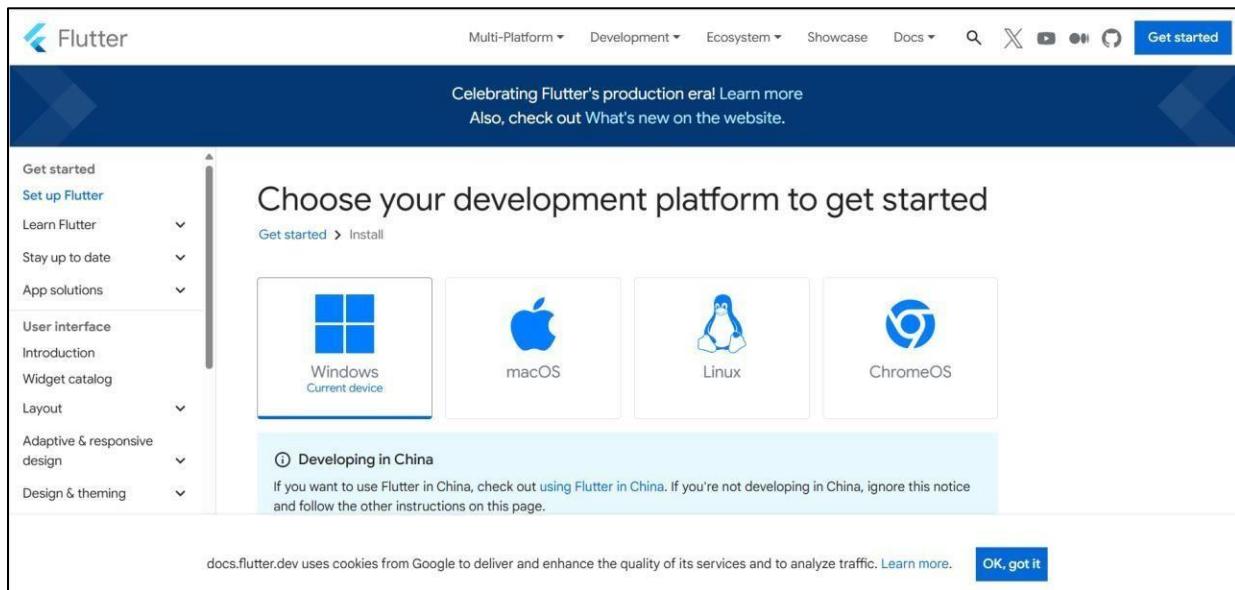


EXPERIMENT NO: - 01

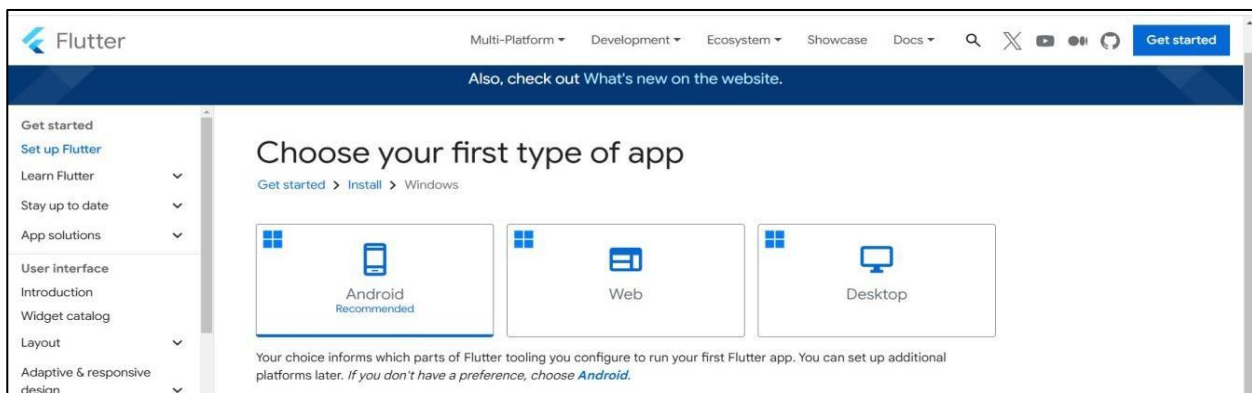
AIM: Installation and Configuration of Flutter Environment.

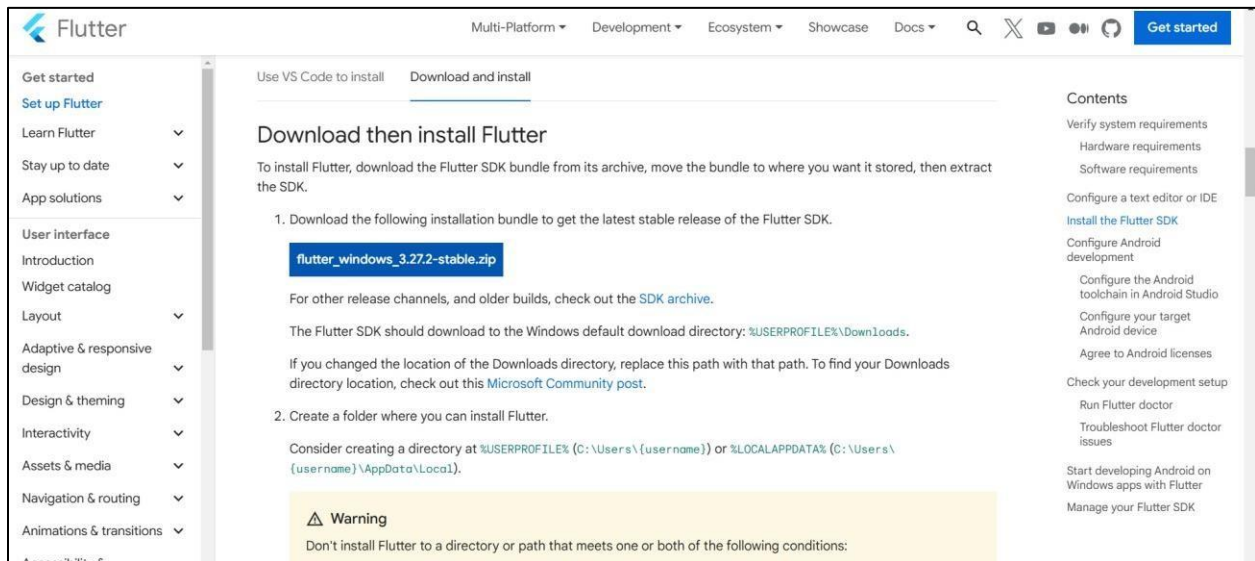
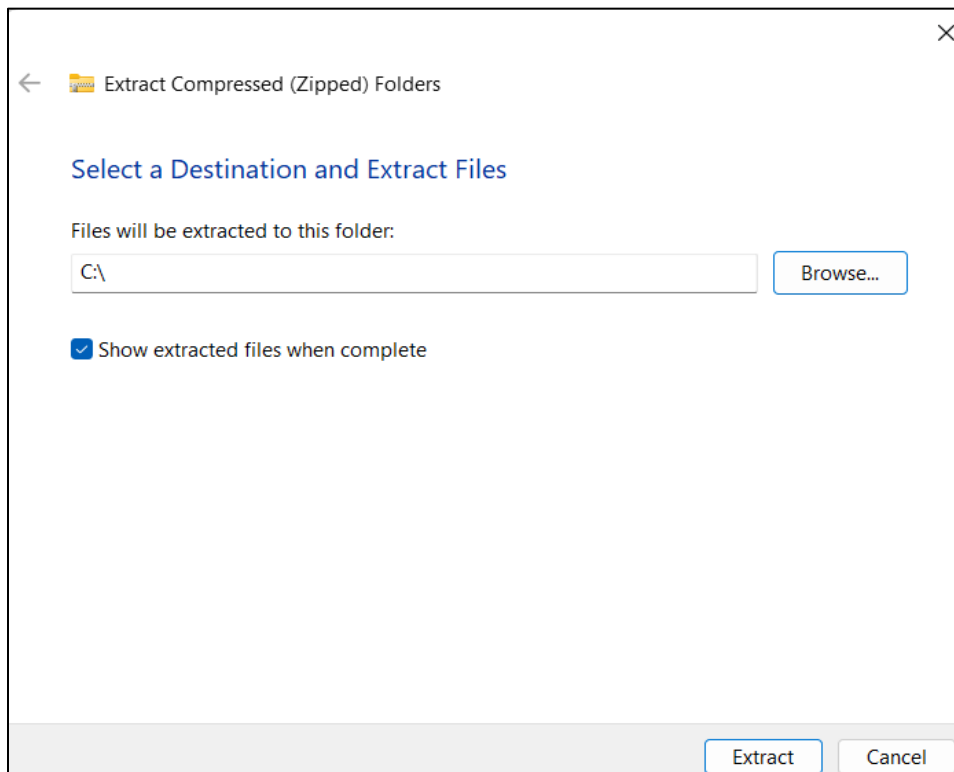
PROCEDURE:

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

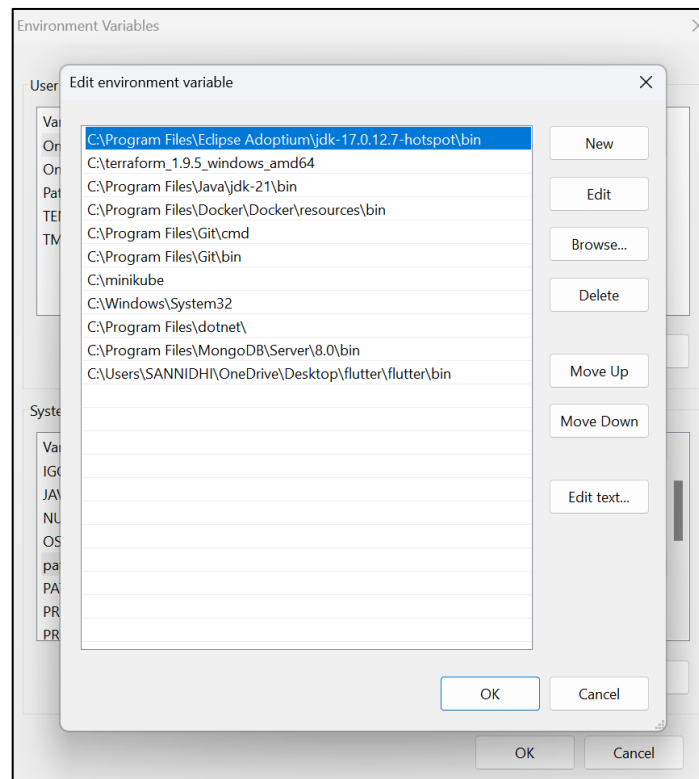


Step 3: For Windows, download the stable release (a .zip file).**Step 4:** Extract the ZIP file to a folder (e.g., C:\flutter).

