

# **Laporan Project Mata Kuliah Mobile Computing**



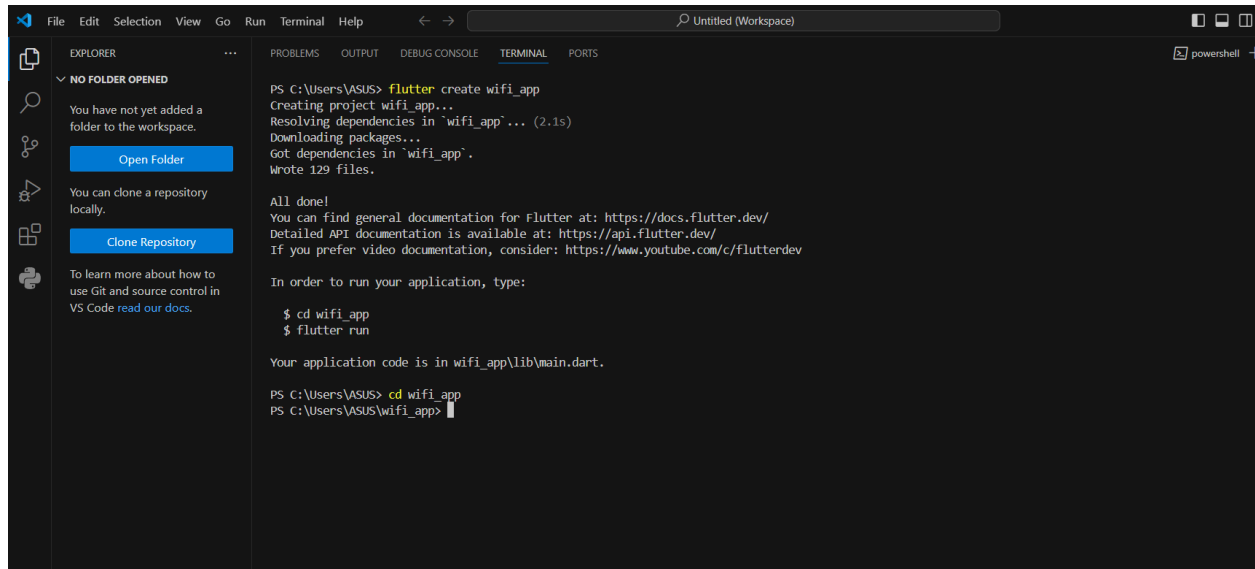
Disusun Oleh :

Asiwidia Simanjuntak (2207411030)

**TI-4A  
TEKNIK INFORMATIKA  
TEKNIK INFORMATIKA DAN KOMPUTER  
POLITEKNIK NEGERI JAKARTA  
2024**

# Flutter WIFI

## 1. Bagian wifi:



```
File Edit Selection View Go Run Terminal Help < -> Untitled (Workspace)
EXPLORER NO FOLDER OPENED
You have not yet added a folder to the workspace.
Open Folder
You can clone a repository locally.
Clone Repository
To learn more about how to use Git and source control in VS Code read our docs.
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\ASUS> flutter create wifi_app
Creating project wifi_app...
Resolving dependencies in 'wifi_app'... (2.1s)
Downloading packages...
Got dependencies in 'wifi_app'.
Wrote 129 files.

All done!
You can find general documentation for Flutter at: https://docs.flutter.dev/
Detailed API documentation is available at: https://api.flutter.dev/
If you prefer video documentation, consider: https://www.youtube.com/c/flutterdev

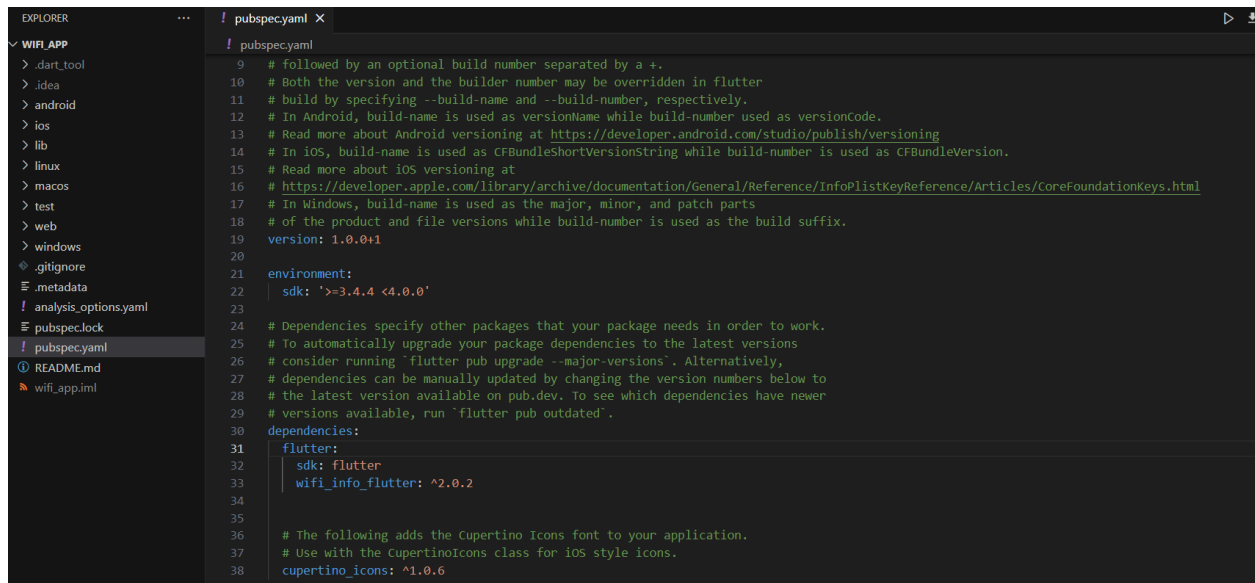
In order to run your application, type:

$ cd wifi_app
$ flutter run

Your application code is in wifi_app\lib\main.dart.

PS C:\Users\ASUS> cd wifi_app
PS C:\Users\ASUS>wifi_app>
```

Setelah berhasil buka file - new file - ke folder C - users - user dan cari wifi\_app dan klik open folder.

