



*Your complimentary
use period has ended.
Thank you for using
PDF Complete.*

[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)

LOCATION-BASED SERVICES PENS

Apa itu location-based service itu?













































” Location-based service adalah system yang menyebarkan suatu informasi yang dapat diakses menggunakan suatu mobile devices menggunakan internet. Cara mengaksesnya dengan menggunakan GPS yang ada pada mobile device tersebut.

Algoritma aplikasi LBS

- ” Mendapatkan koordinat posisi kita melalui GPS
- ” Menetapkan lokasi yang ingin ditampilkan difilter berdasarkan jarak
- ” Gambar posisi kita dan lokasi yang terdekat dalam map

...ng perlu diketahui sebelum membuat program LBS :

” Membutuhkan Google Play Services SDK

 Name	API	Rev.	Status
▶ <input type="checkbox"/>  Android 3.2 (API 13)			
▶ <input type="checkbox"/>  Android 3.1 (API 12)			
▶ <input type="checkbox"/>  Android 3.0 (API 11)			
▲ <input type="checkbox"/>  Android 2.3.3 (API 10)			
<input type="checkbox"/>  SDK Platform	10	2	 Installed
<input type="checkbox"/>  Samples for SDK	10	1	 Installed
<input type="checkbox"/>  Intel x86 Atom System Image	10	1	 Update available: rev. 2
<input type="checkbox"/>  Google APIs	10	2	 Installed
▶ <input type="checkbox"/>  Android 2.2 (API 8)			
▶ <input type="checkbox"/>  Android 2.1 (API 7)			
▶ <input type="checkbox"/>  Android 1.6 (API 4)			
▶ <input type="checkbox"/>  Android 1.5 (API 3)			
▲ <input type="checkbox"/>  Extras			
<input type="checkbox"/>  Android Support Repository		1	 Not installed
<input type="checkbox"/>  Android Support Library		13	 Installed
<input type="checkbox"/>  Google AdMob Ads SDK		11	 Not installed
<input type="checkbox"/>  Google Analytics App Tracking SDK		3	 Not installed
<input type="checkbox"/>  Google Cloud Messaging for Android Library		3	 Not installed
<input type="checkbox"/>  Google Play services		7	 Installed
<input type="checkbox"/>  Google Repository		1	 Not installed
<input type="checkbox"/>  Google Play APK Expansion Library		3	 Installed
<input type="checkbox"/>  Google Play Billing Library		4	 Installed
<input type="checkbox"/>  Google Play Licensing Library		2	 Installed
<input type="checkbox"/>  Google USB Driver		7	 Not installed
<input type="checkbox"/>  Google Web Driver		2	 Not installed
<input type="checkbox"/>  Intel x86 Emulator Accelerator (HAXM)		3	 Not installed

Mendapatkan API key melewati Google APIs
Console :

<https://code.google.com/apis/console/#project:1071158763728>

” Menggunakan MapFragment
fitur Fragment ini hanya ada pada SDK versi
Honeycomb ke atas, sehingga apabila ingin
membuat aplikasi untuk froyo/gingerbread
akan membutuhkan android support library



*Your complimentary
use period has ended.
Thank you for using
PDF Complete.*

[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)

“ Android Maps v2 tidak dapat dijalankan menggunakan emulator.

Kenapa? Karena android maps v2 termasuk dalam Google Play Services sehingga membutuhkan Google Play Store untuk bisa berjalan 😊

Cara untuk mendapatkan API Key

- ” Mendapatkan android certificate SH1 fingerprint dari debug keystore, biasanya di *“C:\\Users\\<your name>\\.android\\debug.keystore”*
- ” buka command prompt, ketik *keytool -v -list -keystore "C:\\Users\\<your name>\\.android\\debug.keystore”*
- ” Ketika disuruh memasukkan password, bisa dikosongkan saja.

te SHA-1 fingerprint yang telah di-
generate yang nantinya di masukkan ke
dalam google APIs console

```
C:\Users\user>cd c:\program files\java\jdk1.7.0_01\bin
c:\Program Files\Java\jdk1.7.0_01\bin>keytool -v -list -keystore "c:\users\user\
.android\debug.keystore
Enter keystore password:

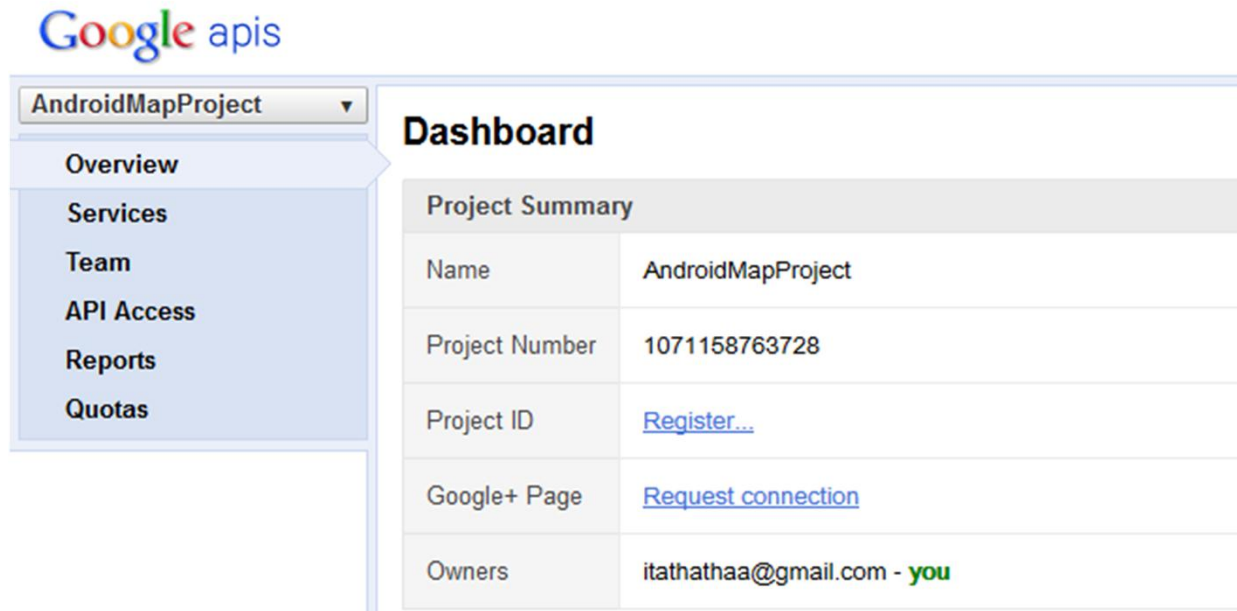
Keystore type: JKS
Keystore provider: SUN

Your keystore contains 1 entry

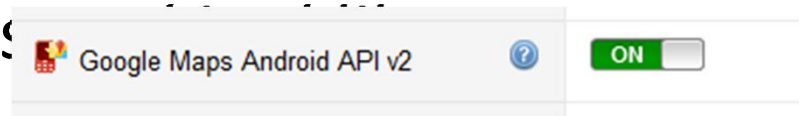
Alias name: androiddebugkey
Creation date: Mar 13, 2013
Entry type: PrivateKeyEntry
Certificate chain length: 1
Certificate[1]:
Owner: CN=Android Debug, O=Android, C=US
Issuer: CN=Android Debug, O=Android, C=US
Serial number: 3cb69f35
Valid from: Wed Mar 13 09:05:52 ICT 2013 until: Fri Mar 06 09:05:52 ICT 2043
Certificate fingerprints:
MD5: 11-9E-1E-2E-E2-78-DE-2A-EA-77-8E-CE-11-9A-4A-2C
SHA1: B9:FD:DD:C4:4E:22:8D:5B:15:B0:89:A6:D8:70:8A:25:8B:A3:BA:3D
SHA256: B9:FD:DD:C4:4E:22:8D:5B:15:B0:89:A6:D8:70:8A:25:8B:A3:BA:3D:14:9A:88:7C:F8:79:91:C4:98:32:1D
Signature algorithm name: SHA256withRSA
Version: 3

Extensions:
#1: ObjectId: 2.5.29.14 Criticality=false
SubjectKeyIdentifier [
KeyIdentifier [
0000: E3 07 BA F6 AA C2 28 3F 96 9A CE 70 E2 3E E8 4D .....<?...>.M
0010: 33 93 06 AA 3...
]
]
```

