

# **LAPORAN PRAKTIKUM**

## **JOBSHEET IV: APLIKASI PERTAMA DAN WIDGET DASAR FLUTTER**

### **MATA KULIAH PEMROGRAMAN MOBILE**

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NIM : 2341760082

No. Absen : 29

**JURUSAN TEKNOLOGI INFORMASI**

**PROGRAM STUDI D-IV SISTEM INFORMASI BISNIS**

**POLITEKNIK NEGERI MALANG**

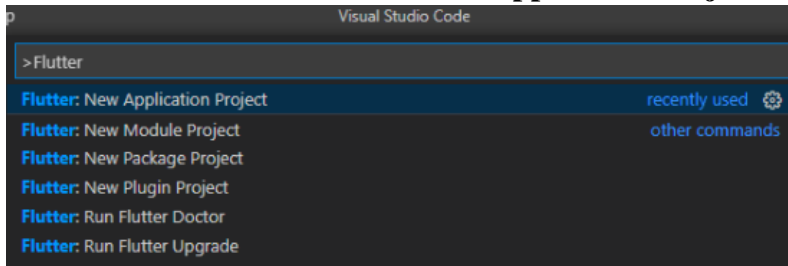
**2025**

## JOB SHEET MINGGU IV

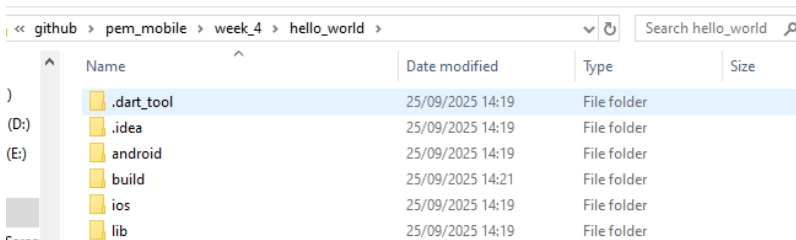
### APLIKASI PERTAMA DAN WIDGET DASAR FLUTTER

#### PRAKTIKUM 1

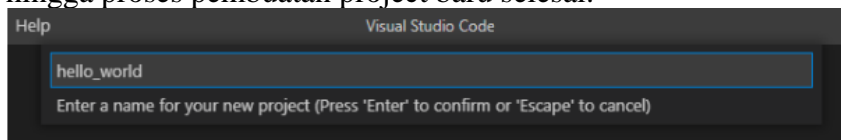
1. Buka VS Code, lalu tekan tombol **Ctrl + Shift + P** maka akan tampil *Command Palette*, lalu ketik **Flutter**. Pilih **New Application Project**.



2. Kemudian buat folder **sesuai style** laporan praktikum yang Anda pilih. Disarankan pada folder dokumen atau desktop atau alamat folder lain yang tidak terlalu dalam atau panjang. Lalu pilih **Select a folder to create the project in**.

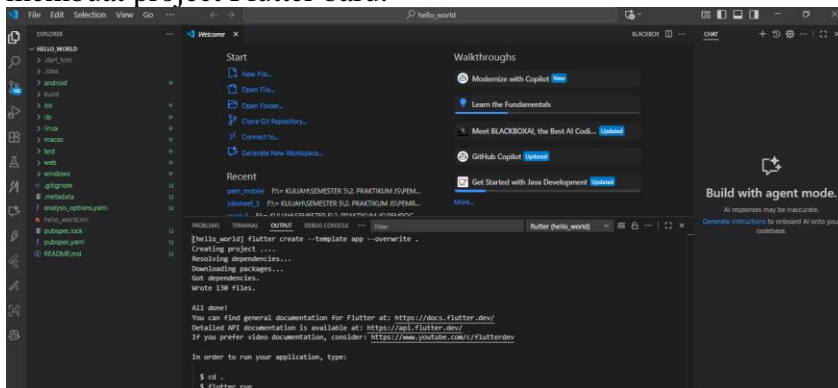


3. Buat nama project flutter **hello\_world** seperti berikut, lalu tekan **Enter**. Tunggu hingga proses pembuatan project baru selesai.



***\*\*Nama project ini harus lowercase (huruf kecil semua) tanpa menggunakan spasi.***

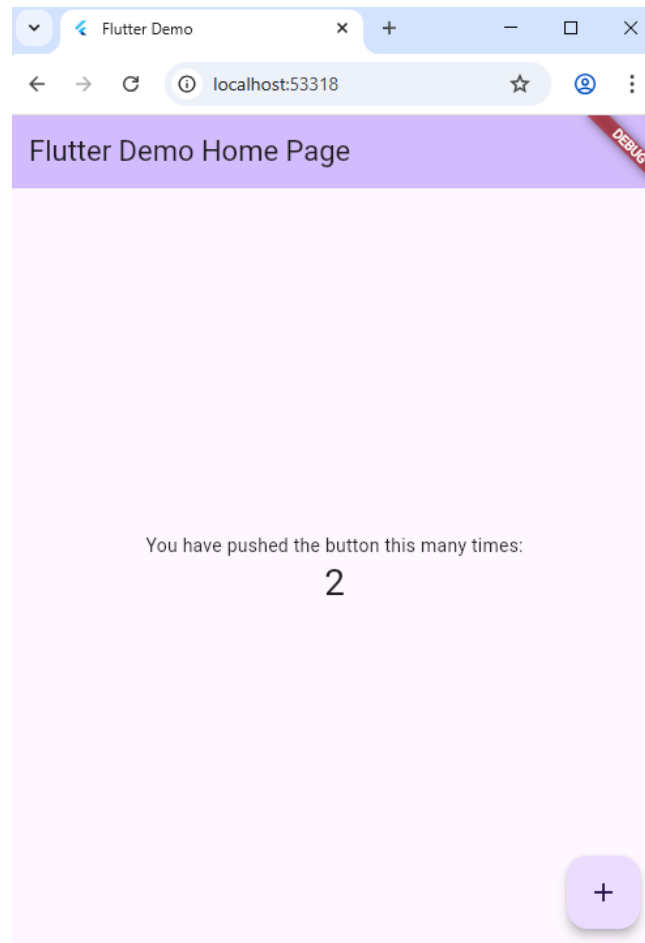
4. Jika sudah selesai proses pembuatan project baru, pastikan tampilan seperti berikut. Pesan akan tampil berupa **"Your Flutter Project is ready!"** artinya Anda telah berhasil membuat project Flutter baru.



