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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(title: Text('Drawer Example')),
        drawer: Drawer(
          child: ListView(
            padding: EdgeInsets.zero,
            children: <Widget>[
              DrawerHeader(
                decoration: BoxDecoration(color: Colors.blue),
                child: Text(
                  'Drawer Header',
                  style: TextStyle(color: Colors.white, fontSize: 24),
                ),
              ),
              ListTile(
                leading: Icon(Icons.home),
                title: Text('Home'),
                onTap: () => Navigator.pop(context),
              ),
              ListTile(
                leading: Icon(Icons.settings),
                title: Text('Settings'),
                onTap: () => Navigator.pop(context),
              ),
              ListTile(
                leading: Icon(Icons.edit),
                title: Text('Edit'),
                onTap: () => Navigator.pop(context),
              ),
            ],
          ),
        ),
        body: Center(child: Text('Drawer Example App')),
```
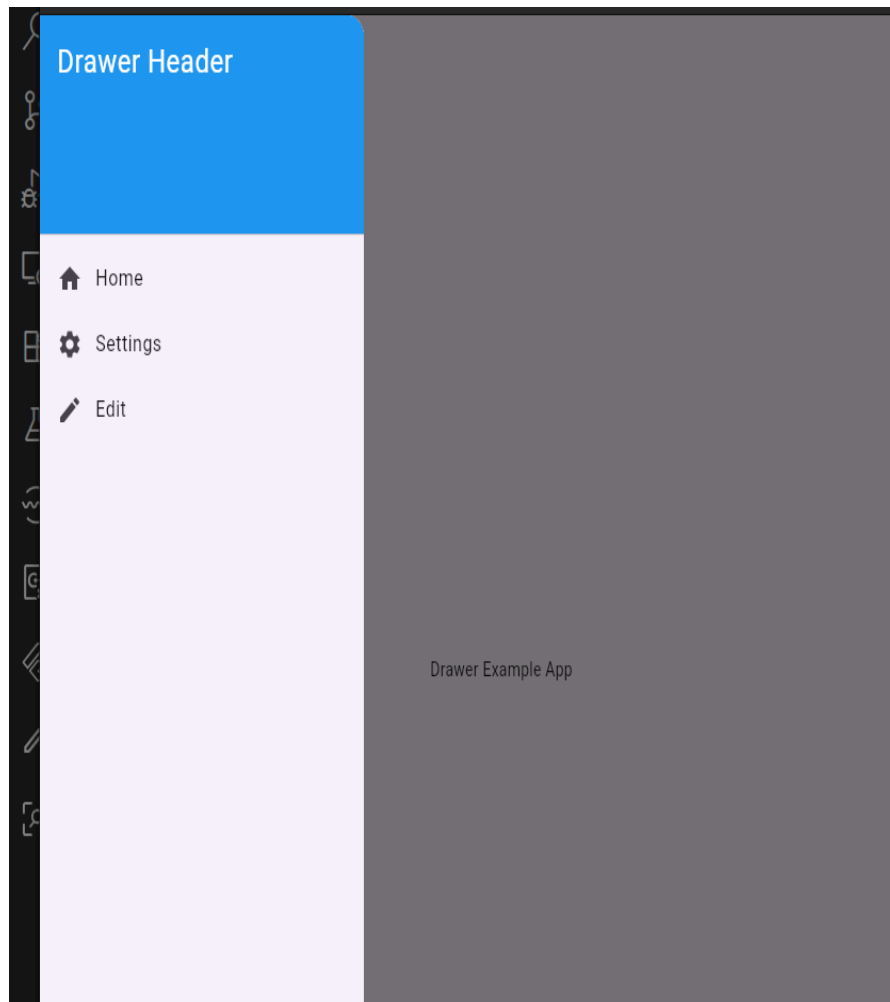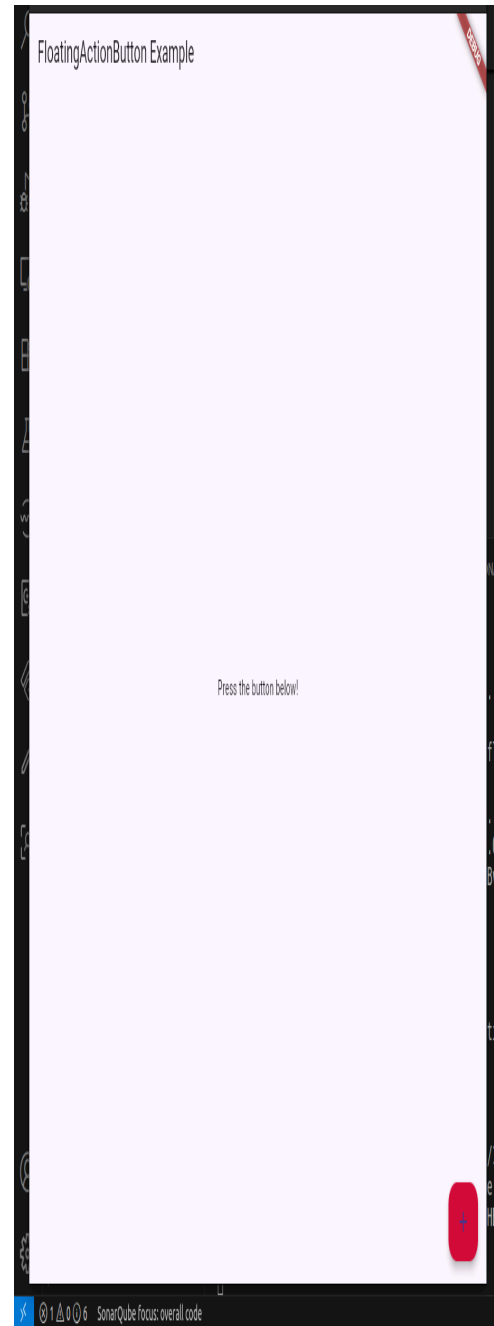
```
      ),
    );
  }
}
```

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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
 @override
 Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(title:
Text('FloatingActionButton Example')),
        body: Center(child: Text('Press the
button below!')),
        floatingActionButton:
FloatingActionButton(
          onPressed: () {
            print('Button Pressed!');
          },
          child: Icon(Icons.add),
          backgroundColor:
Color.fromARGB(255, 213, 11, 58),
        ),
      ),
    );
 }
}
```


