

Introduction to Dart:

❖ What is Dart?

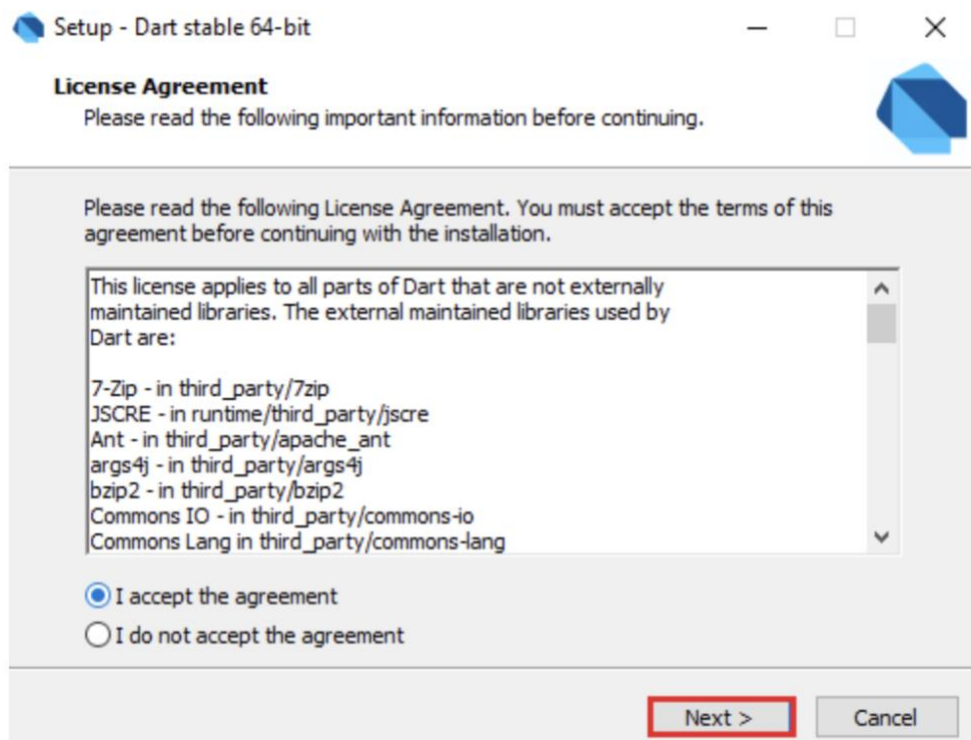
- Dart is a client optimized language for developing fast apps on any platform.
- Dart is a dynamic, class based, object-oriented programming language.
- Is used to create mobile app, web app, desktop app, server-side script.
- Developed by Google.
- Free and open source.
- Productive Development.
 - Hot reload that means not necessary to re-run the program for execution when we change the code.
- Fast on platforms.
- It is quite like Java, C and JavaScript. If you know any of these programming languages, you can easily learn Dart programming language.
- Fast on all platforms.
- It was emerged in 2011, but the stable version was released in 2017.

❖ Dart Installation:

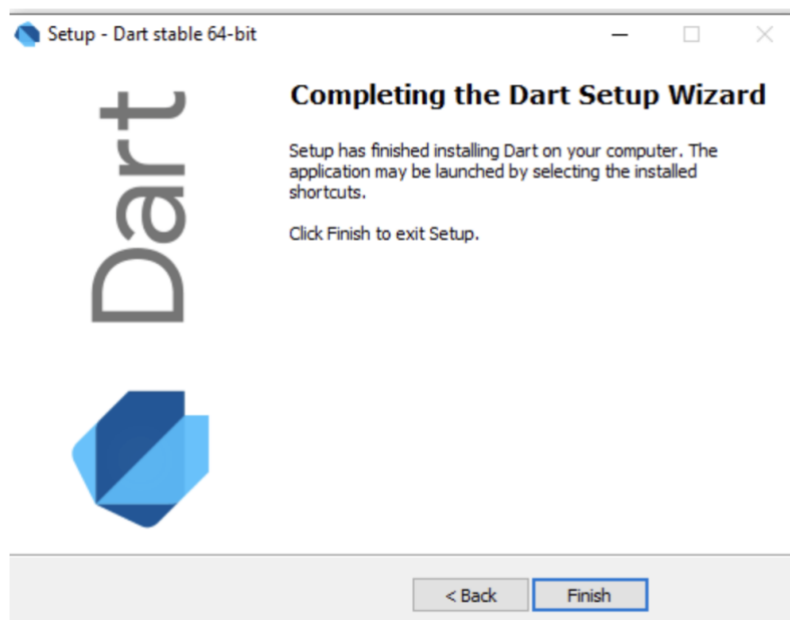
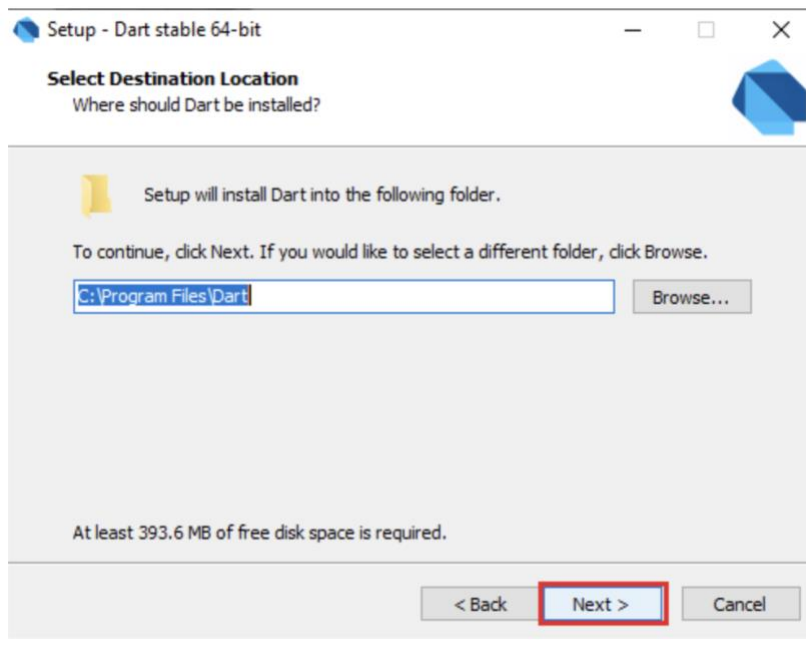
- To learn the Dart, we need to set up the Dart programming environment to our local machine. We are describing the following instructions to install the Dart SDK (Software Development Kit) in various operating systems. If you have already installed it, then you can skip this part.

Note: Remember if you have installed flutter, then not necessary to install Dart separately

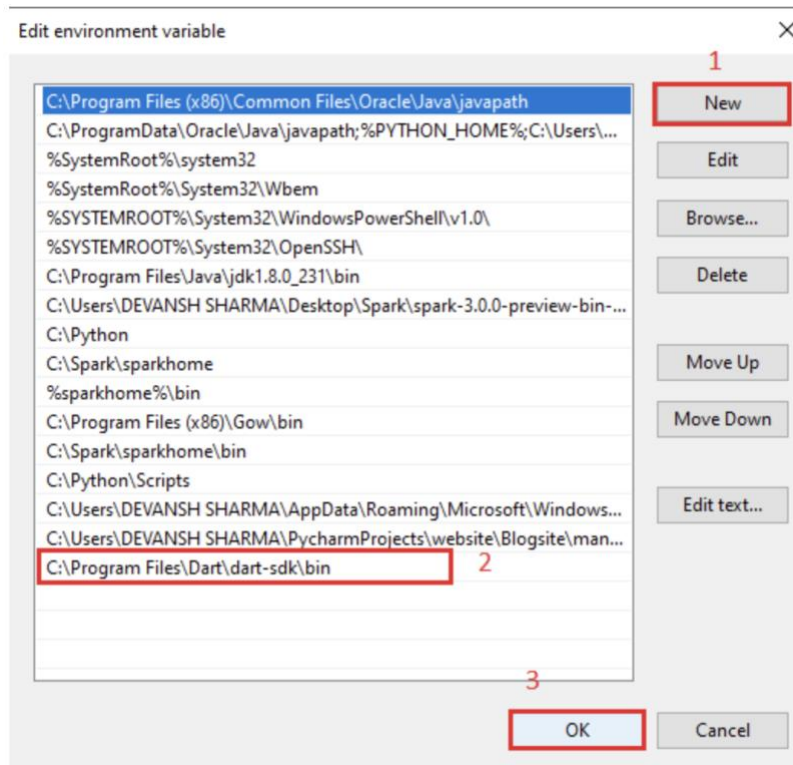
- Install the dart SDK on windows:
 - Click the given below link to download the SDK.
 - Link: [Dart SDK](#)
 - Run the Dart installer(It is the .exe file that we downloaded in the previous step) and click on the **Next** button.



