

Sistem Informasi Geografis

Persiapan:

- API Key Google Console
- Fitur Maps SDK Android dari Google Console

Langkah-langkahnya:

1. Buatlah project di <https://console.developers.google.com/>
2. Buat **API Key** di menu Credential

API APIs & Services

- Dashboard
- Library
- Credentials**
- OAuth consent screen
- Domain verification
- Page usage agreements

Credentials + CREATE CREDENTIALS DELETE

Create credentials to access your APIs

Remember to

API Keys

Name

No API keys to display

- API key**
Identifies your project using a simple API key to check quota and access
- OAuth client ID**
Requests user consent so your app can access the user's data
- Service account**
Enables server-to-server, app-level authentication using robot accounts
- Help me choose**
Asks a few questions to help you decide which type of credential to use


Setelah selesai akan muncul seperti ini

API key created

Use this key in your application by passing it with the `key=API_KEY` parameter.

Your API key

AI: 



 Restrict your key to prevent unauthorized use in production.


[CLOSE](#)


[RESTRICT KEY](#)


Dianjurkan untuk Restrict Key.


3. Cari **Maps SDK for Android**


 


 **Maps Embed API**


 **Maps JavaScript API**


 **Maps SDK for Android**


 **Maps SDK for iOS**


 **Maps Static API**

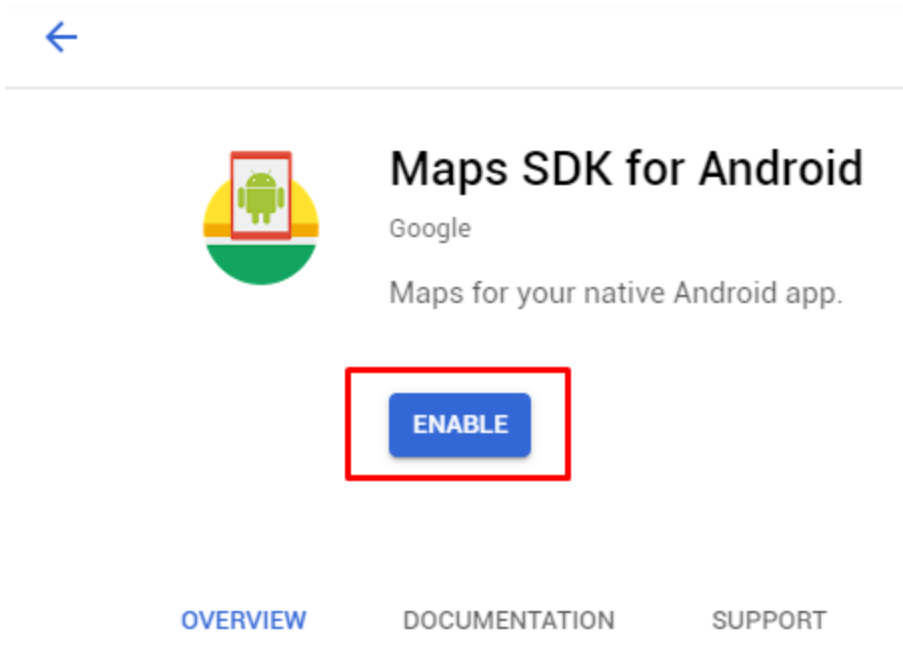
 **Maps Elevation API**

 **Census Bureau US Boundaries**
United States Census Bureau

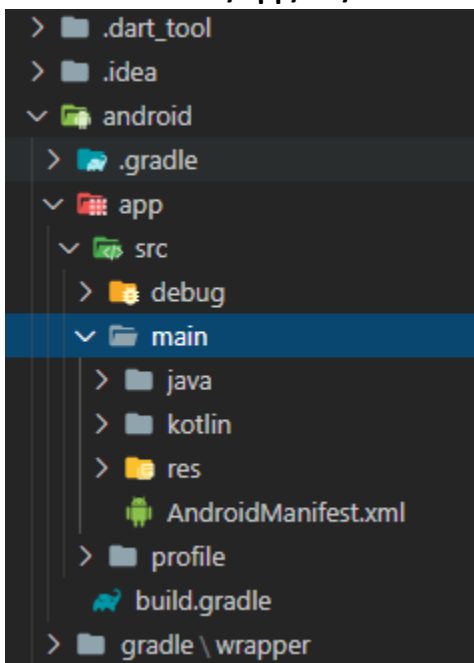
 **Directions API**

 **Distance Matrix API**

 **Geocoding API**



4. Berikutnya, buat project Flutter seperti biasa
5. Pada file **android/app/src/main** terdapat file **Android Manifest**



Tambahkan tag meta-data berikut

```
<application
  android:name="io.flutter.app.FlutterApplication"
  android:label="maps_flutter"
  android:icon="@mipmap/ic_launcher">
  <meta-data android:name="com.google.android.geo.API_KEY"
    android:value="YOUR_API_KEY_GOES_HERE"/>

  <activity
    android:name=".MainActivity"
    android:launchMode="singleTop"
```

6. Tambahkan **Google Maps Flutter** di `pubspec.yaml`

Berikut contoh program dengan menggunakan Maps SDK for Android



Code:

1. Main

```
lib > main.dart > ...
1  import 'package:flutter/material.dart';
2  import 'homescreen.dart';
3
4  void main() => runApp(MyApp());
5
6  class MyApp extends StatelessWidget {
7    @override
8    Widget build(BuildContext context) {
9      return MaterialApp(
10       home: HomeScreen(),
11     ); // MaterialApp
12   }
13 }
14
```