FloatingActionButton Example

Press the button below!

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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(title: Text('Container
Example')),
        body: Center(
          child: Container(
            padding: EdgeInsets.all(35),
            margin: EdgeInsets.all(20),
            alignment: Alignment.center,
            transform: Matrix4.rotationZ(0.1),
            child: Text(
              "Hello! I am in the container
widget",
              style: TextStyle(fontSize: 25),
            ),
          ),
        ),
      ),
    );
  }
}
```

Container Example

Hello! I am in the container widget
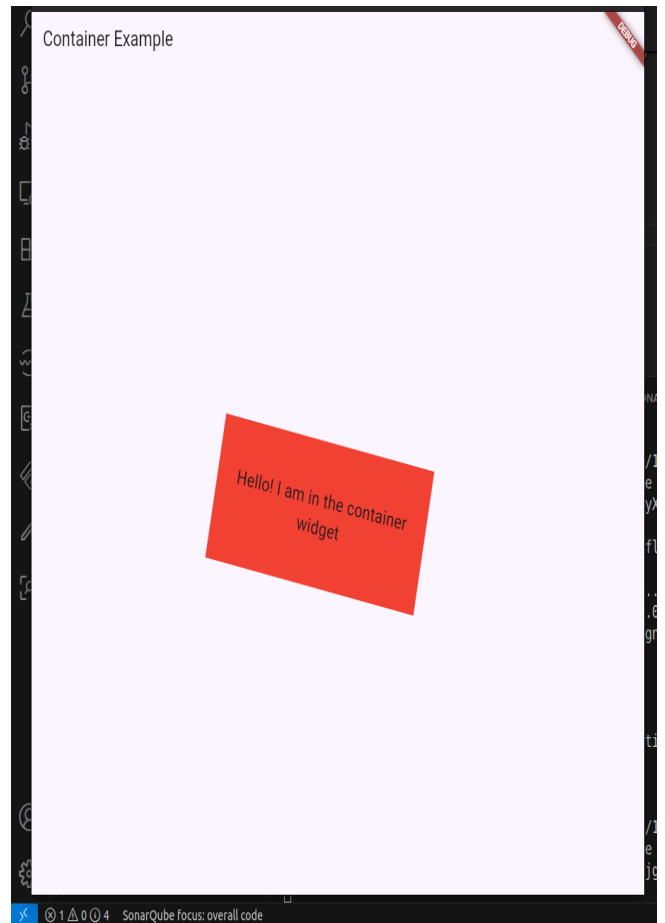
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```dart
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(title:
Text('Container Example')),
        body: Center(
          child: Container(
            padding: EdgeInsets.all(10),
// smaller padding
            margin: EdgeInsets.all(35),
            alignment: Alignment.center,
            width: 300.0, // bigger
width
            height: 150.0, // bigger
height
            color: Colors.red,
            transform:
Matrix4.rotationZ(0.2),
            child: Text(
              "Hello! I am in the
container widget",
              style: TextStyle(fontSize:
20), // smaller font size
              textAlign: TextAlign.center, // center the text inside
            ),
          ),
        ),
      ),
    );
  } }
```

