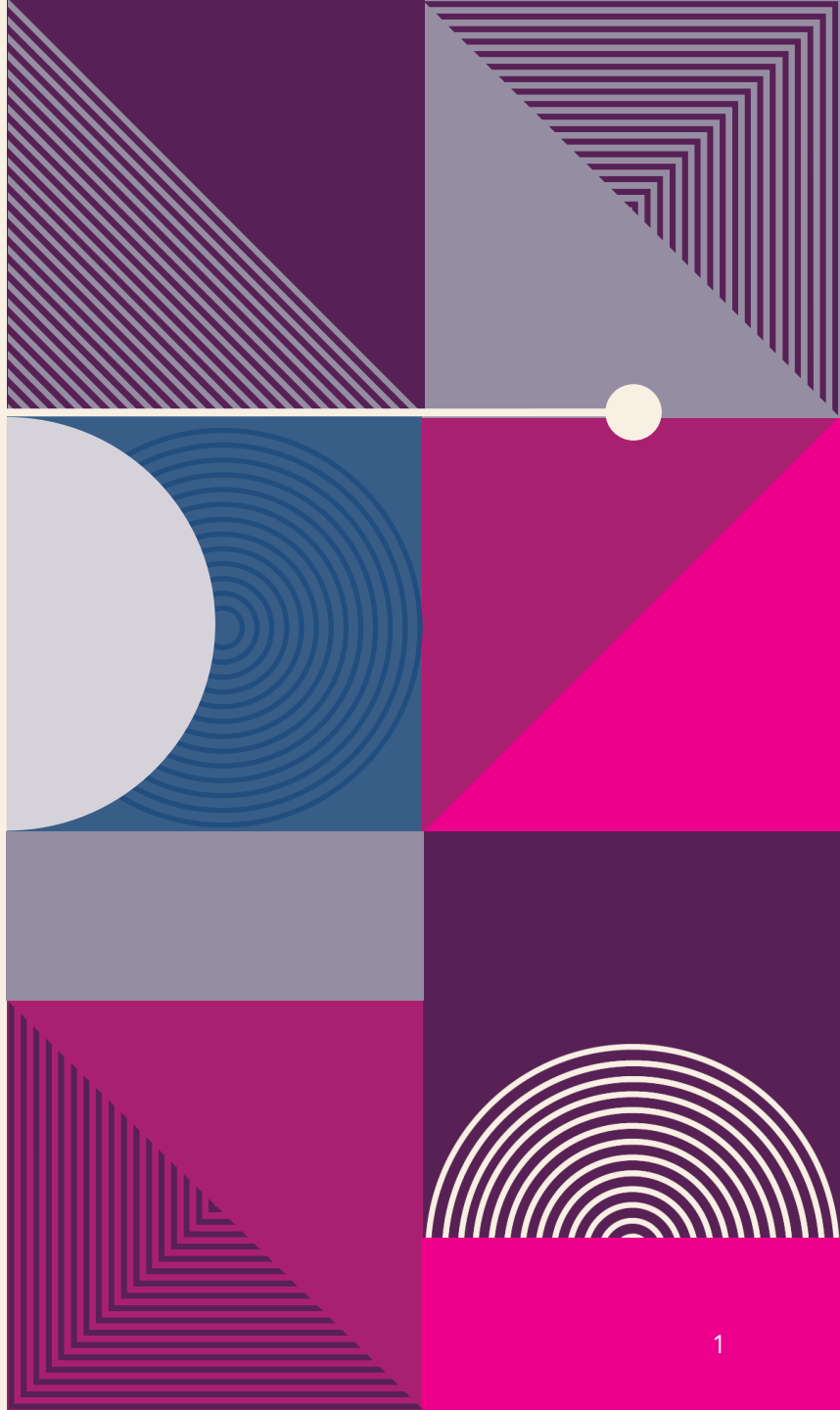
