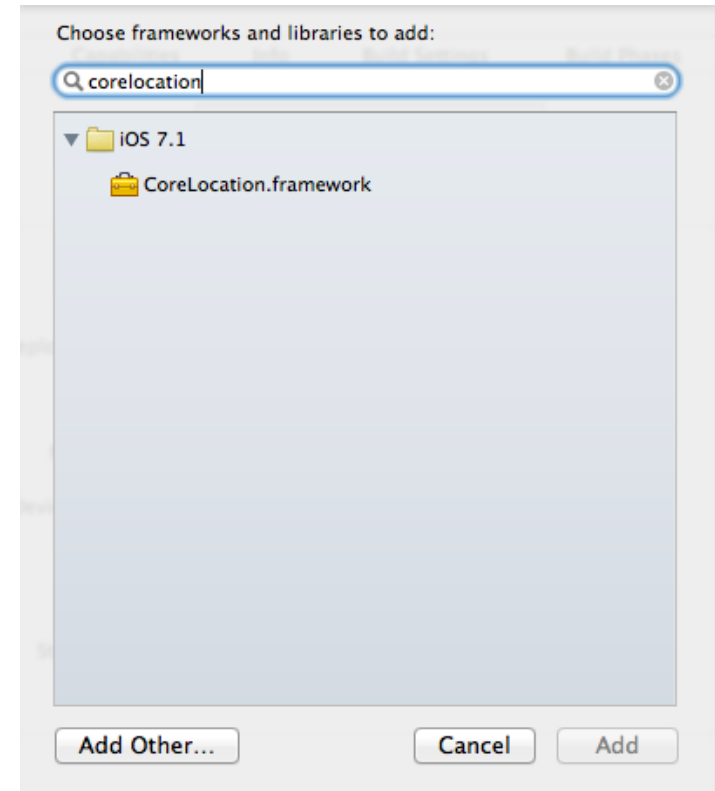


iPhone Apps Development using Objective C & Xcode (Lesson 4)

By Dannis Mok

CLLocation

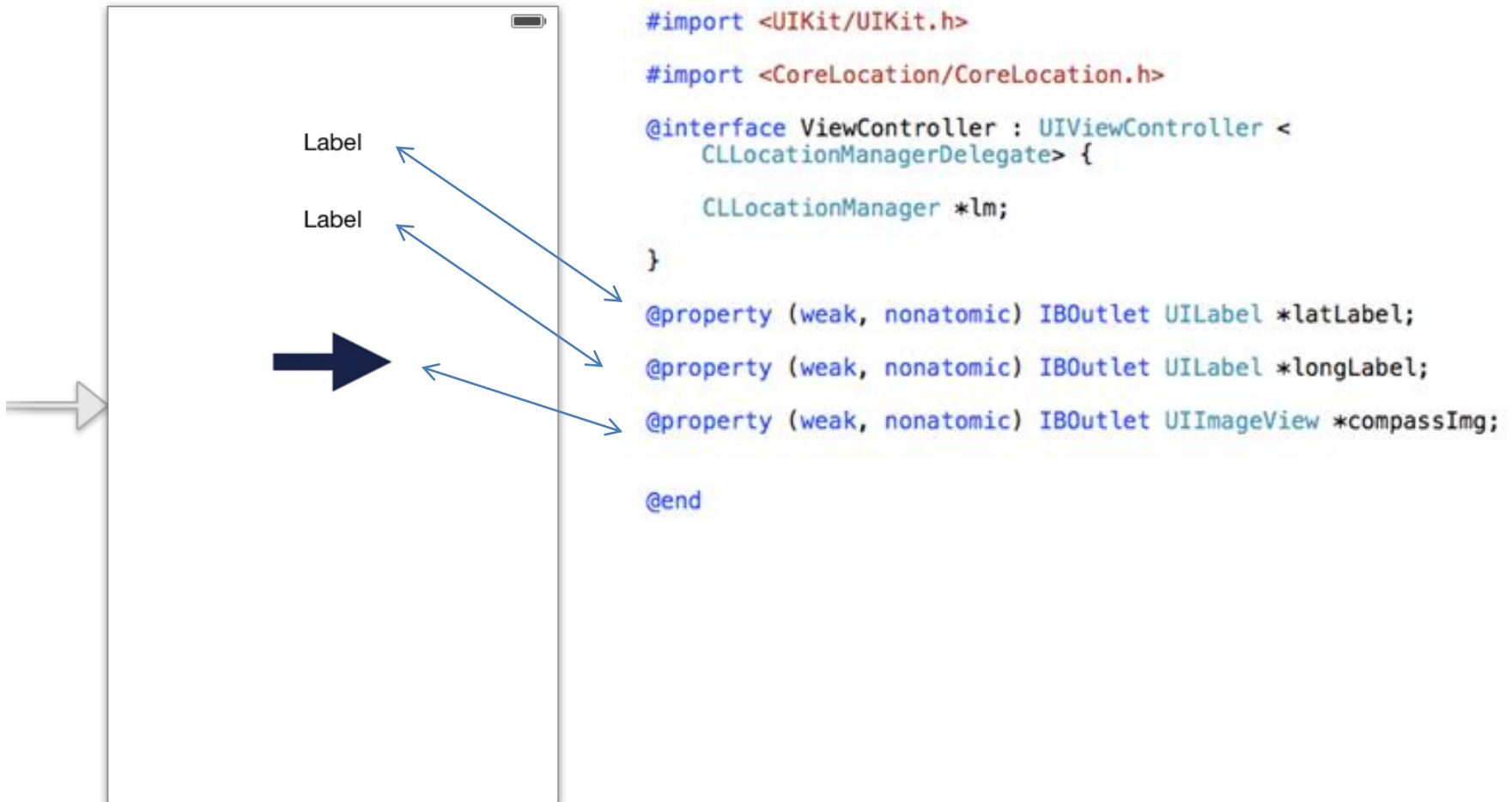
- Can use the device's GPS or WiFi services to get the position of the device.
- Must add the CLLocation framework to the project.



▼ Linked Frameworks and Libraries

Name	Status
 CoreGraphics.framework	Required ▴ ▾
 UIKit.framework	Required ▴ ▾
 Foundation.framework	Required ▴ ▾
+ -	

Exercise 14 - CLLocation



CLLocation Implementation

```
#import "ViewController.h"

@interface ViewController ()

@end

@implementation ViewController

@synthesize latLabel, longLabel, compassImg;

- (void)viewDidLoad
{
    [super viewDidLoad];

    lm = [[CLLocationManager alloc] init];

    lm.delegate = self;

    lm.desiredAccuracy = kCLLocationAccuracyHundredMeters;

    lm.distanceFilter = kCLDistanceFilterNone;

    [lm startUpdatingLocation];

    [lm startUpdatingHeading];
}
```

CLLocation Implementation

```
-(void) locationManager:(CLLocationManager *)manager didUpdateToLocation:
    (CLLocation *)newLocation fromLocation:(CLLocation *)oldLocation {

    self.latLabel.text = [NSString stringWithFormat:@"Lat=%g", newLocation
        .coordinate.latitude];

    self.longLabel.text = [NSString stringWithFormat:@"Long=%g",
        newLocation.coordinate.longitude];

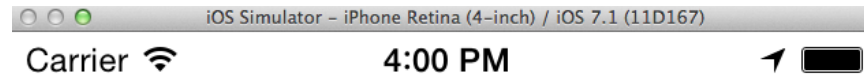
}

-(void) locationManager:(CLLocationManager *)manager didUpdateHeading:
    (CLHeading *)newHeading {

    self.compassImg.transform = CGAffineTransformMakeRotation(-newHeading.
        magneticHeading * M_PI/180);

}
```