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.**

```

Microsoft Windows [Version 10.0.22631.4751]
(c) Microsoft Corporation. All rights reserved.

C:\Users\SANNIDHI>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.

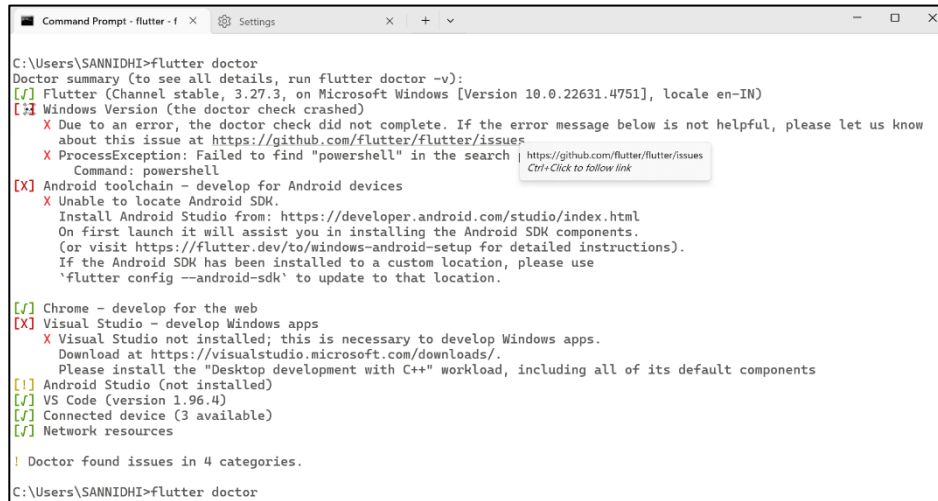
Usage: flutter <command> [arguments]

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:

```

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



```
C:\Users\SANNIDHI>flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 3.27.3, on Microsoft Windows [Version 10.0.22631.4751], 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
       Command: powershell
       https://github.com/flutter/flutter/issues
       Ctrl+Click to follow link
[✗] 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
     X Visual Studio not installed; this is necessary to develop Windows apps.
       Download at https://visualstudio.microsoft.com/downloads/.
       Please install the "Desktop development with C++" workload, including all of its default components
[!] Android Studio (not installed)
[✓] VS Code (version 1.96.4)
[✓] Connected device (3 available)
[✓] Network resources

! Doctor found issues in 4 categories.

C:\Users\SANNIDHI>flutter doctor
```

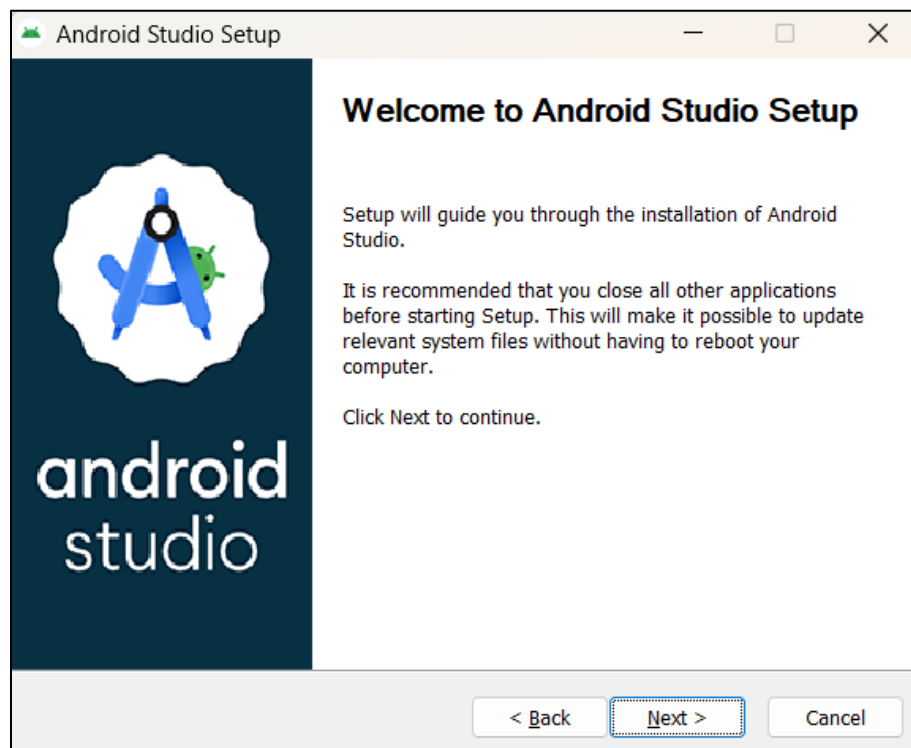
Android SDK installation:

Step 1: Go to Android Studio and download the installer.

