Tools

#WWDC14

What’s New in Xcode 6

Session 401
Mike Ferris
Developer Tools

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XCODE

Swift

Live design

Visual debugging

Performance testing

Jogr.xcodeproj — Jogr.storyboard

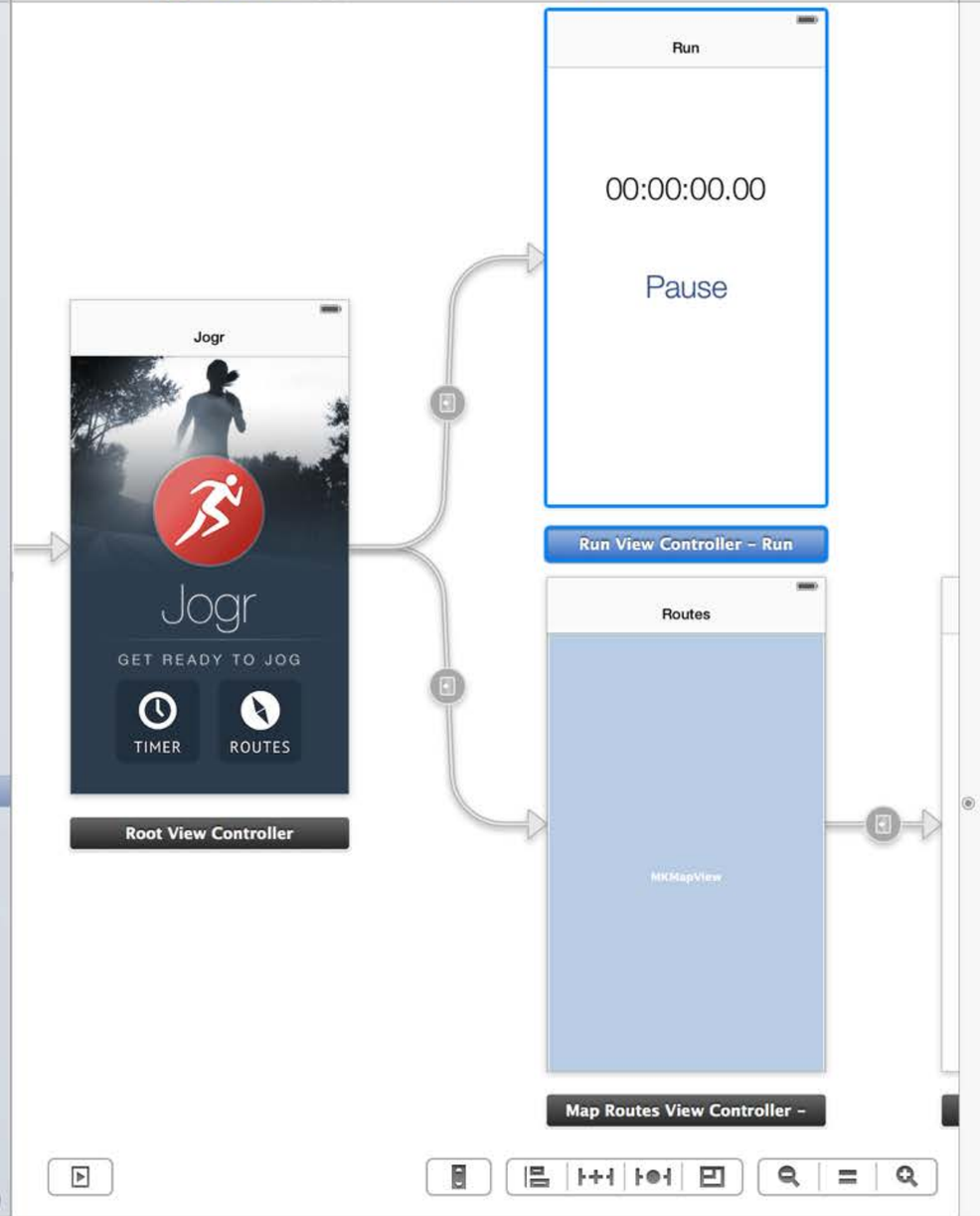
Jogr › iPhone

Jogr: **Ready** | Today at 8:19 AM | No Issues

Jogr
2 targets, iOS SDK 7.0

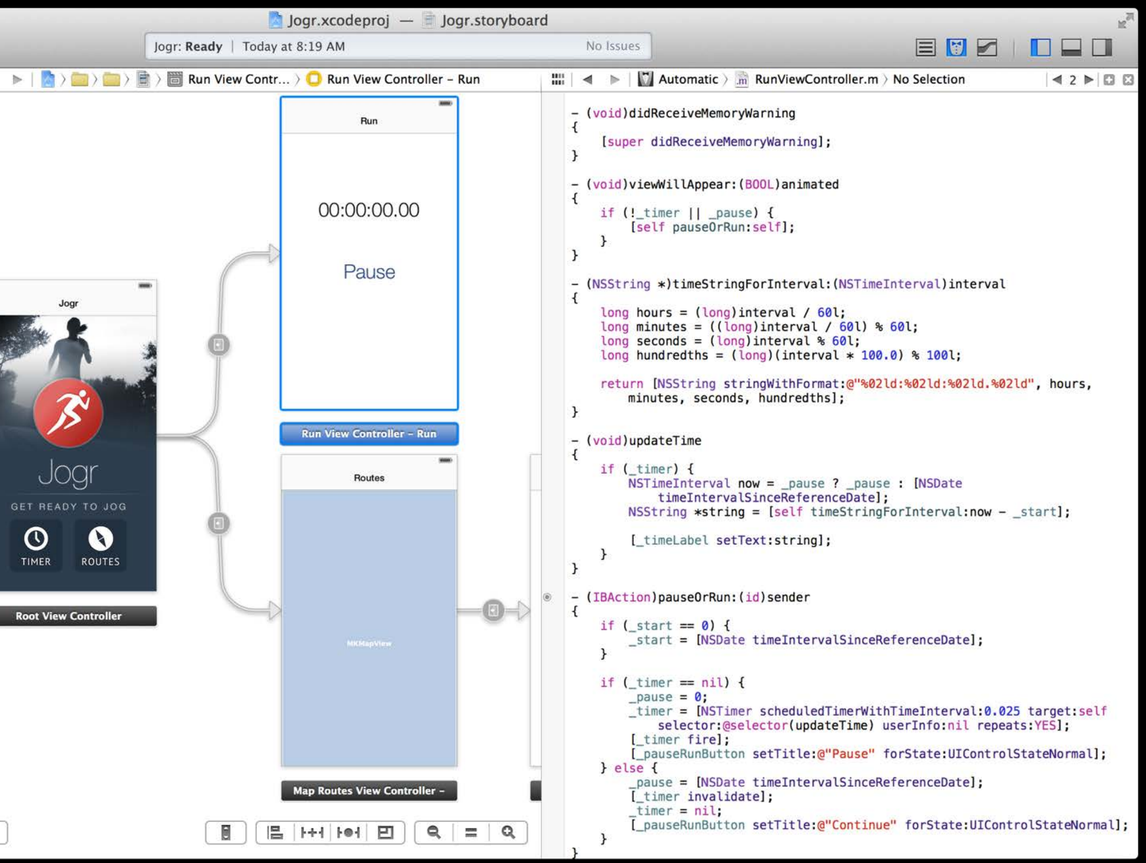
- Jogr Source
  - Model
    - RouteData.h
    - RouteData.m
    - RunData.h
    - RunData.m
  - View
    - RoutePathOverlay.h
    - RoutePathOverlay.m
    - GraphView.h
    - GraphView.m
  - Controller
    - AppDelegate.h
    - AppDelegate.m
    - RunViewController.h
    - RunViewController.m
    - MapRoutesViewController.h
    - MapRoutesViewController.m
    - RouteDetailsViewController.h
    - RouteDetailsViewController.m
    - RunDetailsViewController.h
    - RunDetailsViewController.m
  - Resources
    - Jogr.storyboard
    - embarcadero.jpg
    - Pier39RunDescription.rtf
    - Images.xcassets
    - SampleRuns
  - Supporting Files
- Jogr Tests
  - JogrTests.m
  - Supporting Files
- Frameworks
- Products

Run View Contr… › Run View Controller – Run



Automatic › RunViewController.m › No Selection

```
- (void)didReceiveMemoryWarning
{
    [super didReceiveMemoryWarning];
}

- (void)viewWillAppear:(BOOL)animated
{
    if (!_timer || _pause) {
        [self pauseOrRun:self];
    }
}

- (NSString *)timeStringForInterval:(NSTimeInterval)interval
{
    long hours = (long)interval / 60l;
    long minutes = ((long)interval / 60l) % 60l;
    long seconds = (long)interval % 60l;
    long hundredths = (long)(interval * 100.0) % 100l;

    return [NSString stringWithFormat:@"%02ld:%02ld:%02ld.%02ld", hours,
        minutes, seconds, hundredths];
}

- (void)updateTime
{
    if (_timer) {
        NSTimeInterval now = _pause ? _pause : [NSDate
            timeIntervalSinceReferenceDate];
        NSString *string = [self timeStringForInterval:now - _start];

        [_timeLabel setText:string];
    }
}

- (IBAction)pauseOrRun:(id)sender
{
    if (_start == 0) {
        _start = [NSDate timeIntervalSinceReferenceDate];
    }

    if (_timer == nil) {
        _pause = 0;
        _timer = [NSTimer scheduledTimerWithTimeInterval:0.025 target:self
            selector:@selector(updateTime) userInfo:nil repeats:YES];
        [_timer fire];
        [_pauseRunButton setTitle:@"Pause" forState:UIControlStateNormal];
    } else {
        _pause = [NSDate timeIntervalSinceReferenceDate];
        [_timer invalidate];
        _timer = nil;
        [_pauseRunButton setTitle:@"Continue" forState:UIControlStateNormal];
    }
}
```



64-bit for iOS
Auto Layout
Quick Look

Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help
Mon 9:41 AM
Shutterbugs › iPhone 5s
Shutterbugs | Build Shutterbugs: Succeeded | 5/29/14 at 9:33 AM
Shutterbugs
4 targets, iOS SDK 8.0
Shutterbugs
Views
CroppedPictureView.h
CroppedPictureView.m
GamePlayerCollectionViewCell.h
GamePlayerCollectionViewCell.m
PhotoCommentTableViewCell.h
PhotoCommentTableViewCell.m
GameTableHeaderLabel.h
GameTableHeaderLabel.m
GamesTableViewCell.swift
Controllers
SignInViewController.h
SignInViewController.m
GameCollectionViewController.h
GameCollectionViewController.m
PhotoDetailViewController.h
PhotoDetailViewController.m
GamesTableViewController.swift
ZoomedPhotoViewController.h
ZoomedPhotoViewController.m
AppDelegate.h
AppDelegate.m
Main.storyboard
VignetteFilter.swift
Images.xcassets
DrawingTests.playground
Resources
Supporting Files
ShutterbugsTests
PlayerTests.m
GameTests.m
PhotoVotingTests.m
Supporting Files
CoreShutterbugs
CoreShutterbugsTests
Shutterbugs › S› M› M› F› F› View › Image View - green.png
3 comments, 2 likes
Prototype Cells
Name
Comment
Table View
Prototype Content
Add New Constraints
63
0
0
0
Spacing to nearest neighbor
Width 320
Height 316
Equal Widths
Equal Heights
Aspect Ratio
Align Leading Edges
Update Frames None
Add Constraints
GamesTableViewContro… › GamesTableViewController
//
// GamesTableViewController.swift
// Shutterbugs
//
// Copyright (c) 2014 Apple Inc. All rights reserved.
//
import UIKit
import CoreShutterbugs
class GamesTableViewController: UITableViewController {
var userSession: UserSession!
func gameListForSection(section: Int) -> Game[] {
if section == 0 {
return self.userSession.inProgressGames as Game[]
} else {
return self.userSession.completedGames as Game[]
}
}
/// Get the appropriate game (or nil) for the given index path.
func gameForIndexPath(indexPath: NSIndexPath) -> Game? {
// Get the appropriate game for this cell.
var games = self.gameListForSection(indexPath.section)
if indexPath.row < games.count {
return games[indexPath.row]
}
return nil
}
/// Table view data source
override func numberOfSectionsInTableView(tableView:
UITableView!) -> Int {
// Return the number of sections.
return 2
}
override func tableView(tableView: UITableView!,
numberOfRowsInSection section: Int) -> Int {
// Return the number of rows in the section.