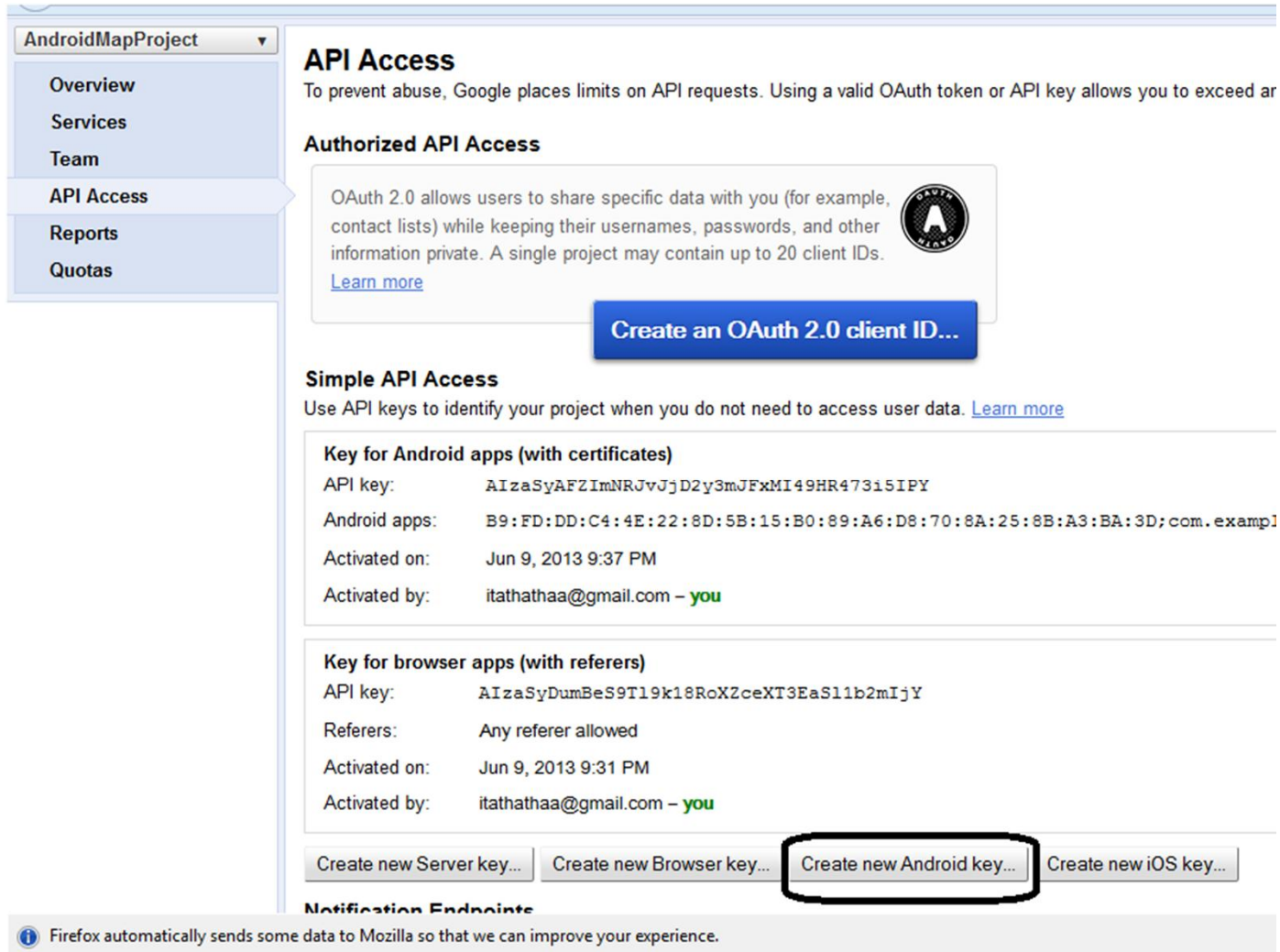

Buka Google APIs Console pada browser
<https://cloud.google.com/console?redirected=true#/project/554626022404/apiui/api>



” Klik services, pada Google Maps Android API v2 nya status



Klik API Access, kemudian klik create new android key



The screenshot shows the Google API Access console for a project named 'AndroidMapProject'. The left sidebar contains navigation links: Overview, Services, Team, API Access (highlighted), Reports, and Quotas. The main content area is titled 'API Access' and includes a sub-section 'Authorized API Access' with a 'Create an OAuth 2.0 client ID...' button. Below this, there are two sections for API keys: 'Key for Android apps (with certificates)' and 'Key for browser apps (with referers)'. At the bottom, there are four buttons: 'Create new Server key...', 'Create new Browser key...', 'Create new Android key...' (circled in red), and 'Create new iOS key...'. A footer notification states: 'Firefox automatically sends some data to Mozilla so that we can improve your experience.'

