EXPERIMENT – 8

AIM:

Build mobile application based on the Google Maps

DESCRIPTION:

Google Maps is a web service that provides detailed information about geographical regions and sites worldwide. In addition to conventional road maps, Google Maps offers aerial and satellite views of many locations. In some cities, Google Maps offers street views comprising photographs taken from vehicles.

MainActivity.java:

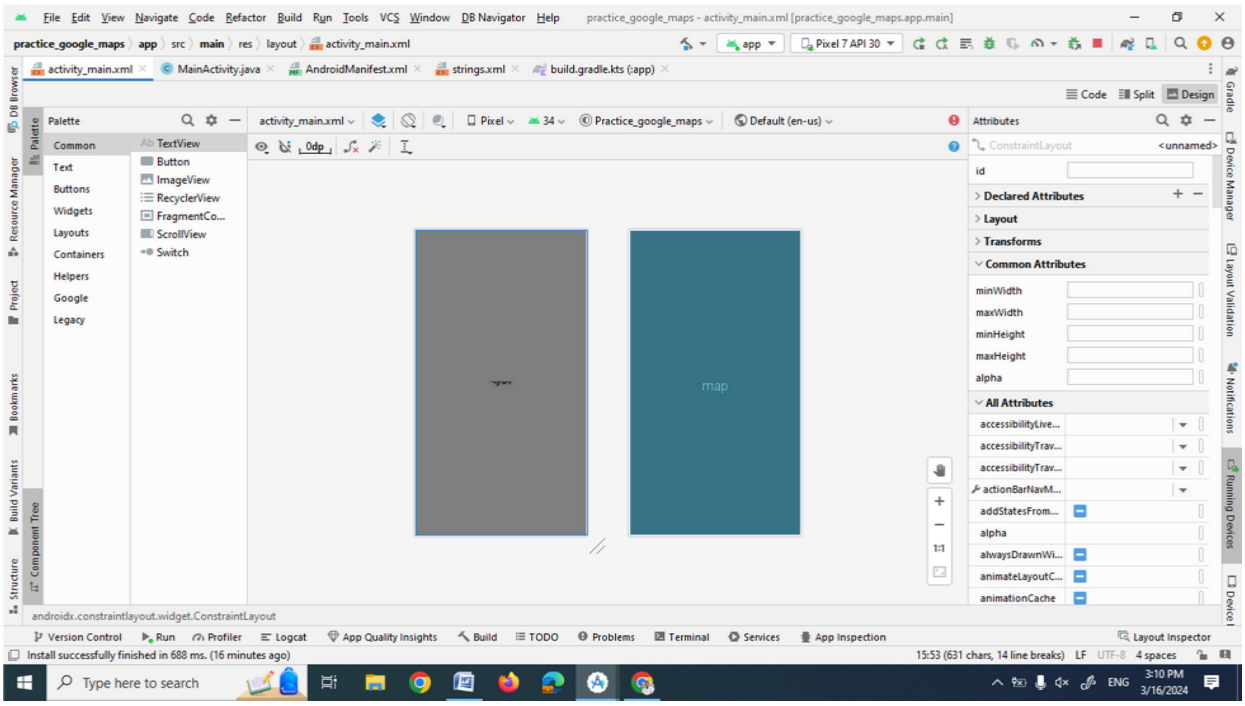
```
package com.example.practice_google_maps;
import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import com.google.android.gms.maps.CameraUpdateFactory;
import com.google.android.gms.maps.GoogleMap;
import com.google.android.gms.maps.OnMapReadyCallback;
import com.google.android.gms.maps.SupportMapFragment;
import com.google.android.gms.maps.model.LatLng;
import com.google.android.gms.maps.model.MarkerOptions;

public class MainActivity extends AppCompatActivity implements OnMapReadyCallback {
GoogleMap gMap;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      SupportMapFragment supportMapFragment=(SupportMapFragment)
            getSupportFragmentManager().findFragmentById(R.id.map);
      supportMapFragment.getMapAsync(this);
   }
   @Override
   public void onMapReady(@NonNull GoogleMap googleMap)
   {
      gMap=googleMap;
      LatLng vja=new LatLng(16.48816,80.69413);
      MarkerOptions mo=new MarkerOptions();
      mo.position(vja);
      mo.title("PVPSIT");
      gMap.addMarker(mo);
      gMap.moveCamera(CameraUpdateFactory.newLatLng(vja));
      gMap.getUiSettings().setZoomControlsEnabled(true);
```

```
gMap.getUiSettings().setCompassEnabled(true);}}
```

activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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:id="@+id/map"
      android:name="com.google.android.gms.maps.SupportMapFragment"
      android:layout_width="match_parent"
      android:layout_height="match_parent"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```



AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
   xmlns:tools="http://schemas.android.com/tools">
   <application
      android:allowBackup="true"
```

```
    android:dataExtractionRules="@xml/data_extraction_rules"
    android:fullBackupContent="@xml/backup_rules"
    android:icon="@mipmap/ic_launcher"
    android:label="@string/app_name"
    android:roundIcon="@mipmap/ic_launcher_round"
    android:supportsRtl="true"
    android:theme="@style/Theme.Practice_google_maps"
    tools:targetApi="31">
    <activity
      android:name=".MainActivity"
      android:exported="true">
      <intent-filter>
        <action android:name="android.intent.action.MAIN" />
        <category android:name="android.intent.category.LAUNCHER" />
      </intent-filter>
    </activity>
    <meta-data
      android:name="com.google.android.geo.API_KEY"
      android:value="@string/mic_maps_api_key" />
  </application>
</manifest>
```

Strings.xml

```
<resources>
  <string name="app_name">practice_google_maps</string>
  <string name="mic_maps_api_key">AIzaSyBtNldqVCKeU9eK-Q_eyZE0iHP-
C4RLY5o</string>
</resources>
```

Build.gradle.kts(:app):

```
plugins {
  id("com.android.application")
}
android {
  namespace = "com.example.practice_google_maps"
  compileSdk = 34
  defaultConfig {
    applicationId = "com.example.practice_google_maps"
    minSdk = 24
    targetSdk = 34
    versionCode = 1
    versionName = "1.0"

    testInstrumentationRunner = "androidx.test.runner.AndroidJUnitRunner"
  }
```

```
    buildTypes {
        release {
            isMinifyEnabled = false
            proguardFiles(getDefaultProguardFile("proguard-android-optimize.txt"), "proguard-
rules.pro")
        }}
    compileOptions {
        sourceCompatibility = JavaVersion.VERSION_1_8
        targetCompatibility = JavaVersion.VERSION_1_8  }}
dependencies {
    implementation("androidx.appcompat:appcompat:1.6.1")
    implementation("com.google.android.material:material:1.11.0")
    implementation("androidx.constraintlayout:constraintlayout:2.1.4")
    testImplementation("junit:junit:4.13.2")
    androidTestImplementation("androidx.test.ext:junit:1.1.5")
    androidTestImplementation("androidx.test.espresso:espresso-core:3.5.1")
    implementation("com.google.android.gms:play-services-maps:18.2.0")
}
```

OUTPUT: