

**LAPORAN PRAKTIKUM**  
**MATA KULIAH PEMROGRAMAN MOBILE**

Dosen Pengampu : Ade Ismail, S.Kom., M.TI.

**JOBSHEET 3: APLIKASI PERTAMA DAN WIDGET DASAR FLUTTER**



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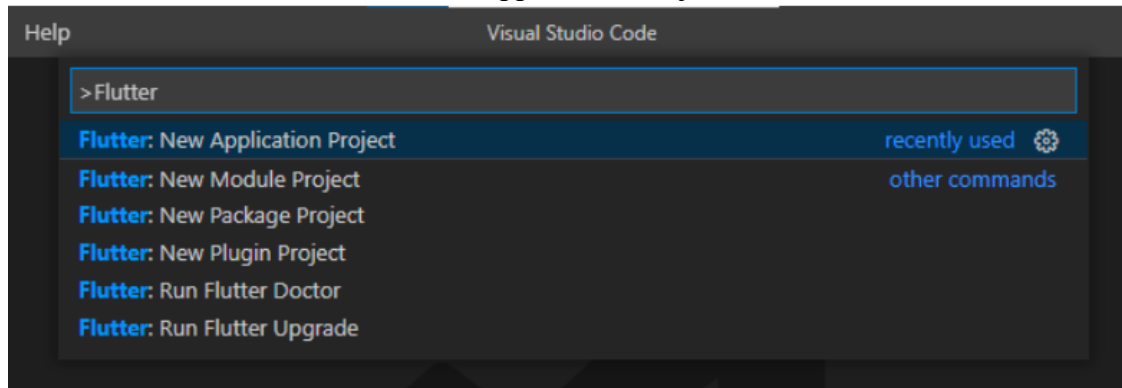
Prodi : D-IV Sistem Informasi Bisnis

**JURUSAN TEKNOLOGI INFORMASI**  
**POLITEKNIK NEGERI MALANG**

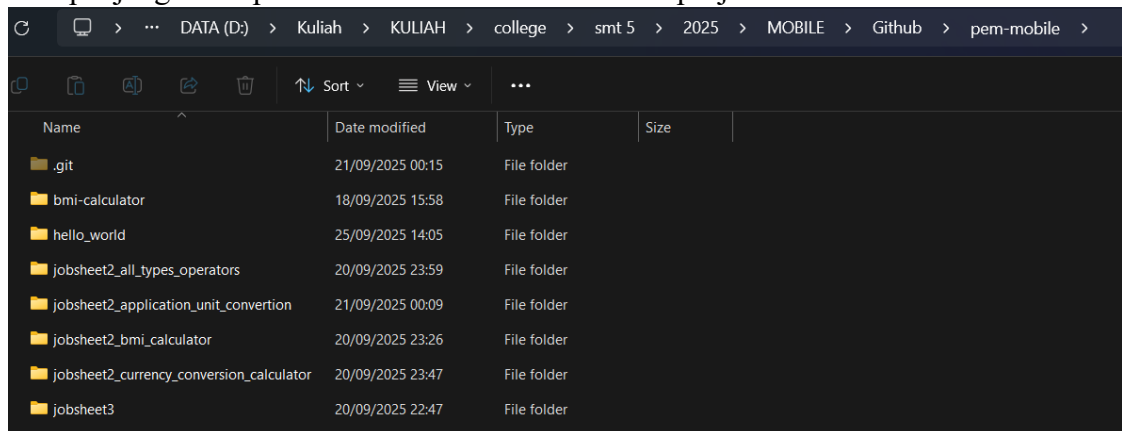
**2025**

## Praktikum 1: Membuat Project Flutter Baru

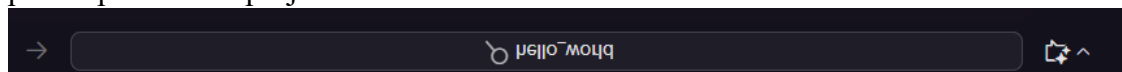
1. Buka VS Code, lalu tekan tombol Ctrl + Shift + P maka akan tampil *Command Palette*, lalu ketik Flutter. Pilih New Application Project.



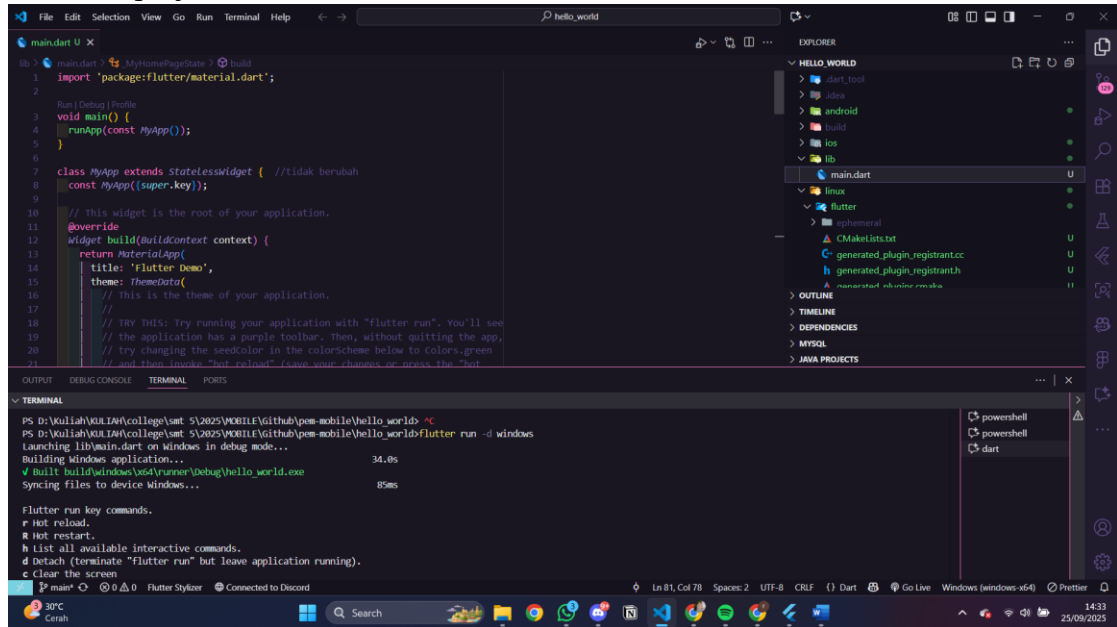
2. Kemudian buat folder sesuai style laporan praktikum yang Anda pilih. Disarankan pada folder dokumen atau desktop atau alamat folder lain yang tidak terlalu dalam atau panjang. Lalu pilih Select a folder to create the project in.