CLLocation Output



Lat=37.3315

Long=-122.031



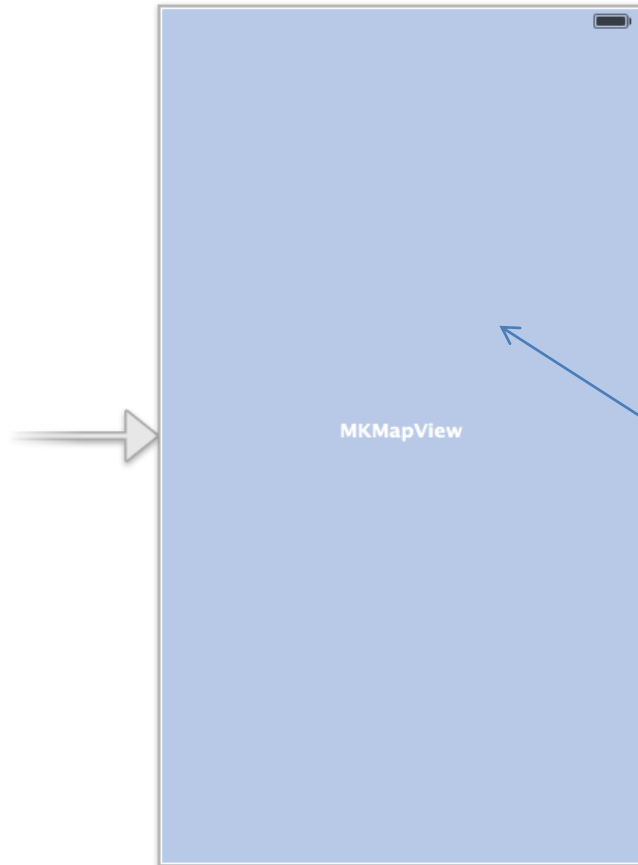
MapKit

- Can use the latitude and the longitude information returned by the CLLocation object and then use the MapKit framework to return a map

▼ Linked Frameworks and Libraries

Name	Status
 MapKit.framework	Required ⬆⬇⬆
 CoreLocation.framework	Required ⬆⬇⬆
 CoreGraphics.framework	Required ⬆⬇⬆
 UIKit.framework	Required ⬆⬇⬆
 Foundation.framework	Required ⬆⬇⬆
+ -	

Exercise 15 - MapKit



```
#import <UIKit/UIKit.h>

#import <CoreLocation/CoreLocation.h>

#import <MapKit/MapKit.h>

@interface ViewController : UIViewController <
    CLLocationManagerDelegate> {

    CLLocationManager *lm;

}

@property (weak, nonatomic) IBOutlet MKMapView *myMapView;

@end
```

MapKit Implementation

```
#import "ViewController.h"

@interface ViewController ()

@end

@implementation ViewController

- (void)viewDidLoad
{
    [super viewDidLoad];

    lm = [[CLLocationManager alloc] init];

    lm.delegate = self;

    lm.desiredAccuracy = kCLLocationAccuracyHundredMeters;

    lm.distanceFilter = kCLHeadingFilterNone;

    [lm startUpdatingLocation];
}
```

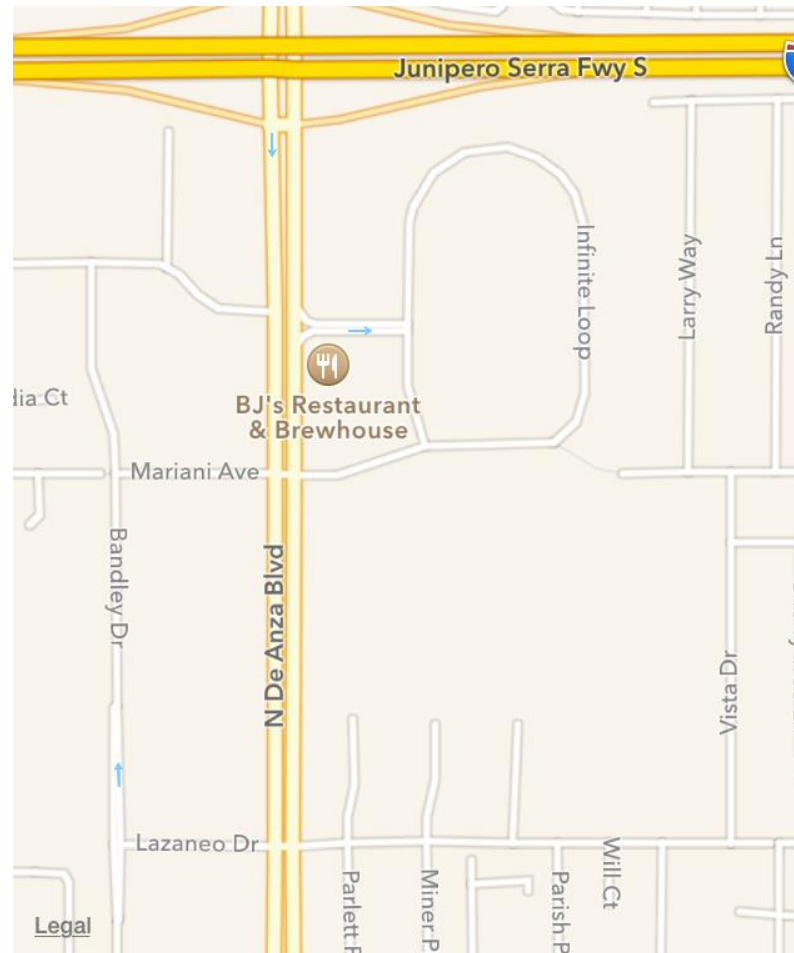
MapKit Implementation

```
-(void) locationManager:(CLLocationManager *)manager
    didUpdateToLocation:(CLLocation *)newLocation fromLocation:
        (CLLocation *)oldLocation
{
    MKCoordinateRegion region = self.myMapView.region;

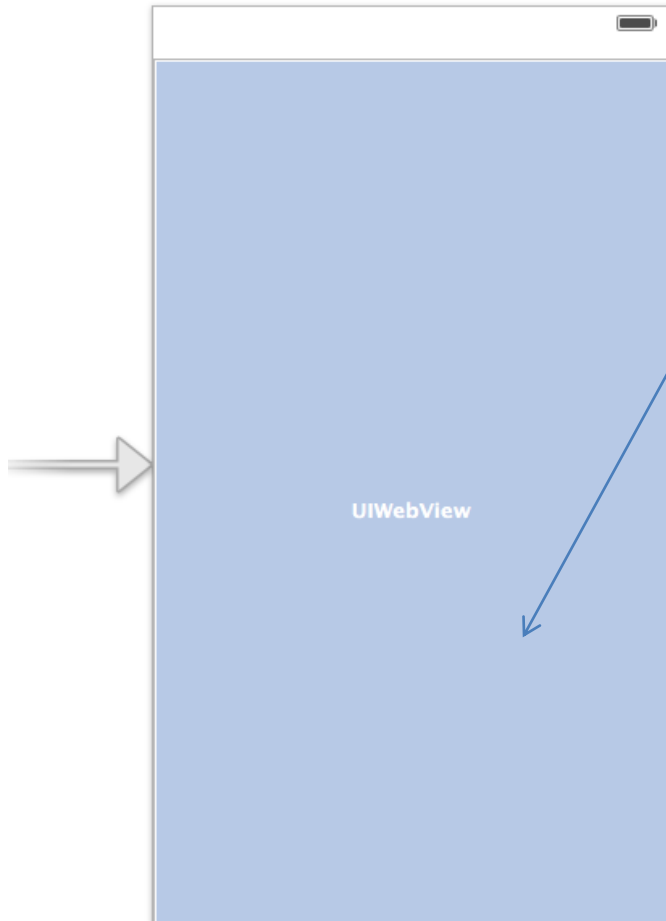
    region.center.latitude = newLocation.coordinate.latitude;
    region.center.longitude = newLocation.coordinate.longitude;
    region.span.latitudeDelta = 0.01;
    region.span.longitudeDelta = 0.01;

    [self.myMapView setRegion:region animated:YES];
}
```

MapKit Output



Exercise 16 - WebView



```
#import <UIKit/UIKit.h>

@interface ViewController : UIViewController

@property (weak, nonatomic) IBOutlet UIWebView *myWebView;

@end
```

WebView Implementation

```
#import "ViewController.h"

@interface ViewController ()

@end

@implementation ViewController

- (void)viewDidLoad
{
    [super viewDidLoad];

    NSURL *myURL = [NSURL URLWithString:@"http://www.apple.com"];

    NSURLRequest *myURLRequest = [NSURLRequest requestWithURL:myURL];

    [self.myWebView loadRequest:myURLRequest];
}

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

@end
```

WebView Output

A big moment in music history.
And you're part of it.