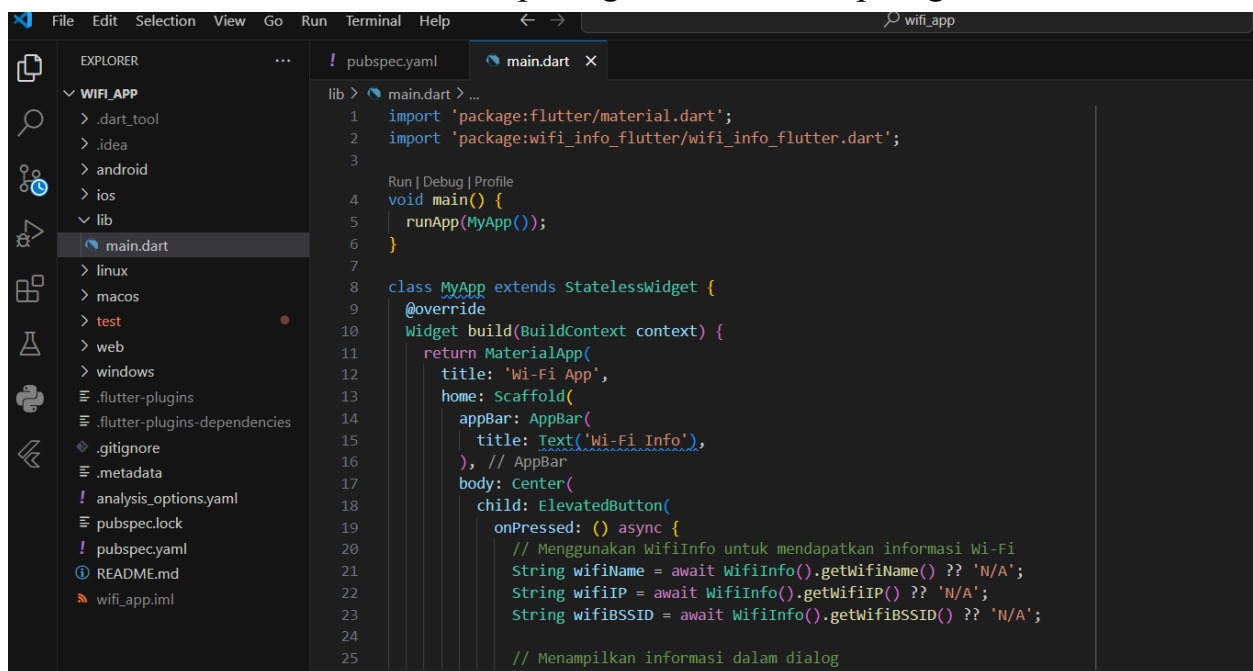


```
EXPLORER WIFI_APP
> dart_tool
> idea
> android
> ios
> lib
> linux
> macos
> test
> web
> windows
> .gitignore
! .metadata
! analysis_options.yaml
! pubspec.lock
! pubspec.yaml
! README.md
wifi_app.iml
! pubspec.yaml
9 # followed by an optional build number separated by a +.
10 # Both the version and the builder number may be overridden in flutter
11 # build by specifying --build-name and --build-number, respectively.
12 # In Android, build-name is used as versionName while build-number used as versionCode.
13 # Read more about Android versioning at https://developer.android.com/studio/publish/versioning
14 # In iOS, build-name is used as CFBundleShortVersionString while build-number is used as CFBundleVersion.
15 # Read more about iOS versioning at
16 # https://developer.apple.com/library/archive/documentation/General/Reference/InfoPlistKeyReference/Articles/CoreFoundationKeys.html
17 # In Windows, build-name is used as the major, minor, and patch parts
18 # of the product and file versions while build-number is used as the build suffix.
19 version: 1.0.0+1
20
21 environment:
22   sdk: '>=3.4.4 <4.0.0'
23
24 # Dependencies specify other packages that your package needs in order to work.
25 # To automatically upgrade your package dependencies to the latest versions
26 # consider running 'flutter pub upgrade --major-versions'. Alternatively,
27 # dependencies can be manually updated by changing the version numbers below to
28 # the latest version available on pub.dev. To see which dependencies have newer
29 # versions available, run 'flutter pub outdated'.
30 dependencies:
31   flutter:
32     sdk: flutter
33     wifi_info_flutter: ^2.0.2
34
35
36 # The following adds the Cupertino Icons font to your application.
37 # Use with the CupertinoIcons class for iOS style icons.
38 cupertino_icons: ^1.0.6
39
```

Setelah terbuka pilih file pubspec.yaml dan masukkan “wifi\_info\_flutter: ^2.0.2 dan ctrl + s untuk menyimpan.

```
PS C:\Users\ASUS\wifi_app> flutter pub get
Resolving dependencies...
Downloading packages...
  collection 1.18.0 (1.19.0 available)
  flutter_lints 3.0.2 (4.0.0 available)
  leak_tracker 10.0.4 (10.0.5 available)
  leak_tracker_flutter_testing 3.0.3 (3.0.5 available)
  lints 3.0.0 (4.0.0 available)
  material_color_utilities 0.8.0 (0.12.0 available)
  meta 1.12.0 (1.15.0 available)
  string_scanner 1.2.0 (1.3.0 available)
  test_api 0.7.0 (0.7.3 available)
  vm_service 14.2.1 (14.2.4 available)
  wifi_info_flutter 2.0.2 (discontinued)
Got dependencies!
1 package is discontinued.
10 packages have newer versions incompatible with dependency constraints.
Try `flutter pub outdated` for more information.
PS C:\Users\ASUS\wifi_app>
```

