PRANAV RAIKAR
D15A 47
Experiment 6

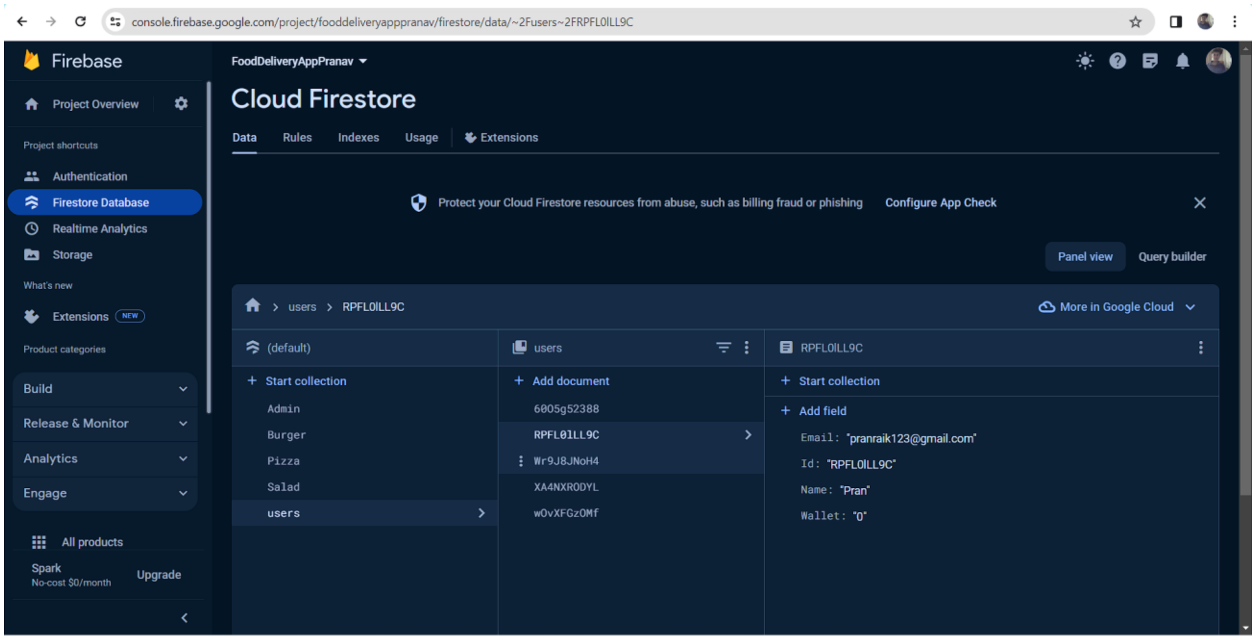
AIM: To Connect Flutter UI with fireBase database

Theory:
Connecting a Flutter app to Firebase involves several steps, including setting up a Firebase project, configuring the Flutter app to use Firebase, and integrating Firebase SDKs into your Flutter code.
1. Firebase Setup: First, you need to create a Firebase project in the Firebase console (https://console.firebase.google.com/). This project will host your app's data and services.
2. Add Firebase to Flutter App: You'll need to add the Firebase SDK to your Flutter app. This involves adding Firebase configuration files to your project and updating your Flutter app's dependencies to include Firebase SDKs.
3. Initialize Firebase: In your Flutter app, you'll initialize Firebase by calling Firebase.initializeApp(). This should typically be done at the beginning of your app's lifecycle, such as in the main() function or in the initState() method of your main widget.
4. Use Firebase Services: Once Firebase is initialized, you can use various Firebase services in your Flutter app, such as Authentication, Firestore, Realtime Database, Cloud Storage, Cloud Messaging, and more.