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



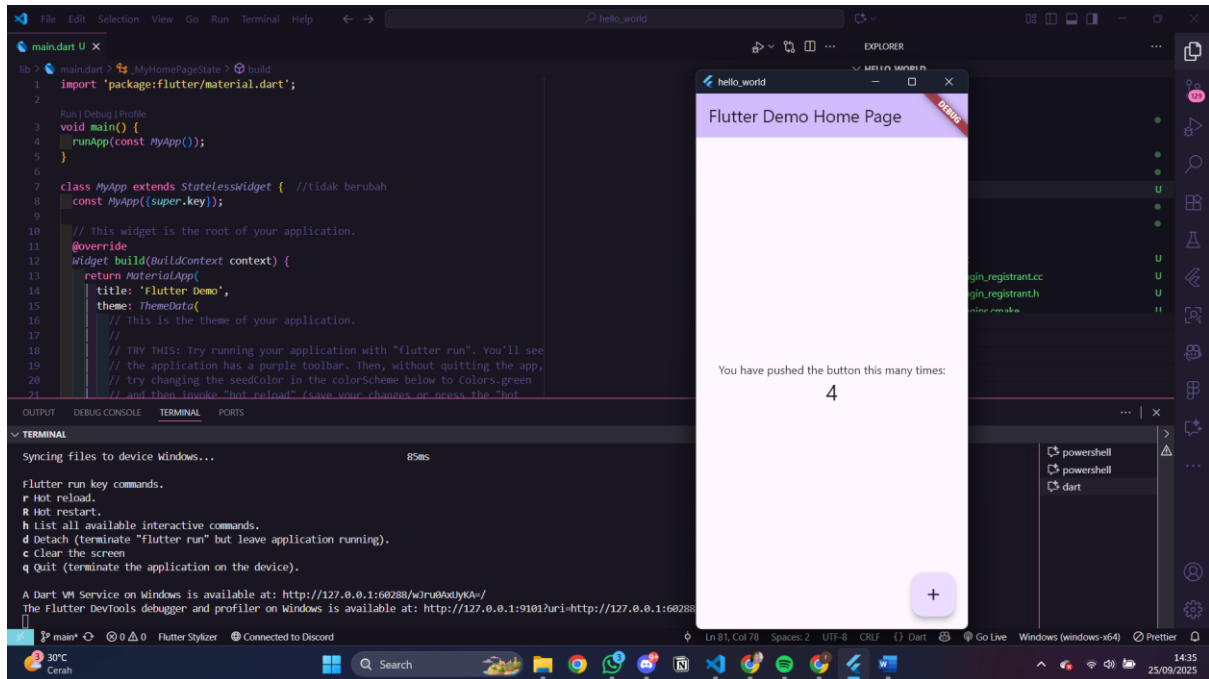
4. Jika sudah selesai proses pembuatan project baru, pastikan tampilan seperti berikut. Pesan akan tampil berupa "Your Flutter Project is ready!" artinya Anda telah berhasil membuat project Flutter baru.



```
main.dart U X
1 import 'package:flutter/material.dart';
2
3 void main() {
4   runApp(const MyApp());
5 }
6
7 class MyApp extends StatelessWidget { //tidak berubah
8   const MyApp({super.key});
9
10  // This widget is the root of your application.
11  @override
12  Widget build(BuildContext context) {
13    return MaterialApp(
14      title: 'Flutter Demo',
15      theme: ThemeData(
16        // This is the theme of your application.
17        //
18        // TRY THIS: Try running your application with "flutter run". You'll see
19        // the application has a purple toolbar. Then, without quitting the app,
20        // try changing the seedColor in the colorsScheme below to colors.green
21        // and then invoke "hot-reload" (save your changes or press the "hot
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## Praktikum 2: Menghubungkan Perangkat Android atau Emulator

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.



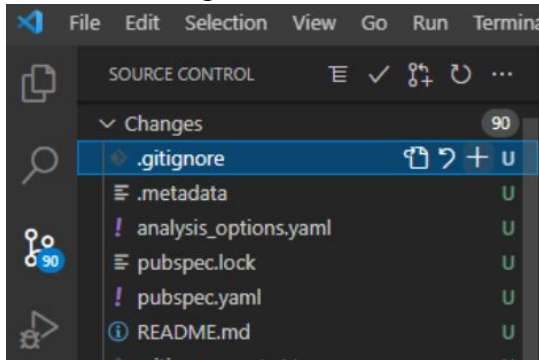
### Praktikum 3: Membuat Repository GitHub dan Laporan Praktikum

Melanjutkan dari praktikum 2, silakan selesaikan langkah-langkah berikut ini.

1. Login ke akun GitHub Anda, lalu buat repository baru dengan nama "pem-mobile"
2. Lalu klik tombol "Create repository".
3. Kembali ke VS code, project flutter hello\_world, buka terminal pada menu Terminal > New Terminal. Lalu ketik perintah berikut untuk inisialisasi git pada project Anda.

```
git init
```

4. Pilih menu Source Control di bagian kiri, lalu lakukan stages (+) pada file .gitignore untuk mengunggah file pertama ke repository GitHub. Bisa juga dengan menambahkan git add .



```
PS D:\Kuliah\KULIAH\college\smt 5\2025\MOBILE\Github\pem-mobile\hello_world> git add .
warning: in the working copy of 'hello_world/.metadata', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'hello_world/linux/flutter/generated_plugin_registrant.cc', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'hello_world/linux/flutter/generated_plugins.cmake', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'hello_world/macos/Flutter/GeneratedPluginRegistrant.swift', LF will be replaced by CRLF the next time Git touches it
```

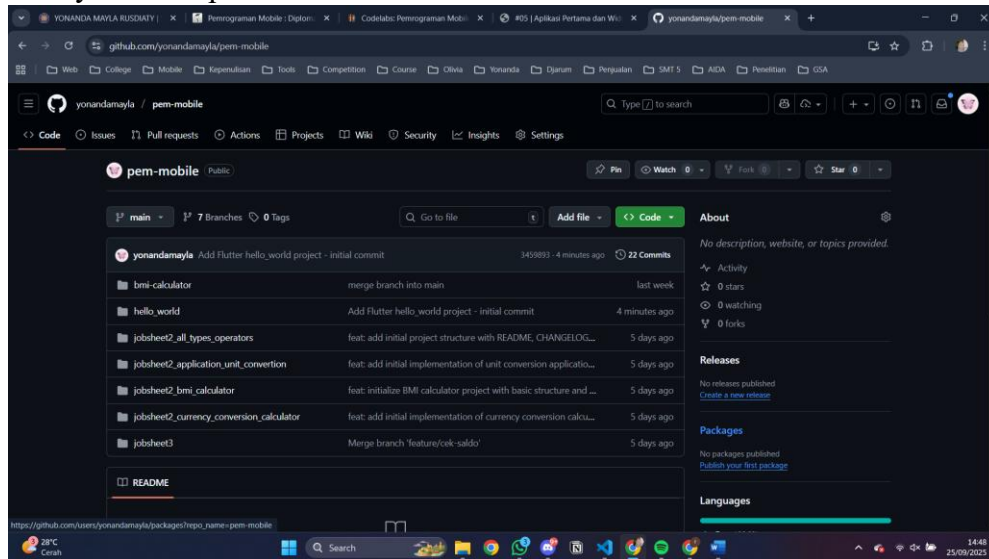
5. Beri pesan commit "Add Flutter hello\_world project - initial commit" lalu klik Commit (✓)