- It provides the option to select the Dart installation path. After the path is selected, click on the **Next** button.



- After the download is completed, set the PATH environment variable to "**C:\Program Files\Dart\dart-sdk\bin**" in advance system properties.



- Now open the terminal and verify the Dart installation by typing dart.

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.18362.778]
(c) 2019 Microsoft Corporation. All rights reserved.

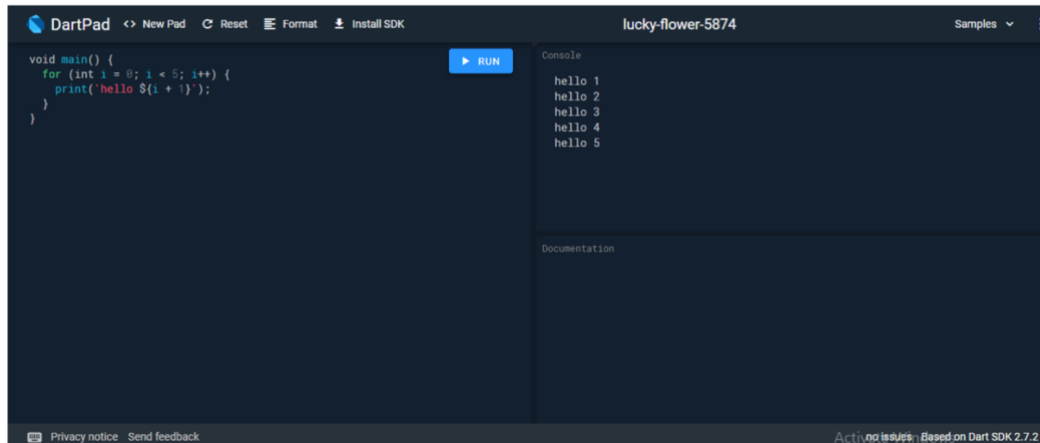
C:\Users\DEVANSH SHARMA>dart
Usage: dart [<vm-flags>] <dart-script-file> [<script-arguments>]

Executes the Dart script <dart-script-file> with the given list of <script-arguments>.

