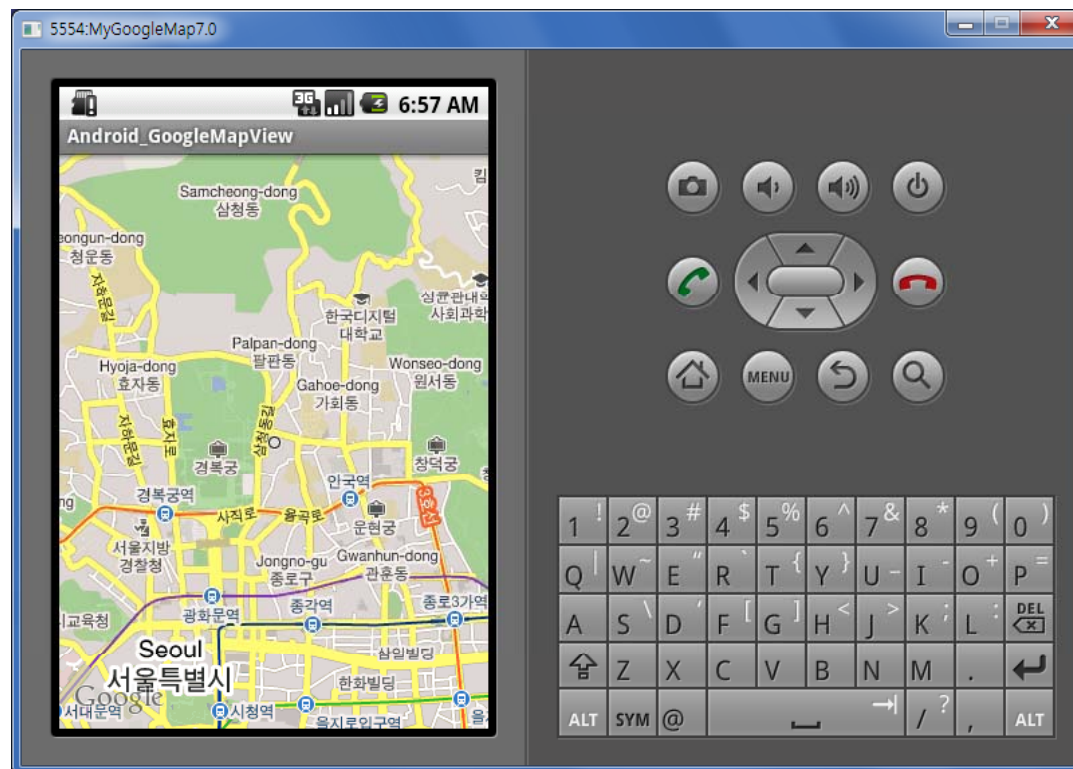




Google Map View 구현





학습 목표

교육 목표

- ❖ Google Map View 구현
- ❖ Google Map 지원 Emulator 생성
- ❖ Google Map API Key
- ❖ 위도/경도 구하기
- ❖ 위도/경도에 따른 Google Map View 구현
- ❖ Zoom Controller 구현



Navigation voice



Traffic view



Street View



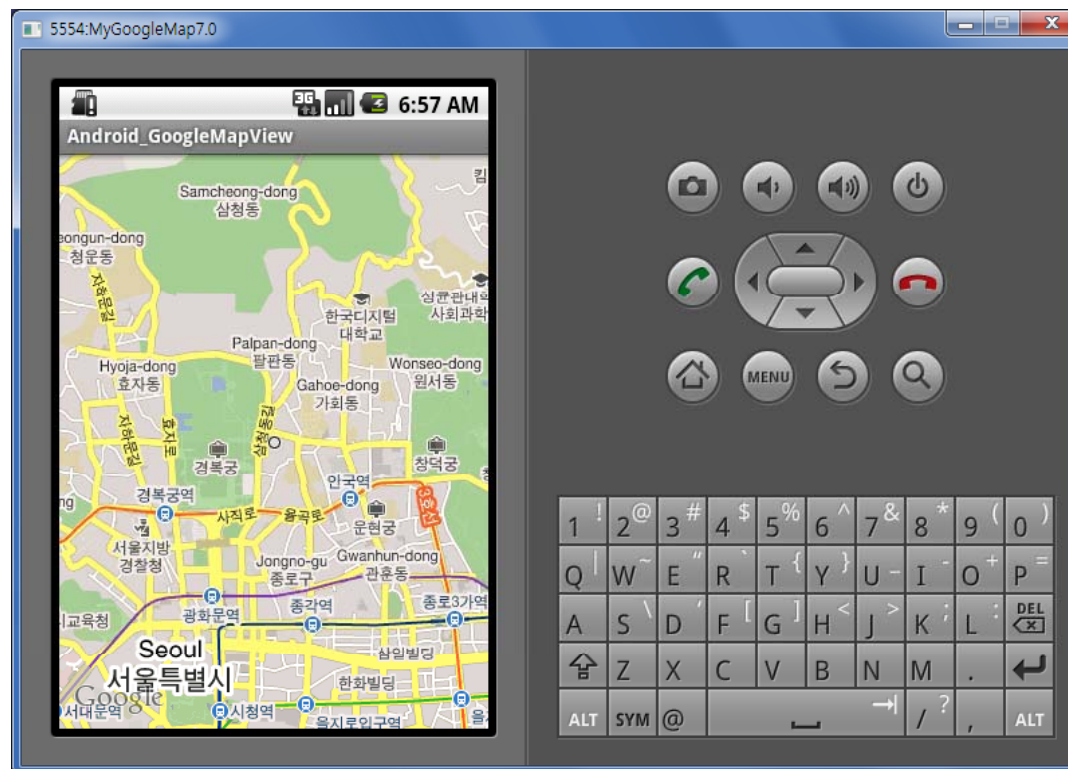


Google Map View (1)

■ Google Map View

❖ 기능

◆ Google Map을 보여 주는 기능 제공

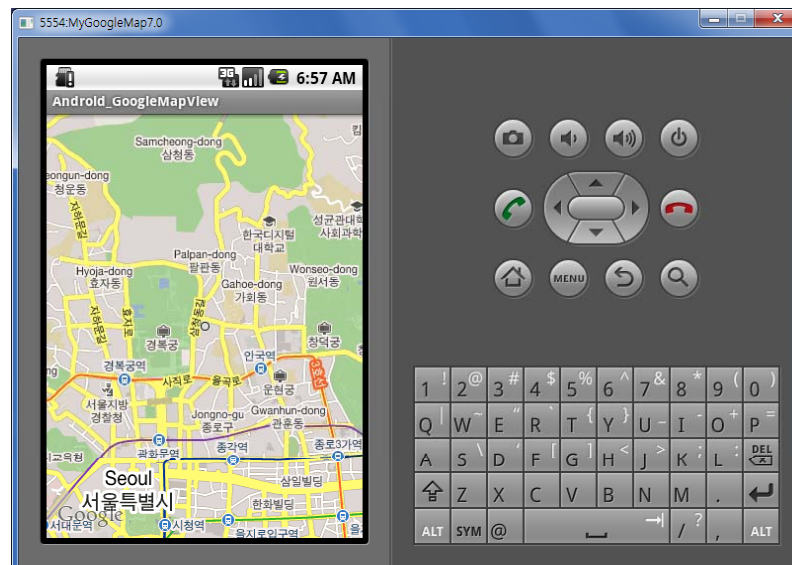




Google Map View (2)

■ MapView 클래스의 Method

Method	설 명
setStreetView(boolean)	도로 보기
setTraffic(boolean)	교통 보기
setSatellite(boolean)	위성 사진 모드





Google Map View (3)

■ Map View 클래스

❖ Map 제어 기능

Method	설 명
getController()	MapController 클래스 반환

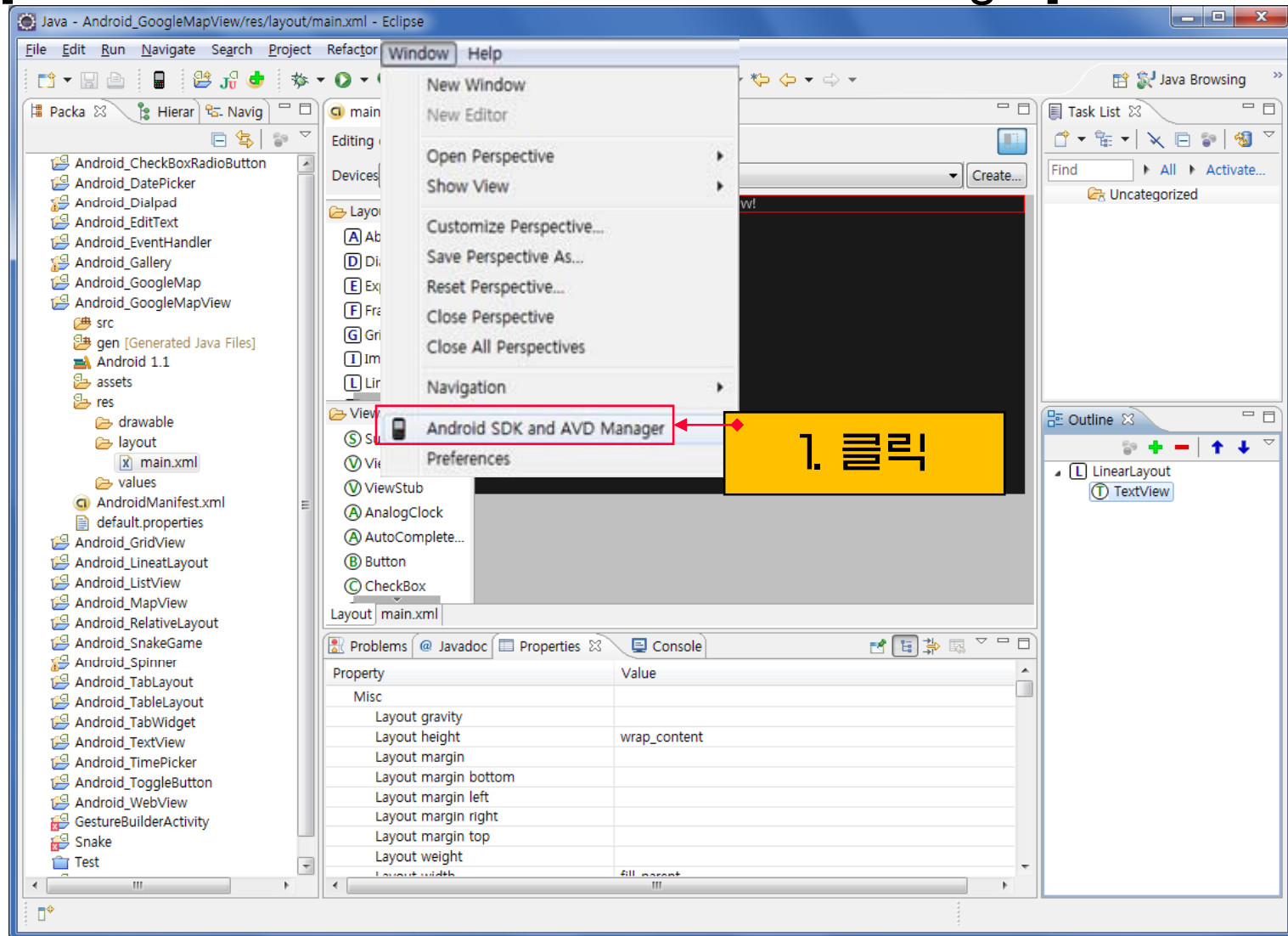
■ MapController 클래스

Method	설 명
animateTo()	Map 이동 기능
setZoom(boolean)	Zoom In 기능



Google Map 지원 Emulator 생성 (1)

■ [Window > Android SDK and AVD Manager]

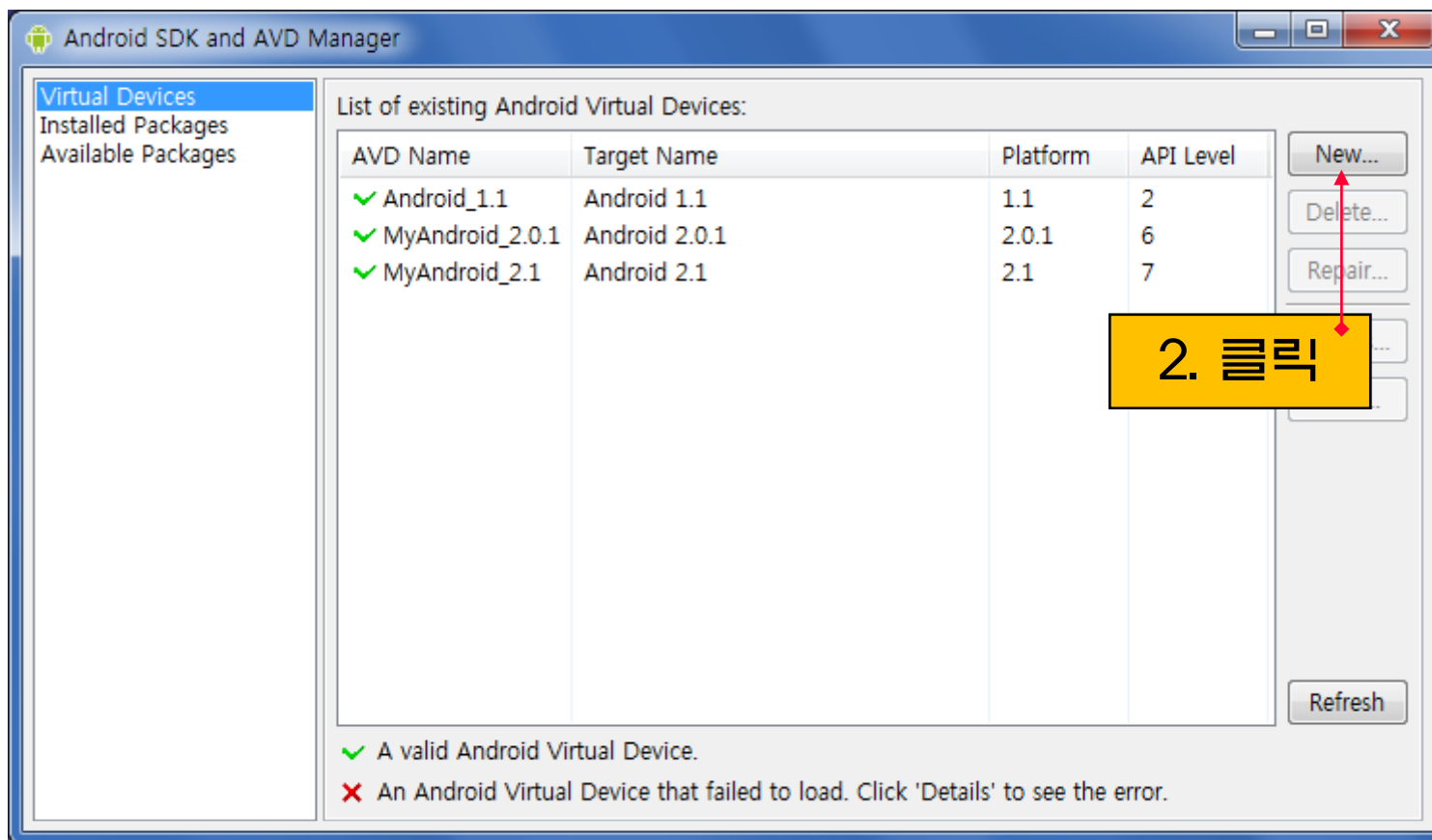




Google Map 지원 Emulator 생성 (2)

■ Android SDK and AVD Manager

❖ Virtual Device 등록





Google Map 지원 Emulator 생성 (3)

❖ AVD 생성

Create new AVD

Name: MyGoogleMap7.0

Target: Google APIs (Google Inc.) - API Level 7

SD Card:

☒ Size: MiB

☐ File: Browse...

