

Assignment No.: 1

Title: Installation and Configuration of Flutter Environment

Name: Harshit Raheja

Class: D15B

Roll Number: 45

Aim: To install and configure the Flutter development environment on a Windows system.

Theory:

Flutter is an open-source UI software development kit created by Google. It is used to develop cross-platform applications for Android, iOS, Linux, macOS, Windows, and the web from a single codebase. To develop apps using Flutter, it's essential to install and configure the SDK and its supporting tools properly.

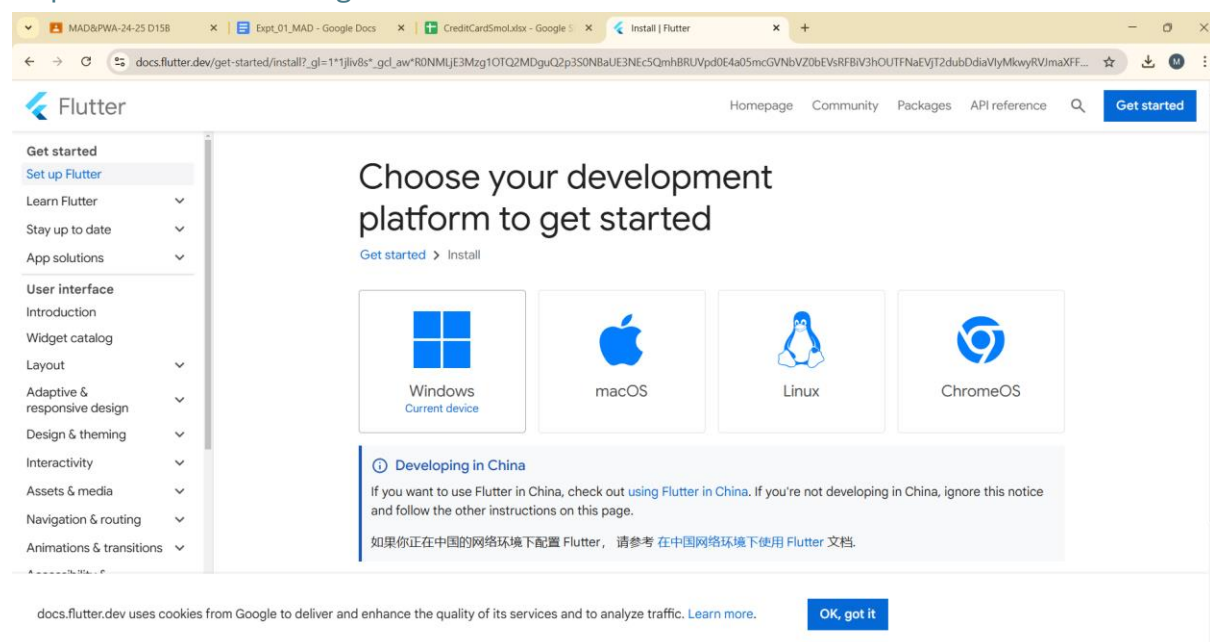
Procedure:

1. Install the Flutter SDK

Step 1:

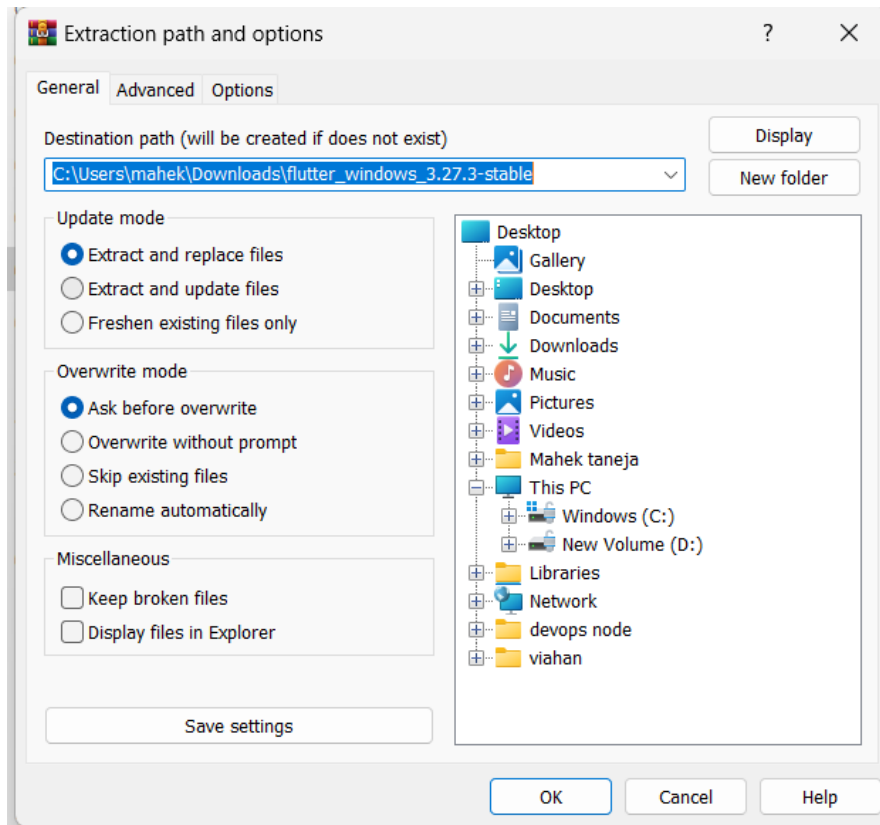
Download the Flutter SDK from the official Flutter website:

<https://docs.flutter.dev/get-started/install>



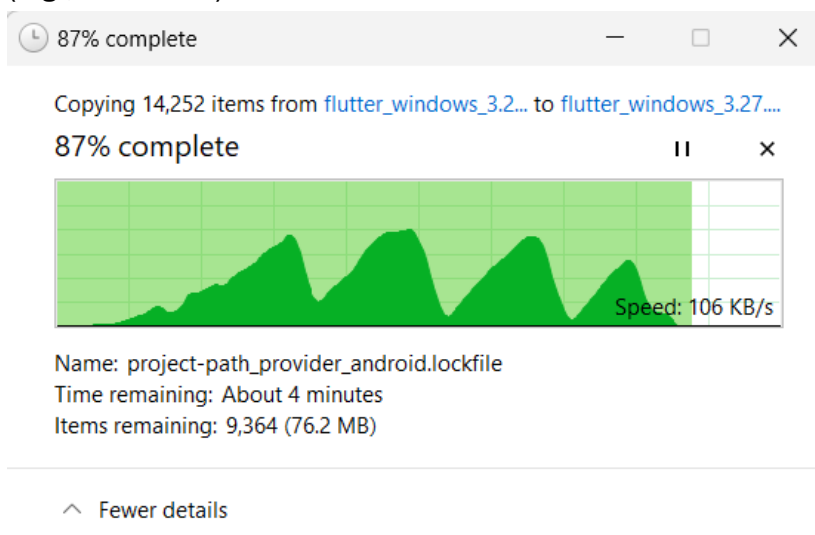
Step 2:

Click on the **Windows** icon to download the latest Flutter SDK for Windows.



Step 3:

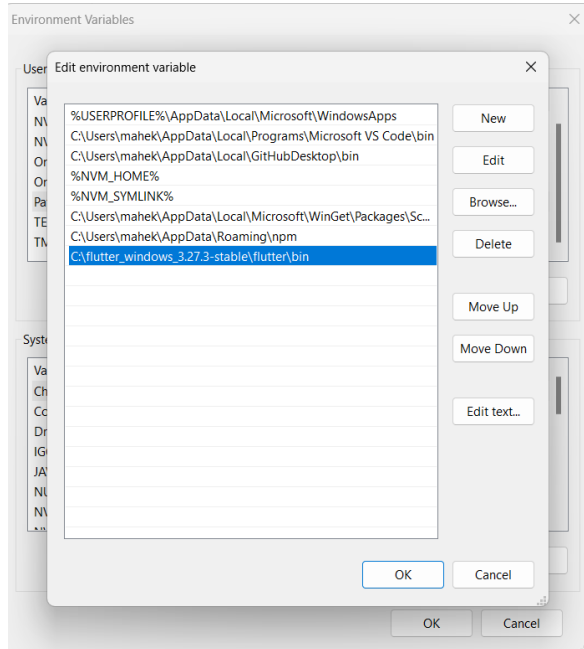
Extract the downloaded ZIP file and move the extracted folder to a preferred location (e.g., C:\Flutter).



Step 4:

Add the Flutter bin directory to the system PATH.