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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget
{
 @override
 Widget build(BuildContext context)
{
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('Constraints
Example'),
        ),
        body: Center(
          child: Container(
            constraints:
BoxConstraints(
              minWidth: 100,
              maxWidth: 200,
              minHeight: 100,
              maxHeight: 200,
            ),
            color: Colors.blue,
            child: Center(
              child: Text(
                'Constrained
Container',
                style: TextStyle(
                  color:
Colors.white,
                  fontSize: 18,
                ),
              ),
            ),
          ),
        ),
      ),
    );}}
```
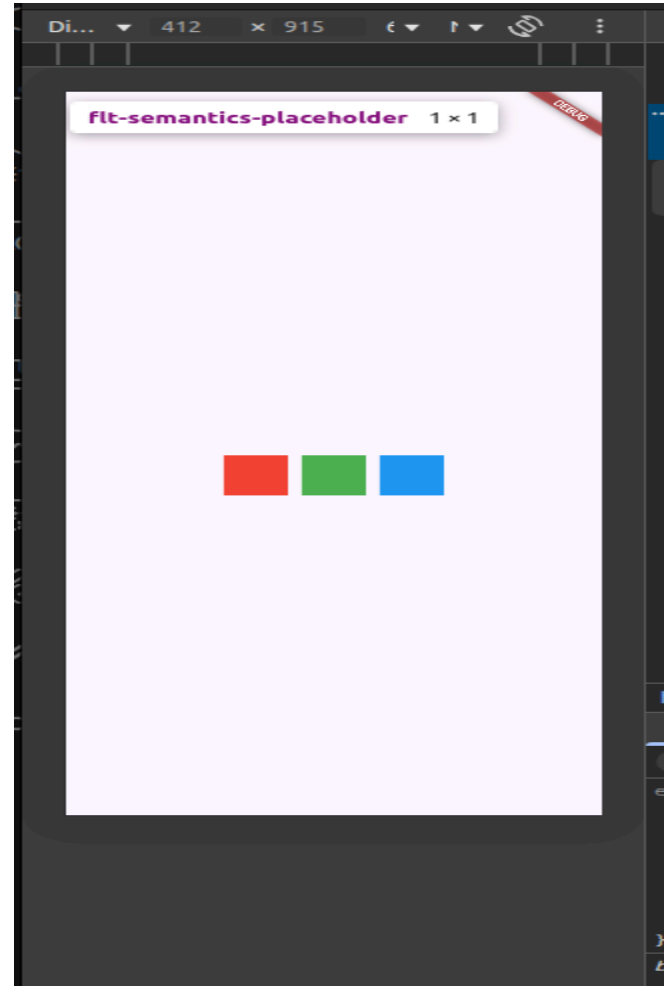
Constraints Example

Constrained Container

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

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(title: Text('Row Widget
Example')),
        body: Center(
          child: Row(
            mainAxisAlignment:
MainAxisAlignment.center,
            children: [
              Container(width: 50, height: 50,
color: Colors.red),
              SizedBox(width: 10), // space
between boxes
              Container(width: 50, height: 50,
color: Colors.green),
              SizedBox(width: 10), // space
between boxes
              Container(width: 50, height: 50, color: Colors.blue),
            ],
          ),
        ),
      ),
    );
  }
}
```