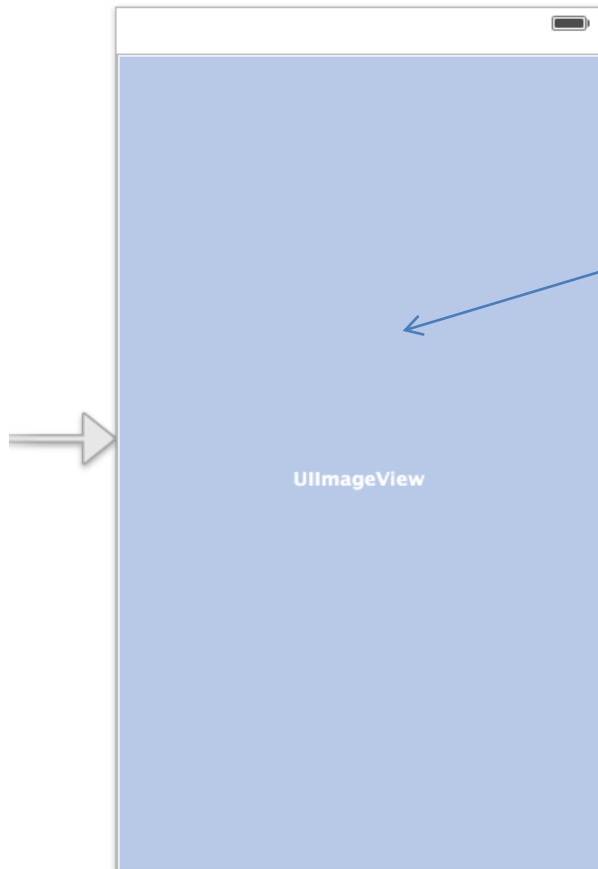
Apple and U2 are giving the new album
Songs of Innocence to over 500 million
iTunes customers worldwide.

[Learn more >](#)

[Watch the ad ▶](#)



Exercise 17 – Load Image from Internet



```
#import <UIKit/UIKit.h>

@interface ViewController : UIViewController

@property (weak, nonatomic) IBOutlet
    UIImageView *myImageView;

@end

|
```

Load Image from Internet

```
#import "ViewController.h"

@interface ViewController ()

@end

@implementation ViewController

- (void)viewDidLoad
{
    [super viewDidLoad];

    NSURL *myURL = [NSURL URLWithString:@"http://www.ymori.com/itest/test.jpg"];

    NSData *myData = [NSData dataWithContentsOfURL:myURL];

    UIImage *myImage = [UIImage imageWithData:myData];

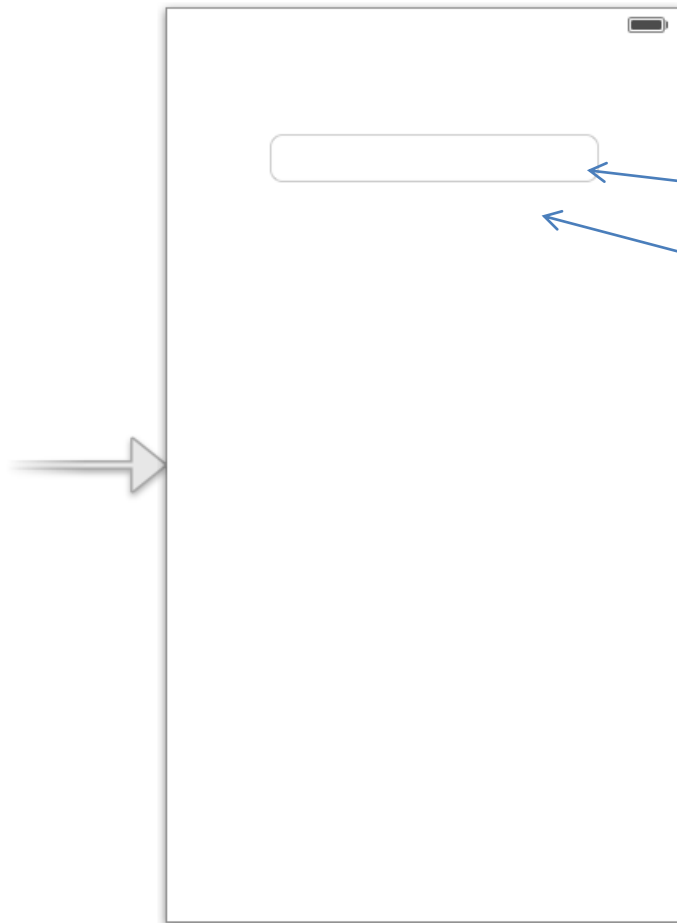
    self.myImageView.image = myImage;

}

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

@end
```

Exercise 18 – UserDefaults



```
#import <UIKit/UIKit.h>
```

```
@interface ViewController : UIViewController
```

```
@property (weak, nonatomic) IBOutlet  
UITextField *myTextField;
```

```
- (IBAction)inputText:(id)sender;
```

```
@end
```

UserDefault Implementation

```
@implementation ViewController

- (void)viewDidLoad
{
    [super viewDidLoad];

    NSUserDefaults *defaults = [NSUserDefaults standardUserDefaults];

    NSString *str = [defaults objectForKey:@"MEMO"];

    self.myTextField.text = str;
}

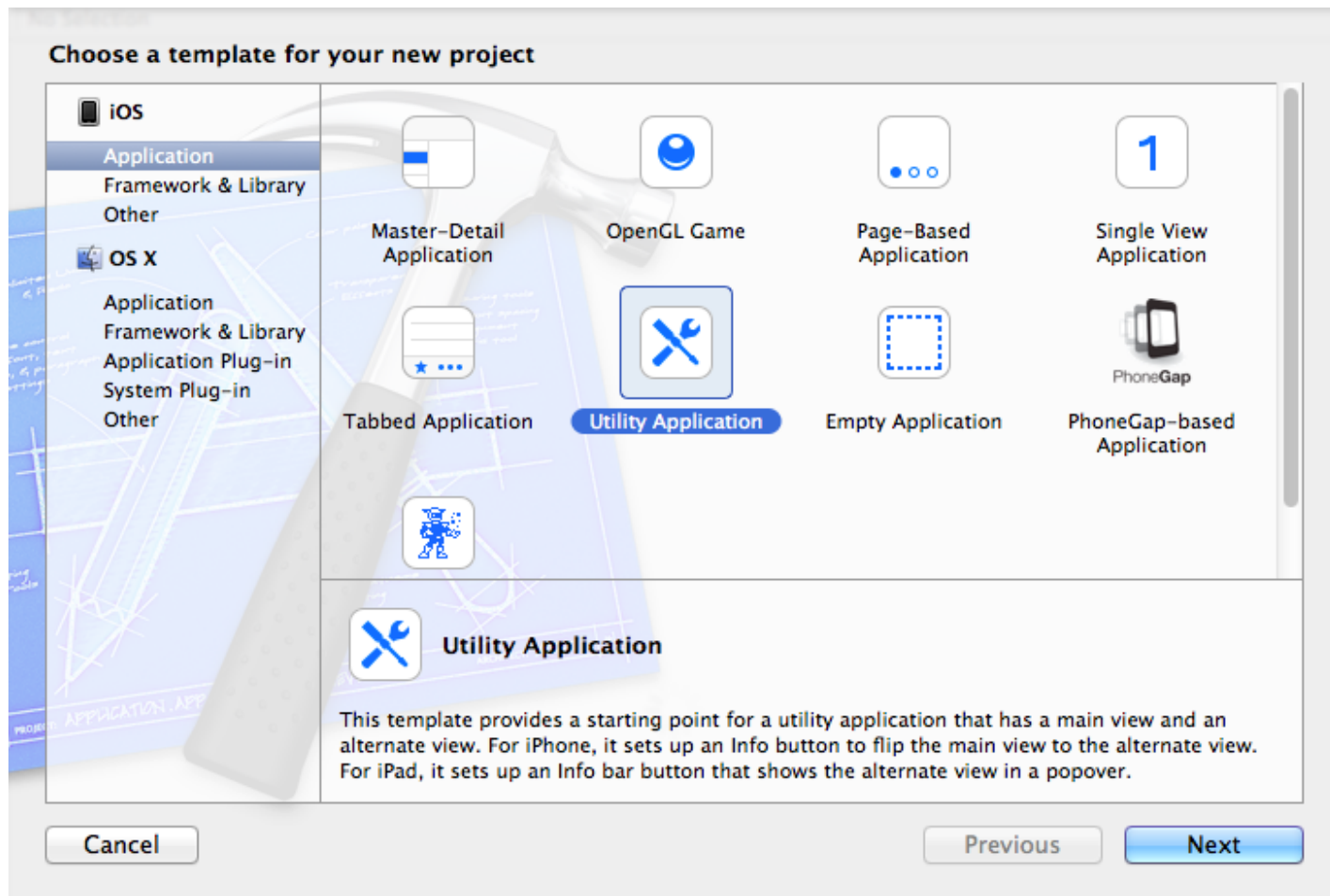
- (IBAction)inputText:(id)sender {
    NSUserDefaults *defaults = [NSUserDefaults standardUserDefaults];

    [defaults setObject:self.myTextField.text forKey:@"MEMO"];

    [defaults synchronize];
}
@end
```