```
PS D:\Kuliah\KULIAH\college\smt 5\2025\MOBILE\Github\pem-mobile\hello_world> git commit -m "Add Flutter hello_world project - initial commit"
[main 3459893] Add Flutter hello_world project - initial commit
129 files changed, 4949 insertions(+)
create mode 100644 hello_world/.gitignore
create mode 100644 hello_world/.metadata
create mode 100644 hello_world/README.md
create mode 100644 hello_world/analysis_options.yaml
create mode 100644 hello_world/android/.gitignore
```

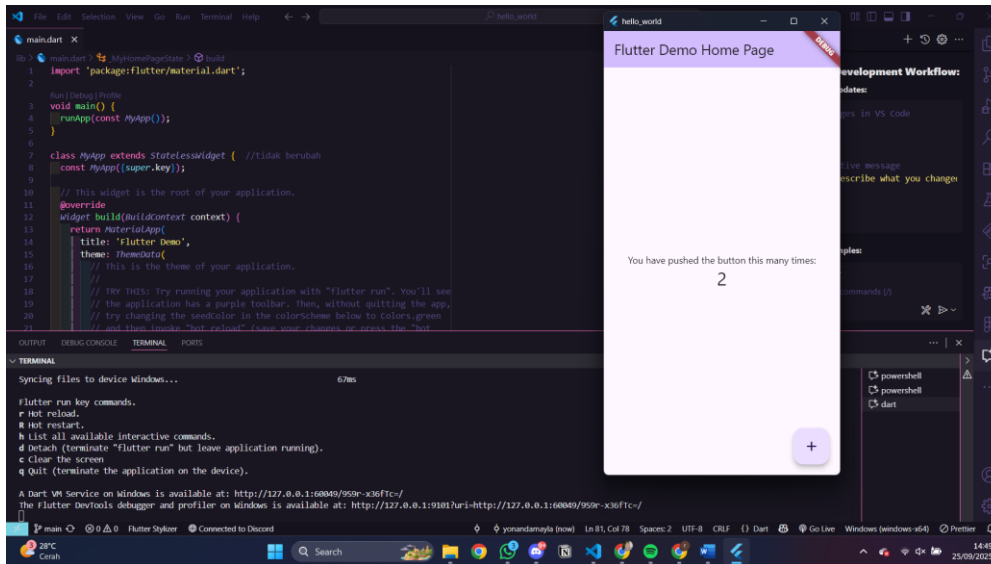
6. Lakukan push dengan klik bagian menu titik tiga > Push. Atau bisa juga dengan command `git push origin main`

