BAWP

MAC OS - VS Code and Android Studio Setup

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1 Introduction

With this guide, you can learn how to set up the development environment for Flutter and Dart—explained in simple and easy terms, the guide details how to create your first Flutter application for different operating systems like Android, iOS, and web.

Please note that there would be a default prefix $ in every terminal. You don't need to copy it, just copy the command if you want to execute it in your terminal or shell. We sincerely hope that the guide will help you develop more interest in Flutter and give you the technical knowledge of working in the Flutter environment.

2 Setup Development Environment - For MAC

Pre-requisites:

- Editor or Integrated Development Environment (IDE)
- Flutter and Dart Software Development Kit (SDK)

This chapter gives insight into Android Studio, a popular IDE from IntelliJ, and Visual Studio Code from Microsoft. Followed by this, we will go forward with the Flutter installation on Windows.

2.1 Android Studio - Explained in brief

Android Studio is a powerful IDE that facilitates quick Android Development. It contains everything needed by a developer to create new-age Android applications. When integrated with Android Studio, flutter, a Google framework, adds its features and functionality to create native apps.

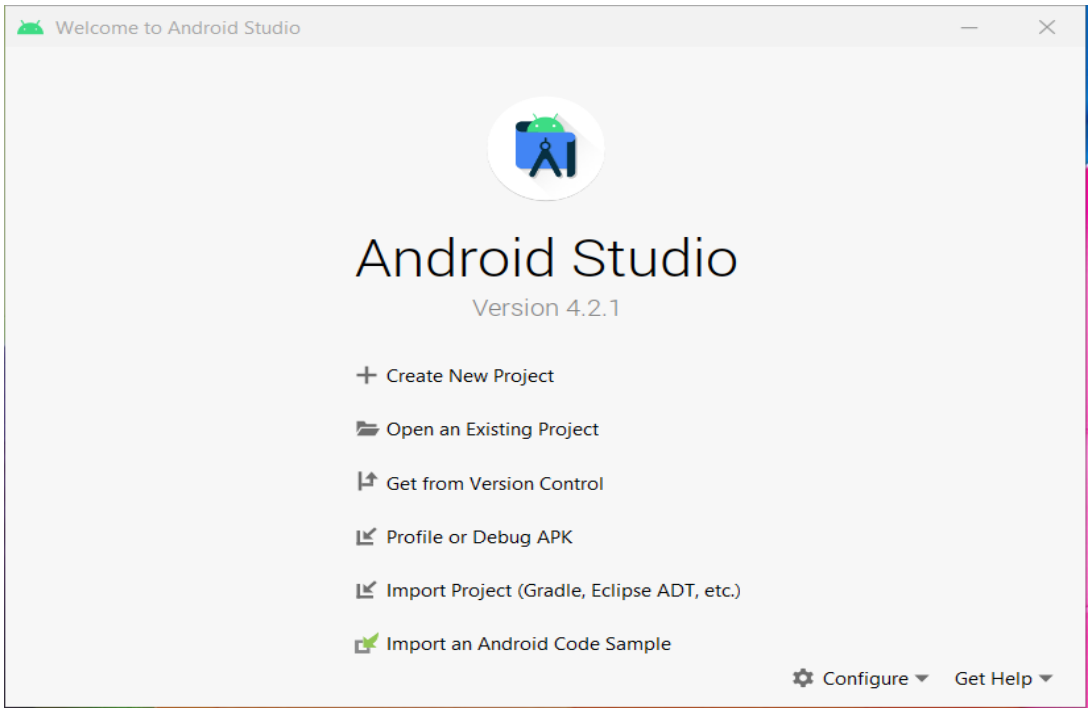
It supports Version Control Systems like Git and SVN, which are built-in the IDE. Android Studio contains features that support standard code formatting and advanced refactoring, which simplifies development tasks.

The disadvantage of Android Studio is that it requires more hardware resources compared to its contemporary Visual Studio.