## PRAKTIKUM 2

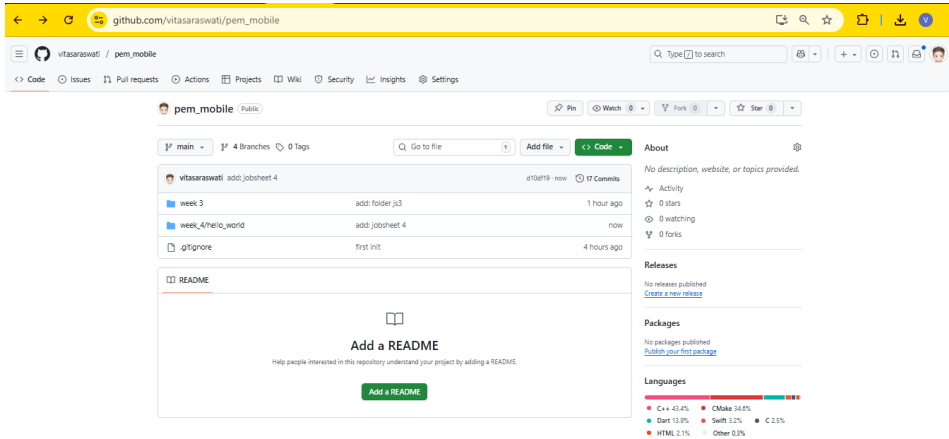
Melanjutkan dari praktikum 1, Anda diminta untuk menjalankan aplikasi ke perangkat fisik (device Android atau iOS). Silakan ikuti langkah-langkah pada codelab tautan berikut ini.

<https://developer.android.com/codelabs/basic-android-kotlin-compose-connect-device?hl=id#0>



## PRAKTIKUM 3

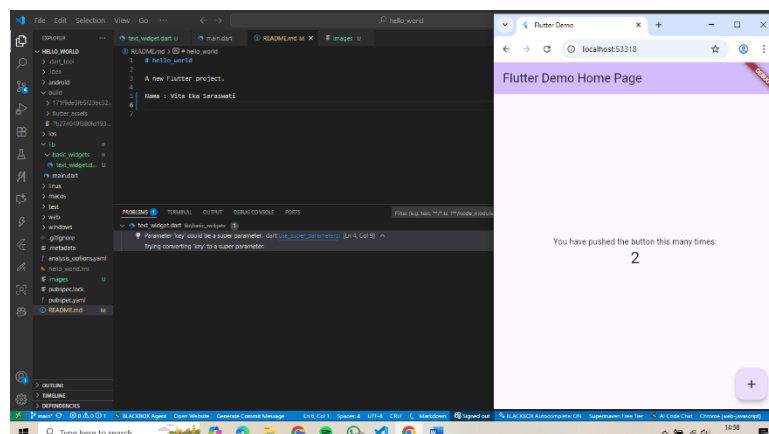
1. Login ke akun [GitHub](#) Anda, lalu buat repository baru dengan nama "**flutter-fundamental-part1**"
2. Lalu klik tombol "**Create repository**" atau gunakan repository yang sudah ada. Kali ini aya telah membuat repository sehingga tidak menggunakan repository baru



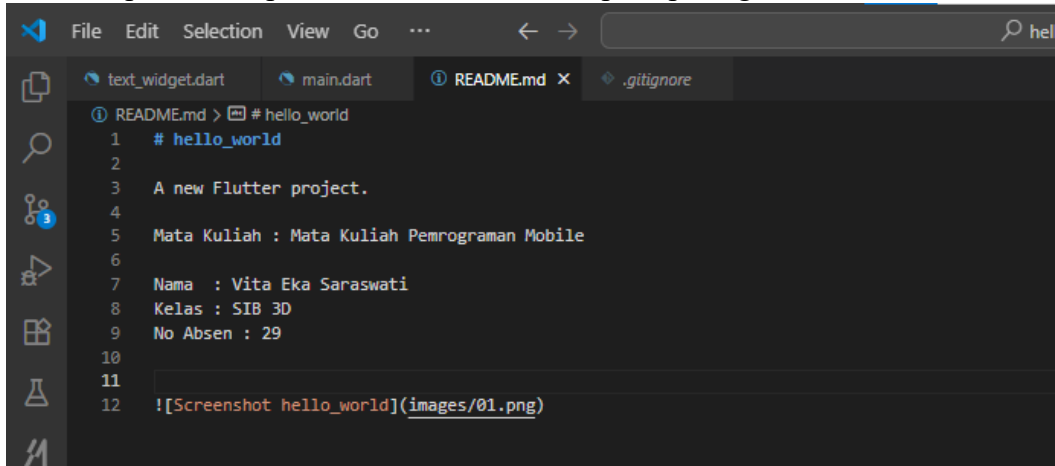
3. Lakukan perintah git add .
4. Berikan pesan commit dengan perintah git commit -m "add jobsheet 4"
5. Setelah add dan commit, lakukan push ke repository branch main

```
Counting objects: 100% (182/182), done.
Delta compression using up to 8 threads
Compressing objects: 100% (149/149), done.
Writing objects: 100% (181/181), 267.74 KiB | 1.18 MiB/s, done.
Total 181 (delta 19), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (19/19), done.
To https://github.com/vitasaraswati/pem_mobile.git
23298a3..d10df19 main -> main
remote: Resolving deltas: 100% (19/19), done.
To https://github.com/vitasaraswati/pem_mobile.git
23298a3..d10df19 main -> main
To https://github.com/vitasaraswati/pem_mobile.git
23298a3..d10df19 main -> main
```

