

iPhone App Development

CM420-09-2016-C
Lesson 7

Lecturer

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Git

[https://github.com/bryanttang/iOS-
Class-2016-9](https://github.com/bryanttang/iOS-Class-2016-9)

Summary

- Navigation Controller (Review)
- MapKit
- User's Location
- UIAlertView
- Third Party SDK

MapKit

Demo

MapKit

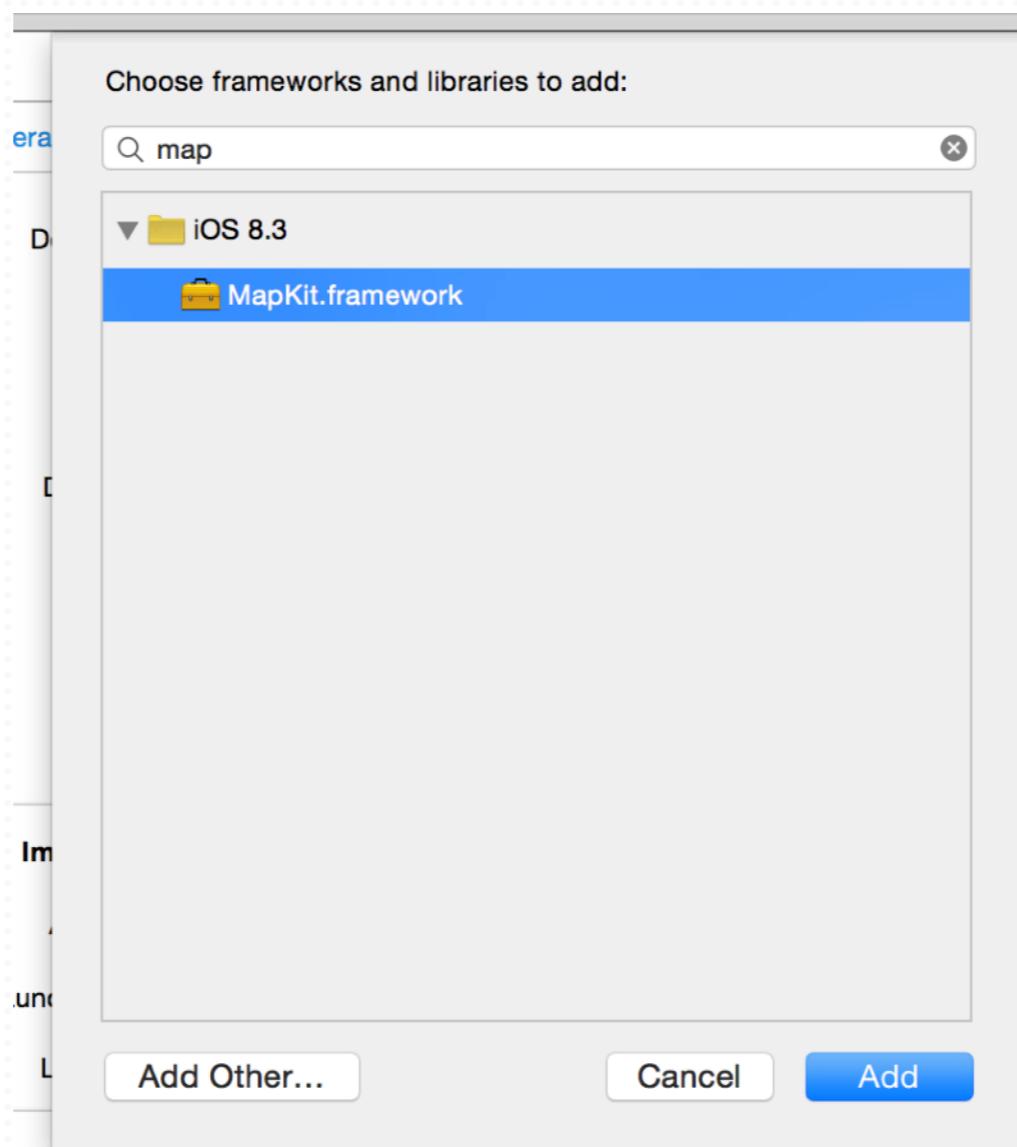
- To show a map
- To show where you are
- To show places – pin annotation and information