API Access
To prevent abuse, Google places limits on API requests. Using a valid OAuth token or API key allows you to exceed ar

Authorized API Access

OAuth 2.0 allows users to share specific data with you (for example, contact lists) while keeping their usernames, passwords, and other information private. A single project may contain up to 20 client IDs. [Learn more](#)

Create an OAuth 2.0 client ID...

Simple API Access
Use API keys to identify your project when you do not need to access user data. [Learn more](#)

Key for Android apps (with certificates)

API key: AIzaSyAFZImNRJvJjD2y3mJFxmI49HR473i5IPY
Android apps: B9:FD:DD:C4:4E:22:8D:5B:15:B0:89:A6:D8:70:8A:25:8B:A3:BA:3D;com.examp1
Activated on: Jun 9, 2013 9:37 PM
Activated by: itathathaa@gmail.com – you

Key for browser apps (with referers)

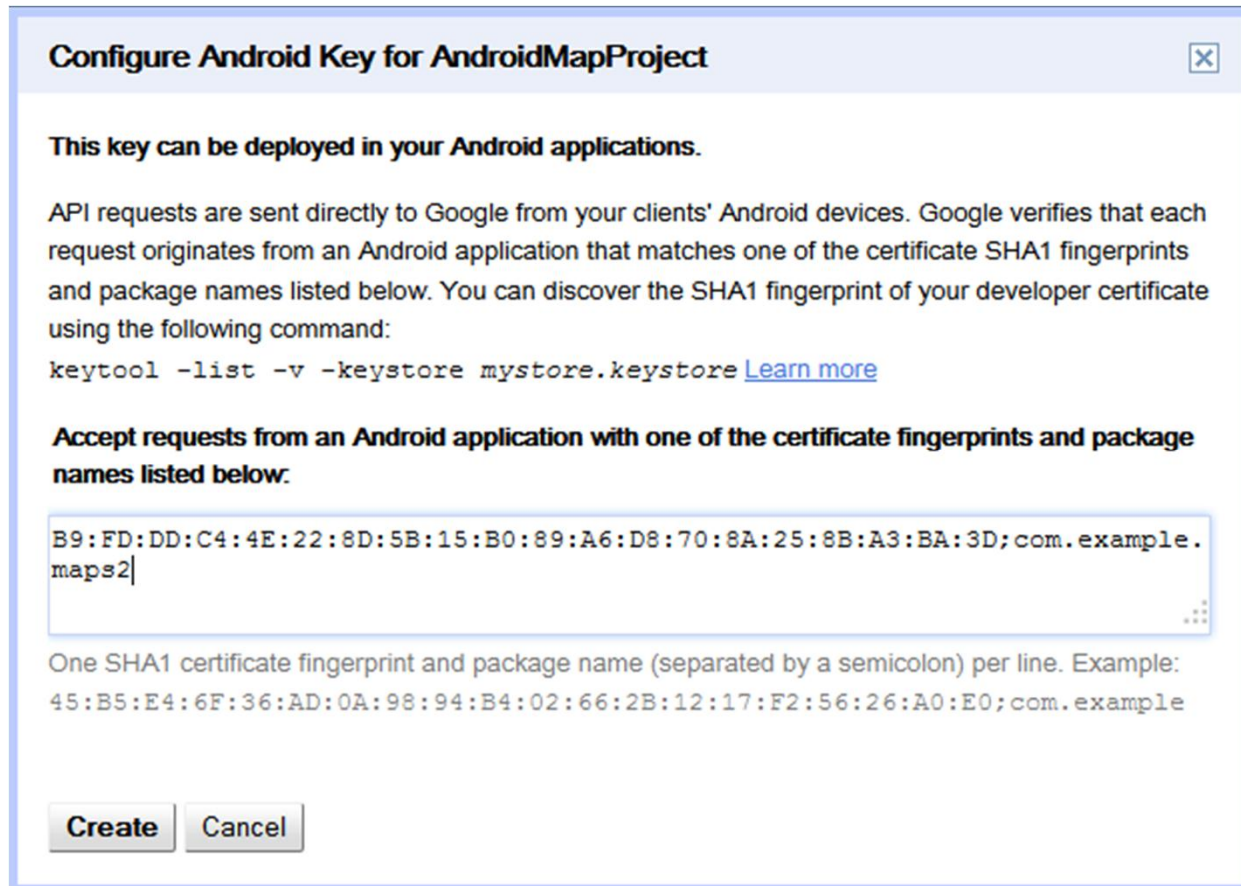
API key: AIzaSyDumBeS9T19k18RoXZceXT3EaS11b2mIjY
Referers: Any referer allowed
Activated on: Jun 9, 2013 9:31 PM
Activated by: itathathaa@gmail.com – you

Create new Server key... Create new Browser key... **Create new Android key...** Create new iOS key...

Notification Endpoints

Firefox automatically sends some data to Mozilla so that we can improve your experience.

ita masukkan SHA-1 fingerprint
tadi, kemudian disambung dengan nama
package dari aplikasimu dengan
menambahkan titik koma, klik create



ya akan seperti berikut :

Simple API Access

Use API keys to identify your project when you do not need to access user data. [Learn more](#)

Key for Android apps (with certificates)

API key: **AIzaSyC_JfunAn_ENe9ECPPewqGjbJ8xNAAc4zw**
Android apps: B9:FD:DD:C4:4E:22:8D:5B:15:B0:89:A6:D8:70:8A:25:8B:A3:BA:3D;com.example.maps2
Activated on: Jun 10, 2013 10:19 PM
Activated by: itathathaa@gmail.com – **you**

Key for Android apps (with certificates)


API key: AIzaSyAFZImNRJvJjD2y3mJFxmI49HR473i5IPY
Android apps: B9:FD:DD:C4:4E:22:8D:5B:15:B0:89:A6:D8:70:8A:25:8B:A3:BA:3D;com.example.google
Activated on: Jun 9, 2013 9:37 PM
Activated by: itathathaa@gmail.com – **you**

e data to Mozilla so that we can improve your experience.

” API key sudah kita dapatkan.