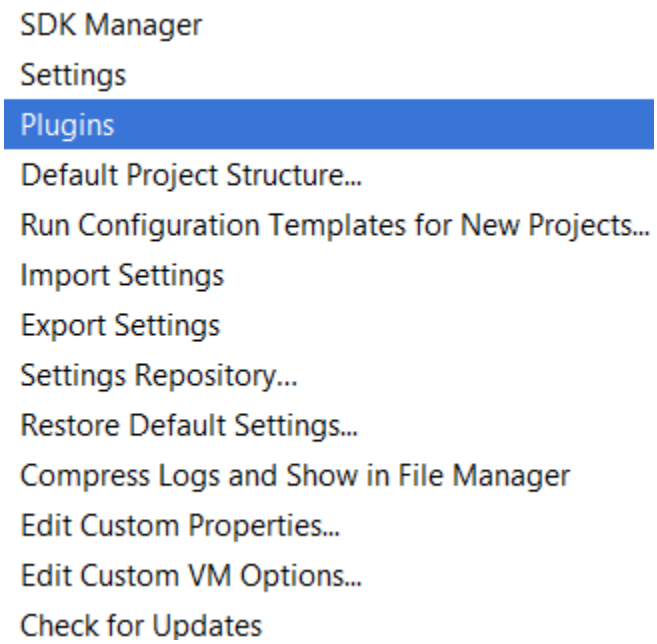
A word of advice for developers who want to test the app on Android Emulator is to install Android Studio without fail. This will help you test your app without any hassles.

2.1.1 Installation

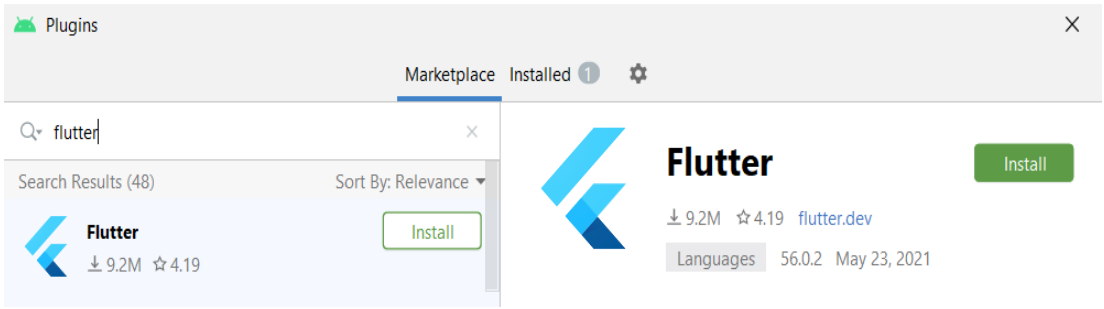
1. The first step is to download the latest version of Android Studio, which you can do from https://developer.android.com/studio
2. You need to accept the licenses and download the Android Studio version suitable for your Operating System.
3. Once the installation begins, it will prompt you to download and install Android SDK.
4. Followed by this, you need to install the Flutter and Dart plugins, which you can do by clicking the “Configure” button.



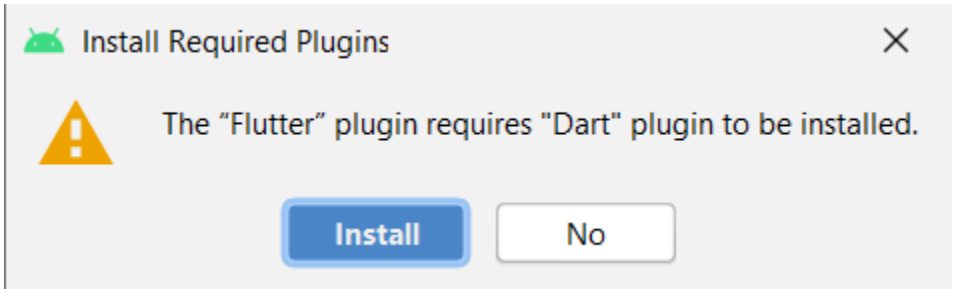
5. After clicking Configure, you will find a menu with various options. Select “Plugins” from this menu.