MapKit

- To show a map

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

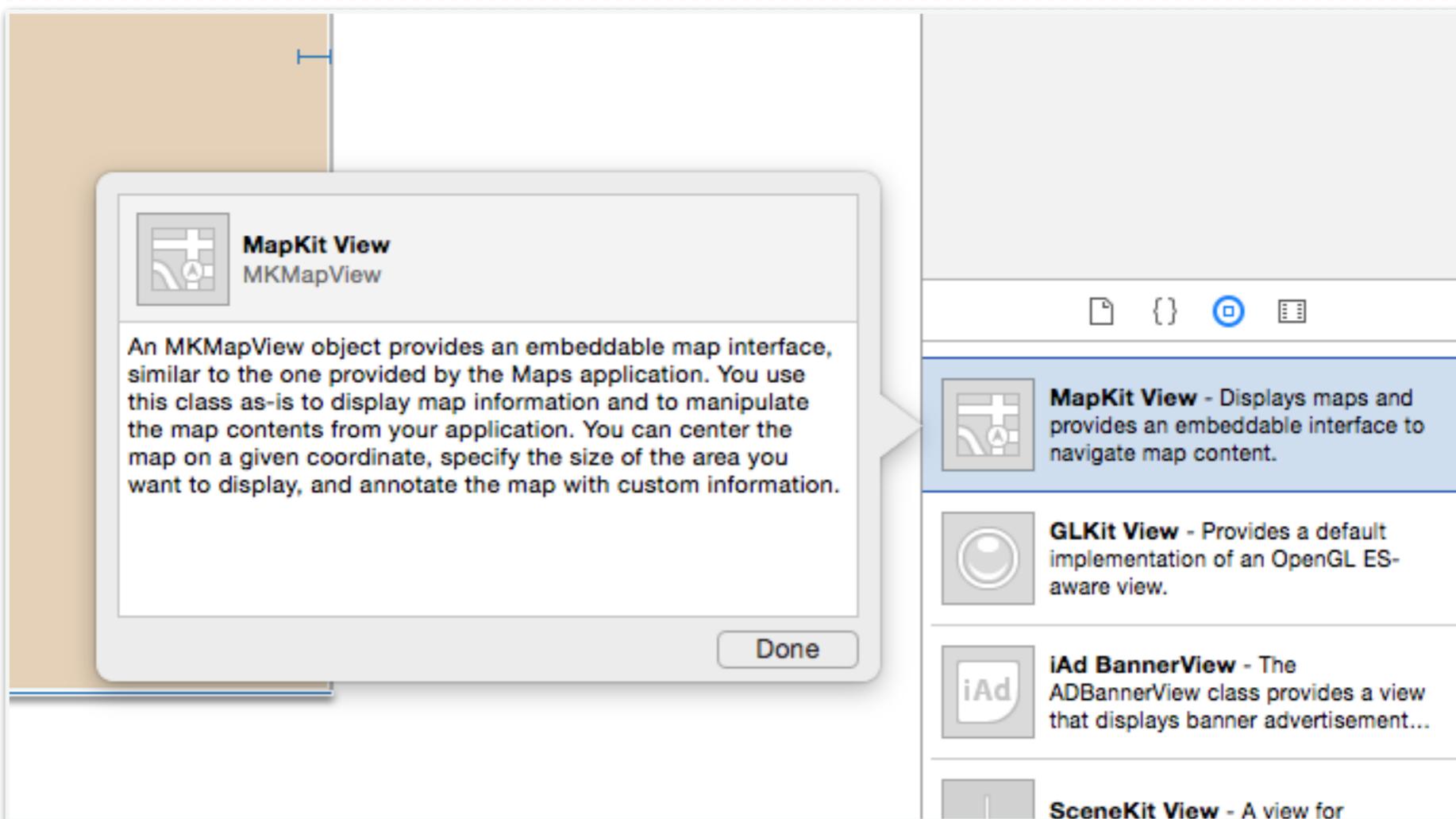
MapKit



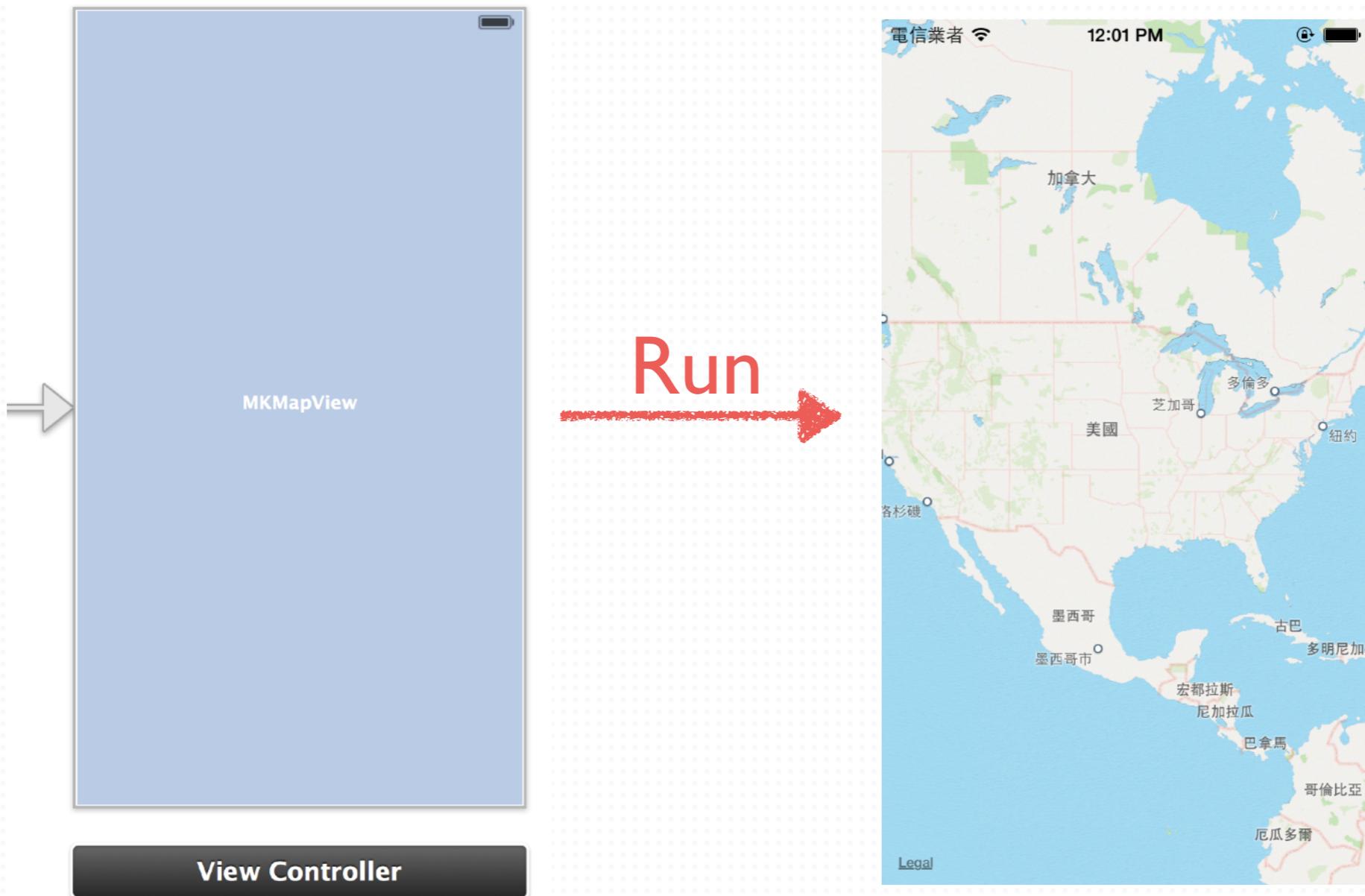
- Add framework in project

MapKit

- Drag a map in storyboard

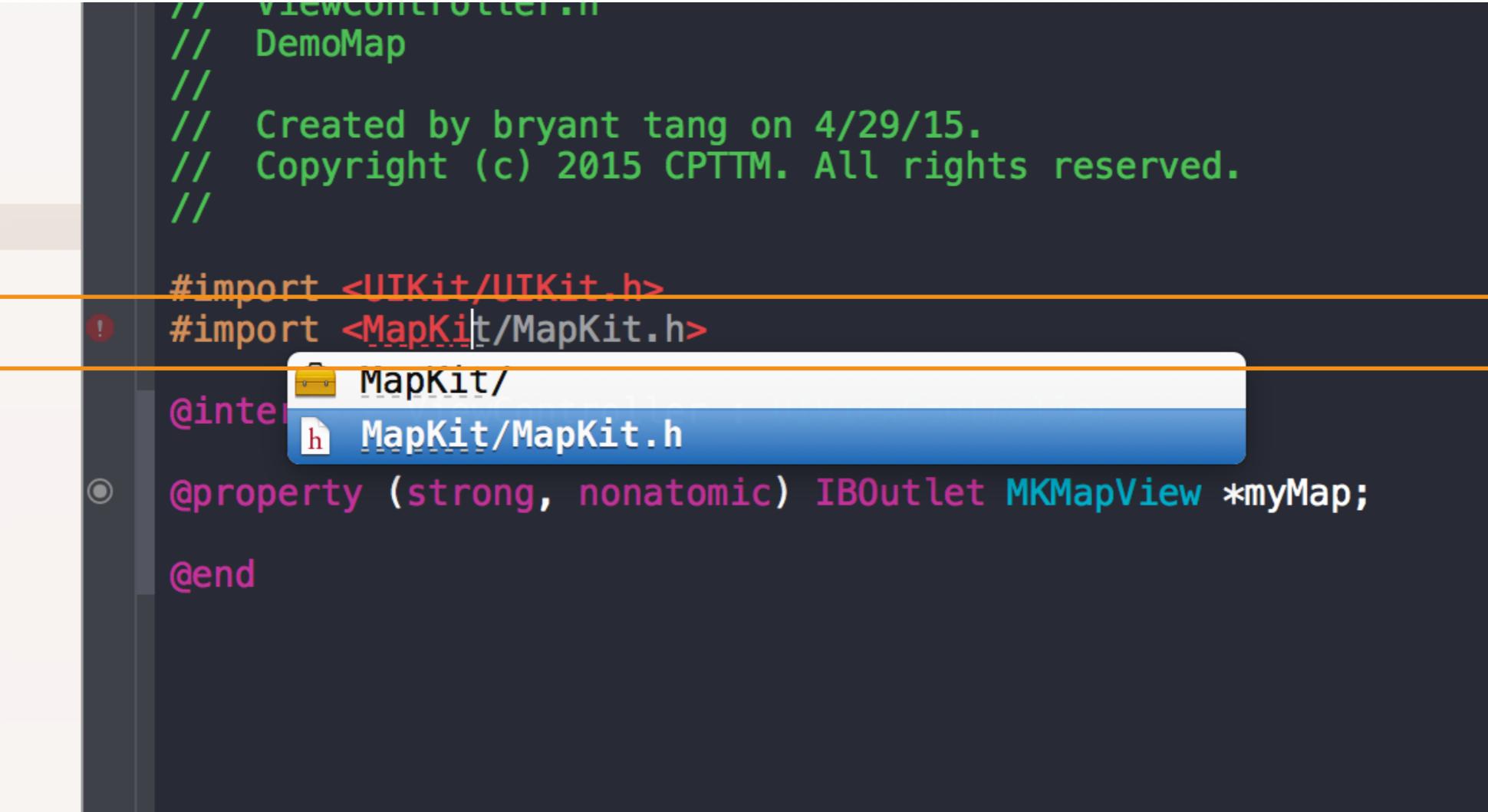


MapKit



MapKit

- Implement map in code



A screenshot of an Xcode code editor showing a file named "viewController.m". The code includes a copyright notice and imports for UIKit and MapKit. A code completion dropdown is open over the import statement "#import <MapKit/MapKit.h>". The dropdown shows two options: "MapKit/" (with a folder icon) and "MapKit/MapKit.h" (with a file icon). The second option is highlighted with a blue selection bar. An