Skin:

☒ Built-in: Default (HVGA)

☐ Resolution: x

Hardware:

Property	Value
Abstracted LCD density	160

New... Delete

Force create

Create AVD Cancel

3. "MyGoogleMap7.0" 입력

4. 선택

5. 클릭

6. 클릭

OK

Android Virtual Devices Manager

Result of creating AVD 'MyGoogleMap7.0':

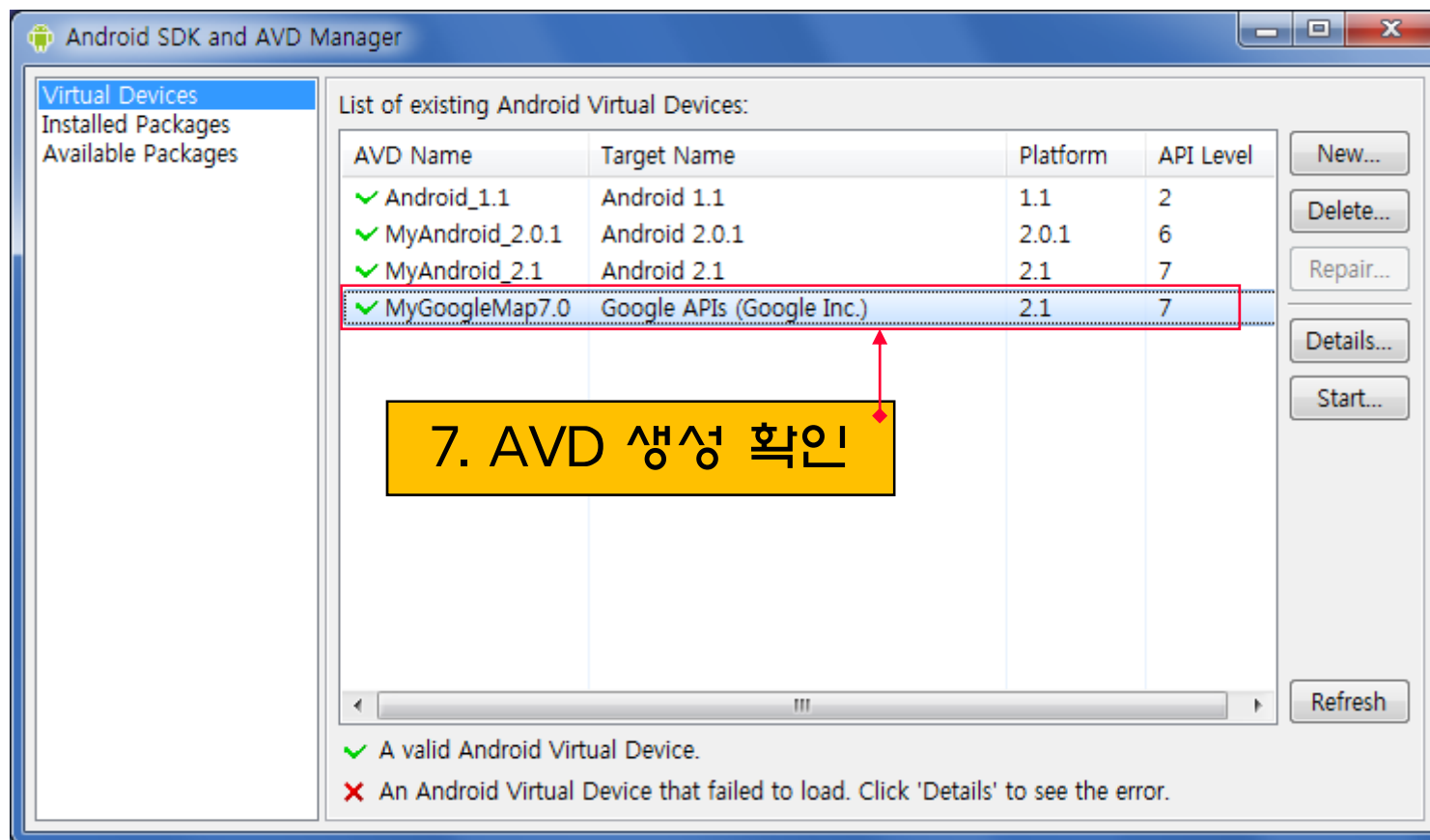
Created AVD 'MyGoogleMap7.0' based on Google APIs (Google Inc.), with the following hardware config:
hw.lcd.density=160

OK



Google Map 지원 Emulator 생성 (4)

❖ AVD 생성 결과

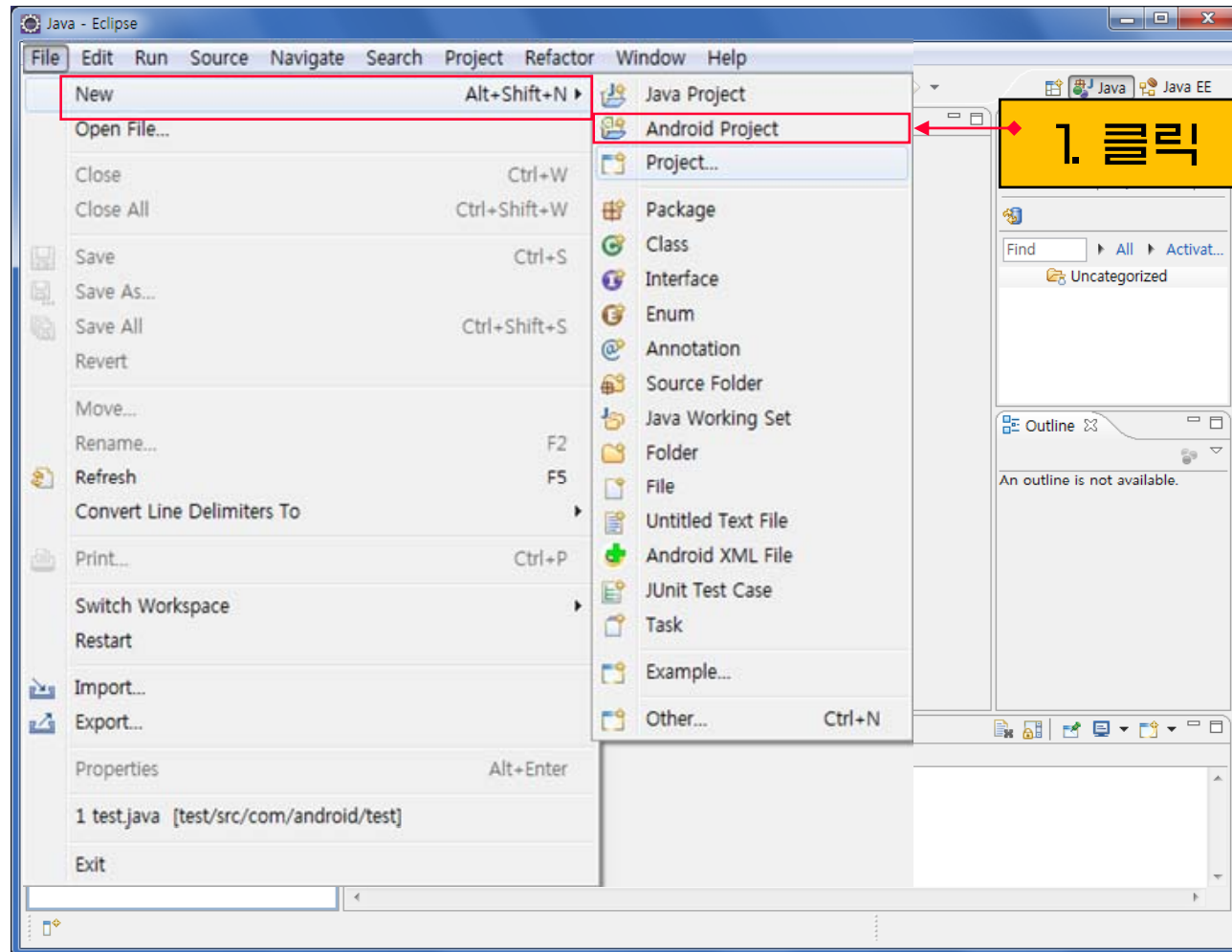




Google Map View 구현 (1)

■ Android 프로젝트 생성

❖ 프로젝트 명 : Android_GoogleMapView





Google Map View 구현 (2)

New Android Project

Creates a new Android Project resource.

Project name:

Contents

- ☒ Create new project in workspace
- ☐ Create project from existing source
- ☒ Use default location

Location:

☐ Create project from existing sample

Samples:

Build Target

Target Name	Vendor	Platform	API ...
<input type="checkbox"/> Android 1.1	Android Open Source Project	1.1	2
<input type="checkbox"/> Android 2.0.1	Android Open Source Project	2.0.1	6
<input type="checkbox"/> Android 2.1	Android Open Source Project	2.1	7
<input type="checkbox"/> Google APIs	Google Inc.	2.0.1	6
<input checked="" type="checkbox"/> Google APIs	Google Inc.	2.1	7

Android + Google APIs

Properties

Application name:

Package name:

☒ Create Activity:

Min SDK Version:

2. Android_GoogleMapView 입력

3. 클릭

4. Android_GoogleMapView 입력

5. com.inhatec.android_GoogleMapView 입력

6. Android_GoogleMapView 입력

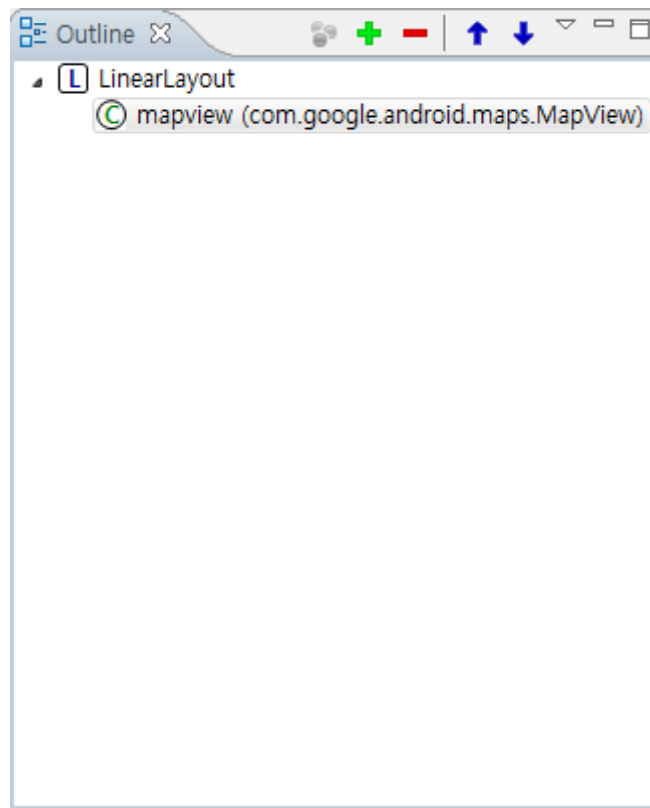
7. 클릭





Google Map View 구현 (3)

■ UI 설계



8. UI 설계 및 속성 지정





Google Map View 구현 (4)

❖ Text View 삭제

Java - Android_GoogleMapView/res/layout/main.xml - Eclipse

File Edit Run Navigate Search Project Refactor Window Help

main.xml

Editing config: default

Devices: ADP1 Config: Landscap Locale: Theme Create...

Layouts

- A AbsoluteLayout
- D DialerFilter
- E ExpandableList...
- F FrameLayout
- G GridView
- I ImageSwitcher
- L LinearLayout

Views

- S SurfaceView
- V View
- V ViewStub
- A AnalogClock
- A AutoComplete...
- R Button

Task List

Find All Activate...

Uncategorized

Outline

- LinearLayout
 - TextView

Remove element from Android XML

Do you really want to remove - LinearLayout > TextView?