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

Mon 9:41 AM

Shutterbugs 〉 iPhone 5s

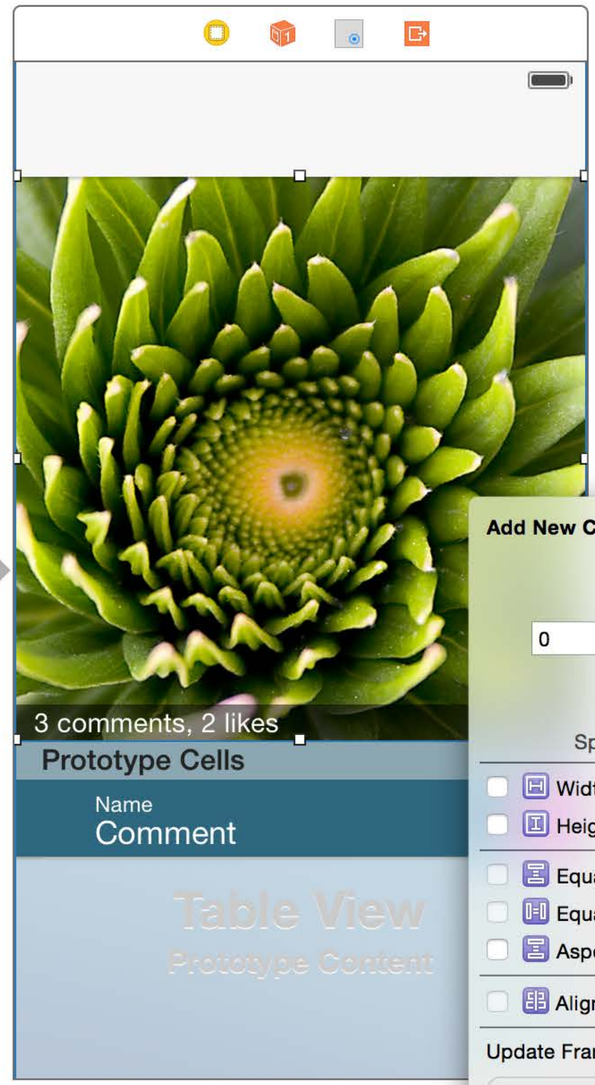
Shutterbugs | Build Shutterbugs: **Succeeded** | 5/29/14 at 9:33 AM

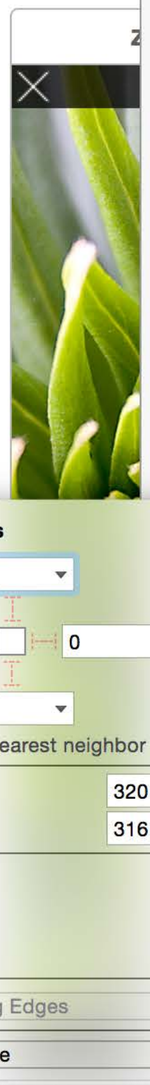
Shutterbugs 〉 S 〉 N 〉 N 〉 F 〉 F 〉 View 〉 Image View - green.png

GamesTableViewContro... 〉 GamesTableViewController

Shutterbugs
4 targets, iOS SDK 8.0

- Shutterbugs
  - Views
    - CroppedPictureView.h
    - CroppedPictureView.m
    - GamePlayerCollectionViewCell.h
    - GamePlayerCollectionViewCell.m
    - PhotoCommentTableViewCell.h
    - PhotoCommentTableViewCell.m
    - GameTableHeaderLabel.h
    - GameTableHeaderLabel.m
    - GamesTableViewCell.swift
  - Controllers
    - SignInViewController.h
    - SignInViewController.m
    - GameCollectionViewController.h
    - GameCollectionViewController.m
    - PhotoDetailViewController.h
    - PhotoDetailViewController.m
    - GamesTableViewController.swift
    - ZoomedPhotoViewController.h
    - ZoomedPhotoViewController.m
  - AppDelegate.h
  - AppDelegate.m
  - Main.storyboard
  - VignetteFilter.swift
  - Images.xcassets
  - DrawingTests.playground
  - Resources
  - Supporting Files
- ShutterbugsTests
  - PlayerTests.m
  - GameTests.m
  - PhotoVotingTests.m
  - Supporting Files
- CoreShutterbugs
- CoreShutterbugsTests





Add New Constraints

63

0 0

0

Spacing to nearest neighbor

Width 320

Height 316

Equal Widths

Equal Heights

Aspect Ratio

Align Leading Edges

Update Frames None

Add Constraints

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

import UIKit
import CoreShutterbugs

class GamesTableViewController: UITableViewController {

    var userSession: UserSession!

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

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

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

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

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

        return nil
    }

    /// Table view data source

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

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

Balloons — Balloons.playground — Edited

Balloons.playground › setupHero(_:_:)

```
func doDidMoveToView(scene : SKScene,
                     delegate : SKPhysicsContactDelegate) {


    // ================== Blimp Control ====================

    yOffsetForTime = { i in
        return 80 * sin(i / 10.0)
    }

    // ============= Scene Configuration ==================

    // Set up balloon lighting and per-pixel collisions.
    balloonConfigurator = { b in
        b.physicsBody.categoryBitMask = CONTACT_CATEGORY
        b.physicsBody.fieldBitMask = WIND_FIELD_CATEGORY
        b.lightingBitMask = BALLOON_LIGHTING_CATEGORY
    }

    // Load images for balloon explosion.
    balloonPop = (1...4).map {
        SKTexture(imageNamed: "explode_0\($0)")
    }

    // Install turbulant field forces.
    var turbulence = SKFieldNode.noiseFieldWithSmoothness(0.7,
                                 animationSpeed:0.8)
    turbulence.categoryBitMask = WIND_FIELD_CATEGORY
    turbulence.strength = 0.21
    scene.addChild(turbulence)

    cannonStrength = 210.0

    // ================ Scene Initialization =================

    // Do the rest of the setup and start the scene.
    setupHero(scene, delegate)
    setupFan(scene, delegate)
    setupCannons(scene, delegate)
}


func handleContact(bodyA : SKSpriteNode,
                   bodyB : SKSpriteNode)| {

    if (bodyA == hero) {
        bodyB.normalTexture = nil
        bodyB.runAction(removeBalloonAction)
    } else if (bodyB == hero) {
        bodyA.normalTexture = nil
        bodyA.runAction(removeBalloonAction)
    }
}
```

(Function)
(1058 times)

(Function)

(55 times)

[SKTexture, SKTexture, SKTe...
(4 times)

SKNoiseFieldNode

SKNoiseFieldNode
SKNoiseFieldNode
{GameScene {(Function)} {(F...

210.0

Timeline › Balloons.playground (Timeline)

Balloons

let y = 80 * sin(x)

− 30 sec +

GuidedTour.playground

GuidedTour.playground 〉 getGasPrices()

Functions and Closures

Use `func` to declare a function. Call a function by following its name with a list of arguments in parentheses. Use `->` to separate the parameter names and types from the function's return type.

```
func greet(name: String, day: String) -> String {
    return "Hello \(name), today is \(day)."
}
greet("Bob", "Tuesday")
```

"Hello Bob, today is Tuesday."

"Hello Bob, today is Tuesday."

EXPERIMENT

Remove the `day` parameter. Add a parameter to include today's lunch special in the greeting.

Use a tuple to return multiple values from a function.

```
func getGasPrices() -> (Double, Double, Double) {
    return (3.59, 3.69, 3.79)
}
getGasPrices()
```

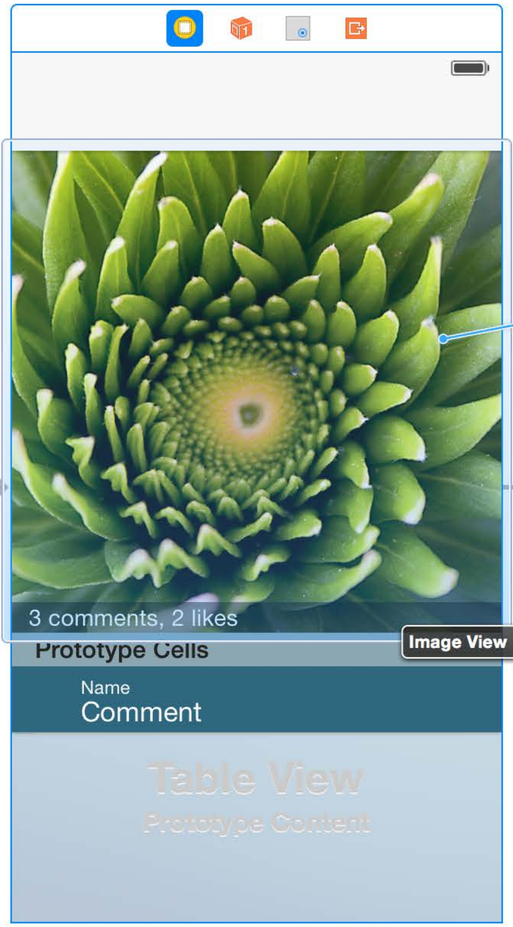
(.0 3.59, .1 3.69, .2 3.79)

(.0 3.59, .1 3.69, .2 3.79)

Functions can also take a variable number of arguments, collecting them into an array.

Shutterbugs 〉 iPhone 5s | Shutterbugs | Build Shutterbugs: **Succeeded** | Yesterday at 3:21 PM

Shutterbugs 〉 S.. 〉 M. 〉 M. 〉 Photo Detail View Controller Scene 〉 Photo Details View Controller



Automatic 〉 PhotoDetailsViewController.swift 〉 viewDidLoad()

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


import UIKit


class PhotoDetailsViewController: UIViewController, UITableViewDataSource {

    @IBOutlet var imageView: UIImageView!
    @IBOutlet var commentsView: UITableView!


    override func viewDidLoad() {
        super.viewDidLoad()

        title = gameEntry.playerName
        commentsView.dataSource = self
        imageView.image = gameEntry.image
        commentsView.separatorInset = UIEdgeInsets(top: 0, left: 0, bottom:
                    45, right: 0)
    }


    override func viewDidAppear(animated: Bool) {
        // Post-appearance configuration
        self.configureDisplayedView(view)

        // Validate our GameComment objects in the background.
        gameComments = gameEntry.comments
        self.validateGameCommentsInBackground(gameComments)
    }


    override func didReceiveMemoryWarning() {
        super.didReceiveMemoryWarning()

        // Dispose of any resources that can be recreated.
    }


    func tableView(tableView: UITableView!, numberOfRowsInSection section:
                Int) -> Int {
```

```
/*  NSUndoManager.h
    Copyright (c) 1995-2014, Apple Inc. All rights reserved.
*/

//
// NSUndoManager is a general-purpose undo stack where clients can register
// callbacks to be invoked should an undo be requested.
//

// used with NSRunLoop's performSelector:target:argument:order:modes:

var NSUndoCloseGroupingRunLoopOrdering: Int { get }

class NSUndoManager : NSObject {

    /* Begin/End Grouping */

    func beginUndoGrouping()
    func endUndoGrouping()
    // These nest.

    var groupingLevel: Int { get }
    // Zero means no open group.

    /* Enable/Disable registration */

    func disableUndoRegistration()
    func enableUndoRegistration()
    var undoRegistrationEnabled: Bool { get }

    /* Groups By Event */

    var groupsByEvent: Bool
    // If groupsByEvent is enabled, the undoManager automatically groups
    // all undos registered during a single NSRunLoop event together in
    // a single top-level group. This featured is enabled by default.

    /* Undo levels */

    var levelsOfUndo: Int
    // Sets the number of complete groups (not operations) that should
    // be kept my the manager.  When limit is reached, oldest undos are
```

