SUPERIOR UNIVERSITY

MOBILE APPLICATIONS DEVELOPMENT

Department: SOFTWARE ENGINEERING

ASSIGNMENT # 04

Course Instructor: Muhammad Ahmed Total Marks: 10

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BSEM-F20-160

5A

QUESTION 1:

Implement Google Map which fetches the user's current location and share it with to another user.

Hint: You can implement the chat application, or you can use what's app application to share with others.

ANDROID MANIFEST FILE:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.kazimasum.mapdemo">

    <uses-permission android:name="android.permission.INTERNET"/>
    <uses-permission
android:name="android.permission.ACCESS_COARSE_LOCATION"/>
    <uses-permission
android:name="android.permission.ACCESS_FINE_LOCATION"/>

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
```

```
        <meta-data android:name="com.google.android.geo.API_KEY"
            android:value="AIzaSyB8Zp_xB5VjC-sgVqsPeLxOyxRnfvqCasE"/>

        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

ACTIVITY_MAIN.XML:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">


   <fragment
      android:layout_width="match_parent"
      android:layout_height="match_parent"
```

```
    android:id="@+id/google_map"
    android:name="com.google.android.gms.maps.SupportMapFragment"/>



</RelativeLayout>
```

MAINACTIVITY.JAVA:

```
package com.kazimasum.mapdemo;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;

import android.Manifest;
import android.content.pm.PackageManager;
import android.location.Location;
import android.nfc.Tag;
import android.os.Bundle;
import android.view.WindowManager;

import com.google.android.gms.location.FusedLocationProviderClient;
import com.google.android.gms.location.LocationServices;
import com.google.android.gms.maps.CameraUpdateFactory;
import com.google.android.gms.maps.GoogleMap;
import com.google.android.gms.maps.OnMapReadyCallback;
import com.google.android.gms.maps.SupportMapFragment;
import com.google.android.gms.maps.model.LatLng;
```

```
import com.google.android.gms.maps.model.MarkerOptions;
import com.google.android.gms.tasks.OnSuccessListener;
import com.google.android.gms.tasks.Task;
import com.karumi.dexter.Dexter;
import com.karumi.dexter.PermissionToken;
import com.karumi.dexter.listener.PermissionDeniedResponse;
import com.karumi.dexter.listener.PermissionGrantedResponse;
import com.karumi.dexter.listener.PermissionRequest;
import com.karumi.dexter.listener.single.PermissionListener;

import java.security.Permission;
import java.util.Map;

public class MainActivity extends AppCompatActivity {

    SupportMapFragment smf;
    FusedLocationProviderClient client;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        getWindow().setFlags(WindowManager.LayoutParams.FLAG_FULLSCREEN,
WindowManager.LayoutParams.FLAG_FULLSCREEN);

        smf = (SupportMapFragment)
getSupportFragmentManager().findFragmentById(R.id.google_map);
        client = LocationServices.getFusedLocationProviderClient(this);
```

```
    Dexter.withContext(getApplicationContext())
            .withPermission(Manifest.permission.ACCESS_FINE_LOCATION)
            .withListener(new PermissionListener() {
                @Override
                public void onPermissionGranted(PermissionGrantedResponse
permissionGrantedResponse) {
                    getmylocation();
                }

                @Override
                public void onPermissionDenied(PermissionDeniedResponse
permissionDeniedResponse) {

                }

                @Override
                public void onPermissionRationaleShouldBeShown(PermissionRequest
permissionRequest, PermissionToken permissionToken) {
                    permissionToken.continuePermissionRequest();
                }
            }).check();

    }


    public void getmylocation() {
        if (ActivityCompat.checkSelfPermission(this,
Manifest.permission.ACCESS_FINE_LOCATION) !=
PackageManager.PERMISSION_GRANTED && ActivityCompat.checkSelfPermission(this,
Manifest.permission.ACCESS_COARSE_LOCATION) !=
PackageManager.PERMISSION_GRANTED) {
```

```
            // TODO: Consider calling
            //    ActivityCompat#requestPermissions
            // here to request the missing permissions, and then overriding
            //   public void onRequestPermissionsResult(int requestCode, String[] permissions,
            //                                          int[] grantResults)
            // to handle the case where the user grants the permission. See the documentation
            // for ActivityCompat#requestPermissions for more details.
            return;
        }

        Task<Location> task = client.getLastLocation();
        task.addOnSuccessListener(new OnSuccessListener<Location>() {
            @Override
            public void onSuccess(final Location location) {
                smf.getMapAsync(new OnMapReadyCallback() {
                    @Override
                    public void onMapReady(GoogleMap googleMap) {
                        LatLng latLng=new LatLng(location.getLatitude(),location.getLongitude());
                        MarkerOptions markerOptions=new MarkerOptions().position(latLng).title("You
are here...!!");

                        googleMap.addMarker(markerOptions);
                        googleMap.animateCamera(CameraUpdateFactory.newLatLngZoom(latLng,17));
                    }
                });
            }
        });
    }
}
```