Android
Studio

Visual Studio Code

DAY 1

Summary :-
1. In today's session we saw the importance of Flutter ,Android studio,vscode and installation of all of them.
2.Flutter is an app SDK for building high-performance, high-fidelity apps for iOS, Android, web (beta), and desktop from a single codebase.Flutter is Google's mobile UI framework
3.Flutter is a framework or a tool , dart is a language is used in this framework to built high-performance, high-fidelity apps for iOS and Android.
4. Its features of Hot reload and easy writing make it a better framework as compared to most cross-platform frameworks, perhaps even better than React Native.
5. Installation of flutter includes:
Download flutter from the link https://flutter.dev/docs/get-started/install --->unzip flutter file --> set the path --> make the directory --> run flutter --version and flutter doctor cmd accordingly.
6.Install Android studio go to configure and install softwares
i.Android emulator
ii.Google USB driver
iii. Intel x86 emulator accelerator
iv. Android SDK tools
v. Android SDK platform tools
vi. Android SDK Build tools
7. Decide the path and install the recommended tools/softwares.
8.Create virtual device by clicking on --> configure --> AVD manager --> phone --.look for playstore --> size --> resolution
9.Decide which android version you want, either go for pie or oreo.
 Some of the commands are as follows:-
flutter emulators
flutter devices
flutter doctor
flutter run
flutter emulators --launch <Nexus.........>
and many more.

Task :-
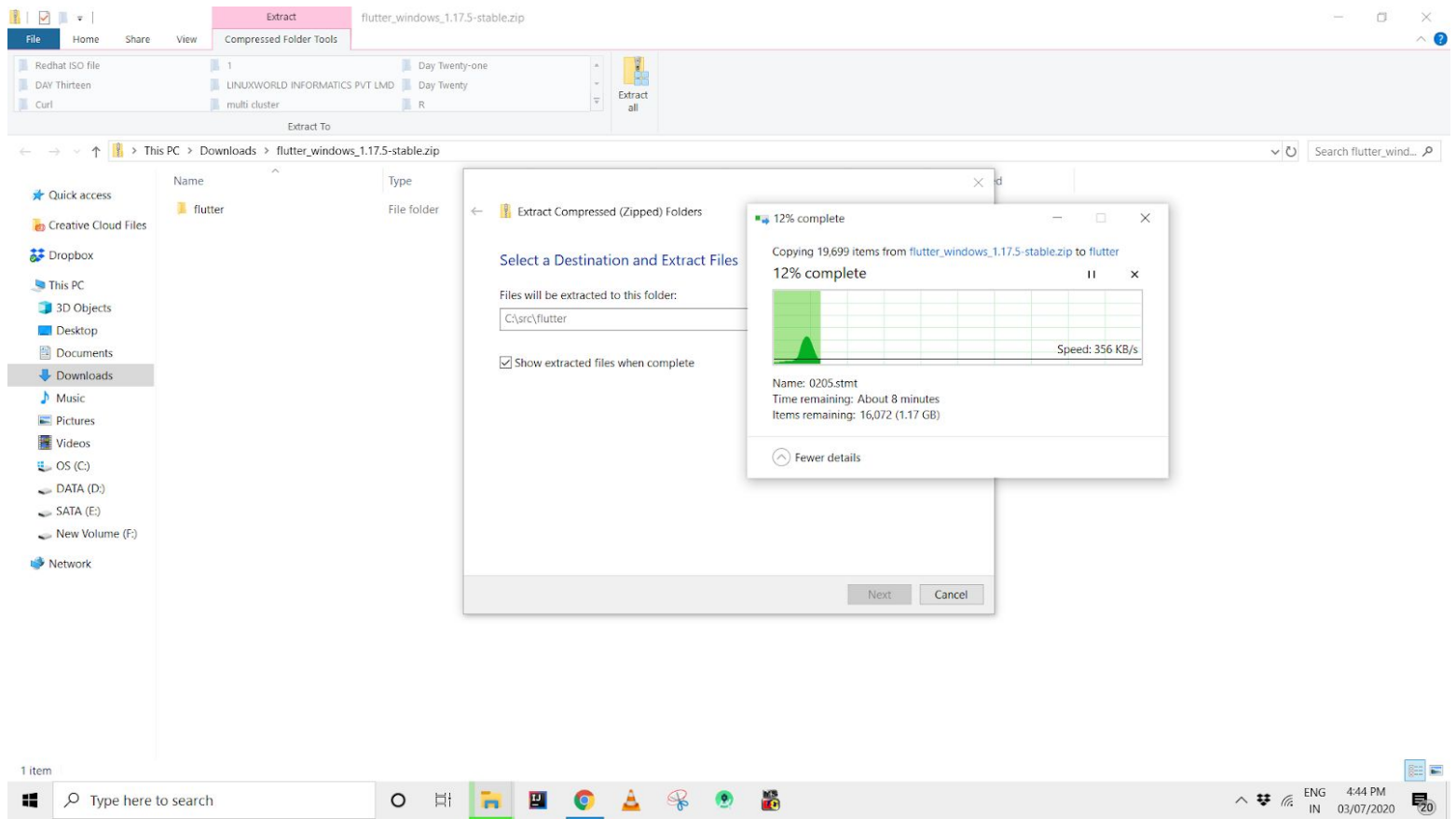
```
C:\Users\Asus>flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
[√] Flutter (Channel stable, v1.17.5, on Microsoft Windows [Version 10.0.18362.900], locale en-US)

[√] Android toolchain - develop for Android devices (Android SDK version 29.0.3)
[√] Android Studio (version 3.6)
[!] Connected device
    ! No devices available

! Doctor found issues in 1 category.

C:\Users\Asus>flutter version
1.17.5
1.20.0-2.0.pre
1.19.0-4.2.pre
1.20.0-1.0.pre
1.17.4
1.19.0-4.1.pre
1.20.0-0.0.pre
1.19.0-5.0.pre
1.19.0-4.0.pre
1.17.3
1.19.0-3.0.pre
1.19.0-2.0.pre
1.17.2
1.18.0-11.1.pre
1.17.1
1.19.0-1.0.pre
1.19.0-0.0.pre
1.18.0-13.0.pre
1.18.0-12.0.pre
1.18.0-11.0.pre
```

