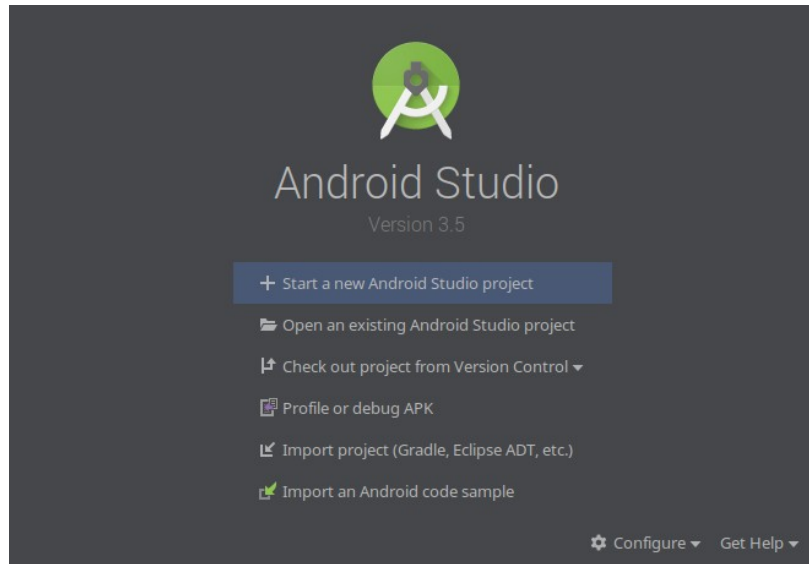


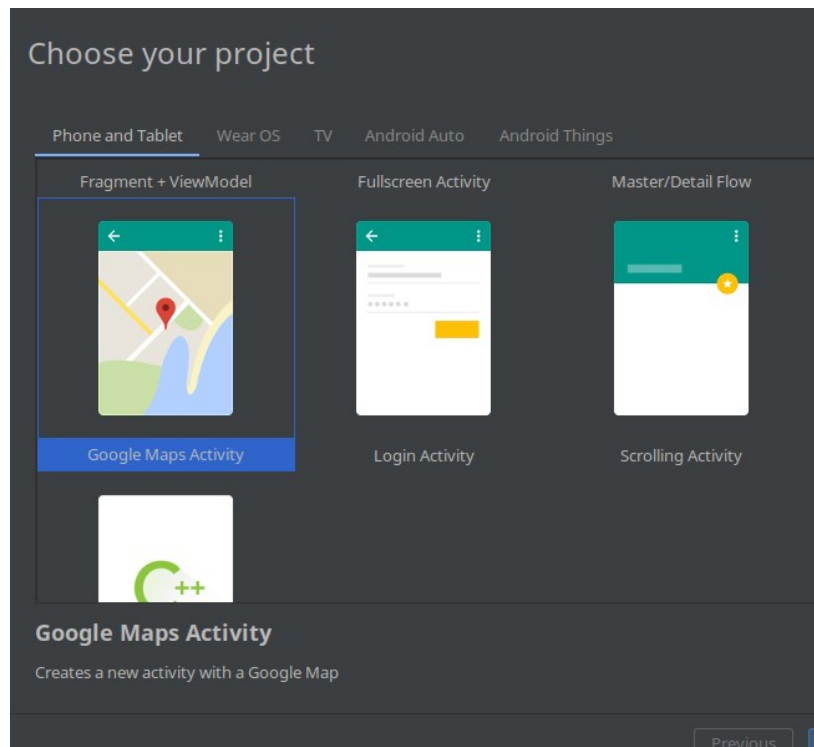
## Praktikum 8

### Google API Map

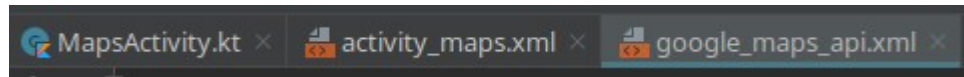
1. Buatlah proyek baru dengan Android Studio