```
PS D:\Kuliah\KULIAH\college\smt 5\2025\MOBILE\Github\pem-mobile\hello_world> git push origin main
Enumerating objects: 181, done.
Counting objects: 100% (181/181), done.
Delta compression using up to 12 threads
Compressing objects: 100% (149/149), done.
Writing objects: 100% (180/180), 267.70 KiB | 7.87 MiB/s, done.
Total 180 (delta 20), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (20/20), completed with 1 local object.
To https://github.com/yonandamayla/pem-mobile.git
4704e39..3459893 main -> main
```

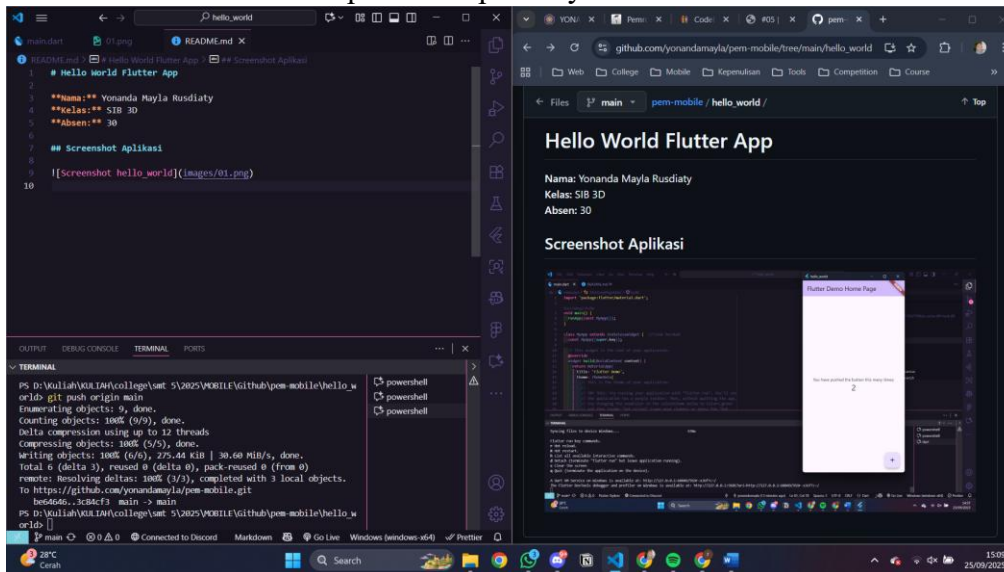
Jadinya akan seperti ini:



7. 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.



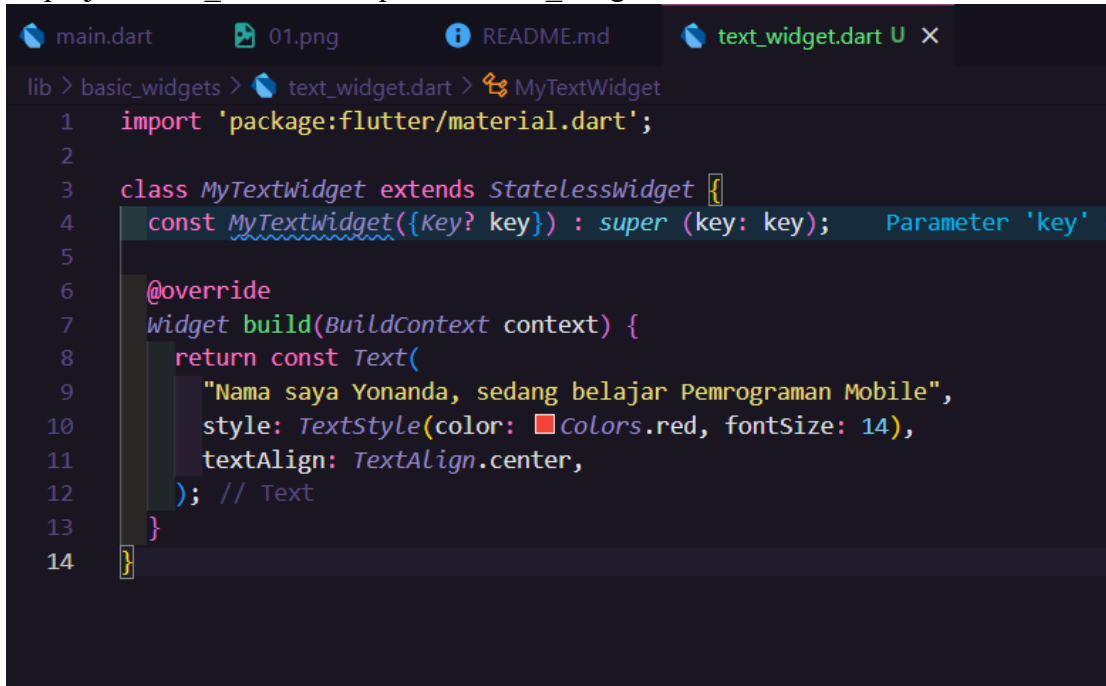
8. Silakan screenshot seperti pada Langkah 11, namun teks yang ditampilkan dalam aplikasi berupa nama lengkap Anda. Simpan file screenshot dengan nama 01.png pada folder images (buat folder baru jika belum ada) di project hello\_world Anda. Lalu ubah isi README.md seperti berikut, sehingga tampil hasil screenshot pada file README.md. Kemudian push ke repository Anda.



## Praktikum 4: Menerapkan Widget Dasar

Selesaikan langkah-langkah praktikum berikut ini dengan melanjutkan dari praktikum sebelumnya.

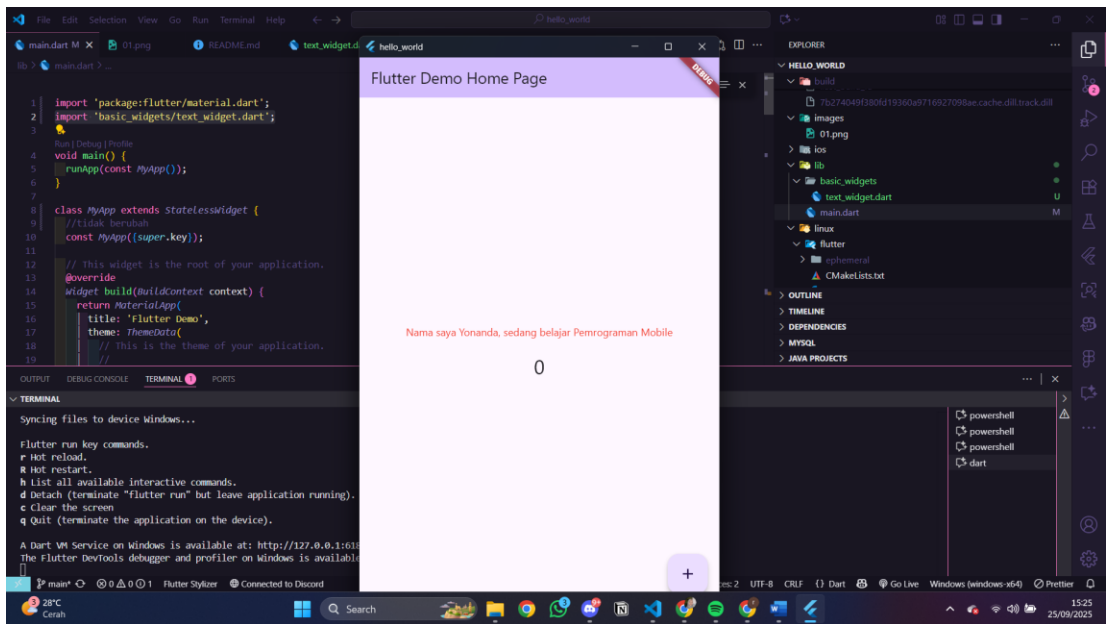
1. Buat folder baru `basic_widgets` di dalam folder `lib`. Kemudian buat file baru di dalam `basic_widgets` dengan nama `text_widget.dart`. Ketik atau salin kode program berikut ke project `hello_world` Anda pada file `text_widget.dart`.



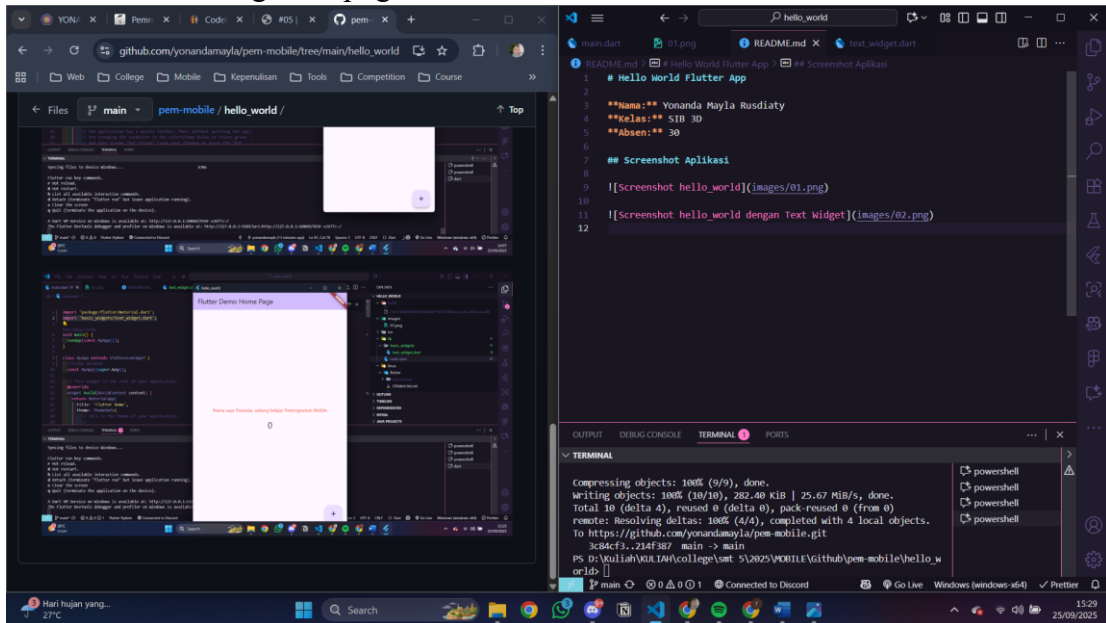
```
lib > basic_widgets > text_widget.dart > MyTextWidget
1  import 'package:flutter/material.dart';
2
3  class MyTextWidget extends StatelessWidget {
4    const MyTextWidget({Key? key}) : super (key: key);
5
6    @override
7    Widget build(BuildContext context) {
8      return const Text(
9        "Nama saya Yonanda, sedang belajar Pemrograman Mobile",
10       style: TextStyle(color: Colors.red, fontSize: 14),
11       textAlign: TextAlign.center,
12     ); // Text
13   }
14 }
```

2. 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`.





Menambahkan images/02.png ke dalam file readme.md



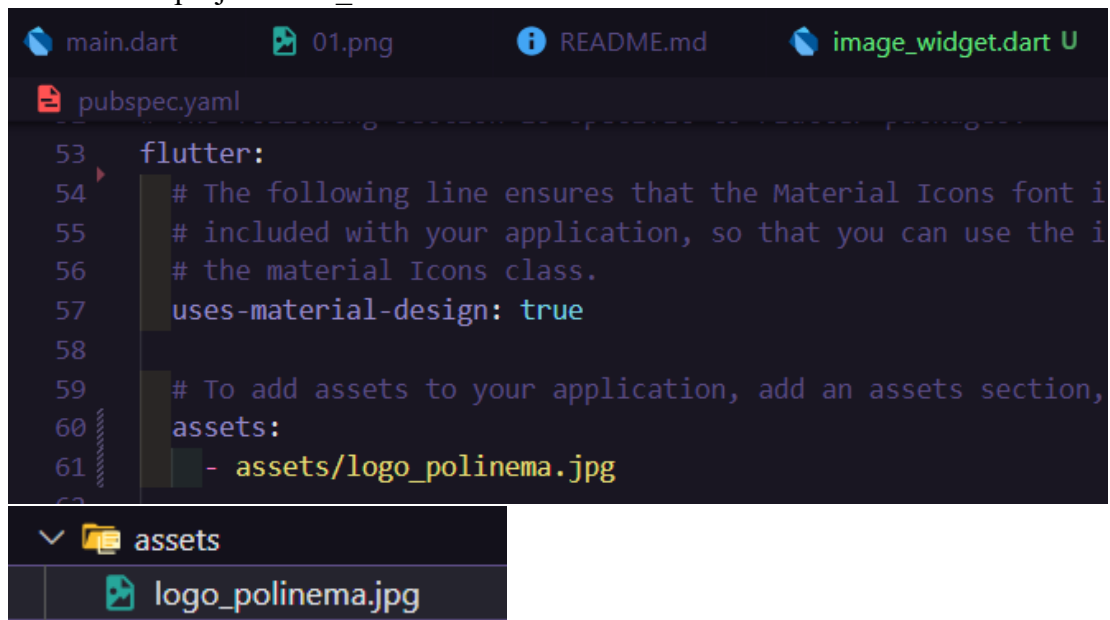
3. Buat sebuah file `image_widget.dart` di dalam folder `basic_widgets` dengan isi kode berikut.



The screenshot shows an IDE with the file `image_widget.dart` open. The code defines a `MyImageWidget` class that extends `StatelessWidget`. It has a constructor that takes an optional `key` and a `build` method that returns an `Image` widget using the asset `assets/logo_polinema.jpg`.