Setting environment on android studio for flutter and dart.
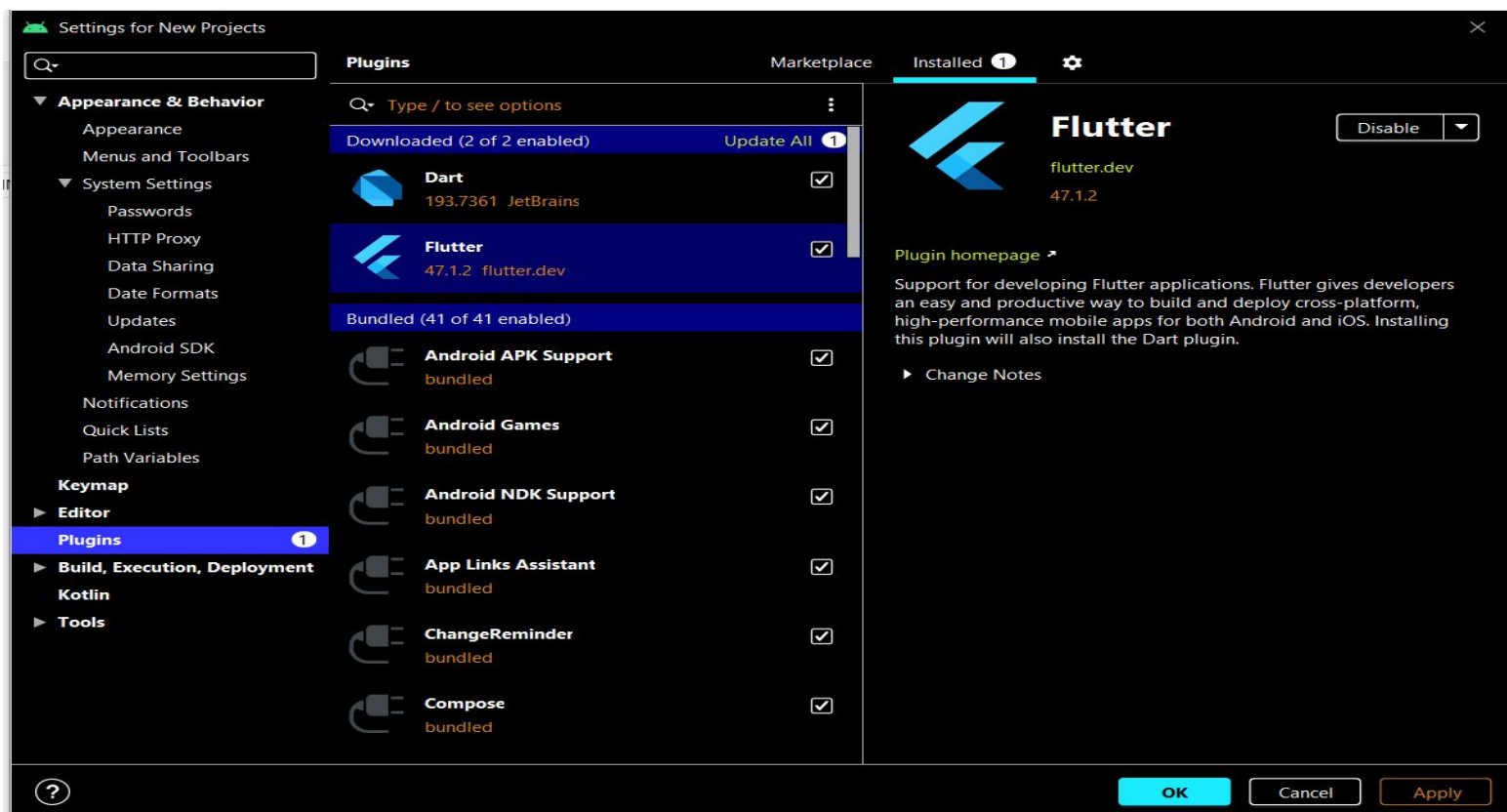
Setting virtual device on android studio….
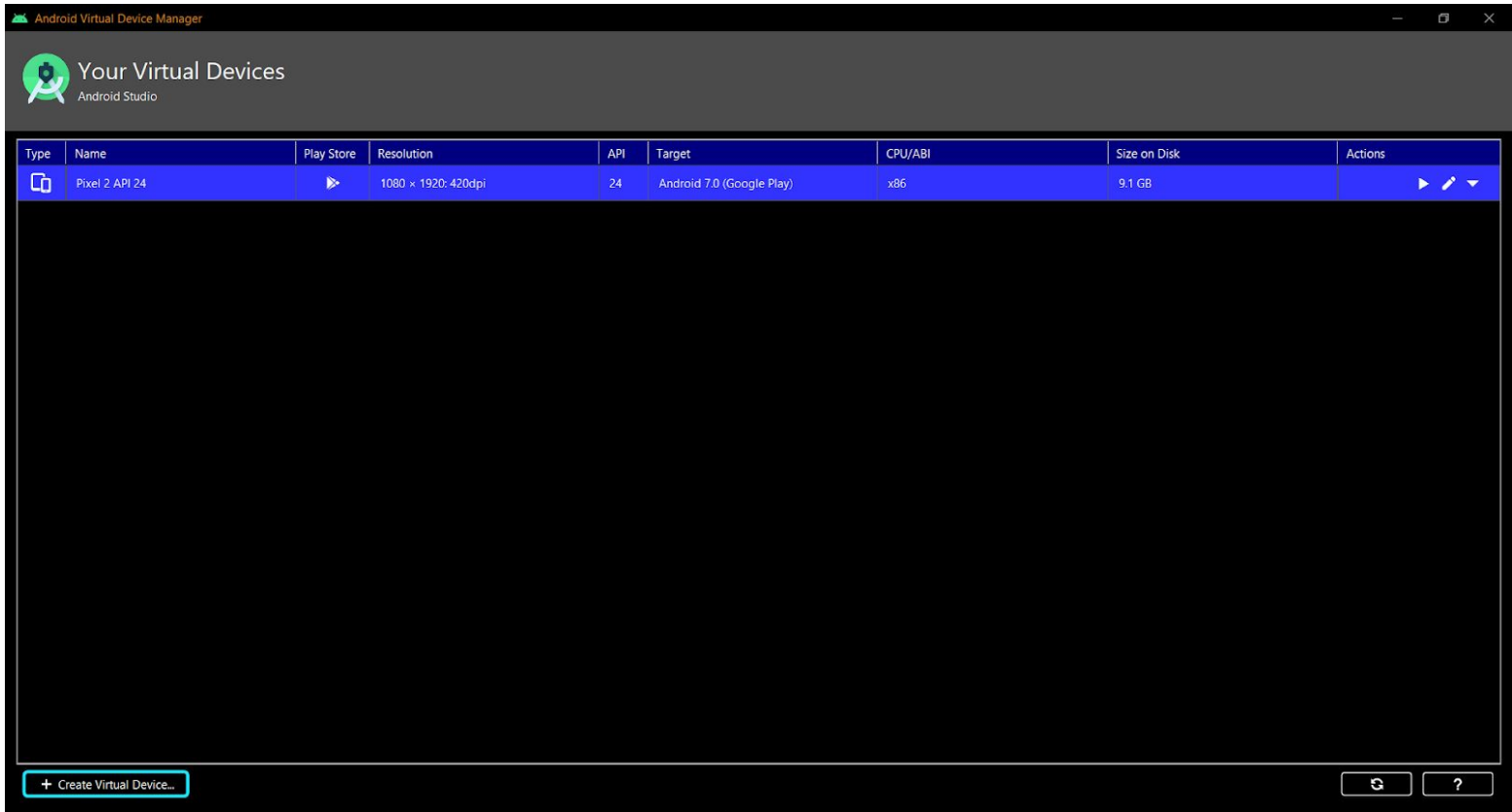
Setting SDK manager
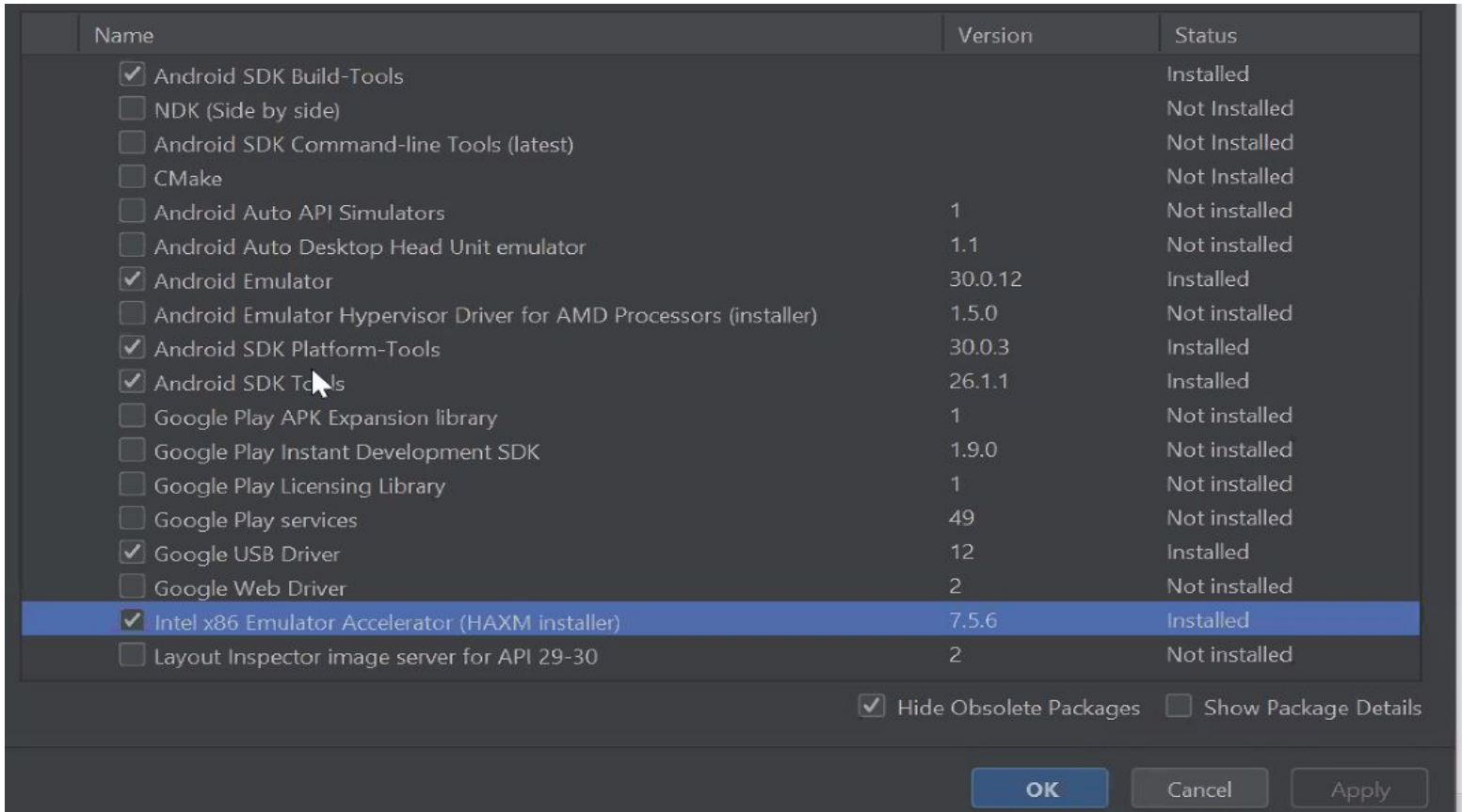
Virtual Device Configuration

