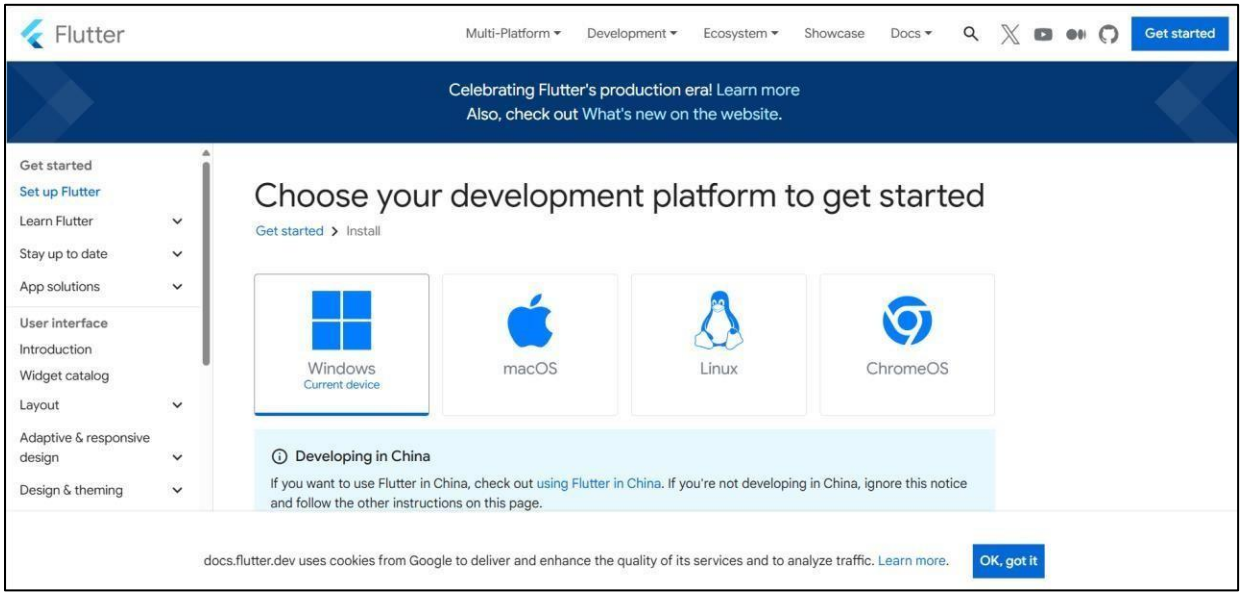
Project Title: **DailyHunt** **RollNo. 60**

MAD & PWA Lab Journal

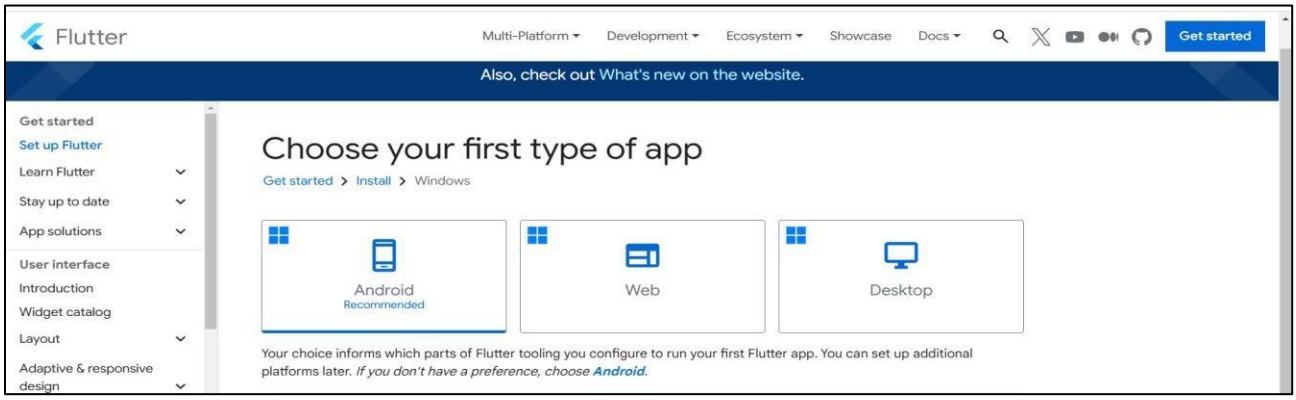
Experiment No.	01
Experiment Title.	To install and configure the Flutter Environment
Roll No.	60
Name	Pranav Titambe
Class	D15A
Subject	MAD & PWA Lab
Lab Outcome	LO1: Understand cross platform mobile application development using Flutter framework
Grade:	

AIM: - Installation and Configuration of Flutter Environment.

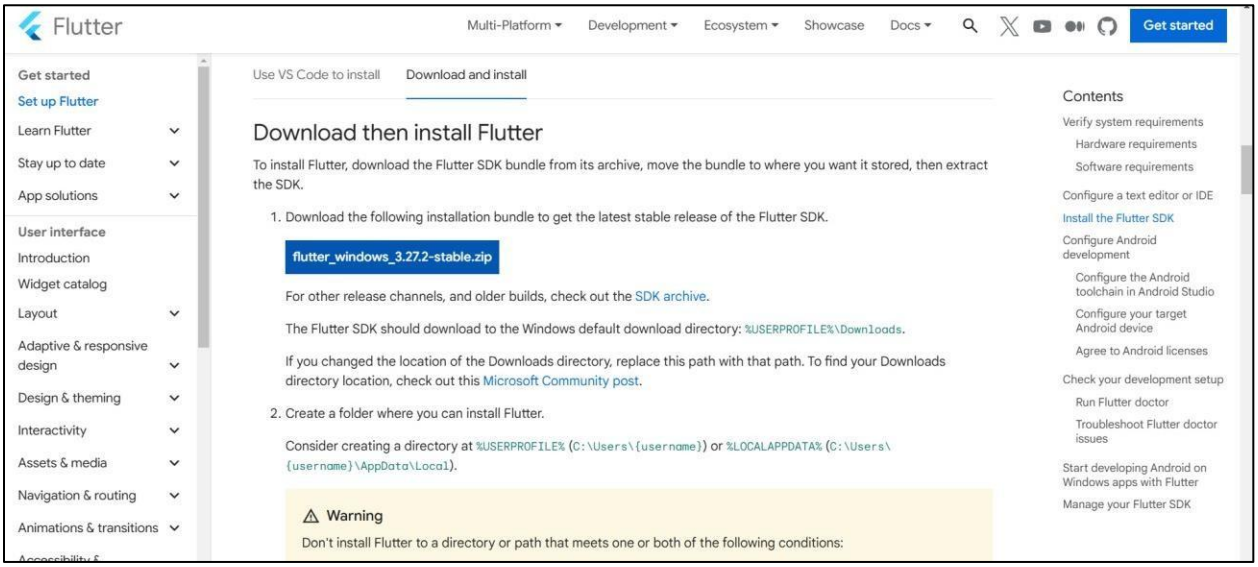
Step 1: Go to the official Flutter website: https://docs.flutter.dev/get-started/install