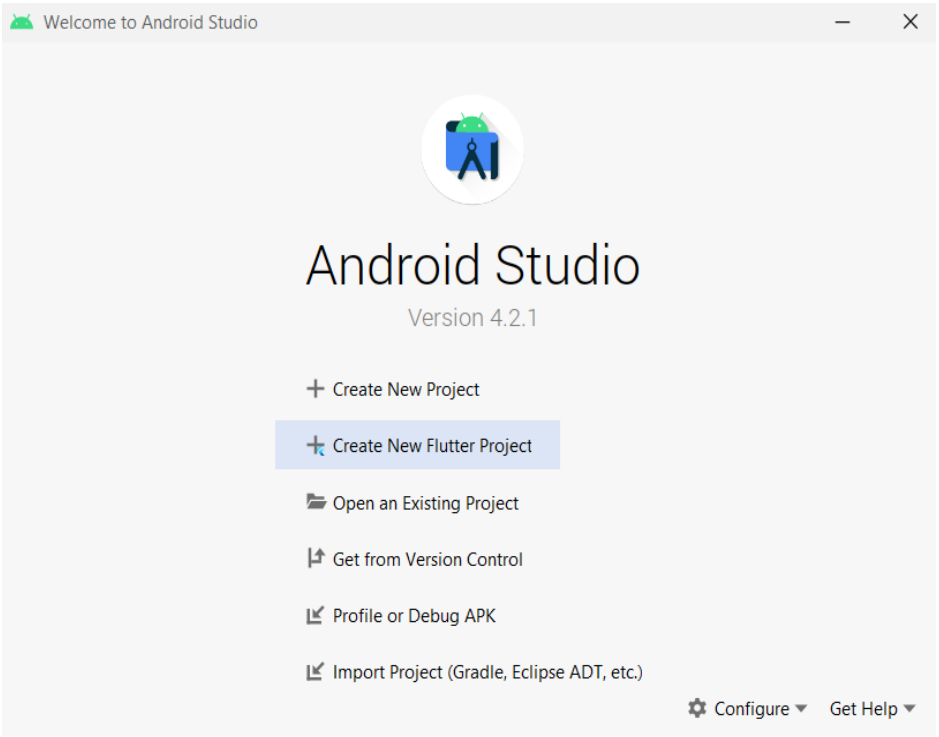
6. It will open a window. Select “Marketplace”and search “Flutter”.



1. Now, click on the “Install” button. Doing this will open a dialogue box that says, “the Flutter plugin requires Dart plugin to be installed”. Click on the “Install” button to install the Dart plugin as it’s the prerequisite.



7. Once the installation is complete, you need to restart Android Studio. The starting window will showcase the option of “Create New Flutter Project”.



