**Praktikum 8**

**Google API Map**

1. Buatlah proyek baru dengan Android Studio

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2. Pilih Empty Activity untuk memulai aplikasi baru

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

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

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

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

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7. Kemudian ikuti langkah berikut untuk membuat projek

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| **1. Projek Baru -> Click Create -> Tunggu Proses** |
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| **2. Welcome Cloud Console** |
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| **3. Quick Access ke APIs & Services (atau manual melalui menu Hamburger)** |
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| **4. Klik Enable APIS AND SERVICES** |
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| **5. Cari Maps SDK for Android** |
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| **6. Klik ENABLE. Tunggu dan Halaman akan berpindah** |
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| **7. Klik Credentials, tunggu Loading** |
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| **8. Klik Create Credentials. Pilih API Key** |
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| **9. Kopi kode ke Android Studio** |
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8. Kode yang didapatkan tadi kemudian di-paste kan ke google\_maps\_api.xml. Lihat Contoh:

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

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| **activity\_maps.xml (Sebelum)** |
| <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"**/>**  **Hati-hati** |
| **Sesudah** |
| <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">   <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" />  <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" />   <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" />   <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()**

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| MainActivity,kt -> onMapReady() (Asli) |
| 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))  } |
| Sesudah |
| 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<Button>(R.id.*btnUSM*)  val btnTuguMuda = findViewById<Button>(R.id.*btnTuguMuda*)  val btnSatelit = findViewById<Button>(R.id.*btnSatelit*)  val btnNormal = findViewById<Button>(R.id.*btnNormal*)  btnUSM.setOnClickListener **{** mMap.moveCamera(CameraUpdateFactory.newLatLngZoom(usm,16.5f))  **}**  btnTuguMuda.setOnClickListener **{** mMap.moveCamera(CameraUpdateFactory.newLatLngZoom(tugumuda,17.5f))  **}** btnSatelit.setOnClickListener **{** mMap.*mapType* = GoogleMap.*MAP\_TYPE\_SATELLITE* **}** btnNormal.setOnClickListener **{** mMap.*mapType* = GoogleMap.*MAP\_TYPE\_NORMAL* **}** } |
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11. Kompile Program dan Tes, jika Map tidak muncul maka kemungkinan API perlu dibuat baru