Import Library Google Play Services

- “ Klik file → import → android → existing android code into workspace → next pilih browse, enter :
`<folder-instalasi-android-sdk>/extras/google/google_play_services/libproject/google-play-services_lib`
- “ Centang pilihan copy to workspace, setelah itu klik finish, nantinya akan dimasukkan ke dalam project yang dibuat



Select a directory to search for existing Android projects

Root Directory:

Projects:

<input checked="" type="checkbox"/>	google-play-services_lib (D:\master\adt-bundle-windows-x86\adt-bund
-------------------------------------	---

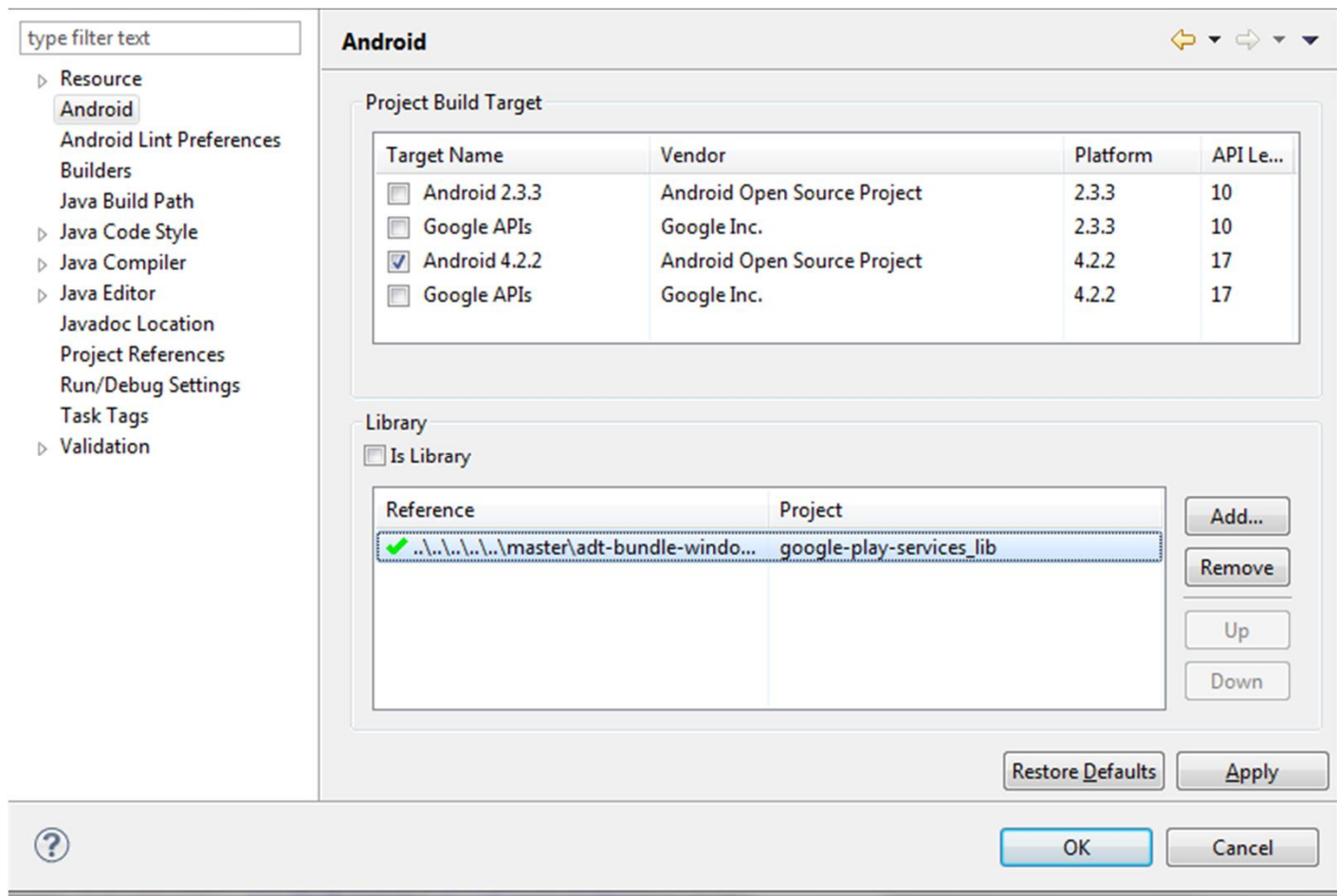
Copy projects into workspace

Working sets

Add project to working sets

Working sets:

... yang dibuat, klik properties →
android, pada library, klik add, pilih project
google-play-services_lib, klik ok





*Your complimentary
use period has ended.
Thank you for using
PDF Complete.*

[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)

MENAMPILKAN PETA

raua layout activity_main.xml

```
<fragment  
    android:id="@+id/map"  
    android:layout_width="wrap_content"  
    android:layout_height="300dp"  
    class="com.google.android.gms.maps.SupportMapFragment" />
```

Java AndroidManifest.xml

” Beri permission sebelum tag <application>

```
<permission
    android:name="com.example.maps2.permission.MAPS_RECEIVE"
    android:protectionLevel="signature" />

<uses-permission android:name="com.example.maps2.permission.MAPS_RECEIVE" />

<uses-sdk
    android:minSdkVersion="8"
    android:targetSdkVersion="17" />

<uses-permission android:name="android.permission.ACCESS_NETWORK_STATE" />
<uses-permission android:name="android.permission.INTERNET" />
<uses-permission android:name="com.google.android.providers.gsf.permission.READ_GSERVICES" />
<!-- External storage for caching. -->
<uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE" />
<!-- My Location -->
<uses-permission android:name="android.permission.ACCESS_COARSE_LOCATION" />
<uses-permission android:name="android.permission.ACCESS_FINE_LOCATION" />
<!-- Maps API needs OpenGL ES 2.0. -->
<uses-feature
    android:glEsVersion="0x00020000"
    android:required="true" />
```



*Your complimentary
use period has ended.
Thank you for using
PDF Complete.*

[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)

” Di dalam tag <application>

```
<meta-data  
    android:name="com.google.android.maps.v2.API_KEY"  
    android:value="AIzaSyBY1AnpENhDwEsLDvEEjq6EEDjiwbdqhaw" />
```

Area kelas activity_main

```
public class MainActivity extends FragmentActivity implements
    OnMapClickListener, LocationListener {

    private GoogleMap mMap;

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

        setUpMapIfNeeded();
        mMap.setOnMapClickListener(this);
    }

    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) {
                MoveToMyLocation();
            }
        }
    }
}
```



Your complimentary
use period has ended.
Thank you for using
PDF Complete.