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

void main() {
  runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({Key? key}) : super(key: key);

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(title: const
Text('Exercise-03')),
        body: const MyHomePage(),
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  const MyHomePage({Key? key}) : super(key:
key);

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

class _MyHomePageState extends
State<MyHomePage> {
  String _displayText = '';

  @override
  Widget build(BuildContext context) {
    return Center(
      child: Row(
        mainAxisAlignment: MainAxisAlignment.center,
        children: <Widget>[
```


Exercise-03

Click Me   Performing hot restart...
            Restarted application in 50ms.
            Restart done!

```
        TextButton(
          onPressed: () {
            setState(() {
              _displayText =
                  'Performing hot restart...\nRestarted application in
50ms.\nRestart done!';
            });
          },
          child: const Text('Click Me'),
        ),
        const SizedBox(
          width: 20,
        ), // Adds some space between the button and the text
        Text(_displayText),
      ],
    ),
  );
 }
}
```
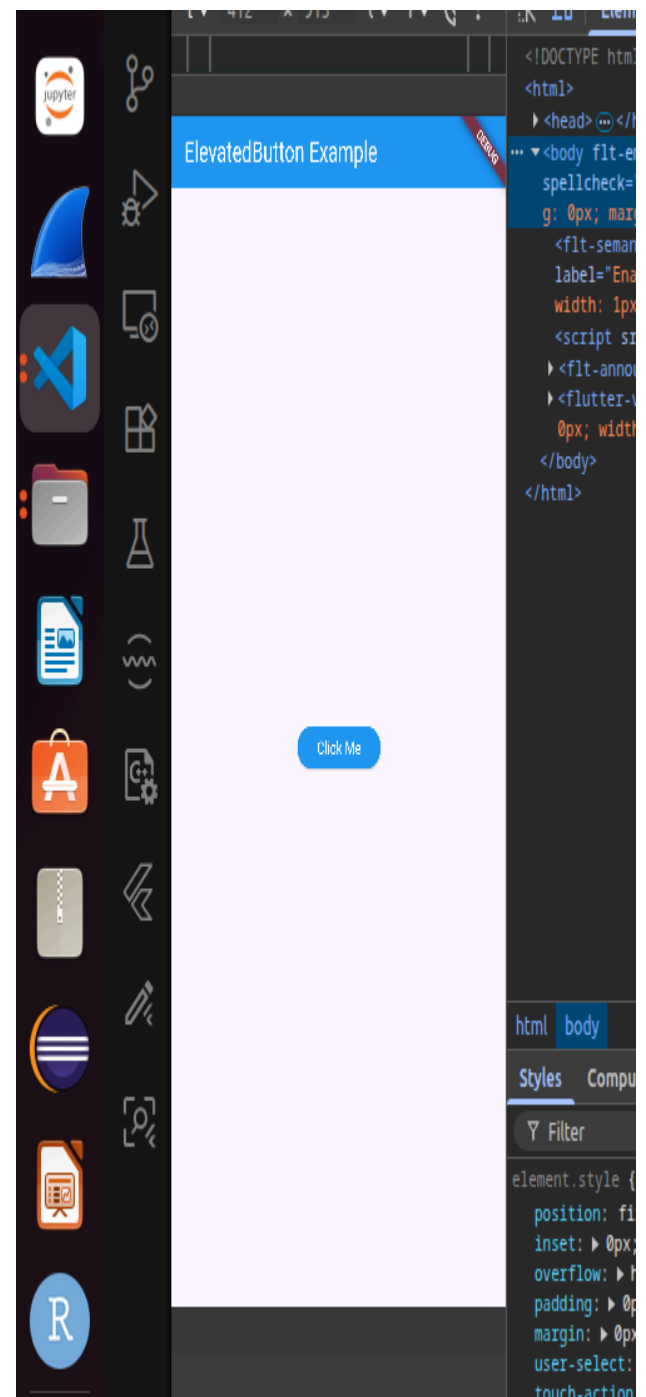
```dart
import 'package:flutter/material.dart';