```
navigationItem.leftBarButtonItem = myButtonItem
```

```
navigationItem.leftBarButtonItem = myButtonItem
```

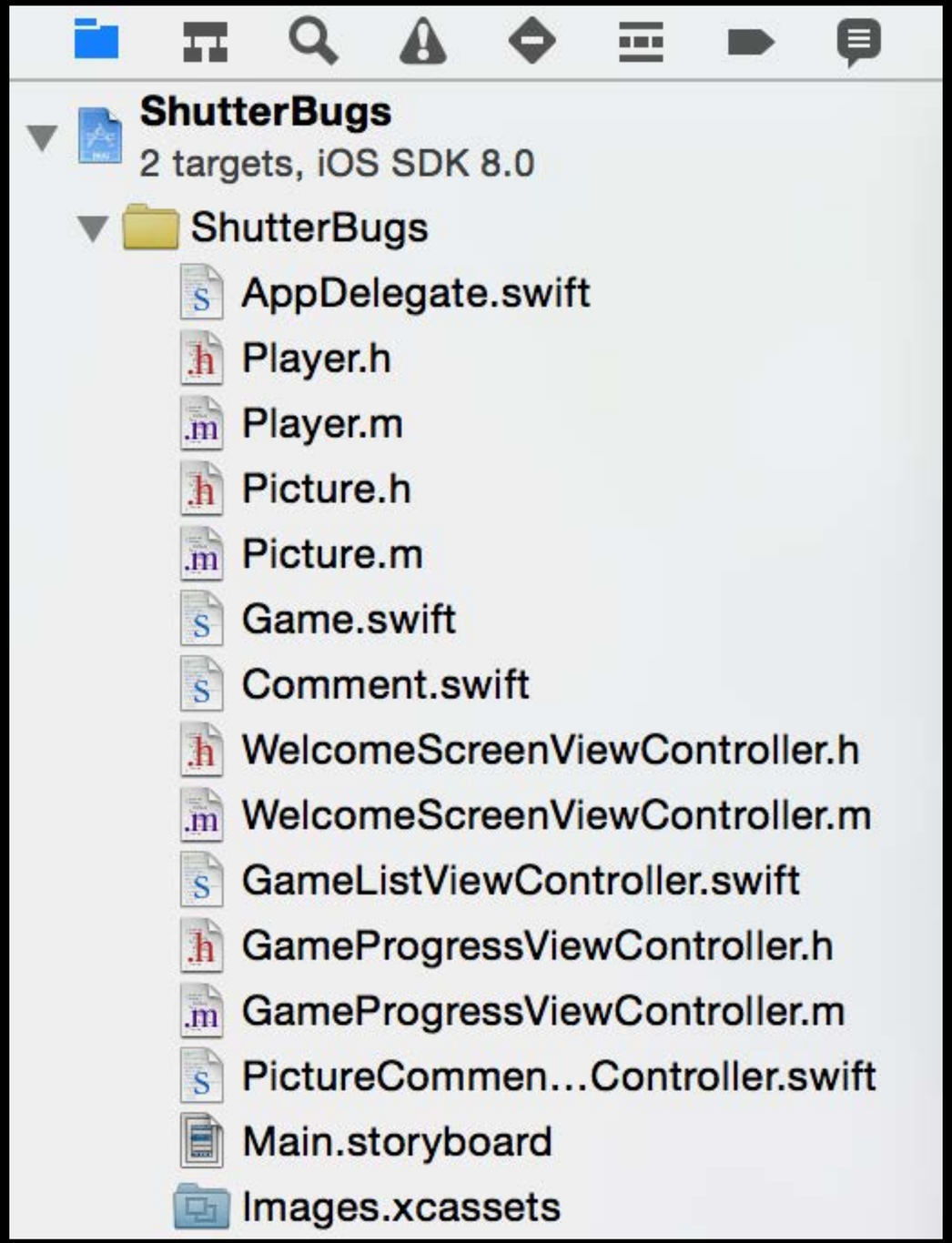
Declaration	`var leftBarButtonItem: UIBarButtonItem! { get set }`
Description	A custom bar button item displayed on the left of the navigation bar when the receiver is the top navigation item.
Availability	iOS (2.0 and later)
Declared In	UINavigationBar.h
Reference	UINavigationItem Class Reference

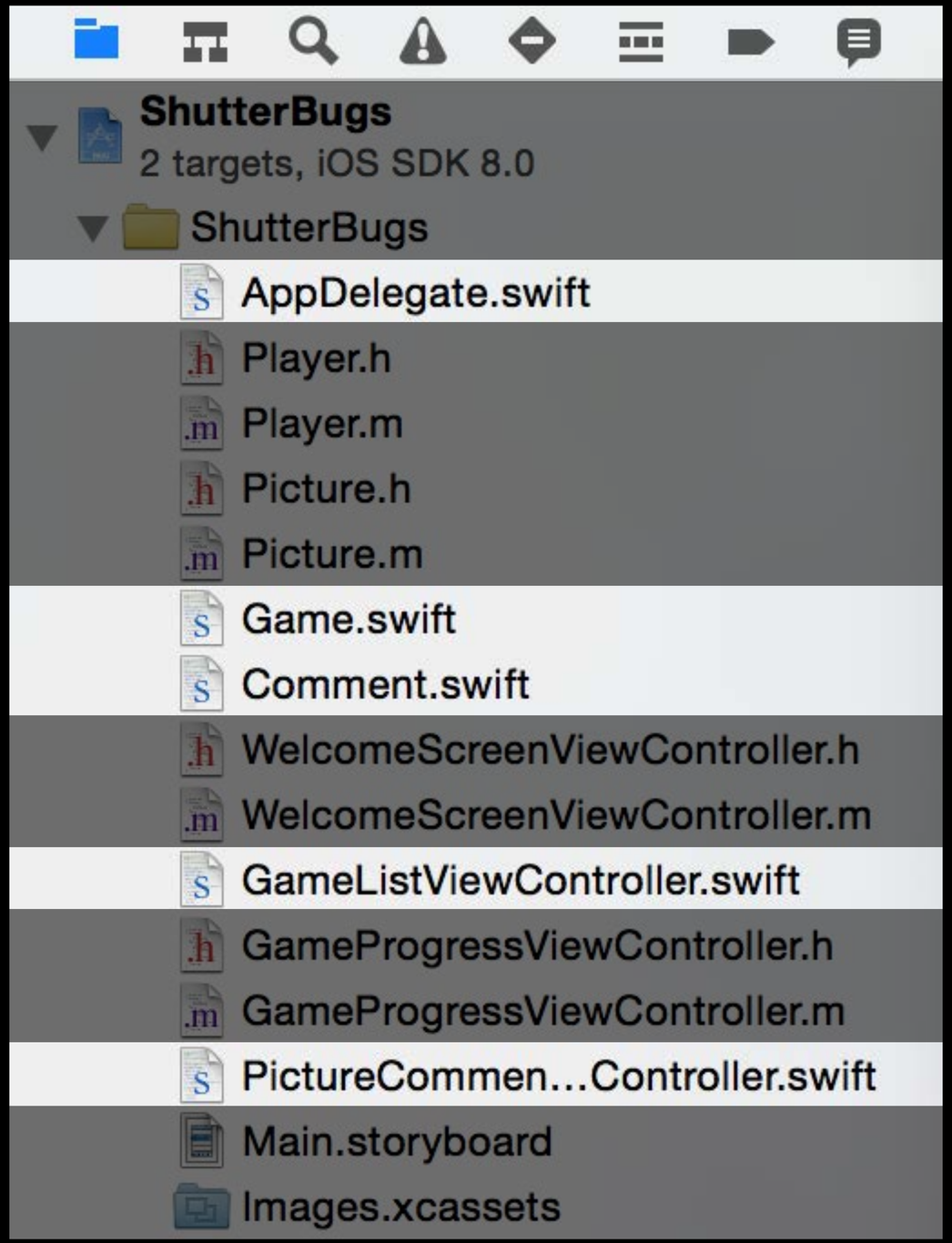
```
let object = fetchedResultsController.o
```

