



An Introduction to **Dart** and **Flutter**



Visual Studio Code


Android
Studio



Session 4

Summary:-

1. In today's session we got to know about variables and its use cases, Use of var, return keyword, different datatype used in dart language and Use cases of list and map.
2. Variables is used to allocate memory location in computer memory that holds a value for that variable. This value can be changed during the execution of the program.
3. A variable without value has null value by default. There are basically int, double, boolean and string Data Types in Dart.
4. Var is a keyword that can hold any type of variable value whether it is string, int or double .
5. In Dart, there is return keyword allows a function to return value.
6. A List is simply an ordered group of objects. Dart represents arrays in the form of List objects.
7. Each element in the List is given a unique number called the index. The index starts from zero.
8. List is mutable means you can change their content without changing their identity.
ex:- `var x = [1, "Hello", "Pratik"];`
9. Just like List, Map(dynamic collection) is also a type of collection in which data is stored in key: value pairs. Use of comma at the end of key-value pair for autoformat of the code.
ex:- `var details = {"Roll no":1, "Name": "Pratik"};`
10. DartPad is an online interpreter to run and compile the dart code.
11. When we save the code, the code get auto formatted.
12. Internal linkedhashmap <String, Object> :- A hash-table based implementation of Map.
13. Runtime.type: checking variable type in Dart.

 DartPad

<> New Pad

↺ Reset

≡ Format

⬇ Install SDK

snowy-disk-1446

Samples ▾ ⋮

```
main () {
  String x = "Dart is a client-optimized language for fast apps on any platform";
  print(x);
  print(x);
  print(x);
}
```

RUN


Console

Dart is a client-optimized language for fast apps on any platform
Dart is a client-optimized language for fast apps on any platform
Dart is a client-optimized language for fast apps on any platform

Documentation

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no issues Based on Dart SDK 2.8.4

 DartPad

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≡ Format

⬇ Install SDK

snowy-disk-1446

Samples ▾ ⋮

```
main () {
  int xyz;
  var x = 31;
  xyz = 23;
  xyz = 46;
  print(xyz);
  print('x');
  print("x");
  print(x);
}
```

RUN

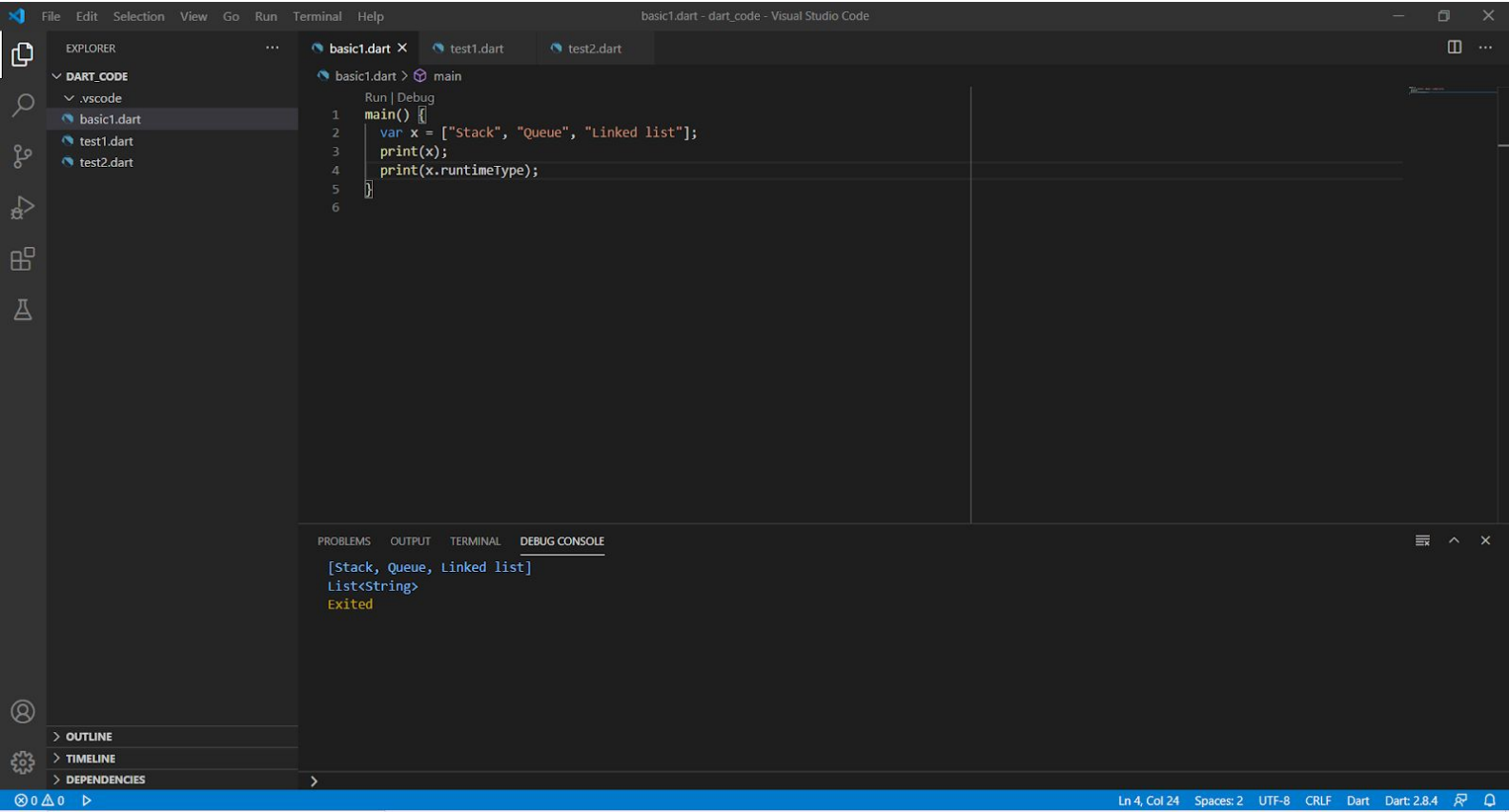
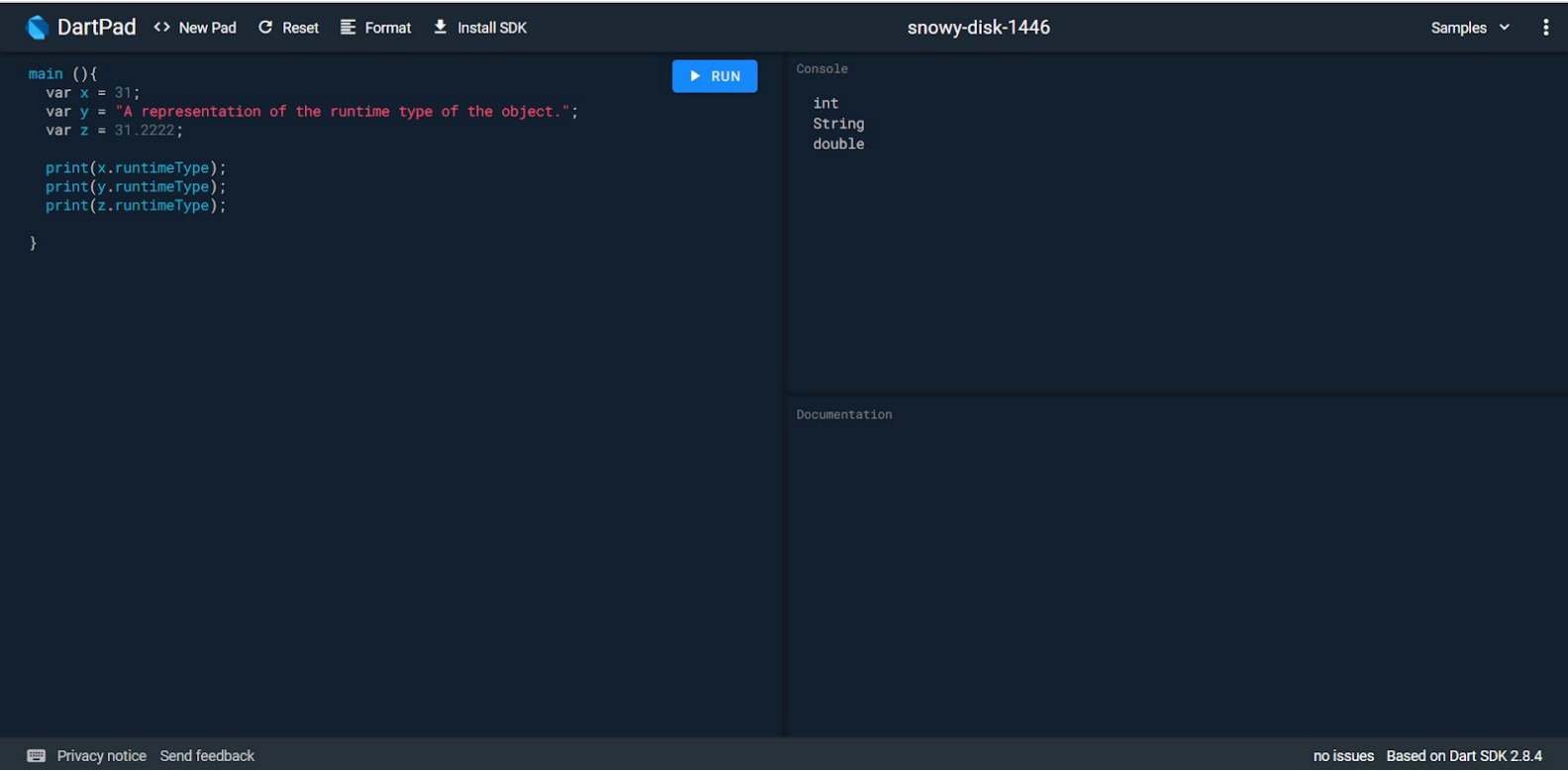
Console

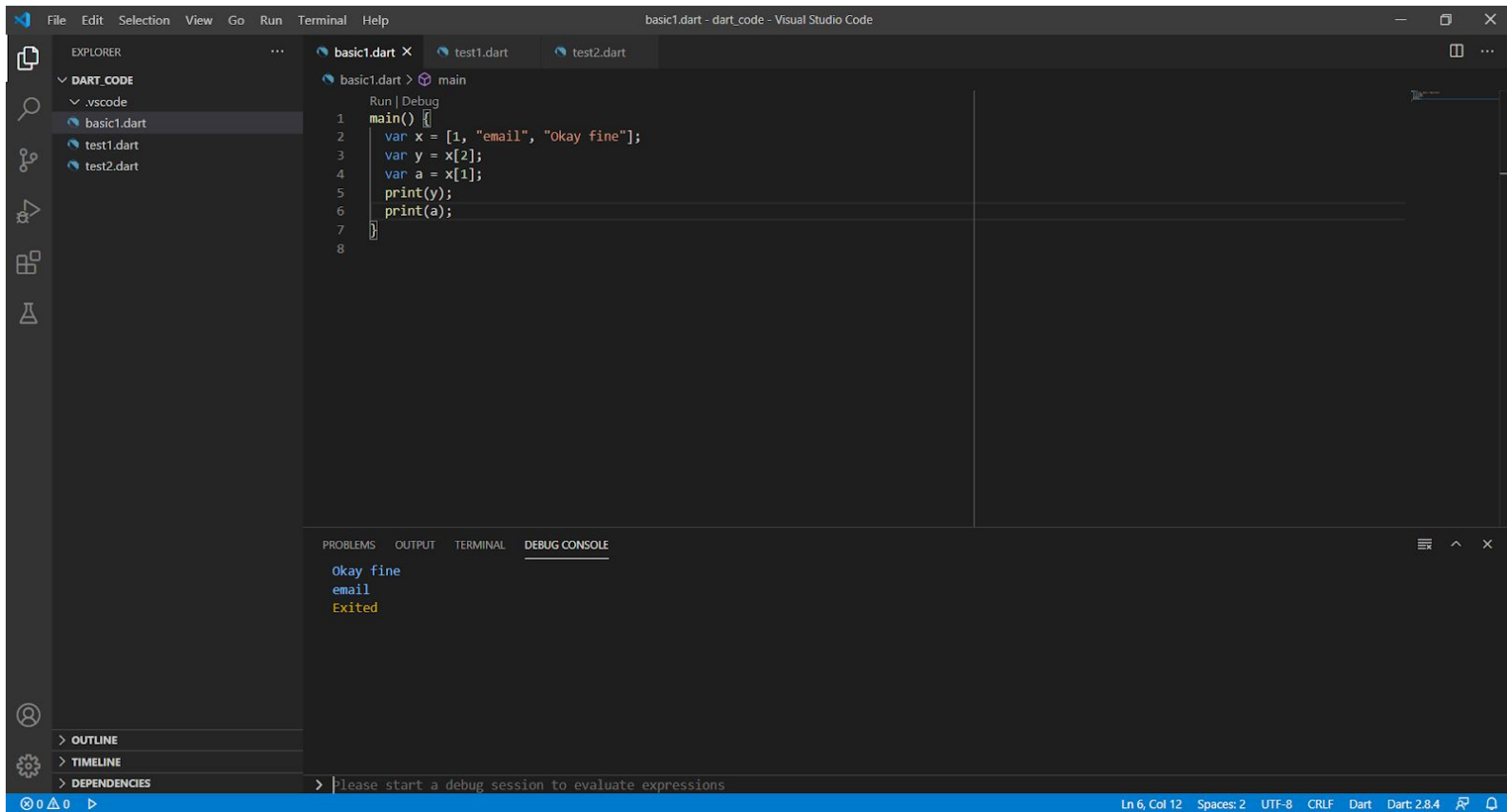
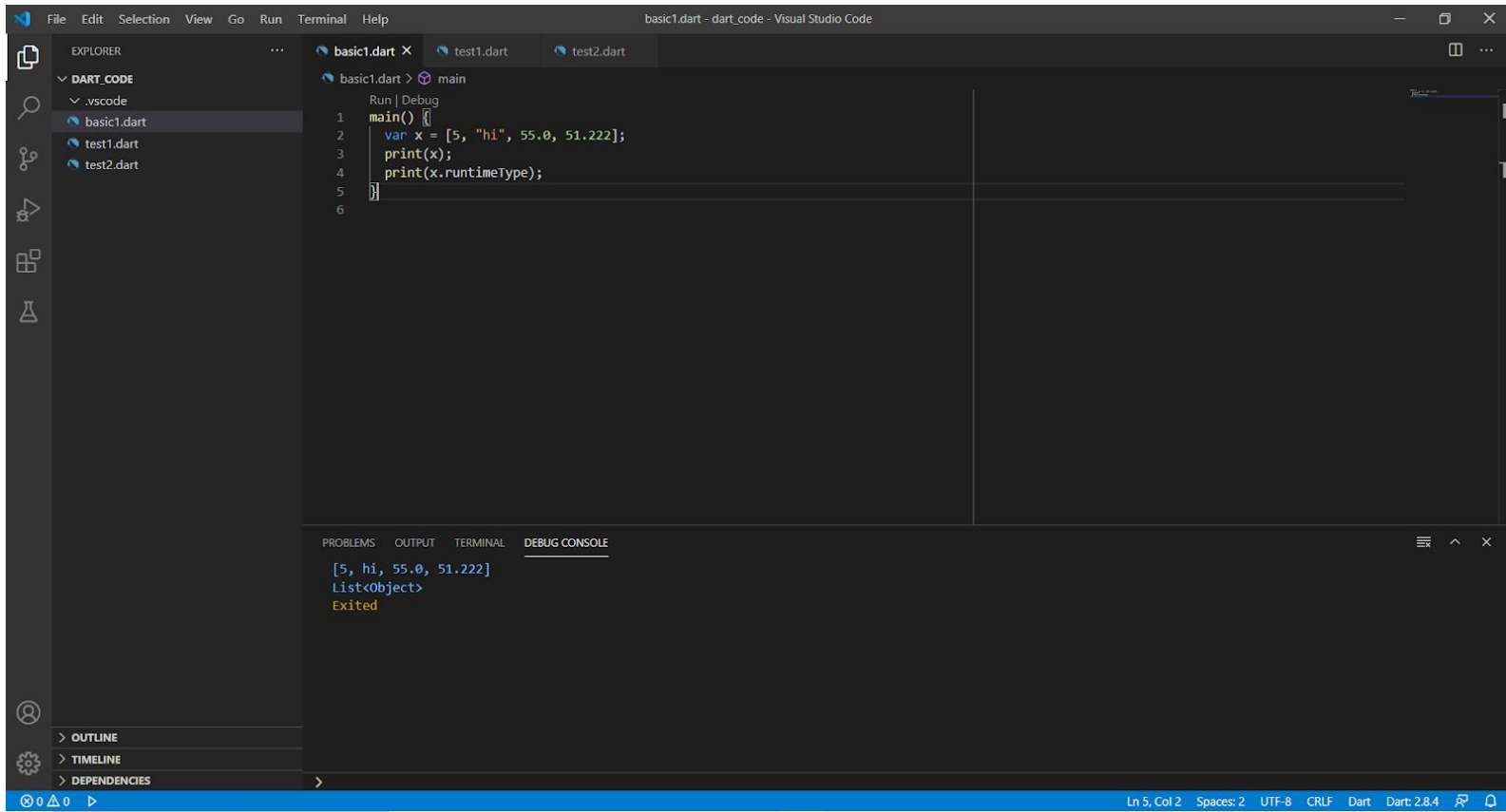
46
x
x
31

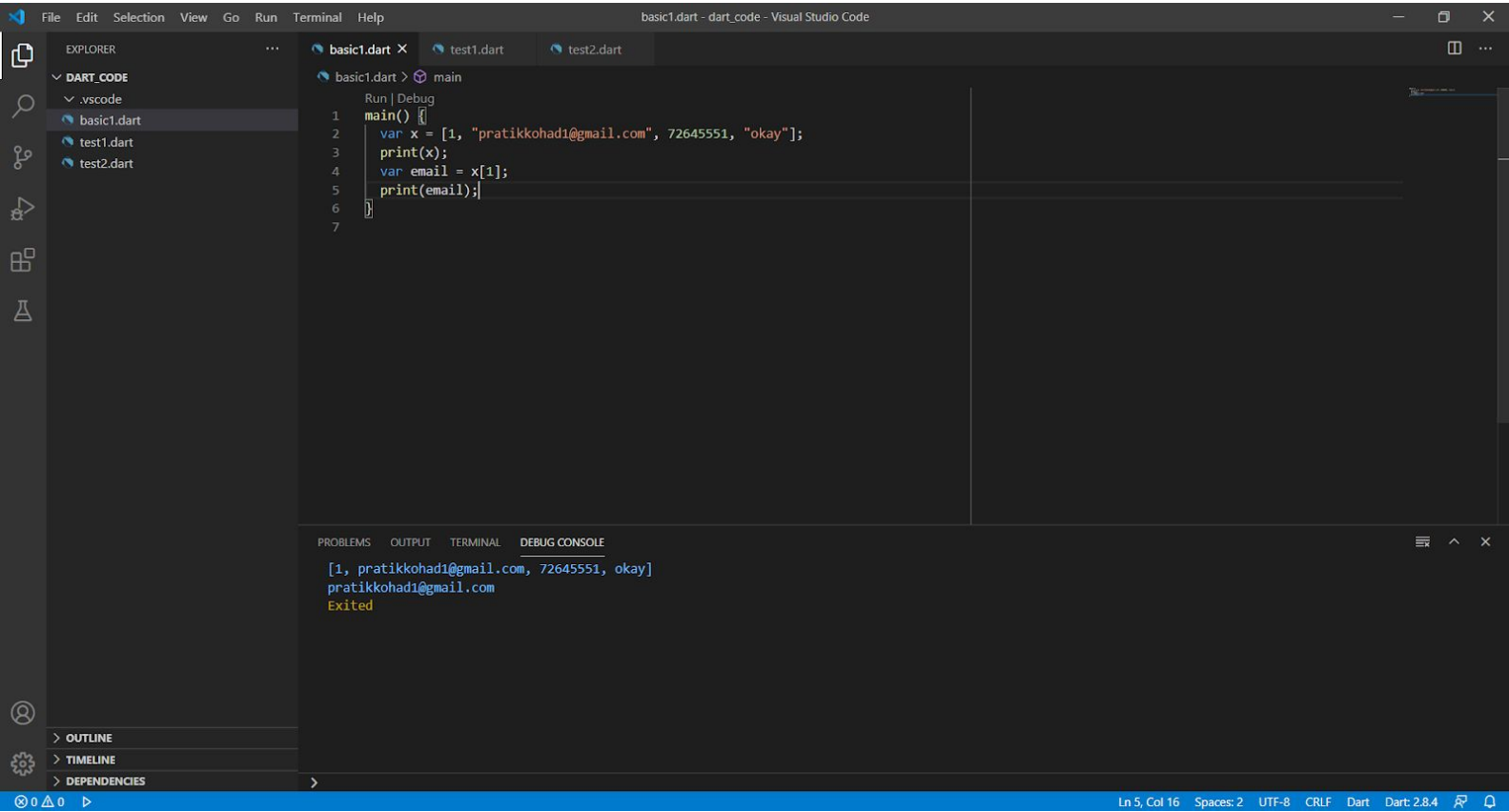
Documentation

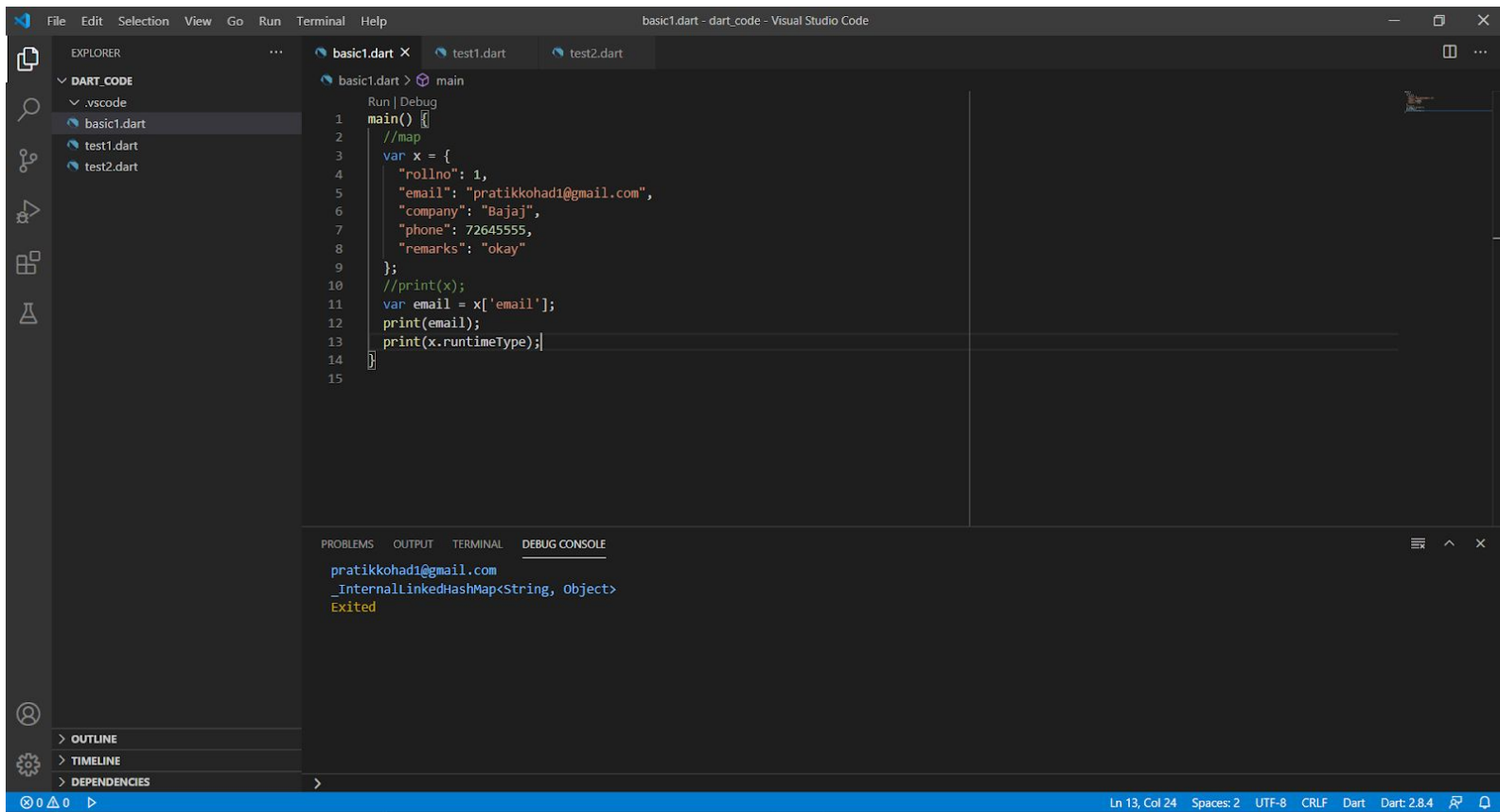
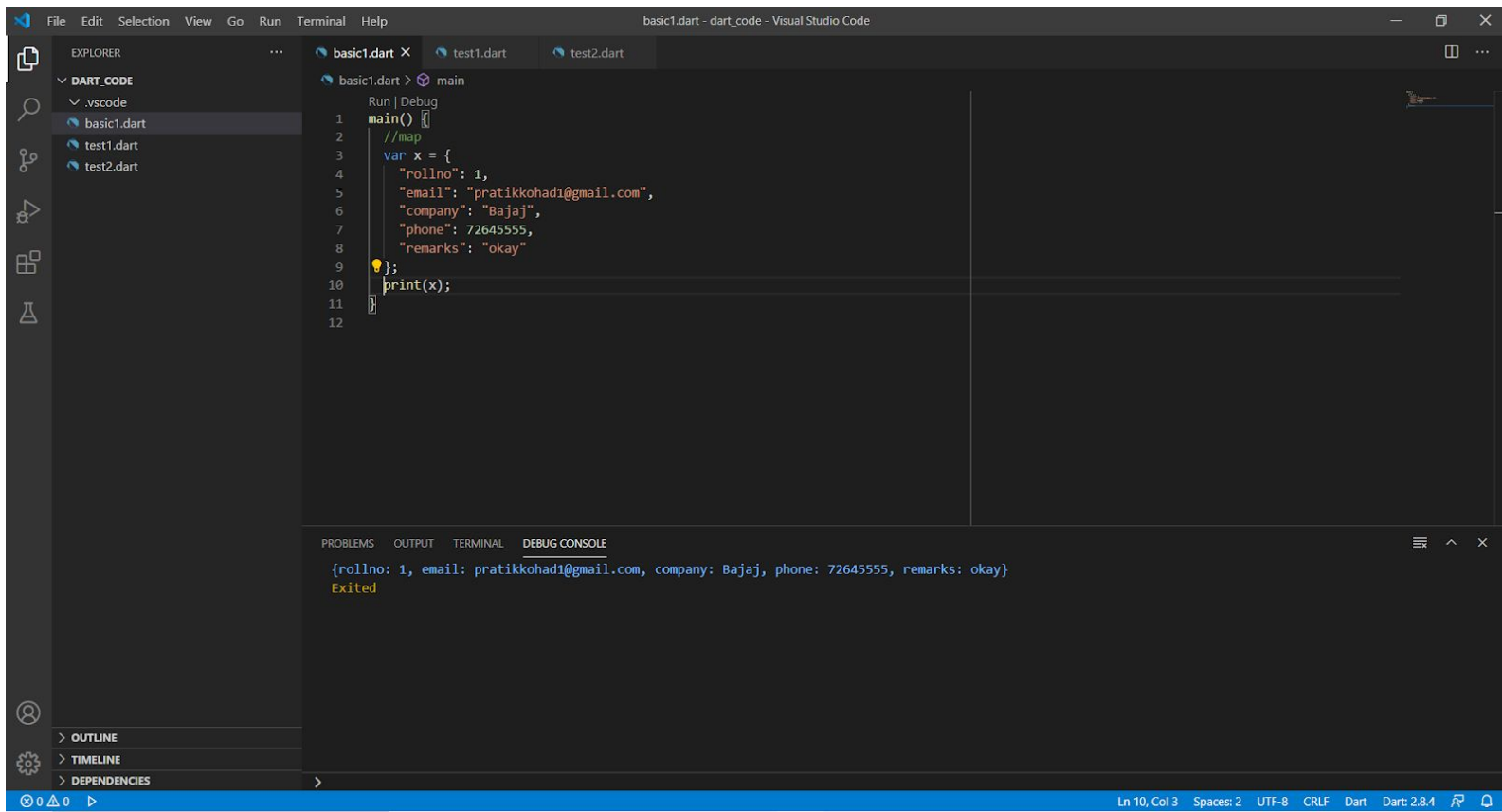
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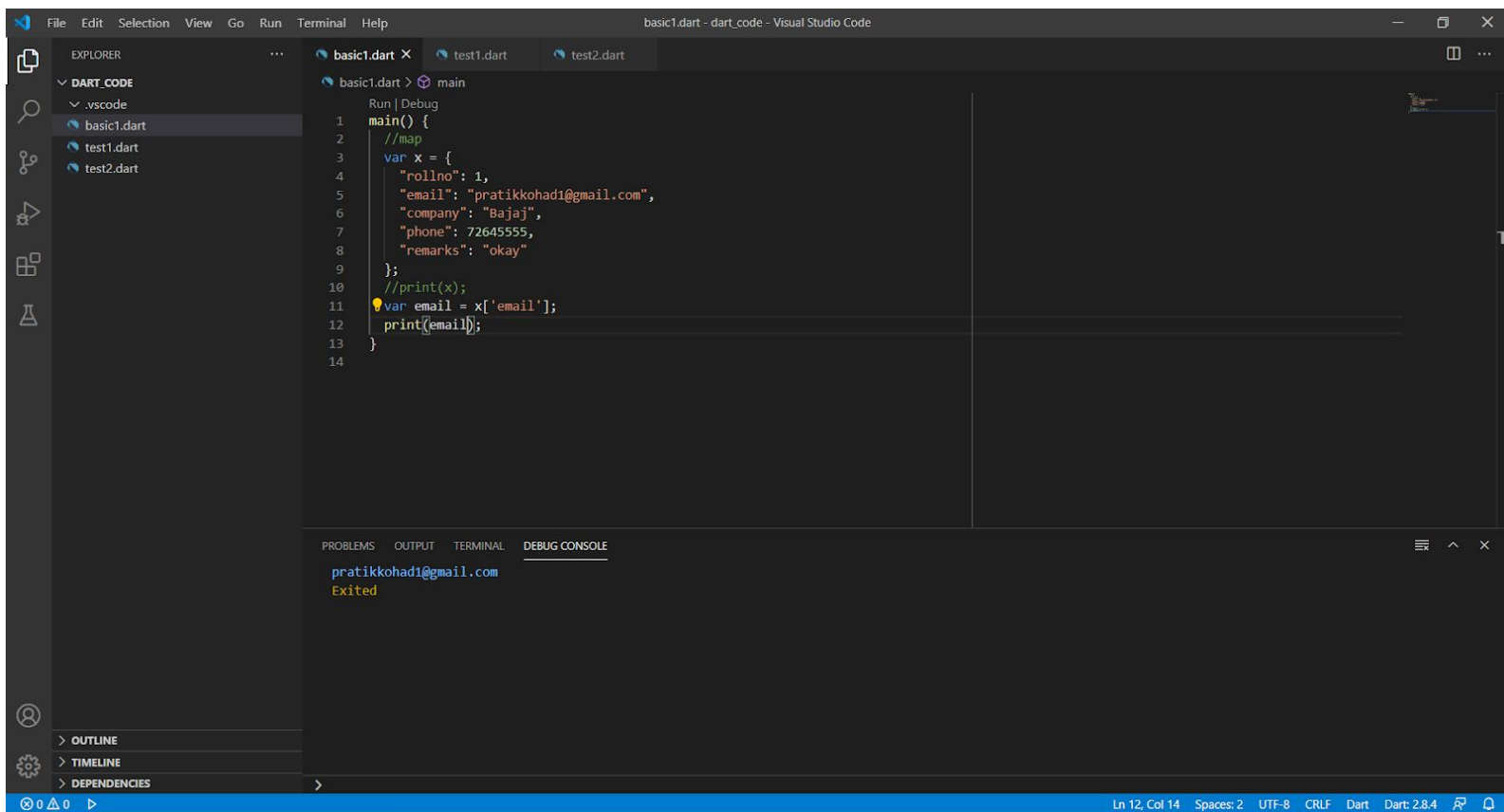
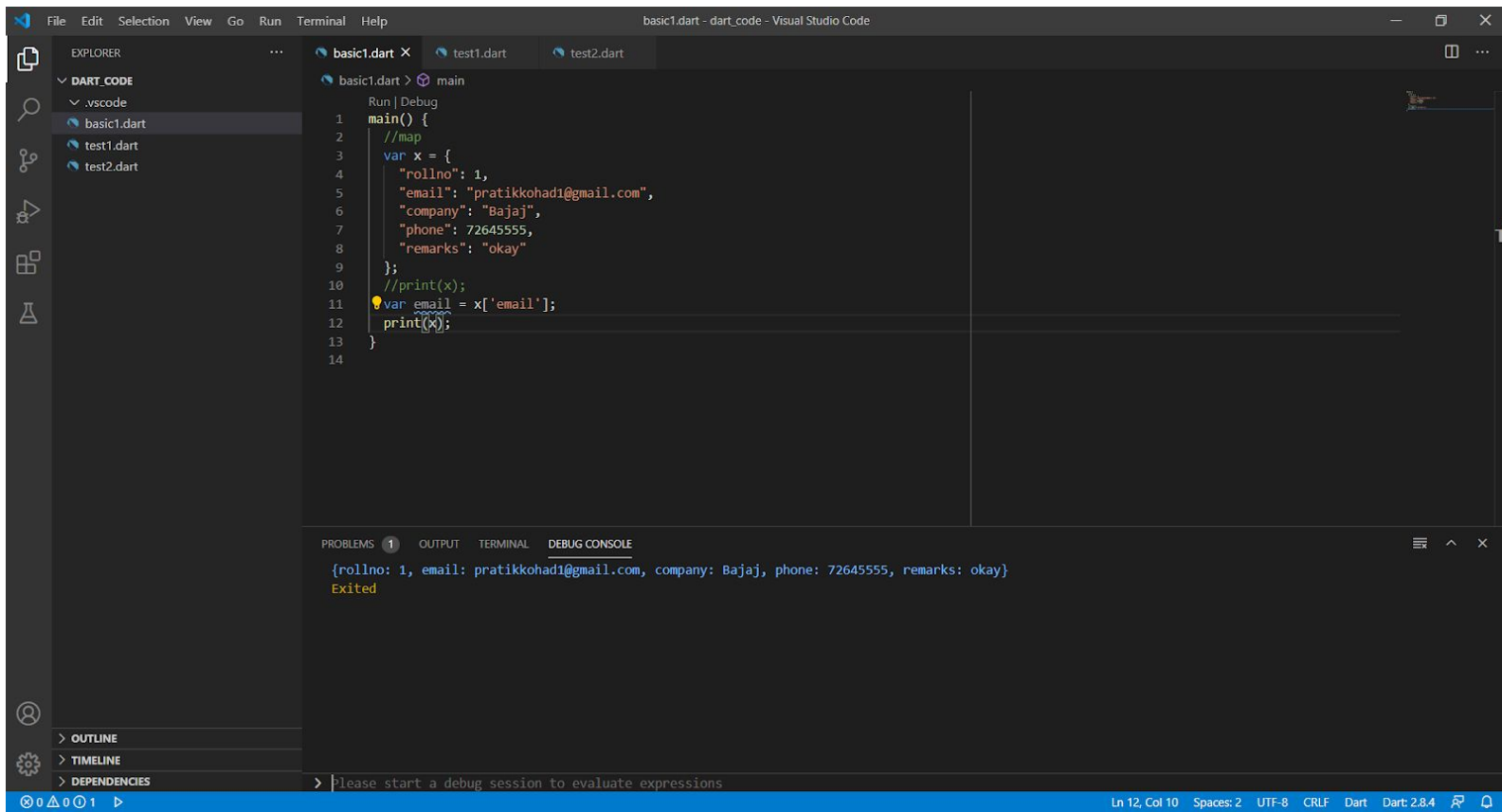
no issues Based on Dart SDK 2.8.4