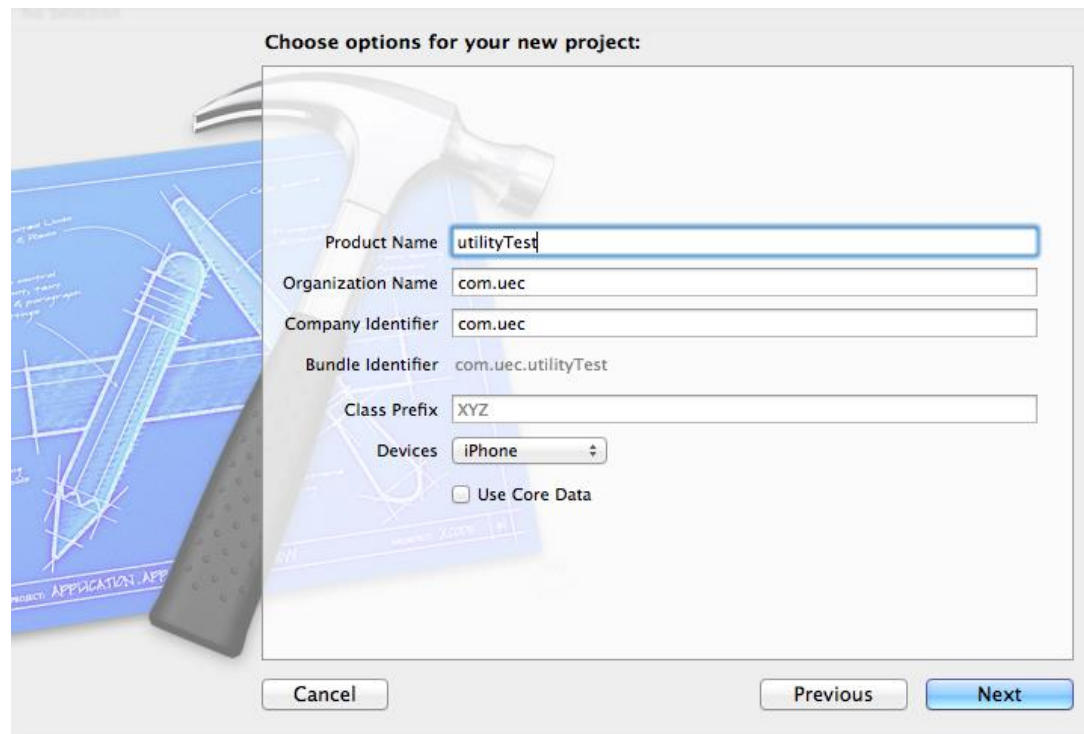
Store the text field in
the plist with the key
MEMO

Multi-Scenes Application

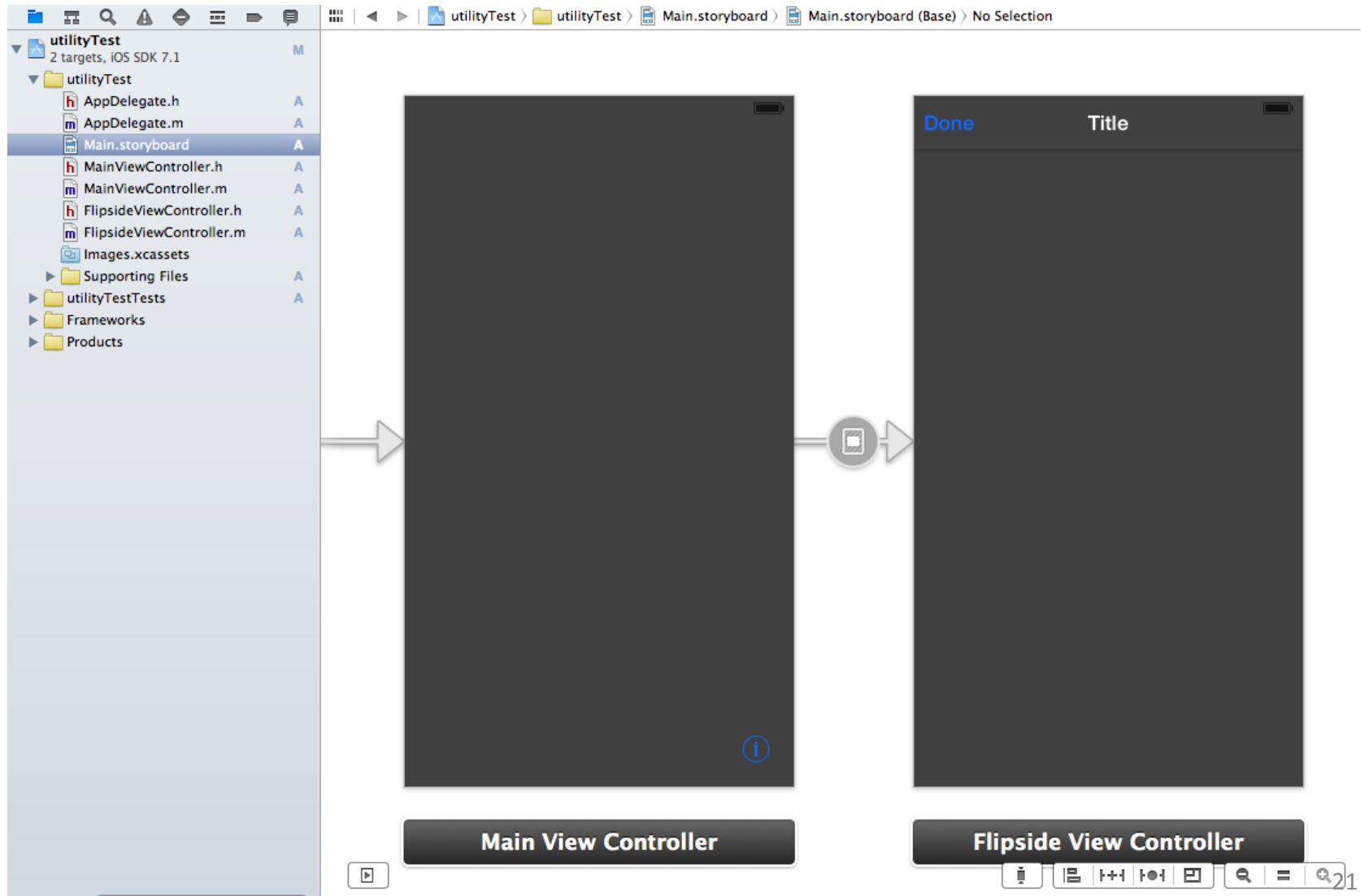


Utility Application

- Values are shown on the front end scene and use the flip button to reveal the back-end scene to alter the values.