6. Kembali ke VS Code, ubah platform di pojok kanan bawah ke emulator atau device atau bisa juga menggunakan browser Chrome. Lalu coba running project **hello\_world** dengan tekan **F5** atau **Run > Start Debugging**. Tunggu proses kompilasi hingga selesai, maka aplikasi flutter pertama Anda akan tampil seperti berikut.

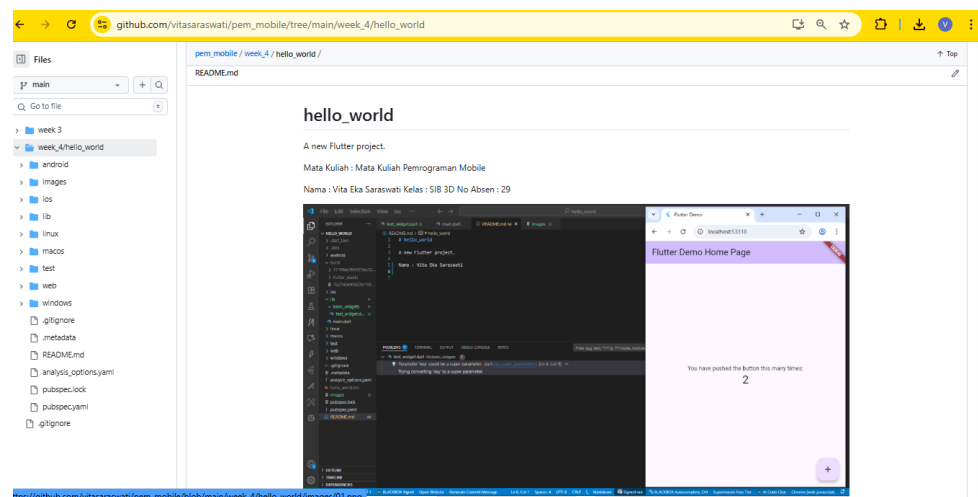


7. Lakukan perubahan pada isi file readme.md seperti pada gambar di bawah ini



```
File Edit Selection View Go ...
text_widget.dart main.dart README.md .gitignore
1 # hello_world
2
3 A new Flutter project.
4
5 Mata Kuliah : Mata Kuliah Pemrograman Mobile
6
7 Nama : Vita Eka Saraswati
8 Kelas : SIB 3D
9 No Absen : 29
10
11
12 ![Screenshot hello_world](images/01.png)
```

8. Lakukan push ke repository  
9. Berikut ini merupakan hasil dari file readme yang telah diubah

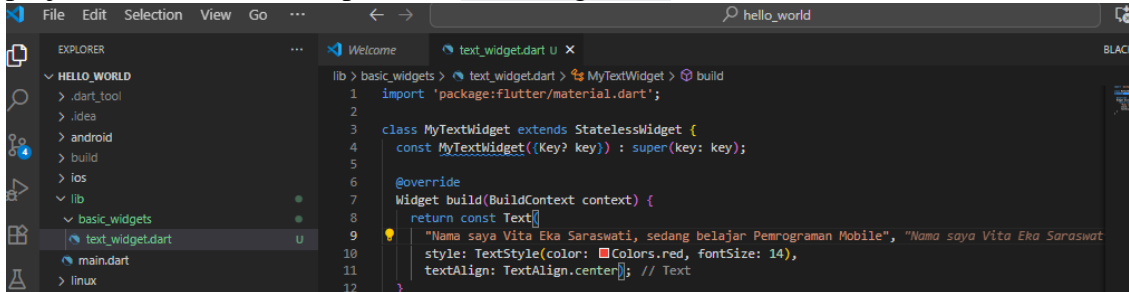


**\*\*Link repository github :**

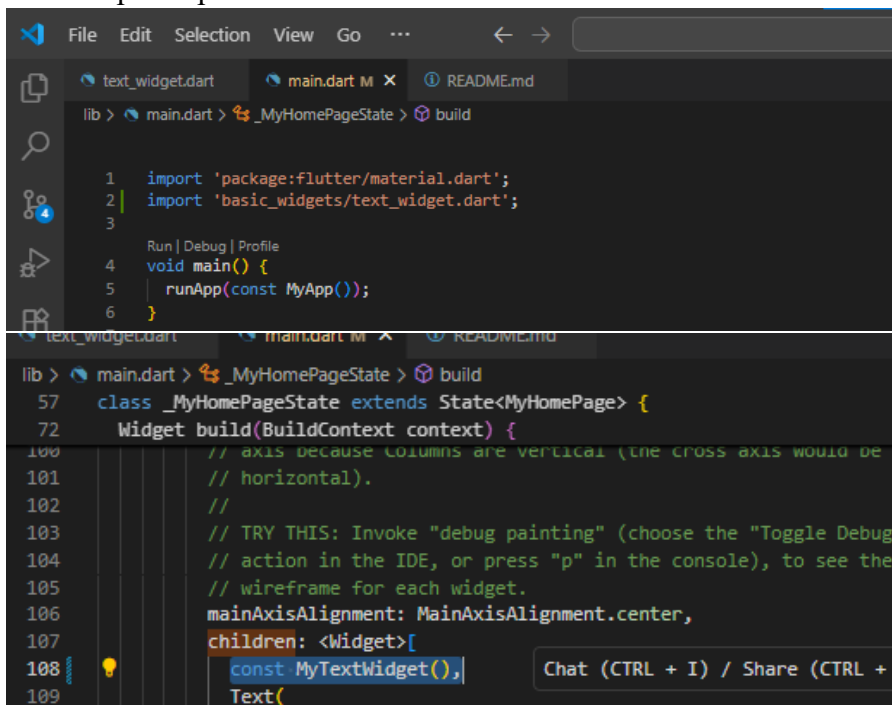
**[https://github.com/vitasaraswati/pem\\_mobile/tree/main/week\\_4/hello\\_world](https://github.com/vitasaraswati/pem_mobile/tree/main/week_4/hello_world)**