8. Now, you are all set to start Flutter Development in Android Studio.

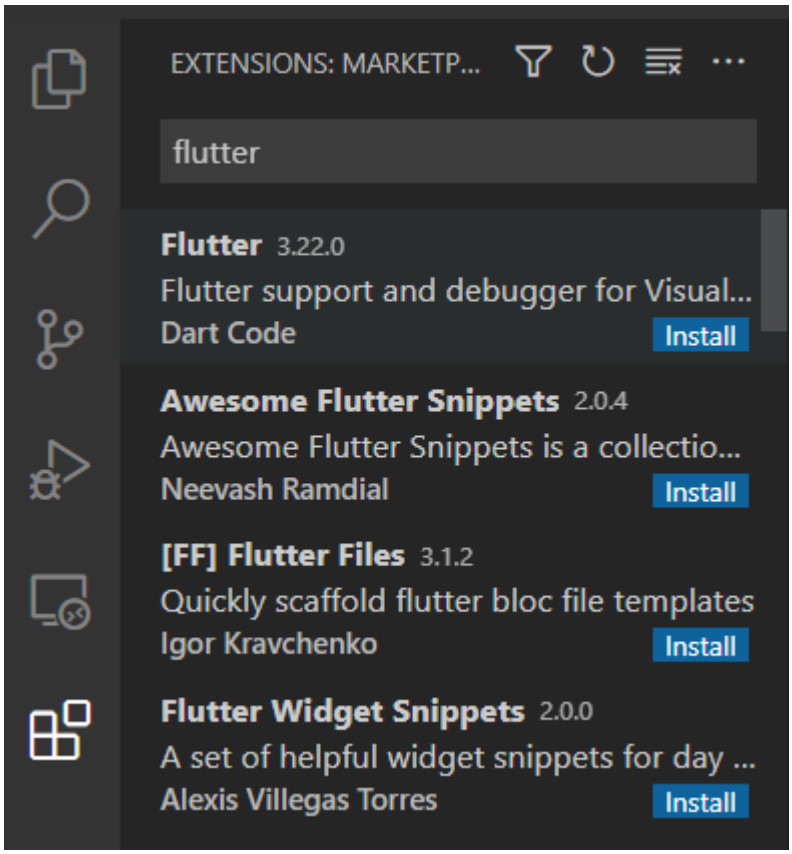
2.2 Visual Studio Code - Explained in Brief

Microsoft has come up with an Open source coding editor called Visual Studio Code (VSCode). This editor is lightweight and supports the feature of IntelliSense as well as runs and debugs Flutter application. It also supports Git integration and offers numerous extensions created by the open-source community.

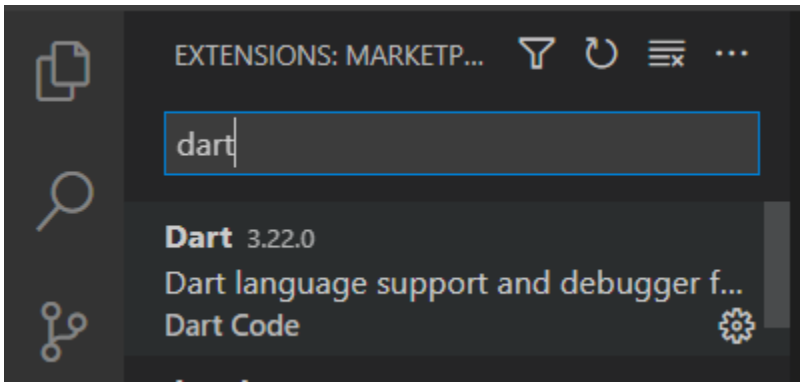
Being a text editor simplifies coding and gives a quick development experience. VSCode is often considered the best coding editor for developers. It is a trendy editor which requires lesser hardware resources. That is why GitHub and StackBlitz use it to do coding within the browser.

2.2.1 Installation

1. Go to https://code.visualstudio.com/ and download the latest version for your OS.
2. Install Visual Studio Code
3. Simply follow the installer
4. Start VSCode and select “Extensions” on the left side menu.
5. Search “Flutter” and Install.



6. As Dart is a prerequisite of installing Flutter plugin, it is automatically installed. Cross check it by searching Dart extension in the search bar.



7. That's it! Now, you have both Flutter and Dart plugins installed within the IDE.

2.3 Install Flutter & Dart

Flutter 1.22 contains the SDKs of Flutter and Dart. This makes it far quicker to develop applications. Now, we will check the process to install Flutter in Mac OS.

Flutter can be installed in two ways:

- Install it through a zip file and copy the files into the correct path.
- Install via Git.

The first method installs a fixed version with all source code created, while the Git version gives you the flexibility to upgrade.