```
let object = fetchedResultsController.
```

Declaration `let object: NSManagedObject`

Declared In MasterViewController.swift


ShutterBugs
2 targets, iOS SDK 8.0
ShutterBugs
AppDelegate.swift
Player.h
Player.m
Picture.h
Picture.m
Game.swift
Comment.swift
WelcomeScreenViewController.h
WelcomeScreenViewController.m
GameListViewController.swift
GameProgressViewController.h
GameProgressViewController.m
PictureCommen…Controller.swift
Main.storyboard
Images.xcassets


ShutterBugs
2 targets, iOS SDK 8.0
ShutterBugs
AppDelegate.swift
Player.h
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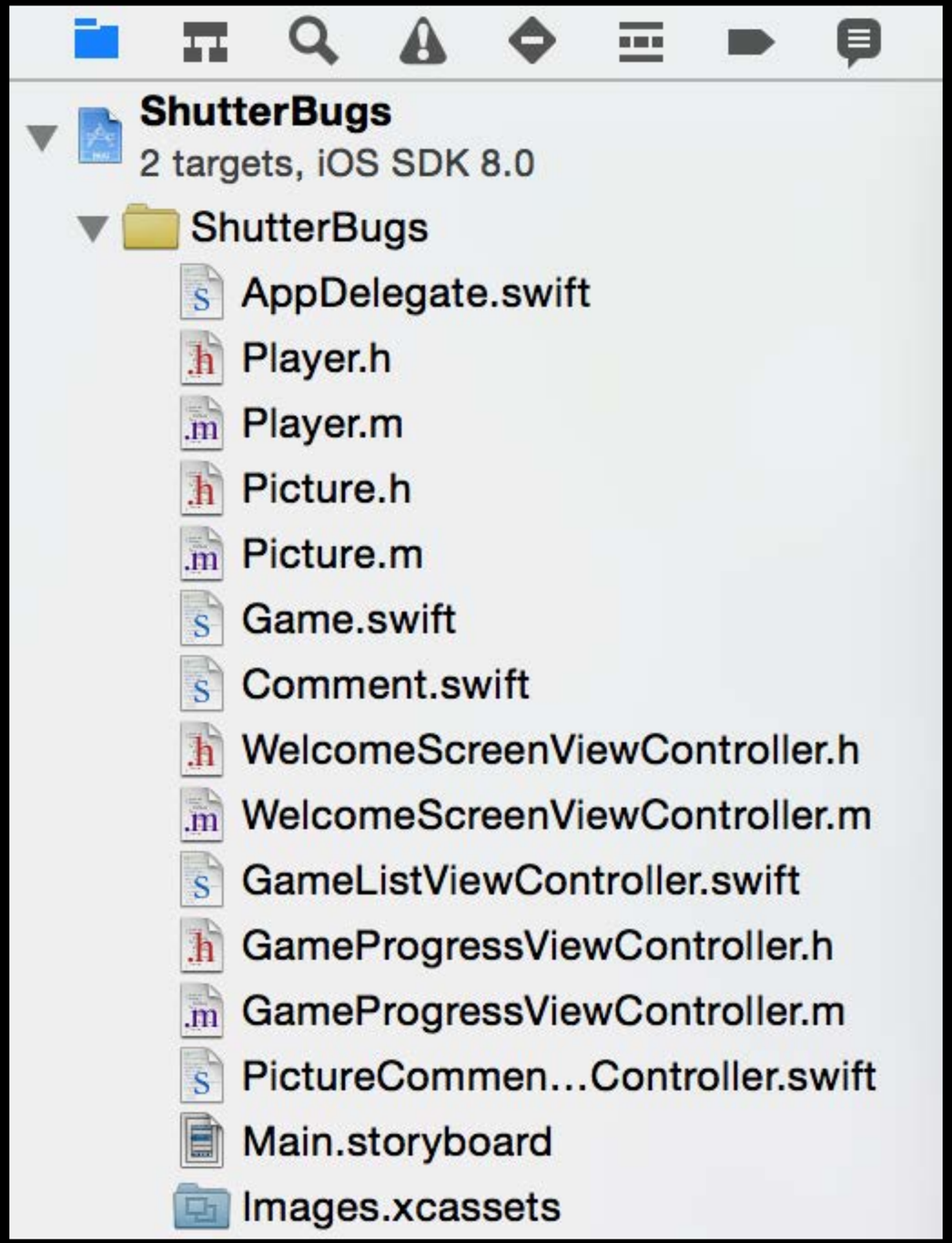
GameListViewController.swift
GameProgressViewController.h
GameProgressViewController.m
PictureCommen…Controller.swift
Main.storyboard
Images.xcassets


ShutterBugs
2 targets, iOS SDK 8.0
ShutterBugs
AppDelegate.swift
Player.h
Player.m
Picture.h
Picture.m
Game.swift
Comment.swift
WelcomeScreenViewController.h
WelcomeScreenViewController.m
GameListViewController.swift
GameProgressViewController.h
GameProgressViewController.m
PictureCommen…Controller.swift
Main.storyboard
Images.xcassets

Design

Sensors 〉 My Mac 64–bit

Sensors: **Ready** | Today at 1:51 PM

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

Main Menu

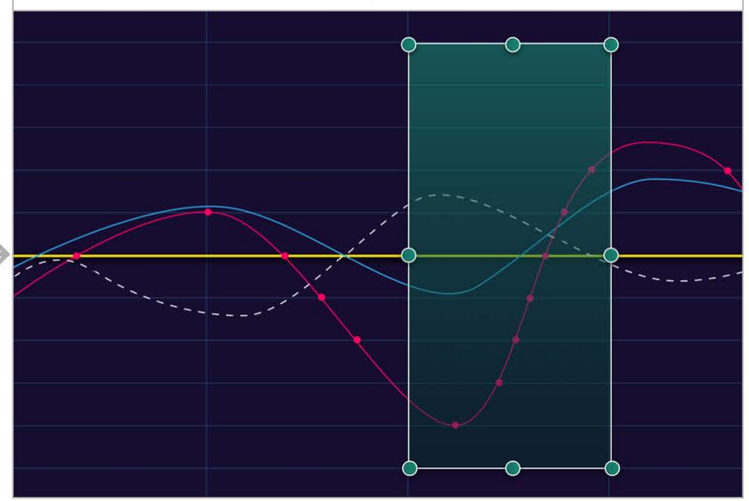
Sensors File Edit Format View Window Help

Window Controller - Window

Window

Sensor Graph Controller

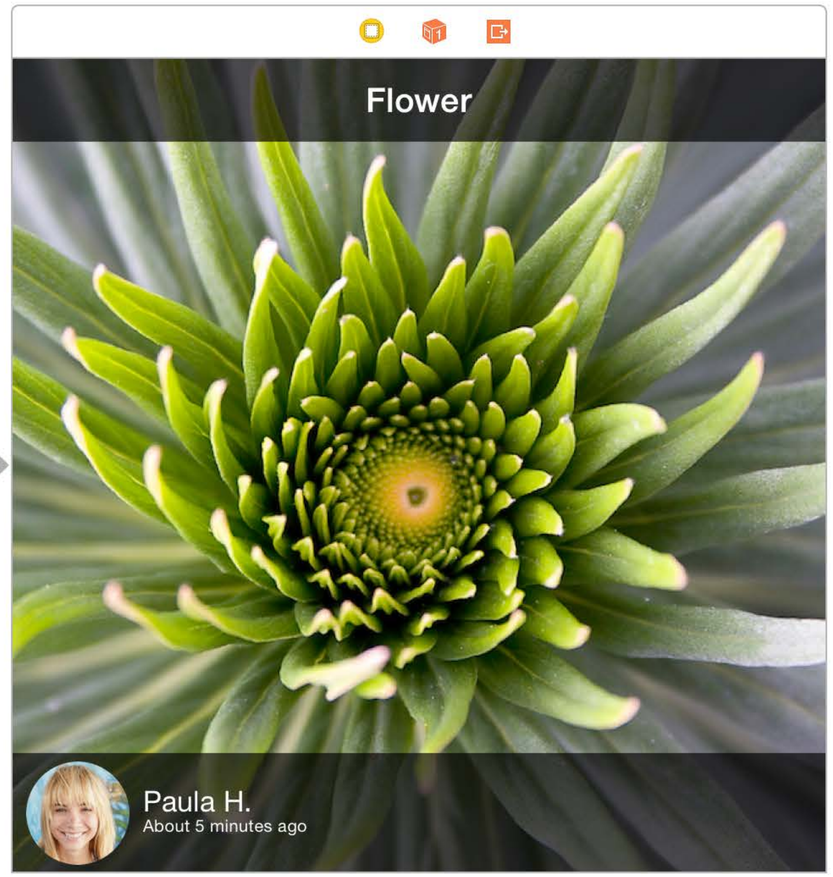
Sensor Graph Controller



Shutterbugs 〉 iPhone 5s | Shutterbugs | Build CoreShutterbugs: **Succeeded** | Today at 10:59 AM

Shutterbugs 〉 Shut… 〉 Mai… 〉 Main_iPhone.storyboard (Base) 〉 No Selection

Preview 〉 Main_iPhone.storyboard (Preview)



iPhone 4-inch

iPad

iPhone 3.5-inch

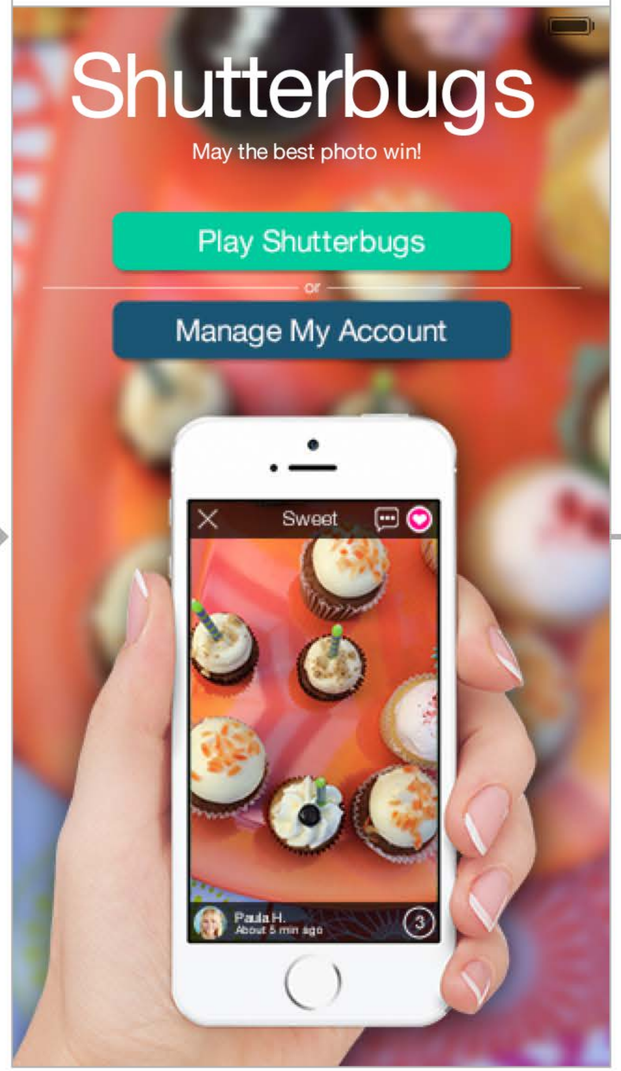
wAny hAny

English

Shutterbugs › iPhone 5s | Shutterbugs | Build Shutterbugs: **Succeeded** | 5/28/14 at 3:21 PM

Shutterbugs › Shutte… › Main_i… › Main_i… › Games… › Games… › Table… › Games… › Content View › Label - Shutterbugs

Sign In View Controller - Sign In



Label

Text: Plain
Shutterbugs
Color: White Color
Font: Giddyup 40.0
Alignment
Lines: 1
Behavior: Enabled, Highlighted
Baseline: Align Baselines
Line Breaks: Truncate Tail
Autoshrink: Fixed Font Size
Tighten Letter Spacing
Highlighted: Default
Shadow: Default
Shadow Offset: 0 Horizontal, -1 Vertical

View

Mode: Left

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

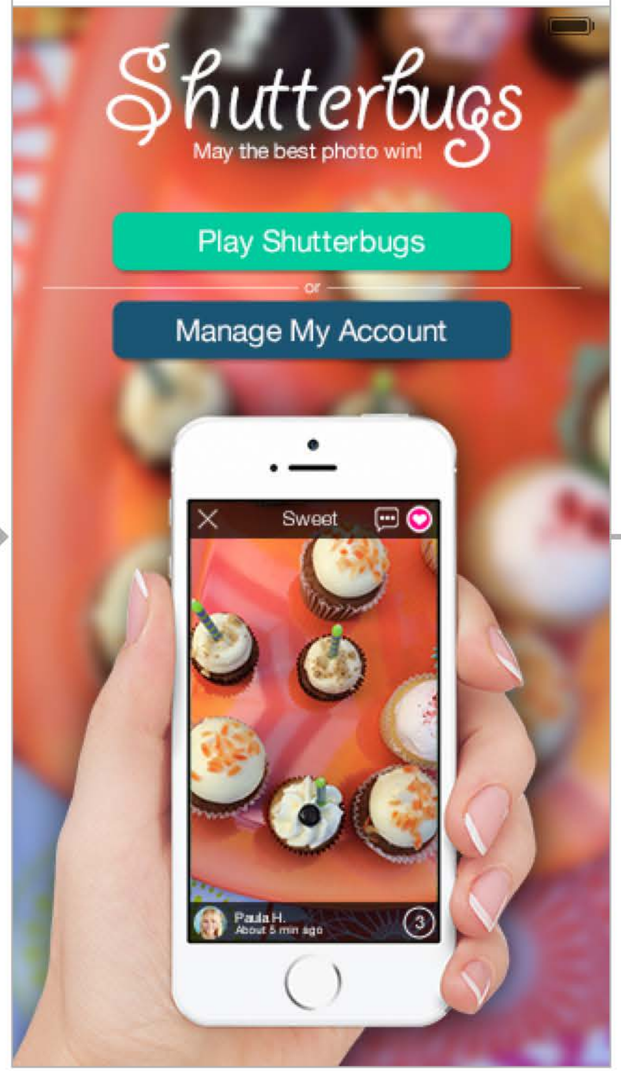
Button **Button** - Intercepts touch events and sends an action message to a target object when it's tapped.

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

Shutterbugs 〉 iPhone 5s | Shutterbugs | Build Shutterbugs: **Succeeded** | 5/28/14 at 3:21 PM

Shutterbugs 〉 Shutte... 〉 Main_i... 〉 Main_i... 〉 Games... 〉 Games... 〉 Table... 〉 Games... 〉 Content View 〉 Label - Shutterbugs

Sign In View Controller - Sign In



Label

Text: Plain
Shutterbugs
Color: White Color
Font: Giddyup 40.0
Alignment
Lines: 1
Behavior: Enabled, Highlighted
Baseline: Align Baselines
Line Breaks: Truncate Tail
Autoshrink: Fixed Font Size
Tighten Letter Spacing
Highlighted: Default
Shadow: Default