orange oval highlights the entire line of code from "#import <UIKit/UIKit.h>" to the completion dropdown. A red exclamation mark icon is positioned to the left of the first import statement. A green checkmark icon is located to the right of the completion bar.

```
// viewcontroller.m
// DemoMap
//
// Created by bryant tang on 4/29/15.
// Copyright (c) 2015 CPTTM. All rights reserved.
//

#import <UIKit/UIKit.h>
!#import <MapKit/MapKit.h>
    ○ MapKit/
@inter○ MapKit/MapKit.h
    ○ @property (strong, nonatomic) IBOutlet MKMapView *myMap;

@end
```

MapKit

- Create a map

```
@property (strong, nonatomic) IBOutlet MKMapView *myMap;
```

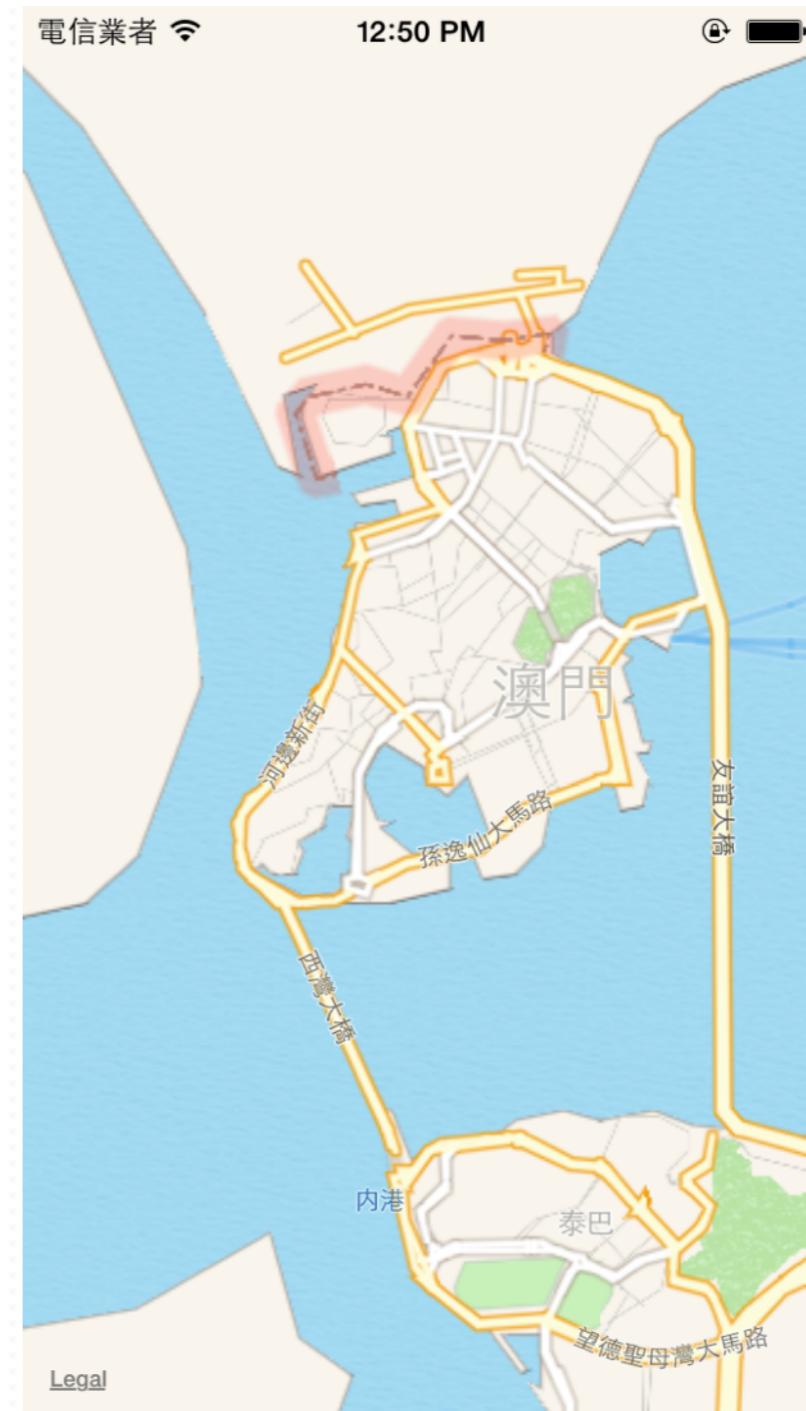
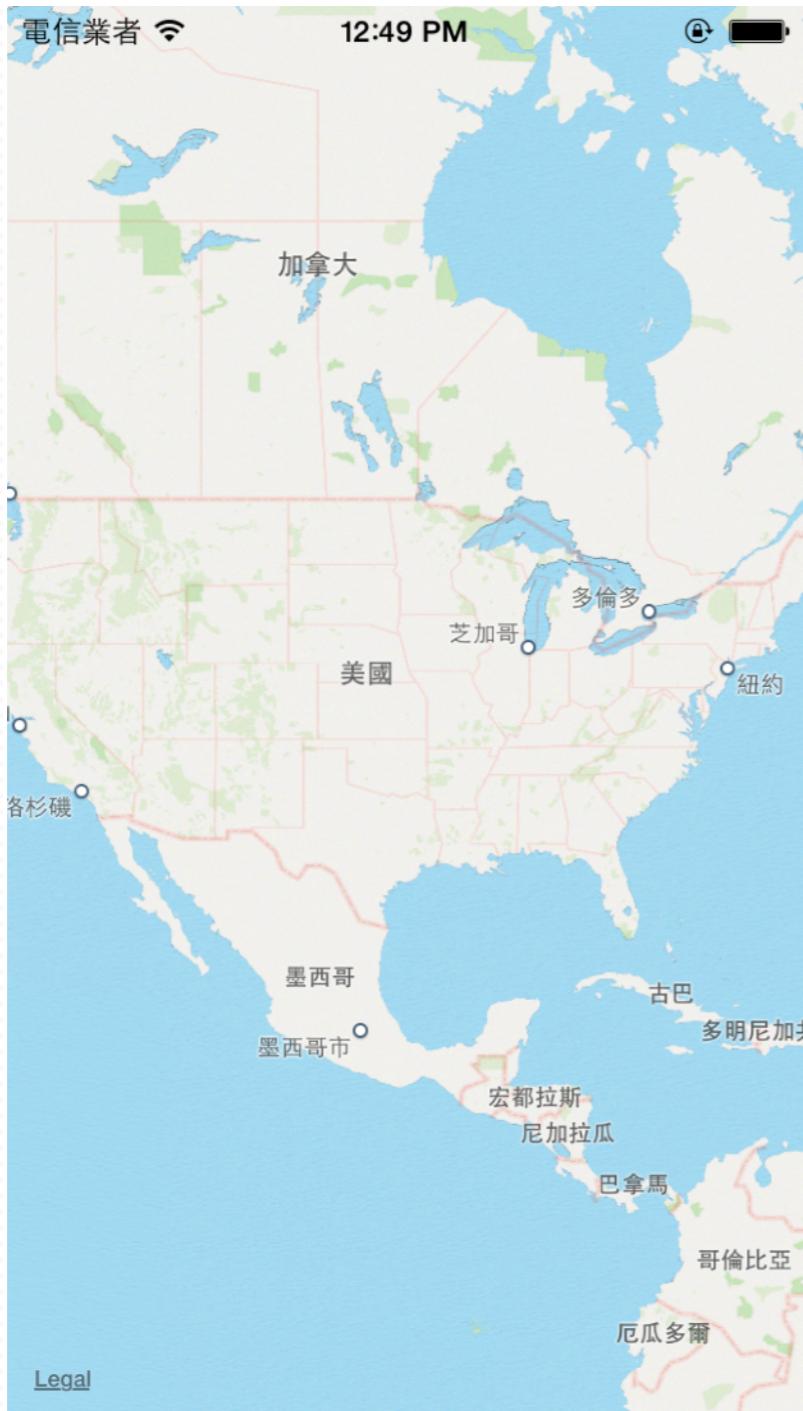
MapKit