2.3.1 macOS

As Flutter is a cross-platform framework, it helps to build apps for iOS and Mac OS. However, you need Mac OS to test and debug Flutter apps for iOS and Mac OS.

System Requirements

To install Flutter on your device, please make sure that your system meets the following requirements.
Operating System: macOS (64bit)

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Disk Space: 2.8 GB7

Git (https://git-scm.com/ or installed with XCode)

Installation via Download

1. Start with https://flutter.dev/docs/get-started/install/macos#get-sdk
2. Download the latest version of Flutter
3. Unzip the Flutter SDK
4. Setup the path variable
5. Setup the path variable
    1. For the current terminal session execute below command. Replace *pwd* with your directory. In our chapter "Setup the Path Variable" it is **D:\software.**

```
$ export PATH=" $PATH:`pwd`/flutter/bin"
```

    2. For a complete solution, check section 2.4 for setting up path variables.
6. Execute "**flutter doctor**" command to check the successful installation.

Installation via Git

1. Open a Terminal or PowerShell
2. Check if you have Git installed on the command prompt.

```
$ git --version
```

3. If *Git* is not installed, go to Git (git-scm.com) and install.
4. Navigate to a folder where you want Flutter installed.
5. Execute the command

```
$ git clone https://github.com/flutter/flutter.git -b stable
```

6. Setup the path variable
    1. For the current terminal session execute below command. Replace pwd with your directory. In our chapter "Setup the Path Variable" it is **D:\software.**

```
$ export PATH=" $PATH:`pwd`/flutter/bin"
```

    2.For a complete solution, check section 2.4 for setting up path variables.

7. Execute **“flutter doctor”** command to check the successful installation.

iOS Setup

If you want to build an app for iOS or Simulator, the prerequisite is to install Xcode on the Mac device. XCode is a versatile IDE for iOS development and is considered default to develop, test and debug apps for iOS or Mac.

1. Firstly, download Xcode from AppStore.
2. Execute the following command to configure command-line tools

```
$ sudo Xcode-select --switch /Applications/Xcode.app/Contents/Developer
$ sudo xcodebuild -runFirstLaunch
```

2.4 Setup the Path Variable

To execute commands like “flutter doctor” rather than full path(installed_dir/flutter/bin), you will need to set up a path variable.

2.4.1 macOS

1. Fire “echo $0” or “echo $SHELL” to find the terminal you are using currently.

```
$ echo $0
/usr/bin/bash
```

2. Next, find a terminal-specific file inside the home directory through the following command.
   1. ZSH: Search for the .zshrc file in the home directory
   2. Bash: Search for the .bashrc file in the home directory
3. If these files are not found in the home directory, then create either of them with the following command

```
$ touch ~/.zshrc
```

```
$ touch ~/.bashrc
```

4. Add the path to your flutter installation.

```
1. export PATH="$PATH":"$HOME/tools/flutter/bin" (example)
2. export
PATH="$PATH":"$HOME/path-to-your-flutter-installation/flutter/bin"
```

5. Once you save the file and restart the terminal, you will execute the flutter doctor command.

```
$ flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
```

3. Troubleshooting Installation Issues

3.1 Antivirus software issue

Problem

Many Antivirus deletes *flutter.bat* files as a system security measure, making it impossible for Flutter to work correctly.

Solution

Whitelist the Flutter folder from your Antivirus Program.

3.2 Command not found: Flutter.

Problem

While executing flutter commands like flutter doctor, the terminal will show a message like **“command not found: flutter”**

```
$ flutter doctor
bash: flutter: command not found
```

Solution

Commonly this happens because your path variables weren't set correctly. Please refer to section 2.4 setup path variable. If the issue persists, then try to execute *flutter* command with the full path.

After having done the process above and the issues continue, you'll need to reinstall flutter then. Make sure to verify that all files are correctly installed.