Shadow Offset: 0 Horizontal, -1 Vertical

View

Mode: Left

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.

Showcase_iOS 〉 iPad Air | Showcase: **Ready** | Today at 10:20 AM

Showcase 〉 Scenes 〉 PerPixelPhysicsScene.sks 〉 SKScene 〉 SKNode: totemStack 〉 SKSpriteNode: totem

Showcase
2 targets, multiple platforms

- Scenes
  - LightingScene.sks
  - PerPixelPhysicsScene.sks
  - PhysicsFieldsScene.sks
  - SceneKitScene.sks
  - alien.dae
  - ship.dae
- Shared
- Assets
- Showcase_Mac
- Showcase_iOS
- Frameworks
- Products

Simulate

Sprite

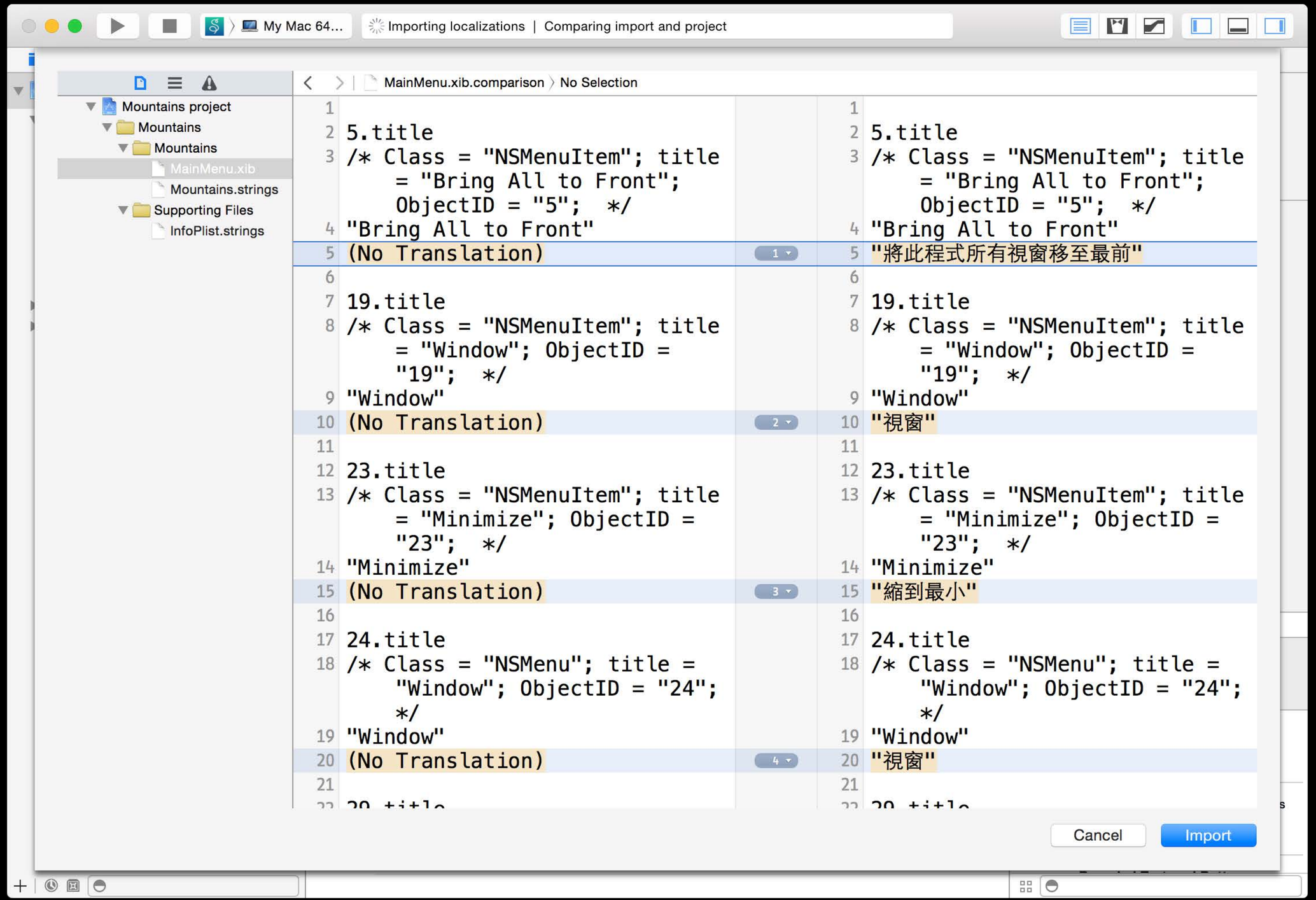
Name	totem	
Parent	totemStack	
Texture		
Position	1.818 (X)	103.795 (Y)
Size	150 (X)	75 (Y)
Anchor Point	0.5 (X)	0.5 (Y)
Color		
Blend factor	0	
Blend Mode	Alpha	
IK Constraints	0° (Min Angle)	360° (Max Angle)
Z	0 (Position)	0° (Rotation)
Scale	1 (X)	1 (Y)
Normal Map		
Auto Normal…	0 (Smoothness)	0 (Contrast)
Lighting Mask	0	
Shadow Cast…	0	
Shadowed M…	0	

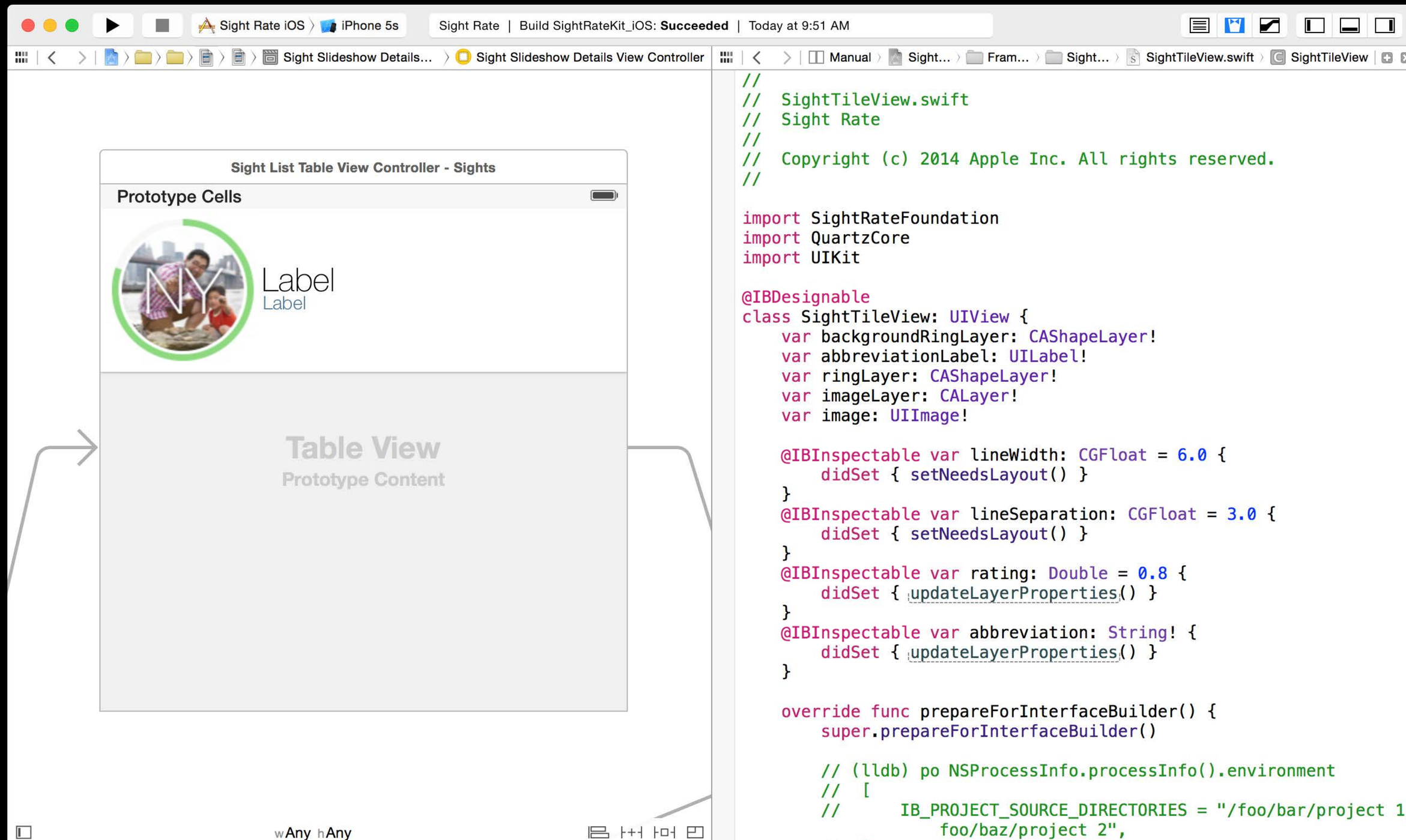
Physics Definition

Body Type: Bounding rectangle

- [x] Dynamic
- [x] Allows Rotation
- [ ] Pinned
- [x] Affected By Gravity

0.8 (Friction)	0.2 (Restitution)


My Mac 64...
Importing localizations | Comparing import and project
Mountains project
Mountains
Mountains
MainMenu.xib
Mountains.strings
Supporting Files
InfoPlist.strings
MainMenu.xib.comparison
No Selection
5.title
/* Class = "NSMenuItem"; title = "Bring All to Front"; ObjectID = "5"; */
"Bring All to Front"
(No Translation)
"將此程式所有視窗移至最前"
19.title
/* Class = "NSMenuItem"; title = "Window"; ObjectID = "19"; */
"Window"
(No Translation)
"視窗"
23.title
/* Class = "NSMenuItem"; title = "Minimize"; ObjectID = "23"; */
"Minimize"
(No Translation)
"縮到最小"
24.title
/* Class = "NSMenu"; title = "Window"; ObjectID = "24"; */
"Window"
(No Translation)
"視窗"
Cancel
Import


Sight Rate iOS
iPhone 5s
Sight Rate | Build SightRateKit_iOS: Succeeded | Today at 9:51 AM
Sight Slideshow Details...
Sight Slideshow Details View Controller
Manual
Sight...
Fram...
Sight...
SightTileView.swift
SightTileView
Sight List Table View Controller - Sights
Prototype Cells
Label
Label
Table View
Prototype Content
wAny hAny
//
// SightTileView.swift
// Sight Rate
//
// Copyright (c) 2014 Apple Inc. All rights reserved.
//
import SightRateFoundation
import QuartzCore
import UIKit
@IBDesignable
class SightTileView: UIView {
var backgroundRingLayer: CAShapeLayer!
var abbreviationLabel: UILabel!
var ringLayer: CAShapeLayer!
var imageLayer: CALayer!
var image: UIImage!
@IBInspectable var lineWidth: CGFloat = 6.0 {
didSet { setNeedsLayout() }
}
@IBInspectable var lineSeparation: CGFloat = 3.0 {
didSet { setNeedsLayout() }
}
@IBInspectable var rating: Double = 0.8 {
didSet { updateLayerProperties() }
}
@IBInspectable var abbreviation: String! {
didSet { updateLayerProperties() }
}
override func prepareForInterfaceBuilder() {
super.prepareForInterfaceBuilder()
// (lldb) po NSProcessInfo.processInfo().environment
// [
// IB_PROJECT_SOURCE_DIRECTORIES = "/foo/bar/project 1,
foo/baz/project 2",

Sight List Table View Controller - Sights

Prototype Cells

Label
Label

Table View
Prototype Content

wAny hAny