System Image

Select a system image

Recommended | x86 Images | Other Images

Release Name	API Level ▼	ABI	Target
R Download	*30*	*x86*	*Android 10.0+ (Google Play)*
Q Download	*29*	*x86*	*Android 10.0 (Google Play)*
Pie	28	x86	Android 9.0 (Google Play)
Oreo Download	*27*	*x86*	*Android 8.1 (Google Play)*
Oreo Download	*26*	*x86*	*Android 8.0 (Google Play)*
Nougat Download	*25*	*x86*	*Android 7.1.1 (Google Play)*
Nougat	24	x86	Android 7.0 (Google Play)

Pie

API Level
28

Android
9.0

Google Inc.

System Image
x86

We recommend these Google Play images because this device is compatible with Google Play.

Questions on API level?
See the API level distribution chart

Previous | **Next** | Cancel | Finish

Virtual Device Configuration

Android Virtual Device (AVD)

Verify Configuration

AVD Name	Nexus 5X API 28

	Nexus 5X	5.2 1080x1920 420dpi	Change...
	Pie	Android 9.0 x86	Change...

AVD Name

The name of this AVD.

Startup orientation

Portrait | Landscape

Emulated Performance   Graphics: Automatic

Device Frame ☑ Enable Device Frame

Show Advanced Settings

Previous | Next | Cancel | **Finish**

Android Virtual Device Manager

Your Virtual Devices
Android Studio

Type	Name	Play Store	Resolution	API	Target	CPU/ABI	Size on Disk	Actions
	Nexus 5X API 28	▷	1080 × 1920: 420dpi	28	Android 9.0 (Google Play)	x86	513 MB	▶ ✎ ▾
	Pixel 2 API 24	▷	1080 × 1920: 420dpi	24	Android 7.0 (Google Play)	x86	9.1 GB	▶ ✎ ▾

+ Create Virtual Device...

Android Virtual Device Manager

Your Virtual Devices
Android Studio

Type	Name	Play Store	Resolution	API	Target	CPU/ABI	Size on Disk	Actions
	Nexus 5X API 28	▷	1080 × 1920: 420dpi	28	Android 9.0 (Google Play)	x86	513 MB	▶ ✎ ▾
	Pixel 2 API 24	▷	1080 × 1920: 420dpi	24	Android 7.0 (Google Play)	x86	9.1 GB	▶ ✎ ▾

Launching Emulator

Starting AVD...