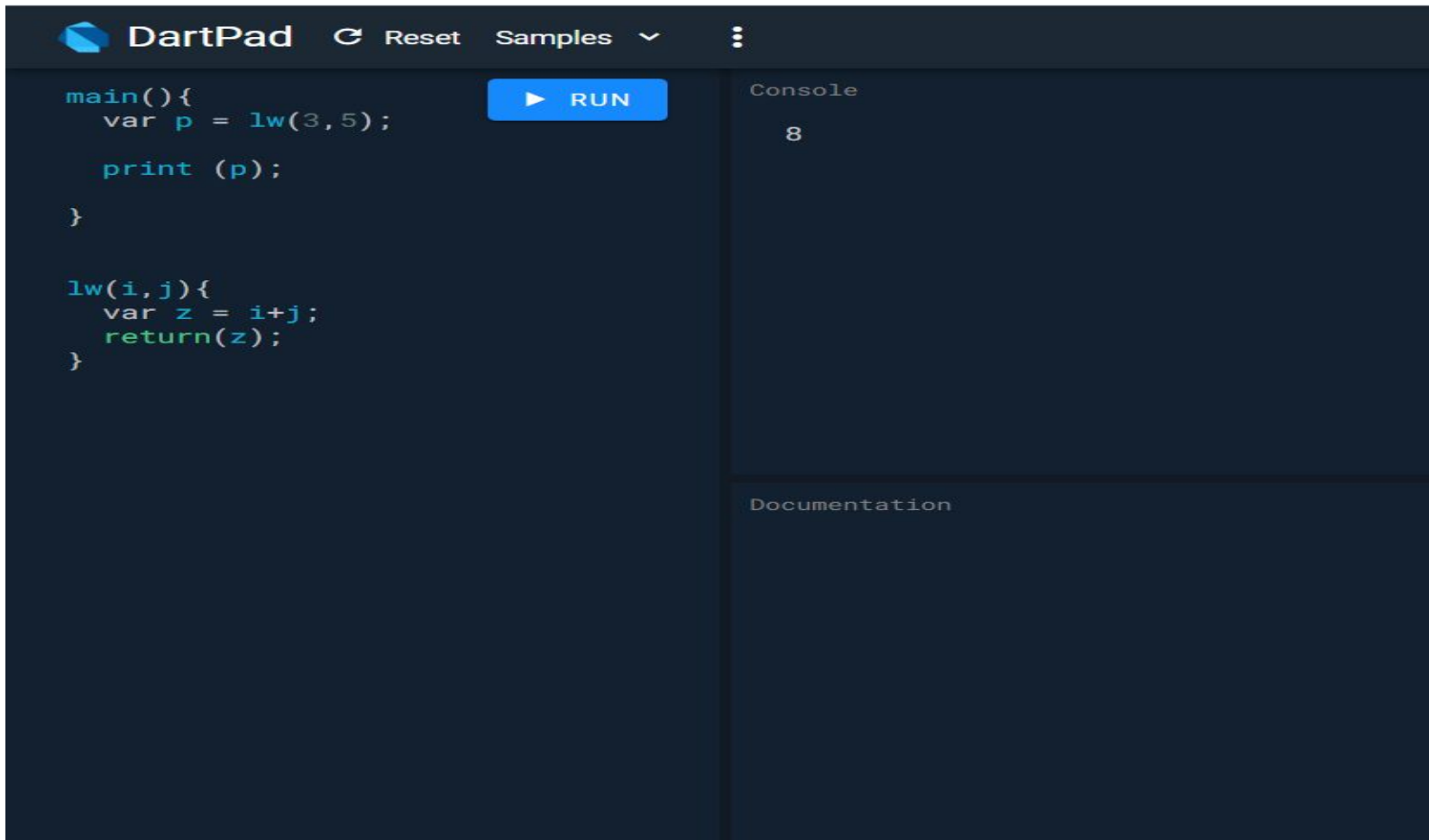
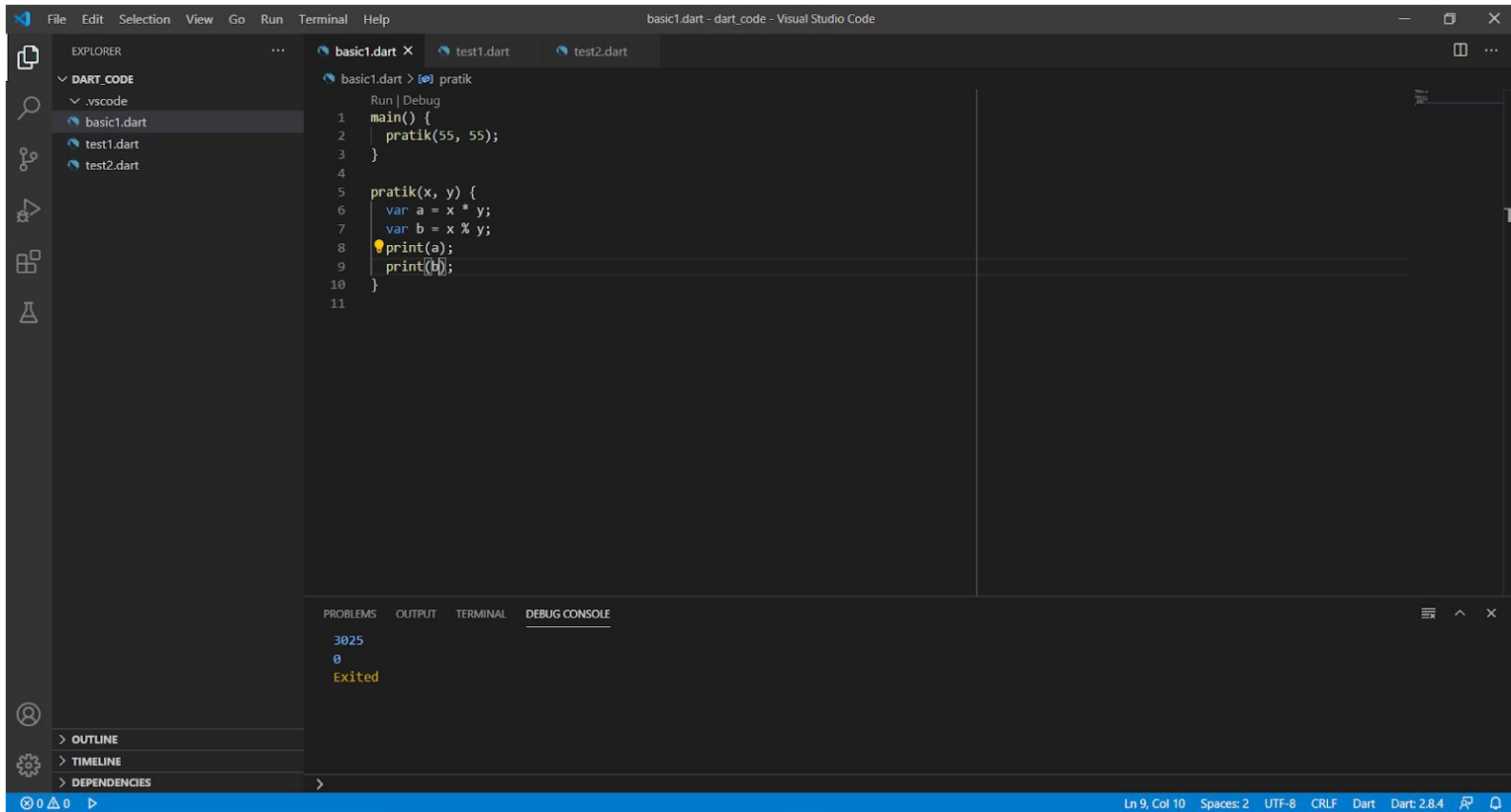