## PRAKTIKUM 4

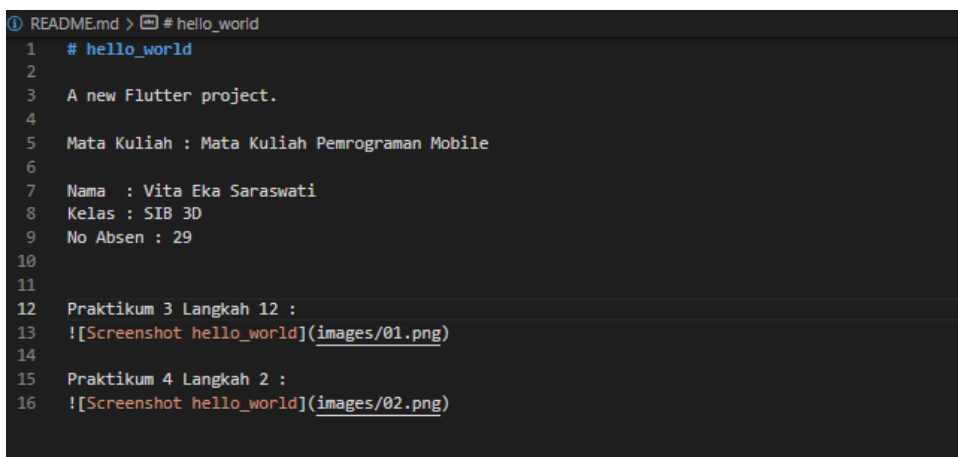
1. Buat folder baru **basic\_widgets** di dalam folder **lib**. Kemudian buat file baru di dalam **basic\_widgets** dengan nama **text\_widget.dart**. Ketik atau salin kode program berikut ke project **hello\_world** Anda pada file **text\_widget.dart**.

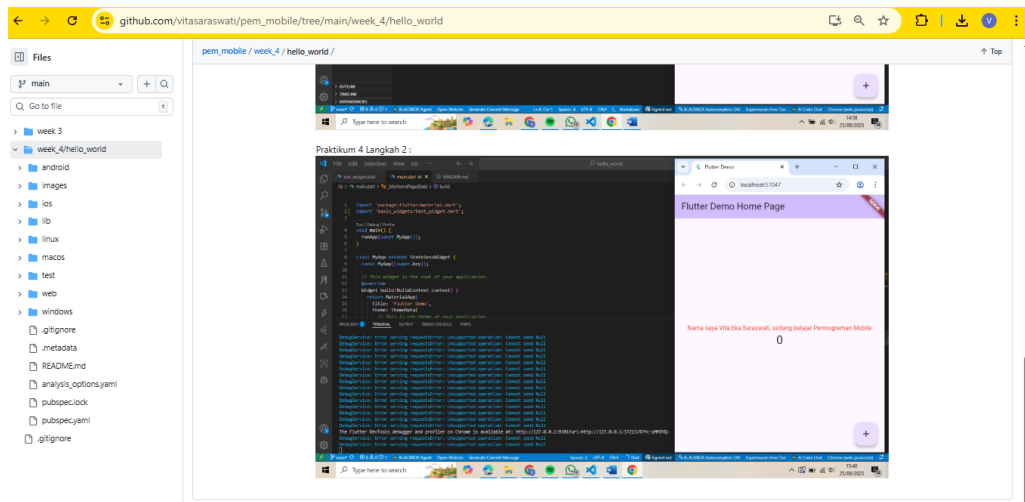


Lakukan import file **text\_widget.dart** ke **main.dart**, lalu ganti bagian text widget dengan kode di atas. Maka hasilnya seperti gambar berikut. Screenshot hasil milik Anda, lalu dibuat laporan pada file **README.md**.