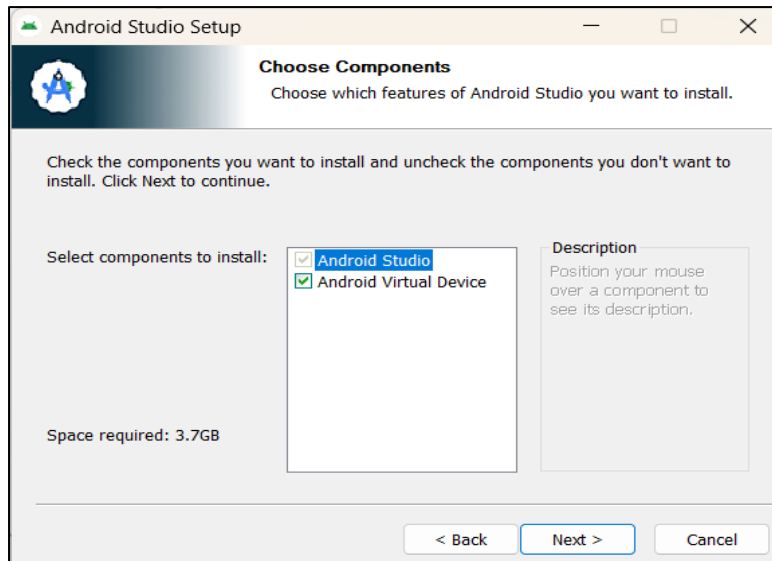
Download the latest version of Android Studio. For more information, see the [Android Studio release notes](#).

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

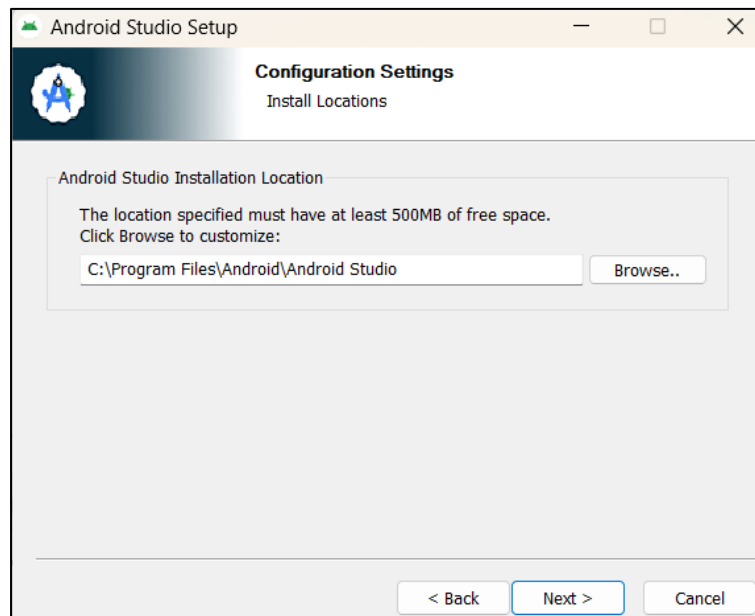
Step 2: When the download is complete, open the .exe file and run it. You will get the following dialog box



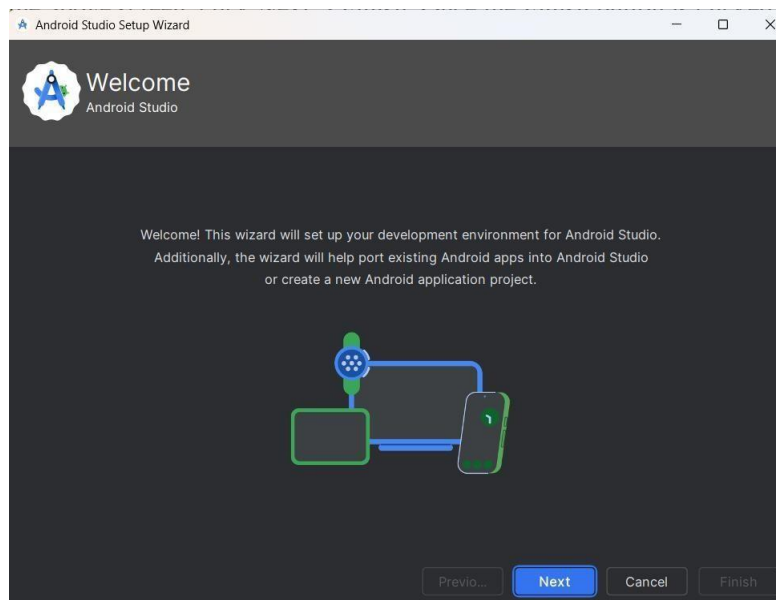
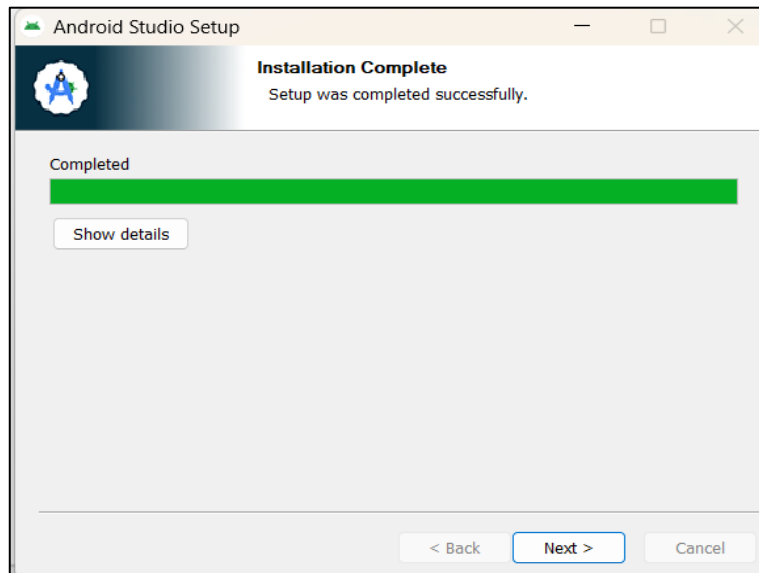
Step 3: Select all the Checkboxes and Click on 'Next' Button.