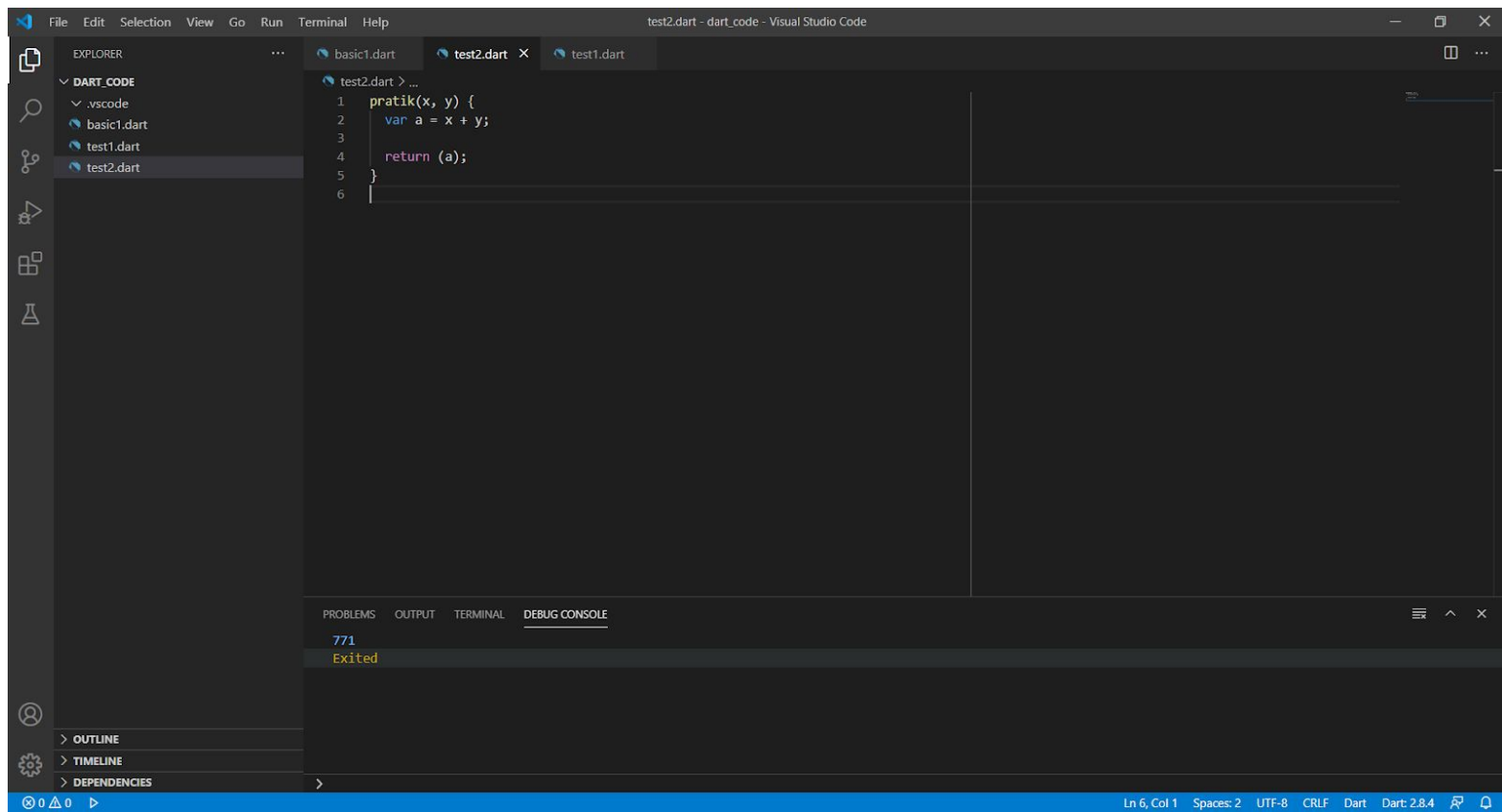
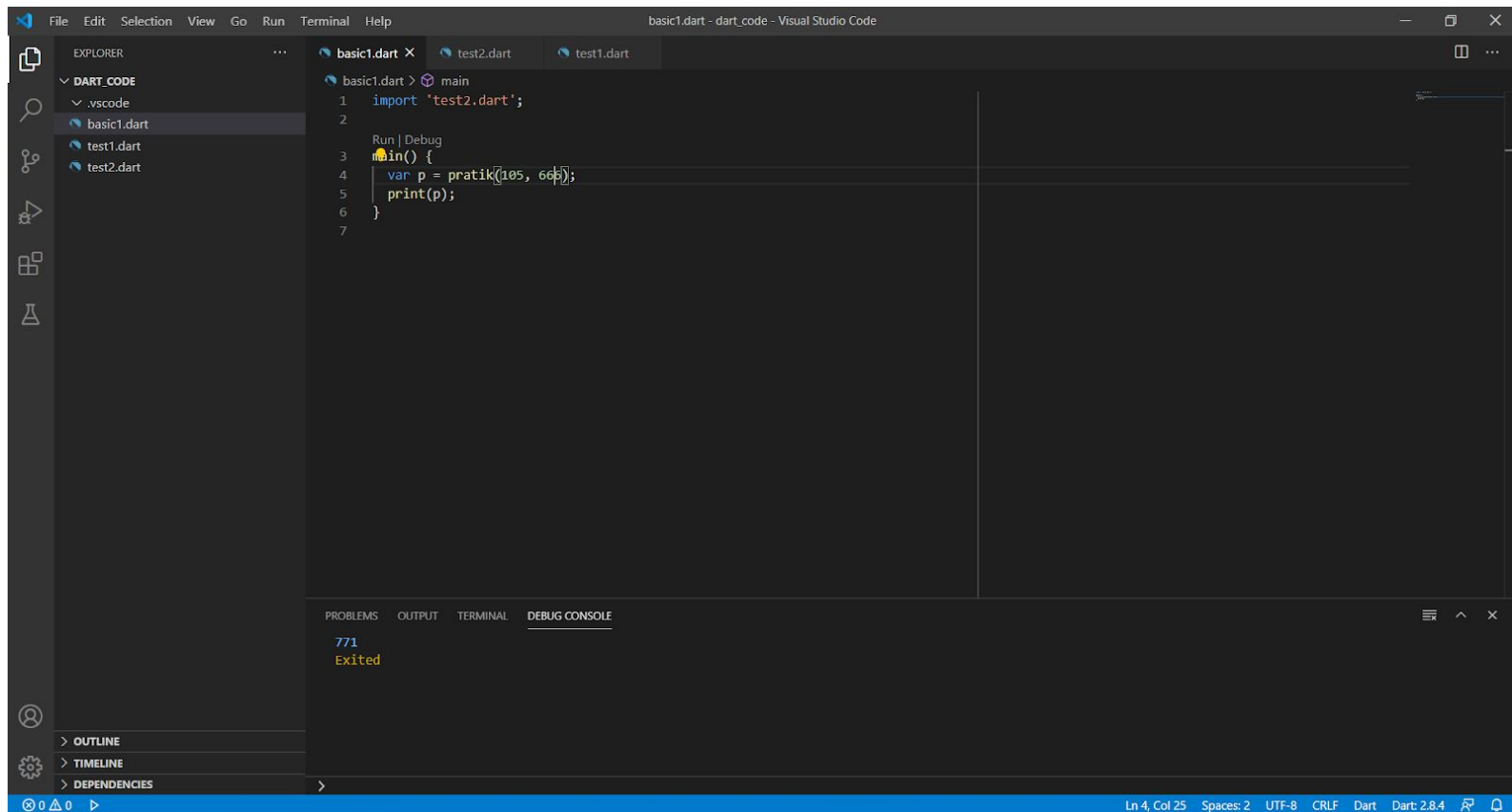












```
Command Prompt

Microsoft Windows [Version 10.0.18362.900]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\Asus>cd C:\src\flutter\flutter_class\projects

C:\src\flutter\flutter_class\projects>dir
Volume in drive C is OS
Volume Serial Number is 3CCE-7C22

Directory of C:\src\flutter\flutter_class\projects

20/07/2020  11:13 PM    <DIR>        .
20/07/2020  11:13 PM    <DIR>        ..
17/07/2020  02:29 AM    <DIR>        test_app
21/07/2020  12:20 AM    <DIR>        test_app2
             0 File(s)              0 bytes
             4 Dir(s)  7,693,463,552 bytes free

C:\src\flutter\flutter_class\projects>flutter create test_app3
```

```
Command Prompt - flutter create test_app3

C:\src\flutter\flutter_class\projects>flutter create test_app3
Creating project test_app3...
test_app3\gitignore (created)
test_app3\idea\libraries\Dart_SDK.xml (created)
test_app3\idea\libraries\Flutter_for_Android.xml (created)
test_app3\idea\libraries\KotlinJavaRuntime.xml (created)
test_app3\idea\modules.xml (created)
test_app3\idea\runConfigurations\main_dart.xml (created)
test_app3\idea\workspace.xml (created)
test_app3\metadata (created)
test_app3\android\app\build.gradle (created)
test_app3\android\app\src\main\kotlin\com\example\test_app3\MainActivity.kt (created)
test_app3\android\build.gradle (created)
test_app3\android\test_app3_android.iml (created)
test_app3\android\gitignore (created)
test_app3\android\app\src\debug\AndroidManifest.xml (created)
test_app3\android\app\src\main\AndroidManifest.xml (created)
test_app3\android\app\src\main\res\drawable\launch_background.xml (created)
test_app3\android\app\src\main\res\mipmap-hdpi\ic_launcher.png (created)
test_app3\android\app\src\main\res\mipmap-mdpi\ic_launcher.png (created)
test_app3\android\app\src\main\res\mipmap-xhdpi\ic_launcher.png (created)
test_app3\android\app\src\main\res\mipmap-xxhdpi\ic_launcher.png (created)
test_app3\android\app\src\main\res\mipmap-xxxhdpi\ic_launcher.png (created)
test_app3\android\app\src\main\res\values\styles.xml (created)
test_app3\android\app\src\profile\AndroidManifest.xml (created)
test_app3\android\gradle\wrapper\gradle-wrapper.properties (created)
test_app3\android\gradle.properties (created)
test_app3\android\settings.gradle (created)
test_app3\ios\Runner\AppDelegate.swift (created)
test_app3\ios\Runner\Runner-Bridging-Header.h (created)
test_app3\ios\Runner.xcodeproj\project.pbxproj (created)
test_app3\ios\Runner.xcodeproj\xcshareddata\xcschemes\Runner.xcscheme (created)
test_app3\ios\gitignore (created)
test_app3\ios\Flutter\AppFrameworkInfo.plist (created)
test_app3\ios\Flutter\Debug.xcconfig (created)
test_app3\ios\Flutter\Release.xcconfig (created)
test_app3\ios\Runner\Assets.xcassets\AppIcon.appiconset\Contents.json (created)
test_app3\ios\Runner\Assets.xcassets\AppIcon.appiconset\Icon-App-1024x1024@1x.png (created)
test_app3\ios\Runner\Assets.xcassets\AppIcon.appiconset\Icon-App-20x20@1x.png (created)
test_app3\ios\Runner\Assets.xcassets\AppIcon.appiconset\Icon-App-20x20@2x.png (created)
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test_app3\ios\Runner\Assets.xcassets\AppIcon.appiconset\Icon-App-60x60@3x.png (created)
```