- Setting the Visible Portion of the Map

- Set region
- Set coordination

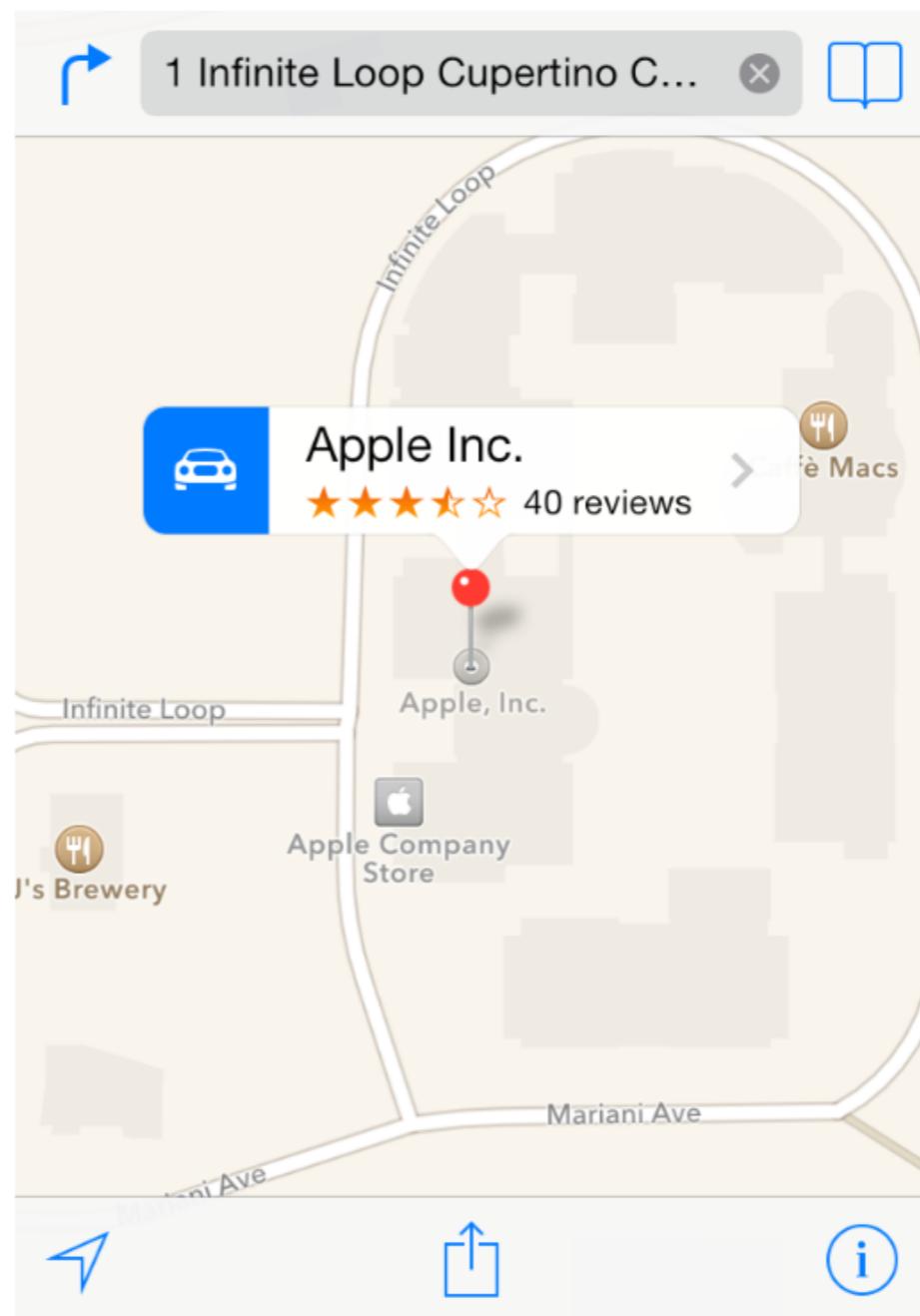
```
MKCoordinateRegion theRegion = mapView.region;  
  
theRegion.center.latitude = 22.192344;  
theRegion.center.longitude = 113.542096;  
  
theRegion.span.longitudeDelta *= 0.0001;  
theRegion.span.latitudeDelta *= 0.0001;  
  
mapView.region = theRegion;
```

MapKit



MapKit

● Annotation



MapKit

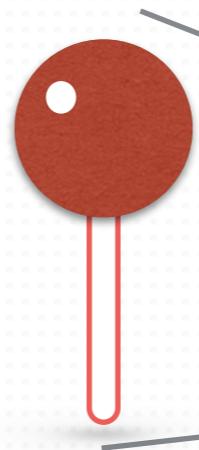
- Two options to define an annotation
 - PointAnnotation
 - Custom Annotation View