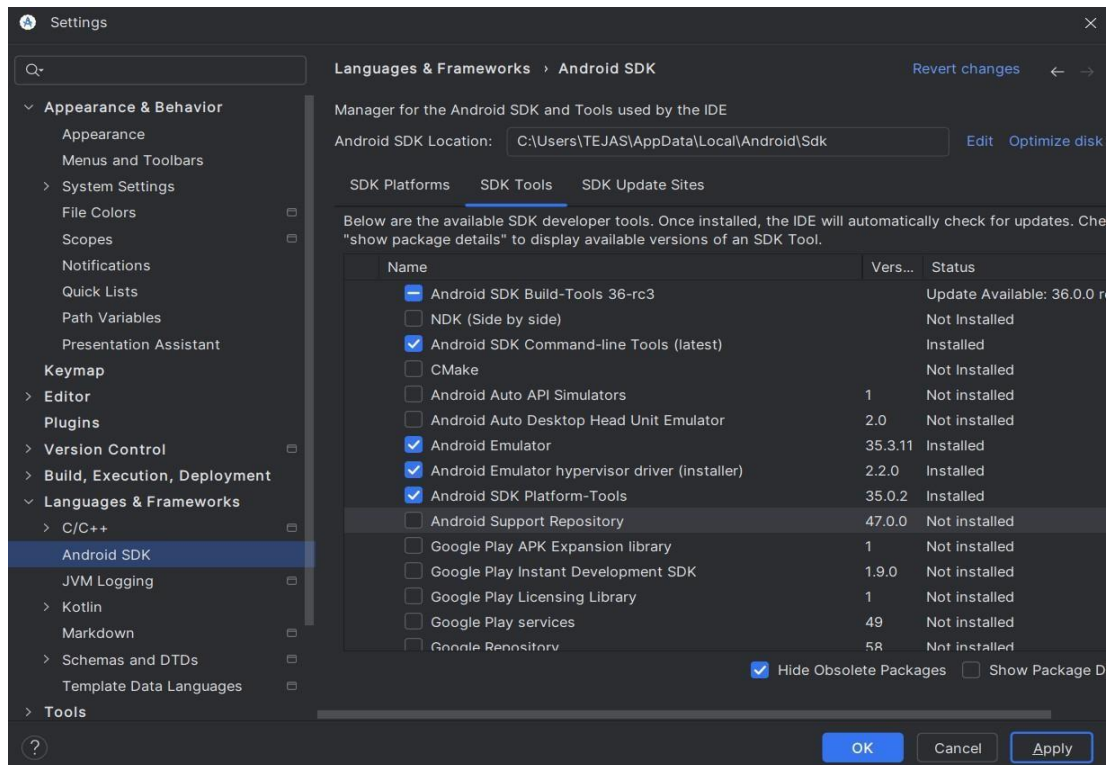
Step 4: Change the destination as per your convenience and click on 'Next' Button.

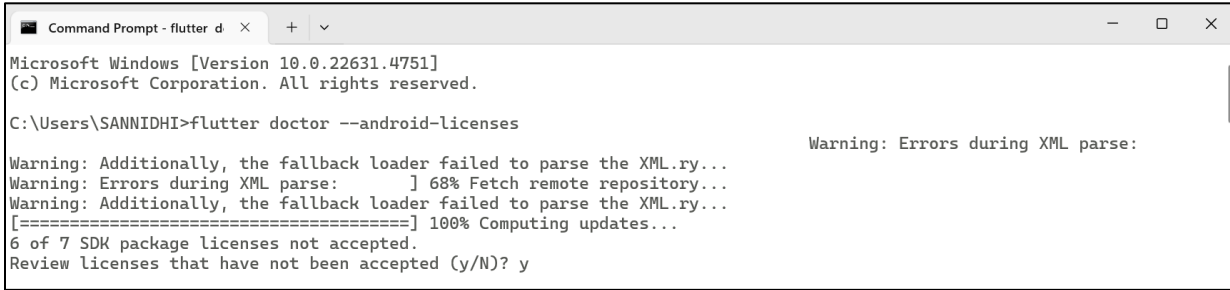


Step 5: Follow the steps of the installation wizard. Once the installation wizard completes, you will get the following screen.



