Task Guide A02

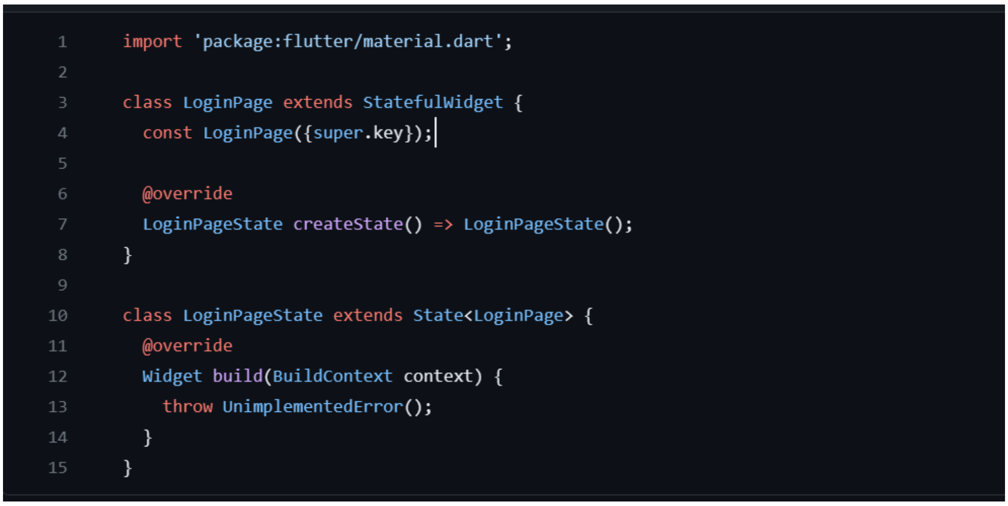
Introduction and setup project

1. Objective
   Student learn how to make Instagram's login screen
2. Requirement
   Hardware:
   - 4 GB RAM minimum, 8 GB RAM recommended
   - 15 GB of available disk space minimum (2 GB for Flutter SDK, 8 GB for Android Studio, 4 GB for AVD, and 1 GB for project's size)
   - 1280 x 800 minimum screen resolution
   - Intel processor with support for Intel VT-x, Intel EM64T (Intel 64), and Execute Disable (XD) Bit functionality

   Software:
   - Microsoft Windows 7/8/10/11 (64-bit)
   - JDK 8
   - Android Studio IDE
   - Git
3. Resource
   Guide, Supplementary, and Test File :
   https://drive.google.com/drive/folders/1WrVHMNwOUsuOZtfxEQ5pufhKCqBD7X62?usp=drive_link
4. Task Description
   In this task, student will be implementing a clone of Instagram's login page using Flutter and various widgets such as StatefulWidget, Scaffold, Column, Container, and more. This exercise will help student understand how to structure a Flutter application, utilize different widgets, and build a user interface resembling Instagram's login page.

Specification

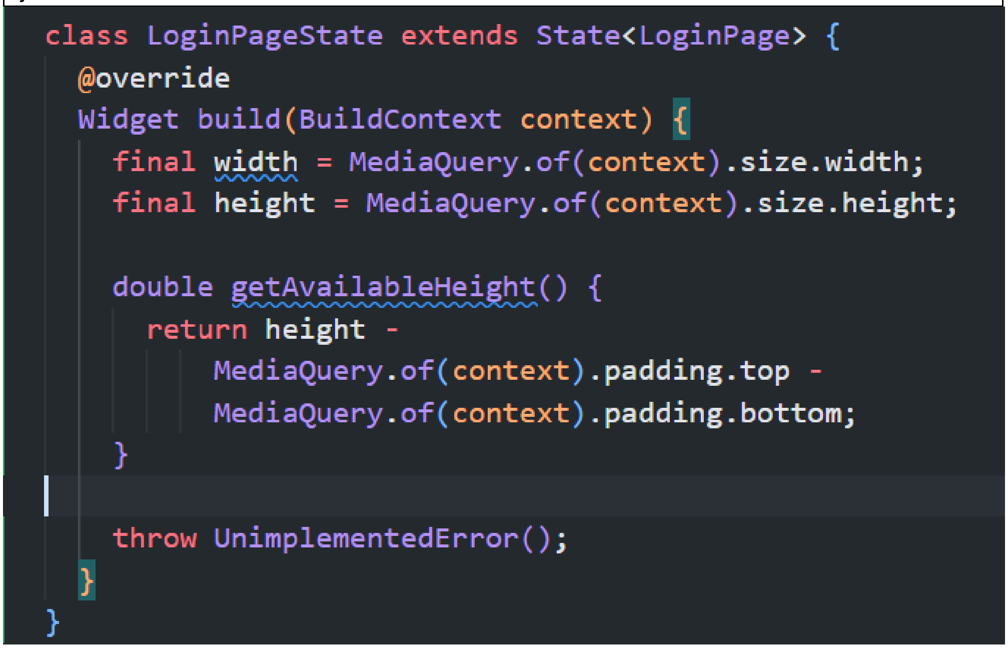
1) Run flutter pub get in the terminal or if you are using Microsoft Visual Studio Code you could click on **Get Package** button.
2) Using this specification make a list of some widgets below :
   1. Open login_page.dart file under lib\app\modules\login folder make sure it is extended from StatefulWidget



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

class LoginPage extends StatefulWidget {
  const LoginPage({super.key});

  @override
  LoginPageState createState() => LoginPageState();
}

class LoginPageState extends State<LoginPage> {
  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

   2. Add this media query to LoginPage class :

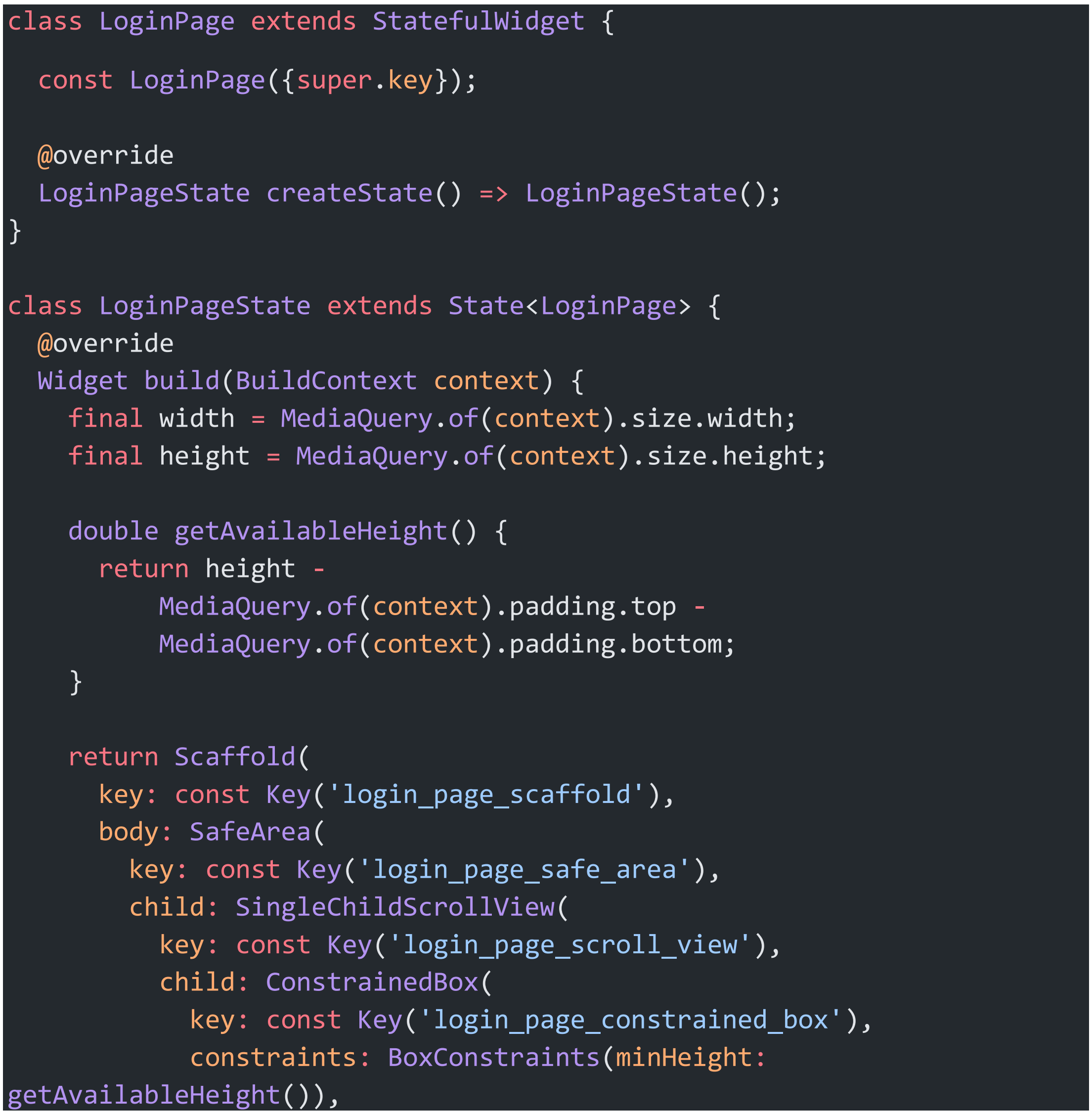
```
final width = MediaQuery.of(context).size.width;
final height = MediaQuery.of(context).size.height;
double getAvailableHeight() {
   return height –
   MediaQuery.of(context).padding.top –
   MediaQuery.of(context).padding.bottom;
}
```



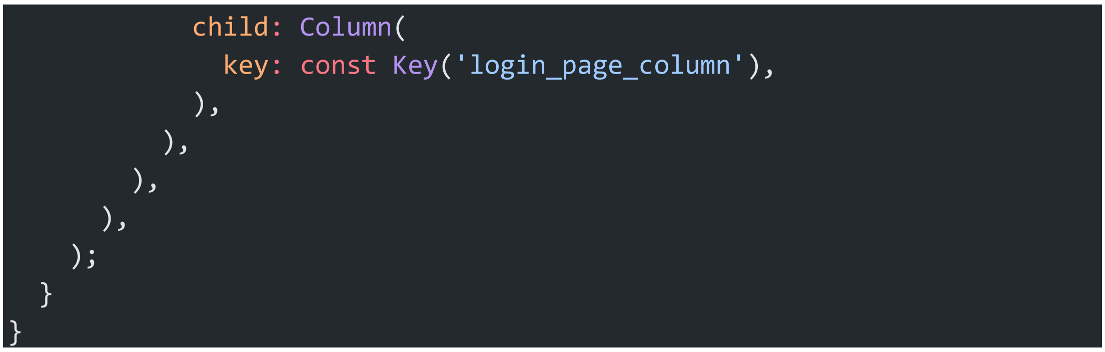
```dart
class LoginPageState extends State<LoginPage> {
  @override
  Widget build(BuildContext context) {
    final width = MediaQuery.of(context).size.width;
    final height = MediaQuery.of(context).size.height;

    double getAvailableHeight() {
      return height -
          MediaQuery.of(context).padding.top -
          MediaQuery.of(context).padding.bottom;
    }

    throw UnimplementedError();
  }
}
```

3. Using this widget specification, make number of widgets below to make the base of LoginPage

No	Widget	Property	Value
1	Scaffold	key	Key('login_page_scaffold')
		body	SafeArea(key: const Key('login_page_safe_area')
2	SafeArea	key	Key('login_page_safe_area')
		child	SingleChildScrollView(key: const Key('login_page_scroll_view')
3	SingleChildScrollView	key	Key('login_page_scroll_view')
		child	ConstrainedBox(key: const Key('login_page_constrained_box')
4	ConstrainedBox	Key	Key('login_page_constrained_box')
		constraints	BoxConstraints(minHeight: getAvailableHeight())
		child	Column(key: const Key('login_page_column')



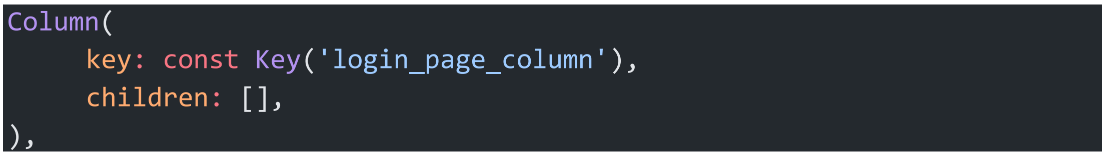
```
class LoginPage extends StatefulWidget {

  const LoginPage({super.key});

  @override
  LoginPageState createState() => LoginPageState();
}

class LoginPageState extends State<LoginPage> {
  @override
  Widget build(BuildContext context) {
    final width = MediaQuery.of(context).size.width;
    final height = MediaQuery.of(context).size.height;

    double getAvailableHeight() {
      return height -
          MediaQuery.of(context).padding.top -
          MediaQuery.of(context).padding.bottom;
    }

    return Scaffold(
      key: const Key('login_page_scaffold'),
      body: SafeArea(
        key: const Key('login_page_safe_area'),
        child: SingleChildScrollView(
          key: const Key('login_page_scroll_view'),
          child: ConstrainedBox(
            key: const Key('login_page_constrained_box'),
            constraints: BoxConstraints(minHeight:
getAvailableHeight()),
```



```
            child: Column(
              key: const Key('login_page_column'),
            ),
          ),
        ),
      ),
    );
  }
}
```