MapKit

● MKPointAnnotation

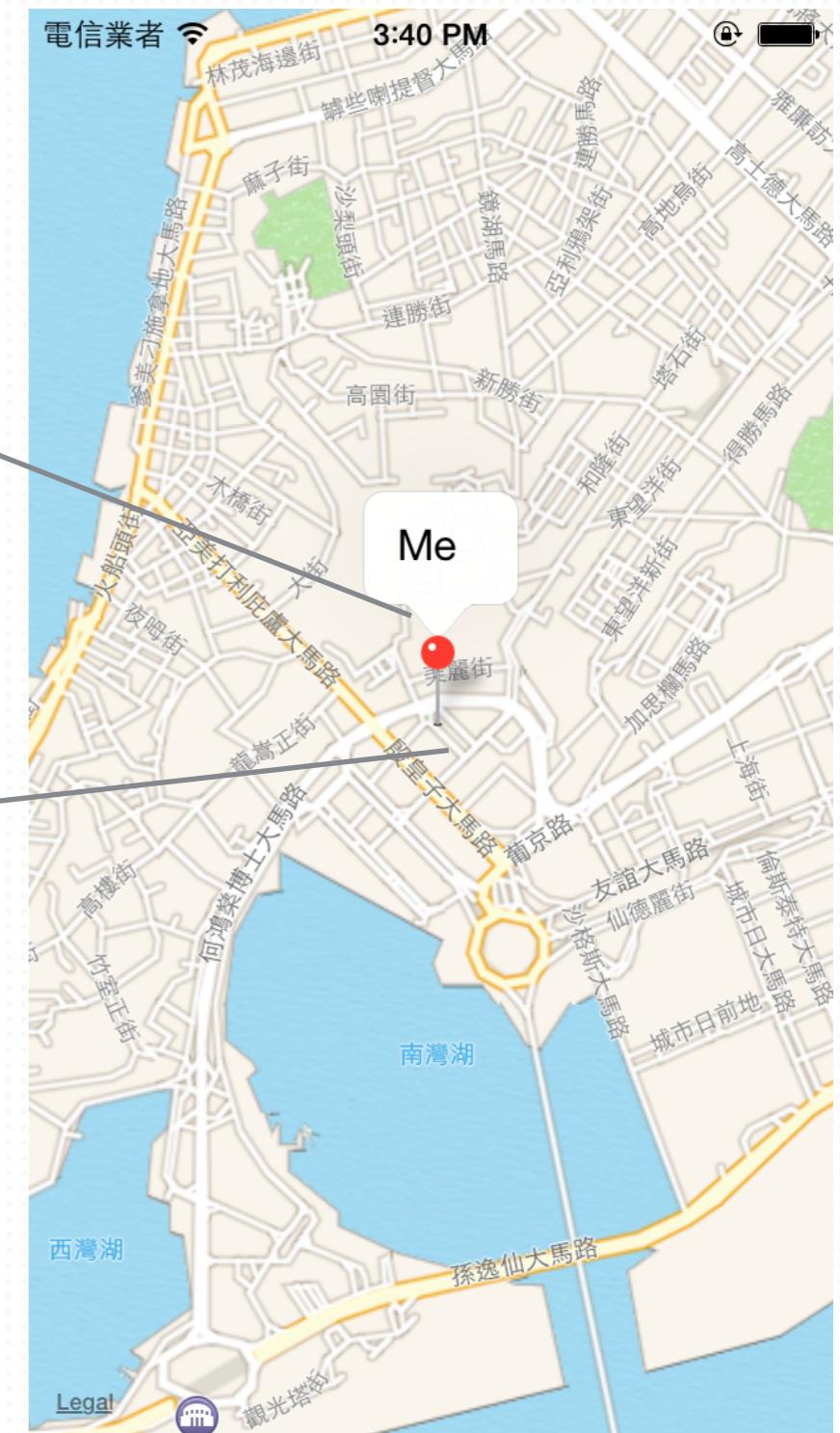
```
MKPointAnnotation *myAnnotation = [[MKPointAnnotation alloc] init];
myAnnotation.coordinate = CLLocationCoordinate2DMake(22.262769, 114.193054);
myAnnotation.title = @"Bryant";
```

- Coordinate
- Title/Subtitle



○ Add annotation to map

```
[mapView addAnnotation:annotation];
```



MapKit

● Custom Annotation View

- Annotation(MKPointAnnotation)