[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)





*Your complimentary
use period has ended.
Thank you for using
PDF Complete.*

[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)

Mengganti tampilan peta


```
        onOptionSelected(menu) {  
            int groupId = 0, order = 0;  
            menu.add(groupId, 1, 1, "Tampilan Normal");  
            menu.add(groupId, 2, 2, "Tampilan Hybrid");  
            menu.add(groupId, 3, 3, "Tampilan None");  
            menu.add(groupId, 5, 4, "Tampilan Satellite");  
            menu.add(groupId, 5, 4, "Tampilan Terrain");  
        }  
  
    @Override  
    public boolean onOptionsItemSelected(MenuItem item) {  
        int menuItemId = item.getItemId();  
        if(menuItemId==1){  
  
            mMap.setMapType(GoogleMap.MAP_TYPE_NORMAL);  
            setUpMapIfNeeded();  
        }else if(menuItemId==2){  
            mMap.setMapType(GoogleMap.MAP_TYPE_HYBRID);  
            setUpMapIfNeeded();  
        }else if(menuItemId==3){  
            mMap.setMapType(GoogleMap.MAP_TYPE_NONE);  
            setUpMapIfNeeded();  
        }else if(menuItemId==4){  
            mMap.setMapType(GoogleMap.MAP_TYPE_SATELLITE);  
            setUpMapIfNeeded();  
        }else if(menuItemId==5){  
            mMap.setMapType(GoogleMap.MAP_TYPE_TERRAIN);  
            setUpMapIfNeeded();  
        }  
        return super.onOptionsItemSelected(item);  
    }  
}
```

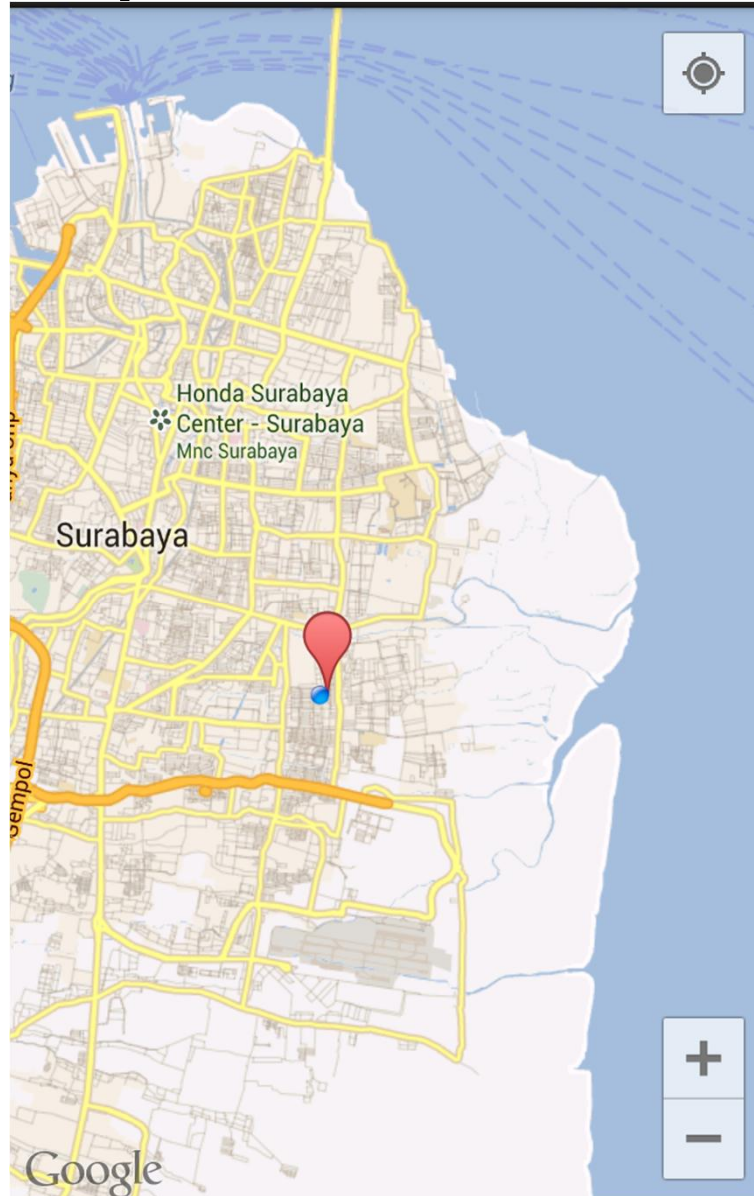


*Your complimentary
use period has ended.
Thank you for using
PDF Complete.*

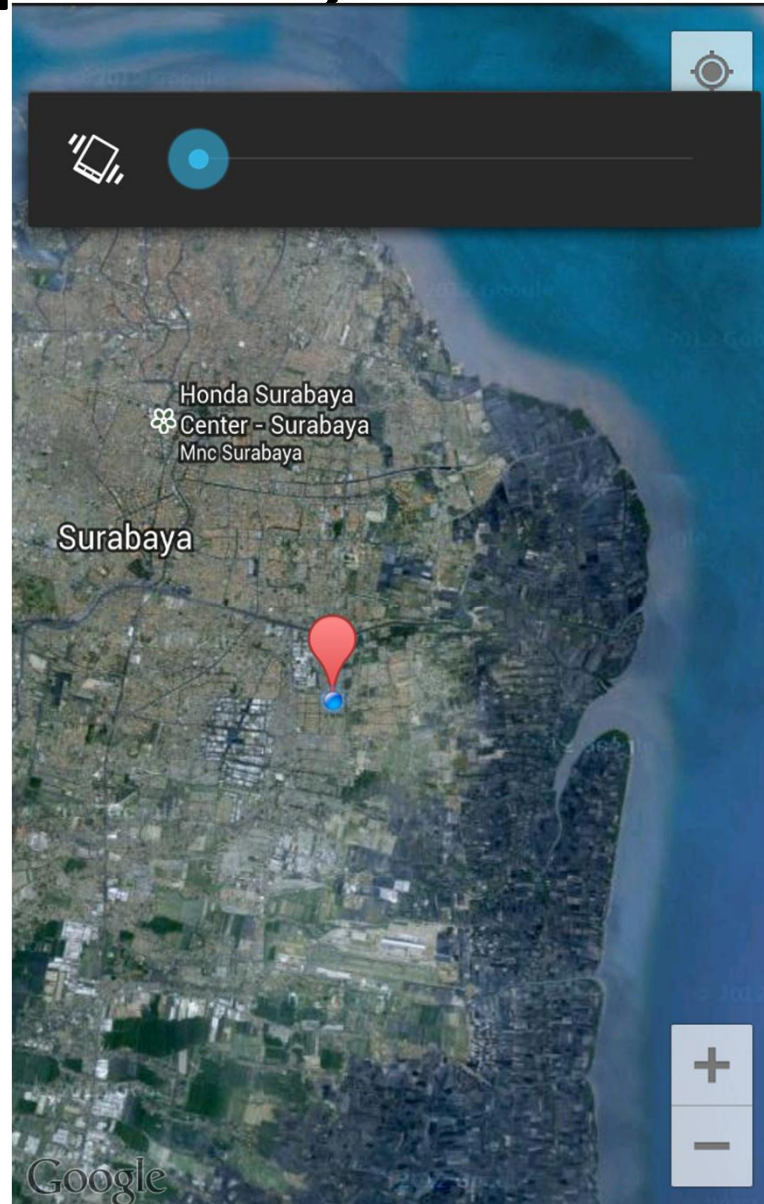
[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)

```
-----  
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;  
    */  
    menu(menu);  
    return super.onCreateOptionsMenu(menu);  
}
```