void main() {
  runApp(ElevatedButtonApp());
}

class ElevatedButtonApp extends
StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'ElevatedButton Example',
      home: Scaffold(
        appBar: AppBar(
          title: Text(
            'ElevatedButton Example',
            style: TextStyle(color:
Colors.white),
          ),
          backgroundColor: Colors.blue,
        ),
        body: Center(
          child: ElevatedButton(
            onPressed: () {
              // Action when button is
pressed
              print('Button Clicked!');
            },
            style:
ElevatedButton.styleFrom(
              backgroundColor:
Colors.blue, // button background
              foregroundColor:
Colors.white, // button text color
            ),
            child: Text('Click Me'),
          ),
        ),
      ),
    ); }}
```

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

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
 @override
 Widget build(BuildContext context) {
    return MaterialApp(home:
MyHomePage());
 }
}

class MyHomePage extends
StatelessWidget {
 void _showAlertDialog(BuildContext
context) {
    showDialog(
      context: context,
      builder: (BuildContext context) {
        return AlertDialog(
          title: Text("Alert Dialog"),
          content: Text("This is a basic
alert dialog."),
          actions: <Widget>[
            TextButton(
              child: Text("Close"),
              onPressed: () {

Navigator.of(context).pop();
              },
            ),
          ],
        );
      },
    );
 }

 @override
 Widget build(BuildContext context) {
```
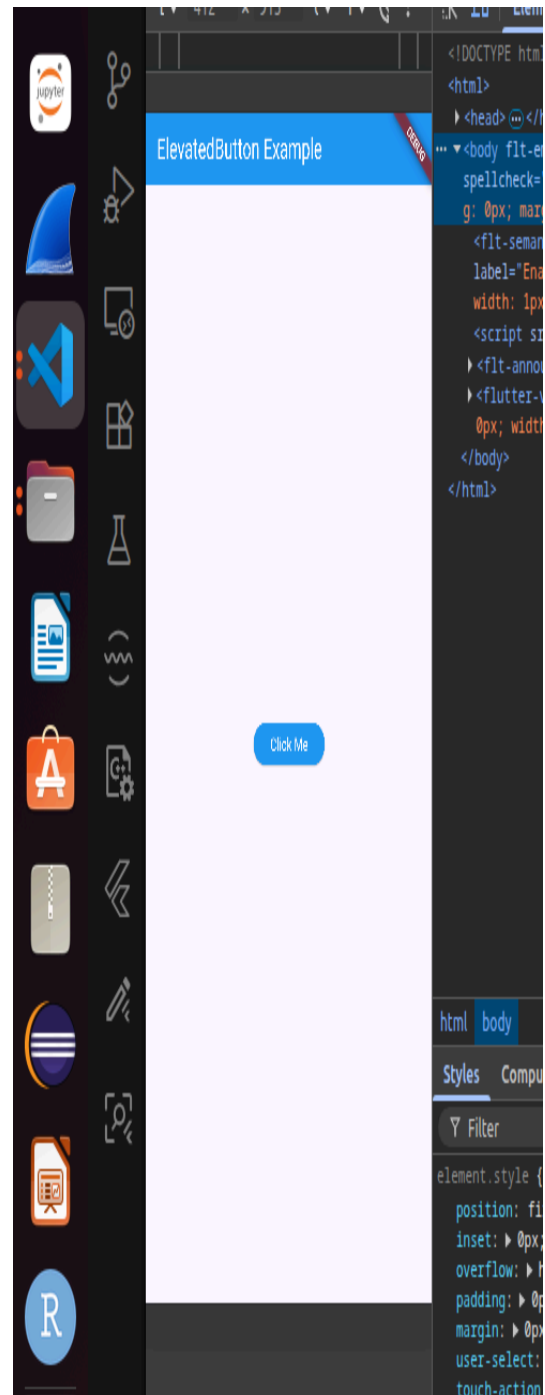
ElevatedButton Example