```
//
//  SightTileView.swift
//  Sight Rate
//
//  Copyright (c) 2014 Apple Inc. All rights reserved.
//

import SightRateFoundation
import QuartzCore
import UIKit

@IBDesignable
class SightTileView: UIView {
    var backgroundRingLayer: CAShapeLayer!
    var abbreviationLabel: UILabel!
    var ringLayer: CAShapeLayer!
    var imageLayer: CALayer!
    var image: UIImage!

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    override func prepareForInterfaceBuilder() {
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        // (lldb) po NSProcessInfo.processInfo().environment
        //  [
        //      IB_PROJECT_SOURCE_DIRECTORIES = "/foo/bar/project 1,
                    foo/baz/project 2",
```

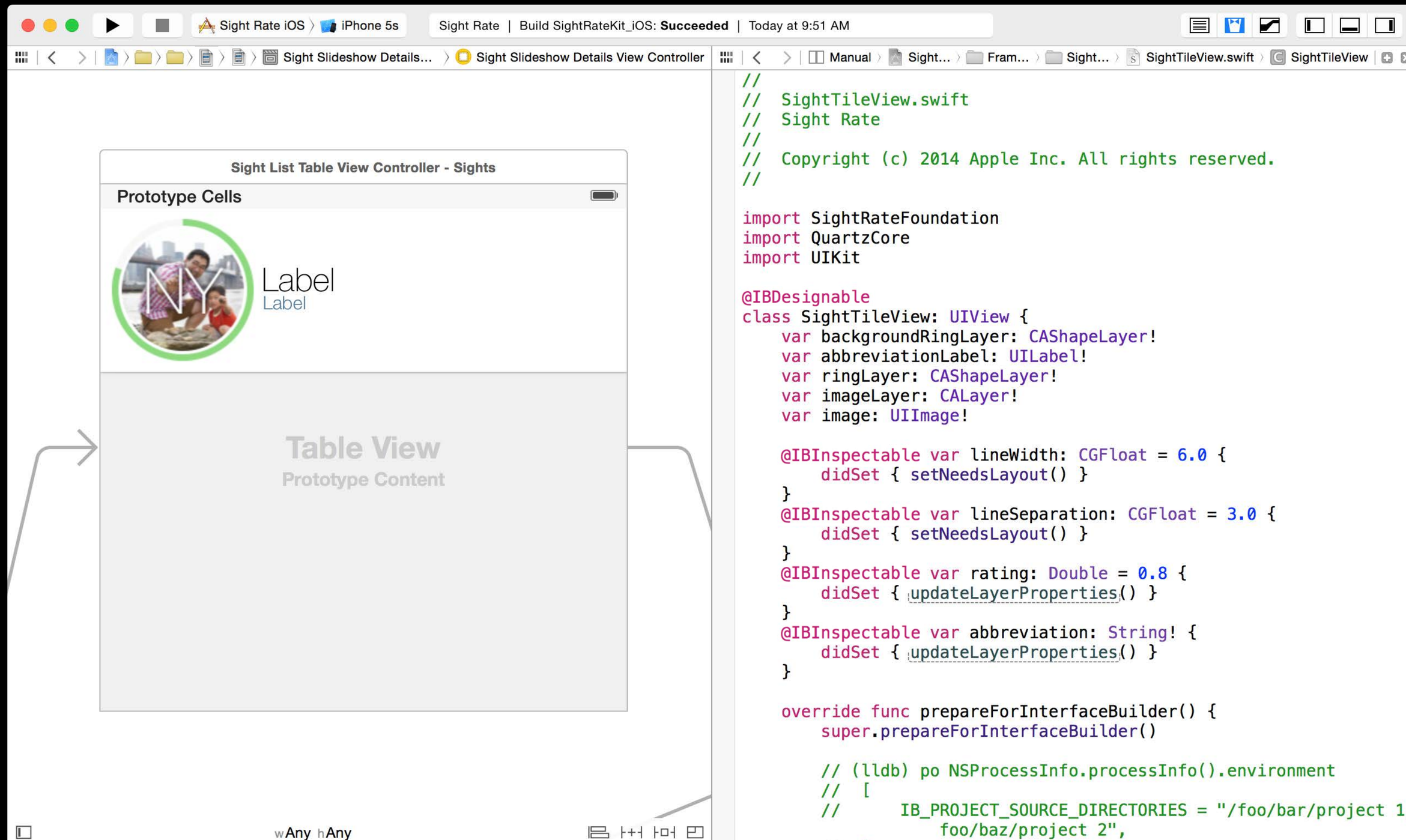
Sight Rate iOS
iPhone 5s
Sight Rate | Build SightRateKit_iOS: Succeeded | Today at 9:51 AM
Sight Slideshow Details...
Sight Slideshow Details View Controller
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@IBDesignable
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var ringLayer: CAShapeLayer!
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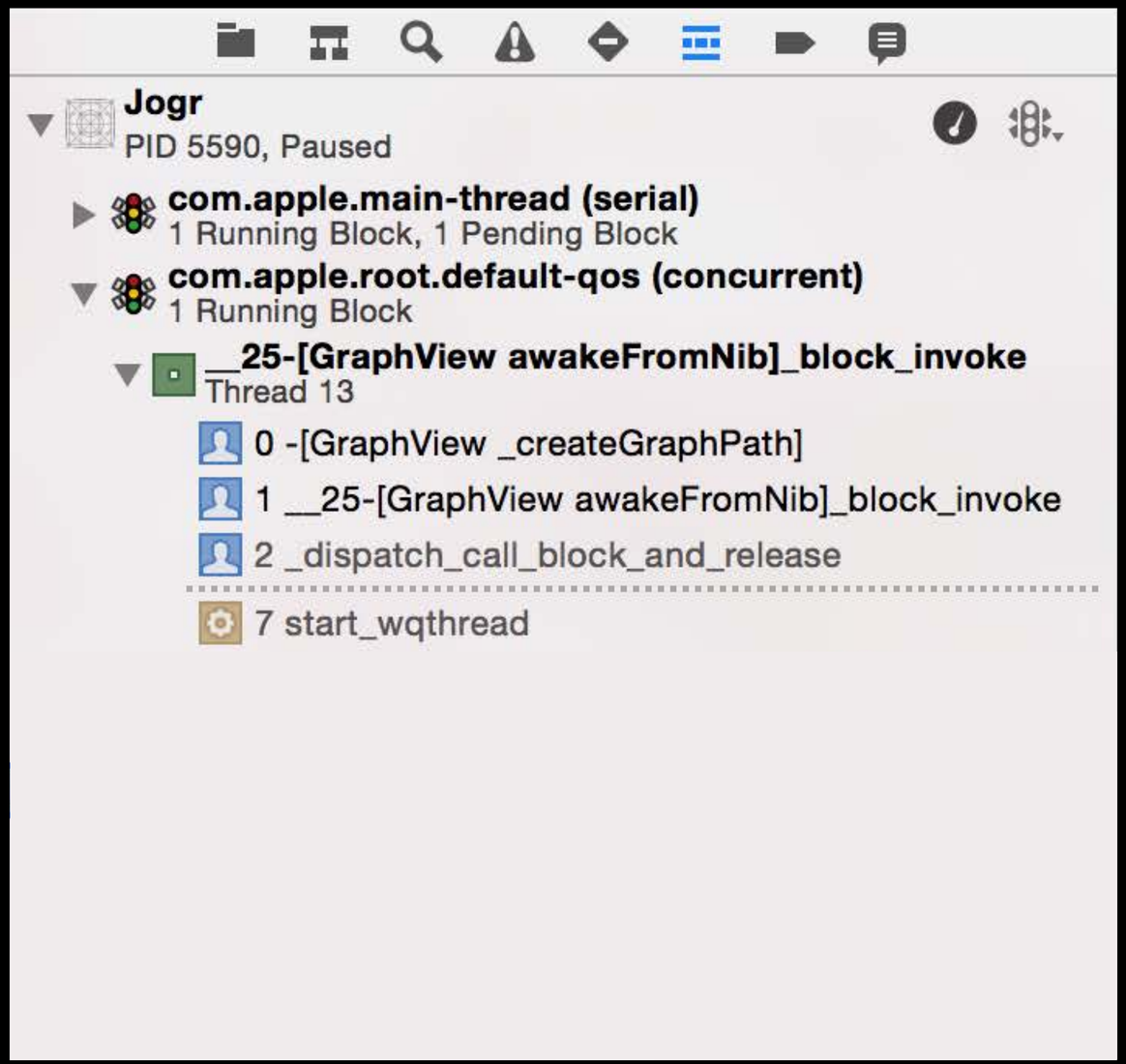
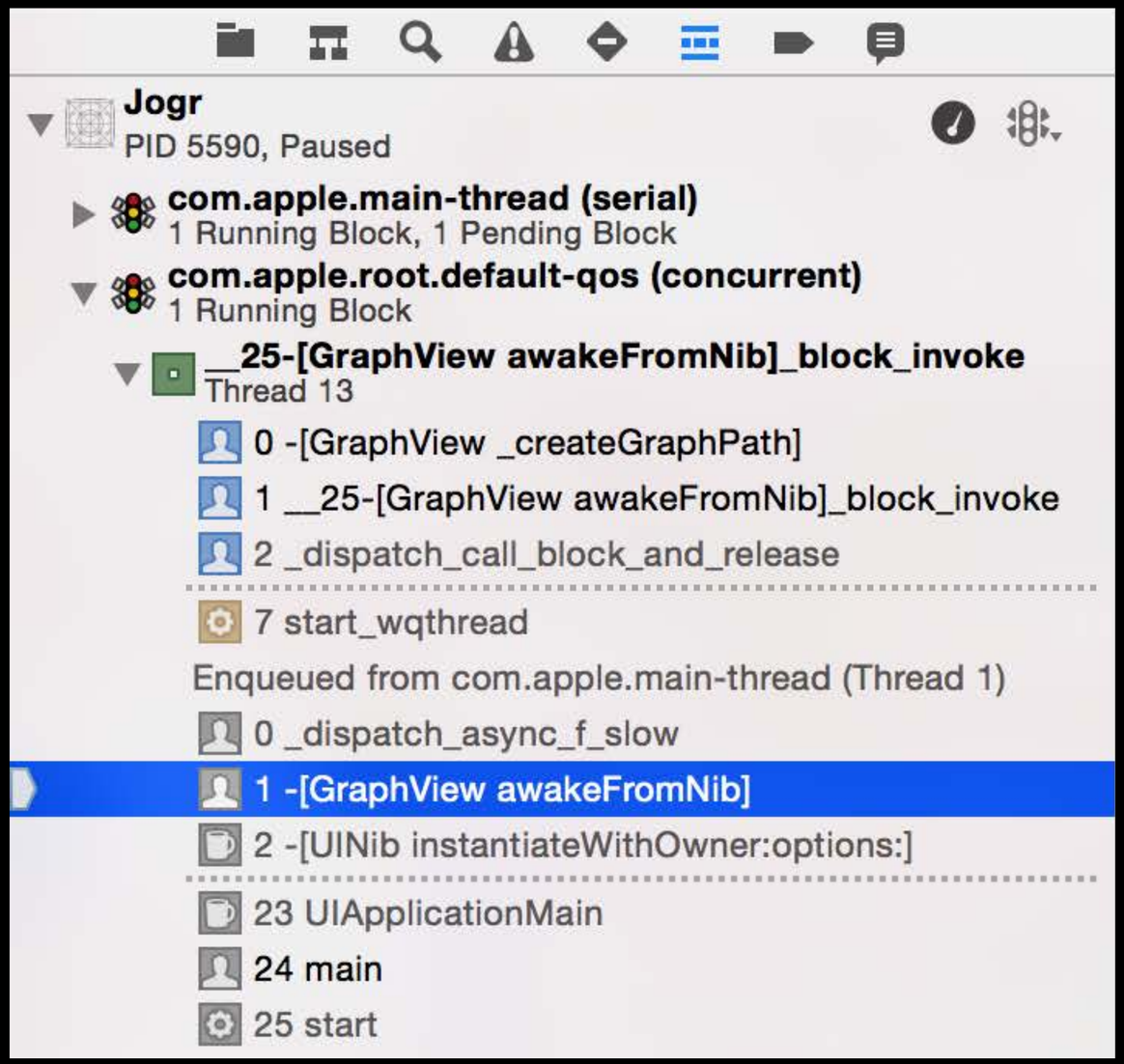
super.prepareForInterfaceBuilder()
// (lldb) po NSProcessInfo.processInfo().environment
// [
// IB_PROJECT_SOURCE_DIRECTORIES = "/foo/bar/project 1,
foo/baz/project 2",

LLDB

LLDB

LLDB


Jogr
PID 5590, Paused
com.apple.main-thread (serial)
1 Running Block, 1 Pending Block
com.apple.root.default-qos (concurrent)
1 Running Block
__25-[GraphView awakeFromNib]_block_invoke
Thread 13
0 -[GraphView _createGraphPath]
1 __25-[GraphView awakeFromNib]_block_invoke
2 _dispatch_call_block_and_release
7 start_wqthread


Jogr
PID 5590, Paused
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1 Running Block, 1 Pending Block
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1 Running Block
__25-[GraphView awakeFromNib]_block_invoke
Thread 13
0 -[GraphView _createGraphPath]
1 __25-[GraphView awakeFromNib]_block_invoke
2 _dispatch_call_block_and_release
7 start_wqthread
Enqueued from com.apple.main-thread (Thread 1)
0 _dispatch_async_f_slow
1 -[GraphView awakeFromNib]
2 -[UINib instantiateWithOwner:options:]
23 UIApplicationMain
24 main
25 start

WWDC Today 〉 Mike's iPad

Running com.apple.WWDC.WWDC-Today on Mike's iPad

WWDC 〉 WWDC Today 〉 TodayViewController.m 〉 @implementation TodayViewController

com.apple.WWDC.WWDC-Today
PID 813, Paused

CPU 3%

Memory 4.9 MB

Disk Zero KB/s

Network Zero KB/s

Thread 1
Queue: com.apple.main-thread (serial)

- 0 -[TodayViewController getSessionFro...
- 1 -[TodayViewController viewDidLoad]
- 2 <redacted>
- 42 start
- Enqueued from com.apple.uikit._UIViewSer...
- 0 _dispatch_barrier_async_f
- 15 start_wqthread

Thread 2
Queue: com.apple.libdispatch-manager (serial)

com.apple.coremedia.player.async (9)

Thread 10

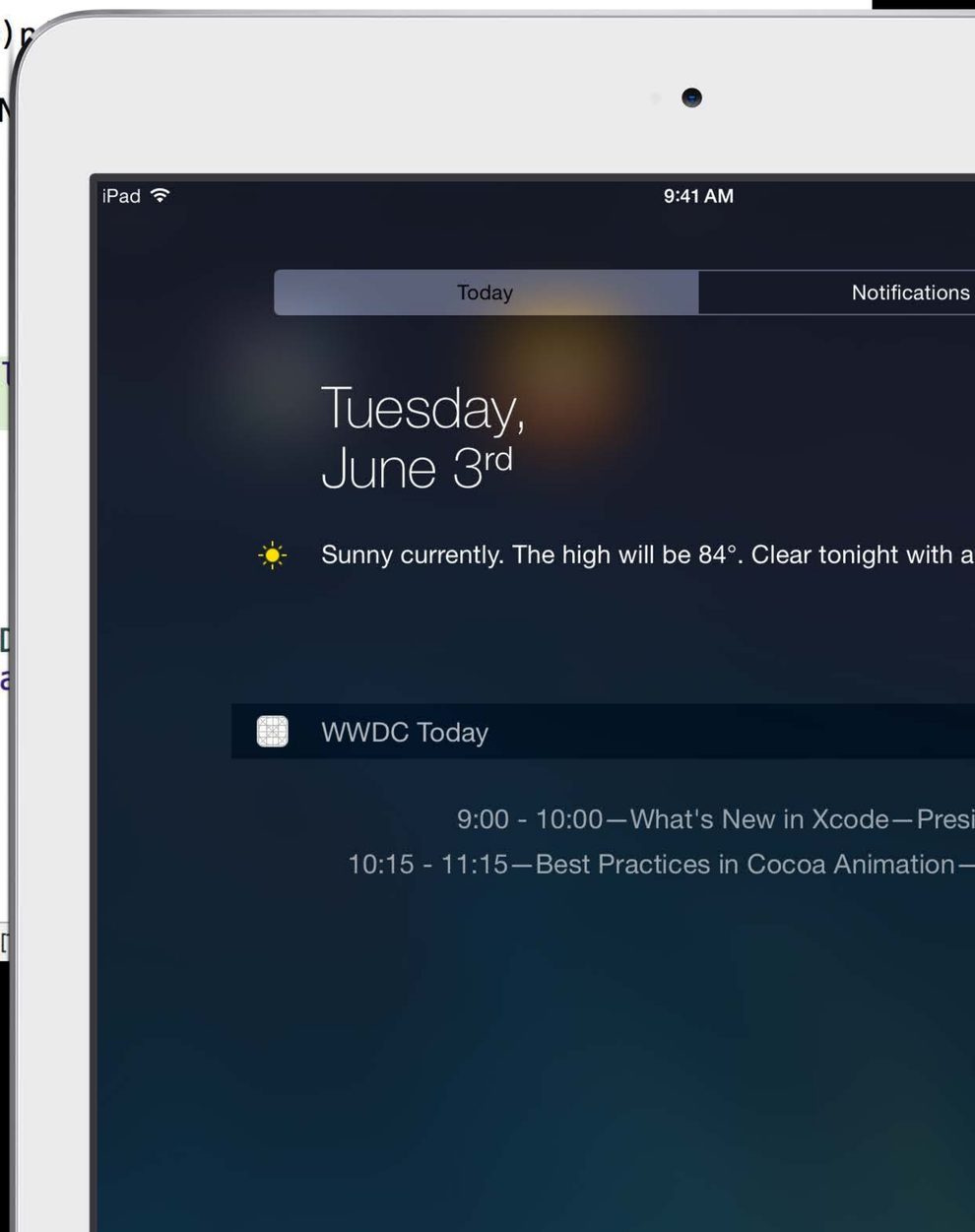
Thread 11

Thread 12

Thread 13