```
lib > basic_widgets > image_widget.dart > MyImageWidget > build
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(image: AssetImage("assets/logo_polinema.jpg"));
9    }
10 }
```

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



The screenshot shows the `pubspec.yaml` file in an IDE. The `flutter:` section is visible, showing the `uses-material-design` property set to `true`. The `assets:` section is being edited to include `assets/logo_polinema.jpg`. Below the code, a file explorer shows the `assets` folder containing the `logo_polinema.jpg` file.

```
53 flutter:
54   # The following line ensures that the Material Icons font is
55   # included with your application, so that you can use the i
56   # the material Icons class.
57   uses-material-design: true
58
59   # To add assets to your application, add an assets section,
60   assets:
61     - assets/logo_polinema.jpg
```

assets

logo\_polinema.jpg

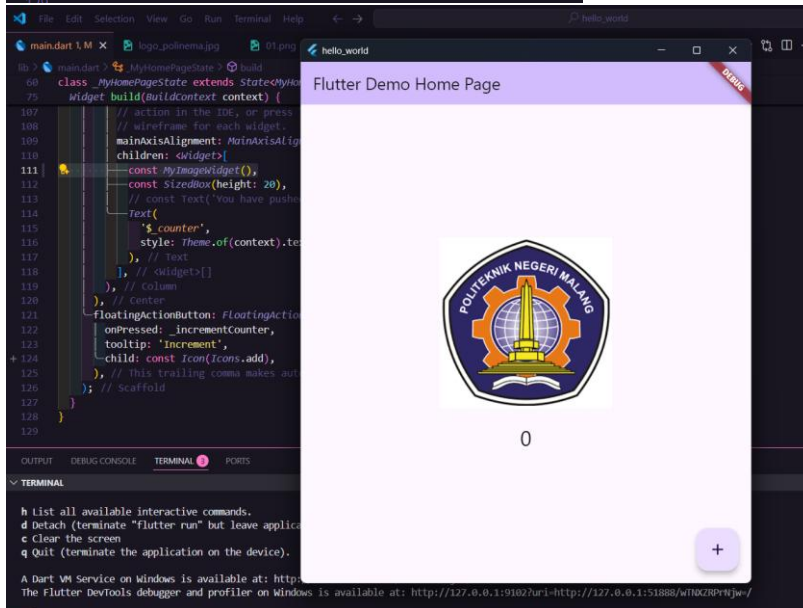
5. Jangan lupa sesuaikan kode dan import di file `main.dart` kemudian akan tampil gambar seperti berikut.

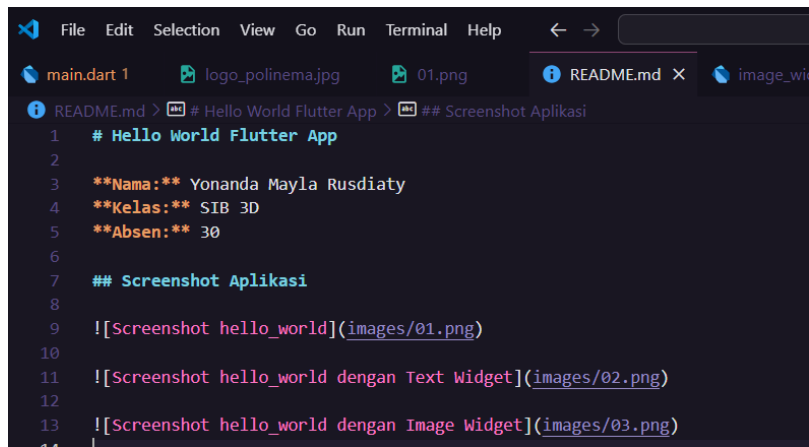
```
main.dart 1, M X logo_polinema.jpg 01.png

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

```
main.dart 1, M X logo_polinema.jpg 01.png README.md

lib > main.dart > _MyHomePageState > build
60 class _MyHomePageState extends State<MyHomePage> {
75   Widget build(BuildContext context) {
107     // action in the IDE, or press "p" in the console), to
108     // wireframe for each widget.
109     mainAxisAlignment: MainAxisAlignment.center,
110     children: <Widget>[
111       const MyImageWidget(),
112       const SizedBox(height: 20),
113       // const Text('You have pushed the button this many t
114       Text(
115         '$_counter',
116         style: Theme.of(context).textTheme.headlineMedium,
117       ), // Text
118     ], // <Widget>[]
119   ), // Column
120 ), // Center
121   floatingActionButton: FloatingActionButton(
122     onPressed: _incrementCounter,
123     tooltip: 'Increment',
124     child: const Icon(Icons.add),
125   ), // This trailing comma makes auto-formatting nicer for b
126 ); // Scaffold
127 }
128
129
```





The image shows a screenshot of an IDE window with a dark theme. The top menu bar includes File, Edit, Selection, View, Go, Run, Terminal, and Help. Below the menu bar, there are several tabs: main.dart 1, logo\_polinema.jpg, 01.png, README.md (active), and image\_wi. The README.md tab is selected, showing the following content:

```
1  # Hello World Flutter App
2
3  **Nama:** Yonanda Mayla Rusdiaty
4  **Kelas:** SIB 3D
5  **Absen:** 30
6
7  ## Screenshot Aplikasi
8
9  ![Screenshot hello_world](images/01.png)
10
11 ![Screenshot hello_world dengan Text Widget](images/02.png)
12
13 ![Screenshot hello_world dengan Image Widget](images/03.png)
14
```

## Praktikum 5: Menerapkan Widget Material Design dan iOS Cupertino

Selesaikan langkah-langkah praktikum berikut ini dengan melanjutkan project `hello_world` Anda. Lakukan langkah yang sama seperti pada Praktikum 3, yaitu setiap widget dibuat file sendiri lalu import ke `main.dart` dan screenshot hasilnya.