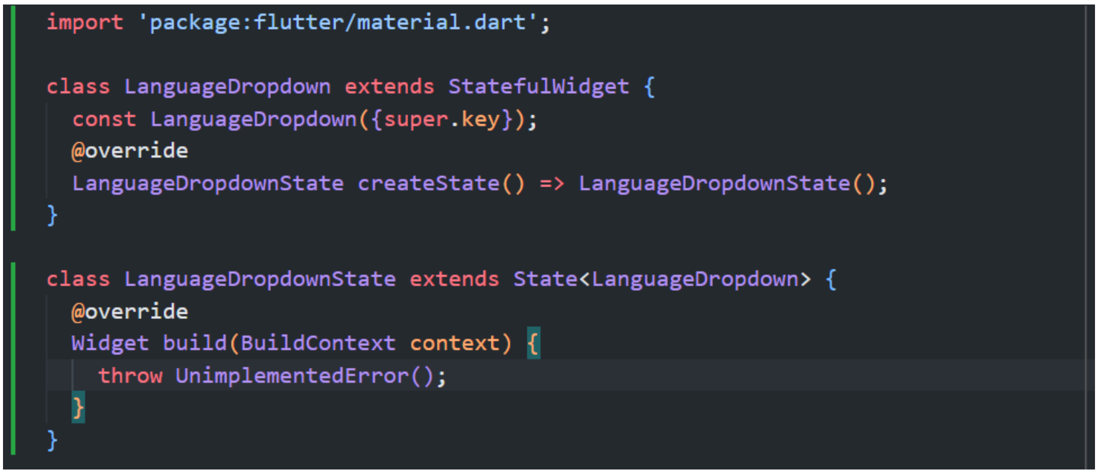
4. Modify Column with id : login_page_column into this based on this specification

No	Widget	Property	Value
5	Column	key	Key('login_page_column')
		children	[]



```
Column(
     key: const Key('login_page_column'),
     children: [],
),
```

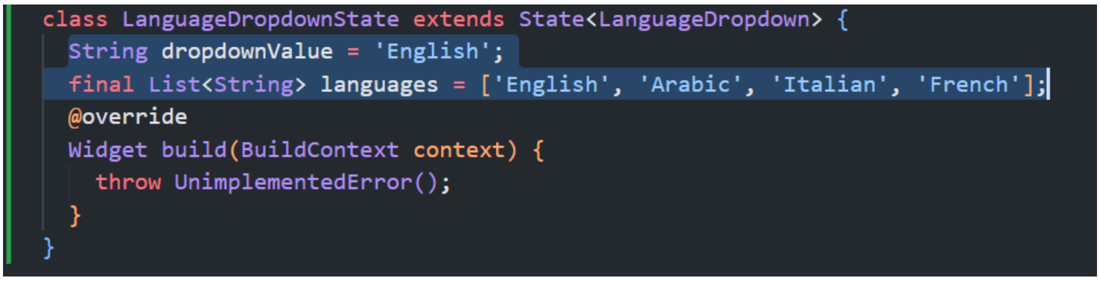
5. Open LanguageDropdown() on directory lib\app\modules\login\components\language_dropdown.dart make sure it is extended from StatefulWidget



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

class LanguageDropdown extends StatefulWidget {
  const LanguageDropdown({super.key});
  @override
  LanguageDropdownState createState() => LanguageDropdownState();
}

class LanguageDropdownState extends State<LanguageDropdown> {
  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

6. Add this line of code to LanguageDropdownState class

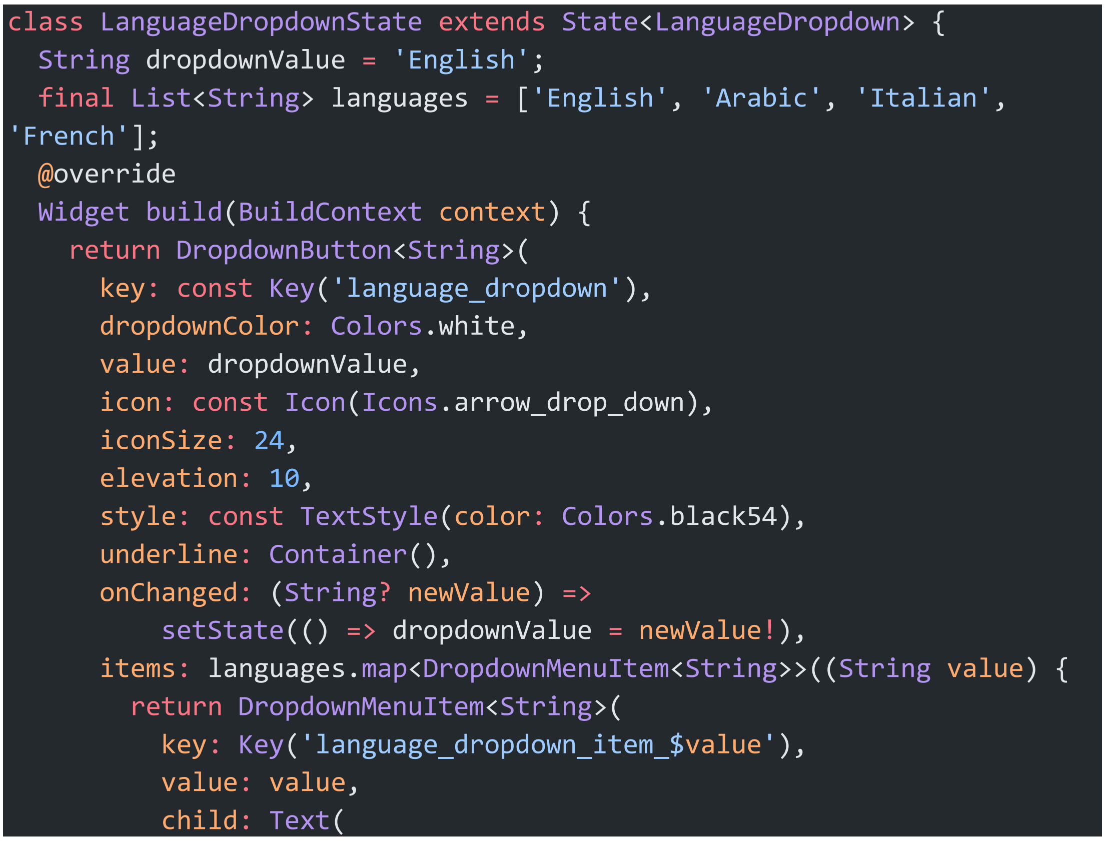
```
String dropdownValue = 'English';
final List<String> languages = ['English', 'Arabic', 'Italian', 'French'];
```



```
class LanguageDropdownState extends State<LanguageDropdown> {
  String dropdownValue = 'English';
  final List<String> languages = ['English', 'Arabic', 'Italian', 'French'];
  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

7. Add DropdownButton<String> widget as return following this specification

No	Widget	Property	Value
6	DropdownButton<String>	key	Key('language_dropdown')
		dropdownColor	Colors.white
		value	dropdownValue
		icon	Icon(Icons.arrow_drop_down)
		iconSize	24
		Elevation	10
		style	TextStyle(color: Colors.black54)
		underline	Container()
		onChanged	(String? newValue) => setState(() => dropdownValue = newValue!)
		Items	languages.map<DropdownMenuItem<String>>((String value) { return DropdownMenuItem<String>(key: Key('language_dropdown_item_$value'), value: value, child: Text(value, style: const TextStyle(fontSize: 16),),); }).toList(),



```
class LanguageDropdownState extends State<LanguageDropdown> {
  String dropdownValue = 'English';
  final List<String> languages = ['English', 'Arabic', 'Italian',
'French'];
  @override
  Widget build(BuildContext context) {
    return DropdownButton<String>(
      key: const Key('language_dropdown'),
      dropdownColor: Colors.white,
      value: dropdownValue,
      icon: const Icon(Icons.arrow_drop_down),
      iconSize: 24,
      elevation: 10,
      style: const TextStyle(color: Colors.black54),
      underline: Container(),
      onChanged: (String? newValue) =>
          setState(() => dropdownValue = newValue!),
      items: languages.map<DropdownMenuItem<String>>((String value) {
        return DropdownMenuItem<String>(
          key: Key('language_dropdown_item_$value'),
          value: value,
          child: Text(
            value,
            style: const TextStyle(fontSize: 16),
          ),
        );
      }).toList(),
    );
  }
}
```

8. Back to login_page.dart file add this import so that LanguageDropdown widget would be accessible from this file.

```
import 'modules/login/components/language_dropdown.dart';
```

9. Still at login_page.dart, find Column widget with key `login_page_column`. On children property, add a Container widget by following this specification

No	Widget	Property	Value
7	Container	key	Key('login_page_language_dropdown_container')
		width	width
		alignment	Alignment.topCenter
		child	LanguageDropdown()

```
Column(
     key: const Key('login_page_column'),
     children: [
       Container(
         key: const Key('login_page_language_dropdown_container'),
         width: width,
         alignment: Alignment.topCenter,
         child: const LanguageDropdown(),
       ),
     ],
)
```

**note if there’s an error on LanguageDropdown, make sure to import the LanguageDropdown widget on login_page.dart*

10. Still on the Column widget with id `login_page_column` add another widget for Children property following this specification

No	Widget	Property	Value
8	Column	key	Key('login_page_content_column')
		mainAxisAlignment	MainAxisAlignment.center
		children	[]

```
Column(
     key: const Key('login_page_column'),
     children: [
        Container(

         key: const Key('login_page_language_dropdown_container')
         …

        ),

        Column(
             key: const Key('login_page_content_column'),
             mainAxisAlignment: MainAxisAlignment.center,
             children: [],
         ),
     ],
)
```

11. Add Instagram logo using this Image.Asset widget following this specification

No	Widget	Property	Value
9	Image.Asset	key	Key('login_page_instagram_logo')
			assets/instagram_logo.png
		width	width * .5

```
Column(
     key: const Key('login_page_content_column'),
     mainAxisAlignment: MainAxisAlignment.center,
     children: [
        Image.asset(
          key: const Key('login_page_instagram_logo'),
          'assets/instagram_logo.png',
          width: width * .5,
        ),
     ],
),
```

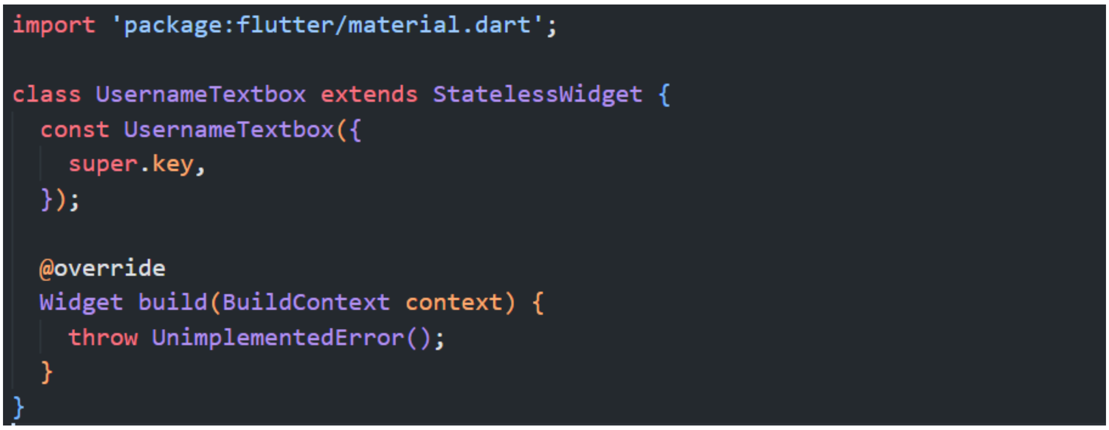
12. On the Column widget with key `login_page_column` add another widget for Children property following this specification

No	Widget	Property	Value
10	SizedBox	height	15

```
Column(
     key: const Key('login_page_content_column'),
     mainAxisAlignment: MainAxisAlignment.center,
     children: [
        ...
        const SizedBox(height: 15),
```