[Background]

+ Create Virtual Device...
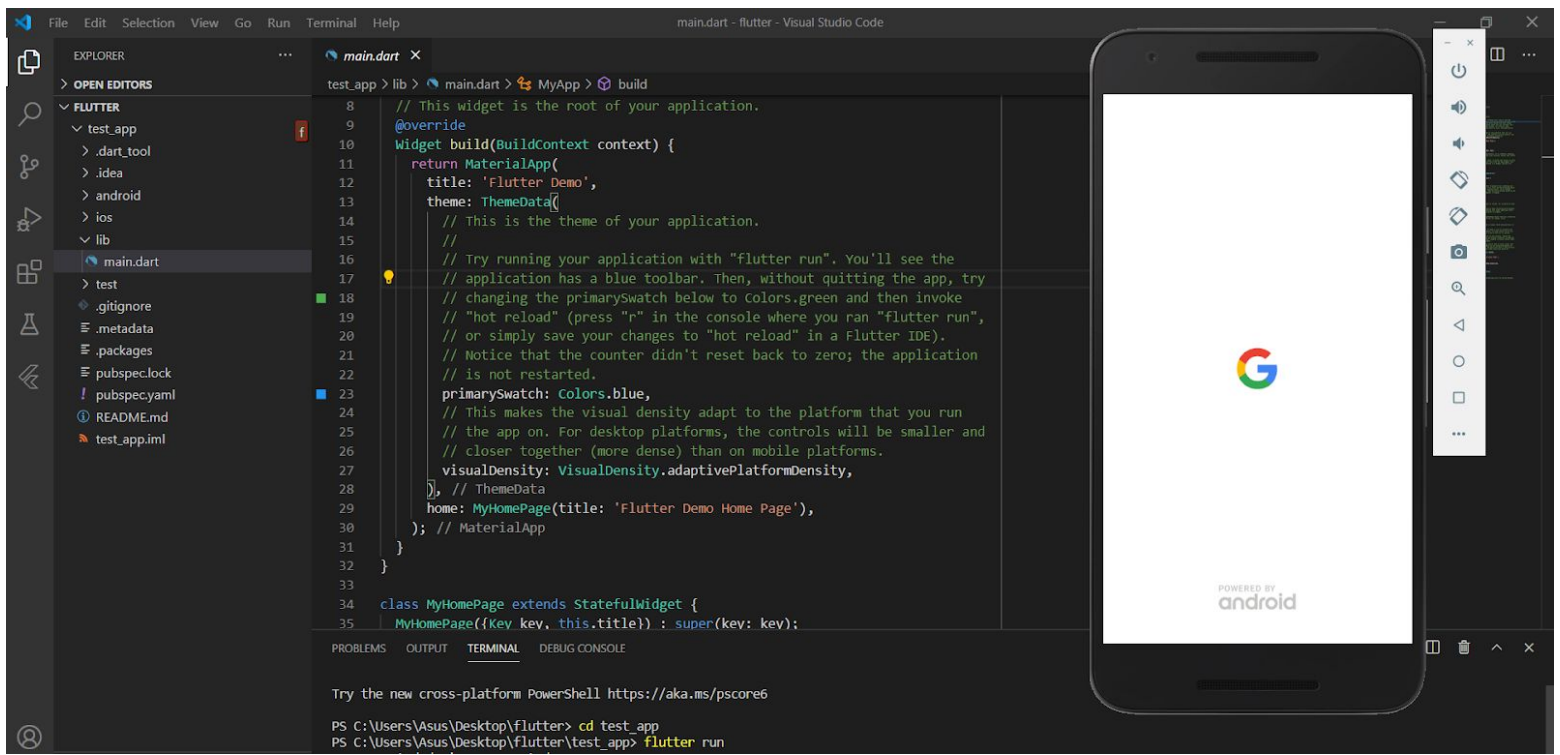
Setting flutter and dart in VS code ….

Screenshot 1 (top):

Extension: Dart - Visual Studio Code
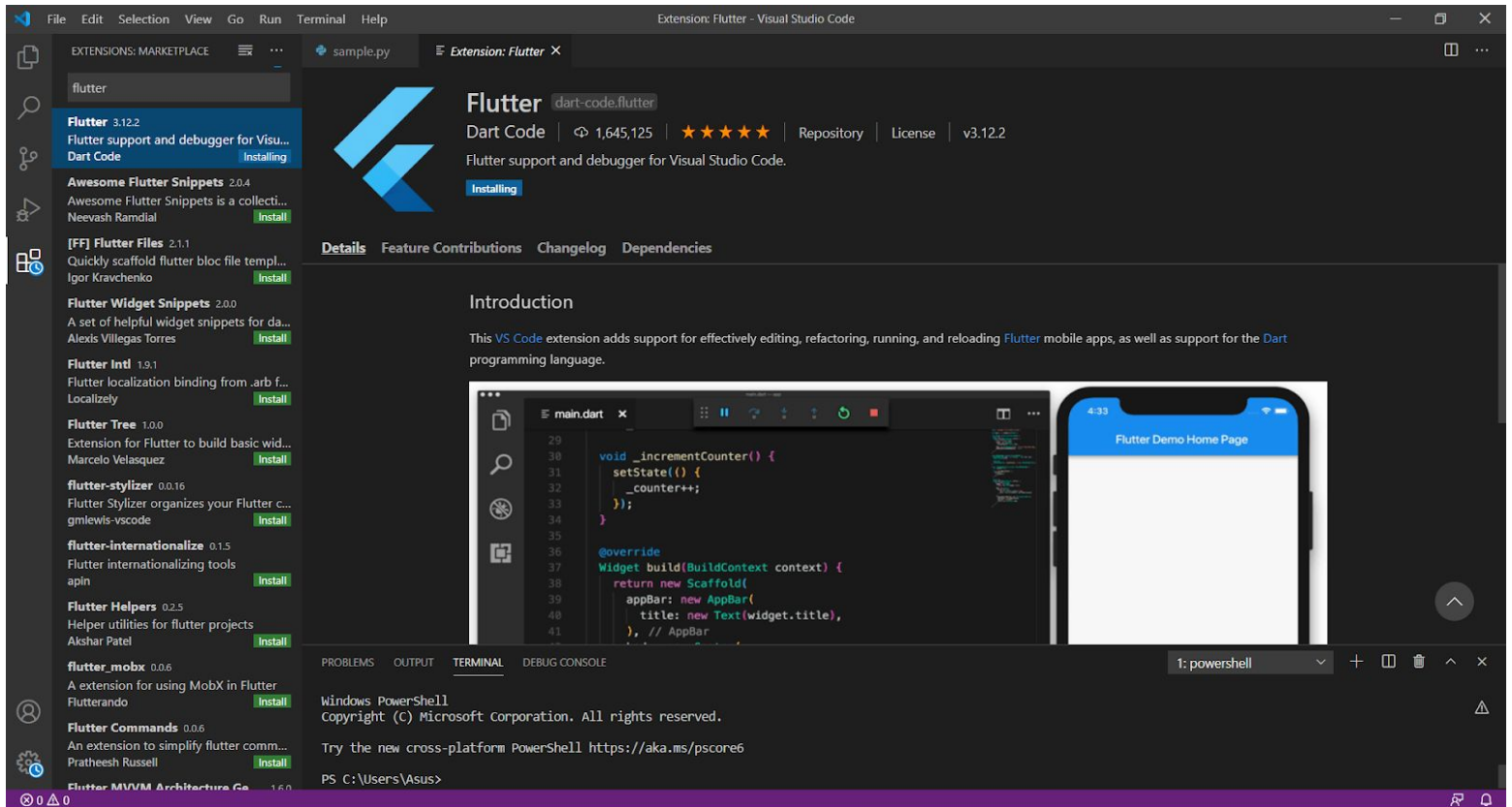
File Edit Selection View Go Run Terminal Help

