



PARSHVANATH CHARITABLE TRUST'S

A. P. SHAH INSTITUTE OF TECHNOLOGY

(All Branches NBA Accredited)



Department of Information Technology

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Class / Branch / Div: TE- IT A/B

Subject: MAD & PWA Lab

Name of Instructor:

Name of Student:

Student ID:

Roll No.

Date of Submission:

Experiment No.:1

Aim: To install and configure Flutter Environment.

Theory:

Flutter Installation

❖ Install the Flutter SDK

Step 1: Download the installation bundle of the Flutter Software Development Kit for Linux. To download Flutter SDK, Go to its official website

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

Step 3: The easiest way to install Flutter on Linux is by using snapd. For more information, see Installing snapd.

Once you have snapd, you can install Flutter using the Snap Store, or at the command line:

\$ sudo snap install flutter --classic

Note: Once the snap is installed, you can use the following command to display your Flutter SDK path:

\$ flutter sdk-path

Step 4: Run flutter doctor

Run the following command to see if there are any dependencies you need to install to complete the setup (for verbose output, add the -v flag). This command checks for all the requirements of Flutter app development and displays a report of the status of your Flutter installation.:

\$ flutter doctor

Step 5: Update your path

You can update your PATH variable for the current session at the command line, as shown in Get the Flutter SDK. You'll probably want to update this variable permanently, so you can run flutter commands in any terminal session.

sudo nano /etc/profile



Step 6: Android setup

Installing Java OpenJDK

To install Android Studio we require OpenJDK version 8 or above to be installed in our system. First, we will install OpenJDK 8. The installation is very simple, we can start by updating the package index:

```
$ sudo apt update
```

Now install the OpenJDK 8 package using the below command

```
$ sudo apt install openjdk-8-jdk
```

To verify the installation we can use the below command to check the version:

```
$ java -version
```

Installing Android Studio

To download and install the Android Studio snap package, we have to open our terminal using the Ctrl+Alt+T keyboard shortcut and type the below command:

```
$ sudo snap install android-studio --classic
```

When the installation gets completed, we will see the following output:

android-studio 3.3.1.0 from Snapcrafters installed

Now Android Studio has been installed on our Ubuntu desktop.

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.

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 system image for the latest Android version and click on 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 into the red color rectangle. The Android emulator displayed as below screen.

Step 9: Now, install Flutter and Dart plugin for building Flutter application in Android Studio. These plugins provide a template to create a Flutter application, give an option to run



and debug 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 Flutter plugin and click install. When you click on install, it will ask you to install Dart plugin as below screen. Click yes to proceed.

Step 9.3: Restart the Android Studio.

❖ Flutter First Application

In this section, we are going to learn how to create a simple application in Android Studio to understand the basics of the Flutter application. To create Flutter application, do the following steps:

Step 1: Open the Android Studio.

Step 2: Create the Flutter project. To create a project, go to File-> New->New Flutter Project. The following screen helps to understand it more clearly.

Step 3: In the next wizard, you need to choose the Flutter Application. For this, select Flutter Application-> click Next, as shown in the below screen.

Step 4: Next, configure the application details as shown in the below screen and click on the Next button.

Step 5: In the next wizard, you need to set the company domain name and click the Finish button.

After clicking the Finish button, it will take some time to create a project. When the project is created, you will get a fully working Flutter application with minimal functionality.

Step 6: Open the **main.dart** file and replace the code with the following code snippets.

Step 7: Now, run the application. To do this, go to Run->Run main.dart, as shown in the below screen.

Step 8: Finally, you will get the output as below screen.

Conclusion: In this experiment we have created complete environment to execute flutter applications.