Tampilan normal



Tampilan hybrid

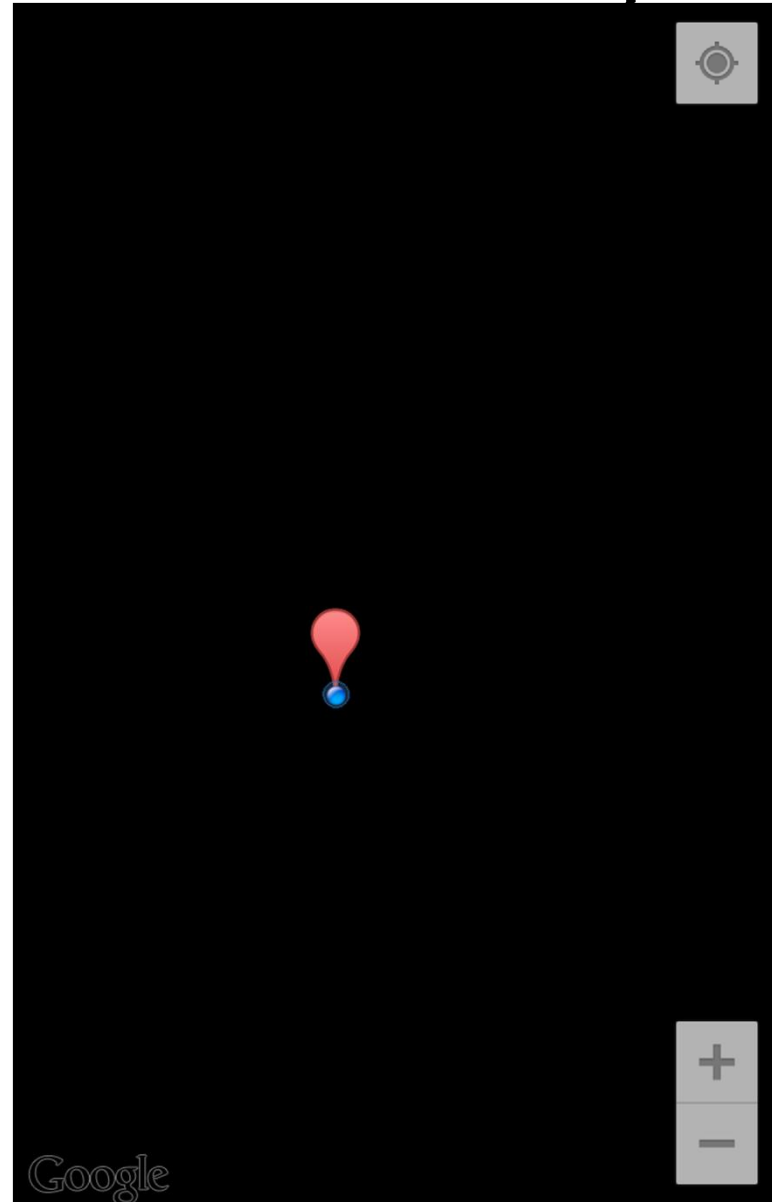




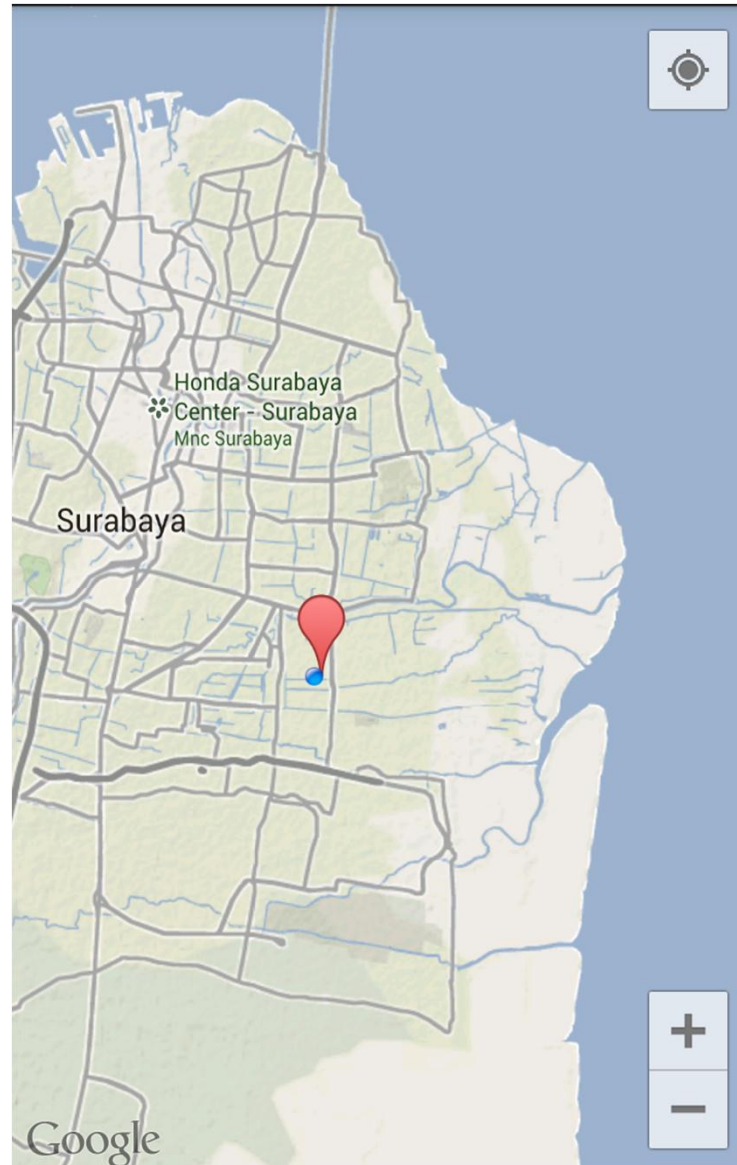
*Your complimentary
use period has ended.
Thank you for using
PDF Complete.*