Command Prompt

```
test_app3\ios\Runner\AppDelegate.swift (created)
test_app3\ios\Runner\Runner-Bridging-Header.h (created)
test_app3\ios\Runner.xcodeproj\project.pbxproj (created)
test_app3\ios\Runner.xcodeproj\xcsdashedata\xcschemes\Runner.xcscheme (created)
test_app3\ios\Runner.gitignore (created)
test_app3\ios\Flutter\AppFrameworkInfo.plist (created)
test_app3\ios\Flutter\Debug.xcconfig (created)
test_app3\ios\Flutter\Release.xcconfig (created)
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test_app3\ios\Runner\Assets.xcassets\AppIcon.appiconset\Icon-App-76x76@2x.png (created)
test_app3\ios\Runner\Assets.xcassets\AppIcon.appiconset\Icon-App-83.5x83.5@2x.png (created)
test_app3\ios\Runner\Assets.xcassets\LaunchImage.imageset\Contents.json (created)
test_app3\ios\Runner\Assets.xcassets\LaunchImage.imageset\LaunchImage.png (created)
test_app3\ios\Runner\Assets.xcassets\LaunchImage.imageset\LaunchImage@2x.png (created)
test_app3\ios\Runner\Assets.xcassets\LaunchImage.imageset\LaunchImage@3x.png (created)
test_app3\ios\Runner\Assets.xcassets\LaunchImage.imageset\README.md (created)
test_app3\ios\Runner\Base.lproj\LaunchScreen.storyboard (created)
test_app3\ios\Runner\Base.lproj\Main.storyboard (created)
test_app3\ios\Runner\Info.plist (created)
test_app3\ios\Runner.xcodeproj\project.xcworkspace\Contents.xcworkspacedata (created)
test_app3\ios\Runner.xcodeproj\project.xcworkspace\xcsdashedata\IDEWorkspaceChecks.plist (created)
test_app3\ios\Runner.xcodeproj\project.xcworkspace\xcsdashedata\WorkspaceSettings.xcsettings (created)
test_app3\ios\Runner.xcworkspace\Contents.xcworkspacedata (created)
test_app3\ios\Runner.xcworkspace\xcsdashedata\IDEWorkspaceChecks.plist (created)
test_app3\ios\Runner.xcworkspace\xcsdashedata\WorkspaceSettings.xcsettings (created)
test_app3\lib\main.dart (created)
test_app3\test_app3.iml (created)
test_app3\pubspec.yaml (created)
test_app3\README.md (created)
test_app3\test\widget_test.dart (created)
Running "flutter pub get" in test_app3... 4.4s
Wrote 72 files.

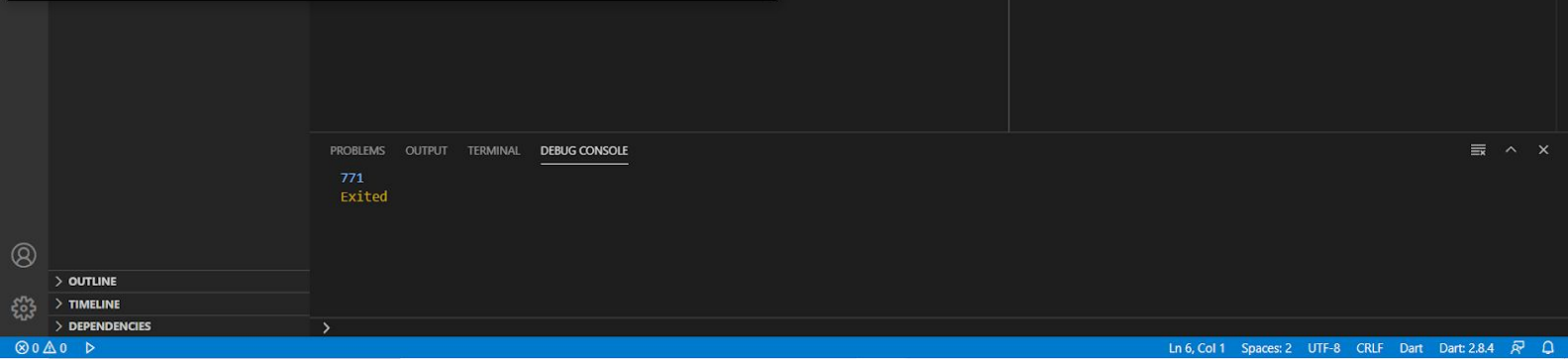
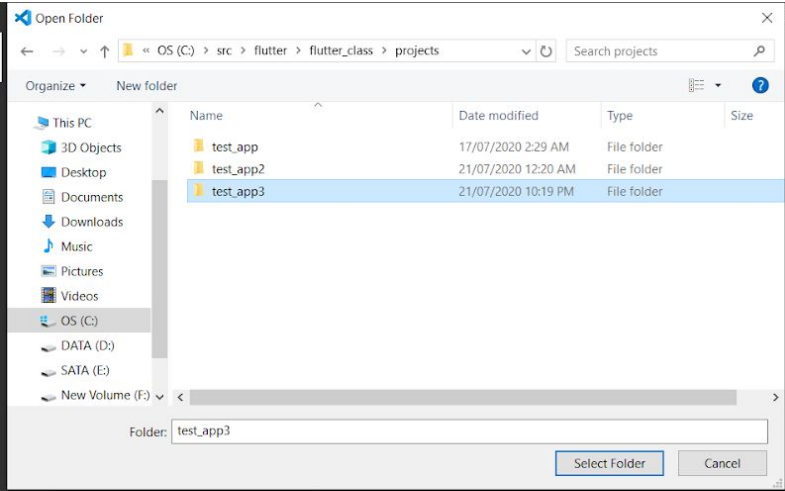
All done!
[✓] Flutter: is fully installed. (Channel stable, v1.17.5, on Microsoft Windows [Version 10.0.18362.900], locale en-US)
[✓] Android toolchain - develop for Android devices: is fully installed. (Android SDK version 29.0.3)
[✓] Android Studio: is fully installed. (version 4.0)
```