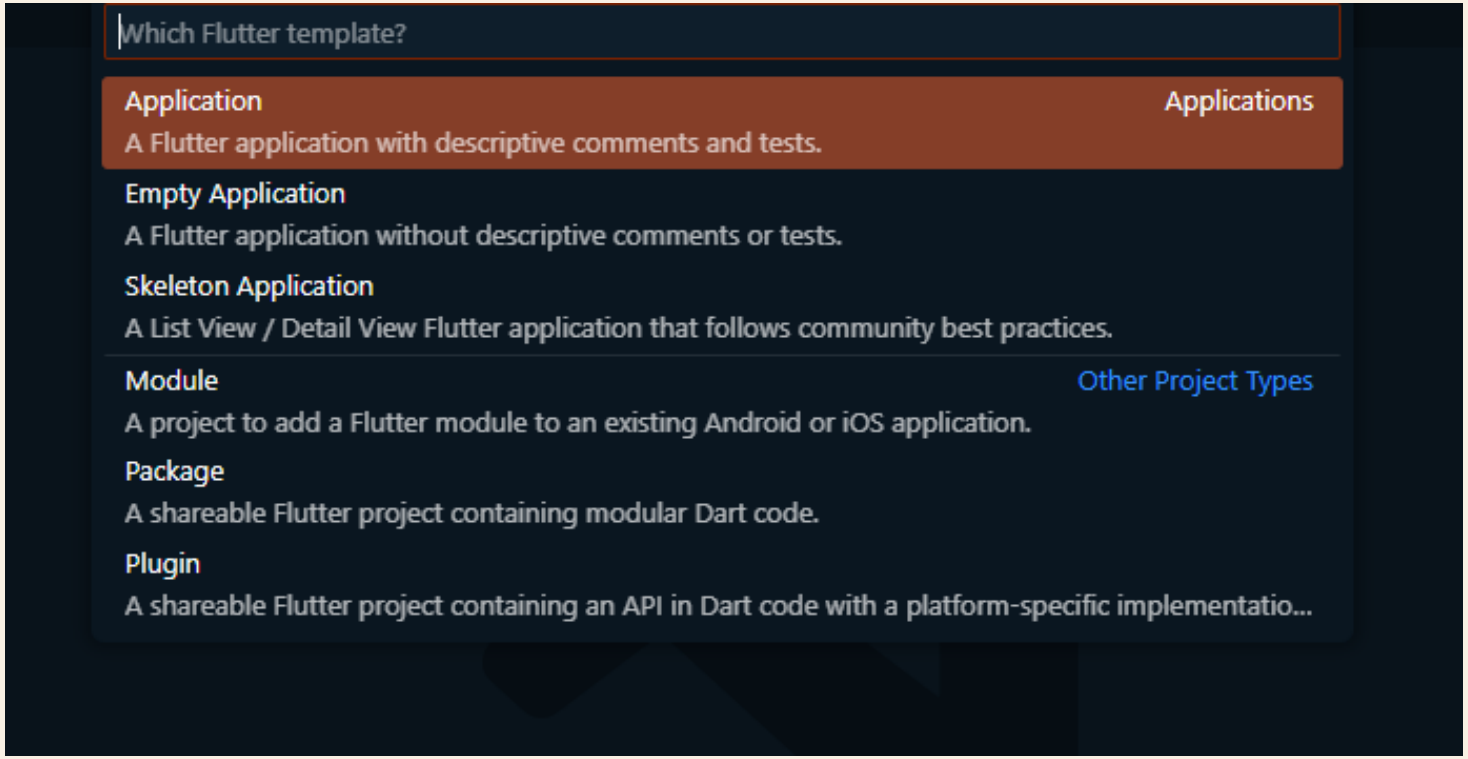
Creating a Starter Project Template