Yes No

10. 클릭

9. 클릭

11. 클릭



Google Map View 구현 (5)

■ Map View 추가

❖ Main.xml 수정

```
*main.xml
1<?xml version="1.0" encoding="utf-8"?>
2<LinearLayout
3    xmlns:android="http://schemas.android.com/apk/res/android"
4    android:orientation="vertical"
5    android:layout_width="fill_parent"
6    android:layout_height="fill_parent"
7    >
8    <com.google.android.maps.MapView
9        android:id="@+id/mapview"
10       android:layout_width="fill_parent"
11       android:layout_height="fill_parent"
12       android:clickable="true"
13       android:apiKey="Your Maps API Key goes here"/>
14</LinearLayout>
```

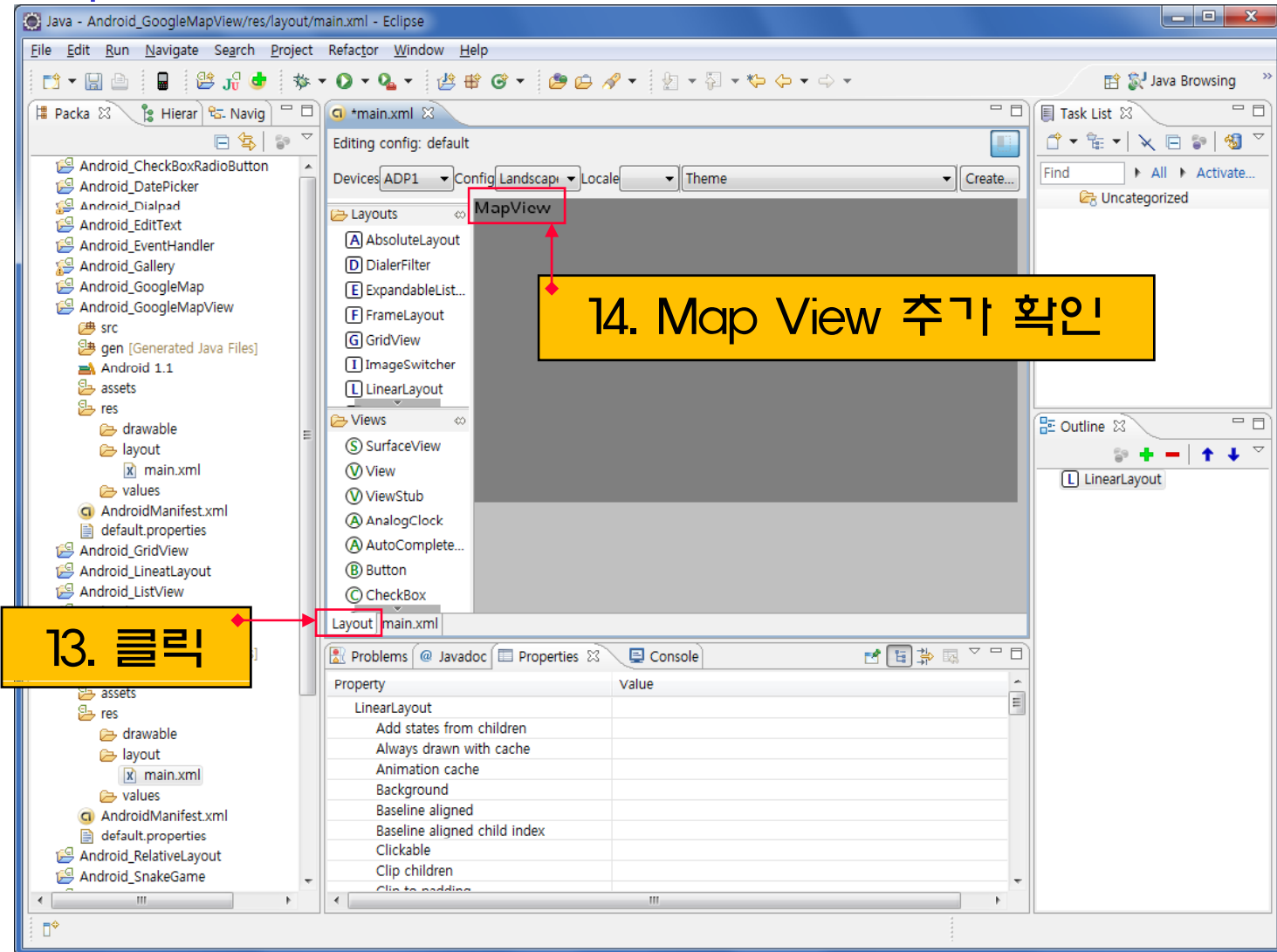
12. XML code 수정 확인





Google Map View 구현 (6)

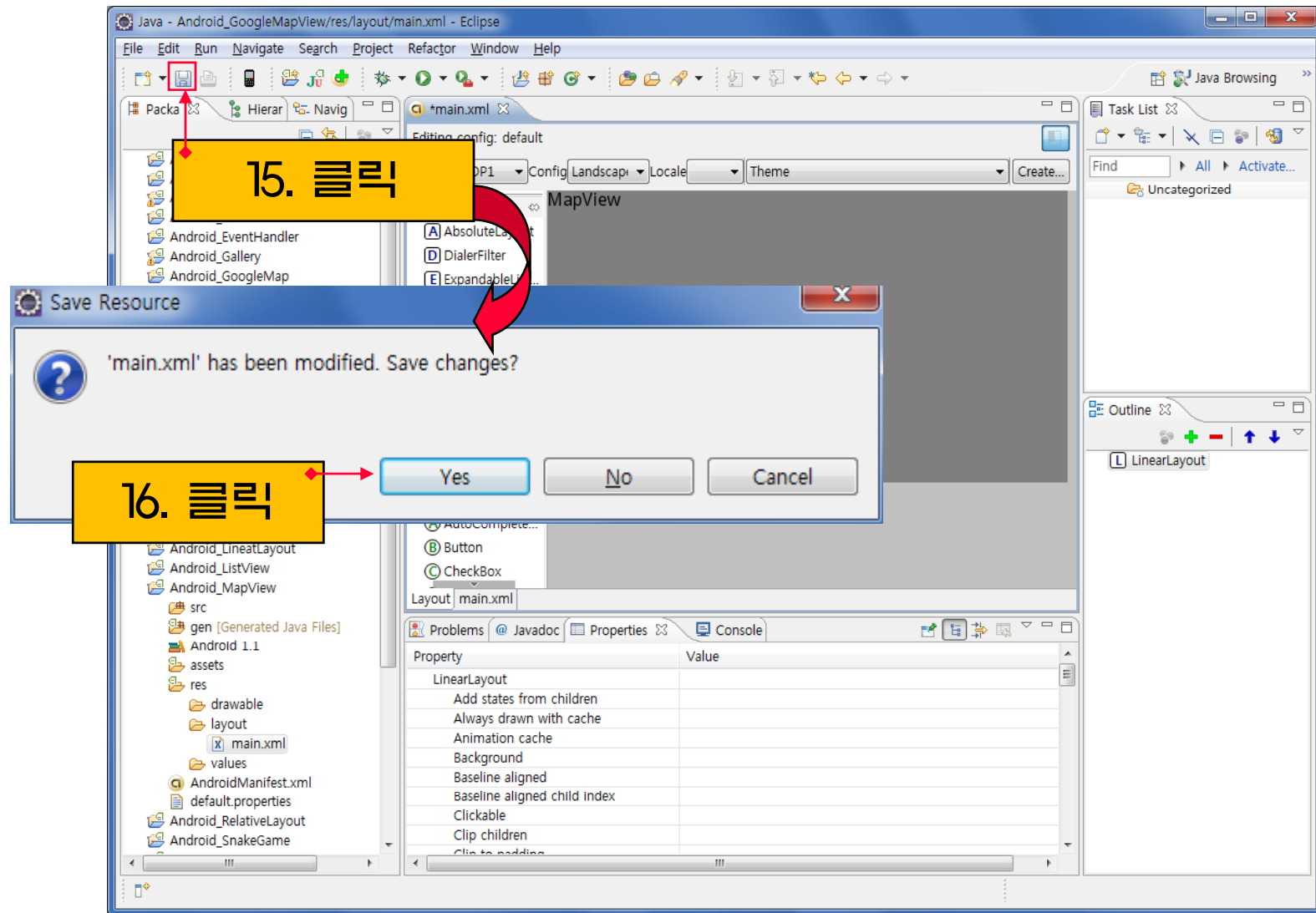
❖ Map View 추가 확인





Google Map View 구현 (7)

❖ Main.xml 저장





Google Map View 구현 (8)

❖ AndroidManifest.xml 수정

```
*Android_GoogleMapView Manifest X
1<?xml version="1.0" encoding="utf-8"?>
2<manifest xmlns:android="http://schemas.android.com/apk/res/android"
3    package="com.inhatec.android_GoogleMapView"
4    android:versionCode="1"
5    android:versionName="1.0">
6    <application
7        android:icon="@drawable/icon"
8        android:label="@string/app_name">
9        <uses-library android:name="com.google.android.maps" />
10        <activity
11            android:name=".Android_GoogleMapView"
12            android:label="@string/app_name">
13
14            <intent-filter>
15                <action android:name="android.intent.action.MAIN" />
16                <category android:name="android.intent.category.LAUNCHER" />
17            </intent-filter>
18        </activity>
19
20    </application>
21    <uses-permission android:name="android.permission.INTERNET" />
22    <uses-sdk android:minSdkVersion="7" />
23</manifest>
```

Manifest Application Permissions Instrumentation An

17. XML code 수정 확인





Google Map View 구현 (9)

■ AndroidManifest.xml

❖ <uses-permission> Tag

◆ 애플리케이션이 device data에 접근 허가를 얻기 위한 tag

❖ Format

◆ `<uses-permission android:name="android.permission.INTERNET" />`

Field		설명
android.permission.	INTERNET	인터넷 접속
	RECEIVE_SMS	SMS 메시지
	ACCESS_COARSE_LOCATION	위치정보(Cell-ID, WiFi)
	ACCESS_FINE_LOCATION	위치정보(GPS)





Google Map View 구현 (10)

■ Android_GoogleMapView.java

```
*Android_GoogleMapView.java
1 package com.inhatc.android_GoogleMapView;
2
3 import android.os.Bundle;
4
5 import com.google.android.maps.MapActivity;
6
7 public class Android_GoogleMapView extends MapActivity {
8
9     /** Called when the activity is first created. */
10    @Override
11    public void onCreate(Bundle savedInstanceState) {
12        super.onCreate(savedInstanceState);
13        setContentView(R.layout.main);
14    }
15
16    @Override
17    protected boolean isRouteDisplayed() {
18        return false;
19    }
20 }
```

18. Coding





Google Map View 구현 (11)

❖ R.java

```
*R.java X
1+/* AUTO-GENERATED FILE. DO NOT MODIFY.
7
8 package com.inhatc.android_GoogleMapView;
9
10 public final class R {
11     public static final class attr {
12     }
13     public static final class drawable {
14         public static final int icon=0x7f020000;
15     }
16     public static final class id {
17         public static final int mapview=0x7f050000;
18     }
19     public static final class layout {
20         public static final int main=0x7f030000;
21     }
22     public static final class string {
23         public static final int app_name=0x7f040001;
24         public static final int hello=0x7f040000;
25     }
26 }
```

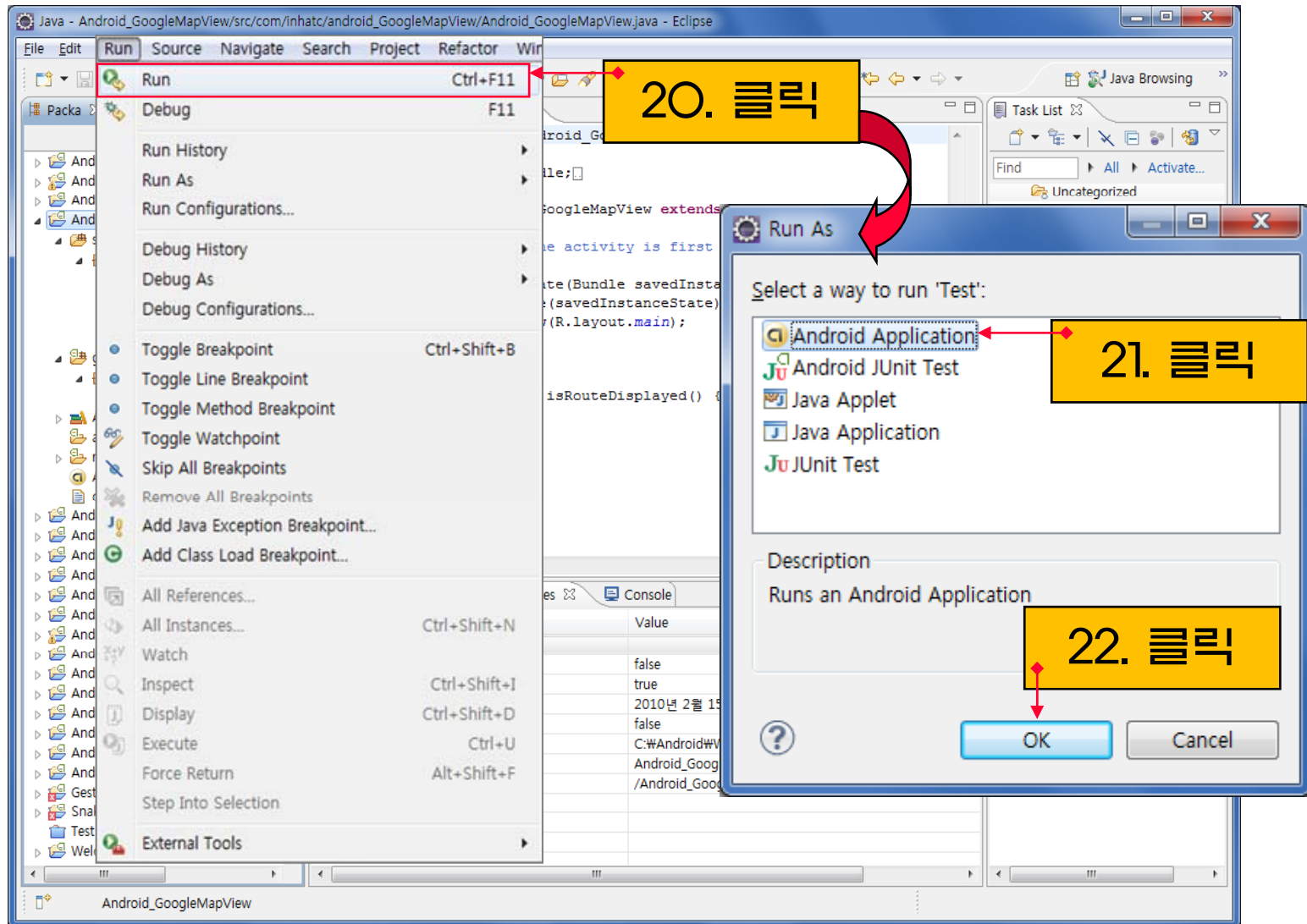
19. id 클래스 변수 추가 확인





Google Map View 구현 (12)

