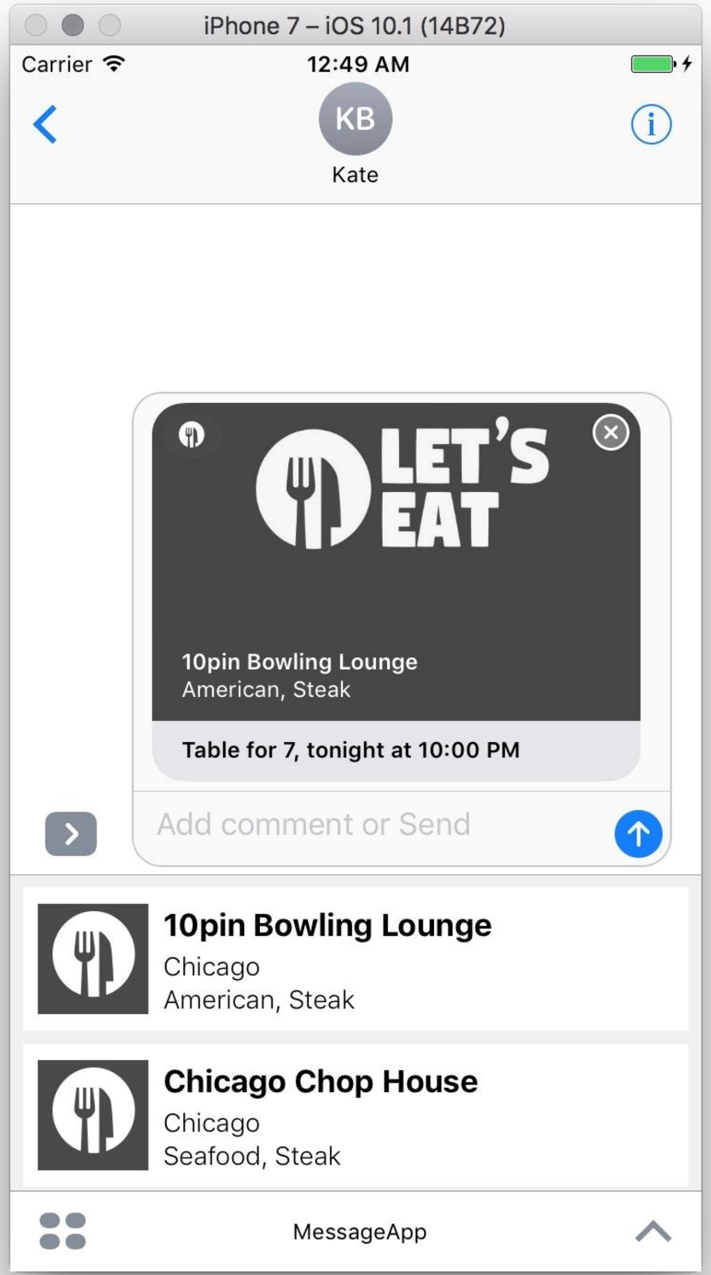
The Capital Grille - Chicago - Do...
Chicago
Pizza, Seafood

Signature Room at the 95th
Chicago
American, Steak

Café Ba-Ba-Reeba
Chicago
Prime Rib, Continental

iMessage





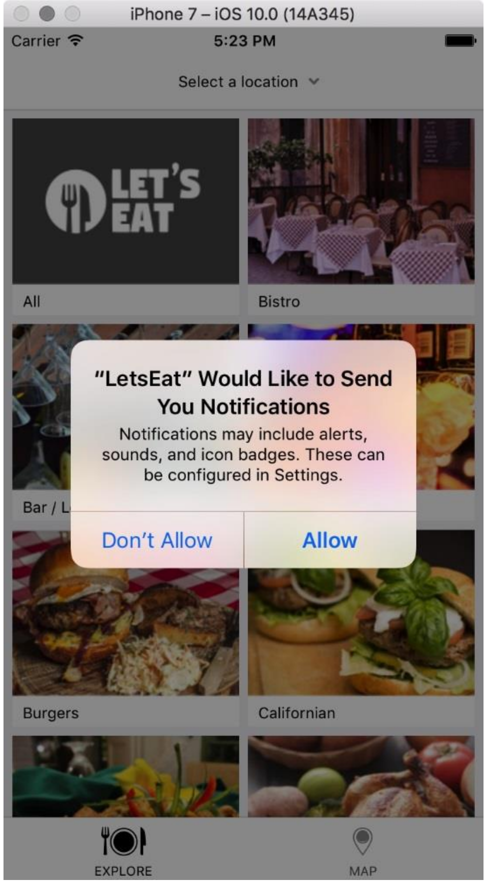
10pin Bowling Lounge
American, Steak

Table for 7, tonight at 10:00 PM

10pin Bowling Lounge
Chicago
American, Steak

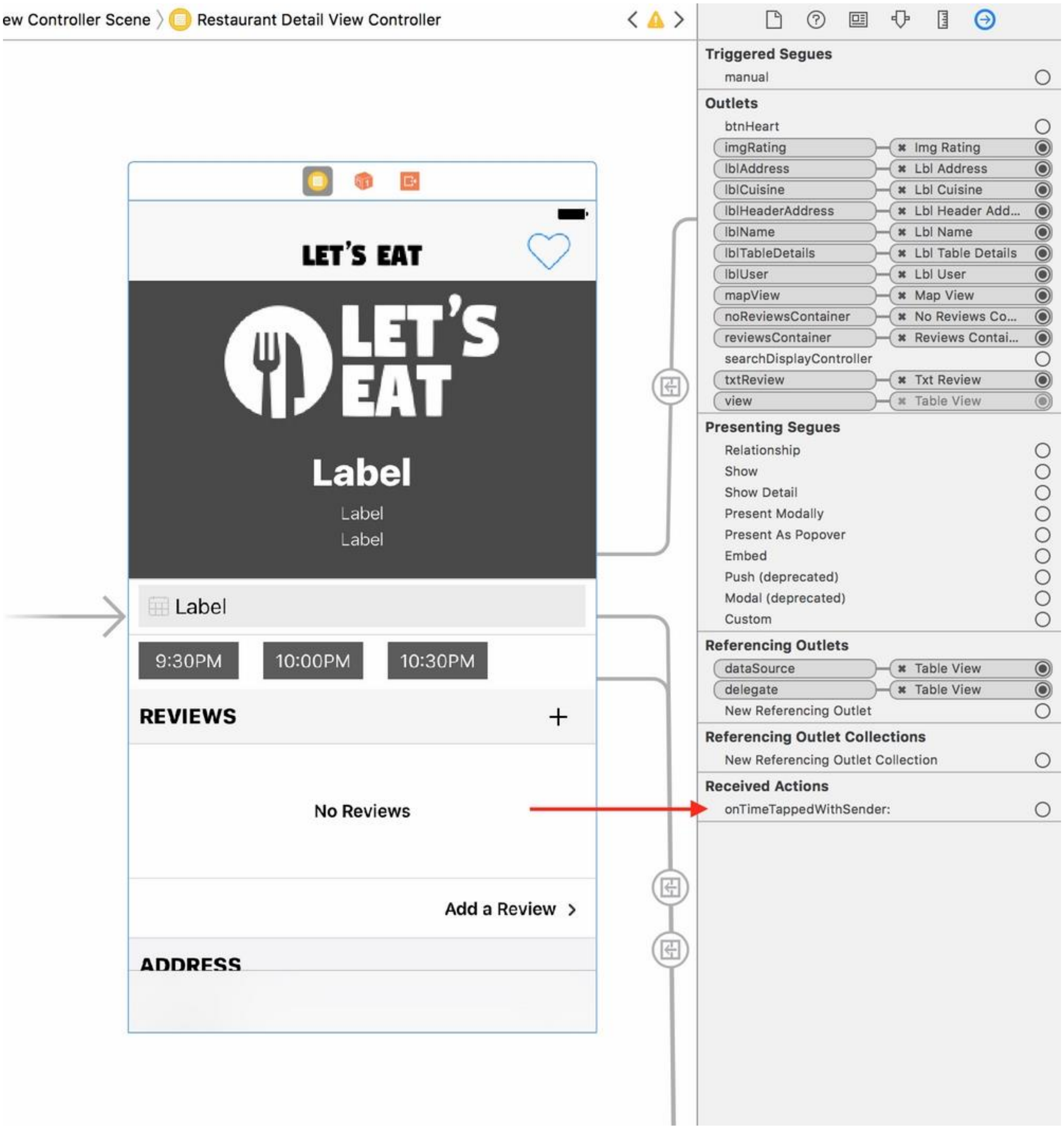
Chicago Chop House
Chicago
Seafood, Steak

Chapter 16: Notifications



"LetsEat" Would Like to Send You Notifications

Notifications may include alerts, sounds, and icon badges. These can be configured in Settings.



Triggered Segues

manual		○

Outlets

btnHeart		○
imgRating	✖ Img Rating	●
lblAddress	✖ Lbl Address	●
lblCuisine	✖ Lbl Cuisine	●
lblHeaderAddress	✖ Lbl Header Add...	●
lblName	✖ Lbl Name	●
lblTableDetails	✖ Lbl Table Details	●
lblUser	✖ Lbl User	●
mapView	✖ Map View	●
noReviewsContainer	✖ No Reviews Co...	●
reviewsContainer	✖ Reviews Contai...	●
searchDisplayController		○
txtReview	✖ Txt Review	●
view	✖ Table View	●

Presenting Segues

Relationship	○
Show	○
Show Detail	○
Present Modally	○
Present As Popover	○
Embed	○
Push (deprecated)	○
Modal (deprecated)	○
Custom	○

Referencing Outlets

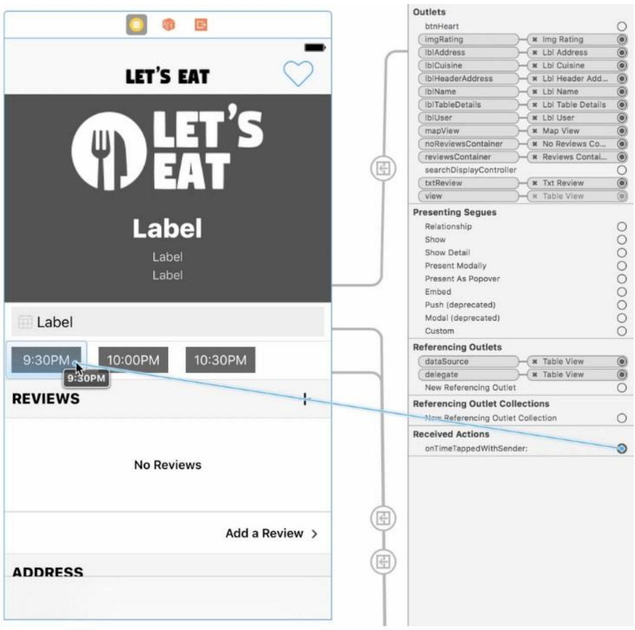
dataSource	✖ Table View	●
delegate	✖ Table View	●
New Referencing Outlet		○

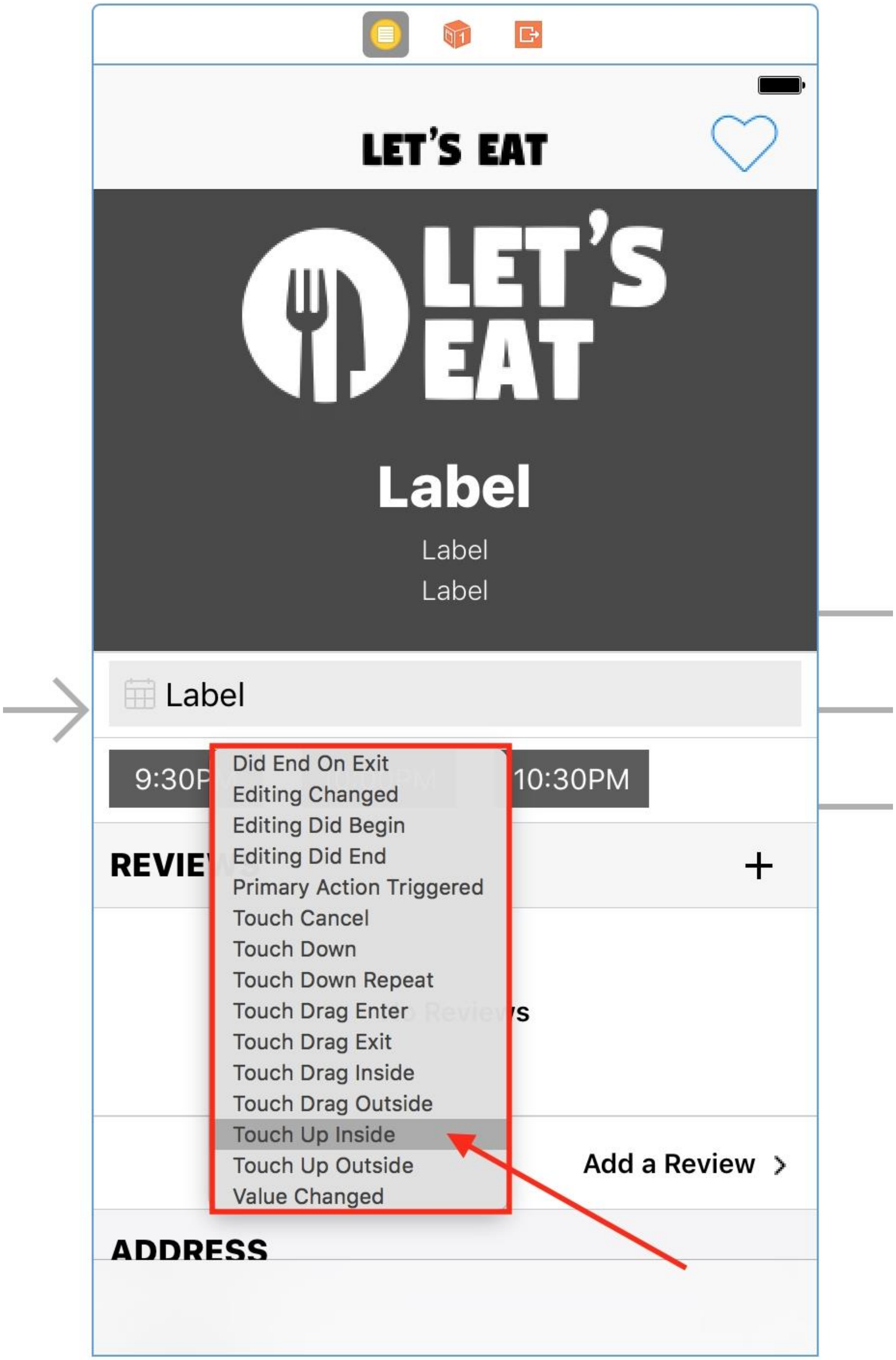
Referencing Outlet Collections

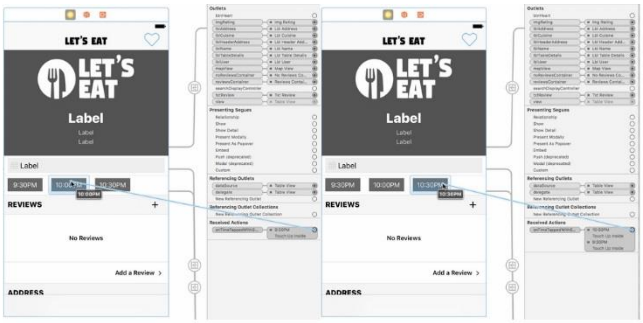
New Referencing Outlet Collection	○

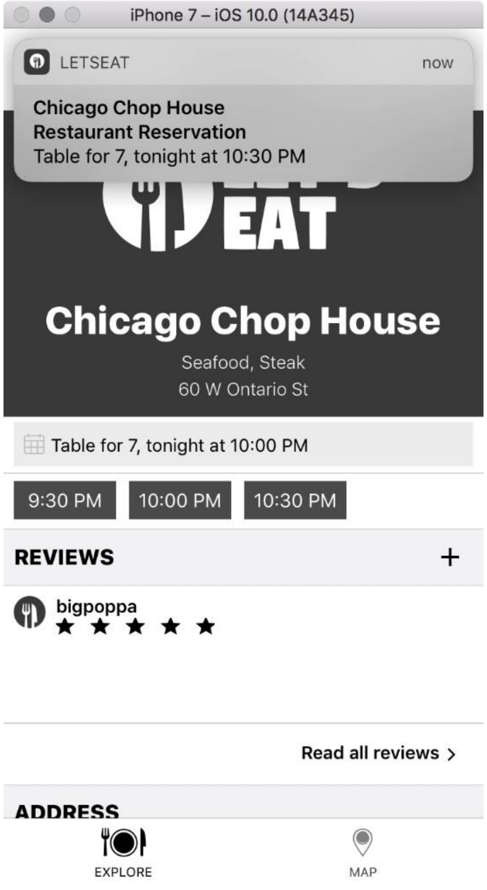
Received Actions

onTimeTappedWithSender:	○


LET'S EAT
LET'S EAT
Label
Label
Label
Label
9:30PM
10:00PM
10:30PM
9:30PM
REVIEWS
No Reviews
Add a Review
ADDRESS
Outlets
btnHeart
imgRating — Img Rating
lblAddress — Lbl Address
lblCuisine — Lbl Cuisine
lblHeaderAddress — Lbl Header Add...
lblName — Lbl Name
lblTableDetails — Lbl Table Details
lblUser — Lbl User
mapView — Map View
noReviewsContainer — No Reviews Co...
reviewsContainer — Reviews Contai...
searchDisplayController
txtReview — Txt Review
view — Table View
Presenting Segues
Relationship
Show
Show Detail
Present Modally
Present As Popover
Embed
Push (deprecated)
Modal (deprecated)
Custom
Referencing Outlets
dataSource — Table View
delegate — Table View
New Referencing Outlet
Referencing Outlet Collections
New Referencing Outlet Collection
Received Actions
onTimeTappedWithSender:


LET'S EAT
LET'S EAT
Label
Label
Label
Label
9:30P
10:30PM
REVIE
+
Did End On Exit
Editing Changed
Editing Did Begin
Editing Did End
Primary Action Triggered
Touch Cancel
Touch Down
Touch Down Repeat
Touch Drag Enter
Touch Drag Exit
Touch Drag Inside
Touch Drag Outside
Touch Up Inside
Touch Up Outside
Value Changed
Add a Review
ADDRESS



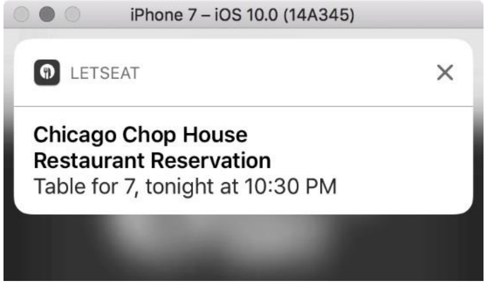


Chicago Chop House
Restaurant Reservation
Table for 7, tonight at 10:30 PM

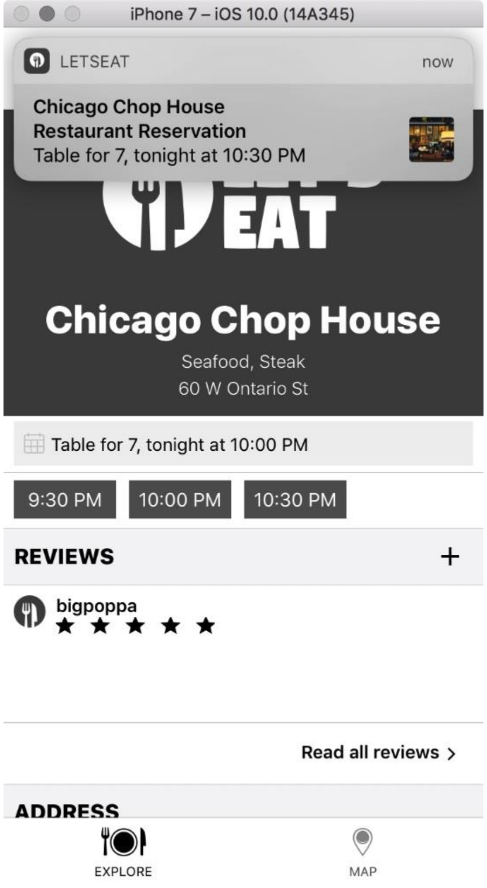
Chicago Chop House

Seafood, Steak
60 W Ontario St

Table for 7, tonight at 10:00 PM



Chicago Chop House
Restaurant Reservation
Table for 7, tonight at 10:30 PM



Chicago Chop House
Restaurant Reservation
Table for 7, tonight at 10:30 PM

Chicago Chop House

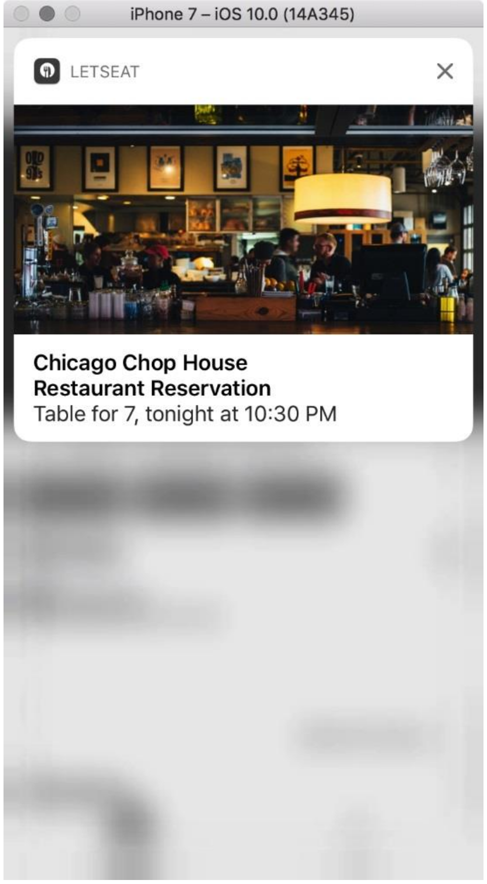
Seafood, Steak
60 W Ontario St

Table for 7, tonight at 10:00 PM

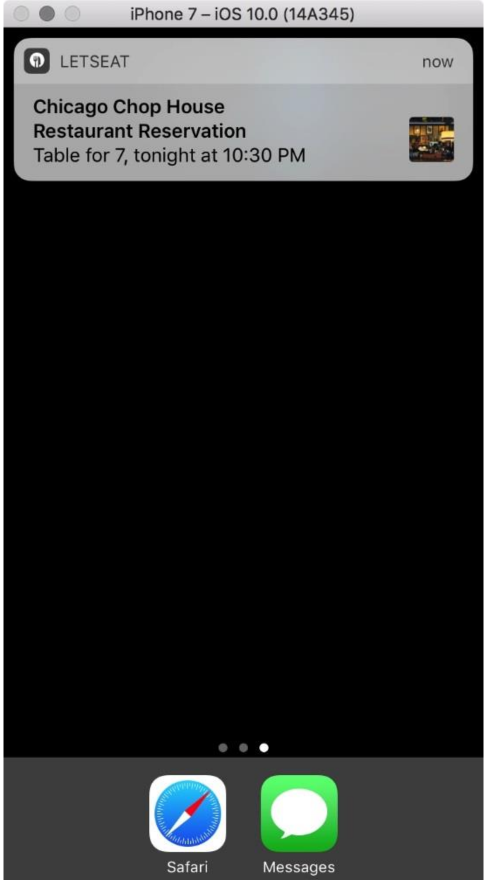
REVIEWS

bigpoppa
★ ★ ★ ★ ★

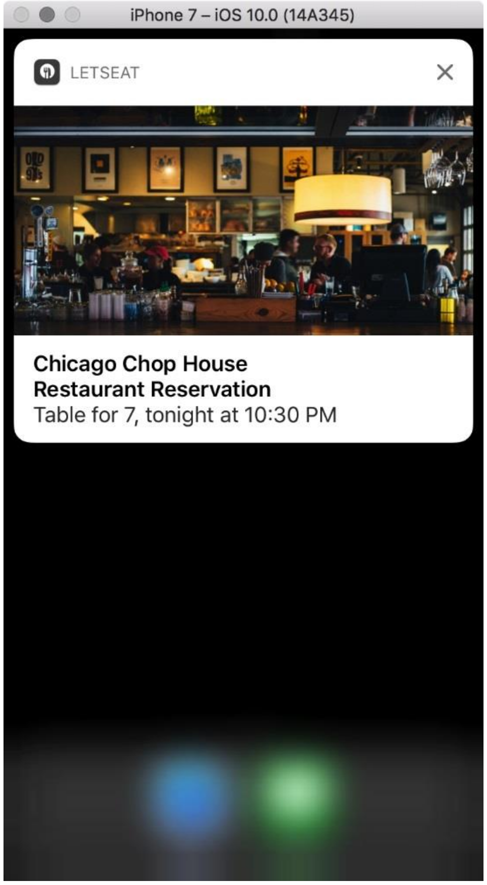
ADDRESS



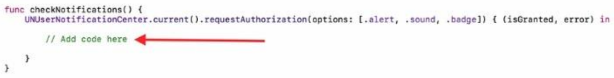
Chicago Chop House
Restaurant Reservation
Table for 7, tonight at 10:30 PM



Chicago Chop House
Restaurant Reservation
Table for 7, tonight at 10:30 PM



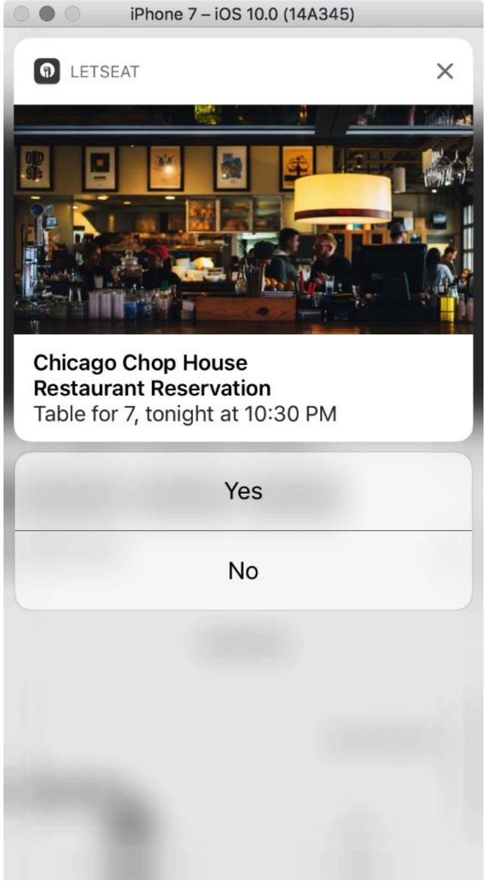
Chicago Chop House
Restaurant Reservation
Table for 7, tonight at 10:30 PM