```
      ],
),
```

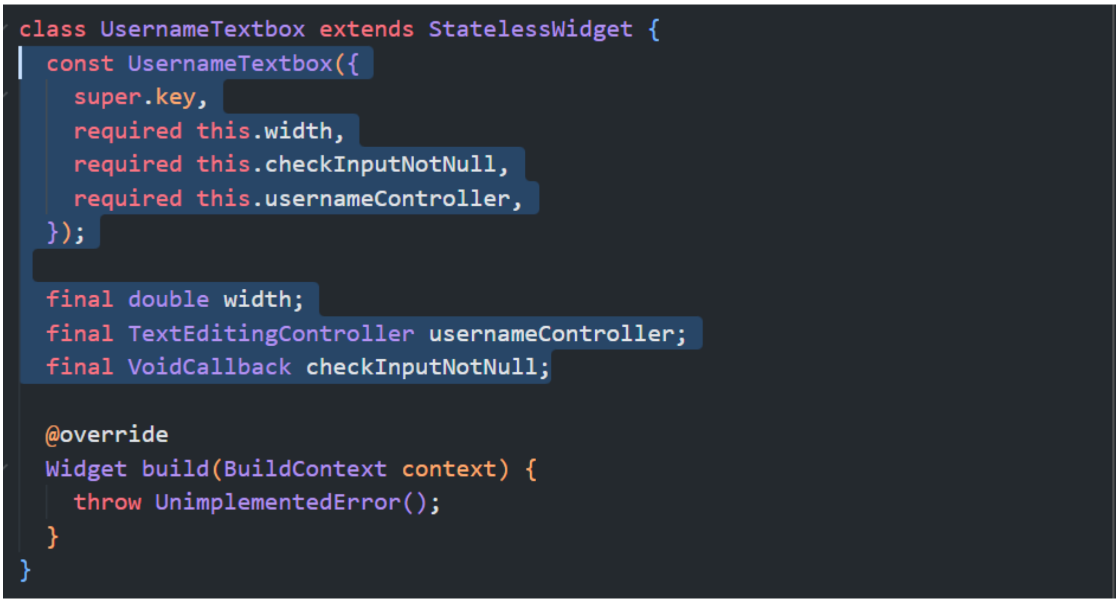
13. Move to username_textbox.dart file on directory lib\app\modules\login\components\username_textbox.dart make sure it’s extended from StatelessWidget



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

class UsernameTextbox extends StatelessWidget {
  const UsernameTextbox({
    super.key,
  });

  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

14. Add this parameters to the UsernameTextbox class

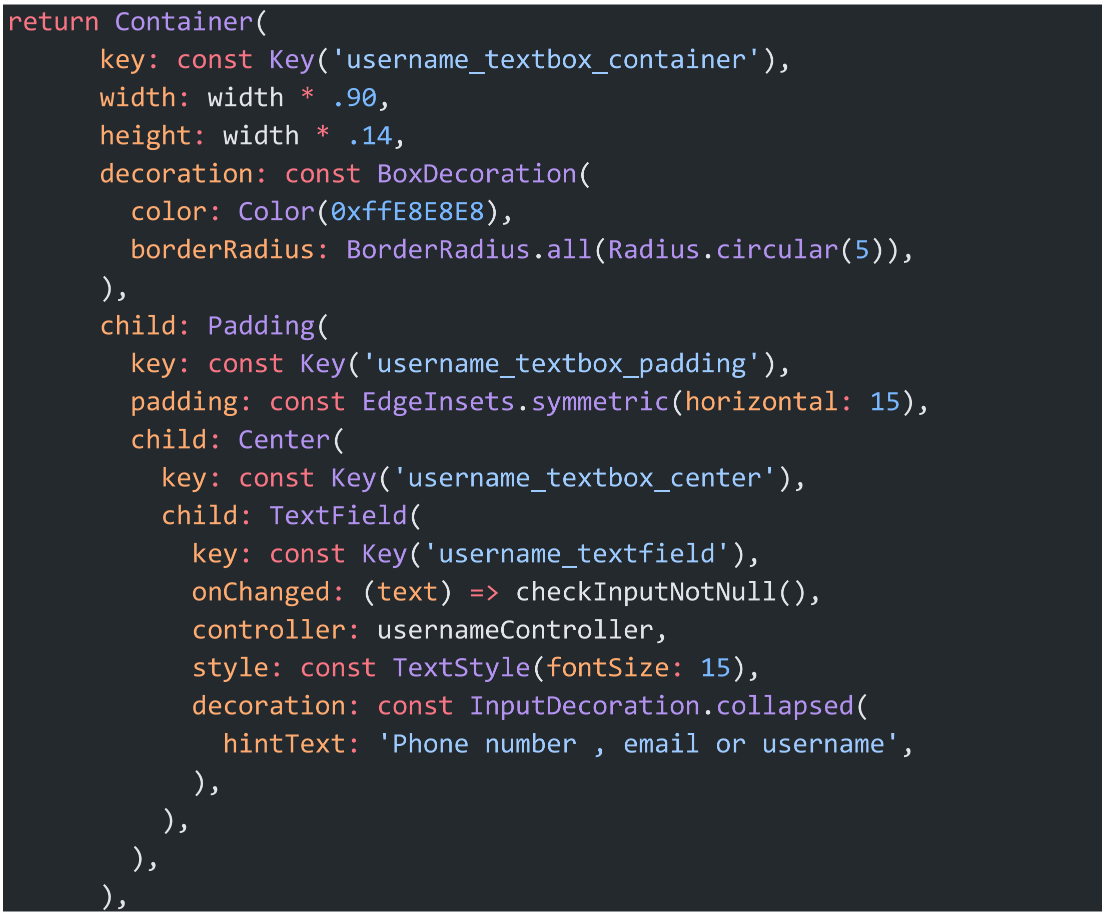
```
const UsernameTextbox({
    super.key,
    required this.width,
    required this.checkInputNotNull,
    required this.usernameController,
  });

  final double width;
  final TextEditingController usernameController;
  final VoidCallback checkInputNotNull;
```



```
class UsernameTextbox extends StatelessWidget {
  const UsernameTextbox({
    super.key,
    required this.width,
    required this.checkInputNotNull,
    required this.usernameController,
  });

  final double width;
  final TextEditingController usernameController;
  final VoidCallback checkInputNotNull;

  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

15. Add this Container widget as return following this specification:

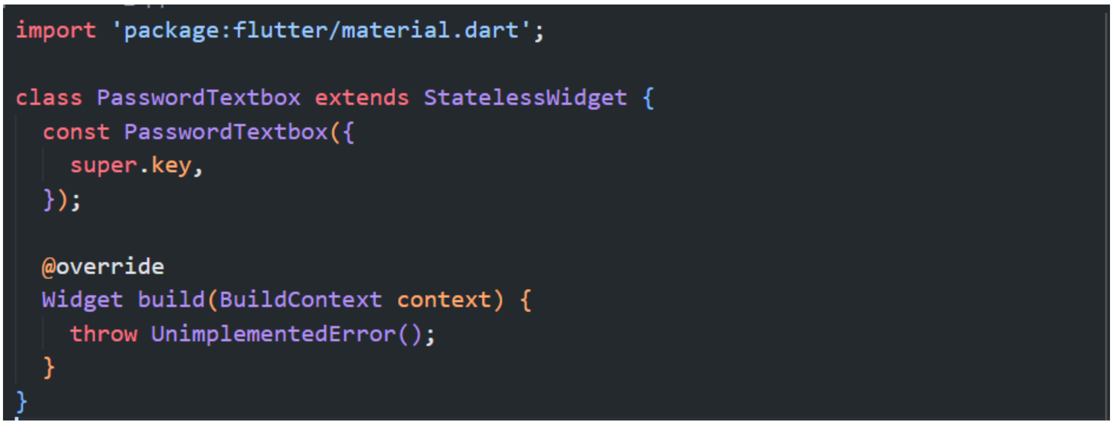
No	Widget	Property	Value
11	Container	key	Key('username_textbox_container')
		width	width * .90
		height	width * .14
		decoration	BoxDecoration(color: Color(0xffE8E8E8), borderRadius: BorderRadius.all(Radius.circular(5),),)
		child	Padding(key: const Key('username_textbox_padding')
Padding(key: const Key('username_textbox_padding') properties :			
12	Padding	key	Key('username_textbox_padding')
		padding	EdgeInsets.symmetric(horizontal: 15)
		child	Center(key: const Key('username_textbox_center')
Center(key: const Key('username_textbox_center') properties :			
13	Center	key	Key('username_textbox_center')
		child	TextField(key: const Key('username_textfield')
TextField(key: const Key('username_textfield') properties :			
14	TextField	key	Key('username_textfield')
		onChanged	(text) => checkInputNotNull()
		controller	usernameController
		style	TextStyle(fontSize: 15)
		decoration	InputDecoration.collapsed(hintText: 'Phone number , email or username')



```
return Container(
      key: const Key('username_textbox_container'),
      width: width * .90,
      height: width * .14,
      decoration: const BoxDecoration(
        color: Color(0xffE8E8E8),
        borderRadius: BorderRadius.all(Radius.circular(5)),
      ),
      child: Padding(
        key: const Key('username_textbox_padding'),
        padding: const EdgeInsets.symmetric(horizontal: 15),
        child: Center(
          key: const Key('username_textbox_center'),
          child: TextField(
            key: const Key('username_textfield'),
            onChanged: (text) => checkInputNotNull(),
            controller: usernameController,
            style: const TextStyle(fontSize: 15),
            decoration: const InputDecoration.collapsed(
              hintText: 'Phone number , email or username',
            ),
          ),
        ),
      ),
```

```
    );
```

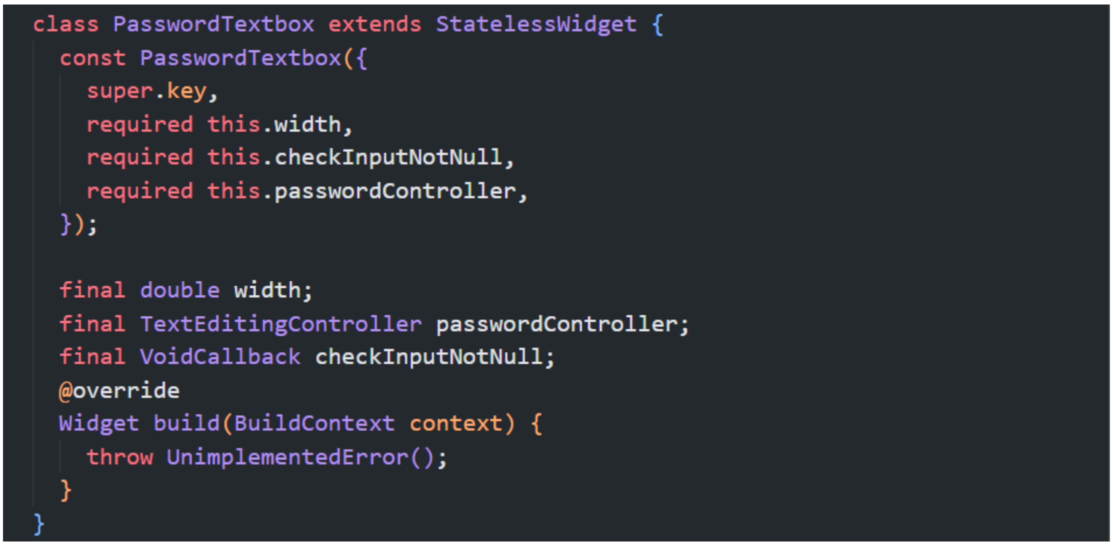
16. Move to password_textbox.dart file on directory lib\app\modules\login\components\ password_textbox.dart make sure it’s extended from StatelessWidget



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

class PasswordTextbox extends StatelessWidget {
  const PasswordTextbox({
    super.key,
  });

  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

17. Add this parameters to PasswordTextbox class

```
const PasswordTextbox({
   super.key,
   required this.width,
   required this.checkInputNotNull,
   required this.passwordController,
 });

 final double width;
 final TextEditingController passwordController;
 final VoidCallback checkInputNotNull;
```

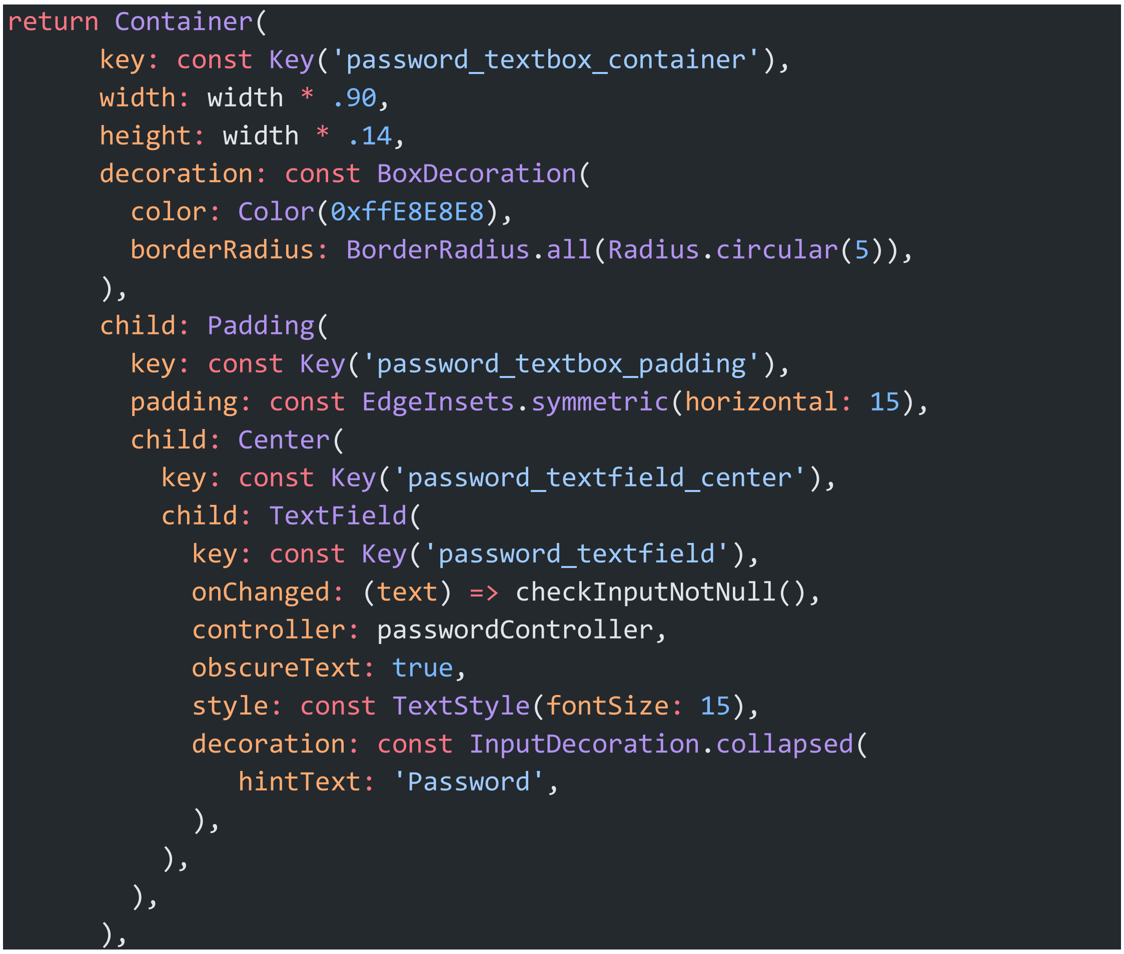


```
  class PasswordTextbox extends StatelessWidget {
    const PasswordTextbox({
      super.key,
      required this.width,
      required this.checkInputNotNull,
      required this.passwordController,
    });

    final double width;
    final TextEditingController passwordController;
    final VoidCallback checkInputNotNull;
    @override
    Widget build(BuildContext context) {
      throw UnimplementedError();
    }
  }
```