```
19 @implementation TodayViewController
20
21 - (instancetype)initWithNibName:(NSString *)n
       nibBundleOrNil {
22     self = [super initWithNibName:nibNameOrN
23     if (self) {
24     }
25     return self;
26 }
27
28 - (WWDCSession *)getSessionFromDatabase {
29     WWDCSession *session = [[WWDCSession all
           currentDatabaseID]];
30     return session;
31 }
32
33 - (void)viewDidLoad {
34     [super viewDidLoad];
35     self.nextSession = [self getSessionFromD
36     self.dateFormatter = [[NSDateFormatter a
37     self.secondLabel.backgroundColor = nil;
38     self.label.backgroundColor = nil;
39 }
40
41 - (void)didReceiveMemoryWarning {
42     [super didReceiveMemoryWarning];
```

com.apple.WWDC.WWDC-Today 〉 Thread 1 〉 0 -[



Network

Receiving and S

Active Connect

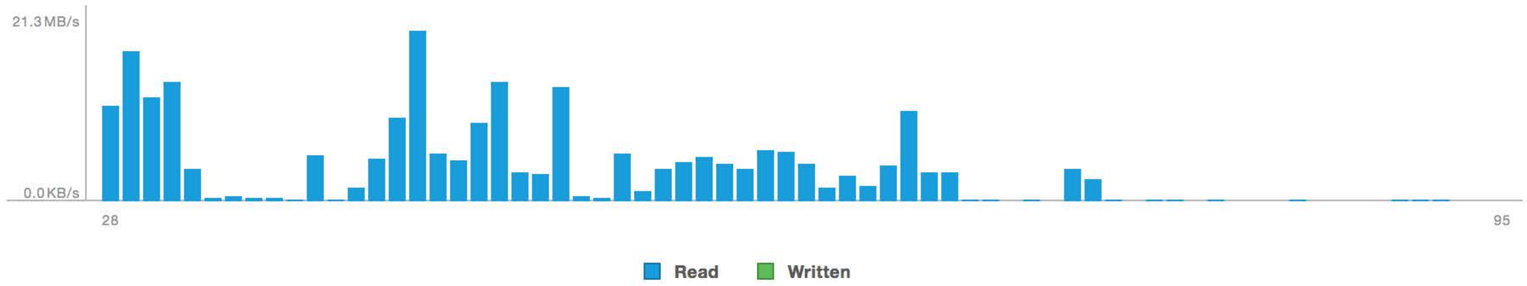
Protocol	Local

Disk

Profile in Instruments

Reading		Writing	
0.0 KB/s	0.2 GB	0.0 KB/s	44.0 KB
Per Second	Total	Per Second	Total

Reading and Writing Rates



Open Files

Descriptor	Type	Device	Size/Offset	Inode	Path
0r	CHR	50,331,650	0	316	/dev/null
1u	CHR	50,331,650	0	316	/dev/null
2u	CHR	50,331,650	1,247	316	/dev/null
4r	REG	0	512	22,312	/System/Library/CoreServices/SystemAppearance.bundle/Contents/R…
5r	REG	0	512	22,311	/System/Library/CoreServices/SystemAppearance.bundle/Contents/R…
6r	REG	0	0	28,042	/System/Library/Frameworks/Carbon.framework/Versions/A/Framewo…
8r	DIR	0	0	240,435	/System/Library/CoreServices/RawCameraSupport.bundle
9r	DIR	0	0	40	/System/Library/CoreServices
10r	DIR	0	0	37	/System/Library
11r	DIR	0	0	36	/System
15r	DIR	0	0	2,080,819	/Volumes/Local/Platforms/Syrah/Users/demo/Library/FontCollections
16r	REG	0	0	2,080,820	/Volumes/Local/Platforms/Syrah/Users/demo/Library/FontCollections/…
17r	REG	0	0	2,080,821	/Volumes/Local/Platforms/Syrah/Users/demo/Library/FontCollections/…
18r	REG	0	0	2,080,822	/Volumes/Local/Platforms/Syrah/Users/demo/Library/FontCollections/…
19r	REG	0	0	2,080,823	/Volumes/Local/Platforms/Syrah/Users/demo/Library/FontCollections/…

Shutterbugs › iPhone 5s

Running Shutterbugs on iPhone 5s

Shutterbugs
PID 20050, Paused

CPU 99%

Memory 88.7 MB

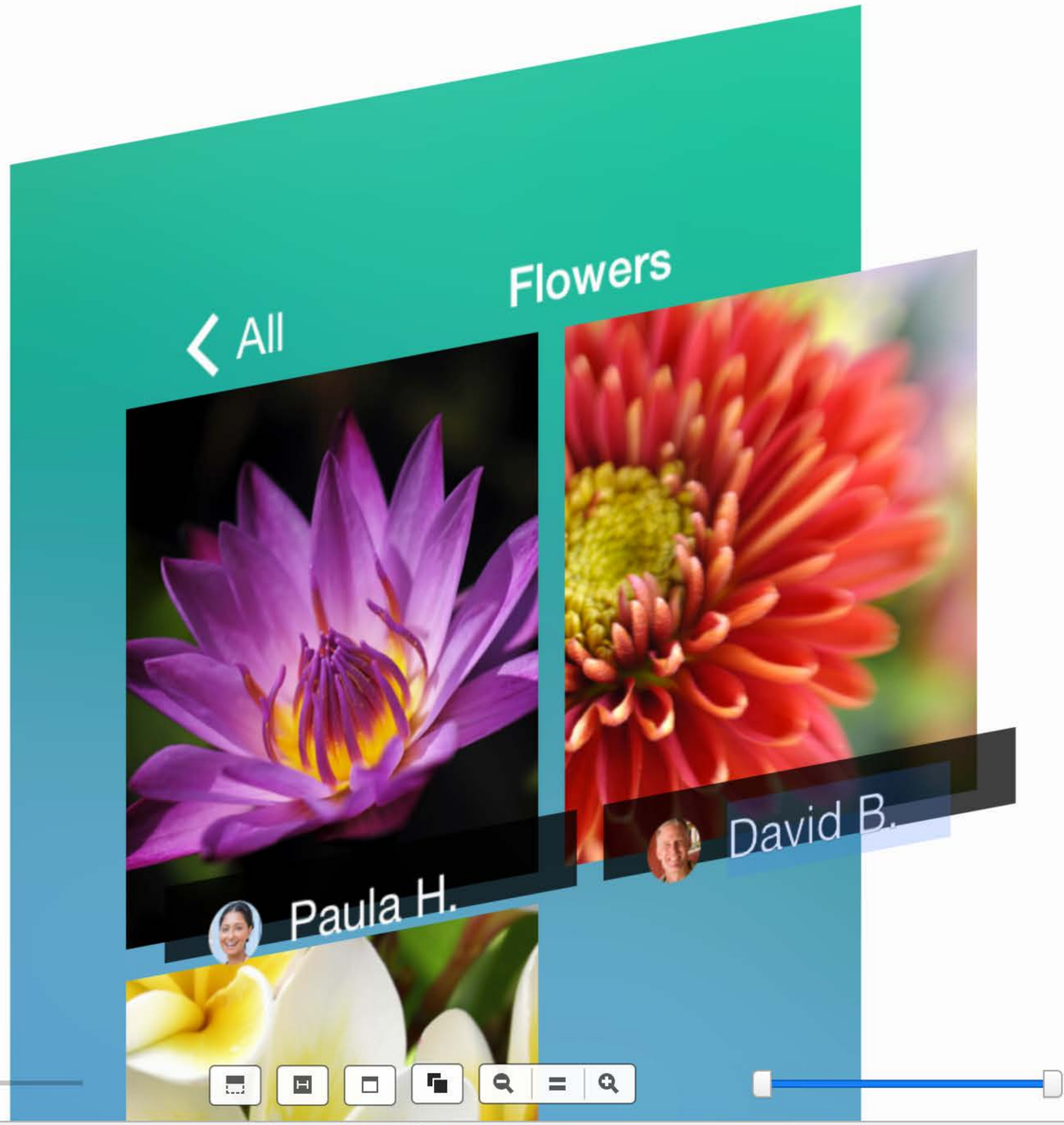
Disk Zero KB/s

Network Zero KB/s

- UIWindow
  - UITransitionView
    - UILayoutContainerView
      - UITransitionView
        - UIViewControllerWrapperView
          - UILayoutContainerView
            - UINavigationTransitionView
              - UIViewControllerWrapperView
                - UICollectionViewControllerW…
                - UICollectionView
                - GamePlayerCollectionV…
                - UIView
                - UIView
                - UILabel
                - GamePlayerCollectionV…
                - UIView
                - UIView
                - UILabel
                - GamePlayerCollectionV…
                - UIView
                - UIView
                - UILabel
  - UINavigationBar
    - UINavigationItemView
      - UILabel
    - UINavigationItemButtonView
      - UILabel

UILabel

Shutterbugs › U› U› U› U› U› U› U› U› U› U› U› G› U› UIView › UILabel



Shutterbugs › Thread 1 › 0 mach_msg_trap

Object

Class Name UILabel
Address 0x10d318890

Label

Text David B.
Plain Text
Text R:1 G:1 B:1 A:1
System Font Regular
Aligned Left
Lines 1
Behavior Enabled Off
Highlighted Off
Baseline Align Baselines
Line Breaks Truncate Tail
Min Font Scale 0
Min Font Size 0
Tighten Letter Spacing Off
Highlighted <nil color>
Shadow <nil color>
Shadow Offs… 0
Y -1

Instruments

Matthew's MacBook Pro 〉All Processes | Run 1 of 1 00:01:17

All Cores | All Processes / Threads

Instruments

Time Profiler

Time Profiler 〉Call Tree 〉Call Tree

Process

Running Time	Self	Symbol Name
85.0ms 100.0%	0.0	* All *
2.0ms 2.3%	0.0	▶Shutterbugs (564)
2.0ms 2.3%	0.0	▼Instruments (1272)
2.0ms 2.3%	0.0	▼_dispatch_worker_thread3 0x6955c
2.0ms 2.3%	1.0	▼__49-[PFTPersistentSymbols learnSymbolsForBacktrace:]_block_invoke InstrumentsPlugIn
2.0ms 2.3%	0.0	-[PFTPersistentSymbols learnSymbolsForBacktrace:] InstrumentsPlugIn
2.0ms 2.3%	0.0	-[PFTPersistentSymbols learnSymbolsForBacktrace:] InstrumentsPlugIn
1.0ms 1.1%	0.0	▼-[PFTPersistentSymbols _shadowSymbolForAddress:inSymbolicator:atTime:] InstrumentsPlugIn
1.0ms 1.1%	0.0	▼__49-[PFTPersistentSymbols learnSymbolsForBacktrace:]_block_invoke InstrumentsPlugIn
1.0ms 1.1%	0.0	-[PFTPersistentSymbols learnSymbolsForBacktrace:] InstrumentsPlugIn
1.0ms 1.1%	0.0	▼0x10567f1f8 CoreSymbolicationDT
1.0ms 1.1%	0.0	▼-[PFTPersistentSymbols _iterateStackFramesForAddress:inSymbolOwner:atTime:] InstrumentsPlugIn
1.0ms 1.1%	0.0	▼-[PFTPersistentSymbols _shadowSymbolForAddress:inSymbolicator:atTime:] InstrumentsPlugIn
1.0ms 1.1%	0.0	▼__49-[PFTPersistentSymbols learnSymbolsForBacktrace:]_block_invoke InstrumentsPlugIn
1.0ms 1.1%	0.0	-[PFTPersistentSymbols learnSymbolsForBacktrace:] InstrumentsPlugIn
1.0ms 1.1%	0.0	▼-[PFTPersistentSymbols _shadowSymbolForCSSymbol:isConcrete:] InstrumentsPlugIn
1.0ms 1.1%	0.0	▼__75-[PFTPersistentSymbols _iterateStackFramesForAddress:inSymbolOwner:atTime:]_block_invoke InstrumentsPlugIn
1.0ms 1.1%	0.0	▼0x10567f1f8 CoreSymbolicationDT
1.0ms 1.1%	0.0	▼-[PFTPersistentSymbols _iterateStackFramesForAddress:inSymbolOwner:atTime:] InstrumentsPlugIn
1.0ms 1.1%	0.0	▼-[PFTPersistentSymbols _shadowSymbolForAddress:inSymbolicator:atTime:] InstrumentsPlugIn
1.0ms 1.1%	0.0	▼__49-[PFTPersistentSymbols learnSymbolsForBacktrace:]_block_invoke InstrumentsPlugIn
1.0ms 1.1%	0.0	-[PFTPersistentSymbols learnSymbolsForBacktrace:] InstrumentsPlugIn
1.0ms 1.1%	0.0	▼-[PFTPersistentSymbols _iterateStackFramesForAddress:inSymbolOwner:atTime:] InstrumentsPlugIn
1.0ms 1.1%	0.0	▼-[PFTPersistentSymbols _shadowSymbolForAddress:inSymbolicator:atTime:] InstrumentsPlugIn
1.0ms 1.1%	0.0	▼__49-[PFTPersistentSymbols learnSymbolsForBacktrace:]_block_invoke InstrumentsPlugIn
1.0ms 1.1%	0.0	-[PFTPersistentSymbols learnSymbolsForBacktrace:] InstrumentsPlugIn
1.0ms 1.1%	1.0	▼iCSTypeDictionaryEqualCallBack InstrumentsPlugIn

Sample Perspective

- All Sample Counts
- Running Sample Times

Call Tree

- [x] Separate by Thread
- [x] Invert Call Tree
- [ ] Hide Missing Symbols
- [x] Hide System Libraries
- [ ] Flatten Recursion
- [x] Top Functions

Call Tree Constraints

- [ ] Count 0 ∞
- [ ] Time (ms) -∞ ∞

Data Mining

Symbol | Library | Restore

Configure bot triggers:

After Integration:

▶ **Notify Committers on Failure** ×

▼ **Run Script** ×

```
1 # Open a new issue in our bug tracker
2
3 # ...or sound the "broken bot" siren
4
5 # ...or activate the electrodes in the
6 # chairs of all the recent committers
7
8 # You decide!
```

Run Script: ☐ On success
☑ On test failures
☑ On build errors

Cancel Previous Create

SeismicXML 〉 iPhone 5s | SeismicXML | Build SeismicXML: **Succeeded** | Today at 9:00 AM

SeismicXML 〉 SeismicXML Tests 〉 TestAPLParseOperation.m 〉 -testParsingValidXML_Time

SeismicXML Tests
5 tests
- TestAPLParseOperation
  - testParsingValidXML
  - testValidateEarthQuakeData
  - testValidateEarthQuakeData...
  - testParsingValidXML_Time
- TestParseGeoJSON
  - testParseGEOJSON

```
- (void)testValidateEarthQuakeData_Time {

        NSURL *dataURL = [[NSBundle bundleForClass:[self class]] URLForResource:@"TestInputData"
                  withExtension:@"xml"];
        NSData *XMLData = [NSData dataWithContentsOfURL:dataURL];
        APLParseOperation *parseOperation = [[APLParseOperation alloc] initWithData:XMLData];
        [parseOperation start];
        XCTAssertEqual(parseOperation.allEarthquakes.count, 50);
        for (APLEarthquake *earthquake in parseOperation.allEarthquakes) {
            XCTAssert([earthquake validateWithError:NULL]);
        }