### 1. Cupertino Button dan Loading Bar

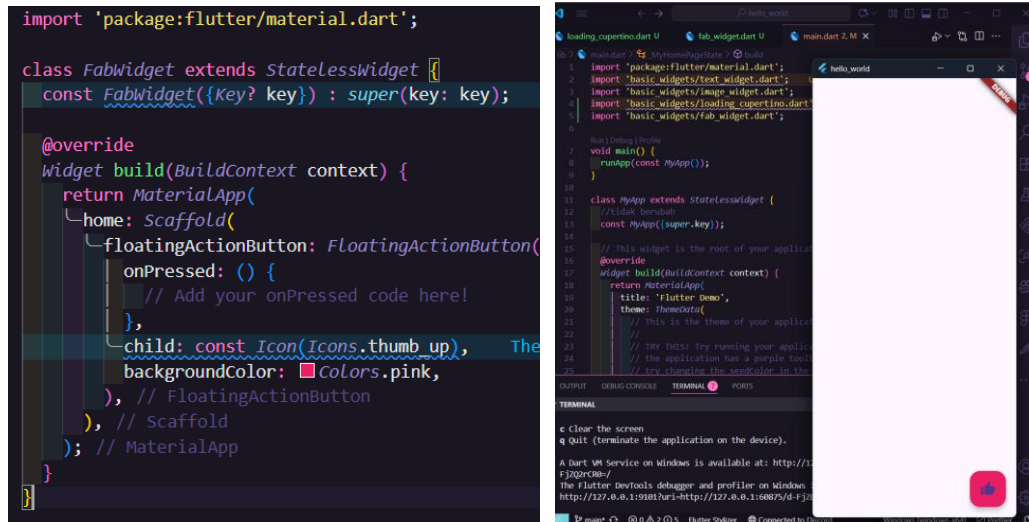
Buat file di `basic_widgets > loading_cupertino.dart`. Import stateless widget dari `material` dan `cupertino`. Lalu isi kode di dalam method `Widget build` adalah sebagai berikut.

```
loading_cupertino.dart U x  main.dart 1, M
lib > basic_widgets > loading_cupertino.dart > LoadingCupertino > build
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. Floating Action Button (FAB)

Button widget terdapat beberapa macam pada flutter yaitu FlatButton, DropdownButton, FlatButton, 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.



## 3. Scaffold Widget

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

Ubah isi kode main.dart seperti berikut:

```
import 'package:flutter/material.dart';

Run | Debug | Profile
void main() {
  runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({Key? key}) : super(key: key); Parameter 'key' could be null.

  // This widget is the root of your application.
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter Demo',
      theme: ThemeData(primarySwatch: Colors.red),
      home: const MyHomePage(title: 'My Increment App'),
    ); // MaterialApp
  }
}

class MyHomePage extends StatefulWidget {
  const MyHomePage({Key? key, required this.title}) : super(key: key);

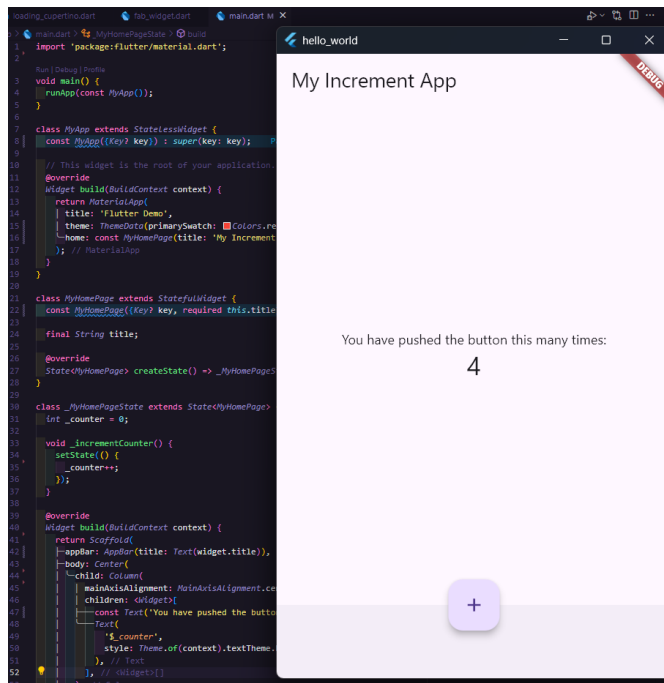
  final String title;

  @override
  State<MyHomePage> createState() => _MyHomePageState();
}

class _MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  void _incrementCounter() {
    setState(() {
      _counter++;
    });
  }
}
```

```
@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(title: Text(widget.title)),
    body: Center(
      child: Column(
        mainAxisAlignment: MainAxisAlignment.center,
        children: <Widget>[
          const Text('You have pushed the button this many times:'),
          Text(
            '$_counter',
            style: Theme.of(context).textTheme.headlineMedium,
          ), // Text
        ], // <Widget>[]
      ), // Column
    ), // Center
    bottomNavigationBar: BottomAppBar(child: Container(height: 50.0)),
    floatingActionButton: FloatingActionButton(
      onPressed: _incrementCounter,
      tooltip: 'Increment Counter',
      child: const Icon(Icons.add),
    ), // FloatingActionButton
    floatingActionButtonLocation: FloatingActionButtonLocation.centerDocked,
  ); // Scaffold
}
```



#### 4. Dialog Widget

Dialog widget pada flutter memiliki dua jenis dialog yaitu AlertDialog dan SimpleDialog. Ubah isi kode main.dart seperti berikut:



```

import 'package:flutter/material.dart';

Run | Debug | Profile
void main() {
  runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({Key? key}) : super(key: key); // Parameter 'key' c

  @override
  Widget build(BuildContext context) {
    return const MaterialApp(home: Scaffold(body: MyLayout()));
  }
}

class MyLayout extends StatelessWidget {
  const MyLayout({Key? key}) : super(key: key); // Parameter 'key' c

  @override
  Widget build(BuildContext context) {
    return Padding(
      padding: const EdgeInsets.all(8.0),
      child: ElevatedButton(
        child: const Text('Show alert'),
        onPressed: () {
          showAlertDialog(context);
        },
      ), // ElevatedButton
    ); // Padding
  }
}

showAlertDialog(BuildContext context) {
  // set up the button
  Widget okButton = TextButton(
    child: const Text("OK"),
    onPressed: () {
      Navigator.pop(context);
    },
  ); // TextButton

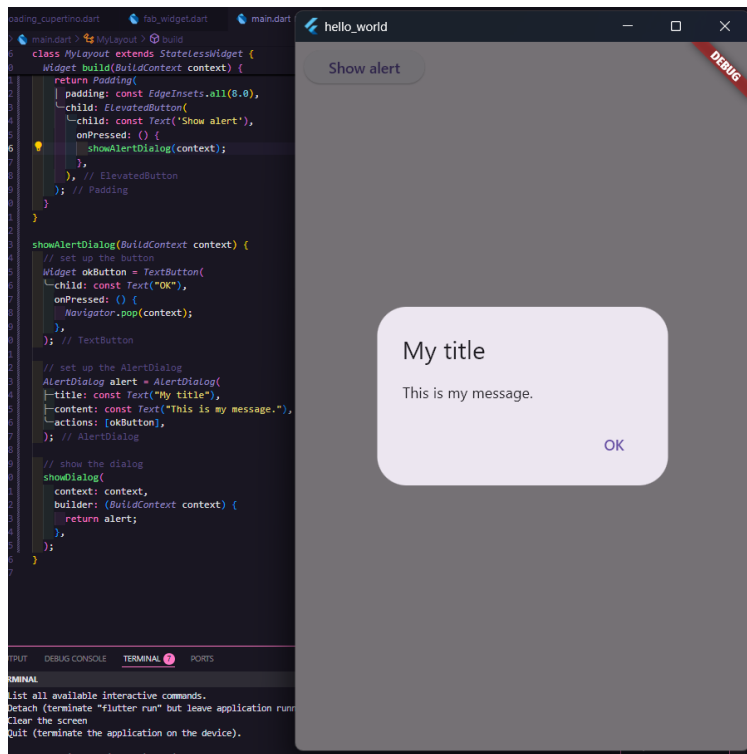
```

```

// set up the AlertDialog
AlertDialog alert = AlertDialog(
  title: const Text("My title"),
  content: const Text("This is my message."),
  actions: [okButton],
); // AlertDialog

// show the dialog
showDialog(
  context: context,
  builder: (BuildContext context) {
    return alert;
  },
);

```



## 5. Input dan Selection Widget

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 M x textfield_widget.dart U input_selection_widget.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); // Parameter 'key' c
10
11   @override
12   Widget build(BuildContext context) {
13     return const MaterialApp(home: InputSelectionWidget());
14   }
15 }
16

```

```

import 'package:flutter/material.dart';

class TextFieldWidget extends StatelessWidget {
  const TextFieldWidget({Key? key}) : super(key: key); // Paramet

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(title: const Text("Contoh TextField")),
        body: const Padding(
          padding: EdgeInsets.all(16.0),
          child: TextField(
            obscureText: false,
            decoration: InputDecoration(
              border: OutlineInputBorder(),
              labelText: 'Nama',
            ), // InputDecoration
          ), // TextField
        ), // Padding
      ), // Scaffold
    ); // MaterialApp
  }
}

```

```

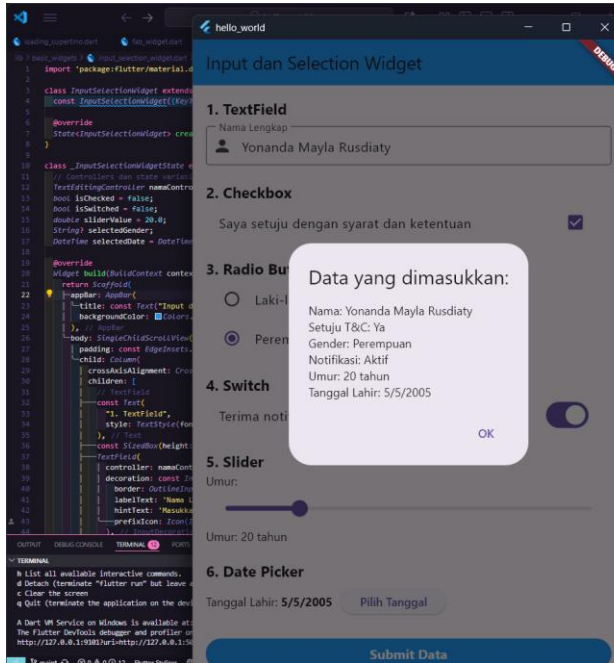
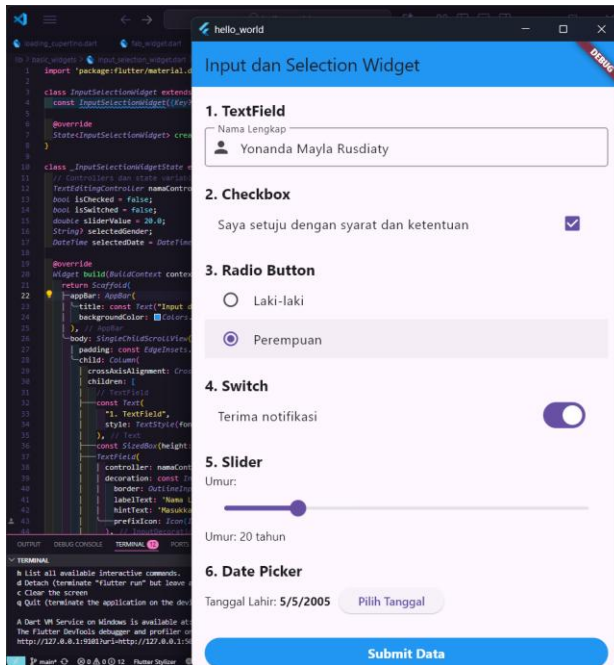
import 'package:flutter/material.dart';

class InputSelectionWidget extends StatefulWidget {
  const InputSelectionWidget({Key? key}) : super(key: key); // Parameter 'key'

  @override
  State<InputSelectionWidget> createState() => _InputSelectionWidgetState();
}

class _InputSelectionWidgetState extends State<InputSelectionWidget> {
  // Controllers dan state variables
  TextEditingController namaController = TextEditingController();
  bool isChecked = false;
  bool isSwitched = false;
  double sliderValue = 20.0;
  String? selectedGender;
  DateTime selectedDate = DateTime.now();
}

```



## 6. Date and Time Pickers

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

```
lib > main.dart > MyApp > build
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); // Parameter 'key' could be
9 |
10 |   @override
11 |   Widget build(BuildContext context) {
12 |     return const MaterialApp(
13 |       title: 'Contoh Date Picker',
14 |       home: MaterialApp(title: 'Contoh Date Picker'),
15 |     ); // MaterialApp
16 |   }
17 |
18 |
19 | class MyHomePage extends StatefulWidget {
20 |   const MyHomePage({Key? key, required this.title}) : super(key: key);
21 |
22 |   final String title;
23 |
24 |   @override
25 |   _MyHomePageState createState() => _MyHomePageState(); // Invalid use
26 | }
27 |
28 | class _MyHomePageState extends State<MyHomePage> {
29 |   // Variable/State untuk mengambil tanggal
30 |   DateTime selectedDate = DateTime.now();
31 |
32 |   // Initial SelectDate Flutter
```

```
loading_cupertino.dart lib_widget.dart main.dart M X simple_date_picker_widget.dart
27 class _MyHomePageState extends State<MyHomePage> {
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 );
40 if (picked != null && picked != selectedDate) {
41 setState(() {
42 selectedDate = picked;
43 });
44 }
45 }
46
47 @override
48 Widget build(BuildContext context) {
49 return Scaffold(
50 appBar: AppBar(title: Text(widget.title)),
51 body: Center(
52 child: Column(
53 mainAxisAlignment: MainAxisAlignment.min,
54 children: <div>
55 <div>
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```

```

fab_widgets.dart main.dart M simple_date_picker_widget.dart U X date_time_picker...
1 import 'dart:async';
2 import 'package:flutter/material.dart';
3
4 class SimpleDatePickerWidget extends StatefulWidget {
5   const SimpleDatePickerWidget({Key? key, required this.title}) : super(key: key);
6   final String title;
7
8   @override
9   _SimpleDatePickerWidgetState createState() => _SimpleDatePickerWidgetState();
10 }
11
12 class _SimpleDatePickerWidgetState extends State<SimpleDatePickerWidget> {
13   // Variable/State untuk tanggal
14   DateTime selectedDate = DateTime.now();
15
16   // Initial SelectDate Flutter
17   Future<void> _selectDate(BuildContext context) async {
18     // Initial DateTime Final Picked
19     final DateTime? picked = await showDatePicker(
20       context: context,
21       initialDate: selectedDate,
22       firstDate: DateTime(2015, 8),
23       lastDate: DateTime(2101),
24     );
25     if (picked != null && picked != selectedDate) {
26       setState(() {
27         selectedDate = picked;
28       });
29     }
30   }
31 }

```

```

@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(title: Text(widget.title)),
    body: Center(
      child: Column(
        mainAxisAlignment: MainAxisAlignment.min,
        children: <Widget>[]
      ),
    ),
  );
}

```

```

fab_widgets.dart main.dart M simple_date_picker_widget.dart U X date_time_picker_widget.dart U X
1 import 'dart:async';
2 import 'package:flutter/material.dart';
3
4 class DateTimePickerWidget extends StatefulWidget {
5   const DateTimePickerWidget({Key? key}) : super(key: key); // Parameter 'key' could be a super
6
7   @override
8   _DateTimePickerWidgetState createState() => _DateTimePickerWidgetState(); // Invalid use of a
9
10 }
11
12 class _DateTimePickerWidgetState extends State<DateTimePickerWidget> {
13   // Variable/State untuk tanggal dan waktu
14   DateTime selectedDate = DateTime.now();
15   TimeOfDay selectedTime = TimeOfDay.now();
16
17   // Function untuk memilih tanggal
18   Future<void> _selectDate(BuildContext context) async {
19     final DateTime? picked = await showDatePicker(
20       context: context,
21       initialDate: selectedDate,
22       firstDate: DateTime(2000),
23       lastDate: DateTime(2101),
24       locale: const Locale('id', 'ID'), // Bahasa Indonesia
25       helpText: 'Pilih Tanggal',
26       cancelText: 'Batal',
27       confirmText: 'OK',
28     );
29     if (picked != null && picked != selectedDate) {
30       setState(() {
31         selectedDate = picked;
32       });
33     }
34   }
35 }

```

```

// Function untuk memilih waktu
Future<void> _selectTime(BuildContext context) async {
  final TimeOfDay? picked = await showTimePicker(
    context: context,
    initialTime: selectedTime,
    helpText: 'Pilih Waktu',
    cancelText: 'Batal',
    confirmText: 'OK',
  );
  if (picked != null && picked != selectedTime) {
    setState(() {
      selectedTime = picked;
    });
  }
}

// Function untuk format tanggal Indonesia
String _formatDate(DateTime date) {
  List<String> bulan = [
    'Januari',
    'Februari',
    'Maret',
    'April',
    'Mei',
    'Juni',
    'Juli',
    'Agustus',
    'September',
    'Oktober',
    'November',
    'Desember',
  ];

  return "${date.day} ${bulan[date.month - 1]} ${date.year}";
}

```

```

basic_widgets > date_time_picker_widget.dart > ...
class _DateTimePickerWidgetState extends State<DateTimePickerWidget> {
  // Function untuk format waktu
  String _formatTime(TimeOfDay time) {
    String hour = time.hour.toString().padLeft(2, '0');
    String minute = time.minute.toString().padLeft(2, '0');
    return "$hour:$minute";
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: const Text('Date and Time Pickers'),
        backgroundColor: Colors.blue,
      ), // AppBar
      body: Padding(
        padding: const EdgeInsets.all(16.0),
        child: Column(
          crossAxisAlignment: CrossAxisAlignment.start,
          children: <Widget>[
            // Header
            const Text(
              'Date and Time Pickers Example',
              style: TextStyle(
                fontSize: 24,
                fontWeight: FontWeight.bold,
                color: Colors.blue,
              ), // TextStyle
            ), // Text
            const SizedBox(height: 30),
            // Date Picker Section
            Card(
              elevation: 3,
              child: Padding(
                padding: const EdgeInsets.all(16.0),
                child: Column(
                  crossAxisAlignment: CrossAxisAlignment.start,
                  children: [
                    const Text(
                      'Date Picker',
                      style: TextStyle(
                        fontSize: 18,

```

```

1  # Import necessary modules
2  import sys
3  import os
4  import random
5  import time
6  import math
7  import logging
8  import argparse
9  import json
10 import pickle
11
12 # Set logging level
13 logging.basicConfig(level=logging.INFO)
14
15 # Define the main function
16 def main():
17     # Parse command line arguments
18     parser = argparse.ArgumentParser(
19         description="A script to generate a random walk path on a grid."
20     )
21     parser.add_argument(
22         "-s", "--size", type=int, default=1000,
23         help="The size of the grid (width x height)."
24     )
25     parser.add_argument(
26         "-p", "--prob", type=float, default=0.5,
27         help="The probability of moving in a given direction."
28     )
29     parser.add_argument(
30         "-o", "--output", type=str, default="path.json",
31         help="The output file name."
32     )
33     args = parser.parse_args()
34
35     # Generate a random walk path
36     path = generate_path(args.size, args.prob)
37
38     # Save the path to a file
39     save_path(path, args.output)
40
41 # Define the generate_path function
42 def generate_path(size, prob):
43     # Initialize the path
44     path = []
45
46     # Generate the path
47     x, y = 0, 0
48     path.append((x, y))
49
50     for i in range(1, size):
51         # Choose a direction to move
52         direction = random.choice(["up", "down", "left", "right"])
53
54         # Calculate the new coordinates
55         x, y = move(x, y, direction)
56
57         # Check if the new coordinates are within the grid
58         if x < 0 or x > size - 1 or y < 0 or y > size - 1:
59             continue
60
61         # Check if the new coordinates are already in the path
62         if (x, y) in path:
63             continue
64
65         # Add the new coordinates to the path
66         path.append((x, y))
67
68     return path
69
70 # Define the move function
71 def move(x, y, direction):
72     if direction == "up":
73         y -= 1
74     elif direction == "down":
75         y += 1
76     elif direction == "left":
77         x -= 1
78     elif direction == "right":
79         x += 1
80
81     return x, y
82
83 # Define the save_path function
84 def save_path(path, output):
85     # Save the path to a file
86     with open(output, "w") as f:
87         json.dump(path, f)
88
89 # Run the main function
90 if __name__ == "__main__":
91     main()

```