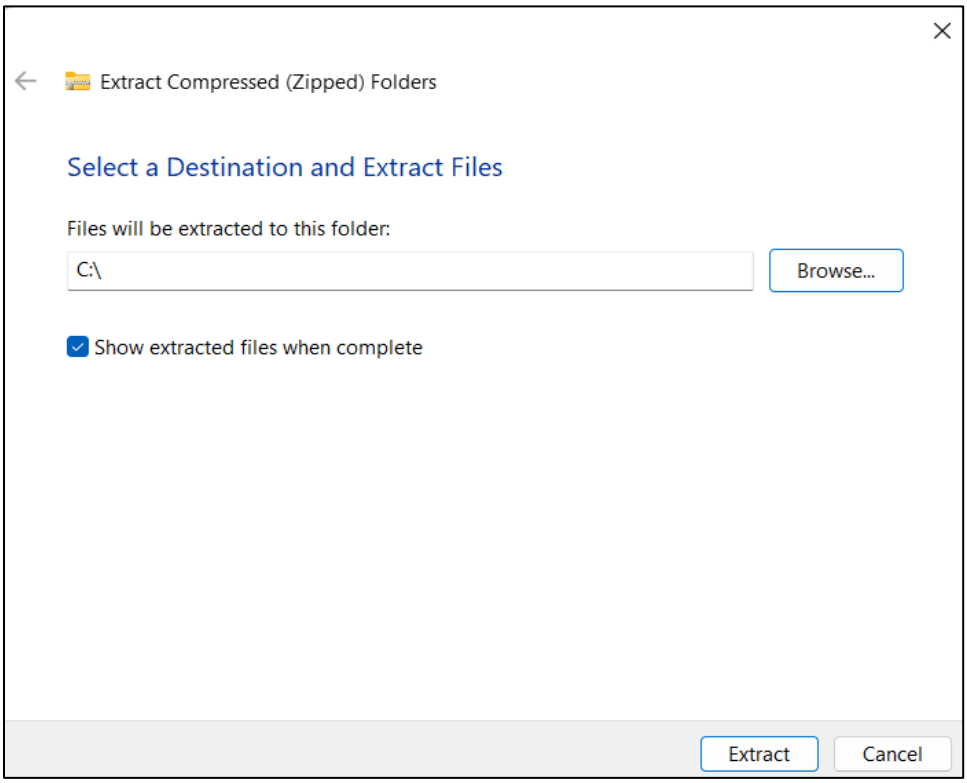
Step 2: To download the latest Flutter SDK, click on the Windows icon > Android



Step 3: For Windows, download the stable release (a .zip file).



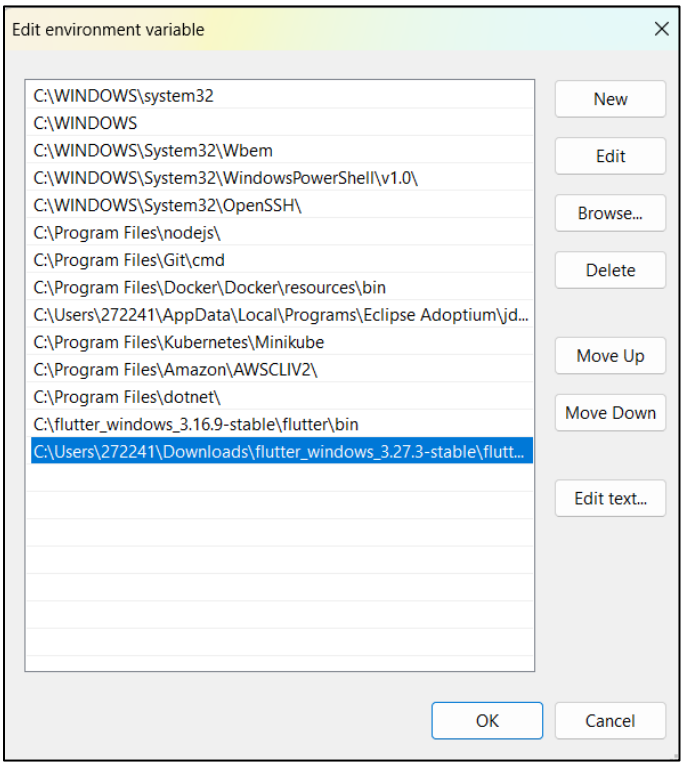
Step 4: Extract the ZIP file to a folder (e.g., C:\flutter).



Step 5 :- Add Flutter to System PATH

Right-click on the Start Menu > System > Advanced system settings > Environment Variables. Under System Variables, find Path and click Edit.

Add the full path to the flutter/bin directory (e.g., C:\flutter\bin).