2. Lakukan commit dan push pada repository github. Berikut adalah hasil pada file **readme** terbaru.





3. Buat sebuah file `image_widget.dart` di dalam folder `basic_widgets` dengan isi kode berikut.

```

lib > basic_widgets > image_widget.dart > ...
1  import 'package:flutter/material.dart';
2
3  class MyImageWidget extends StatelessWidget {
4    const MyImageWidget({Key? key}) : super(key: key);
5
6    @override
7    Widget build(BuildContext context) {
8      return const Image(
9        image: AssetImage("assets/03.png")
10      ); // Image
11    }
12  }

```

Lakukan penyesuaian asset pada file `pubspec.yaml` dan tambahkan file logo Anda di folder `assets` project `hello_world`.

```

52  # The following section is specific to Flutter packages.
53  flutter:
54    assets:
55      - assets/03.png
56
57  # The following line ensures that the Material Icons font is

```

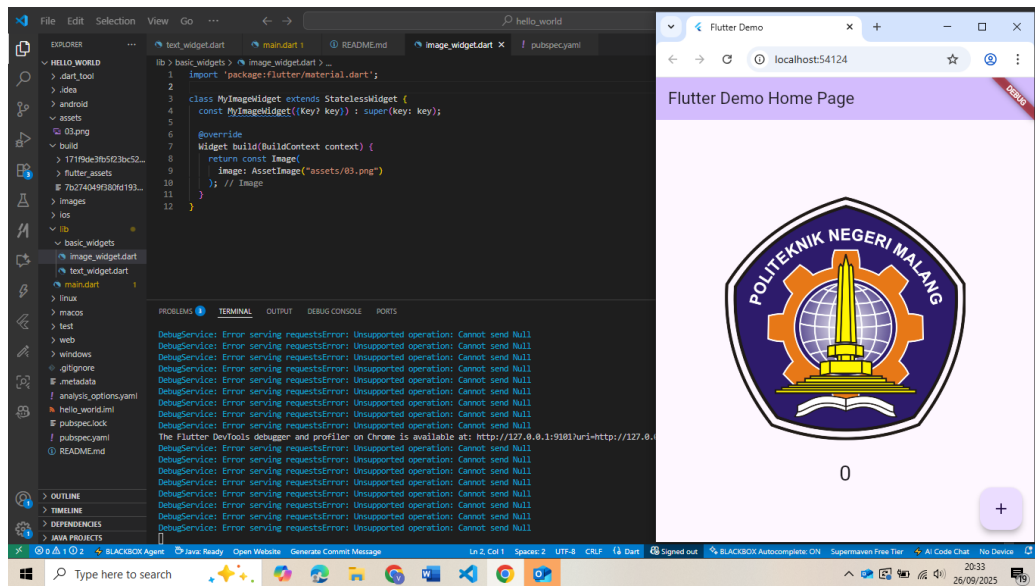
Jangan lupa sesuaikan kode dan import di file `main.dart` kemudian akan tampil gambar seperti berikut.

```

lib > main.dart > ...
1  import 'package:flutter/material.dart';
2  import 'basic_widgets/text_widget.dart';
3  import 'basic_widgets/image_widget.dart';
4

```

#### 4. Jalankan dengan perintah flutter run



## PRAKTIKUM 5

1. Buat file di `basic_widgets > loading_cupertino.dart`. Import stateless widget dari material dan cupertino. Lalu isi kode di dalam method `Widget build` adalah sebagai berikut.

```
lib > basic_widgets > loading_cupertino.dart LoadingCupertino
1 import 'package:flutter/material.dart';
2 import 'package:flutter/cupertino.dart';
3
4 class LoadingCupertino extends StatelessWidget {
5   const LoadingCupertino({Key? key}) : super(key: key);
6
7   @override
8   Widget build(BuildContext context) {
9     return MaterialApp(
10       home: Container(
11         margin: const EdgeInsets.only(top: 30),
12         color: Colors.white,
13         child: Column(
14           children: <Widget>[
15             CupertinoButton(
16               child: const Text("Contoh button"),
17               onPressed: () {},
18             ), // CupertinoButton
19             const CupertinoActivityIndicator(),
20           ], // <Widget>[]
21         ), // Column
22       ), // Container
23     ); // MaterialApp
24   }
25 }
```

2. Button widget terdapat beberapa macam pada flutter yaitu `AppBar`, `DropDownButton`, `TextButton`, `FloatingActionButton`, `IconButton`, `OutlineButton`, `PopupMenuButton`, dan `ElevatedButton`.

Buat file di `basic_widgets > fab_widget.dart`. Import stateless widget dari material. Lalu isi kode di dalam method `Widget build` adalah sebagai berikut.



- File fab\_widget.dart

```

lib > basic_widgets > fab_widget.dart > FabWidget > build
1  import 'package:flutter/material.dart';
2
3  class FabWidget extends StatelessWidget {
4    const FabWidget({Key? key}) : super(key: key);
5
6    @override
7    Widget build(BuildContext context) {
8      return MaterialApp(
9        home: Scaffold(
10         floatingActionButton: FloatingActionButton(
11           onPressed: () {
12             // Add your onPressed code here!
13           },
14           child: const Icon(Icons.thumb_up),
15           backgroundColor: Colors.pink,
16         ), // FloatingActionButton
17       ), // Scaffold
18     ), // MaterialApp
19   }
20
21

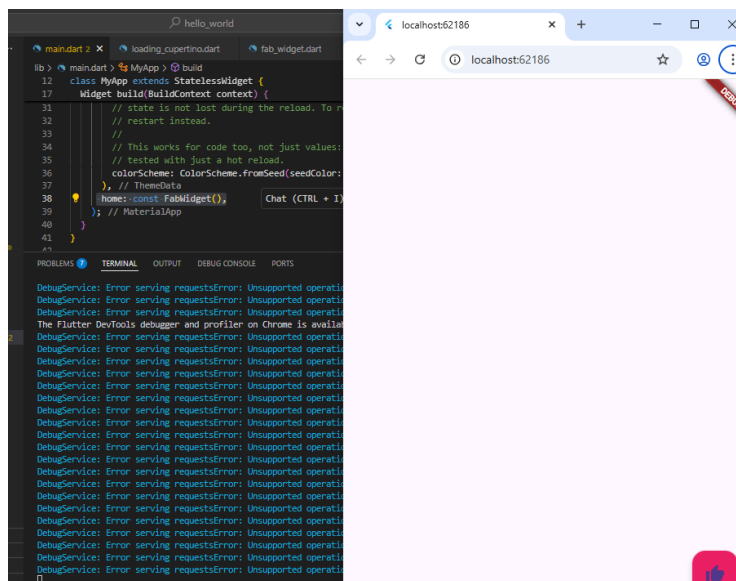
```