Coordinate

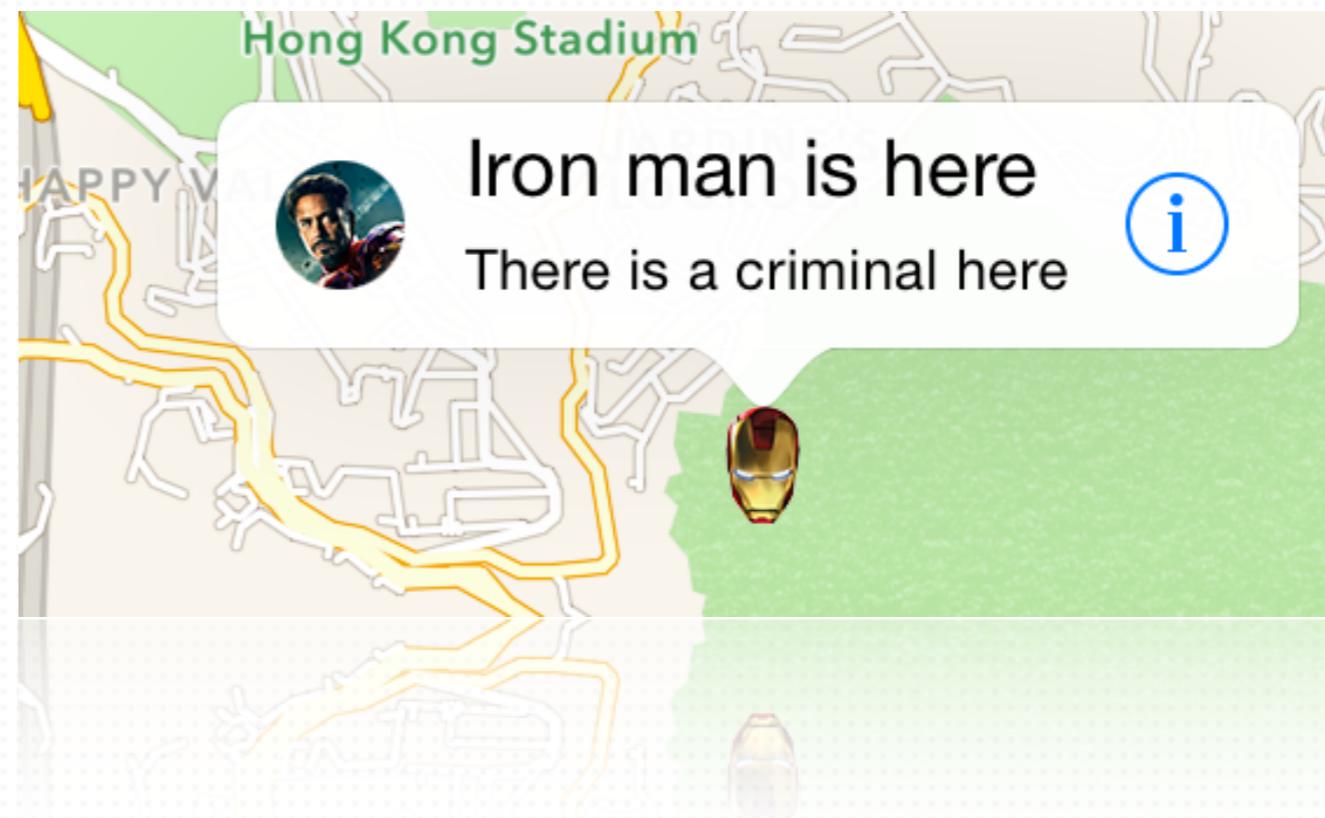
Data-info

- Annotation View

Color

Image of annotation

Callouts



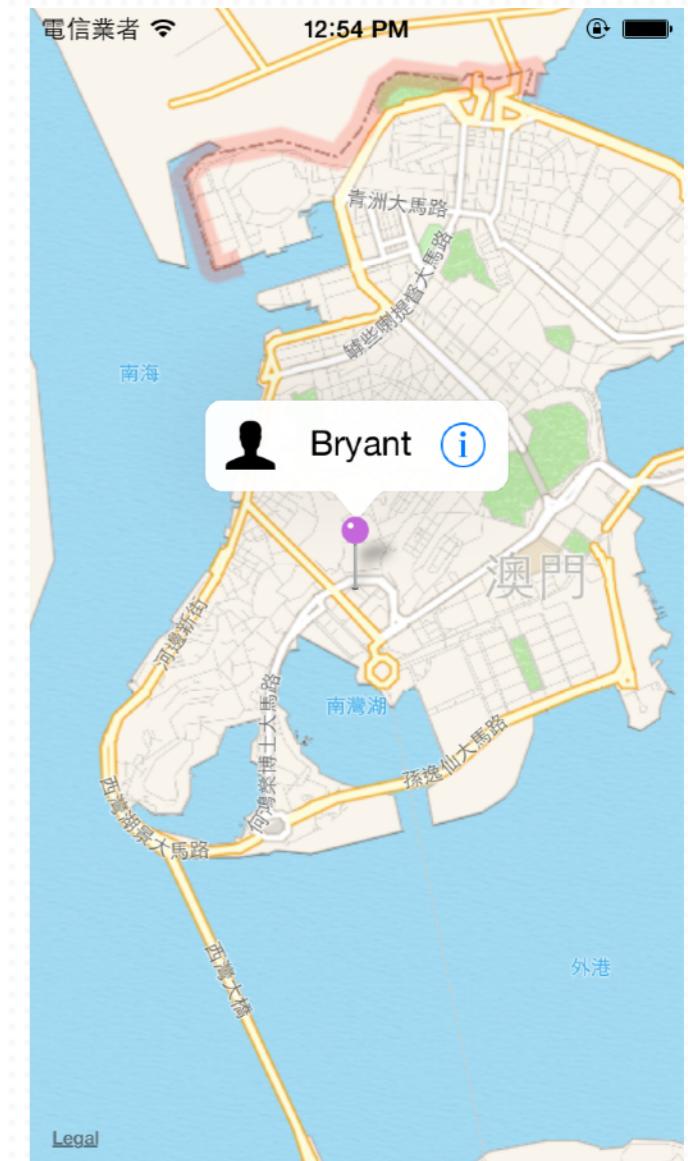
MapKit

● Custom Annotation View

- Annotation View

Implement the delegate method:

```
-(MKAnnotationView*)mapView:(MKMapView *)mapView  
    viewForAnnotation:  
(id<MKAnnotation>)annotation{  
  
    MKAnnotationView *customView;  
    customView = [[MKAnnotationView alloc] init];  
    customView.annotation = annotation;  
    customView.image = [UIImage imageNamed:@"image_name"];  
    customView.canShowCallout = YES;  
    customView.draggable = YES;  
  
}
```

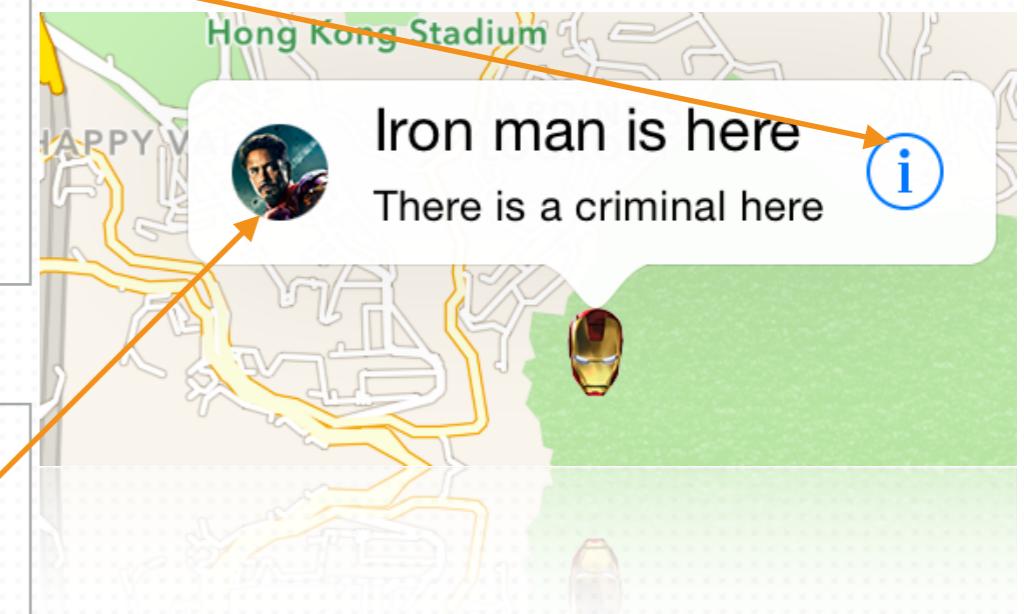


MapKit

● Custom Callouts

```
UIButton *rightButton = [UIButton  
buttonWithType:UIButtonTypeDetailDisclosure];  
  
[rightButton addTarget:self action:@select(clickInfo:  
forControlEvents:UIControlEventTouchUpInside];  
  
aView.rightCalloutAccessoryView = rightButton;
```

```
UIImageView *myCustomImage = [[UIImageView alloc]  
initWithImage:[UIImage imageNamed:@"person_head"]];  
  
aView.leftCalloutAccessoryView = myCustomImage;
```



My Location

My Location

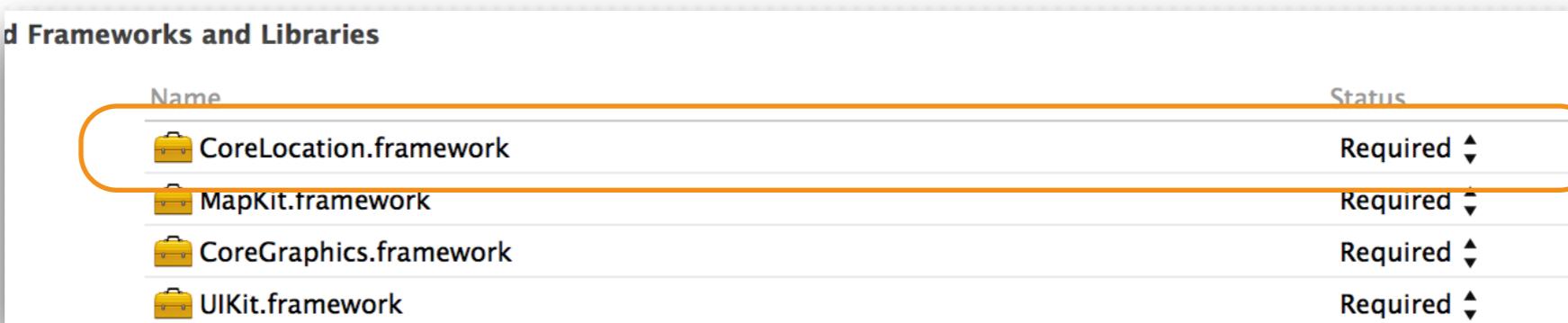
- Find user's location - ([Facebook Check in](#))
- Track user's location - ([Driving Navigation](#))

My Location

- Standard location service
- Significant-change location service

My Location

- Add CoreLocation framework
- import <CoreLocation/CoreLocation.h>



The screenshot shows the beginning of a Swift file with the following code:

```
// Created by bryant tang on 5/12/14.  
// Copyright (c) 2014 bryant. All rights reserved.  
  
import "ViewController.h"  
import "MyCustomAnnotation.h"  
import <CoreLocation/CoreLocation.h>  
  
@interface ViewController ()
```

The line 'import <CoreLocation/CoreLocation.h>' is highlighted with an orange rounded rectangle and has a large orange checkmark to its right.

My Location

- Declare location manager

```
locationManager = [[CLLocationManager alloc] init];  
locationManager.delegate = self;
```

- Accuracy setting

```
locationManager.desiredAccuracy = kCLLocationAccuracyBest;  
locationManager.distanceFilter = 50; // meters
```

- Start location manager

```
[locationManager startUpdatingLocation];
```

My Location

- Update location

```
- (void)locationManager:(CLLocationManager *)manager didUpdateLocations:(NSArray *)locations{
    CLLocation* location = [locations lastObject];
    NSLog(@"latitude %+.6f, longitude %+.6f\n",
          location.coordinate.latitude,
          location.coordinate.longitude);
}
```

My Location

● Authorization (iOS 8)

Apparently in **iOS 8 SDK**,
requestAlwaysAuthorization (for background location) or
requestWhenInUseAuthorization (location only when foreground)
call on CLLocationManager is needed before starting location updates

