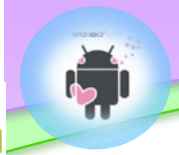
MAP

TMap

프로젝트 생성



프로젝트 정보

- ✓ Application Name: GpsTmap03
- ✓ Minimum SDK : API 16
- ✓ Add an activity to Mobile: Blank Activity
- ✓ Activity Name: MainActivity
- ✓ Layout Name: activity_main
- ✓ Title: MainActivity
- ✓ Menu Resource Name: menu_main

화면설계

activity_main.xml

```
<LinearLayout 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:id="@+id/linear"
    android:orientation="vertical"
    tools:context=".MainActivity">

</LinearLayout>
```

MainActivity

MainActivity.java

```
1  package com.example.administrator.gpstmap03;
2
3  import android.graphics.Bitmap;
4  import android.location.Location;
5  import android.location.LocationListener;
6  import android.os.Bundle;
7  import android.support.v7.app.AppCompatActivity;
8  import android.widget.LinearLayout;
9
10 import com.skp.Tmap.TMapCircle;
11 import com.skp.Tmap.TMapData;
12 import com.skp.Tmap.TMapGpsManager;
13 import com.skp.Tmap.TMapMarkerItem;
14 import com.skp.Tmap.TMapPOIItem;
15 import com.skp.Tmap.TMapPoint;
16 import com.skp.Tmap.TMapView;
17
18 import java.util.ArrayList;
19
```

MainActivity

MainActivity.java

```
19
20  public class MainActivity extends AppCompatActivity
21          implements TMapView.OnLongClickListenerCallback,
22          LocationListener, TMapGpsManager.onLocationChangedCallback {
23
24      private TMapView tMapView = null;
25      TMapGpsManager gps = null;
26      public static String mApiKey = null;
27      public static String mBizAppID = null;
28      private static final String TAG = "TestTmap";
29      Bitmap icon1, icon2;
30      TMapCircle tCircle;
31      TMapData tMapData;
32      TMapPoint point2 = null;
33
```

MainActivity

MainActivity.java

```
34      @Override
35      protected void onCreate(Bundle savedInstanceState) {
36          super.onCreate(savedInstanceState);
37          setContentView(R.layout.activity_main);
38
39          LinearLayout liner = (LinearLayout) findViewById(R.id.linear);
40          tMapView = new TMapView(this);
41          mApiKey = "3fbf4752-cf6c-318b-                    :79";
42          tMapView.setSKPMapApiKey(mApiKey);
43          tMapView.setSKPMapBizappId(mBizAppID);
44          liner.addView(tMapView);
45          setContentView(liner);
46
47          gps = new TMapGpsManager(MainActivity.this);
48          gps.setMinTime(1);
49          gps.setMinDistance(1);
50          gps.setProvider(gps.NETWORK_PROVIDER);
51          //  gps.setProvider(gps.GPS_PROVIDER);
52          gps.OpenGps();
53
```

MainActivity

MainActivity.java

```
53
54          tMapData = new TMapData();
55
56          tMapView.setZoomLevel(16);
57          tMapView.setIconVisibility(true);
58          tMapView.setCompassMode(true);
59          tMapView.setSightVisible(true);
60          tMapView.setMapPosition(TMapView.POSITION_NAVI);
61          tMapView.setTrackingMode(true);
62
63      }
64
```

MainActivity.java

```
64
65      @Override
66      public void onLocationChanged(Location location) {
67
68      }
69
70      @Override
71      public void onStatusChanged(String provider, int status, Bundle extras) {
72
73      }
74
75      @Override
76      public void onProviderEnabled(String provider) {
77
78      }
79
80      @Override
81      public void onProviderDisabled(String provider) {
82
83      }
84
85      @Override
86      public void onLongPressEvent(ArrayList<TMapMarkerItem> arrayList,
87                                   ArrayList<TMapPOIItem> arrayList1, TMapPoint tMapPoint) {
88
89      }
90
```

MainActivity

MainActivity.java

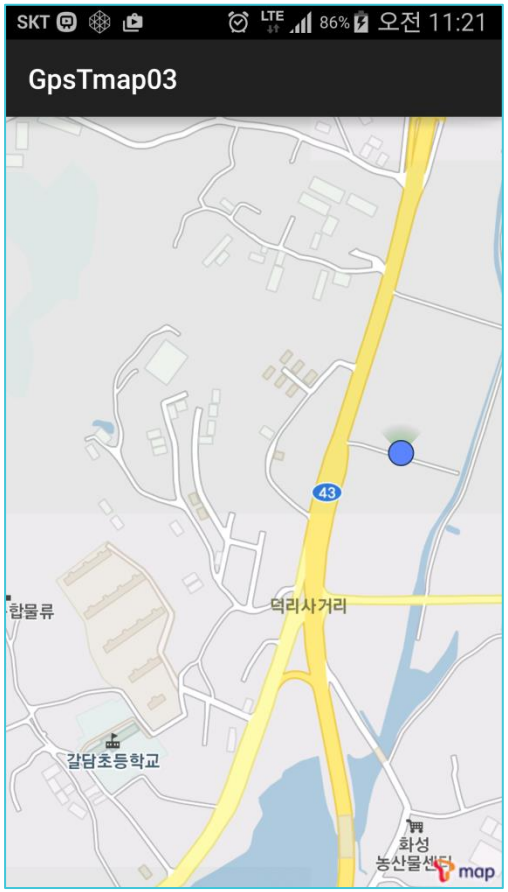
```
83      }
84
85      @Override
86      public void onLongPressEvent(ArrayList<TMapMarkerItem> arrayList,
87                                   ArrayList<TMapPOIItem> arrayList1, TMapPoint tMapPoint) {
88
89      }
90
91      @Override
92      public void onLocationChange(Location location) {
93          tMapView.setCenterPoint(location.getLongitude(), location.getLatitude());
94          tMapView.setLocationPoint(location.getLongitude(), location.getLatitude());
95      }
96
97      @Override
98      protected void onDestroy() {
99          super.onDestroy();
100         gps.CloseGps();
101     }
102
103     @Override
104     protected void onPause() { super.onPause(); }
107 }
```