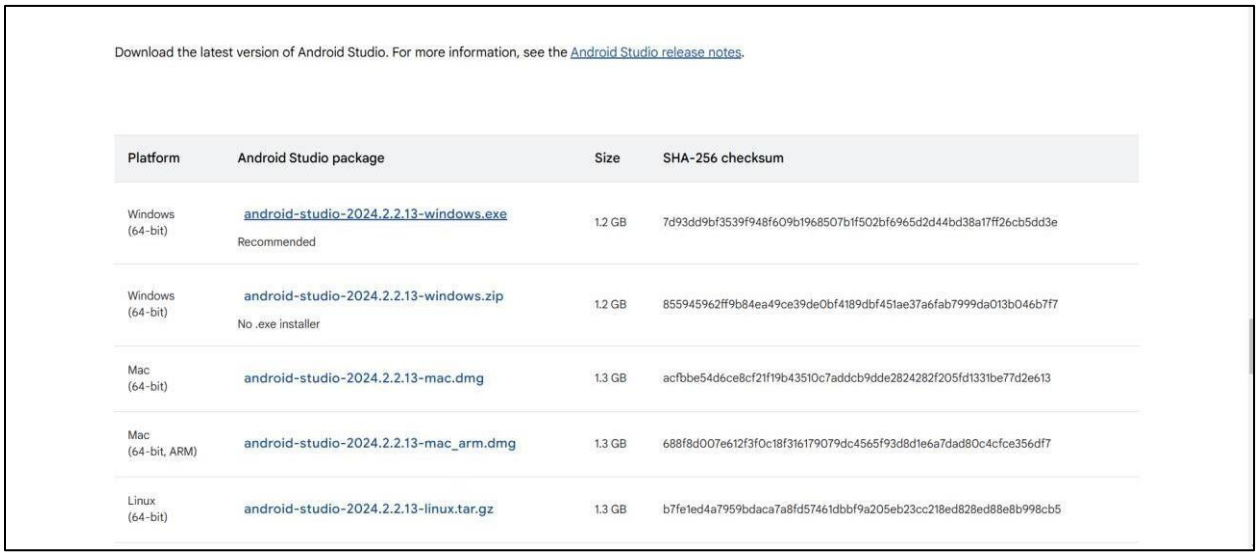
Step 6 : - Now, run the $ flutter command in command prompt.

```
(base) PS C:\Users\prana> flutter
Manage your Flutter app development.

Common commands:

  flutter create <output directory>
    Create a new Flutter project in the specified directory.

  flutter run [options]
    Run your Flutter application on an attached device or in an emulator.

Usage: flutter <command> [arguments]

Global options:
-h, --help                  Print this usage information.
-v, --verbose               Noisy logging, including all shell commands executed.
                            If used with "--help", shows hidden options. If used with "flutter doctor", shows additional
                            diagnostic information. (Use "-vv" to force verbose logging in those cases.)
-d, --device-id             Target device id or name (prefixes allowed).
    --version               Reports the version of this tool.
    --enable-analytics      Enable telemetry reporting each time a flutter or dart command runs.
    --disable-analytics     Disable telemetry reporting each time a flutter or dart command runs, until it is
                            re-enabled.
    --suppress-analytics    Suppress analytics reporting for the current CLI invocation.

Available commands:

Flutter SDK
  bash-completion   Output command line shell completion setup scripts.
  channel           List or switch Flutter channels.
```

Step 7:- 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

```
(base) PS C:\Users\prana> flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 3.27.3, on Microsoft Windows [Version 10.0.26100.3037], locale en-IN)
[✓] Windows Version (Installed version of Windows is version 10 or higher)
[✓] Android toolchain - develop for Android devices (Android SDK version 35.0.1)
[✓] Chrome - develop for the web
[!] Visual Studio - develop Windows apps (Visual Studio Community 2022 17.12.4)
    ✗ Visual Studio is missing necessary components. Please re-run the Visual Studio installer for the "Desktop
      development with C++" workload, and include these components:
        MSVC v142 - VS 2019 C++ x64/x86 build tools
          - If there are multiple build tool versions available, install the latest
        C++ CMake tools for Windows
        Windows 10 SDK
[✓] Android Studio (version 2024.2)
[✓] IntelliJ IDEA Ultimate Edition (version 2024.2)
[✓] VS Code (version 1.96.4)
[✓] Connected device (4 available)
[✓] Network resources

! Doctor found issues in 1 category.
(base) PS C:\Users\prana>
```

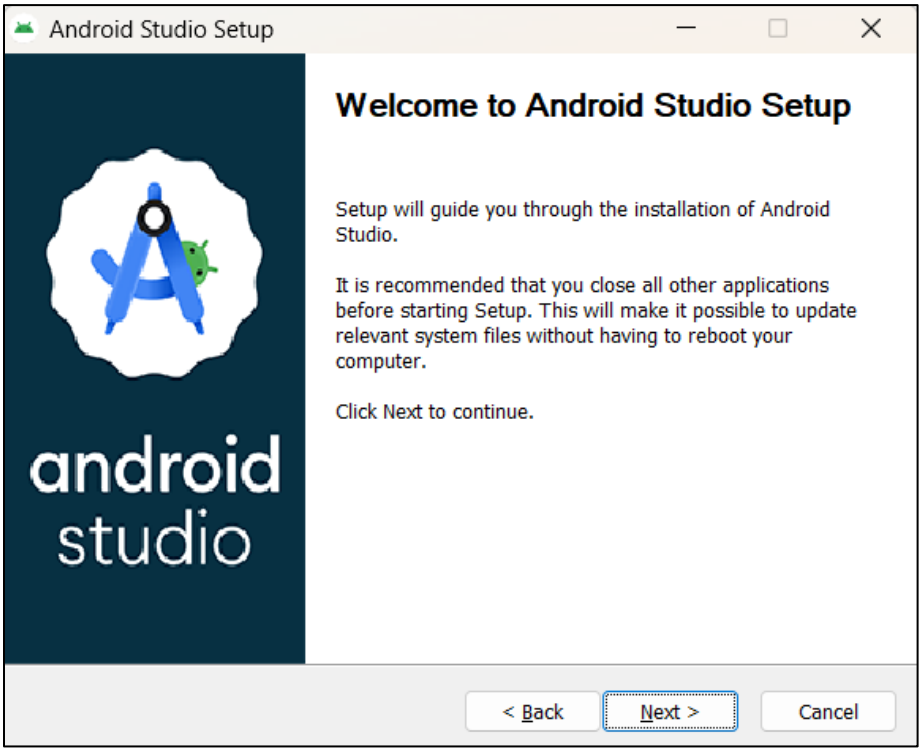
Step 8 : - Go to Android Studio and download the installer.