}



- (void)testParsingValidXML_Time {

        NSURL *dataURL = [[NSBundle bundleForClass:[self class]] URLForResource:@"TestInputData"
                  withExtension:@"xml"];
        NSData *XMLData = [NSData dataWithContentsOfURL:dataURL];
        APLParseOperation *parseOperation = [[APLParseOperation alloc] initWithData:XMLData];
        [parseOperation start];
        XCTAssertEqual(parseOperation.allEarthquakes.count, 50);

}
```

SeismicXML 〉 iPhone 5s | SeismicXML | Build SeismicXML: **Succeeded** | Today at 9:00 AM

SeismicXML 〉 SeismicXML Tests 〉 TestAPLParseOperation.m 〉 @implementation TestAPLParseOperation

- **SeismicXML Tests**
  5 tests
  - TestAPLParseOperation
    - testParsingValidXML
    - testValidateEarthQuakeData
    - testValidateEarthQuakeData...
    - testParsingValidXML_Time
  - TestParseGeoJSON
    - testParseGEOJSON

```objc
- (void)testValidateEarthQuakeData_Time {
    [self measureBlock:^{                                   Time: 0.205 sec (2% better, 1% STDEV)
        NSURL *dataURL = [[NSBundle bundleForClass:[self class]] URLForResource:@"TestInputData"
                          withExtension:@"xml"];
        NSData *XMLData = [NSData dataWithContentsOfURL:dataURL];
        APLParseOperation *parseOperation = [[APLParseOperation alloc] initWithData:XMLData];
        [parseOperation start];
        XCTAssertEqual(parseOperation.allEarthquakes.count, 50);
        for (APLEarthquake *earthquake in parseOperation.allEarthquakes) {
            XCTAssert([earthquake validateWithError:NULL]);
        }
    }];
}


- (void)testParsingValidXML_Time {
    [self measureBlock:^{                                   Time: 0.005 sec (53% better, 15% STDEV)
        NSURL *dataURL = [[NSBundle bundleForClass:[self class]] URLForResource:@"TestInputData"
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        [parseOperation start];
        XCTAssertEqual(parseOperation.allEarthquakes.count, 50);
    }];
}
```

SeismicXML 〉 iPhone 5s | SeismicXML | Build SeismicXML: **Succeeded** | Today at 9:00 AM

SeismicXML 〉 SeismicXML Tests 〉 TestAPLParseOperation.m 〉 @implementation TestAPLParseOperation

SeismicXML Tests
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- TestAPLParseOperation
  - testParsingValidXML
  - testValidateEarthQuakeData
  - testValidateEarthQuakeData...
  - testParsingValidXML_Time
- TestParseGeoJSON
  - testParseGEOJSON

Test “testValidateEarthQuakeData_Time”
Profile “testValidateEarthQuakeData_Time”

Disable “testValidateEarthQuakeData_Time”

Jump to Report

Reveal in Project Navigator
Reveal in Symbol Navigator
Reveal in Test Navigator

New Test Target…
New Test Class…

Refactor ▶

Test Navigator Help ▶

Time: 0.205 sec (2% better, 1% STDEV)

```
eForClass:[self class]] URLForResource:@"TestInputData"
;
hContentsOfURL:dataURL];
 = [[APLParseOperation alloc] initWithData:XMLData];

Earthquakes.count, 50);
 parseOperation.allEarthquakes) {
eWithError:NULL]);
```

Time: 0.005 sec (53% better, 15% STDEV)

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    [self measureBlock:^{
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    }];
}
```

SeismicXML 〉 iPhone 5s | SeismicXML | Build SeismicXML: **Succeeded** | Today at 9:00 AM

SeismicXML 〉 SeismicXML Tests 〉 TestAPLParseOperation.m 〉 @implementation TestAPLParseOperation

SeismicXML Tests
5 tests

- TestAPLParseOperation
  - testParsingValidXML
  - testValidateEarthQuakeData
  - testValidateEarthQuakeData...
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- TestParseGeoJSON
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Test “testValidateEarthQuakeData_Time”
Profile “testValidateEarthQuakeData_Time”
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Jump to Report
Reveal in Project Navigator
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New Test Class…
Refactor
Test Navigator Help

Time: 0.205 sec (2% better, 1% STDEV)

```
eForClass:[self class]] URLForResource:@"TestInputData"
;
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 = [[APLParseOperation alloc] initWithData:XMLData];

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    [self measureBlock:^{
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        NSData *XMLData = [NSData dataWithContentsOfURL:dataURL];
        APLParseOperation *parseOperation = [[APLParseOperation alloc] initWithData:XMLData];
        [parseOperation start];
        XCTAssertEqual(parseOperation.allEarthquakes.count, 50);
    }];
}
```

ShutterBugz 〉 iPhone 4s | ShutterBugz | Build ShutterBugz: **Succeeded** | Today at 1:00 PM | 2

By Group | By Time

- **ShutterBugz** Today, 1:00 PM
- **Project** Today, 1:34 PM
- **Analysis Bot** My Server
- **Nightly Bot** My Server
- **On Commit Bot** My Server
  - Integrate (8) Today, 1:35 PM, Failed tests
  - Integrate (7) Today, 1:31 PM, Finished with w…
  - Integrate (6) Today, 1:29 PM, Failed tests
  - Integrate (5) Today, 1:26 PM, Failed tests
  - Integrate (4) Today, 1:24 PM, Failed tests
  - Integrate (3) Today, 1:20 PM, Finished with w…
  - Integrate (2) Today, 1:17 PM, Failed tests
  - Integrate (1) Today, 1:12 PM, Succeeded

On Commit Bot 〉 Integrate (8)

Integration 8
1 minute

Summary | Tests | Logs

All | Passed | Failed | All | Performance

Tests	Status	Time
ShutterBugzTests > ShutterBugzTests		
testPhotoZoom	✓	
testRadialBlurWithCenteredOffset	✗	
Matthew's iPad iPad mini (Model A1432), iOS 8.0 — Assertions: (((xCoordinate == 0 && yCoordinate == 0)) is true) failed - Expected centered radial blur offset to be (0, 0) after test, but the last value we recorded was (-165, -187)	✗	
Matthew's iPod iPod touch (5th generation), iOS 8.0 — Assertions: (((xCoordinate == 0 && yCoordinate == 0)) is true) failed - Expected centered radial blur offset to be (0, 0) after test, but the last value we recorded was (-165, -187)	✗	
testPhotoLevels	✓	
testAtLeastOnePhotoReturned		
testPhotoApplySepiaEffect		
testSortPhotosAlternativeAlgorithm		-99.67%
Matthew's iPad iPad mini (Model A1432), iOS 8.0		-99.73%
Matthew's iPod iPod touch (5th generation), iOS 8.0		-99.67%
testPhotoScale		
testJSONLoadPerformance		0.03 s

Performance Result

Result: 99.729% better (±1%)
Average: 0.27s
Baseline: 100.00s
Max STDDEV: 10.00%

Edit

Value: 0.281 (3.78%)

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

Mon 9:41 AM

Shutterbugs 〉 iPhone 5s

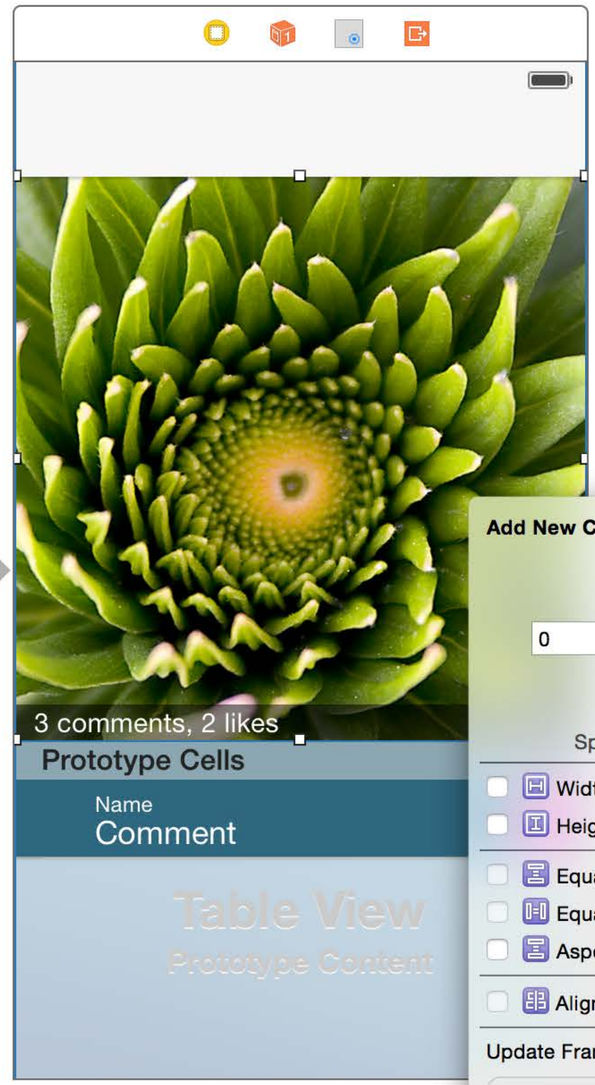
Shutterbugs | Build Shutterbugs: **Succeeded** | 5/29/14 at 9:33 AM

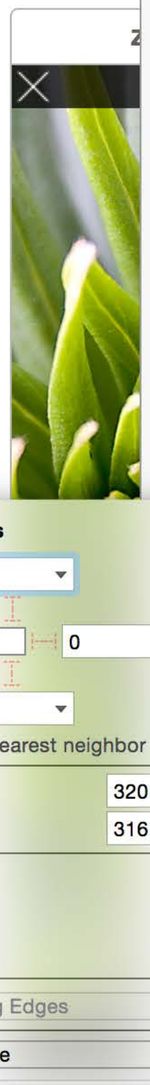
Shutterbugs 〉 S 〉 N 〉 N 〉 F 〉 F 〉 View 〉 Image View - green.png

GamesTableViewContro... 〉 GamesTableViewController

Shutterbugs
4 targets, iOS SDK 8.0

- Shutterbugs
  - Views
    - CroppedPictureView.h
    - CroppedPictureView.m
    - GamePlayerCollectionViewCell.h
    - GamePlayerCollectionViewCell.m
    - PhotoCommentTableViewCell.h
    - PhotoCommentTableViewCell.m
    - GameTableHeaderLabel.h
    - GameTableHeaderLabel.m
    - GamesTableViewCell.swift
  - Controllers
    - SignInViewController.h
    - SignInViewController.m
    - GameCollectionViewController.h
    - GameCollectionViewController.m
    - PhotoDetailViewController.h
    - PhotoDetailViewController.m
    - GamesTableViewController.swift
    - ZoomedPhotoViewController.h
    - ZoomedPhotoViewController.m
  - AppDelegate.h
  - AppDelegate.m
  - Main.storyboard
  - VignetteFilter.swift
  - Images.xcassets
  - DrawingTests.playground
  - Resources
  - Supporting Files
- ShutterbugsTests
  - PlayerTests.m
  - GameTests.m
  - PhotoVotingTests.m
  - Supporting Files
- CoreShutterbugs
- CoreShutterbugsTests





Add New Constraints

63

0 0

0

Spacing to nearest neighbor

Width 320

Height 316

Equal Widths

Equal Heights

Aspect Ratio

Align Leading Edges

Update Frames None

Add Constraints

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

import UIKit
import CoreShutterbugs

class GamesTableViewController: UITableViewController {

    var userSession: UserSession!

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

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

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

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

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

        return nil
    }

    /// Table view data source

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

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

Demo

Swift

Daniel Dunbar

Demo

Interface Builder

Jon Hess

Demo

Debugger

Ken Orr

Demo

Performance

Kate Stone

Xcode File Edit View Find Navigate Editor Product Debug Source Control Window Help
Mon 9:41 AM
Shutterbugs › iPhone 5s
Shutterbugs | Build Shutterbugs: Succeeded | 5/29/14 at 9:33 AM
Shutterbugs
4 targets, iOS SDK 8.0
Shutterbugs
Views
CroppedPictureView.h
CroppedPictureView.m
GamePlayerCollectionViewCell.h
GamePlayerCollectionViewCell.m
PhotoCommentTableViewCell.h
PhotoCommentTableViewCell.m
GameTableHeaderLabel.h
GameTableHeaderLabel.m
GamesTableViewCell.swift
Controllers
SignInViewController.h
SignInViewController.m
GameCollectionViewController.h
GameCollectionViewController.m
PhotoDetailViewController.h
PhotoDetailViewController.m
GamesTableViewController.swift
ZoomedPhotoViewController.h
ZoomedPhotoViewController.m
AppDelegate.h
AppDelegate.m
Main.storyboard
VignetteFilter.swift
Images.xcassets
DrawingTests.playground
Resources
Supporting Files
ShutterbugsTests
PlayerTests.m
GameTests.m
PhotoVotingTests.m
Supporting Files
CoreShutterbugs
CoreShutterbugsTests
Shutterbugs › S› M› M› F› F› View › Image View - green.png
3 comments, 2 likes
Prototype Cells
Name
Comment
Table View
Prototype Content
Add New Constraints
63
0
0
0
Spacing to nearest neighbor
Width 320
Height 316
Equal Widths
Equal Heights
Aspect Ratio
Align Leading Edges
Update Frames None
Add Constraints
GamesTableViewContro… › GamesTableViewController
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// Shutterbugs
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// Copyright (c) 2014 Apple Inc. All rights reserved.
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