Manifest

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.administrator.gpstmap03">

    <uses-permission android:name="android.permission.INTERNET" />
    <uses-permission android:name="android.permission.ACCESS_NETWORK_STATE" />
    <uses-permission android:name="android.permission.WRITE_OWNER_DATA" />
    <uses-permission android:name="android.permission.READ_OWNER_DATA" />
    <uses-permission android:name="android.permission.ACCESS_FINE_LOCATION" />

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="GpsTmap03"
        android:theme="@style/AppTheme">
        <activity
            android:name=".MainActivity"
            android:label="GpsTmap03">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

실행



마커 찍기

수정

MainActivity.java

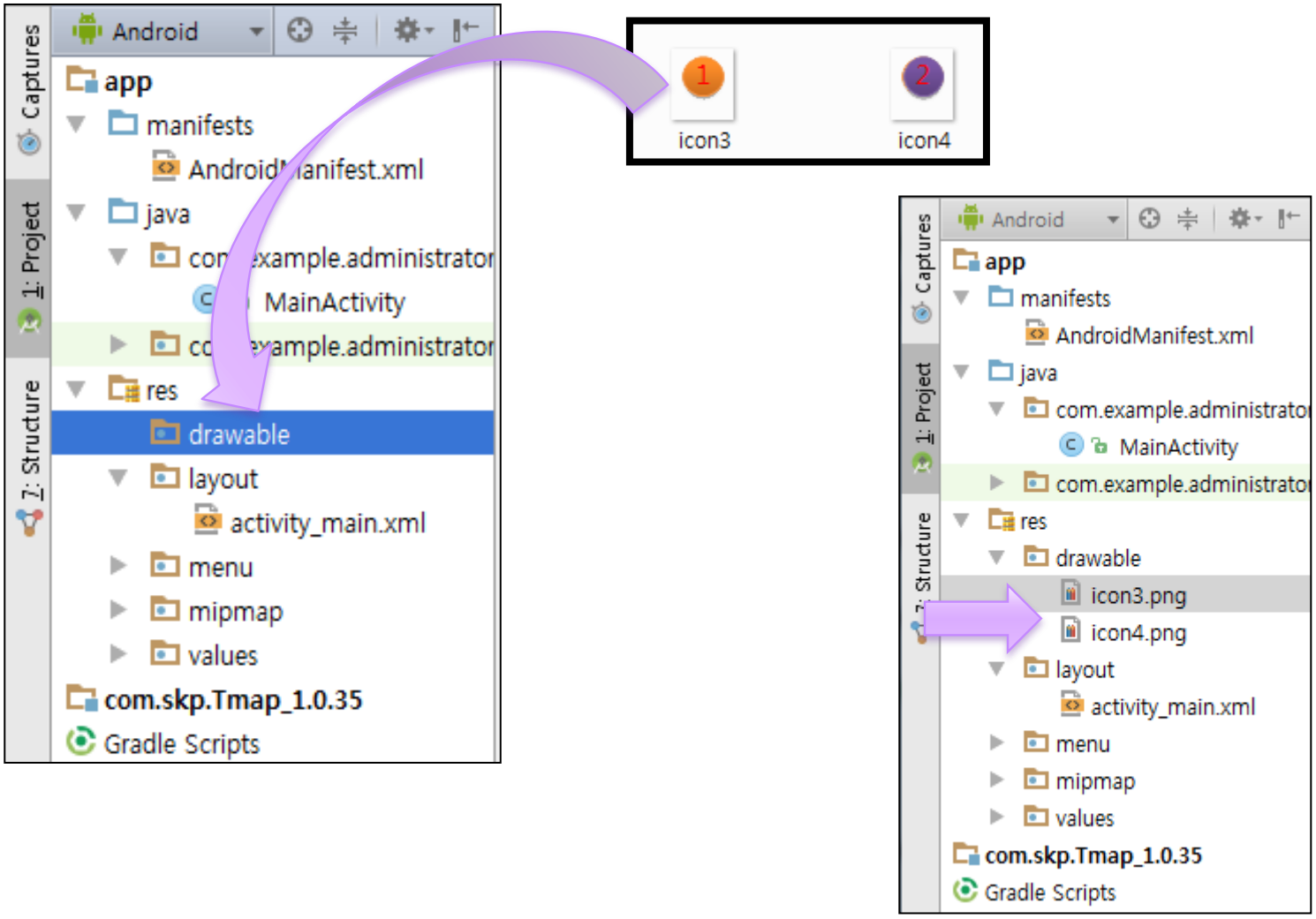
```
49          gps.setMinDistance(1);
50          gps.setProvider(gps.NETWORK_PROVIDER);
51          //  gps.setProvider(gps.GPS_PROVIDER);
52          gps.OpenGps();
53
54          tMapData = new TMapData();
55
56          tMapView.setZoomLevel(16);
57          // tMapView.setIconVisibility(true);
58          tMapView.setCompassMode(true);
59          tMapView.setSightVisible(true);
60          tMapView.setMapPosition(TMapView.POSITION_NAVI);
61          tMapView.setTrackingMode(true);
62
63      }
```

