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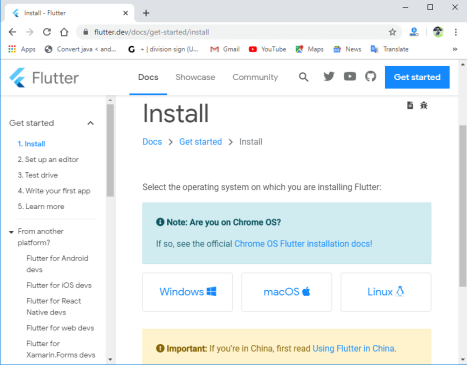
**Experiment No. 1**

Aim: To Install and Configure Flutter Environment

Pre Requisites:

**Install the Flutter SDK**

**Step 1:** Download the installation bundle of the Flutter Software Development Kit for Windows. To download Flutter SDK, Go to its official website https://docs.flutter.dev/get-started/install, you will get the following screen.

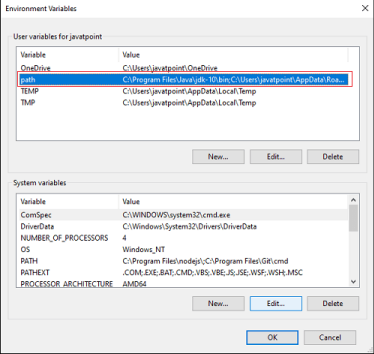
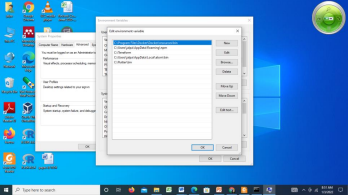


**Step 2:** Next, to download the latest Flutter SDK, click on the Windows **icon**. Here, you will find the download link for SDK.

**Step 3:** When your download is complete, extract the **zip** file and place it in the desired installation folder or location, for example, C: /Flutter.

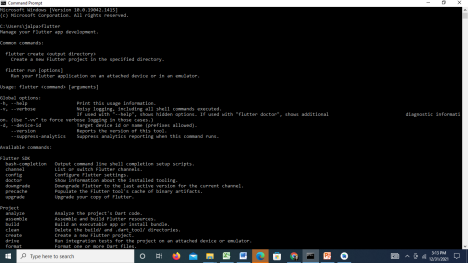
**Step 4:** To run the Flutter command in a regular windows console, you need to update the system path to include the Flutter bin directory. The following steps are required to do this:

**Step 4.1:** Go to MyComputer properties -> advanced tab -> environment variables. You will get the following screen.

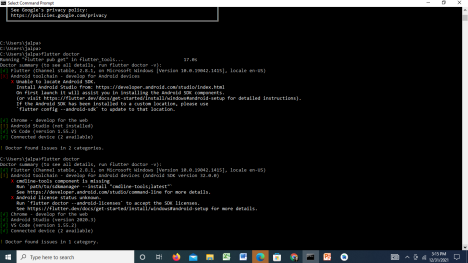
**Step 4.2:** Now, select path -> click on edit. The following screen appears

**Step 4.3:** In the above window, click on New->write path of Flutter bin folder in variable value - > ok -> ok -> ok.

**Step 5:** Now, run the $ **flutter** command in the command prompt.



Now, run the $ **flutter doctor** command. This command checks for all the requirements of Flutter app development and displays a report of the status of your Flutter installation.

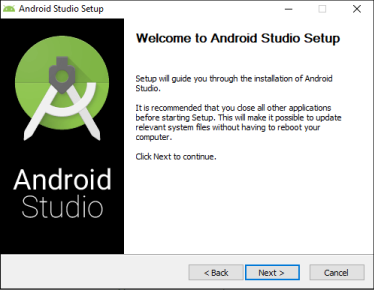


**Step 6:** When you run the above command, it will analyze the system and show its report, as shown in the below image. Here, you will find the details of all missing tools, required to run Flutter as well as the development tools that are available but not connected to the device.