EXTENSIONS: MARKETPLACE

dart

Dart 3.12.2
Dart language support and debugger ...
Dart Code

dart-import 0.2.0
Fix Dart/Flutter's imports
Luan   Install

Dart Data Class Generator 0.3.18
Create dart data classes easily, fast an...
BendixMa   Install

Dart (Syntax Highlighting Only) 1.0.1
Syntax highlighting for Dart and nothi...
oscarcs   Install

Puzzle Dart 0.0.2
XAML for Dart Language Support
bigmogician   Install

Dart Built Value Snippets 1.1.1
VS Code Snippets for the Dart built_va...
YongZhen Low   Install

Json to Dart Model 2.2.0
Extension convert Json to Dart Model ...
hirantha   Install

Dart Getters And Setters 0.0.4
Dart Generate Getters And Setters
Peter Haddad   Install

Dart Extensions Snippets 1.0.0
Snippets to create extensions in Dart
Jordan ALCARAZ   Install

goVSCode Flutter & Dart 0.0.4
Dedicated to making our lives easier. ...
Tap Payments   Install

Flutter (dart) generator 0.0.3

sample.py   Extension: Dart ×

Dart dart-code.dart-code
Dart Code   ⊙ 1,706,161   ★★★★★   Repository   License   v3.12.2
Dart language support and debugger for Visual Studio Code.
Disable Uninstall This extension is enabled globally.

Details Feature Contributions Changelog

chat discord chat gitter twitter dartcode help contribute

Introduction

Dart Code extends VS Code with support for the Dart programming language, and provides tools for effectively editing, refactoring, running, and reloading Flutter mobile apps, and AngularDart web apps.

Installation

Dart Code can be installed from the Visual Studio Code Marketplace or by searching within VS Code.

Features

- Edit and Debug Flutter mobile apps (launch using F5 or the Debug menu)
- Edit and Debug Dart command line apps (launch using F5 or the Debug menu)
- Automatic hot reloads for Flutter
- Refactorings and Code fixes (lightbulb)
- Quickly switch between devices for Flutter

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE   1: powershell

Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Asus>

ⓘ Would you like to use recommended VS Code settings for Dart & Flutter?
Source: Dart (Extension)   Yes   No   Show Recommended Settings

⊗ 0 ⚠ 0

Screenshot 2 (bottom):

Welcome - flutter - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER
> OPEN EDITORS
∨ FLUTTER
  > test_app

Welcome ×

Start
New file
Open folder...
Add workspace folder...

Customize
Tools and languages
Install support for JavaScript, Python, PHP, Azure, Docker and more

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE   1: dart

Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Asus\Desktop\flutter> flutter create test_app
Creating project test_app...
Running "flutter pub get" in flutter_tools...   2.3s
  test_app\.gitignore (created)
  test_app\.idea\libraries\Dart_SDK.xml (created)
  test_app\.idea\libraries\Flutter_for_Android.xml (created)
  test_app\.idea\libraries\KotlinJavaRuntime.xml (created)
  test_app\.idea\modules.xml (created)
  test_app\.idea\runConfigurations\main_dart.xml (created)
  test_app\.idea\workspace.xml (created)
  test_app\.metadata (created)
  test_app\android\app\build.gradle (created)
  test_app\android\app\src\main\kotlin\com\example\test_app\MainActivity.kt (created)
  test_app\android\build.gradle (created)
  test_app\android\test_app_android.iml (created)
  test_app\android\.gitignore (created)
  test_app\android\app\src\debug\AndroidManifest.xml (created)
  test_app\android\app\src\main\AndroidManifest.xml (created)
  test_app\android\app\src\main\res\drawable\launch_background.xml (created)
  test_app\android\app\src\main\res\mipmap-hdpi\ic_launcher.png (created)
  test_app\android\app\src\main\res\mipmap-mdpi\ic_launcher.png (created)
  test_app\android\app\src\main\res\mipmap-xhdpi\ic_launcher.png (created)
  test_app\android\app\src\main\res\mipmap-xxhdpi\ic_launcher.png (created)
  test_app\android\app\src\main\res\mipmap-xxxhdpi\ic_launcher.png (created)
  test_app\android\app\src\main\res\values\styles.xml (created)
  test_app\android\app\src\profile\AndroidManifest.xml (created)
  test_app\android\gradle\wrapper\gradle-wrapper.properties (created)
  test_app\android\gradle.properties (created)
  test_app\android\settings.gradle (created)