수정

MainActivity.java

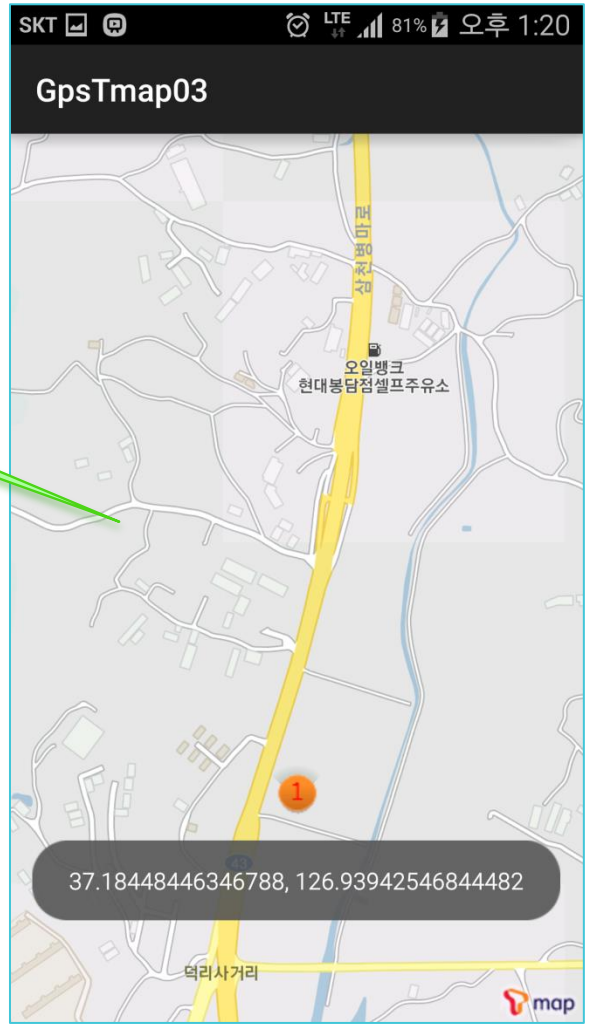
```
85      }
86
87      @Override
88      public void onLongPressEvent(ArrayList<TMapMarkerItem> arrayList,
89                                   ArrayList<TMapPOIItem> arrayList1, TMapPoint tMapPoint) {
90          tMapView.setIconVisibility(false);
91          Bitmap bitmap = BitmapFactory.decodeResource(getResources(), R.drawable.icon3);
92
93          Toast.makeText(getBaseContext(), String.valueOf(tMapPoint.getLatitude()) + ", "
94                  + String.valueOf(tMapPoint.getLongitude()), Toast.LENGTH_SHORT).show();
95          tMapView.setIcon(bitmap);
96          tMapView.setIconVisibility(true);
97      }
```

이미지 추가


Android
app
manifests
AndroidManifest.xml
java
com.example.administrator
MainActivity
com.example.administrator
res
drawable
layout
activity_main.xml
menu
mipmap
values
com.skp.Tmap_1.0.35
Gradle Scripts
Captures
1: Project
7: Structure
1
2
icon3
icon4
Android
app
manifests
AndroidManifest.xml
java
com.example.administrator
MainActivity
com.example.administrator
res
drawable
icon3.png
icon4.png
layout
activity_main.xml
menu
mipmap
values
com.skp.Tmap_1.0.35
Gradle Scripts
Captures
1: Project
7: Structure

실행

임의의 맵
롱 클릭


SKT
LTE
81%
오후 1:20
GpsTmap03
오일뱅크
현대봉담점셀프주유소
1
37.18448446346788, 126.93942546844482
역리사거리
map