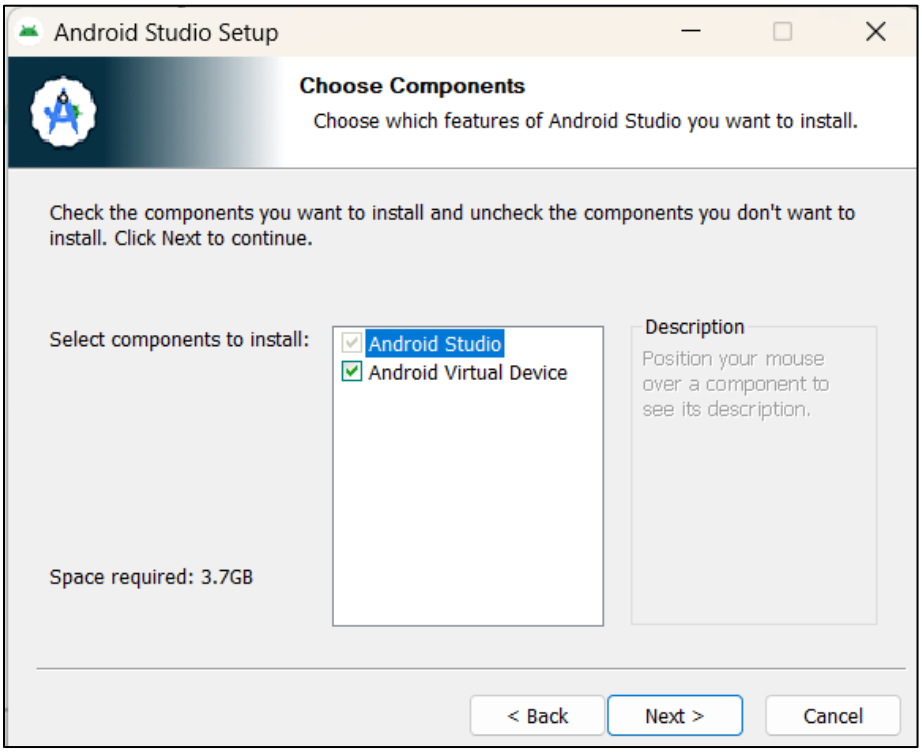
Download the latest version of Android Studio. For more information, see the Android Studio release notes.

Platform	Android Studio package	Size	SHA-256 checksum
Windows (64-bit)	android-studio-2024.2.2.13-windows.exe Recommended	1.2 GB	7d93dd9bf3539f948f609b1968507b1f502bf6965d2d44bd38a17ff26cb5dd3e
Windows (64-bit)	android-studio-2024.2.2.13-windows.zip No .exe installer	1.2 GB	855945962ff9b84ea49ce39de0bf4189dbf451ae37a6fab7999da013b046b7f7
Mac (64-bit)	android-studio-2024.2.2.13-mac.dmg	1.3 GB	acfbbe54d6ce8cf21f19b43510c7addcb9dde2824282f205fd1331be77d2e613
Mac (64-bit, ARM)	android-studio-2024.2.2.13-mac_arm.dmg	1.3 GB	688f8d007e612f3f0c18f316179079dc4565f93d8d1e6a7dad80c4cfce356df7
Linux (64-bit)	android-studio-2024.2.2.13-linux.tar.gz	1.3 GB	b7fe1ed4a7959bdaca7a8fd57461dbbf9a205eb23cc218ed828ed88e8b998cb5

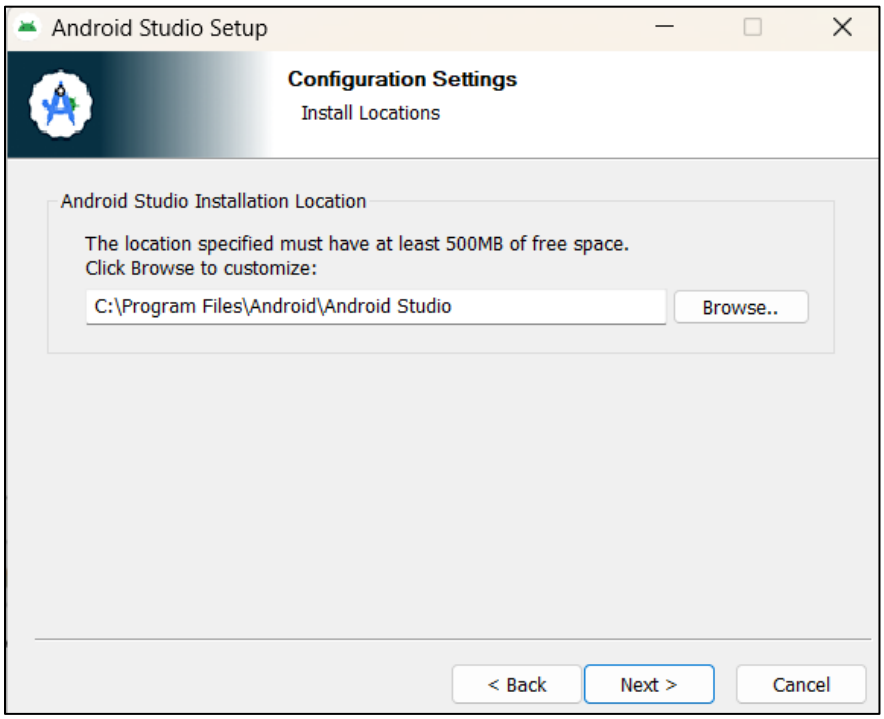
Step 8.1: - When the download is complete, open the .exe file and run it. You will get the following dialog box