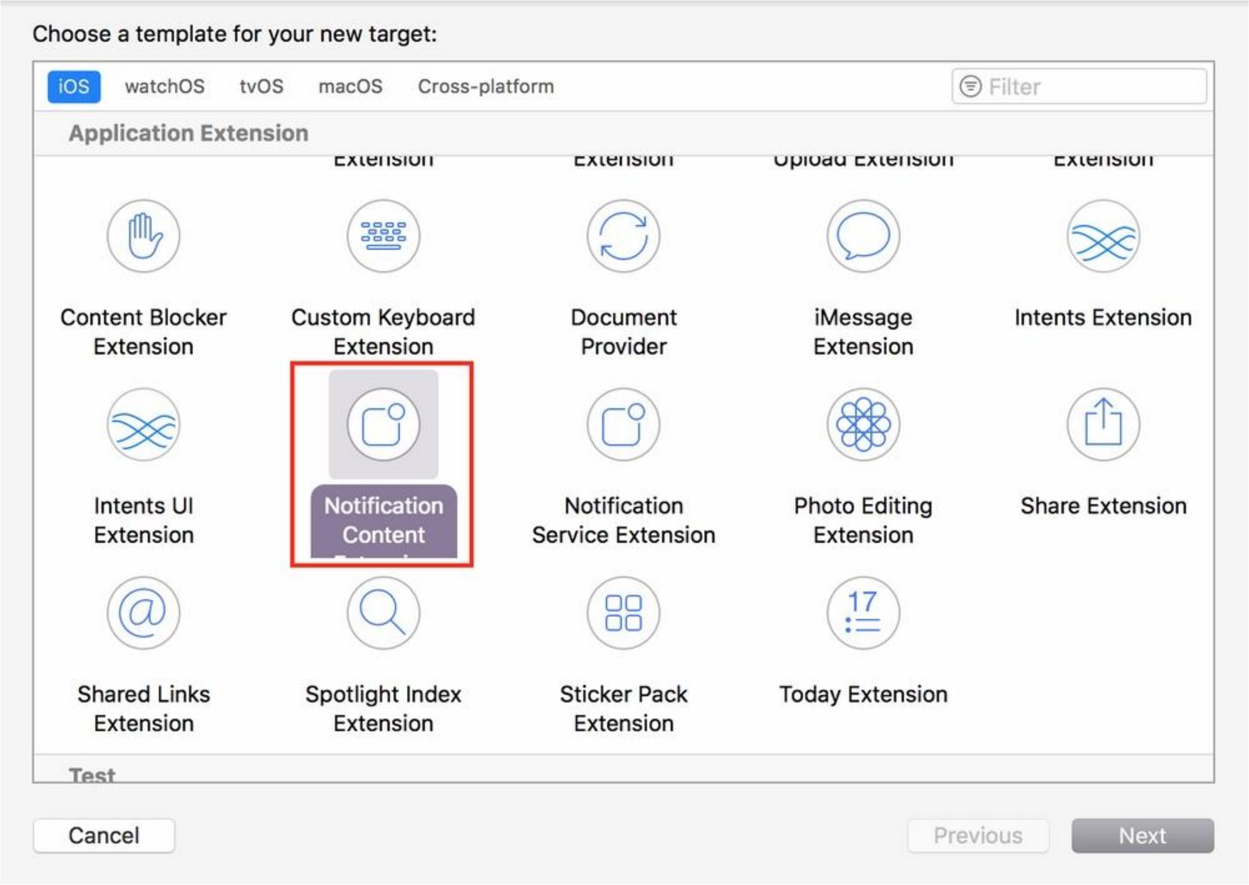
```
func checkNotifications() {
    UNUserNotificationCenter.current().requestAuthorization(options: [.alert, .sound, .badge]) { (isGranted, error) in

        // Add code here

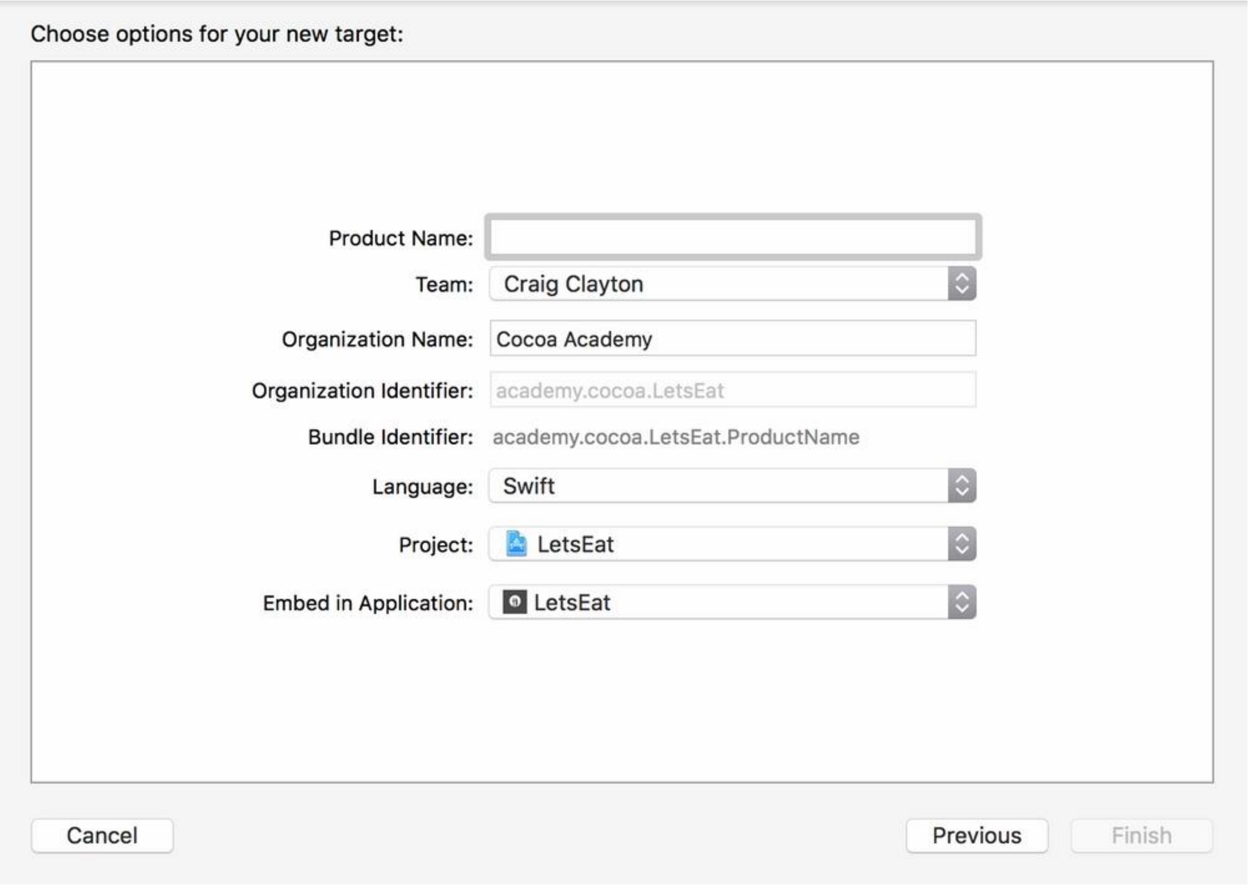
    }
}
```



Chicago Chop House
Restaurant Reservation
Table for 7, tonight at 10:30 PM



Choose a template for your new target:



Choose options for your new target:

Product Name:

Team: Craig Clayton

Organization Name: Cocoa Academy

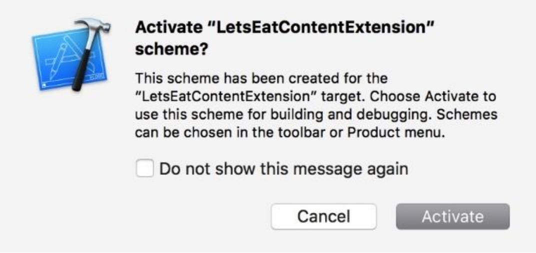
Organization Identifier: academy.cocoa.LetsEat

Bundle Identifier: academy.cocoa.LetsEat.ProductName

Language: Swift

Project: LetsEat

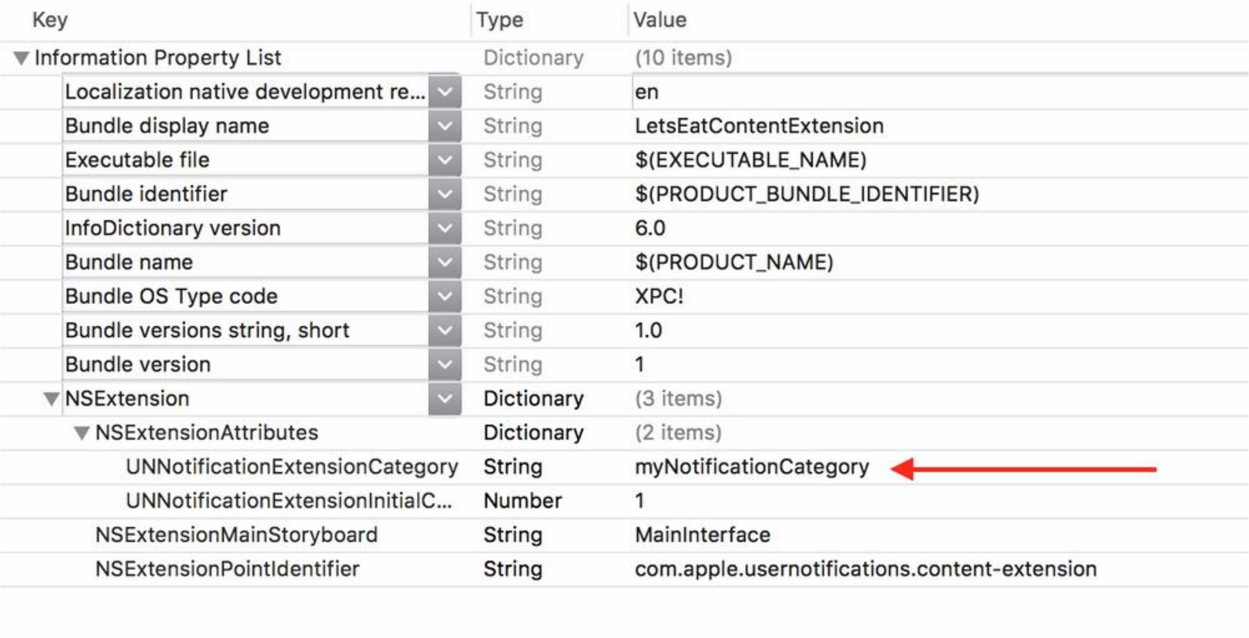
Embed in Application: LetsEat



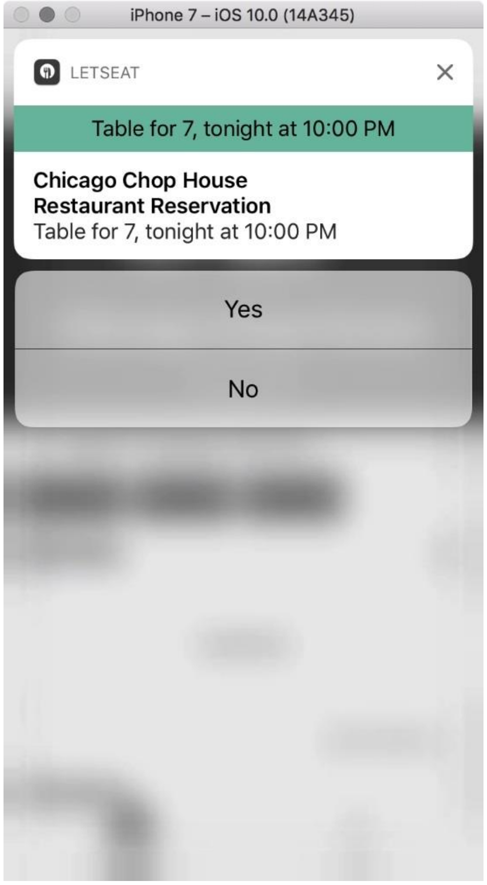
Activate "LetsEatContentExtension" scheme?

This scheme has been created for the "LetsEatContentExtension" target. Choose Activate to use this scheme for building and debugging. Schemes can be chosen in the toolbar or Product menu.

□ Do not show this message again



Key	Type	Value
▼ Information Property List	Dictionary	(10 items)
Localization native development re...	String	en
Bundle display name	String	LetsEatContentExtension
Executable file	String	$(EXECUTABLE_NAME)
Bundle identifier	String	$(PRODUCT_BUNDLE_IDENTIFIER)
InfoDictionary version	String	6.0
Bundle name	String	$(PRODUCT_NAME)
Bundle OS Type code	String	XPC!
Bundle versions string, short	String	1.0
Bundle version	String	1
▼ NSExtension	Dictionary	(3 items)
▼ NSExtensionAttributes	Dictionary	(2 items)
UNNotificationExtensionCategory	String	myNotificationCategory
UNNotificationExtensionInitialC...	Number	1
NSExtensionMainStoryboard	String	MainInterface
NSExtensionPointIdentifier	String	com.apple.usernotifications.content-extension

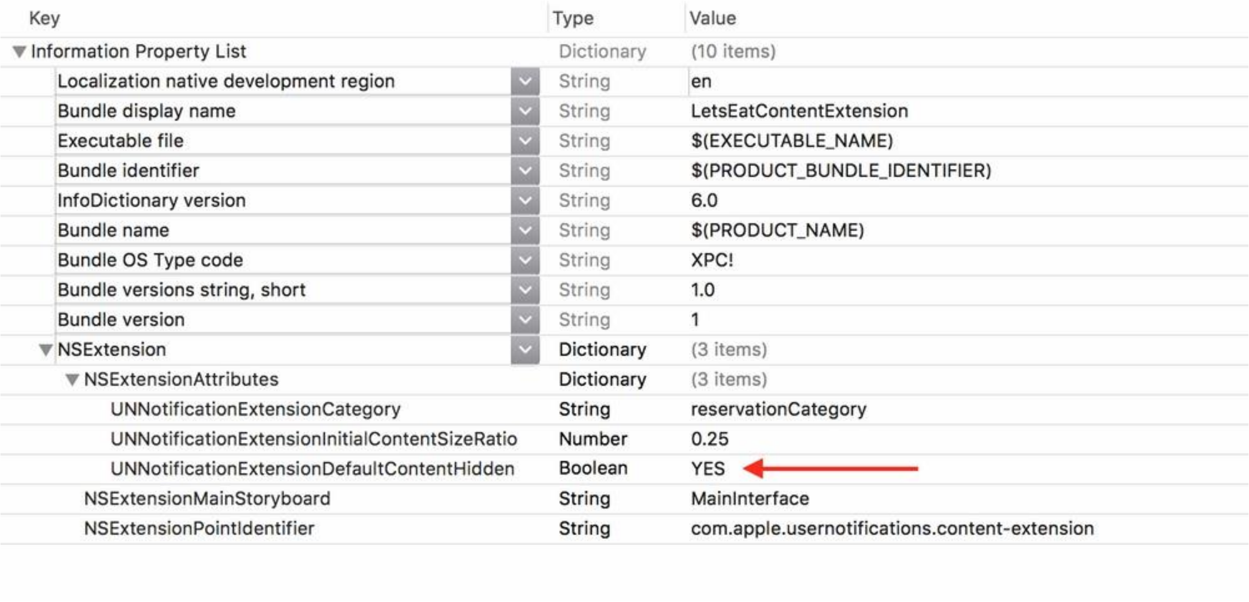


iPhone 7 – iOS 10.0 (14A345)

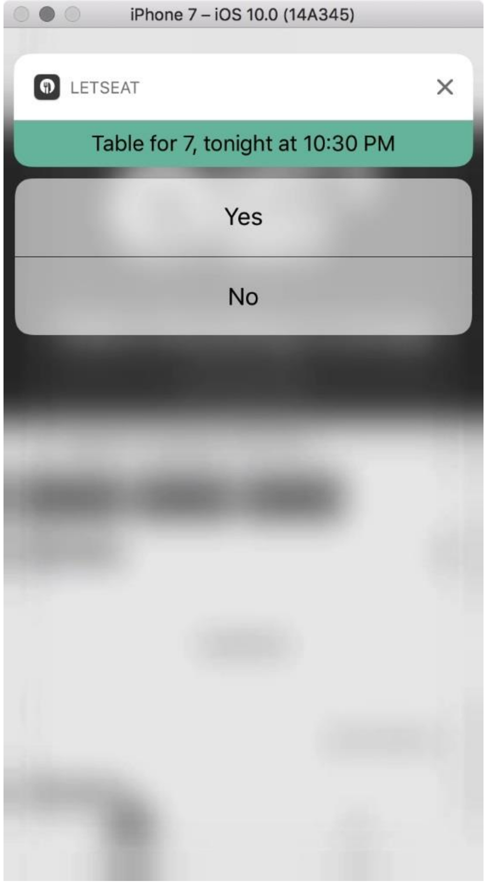
LETSEAT

Table for 7, tonight at 10:00 PM

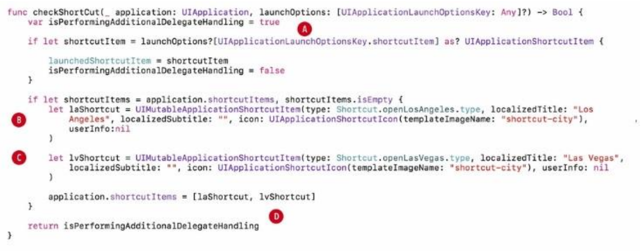
Chicago Chop House
Restaurant Reservation
Table for 7, tonight at 10:00 PM



Key	Type	Value
▼ Information Property List	Dictionary	(10 items)
Localization native development region	String	en
Bundle display name	String	LetsEatContentExtension
Executable file	String	$(EXECUTABLE_NAME)
Bundle identifier	String	$(PRODUCT_BUNDLE_IDENTIFIER)
InfoDictionary version	String	6.0
Bundle name	String	$(PRODUCT_NAME)
Bundle OS Type code	String	XPC!
Bundle versions string, short	String	1.0
Bundle version	String	1
▼ NSExtension	Dictionary	(3 items)
▼ NSExtensionAttributes	Dictionary	(3 items)
UNNotificationExtensionCategory	String	reservationCategory
UNNotificationExtensionInitialContentSizeRatio	Number	0.25
UNNotificationExtensionDefaultContentHidden	Boolean	YES
NSExtensionMainStoryboard	String	MainInterface
NSExtensionPointIdentifier	String	com.apple.usernotifications.content-extension


iPhone 7 – iOS 10.0 (14A345)
LETSEAT
Table for 7, tonight at 10:30 PM
Yes
No

Chapter 17: Just a Peek



```
func checkShortCut(_ application: UIApplication, launchOptions: [UIApplicationLaunchOptionsKey: Any]?) -> Bool {
    var isPerformingAdditionalDelegateHandling = true

    if let shortcutItem = launchOptions?[UIApplicationLaunchOptionsKey.shortcutItem] as? UIApplicationShortcutItem {

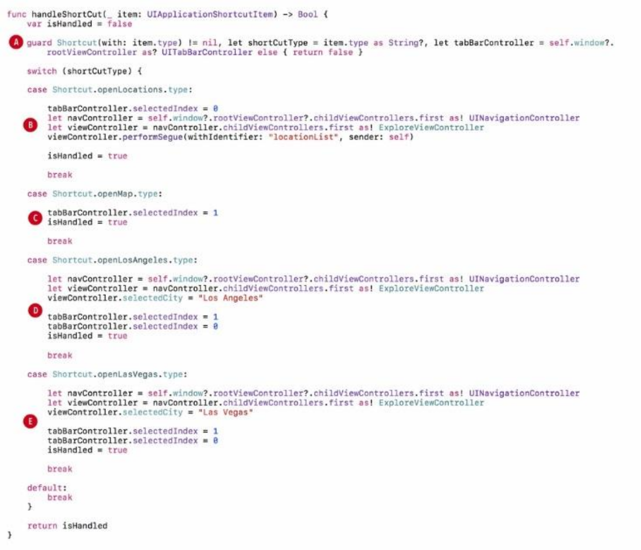
        launchedShortcutItem = shortcutItem
        isPerformingAdditionalDelegateHandling = false
    }

    if let shortcutItems = application.shortcutItems, shortcutItems.isEmpty {
        let laShortcut = UIMutableApplicationShortcutItem(type: Shortcut.openLosAngeles.type, localizedTitle: "Los
            Angeles", localizedSubtitle: "", icon: UIApplicationShortcutIcon(templateImageName: "shortcut-city"),
            userInfo:nil
        )

        let lvShortcut = UIMutableApplicationShortcutItem(type: Shortcut.openLasVegas.type, localizedTitle: "Las Vegas",
            localizedSubtitle: "", icon: UIApplicationShortcutIcon(templateImageName: "shortcut-city"), userInfo: nil
        )

        application.shortcutItems = [laShortcut, lvShortcut]
    }

    return isPerformingAdditionalDelegateHandling
}
```



```
func handleShortCut(_ item: UIApplicationShortcutItem) -> Bool {
    var isHandled = false

    guard Shortcut(with: item.type) != nil, let shortCutType = item.type as String?, let tabBarController = self.window?.
        rootViewController as? UITabBarController else { return false }

    switch (shortCutType) {

    case Shortcut.openLocations.type:

        tabBarController.selectedIndex = 0
        let navController = self.window?.rootViewController?.childViewControllers.first as! UINavigationController
        let viewController = navController.childViewControllers.first as! ExploreViewController
        viewController.performSegue(withIdentifier: "locationList", sender: self)

        isHandled = true

        break

    case Shortcut.openMap.type:

        tabBarController.selectedIndex = 1
        isHandled = true

        break

    case Shortcut.openLosAngeles.type:

        let navController = self.window?.rootViewController?.childViewControllers.first as! UINavigationController
        let viewController = navController.childViewControllers.first as! ExploreViewController
        viewController.selectedCity = "Los Angeles"

        tabBarController.selectedIndex = 1
        tabBarController.selectedIndex = 0
        isHandled = true

        break

    case Shortcut.openLasVegas.type:

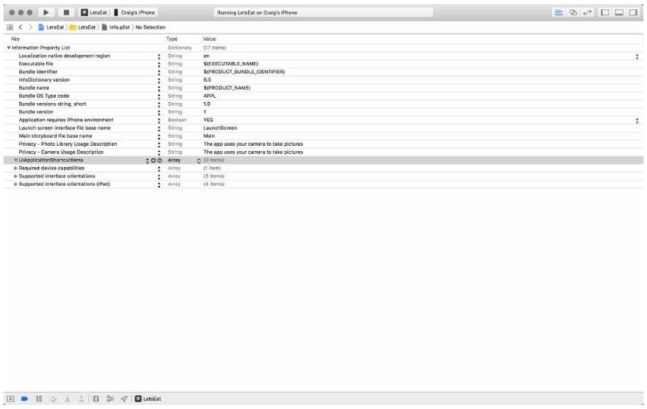
        let navController = self.window?.rootViewController?.childViewControllers.first as! UINavigationController
        let viewController = navController.childViewControllers.first as! ExploreViewController
        viewController.selectedCity = "Las Vegas"

        tabBarController.selectedIndex = 1
        tabBarController.selectedIndex = 0
        isHandled = true

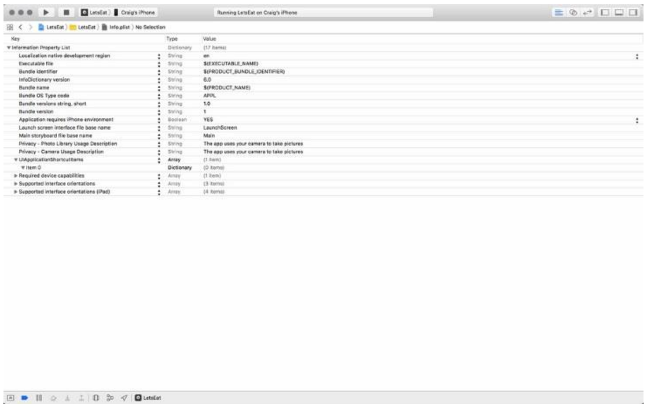
        break

    default:
        break
    }

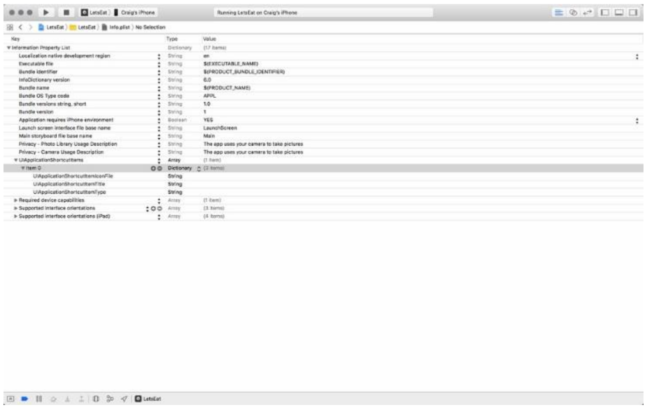
    return isHandled
}
```



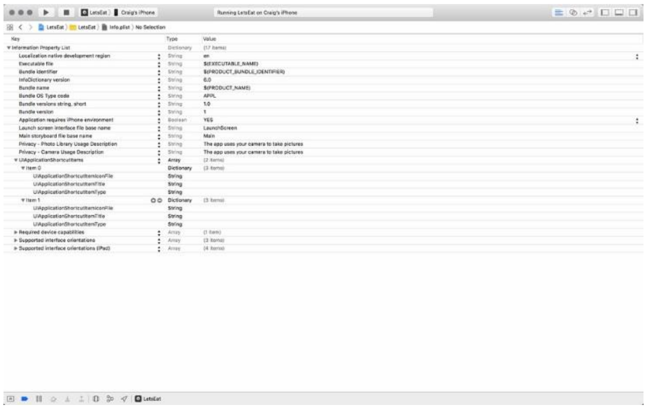
Key	Type	Value
▼ Information Property List	Dictionary	(17 items)
Localization native development region	String	en
Executable file	String	$(EXECUTABLE_NAME)
Bundle identifier	String	$(PRODUCT_BUNDLE_IDENTIFIER)
InfoDictionary version	String	6.0
Bundle name	String	$(PRODUCT_NAME)
Bundle OS Type code	String	APPL
Bundle versions string, short	String	1.0
Bundle version	String	1
Application requires iPhone environment	Boolean	YES
Launch screen interface file base name	String	LaunchScreen
Main storyboard file base name	String	Main
Privacy - Photo Library Usage Description	String	The app uses your camera to take pictures
Privacy - Camera Usage Description	String	The app uses your camera to take pictures
▼ UIApplicationShortcutItems	Array	(0 items)
▶ Required device capabilities	Array	(1 item)
▶ Supported interface orientations	Array	(3 items)
▶ Supported interface orientations (iPad)	Array	(4 items)



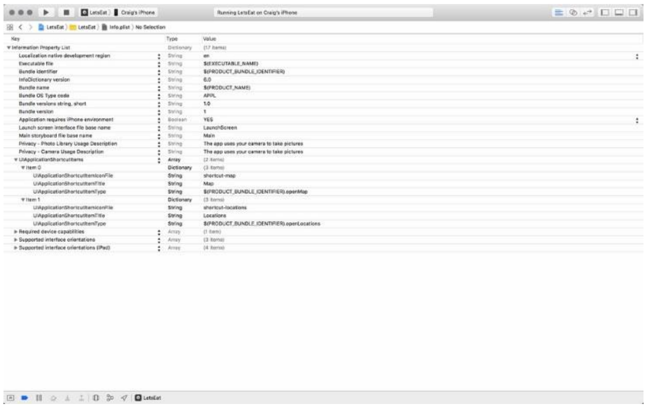
Key	Type	Value
▼ Information Property List	Dictionary	(17 items)
Localization native development region	String	en
Executable file	String	$(EXECUTABLE_NAME)
Bundle identifier	String	$(PRODUCT_BUNDLE_IDENTIFIER)
InfoDictionary version	String	6.0
Bundle name	String	$(PRODUCT_NAME)
Bundle OS Type code	String	APPL
Bundle versions string, short	String	1.0
Bundle version	String	1
Application requires iPhone environment	Boolean	YES
Launch screen interface file base name	String	LaunchScreen
Main storyboard file base name	String	Main
Privacy - Photo Library Usage Description	String	The app uses your camera to take pictures
Privacy - Camera Usage Description	String	The app uses your camera to take pictures
▼ UIApplicationShortcutItems	Array	(1 item)
▼ Item 0	Dictionary	(0 items)
▶ Required device capabilities	Array	(1 item)
▶ Supported interface orientations	Array	(3 items)
▶ Supported interface orientations (iPad)	Array	(4 items)



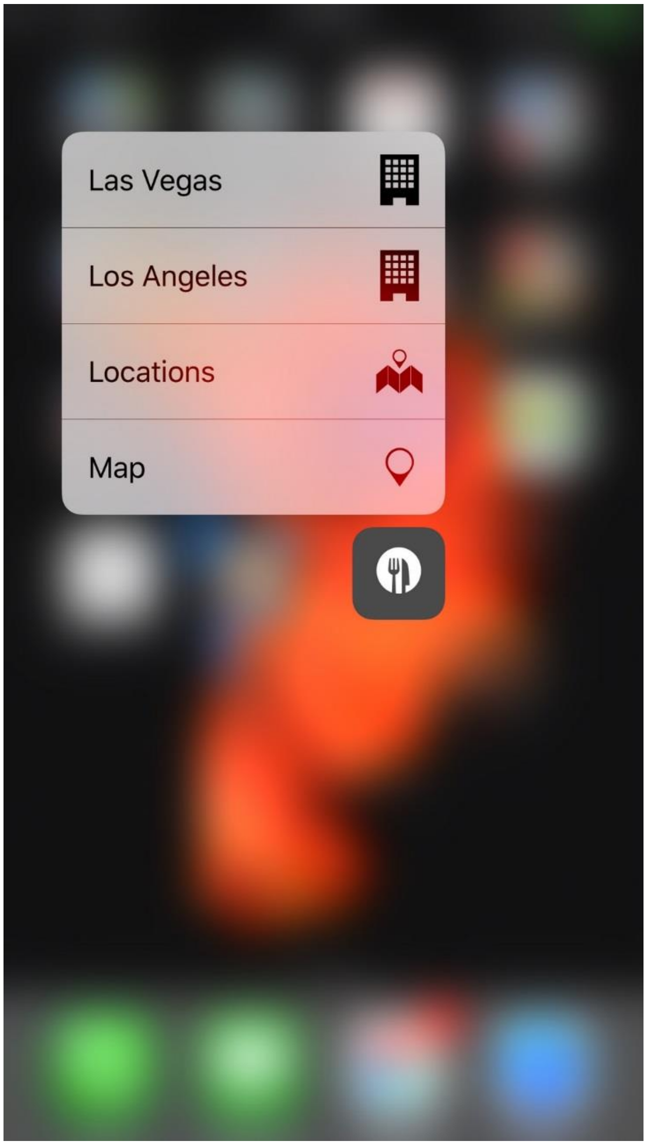
Key	Type	Value
▼ Information Property List	Dictionary	(17 items)
Localization native development region	String	en
Executable file	String	$(EXECUTABLE_NAME)
Bundle identifier	String	$(PRODUCT_BUNDLE_IDENTIFIER)
InfoDictionary version	String	6.0
Bundle name	String	$(PRODUCT_NAME)
Bundle OS Type code	String	APPL
Bundle versions string, short	String	1.0
Bundle version	String	1
Application requires iPhone environment	Boolean	YES
Launch screen interface file base name	String	LaunchScreen
Main storyboard file base name	String	Main
Privacy - Photo Library Usage Description	String	The app uses your camera to take pictures
Privacy - Camera Usage Description	String	The app uses your camera to take pictures
▼ UIApplicationShortcutItems	Array	(1 item)
▼ Item 0	Dictionary	(3 items)
UIApplicationShortcutItemIconFile	String	
UIApplicationShortcutItemTitle	String	
UIApplicationShortcutItemType	String	
▶ Required device capabilities	Array	(1 item)
▶ Supported interface orientations	Array	(3 items)
▶ Supported interface orientations (iPad)	Array	(4 items)