2. Pilih Empty Activity untuk memulai aplikasi baru



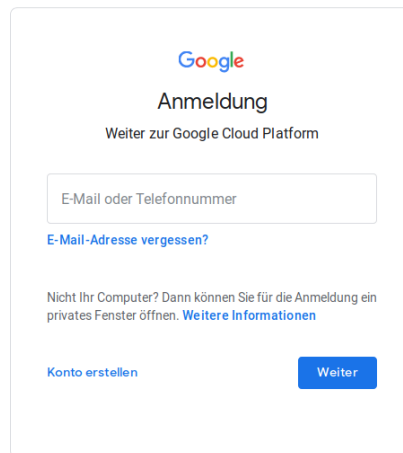
3. Biarkan Android Studio membangun file yang dibutuhkan, kemudian secara otomatis akan terbuka file MainActivity.kt dan google\_maps\_api.xml



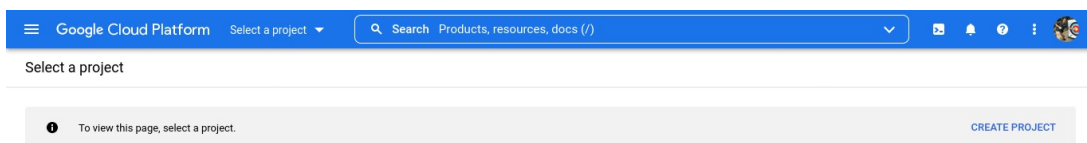
4. Buka google\_maps\_api.xml, maka akan terlihat garis seperti ini

```
<string name="google_maps_key" templateMergeStrategy="preserve" translatable="false">AF
</resources>
```

5. Buka link ini [Google Cloud Platform](https://console.cloud.google.com) (atau: <https://console.cloud.google.com>), lalu login menggunakan akun Google



6. Maka akan diarahkan ke Google Cloud Platform, klik **Create Project**



7. Kemudian ikuti langkah berikut untuk membuat projek

## 1. Projek Baru -> Click Create -> Tunggu Proses


New Project - Google Cloud Platform - Mozilla Firefox

https://console.cloud.google.com/projectcreate?previousPage=%2Fproj...

Your free trial is waiting: activate now to get \$300 credit to explore Google Cloud products [Learn more](#) DISMISS ACTIVATE

Google Cloud Platform

New Project

 You have 29 projects remaining in your quota. Request an increase or delete projects. [Learn more](#)  
[MANAGE QUOTAS](#)

Project name \*  
My Project 4894

Project ID: eighth-parity-257211. It cannot be changed later. [EDIT](#)

Organisation \*  
usm.ac.id

Select an organisation to attach it to a project. This selection can't be changed later.

Location \*  
usm.ac.id [BROWSE](#)

Parent organisation or folder

CREATE CANCEL

## 2. Welcome Cloud Console

Google Cloud Platform GoogleAPI

Search Products, resources, docs (/)

Welcome

You're working in GoogleAPI

Project number: 994815745585 Project ID: excellent-ion-353204

[Dashboard](#) [Recommendations](#)