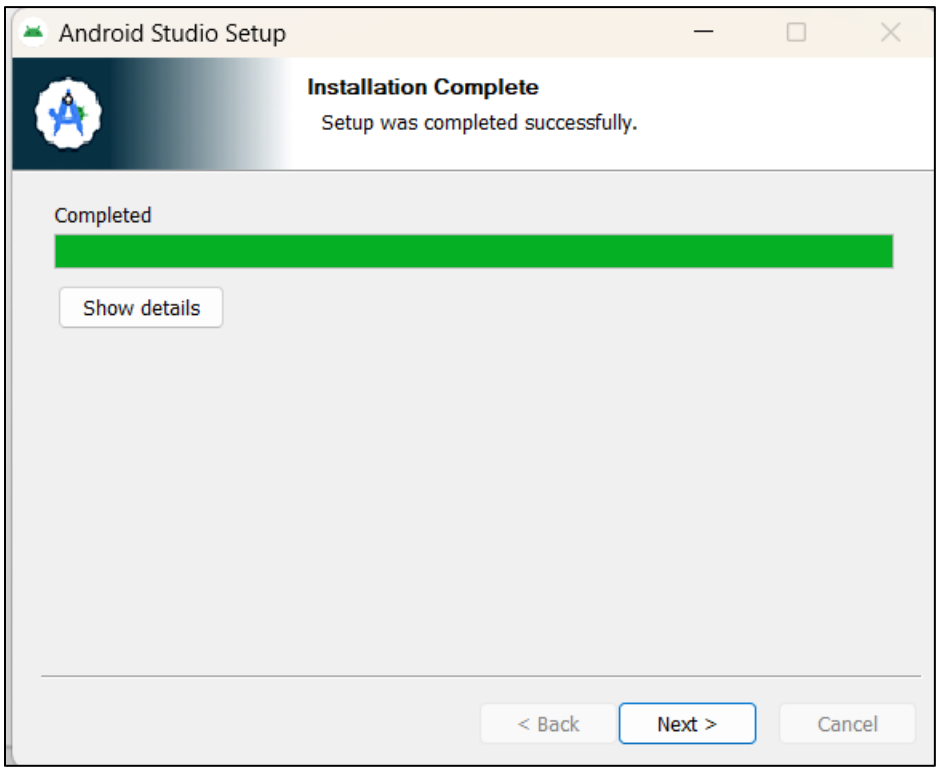
Step 8.2: - Select all the Checkboxes and Click on 'Next' Button.

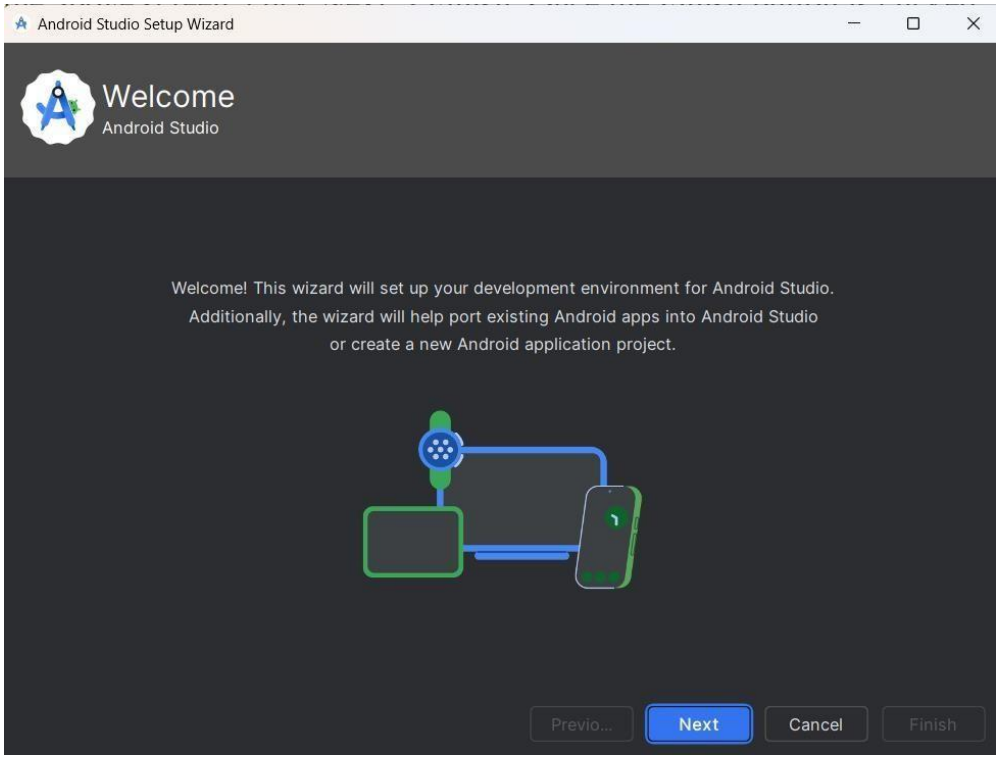


Step 8.3: - Change the destination as per your convenience and click on ‘Next’ Button.

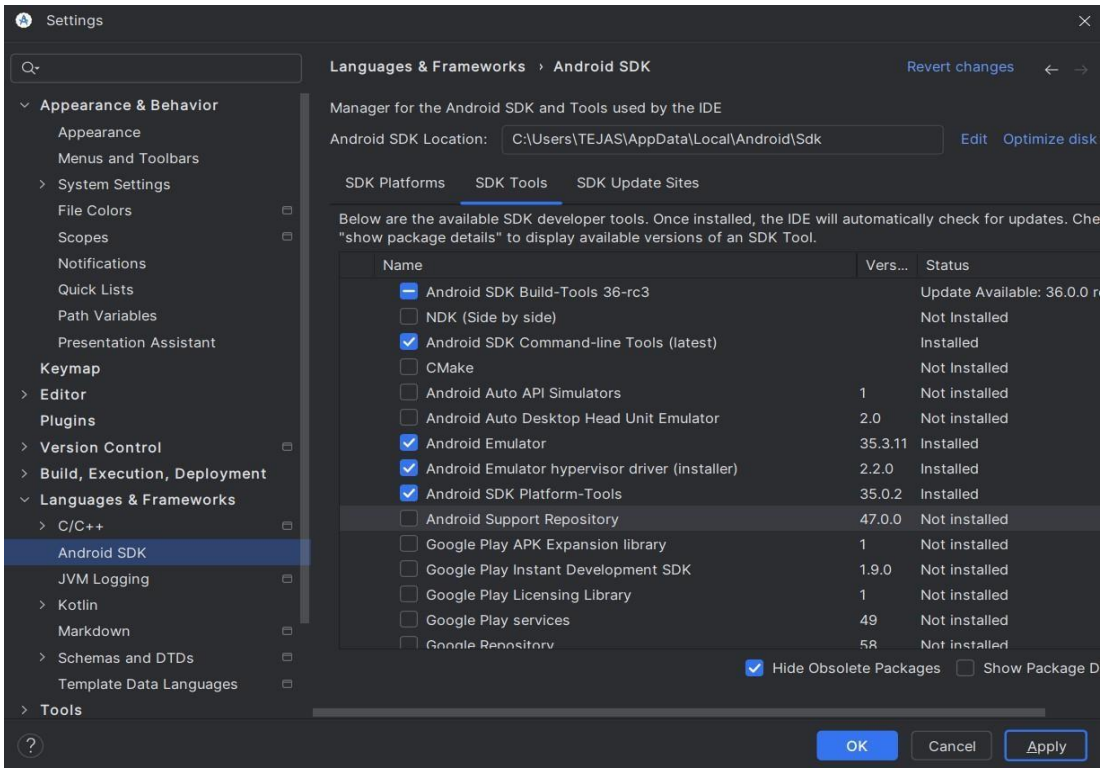


Step 8.4: - Follow the steps of the installation wizard. Once the installation wizard completes, you will get the following screen.