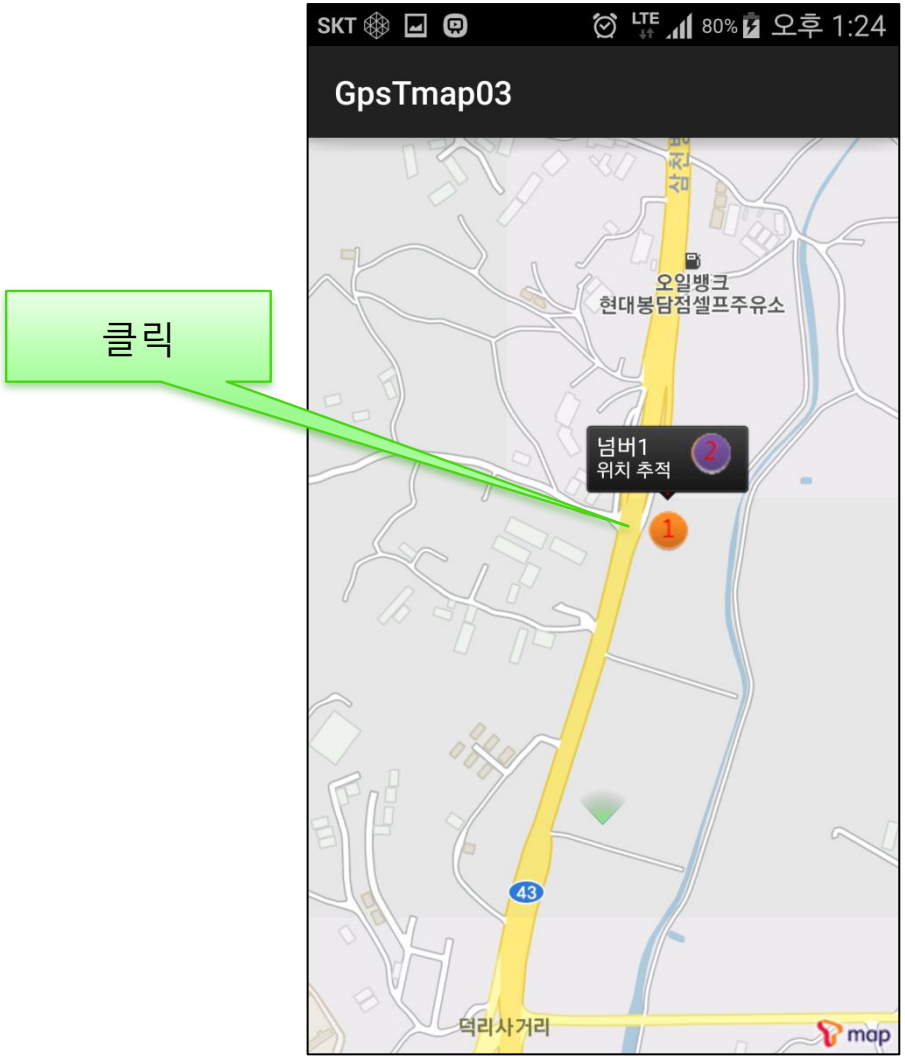
수정

MainActivity.java

```
86      @Override
87      public void onLongPressEvent(ArrayList<TMapMarkerItem> arrayList,
88                                   ArrayList<TMapPOIItem> arrayList1, TMapPoint tMapPoint) {
89  //          tMapView.setIconVisibility(false);
90  //          Bitmap bitmap = BitmapFactory.decodeResource(getResources(), R.drawable.icon3);
91  //
92  //          Toast.makeText(getBaseContext(), String.valueOf(tMapPoint.getLatitude()) + ", "
93  //                  + String.valueOf(tMapPoint.getLongitude()), Toast.LENGTH_SHORT).show();
94  //          tMapView.setIcon(bitmap);
95  //          tMapView.setIconVisibility(true);
96
97          TMapPoint point = new TMapPoint(tMapPoint.getLatitude(), tMapPoint.getLongitude());
98          TMapMarkerItem item1 = new TMapMarkerItem();
99          Bitmap bitmap = BitmapFactory.decodeResource(getResources(), R.drawable.icon3);
100         item1.setTMapPoint(point);
101         item1.setName("Target");
102         item1.setVisible(item1.VISIBLE);
103         item1.setIcon(bitmap);
104         item1.setCalloutTitle("넘버1");
105         item1.setCalloutSubTitle("위치 추적");
106         item1.setCanShowCallout(true);
107         item1.setAutoCalloutVisible(true);
108         Bitmap bitmap_i = BitmapFactory.decodeResource(getResources(), R.drawable.icon4);
109         item1.setCalloutRightButtonImage(bitmap_i);
110         tMapView.addMarkerItem("ID_01", item1);
111     }
```

서브 마커

실행


클릭
SKT
LTE
80%
오후 1:24
GpsTmap03
오일뱅크
현대봉담점셀프주유소
넘버1
위치 추적
2
1
43
덕리사거리
map

마커 클릭 이벤트

추가

MainActivity.java

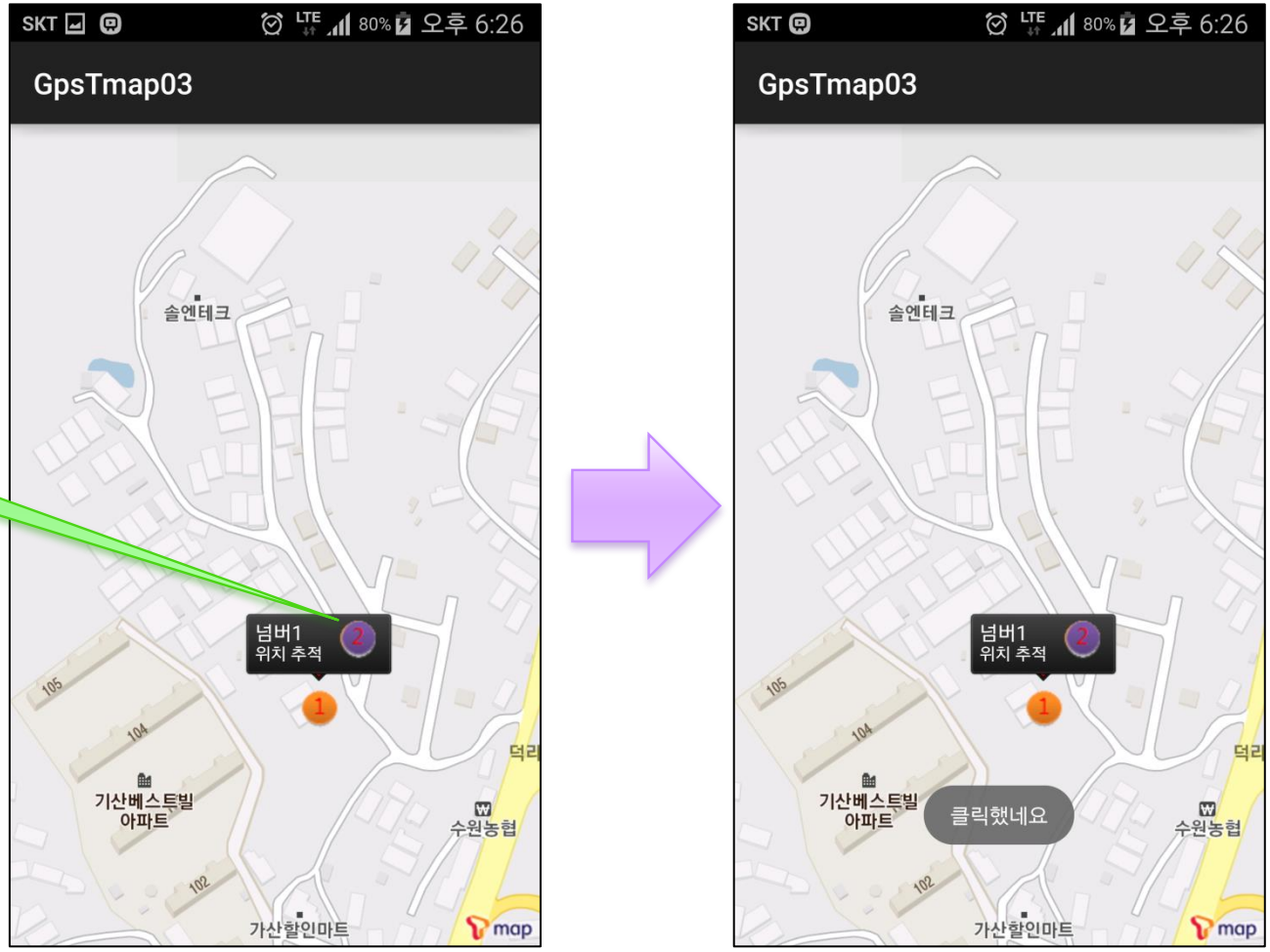
```
18  import com.skp.Tmap.TMapView;
19
20  import java.util.ArrayList;
21
22  public class MainActivity extends AppCompatActivity
23          implements TMapView.OnLongClickListenerCallback,
24          LocationListener, TMapGpsManager.onLocationChangedCallback ,
25          TMapView.OnCalloutRightButtonClickCallback{
26
27      private TMapView tMapView = null;
28      TMapGpsManager gps = null;
```