Lalu kembali ke terminal dan seperti gambar “flutter pub get”



```
lib > main.dart > ...
1 import 'package:flutter/material.dart';
2 import 'package:wifi_info_flutter/wifi_info_flutter.dart';
3
4 void main() {
5   runApp(MyApp());
6 }
7
8 class MyApp extends StatelessWidget {
9   @override
10  Widget build(BuildContext context) {
11    return MaterialApp(
12      title: 'Wi-Fi App',
13      home: Scaffold(
14        appBar: AppBar(
15          title: Text('Wi-Fi Info'),
16        ), // AppBar
17        body: Center(
18          child: ElevatedButton(
19            onPressed: () async {
20              // Menggunakan WifiInfo untuk mendapatkan informasi Wi-Fi
21              String wifiName = await WifiInfo().getWifiName() ?? 'N/A';
22              String wifiIP = await WifiInfo().getWifiIP() ?? 'N/A';
23              String wifiBSSID = await WifiInfo().getWifiBSSID() ?? 'N/A';
24              // Menampilkan informasi dalam dialog
25            },
26          ),
27        ),
28      ),
29    );
30  }
31}
```

```
> ios
  ✓ lib
    main.dart
  > linux
  > macos
  > test
  > web
  > windows
  .flutter-plugins
  .flutter-plugins-dependencies
  .gitignore
  .metadata
  ! analysis_options.yaml
  pubspec.lock
  ! pubspec.yaml
  README.md
  wifi_app.iml

vm_service 14.2.1 (14.2.4 available)
wifi_info_flutter 2.0.2 (discontinued)
Got dependencies!
1 package is discontinued.
10 packages have newer versions incompatible with dependency constraints.
Try `flutter pub outdated` for more information.
PS C:\Users\ASUS\wifi_app> flutter run
Connected devices:
Windows (desktop) • windows • windows-x64 • Microsoft Windows [Version 10.0.22631.3880]
Chrome (web) • chrome • web-javascript • Google Chrome 126.0.6478.183
Edge (web) • edge • web-javascript • Microsoft Edge 126.0.2592.113
[1]: Windows (windows)
[2]: Chrome (chrome)
[3]: Edge (edge)
Please choose one (or "q" to quit): 2
Launching lib\main.dart on Chrome in debug mode...
Waiting for connection from debug service on Chrome...
```

```
File Edit Selection View Go Run Terminal Help
wifi_app

EXPLORER
  WIFI_APP
    .dart_tool
    .idea
    > android
    > build
    > ios
    ✓ lib
      main.dart
      > linux
      > macos
      > test
      > web
      > windows
      .flutter-plugins
      .flutter-plugins-dependencies
      .gitignore
      .metadata
      ! analysis_options.yaml
      pubspec.lock
      ! pubspec.yaml
      README.md
      wifi_app.iml

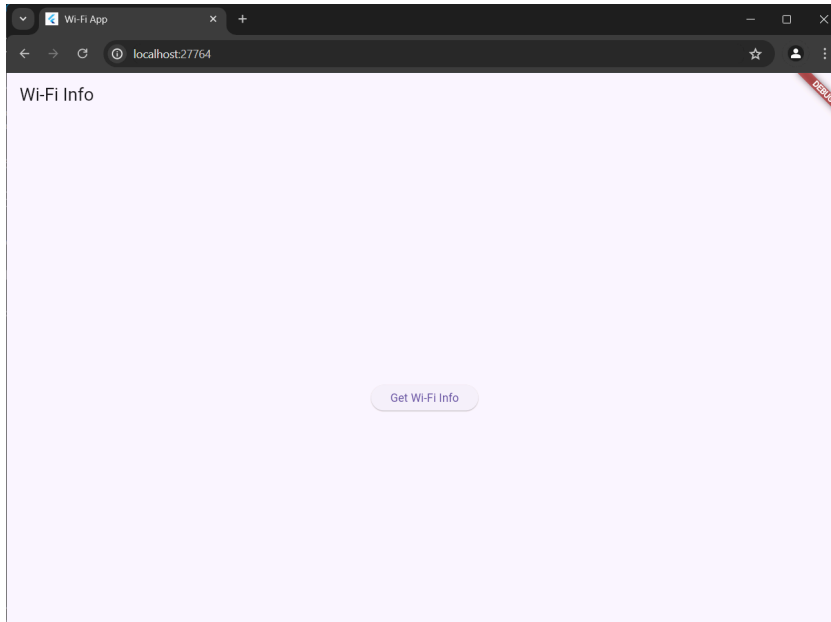
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
material_color_utilities 0.8.0 (0.12.0 available)
meta 1.12.0 (1.15.0 available)
string_scanner 1.2.0 (1.3.0 available)
test_api 0.7.0 (0.7.3 available)
vm_service 14.2.1 (14.2.4 available)
wifi_info_flutter 2.0.2 (discontinued)
Got dependencies!
1 package is discontinued.
10 packages have newer versions incompatible with dependency constraints.
Try `flutter pub outdated` for more information.
PS C:\Users\ASUS\wifi_app> flutter run
Connected devices:
Windows (desktop) • windows • windows-x64 • Microsoft Windows [Version 10.0.22631.3880]
Chrome (web) • chrome • web-javascript • Google Chrome 126.0.6478.183
Edge (web) • edge • web-javascript • Microsoft Edge 126.0.2592.113
[1]: Windows (windows)
[2]: Chrome (chrome)
[3]: Edge (edge)
Please choose one (or "q" to quit): 2
Launching lib\main.dart on Chrome in debug mode...
Waiting for connection from debug service on Chrome... 35.2s
This app is linked to the debug service: ws://127.0.0.1:27832/6kugZhmNfPg=/ws
Debug service listening on ws://127.0.0.1:27832/6kugZhmNfPg=/ws

To hot restart changes while running, press "r" or "R".
For a more detailed help message, press "h". To quit, press "q".

A Dart VM Service on Chrome is available at: http://127.0.0.1:27832/6kugZhmNfPg-.
The Flutter DevTools debugger and profiler on Chrome is available at: http://127.0.0.1:9101?uri=http://127.0.0.1:27832/6kugZhmNfPg-
Error
dart-sdk/lib/_internal/js_dev_runtime/private/ddc_runtime/errors.dart 296:3 throw_
packages/flutter/src/services/platform_channel.dart 332:7 _invokeMethod
dart-sdk/lib/_internal/js_dev_runtime/patch/async_patch.dart 45:50 <fn>
dart-sdk/lib/async/zone.dart 1661:54 runUnary
dart-sdk/lib/async/future_impl.dart 163:18 handleValue
dart-sdk/lib/async/future_impl.dart 847:44 handleValueCallback
dart-sdk/lib/async/future_impl.dart 876:13 _propagateToListeners
dart-sdk/lib/async/future_impl.dart 652:5 [_completeWithValue]
dart-sdk/lib/async/future_impl.dart 722:7 callback
dart-sdk/lib/async/schedule_microtask.dart 40:11 _microtaskLoop
dart-sdk/lib/async/schedule_microtask.dart 49:5 startMicrotaskLoop
```

Lalu setelah itu ketik lagi “terminal run” dan enter lagi.

Hasil output:



## 2. Bagian Bluetooth :

```
PS C:\Users\ASUS> flutter create bluetooth_app
Creating project bluetooth_app...
Resolving dependencies in `bluetooth_app`... (1.9s)
Downloading packages...
Got dependencies in `bluetooth_app`.
Wrote 129 files.

All done!
You can find general documentation for Flutter at: https://docs.flutter.dev/
Detailed API documentation is available at: https://api.flutter.dev/
If you prefer video documentation, consider: https://www.youtube.com/c/flutterdev

In order to run your application, type:

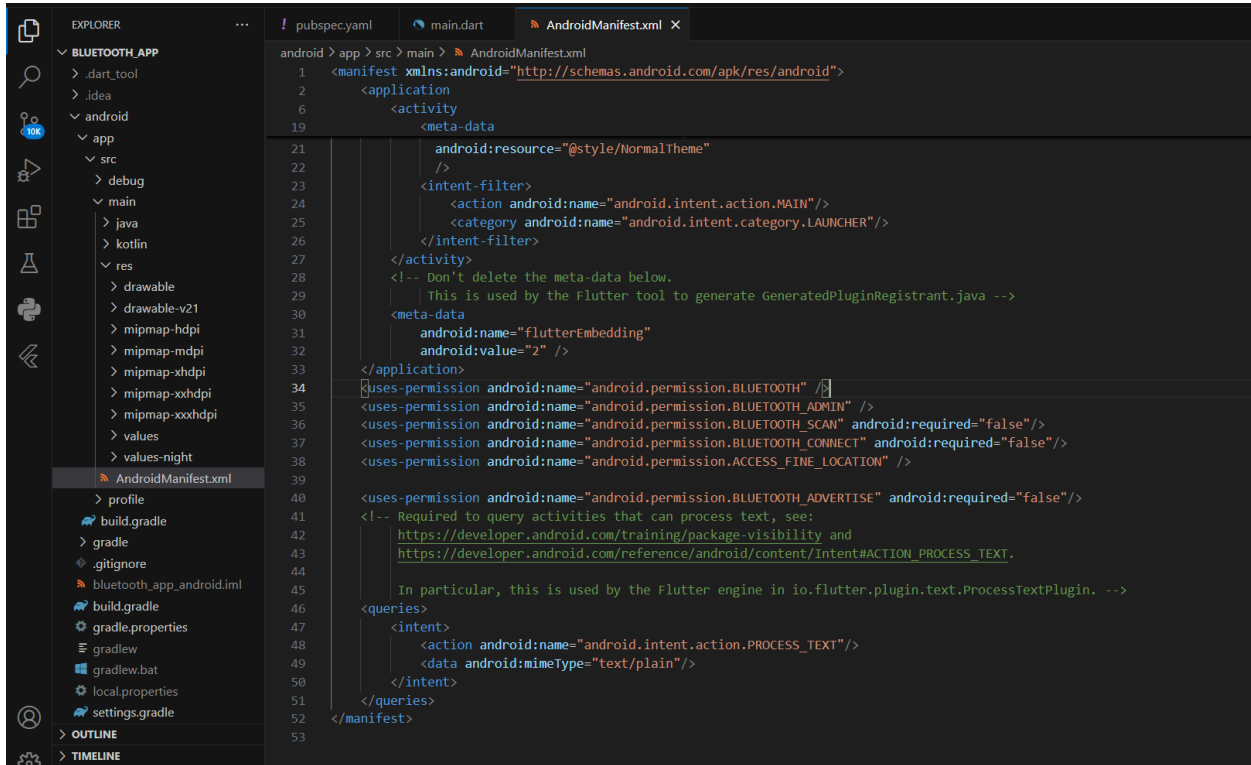
$ cd bluetooth_app
$ flutter run

Your application code is in bluetooth_app\lib\main.dart.

PS C:\Users\ASUS> cd bluetooth_app
PS C:\Users\ASUS\bluetooth_app> 
```

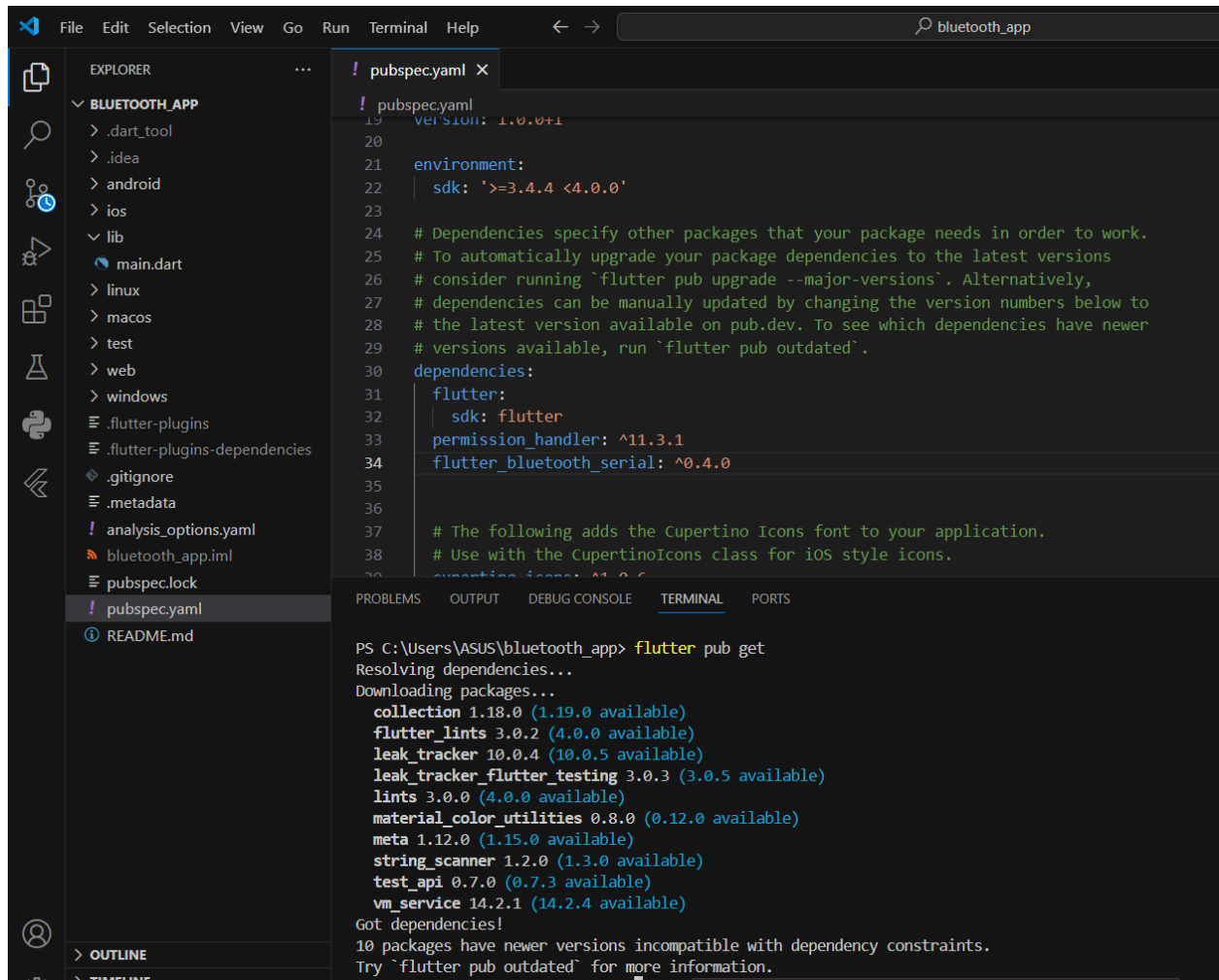
Untuk bagian bluetooth langkah menginstallnya juga sama seperti wifi. File - new windows - terminal - new terminal - lalu ketik “flutter create bluetooth\_app” dan enter.