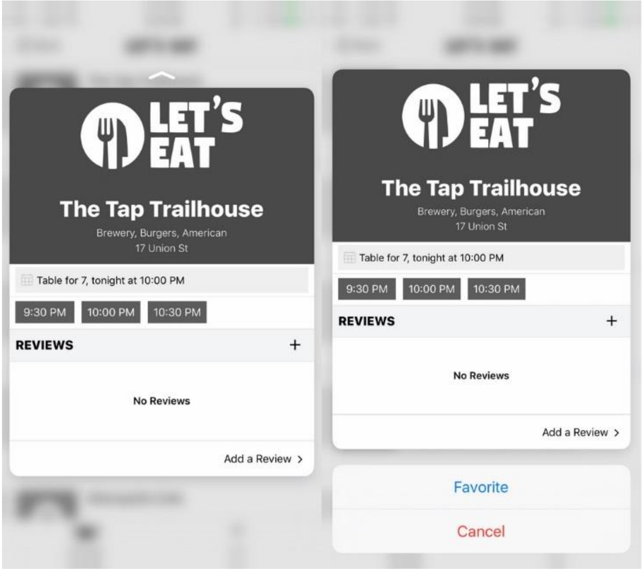


Key	Type	Value
▼ Information Property List	Dictionary	(17 items)
Localization native development region	String	en
Executable file	String	$(EXECUTABLE_NAME)
Bundle identifier	String	$(PRODUCT_BUNDLE_IDENTIFIER)
InfoDictionary version	String	6.0
Bundle name	String	$(PRODUCT_NAME)
Bundle OS Type code	String	APPL
Bundle versions string, short	String	1.0
Bundle version	String	1
Application requires iPhone environment	Boolean	YES
Launch screen interface file base name	String	LaunchScreen
Main storyboard file base name	String	Main
Privacy - Photo Library Usage Description	String	The app uses your camera to take pictures
Privacy - Camera Usage Description	String	The app uses your camera to take pictures
▼ UIApplicationShortcutItems	Array	(2 items)
▼ Item 0	Dictionary	(3 items)
UIApplicationShortcutItemIconFile	String	
UIApplicationShortcutItemTitle	String	
UIApplicationShortcutItemType	String	
▼ Item 1	Dictionary	(3 items)
UIApplicationShortcutItemIconFile	String	
UIApplicationShortcutItemTitle	String	
UIApplicationShortcutItemType	String	
▶ Required device capabilities	Array	(1 item)
▶ Supported interface orientations	Array	(3 items)
▶ Supported interface orientations (iPad)	Array	(4 items)



Key	Type	Value
▼ Information Property List	Dictionary	(17 items)
Localization native development region	String	en
Executable file	String	$(EXECUTABLE_NAME)
Bundle identifier	String	$(PRODUCT_BUNDLE_IDENTIFIER)
InfoDictionary version	String	6.0
Bundle name	String	$(PRODUCT_NAME)
Bundle OS Type code	String	APPL
Bundle versions string, short	String	1.0
Bundle version	String	1
Application requires iPhone environment	Boolean	YES
Launch screen interface file base name	String	LaunchScreen
Main storyboard file base name	String	Main
Privacy - Photo Library Usage Description	String	The app uses your camera to take pictures
Privacy - Camera Usage Description	String	The app uses your camera to take pictures
▼ UIApplicationShortcutItems	Array	(2 items)
▼ Item 0	Dictionary	(3 items)
UIApplicationShortcutItemIconFile	String	shortcut-map
UIApplicationShortcutItemTitle	String	Map
UIApplicationShortcutItemType	String	$(PRODUCT_BUNDLE_IDENTIFIER).openMap
▼ Item 1	Dictionary	(3 items)
UIApplicationShortcutItemIconFile	String	shortcut-locations
UIApplicationShortcutItemTitle	String	Locations
UIApplicationShortcutItemType	String	$(PRODUCT_BUNDLE_IDENTIFIER).openLocations
▶ Required device capabilities	Array	(1 item)
▶ Supported interface orientations	Array	(3 items)
▶ Supported interface orientations (iPad)	Array	(4 items)





The Tap Trailhouse

Brewery, Burgers, American
17 Union St

Table for 7, tonight at 10:00 PM

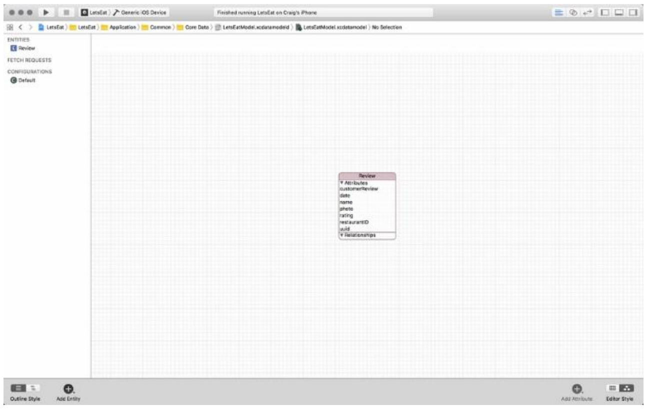
No Reviews

The Tap Trailhouse

Brewery, Burgers, American
17 Union St

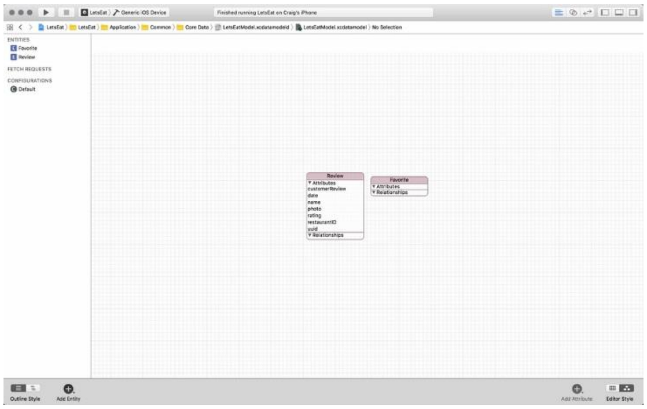
Table for 7, tonight at 10:00 PM

No Reviews



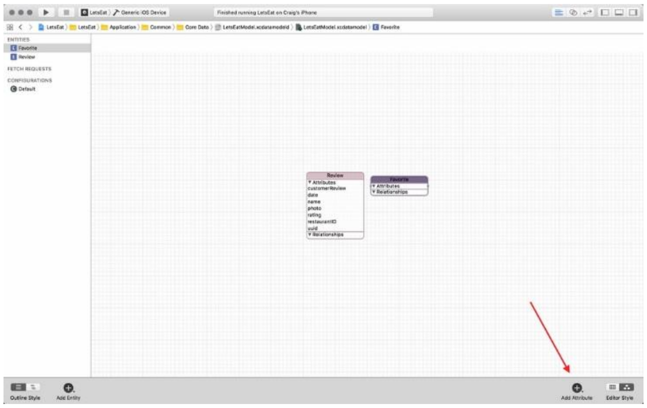
Finished running LetsEat on Craig's iPhone

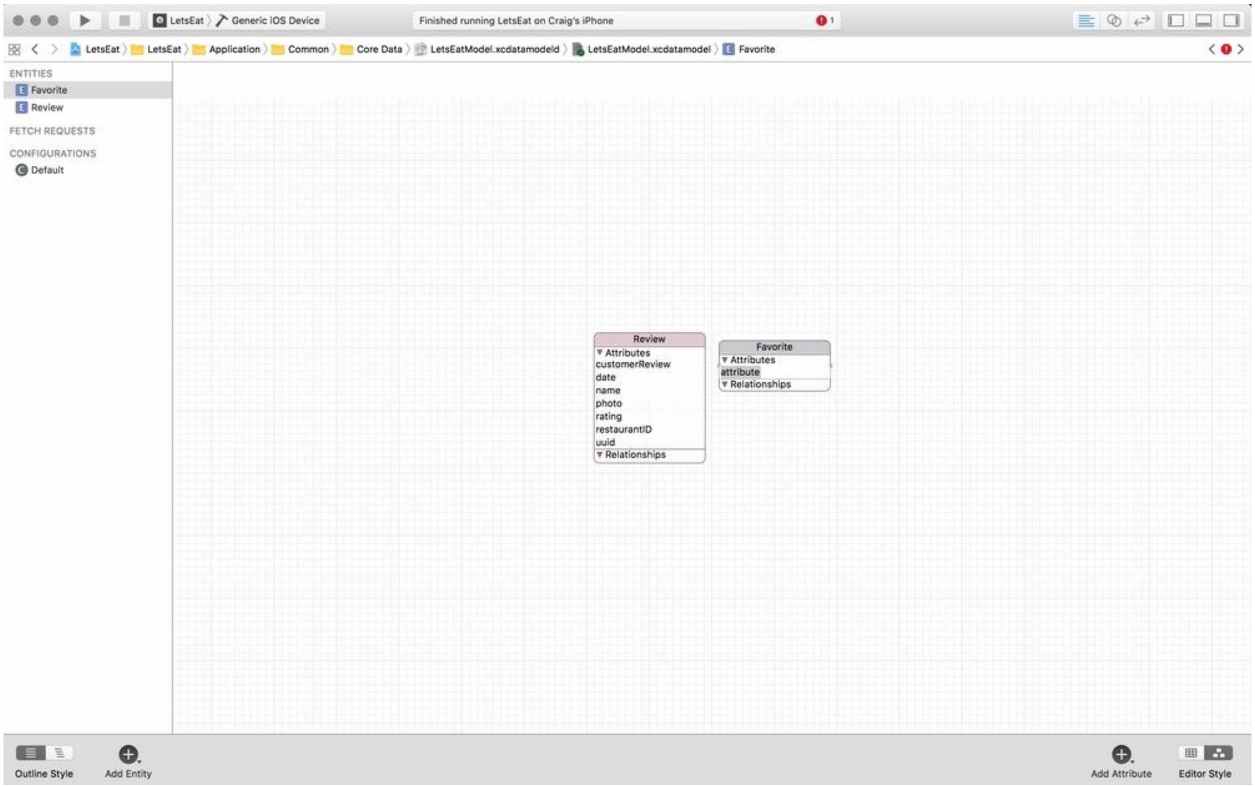
LetsEat 〉 LetsEat 〉 Application 〉 Common 〉 Core Data 〉 LetsEatModel.xcdatamodeld 〉 LetsEatModel.xcdatamodel 〉 No Selection

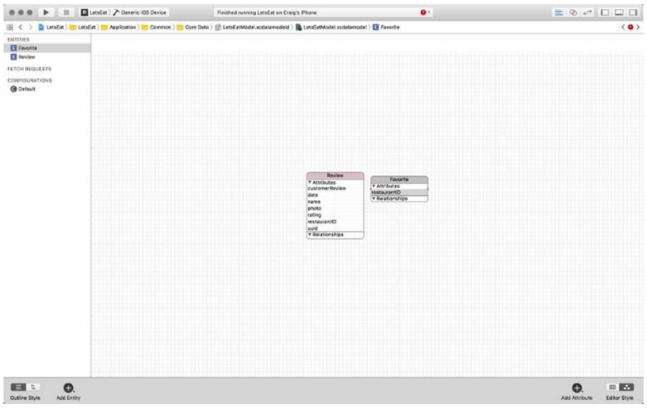


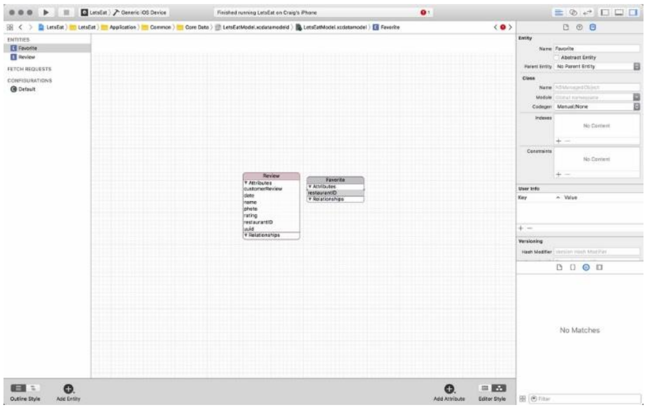
Finished running LetsEat on Craig's iPhone

LetsEat 〉 LetsEat 〉 Application 〉 Common 〉 Core Data 〉 LetsEatModel.xcdatamodeld 〉 LetsEatModel.xcdatamodel 〉 No Selection


Add Attribute


LetsEat 〉 Generic iOS Device
Finished running LetsEat on Craig's iPhone
LetsEat 〉 LetsEat 〉 Application 〉 Common 〉 Core Data 〉 LetsEatModel.xcdatamodeld 〉 LetsEatModel.xcdatamodel 〉 Favorite
ENTITIES
Favorite
Review
FETCH REQUESTS
CONFIGURATIONS
Default
Review
▼ Attributes
customerReview
date
name
photo
rating
restaurantID
uuid
▼ Relationships
Favorite
▼ Attributes
attribute
▼ Relationships
Outline Style
Add Entity
Add Attribute
Editor Style





Entity

Name: Favorite

□ Abstract Entity

Parent Entity: No Parent Entity

Class

Name: NSManagedObject

Module: Global namespace

Codegen: Manual/None

Indexes: No Content

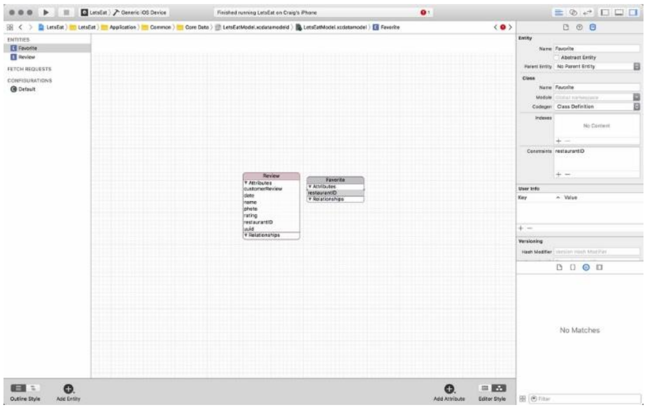
Constraints: No Content

User Info

Key ^ Value

Versioning

Hash Modifier: Version Hash Modifier



Entity

Name: Favorite

□ Abstract Entity

Parent Entity: No Parent Entity

Class

Name: Favorite

Module: Global namespace

Codegen: Class Definition

Indexes: No Content

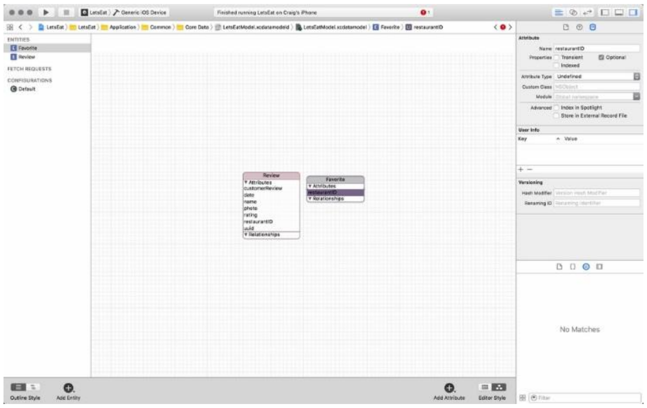
Constraints: restaurantID

User Info

Key ^ Value

Versioning

Hash Modifier: Version Hash Modifier



Attribute

Name: restaurantID

Properties: □ Transient ☑ Optional □ Indexed

Attribute Type: Undefined

Custom Class: NSObject

Module: Global namespace

Advanced: □ Index in Spotlight □ Store in External Record File

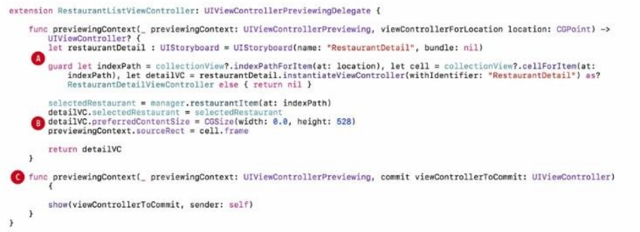
User Info

Key ^ Value

Versioning

Hash Modifier: Version Hash Modifier

Renaming ID: Renaming Identifier



```
extension RestaurantListViewController: UIViewControllerPreviewingDelegate {

    func previewingContext(_ previewingContext: UIViewControllerPreviewing, viewControllerForLocation location: CGPoint) ->
        UIViewController? {
        let restaurantDetail : UIStoryboard = UIStoryboard(name: "RestaurantDetail", bundle: nil)

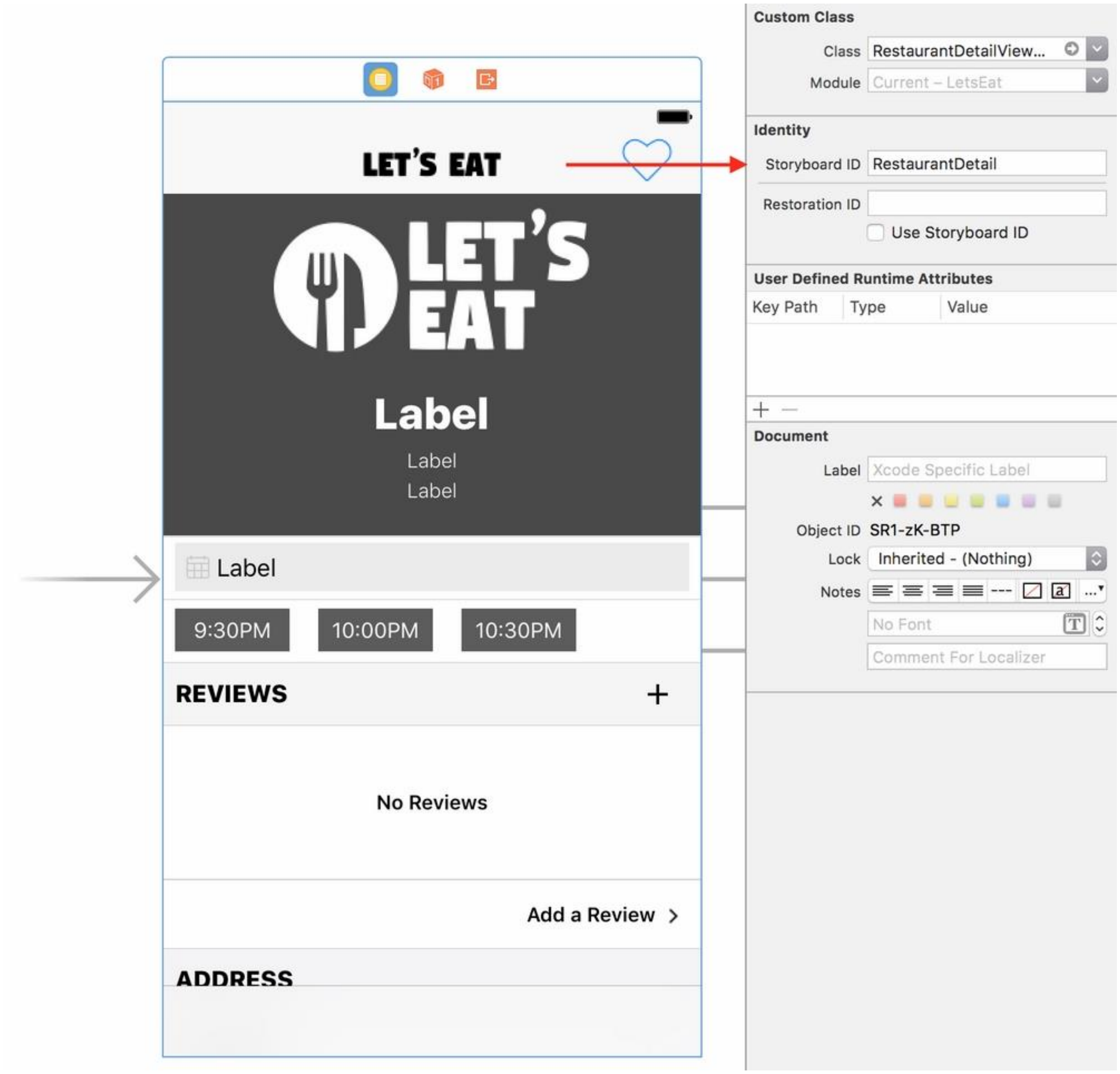
        guard let indexPath = collectionView?.indexPathForItem(at: location), let cell = collectionView?.cellForItem(at:
            indexPath), let detailVC = restaurantDetail.instantiateViewController(withIdentifier: "RestaurantDetail") as?
            RestaurantDetailViewController else { return nil }

        selectedRestaurant = manager.restaurantItem(at: indexPath)
        detailVC.selectedRestaurant = selectedRestaurant
        detailVC.preferredContentSize = CGSize(width: 0.0, height: 528)
        previewingContext.sourceRect = cell.frame

        return detailVC
    }

    func previewingContext(_ previewingContext: UIViewControllerPreviewing, commit viewControllerToCommit: UIViewController)
        {

        show(viewControllerToCommit, sender: self)
    }
}
```



Custom Class

Class RestaurantDetailView...

Module Current – LetsEat

Identity

Storyboard ID RestaurantDetail

Restoration ID

□ Use Storyboard ID

User Defined Runtime Attributes

Key Path	Type	Value

Document

Label Xcode Specific Label

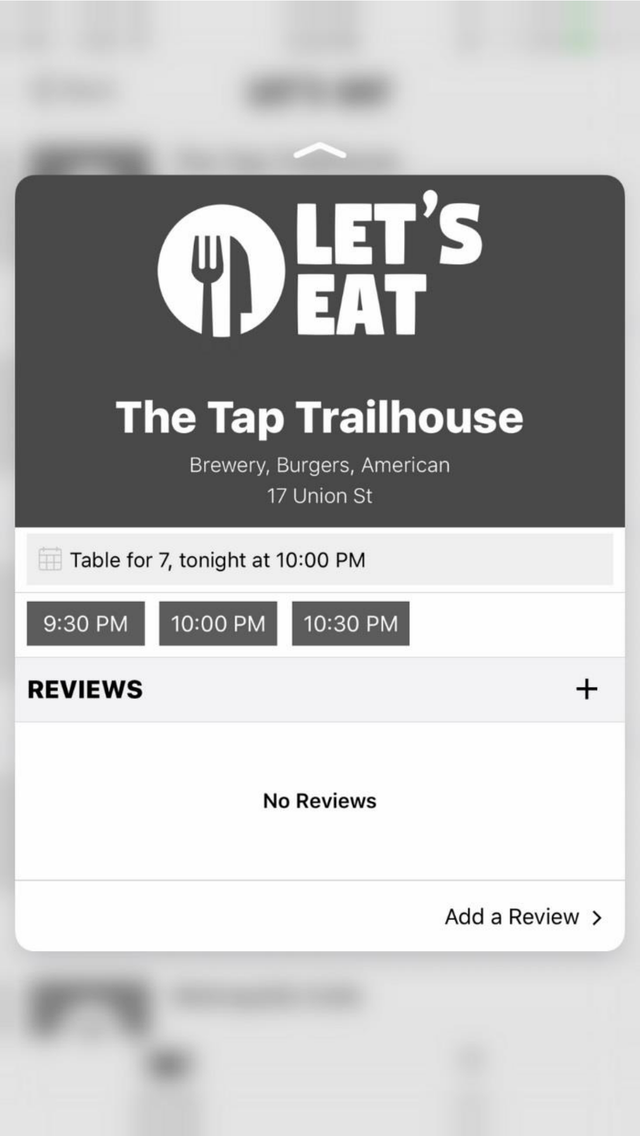
Object ID SR1-zK-BTP

Lock Inherited - (Nothing)

Notes

No Font

Comment For Localizer

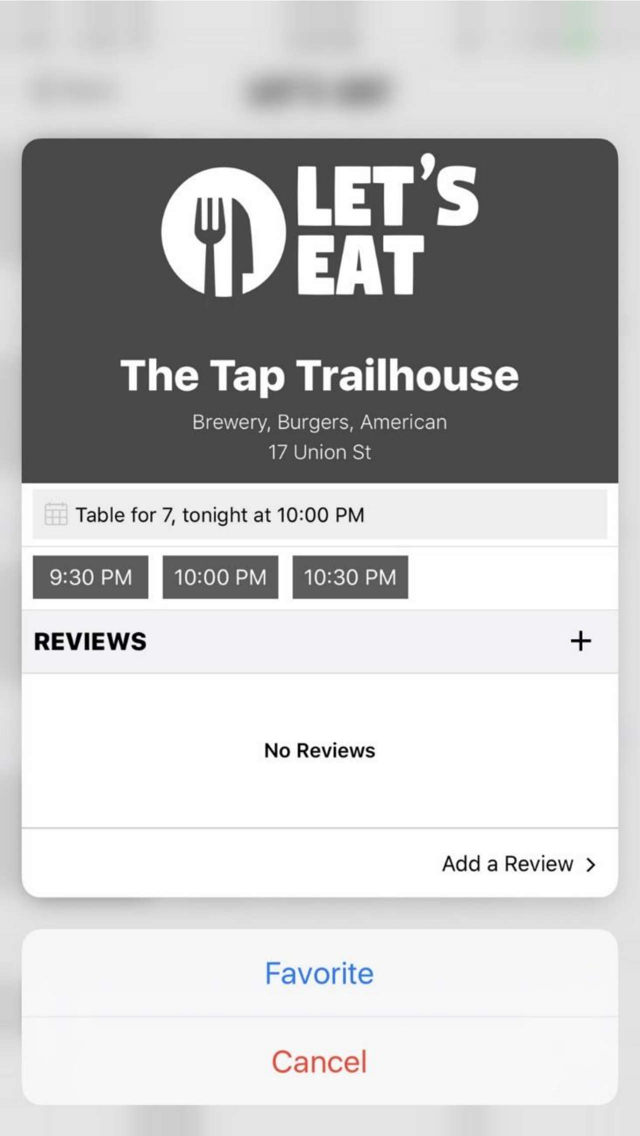


The Tap Trailhouse

Brewery, Burgers, American
17 Union St

Table for 7, tonight at 10:00 PM

No Reviews



LET'S EAT

The Tap Trailhouse

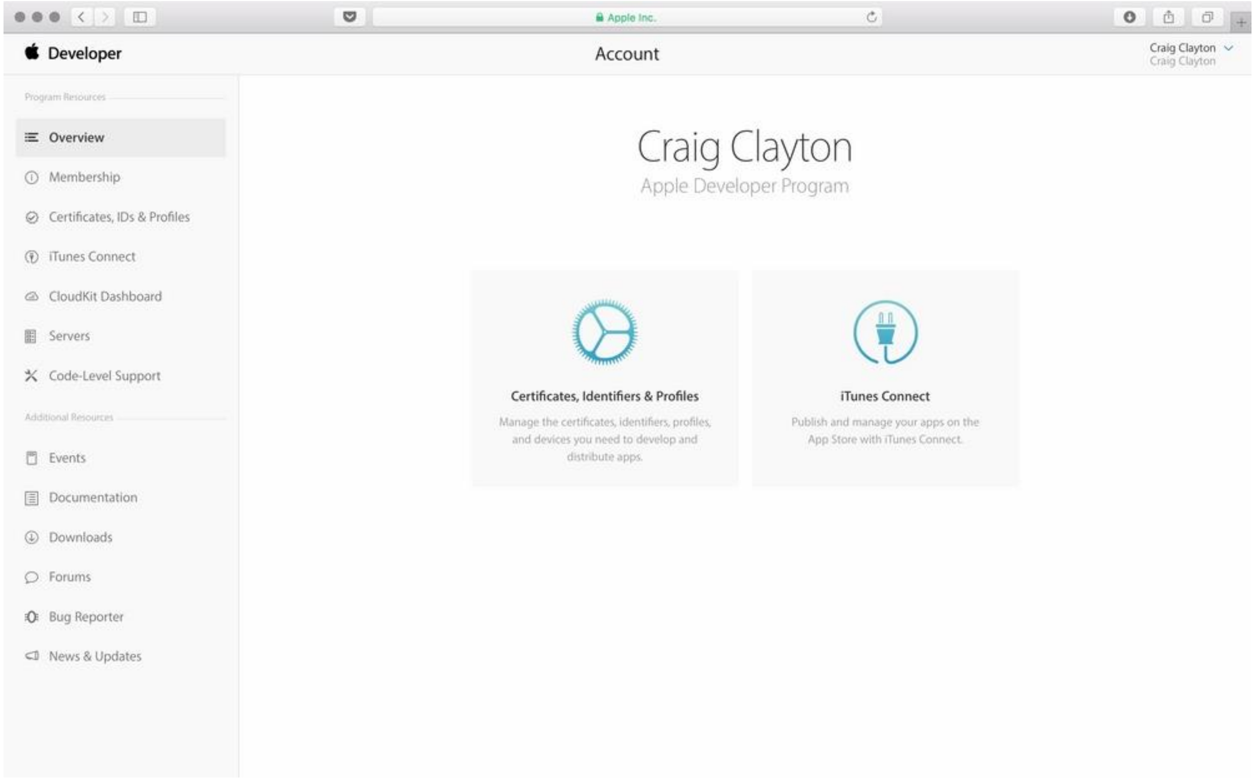
Brewery, Burgers, American
17 Union St

Table for 7, tonight at 10:00 PM

REVIEWS +

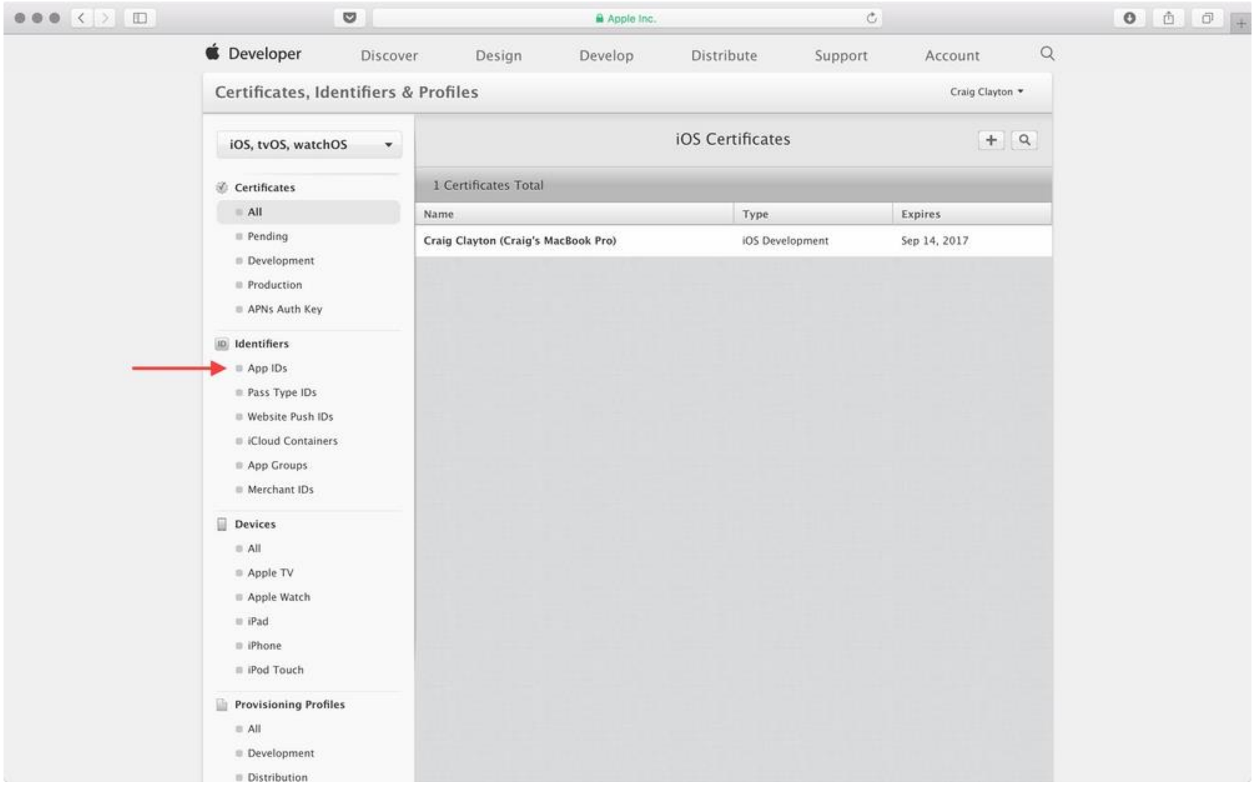
No Reviews

Chapter 18: Beta and Store Submission



Manage the certificates, identifiers, profiles, and devices you need to develop and distribute apps.

