**package** com.example.user.markersremoveandclickproject;

**import** android.support.v4.app.FragmentActivity;

**import** android.os.Bundle;

**import** android.view.View;

**import** android.widget.Button;

**import** android.widget.EditText;

**import** android.widget.Toast;

**import** com.android.volley.Request;

**import** com.android.volley.RequestQueue;

**import** com.android.volley.Response;

**import** com.android.volley.VolleyError;

**import** com.android.volley.toolbox.JsonArrayRequest;

**import** com.android.volley.toolbox.Volley;

**import** com.google.android.gms.maps.CameraUpdateFactory;

**import** com.google.android.gms.maps.GoogleMap;

**import** com.google.android.gms.maps.SupportMapFragment;

**import** com.google.android.gms.maps.model.BitmapDescriptorFactory;

**import** com.google.android.gms.maps.model.LatLng;

**import** com.google.android.gms.maps.model.MarkerOptions;

**import** com.google.maps.android.clustering.Cluster;

**import** com.google.maps.android.clustering.ClusterItem;

**import** com.google.maps.android.clustering.ClusterManager;

**import** org.json.JSONArray;

**import** org.json.JSONException;

**class** ClusterMarker **implements** ClusterItem{

**private** LatLng **mPosition** = **null**;

**public** ClusterMarker(**double** lat,**double** lng){

**mPosition** = **new** LatLng(lat,lng);

}

@Override

**public** LatLng getPosition() {

**return mPosition**;

}

}

**public class** MapsActivity **extends** FragmentActivity {

LatLng **latlngCluster**;

EditText **editText**;

Button **button**;

Button **button2**;

**private** GoogleMap **mMap**; *// Might be null if Google Play services APK is not available.*

RequestQueue **mQueue**;

String **url\_to\_PHP** = **"http://140.130.19.38:58136/~s12/connect.php"**;

ClusterManager<ClusterMarker> **mClusterManager**;

@Override

**protected void** onCreate(Bundle savedInstanceState) {

**super**.onCreate(savedInstanceState);

setContentView(R.layout.***activity\_maps***);

setUpMapIfNeeded();

**button** = (Button)findViewById(R.id.***button***);

**button**.setOnClickListener(**buttonListener**);

**button2** = (Button)findViewById(R.id.***button2***);

**button2**.setOnClickListener(**buttonListener**);

setupCluster();

}

**private** GoogleMap getMap(){

**return mMap**;

}

**private void** setupCluster(){

**mClusterManager** = **new** ClusterManager<ClusterMarker>(**this**,getMap());

**mClusterManager**.setOnClusterClickListener(**clusterListener**);

getMap().setOnCameraChangeListener(**mClusterManager**);

getMap().setOnMarkerClickListener(**mClusterManager**);

}

ClusterManager.OnClusterClickListener<ClusterMarker> **clusterListener** = **new** ClusterManager.OnClusterClickListener<ClusterMarker>() {

@Override

**public boolean** onClusterClick(Cluster<ClusterMarker> cluster) {

**latlngCluster** = cluster.getPosition();

**return true**;

}

};

**private void** addItems(**double** lat,**double** lng){

ClusterMarker offsetItem1 = **new** ClusterMarker(lat,lng);

**mClusterManager**.addItem(offsetItem1);

}

Button.OnClickListener **buttonListener** = **new** Button.OnClickListener(){

@Override

**public void** onClick(View v) {

**if**(v.getId() == R.id.***button***) {

volleyRequest();

}**else if**(v.getId() == R.id.***button2***){

**mMap**.clear();

}

}

};

@Override

**protected void** onResume() {

**super**.onResume();

setUpMapIfNeeded();

}

*/\*\**

*\* Sets up the map if it is possible to do so (i.e., the Google Play services APK is correctly*

*\* installed) and the map has not already been instantiated.. This will ensure that we only ever*

*\* call {****@link*** *#setUpMap()} once when {****@link*** *#mMap} is not null.*

*\* <p/>*

*\* If it isn't installed {****@link*** *SupportMapFragment} (and*

*\* {****@link*** *com.google.android.gms.maps.MapView MapView}) will show a prompt for the user to*

*\* install/update the Google Play services APK on their device.*

*\* <p/>*

*\* A user can return to this FragmentActivity after following the prompt and correctly*

*\* installing/updating/enabling the Google Play services. Since the FragmentActivity may not*

*\* have been completely destroyed during this process (it is likely that it would only be*

*\* stopped or paused), {****@link*** *#onCreate(Bundle)} may not be called again so we should call this*

*\* method in {****@link*** *#onResume()} to guarantee that it will be called.*

*\*/*

**private void** setUpMapIfNeeded() {

*// Do a null check to confirm that we have not already instantiated the map.*

**if** (**mMap** == **null**) {

*// Try to obtain the map from the SupportMapFragment.*

**mMap** = ((SupportMapFragment) getSupportFragmentManager().findFragmentById(R.id.***map***))

.getMap();

*// Check if we were successful in obtaining the map.*

**if** (**mMap** != **null**) {

setUpMap();

}

}

}

*/\*\**

*\* This is where we can add markers or lines, add listeners or move the camera. In this case, we*

*\* just add a marker near Africa.*

*\* <p/>*

*\* This should only be called once and when we are sure that {****@link*** *#mMap} is not null.*

*\*/*

**private void** setUpMap() {

**mMap**.addMarker(**new** MarkerOptions().position(**new** LatLng(0, 0)).title(**"Marker"**));

}

**private void** volleyRequest(){

*//使用jsonArray取代jsonObject*

JSONArray jsonArray = **new** JSONArray();

JsonArrayRequest jsonArrayRequest = **new** JsonArrayRequest(Request.Method.***POST***, **url\_to\_PHP**, jsonArray, **new** Response.Listener<JSONArray>() {

@Override

**public void** onResponse(JSONArray response) {

Double lat = 0.0;

Double lng = 0.0;

**mMap**.clear();

**for**(**int** i = 0; i < response.length(); i++){

**try** {*// 處理方式: JSONARRAY > 用getJSONObject取二維JSON陣列中的一段,再用getString("NAME")取這一段其中的一個元素*

*//必須要先分離出lat和lng才能打點*

lat = Double.*parseDouble*(response.getJSONObject(i).getString(**"lat"**));

lng = Double.*parseDouble*(response.getJSONObject(i).getString(**"lng"**));

addItems(lat, lng);

} **catch** (JSONException e) {

e.printStackTrace();

}

}

}

}, **new** Response.ErrorListener() {

@Override

**public void** onErrorResponse(VolleyError error) {

Toast.*makeText*(MapsActivity.**this**,**"OOPS,看起來資料伺服器有點問題"**, Toast.***LENGTH\_SHORT***).show();

}

});

**mQueue** = Volley.*newRequestQueue*(**this**);

**mQueue**.add(jsonArrayRequest);

}

}