MainActivity.java

```
130     @Override
131     protected void onPause() {
132         super.onPause();
133     }
134
135     @Override
136     public void onCalloutRightButton(TMapMarkerItem tMapMarkerItem) {
137         Toast.makeText(getApplicationContext(), "클릭했네요", Toast.LENGTH_SHORT).show();
138     }
139 }
140
```

실행

롱 클릭

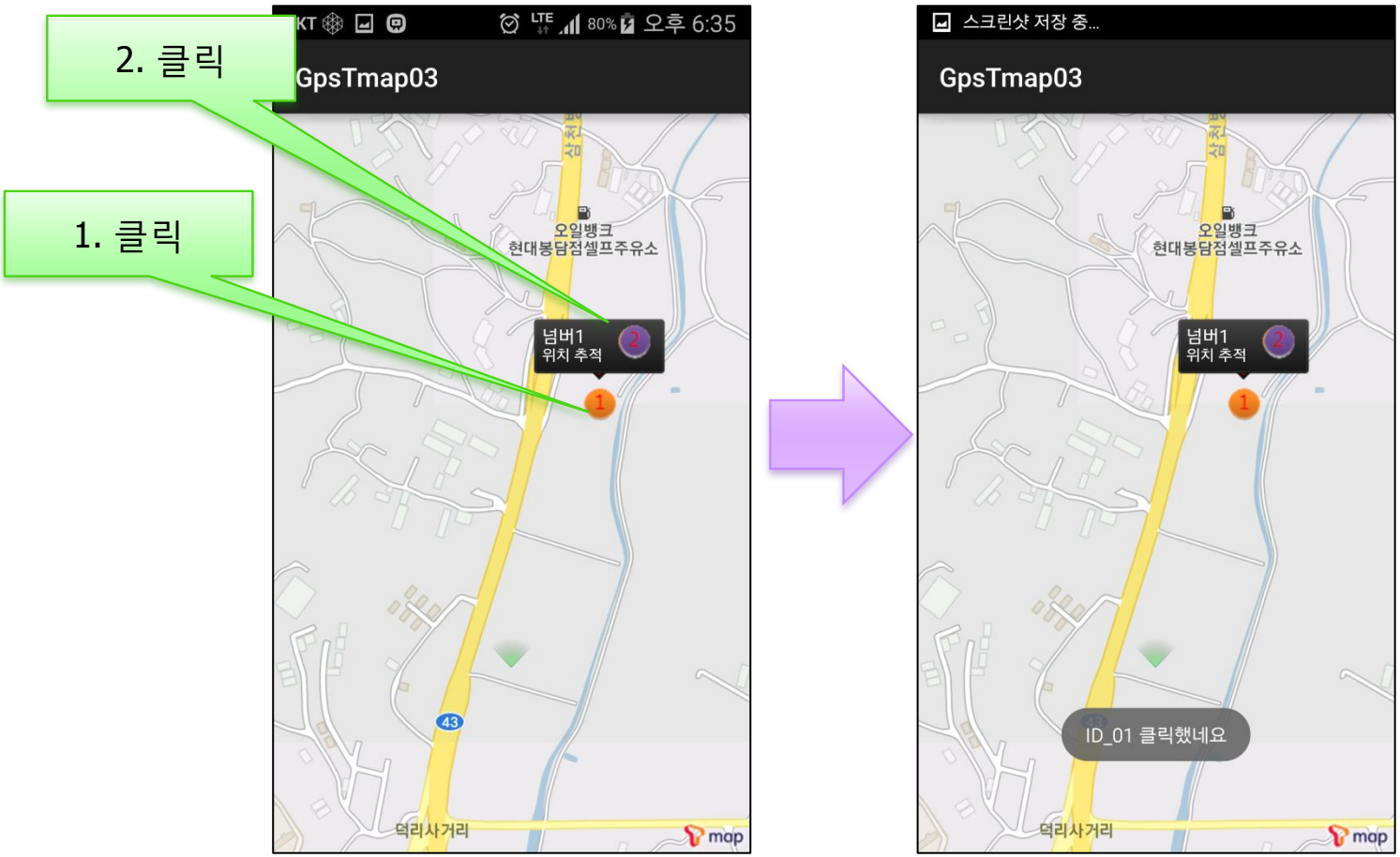

SKT
LTE
80%
오후 6:26
GpsTmap03
솔엔테크
넘버1
위치 추적
2
1
105
104
102
기산베스트빌
아파트
수원농협
가산할인마트
map
클릭했네요