CREATING AND ORGANIZING FOLDERS AND FILES

- **Creating the Folder Structure**

1. **Creating a New App** section, enter **starter_exercise** for the **project name** and click **Next**.



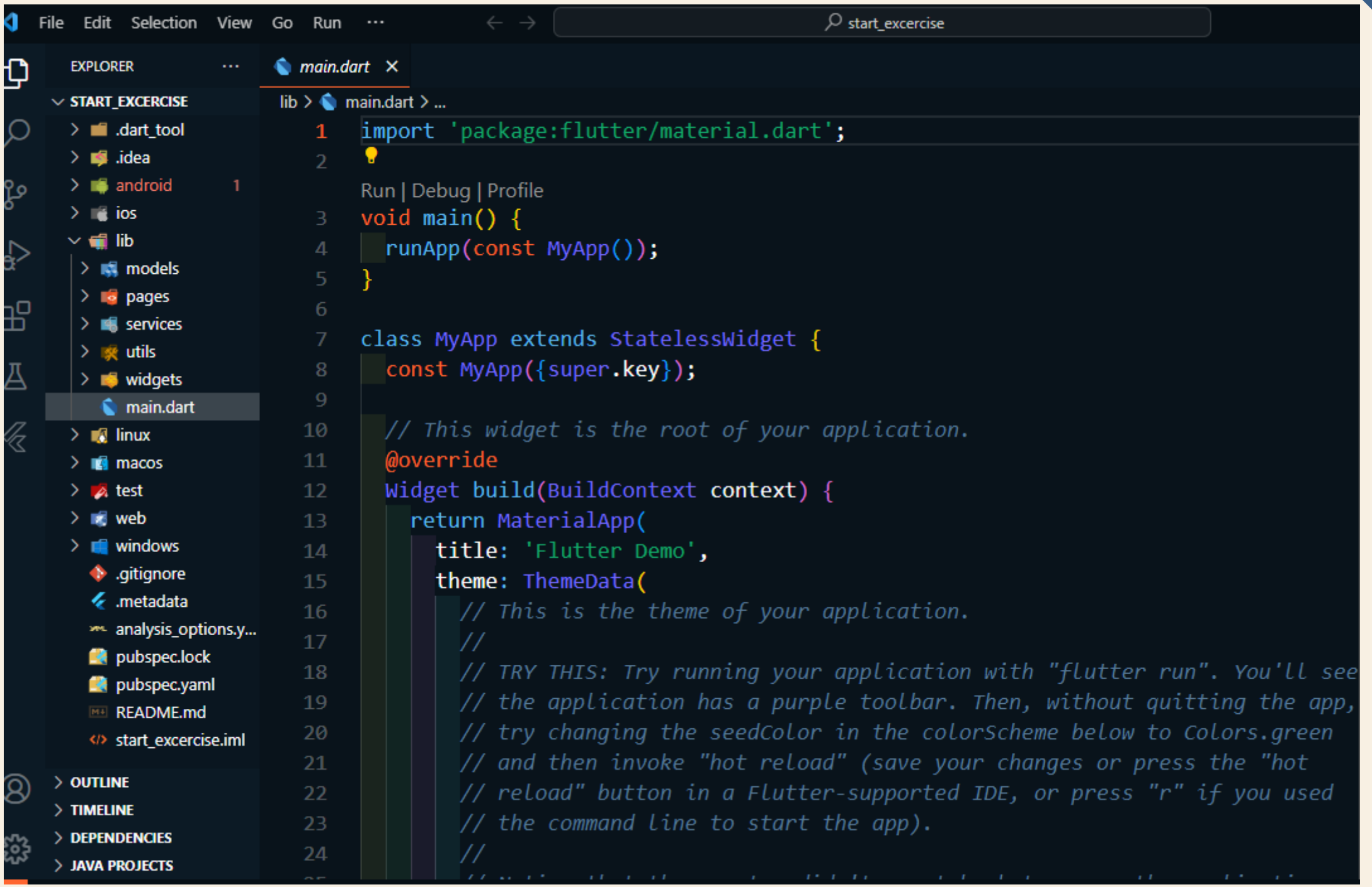
1. **Click** the **Terminal button** at the bottom of the Vscode.

1. To create the **folder** structures, execute the **mkdir –p folder/subfolder** command. This **mkdir** command creates a **folder**, and the **–p** parameter creates a **folder and subfolder** in one run.

• **Run** each **mkdir** command in the **Terminal window** to create each folder structure . **For example**

```
// From Terminal enter below commands
Mac:starter_exercise marco$ mkdir -p assets/images
Mac:starter_exercise marco$ mkdir -p lib/pages
Mac:starter_exercise marco$ mkdir -p lib/models
Mac:starter_exercise marco$ mkdir -p lib/utils
Mac:starter_exercise marco$ mkdir -p lib/widgets
Mac:starter_exercise marco$ mkdir -p lib/services
```

```
// From Windows Command Prompt enter below commands
F:\Pixolini\Flutter\starter_exercise>mkdir assets\images
F:\Pixolini\Flutter\starter_exercise>mkdir lib\pages
F:\Pixolini\Flutter\starter_exercise>mkdir lib\models
F:\Pixolini\Flutter\starter_exercise>mkdir lib\utils
F:\Pixolini\Flutter\starter_exercise>mkdir lib\widgets
F:\Pixolini\Flutter\starter_exercise>mkdir lib\services
```


File Edit Selection View Go Run ···
start_excercise
EXPLORER
main.dart
START_EXCERCISE
.dart_tool
.idea
android 1
ios
lib
models
pages
services
utils
widgets
main.dart
linux
macos
test
web
windows
.gitignore
.metadata
analysis_options.y...
pubspec.lock
pubspec.yaml
README.md
start_excercise.iml
OUTLINE
TIMELINE
DEPENDENCIES
JAVA PROJECTS
lib > main.dart > ...
import 'package:flutter/material.dart';
Run | Debug | Profile
void main() {
runApp(const MyApp());
}
class MyApp extends StatelessWidget {
const MyApp({super.key});
// This widget is the root of your application.
@override
Widget build(BuildContext context) {
return MaterialApp(
title: 'Flutter Demo',
theme: ThemeData(
// This is the theme of your application.
//
// TRY THIS: Try running your application with "flutter run". You'll see
// the application has a purple toolbar. Then, without quitting the app,
// try changing the seedColor in the colorScheme below to Colors.green
// and then invoke "hot reload" (save your changes or press the "hot
// reload" button in a Flutter-supported IDE, or press "r" if you used
// the command line to start the app).
//

- **assets/images**: The assets folder holds subfolders such as **images**, **fonts**, and **configuration** files.
- **lib/pages**: The pages folder holds **user interface** (UI) files such as **logins**, **lists** of **items**, **charts**, and **settings**.
- **lib/models**: The models folder holds **classes** for your data such as **customer information** and **inventory items**.
- **lib/utils**: The utils folder holds **helper classes** such as **date calculations** and **data conversion**.
- **lib/widgets**: The widgets folder holds different **Dart files** separating widgets to reuse through the app.
- **lib/services**: The services folder holds **classes** that **help** to **retrieve data** from **services** over the **Internet**.

• **Creating the Dart Files and Widgets**

Note: **Delete** all the contents of the **main.dart** file.
Let's start by adding the code to the main.dart file and saving it.

1. Import the **package/file**. The default import is the **material.dart** library (To use the Cupertino **iOS-style widgets**, import the **cupertino.dart**)

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

2. Leave a blank line and enter the **main() function** listed next. The **main()** function is the entry point to the app and calls the **MyApp** class.

3. Type the **MyApp** class that **extends StatelessWidget**.
The **MyApp** class returns a **MaterialApp** widget **declaring title**, **theme**, and **home properties**. home property calls the **Home()** class, which is created later in the **home.dart** file.

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

```
class MyApp extends StatelessWidget {
   // This widget is the root of your application.
   @override
   Widget build(BuildContext context) {
        return MaterialApp(
           debugShowCheckedModeBanner: false,
           title: 'Starter Template',
           theme: ThemeData(
              primarySwatch: Colors.blue,
           ),
           home: Home(),
        );
   }
}
```

4. Create a new **Dart file** in the **pages folder**. **Right-click** the **pages folder**, select **New** ⇨ **Dart File**, enter **home.dart**, and click the **Enter**.

5. Like in step 1, import the **material.dart** package/file

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

Start typing **st** and the autocompletion help opens. Select the **stful** abbreviation.

7. give the **StatefulWidget** class its **name**:**Home**.

```
// home.dart
import 'package:flutter/material.dart';
class Home extends StatefulWidget {
   @override
    _HomeState createState() => _HomeState();
}
class _HomeState extends State<Home> {
   @override
   Widget build(BuildContext context) {
       return Container();
   }
}
```

If the Home class does not need to keep state, then use **StatelessWidget**.

```
class Home extends StatelessWidget {
   @override
    Widget build(BuildContext context) {
         return Container();
    }
}
```

8. Replace the **Container()** widget with a **Scaffold widget**.

– The **Scaffold** widget implements the **basic Material Design** visual layout, allowing the simple addition of AppBar, BottomAppBar, FloatingActionButton, Drawer, SnackBar, BottomSheet, and more. (If this were a CupertinoApp, you could use either CupertinoPageScaffold or CupertinoTabScaffold.)

```
class _HomeState extends State<Home> {
   @override
   Widget build(BuildContext context) {
        return Scaffold(
           appBar: AppBar(
               title: Text('Home'),
           ),
           body: Container(),
       );
   }
}
```