- **Step 4.1:** Go to This PC → Right-click → Properties → Advanced System Settings → Environment Variables.
- **Step 4.2:** Under "System variables", find and select Path, then click on Edit.
- **Step 4.3:** Click New, then paste the path to the Flutter bin folder (e.g., C:\Flutter\bin). Click OK to close all dialogs.



Step 5:

Open the Command Prompt and run:

```
flutter doctor
```

This command checks for the necessary dependencies and shows their installation status.

```
Microsoft Windows [Version 10.0.22631.4602]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\System32>flutter doctor

Welcome to Flutter! - https://flutter.dev

The Flutter tool uses Google Analytics to anonymously report feature usage
statistics and basic crash reports. This data is used to help improve
Flutter tools over time.

Flutter tool analytics are not sent on the very first run. To disable
reporting, type 'flutter config --no-analytics'. To display the current
setting, type 'flutter config'. If you opt out of analytics, an opt-out
event will be sent, and then no further information will be sent by the
Flutter tool.

By downloading the Flutter SDK, you agree to the Google Terms of Service.
The Google Privacy Policy describes how data is handled in this service.

Moreover, Flutter includes the Dart SDK, which may send usage metrics and
crash reports to Google.

Read about data we send with crash reports:
https://flutter.dev/to/crash-reporting

See Google's privacy policy:
https://policies.google.com/privacy

To disable animations in this tool, use
'flutter config --no-cli-animations'.
```

```
Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 3.27.3, on Microsoft Windows [Version 10.0.22631.4602], locale en-IN)
[✗] Windows Version (the doctor check crashed)
    X Due to an error, the doctor check did not complete. If the error message below is not helpful, please let us know about this issue at https://github.com/flutter/flutter/issues.