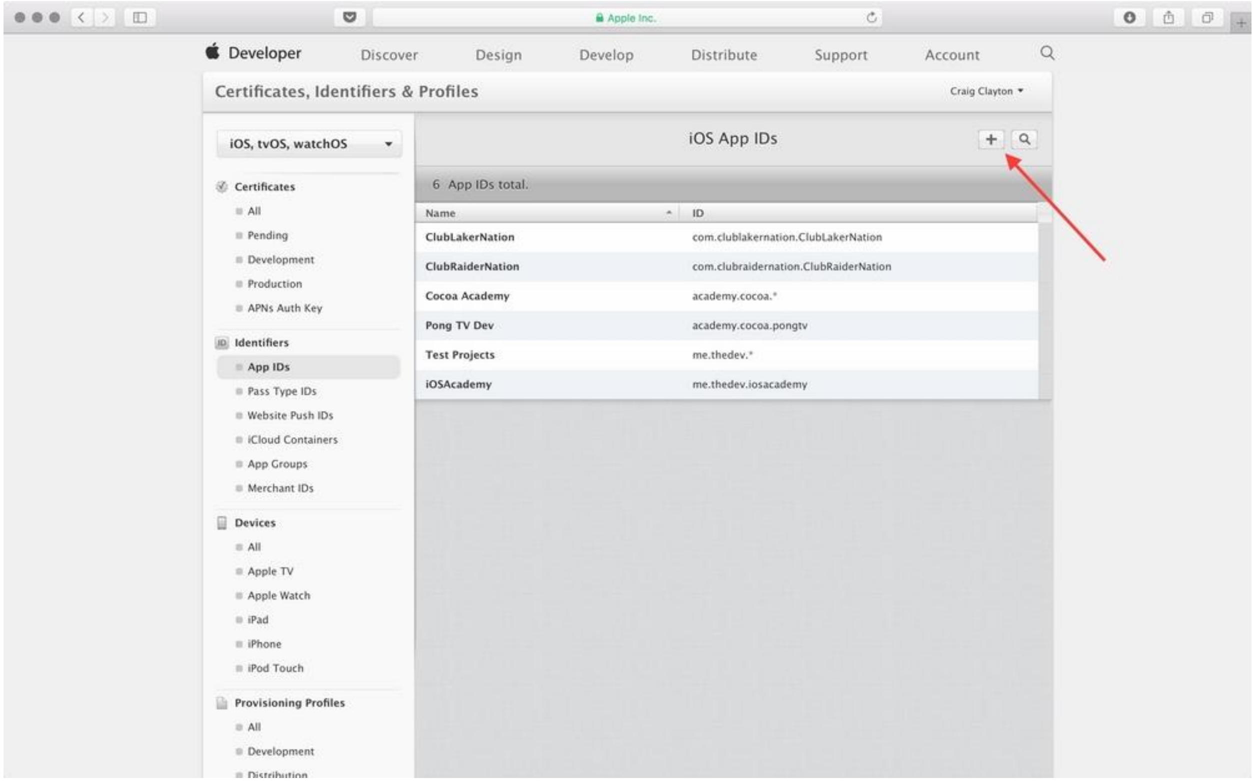
Publish and manage your apps on the App Store with iTunes Connect.



iOS Certificates

1 Certificates Total

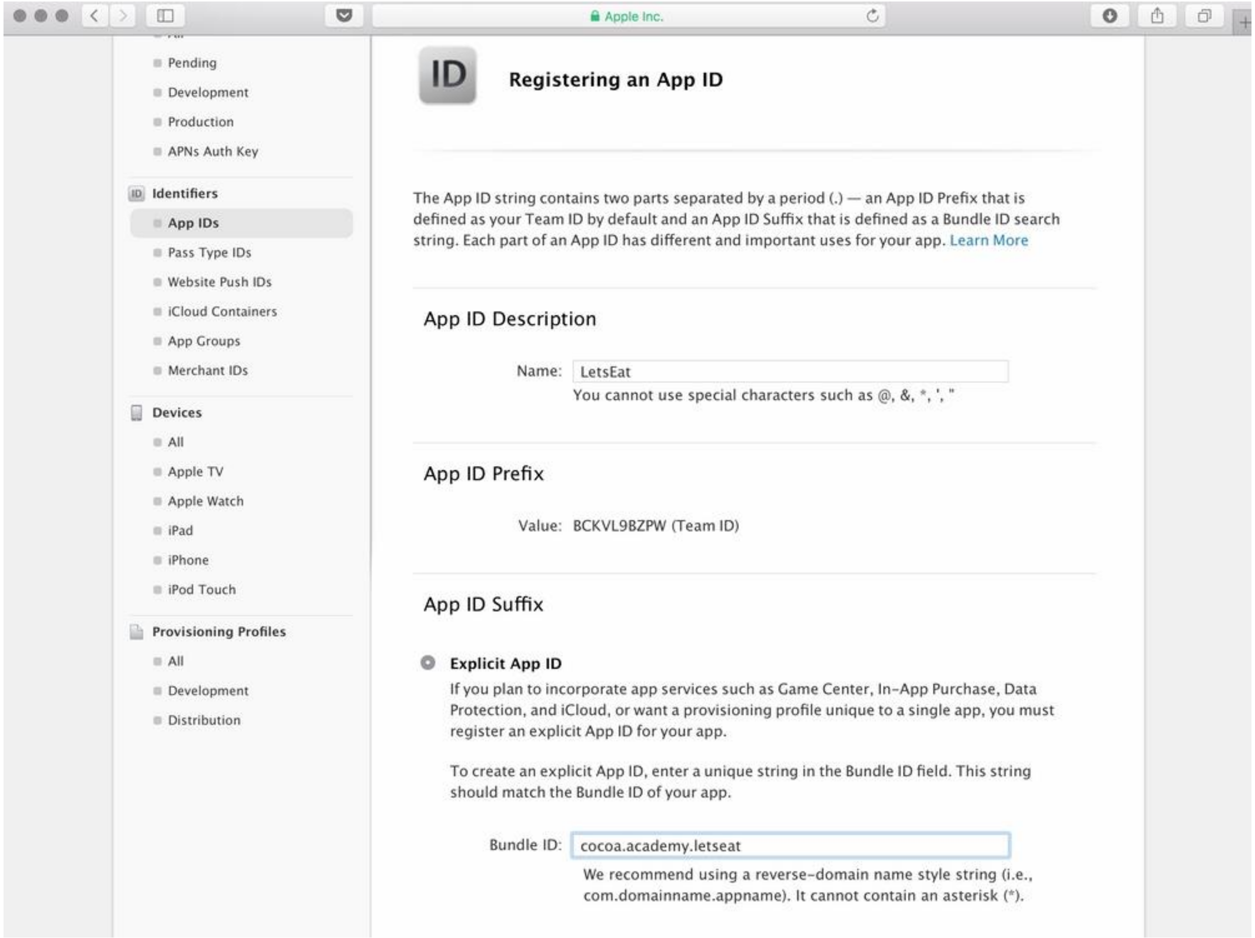
Name	Type	Expires
Craig Clayton (Craig's MacBook Pro)	iOS Development	Sep 14, 2017



iOS App IDs

6 App IDs total.

Name	ID
ClubLakerNation	com.clublakernation.ClubLakerNation
ClubRaiderNation	com.clubraidernation.ClubRaiderNation
Cocoa Academy	academy.cocoa.*
Pong TV Dev	academy.cocoa.pongtv
Test Projects	me.thedev.*
iOSAcademy	me.thedev.iosacademy



Registering an App ID

The App ID string contains two parts separated by a period (.) — an App ID Prefix that is defined as your Team ID by default and an App ID Suffix that is defined as a Bundle ID search string. Each part of an App ID has different and important uses for your app. Learn More

App ID Description

Name: LetsEat

You cannot use special characters such as @, &, *, ', "

App ID Prefix

Value: BCKVL9BZPW (Team ID)

App ID Suffix

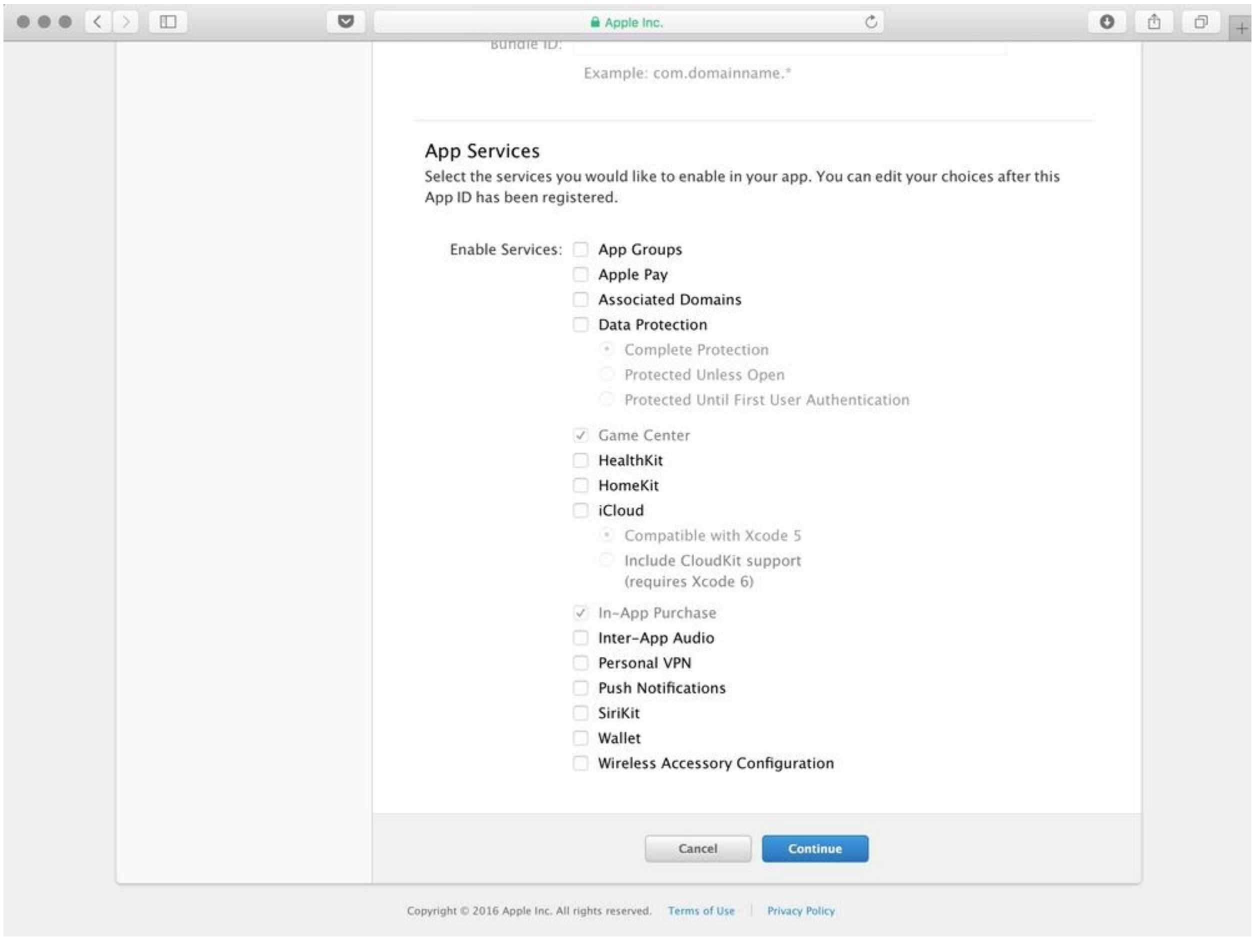
● **Explicit App ID**

If you plan to incorporate app services such as Game Center, In-App Purchase, Data Protection, and iCloud, or want a provisioning profile unique to a single app, you must register an explicit App ID for your app.

To create an explicit App ID, enter a unique string in the Bundle ID field. This string should match the Bundle ID of your app.

Bundle ID: cocoa.academy.letseat

We recommend using a reverse-domain name style string (i.e., com.domainname.appname). It cannot contain an asterisk (*).



Bundle ID:

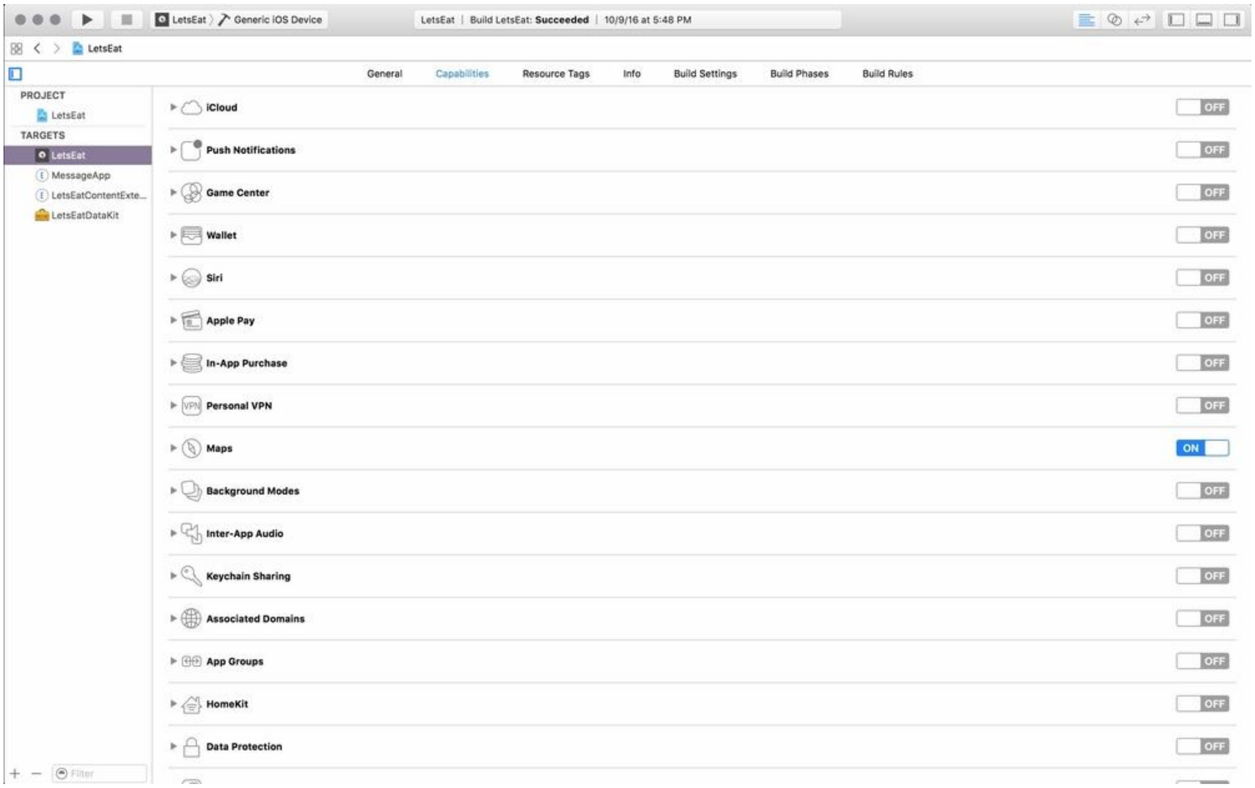
Example: com.domainname.*

App Services

Select the services you would like to enable in your app. You can edit your choices after this App ID has been registered.

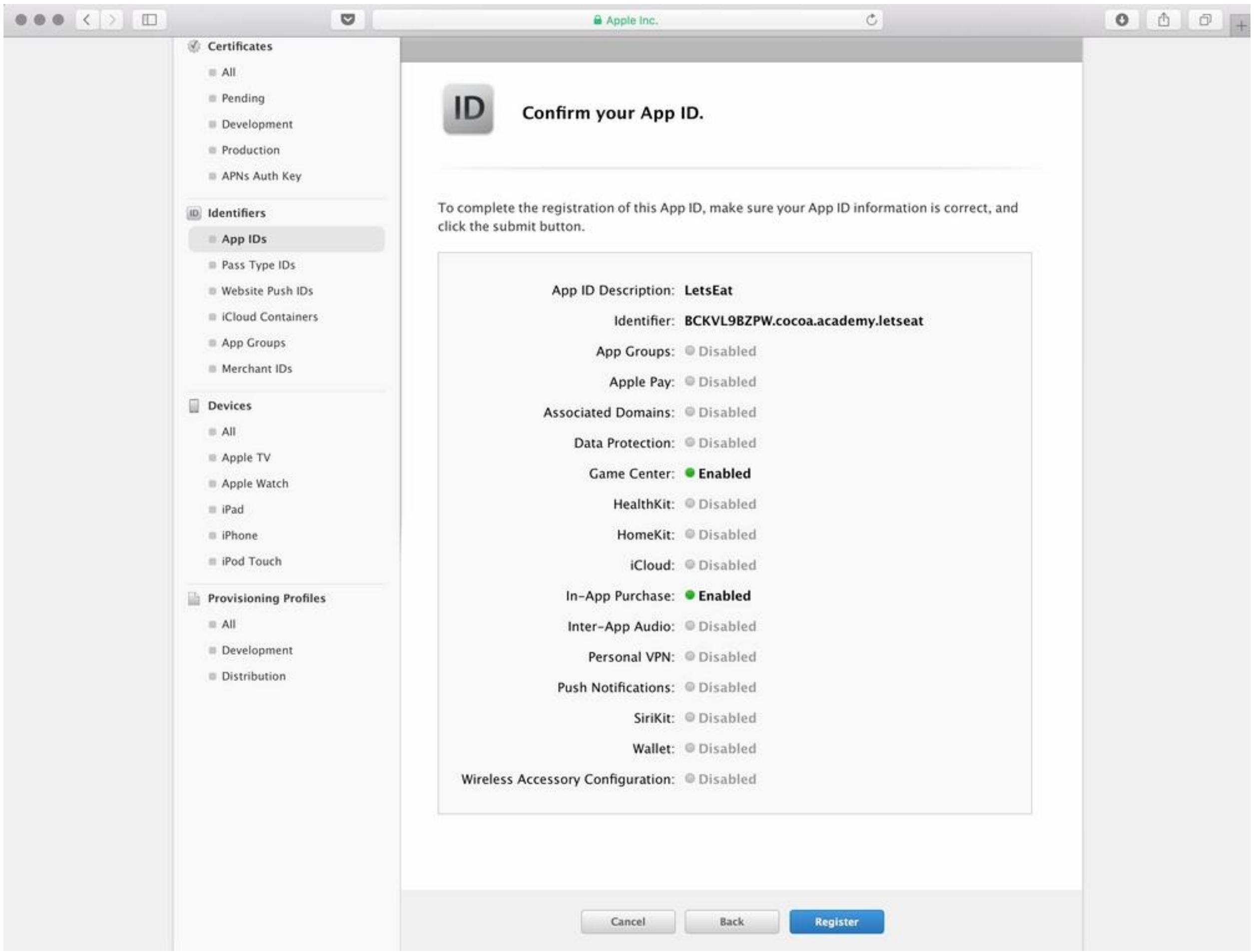
Enable Services:

- □ App Groups
- □ Apple Pay
- □ Associated Domains
- □ Data Protection
  - ● Complete Protection
  - ○ Protected Unless Open
  - ○ Protected Until First User Authentication
- ☑ Game Center
- □ HealthKit
- □ HomeKit
- □ iCloud
  - ● Compatible with Xcode 5
  - ○ Include CloudKit support (requires Xcode 6)
- ☑ In-App Purchase
- □ Inter-App Audio
- □ Personal VPN
- □ Push Notifications
- □ SiriKit
- □ Wallet
- □ Wireless Accessory Configuration



LetsEat | Build LetsEat: **Succeeded** | 10/9/16 at 5:48 PM

iCloud	OFF
Push Notifications	OFF
Game Center	OFF
Wallet	OFF
Siri	OFF
Apple Pay	OFF
In-App Purchase	OFF
Personal VPN	OFF
Maps	ON
Background Modes	OFF
Inter-App Audio	OFF
Keychain Sharing	OFF
Associated Domains	OFF
App Groups	OFF
HomeKit	OFF
Data Protection	OFF



Confirm your App ID.

To complete the registration of this App ID, make sure your App ID information is correct, and click the submit button.

App ID Description: **LetsEat**

Identifier: **BCKVL9BZPW.cocoa.academy.letseat**

App Groups: ○ Disabled

Apple Pay: ○ Disabled

Associated Domains: ○ Disabled

Data Protection: ○ Disabled

Game Center: ● **Enabled**

HealthKit: ○ Disabled

HomeKit: ○ Disabled

iCloud: ○ Disabled

In-App Purchase: ● **Enabled**

Inter-App Audio: ○ Disabled

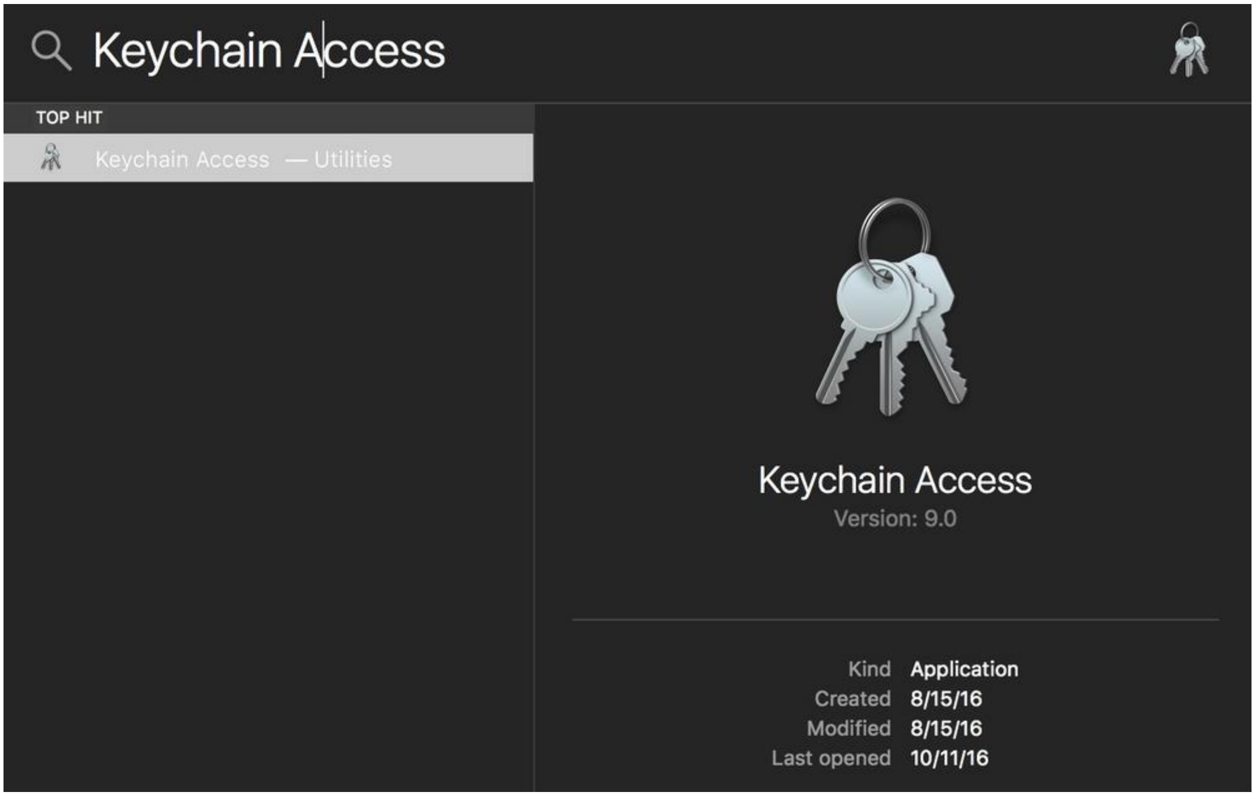
Personal VPN: ○ Disabled

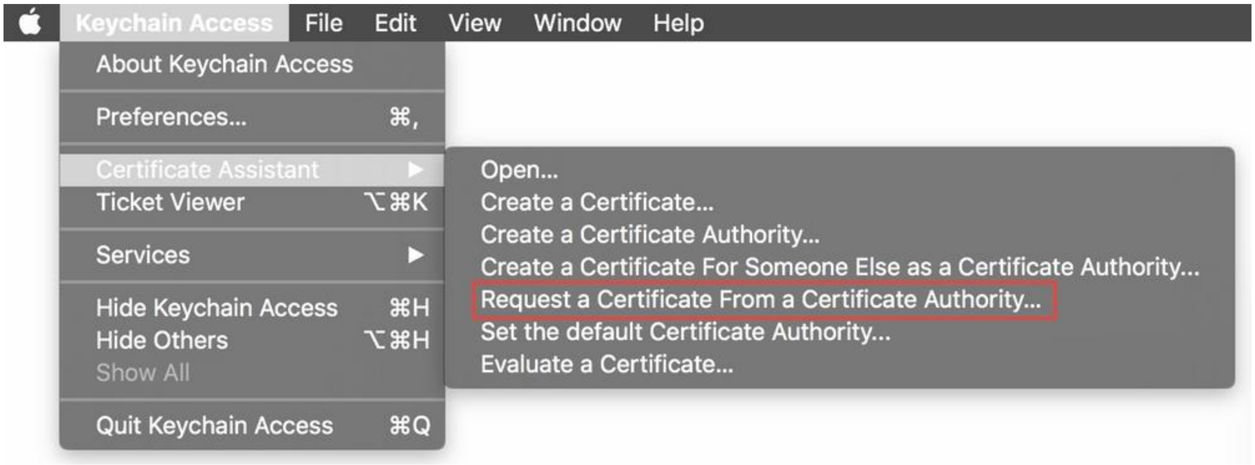
Push Notifications: ○ Disabled

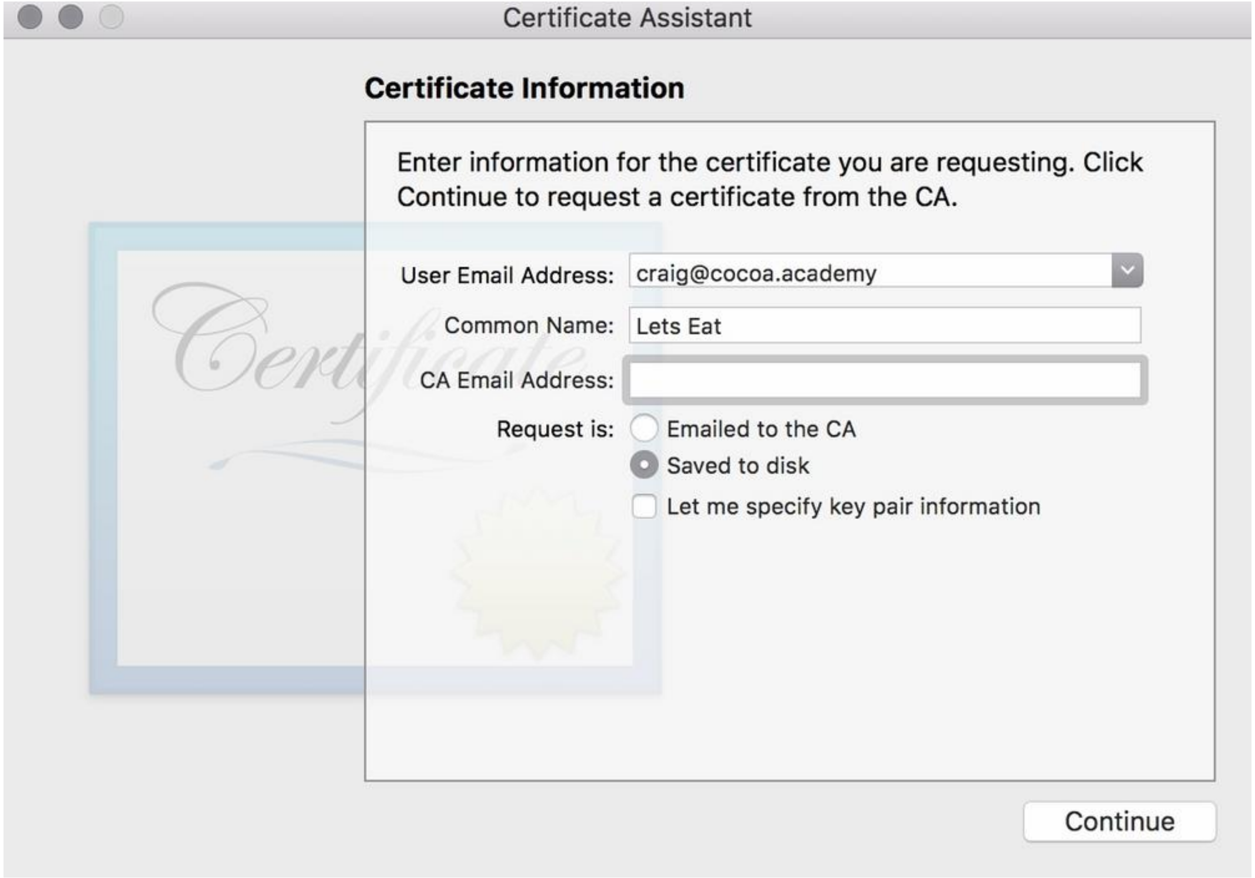
SiriKit: ○ Disabled

Wallet: ○ Disabled

Wireless Accessory Configuration: ○ Disabled


Keychain Access
TOP HIT
Keychain Access — Utilities
Keychain Access
Version: 9.0
Kind Application
Created 8/15/16
Modified 8/15/16
Last opened 10/11/16


Keychain Access
File
Edit
View
Window
Help
About Keychain Access
Preferences... ⌘,
Certificate Assistant ▶
Ticket Viewer ⌥⌘K
Services ▶
Hide Keychain Access ⌘H
Hide Others ⌥⌘H
Show All
Quit Keychain Access ⌘Q
Open...
Create a Certificate...
Create a Certificate Authority...
Create a Certificate For Someone Else as a Certificate Authority...
Request a Certificate From a Certificate Authority...
Set the default Certificate Authority...
Evaluate a Certificate...



