

MPL Experiment 1

Name: Prathamesh Palve

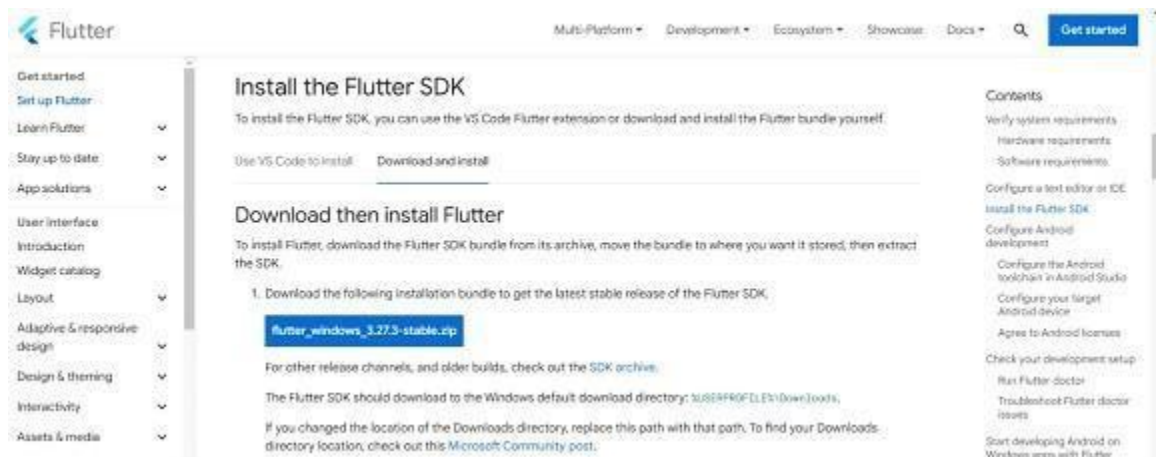
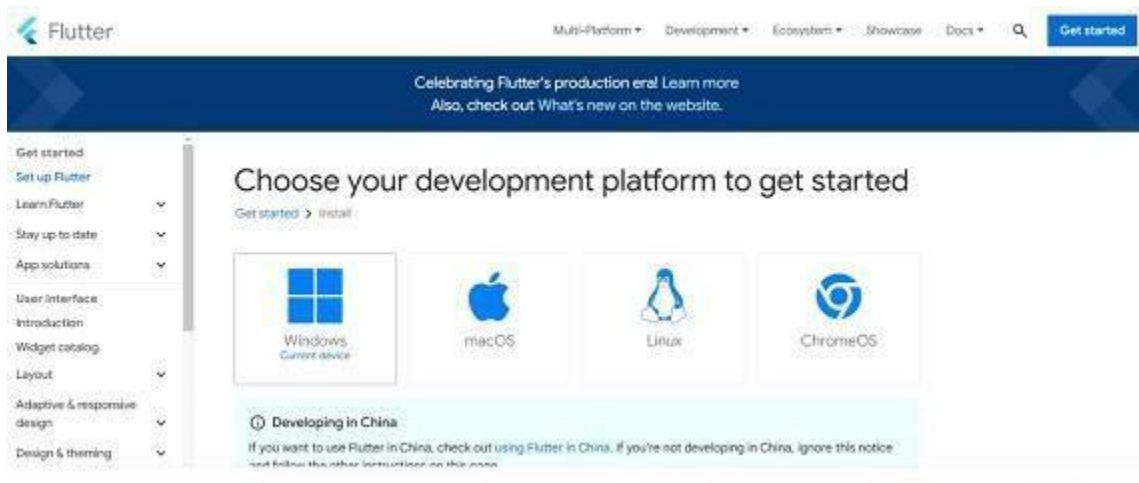
Class: D15A