    X ProcessException: Failed to find "powershell" in the search path.
      Command: powershell
[✗] Android toolchain - develop for Android devices
    X Unable to locate Android SDK.
      Install Android Studio from: https://developer.android.com/studio/index.html
      On first launch it will assist you in installing the Android SDK components.
      (or visit https://flutter.dev/to/windows-android-setup for detailed instructions).
      If the Android SDK has been installed to a custom location, please use
      'flutter config --android-sdk' to update to that location.
```

```
[✓] Chrome - develop for the web
[✓] Visual Studio - develop Windows apps (Visual Studio Build Tools 2019 16.11.37)
[!] Android Studio (not installed)
[✓] VS Code (version 1.96.4)
[✓] Connected device (3 available)
[✓] Network resources

! Doctor found issues in 3 categories.

The Flutter CLI developer tool uses Google Analytics to report usage and diagnostic
data along with package dependencies, and crash reporting to send basic crash
reports. This data is used to help improve the Dart platform, Flutter framework,
and related tools.

Telemetry is not sent on the very first run. To disable reporting of telemetry,
run this terminal command:

    flutter --disable-analytics

If you opt out of telemetry, an opt-out event will be sent, and then no further
information will be sent. This data is collected in accordance with the Google
Privacy Policy (https://policies.google.com/privacy).

C:\Windows\System32>flutter doctorhelpC:\Windows\System32> flutter doctor
Could not find a command named "doctorhelpC:\Windows\System32".

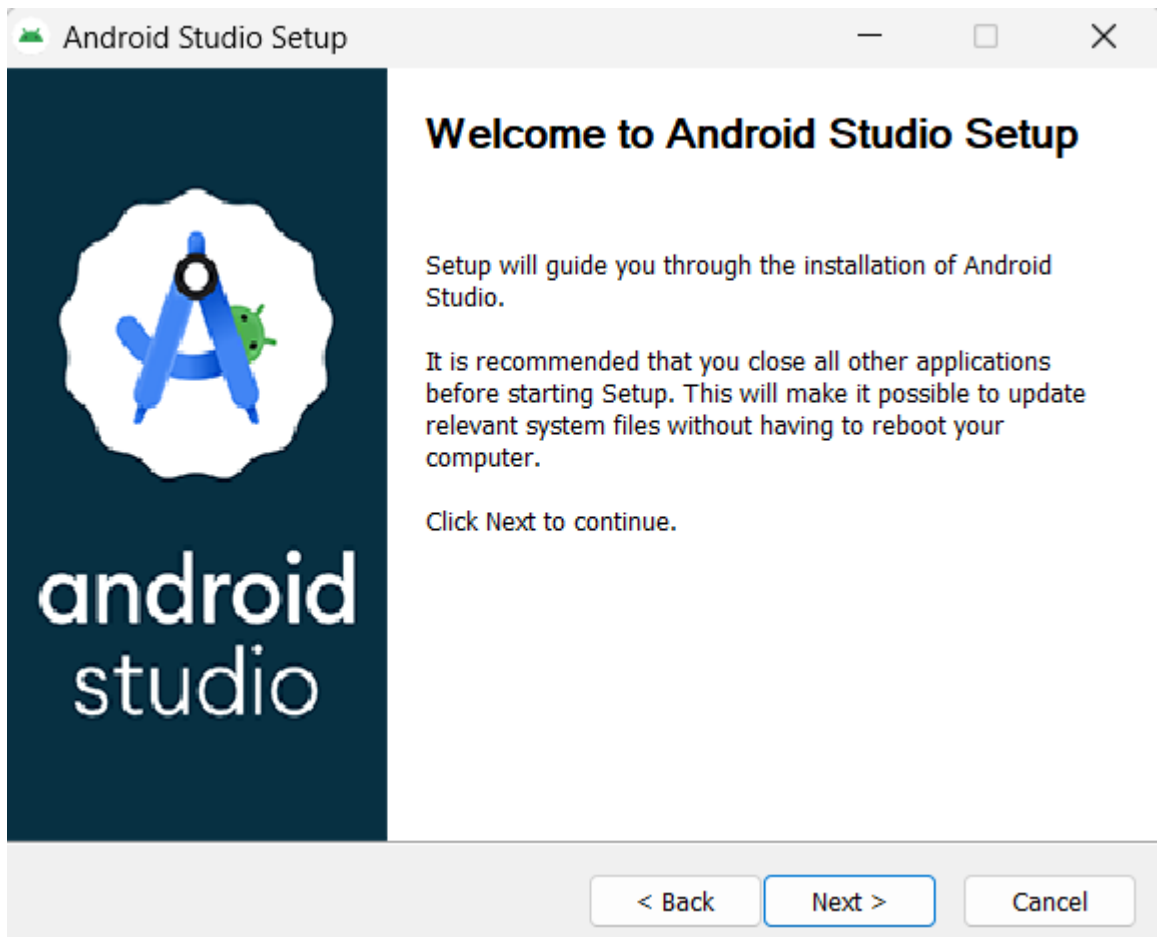
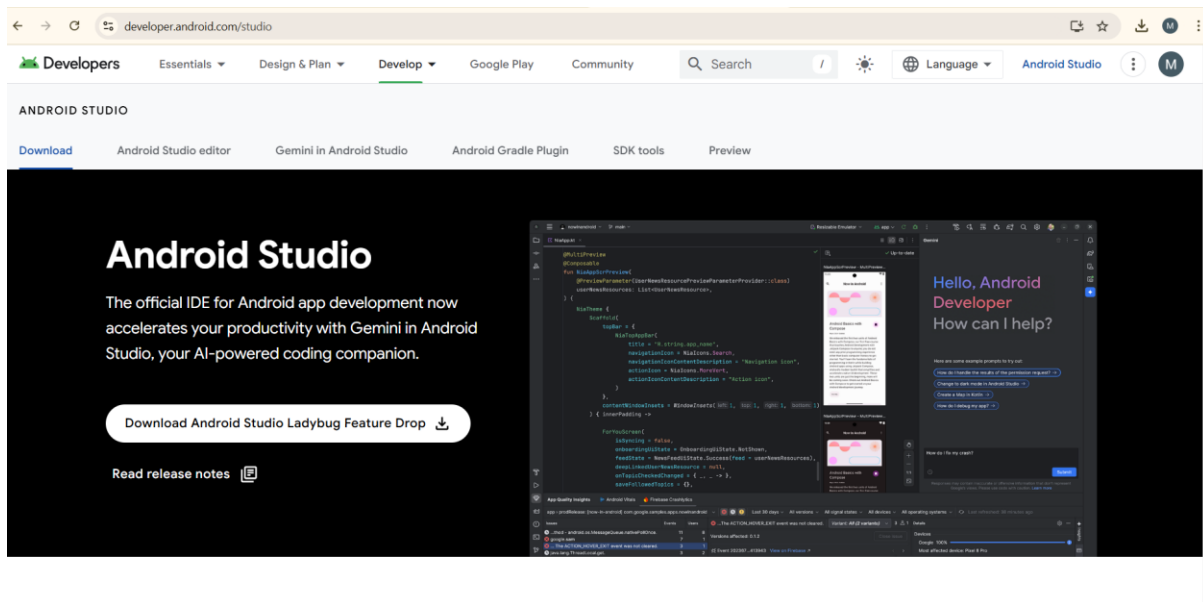
Run 'flutter -h' (or 'flutter <command> -h') for available flutter commands and options.
```