Selanjutnya ketik “cd bluetooth\_app” dan enter. Jika sudah buka file C-USERS-USER- dan cari bluetooth\_app”

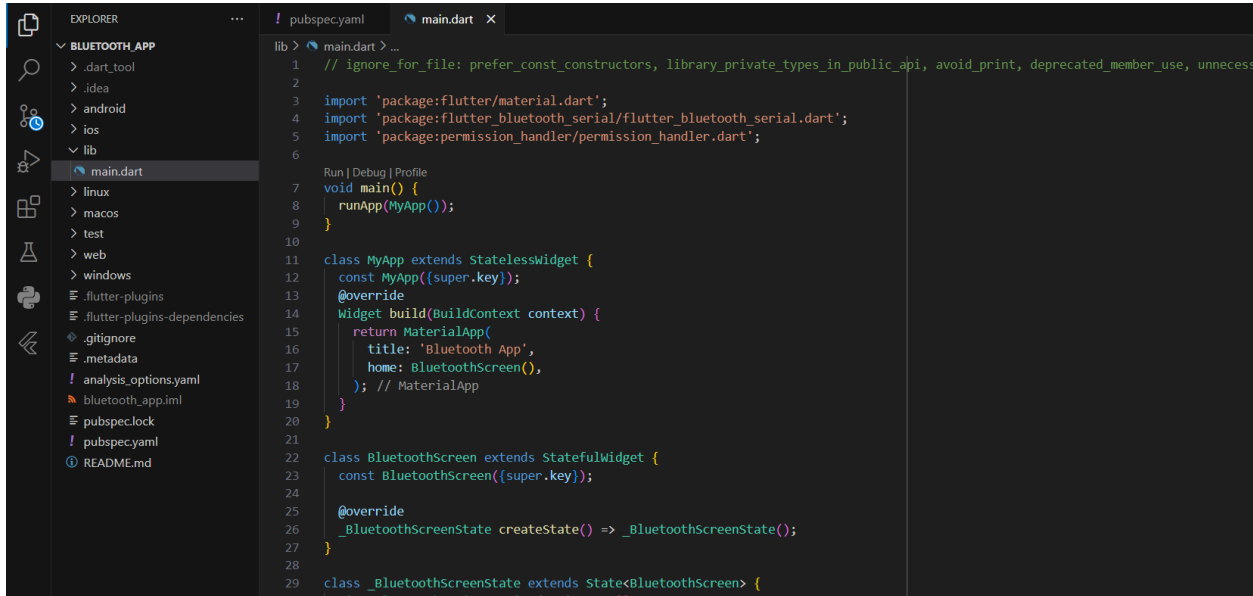


```
1 <manifest xmlns:android="http://schemas.android.com/apk/res/android">
2   <application
3     <activity
4       <meta-data
5         android:resource="@style/NormalTheme"
6       />
7     <intent-filter>
8       <action android:name="android.intent.action.MAIN"/>
9       <category android:name="android.intent.category.LAUNCHER"/>
10    </intent-filter>
11  </activity>
12  <!-- Don't delete the meta-data below.
13       This is used by the Flutter tool to generate GeneratedPluginRegistrant.java -->
14  <meta-data
15    android:name="flutterEmbedding"
16    android:value="2" />
17 </application>
18
19 <uses-permission android:name="android.permission.BLUETOOTH" />
20 <uses-permission android:name="android.permission.BLUETOOTH_ADMIN" />
21 <uses-permission android:name="android.permission.BLUETOOTH_SCAN" android:required="false"/>
22 <uses-permission android:name="android.permission.BLUETOOTH_CONNECT" android:required="false"/>
23 <uses-permission android:name="android.permission.ACCESS_FINE_LOCATION" />
24
25 <!-- Required to query activities that can process text, see:
26      https://developer.android.com/training/package-visibility and
27      https://developer.android.com/reference/android/content/Intent#ACTION_PROCESS_TEXT.
28      In particular, this is used by the Flutter engine in io.flutter.plugin.text.ProcessTextPlugin. -->
29 <queries>
30   <intent>
31     <action android:name="android.intent.action.PROCESS_TEXT"/>
32     <data android:mimeType="text/plain"/>
33   </intent>
34 </queries>
35 </manifest>
```

Pada file pubspec.yaml tambahkan code yang ada di line 33-34 dan sejajarkan dengan dependencies.



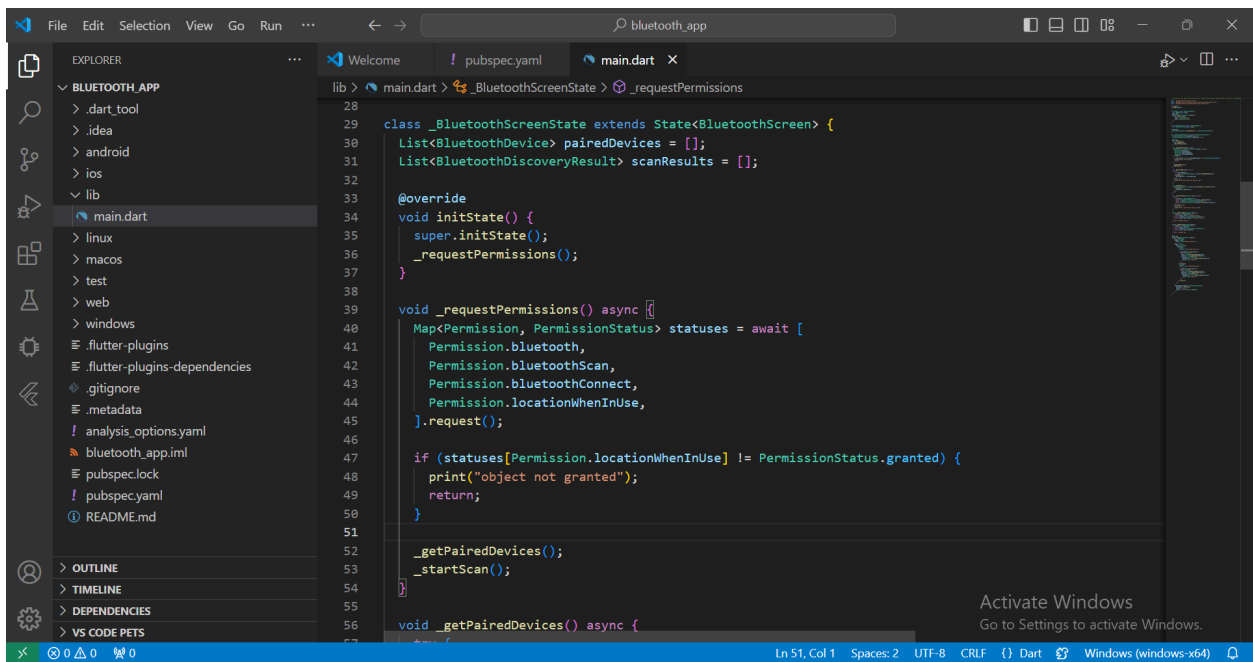
Klik tanda tiga lagi - terminal - new terminal lalu ketik “flutter pub get” dan enter.