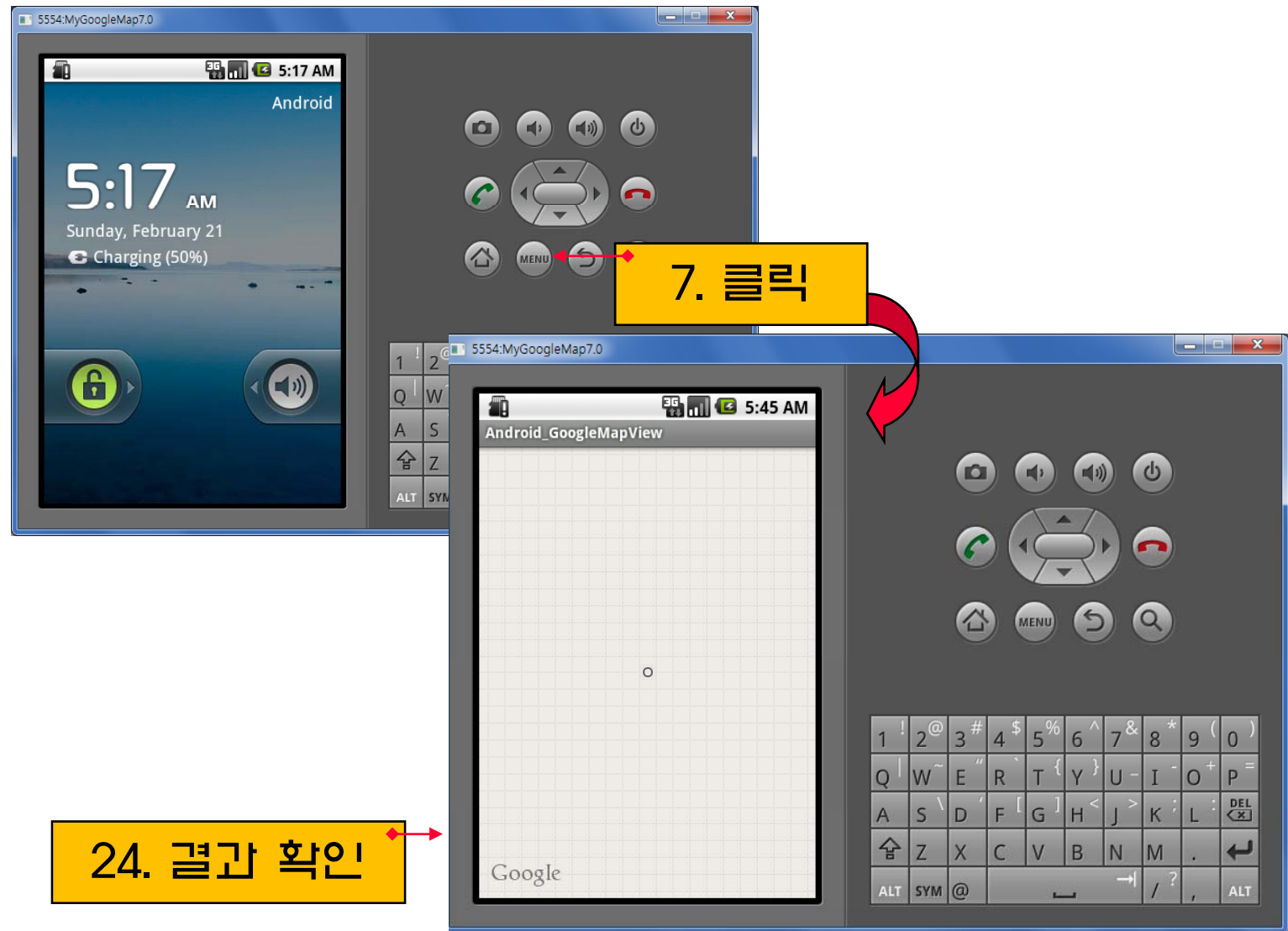
❖ Android 프로젝트 실행





Google Map View 구현 (13)

❖ 실행 결과





실습 1 : Google Map View 구현

■ Android_GoogleMapView (실습 시간 : 30분)

❖ 아래 그림과 같이 Google Map View에 지도가 출력되도록 구현 하시오.

◆ Google Map API Key 등록





실습 1 : Google Map View 구현 (1)

■ Main.xml 수정

❖ Map API Key 등록

```
*main.xml
1<?xml version="1.0" encoding="utf-8"?>
2<LinearLayout
3    xmlns:android="http://schemas.android.com/apk/res/android"
4    android:orientation="vertical"
5    android:layout_width="fill_parent"
6    android:layout_height="fill_parent"
7    >
8    <com.google.android.maps.MapView
9        android:id="@+id/mapview"
10       android:layout_width="fill_parent"
11       android:layout_height="fill_parent"
12       android:clickable="true"
13       android:apiKey="0Ny4sz6ACDh· MxsT4R11r0nRSQHcQ"/>
14</LinearLayout>
```

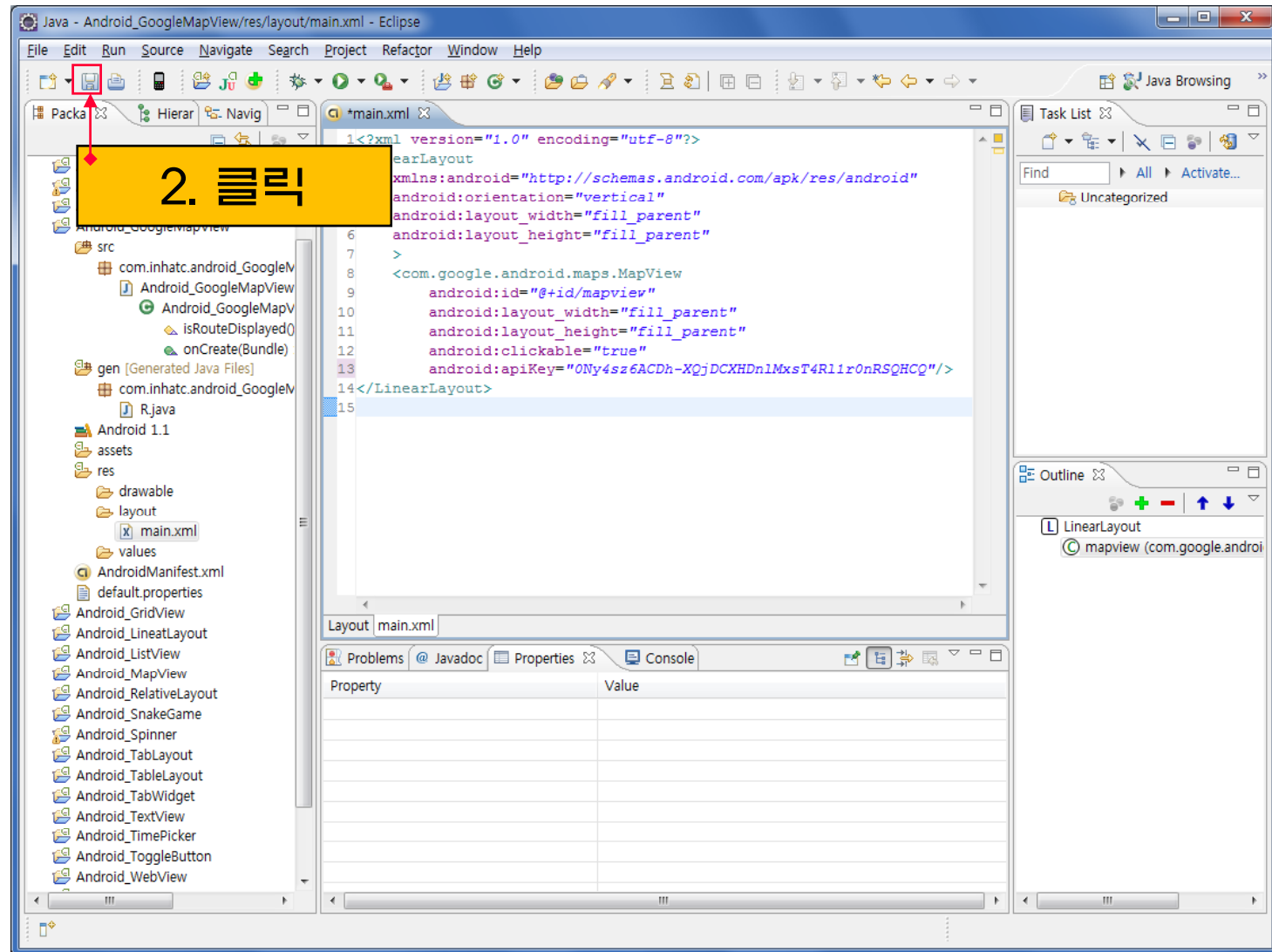
1. XML code 수정 확인





실습 1 : Google Map View 구현 (2)

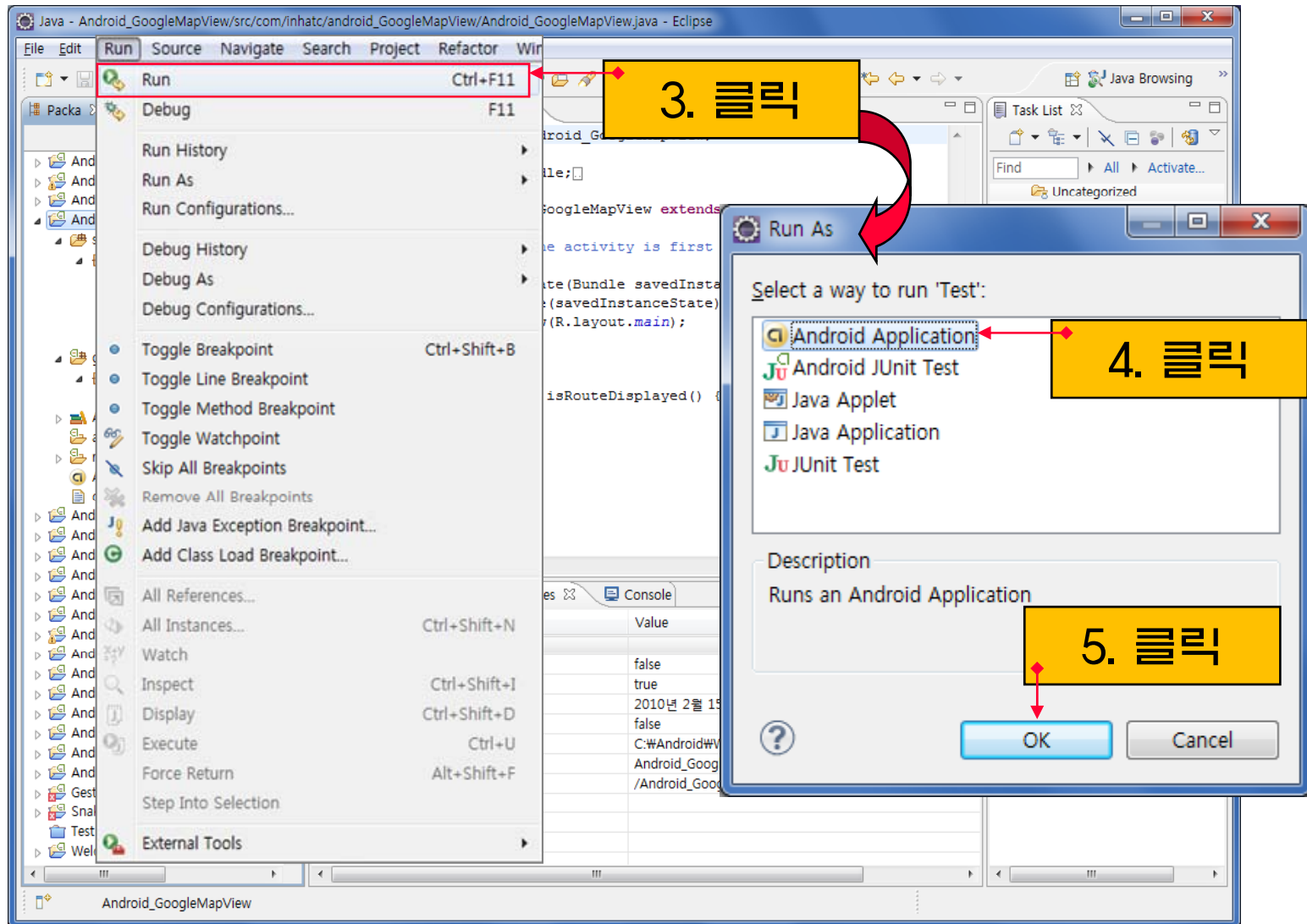
❖ Main.xml 저장





실습 1 : Google Map View 구현 (3)

❖ Android 프로젝트 실행



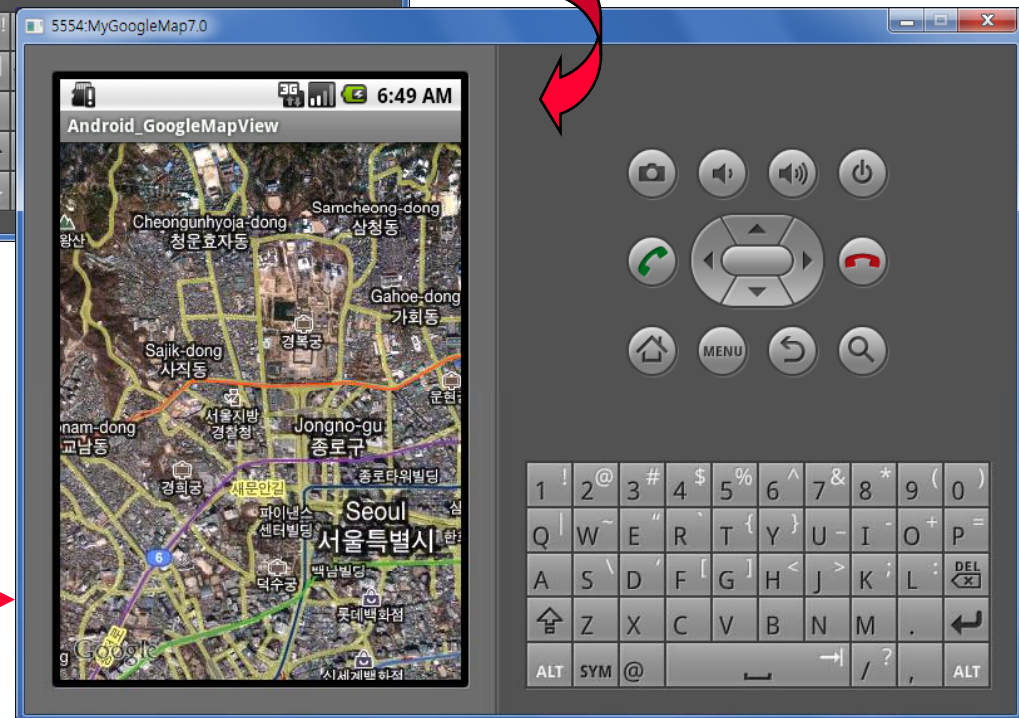


실습 1 : Google Map View 구현 (4)

❖ 실행 결과



7. 클릭



7. 결과 확인





Google Map API Key (1)

■ Google Map API Key

❖ 기능

- ◆ Google Map 서비스를 애플리케이션에서 사용할 수 있도록 지원

❖ Map API Key 획득 과정

- 1 debug.keystore 파일 존재 확인
- 2 keytool.exe 파일 실행
- 3 MD5 fingerprint 획득
- 4 <http://code.google.com/intl/ko/android/maps-api-signup.html> 로그인
- 5 MD5 fingerprint 등록
- 6 Google 로그인
- 7 Map API Key 생성
- 8 Main.xml 파일에 Map API Key 등록





Google Map API Key (2)

