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<b>Reg. No.</b>	<b>:</b>	<b>18 5001 194</b>	<b>Date</b>	<b>:</b>	<b>30/10/2021</b>
<b>Subject</b>	<b>:</b>	<b>UCS1711---Mobile Application Development Lab</b>			

### **Ex. No. 7 GPS location information**

#### **AIM :**

To develop a native application that uses GPS location information, and displays the latitude and longitude of the given place.

#### **CODE :**

#### **Activity\_main.xml :**

```
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context=".MainActivity" >

    <Button
        android:id="@+id/button1"
        android:layout_width="133dp"
        android:layout_height="34dp"
        android:layout_below="@+id/textView1"
        android:layout_marginTop="244dp"
        android:text="OK" />

    <EditText
```

```
        android:id="@+id/location"
        android:layout_width="269dp"
        android:layout_height="wrap_content"
        android:layout_below="@+id/textView1"
        android:layout_alignRight="@+id/button1"
        android:layout_marginTop="66dp"
        android:layout_marginRight="-63dp"
        android:ems="10">

        <requestFocus />
    </EditText>

</RelativeLayout>
```

## MainActivity.java :

```
package com.example.geocode;

import java.io.IOException;
import java.util.List;
import java.util.Locale;

import android.location.Address;
import android.location.Geocoder;
import android.os.Bundle;
import android.app.Activity;
import android.util.Log;
import android.view.Menu;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends Activity {

    double latitude, longitude;
    EditText locationName;
    Button okbtn;
    TextView result;
```

```

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);

    locationName = (EditText) findViewById(R.id.location);
    okbtn = (Button) findViewById(R.id.button1);
    result = (TextView) findViewById(R.id.textView1);

    // Log.v("msg",(Locale.getDefault().toString()));

    okbtn.setOnClickListener(new View.OnClickListener() {

        @Override
        public void onClick(View v) {
            // TODO Auto-generated method stub

            Geocoder geocoder = new Geocoder(getBaseContext(), Locale
                .getDefault());

            try {
                List<Address> address;

                address = geocoder.getFromLocationName(locationName
                    .getText().toString(), 1);
                if (address.size() > 0) {
                    latitude = address.get(0).getLatitude();
                    longitude = address.get(0).getLongitude();
                }

            } catch (IOException e) {
                // TODO Auto-generated catch block
                e.printStackTrace();
            } finally {

            }

            result.setText("" + latitude + "\n" + longitude);

        }
    });
}

@Override
public boolean onCreateOptionsMenu(Menu menu) {

```

```
        // Inflate the menu; this adds items to the action bar if it is present.  
        getMenuInflater().inflate(R.menu.main, menu);  
        return true;  
    }  
  
}
```

## AndroidManifest.xml :

```
<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
    package="com.example.geocode">  
  
    <application  
        android:allowBackup="true"  
        android:icon="@mipmap/ic_launcher"  
        android:label="@string/app_name"  
        android:roundIcon="@mipmap/ic_launcher_round"  
        android:supportRtl="true"  
        android:theme="@style/Theme.Geocode">  
        <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>  
    </application>  
  
</manifest>
```

## Output Snapshots :

### Home Screen

9:31

GPS Location

ANDROID LOCATION TRACKER APPLICATION

LATITUDE Latitude

LONGITUDE Longitude

GET LOCATION

OK

This screenshot shows the initial state of the application. The title bar is purple with the text 'GPS Location'. Below it is a teal bar with the text 'ANDROID LOCATION TRACKER APPLICATION'. The main area has two input fields: 'Latitude' and 'Longitude', each preceded by a blue button labeled 'LATITUDE' and 'LONGITUDE' respectively. Below these is a blue 'GET LOCATION' button. At the bottom, there is a red horizontal line and a red 'OK' button. The status bar at the top shows the time 9:31 and various icons.

### GPS location of input

9:31

GPS Location

ANDROID LOCATION TRACKER APPLICATION

LATITUDE 11.363795000000001

LONGITUDE 77.68452

GET LOCATION

SSN College

OK

This screenshot shows the application after the 'GET LOCATION' button has been clicked. The 'Latitude' input field now contains the value '11.363795000000001' and the 'Longitude' input field contains '77.68452'. The 'GET LOCATION' button remains visible. Below the input fields, the text 'SSN College' is displayed above a red horizontal line, with a red 'OK' button below it. The status bar at the top shows the time 9:31 and various icons.

## LEARNING OUTCOME :