여러 개의 마커 중에서 이벤트 주기

수정

MainActivity.java

```
130     @Override
131     protected void onPause() {
132         super.onPause();
133     }
134
135     @Override
136     public void onCalloutRightButton(TMapMarkerItem tMapMarkerItem) {
137
138         if(tMapMarkerItem.getID() == "ID_01") {
139             Toast.makeText(getApplicationContext(), "ID_01 클릭했네요",
140                     Toast.LENGTH_SHORT).show();
141         }
142     }
143 }
144
```


2. 클릭
1. 클릭
KT
LTE
80%
오후 6:35
GpsTmap03
오일뱅크
현대봉담점셀프주유소
넘버1
위치 추적
43
덕리사거리
map
스크린샷 저장 중...
GpsTmap03
오일뱅크
현대봉담점셀프주유소
넘버1
위치 추적
ID_01 클릭했네요
덕리사거리
map

두 번째 마커 찍기

MainActivity.java

```
24          LocationListener, TMapGpsManager.onLocationChangedCallback ,
25          TMapView.OnCalloutRightButtonClickCallback{
26
27      private TMapView tMapView = null;
28      TMapGpsManager gps = null;
29      public static String mApiKey = null;
30      public static String mBizAppID = null;
31      private static final String TAG = "TestTmap";
32      Bitmap icon1, icon2;
33      TMapCircle tCircle;
34      TMapData tMapData;
35      TMapPoint point2 = null;
36      TMapMarkerItem item1 = new TMapMarkerItem();
37      TMapMarkerItem item2 = new TMapMarkerItem();
38
39      @Override
40      protected void onCreate(Bundle savedInstanceState) {
```

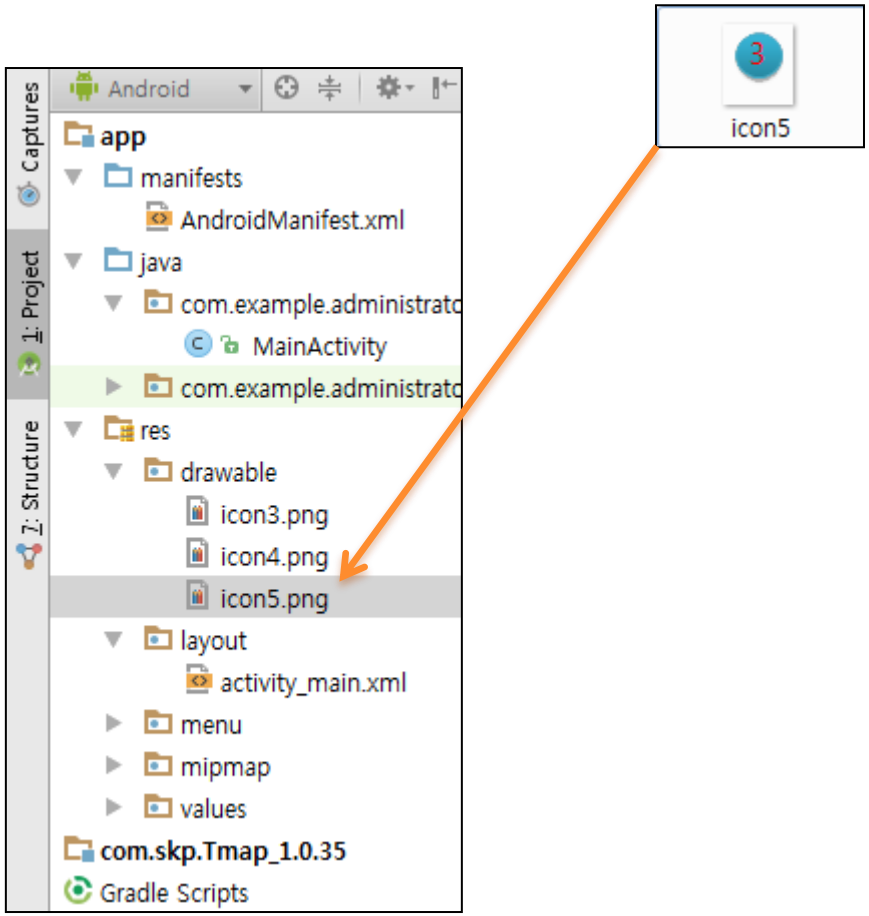
MainActivity.java

```
98      //      tMapView.setIconVisibility(true);
99
100         TMapPoint point1 = new TMapPoint(tMapPoint.getLatitude(), tMapPoint.getLongitude());
101         TMapPoint point2 = new TMapPoint(tMapPoint.getLatitude()+0.01, tMapPoint.getLongitude());
102        // TMapMarkerItem item1 = new TMapMarkerItem();
103         Bitmap bitmap3 = BitmapFactory.decodeResource(getResources(), R.drawable.icon3);
104         Bitmap bitmap5 = BitmapFactory.decodeResource(getResources(), R.drawable.icon5);
105         item1.setTMapPoint(point1);
106         item1.setName("Target");
107         item1.setVisible(item1.VISIBLE);
108         item1.setIcon(bitmap3);
109
110         item1.setCalloutTitle("넘버1");
111         item1.setCalloutSubTitle("위치 추적");
112         item1.setCanShowCallout(true);
113         item1.setAutoCalloutVisible(true);
```