> OUTLINE
> TIMELINE

⊗ 0 ⚠ 0

Screenshot 1 — Welcome - flutter - Visual Studio Code

File   Edit   Selection   View   Go   Run   Terminal   Help

Welcome

EXPLORER
> OPEN EDITORS
∨ FLUTTER
  > test_app
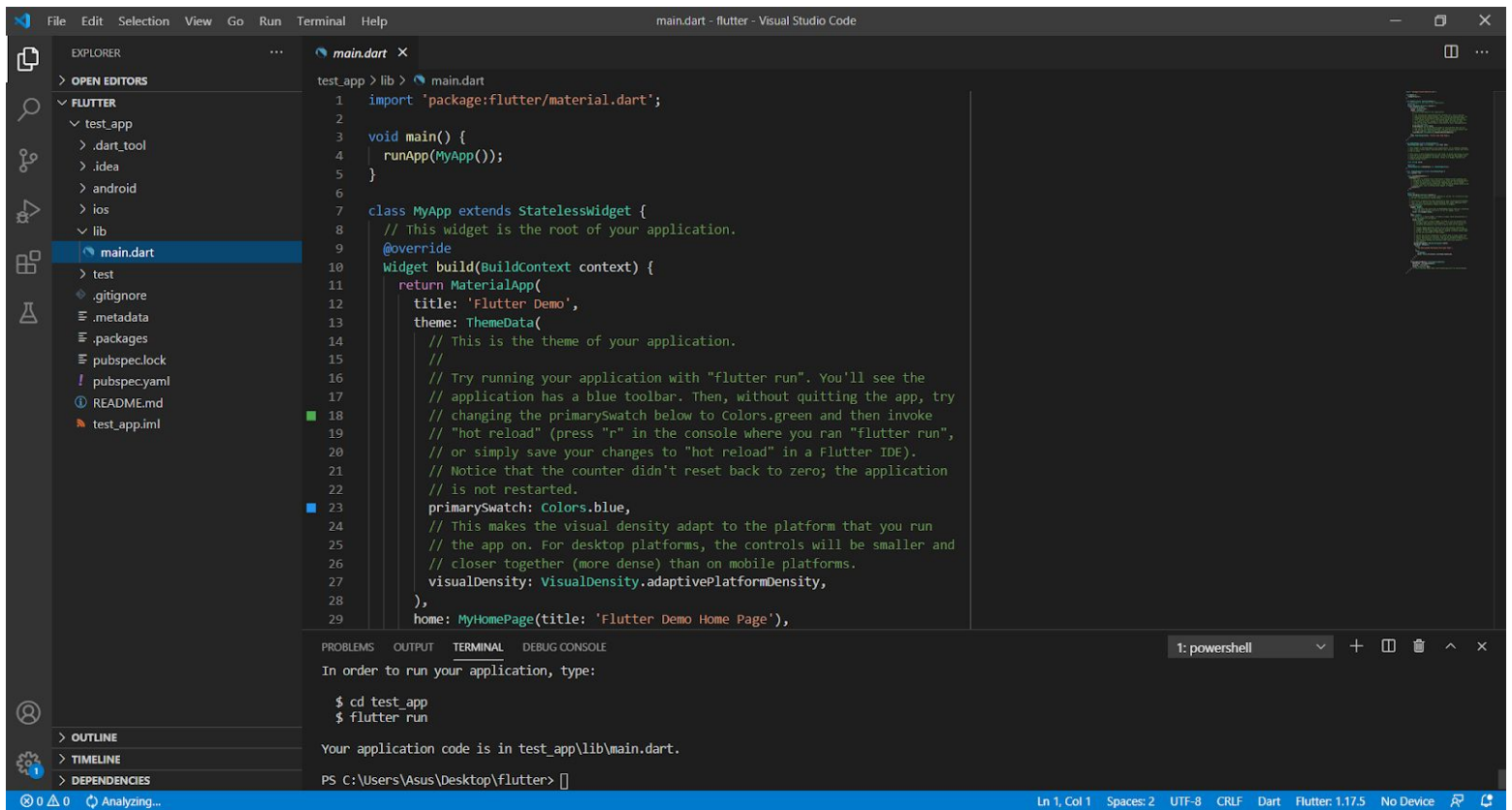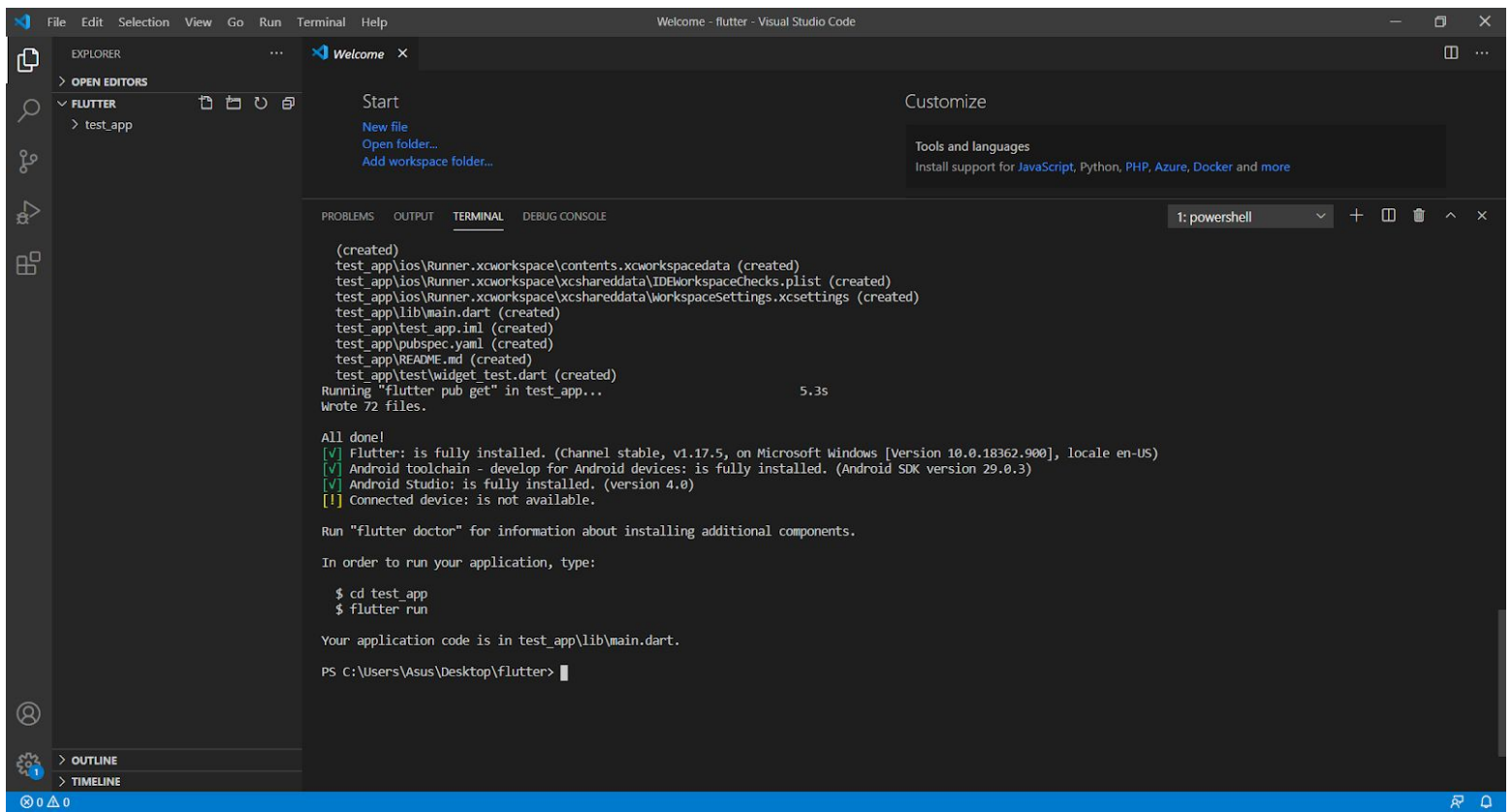
Start
New file
Open folder...
Add workspace folder...