Click Me

```
  return Scaffold(
    appBar: AppBar(title: Text("Flutter Alert Dialog Example")),
    body: Center(
      child: ElevatedButton(
        onPressed: () {
          _showAlertDialog(context);
        },
        child: Text("Show Alert Dialog"),
      ),
    ),
  );
}
}
```

```dart
import 'package:flutter/material.dart';
import 'package:fl_chart/fl_chart.dart';
void main() {
runApp(MyApp());
}
class MyApp extends StatelessWidget {
@override
Widget build(BuildContext context) {
 return MaterialApp(
 home: MyHomePage(),
 );}
}
class MyHomePage extends StatelessWidget {
@override
Widget build(BuildContext context) {
 return Scaffold(
 appBar: AppBar(
 title: Text('Flutter Pie Chart Demo'),
 ),
 body: Center(
 child: PieChart(
 PieChartData(
 sections: [
 PieChartSectionData(
 color: Colors.blue,
 value: 30,
 title: 'Category A',
 ),
 PieChartSectionData(
 color: Colors.green,
 value: 40,
 title: 'Category B',
 ),
 PieChartSectionData(
 color: Colors.orange,
 value: 20,
 title: 'Category C',
 ),
 PieChartSectionData(
 color: Colors.red,
```


Flutter Pie Chart Demo

Category C
Category D
Category B
Category A

```
value: 10,
title: 'Category D',
),
],
),
),
),
);
}}
```

```dart
import 'package:flutter/material.dart';
import 'package:provider/provider.dart';
void main() {
runApp(
ChangeNotifierProvider<ThemeProvider>(
create: (BuildContext context) => ThemeProvider(),
builder: (BuildContext context, Widget? child) => const MyApp(),
),
);
}
class ThemeProvider extends ChangeNotifier {
ThemeMode themeMode = ThemeMode.light;void toggleTheme() {
themeMode = (themeMode == ThemeMode.light) ? ThemeMode.dark :
ThemeMode.light;
notifyListeners();
}
bool get isDarkMode => themeMode == ThemeMode.dark;
}
class MyApp extends StatelessWidget {
const MyApp({super.key});
@override
Widget build(BuildContext context) {
final ThemeProvider themeProvider = Provider.of<ThemeProvider>(context);
return MaterialApp(
debugShowCheckedModeBanner: false,
title: 'Custom UI App',
themeMode: themeProvider.themeMode,
theme: ThemeData(
brightness: Brightness.light,
primarySwatch: Colors.blue,
appBarTheme: const AppBarTheme(
backgroundColor: Colors.blue,
foregroundColor: Colors.white,
),
),
darkTheme: ThemeData(
brightness: Brightness.dark,
primarySwatch: Colors.blue,
appBarTheme: const AppBarTheme(
backgroundColor: Colors.blueGrey,
```

```dart
      foregroundColor: Colors.white,
    ),
  ),
  home: const HomeScreen(),
);
}
}
class HomeScreen extends StatelessWidget {
const HomeScreen({super.key});
@overrideWidget build(BuildContext context) {
final ThemeProvider themeProvider = Provider.of<ThemeProvider>(context);
return Scaffold(
appBar: AppBar(
title: const Text('Theme Selector'),
),
body: Center(
child: Column(
mainAxisAlignment: MainAxisAlignment.center,
children: <Widget>[
Text(
'Current Theme: ${themeProvider.isDarkMode ? 'Dark' : 'Light'}',
style: Theme.of(context).textTheme.headlineMedium,
),
const SizedBox(height: 32.0),
Row(
mainAxisAlignment: MainAxisAlignment.center,
children: <Widget>[
const Icon(Icons.light_mode, size: 32.0),
Switch(
value: themeProvider.isDarkMode,
onChanged: (bool value) {
Provider.of<ThemeProvider>(context, listen: false).toggleTheme();
},
),
const Icon(Icons.dark_mode, size: 32.0),
],
),
const SizedBox(height: 16.0),
Text(
'Toggle to change theme',
```

```
style: Theme.of(context).textTheme.bodyMedium,
),
],
),
),
);
}
}
```