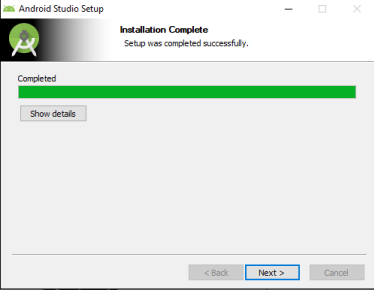
**Step 7:** Install the Android SDK. If the Flutter Doctor command does not find the Android SDK tool in your system, then you need first to install the Android Studio IDE. To install Android Studio IDE, do the following steps.

**Step 7.1:** Download the latest Android Studio executable or zip file from the official site.

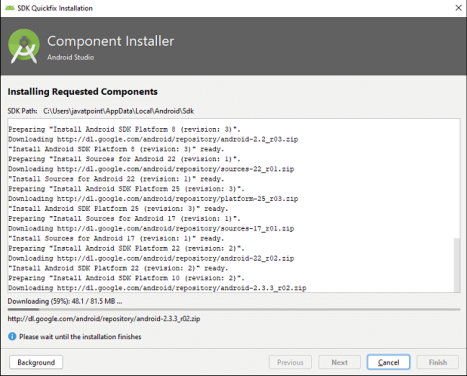
**Step 7.2:** When the download is complete, open the **.exe** file and run it. You will get the following dialog box.

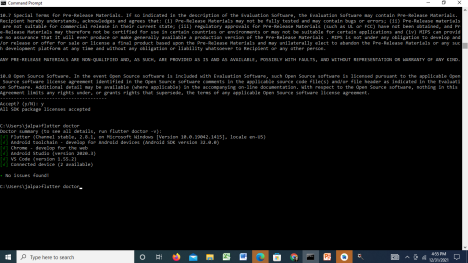


**Step 7.3:** Follow the steps of the installation wizard. Once the installation wizard completes, you will get the following screen.



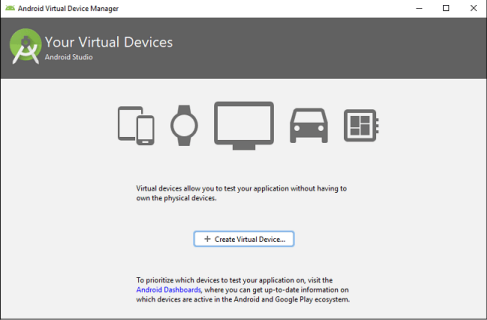
**Step 7.4:** In the above screen, click Next-> Finish. Once the Finish button is clicked, you need to choose the 'Don't import Settings' option’ and click OK. It will start with Android Studio.

Step 7.5 runs the $ **flutter doctor** command and Runs the flutter doctor --android-licenses command.



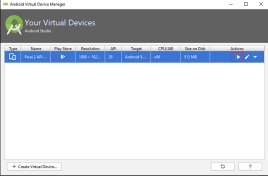
**Step 8:** Next, you need to set up an Android emulator. It is responsible for running and testing the Flutter application.

**Step 8.1:** To set an Android emulator, go to Android Studio > Tools > Android > AVD Manager and select Create Virtual Device. Or, go to Help->Find Action->Type Emulator in the search box. You will get the following screen.

**Step 8.2:** Choose your device definition and click on Next.

**Step 8.3:** Select the latest Android version's system image and click Next.

**Step 8.4:** Now, verify the all AVD configuration. If it is correct, click on Finish. The following screen appears.



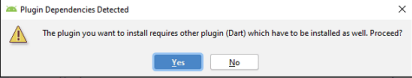
**Step 8.5:** Last, click on the icon pointed to the red color rectangle. The Android emulator is displayed as the below screen.



**Step 9:** Now, install the Flutter and Dart plugin for building the Flutter application in Android Studio. These plugins provide a template to create a Flutter application and give an option to run and debug the Flutter application in the Android Studio itself. Do the following steps to install these plugins.

**Step 9.1:** Open the Android Studio and then go to File->Settings->Plugins.

**Step 9.2:** Now, search the Flutter plugin. If found, select the Flutter plugin and click install. When you click on install, it will ask you to install the Dart plugin as below screen. Click yes to proceed.