Certificate Information

Enter information for the certificate you are requesting. Click Continue to request a certificate from the CA.

User Email Address: craig@cocoa.academy

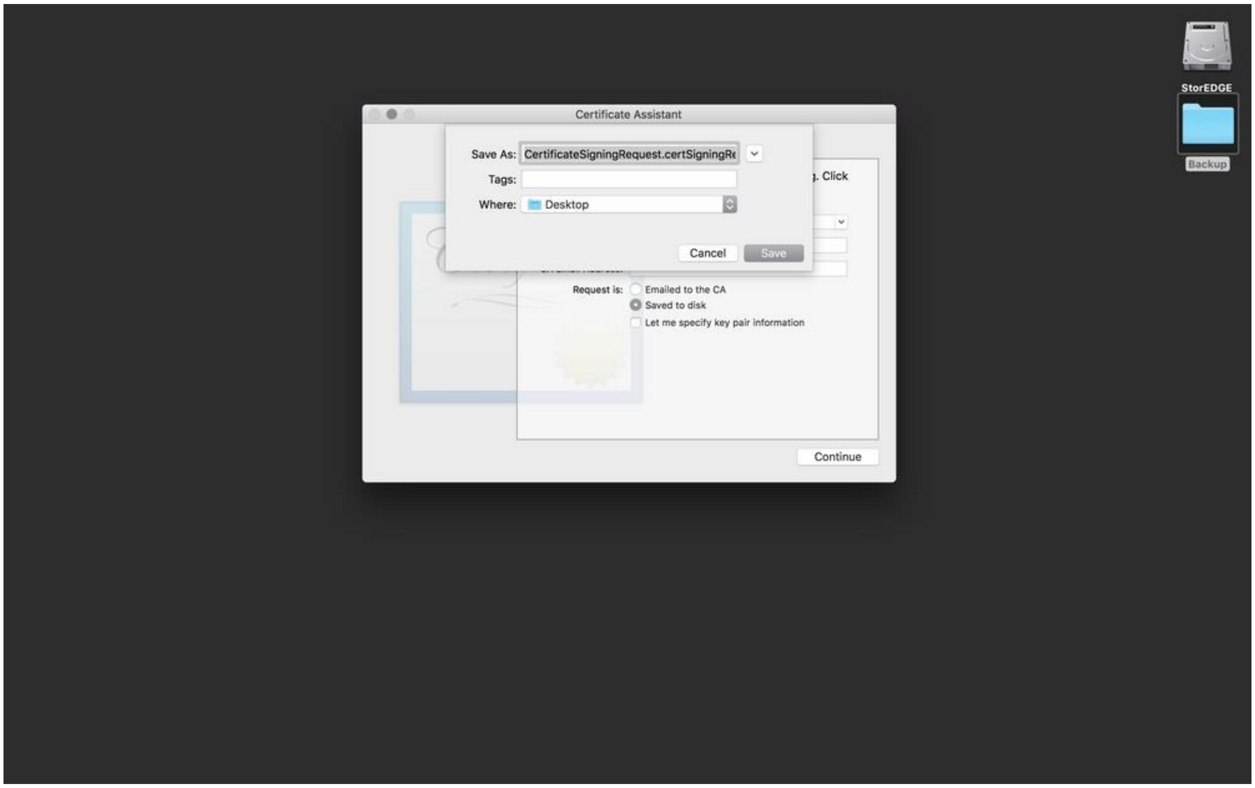
Common Name: Lets Eat

CA Email Address:

Request is: ○ Emailed to the CA

● Saved to disk

□ Let me specify key pair information

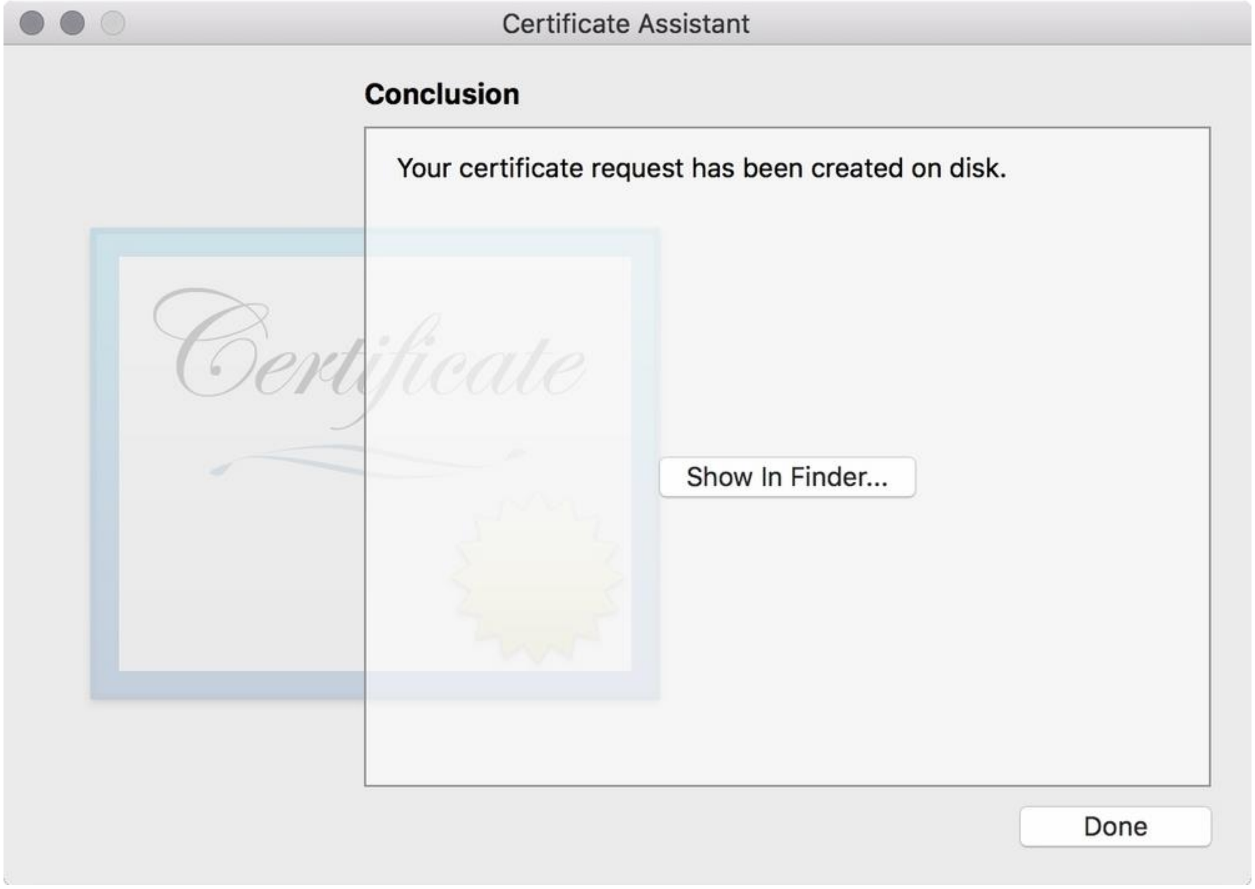


Save As: CertificateSigningRequest.certSigningRe

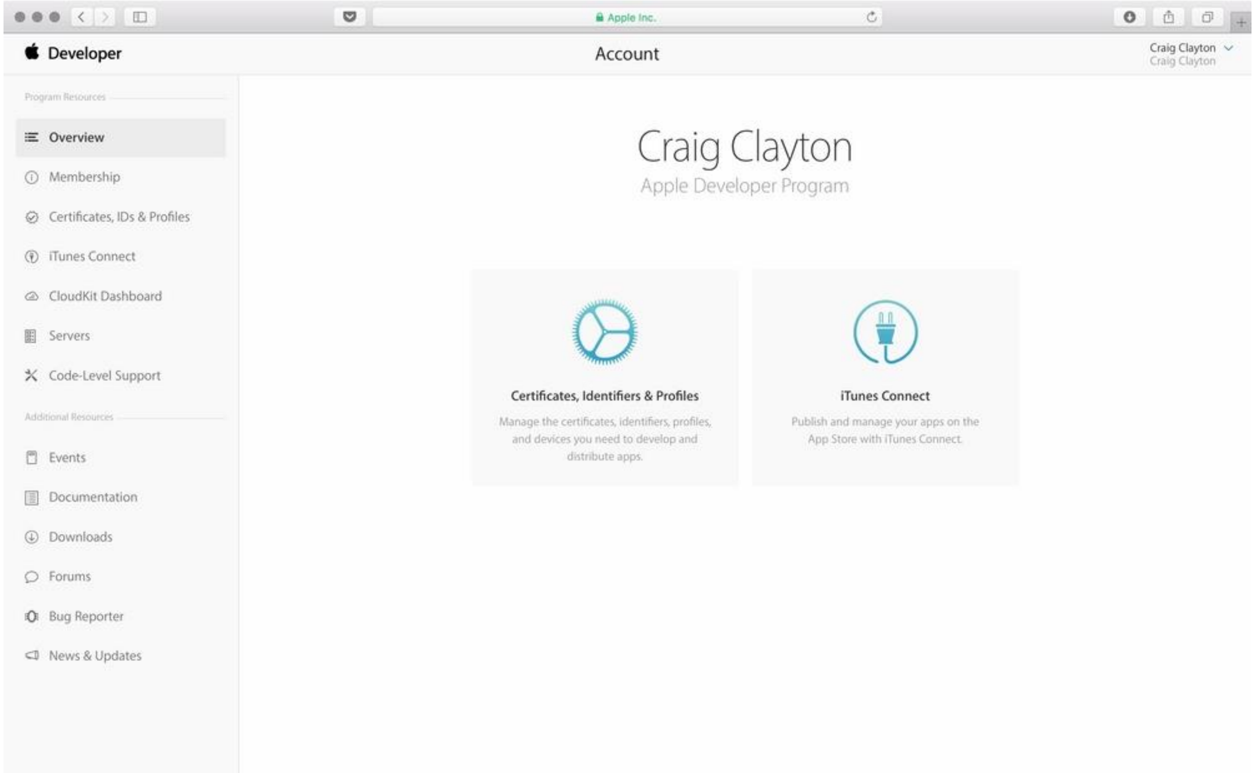
Tags:

Where: Desktop

Request is: ○ Emailed to the CA
● Saved to disk
□ Let me specify key pair information



Your certificate request has been created on disk.



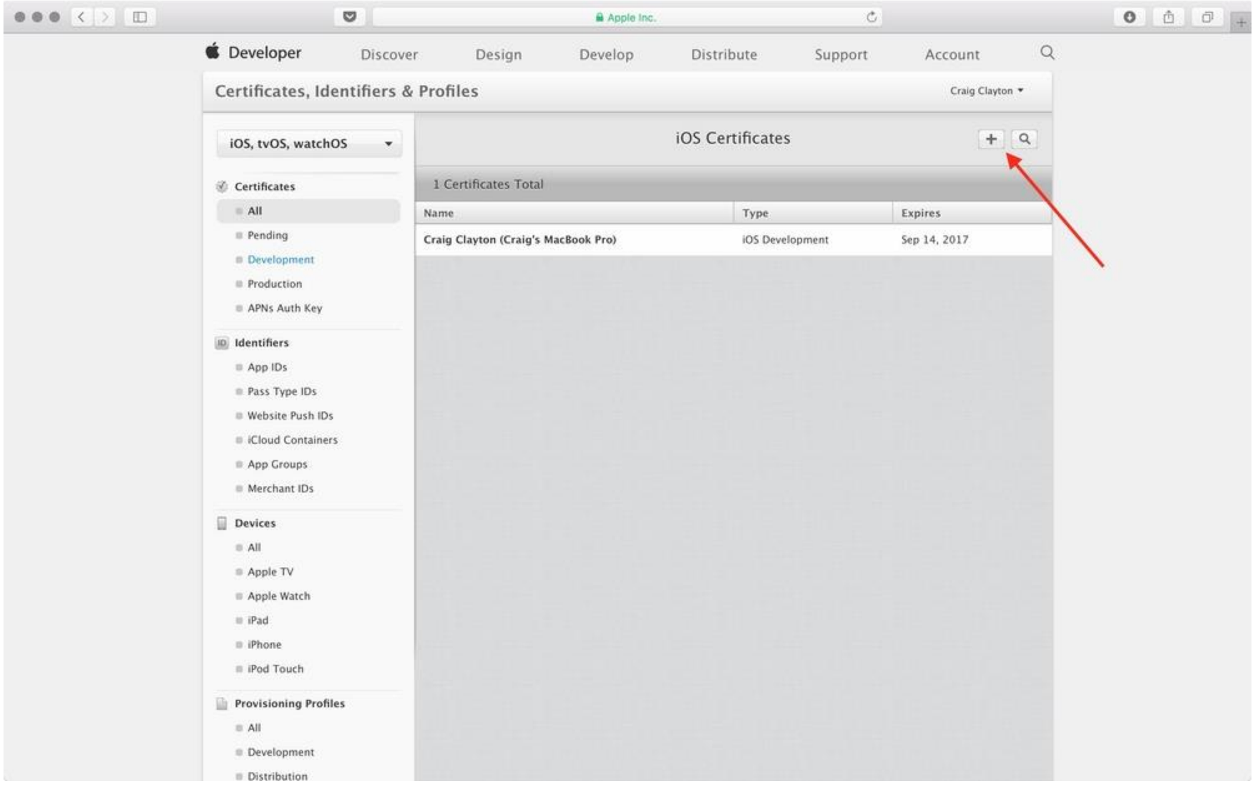
Craig Clayton
Apple Developer Program

Certificates, Identifiers & Profiles

Manage the certificates, identifiers, profiles, and devices you need to develop and distribute apps.

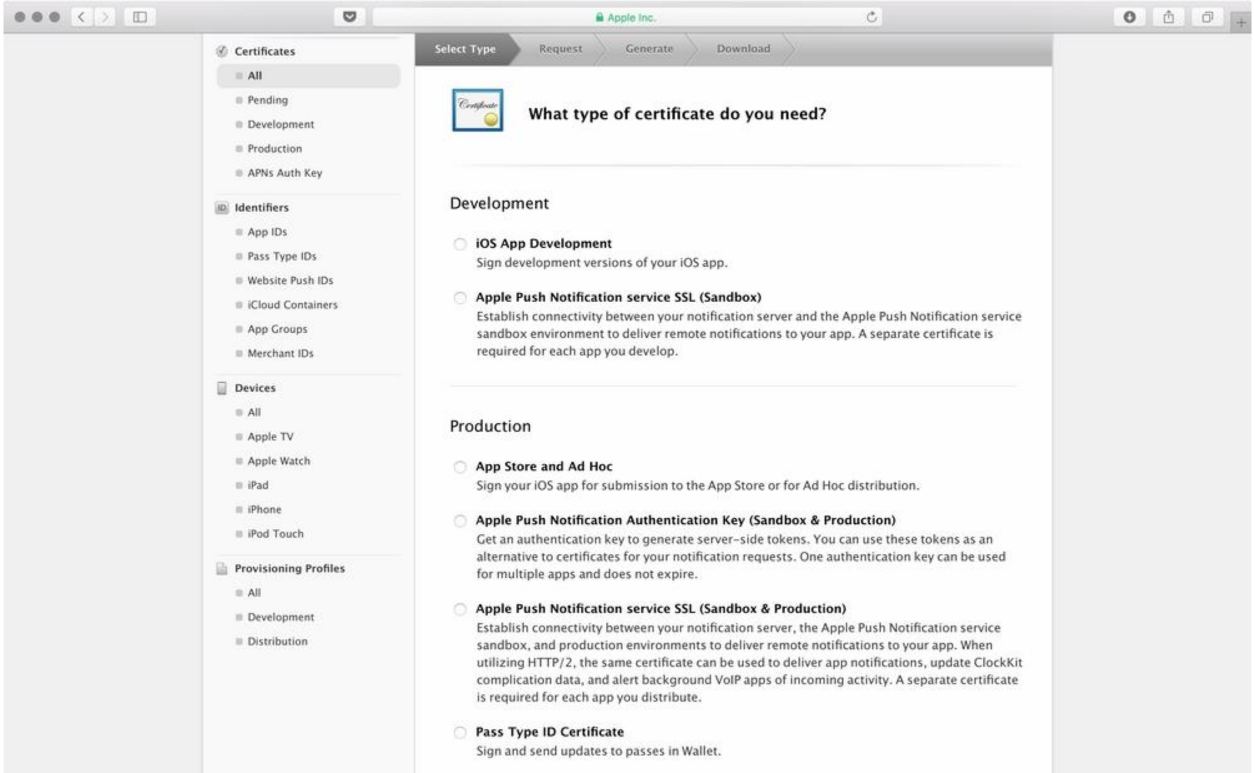
iTunes Connect

Publish and manage your apps on the App Store with iTunes Connect.



1 Certificates Total

Name	Type	Expires
Craig Clayton (Craig's MacBook Pro)	iOS Development	Sep 14, 2017



What type of certificate do you need?

Development

○ **iOS App Development**
Sign development versions of your iOS app.

○ **Apple Push Notification service SSL (Sandbox)**
Establish connectivity between your notification server and the Apple Push Notification service sandbox environment to deliver remote notifications to your app. A separate certificate is required for each app you develop.

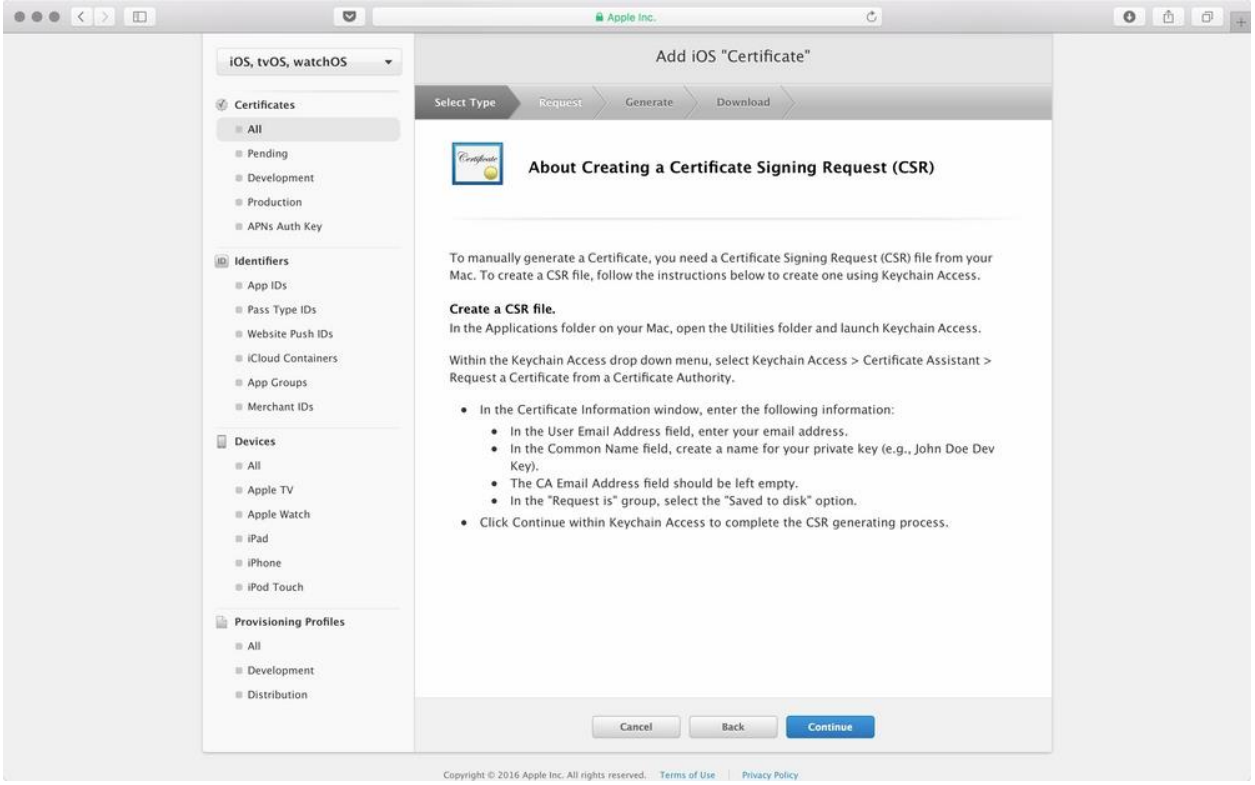
Production

○ **App Store and Ad Hoc**
Sign your iOS app for submission to the App Store or for Ad Hoc distribution.

○ **Apple Push Notification Authentication Key (Sandbox & Production)**
Get an authentication key to generate server-side tokens. You can use these tokens as an alternative to certificates for your notification requests. One authentication key can be used for multiple apps and does not expire.

○ **Apple Push Notification service SSL (Sandbox & Production)**
Establish connectivity between your notification server, the Apple Push Notification service sandbox, and production environments to deliver remote notifications to your app. When utilizing HTTP/2, the same certificate can be used to deliver app notifications, update ClockKit complication data, and alert background VoIP apps of incoming activity. A separate certificate is required for each app you distribute.

○ **Pass Type ID Certificate**
Sign and send updates to passes in Wallet.



Add iOS "Certificate"

About Creating a Certificate Signing Request (CSR)

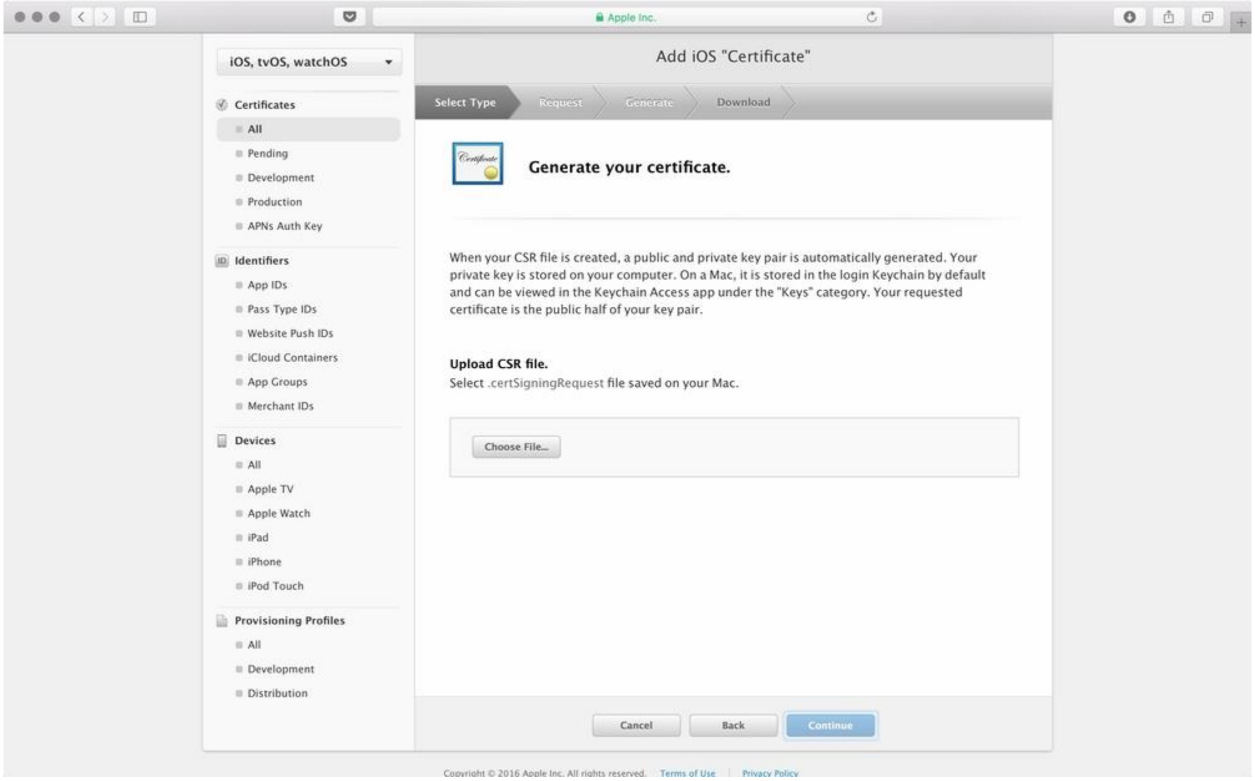
To manually generate a Certificate, you need a Certificate Signing Request (CSR) file from your Mac. To create a CSR file, follow the instructions below to create one using Keychain Access.

Create a CSR file.
In the Applications folder on your Mac, open the Utilities folder and launch Keychain Access.

Within the Keychain Access drop down menu, select Keychain Access > Certificate Assistant > Request a Certificate from a Certificate Authority.

- In the Certificate Information window, enter the following information:
  - In the User Email Address field, enter your email address.
  - In the Common Name field, create a name for your private key (e.g., John Doe Dev Key).
  - The CA Email Address field should be left empty.
  - In the "Request is" group, select the "Saved to disk" option.
- Click Continue within Keychain Access to complete the CSR generating process.

Copyright © 2016 Apple Inc. All rights reserved.



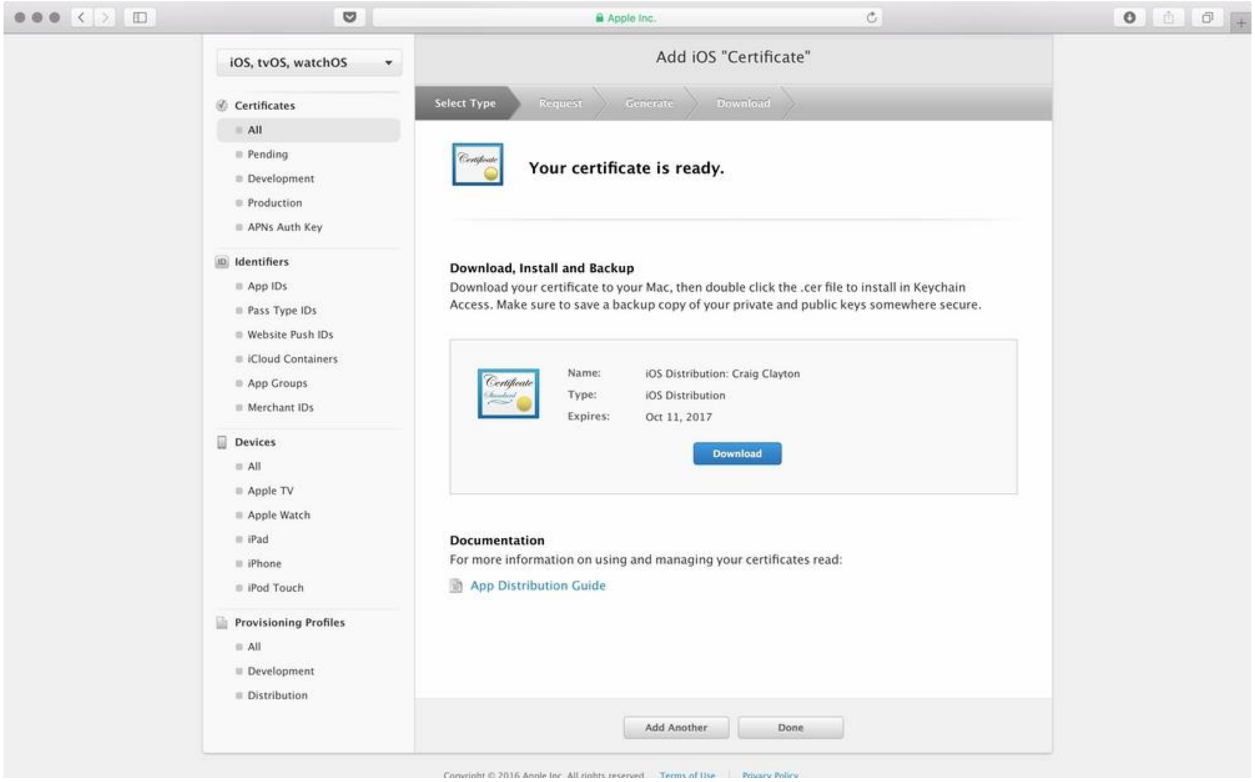
Add iOS "Certificate"

Generate your certificate.

When your CSR file is created, a public and private key pair is automatically generated. Your private key is stored on your computer. On a Mac, it is stored in the login Keychain by default and can be viewed in the Keychain Access app under the "Keys" category. Your requested certificate is the public half of your key pair.

Upload CSR file.

Select .certSigningRequest file saved on your Mac.



Add iOS "Certificate"

Your certificate is ready.

