IOS - ACCESSING MAPS

Maps are always helpful for us to locate places. Maps are integrated in iOS using the MapKit framework.

Steps Involved

Step 1. Create a simple view-based application.

Step 2. Select your project file, then select targets and then add MapKit.framework.

Step 3. We should also add Corelocation.framework.

Step 4. Add a MapView to ViewController.xib and create an ibOutlet and name it as mapView.

Step 5. Create a new file by selecting File-> New -> File... -> select Objective C class and click next.

Step 6. Name the class as MapAnnotation with "sub class of" as NSObject.

Step 7. Select create.

Step 8. Update MapAnnotation.h as follows:

```
#import <Foundation/Foundation.h>
#import <MapKit/MapKit.h>

@interface MapAnnotation : NSObject<MKAnnotation>
@property (nonatomic, strong) NSString *title;
@property (nonatomic, readwrite) CLLocationCoordinate2D coordinate;

- (id)initWithTitle:(NSString *)title andCoordinate:
  (CLLocationCoordinate2D)coordinate2d;

@end
```

Step 9. Update **MapAnnotation.m** as follows −

```
#import "MapAnnotation.h"

@implementation MapAnnotation
-(id)initWithTitle:(NSString *)title andCoordinate:
 (CLLocationCoordinate2D)coordinate2d{
    self.title = title;
    self.coordinate =coordinate2d;
    return self;
}
@end
```

Step 10. Update **ViewController.h** as follows −

```
#import <UIKit/UIKit.h>
#import <MapKit/MapKit.h>
#import <CoreLocation/CoreLocation.h>
@interface ViewController : UIViewController<MKMapViewDelegate>
{
    MKMapView *mapView;
}
@end
```

Step 11. Update **ViewController.m** as follows −

```
#import "ViewController.h"
```

```
#import "MapAnnotation.h"

@interface ViewController ()

@end

@implementation ViewController

- (void)viewDidLoad
{
   [super viewDidLoad];
   mapView = [[MKMapView alloc]initWithFrame:
   CGRectMake(10, 100, 300, 300)];
   mapView.delegate = self;
   mapView.centerCoordinate = CLLocationCoordinate2DMake(37.32, -122.03);
   mapView.mapType = MKMapTypeHybrid;
   CLLocationCoordinate2D location;
   location.latitude = (double) 37.332768;
   location.longitude = (double) -122.030039;
   // Add the annotation to our map view
   MapAnnotation *newAnnotation = [[MapAnnotation alloc]
   initWithTitle:@"Apple Head quaters" andCoordinate:location];
   [mapView addAnnotation:newAnnotation];
   CLLocationCoordinate2D location2;
   location2.latitude = (double) 37.35239;
   location2.longitude = (double) -122.025919;
   MapAnnotation *newAnnotation2 = [[MapAnnotation alloc]
   initWithTitle:@"Test annotation" andCoordinate:location2];
   [mapView addAnnotation:newAnnotation2];
   [self.view addSubview:mapView];
}
// When a map annotation point is added, zoom to it (1500 range)
- (void)mapView:(MKMapView *)mv didAddAnnotationViews:(NSArray *)views
{
   MKAnnotationView *annotationView = [views objectAtIndex:0];
   id <MKAnnotation> mp = [annotationView annotation];
   MKCoordinateRegion region = MKCoordinateRegionMakeWithDistance
   ([mp coordinate], 1500, 1500);
   [mv setRegion:region animated:YES];
   [mv selectAnnotation:mp animated:YES];
}

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

@end
```

Output

When we run the application, we'll get the output as shown below −

When we scroll the map up, we will get the output as shown below −