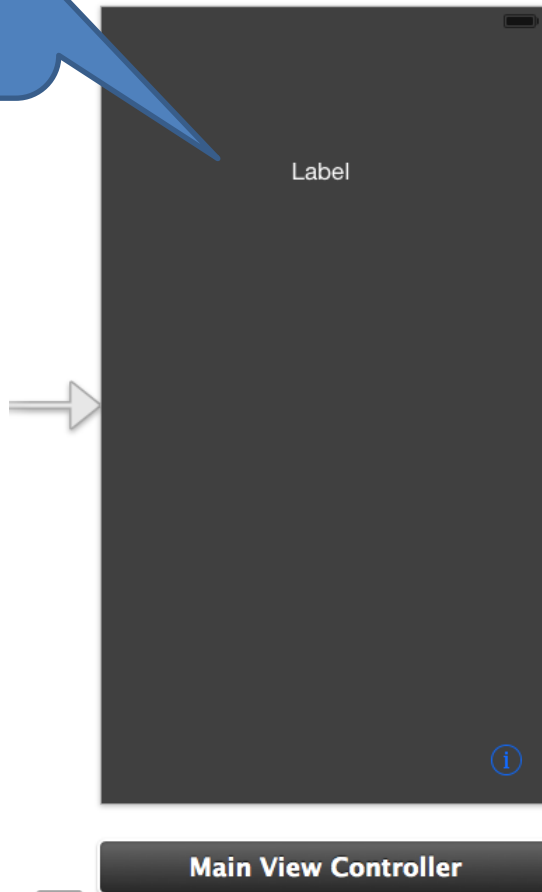


Utility Application



Utility Application

Add an
UILabel on
the front-
end scene

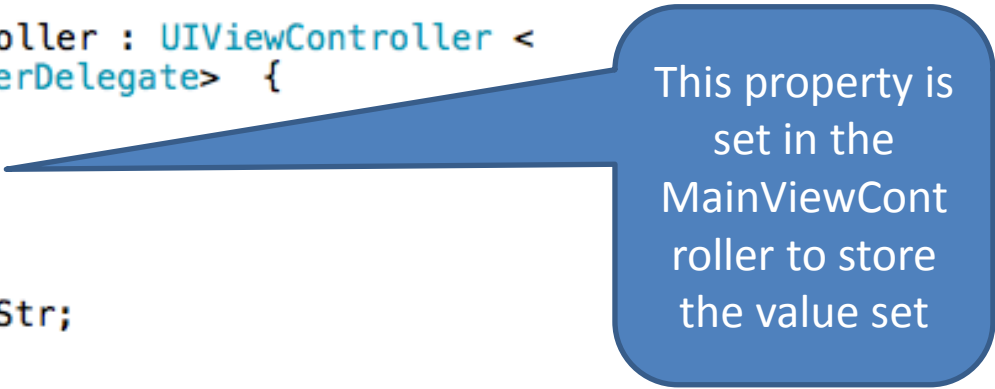


Add an
UISwitch on
the back-end
scene



Utility Application – MainView

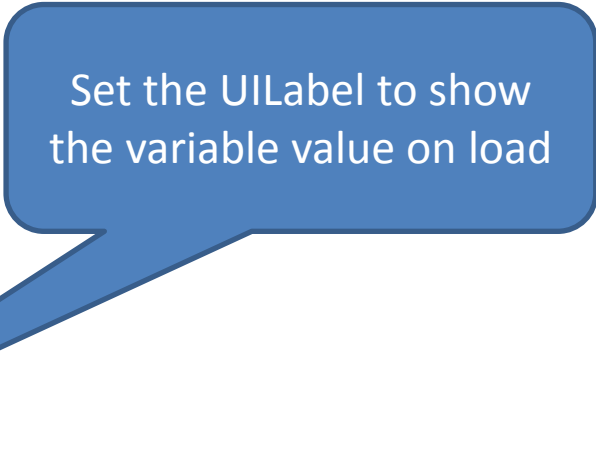
```
//  
// MainViewController.h  
// utilityTest  
//  
// Created by Dannis Mok on 14/9/14.  
// Copyright (c) 2014 com.uec. All rights reserved.  
//  
  
#import "FlipsideViewController.h"  
  
@interface MainViewController : UIViewController <  
    FlipsideViewControllerDelegate> {  
  
    NSString *dispStr;  
  
}  
  
@property NSString *dispStr;  
  
@property (weak, nonatomic) IBOutlet UILabel *myLabel;  
  
@end
```



This property is set in the MainViewCont roller to store the value set

Utility Application – MainView

```
//  
// MainViewController.m  
// utilityTest  
//  
// Created by Dannis Mok on 14/9/14.  
// Copyright (c) 2014 com.uec. All rights reserved.  
//  
  
#import "MainViewController.h"  
  
@interface MainViewController ()  
  
@end  
  
@implementation MainViewController  
  
@synthesize dispStr;  
  
- (void)viewDidLoad  
{  
    [super viewDidLoad];  
    self.myLabel.text = dispStr;  
    // Do any additional setup after loading the view, typically from a nib.  
}
```



Set the UILabel to show the variable value on load

Utility Application - MainView

```
#pragma mark - Flipside View
```

```
- (void)flipsideViewControllerDidFinish:(FlipsideViewController *)controller
{
    [self dismissViewControllerAnimated:YES completion:nil];
```

```
    dispStr = controller.switchStatus;
```

```
    self.myLabel.text = dispStr;
```

```
}
```

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

```
    if ([[segue identifier] isEqualToString:@"showAlternate"]) {
        [[segue destinationViewController] setDelegate:self];
    }
```

```
    FlipsideViewController *secondController = (FlipsideViewController *)[segue
        destinationViewController];
```

```
    secondController.switchStatus = dispStr;
```

```
}
```

```
@end
```

Call when change
from FlipsideView
back to MainView

Call when change
from MainView to
FlipsideView

Utility Application - FlipsideView

```
//  
// FlipsideViewController.h  
// utilityTest  
//  
// Created by Dannis Mok on 14/9/14.  
// Copyright (c) 2014 com.uec. All rights reserved.  
//  
  
#import <UIKit/UIKit.h>  
  
@class FlipsideViewController;  
  
@protocol FlipsideViewControllerDelegate  
- (void)flipsideViewControllerDidFinish:(FlipsideViewController *)controller;  
@end  
  
@interface FlipsideViewController : UIViewController {  
    NSString *switchStatus;  
}  
  
@property NSString *switchStatus;  
  
@property (weak, nonatomic) id <FlipsideViewControllerDelegate> delegate;  
@property (weak, nonatomic) IBOutlet UISwitch *mySwitch;  
  
- (IBAction)changeSwitch:(id)sender;  
  
- (IBAction)done:(id)sender;  
  
@end
```

A protocol is defined for data exchange

Another variable defined in FlipsideViewController

A delegate variable is defined here

Utility Application - FlipsideView

```
@implementation FlipsideViewController

@synthesize switchStatus;

- (void)viewDidLoad
{
    [super viewDidLoad];

    if([self.switchStatus isEqualToString:@"The Switch is on"]) {
        self.mySwitch.on = YES;
    } else {
        self.mySwitch.on = NO;
    }
}
```

To turn on the switch when the switchStatus is equal , otherwise, to turn the switch off

