**Task # 1: Integrate GoogleMaps using cocoapods and show current location with an annotation:**

**Program:**

import UIKit

import CoreLocation

import GoogleMaps

class ViewController: UIViewController {

    var locationManager: CLLocationManager!

    var mapView: GMSMapView!

    override func viewDidLoad() {

        super.viewDidLoad()

        let camera = GMSCameraPosition.camera(withLatitude: 33.714453, longitude: 73.024374, zoom: 15.0)

        mapView = GMSMapView.map(withFrame: view.bounds, camera: camera)

        mapView.settings.myLocationButton = true

        mapView.isMyLocationEnabled = true

        mapView.delegate = self

        view = mapView

        let marker = GMSMarker()

        marker.position = CLLocationCoordinate2DMake(33.714453, 73.024374)

        marker.icon = GMSMarker.markerImage(with: UIColor.gray)

        marker.title = "Air university!"

        marker.snippet = "Islamabad"

        marker.map = mapView

        locationManager = CLLocationManager()

        locationManager.requestAlwaysAuthorization()

        locationManager.requestWhenInUseAuthorization()

        if CLLocationManager.locationServicesEnabled() {

            locationManager.delegate = self

            locationManager.desiredAccuracy = kCLLocationAccuracyBest

            locationManager.startUpdatingLocation()

        } else {

            print("Location services not enabled")

        }

    }

}

extension ViewController: GMSMapViewDelegate {

    func mapView(\_ mapView: GMSMapView, didTapMyLocation location: CLLocationCoordinate2D) {

        print("latitude: \(location.latitude) longitude: \(location.longitude)")

    }

}

extension ViewController: CLLocationManagerDelegate {

    func locationManager(\_ manager: CLLocationManager, didUpdateLocations locations: [CLLocation]) {

        let myLocation = locations.last

        let camera = GMSCameraPosition.camera(withLatitude: (myLocation?.coordinate.latitude)!, longitude: (myLocation?.coordinate.longitude)!, zoom: 15.0)

        self.mapView.animate(to: camera)

        manager.stopUpdatingLocation()

    }

    func locationManager(\_ manager: CLLocationManager, didFailWithError error: Error) {

        print(error.localizedDescription)

    }

}