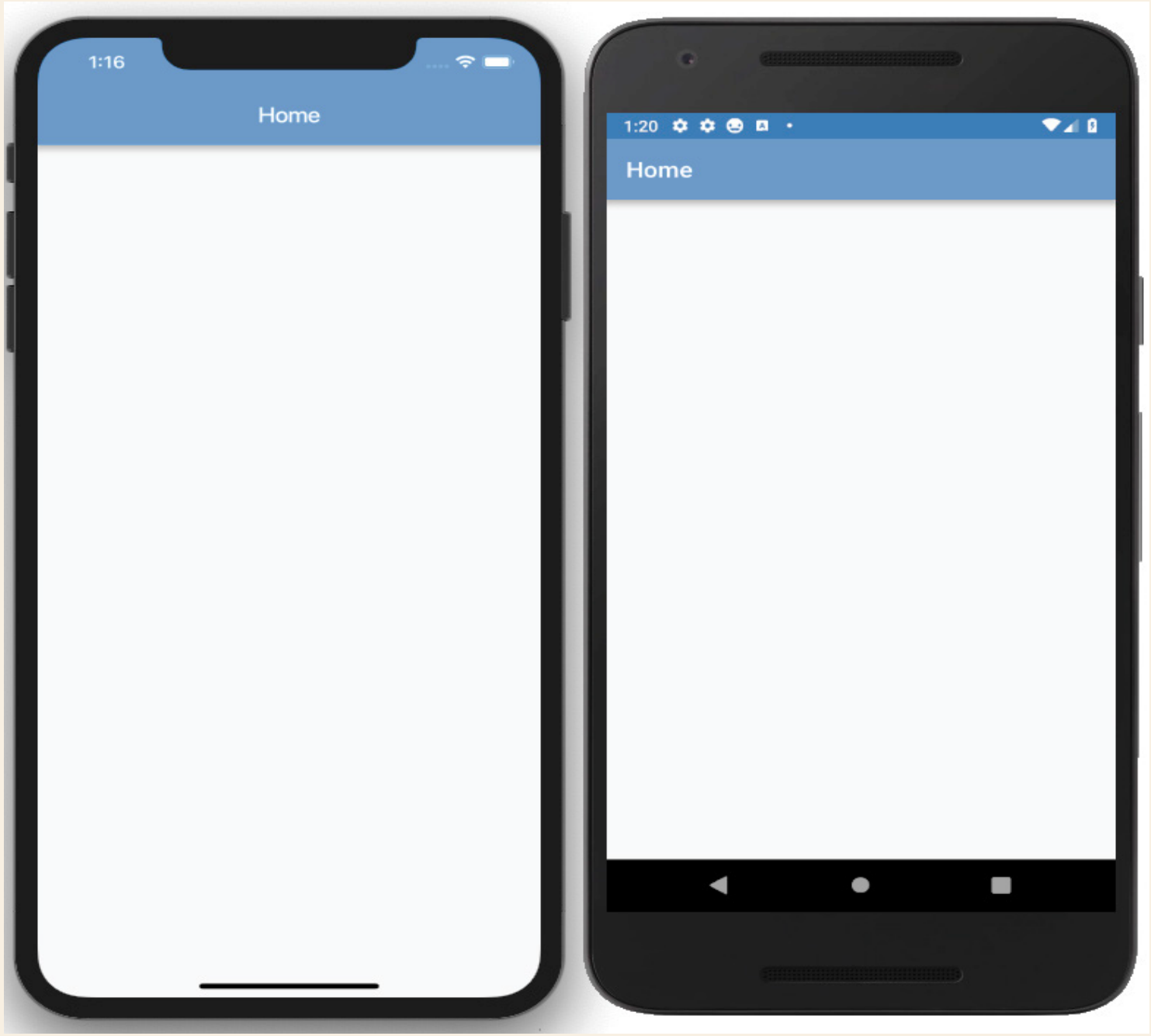
The following is the **full source code** for both the **main.dart** and **home.dart** files:

1. lib/main.dart

```
// main.dart
import 'package:flutter/material.dart';
import 'package:ch4_starter_exercise/pages/home.dart';
void main() => runApp(MyApp());
class MyApp extends StatelessWidget {
    // This widget is the root of your application.
    @override
    Widget build(BuildContext context) {
        return MaterialApp(
            debugShowCheckedModeBanner: false,
            title: 'Starter Template',
            theme: ThemeData(
               primarySwatch: Colors.blue,
            ),
           home: Home(),
       );
   }
}
```

2. lib/ home.dart

```
// home.dart
import 'package:flutter/material.dart';
class Home extends StatefulWidget {
   @override
          _HomeState createState() => _HomeState();
   }
class _HomeState extends State<Home> {
   @override
   Widget build(BuildContext context) {
       return Scaffold(
         appBar: AppBar(
             title: Text('Home'),
        ),
        body: Container(),
     );
  }
}
```


1:16
Home
1:20
Home