Implement

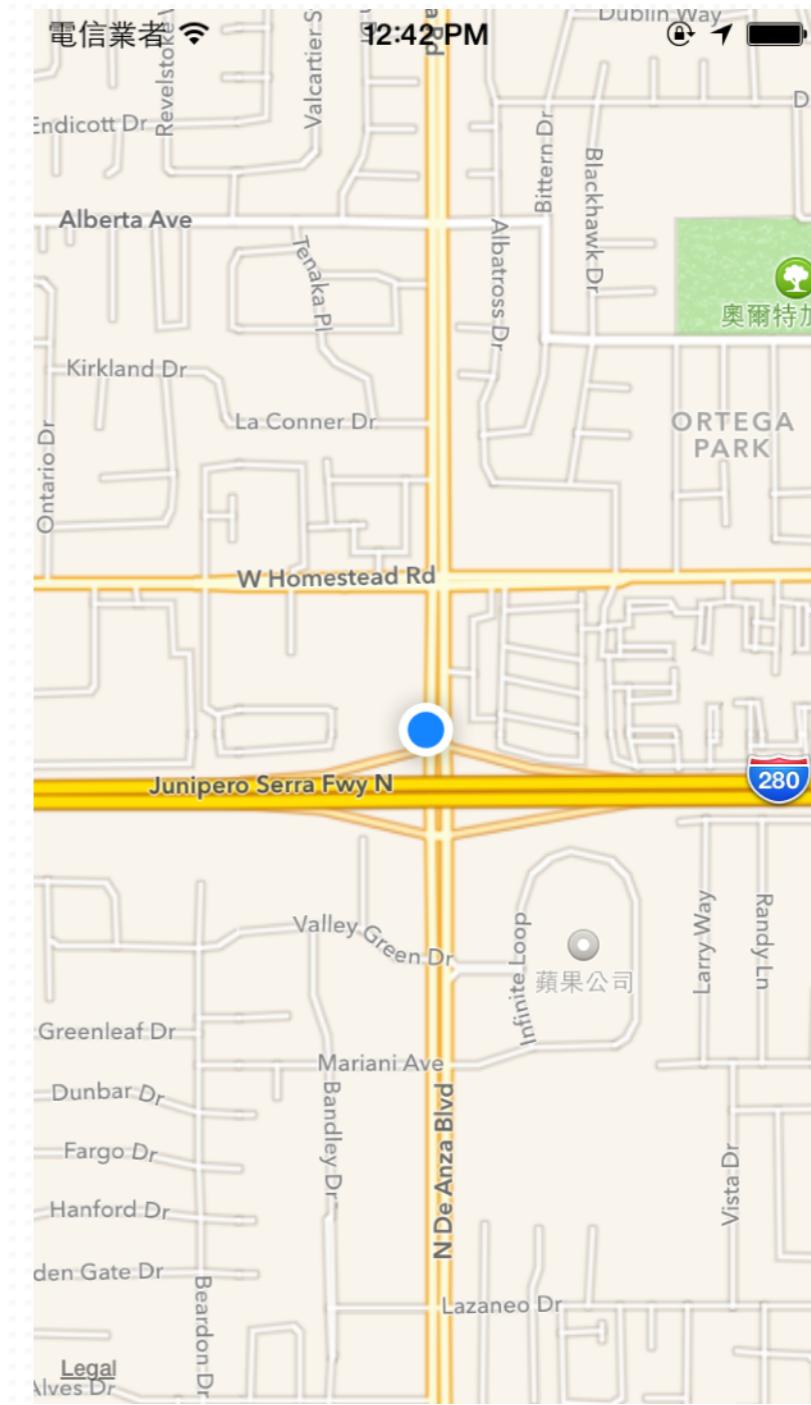
```
[locationManager requestWhenInUseAuthorization]; // For foreground access  
[locationManager requestAlwaysAuthorization]; // For background access
```

Add Description

Key	Type	Value
▼ Information Property List	Dictionary	(15 items)
NSLocationAlwaysUsageDescription	String	Do you want to enable core location?
Localization native development r...	String	en

My Location

- Show location in map



UIAlertView

- Create an alert view and show

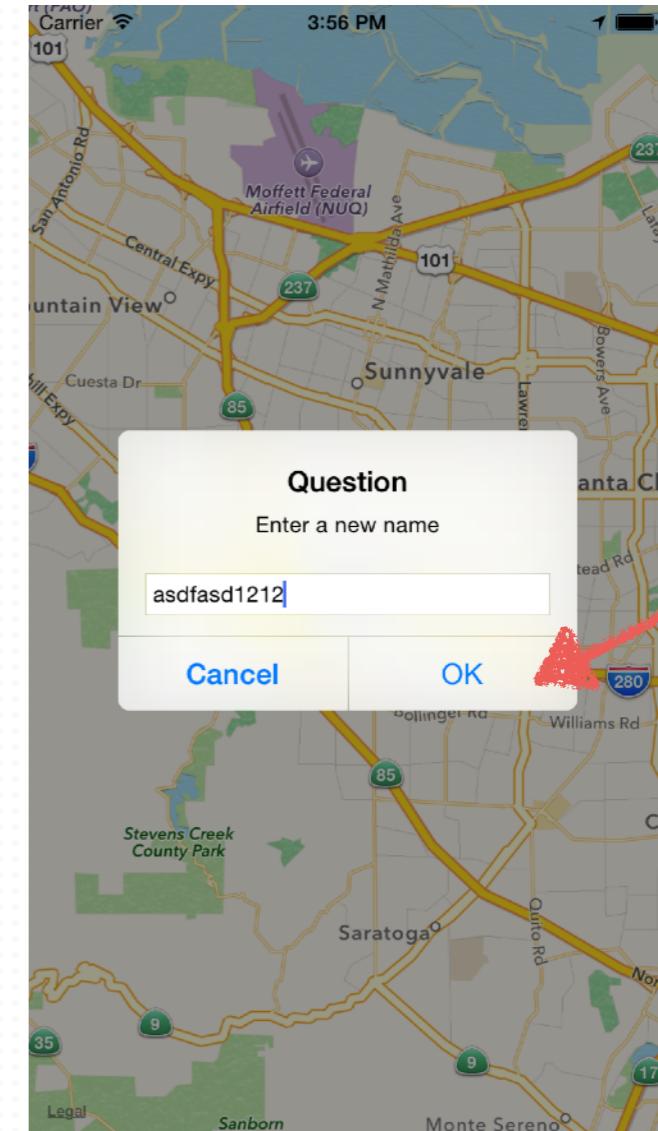
```
UIAlertView *askProfile = [[UIAlertView alloc] initWithTitle:@"Add Profile"
                                                    message:@"Enter Phone"
                                                    delegate:self
                                                   cancelButtonTitle:@"Cancel"
                                                   otherButtonTitles:@"OK", nil];

askProfile.alertViewStyle = UIAlertViewStylePlainTextInput;
[askProfile addSubview:textf];
[askProfile show]; //Show if this code is written
```