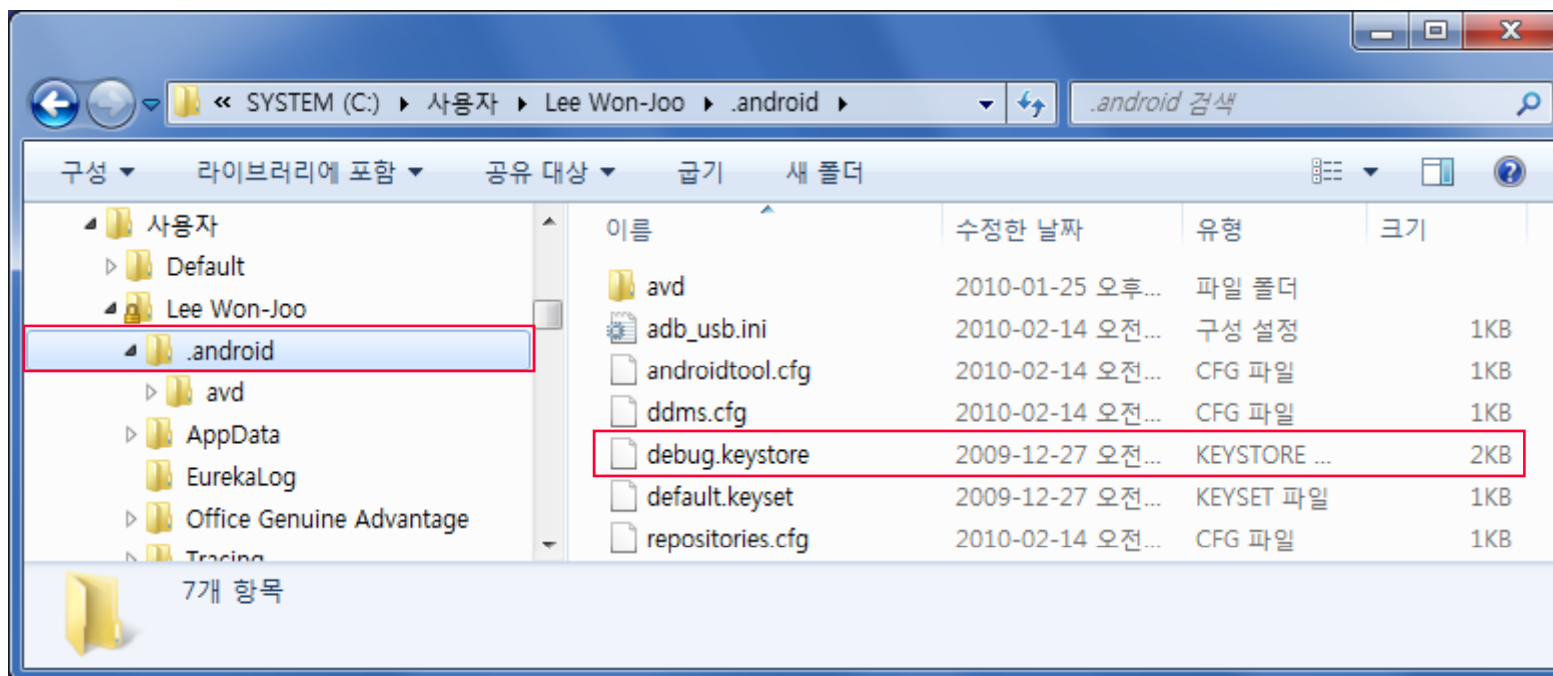
■ debug.keystore 파일

❖ 기능

◆ MD5 fingerprint 획득에 필요

❖ 위치 (Windows 7)

◆ .android 폴더





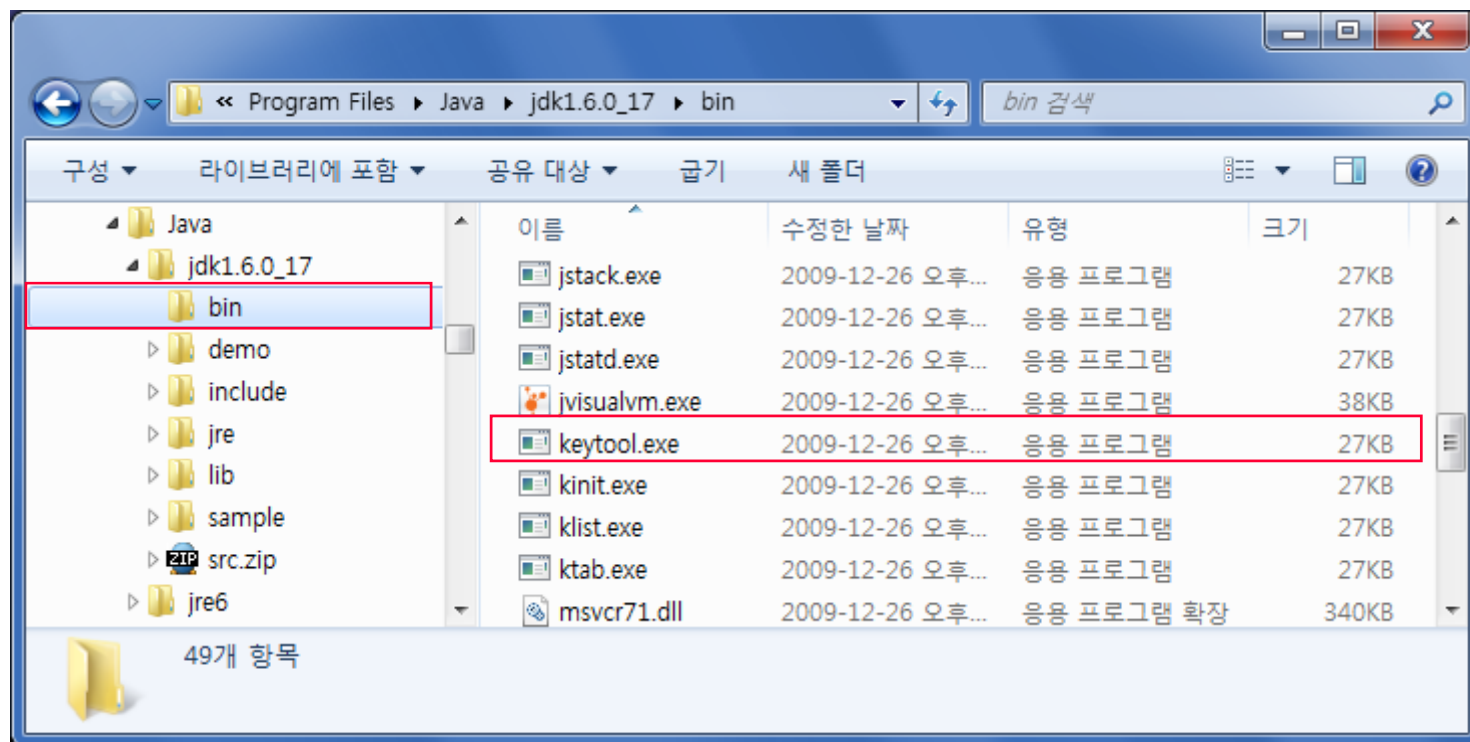
Google Map API Key (3)

■ MD5 fingerprint 획득

❖ 방법

◆ Keytool.exe 파일 실행으로 생성

❖ Keytool.exe 위치





Google Map API Key (4)

❖ Keytool.exe 사용법

[명령어 형식]

```
keytool -list -alias androiddebugkey -keystore debug.keystore  
-storepass android -keypass android
```

Option	설 명
-list	MD5 fingerprint 출력
-keystore <keystore-name>.keystore	Target key를 포함한 Keystore 명
-storepass <password>	Keystore를 위한 Password
-alias <alias_name>	MD5 certificate fingerprint 생성을 위한 key의 별명
-keypass <password>	Key를 위한 password

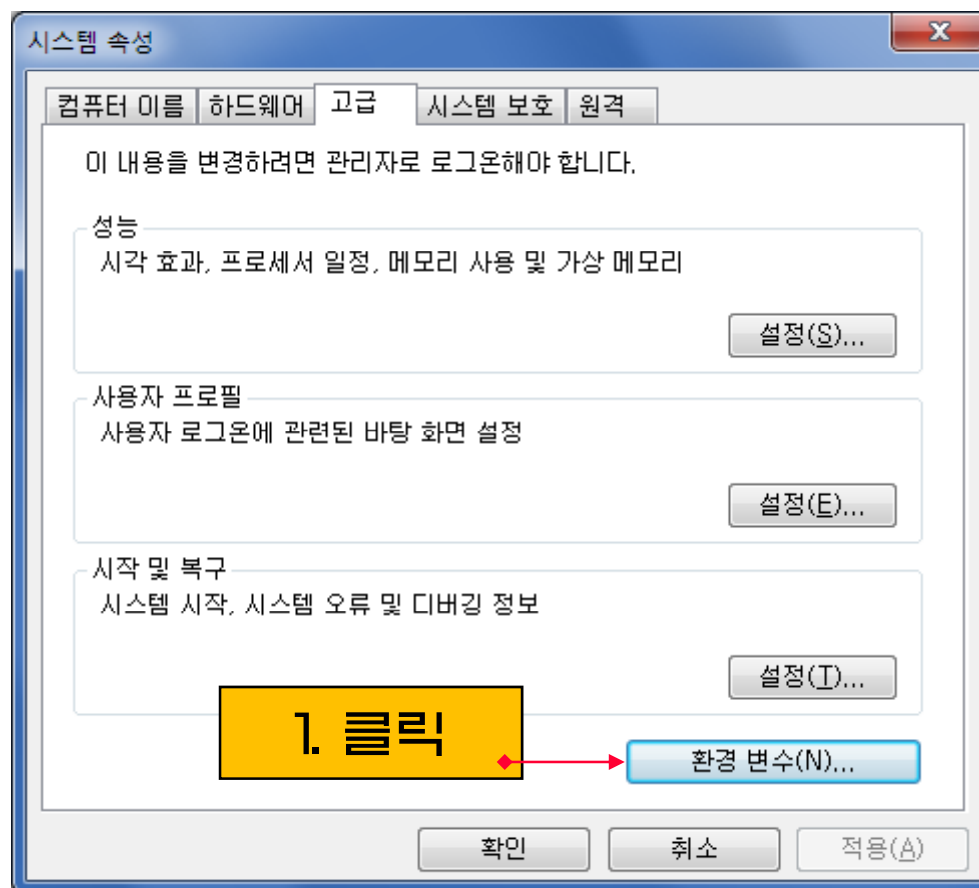




Google Map API Key (5)

❖ Keytool.exe 파일 path 지정

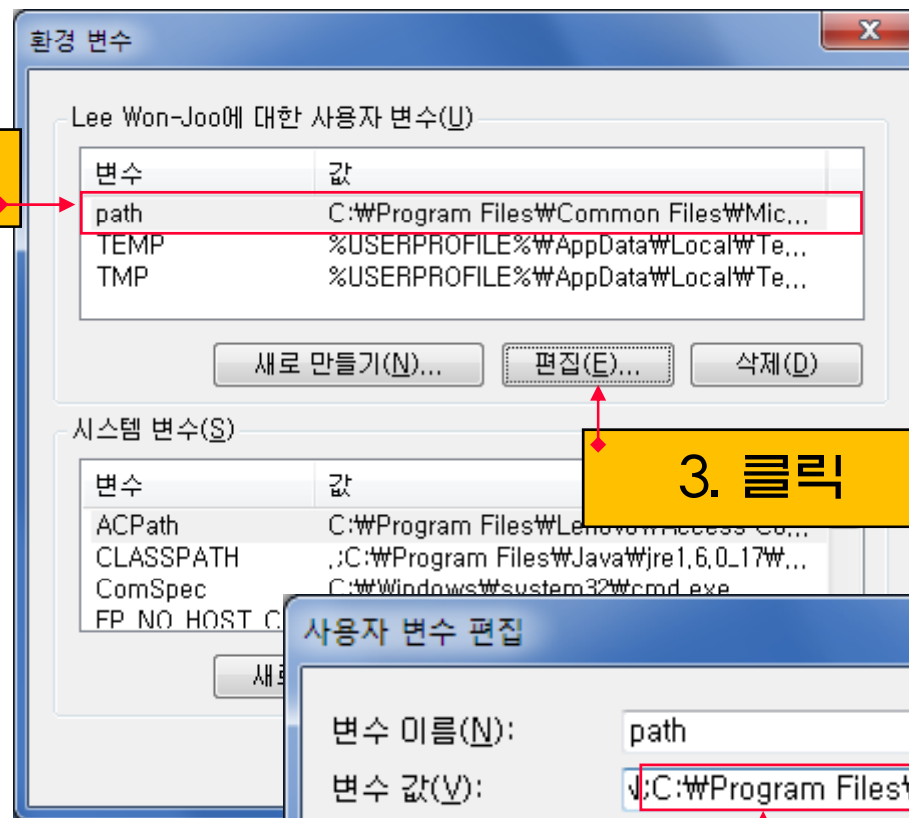
◆ C:\Program Files\Java\jdk1.6.0_17\bin



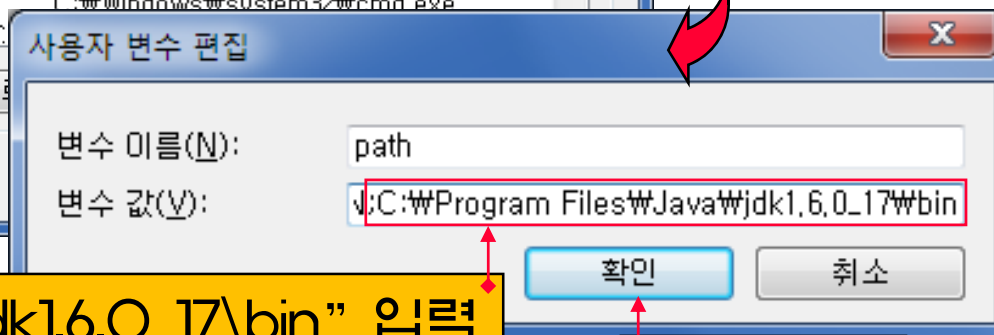


Google Map API Key (6)

2. 클릭



3. 클릭



4. “C:\Program Files\Java\jdk1.6.0_17\bin” 입력

5. 클릭



Google Map API Key (7)

❖ Keytool.exe 실행

```
명령 프롬프트
Microsoft Windows [Version 6.1.7600]
Copyright (c) 2009 Microsoft Corporation

C:\Users\Lee Won-Joo>cd .android

C:\Users\Lee Won-Joo\android>keytool -list -alias androiddebugkey -keystore debug.keystore -storepass android -keypass android
androiddebugkey, 2009. 12. 27, PrivateKeyEntry,
인증서 지문(MD5): 8E:78:E3:C6:74:07:61:94:[REDACTED]:DB:34:2D

C:\Users\Lee Won-Joo\android>
```

6. “.android” 폴더로 이동

7. Keytool 명령어 인수 입력 및 실행

```
keytool -list -alias androiddebugkey -keystore debug.keystore -storepass android -keypass android
```





Google Map API Key (8)

■ Map API Key 등록

❖ URL

◆ <http://code.google.com/intl/ko/android/maps-api-signup.html>





Google Map API Key (9)

❖ MD5 fingerprint 입력

Sign Up for the Android Maps API - Android Maps API - Google Code - Windows Internet Explorer

http://code.google.com/intl/ko/android/maps-api-signup.html

파일(F) 편집(E) 보기(V) 즐겨찾기(A) 도구(T) 도움말(H)

알뜰바 빠른검색 알파스On 즐겨찾기On 11번가 문자 캡처

NAVER 네이버 검색 사전 화면캡처 PC치료 관리 로그인

Sign Up for the Android Maps API - Android M...