The screenshot shows the VS Code editor with the Explorer sidebar on the left. The 'lib' folder is expanded, and 'main.dart' is selected. The code in 'main.dart' is as follows:

```
1 // ignore_for_file: prefer_const_constructors, library_private_types_in_public_api, avoid_print, deprecated_member_use, unneces
2
3 import 'package:flutter/material.dart';
4 import 'package:flutter_bluetooth_serial/flutter_bluetooth_serial.dart';
5 import 'package:permission_handler/permission_handler.dart';
6
7 void main() {
8   runApp(MyApp());
9 }
10
11 class MyApp extends StatelessWidget {
12   const MyApp({super.key});
13   @override
14   Widget build(BuildContext context) {
15     return MaterialApp(
16       title: 'Bluetooth App',
17       home: BluetoothScreen(),
18     ); // MaterialApp
19   }
20 }
21
22 class BluetoothScreen extends StatefulWidget {
23   const BluetoothScreen({super.key});
24
25   @override
26   _BluetoothScreenState createState() => _BluetoothScreenState();
27 }
28
29 class _BluetoothScreenState extends State<BluetoothScreen> {
```

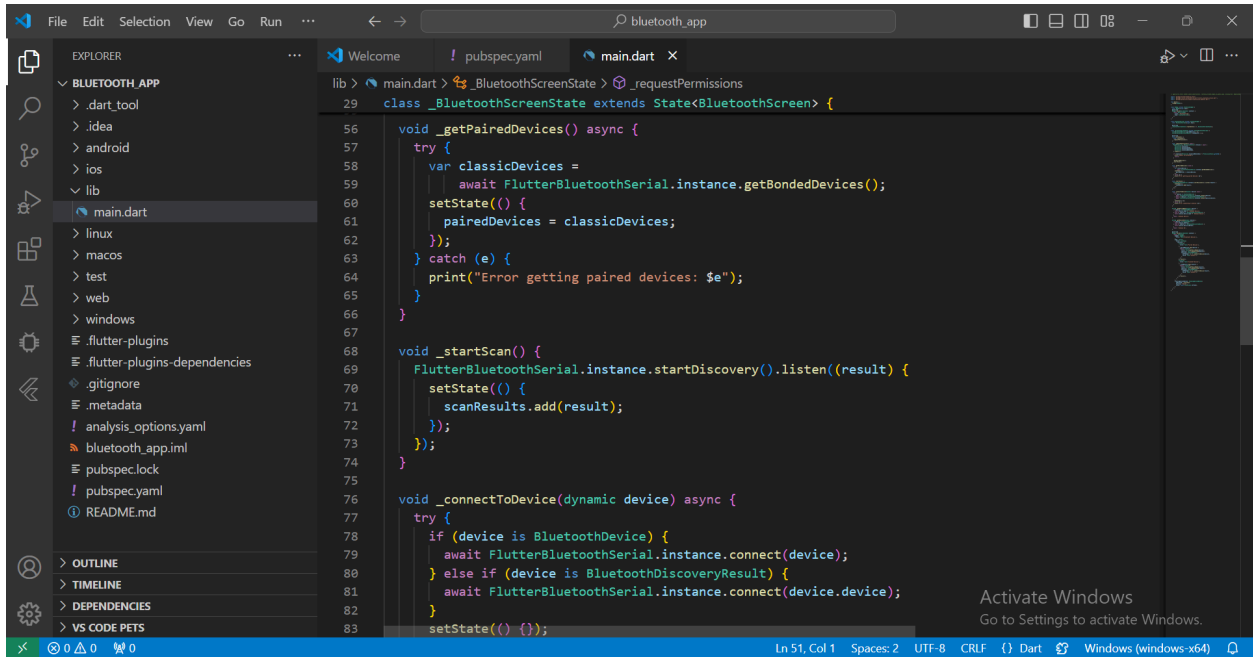
Pada folder lib - main.dart lalu masukkan code yang tertera digambar. Lalu ctrl + S



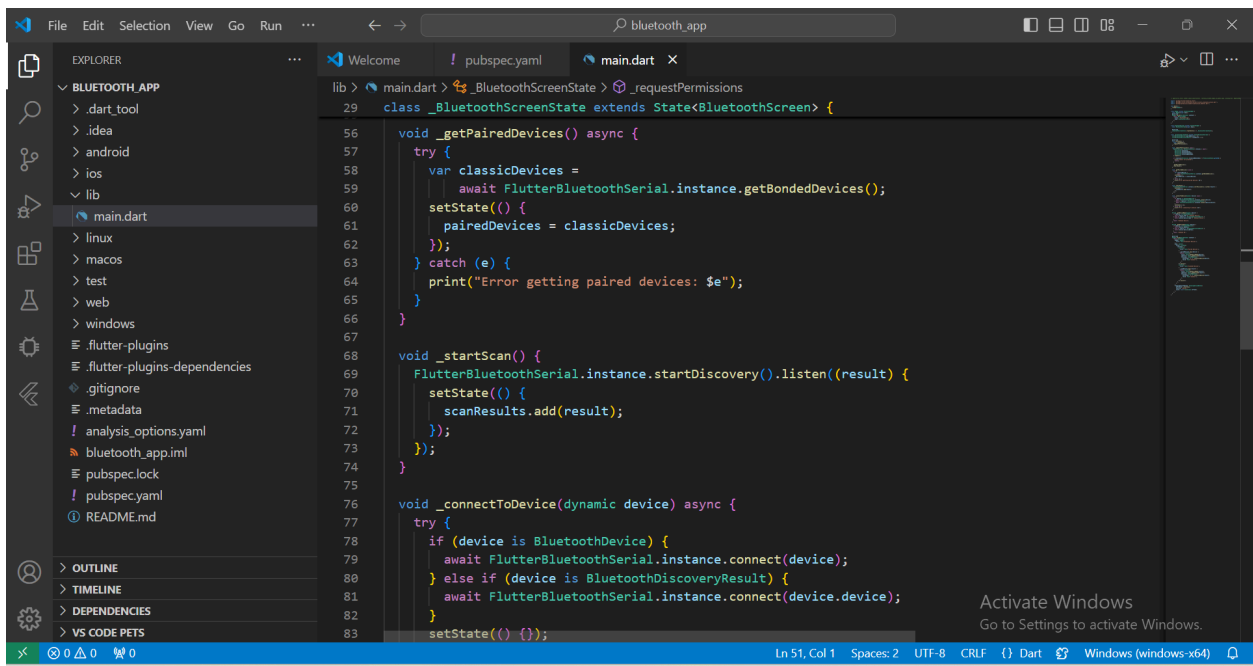
The screenshot shows the VS Code editor with the Explorer sidebar on the left. The 'lib' folder is expanded, and 'main.dart' is selected. The code in 'main.dart' is as follows:

```
28
29 class _BluetoothScreenState extends State<BluetoothScreen> {
30   List<BluetoothDevice> pairedDevices = [];
31   List<BluetoothDiscoveryResult> scanResults = [];
32
33   @override
34   void initState() {
35     super.initState();
36     _requestPermissions();
37   }
38
39   void _requestPermissions() async {
40     Map<Permission, PermissionStatus> statuses = await [
41       Permission.bluetooth,
42       Permission.bluetoothScan,
43       Permission.bluetoothConnect,
44       Permission.locationWhenInUse,
45     ].request();
46
47     if (statuses[Permission.locationWhenInUse] != PermissionStatus.granted) {
48       print("object not granted");
49       return;
50     }
51
52     _getPairedDevices();
53     _startScan();
54   }
55
56   void _getPairedDevices() async {
```