Create a VM Run a query in BigQuery Create a GKE cluster Create a storage bucket

Quick access

APIs & Services IAM & Admin Billing Compute Engine

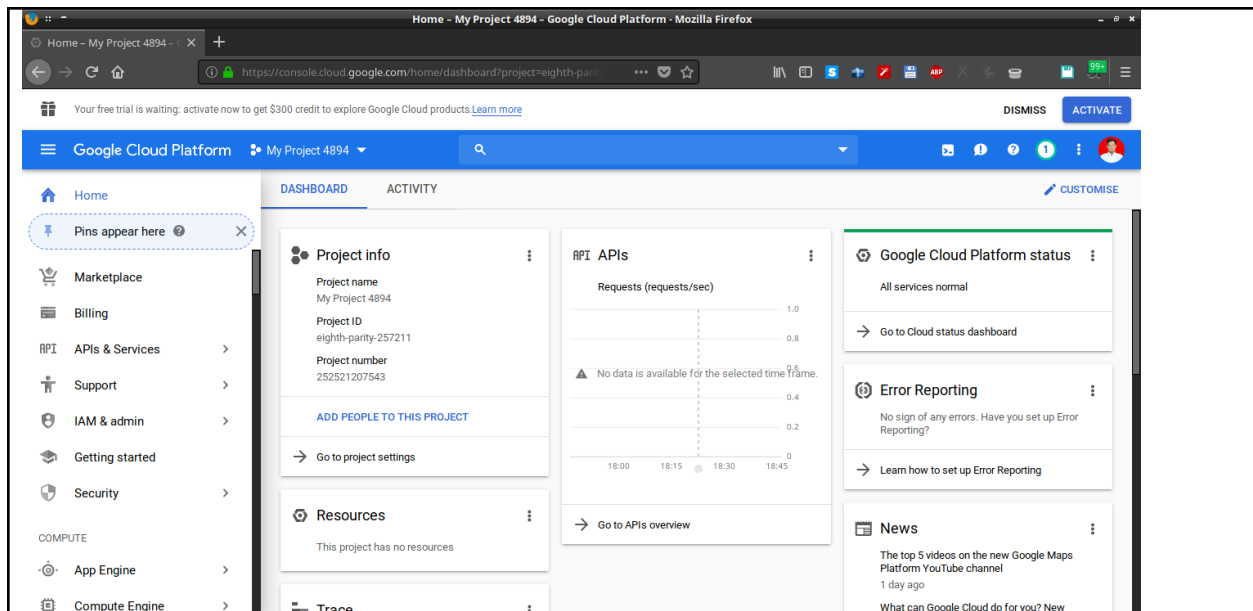
Privacy Policy Terms of Service

## 3. Quick Access ke APIs & Services (atau manual melalui menu Hamburger)

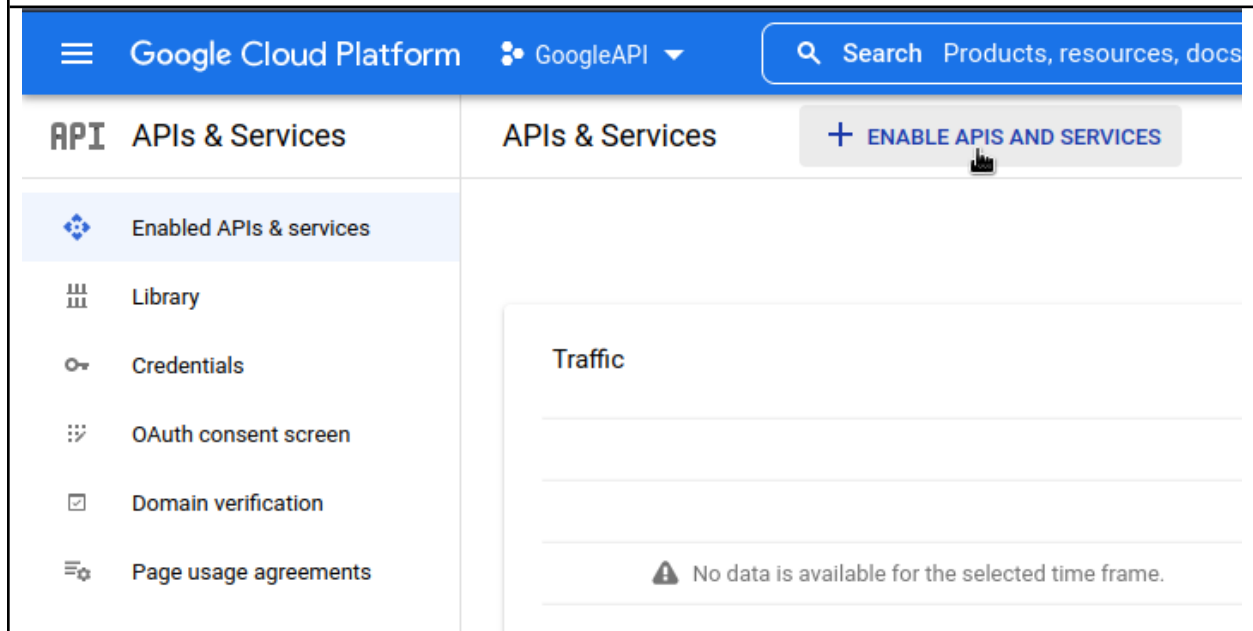
Quick access

APIs & Services IAM & Admin Billing Compute Engine

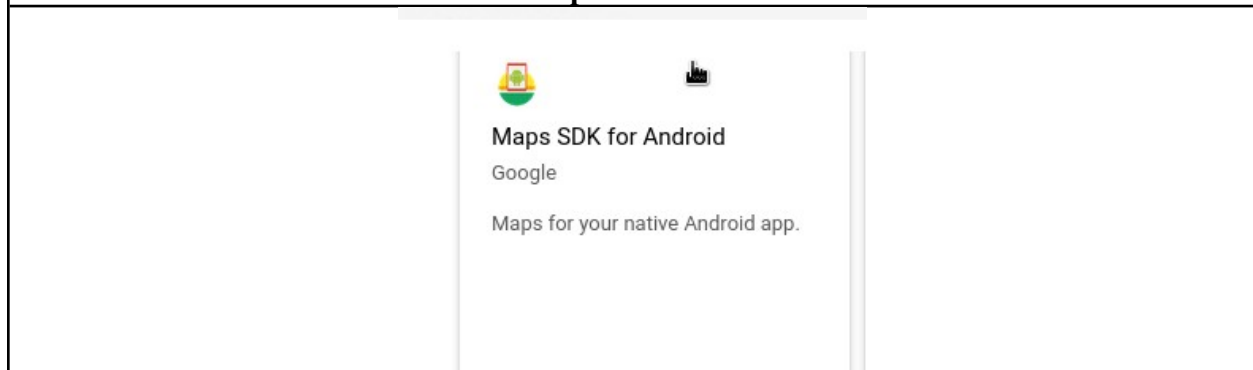
Cloud Storage BigQuery VPC network Kubernetes Engine




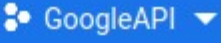
#### 4. Klik Enable APIS AND SERVICES





#### 5. Cari Maps SDK for Android



#### 6. Klik ENABLE. Tunggu dan Halaman akan berpindah

 Google Cloud Platform 





## Maps SDK for Android


Google


Maps for your native Android app.


ENABLE


Click to enable this API


#### 7. Klik Credentials, tunggu Loading



 Google Maps Platform


 Overview


 APIs


 Metrics


 Quotas

 Credentials 

 Support

 Solution Library

 Map Management

 Map Styles

### APIs

#### Enabled APIs

Select an API to view details. Figures are for the last 30 days.