Utility Application - FlipsideView

```
#pragma mark - Actions

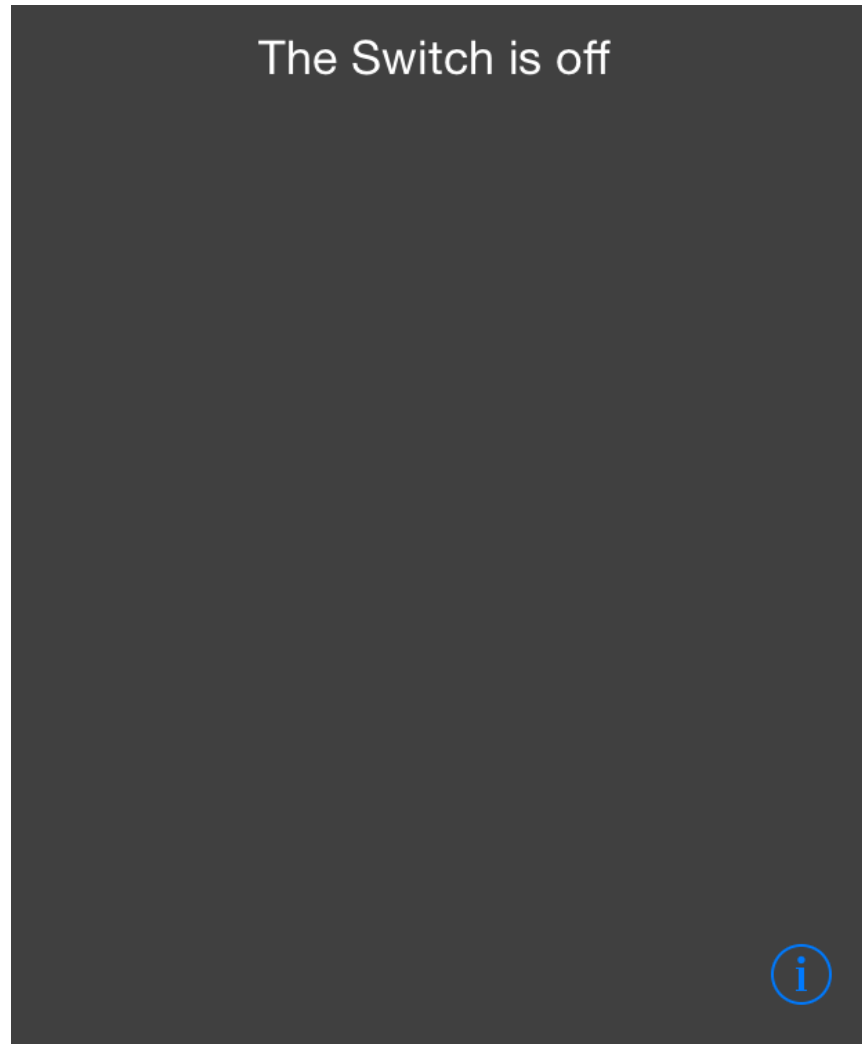
- (IBAction)changeSwitch:(id)sender {
    if(self.mySwitch.on == YES) {
        switchStatus = @"The Switch is on";
    } else {
        switchStatus = @"The Switch is off";
    }
}

- (IBAction)done:(id)sender
{
    [self.delegate flipsideViewControllerDidFinish:self];
}

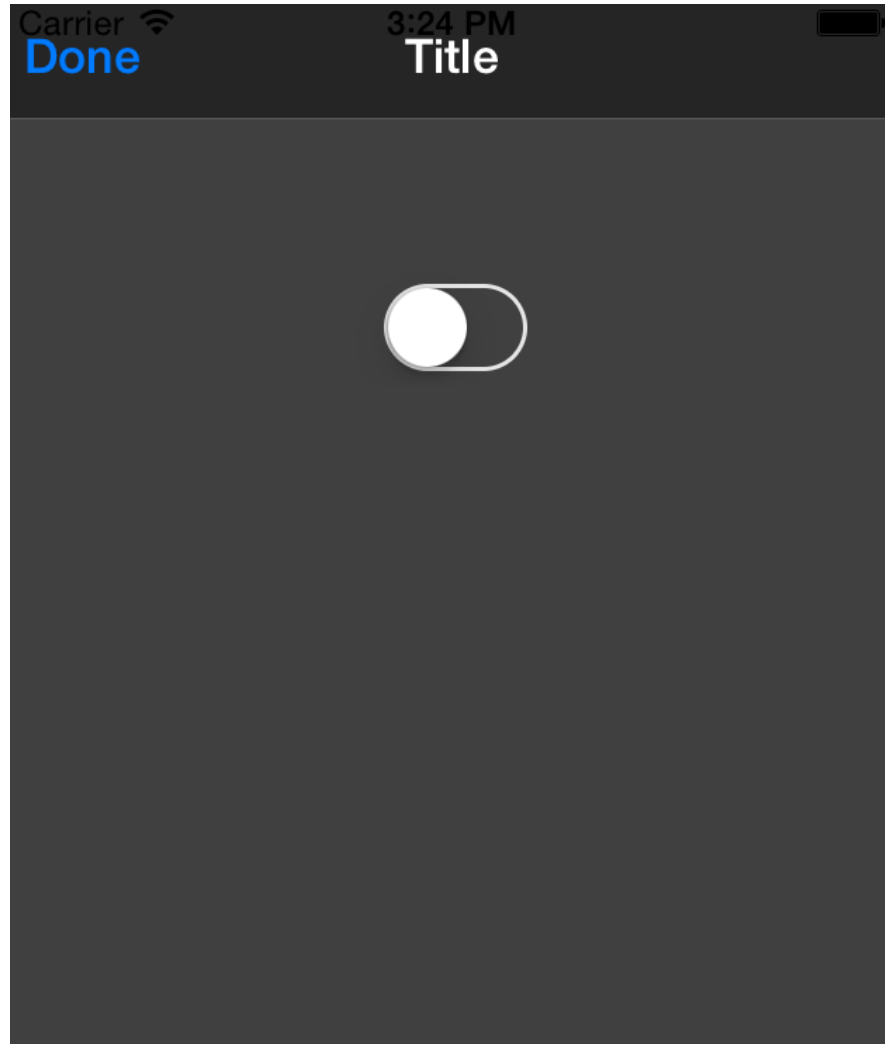
@end
```