18. Add Container widget as return with this specification

No	Widget	Property	Value

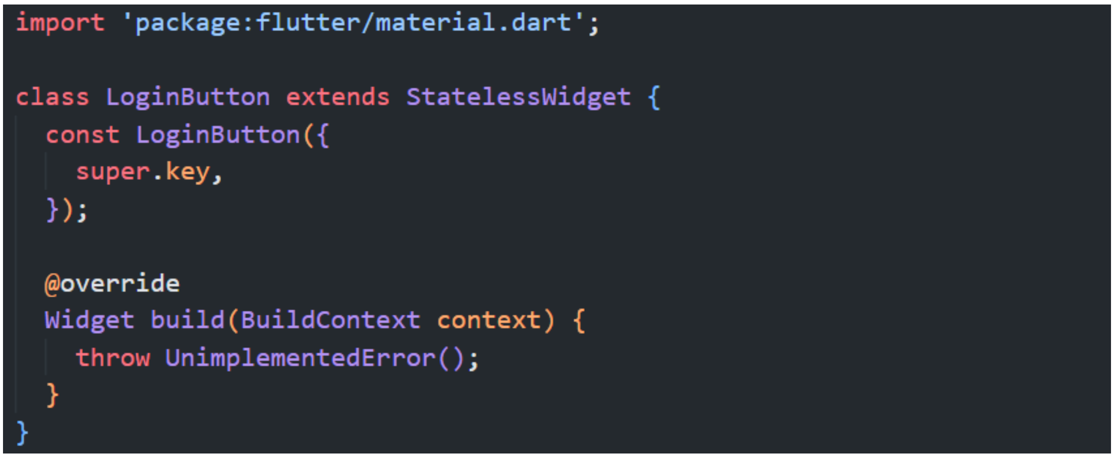
15	Container	key	Key('password_textbox_container')
		width	width * .90
		height	width * .14
		decoration	BoxDecoration(color: Color(0xffE8E8E8), borderRadius: BorderRadius.all(Radius.circular(5)),)
		child	Padding(key: const Key('password_textbox_padding')
Padding(key: const Key('password_textbox_padding') properties :			
16	Padding	key	Key('password_textbox_padding')
		padding	EdgeInsets.symmetric(horizontal: 15)
		child	Center(key: const Key('password_textfield')
Center(key: const Key('password_textfield') properties :			
17	Center	key	Key('password_textfield_center')
		child	TextField(key: const Key('password_textfield')
TextField(key: const Key('password_textfield') properties :			
18	TextField	key	Key('password_textfield')
		onChanged	(text) => checkInputNotNull()
		controller	passwordController
		obscureText	true
		style	TextStyle(fontSize: 15)
		decoration	InputDecoration.collapsed(hintText: 'Password')



```
return Container(
      key: const Key('password_textbox_container'),
      width: width * .90,
      height: width * .14,
      decoration: const BoxDecoration(
        color: Color(0xffE8E8E8),
        borderRadius: BorderRadius.all(Radius.circular(5)),
      ),
      child: Padding(
        key: const Key('password_textbox_padding'),
        padding: const EdgeInsets.symmetric(horizontal: 15),
        child: Center(
          key: const Key('password_textfield_center'),
          child: TextField(
            key: const Key('password_textfield'),
            onChanged: (text) => checkInputNotNull(),
            controller: passwordController,
            obscureText: true,
            style: const TextStyle(fontSize: 15),
            decoration: const InputDecoration.collapsed(
               hintText: 'Password',
            ),
          ),
        ),
      ),
```

```
);
```

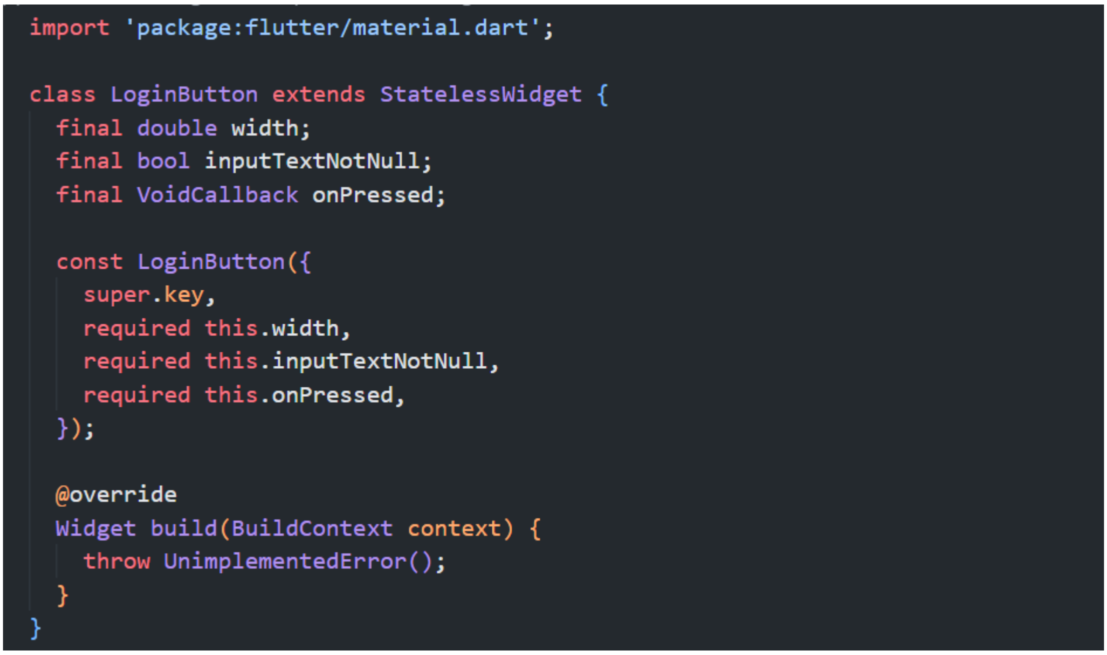
19. Move to login_button.dart file on directory lib\app\modules\login\components\login_button.dart make sure it’s extended from StatelessWidget



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

class LoginButton extends StatelessWidget {
  const LoginButton({
    super.key,
  });

  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

20. Add this parameters to LoginButton class

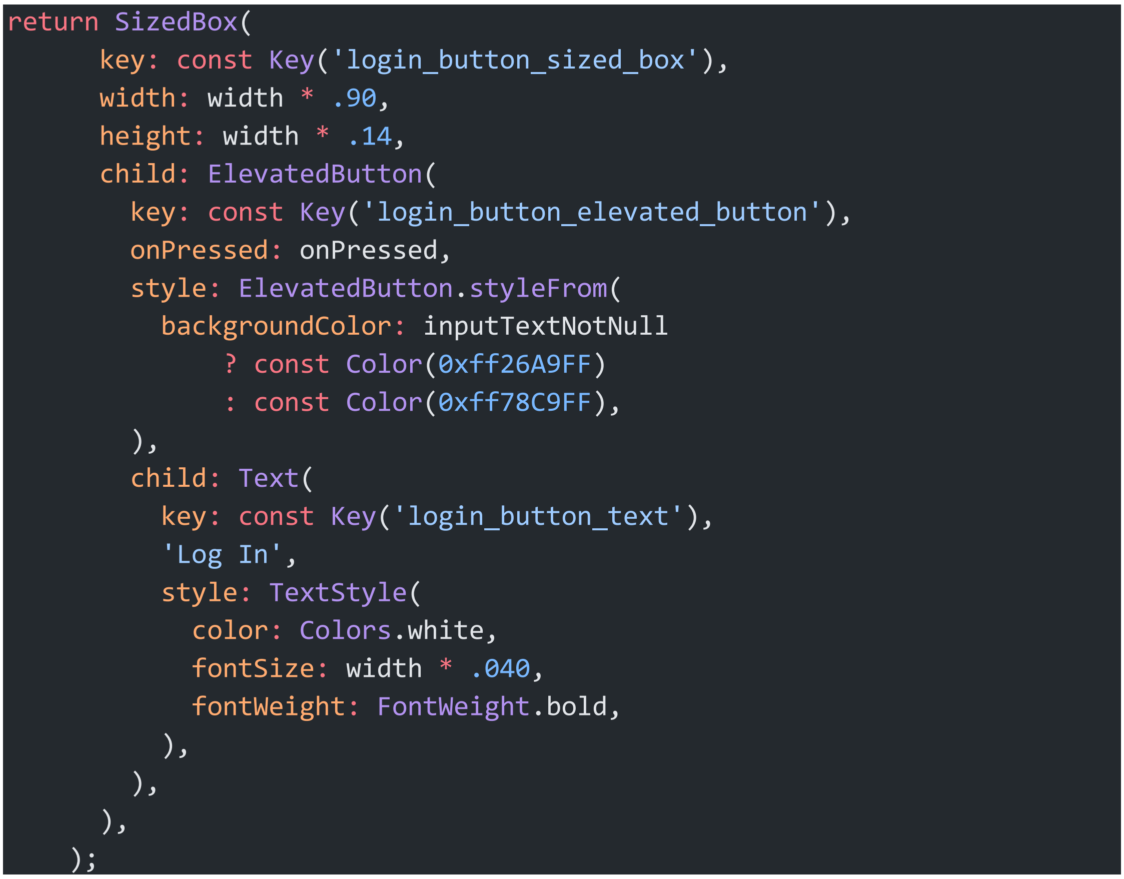
```
final double width;
final bool inputTextNotNull;
final VoidCallback onPressed;

const LoginButton({
  super.key,
  required this.width,
  required this.inputTextNotNull,
  required this.onPressed,
});
```



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

class LoginButton extends StatelessWidget {
  final double width;
  final bool inputTextNotNull;
  final VoidCallback onPressed;

  const LoginButton({
    super.key,
    required this.width,
    required this.inputTextNotNull,
    required this.onPressed,
  });

  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

21. Add SizedBox widget as return following this specifications

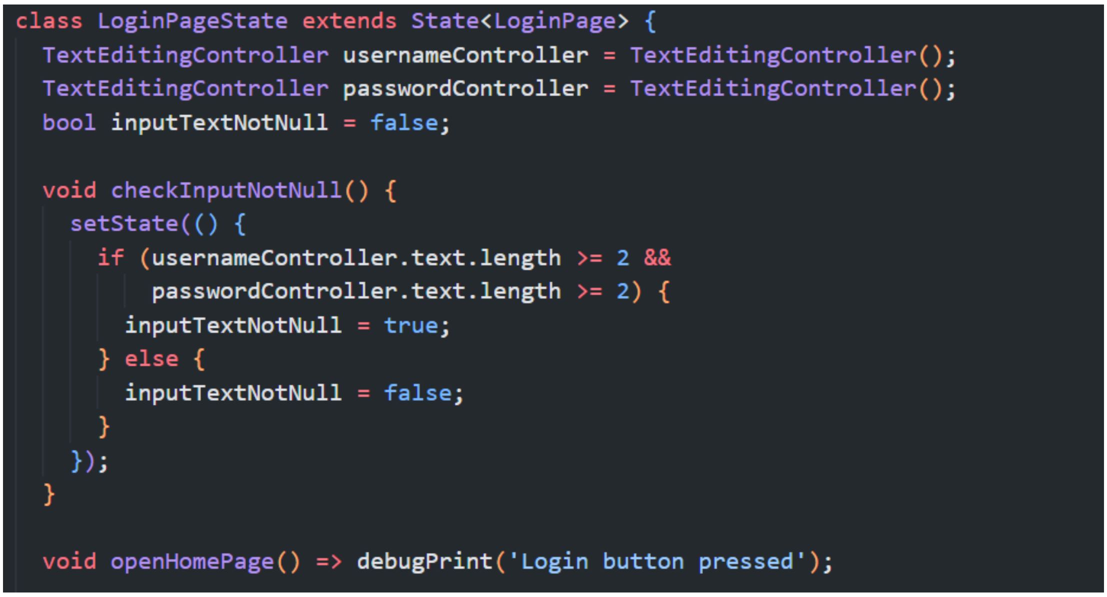
No	Widget	Property	Value
19	SizedBox	key	Key('login_button_sized_box')
		width	width * .90
		height	width * .14
		child	ElevatedButton(key: const Key('login_button_elevated_button')
ElevatedButton(key: const Key('login_button_elevated_button') properties :			
20	ElevatedButton	key	Key('login_button_elevated_button')
		onPressed	onPressed
		style	ElevatedButton.styleFrom(backgroundColor: inputTextNotNull ? const Color(0xff26A9FF) : const Color(0xff78C9FF),)
		child	Text(key: const Key('login_button_text')
Text(key: const Key('login_button_text') properties :			
21	Text	key	Key('login_button_text')
		value	'Log In'
		style	TextStyle(color: Colors.white, fontSize: width * .040, fontWeight: FontWeight.bold)



```
return SizedBox(
      key: const Key('login_button_sized_box'),
      width: width * .90,
      height: width * .14,
      child: ElevatedButton(
        key: const Key('login_button_elevated_button'),
        onPressed: onPressed,
        style: ElevatedButton.styleFrom(
          backgroundColor: inputTextNotNull
              ? const Color(0xff26A9FF)
              : const Color(0xff78C9FF),
        ),
        child: Text(
          key: const Key('login_button_text'),
          'Log In',
          style: TextStyle(
            color: Colors.white,
            fontSize: width * .040,
            fontWeight: FontWeight.bold,
          ),
        ),
      ),
    );
```