Customize
Tools and languages
Install support for JavaScript, Python, PHP, Azure, Docker and more

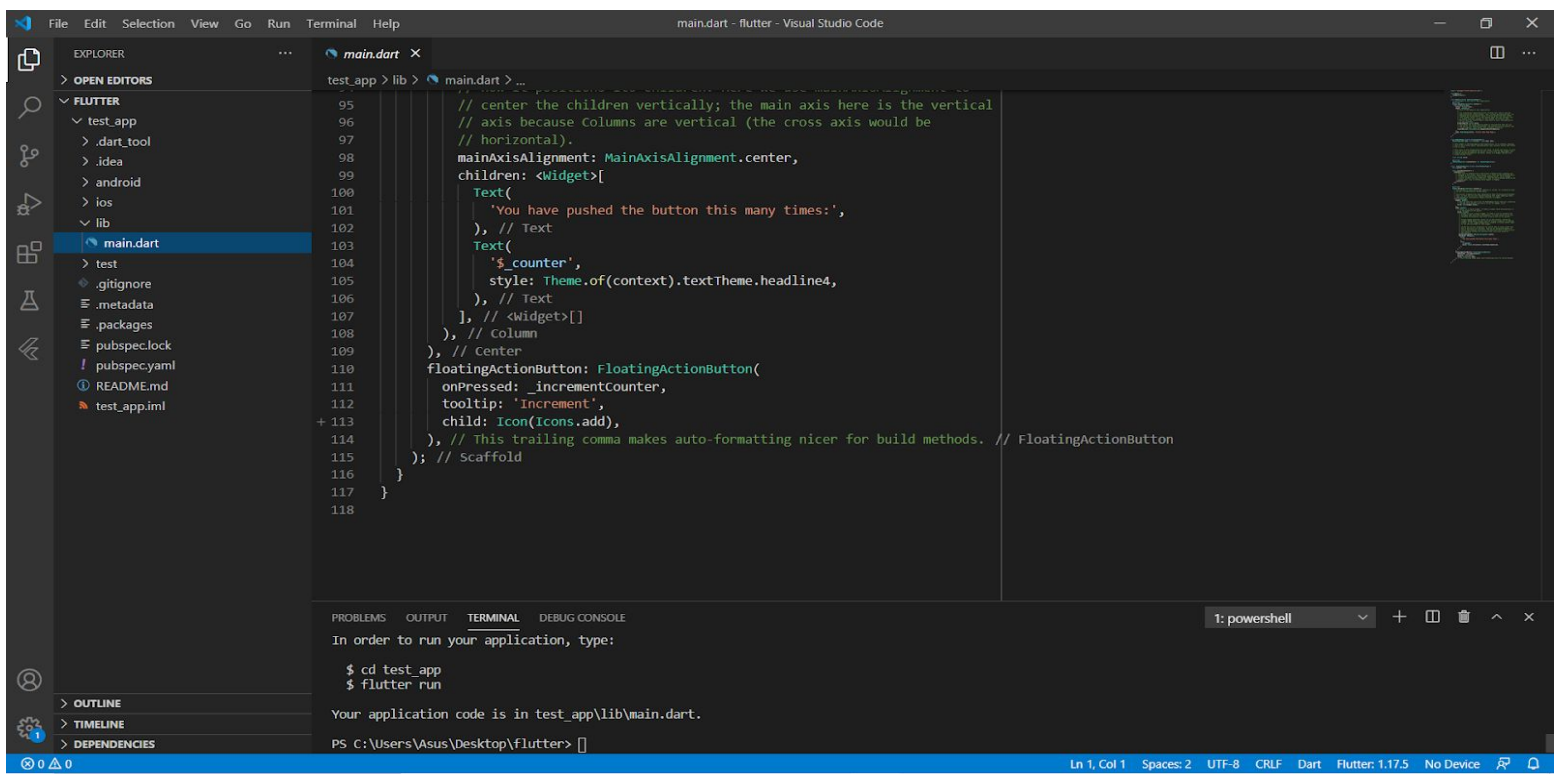PROBLEMS   OUTPUT   TERMINAL   DEBUG CONSOLE

```
  (created)
  test_app\ios\Runner.xcworkspace\contents.xcworkspacedata (created)
  test_app\ios\Runner.xcworkspace\xcshareddata\IDEWorkspaceChecks.plist (created)
  test_app\ios\Runner.xcworkspace\xcshareddata\WorkspaceSettings.xcsettings (created)
  test_app\lib\main.dart (created)
  test_app\test_app.iml (created)
  test_app\pubspec.yaml (created)
  test_app\README.md (created)
  test_app\test\widget_test.dart (created)
Running "flutter pub get" in test_app...                    5.3s
Wrote 72 files.

All done!
[√] Flutter: is fully installed. (Channel stable, v1.17.5, on Microsoft Windows [Version 10.0.18362.900], locale en-US)
[√] Android toolchain - develop for Android devices: is fully installed. (Android SDK version 29.0.3)
[√] Android Studio: is fully installed. (version 4.0)
[!] Connected device: is not available.

Run "flutter doctor" for information about installing additional components.

In order to run your application, type:

  $ cd test_app
  $ flutter run

Your application code is in test_app\lib\main.dart.

PS C:\Users\Asus\Desktop\flutter>
```

1: powershell

⊗ 0 ⚠ 0

Screenshot 2 — main.dart - flutter - Visual Studio Code

File   Edit   Selection   View   Go   Run   Terminal   Help

main.dart

EXPLORER
> OPEN EDITORS
∨ FLUTTER
  ∨ test_app
    > .dart_tool
    > .idea
    > android
    > ios
    ∨ lib
      main.dart
    > test
    .gitignore
    .metadata
    .packages
    pubspec.lock
    pubspec.yaml
    README.md
    test_app.iml

test_app > lib > main.dart

```dart
 1  import 'package:flutter/material.dart';
 2
 3  void main() {
 4    runApp(MyApp());
 5  }
 6
 7  class MyApp extends StatelessWidget {
 8    // This widget is the root of your application.
 9    @override
10    Widget build(BuildContext context) {
11      return MaterialApp(
12        title: 'Flutter Demo',
13        theme: ThemeData(
14          // This is the theme of your application.
15          //
16          // Try running your application with "flutter run". You'll see the
17          // application has a blue toolbar. Then, without quitting the app, try
18          // changing the primarySwatch below to Colors.green and then invoke
19          // "hot reload" (press "r" in the console where you ran "flutter run",
20          // or simply save your changes to "hot reload" in a Flutter IDE).
21          // Notice that the counter didn't reset back to zero; the application
22          // is not restarted.
23          primarySwatch: Colors.blue,
24          // This makes the visual density adapt to the platform that you run
25          // the app on. For desktop platforms, the controls will be smaller and
26          // closer together (more dense) than on mobile platforms.
27          visualDensity: VisualDensity.adaptivePlatformDensity,
28        ),
29        home: MyHomePage(title: 'Flutter Demo Home Page'),
```