- File main.dart

```

lib > main.dart > ...
1  import 'package:flutter/material.dart';
2  import 'basic_widgets/text_widget.dart';
3  import 'basic_widgets/image_widget.dart';
4  import 'basic_widgets/loading_cupertino.dart';
5  import 'basic_widgets/fab_widget.dart';
6

```



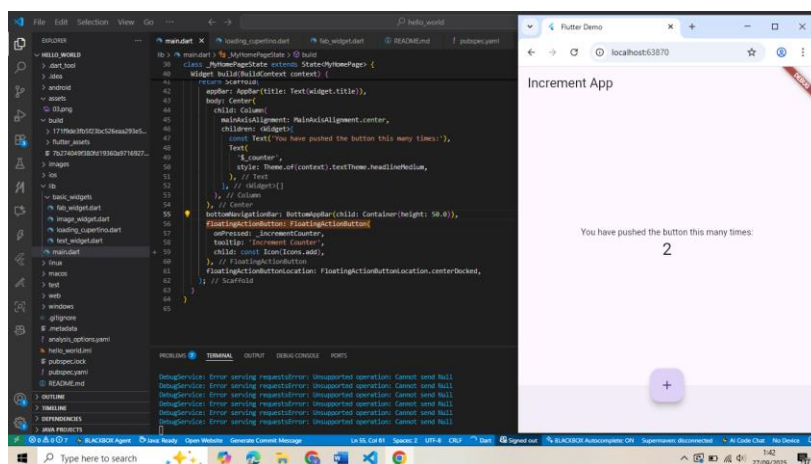
3. Scaffold widget digunakan untuk mengatur tata letak sesuai dengan material design.

Ubah isi kode `main.dart` seperti berikut.

- Isi file main.dart

```
lib > main.dart > % MyApp
1 import 'package:flutter/material.dart';
2
3 Run | Debug | Profile
4 void main() {
5   runApp(const MyApp());
6 }
7
8 class MyApp extends StatelessWidget {
9   const MyApp({Key? key}) : super(key: key);
10
11   // This widget is the root of your application.
12   @override
13   Widget build(BuildContext context) {
14     return MaterialApp(
15       title: 'Flutter Demo',
16       theme: ThemeData(primarySwatch: Colors.red),
17       home: const MyHomePage(title: 'Increment App'),
18     ); // MaterialApp
19   }
20 }
21
22 class MyHomePage extends StatefulWidget {
23   const MyHomePage({Key? key, required this.title}) : super(key: key);
24
25   final String title;
26
27   @override
28   State<MyHomePage> createState() => _MyHomePageState();
29 }
30
31 class _MyHomePageState extends State<MyHomePage> {
32   int _counter = 0;
33
34   void _incrementCounter() {
35     setState(() {
36       _counter++;
37     });
38   }
39
40   @override
41   Widget build(BuildContext context) {
42     return Scaffold(
43       appBar: AppBar(title: Text(widget.title)),
44       body: Center(
45         child: Column(
46           mainAxisAlignment: MainAxisAlignment.center,
47           children: <Widget>[
48             const Text('You have pushed the button this many times:'),
49             Text(
50               '$_counter',
51               style: Theme.of(context).textTheme.headlineMedium,
52             ), // Text
53           ], // <Widget>[]
54         ), // Column
55       ), // Center
56       bottomNavigationBar: BottomAppBar(child: Container(height: 50.0)),
57       floatingActionButton: FloatingActionButton(
58         onPressed: _incrementCounter,
59         tooltip: 'Increment Counter',
60         child: const Icon(Icons.add),
61       ), // FloatingActionButton
62       floatingActionButtonLocation: FloatingActionButtonLocation.centerDocked,
63     ); // Scaffold
64   }
65 }
```