Step 8.5: - Go to Preferences > Appearance & Behavior > System Settings > Android SDK. Select the SDK Tools tab and check Android SDK Command-line Tools and Install it.



Step 9: - Open a terminal and run the following command

```
(base) PS C:\Users\prana>  flutter doctor --android-licenses
Warning: Observed package id 'platform-tools' in inconsistent location 'C:\Users\prana\AppData\Local\Android\Sdk\platfor
m-tools-2' (Expected 'C:\Users\prana\AppData\Local\Android\Sdk\platform-tools')
Warning: Observed package id 'platform-tools' in inconsistent location 'C:\Users\prana\AppData\Local\Android\Sdk\platfor
m-tools-2' (Expected 'C:\Users\prana\AppData\Local\Android\Sdk\platform-tools')
                                                                    Warning: Errors during XML parse:
Warning: Additionally, the fallback loader failed to parse the XML.ry...
Warning: Errors during XML parse:       ] 54% Fetch remote repository...
Warning: Additionally, the fallback loader failed to parse the XML.ry...
[======================================] 100% Computing updates...
All SDK package licenses accepted.
```

```
(base) PS C:\Users\prana> flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 3.27.3, on Microsoft Windows [Version 10.0.26100.3037], locale en-IN)
[✓] Windows Version (Installed version of Windows is version 10 or higher)
[✓] Android toolchain - develop for Android devices (Android SDK version 35.0.1)
[✓] Chrome - develop for the web
[!] Visual Studio - develop Windows apps (Visual Studio Community 2022 17.12.4)
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      development with C++" workload, and include these components:
        MSVC v142 - VS 2019 C++ x64/x86 build tools
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        C++ CMake tools for Windows
        Windows 10 SDK
[✓] Android Studio (version 2024.2)
[✓] IntelliJ IDEA Ultimate Edition (version 2024.2)
[✓] VS Code (version 1.96.4)
[✓] Connected device (4 available)
[✓] Network resources

! Doctor found issues in 1 category.
(base) PS C:\Users\prana>
```
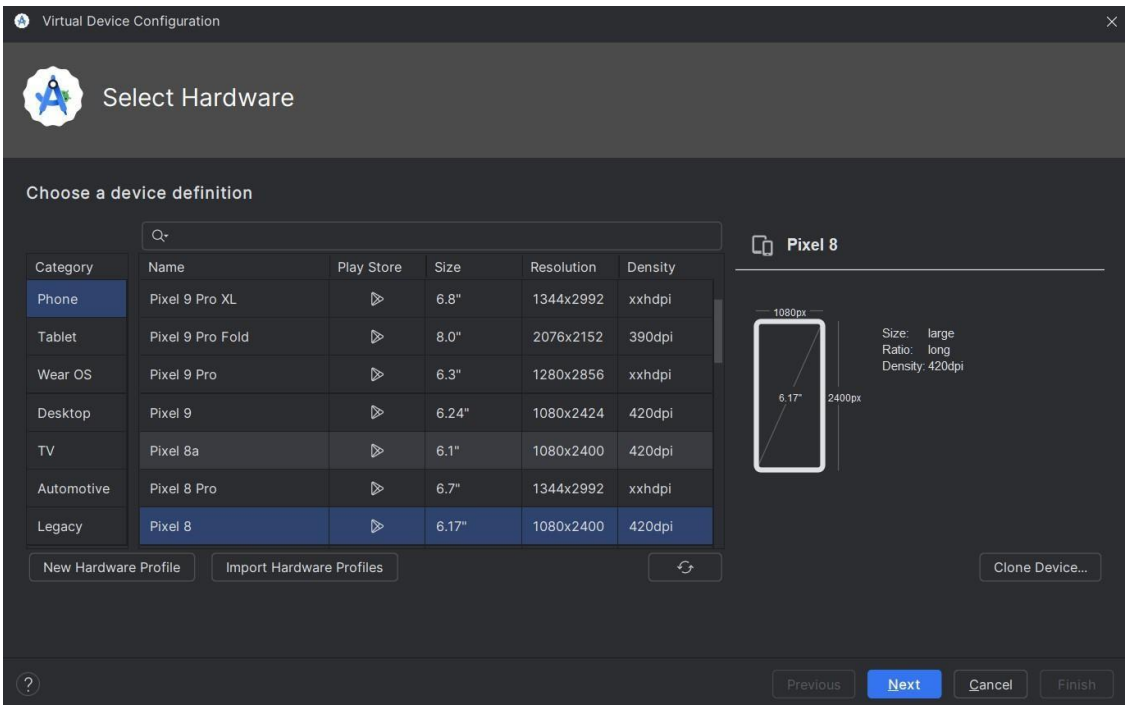
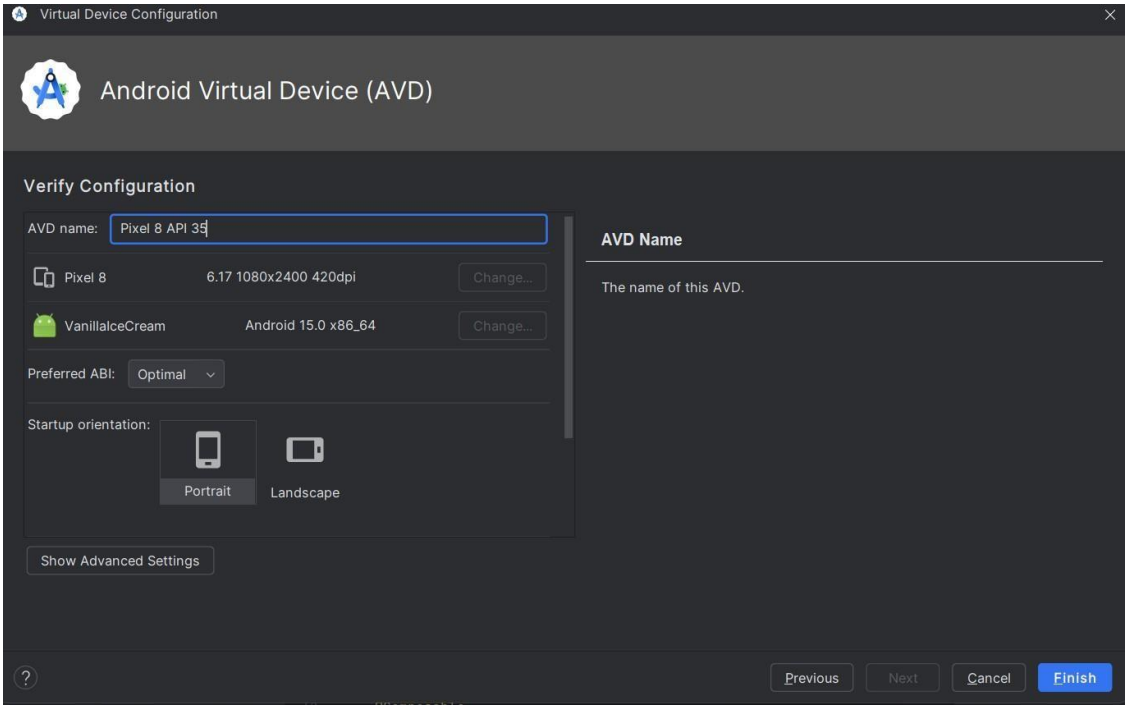
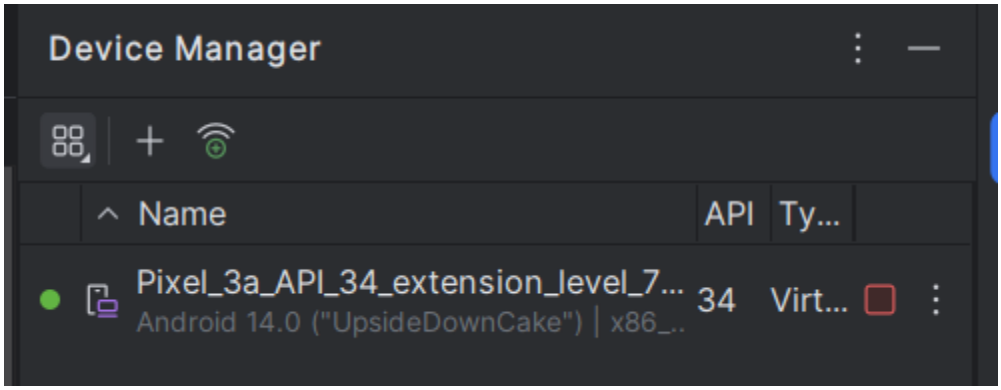