Main.dart:
```
import 'package:flutter/material.dart';
import 'package:flutter_stripe/flutter_stripe.dart';
import 'package:food_panda/admin/admin_login.dart';
import 'package:food_panda/pages/bottomnav.dart';
import 'package:food_panda/pages/onboard.dart';
import 'package:firebase_core/firebase_core.dart';
import 'package:food_panda/widget/app_constant.dart';
import 'firebase_options.dart';

void main() async {
  WidgetsFlutterBinding.ensureInitialized();
  Stripe.publishableKey = publishableKey;
  await Firebase.initializeApp(
    options: FirebaseOptions(
      apiKey: 'AIzaSyBftcoBEue-M8hQfcB-M-7ZAbhm_5PVmck',
      appId: '1:726847533270:android:f8faab0dba68351c9b1977',
      messagingSenderId: '726847533270',
      projectId: 'fooddeliveryapppranav',
      storageBucket: 'fooddeliveryapppranav.appspot.com',
    ),
  );
  runApp(const MyApp());
}

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

  // This widget is the root of your application.
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'Flutter Demo',
      theme: ThemeData(
        // This is the theme of your application.
        //
        // TRY THIS: Try running your application with "flutter run". You'll see
        // the application has a purple toolbar. Then, without quitting the app,
        // try changing the seedColor in the colorScheme below to Colors.green
        // and then invoke "hot reload" (save your changes or press the "hot
        // reload" button in a Flutter-supported IDE, or press "r" if you used
        // the command line to start the app).
        //
        // Notice that the counter didn't reset back to zero; the application
        // state is not lost during the reload. To reset the state, use hot
        // restart instead.
        //
        // This works for code too, not just values: Most code changes can be
        // tested with just a hot reload.
        colorScheme: ColorScheme.fromSeed(seedColor: Colors.deepPurple),
        useMaterial3: true,
      ),
      home: Onboard(),
      // home: AdminLogin(),

      // home: BottomNav(),
    );
  }
}

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

  // This widget is the home page of your application. It is stateful, meaning
  // that it has a State object (defined below) that contains fields that affect
  // how it looks.

  // This class is the configuration for the state. It holds the values (in this
  // case the title) provided by the parent (in this case the App widget) and
  // used by the build method of the State. Fields in a Widget subclass are
  // always marked "final".

  final String title;

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

class _MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  void _incrementCounter() {
    setState(() {
      // This call to setState tells the Flutter framework that something has
      // changed in this State, which causes it to rerun the build method below
      // so that the display can reflect the updated values. If we changed
      // _counter without calling setState(), then the build method would not be
      // called again, and so nothing would appear to happen.
      _counter++;
    });
  }

  @override
  Widget build(BuildContext context) {
    // This method is rerun every time setState is called, for instance as done
    // by the _incrementCounter method above.
    //
    // The Flutter framework has been optimized to make rerunning build methods
    // fast, so that you can just rebuild anything that needs updating rather
    // than having to individually change instances of widgets.
    return Scaffold(
      appBar: AppBar(
        // TRY THIS: Try changing the color here to a specific color (to
        // Colors.amber, perhaps?) and trigger a hot reload to see the AppBar
        // change color while the other colors stay the same.
        backgroundColor: Theme.of(context).colorScheme.inversePrimary,
        // Here we take the value from the MyHomePage object that was created by
        // the App.build method, and use it to set our appbar title.
        title: Text(widget.title),
      ),
      body: Center(
        // Center is a layout widget. It takes a single child and positions it
        // 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(
              'You have pushed the button this many times:',
            ),
            Text(
              '$_counter',
              style: Theme.of(context).textTheme.headlineMedium,
            ),
          ],
        ),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: _incrementCounter,
        tooltip: 'Increment',
        child: const Icon(Icons.add),
      ), // This trailing comma makes auto-formatting nicer for build methods.
    );
  }
}
```

Database.dart:

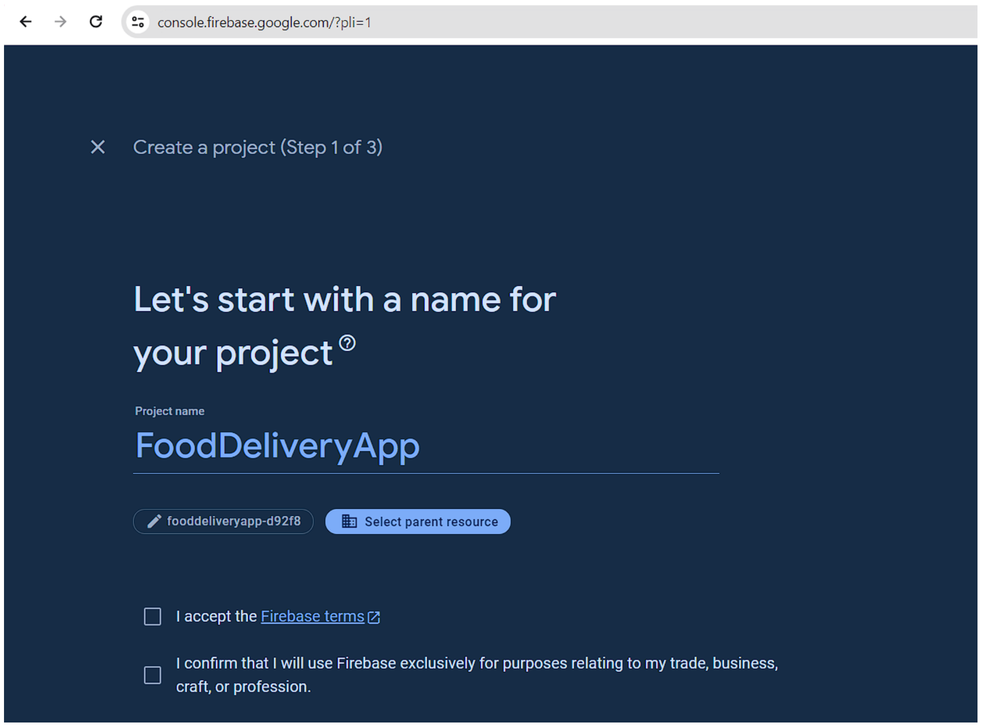
```
import 'package:cloud_firestore/cloud_firestore.dart';

class DatabaseMethods {
  Future addUserDetail(Map<String, dynamic> userInfoMap, String id) async {
    return await FirebaseFirestore.instance
        .collection('users')
        .doc(id)
        .set(userInfoMap);
  }

  UpdateUserwallet(String id, String amount) async {
    return await FirebaseFirestore.instance
        .collection("users")
        .doc(id)
        .update({"Wallet": amount});
  }

  Future addFoodItem(Map<String, dynamic> userInfoMap, String name) async {
    return await FirebaseFirestore.instance.collection(name).add(userInfoMap);
  }

  Future<Stream<QuerySnapshot>> getFoodItem(String name) async {
    return await FirebaseFirestore.instance.collection(name).snapshots();
  }
}
```



Admin
Burger
Pizza
Salad
users

6005g52388
RPFL0lLL9C
Wr9J8JNoH4
XA4NXRODYL
wOvXFGzOMf

```
Email: "pranraik123@gmail.com"
Id: "RPFL0lLL9C"
Name: "Pran"
Wallet: "0"
```



console.firebase.google.com/?pli=1

Create a project (Step 1 of 3)

Let's start with a name for your project

Project name

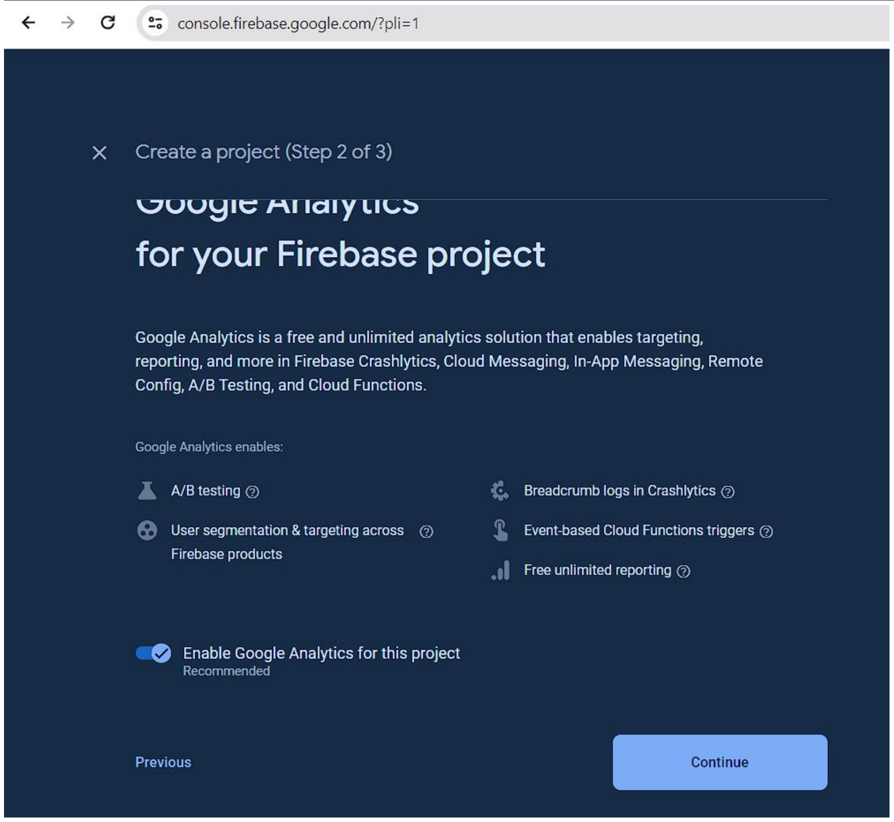
FoodDeliveryApp

fooddeliveryapp-d92f8

Select parent resource

☐ I accept the Firebase terms

☐ I confirm that I will use Firebase exclusively for purposes relating to my trade, business, craft, or profession.