- Output

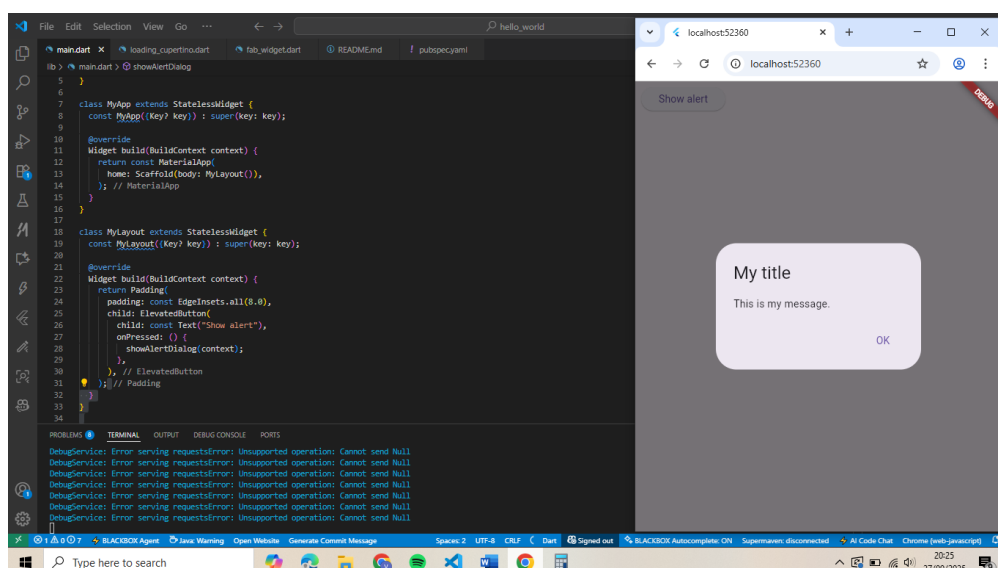


4. Dialog widget pada flutter memiliki dua jenis dialog yaitu `AlertDialog` dan `SimpleDialog`.

Ubah isi kode `main.dart` seperti berikut.

```
lib > main.dart > MyLayout > build
1 import 'package:flutter/material.dart';
2
3 void main() {
4   runApp(const MyApp());
5 }
6
7 class MyApp extends StatelessWidget {
8   const MyApp({Key? key}) : super(key: key);
9
10  @override
11  Widget build(BuildContext context) {
12    return const MaterialApp(
13      home: Scaffold(body: MyLayout()),
14    ); // MaterialApp
15  }
16 }
17
18 class MyLayout extends StatelessWidget {
19   const MyLayout({Key? key}) : super(key: key);
20
21  @override
22  Widget build(BuildContext context) {
23    return Padding(
24      padding: const EdgeInsets.all(8.0),
25      child: ElevatedButton(
26        child: const Text("Show alert"),
27        onPressed: () {
28          showAlertDialog(context);
29        },
30      ), // ElevatedButton
31    ); // Padding
32  }
33 }
34
35 showAlertDialog(BuildContext context) {
36   // set up the button
37   Widget okButton = TextButton(
38     child: const Text("OK"),
39     onPressed: () {
40       Navigator.pop(context);
41     },
42   ); // TextButton
43
44   // set up the AlertDialog
45   AlertDialog alert = AlertDialog(
46     title: const Text("My title"),
47     content: const Text("This is my message."),
48     actions: [okButton],
49   ); // AlertDialog
50
51   // show the dialog
52   showDialog(
53     context: context,
54     builder: (BuildContext context) {
55       return alert;
56     },
57   );
58 }
```

- Output



5. Flutter menyediakan widget yang dapat menerima input dari pengguna aplikasi yaitu antara lain Checkbox, Date and Time Pickers, Radio Button, Slider, Switch, TextField. Contoh penggunaan TextField widget adalah sebagai berikut:

- Main.dart

```
lib > main.dart > ...
1  import 'package:flutter/material.dart';
2  import 'basic_widgets/input_selection_widget.dart';
3
4  void main() {
5    runApp(const MyApp());
6  }
7
8  class MyApp extends StatelessWidget {
9    const MyApp({Key? key}) : super(key: key);
10
11    @override
12    Widget build(BuildContext context) {
13      return const MaterialApp(home: InputSelectionWidget()
14        ); // MaterialApp
15    }
16  }
```

- Basic\_widgets/Input\_selection\_widget.dart

```
lib > basic_widgets > input_selection_widget.dart > _InputSelectionWidgetState > build
1  import 'package:flutter/material.dart';
2
3  class InputSelectionWidget extends StatefulWidget {
4    const InputSelectionWidget({Key? key}) : super(key: key);
5
6    @override
7    State<InputSelectionWidget> createState() => _InputSelectionWidgetState();
8  }
9
10 class _InputSelectionWidgetState extends State<InputSelectionWidget> {
11   // Controllers dan state variables
12   TextEditingController namaController = TextEditingController();
13   bool isChecked = false;
14   bool isSwitched = false;
15   double sliderValue = 20.0;
16   String? selectedGender;
17   DateTime selectedDate = DateTime.now();
18
19   @override
20   Widget build(BuildContext context) {
21     return Scaffold(
22       appBar: AppBar(
23         title: const Text("Input dan Selection Widget"),
24       ),
25     );
26   }
27 }
```

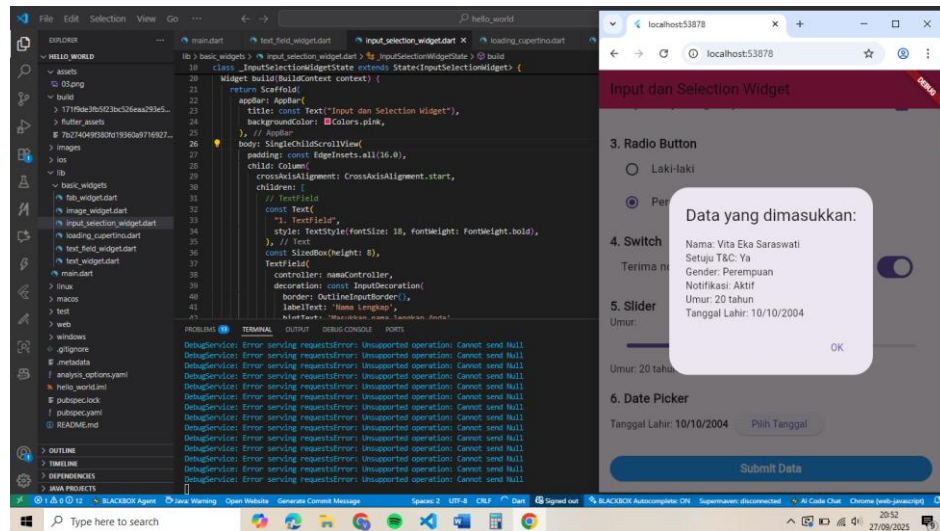
*\*Selengkapnya pada*

[https://github.com/vitasaraswati/pem\\_mobile/blob/fb02838ae9b6bfcaa0fac4407640025134caf3bb/week\\_4/hello\\_world/lib/basic\\_widgets/input\\_selection\\_widget.dart](https://github.com/vitasaraswati/pem_mobile/blob/fb02838ae9b6bfcaa0fac4407640025134caf3bb/week_4/hello_world/lib/basic_widgets/input_selection_widget.dart)