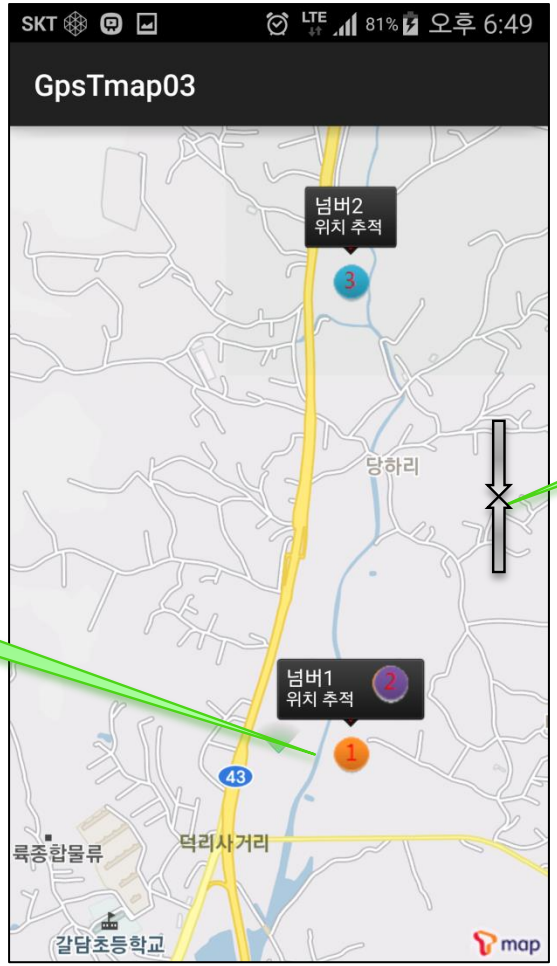
MainActivity.java

```
114
115         item2.setTMapPoint(point2);
116         item2.setName("Target");
117         item2.setVisible(item2.VISIBLE);
118         item2.setIcon(bitmap5);
119
120         item2.setCalloutTitle("넘버2");
121         item2.setCalloutSubTitle("위치 추적");
122         item2.setCanShowCallout(true);
123         item2.setAutoCalloutVisible(true);
124
125
126         Bitmap bitmap_i = BitmapFactory.decodeResource(getResources(), R.drawable.icon4);
127         item1.setCalloutRightButtonImage(bitmap_i);
128         tMapView.addMarkerItem("ID_01", item1);
129         tMapView.addMarkerItem("ID_02", item2);
130     }
131
```

이미지 추가


Android
app
manifests
AndroidManifest.xml
java
com.example.administrato
MainActivity
com.example.administrato
res
drawable
icon3.png
icon4.png
icon5.png
layout
activity_main.xml
menu
mipmap
values
com.skp.Tmap_1.0.35
Gradle Scripts
Captures
1: Project
7: Structure
icon5

실행


SKT
LTE
81%
오후 6:49
GpsTmap03
넘버2
위치 추적
3
당하리
넘버1
위치 추적
2
1
43
덕리사거리
륙종합물류
갈담초등학교
map

1. 클릭

2. 맵 축소

폴리 라인

수정

MainActivity.java

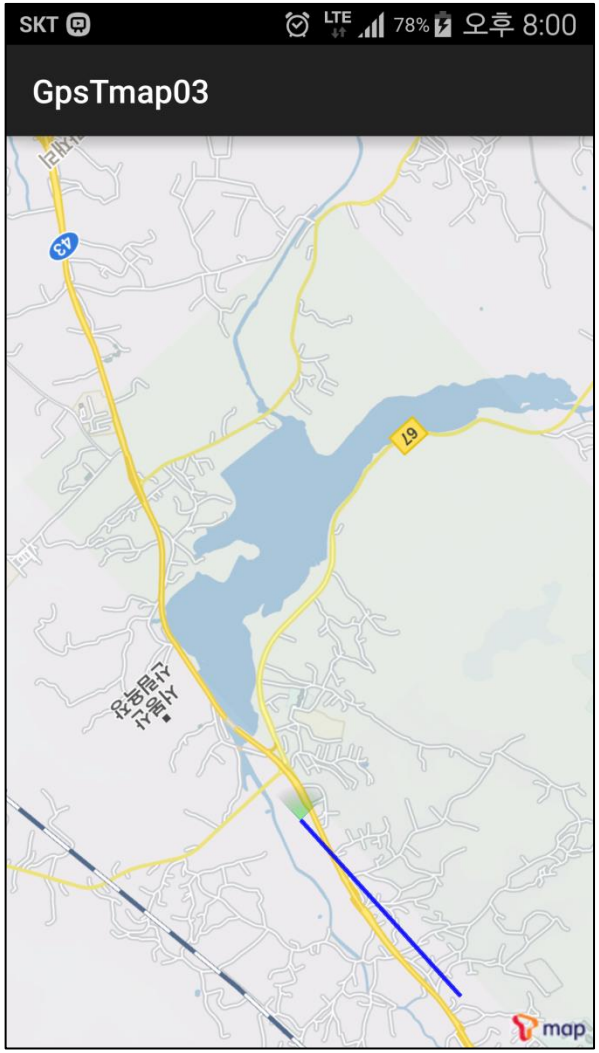
```
35      TMapCircle tCircle;
36      TMapData tMapData;
37      TMapPoint point1 = null;
38      TMapPoint point2 = null;
39      TMapMarkerItem item1 = new TMapMarkerItem();
40      TMapMarkerItem item2 = new TMapMarkerItem();
41      TMapPolyLine tpolyline = new TMapPolyLine();
42
43      @Override
44      protected void onCreate(Bundle savedInstanceState) {
45          super.onCreate(savedInstanceState);
46          setContentView(R.layout.activity_main);
```