Download, Install and Backup

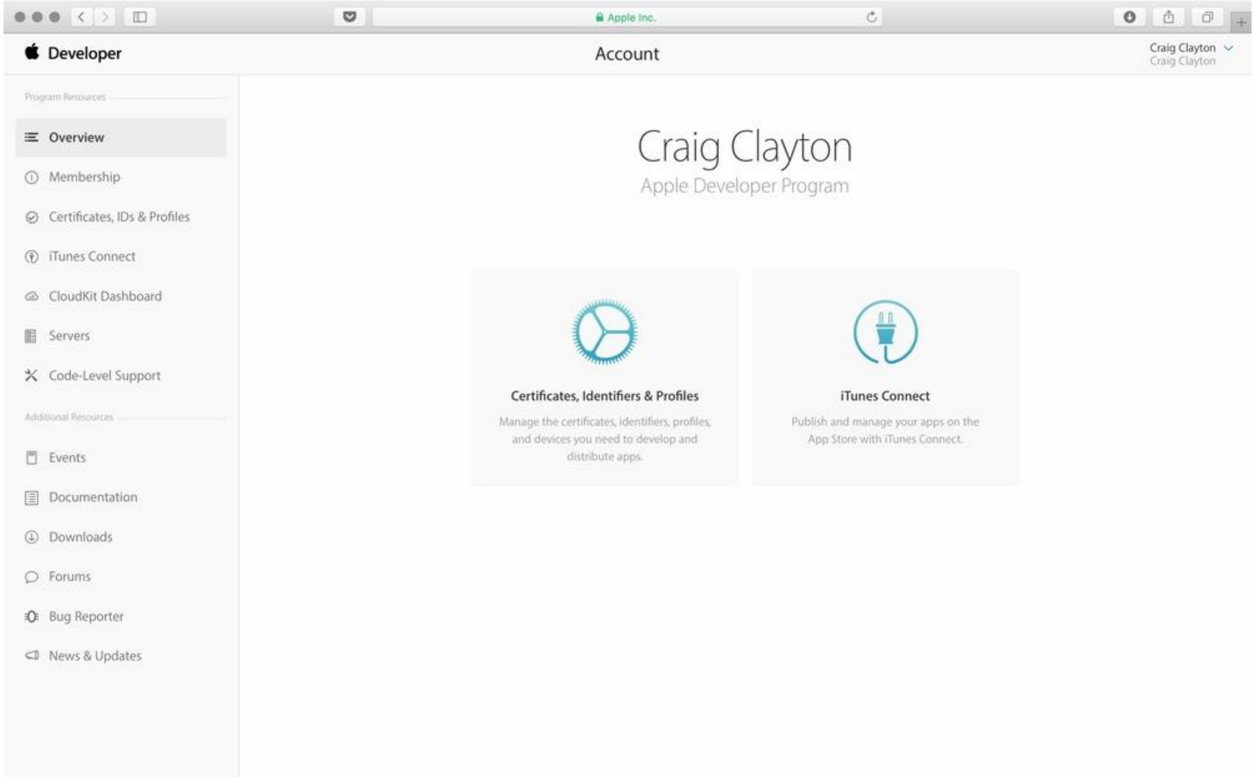
Download your certificate to your Mac, then double click the .cer file to install in Keychain Access. Make sure to save a backup copy of your private and public keys somewhere secure.

Name: iOS Distribution: Craig Clayton
Type: iOS Distribution
Expires: Oct 11, 2017

Documentation

For more information on using and managing your certificates read:

App Distribution Guide



Craig Clayton

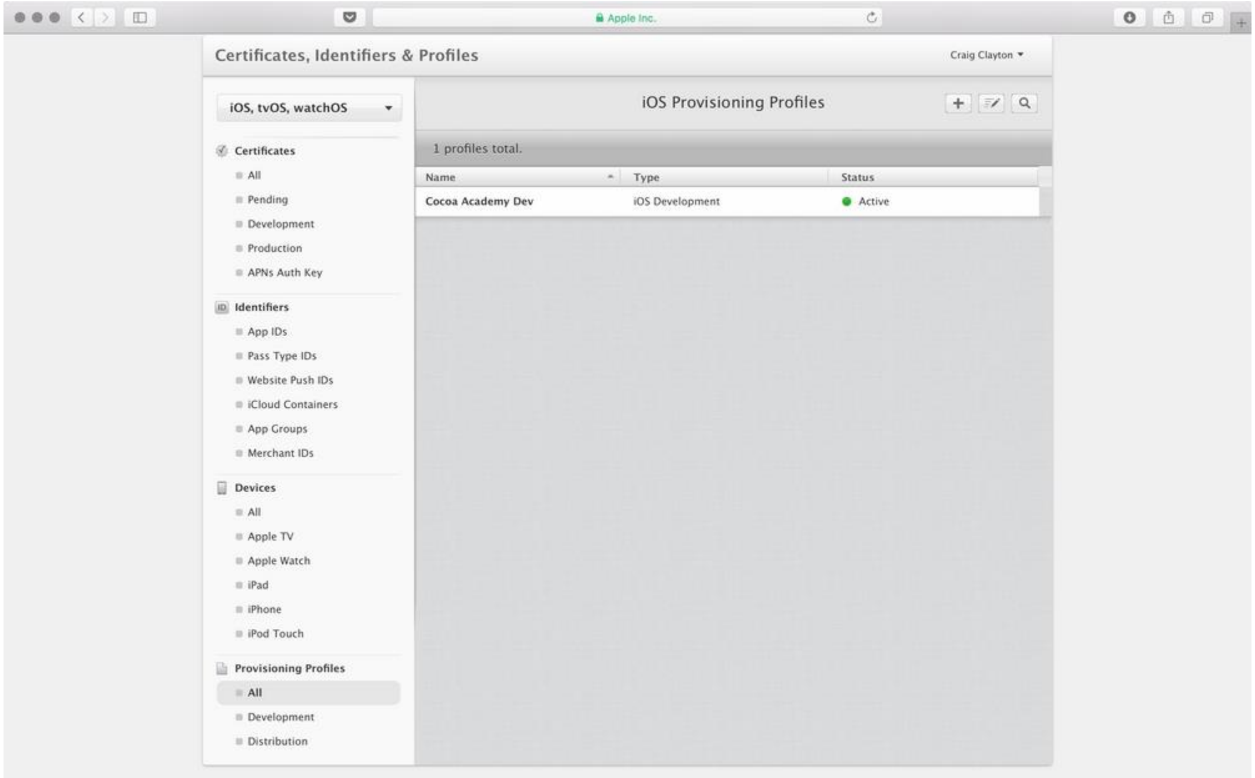
Apple Developer Program

Certificates, Identifiers & Profiles

Manage the certificates, identifiers, profiles, and devices you need to develop and distribute apps.

iTunes Connect

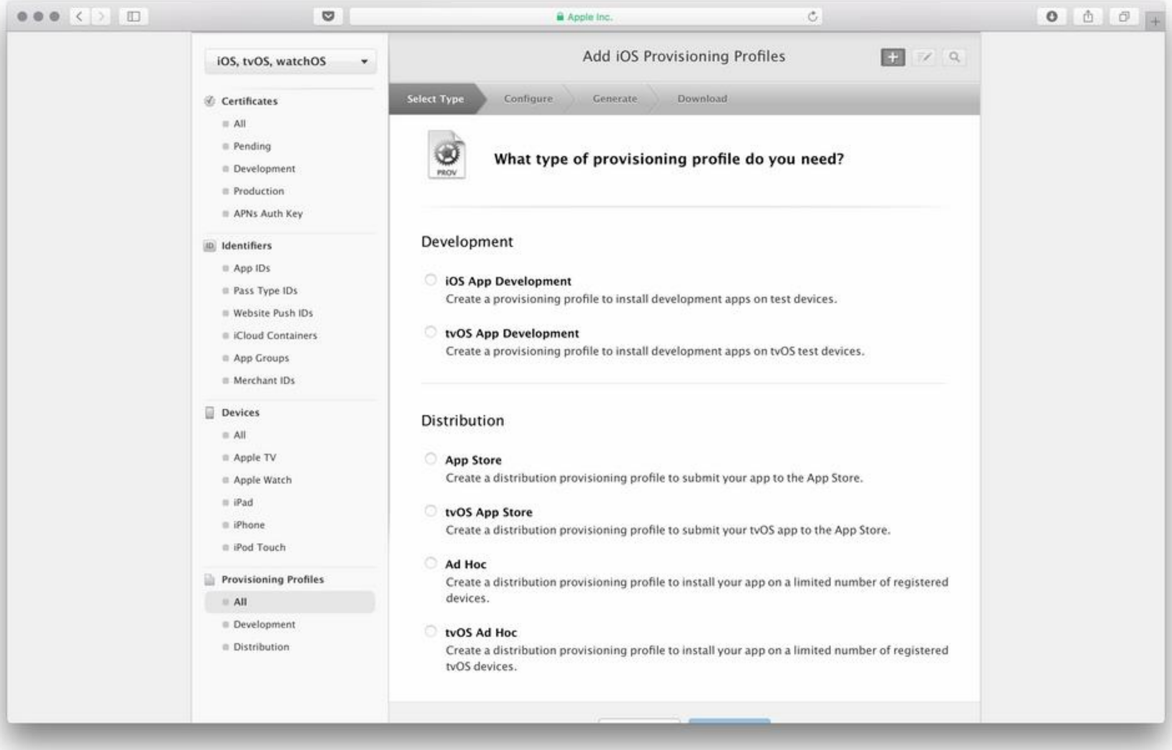
Publish and manage your apps on the App Store with iTunes Connect.



iOS Provisioning Profiles

1 profiles total.

Name	Type	Status
Cocoa Academy Dev	iOS Development	● Active



What type of provisioning profile do you need?

Development

○ **iOS App Development**
Create a provisioning profile to install development apps on test devices.

○ **tvOS App Development**
Create a provisioning profile to install development apps on tvOS test devices.

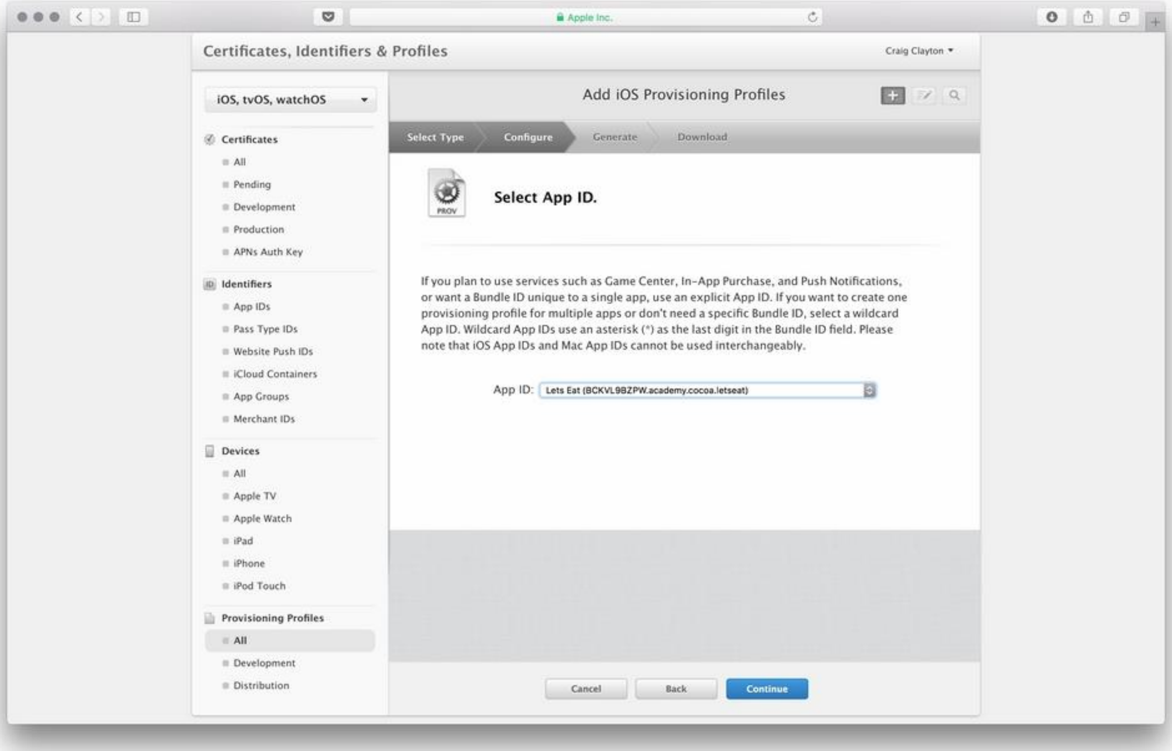
Distribution

○ **App Store**
Create a distribution provisioning profile to submit your app to the App Store.

○ **tvOS App Store**
Create a distribution provisioning profile to submit your tvOS app to the App Store.

○ **Ad Hoc**
Create a distribution provisioning profile to install your app on a limited number of registered devices.

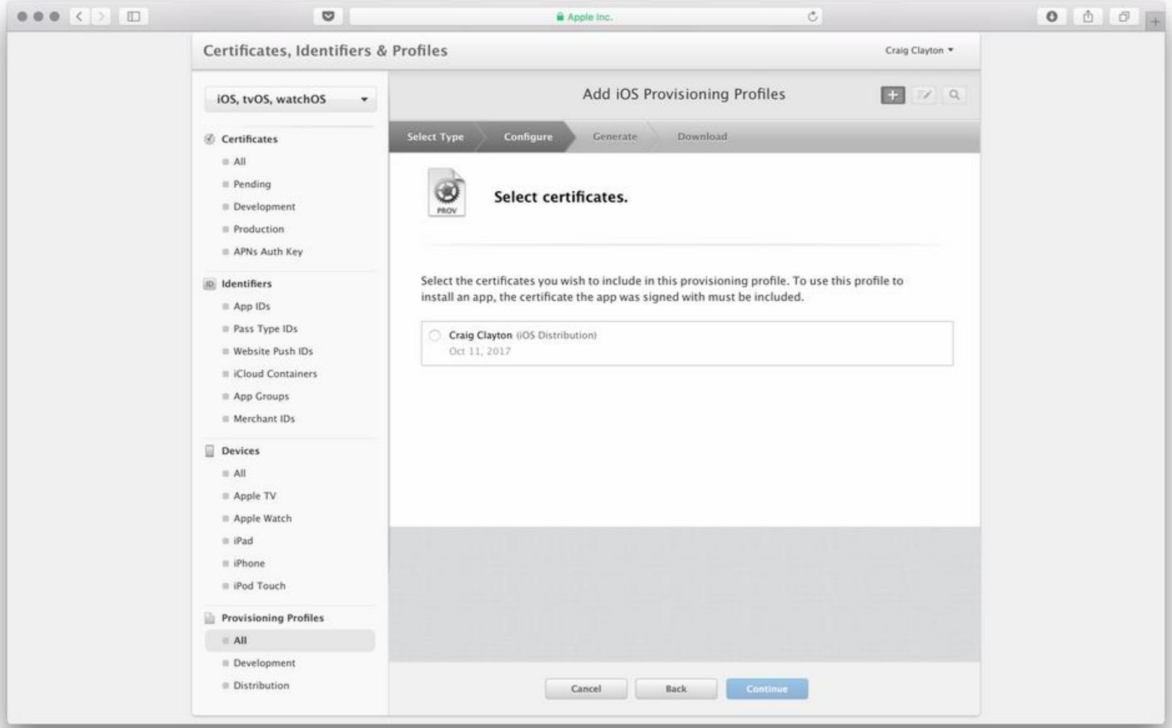
○ **tvOS Ad Hoc**
Create a distribution provisioning profile to install your app on a limited number of registered tvOS devices.



Select App ID.

If you plan to use services such as Game Center, In-App Purchase, and Push Notifications, or want a Bundle ID unique to a single app, use an explicit App ID. If you want to create one provisioning profile for multiple apps or don't need a specific Bundle ID, select a wildcard App ID. Wildcard App IDs use an asterisk (*) as the last digit in the Bundle ID field. Please note that iOS App IDs and Mac App IDs cannot be used interchangeably.

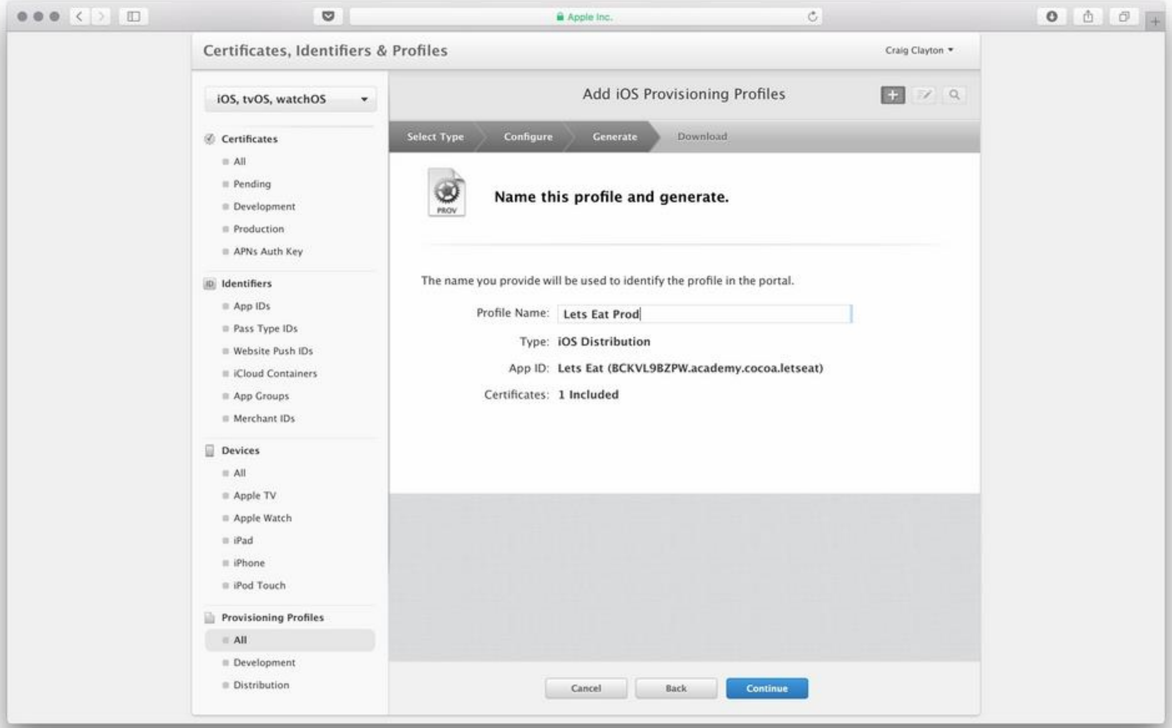
App ID: Lets Eat (BCKVL9BZPW.academy.cocoa.letseat)



Select certificates.

Select the certificates you wish to include in this provisioning profile. To use this profile to install an app, the certificate the app was signed with must be included.

○ Craig Clayton (iOS Distribution)
Oct 11, 2017



Name this profile and generate.

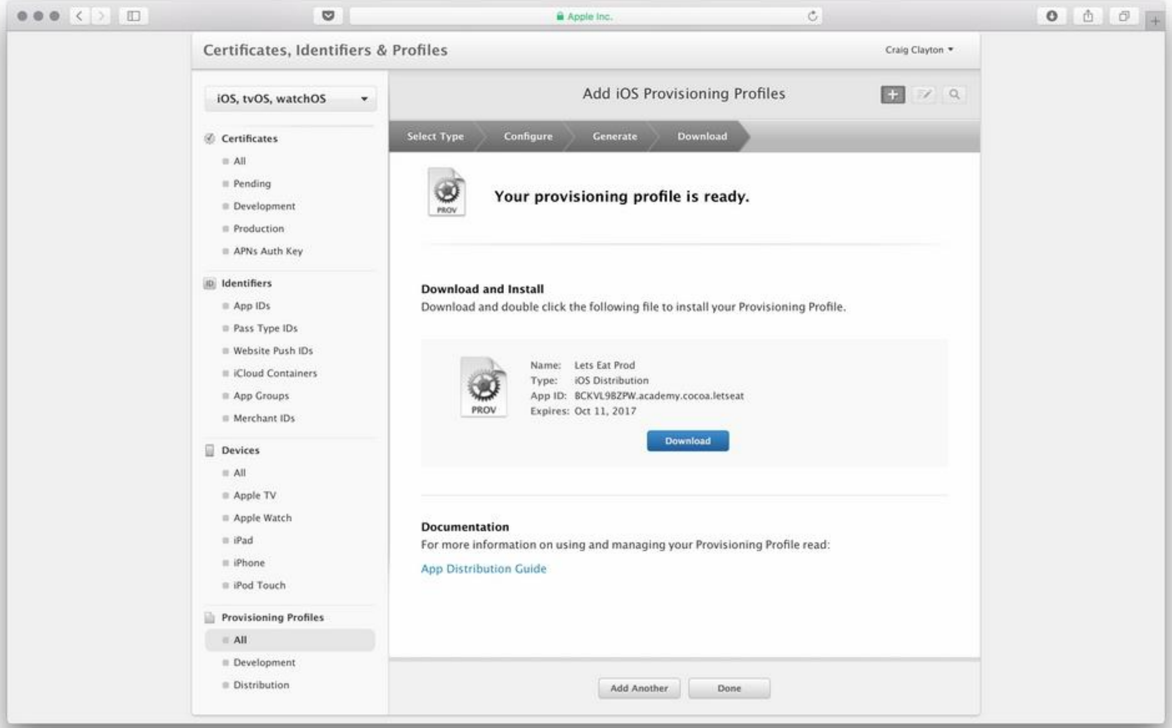
The name you provide will be used to identify the profile in the portal.

Profile Name: Lets Eat Prod

Type: iOS Distribution

App ID: Lets Eat (BCKVL9BZPW.academy.cocoa.letseat)

Certificates: 1 Included



Your provisioning profile is ready.

Download and Install

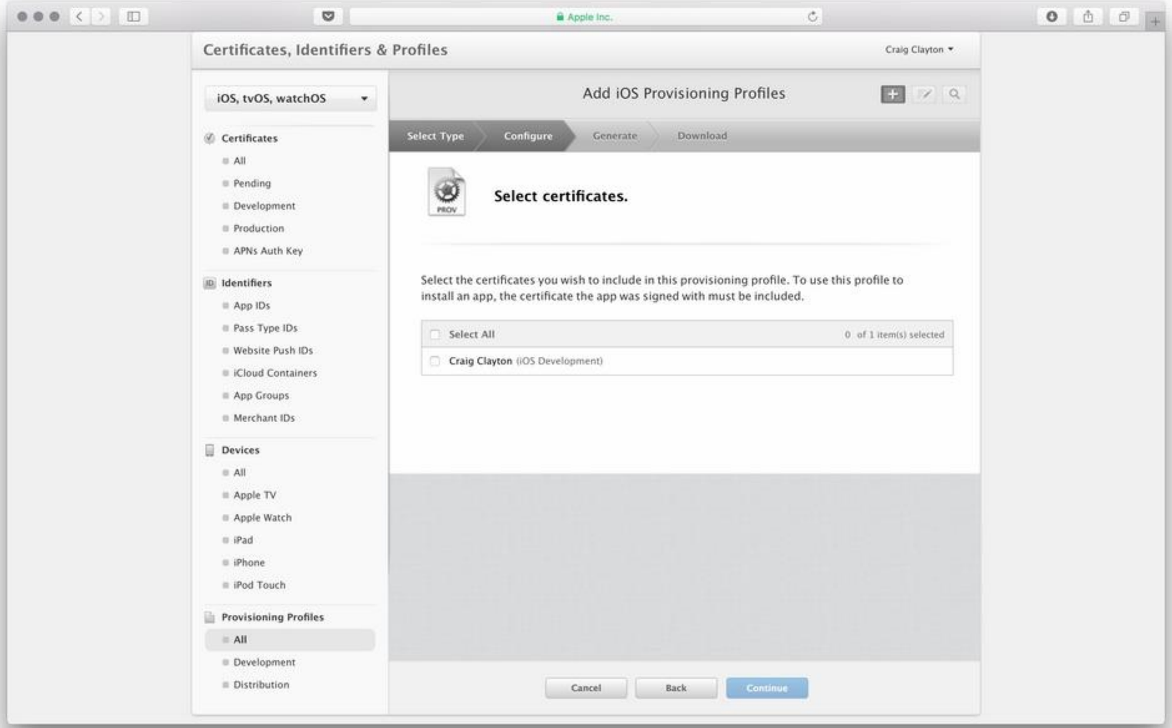
Download and double click the following file to install your Provisioning Profile.

Name: Lets Eat Prod
Type: iOS Distribution
App ID: BCKVL9BZPW.academy.cocoa.letseat
Expires: Oct 11, 2017

Documentation

For more information on using and managing your Provisioning Profile read:

App Distribution Guide

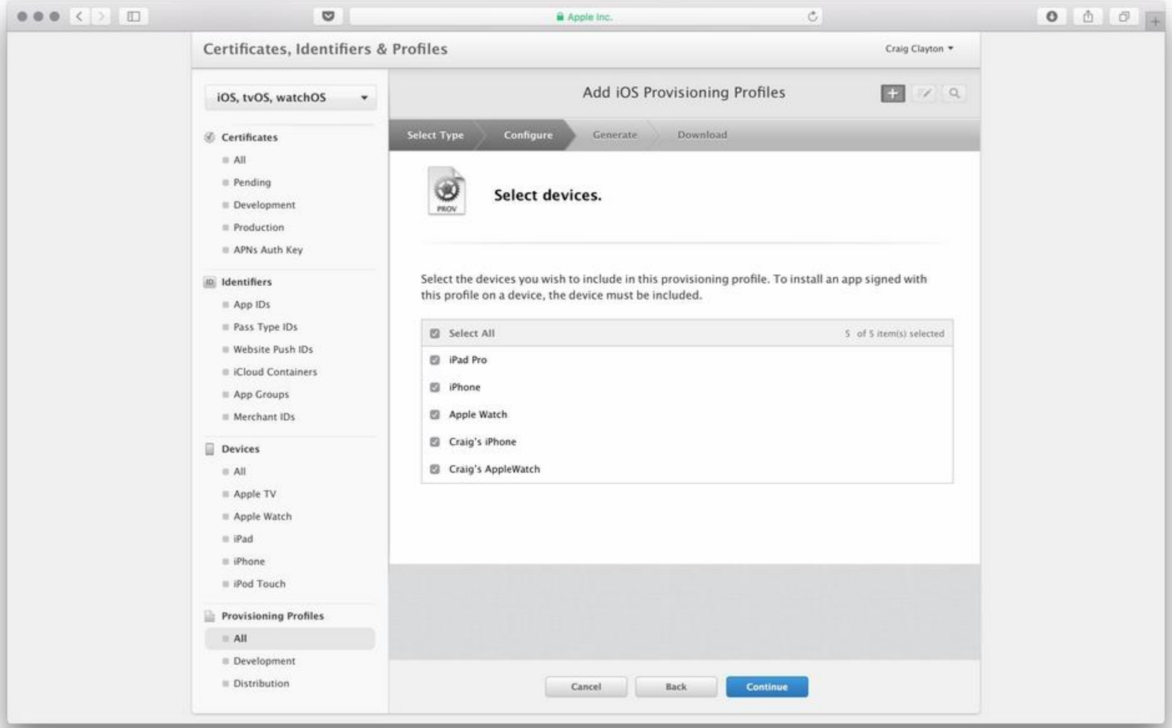


Select certificates.

Select the certificates you wish to include in this provisioning profile. To use this profile to install an app, the certificate the app was signed with must be included.

□ Select All — 0 of 1 item(s) selected

□ **Craig Clayton** (iOS Development)



Select devices.

Select the devices you wish to include in this provisioning profile. To install an app signed with this profile on a device, the device must be included.

☑ Select All — 5 of 5 item(s) selected

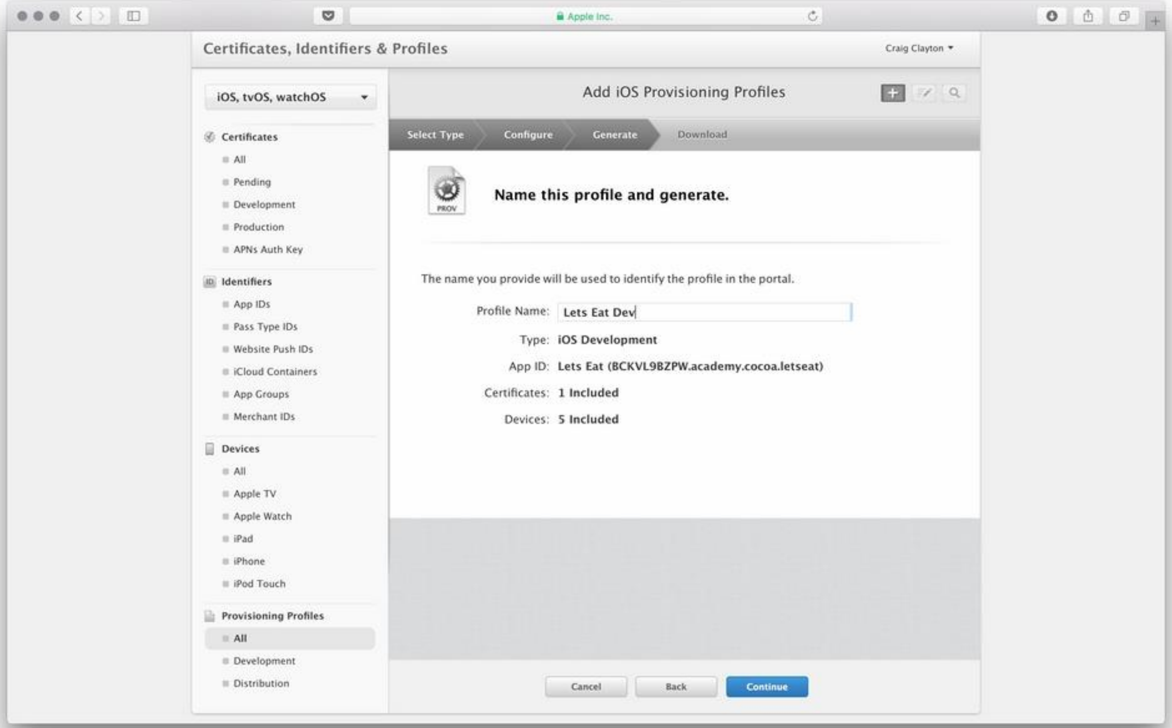
☑ iPad Pro

☑ iPhone

☑ Apple Watch

☑ Craig's iPhone

☑ Craig's AppleWatch



Name this profile and generate.