2. Homescreen

```
lib > homescreen.dart > ...
1  import 'package:flutter/material.dart';
2  import 'package:google_maps_flutter/google_maps_flutter.dart';
3  import 'container_info.dart';
4
5  class HomeScreen extends StatefulWidget {
6    @override
7    _HomeScreenState createState() => _HomeScreenState();
8  }
9
10 class _HomeScreenState extends State<HomeScreen> {
11   final Set<Marker> _markers = {};
12   final LatLng _currentPosition = LatLng(-6.185595, 106.778812);
13   final InfoWindow _infoWindow = InfoWindow(
14     title: "Place's Name",
15     snippet: "Place's Rate",
16   );
17
18   @override
19   void initState() {
20     _markers.add(
21       Marker(
22         markerId: MarkerId("-6.185595, 106.778812" /**Esa Unggul */),
23         position: _currentPosition,
24         icon: BitmapDescriptor.defaultMarker,
25         infoWindow: _infoWindow,
26       ), // Marker
27     );
28     super.initState();
29   }
30
31   @override
32   Widget build(BuildContext context) {
33     return Scaffold(
34       appBar: AppBar(
35         title: Text('Google Maps Flutter'),
36       ), // AppBar
37       body: Stack(
38         children: <Widget>[
39           GoogleMap(
```

```
lib > homescreen.dart > ...
39   GoogleMap(
40     onTap: (position) {
41       setState(() {
42         _markers.add(
43           Marker(
44             markerId:
45               MarkerId("${position.latitude}, ${position.longitude}"),
46             icon: BitmapDescriptor.defaultMarker,
47             position: position,
48             infoWindow: _infoWindow,
49           ), // Marker
50         );
51       });
52     },
53     mapType: MapType.normal,
54     initialCameraPosition: CameraPosition(
55       target: _currentPosition,
56       zoom: 14.0,
57     ), // CameraPosition
58     markers: _markers,
59   ), // GoogleMap
60   Align(
61     alignment: Alignment.bottomCenter,
62     child: Container(
63       height: 130.0,
64       child: ListView(
65         scrollDirection: Axis.horizontal,
66         padding: EdgeInsets.fromLTRB(
67           12.0,
68           15.0,
69           12.0,
70           15.0,
71         ), // EdgeInsets.fromLTRB
72       children: <Widget>[
73         ContainerInfo(),
74         SizedBox(width: 12.0),
75         ContainerInfo(),
76       ], // <Widget>[]

```

```

58         markers: _markers,
59       ), // GoogleMap
60     Align(
61       alignment: Alignment.bottomCenter,
62       child: Container(
63         height: 130.0,
64         child: ListView(
65           scrollDirection: Axis.horizontal,
66           padding: EdgeInsets.fromLTRB(
67             12.0,
68             15.0,
69             12.0,
70             15.0,
71           ), // EdgeInsets.fromLTRB
72           children: <Widget>[
73             ContainerInfo(),
74             SizedBox(width: 12.0),
75             ContainerInfo(),
76           ], // <Widget>[]
77         ), // ListView
78       ), // Container
79     ) // Align
80   ], // <Widget>[]
81 ), // Stack
82 ); // Scaffold
83 }
84 }

```

3. Container Info

```

lib > container_info.dart > ...
1 import 'package:flutter/material.dart';
2
3 class ContainerInfo extends StatelessWidget {
4   @override
5   Widget build(BuildContext context) {
6     return Container(
7       width: 200.0,
8       decoration: BoxDecoration(
9         boxShadow: [
10          BoxShadow(
11            color: Colors.black.withOpacity(.3),
12            offset: Offset(0, 5.0),
13            blurRadius: 5.0,
14          ) // BoxShadow
15        ],
16        borderRadius: BorderRadius.circular(15.0),
17        color: Colors.white,
18      ), // BoxDecoration
19      child: Padding(
20        padding: const EdgeInsets.all(8.0),
21        child: Align(
22          child: Row(
23            mainAxisAlignment: MainAxisAlignment.center,
24            children: <Widget>[
25              CircleAvatar(
26                radius: 30.0,
27              ), // CircleAvatar
28              SizedBox(width: 12.0),
29              Column(
30                crossAxisAlignment: CrossAxisAlignment.start,
31                mainAxisAlignment: MainAxisAlignment.center,
32                children: <Widget>[
33                  Text(
34                    "Place's Name",
35                    style: TextStyle(
36                      fontWeight: FontWeight.w600,
37                      fontSize: 16.0,
38                    ), // TextStyle
39                ), // Text
40              ], // <Widget>[]
41            ), // Column
42          ], // <Widget>[]
43        ), // Row
44      ), // Align
45    ), // Padding
46  ); // Container
47 }

```

```

20 padding: const EdgeInsets.all(8.0),
21 child: Align(
22   child: Row(
23     mainAxisAlignment: MainAxisAlignment.center,
24     children: <Widget>[
25       CircleAvatar(
26         radius: 30.0,
27       ), // CircleAvatar
28       SizedBox(width: 12.0),
29       Column(
30         crossAxisAlignment: CrossAxisAlignment.start,
31         mainAxisAlignment: MainAxisAlignment.center,
32         children: <Widget>[
33           Text(
34             "Place's Name",
35             style: TextStyle(
36               fontWeight: FontWeight.w600,
37               fontSize: 16.0,
38             ), // TextStyle
39           ), // Text
40           Text("Place's Rate")
41         ], // <Widget>[]
42       ) // Column
43     ], // <Widget>[]
44   ), // Row
45 ), // Align
46 ), // Padding
47 ); // Container
48 }
49 }

```