수정

MainActivity.java

```
134
135
136     @Override
137     public void onLocationChange(Location location) {
138         tMapView.setCenterPoint(location.getLongitude(), location.getLatitude());
139         tMapView.setLocationPoint(location.getLongitude(), location.getLatitude());
140
141         point1 = new TMapPoint(location.getLatitude(), location.getLongitude());
142         point2 = new TMapPoint(location.getLatitude()+0.01, location.getLongitude());
143
144         tpolyline.setLineColor(Color.BLUE);
145         tpolyline.setLineWidth(2);
146         tpolyline.addLinePoint(point1);
147         tpolyline.addLinePoint(point2);
148         tMapView.addTMapPolyLine("tp01", tpolyline);
149     }
```

실행



폴리라인 거리 구하기

수정

MainActivity.java

```
143
144         tMapView.removeAllTMapPolyLine();
145         tpolyline.setLineColor(Color.BLUE);
146         tpolyline.setLineWidth(2);
147         tpolyline.addLinePoint(point1);
148         tpolyline.addLinePoint(point2);
149         tMapView.addTMapPolyLine("tp01", tpolyline);
150
151         double Distance = tpolyline.getDistance();
152         Toast.makeText(getApplicationContext(), String.valueOf(Distance),
153                 Toast.LENGTH_SHORT).show();
154     }
155
```

실행

SKT
LTE
78%
오후 8:06
GpsTmap03
43
322
왕림
휴게소
건달산
태봉산
7759.66415560066
서봉산
산림욕장
map

폴리곤

MainActivity.java

```
36      TMapCircle tCircle;
37      TMapData tMapData;
38      TMapPoint point1 = null;
39      TMapPoint point2 = null;
40      TMapPoint point3 = null;
41      TMapPoint point4 = null;
42      TMapMarkerItem item1 = new TMapMarkerItem();
43      TMapMarkerItem item2 = new TMapMarkerItem();
44      TMapPolyLine tpolyline = new TMapPolyLine();
45      TMapPolygon tpolygon = new TMapPolygon();
46
47      @Override
48      protected void onCreate(Bundle savedInstanceState) {
49          super.onCreate(savedInstanceState);
```

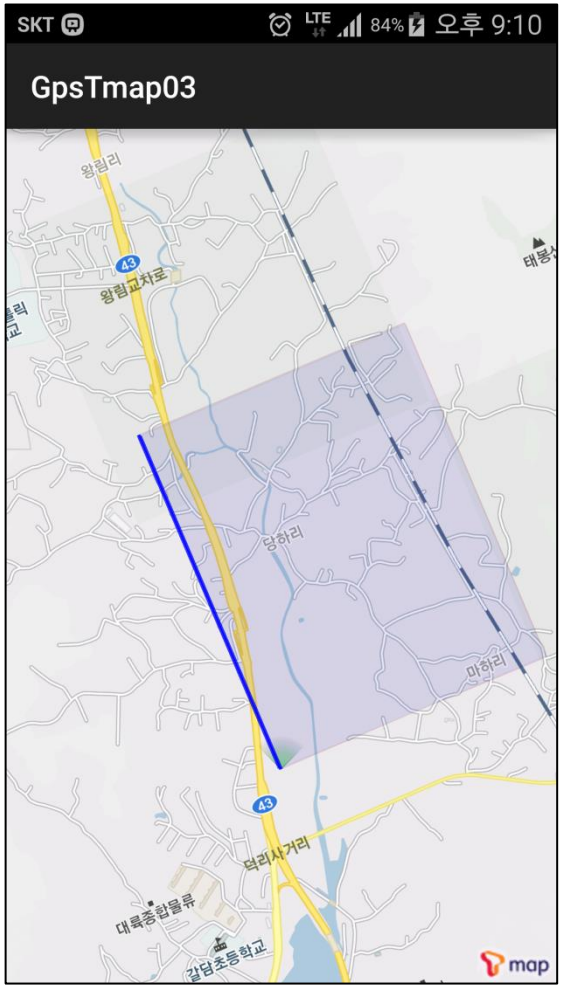
MainActivity.java

```
139
140     @Override
141     public void onLocationChange(Location location) {
142         tMapView.setCenterPoint(location.getLongitude(), location.getLatitude());
143         tMapView.setLocationPoint(location.getLongitude(), location.getLatitude());
144
145         point1 = new TMapPoint(location.getLatitude(), location.getLongitude());
146         point2 = new TMapPoint(location.getLatitude()+0.01, location.getLongitude());
147         point3 = new TMapPoint(location.getLatitude()+0.01, location.getLongitude()+0.01);
148         point4 = new TMapPoint(location.getLatitude(), location.getLongitude()+0.01);
149
150         tMapView.removeAllTMapPolyLine();
151         tpolyline.setLineColor(Color.BLUE);
```

MainActivity.java

```
157         double Distance = tpolyline.getDistance();
158         Toast.makeText(getApplicationContext(), String.valueOf(Distance),
159                 Toast.LENGTH_SHORT).show();
160
161         tpolygon.setLineColor(Color.RED);  //폴리곤 선색
162         tpolygon.setPolygonWidth(2);
163         tpolygon.setAreaColor(Color.BLUE);
164         tpolygon.setAreaAlpha(20);
165         tpolygon.setLineAlpha(20);
166         tpolygon.addPolygonPoint(point1);
167         tpolygon.addPolygonPoint(point2);
168         tpolygon.addPolygonPoint(point3);
169         tpolygon.addPolygonPoint(point4);
170         tMapView.addTMapPolygon("polID", tpolygon);
171
172     }
```

실행


SKT
LTE
84%
오후 9:10
GpsTmap03
왕림리
왕림교차로
43
당하리
마하리
덕리사거리
대륙종합물류
갈담초등학교
map