- Basic\_widgets/Text\_field\_widget.dart

```
lib > basic_widgets > text_field_widget.dart > MyApp
1  import 'package:flutter/material.dart';
2
3  class MyApp extends StatelessWidget {
4    const MyApp({Key? key}) : super(key: key);
5
6    @override
7    Widget build(BuildContext context) {
8      return MaterialApp(
9        home: Scaffold(
10         appBar: AppBar(title: const Text("Contoh TextField")),
11         body: const TextField(
12           obscureText: false,
13           decoration: InputDecoration(
14             border: OutlineInputBorder(),
15             labelText: 'Nama',
16           ), // InputDecoration
17         ), // TextField
18       ), // Scaffold
19     ); // MaterialApp
20   }
21 }
```

- Output



6. Date and Time Pickers termasuk pada kategori input dan selection widget, berikut adalah contoh penggunaan Date and Time Pickers.

- Main.dart

```

1 import 'package:flutter/material.dart';
2
3 void main() {
4   runApp(const MyApp());
5 }
6
7 class MyApp extends StatelessWidget {
8   const MyApp({Key? key}) : super(key: key);
9
10  @override
11  Widget build(BuildContext context) {
12    return const MaterialApp(
13      title: 'Contoh Date Picker',
14      home: MyHomePage(title: 'Contoh Date Picker'),
15    ); // MaterialApp
16  }
17
18  class MyHomePage extends StatefulWidget {
19    const MyHomePage({Key? key, required this.title}) : super(key: key);
20
21    final String title;
22
23    @override
24    _MyHomePageState createState() => _MyHomePageState();
25  }
26
27  class _MyHomePageState extends State<MyHomePage> {
28    // Variable/State untuk mengambil tanggal
29    DateTime selectedDate = DateTime.now();
30
31

```

```

32  // Initial SelectDate Flutter
33  Future<void> _selectDate(BuildContext context) async {
34    // Initial DateTime Final Picked
35    final DateTime? picked = await showDatePicker(
36      context: context,
37      initialDate: selectedDate,
38      firstDate: DateTime(2015, 8),
39      lastDate: DateTime(2101),
40    );
41    if (picked != null && picked != selectedDate) {
42      setState(() {
43        selectedDate = picked;
44      });
45    }
46  }
47

```

```

48   @override
49   Widget build(BuildContext context) {
50     return Scaffold(
51       appBar: AppBar(title: Text(widget.title)),
52       body: Center(
53         child: Column(
54           mainAxisAlignment: MainAxisAlignment.min,
55           children: <Widget>[
56             Text("${selectedDate.toLocal()}.split(' ')[0]"),
57             const SizedBox(height: 20.0),
58             ElevatedButton(
59               onPressed: () => {
60                 _selectDate(context),
61                 // ignore: avoid_print
62                 print(
63                   selectedDate.day + selectedDate.month + selectedDate.year,
64                 ),
65               },
66               child: const Text('Pilih Tanggal'),
67             ), // ElevatedButton
68           ], // <Widget>[]
69         ), // Column
70       ), // Center
71     ); // Scaffold
72   }
73 }

```

- Basic\_widgets/simple\_date\_picker\_widget.dart

```

1  import 'dart:async';
2  import 'package:flutter/material.dart';
3
4  Run | Debug | Profile
5  void main() => runApp(const MyApp());
6
7  class MyApp extends StatelessWidget {
8    const MyApp({Key? key}) : super(key: key);
9
10   @override
11   Widget build(BuildContext context) {
12     return const MaterialApp(
13       title: 'Contoh Date Picker',
14       home: MyHomePage(title: 'Contoh Date Picker'),
15     ); // MaterialApp
16   }
17
18   class MyHomePage extends StatefulWidget {
19     const MyHomePage({Key? key, required this.title}) : super(key: key);
20
21     final String title;
22
23     @override
24     _MyHomePageState createState() => _MyHomePageState();
25   }
26
27   class _MyHomePageState extends State<MyHomePage> {
28     // Variable/State untuk mengambil tanggal
29     DateTime selectedDate = DateTime.now();
30
31     // Initial SelectDate Flutter
32     Future<void> _selectDate(BuildContext context) async {
33       // Initial DateTime Final Picked
34       final DateTime? picked = await showDatePicker(
35         context: context,
36         initialDate: selectedDate,
37         firstDate: DateTime(2015, 8),
38         lastDate: DateTime(2101));
39       if (picked != null && picked != selectedDate) {
40         setState(() {
41           selectedDate = picked;
42         });
43       }
44     }
45
46     @override
47     Widget build(BuildContext context) {
48       return Scaffold(
49         appBar: AppBar(
50           title: Text(widget.title),
51         ), // AppBar
52         body: Center(
53           child: Column(
54             mainAxisAlignment: MainAxisAlignment.min,
55             children: <Widget>[
56               Text("${selectedDate.toLocal()}.split(' ')[0]"),
57               const SizedBox(
58                 height: 20.0,
59               ), // SizedBox
60               ElevatedButton(
61                 onPressed: () => {
62                   _selectDate(context),
63                   // ignore: avoid_print
64                   print(selectedDate.day + selectedDate.month + selectedDate.year)
65                 },

```

```

66         child: const Text('Pilih Tanggal'),
67       ), // ElevatedButton
68     ], // <Widget>[]
69   ), // Column
70 ), // Center
71 ); // Scaffold
72 }
73

```

- Output