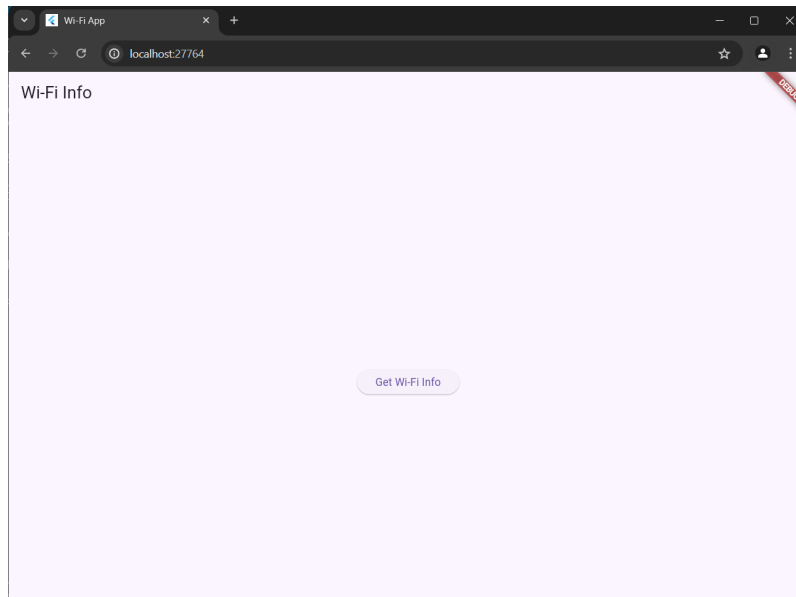
```
lib > main.dart > _BluetoothScreenState > _requestPermissions
29 class _BluetoothScreenState extends State<BluetoothScreen> {
56 void _getPairedDevices() async {
57   try {
58     var classicDevices =
59       await FlutterBluetoothSerial.instance.getBondedDevices();
60     setState(() {
61       pairedDevices = classicDevices;
62     });
63   } catch (e) {
64     print("Error getting paired devices: $e");
65   }
66 }
67
68 void _startScan() {
69   FlutterBluetoothSerial.instance.startDiscovery().listen((result) {
70     setState(() {
71       scanResults.add(result);
72     });
73   });
74 }
75
76 void _connectToDevice(dynamic device) async {
77   try {
78     if (device is BluetoothDevice) {
79       await FlutterBluetoothSerial.instance.connect(device);
80     } else if (device is BluetoothDiscoveryResult) {
81       await FlutterBluetoothSerial.instance.connect(device.device);
82     }
83     setState(() {});
84   } catch (e) {
85     print("Error connecting to device: $e");
86   }
87 }
```



```
lib > main.dart > _BluetoothScreenState > _requestPermissions
29 class _BluetoothScreenState extends State<BluetoothScreen> {
56 void _getPairedDevices() async {
57   try {
58     var classicDevices =
59       await FlutterBluetoothSerial.instance.getBondedDevices();
60     setState(() {
61       pairedDevices = classicDevices;
62     });
63   } catch (e) {
64     print("Error getting paired devices: $e");
65   }
66 }
67
68 void _startScan() {
69   FlutterBluetoothSerial.instance.startDiscovery().listen((result) {
70     setState(() {
71       scanResults.add(result);
72     });
73   });
74 }
75
76 void _connectToDevice(dynamic device) async {
77   try {
78     if (device is BluetoothDevice) {
79       await FlutterBluetoothSerial.instance.connect(device);
80     } else if (device is BluetoothDiscoveryResult) {
81       await FlutterBluetoothSerial.instance.connect(device.device);
82     }
83     setState(() {});
84   } catch (e) {
85     print("Error connecting to device: $e");
86   }
87 }
```

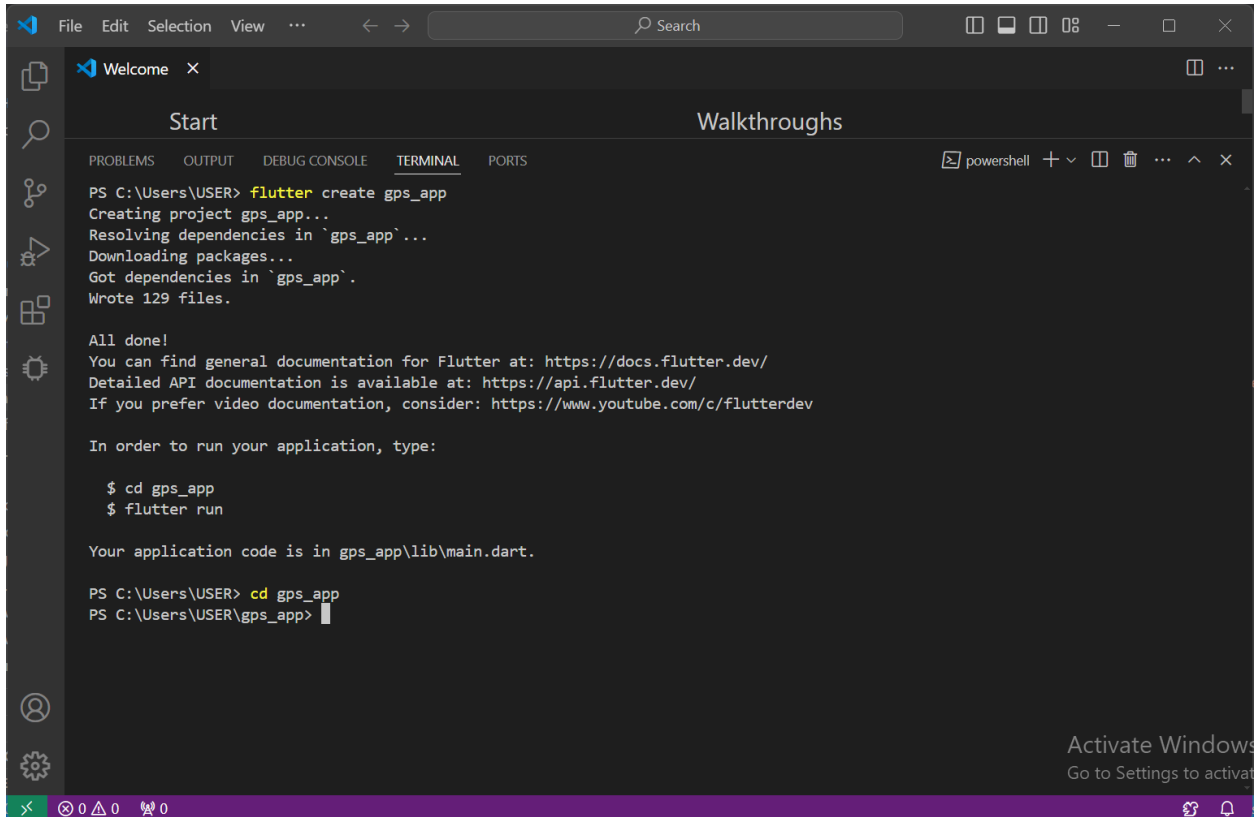
Jika sudah selesai lakukan langkah-langkah seperti wifi\_app. Klik tanda tiga diatas - terminal - new terminal - dan ketik “flutter run” lalu enter

