**Experiment No :- 9**

**Aim:** Develop a native application that makes use of GPS location.

**1. code for GetCurrentLocation.java**

package com.rdc;

import java.io.IOException;

import java.util.List;

import java.util.Locale;

import android.app.Activity;

import android.app.AlertDialog;

import android.content.ContentResolver;

import android.content.Context;

import android.content.DialogInterface;

import android.content.Intent;

import android.content.pm.ActivityInfo;

import android.location.Address;

import android.location.Geocoder;

import android.location.Location;

import android.location.LocationListener;

import android.location.LocationManager;

import android.os.Bundle;

import android.provider.Settings;

import android.util.Log;

import android.view.View;

import android.view.View.OnClickListener;

import android.widget.Button;

import android.widget.EditText;

import android.widget.ProgressBar;

import android.widget.Toast;

public class GetCurrentLocation extends Activity

implements OnClickListener {

private LocationManager locationMangaer=null;

private LocationListener locationListener=null;

private Button btnGetLocation = null;

private EditText editLocation = null;

private ProgressBar pb =null;

private static final String TAG = "Debug";

private Boolean flag = false;

@Override

public void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.main);

//if you want to lock screen for always Portrait mode

setRequestedOrientation(ActivityInfo

.SCREEN\_ORIENTATION\_PORTRAIT);

pb = (ProgressBar) findViewById(R.id.progressBar1);

pb.setVisibility(View.INVISIBLE);

editLocation = (EditText) findViewById(R.id.editTextLocation);

btnGetLocation = (Button) findViewById(R.id.btnLocation);

btnGetLocation.setOnClickListener(this);

locationMangaer = (LocationManager)

getSystemService(Context.LOCATION\_SERVICE);

}

@Override

public void onClick(View v) {

flag = displayGpsStatus();

if (flag) {

Log.v(TAG, "onClick");

editLocation.setText("Please!! move your device to"+

" see the changes in coordinates."+"\nWait..");

pb.setVisibility(View.VISIBLE);

locationListener = new MyLocationListener();

locationMangaer.requestLocationUpdates(LocationManager

.GPS\_PROVIDER, 5000, 10,locationListener);

} else {

alertbox("Gps Status!!", "Your GPS is: OFF");

}

}

/\*----Method to Check GPS is enable or disable ----- \*/

private Boolean displayGpsStatus() {

ContentResolver contentResolver = getBaseContext()

.getContentResolver();

boolean gpsStatus = Settings.Secure

.isLocationProviderEnabled(contentResolver,

LocationManager.GPS\_PROVIDER);

if (gpsStatus) {

return true;

} else {

return false;

}

}

/\*----------Method to create an AlertBox ------------- \*/

protected void alertbox(String title, String mymessage) {

AlertDialog.Builder builder = new AlertDialog.Builder(this);

builder.setMessage("Your Device's GPS is Disable")

.setCancelable(false)

.setTitle("\*\* Gps Status \*\*")

.setPositiveButton("Gps On",

new DialogInterface.OnClickListener() {

public void onClick(DialogInterface dialog, int id) {

// finish the current activity

// AlertBoxAdvance.this.finish();

Intent myIntent = new Intent(

Settings.ACTION\_SECURITY\_SETTINGS);

startActivity(myIntent);

dialog.cancel();

}

})

.setNegativeButton("Cancel",

new DialogInterface.OnClickListener() {

public void onClick(DialogInterface dialog, int id) {

// cancel the dialog box

dialog.cancel();

}

});

AlertDialog alert = builder.create();

alert.show();

}

/\*----------Listener class to get coordinates ------------- \*/

private class MyLocationListener implements LocationListener {

@Override

public void onLocationChanged(Location loc) {

editLocation.setText("");

pb.setVisibility(View.INVISIBLE);

Toast.makeText(getBaseContext(),"Location changed : Lat: " +

loc.getLatitude()+ " Lng: " + loc.getLongitude(),

Toast.LENGTH\_SHORT).show();

String longitude = "Longitude: " +loc.getLongitude();

Log.v(TAG, longitude);

String latitude = "Latitude: " +loc.getLatitude();

Log.v(TAG, latitude);

/\*----------to get City-Name from coordinates ------------- \*/

String cityName=null;

Geocoder gcd = new Geocoder(getBaseContext(),

Locale.getDefault());

List<Address> addresses;

try {

addresses = gcd.getFromLocation(loc.getLatitude(), loc

.getLongitude(), 1);

if (addresses.size() > 0)

System.out.println(addresses.get(0).getLocality());

cityName=addresses.get(0).getLocality();

} catch (IOException e) {

e.printStackTrace();

}

String s = longitude+"\n"+latitude +

"\n\nMy Currrent City is: "+cityName;

editLocation.setText(s);

}

@Override

public void onProviderDisabled(String provider) {

// TODO Auto-generated method stub

}

@Override

public void onProviderEnabled(String provider) {

// TODO Auto-generated method stub

}

@Override

public void onStatusChanged(String provider,

int status, Bundle extras) {

// TODO Auto-generated method stub

}

}

}

**2. cod for main.xml**

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout

xmlns:android="http://schemas.android.com/apk/res/android"

android:orientation="vertical"

android:layout\_width="fill\_parent"

android:layout\_height="fill\_parent"

android:weightSum="1">

<TextView

android:layout\_width="fill\_parent"

android:layout\_height="wrap\_content"

android:text="Get Current Location and City Name"

android:layout\_weight="0.20"

android:gravity="center"

android:textSize="20sp" />

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_weight="0.33"

android:id="@+id/editTextLocation"

android:editable="false">

<requestFocus></requestFocus>

</EditText>

<LinearLayout

android:id="@+id/layButtonH"

android:layout\_height="wrap\_content"

android:layout\_width="fill\_parent"

android:gravity="center"

android:layout\_weight="0.15">

<Button

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Get Location"

android:id="@+id/btnLocation"></Button>

</LinearLayout>

<LinearLayout

android:id="@+id/layloadingH"

android:layout\_height="wrap\_content"

android:layout\_weight="0.20"

android:layout\_width="fill\_parent"

android:gravity="center">

<ProgressBar

android:layout\_width="wrap\_content"

android:id="@+id/progressBar1"

android:layout\_height="wrap\_content"></ProgressBar>

</LinearLayout>

</LinearLayout>

**3. code for AndroidManifest.xml**

<?xml version="1.0" encoding="utf-8"?>

<manifest

xmlns:android="http://schemas.android.com/apk/res/android"

package="com.rdc"

android:versionCode="1"

android:versionName="1.0">

<uses-sdk android:minSdkVersion="10" />

<uses-permission android:name="android.permission.ACCESS\_FINE\_LOCATION">

</uses-permission>

<application

android:icon="@drawable/icon"

android:label="@string/app\_name">

<activity

android:name=".GetCurrentLocation"

android:label="@string/app\_name">

<intent-filter>

<action android:name="android.intent.action.MAIN" />

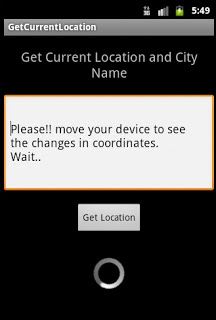
<category android:name="android.intent.category.LAUNCHER" />

</intent-filter>

</activity>

</application>

</manifest>

**OUTPUT:-**