Roll no:31

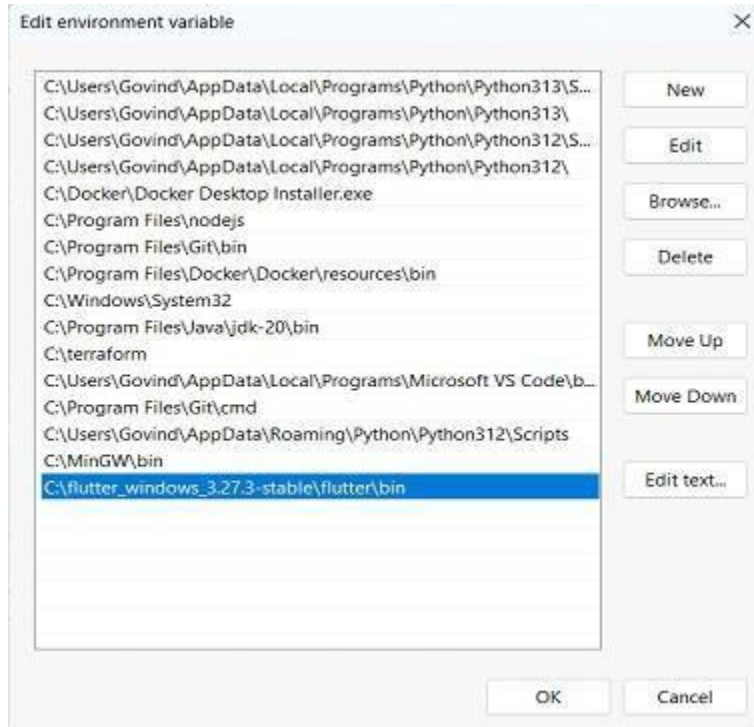
Aim: Installation and Configuration of Flutter Environment.

Step 1: Install Flutter

- Download Flutter SDK from the official Flutter website (<https://flutter.dev/>).
- Download the Flutter SDK for your operating system (Windows, macOS, or Linux).



- Extract the downloaded zip file to a preferred location on your computer (e.g., C:\src\flutter for Windows).
- Add Flutter to the PATH
- Locate the flutter\bin directory in the extracted Flutter folder.
- Add this directory to your system's PATH environment variable.



Verify the Installation

- Open a terminal or command prompt.
- Run the command: **flutter** and **flutter doctor**.

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

C:\Users\User>flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 3.27.1, 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 34.0.0)
[✓] 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 2023.3)
[✓] VS Code (version 1.96.4)
[✓] Connected device (4 available)
[✓] Network resources

! Doctor found issues in 2 categories.

C:\Users\User>
```

```
Command Prompt - flutter x + v

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'.