Step 10: - Next, you need to set up an Android emulator. It is responsible for running and testing the Flutter application



Step 10.1: - Open Android Studio and go to Tools > AVD Manager. Create a new virtual device.

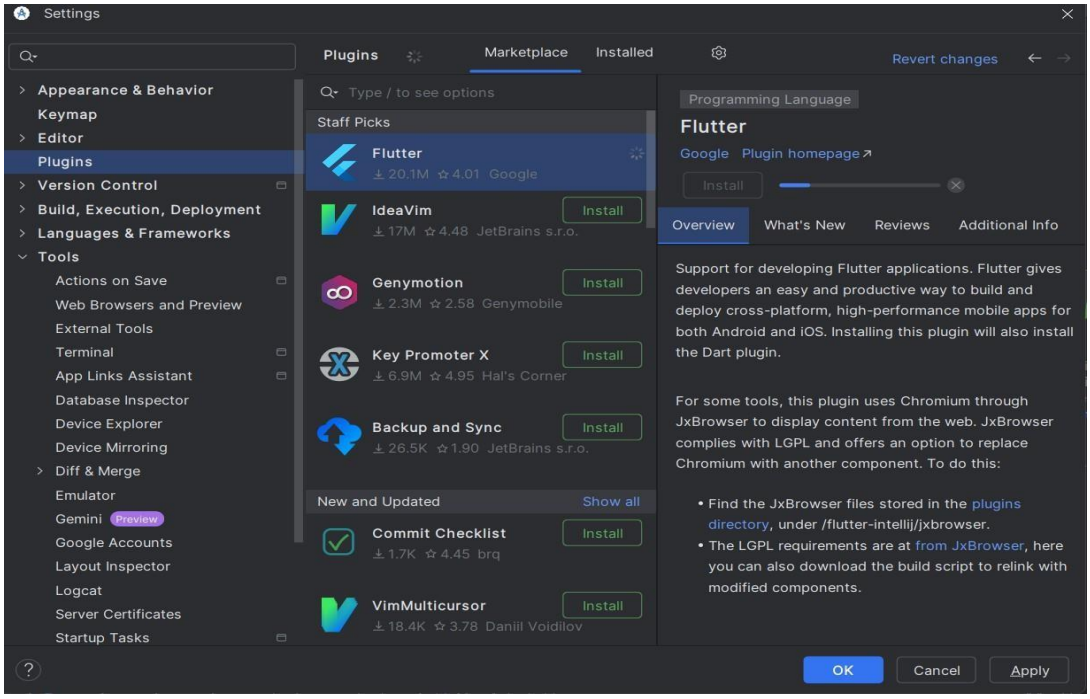


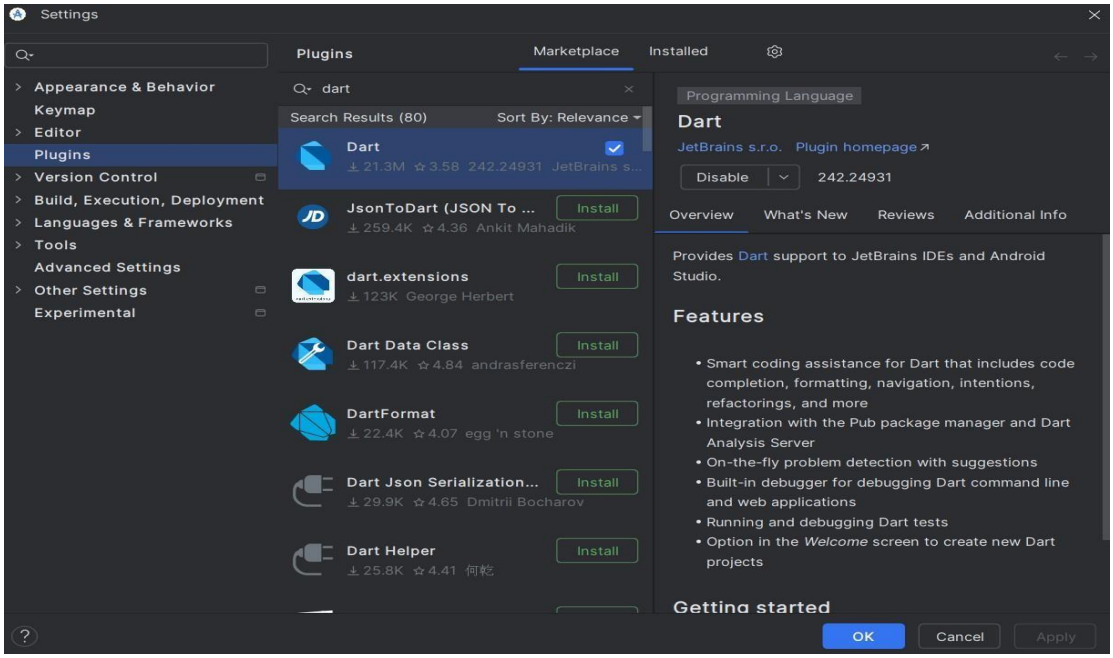
Step 10.2: - Click on the icon pointed into the red color rectangle. The Android emulator displayed as below screen



Step 11: - 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

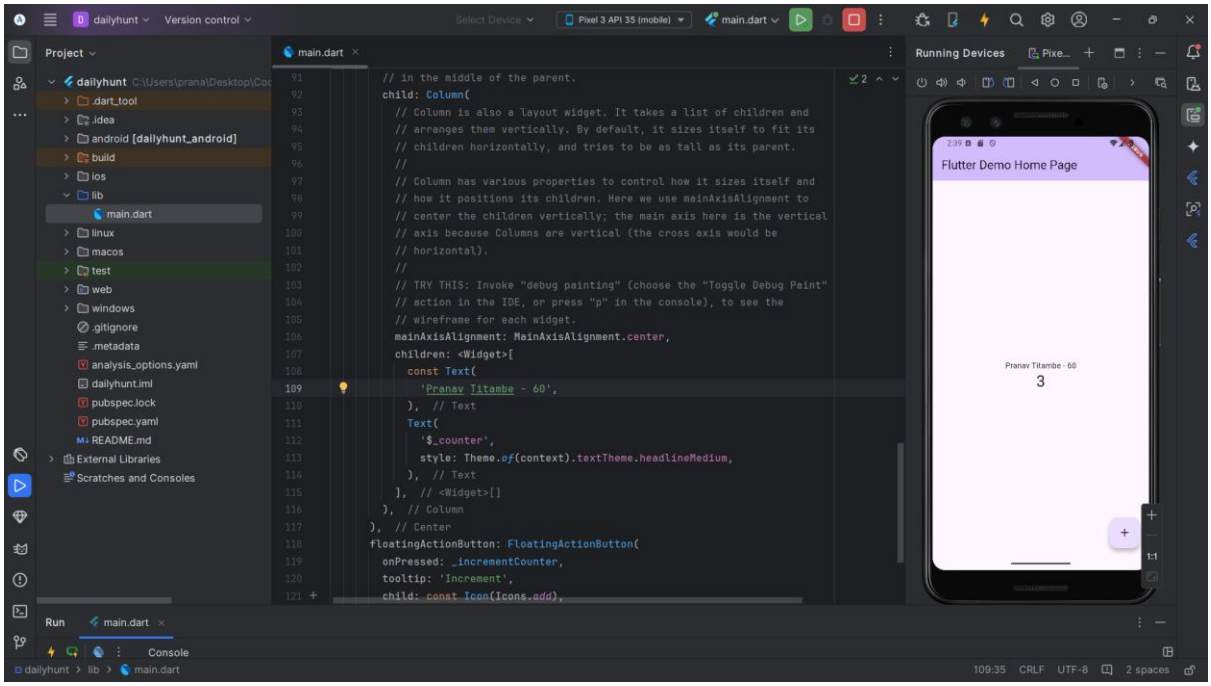
Step 11.1: - Open the Android Studio and then go to File->Settings->Plugins. Now, search the Flutter plugin. If found, select Flutter plugin and click install





Step 11.2: - Restart the Android Studio

Step 12: - Go to File > New Project > Create Flutter Project, then select the project name and location, and click Next to proceed.


dailyhunt
Version control
Pixel 3 API 35 (mobile)
main.dart
Project
dailyhunt C:\Users\prana\Desktop\Coc
.dart_tool
.idea
android [dailyhunt_android]
build
ios
lib
main.dart
linux
macos
test
web
windows
.gitignore
.metadata
analysis_options.yaml
dailyhunt.iml
pubspec.lock
pubspec.yaml
README.md
External Libraries
Scratches and Consoles
// in the middle of the parent.
child: Column(
// Column is also a layout widget. It takes a list of children and
// arranges them vertically. By default, it sizes itself to fit its
// children horizontally, and tries to be as tall as its parent.
//
// Column has various properties to control how it sizes itself and
// how it positions its children. Here we use mainAxisAlignment to
// center the children vertically; the main axis here is the vertical
// axis because Columns are vertical (the cross axis would be
// horizontal).
//
// TRY THIS: Invoke "debug painting" (choose the "Toggle Debug Paint"
// action in the IDE, or press "p" in the console), to see the
// wireframe for each widget.
mainAxisAlignment: MainAxisAlignment.center,
children: <Widget>[
const Text(
'Pranav Titambe - 60',
), // Text
Text(
'$_counter',
style: Theme.of(context).textTheme.headlineMedium,
), // Text
], // <Widget>[]
), // Column
), // Center
floatingActionButton: FloatingActionButton(
onPressed: _incrementCounter,
tooltip: 'Increment',
child: const Icon(Icons.add),
Running Devices
Flutter Demo Home Page
Pranav Titambe - 60
3
Run
main.dart
Console
dailyhunt > lib > main.dart
109:35
CRLF
UTF-8
2 spaces