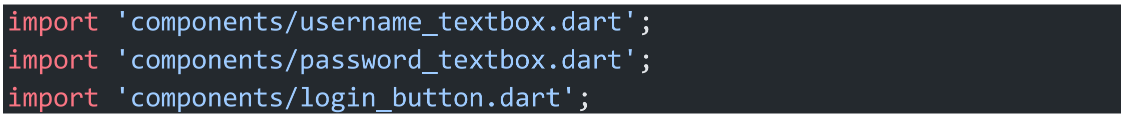
22. Back to login_page.dart file and add these lines of code on LoginPageState class

```
TextEditingController usernameController = TextEditingController();
TextEditingController passwordController = TextEditingController();
bool inputTextNotNull = false;

 void checkInputNotNull() {
  setState(() {
   if (usernameController.text.length >= 2 &&
     passwordController.text.length >= 2) {
    inputTextNotNull = true;
   } else {
    inputTextNotNull = false;
   }
  });
 }

 void openHomePage() => debugPrint('Login button pressed');
```



```
class LoginPageState extends State<LoginPage> {
  TextEditingController usernameController = TextEditingController();
  TextEditingController passwordController = TextEditingController();
  bool inputTextNotNull = false;

  void checkInputNotNull() {
    setState(() {
      if (usernameController.text.length >= 2 &&
          passwordController.text.length >= 2) {
        inputTextNotNull = true;
      } else {
        inputTextNotNull = false;
      }
    });
  }

  void openHomePage() => debugPrint('Login button pressed');
```

23. Still on login_page.dart file add this import so that UsernameTextbox, PasswordTextbox, and LoginButton widgets that previously made would be accessible from this file.

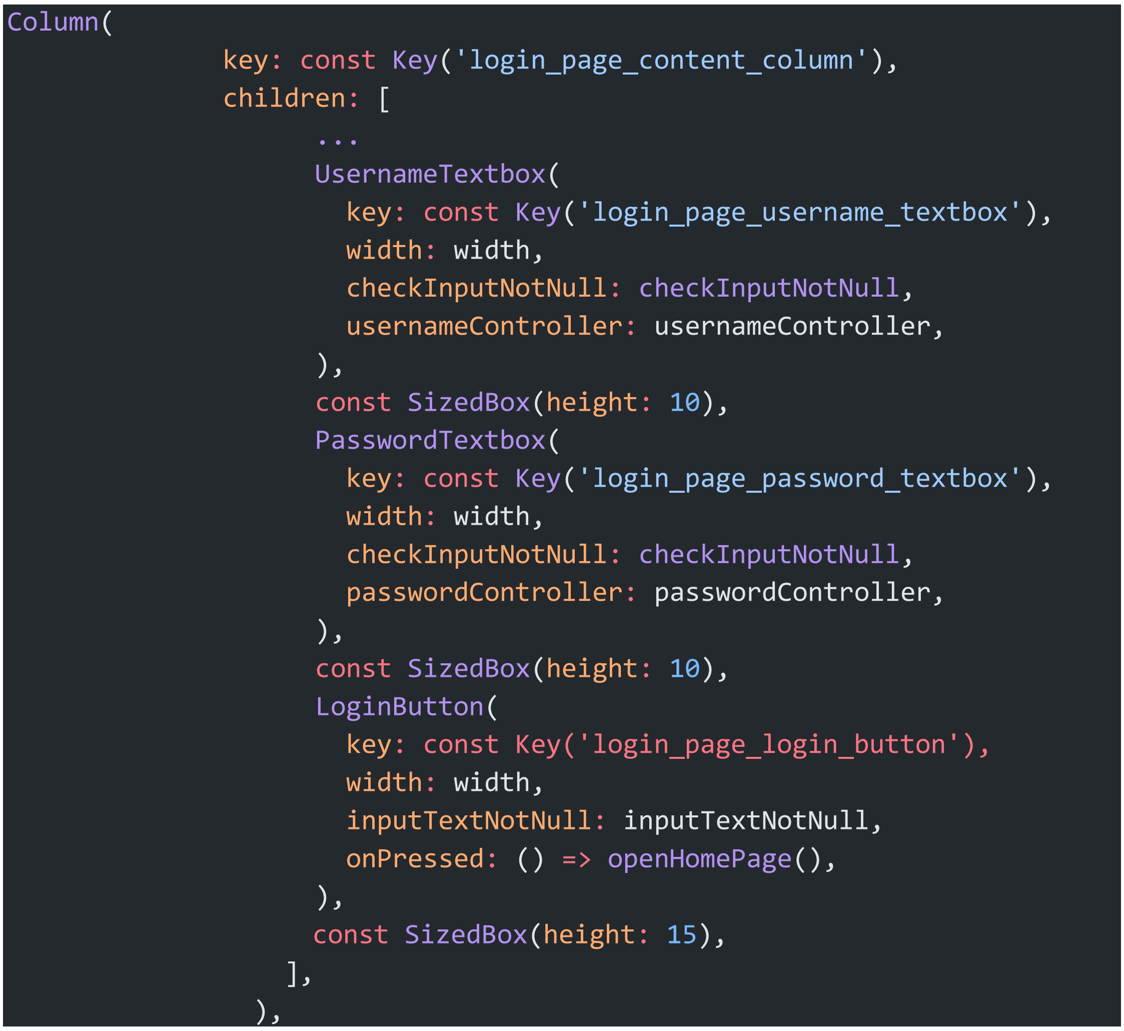


```
import 'components/username_textbox.dart';
import 'components/password_textbox.dart';
import 'components/login_button.dart';
```

24. Find Column widget with key login_page_content_column, on child properties add UsernameTextbox, PasswordTextbox, and LoginButton following this requirements

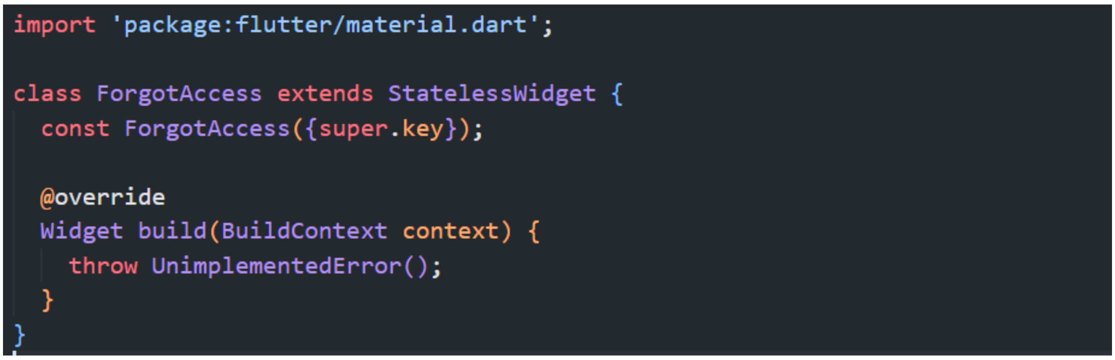
No	Widget	Property	Value
22	UsernameTextbox	Key	const Key('login_page_username_textbox')
		width	width
		checkInputNotNull	checkInputNotNull

		usernameController	usernameController
23	SizedBox	Height	10
24	PasswordTextbox	Key	const Key('login_page_password_textbox')
		width	width
		checkInputNotNull	checkInputNotNull
		passwordController	passwordController
25	SizedBox	height	10
26	LoginButton	Key	const Key('login_page_login_button')
		width	width
		inputTextNotNull	inputTextNotNull
		onPressed	() => openHomePage()
27	SizedBox	height	15



```
Column(
              key: const Key('login_page_content_column'),
              children: [
                    ...
                    UsernameTextbox(
                      key: const Key('login_page_username_textbox'),
                      width: width,
                      checkInputNotNull: checkInputNotNull,
                      usernameController: usernameController,
                    ),
                    const SizedBox(height: 10),
                    PasswordTextbox(
                      key: const Key('login_page_password_textbox'),
                      width: width,
                      checkInputNotNull: checkInputNotNull,
                      passwordController: passwordController,
                    ),
                    const SizedBox(height: 10),
                    LoginButton(
                      key: const Key('login_page_login_button'),
                      width: width,
                      inputTextNotNull: inputTextNotNull,
                      onPressed: () => openHomePage(),
                    ),
                    const SizedBox(height: 15),
                  ],
                ),
```

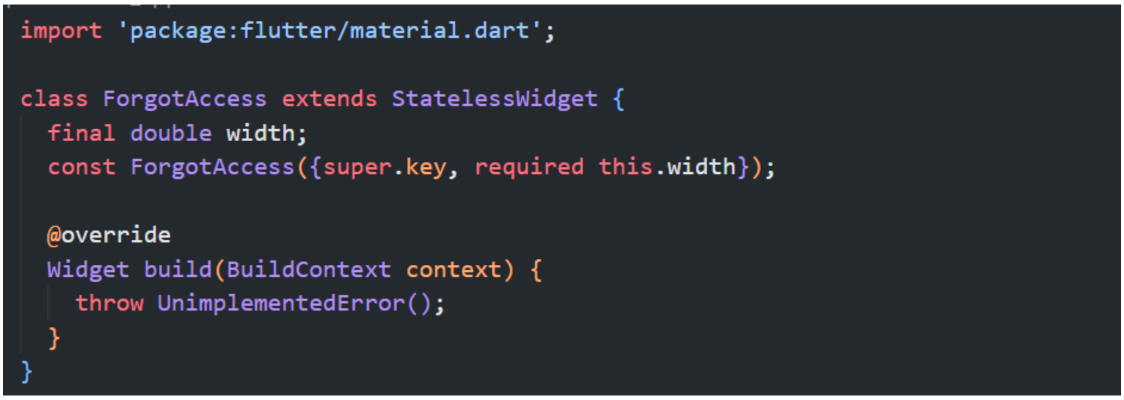
25. Move to forgot_access.dart file under directory lib\app\modules\login\components\forgot_access.dart make sure it’s extended from StatelessWidget



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

class ForgotAccess extends StatelessWidget {
  const ForgotAccess({super.key});

  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

26. Add this parameters to ForgotAccess class

```
final double width;
const ForgotAccess({super.key, required this.width});
```



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

class ForgotAccess extends StatelessWidget {
  final double width;
  const ForgotAccess({super.key, required this.width});

  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

27. Add Row widget as return following this specifications :

No	Widget	Property	Value
28	Row	key	Key('forgot_access_row')
		mainAxisAlignment	MainAxisAlignment.center
		children	Text(key:Key('forgot_access_text'), GestureDetector(key : Key('get_help_gesture_detector'))
Text(key:Key('forgot_access_text') properties :			
29	Text	key	Key('forgot_access_text')
		value	'Forgot your login details? '
		style	TextStyle(fontSize: 13, fontWeight: FontWeight.normal, color: Colors.black)
GestureDetector(key : Key('get_help_gesture_detector')) properties :			
30	GestureDetector	key	Key('get_help_gesture_detector')
		onTap	() => debugPrint('Get help')
		child	Text(key: Key('get_help_text')
Text(key: Key('get_help_text') properties :			
31	Text	key	Key('get_help_text')
		value	'Get help'
		style	TextStyle(

			fontSize: 13, color: Color(0xff002588), fontWeight: FontWeight.bold)

```
return Row(
      key: const Key('forgot_access_row'),
      mainAxisAlignment: MainAxisAlignment.center,
      children: [
        const Text(
          'Forgot your login details? ',
          style: TextStyle(
            fontSize: 13,
            fontWeight: FontWeight.normal,
            color: Colors.black,
          ),
          key: Key('forgot_access_text'),
        ),
        GestureDetector(
          key: const Key('get_help_gesture_detector'),
          onTap: () => debugPrint('Get help'),
          child: const Text(
            'Get help',
            style: TextStyle(
              fontSize: 13,
              color: Color(0xff002588),
              fontWeight: FontWeight.bold,
            ),
            key: Key('get_help_text'),
          ),
        ),
      ],
    );
```