2. Install Android SDK and Android Studio

If flutter doctor reports that Android SDK is missing:

Step 6:

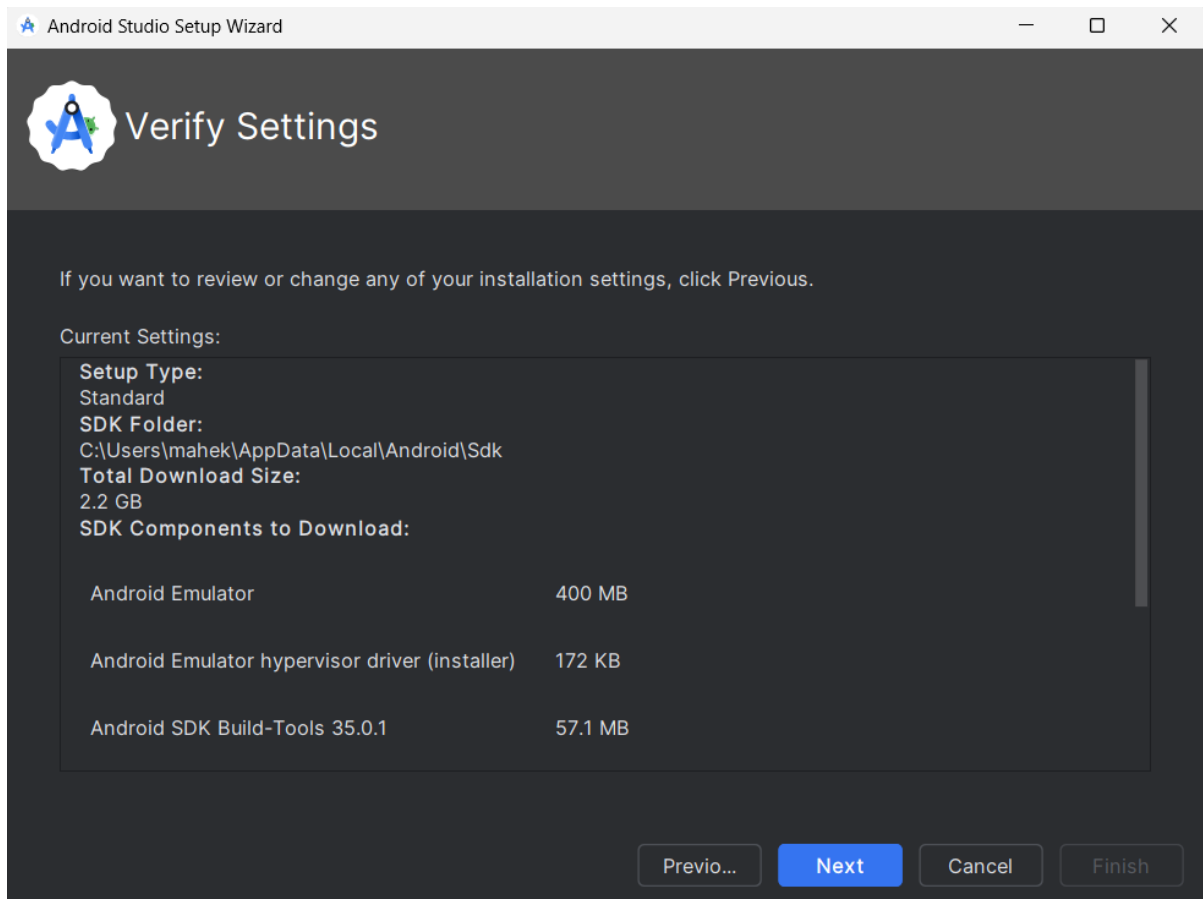
Download Android Studio from the official site and run the installer.



Step 7:

Follow the installation wizard. After installation:

- Click on **“Do not import settings”** when prompted.
- Start Android Studio.