API ↑

Maps SDK for Android

#### Additional APIs

Select an API to view details in Marketplace

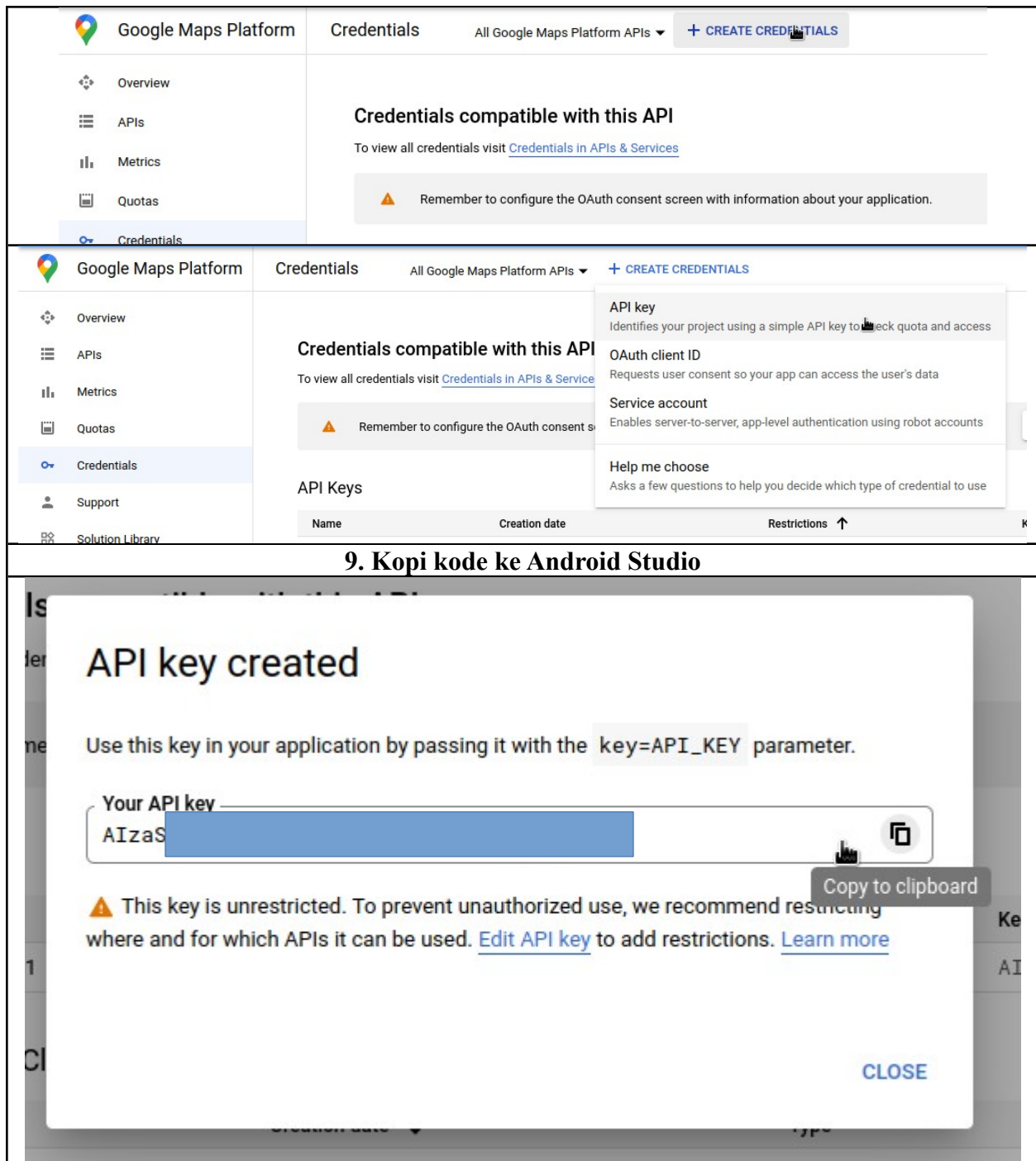
API

Directions API

Distance Matrix API

Maps Elevation API

#### 8. Klik Create Credentials. Pilih API Key



## 9. Kopi kode ke Android Studio

8. Kode yang didapatkan tadi kemudian di-paste kan ke google\_maps\_api.xml. Lihat Contoh:

```
<string name="google_maps_key" templateMergeStrategy="preserve" translatable="false">AIzaSyB5YYKALXlq2ameXc
</resources>
```