Hasil Output:

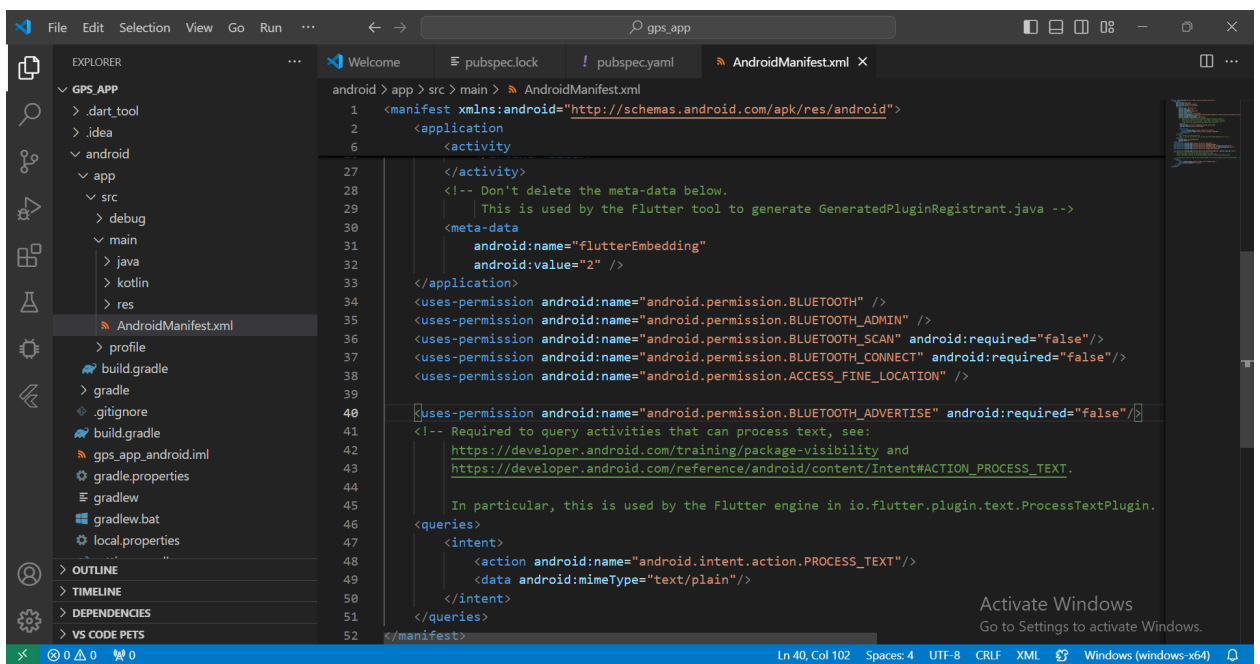


Note: ketika ingin melakukan “Run” harus menyalakan bluetooth yang ada pada laptop. Jika perangkat laptop pernah terhubung pada hp atau perangkat lain selain earphone akan ada tulisannya pada hasil output.

### 3. Bagian Gps



Pilih tanda titik tiga diatas - terminal - new terminal - ketik “flutter create gps\_app” lalu enter. Kemudian dibawahnya Ketik lagi “cd gps\_app” lalu enter



**Klik android - app - src - main - androidManifest.xml dibagian bawah application masukkan code berikut ini.**

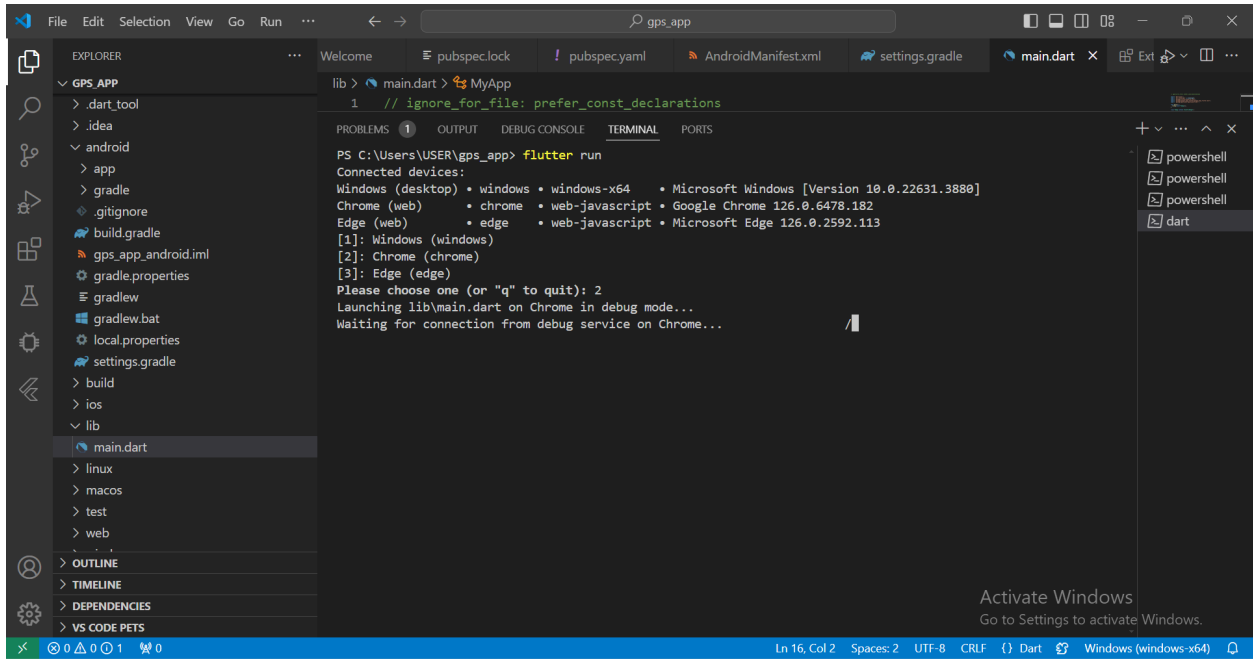
```
<uses-permission android:name="android.permission.BLUETOOTH" />
  <uses-permission android:name="android.permission.BLUETOOTH_ADMIN"
/>
  <uses-permission android:name="android.permission.BLUETOOTH_SCAN"
android:required="false"/>
  <uses-permission
android:name="android.permission.BLUETOOTH_CONNECT"
android:required="false"/>
  <uses-permission
android:name="android.permission.ACCESS_FINE_LOCATION" />

  <uses-permission
android:name="android.permission.BLUETOOTH_ADVERTISE"
android:required="false"/>
```

**Jika sudah ke bagian meta-data dan tambahkan code berikut.**

```
<meta-data
  android:name="com.google.android.geo.API_KEY"
  android:value="AIzaSyBQEuIXMJseti4EmnL1LvIizXQfCTrPeF8"/>

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



## Output:

