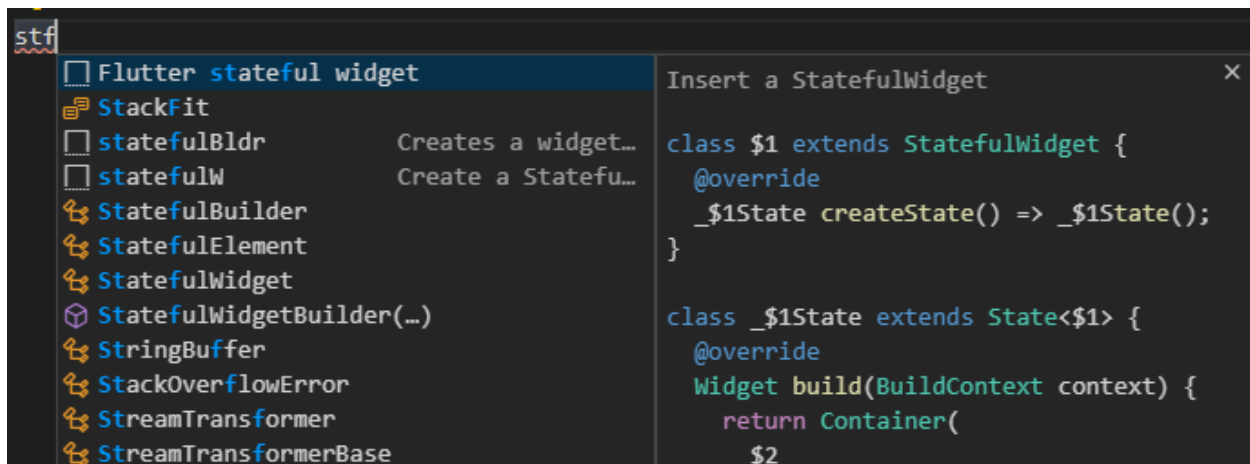


Materi 3 (Pertemuan 4)

StatefulWidget dan setState, dan pubspec.yaml

1. StatefulWidget dan setState

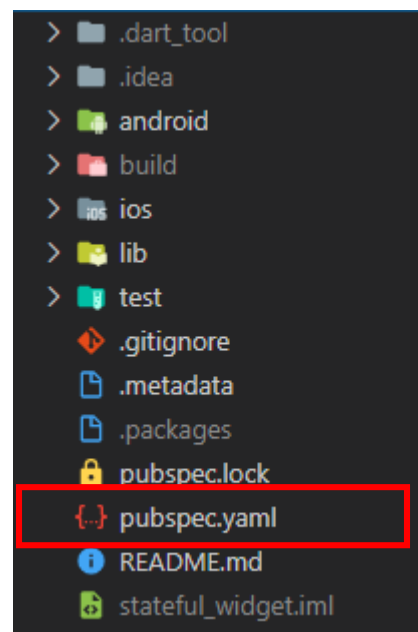
Jika **StatelessWidget** adalah untuk membuat widget tetap, maka **StatefulWidget** dapat membuat widget dinamis dan dapat dibuat menjadi interaktif dengan *user*. StatefulWidget dapat menggunakan method **setState** yang berisi logic untuk mengubah atau menyeting keadaan (*state*) sesuai yang diinginkan. Flutter menyediakan snippet untuk membuat/auto-complete widget. Untuk Stateful, Anda bisa menulis **stf**.



Beberapa widget dapat berjalan maksimal dengan Stateful, seperti widget-widget animasi.

2. pubspec.yaml

pubspec.yaml adalah file yang telah disediakan flutter sebagai media manager developer. Jika Anda ingin mengimport gambar atau typeface/font baru, maka Anda harus memasukkannya ke dalam pubspec.yaml ini.



```
43 # To add assets to your application, add an assets section, like this:
44 # assets:
45 # - images/a_dot_burr.jpeg
46 # - images/a_dot_ham.jpeg
47
48 # An image asset can refer to one or more resolution-specific "variants", see
49 # https://flutter.dev/assets-and-images/#resolution-aware.
50
51 # For details regarding adding assets from package dependencies, see
52 # https://flutter.dev/assets-and-images/#from-packages
53
54 # To add custom fonts to your application, add a fonts section here,
55 # in this "flutter" section. Each entry in this list should have a
56 # "family" key with the font family name, and a "fonts" key with a
57 # list giving the asset and other descriptors for the font. For
58 # example:
59 # fonts:
60 # - family: Schyler
61 #   fonts:
62 #     - asset: fonts/Schyler-Regular.ttf
63 #     - asset: fonts/Schyler-Italic.ttf
64 #       style: italic
65 # - family: Trajan Pro
66 #   fonts:
67 #     - asset: fonts/TrajanPro.ttf
68 #     - asset: fonts/TrajanPro_Bold.ttf
69 #       weight: 700
70 #
```

default pubspec.yaml (spot yang akan diedit)

```

40 # To add assets to your application, add an assets section, like this:
41 assets:
42   - assets/images/
43   # - images/a_dot_ham.jpeg
44 # An image asset can refer to one or more resolution-specific
45 # https://flutter.dev/assets-and-images/#resolution-aware.
46 # For details regarding adding assets from package dependencies
47 # https://flutter.dev/assets-and-images/#from-packages
48 # To add custom fonts to your application, add a fonts section
49 # in this "flutter" section. Each entry in this list should be
50 # "family" key with the font family name, and a "fonts" key
51 # list giving the asset and other descriptors for the font.
52 # example:
53 fonts:
54   - family: Montserrat
55     fonts:
56       - asset: assets/fonts/Montserrat-Regular.otf
57       - asset: assets/fonts/Montserrat-Light.otf
58         weight: 300
59       - asset: assets/fonts/Montserrat-Bold.ttf
60         weight: 600
61 #   - asset: fonts/Schyier-Italic.ttf
62 #     style: italic
63 #   - family: Trajan Pro
64 #     fonts:
65 #       - asset: fonts/TrajanPro.ttf
66 #       - asset: fonts/TrajanPro_Bold.ttf
67 #         weight: 700

```

pubspec.yaml yang telah diedit sesuai keperluan

Selain untuk asset gambar dan typeface font, pubspec.yaml juga menampung library yang ingin kita gunakan. Library dapat anda cari pada laman **pub.dev/flutter**.

Default

```

19 dependencies:
20   flutter:
21     sdk: flutter
22
23   # The following adds the Cupertino
24   # Use with the CupertinoIcons class
25   cupertino_icons: ^0.1.2

```

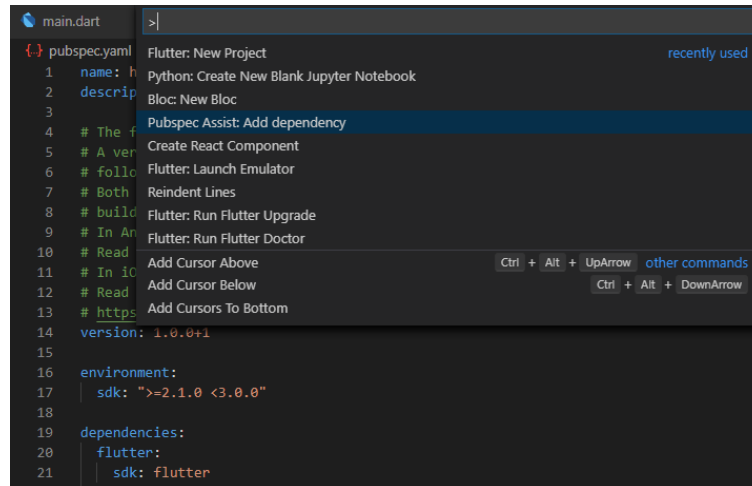
Setelah diisi

```

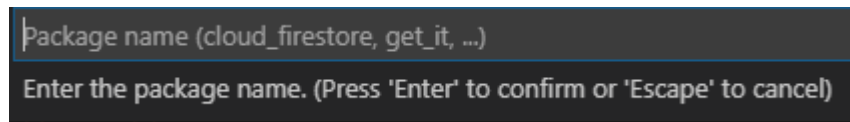
19 dependencies:
20   flutter:
21     sdk: flutter
22   cached_network_image: ^1.1.3
23   rive: ^0.0.1
24   graphql_flutter: ^3.0.0
25   carousel_slider: ^1.4.1
26   custom_radio: ^0.1.2
27   flutter_svg: ^0.17.1

```

Untuk menambahkan library yang diinginkan, pada VS Code Anda dapat mengunduh extension bernama **Pubspec Assist**. Lalu buka file pubspec.yaml dan gunakan shortcut **ctrl+shift+p**. Akan muncul pilihan seperti dibawah.



Lalu masukkan keyword yang Anda inginkan (berdasarkan dari pub.dev). Pastikan Anda terkoneksi dengan jaringan internet.



Dan library yang Anda inginkan akan secara otomatis tertulis di pubspec beserta versinya.

Berbeda dengan VS Code, pada Android Studio Anda harus menulis manual beserta versinya atau meng-copy dari pub.dev langsung.

flutter_bloc 3.2.0

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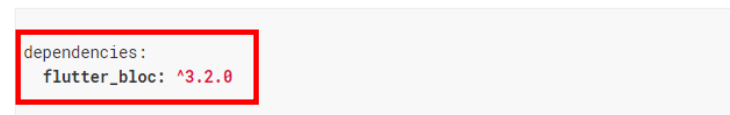
FLUTTER ANDROID IOS WEB

Readme Changelog Example **Installing** Versions 100

Use this package as a library

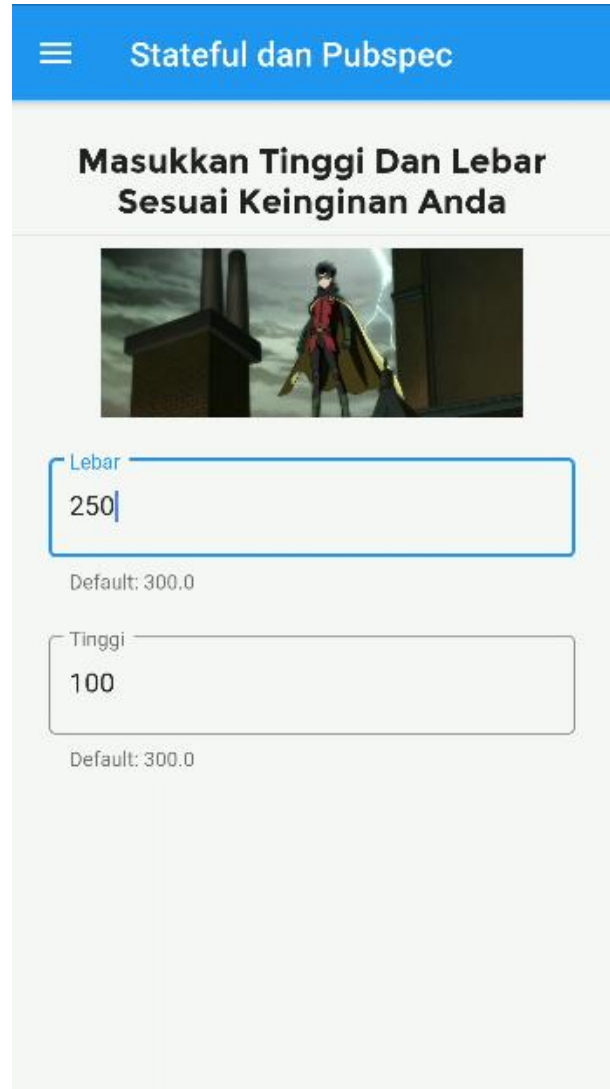
1. Depend on it

Add this to your package's pubspec.yaml file:

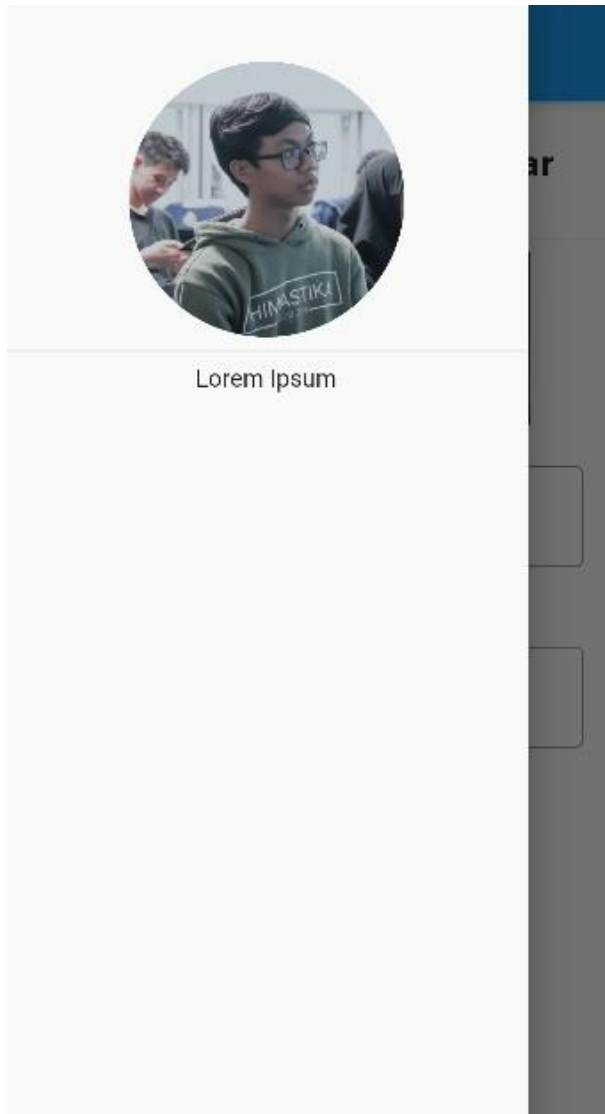


Perlu diperhatikan bahwa pubspec.yaml menggunakan **indent**. Disarankan **hanya menghapus pagar** atau menggunakan bantuan shortcut **ctrl+/-** pada baris yang ingin digunakan (gambar, typeface font atau library). Setelah selesai mengedit, save file dan Flutter akan menjalankan perintah **flutter pub get** untuk mendapatkan paket yang diminta. Untuk get library diharuskan terkoneksi dengan jaringan internet.

Contoh aplikasi Stateful Widget



Bonus, Drawer



Contoh source code

```
main.dart x homepage.dart
lib > main.dart > ...
1 import 'package:flutter/material.dart';
2 import 'package:hello_world/homepage.dart';
3
4 void main() => runApp(MyApp());
5
6 class MyApp extends StatelessWidget {
7   @override
8   Widget build(BuildContext context) {
9     return MaterialApp(
10      debugShowCheckedModeBanner: false,
11      theme: ThemeData(scaffoldBackgroundColor: Color(0xFFFF6F6F)),
12      home: Homepage(),
13    ); // MaterialApp
14  }
15 }
```

```

main.dart  homepage.dart X
lib > homepage.dart > ...
1 import 'package:flutter/material.dart';
2
3 class Homepage extends StatefulWidget {
4   @override
5   _HomepageState createState() => _HomepageState();
6 }
7
8 class _HomepageState extends State<Homepage> {
9   double _width = 300;
10  double _height = 300;
11
12  @override
13  Widget build(BuildContext context) {
14    return Scaffold(
15      appBar: AppBar(title: Text("Stateful dan Pubspec")),
16      drawer: Drawer(
17        child: Padding(
18          padding: EdgeInsets.only(top: 60.0),
19          child: Column(
20            children: <Widget>[
21              CircleAvatar(
22                radius: 80.0,
23                backgroundImage: NetworkImage(
24                  'https://avatars1.githubusercontent.com/u/58131058?s=460&v=4'),
25              Divider(),
26              Text("Lorem Ipsum")
27            ], // <Widget>[]
28          ), // Column
29        ), // Padding
30      ), // Drawer
31      body: SafeArea(
32        child: SingleChildScrollView(

```

```

31      body: SafeArea(
32        child: SingleChildScrollView(
33          child: Padding(
34            padding: EdgeInsets.only(top: 24.0),
35            child: Column(
36              children: <Widget>[
37                Padding(
38                  padding: EdgeInsets.symmetric(horizontal: 12.0),
39                  child: Text(
40                    "Masukkan Tinggi Dan Lebar Sesuai Keinginan Anda",
41                    textAlign: TextAlign.center,
42                    style: TextStyle(
43                      fontFamily: "Montserrat",
44                      fontWeight: FontWeight.w600,
45                      fontSize: 20.0,
46                    ), // TextStyle
47                  ), // Text
48                ), // Padding
49                Divider(),
50                AnimatedContainer(
51                  duration: Duration(milliseconds: 700),
52                  height: _height,
53                  width: _width,
54                  color: Colors.blueAccent,
55                  curve: Curves.fastOutSlowIn,
56                  child: Image.asset(
57                    "assets/images/myImage.png",
58                    fit: BoxFit.cover,
59                  ), // Image.asset
60                ), // AnimatedContainer
61                SizedBox(height: 24.0),
62                Padding(

```

```

61     SizedBox(height: 24.0),
62     Padding(
63       padding: EdgeInsets.symmetric(horizontal: 24.0),
64       child: Column(
65         children: <Widget>[
66           TextFormField(
67             keyboardType: TextInputType.number,
68             decoration: InputDecoration(
69               border: OutlineInputBorder(),
70               hintText: "Berapa Piksel?",
71               labelText: "Lebar",
72               helperText: "Default: 300.0",
73             ), // InputDecoration
74             onChanged: (String newWidth) {
75               setState(() {
76                 _width = double.parse(newWidth);
77               });
78             },
79           ), // TextFormField
80           SizedBox(height: 24.0),
81           TextFormField(
82             keyboardType: TextInputType.number,
83             decoration: InputDecoration(
84               border: OutlineInputBorder(),
85               hintText: "Berapa Piksel",
86               labelText: "Tinggi",
87               helperText: "Default: 300.0",
88             ), // InputDecoration
89             onChanged: (String newHeight) {
90               setState(() {
91                 _height = double.parse(newHeight);
92               });

```

```

92             });
93           },
94         ), // TextFormField
95       ], // <Widget>[]
96     ), // Column
97   ), // Padding
98 ], // <Widget>[]
99 ), // Column
100 ), // Padding
101 ), // SingleChildScrollView
102 ), // SafeArea
103 ); // Scaffold
104 }
105 }

```