Save the
switchStatus for
different switch
status

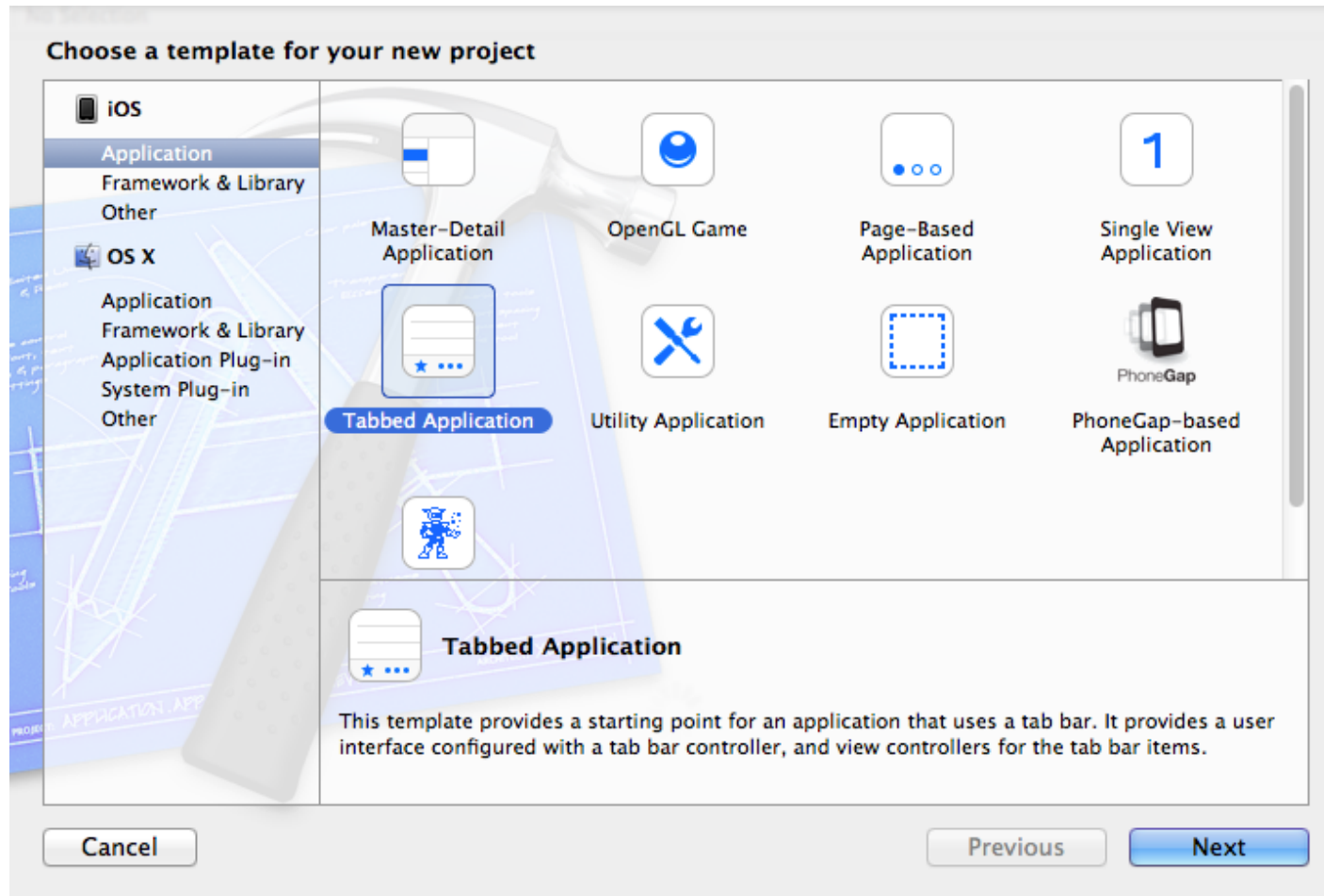
Utility Application - Output



Utility Application - Output

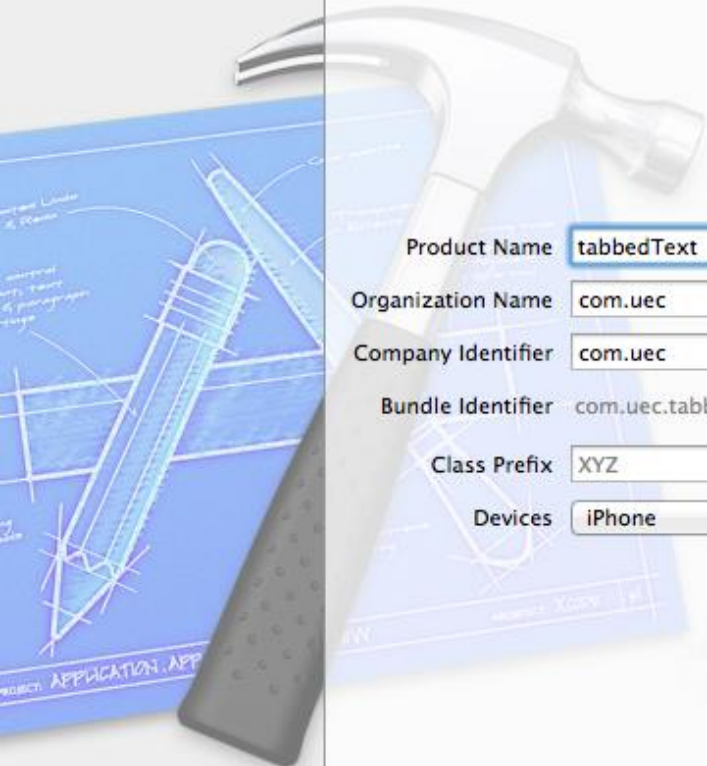


Tabbed Application



Tabbed Application

Choose options for your new project:



Product Name

Organization Name

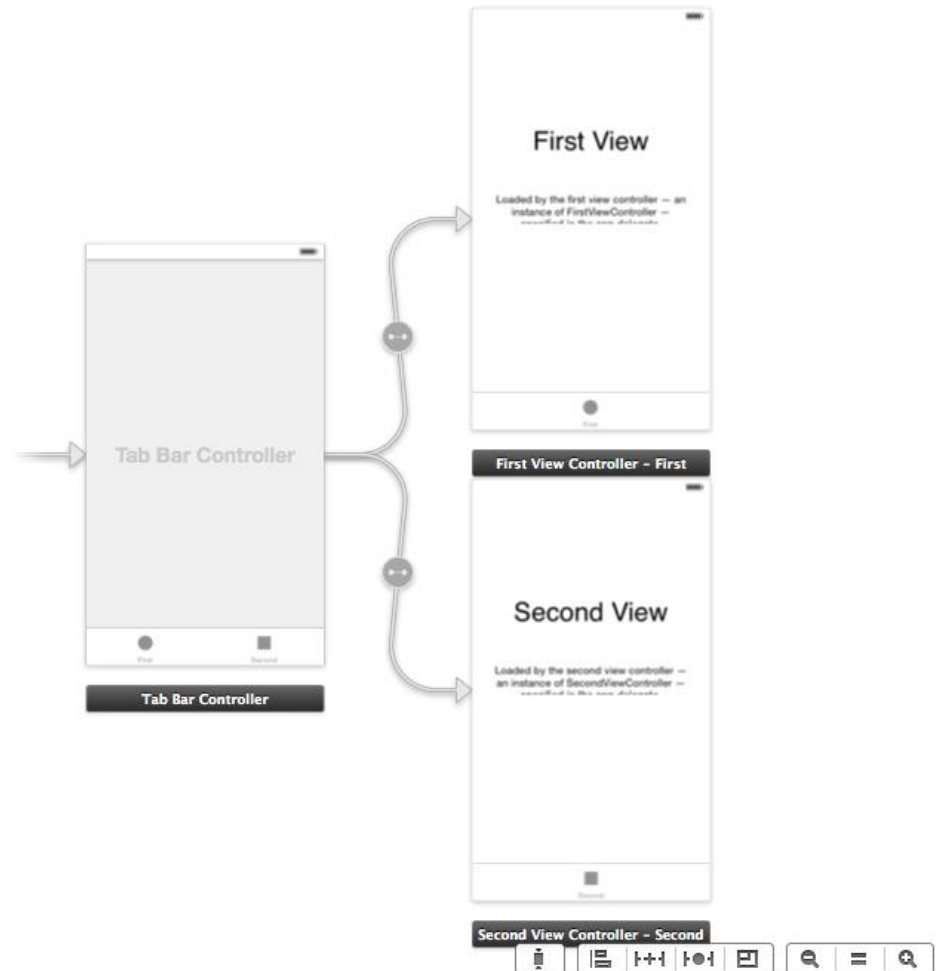
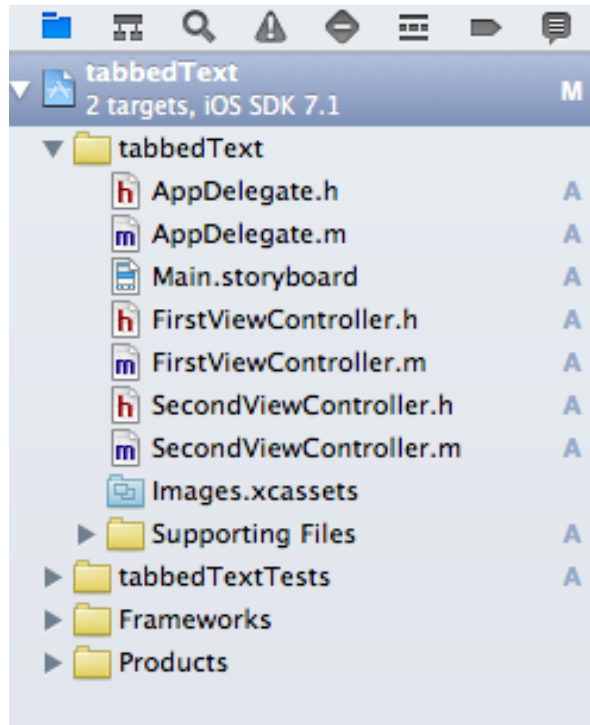
Company Identifier