You also need a [Google Account](#) to get a Maps API key, and your API key will be connected to your Google Account.

Android Maps APIs Terms of Service

Last Updated: October 13, 2008

Thanks for your interest in the Android Maps APIs. The Android Maps APIs are a collection of services (including, but not limited to, the "com.google.android.maps.MapView" and "android.location.Geocoder" classes) that allow you to include maps, geocoding, and other content from Google and its content providers in your Android applications. The Android Maps APIs explicitly do not include any driving directions data or local search data that may be owned or licensed by Google.

1. Your relationship with Google.

☒ I have read and agree with the terms and conditions ([printable version](#))

My certificate's MD5 fingerprint: 8E:78:E3:C6:74:07:61:94:A6:15:05:9E:67:DB:34:2D

Generate API Key

작업을 마쳤으나 페이지에 오류가 있습니다. 호 모드: 설정

9. 클릭

10. MD5 fingerprint 입력

11. 클릭



Google Map API Key (10)

❖ Google 로그인

Google Accounts - Windows Internet Explorer

https://www.google.com/accounts/ServiceLogin?service=andrc

파일(F) 편집(E) 보기(V) 즐겨찾기(A) 도구(T) 도움말(H)

알뜰바 빠른검색 알패스On 즐겨찾기On 11번가 문자 캡처 PC치료

NAVER 네이버 검색 사전 화면캡처 PC치료 관리 로그인

Google Accounts

12. Email & Password 입력

13. 클릭

Sign in to Android Market Publisher Site with your Google Account

Email: vonjoo2@gmail.com

Password:

☒ Stay signed in

Sign in

[Can't access your account?](#)

Don't have a Google Account?

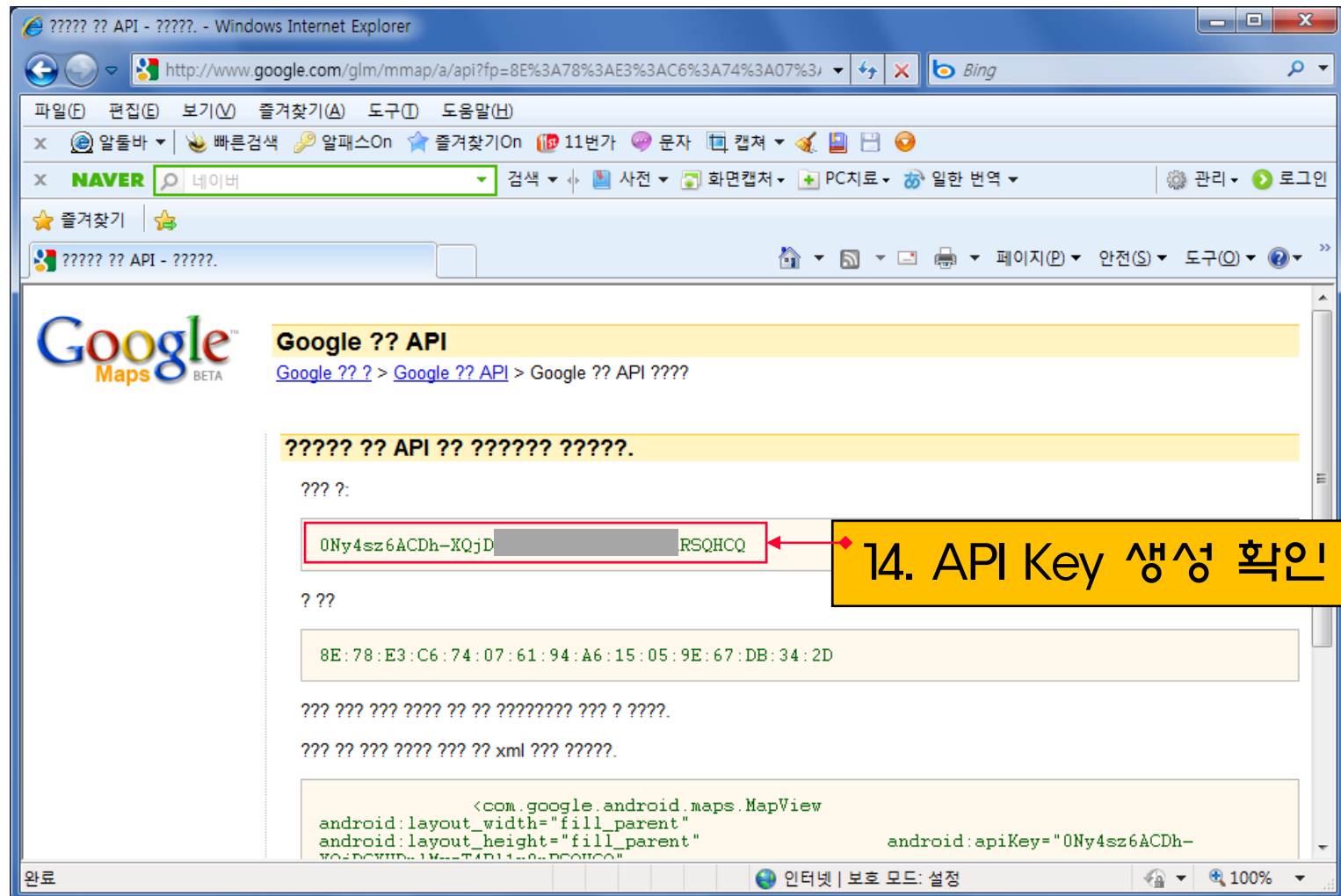
[Create an account now](#)

완료 인터넷 | 보호 모드: 설정 100%



Google Map API Key (11)

❖ API Key 생성



14. API Key 생성 확인



Google Map API Key (12)

■ Main.xml 파일에 API Key 등록

❖ Android : apiKey

```
*main.xml
1<?xml version="1.0" encoding="utf-8"?>
2<LinearLayout
3    xmlns:android="http://schemas.android.com/apk/res/android"
4    android:orientation="vertical"
5    android:layout_width="fill_parent"
6    android:layout_height="fill_parent"
7    >
8    <com.google.android.maps.MapView
9        android:id="@+id/mapview"
10       android:layout_width="fill_parent"
11       android:layout_height="fill_parent"
12       android:clickable="true"
13       android:apiKey="0Ny4sz6ACDh-XQjDCX" 0nRSQHCO"/>
14</LinearLayout>
```

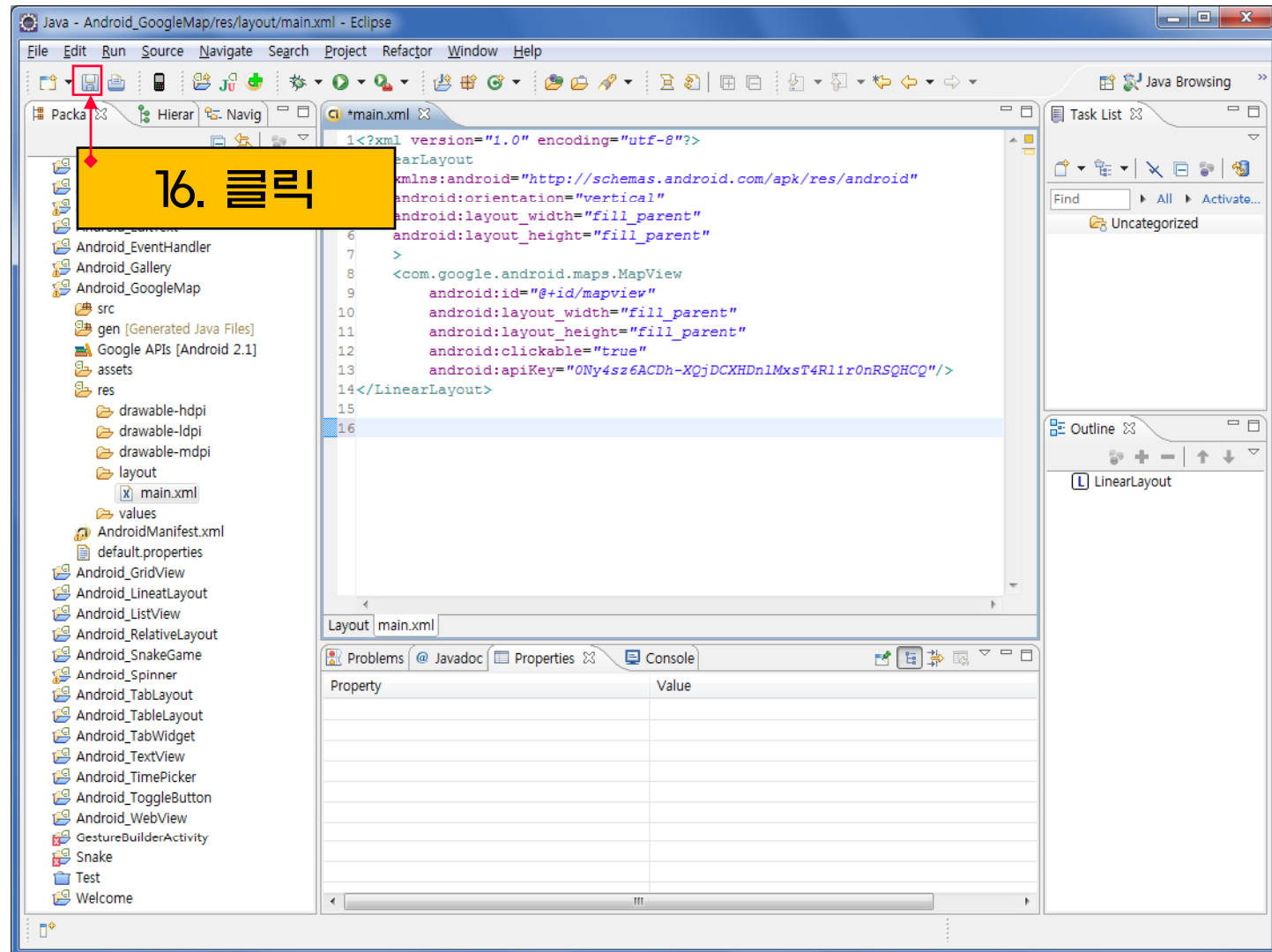
15. API Key 등록





Google Map API Key (13)

❖ Main.xml 저장



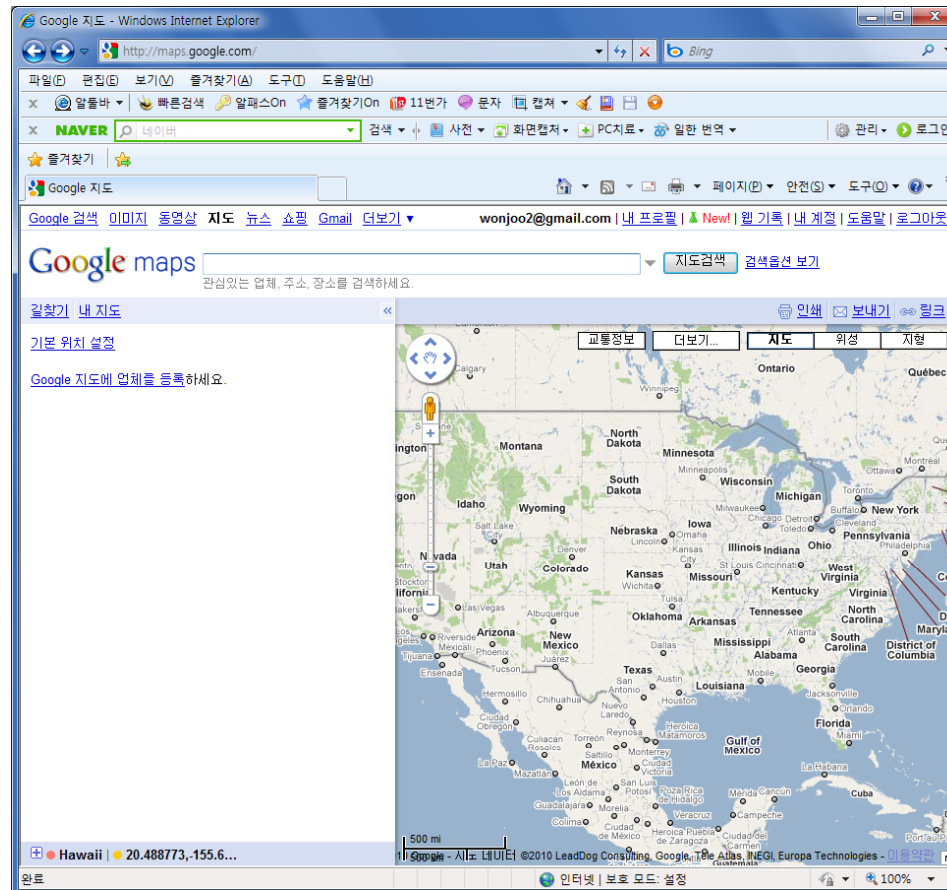


위도/경도 구하기 (1)

■ 위도(Latitude) / 경도(Longitude) 구하기

❖ Google 웹 사이트

◆ <http://maps.google.com/>





위도/경도 구하기 (2)