The name you provide will be used to identify the profile in the portal.

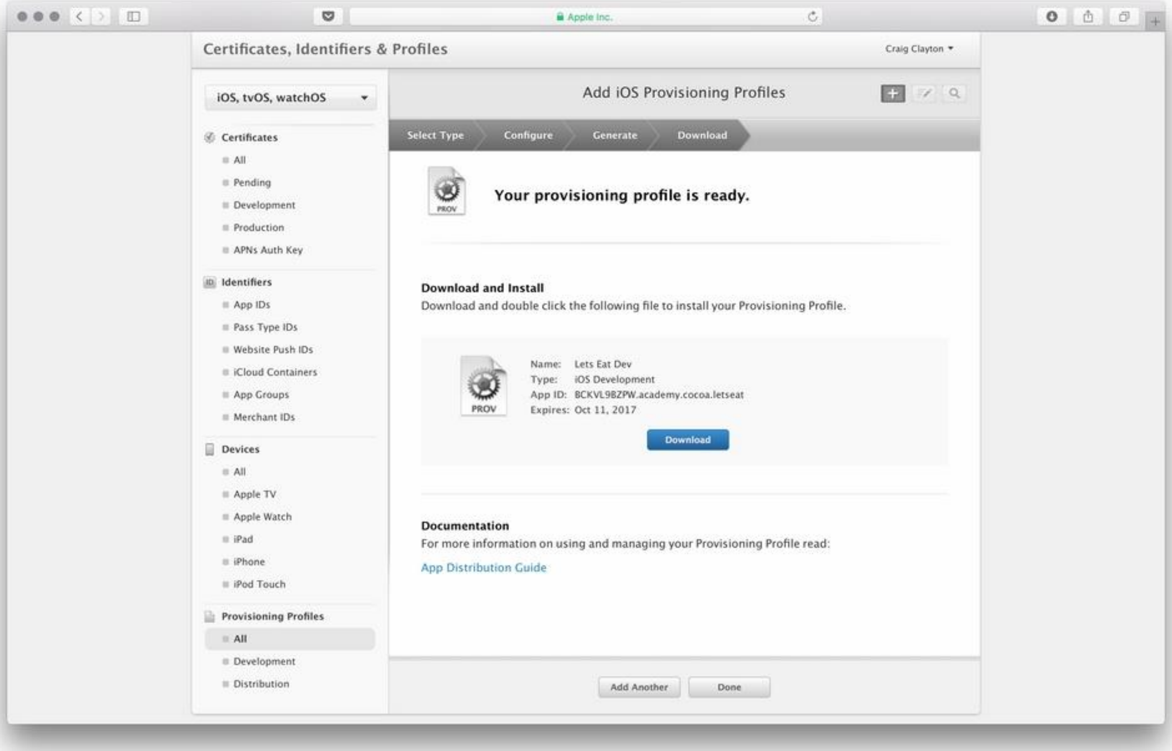
Profile Name: Lets Eat Dev

Type: iOS Development

App ID: Lets Eat (BCKVL9BZPW.academy.cocoa.letseat)

Certificates: 1 Included

Devices: 5 Included



Your provisioning profile is ready.

Download and Install

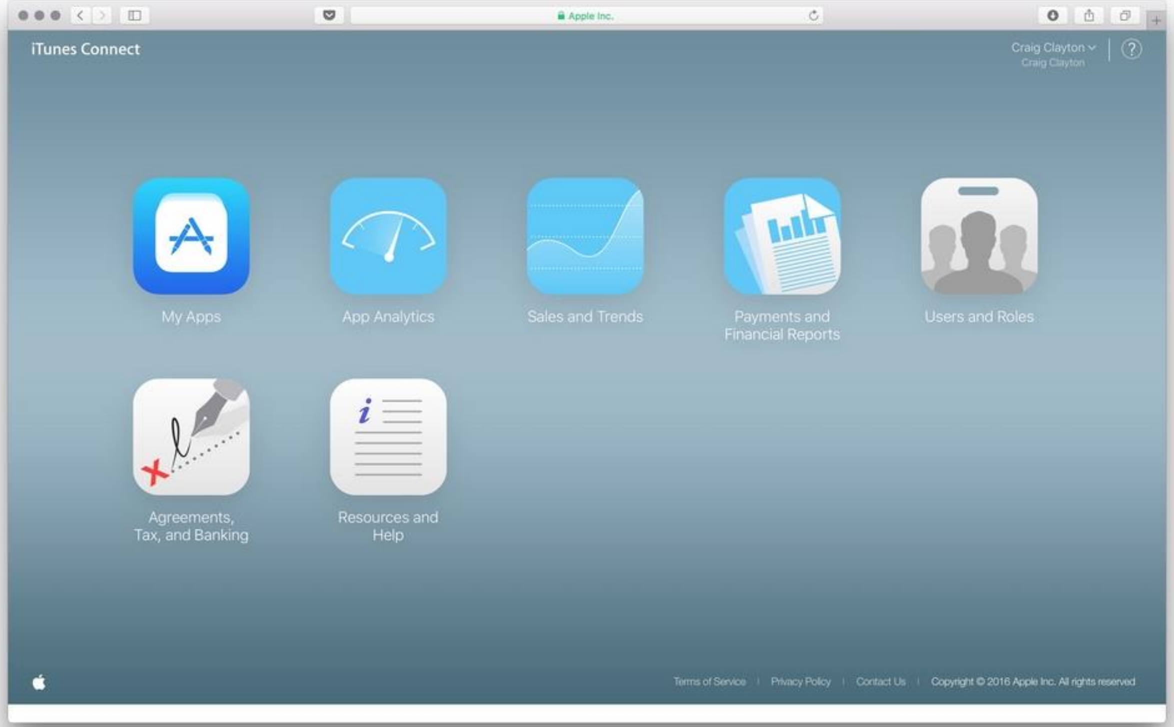
Download and double click the following file to install your Provisioning Profile.

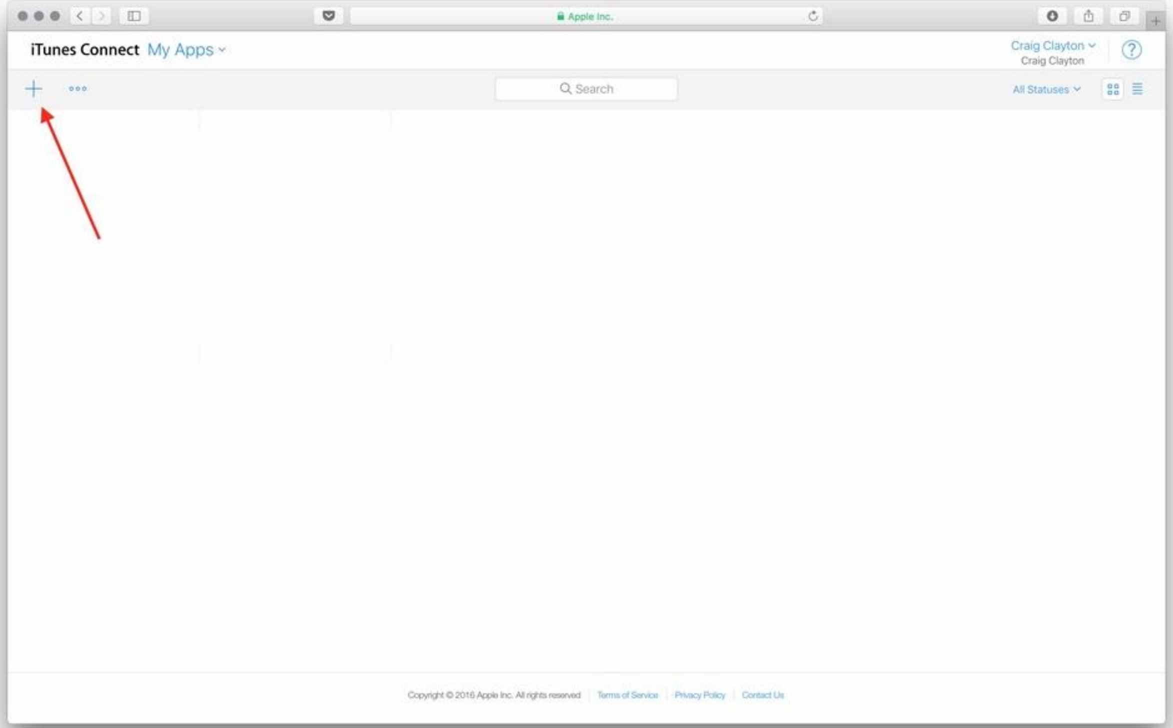
Name: Lets Eat Dev
Type: iOS Development
App ID: BCKVL9BZPW.academy.cocoa.letseat
Expires: Oct 11, 2017

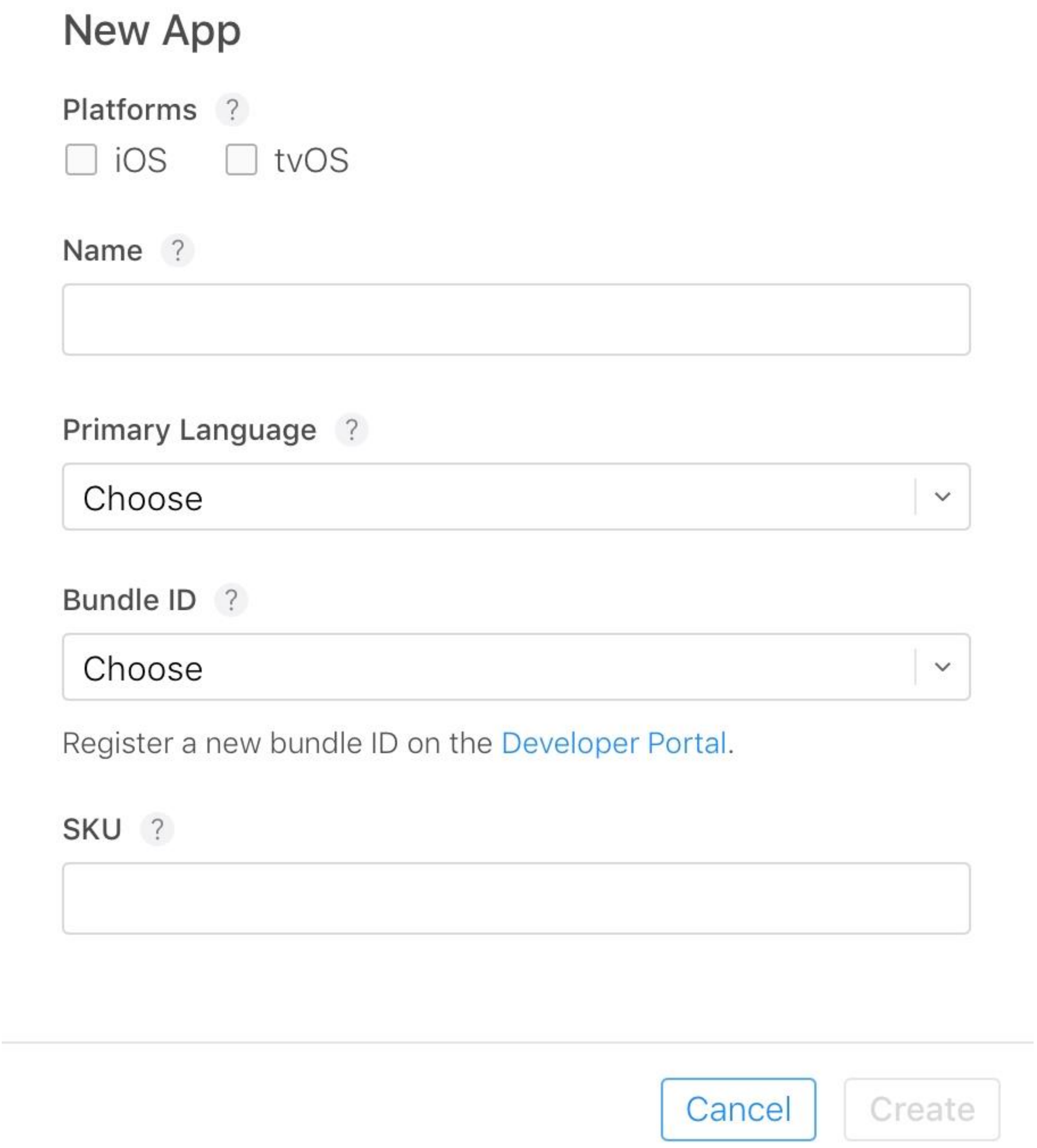
Documentation

For more information on using and managing your Provisioning Profile read:

App Distribution Guide


Apple Inc.
iTunes Connect
Craig Clayton
Craig Clayton
My Apps
App Analytics
Sales and Trends
Payments and Financial Reports
Users and Roles
Agreements, Tax, and Banking
Resources and Help
Terms of Service
Privacy Policy
Contact Us
Copyright © 2016 Apple Inc. All rights reserved


Apple Inc.
iTunes Connect
My Apps
Craig Clayton
Craig Clayton
Search
All Statuses
Copyright © 2016 Apple Inc. All rights reserved
Terms of Service
Privacy Policy
Contact Us



New App

Platforms ?

□ iOS □ tvOS

Name ?

Primary Language ?

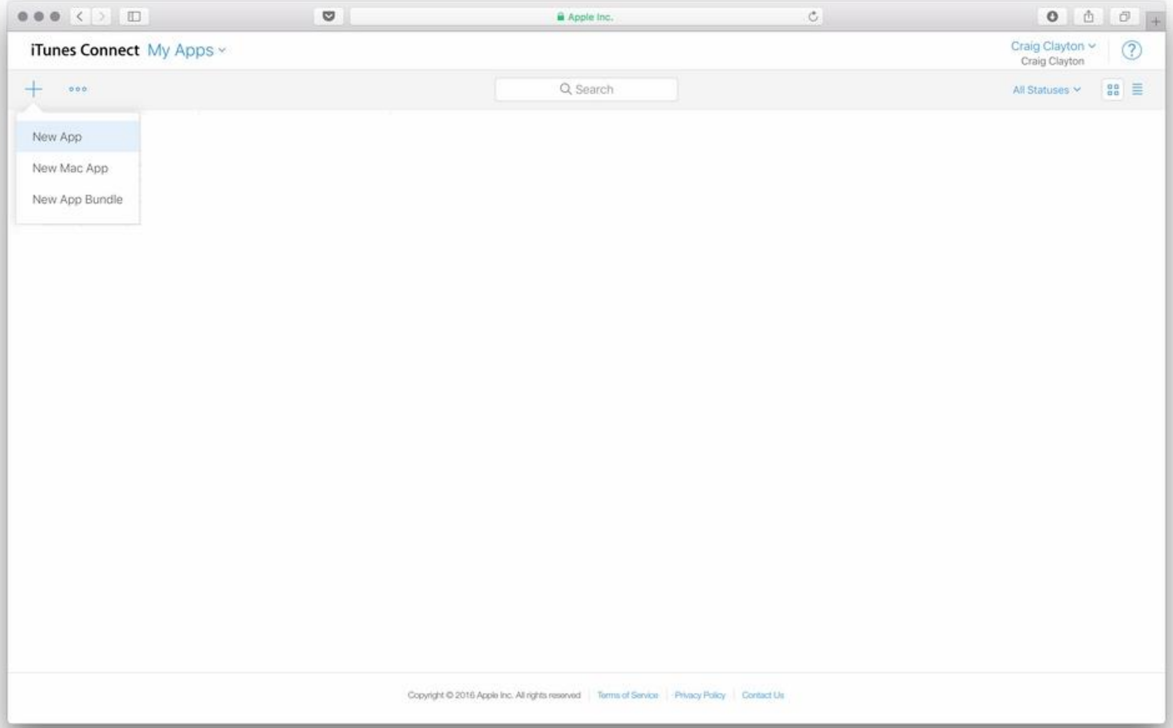
Choose

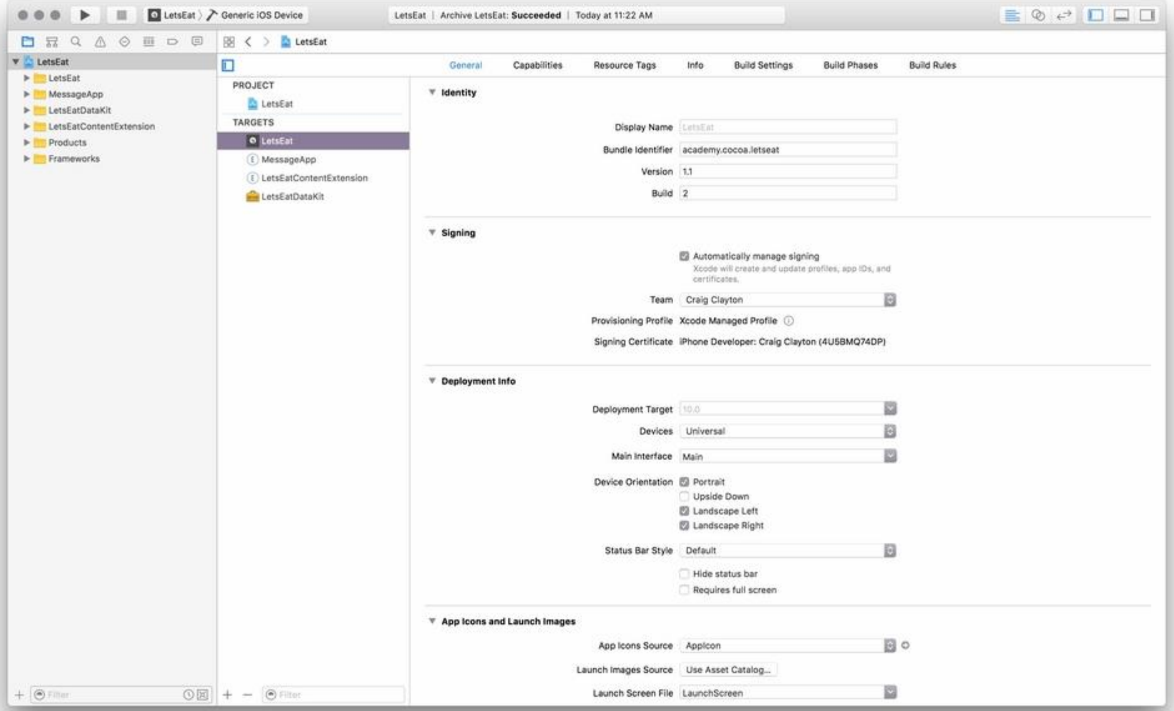
Bundle ID ?

Choose

Register a new bundle ID on the Developer Portal.

SKU ?





Identity

Display Name: LetsEat

Bundle Identifier: academy.cocoa.letseat

Version: 1.1

Build: 2

Signing

☑ Automatically manage signing
Xcode will create and update profiles, app IDs, and certificates.

Team: Craig Clayton

Provisioning Profile: Xcode Managed Profile

Signing Certificate: iPhone Developer: Craig Clayton (4U5BMQ74DP)

Deployment Info

Deployment Target: 10.0

Devices: Universal

Main Interface: Main

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

Status Bar Style: Default

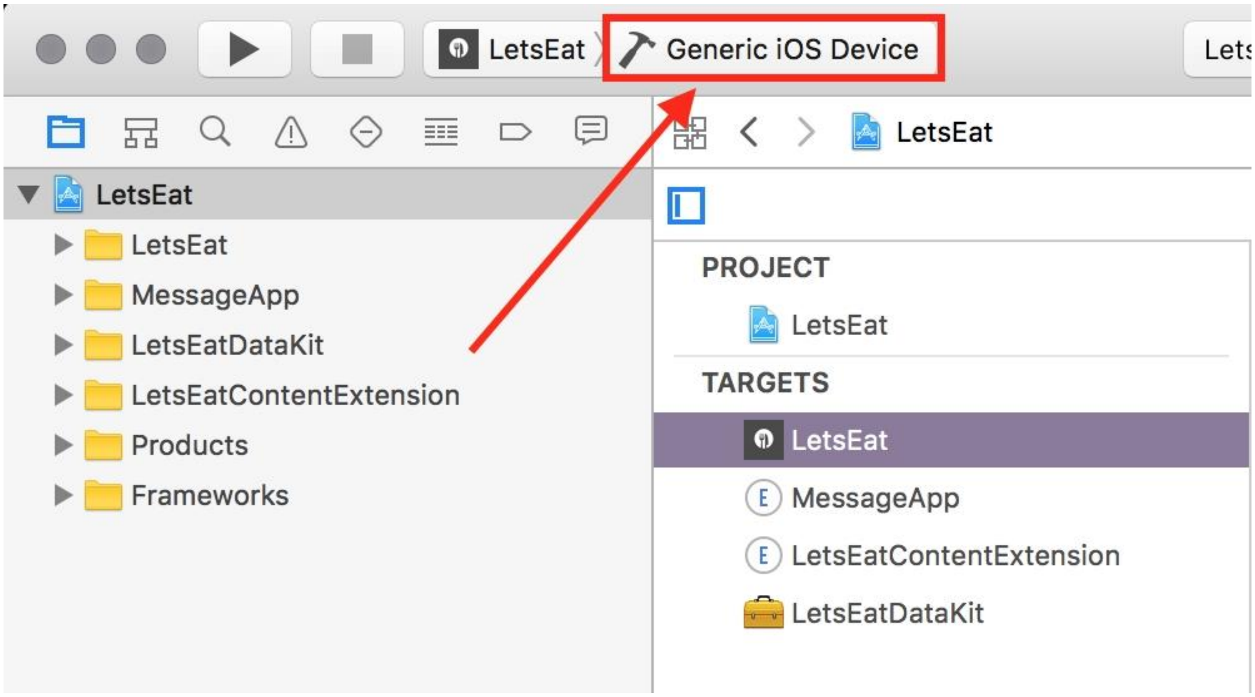
☐ Hide status bar
☐ Requires full screen

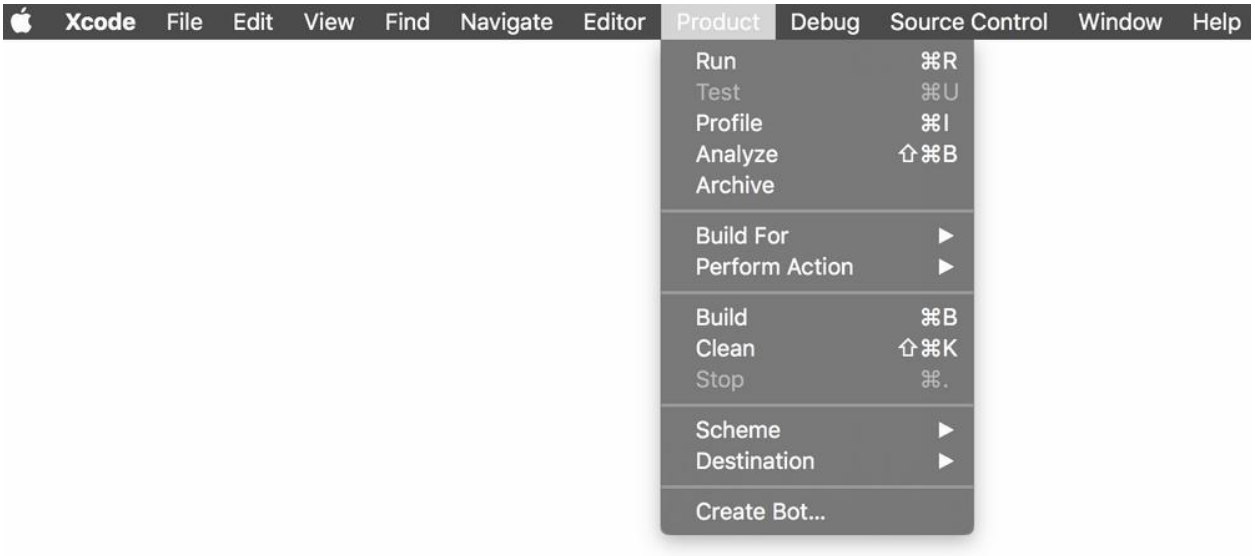
App Icons and Launch Images

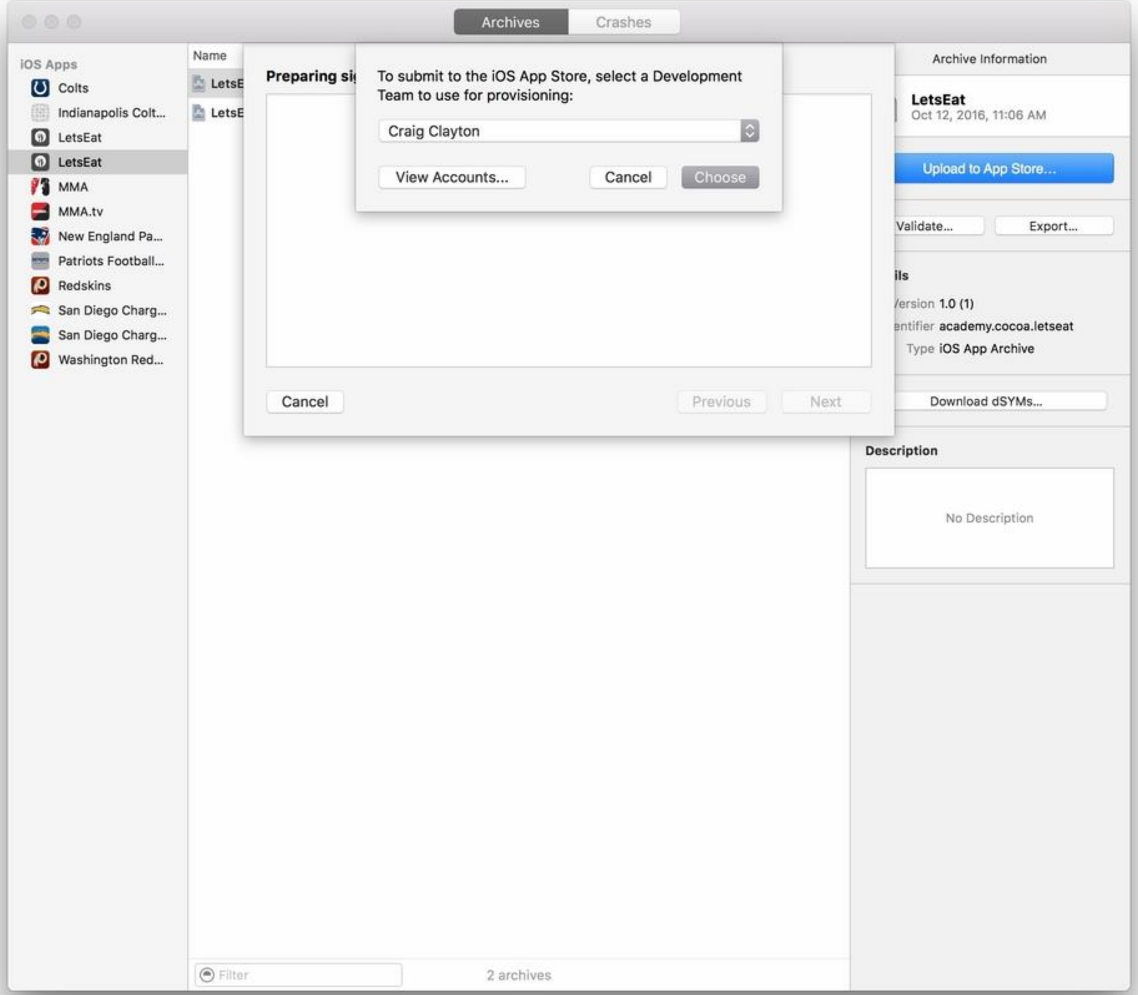
App Icons Source: AppIcon

Launch Images Source: Use Asset Catalog...

Launch Screen File: LaunchScreen


LetsEat
Generic iOS Device
Lets
LetsEat
LetsEat
LetsEat
MessageApp
LetsEatDataKit
LetsEatContentExtension
Products
Frameworks
PROJECT
LetsEat
TARGETS
LetsEat
MessageApp
LetsEatContentExtension
LetsEatDataKit


Xcode
File
Edit
View
Find
Navigate
Editor
Product
Debug
Source Control
Window
Help
Run ⌘R
Test ⌘U
Profile ⌘I
Analyze ⇧⌘B
Archive
Build For ▶
Perform Action ▶
Build ⌘B
Clean ⇧⌘K
Stop ⌘.
Scheme ▶
Destination ▶
Create Bot...