9. API sudah siap, kemudian kita sedikit melakukan perubahan Layout Android. Buka **activity\_maps.xml**

activity_maps.xml (Sebelum)	
<pre> &lt;fragment xmlns:android="http://schemas.android.com/apk/res/android"     xmlns:map="http://schemas.android.com/apk/res-auto"     xmlns:tools="http://schemas.android.com/tools"     android:id="@+id/map"     android:name="com.google.android.gms.maps.SupportMapFragment"     android:layout_width="match_parent"     android:layout_height="match_parent"     tools:context=".MapsActivity"/&gt; </pre>	
Sesudah	
<pre> &lt;fragment xmlns:android="http://schemas.android.com/apk/res/android"     xmlns:map="http://schemas.android.com/apk/res-auto"     xmlns:tools="http://schemas.android.com/tools"     android:id="@+id/map"     android:name="com.google.android.gms.maps.SupportMapFragment"     android:layout_width="match_parent"     android:layout_height="match_parent"     tools:context=".MapsActivity"&gt;  &lt;Button     android:id="@+id/btnUSM"     android:layout_width="wrap_content"     android:layout_height="wrap_content"     android:layout_gravity="bottom center right"     android:layout_marginRight="32dp"     android:layout_marginBottom="32dp"     android:text="Lihat USM" /&gt;  &lt;Button     android:id="@+id/btnTuguMuda"     android:layout_width="wrap_content"     android:layout_height="wrap_content"     android:layout_gravity="bottom center left"     android:layout_marginLeft="32dp"     android:layout_marginBottom="32dp"     android:text="Lihat Tugu Muda" /&gt;  &lt;Button     android:id="@+id/btnSatelit"     android:layout_width="wrap_content"     android:layout_height="wrap_content"     android:layout_gravity="center right top"     android:layout_marginTop="32dp"     android:layout_marginRight="32dp"     android:text="Mode Satelit" /&gt; </pre>	

```

<Button
    android:id="@+id/btnNormal"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center|top|left"
    android:layout_marginLeft="32dp"
    android:layout_marginTop="32dp"
    android:text="Mode Normal" />
</fragment>

```

10. Buka MainActivity.kt, dan ubah fungsi **onMapReady()**

MainActivity.kt -> onMapReady() (Asli)
<pre> override fun onMapReady(googleMap: GoogleMap) {     mMap = googleMap      // Add a marker in Sydney and move the camera     val sydney = LatLng(-34.0, 151.0)     mMap.addMarker(MarkerOptions().position(sydney).title("Marker in Sydney"))     mMap.moveCamera(CameraUpdateFactory.newLatLng(sydney)) } </pre>
Sesudah
<pre> override fun onMapReady(googleMap: GoogleMap) {     mMap = googleMap      // Add a marker in Sydney and move the camera     // Ganti Posisi GPS dengan -6.9821552,110.4501256     val usm = LatLng(-6.982265, 110.452180)     val tugumuda = LatLng(-6.984354,110.4094242)      mMap.addMarker(MarkerOptions().position(usm).title("Universitas Semarang"))     mMap.addMarker(MarkerOptions().position(tugumuda).title("Tugu Muda Semarang"))      val btnUSM = findViewById&lt;Button&gt;(R.id.btnUSM)     val btnTuguMuda = findViewById&lt;Button&gt;(R.id.btnTuguMuda)     val btnSatelit = findViewById&lt;Button&gt;(R.id.btnSatelit)     val btnNormal = findViewById&lt;Button&gt;(R.id.btnNormal)      btnUSM.setOnClickListener {         mMap.moveCamera(CameraUpdateFactory.newLatLngZoom(usm,16.5f))     }      btnTuguMuda.setOnClickListener { </pre>



```
mMap.moveCamera(CameraUpdateFactory.newLatLngZoom(tugumuda,17.5f))
}

btnSatelit.setOnClickListener {
    mMap.mapType = GoogleMap.MAP_TYPE_SATELLITE
}

btnNormal.setOnClickListener {
    mMap.mapType = GoogleMap.MAP_TYPE_NORMAL
}
}
```

11. Kompile Program dan Tes, jika Map tidak muncul maka kemungkinan API perlu dibuat baru