console.firebase.google.com/?pli=1

Create a project (Step 2 of 3)

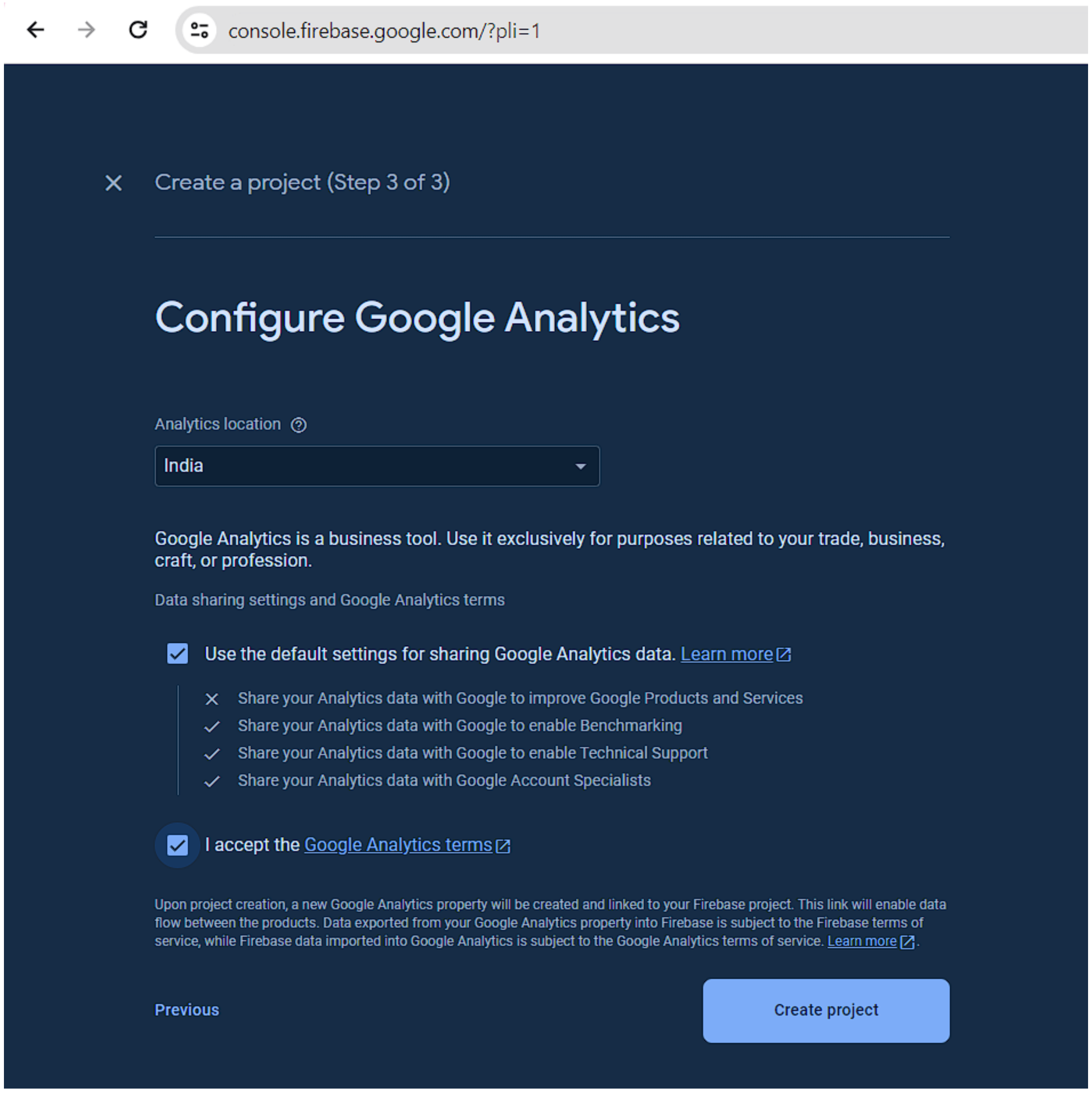
Google Analytics for your Firebase project

Google Analytics is a free and unlimited analytics solution that enables targeting, reporting, and more in Firebase Crashlytics, Cloud Messaging, In-App Messaging, Remote Config, A/B Testing, and Cloud Functions.