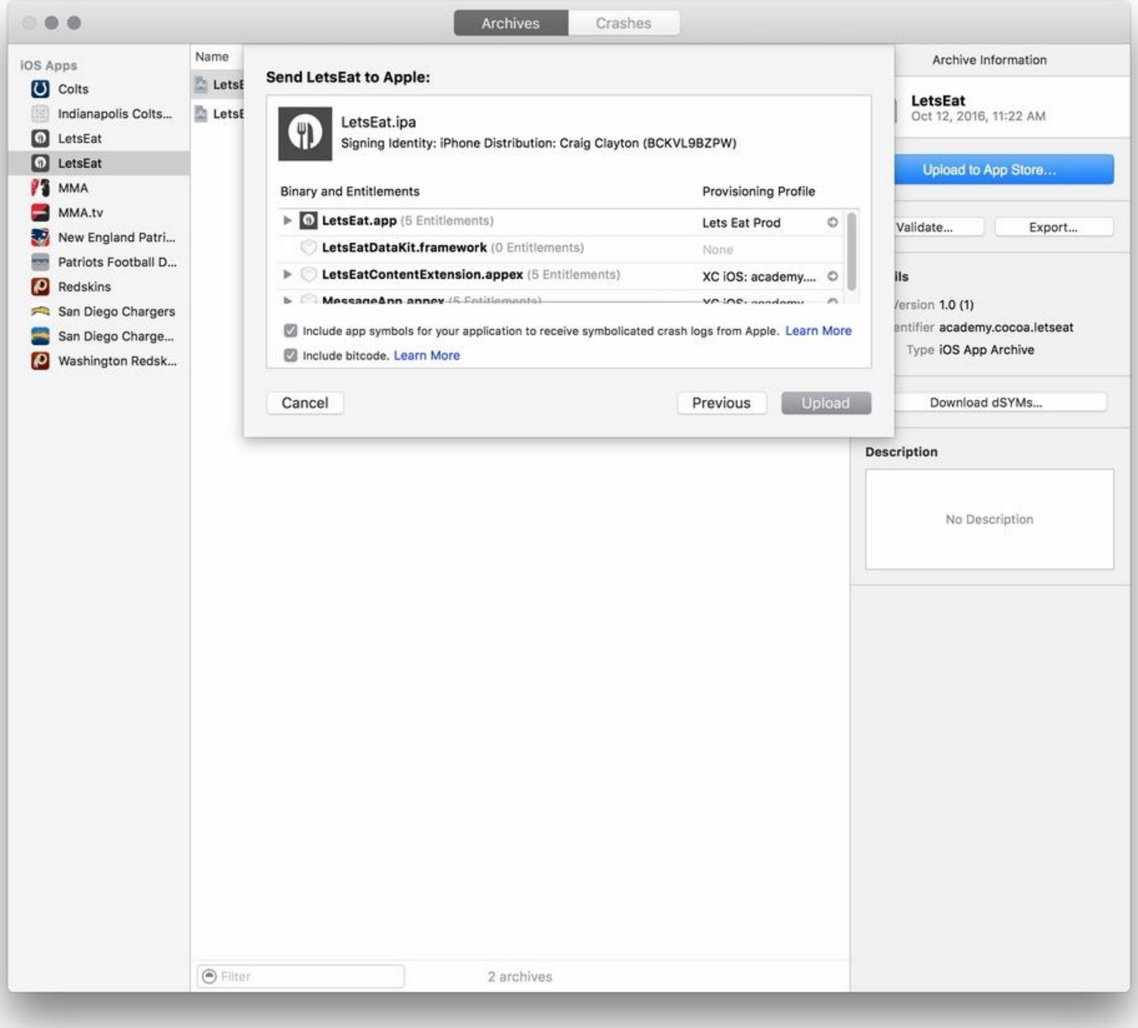


To submit to the iOS App Store, select a Development Team to use for provisioning:

Craig Clayton

LetsEat
Oct 12, 2016, 11:06 AM

Version 1.0 (1)
Identifier academy.cocoa.letseat
Type iOS App Archive



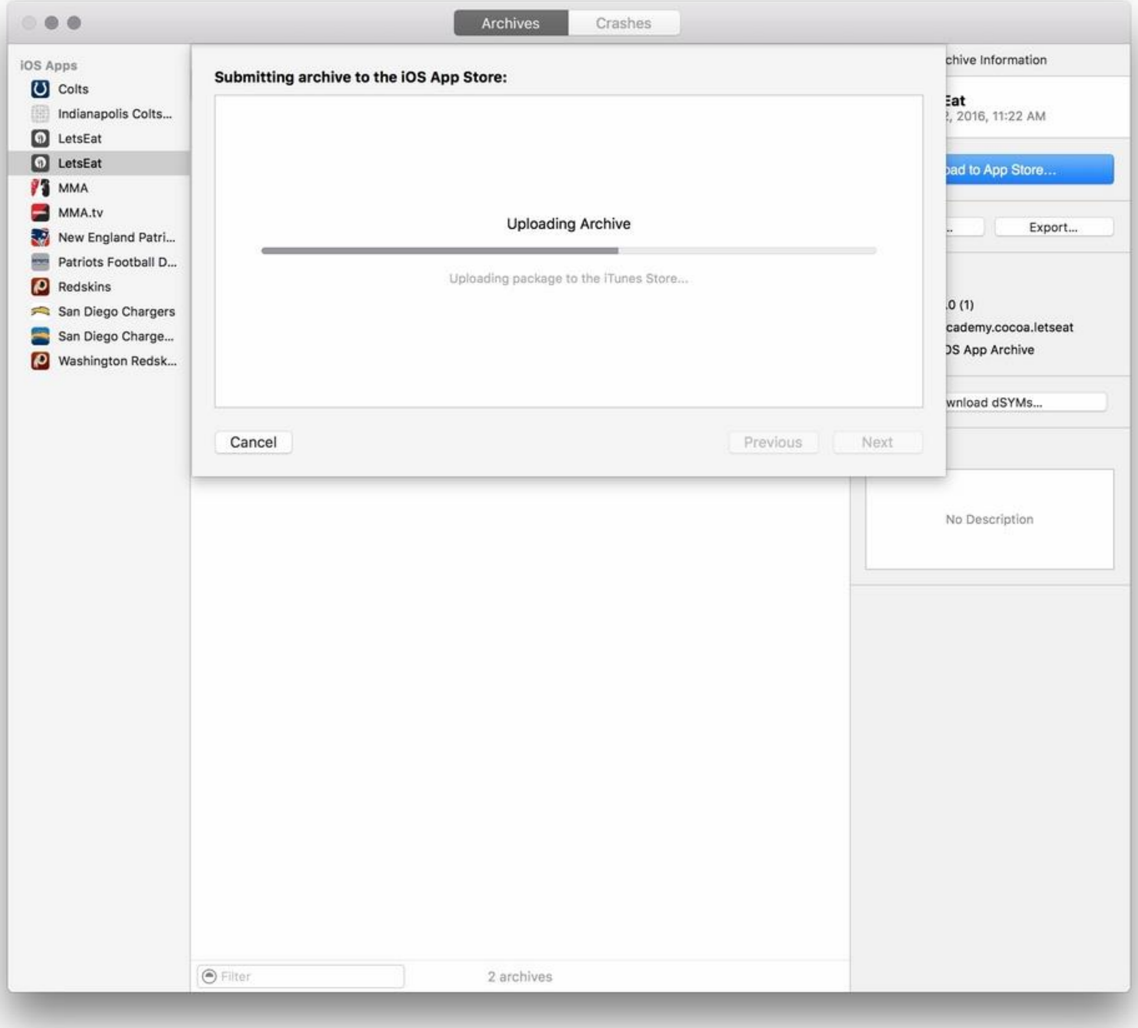
Send LetsEat to Apple:

LetsEat.ipa
Signing Identity: iPhone Distribution: Craig Clayton (BCKVL9BZPW)

Binary and Entitlements	Provisioning Profile
▶ **LetsEat.app** (5 Entitlements)	Lets Eat Prod
LetsEatDataKit.framework (0 Entitlements)	None
▶ **LetsEatContentExtension.appex** (5 Entitlements)	XC iOS: academy....
▶ **MessageApp.appex** (5 Entitlements)	XC iOS: academy...

☑ Include app symbols for your application to receive symbolicated crash logs from Apple. Learn More

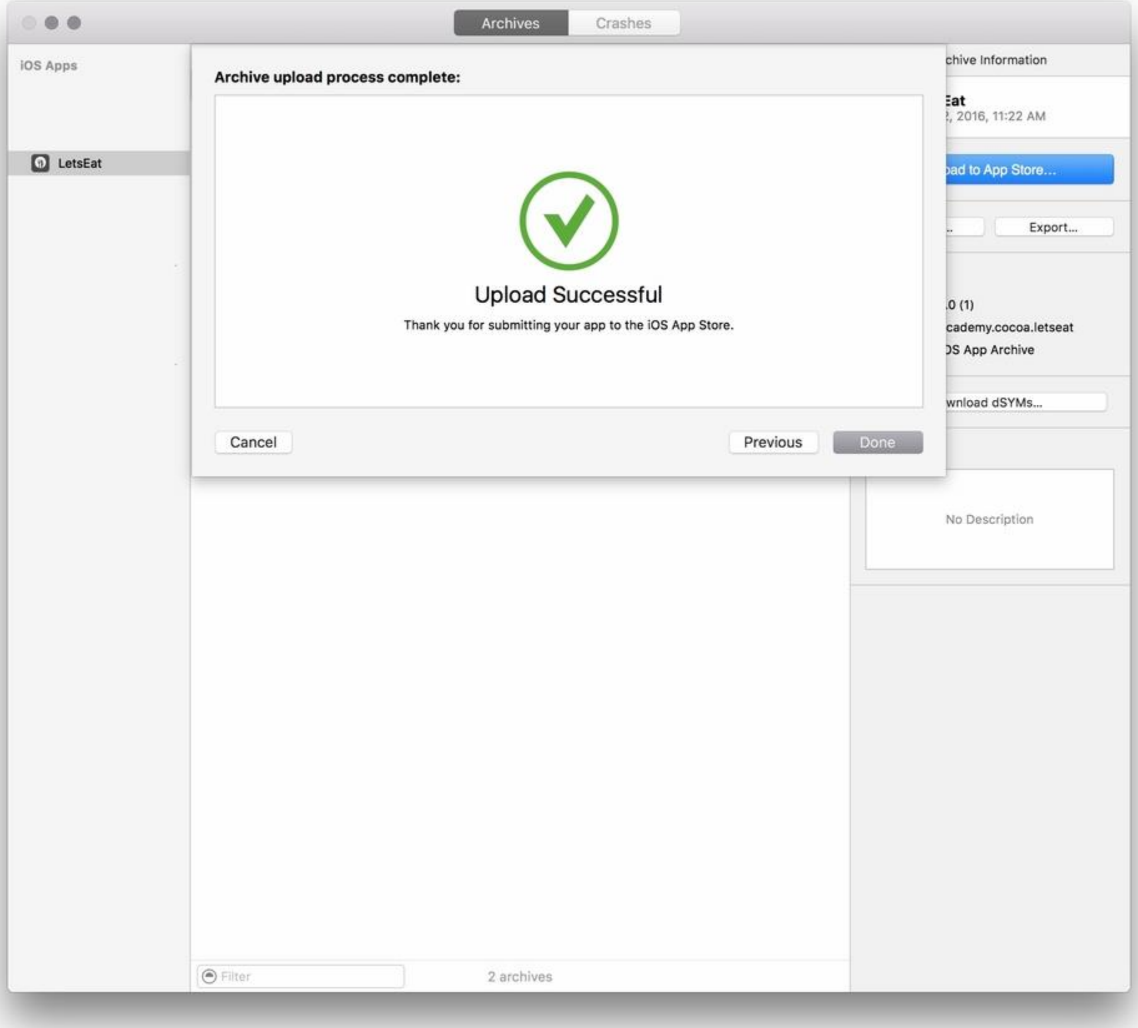
☑ Include bitcode. Learn More



Submitting archive to the iOS App Store:

Uploading Archive

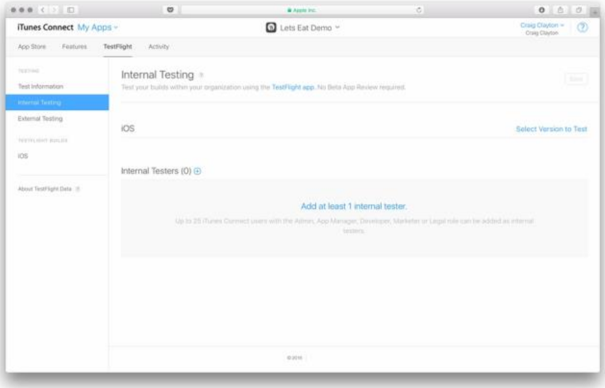
Uploading package to the iTunes Store...



Archive upload process complete:

Upload Successful

Thank you for submitting your app to the iOS App Store.

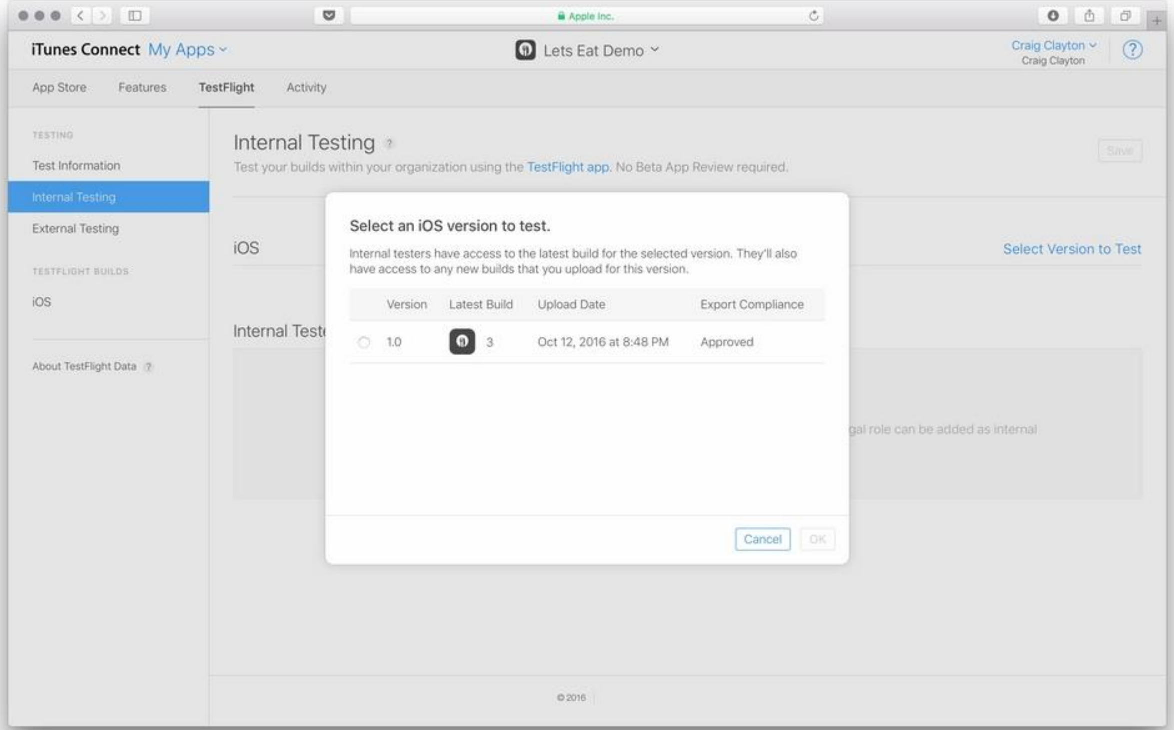


Internal Testing

Test your builds within your organization using the TestFlight app. No Beta App Review required.

Add at least 1 internal tester.

Up to 25 iTunes Connect users with the Admin, App Manager, Developer, Marketer or Legal role can be added as internal testers.



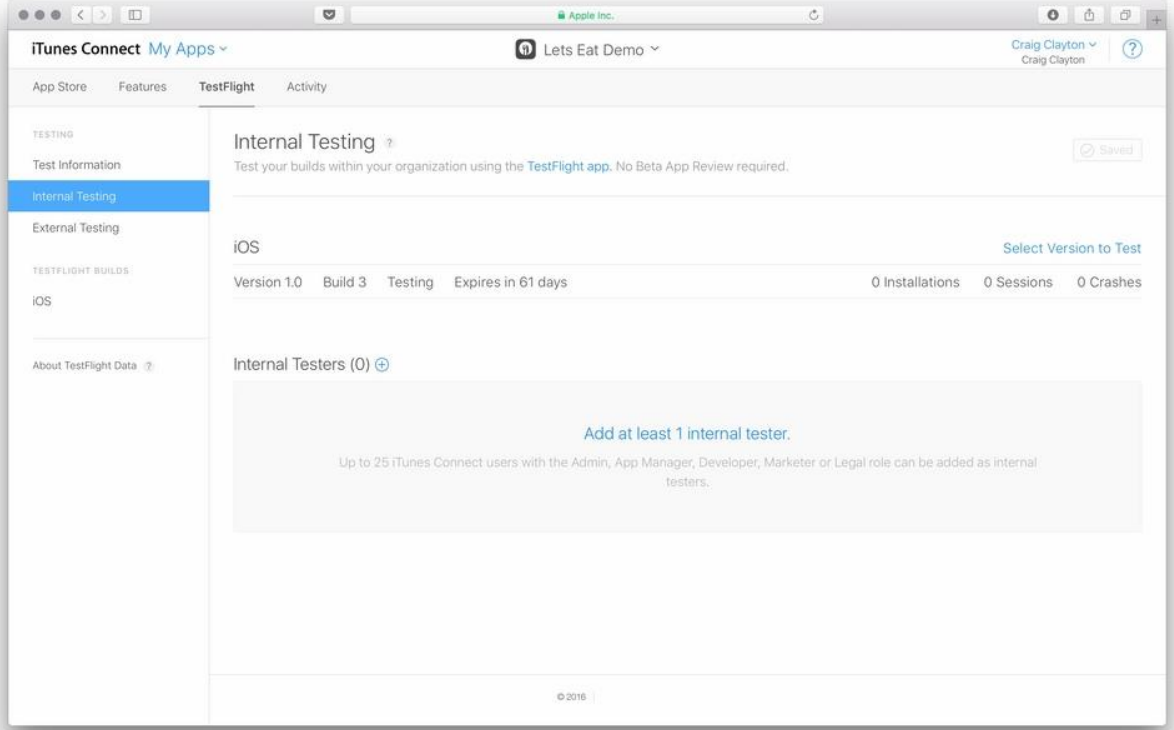
Internal Testing

Test your builds within your organization using the TestFlight app. No Beta App Review required.

Select an iOS version to test.

Internal testers have access to the latest build for the selected version. They'll also have access to any new builds that you upload for this version.

	Version	Latest Build	Upload Date	Export Compliance
○	1.0	3	Oct 12, 2016 at 8:48 PM	Approved



Internal Testing

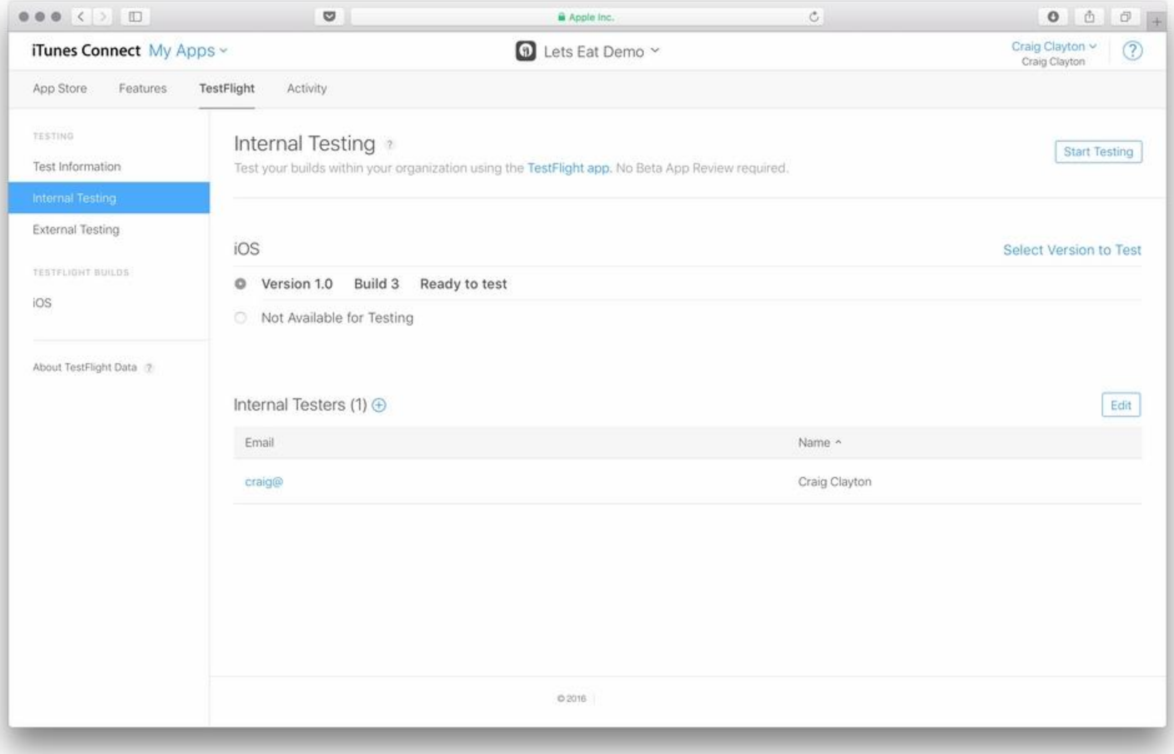
Test your builds within your organization using the TestFlight app. No Beta App Review required.

Version 1.0 Build 3 Testing Expires in 61 days 0 Installations 0 Sessions 0 Crashes

Internal Testers (0)

Add at least 1 internal tester.

Up to 25 iTunes Connect users with the Admin, App Manager, Developer, Marketer or Legal role can be added as internal testers.



Internal Testing

Test your builds within your organization using the TestFlight app. No Beta App Review required.

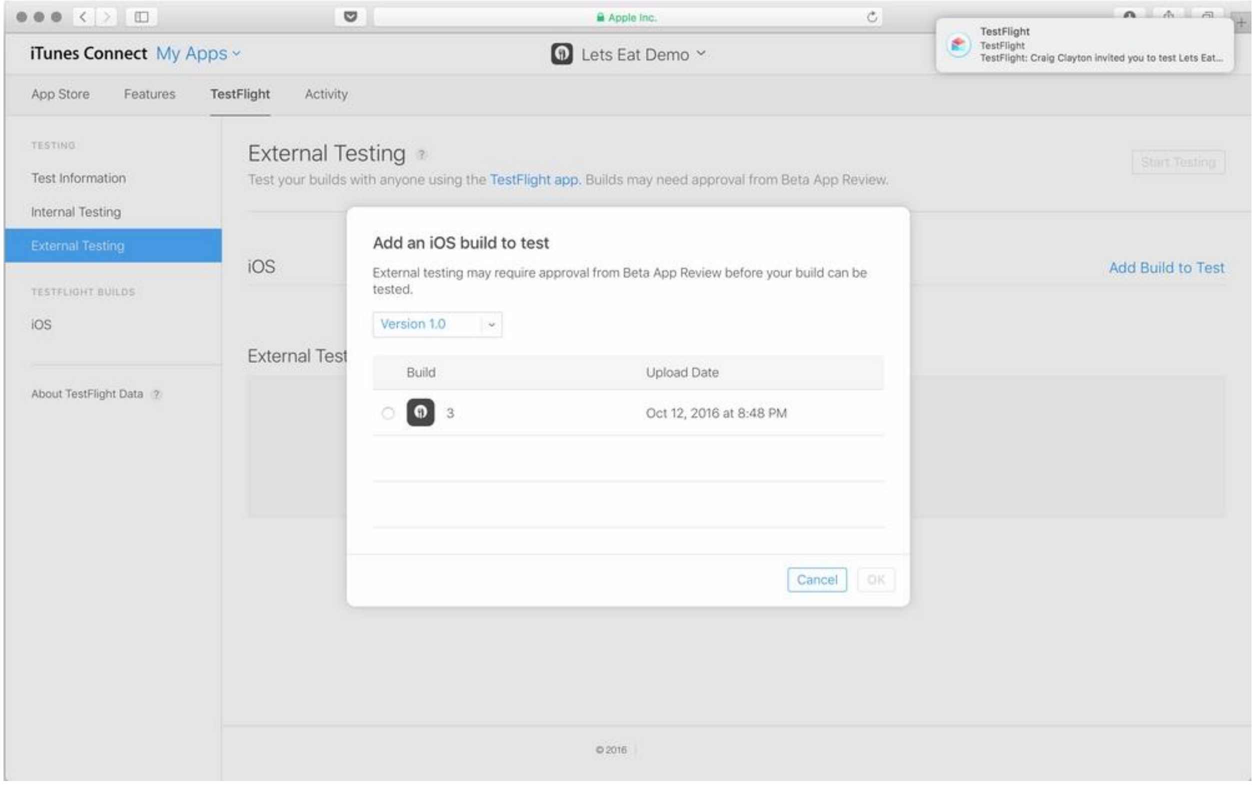
iOS

● Version 1.0 Build 3 Ready to test

○ Not Available for Testing

Internal Testers (1)

Email	Name
craig@	Craig Clayton



TestFlight
TestFlight
TestFlight: Craig Clayton invited you to test Lets Eat...

External Testing

Test your builds with anyone using the TestFlight app. Builds may need approval from Beta App Review.

iOS

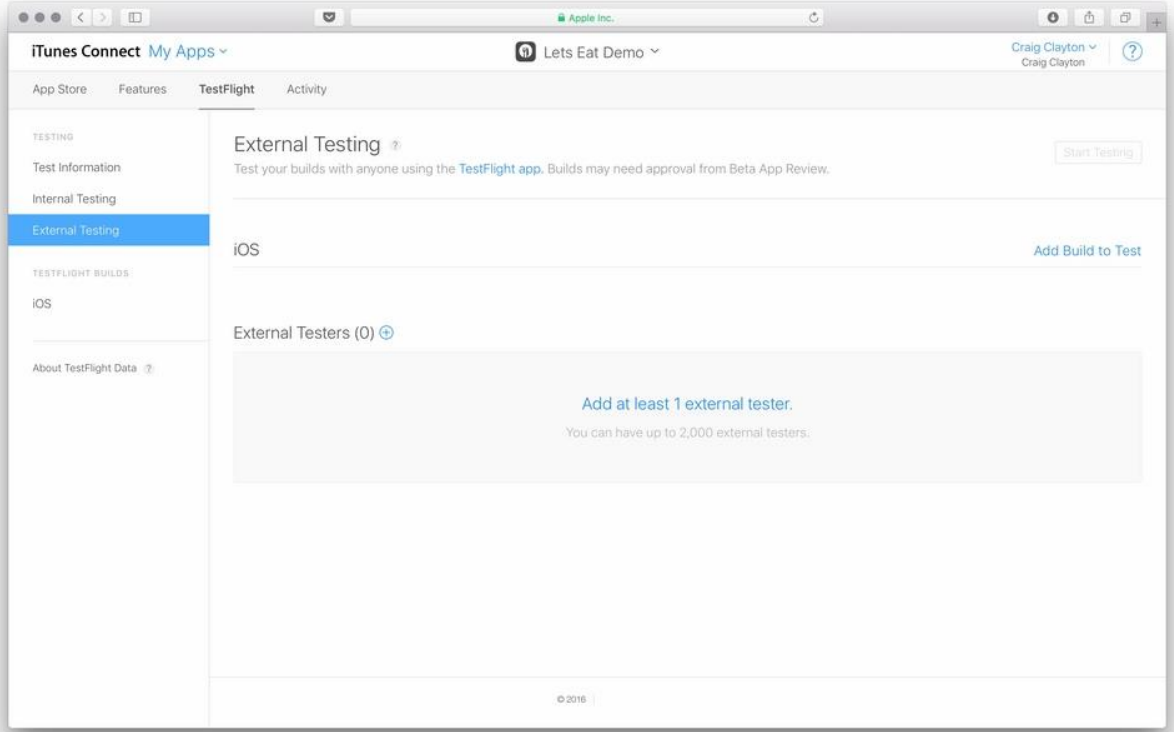
External Test

Add an iOS build to test

External testing may require approval from Beta App Review before your build can be tested.

Version 1.0

Build	Upload Date
○ 3	Oct 12, 2016 at 8:48 PM



External Testing

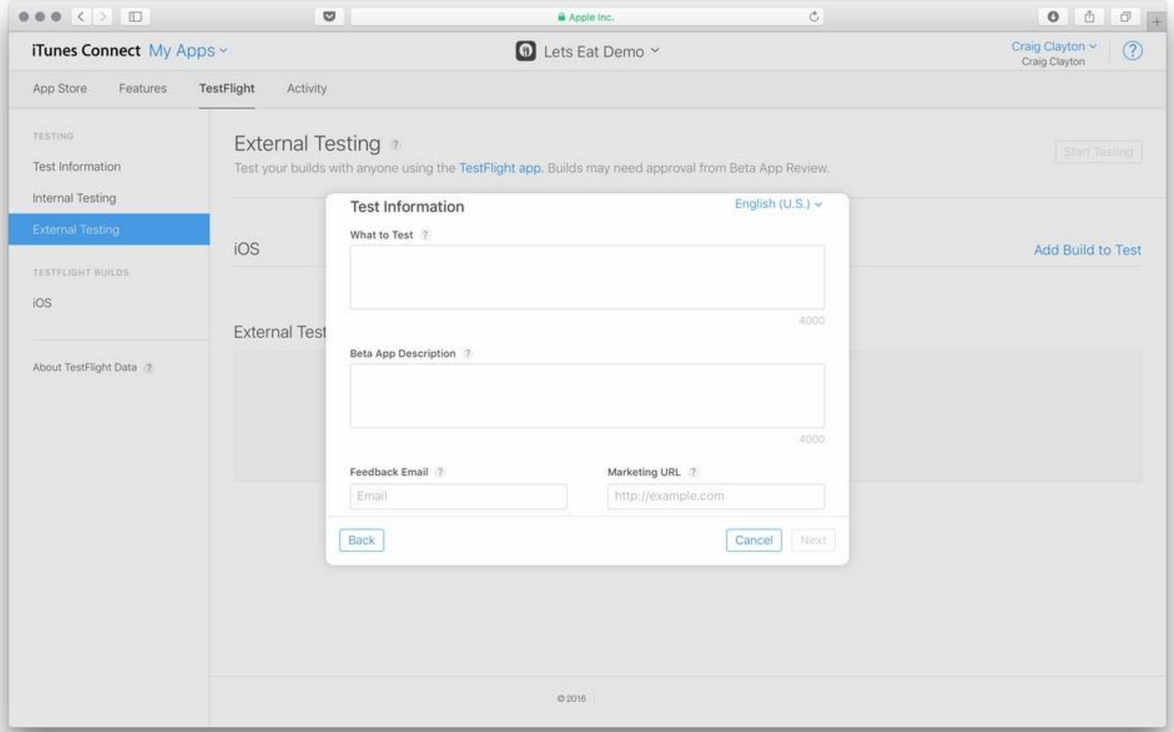
Test your builds with anyone using the TestFlight app. Builds may need approval from Beta App Review.

iOS

External Testers (0)

Add at least 1 external tester.

You can have up to 2,000 external testers.



External Testing

Test your builds with anyone using the TestFlight app. Builds may need approval from Beta App Review.

iOS

External Test

Test Information

What to Test

4000

Beta App Description

4000

Feedback Email

Email

Marketing URL

http://example.com