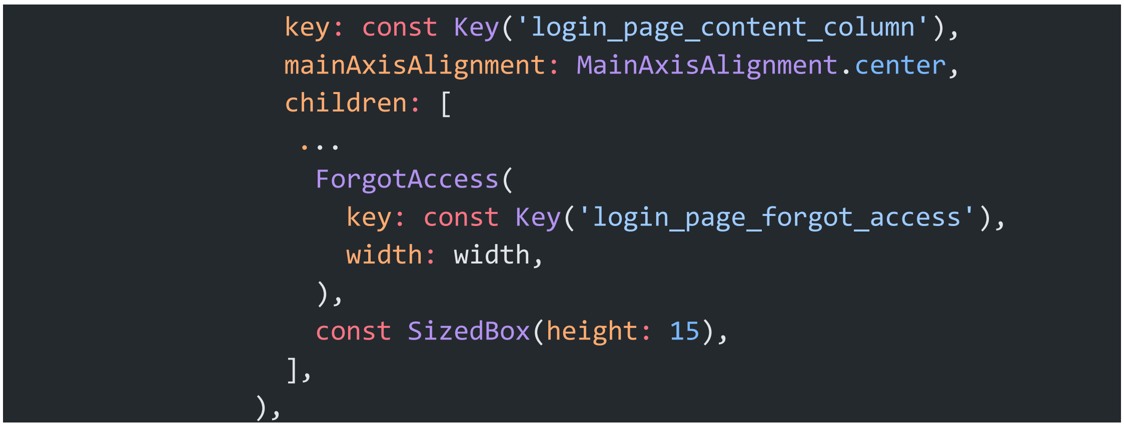
28. Back to login_page.dart file add this import so that ForgotAccess widget would be accessible from this page.

```
import 'components/forgot_access.dart';
```

29. Move into Column widget within login_page.dart with key `login_page_column` and add ForgotAccess and SizedBox widget as children following this specification

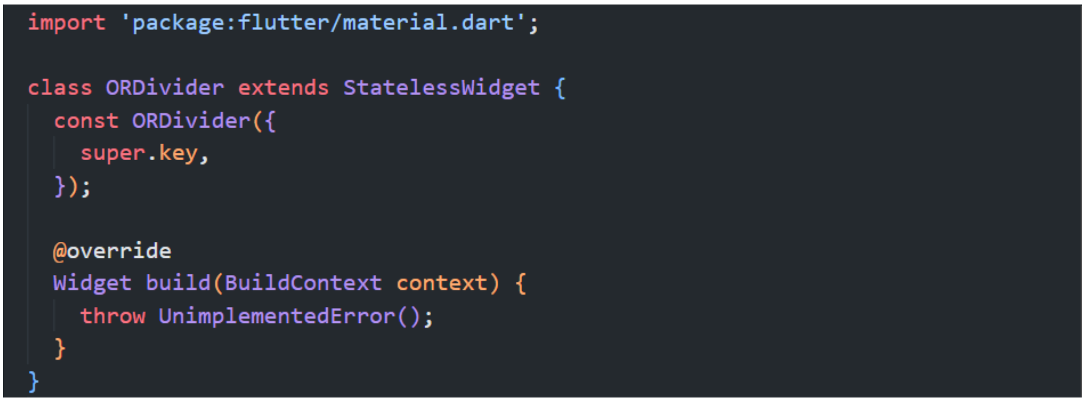
No	Widget	Property	Value
32	ForgotAccess	Key	const Key('login_page_forgot_access')
		width	Width
33	SizedBox	height	15

```
Column(
```



```
  key: const Key('login_page_content_column'),
  mainAxisAlignment: MainAxisAlignment.center,
  children: [
   ...
    ForgotAccess(
      key: const Key('login_page_forgot_access'),
      width: width,
    ),
    const SizedBox(height: 15),
  ],
),
```

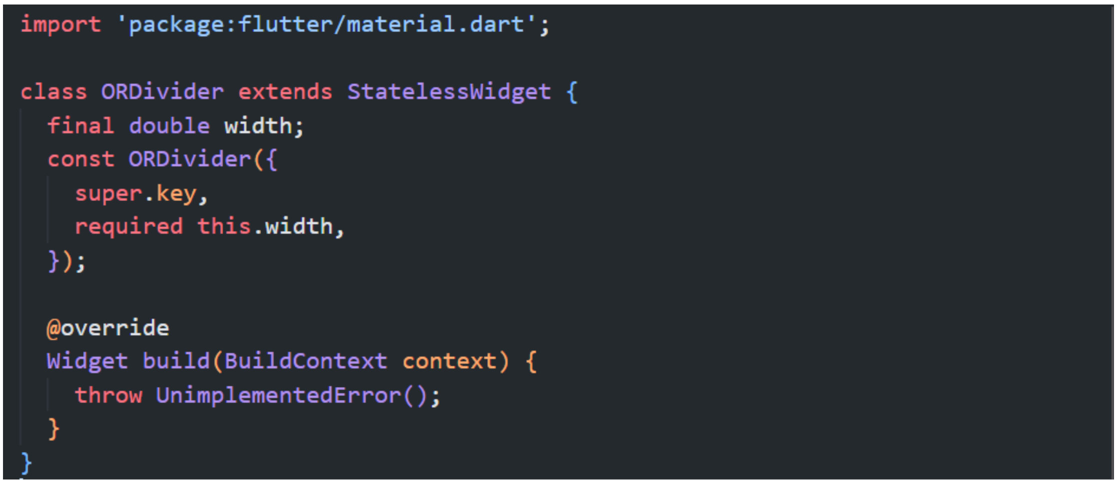
30. Move to or_divider.dart file under directory lib\app\modules\login\components\ or_divider.dart make sure it’s extended from StatelessWidget



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

class ORDivider extends StatelessWidget {
  const ORDivider({
    super.key,
  });

  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

31. Add this parameters to ORDivider class

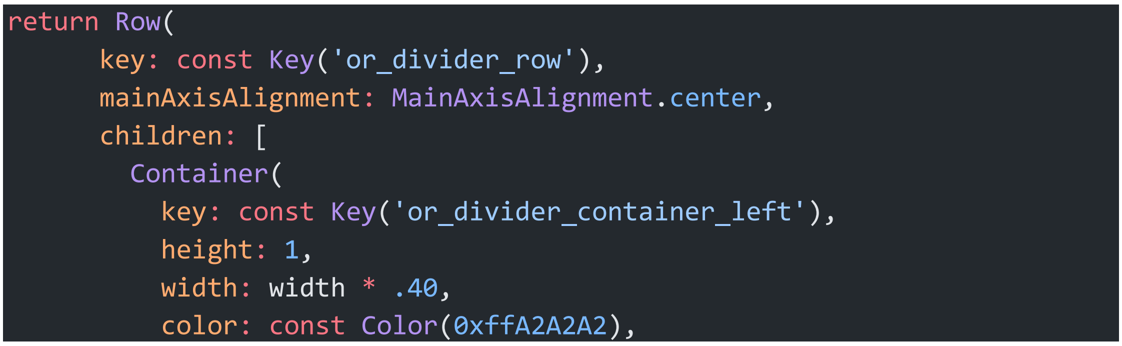
```
final double width;
const ORDivider({
  super.key,
  required this.width,
});
```



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

class ORDivider extends StatelessWidget {
  final double width;
  const ORDivider({
    super.key,
    required this.width,
  });

  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

32. Add Row widget as return following this specifications :

No	Widget	Property	Value
34	Row	key	Key('or_divider_row')
		mainAxisAlignment	MainAxisAlignment.center
		children	Container(key: const Key('or_divider_container_left'), SizedBox(width: 10), Text(key: const Key('or_divider_text')), SizedBox(width: 10), Container(key: const Key('or_divider_container_right'))
Container(key: const Key('or_divider_container_left') properties :			
35	Container	key	Key('or_divider_container_left')
		height	1
		width	width * .40
		color	Color(0xffA2A2A2)
Text(key: const Key('or_divider_text')) properties :			
36	Text	key	Key('or_divider_text')
		value	'OR'
		style	TextStyle(fontSize: width * .040)
Container(key: const Key('or_divider_container_right')) properties :			
37	Container	key	Key('or_divider_container_right')
		height	1
		width	width * .40
		color	Color(0xffA2A2A2)



```
return Row(
      key: const Key('or_divider_row'),
      mainAxisAlignment: MainAxisAlignment.center,
      children: [
        Container(
          key: const Key('or_divider_container_left'),
          height: 1,
          width: width * .40,
          color: const Color(0xffA2A2A2),
        ),
        const SizedBox(width: 10),
        Text(
          key: const Key('or_divider_text'),
          'OR',
          style: TextStyle(fontSize: width * .040),
        ),
        const SizedBox(width: 10),
        Container(
          key: const Key('or_divider_container_right'),
          height: 1,
          width: width * .40,
          color: const Color(0xffA2A2A2),
        ),
      ],
    );
```

33. Back to login_page.dart file, add this import so ORDivider widget would be accessible from this page

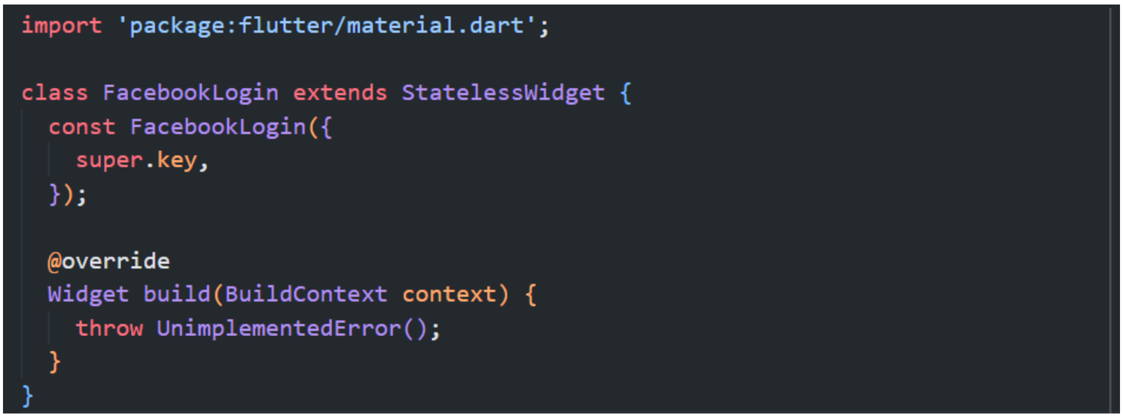
```
import 'components/or_divider.dart';
```

34. Move to Column widget with key `login_page_content_column`, on child properties add ORDivider and SizedBox widget following this specifications:

No	Widget	Property	Value
38	ORDivider	Key	const Key('login_page_or_divider')
		width	width
39	SizedBox	height	20

```
Column(
  key: const Key('login_page_content_column'),
  mainAxisAlignment: MainAxisAlignment.center,
  children: [
    ...
    ORDivider(
      key: const Key('login_page_or_divider'),
      width: width,
    ),
    const SizedBox(height: 20),
  ],
)
```

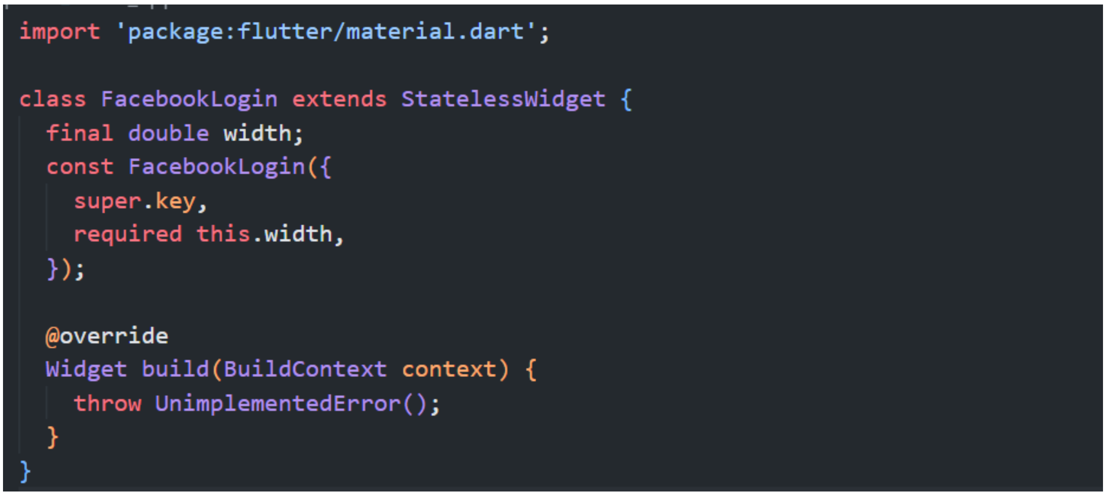
35. Move to facebook_login.dart file under directory lib\app\modules\login\components\facebook_login.dart make sure it’s extended from StatelessWidget