Google Analytics enables:

- A/B testing
- User segmentation & targeting across Firebase products
- Breadcrumb logs in Crashlytics
- Event-based Cloud Functions triggers
- Free unlimited reporting

✓ Enable Google Analytics for this project
Recommended



console.firebase.google.com/?pli=1

Create a project (Step 3 of 3)

Configure Google Analytics

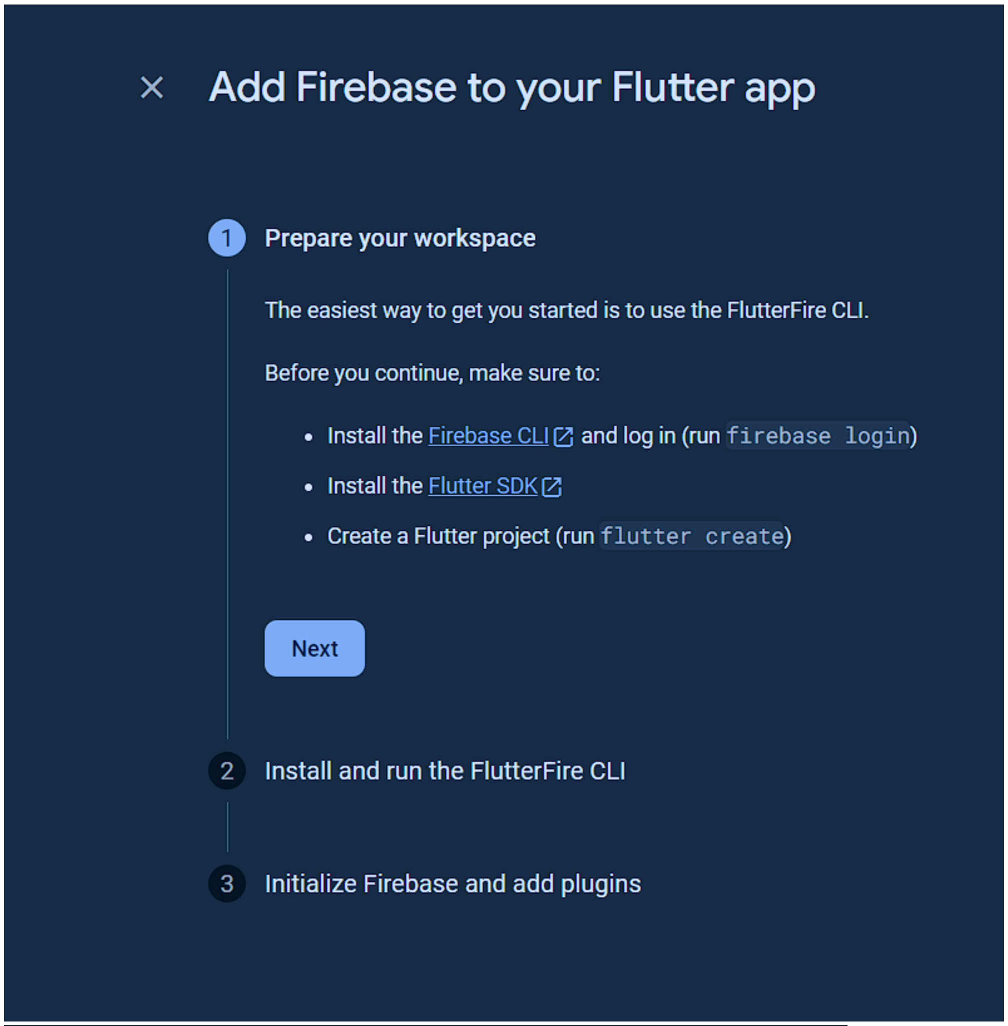
Analytics location: India

Google Analytics is a business tool. Use it exclusively for purposes related to your trade, business, craft, or profession.

Data sharing settings and Google Analytics terms

- [✓] Use the default settings for sharing Google Analytics data. Learn more
  - ✗ Share your Analytics data with Google to improve Google Products and Services
  - ✓ Share your Analytics data with Google to enable Benchmarking
  - ✓ Share your Analytics data with Google to enable Technical Support
  - ✓ Share your Analytics data with Google Account Specialists
- [✓] I accept the Google Analytics terms

Upon project creation, a new Google Analytics property will be created and linked to your Firebase project. This link will enable data flow between the products. Data exported from your Google Analytics property into Firebase is subject to the Firebase terms of service, while Firebase data imported into Google Analytics is subject to the Google Analytics terms of service. Learn more.