Step 6: Go to Preferences > Appearance & Behavior > System Settings > Android SDK. Select the SDK Tools tab and check Android SDK Command-line Tools and Install it.

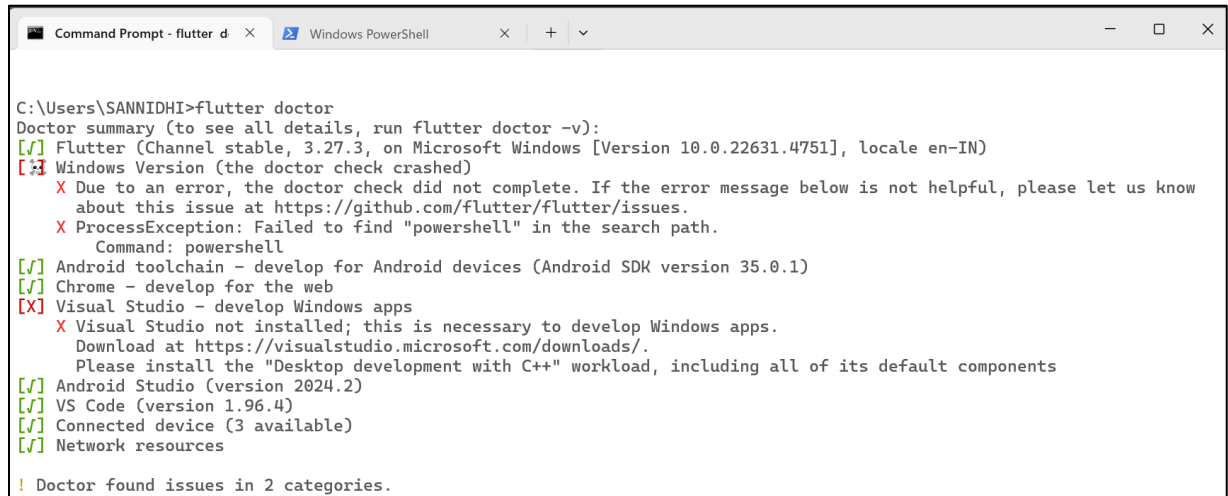


Step 9: Open a terminal and run the following command

```
Microsoft Windows [Version 10.0.22631.4751]
(c) Microsoft Corporation. All rights reserved.

C:\Users\SANNIDHI>flutter doctor --android-licenses

Warning: Errors during XML parse:
Warning: Additionally, the fallback loader failed to parse the XML.ry...
Warning: Errors during XML parse:      ] 68% Fetch remote repository...
Warning: Additionally, the fallback loader failed to parse the XML.ry...
[=====] 100% Computing updates...
6 of 7 SDK package licenses not accepted.
Review licenses that have not been accepted (y/N)? y
```