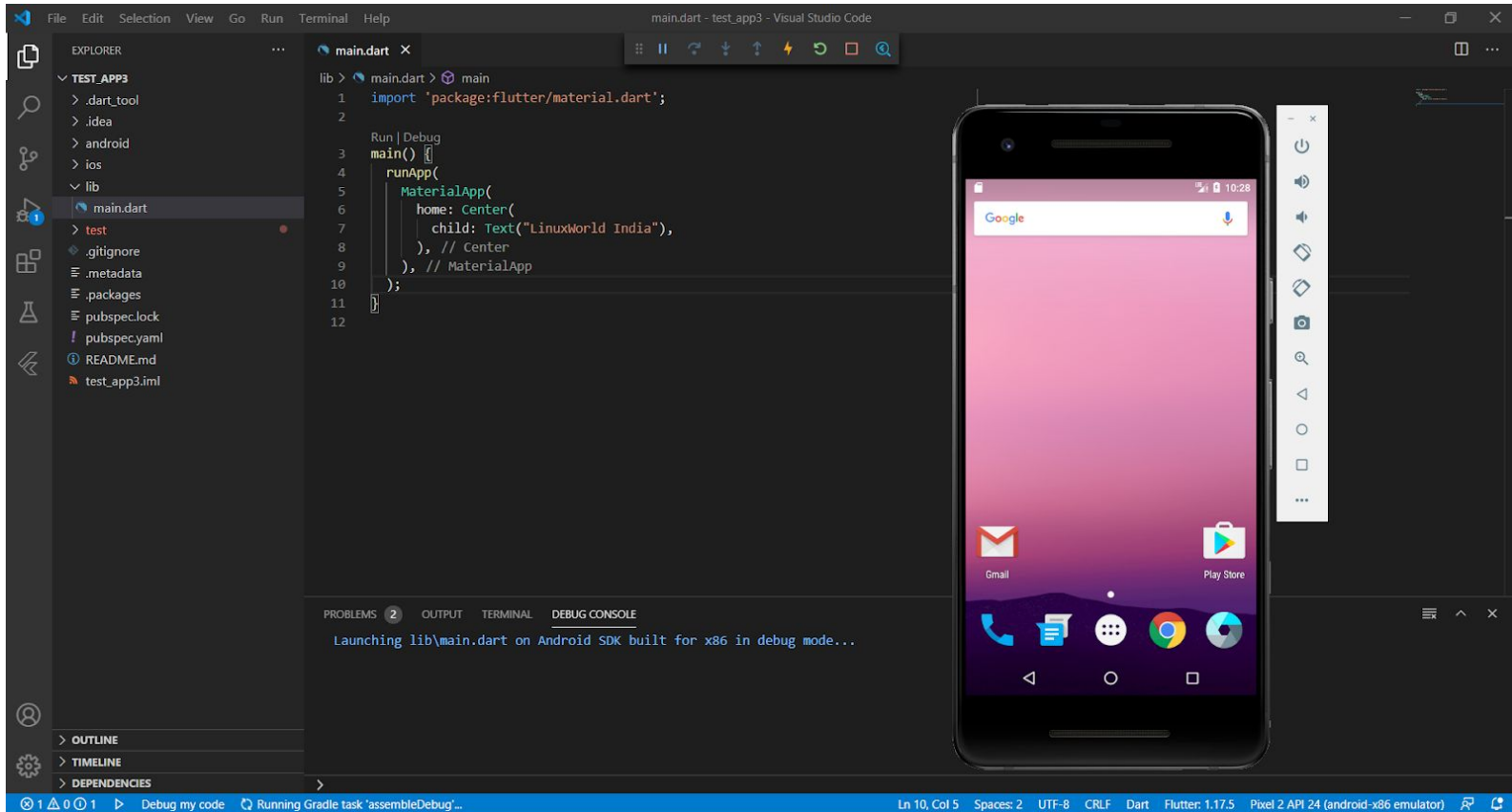
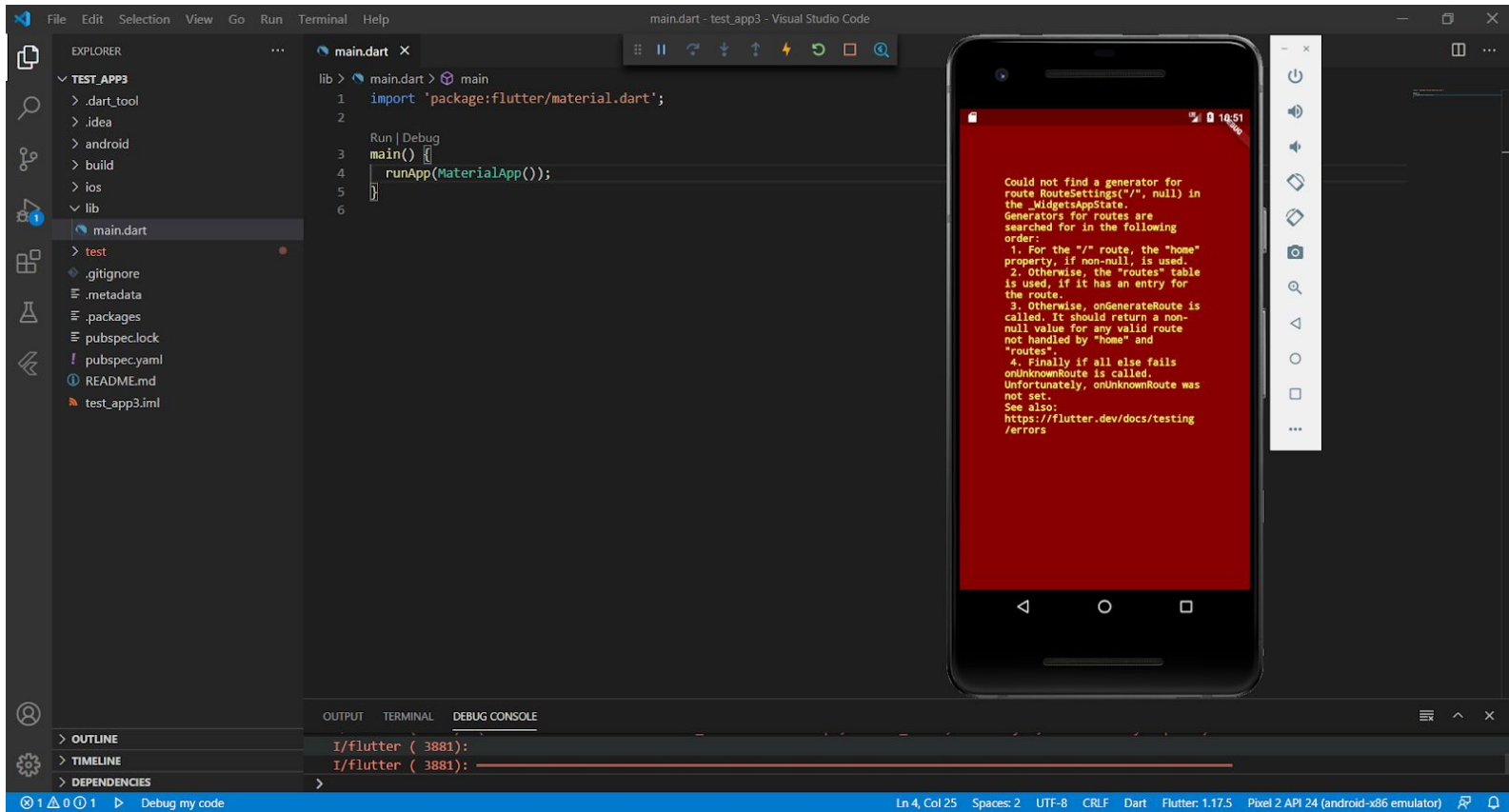
Run "flutter doctor" for information about installing additional components.