Common VM flags:
--enable-asserts
  Enable assert statements.
--help or -h
  Display this message (add -v or --verbose for information about
  all VM options).
--package-root=<path> or -p<path>
  Where to find packages, that is, "package:..." imports.
```

❖ Online Editor:

- We have discussed Dart installation on the windows operating systems so far, but if we do not want to install Dart then there is an online Dart editor (Known as DartPad) is available to run the Dart programs. The online DartPad is provided at <https://dartpad.dev/>. The DartPad offers to execute the Dart scripts and display HTML and also console output. The online DartPad looks like the below image.



- We can use Dart IDE for running the Dart program. Following are some popular IDE:
 - IntelliJ
 - WebStorm
 - Eclipse
 - Visual Studio Code

Running the First Program:

As we have discussed earlier, Dart is easy to learn if you know any of [Java](#), [C++](#), [JavaScript](#), etc. The simplest "Hello World" program gives the idea of the basic syntax of the programming language. It is the way of testing the system and working environment. In this tutorial, we will give the basic idea of Dart's syntax. There are several ways to run the first program, which is given below:

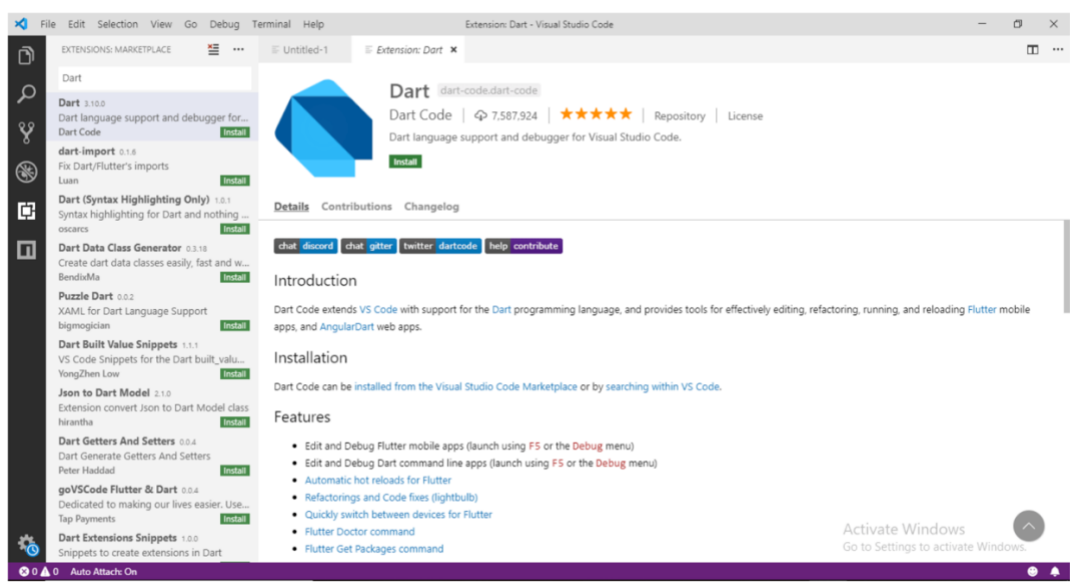
- Using Command Line
- Running on Browser
- Using IDE

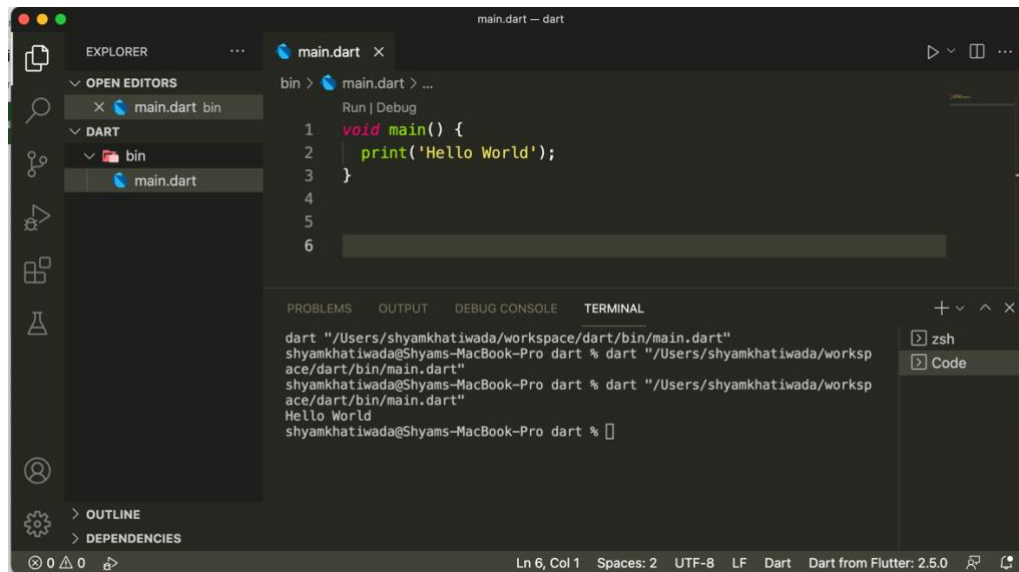
Before running the first program, it must ensure that we have installed the Dart SDK properly. We have discussed the complete installation guide in our previous tutorial. Let's run our first program.

Note: I recommended to run the code using command line or IDE.

❖ Using IDE:

For Visual Studio Code, download the dart extension and run the code.





After installing the dart extension, create a folder on your disk and open the folder on Visual Studio Code → create a file name **hello.dart**.

- `main ()` is the function – anything inside it executed by dart.
- `print ()` is also the function- used to print the text and values given inside it.