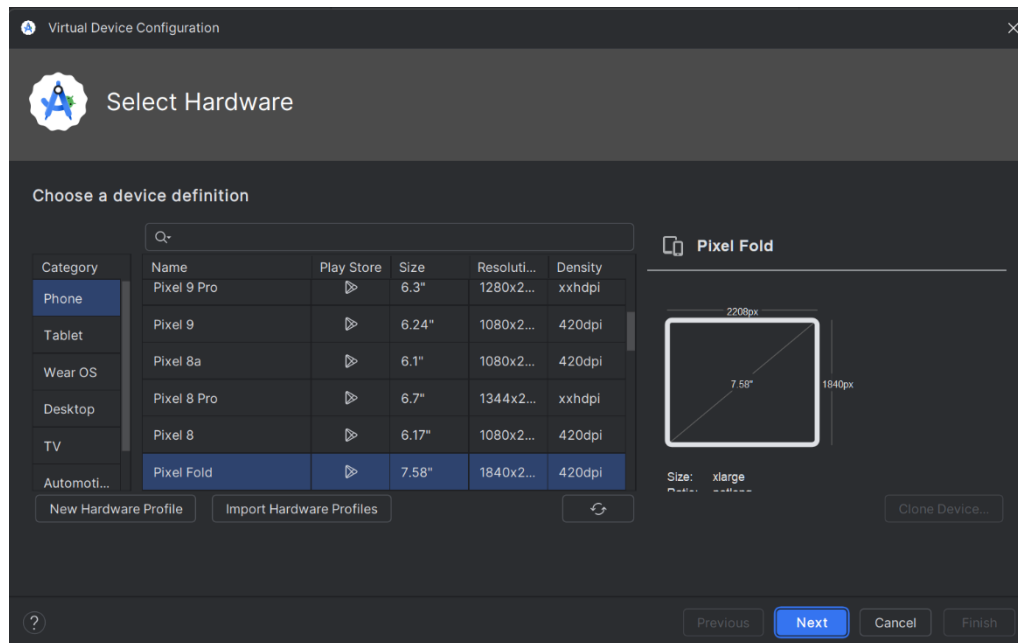


```
C:\Users\SANNIDHI>flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 3.27.3, on Microsoft Windows [Version 10.0.22631.4751], locale en-IN)
[✗] Windows Version (the doctor check crashed)
     X Due to an error, the doctor check did not complete. 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 (Android SDK version 35.0.1)
[✓] Chrome - develop for the web
[✗] Visual Studio - develop Windows apps
     X Visual Studio not installed; this is necessary to develop Windows apps.
       Download at https://visualstudio.microsoft.com/downloads/.
       Please install the "Desktop development with C++" workload, including all of its default components
[✓] Android Studio (version 2024.2)
[✓] VS Code (version 1.96.4)
[✓] Connected device (3 available)
[✓] Network resources

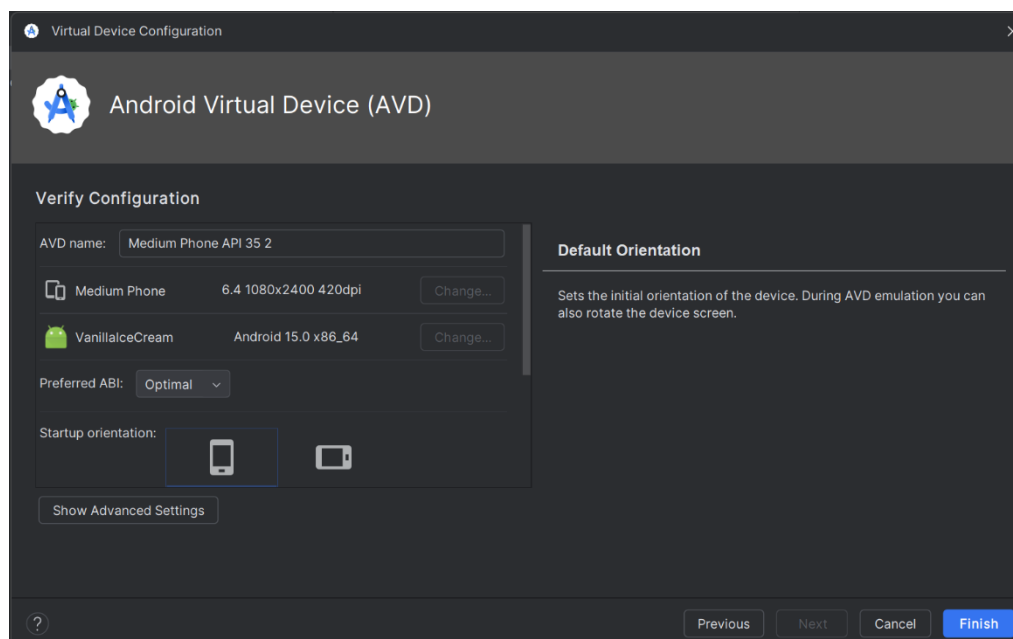
! Doctor found issues in 2 categories.
```

Setting up Android Emulator

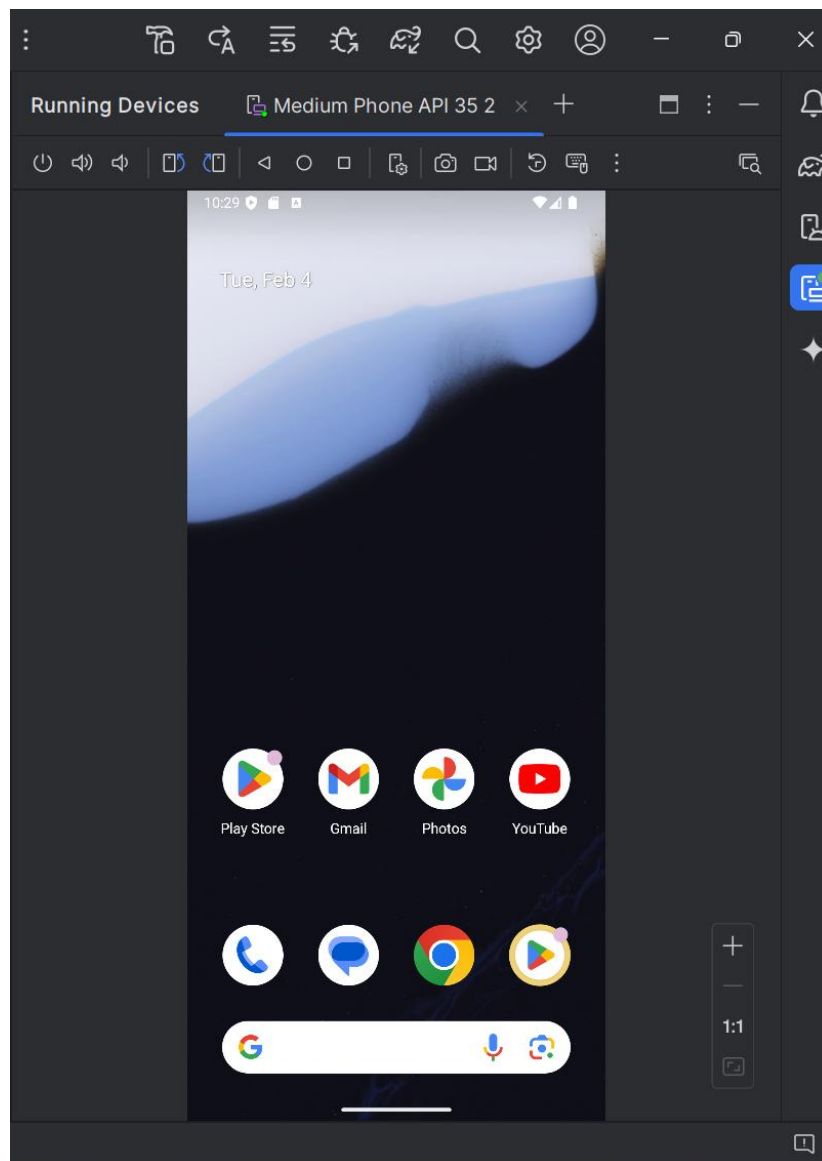
Step 1: Next, you need to set up an Android emulator. It is responsible for running and testing the Flutter application