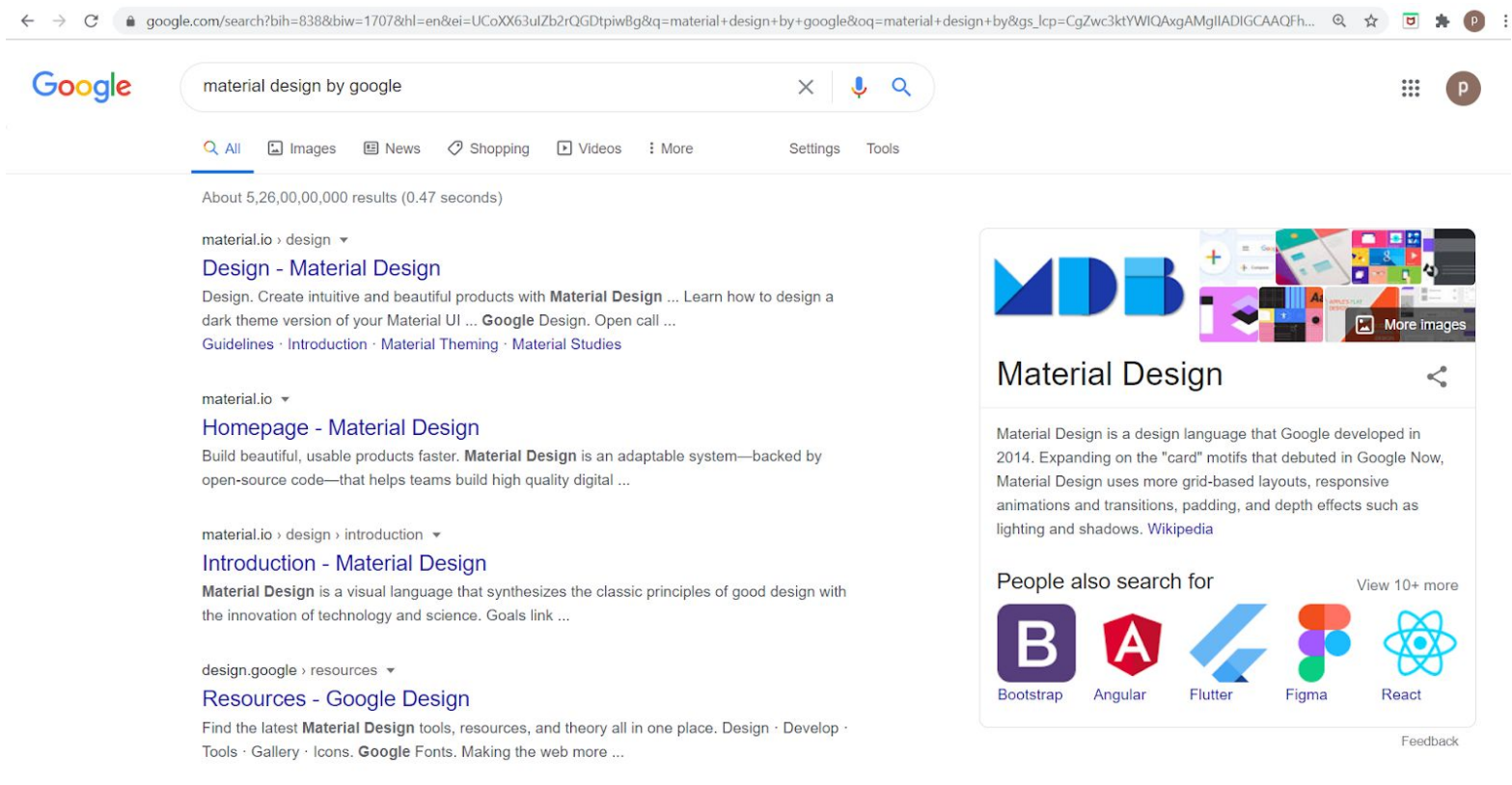
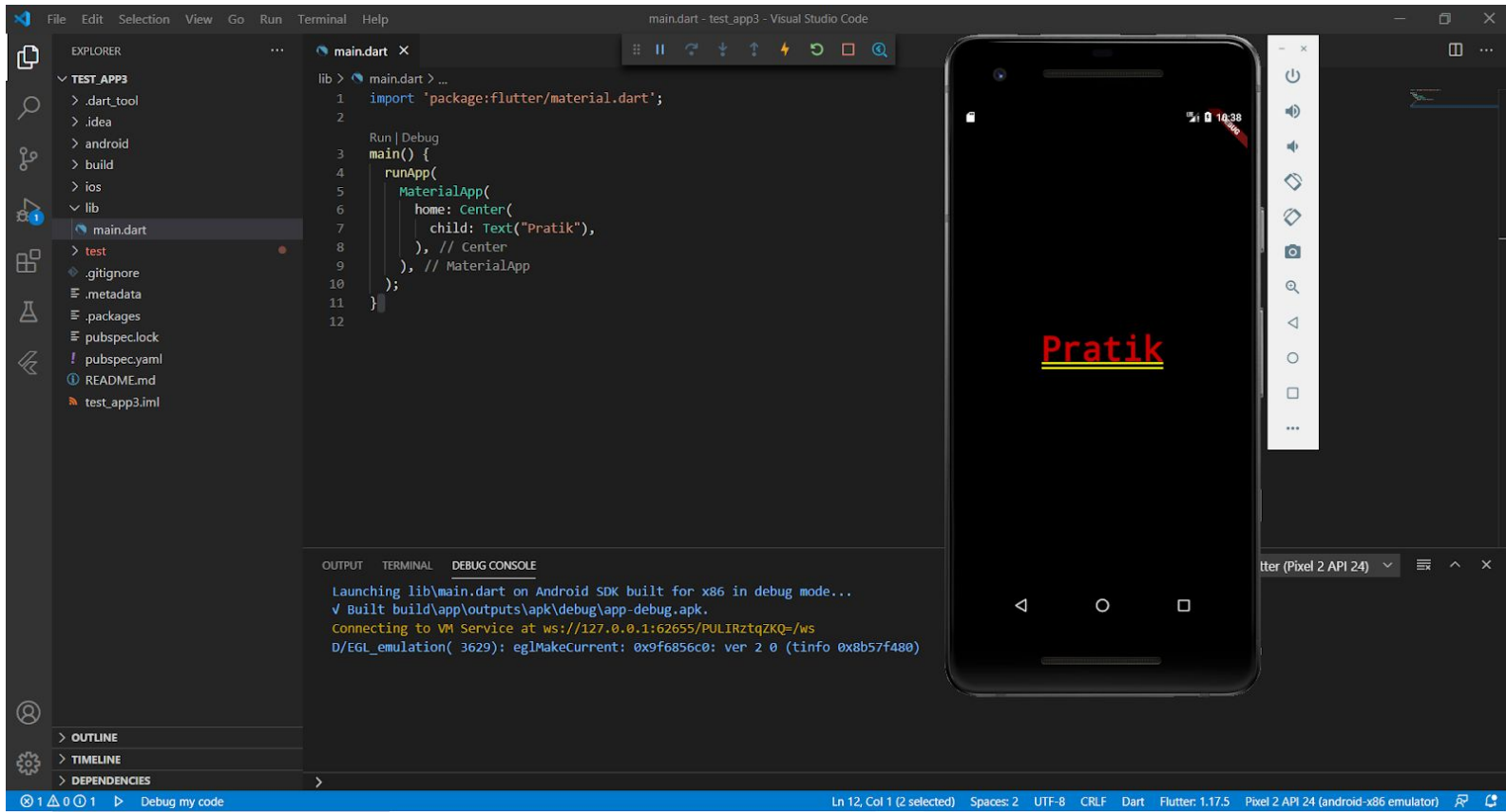
In order to run your application, type:

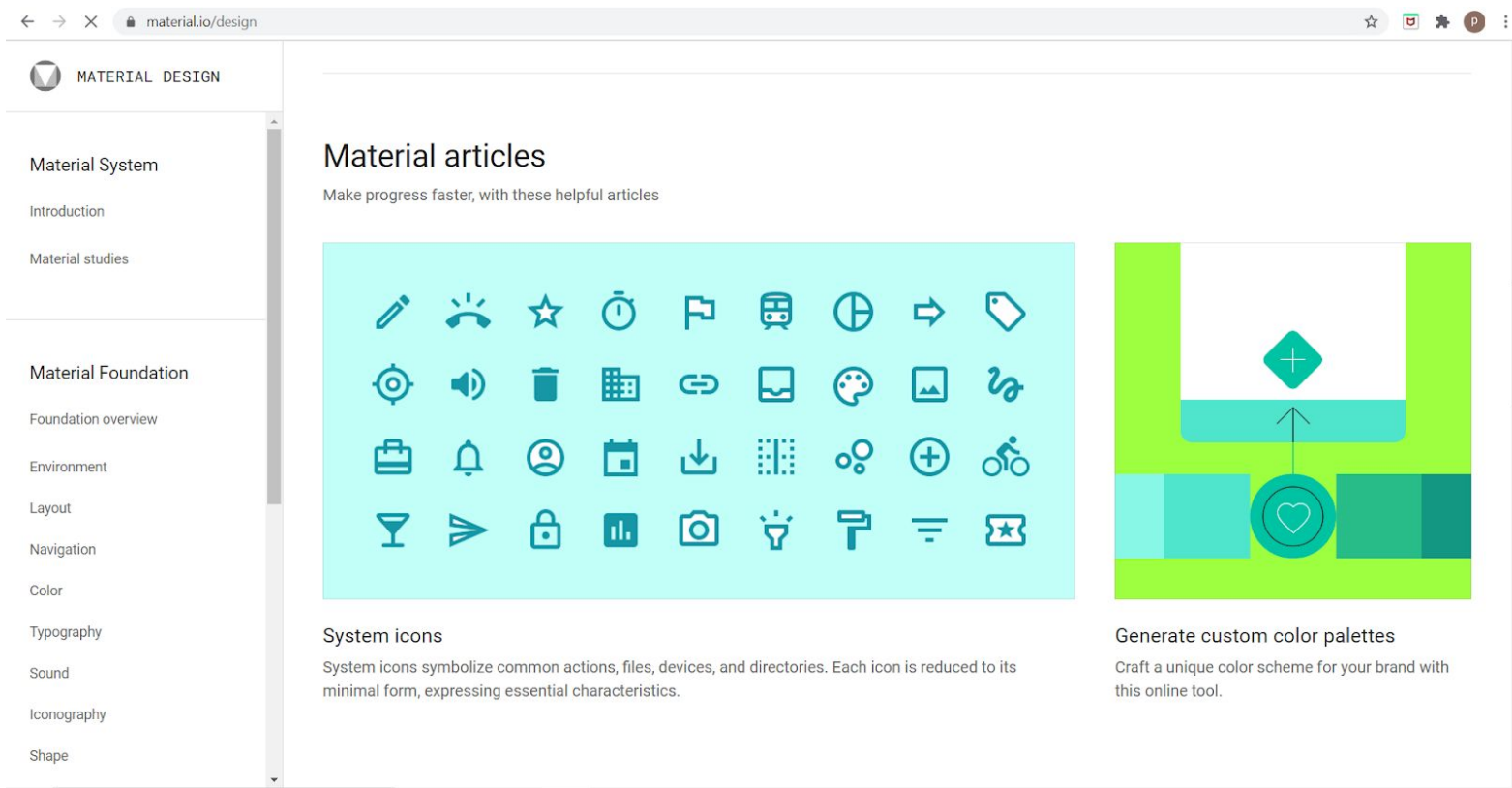
```
$ cd test_app3
$ flutter run
```

Your application code is in test_app3\lib\main.dart.









Thanks for Reading!!!