**Step 9.3:** Restart the Android Studio.

Code:

import 'package:flutter/material.dart';

void main() {

runApp(const MyApp());

}

class MyApp extends StatelessWidget {

const MyApp({Key? key}) : super(key: key);

@override

Widget build(BuildContext context) {

return MaterialApp(

title: 'Welcome to Flutter',

home: Scaffold(

appBar: AppBar(

title: const Text('Welcome to Flutter EXP 1'),

),

body: const Center(

child: Text('Aditya Kundu'),

),

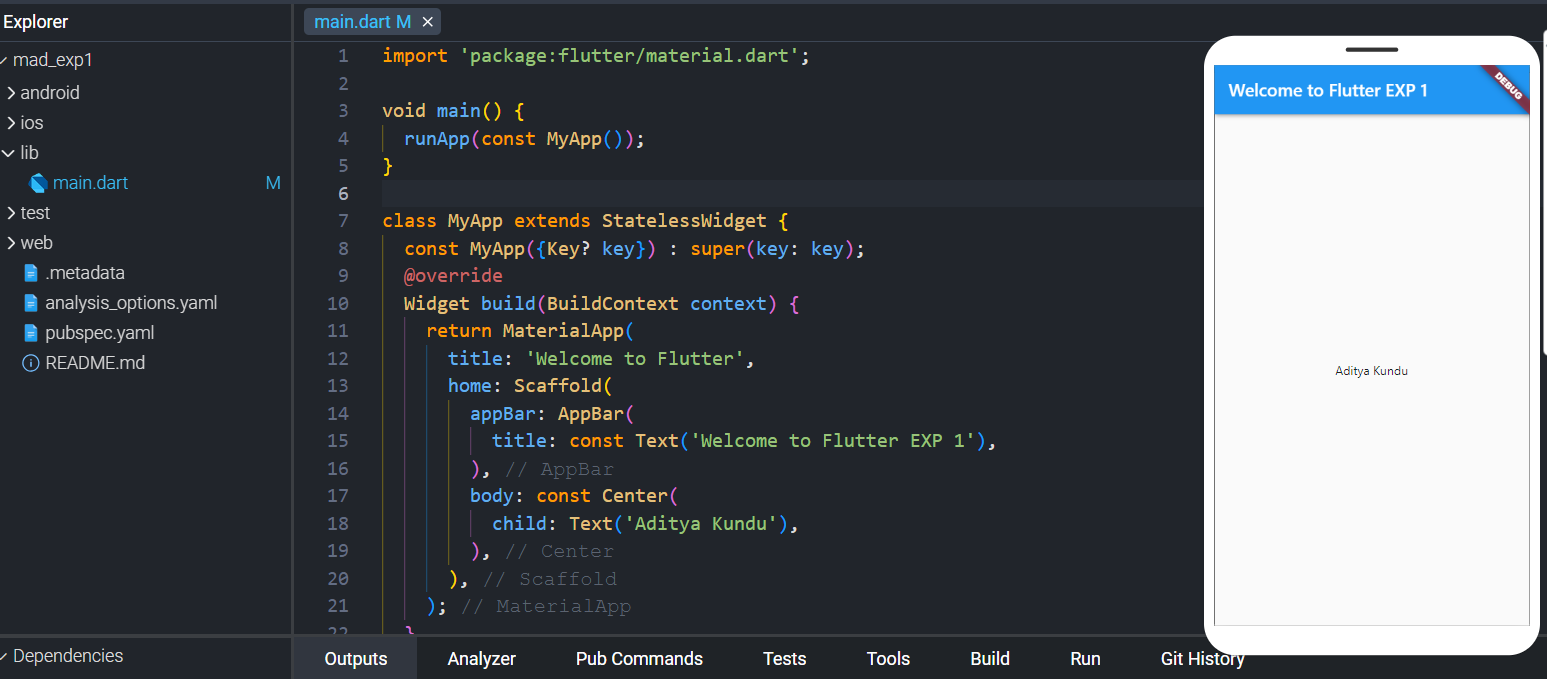
),

);

}

}

Output:



Conclusion: Hence We ran a simple program on running a simple text, on flutter, running on a virtual device