Step 2: Open Android Studio and go to Tools > AVD Manager. Create a new virtual device.



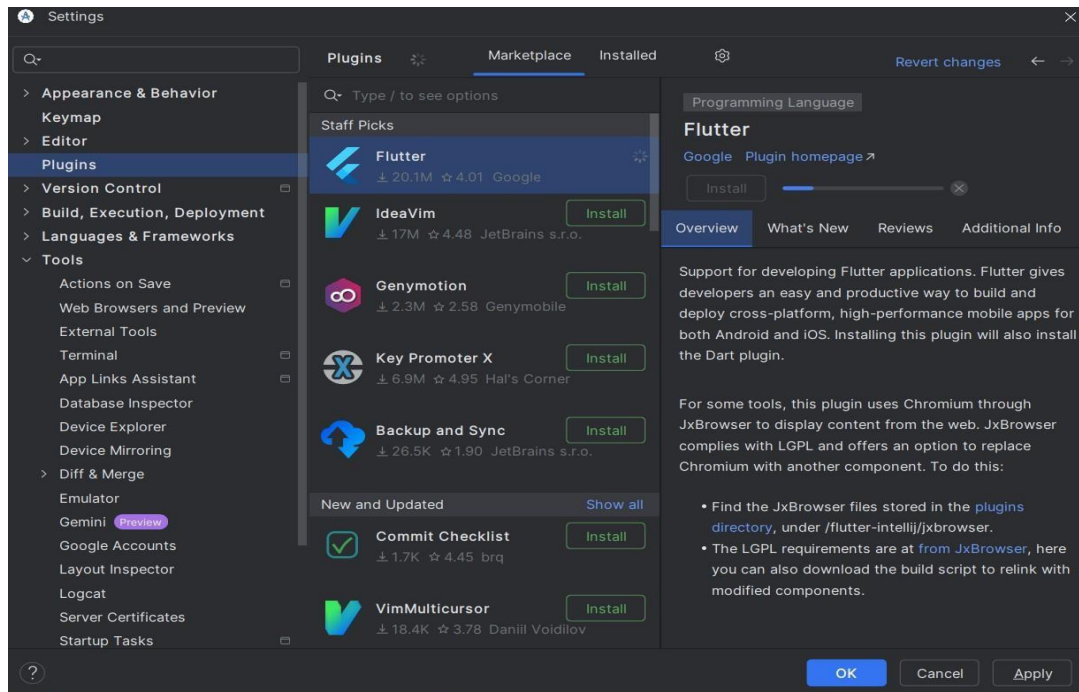
Step 3: Click on the icon pointed into the red color rectangle. The Android emulator displayed as below screen



Plugins Installation

Install Flutter and Dart plugin for building Flutter application in Android Studio.

Open the Android Studio and then go to File->Settings->Plugins. Now, search the Flutter plugin and click install. Restart the Android Studio.



First Flutter App:

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

Code:

```
import 'package:flutter/material.dart';

void main() {
  runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({super.key});

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter Demo',
      theme: ThemeData(
        colorScheme: ColorScheme.fromSeed(seedColor: Colors.deepOrange),
        useMaterial3: true,
      ),
      home: const MyHomePage(title: 'Flutter App'),
    );
  }
}

class MyHomePage extends StatefulWidget {
  const MyHomePage({super.key, required this.title});

  final String title;

  @override
  State<MyHomePage> createState() => _MyHomePageState();
}

class _MyHomePageState extends State<MyHomePage> {
  int _counter = 0; // Added a counter variable

  void _incrementCounter() {
    setState(() {
      _counter++; // Increment the counter when button is pressed
    });
  }

  @override
  Widget build(BuildContext context) {
```

```
return Scaffold(  
  appBar: AppBar(  
    backgroundColor: Theme.of(context).colorScheme.inversePrimary,  
    title: Text(widget.title),  
  ),  
  body: Center(  
    child: Column(  
      mainAxisAlignment: MainAxisAlignment.center,  
      children: <Widget>[  
        const Text(  
          'Hello! I am Sannidhi',  
          style: TextStyle(fontSize: 16.0, fontWeight: FontWeight.bold),  
        ),  
        Text(  
          'Roll No.: $_counter', // Display counter value  
          style: const TextStyle(fontSize: 18.0),  
        ),  
      ],  
    ),  
  ),  
  floatingActionButton: FloatingActionButton(  
    onPressed: _incrementCounter, // Calling the function when button is pressed  
    tooltip: 'Increment',  
    child: const Icon(Icons.add),  
  ),  
);  
}
```