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

class FacebookLogin extends StatelessWidget {
  const FacebookLogin({
    super.key,
  });

  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

36. Add this parameters to FacebookLogin class

```
final double width;
const FacebookLogin({
  super.key,
  required this.width,
});
```



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

class FacebookLogin extends StatelessWidget {
  final double width;
  const FacebookLogin({
    super.key,
    required this.width,
  });

  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

37. Add Row widget as return following this specifications

No	**Widget**	**Property**	**Value**
40	Row	key	Key('facebook_login')
		mainAxisAlignment	MainAxisAlignment.center
		children	Image.asset(key:Key('facebook_logo'), SizedBox(width:5), Text(key: Key('facebook_login_text'))
Image.asset(key:Key('facebook_logo') properties :			
41	Image	key	Key('facebook_logo')
		value	'assets/facebook.png'
		height	width * .060
Text(key: Key('facebook_login_text')) properties :			
43	Text	key	Key('facebook_login_text')
		value	'Login with facebook'
		style	TextStyle(color: const Color(0xff1877f2),

			fontSize: width * .040, fontWeight: FontWeight.w800)

```
return Row(
      key: const Key('facebook_login'),
      mainAxisAlignment: MainAxisAlignment.center,
      children: [
        Image.asset(
          'assets/facebook.png',
          key: const Key('facebook_logo'),
          height: width * .060,
        ),
        const SizedBox(width: 5),
        Text(
          'Login with facebook',
          key: const Key('facebook_login_text'),
          style: TextStyle(
            color: const Color(0xff1877f2),
            fontSize: width * .040,
            fontWeight: FontWeight.w800,
          ),
        ),
      ],
    );
```

38. Back to login_page.dart file add this import so FacebookLogin widget would be accessible from this page.

```
import 'components/facebook_login.dart';
```

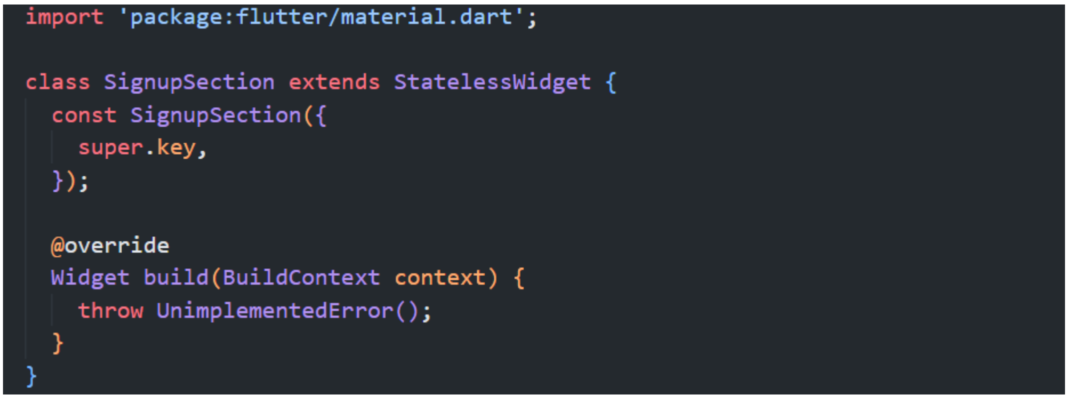
39. Move to Column widget with key `login_page_content_column`, on child properties add FacebookLogin widget following this specifications

No	**Widget**	**Property**	**Value**
44	FacebookLogin	key	const Key('login_page_facebook_login')
		width	width

```
Column(
                  key: const Key('login_page_content_column'),
                  mainAxisAlignment: MainAxisAlignment.center,
                  children: [
                    ...
                    FacebookLogin(
                      key: const Key('login_page_facebook_login'),
                      width: width,
                    ),
                  ],
```

```
                    ),
```

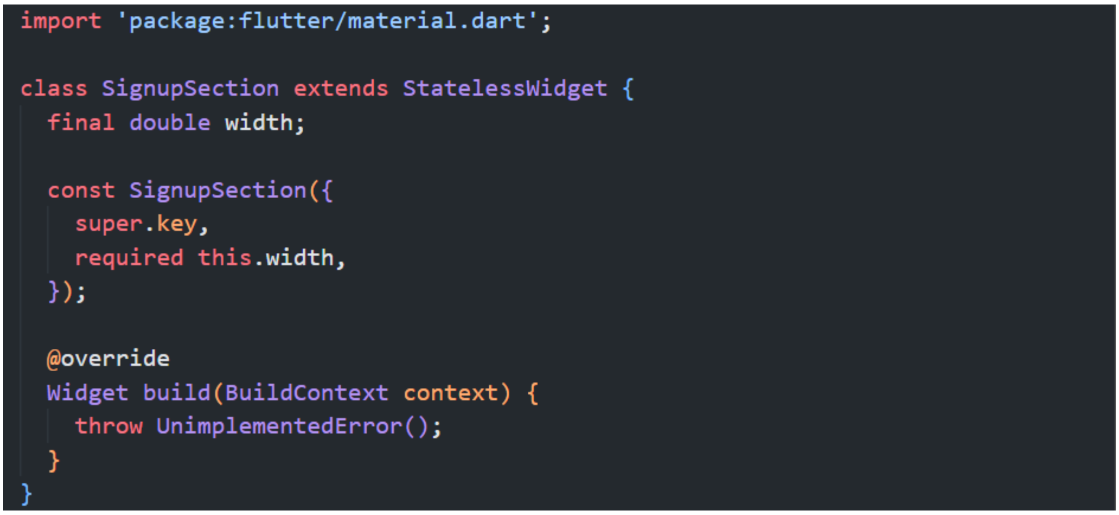
40. Move to signup_section.dart file under directory lib\app\modules\login\components\signup_section.dart make sure it’s extended from StatelessWidget



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

class SignupSection extends StatelessWidget {
  const SignupSection({
    super.key,
  });

  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

41. Add this parameters on SignupSection class

```
final double width;

const SignupSection({
  super.key,
  required this.width,
});
```

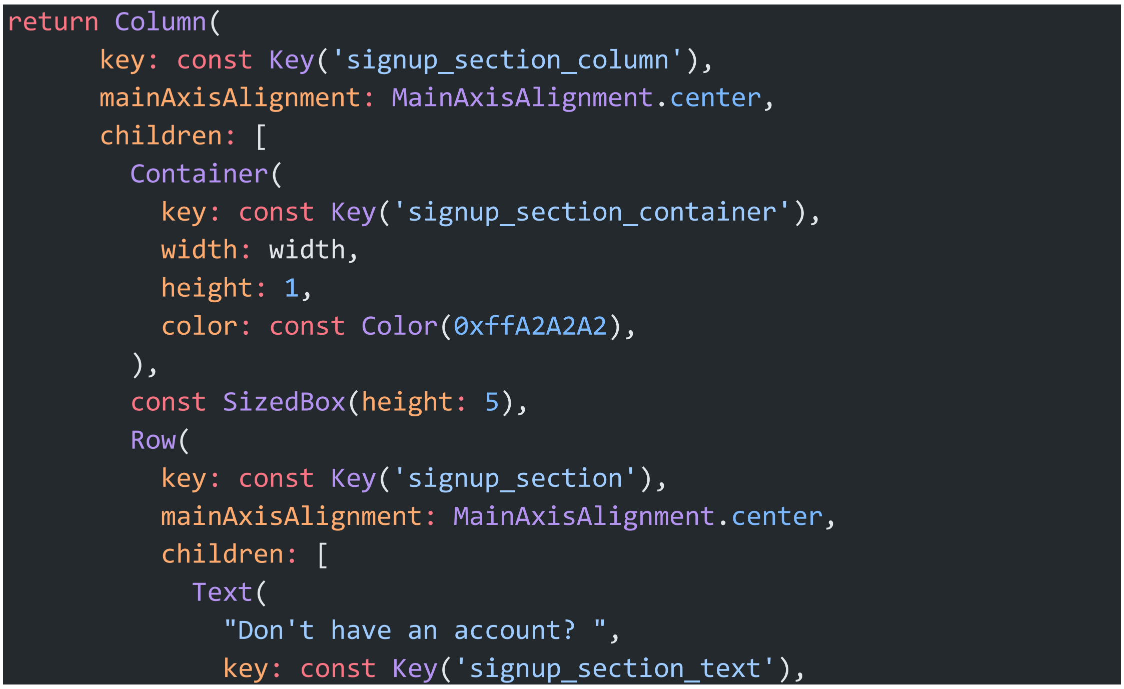


```dart
import 'package:flutter/material.dart';

class SignupSection extends StatelessWidget {
  final double width;

  const SignupSection({
    super.key,
    required this.width,
  });

  @override
  Widget build(BuildContext context) {
    throw UnimplementedError();
  }
}
```

42. Add Column widget as return following this specifications:

No	**Widget**	**Property**	**Value**
45	Column	key	Key('signup_section_column')
		mainAxisAlignment	MainAxisAlignment.center
		children	Container(

			key: const Key('signup_section_container'), SizedBox (height: 5), Row(key: const Key('signup_section'))
Container(key: const Key('signup_section_container') properties :			
46	Container	key	Key('signup_section_container')
		width	width
		height	1
		color	Color(0xffA2A2A2)
Row(key: const Key('signup_section')) properties :			
48	Row	key	Key('signup_section')
		mainAxisAlignment	MainAxisAlignment.center
		children	Text(key: const Key('signup_section_text'), TextButton(key: const Key('signup_section_button'))
Text(key: const Key('signup_section_text') properties :			
49	Text	value	"Don't have an account? "
		key	Key('signup_section_text')
		style	TextStyle(fontSize: width * .040)
TextButton(key: const Key('signup_section_button')) properties :			
50	TextButton	key	Key('signup_section_button')
		child	Text(Key('signup_section_text'))
Text(Key('signup_section_text')) properties :			
51	Text	value	'Sign up'
		style	TextStyle(color: const Color(0xff00258B), fontSize: width * .040, fontWeight: FontWeight.bold,)
		onPressed	() => debugPrint('Sign Up'),
		key	Key('signup_section_text')



```
return Column(
      key: const Key('signup_section_column'),
      mainAxisAlignment: MainAxisAlignment.center,
      children: [
        Container(
          key: const Key('signup_section_container'),
          width: width,
          height: 1,
          color: const Color(0xffA2A2A2),
        ),
        const SizedBox(height: 5),
        Row(
          key: const Key('signup_section'),
          mainAxisAlignment: MainAxisAlignment.center,
          children: [
            Text(
              "Don't have an account? ",
              key: const Key('signup_section_text'),
              style: TextStyle(fontSize: width * .040),
            ),
            TextButton(
              key: const Key('signup_section_button'),
              child: Text(
                'Sign up',
                style: TextStyle(
                  color: const Color(0xff00258B),
                  fontSize: width * .040,
                  fontWeight: FontWeight.bold,
                ),
              ),
              onPressed: () => debugPrint('Sign Up'),
            ),
          ],
        ),
      ],
    );
```

43. Back to login_page.dart file add this import so SignupSection widget would be accessible from this page.

```
import 'components/signup_section.dart';
```

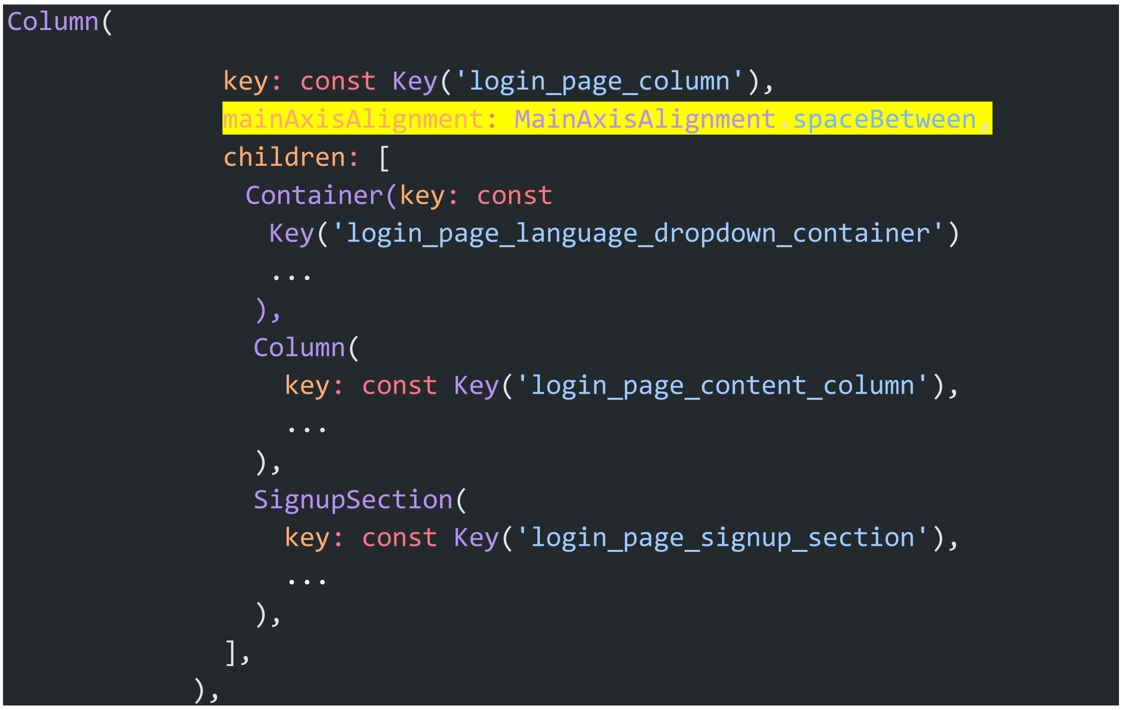
44. Move to Column widget with key login_page_column, on child properties add SignupSection widget following this specifications