❖ Hawaii 위도/경도 구하기

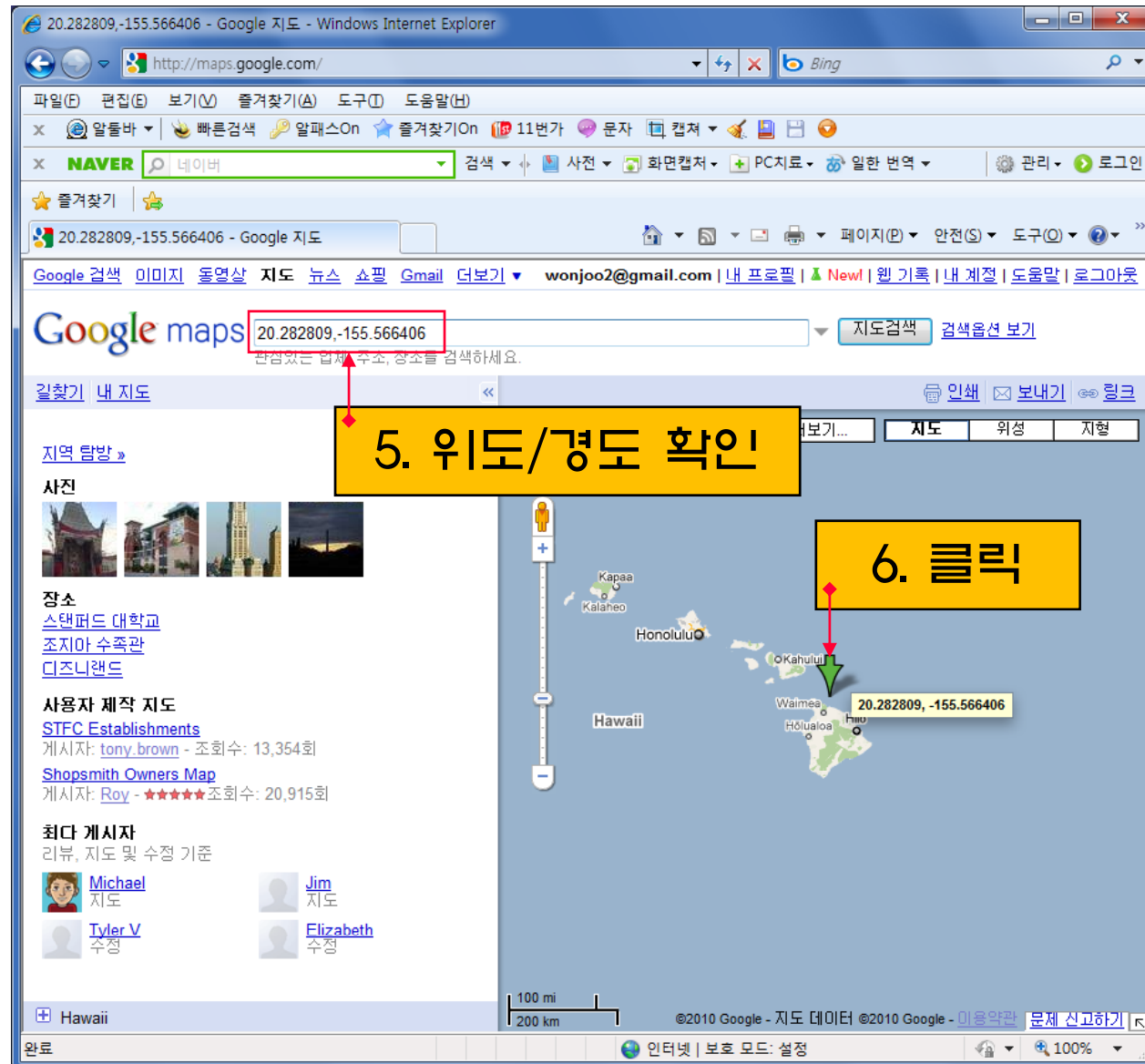
1. "Hawaii" 입력

2. 클릭

3. "Hawaii" 입력

4. 클릭

여기를 출발지로 설정
여기를 목적지로 설정
확대
축소
지도 중앙으로 설정
이곳이 궁금한가요?
문제 신고하기





실습 2 : 위도 / 경도 구현

■ Android_GoogleMapView (실습 시간 : 30분)

❖ 아래 그림과 같이 지도의 초기화면에 Hawaii 가 출력되도록 Android_GoogleMapView.java 파일을 수정하시오.

◆ 단계 1 : Hawaii(위도/경도 : 20.282809 / -155.566406) 구하기

◆ 단계 2 : Android_GoogleMapView.java 파일 수정





실습 2 : 위도 / 경도 구현 (1)

■ Android_GoogleMapView.java 파일 수정

```
*Android_GoogleMapView.java X
1 package com.inhatc.android_GoogleMapView;
2
3 import android.os.Bundle;
4 import com.google.android.maps.GeoPoint;
5 import com.google.android.maps.MapActivity;
6 import com.google.android.maps.MapController;
7 import com.google.android.maps.MapView;
8
9 public class Android_GoogleMapView extends MapActivity {
10     private MapView objMapView; //MapView 객체 선언
11
12     /** Called when the activity is first created. */
13     @Override
14     public void onCreate(Bundle savedInstanceState) {
15         super.onCreate(savedInstanceState);
16         setContentView(R.layout.main);
17
18         objMapView = (MapView) findViewById(R.id.mapview);
19         objMapView.setSatellite(true);
20         //Hawaii 위도/경도 = 20.282809/-155.566406
21         GeoPoint objGP = new GeoPoint(20282809, -155566406);
22         MapController objMC = objMapView.getController();
23         objMC.animateTo(objGP);
24         objMC.setZoom(7); //7 : ZoomIn 정도
25     }
26     @Override
27     protected boolean isRouteDisplayed() {
28         return false;
29     }
30 }
```

1. Coding





실습 2 : 위도 / 경도 구현 (2)

❖ Android_GoogleMapView.java 파일 저장

2. 클릭

```
package com.inhatec.android_googleMapView;

import android.os.Bundle;
import com.google.android.maps.GeoPoint;
import com.google.android.maps.MapActivity;
import com.google.android.maps.MapController;
import com.google.android.maps.MapView;

public class Android_GoogleMapView extends MapActivity {
    private MapView objMapView; //MapView 객체 선언

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        objMapView = (MapView) findViewById(R.id.mapview);
        objMapView.setSatellite(true);
        //Hawaii 위도/경도 = 20.282809/-155.566406
        GeoPoint objGP = new GeoPoint(20282809, -155566406);
        MapController objMC = objMapView.getController();
        objMC.animateTo(objGP);
        objMC.setZoom(7); //7 : ZoomIn 정도
    }

    @Override
    protected boolean isRouteDisplayed() {
        return false;
    }
}
```

Outline:

- com.inhatec.android_googleMapView
 - import declarations
 - android.os.Bundle
 - com.google.android.maps.GeoPoint
 - com.google.android.maps.MapActivity
 - com.google.android.maps.MapController
 - com.google.android.maps.MapView
 - Android_GoogleMapView
 - objMapView : MapView
 - onCreate(Bundle) : void
 - isRouteDisplayed() : boolean

Property	Value
Name	onCreate

Writable Smart Insert 32 : 1



실습 2 : 위도 / 경도 구현 (3)

❖ Android 프로젝트 실행

The screenshot illustrates the process of running an Android application in the Eclipse IDE. The main window shows the 'Run' menu with the 'Run' option highlighted. A yellow box labeled '3. 클릭' (Click) points to the 'Run' option. The 'Run As' dialog is open, showing the 'Select a way to run 'Test':' list with 'Android Application' selected. A yellow box labeled '4. 클릭' (Click) points to 'Android Application'. The 'Description' section shows 'Runs an Android Application'. A yellow box labeled '5. 클릭' (Click) points to the 'OK' button.

3. 클릭

4. 클릭

5. 클릭





실습 2 : 위도 / 경도 구현 (4)

❖ 실행 결과





실습 3 : Zoom Controller | 구현

■ Android_GoogleMapView (실습 시간 : 30분)

❖ 아래 그림과 같이 Android_GoogleMapView.java 파일에 Zoom In / Out 기능을 구현하시오.

◆ 단계 1 : Hawaii(위도/경도 : 20.282809 / -155.566406) 구하기

◆ 단계 2 : Android_GoogleMapView.java 파일 수정





실습 3 : Zoom Controller | 구현 (1)

■ Android_GoogleMapView.java 파일 수정

```
Android_GoogleMapView.java
1 package com.inhatc.android_GoogleMapView;
2
3 import android.os.Bundle;
4
5
6
7
8
9
10 public class Android_GoogleMapView extends MapActivity {
11     private MapView objMapView;    //MapView 객체 선언
12     /** Called when the activity is first created. */
13     @Override
14     public void onCreate(Bundle savedInstanceState) {
15         super.onCreate(savedInstanceState);
16         setContentView(R.layout.main);
17
18         objMapView = (MapView) findViewById(R.id.mapview);
19         objMapView.setSatellite(true);
20         objMapView.setBuiltInZoomControls(true);
21
22         //Hawaii 위도/경도 = 20.282809/-155.566406
23         GeoPoint objGP = new GeoPoint(20282809,-155566406);
24         MapController objMC = objMapView.getController();
25         objMC.animateTo(objGP);
26         objMC.setZoom(7);    //7 : ZoomIn 정도
27     }
28
29     @Override
30     protected boolean isRouteDisplayed() {
31         return false;
32     }
33 }
```

1. Coding



실습 3 : Zoom Controller | 구현 (2)

❖ Android_GoogleMapView.java 파일 저장

2. 클릭

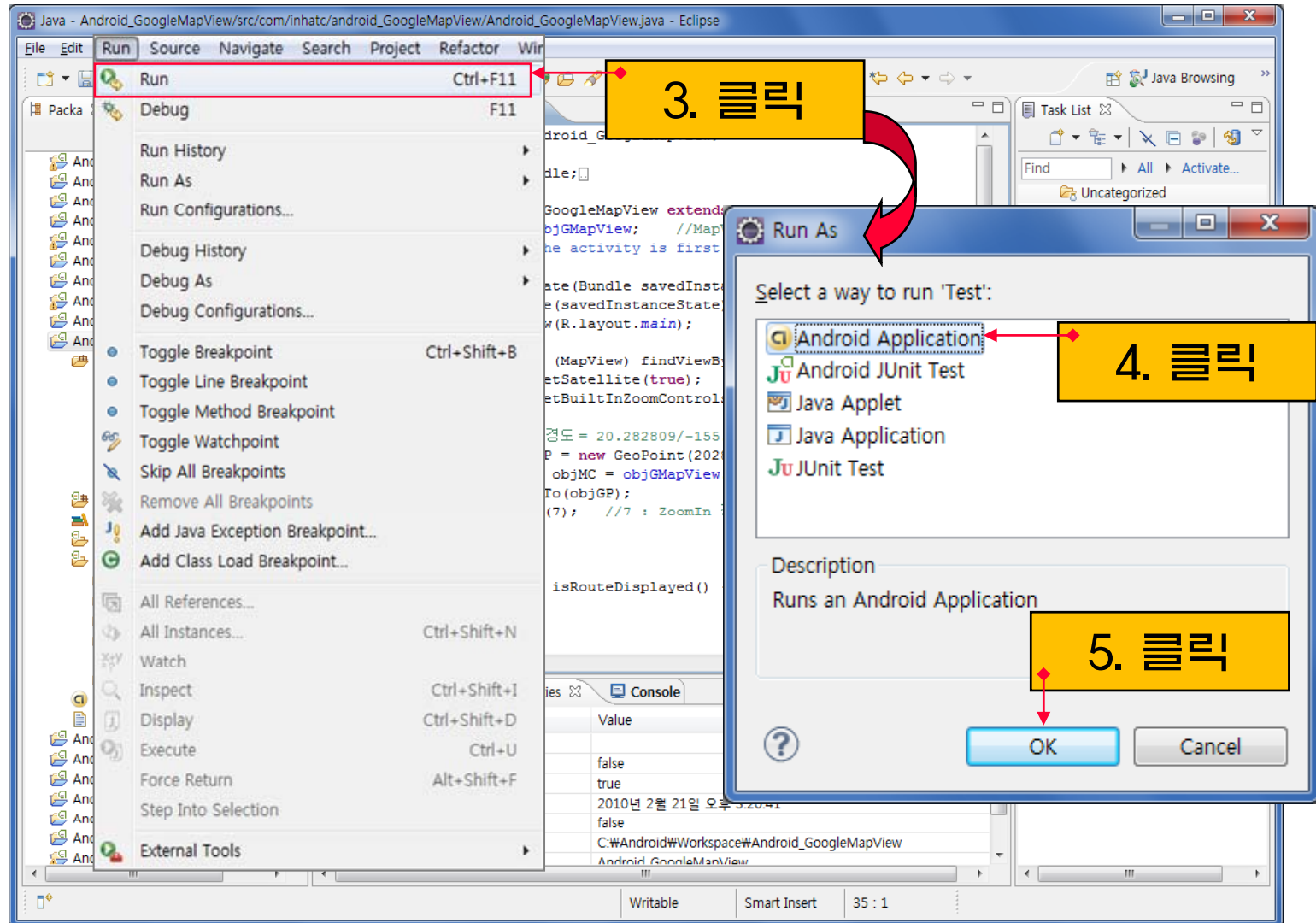
```
1 package com.inhatec.android_GoogleMapView;
2
3 import android.os.Bundle;
4
5 public class Android_GoogleMapView extends MapActivity {
6     private MapView objGMapView; //MapView 객체 선언
7     /** Called when the activity is first created. */
8     @Override
9     public void onCreate(Bundle savedInstanceState) {
10         super.onCreate(savedInstanceState);
11         setContentView(R.layout.main);
12
13         objGMapView = (MapView) findViewById(R.id.mapview);
14         objGMapView.setSatellite(true);
15         objGMapView.setBuiltInZoomControls(true);
16
17         //Hawaii 위도/경도 = 20.282809/-155.566406
18         GeoPoint objGP = new GeoPoint(20282809, -155566406);
19         MapController objMC = objGMapView.getController();
20         objMC.animateTo(objGP);
21         objMC.setZoom(7); //7 : ZoomIn 정도
22     }
23
24     @Override
25     protected boolean isRouteDisplayed() {
26         return false;
27     }
28 }
```

Property	Value
Info	
derived	false
editable	true
last modified	2010년 2월 21일 오후 3:20:41
linked	false
location	C:\Android\Workspace\Android_GoogleMapView
name	Android_GoogleMapView



실습 3 : Zoom Controller | 구현 (3)

❖ Android 프로젝트 실행





실습 3 : Zoom Controller | 구현 (4)

❖ 실행 결과





실습 4 : Zoom Controller II 구현

■ Android_GoogleMapView (실습 시간 : 30분)

❖ 아래 그림과 같이 Android_GoogleMapView.java 파일에 Zoom In / Out 기능을 구현하시오.