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
```

Step 2: Install Android Studio

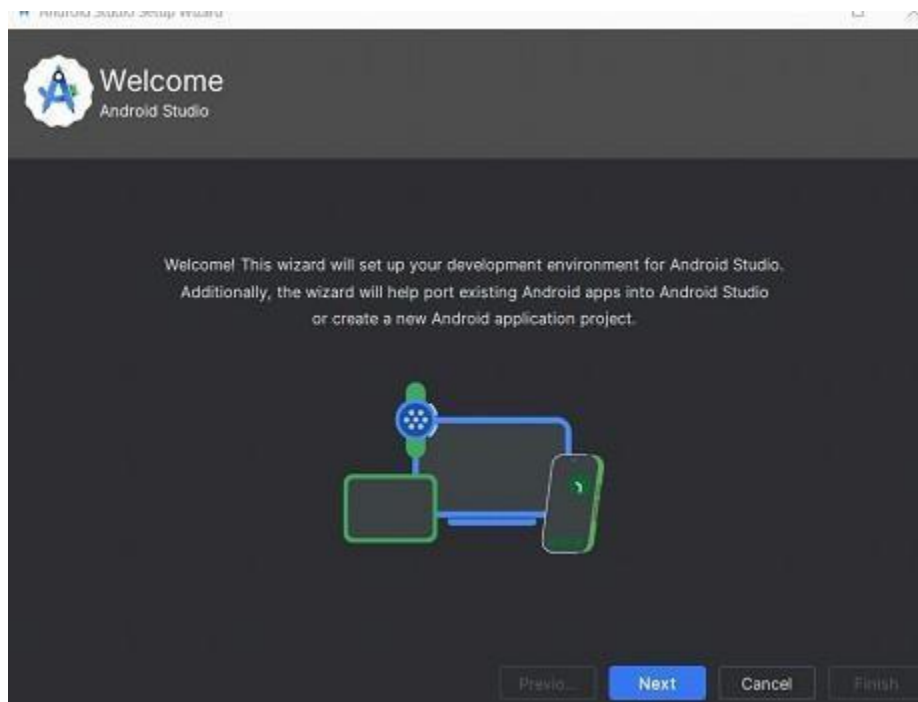
- Download Android Studio
- Go to the Android Studio website. (<https://developer.android.com/studio>)
- Download the installer for your operating system (Windows, macOS, or Linux)).



- Run the installer and follow the setup wizard.
- Choose the standard installation option.

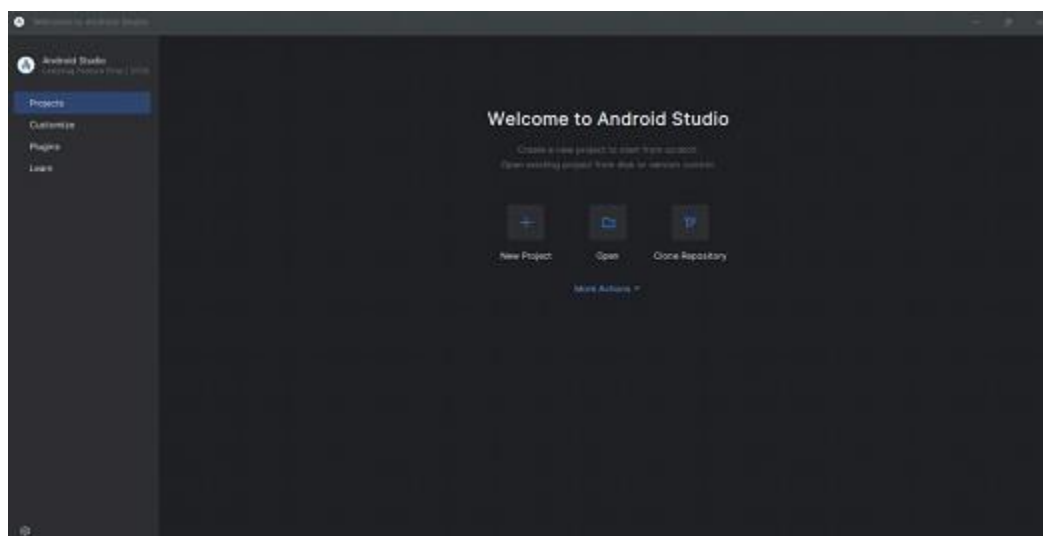
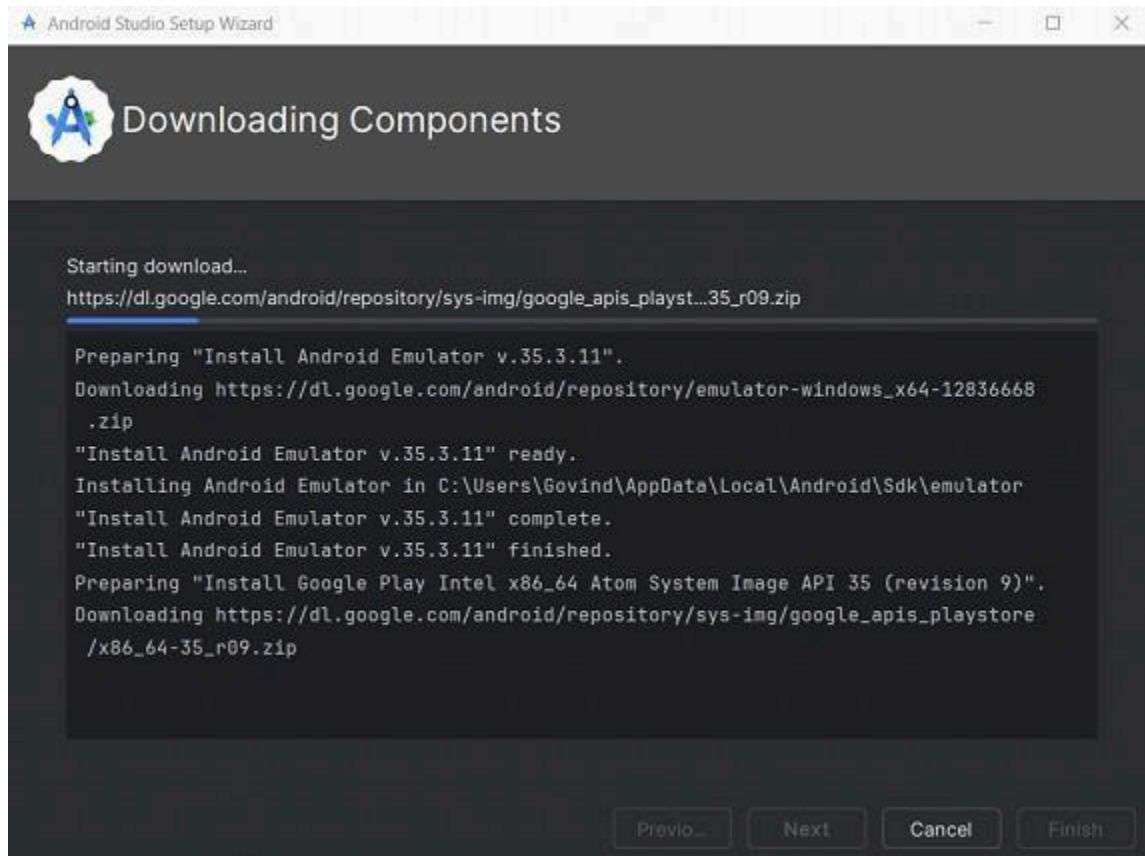


- Install Android SDK Tools
- Open Android Studio.



- Go to Settings/Preferences > Appearance & Behavior > System Settings > Android SDK.

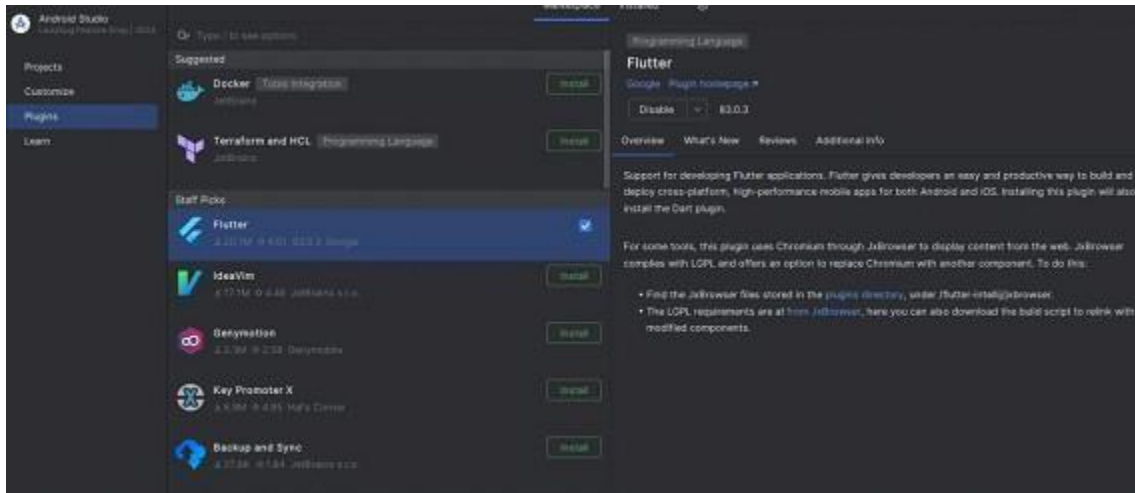
- Select the latest Android API level.
- Ensure "Android SDK Platform" and "Android Virtual Device (AVD)" are selected.
- Click "Apply" and wait for the components to install.



Step 3: Connect Flutter with Android Studio

- Install Flutter and Dart Plugins
- Open Android Studio. Go to File > Settings (Windows/Linux) > Plugins.

- Search for "Flutter" and click "Install." Dart will be installed automatically.
- Restart Android Studio.



Step 4: Create a New Flutter Project

- Click on New Flutter Project.
- Enter project details and select the Flutter SDK path.
- Click "Finish" to create the project.
- Connect the USB to the device and run the flutter application.

NOTE: In your mobile device, make sure the USB debugging is turned on.

Code:

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

  @override
  Widget build(BuildContext context) {
    final User? user = FirebaseAuth.instance.currentUser;

    // If user is not logged in, redirect to login page
    if (user == null) {
      Future.delayed(Duration.zero, () {
        Navigator.pushReplacement(
          context,
          MaterialPageRoute(builder: (context) => const LoginPage()),
        );
      }); // Future.delayed
      return const Scaffold(
        body: Center(child: CircularProgressIndicator()), // Loading spinner
      ); // Scaffold
    }

    return Scaffold(
      appBar: AppBar(
        title: const Text("Welcome"),
        actions: [
          IconButton(
            icon: const Icon(Icons.logout),
            onPressed: () async {
              await FirebaseAuth.instance.signOut();
              Navigator.pushReplacement(
                context,
                MaterialPageRoute(builder: (context) => const LoginPage()),
              );
            }, // IconButton
          ),
        ], // AppBar
      body: const Center(
        child: Text(
          "Hi im prathamesh !",
          style: TextStyle(fontSize: 24, fontWeight: FontWeight.bold),
        ), // Text
      ), // Center
    ); // Scaffold
  }
}
```

Welcome

Hi im prathamesh !

Conclusion: Hello message , is successfully run on the flutter app.