No	Widget	Property	Value
52	SignupSection	key	const Key('login_page_signup_section'),
		width	width

```
Column(
              key: const Key('login_page_column'),
              children: [
                Container(key: const
                 Key('login_page_language_dropdown_container')
                 ...
                ),
                Column(
                  key: const Key('login_page_content_column'),
                  ...
                ),
                SignupSection(
                  key: const Key('login_page_signup_section'),
                  width: width,
                ),
              ],
            ),
```

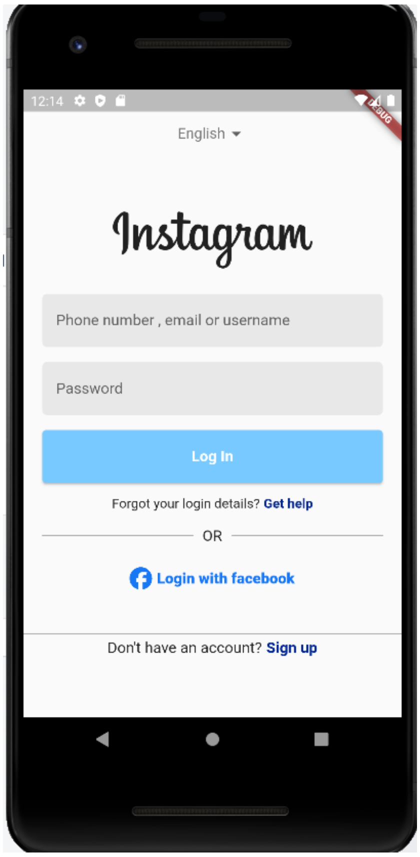
45. Still on the same Column, add this property

No	Widget	Property	Value
53	Column	key	const Key('login_page_signup_section'),
		mainAxisAlingment	MainAxisAlignment.spaceBetween,



```
Column(
              key: const Key('login_page_column'),
              mainAxisAlignment: MainAxisAlignment.spaceBetween,
              children: [
               Container(key: const
                 Key('login_page_language_dropdown_container')
                 ...
                ),
                Column(
                  key: const Key('login_page_content_column'),
                  ...
                ),
                SignupSection(
                  key: const Key('login_page_signup_section'),
                  ...
                ),
              ],
            ),
```

46. Run the project and check if there's no error it will return login page similar like this.

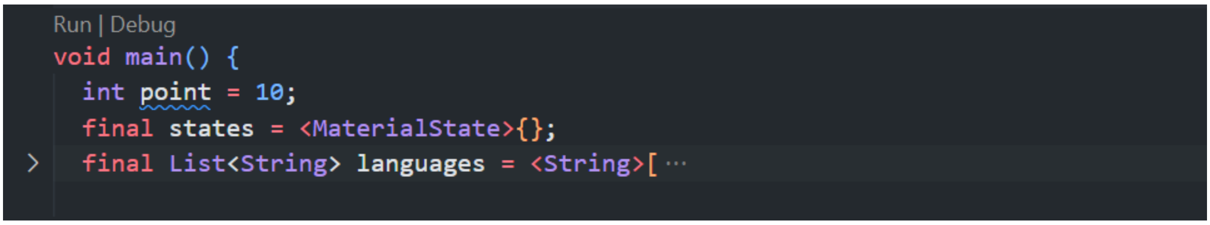


Forgot your login details? **Get help**

Don't have an account? **Sign up**

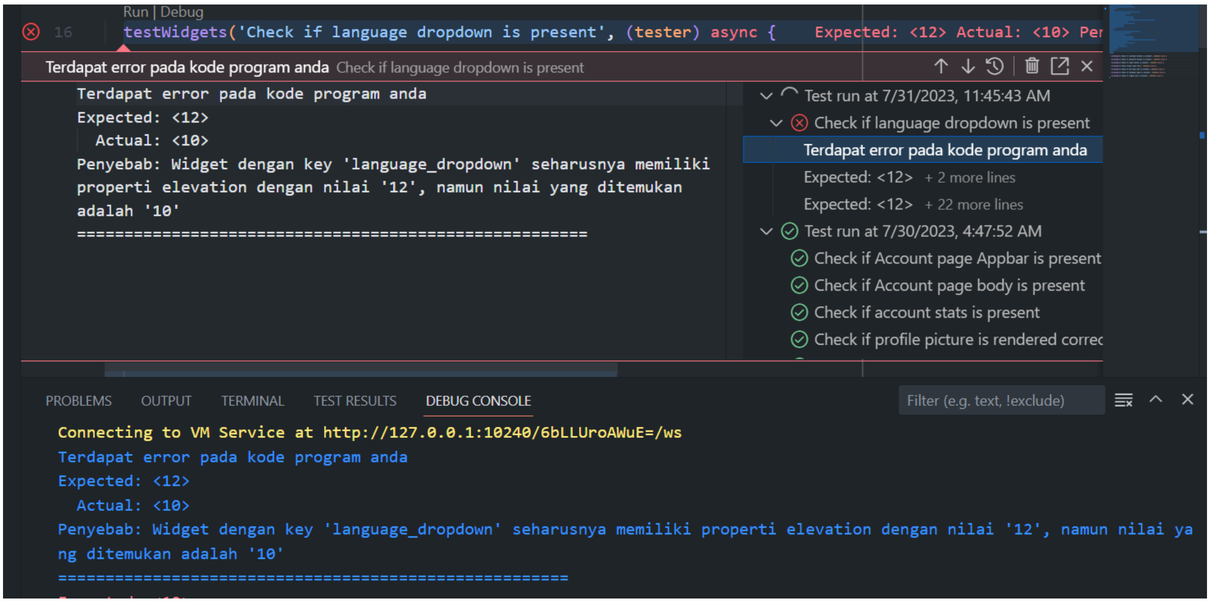
Testing

1) Open login_page_test.dart file under test folder
2) Find main method it will look similar like this



```
Run | Debug
void main() {
  int point = 10;
  final states = <MaterialState>{};
> final List<String> languages = <String>[ ···
```

3) Click Run
4) If there is an error try to check the message and fix the error usually It’s because of wrong key name or missing property of specific widget e.g :



```
Run | Debug
testWidgets('Check if language dropdown is present', (tester) async {    Expected: <12> Actual: <10> Per
```

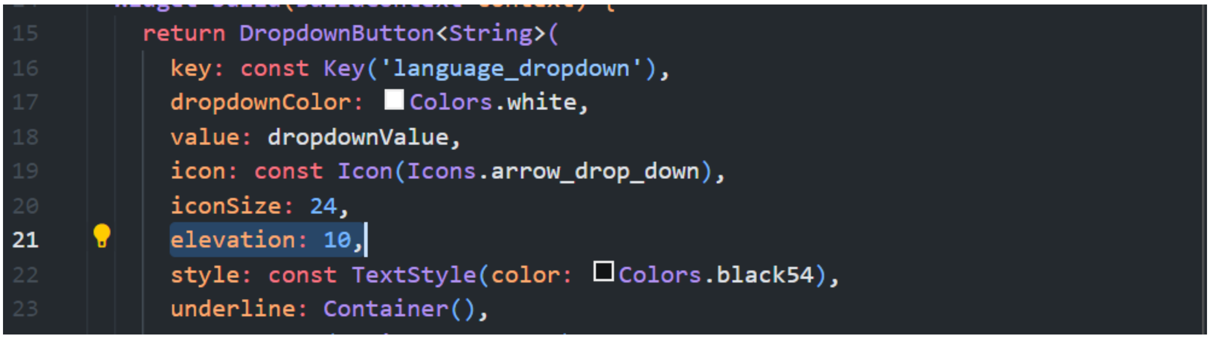
Terdapat error pada kode program anda Check if language dropdown is present

```
Terdapat error pada kode program anda
Expected: <12>
  Actual: <10>
Penyebab: Widget dengan key 'language_dropdown' seharusnya memiliki
properti elevation dengan nilai '12', namun nilai yang ditemukan
adalah '10'
======================================================
```

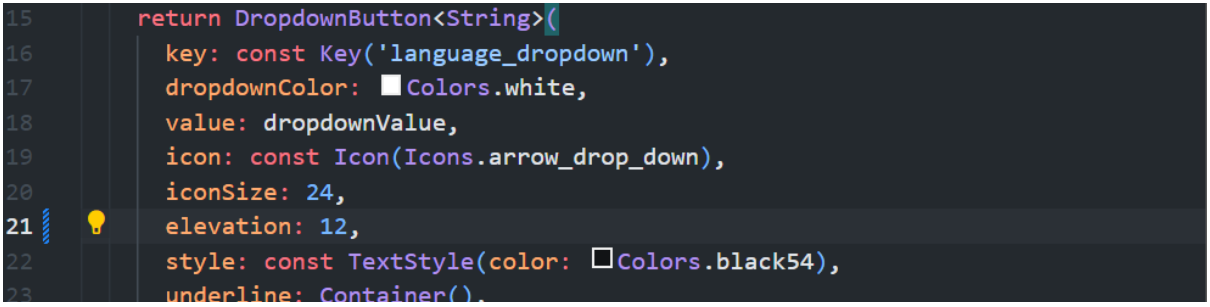
```
Test run at 7/31/2023, 11:45:43 AM
  Check if language dropdown is present
    Terdapat error pada kode program anda
    Expected: <12>  + 2 more lines
    Expected: <12>  + 22 more lines
Test run at 7/30/2023, 4:47:52 AM
  Check if Account page Appbar is present
  Check if Account page body is present
  Check if account stats is present
  Check if profile picture is rendered correc
```

```
Connecting to VM Service at http://127.0.0.1:10240/6bLLUroAWuE=/ws
Terdapat error pada kode program anda
Expected: <12>
  Actual: <10>
Penyebab: Widget dengan key 'language_dropdown' seharusnya memiliki properti elevation dengan nilai '12', namun nilai ya
ng ditemukan adalah '10'
======================================================
```

In this error try to fix the elevation property value on widget with key ‘language_dropdown’ from 10 to 12

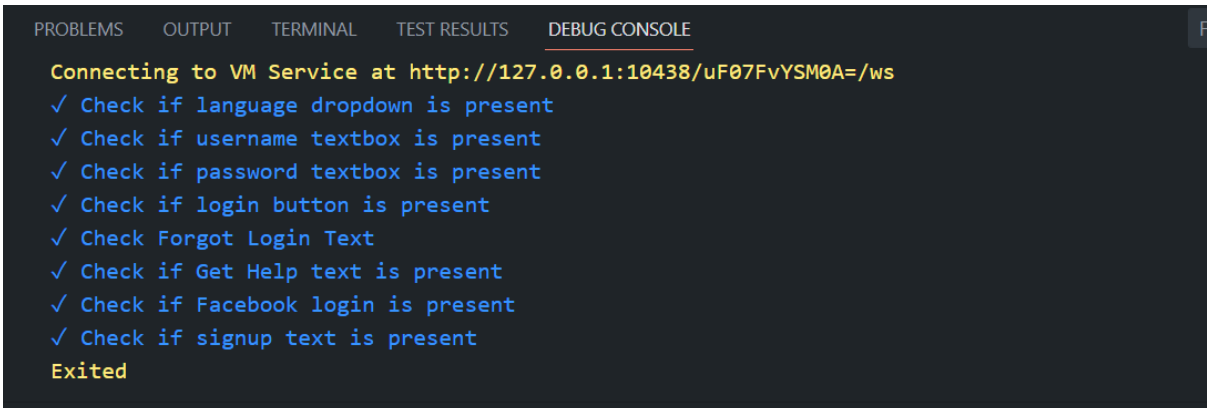


```dart
    return DropdownButton<String>(
      key: const Key('language_dropdown'),
      dropdownColor: Colors.white,
      value: dropdownValue,
      icon: const Icon(Icons.arrow_drop_down),
      iconSize: 24,
      elevation: 10,
      style: const TextStyle(color: Colors.black54),
      underline: Container(),
```



```dart
    return DropdownButton<String>(
      key: const Key('language_dropdown'),
      dropdownColor: Colors.white,
      value: dropdownValue,
      icon: const Icon(Icons.arrow_drop_down),
      iconSize: 24,
      elevation: 12,
      style: const TextStyle(color: Colors.black54),
      underline: Container(),
```

5) Continue repeat fixing the code until there’s no error appear on test



```
Connecting to VM Service at http://127.0.0.1:10438/uF07FvYSM0A=/ws
✓ Check if language dropdown is present
✓ Check if username textbox is present
✓ Check if password textbox is present
✓ Check if login button is present
✓ Check Forgot Login Text
✓ Check if Get Help text is present
✓ Check if Facebook login is present
✓ Check if signup text is present
Exited
```