Step 8:

In Android Studio, install the necessary components and then run:

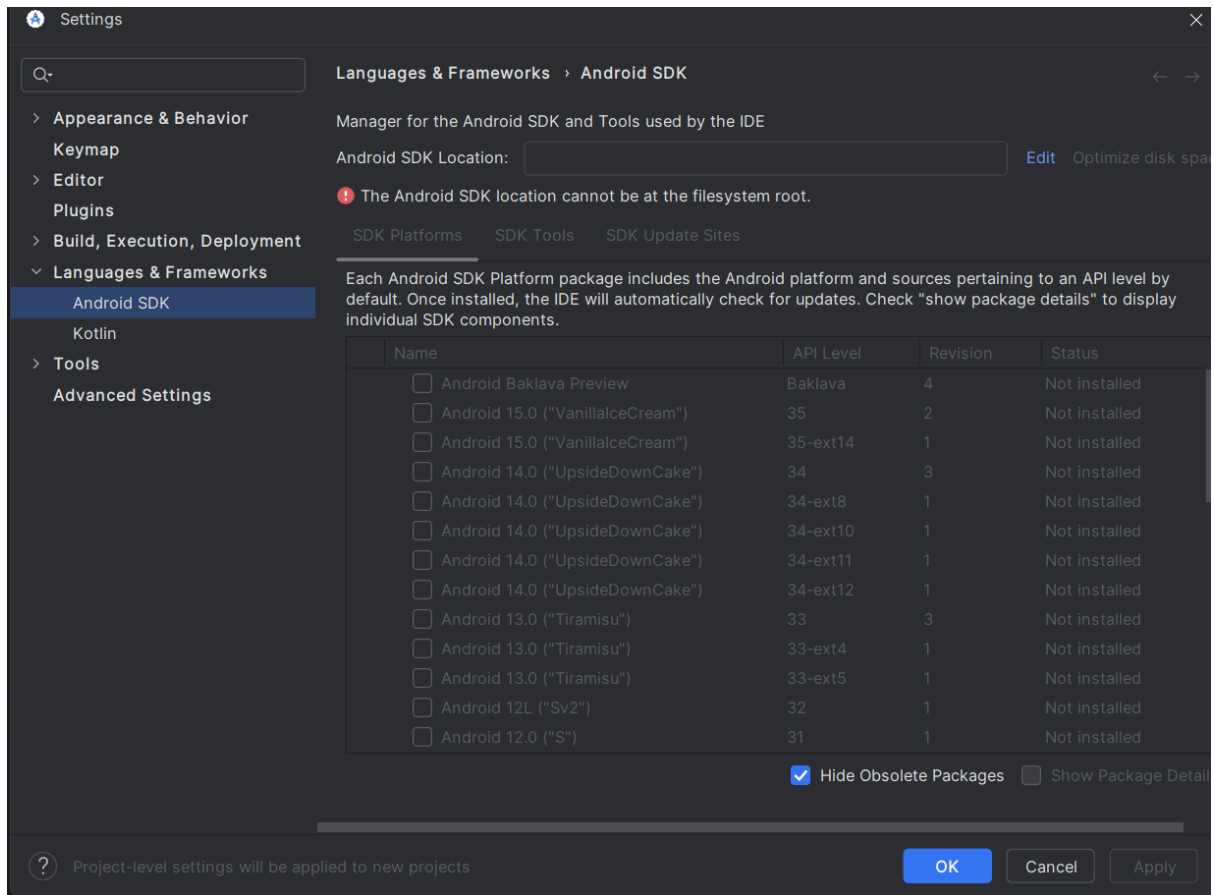
```
flutter doctor --android-licenses
```

Accept all licenses.

3. Set Up Android Emulator

Step 9:

- Open Android Studio → Tools → Device Manager → Create Device.
- Select a hardware profile and click **Next**.
- Download a recommended system image and proceed.
- Verify the configuration and click **Finish**.
- Launch the emulator to confirm it's working.



4. Install Flutter and Dart Plugins in Android Studio

Step 10:

- Go to File → Settings → Plugins.
- Search for **Flutter** plugin and click **Install**.
- It will prompt you to install the **Dart** plugin as well – accept and install it.
- Restart Android Studio after installation.

Conclusion:

The Flutter SDK and Android development environment were successfully installed and configured. All required components such as SDK, emulator, and plugins were set up to enable Flutter application development.