[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)

tidak ada tampilan



Tampilan terrain



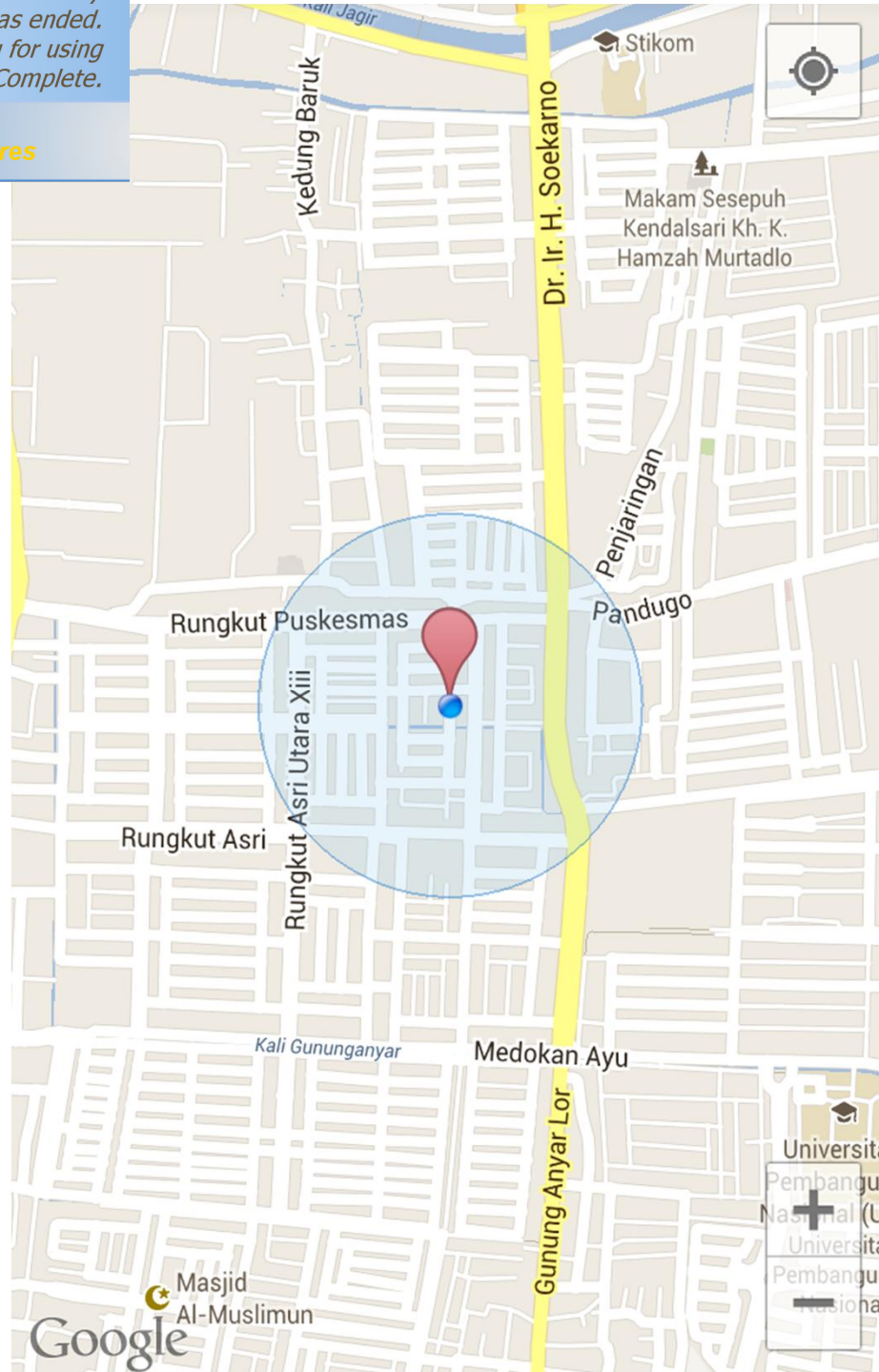


*Your complimentary
use period has ended.
Thank you for using
PDF Complete.*

[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)

Menampilkan secara spesifik
lokasi dimana kita berada saat ini


```
location() {  
    mMap.moveCamera(CameraUpdateFactory.newLatLng(myLocation));  
    mMap.setMyLocationEnabled(true);  
  
    // Get LocationManager object from System Service LOCATION_SERVICE  
    LocationManager locationManager = (LocationManager) getSystemService(LOCATION_SERVICE);  
  
    // Create a criteria object to retrieve provider  
    // a class indicating the application criteria for selecting  
    // a location provider. providers maybe ordered according to accuracy,  
    // power usage, ability to report altitude, speed, etc  
    Criteria criteria = new Criteria();  
  
    // Get the name of the best provider  
    String provider = locationManager.getBestProvider(criteria, true);  
  
    // Get my location insert into variabel mylocation  
    Location myLocation = locationManager.getLastKnownLocation(provider);  
  
    // to showing  
    // Get latitude of the current location  
    double latitude = myLocation.getLatitude();  
  
    // Get longitude of the current location  
    double longitude = myLocation.getLongitude();  
  
    // Create a LatLng object for the current location  
    LatLng latLng = new LatLng(latitude, longitude);  
  
    // Show the current location in Google Map  
    mMap.moveCamera(CameraUpdateFactory.newLatLng(latLng));  
  
    // Zoom in the Google Map  
    mMap.animateCamera(CameraUpdateFactory.zoomTo(10));  
}
```





*Your complimentary
use period has ended.
Thank you for using
PDF Complete.*

[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)

Menambahkan penanda (Marker)



*Your complimentary
use period has ended.
Thank you for using
PDF Complete.*

[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)