UIAlertView

● Delegate function

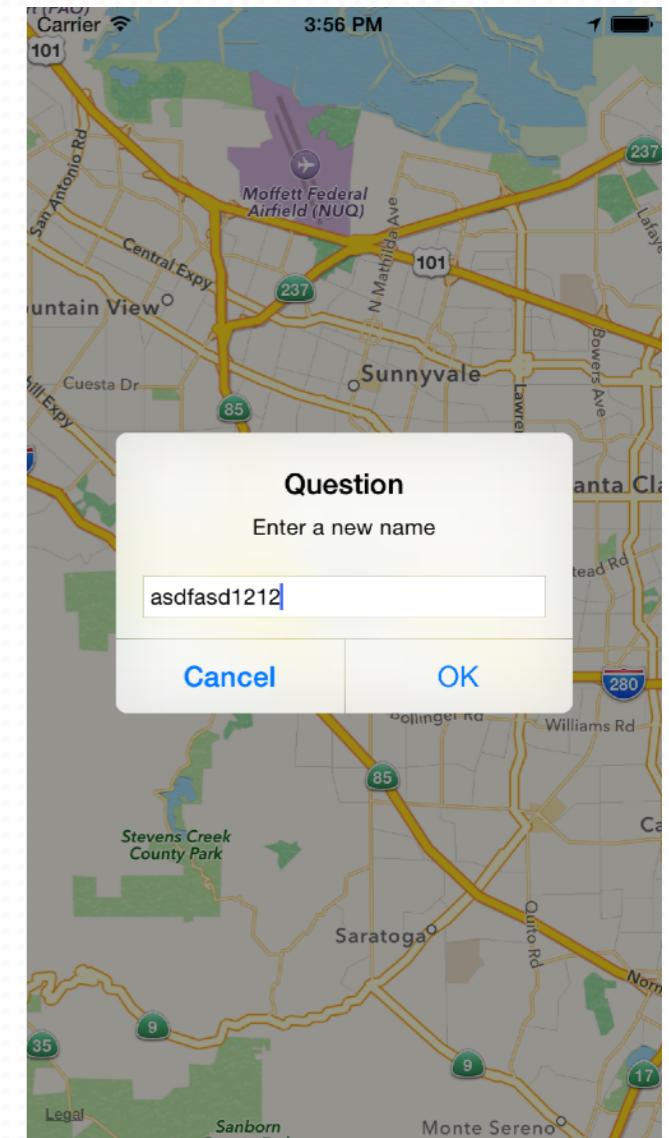
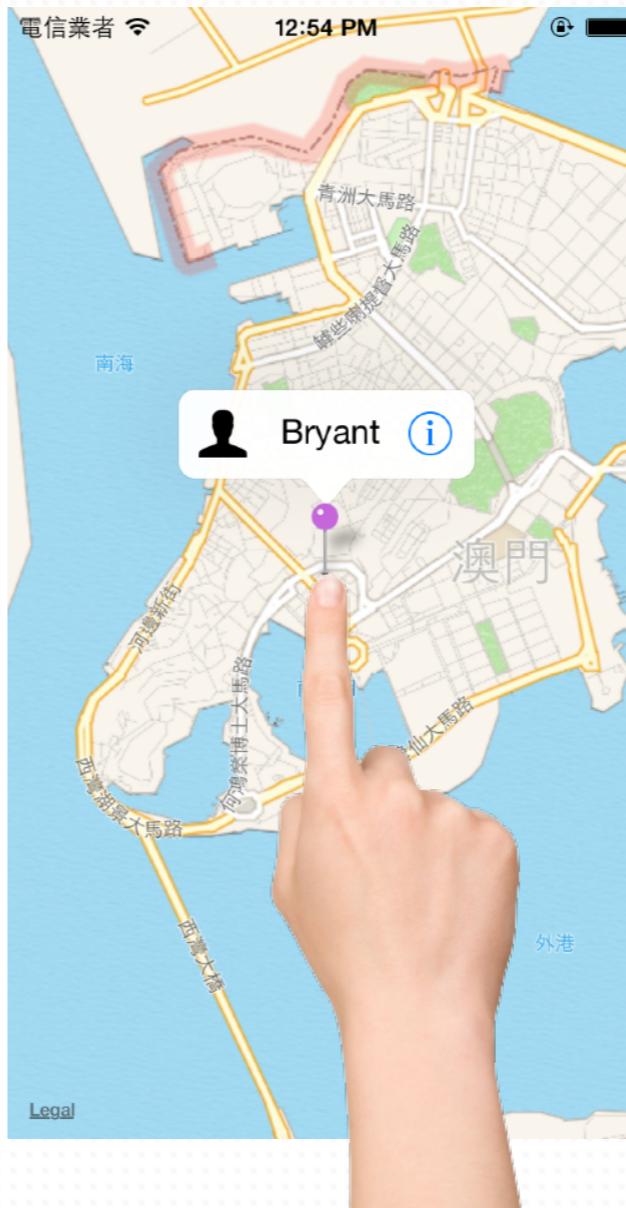
```
- (void)alertView:(UIAlertView *)alertView
clickedButtonAtIndex:(NSInteger)buttonIndex{
    switch (buttonIndex) {
        case 0: // first button : Cancel
            //Do something
            break;
        case 1: // first button : OK
            //Do something
            break;
        default:
            break;
    }
}
```



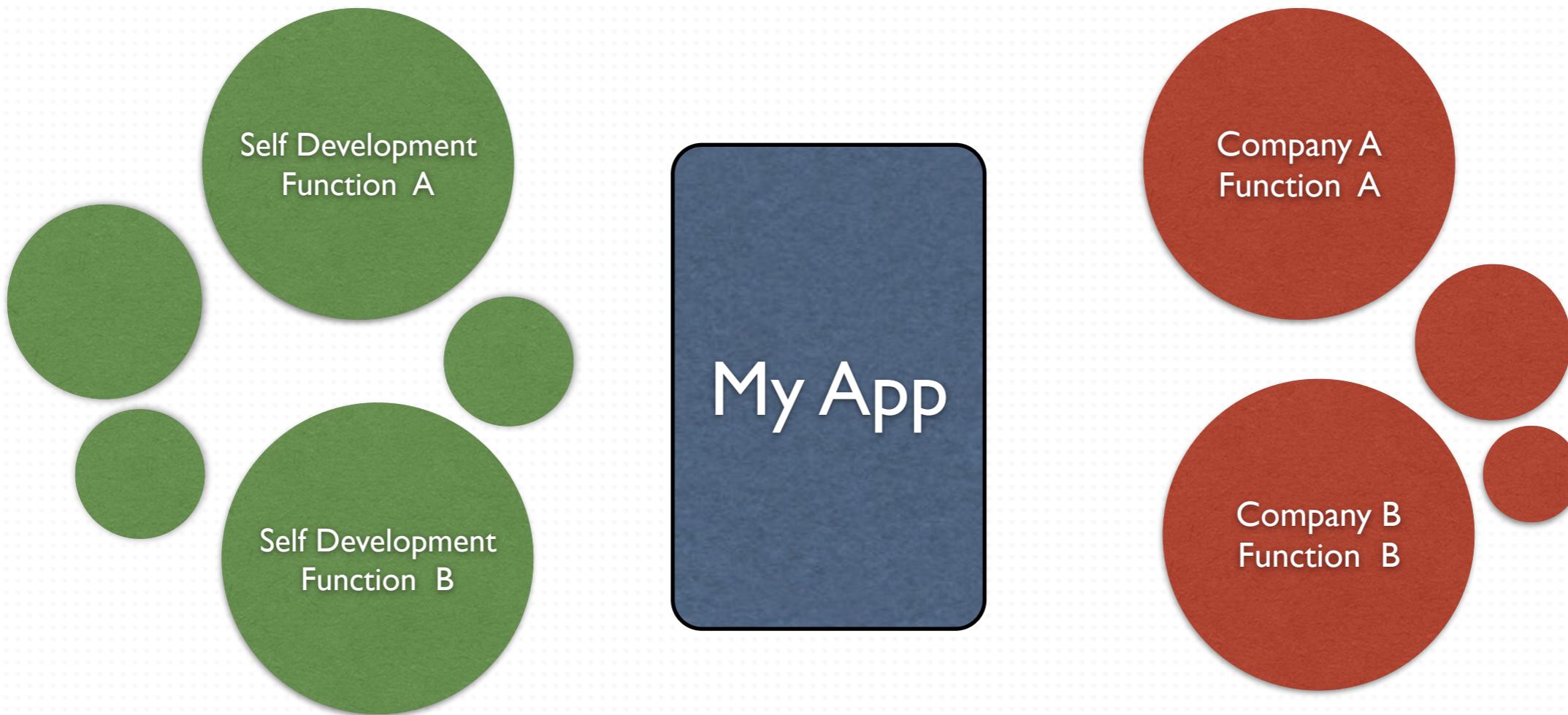
Click

Homework

- Add annotation at map
- Add on place where you point
- Enter a name for annotation



Third Party SDK



Third Party SDK

Must think about before using Third Party SDK

- Deprecated when Updated of iOS
- SDKs compatible
- New language

Third Party SDK

- Google Map iOS SDK

Third Party SDK

Tutorial Website

<https://developers.google.com/maps/>

Third Party SDK

Steps

- Download SDK
- Import SDK in your Project
- Register Key or licence
- Import Library in your Class
- Initial API