Bundle Identifier

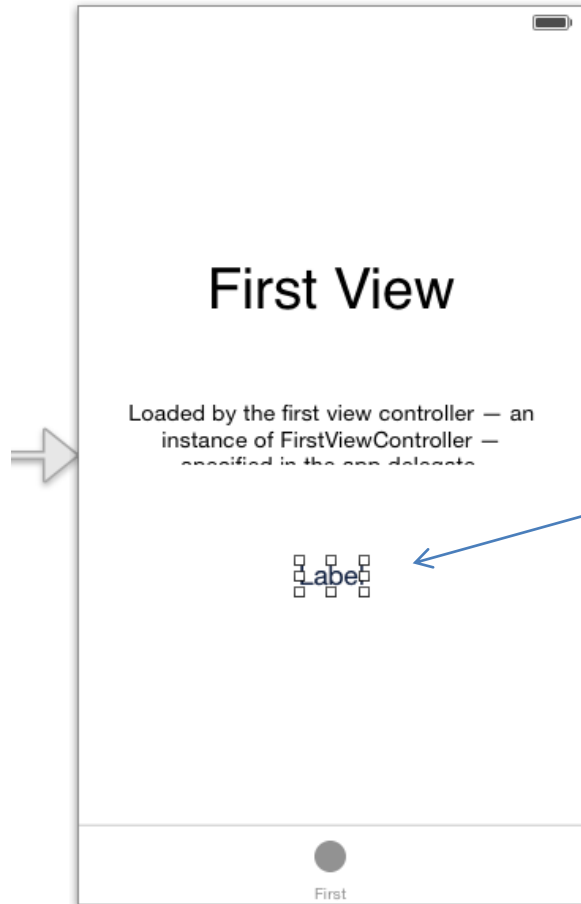
Class Prefix

Devices

Tabbed Application

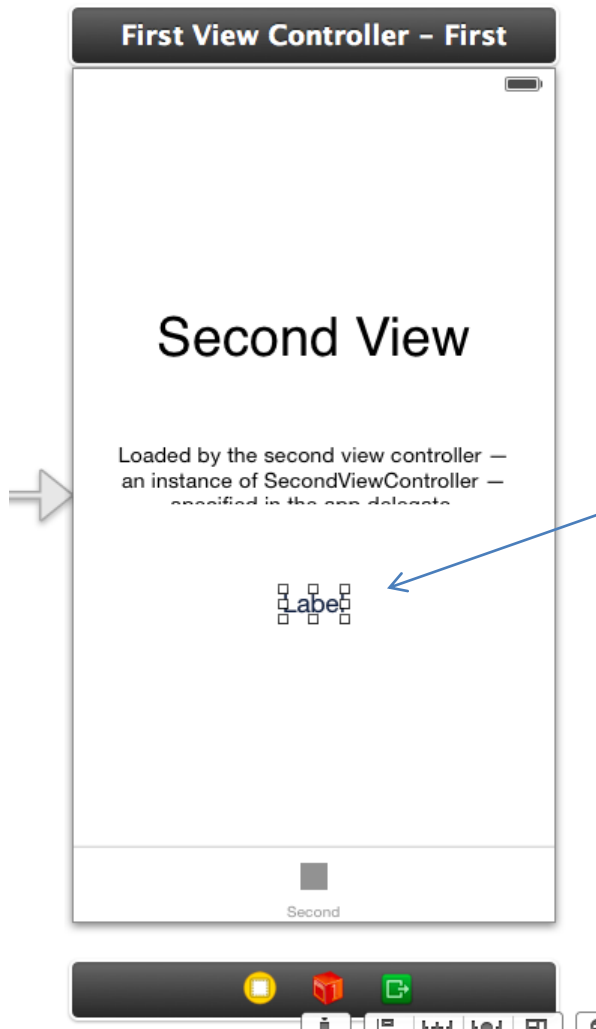


Tabbed Application



```
//  
// FirstViewController.h  
// tabbedText  
//  
// Created by Dannis Mok on 14/9/14.  
// Copyright (c) 2014 com.uec. All rights reserved.  
//  
  
#import <UIKit/UIKit.h>  
  
@interface FirstViewController :  
    UIViewController  
  
@property (weak, nonatomic) IBOutlet UILabel  
    *myLabel;  
  
@end
```

Tabbed Application



```
//
// SecondViewController.h
// tabbedText
//
// Created by Dannis Mok on 14/9/14.
// Copyright (c) 2014 com.uec. All rights
// reserved.
//

#import <UIKit/UIKit.h>

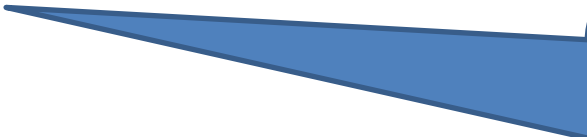
@interface SecondViewController :
    UIViewController

@property (weak, nonatomic) IBOutlet UILabel
    *myLabel;

@end
```

Tabbed Application

```
//  
// AppDelegate.h  
// tabbedText  
//  
// Created by Dannis Mok on 14/9/14.  
// Copyright (c) 2014 com.uec. All rights reserved.  
//  
  
#import <UIKit/UIKit.h>  
  
@interface AppDelegate : UIResponder <UIApplicationDelegate> {  
    NSInteger myCount;  
}  
  
@property NSInteger myCount;  
@property (strong, nonatomic) UIWindow *window;  
@end
```



Define a variable in AppDelegate class to share values between different view controllers

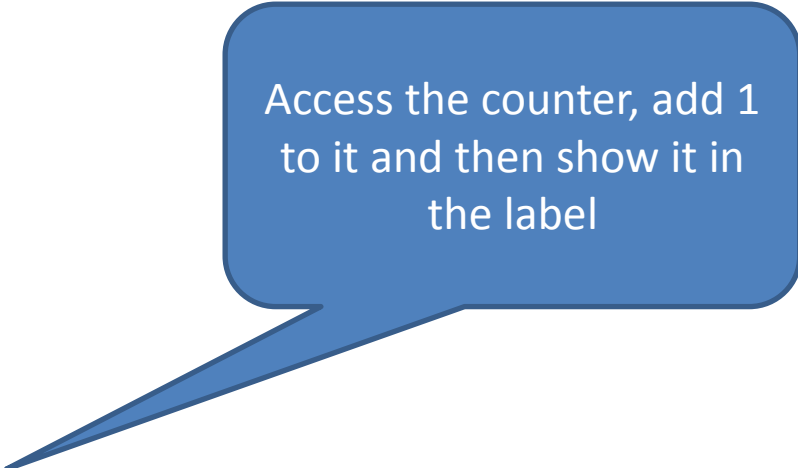
Tabbed Application

```
//  
// AppDelegate.m  
// tabbedText  
//  
// Created by Dannis Mok on 14/9/14.  
// Copyright (c) 2014 com.uec. All rights reserved.  
//  
  
#import "AppDelegate.h"  
  
@implementation AppDelegate  
  
@synthesize myCount;  
  
- (BOOL)application:(UIApplication *)application  
    didFinishLaunchingWithOptions:(NSDictionary *)launchOptions  
{  
  
    myCount = 0;  
    return YES;  
}
```

Initialize the value to 0

Tabbed Application

```
//  
// FirstViewController.m  
// tabbedText  
//  
// Created by Dannis Mok on 14/9/14.  
// Copyright (c) 2014 com.uec. All rights reserved.  
//  
  
#import "FirstViewController.h"  
  
#import "AppDelegate.h"  
  
@interface FirstViewController ()  
  
@end  
  
@implementation FirstViewController  
  
-(void)viewDidAppear:(BOOL)animated  
{  
  
    AppDelegate *appDelegate = [[UIApplication sharedApplication]  
        delegate];  
  
    appDelegate.myCount++;  
  
    self.myLabel.text = [NSString stringWithFormat:@"%d",  
        appDelegate.myCount];  
  
    [super viewWillAppear:animated];  
  
}
```



Access the counter, add 1
to it and then show it in
the label

Tabbed Application

```
//  
// SecondViewController.m  
// tabbedText  
//  
// Created by Dannis Mok on 14/9/14.  
// Copyright (c) 2014 com.uec. All rights reserved.  
//  
  
#import "SecondViewController.h"  
  
#import "AppDelegate.h"  
  
@interface SecondViewController ()  
  
@end  
  
@implementation SecondViewController  
  
-(void)viewDidAppear:(BOOL)animated  
{  
  
    AppDelegate *appDelegate = [[UIApplication sharedApplication]  
        delegate];  
  
    appDelegate.myCount++;  
  
    self.myLabel.text = [NSString stringWithFormat:@"%d",  
        appDelegate.myCount];  
  
    [super viewWillAppear:animated];  
  
}
```

Access the counter, add 1
to it and then show it in
the label