PROBLEMS   OUTPUT   TERMINAL   DEBUG CONSOLE

```
In order to run your application, type:

  $ cd test_app
  $ flutter run

Your application code is in test_app\lib\main.dart.

PS C:\Users\Asus\Desktop\flutter>
```

1: powershell

> OUTLINE
> TIMELINE
> DEPENDENCIES

⊗ 0 ⚠ 0   Analyzing...   Ln 1, Col 1   Spaces: 2   UTF-8   CRLF   Dart   Flutter: 1.17.5   No Device

```
95      // center the children vertically; the main axis here is the vertical
96      // axis because Columns are vertical (the cross axis would be
97      // horizontal).
98      mainAxisAlignment: MainAxisAlignment.center,
99      children: <Widget>[
100       Text(
101         'You have pushed the button this many times:',
102       ), // Text
103       Text(
104         '$_counter',
105         style: Theme.of(context).textTheme.headline4,
106       ), // Text
107     ], // <Widget>[]
108     ), // Column
109    ), // Center
110    floatingActionButton: FloatingActionButton(
111      onPressed: _incrementCounter,
112      tooltip: 'Increment',
113      child: Icon(Icons.add),
114    ), // This trailing comma makes auto-formatting nicer for build methods. // FloatingActionButton
115   ); // Scaffold
116  }
117 }
118
```
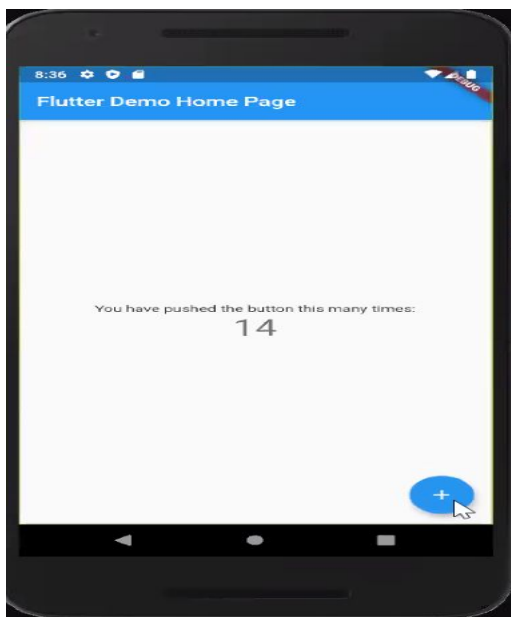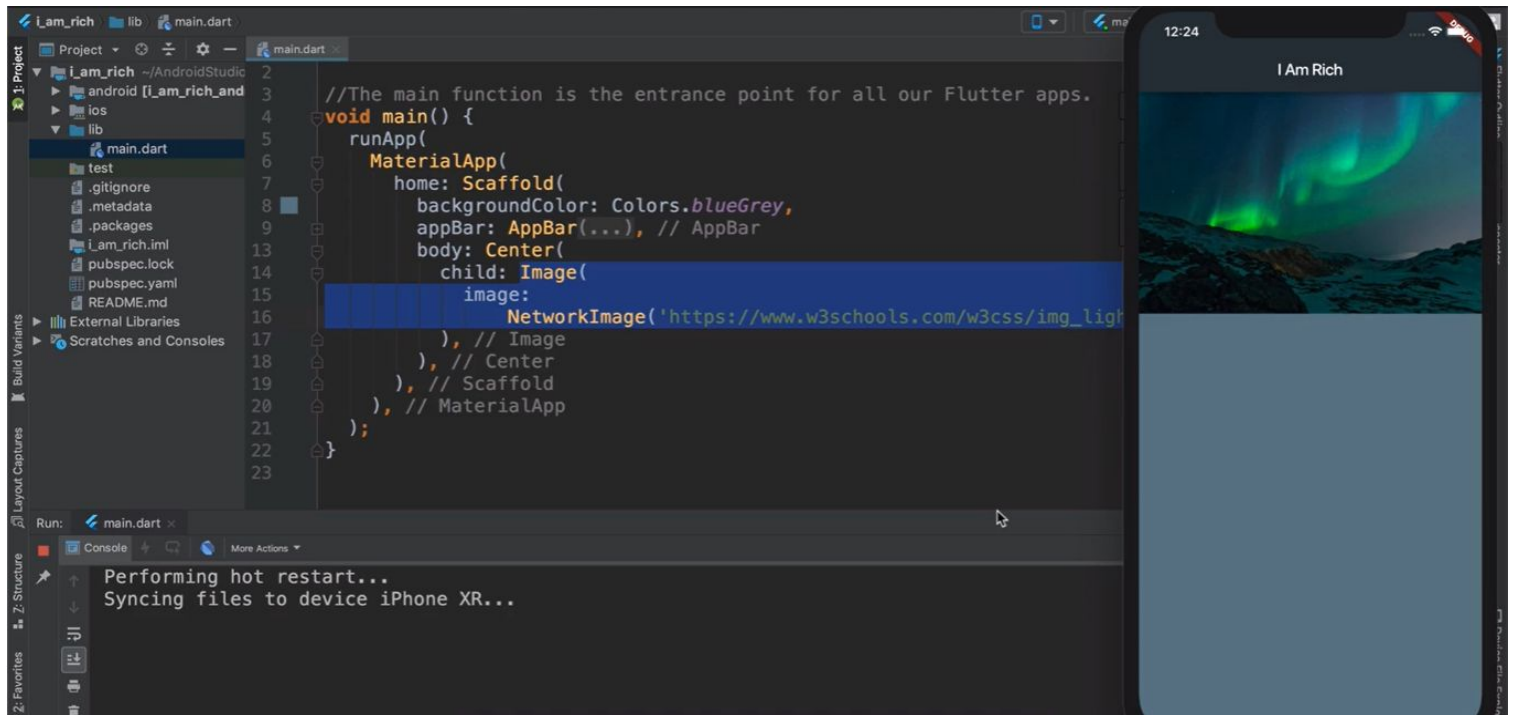


```
Your application code is in test_app\lib\main.dart.

PS C:\Users\Asus\Desktop\flutter> flutter emulators
1 available emulator:

Pixel_2_API_24 • Pixel 2 API 24 • Google • android
```



```
PS C:\Users\Asus\Desktop\flutter> flutter emulators --create [--Pixel_2_API_24  Pixel 2 API 24  Google  android]
Emulator 'flutter_emulator' created successfully.
```


Other program on android studio….

Thanks for Reading!!!