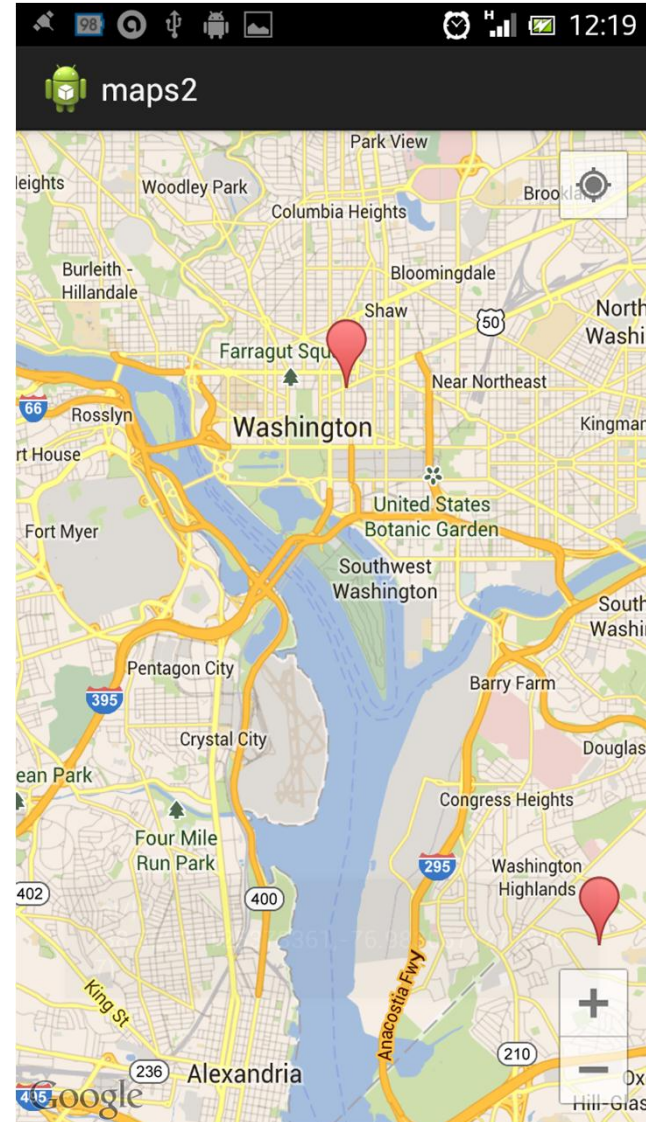
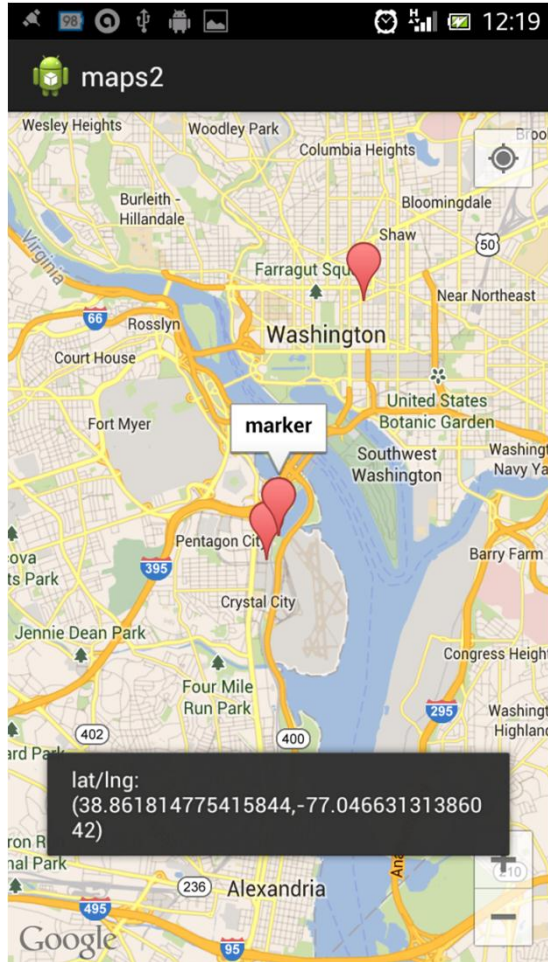
fungsi

” Untuk mengindikasikan tempat yang kita touch pada screen sehingga kita dapat menandai suatu tempat yang ingin kita beri tanda.



Your complimentary use period has ended.
Thank you for using PDF Complete.

[Click Here to upgrade to Unlimited Pages and Expanded Features](#)



GEOCODING

- “ Geocoding adalah sebuah cara untuk mengubah nama dari lokasi tertentu menjadi sebuah titik koordinat. Titik koordinat tersebut berupa longitude dan latitude.
- “ Untuk melakukan geocoding ini, kita membutuhkan kelas geocoder, dengan cara kita mengimportnya.

IMPORT

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

import android.content.Context;
import android.content.Intent;
import android.location.Address;
import android.location.Geocoder;
import android.os.AsyncTask;
import android.os.Bundle;
import android.support.v4.app.FragmentActivity;
import android.view.Menu;
import android.view.MenuItem;
import android.view.Window;
import android.widget.TextView;

import com.google.android.gms.maps.CameraUpdateFactory;
import com.google.android.gms.maps.GoogleMap;
import com.google.android.gms.maps.GoogleMap.OnMapClickListener;
import com.google.android.gms.maps.SupportMapFragment;
import com.google.android.gms.maps.model.LatLng;
import com.google.android.gms.maps.model.MarkerOptions;
```



Your complimentary
use period has ended.
Thank you for using
PDF Complete.

[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)

A screenshot of an Android phone's Google Maps application. The top status bar shows the time as 12:21 and various system icons. The app title bar reads 'maps3'. The main map area shows a red pin placed over Surabaya, with labels for Gresik, Teluk Lamong, and Sidoarjo. The Google logo is visible in the bottom left of the map area. On the right side of the map, there are zoom in (+) and zoom out (-) buttons. Below the map, the coordinates are displayed: 'LATITUDE : -7.289166' and 'LONGITUDE : 112.734398'. At the bottom, there is a search bar containing the text 'surabaya' and a 'GO' button to its right.



*Your complimentary
use period has ended.
Thank you for using
PDF Complete.*

[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)

Menampilkan nama lokasi
dengan cara menyentuh lokasi
tersebut (reverse geocoding)

” Setelah menampilkan Maps, Anda mungkin ingin mengetahui lintang dan bujur dari lokasi sesuai dengan posisi pada layar dengan hanya menyentuh screen-nya saja. karena dengan begitu anda dapat menentukan alamat lokasi, sebuah proses yang dikenal sebagai reverse geocoding. (yang nantinya akan dipelajari lebih lanjut)



Your complimentary
use period has ended.
Thank you for using
PDF Complete.

[Click Here to upgrade to
Unlimited Pages and Expanded Features](#)

A screenshot of a mobile map application. The top status bar shows the time 12:20, battery level, and signal strength. The app title is 'maps3'. The map displays a street view of Surabaya, Indonesia, with a red pin marking a location. A white callout box above the pin contains the text 'Raya Its, Surabaya, Indonesia'. The map shows several streets, including 'Mulyosari', 'Raya Its', and 'Jalan Kertajaya Indah'. The Google logo is visible in the bottom left corner of the map area. Below the map, the coordinates are displayed: 'LATITUDE : -7.277662272869719' and 'LONGITUDE : 112.7946399897337'.

maps3

Raya Its, Surabaya, Indonesia

Mulyosari

Raya Its

Jalan Kertajaya Indah

Google

Jl. Arief Rahman Hakim

LATITUDE : -7.277662272869719

LONGITUDE : 112.7946399897337