◆ 단계 1 : Seoul(위도/경도 : 37.579413 / 126.980667) 구하기

◆ 단계 2 : Android_GoogleMapView.java 파일 수정하여 Zoom Controller를
화면 Left_Top 에 표시하기

Zoom Controller





실습 4 : Zoom Controller II 구현 (1)

■ Android_GoogleMapView.java 파일 수정

❖ 서울(위도/경도 : 37.579413/126.980667) 위치 지정

```
Android_GoogleMapView.java
1 package com.inhatc.android_GoogleMapView;
2
3 import android.os.Bundle;
4 import android.view.View;
5
6 import com.google.android.maps.GeoPoint;
7 import com.google.android.maps.MapActivity;
8 import com.google.android.maps.MapController;
9 import com.google.android.maps.MapView;
10
11 public class Android_GoogleMapView extends MapActivity {
12     private MapView objGMapView;    //MapView 객체 선언
13
14     /** Called when the activity is first created. */
15     @Override
16     public void onCreate(Bundle savedInstanceState) {
17         super.onCreate(savedInstanceState);
18         setContentView(R.layout.main);
19
20         objGMapView = (MapView) findViewById(R.id.mapview);
21         objGMapView.setSatellite(true);
22
23         //Seoul 위도/경도 = 37.579413/126.980667
24         GeoPoint objGP = new GeoPoint(37579413,126980667);
25         MapController objMC = objGMapView.getController();
26         objMC.animateTo(objGP);
27         objMC.setZoom(15);    //15 : ZoomIn 정도
```

1. Coding



실습 4 : Zoom Controller II 구현 (2)

■ Zoom Controller 구현

```
Android_GoogleMapView.java
28
29     int ix = 5;        //Zoom Controller 위치 x 좌표값
30     int iy = 5;        //Zoom Controller 위치 y 좌표값
31     MapView.LayoutParams objLP;
32     objLP = new MapView.LayoutParams(MapView.LayoutParams.WRAP_CONTENT,
33                                     MapView.LayoutParams.WRAP_CONTENT,
34                                     ix, iy, MapView.LayoutParams.TOP_LEFT);
35     View zoomControls = objGMapView.getZoomControls();
36     objGMapView.addView(zoomControls, objLP);
37     objGMapView.displayZoomControls(true);
38 }
39 @Override
40 protected boolean isRouteDisplayed() {
41     return false;
42 }
43 }
```

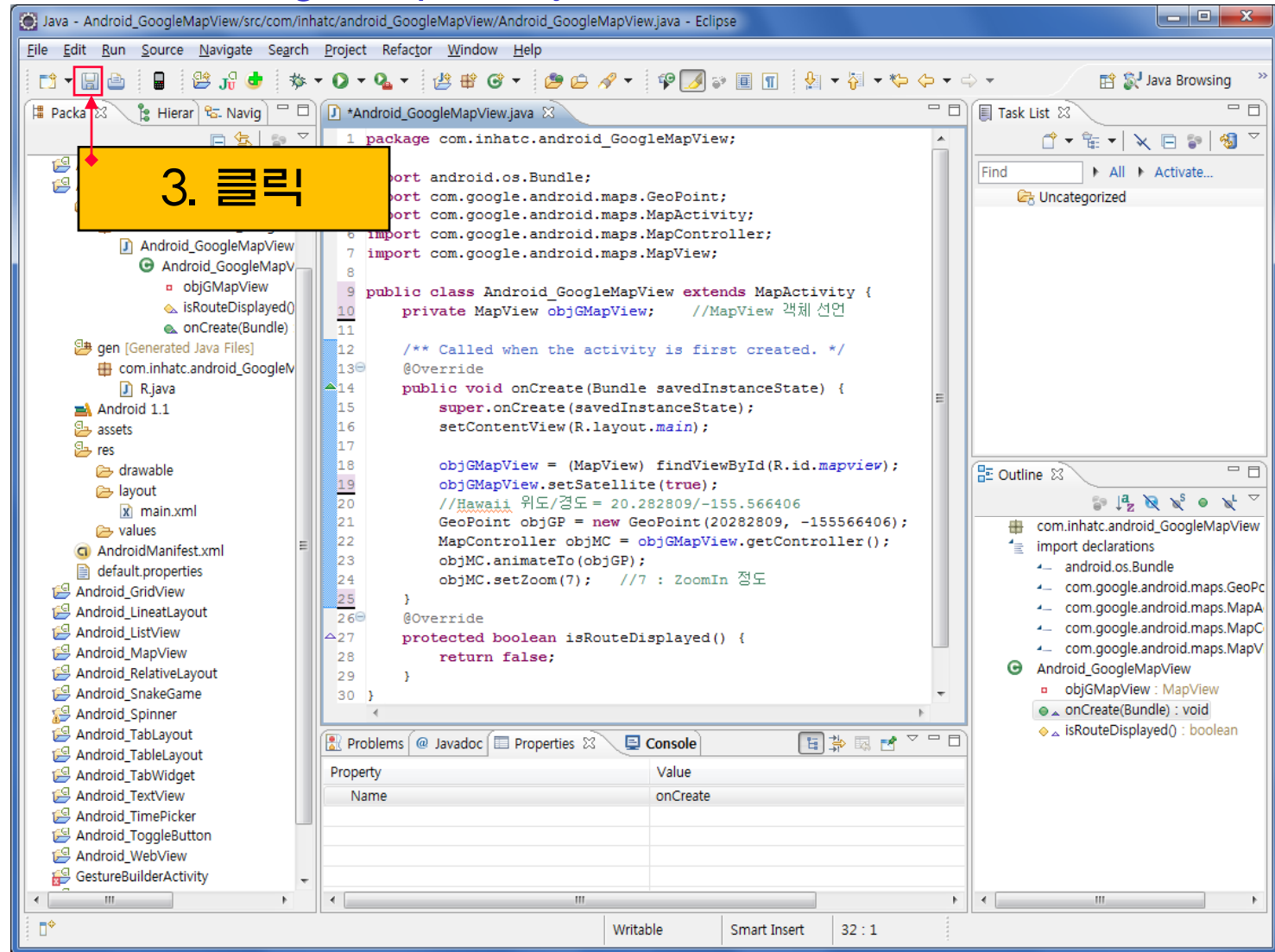
2. Coding





실습 4 : Zoom Controller II 구현 (3)

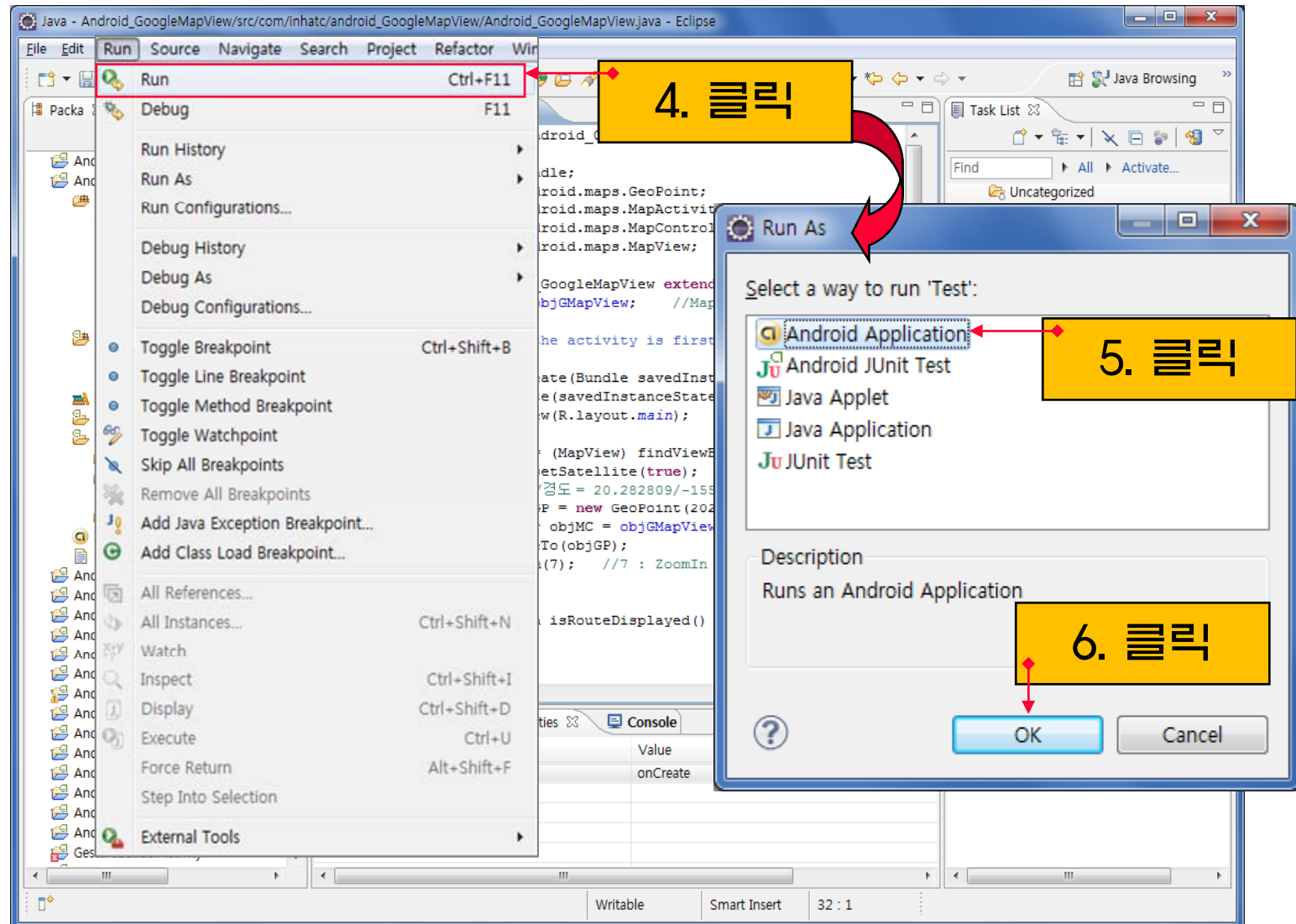
❖ Android_GoogleMapView.java 파일 저장





실습 4 : Zoom Controller II 구현 (4)

❖ Android 프로젝트 실행



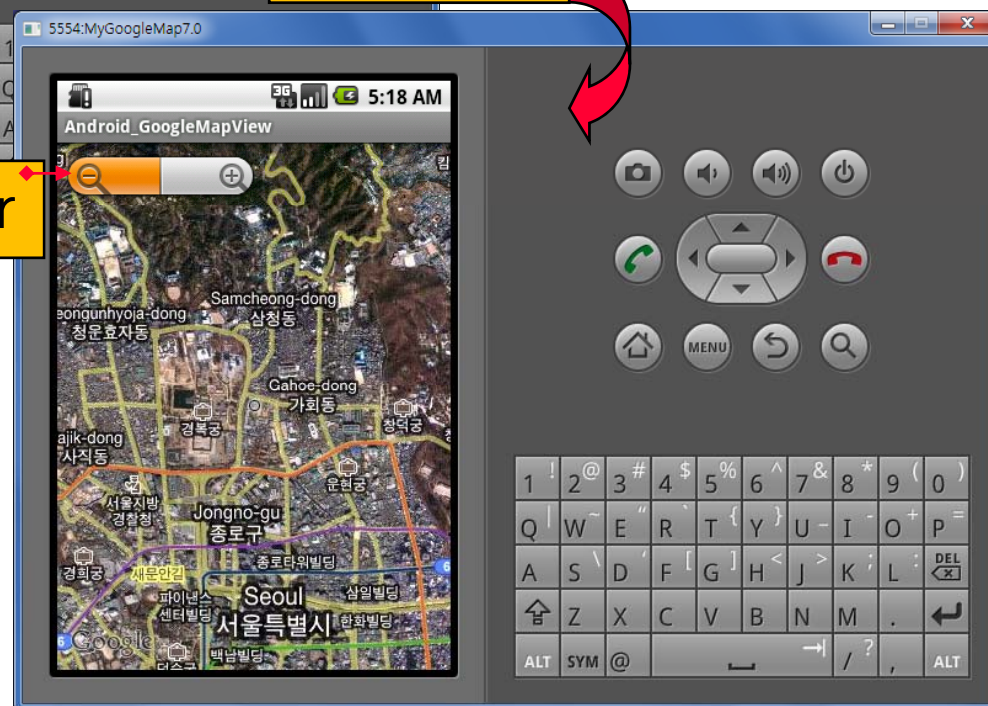


실습 4 : Zoom Controller II 구현 (5)

❖ 실행 결과

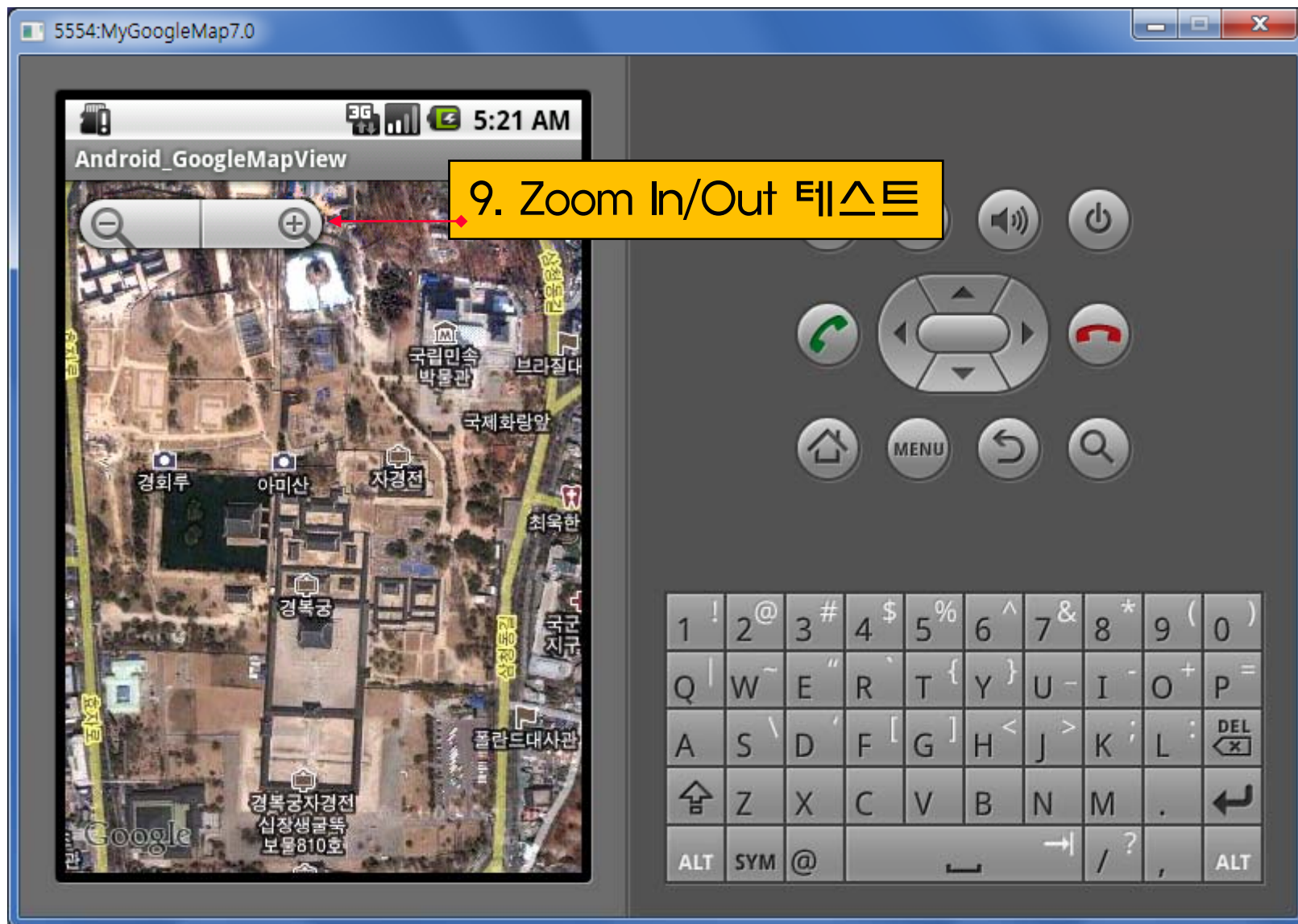


8. Zoom Controller





실습 4 : Zoom Controller II 구현 (6)





학습 요약

- Google Map View 구현
- Google Map 지원 Emulator 생성
- Google Map API Key
- 위도/경도 구하기
- 위도/경도에 따른 Google Map View 구현
- Zoom Controller 구현