Add Firebase to your Flutter app

1. **Prepare your workspace**

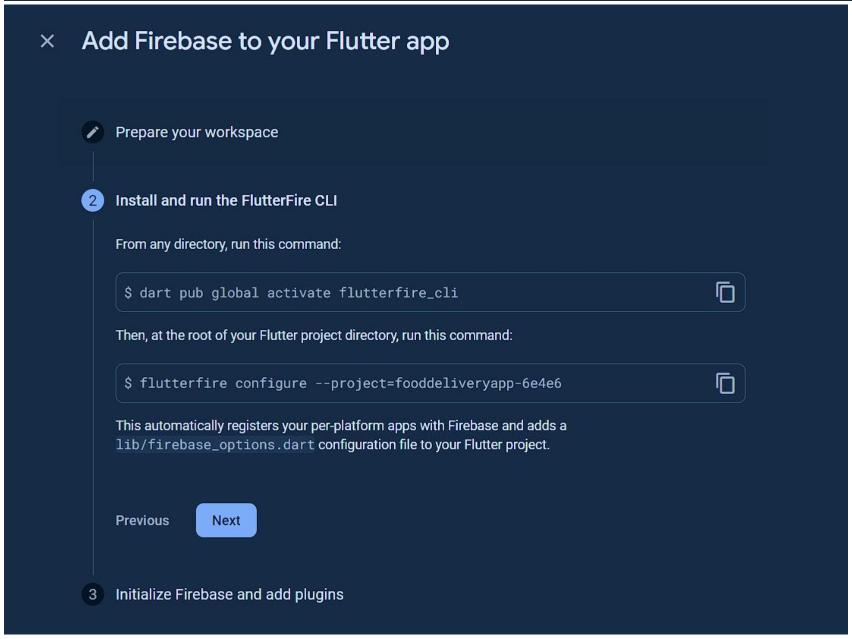
The easiest way to get you started is to use the FlutterFire CLI.

Before you continue, make sure to:

- Install the Firebase CLI and log in (run `firebase login`)
- Install the Flutter SDK
- Create a Flutter project (run `flutter create`)

2. Install and run the FlutterFire CLI

3. Initialize Firebase and add plugins



Add Firebase to your Flutter app

Prepare your workspace

2. **Install and run the FlutterFire CLI**

From any directory, run this command:

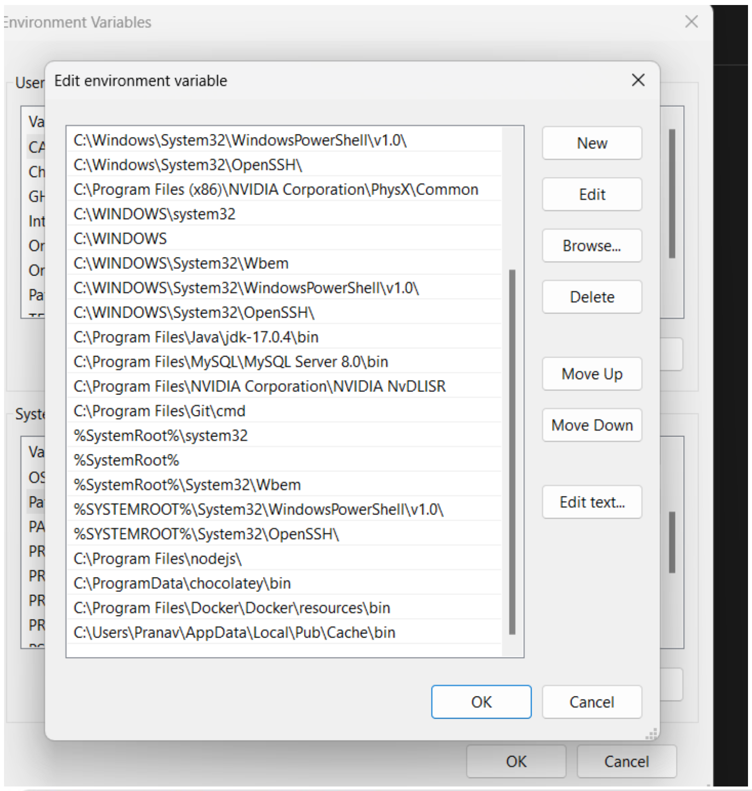
```
$ dart pub global activate flutterfire_cli
```

Then, at the root of your Flutter project directory, run this command:

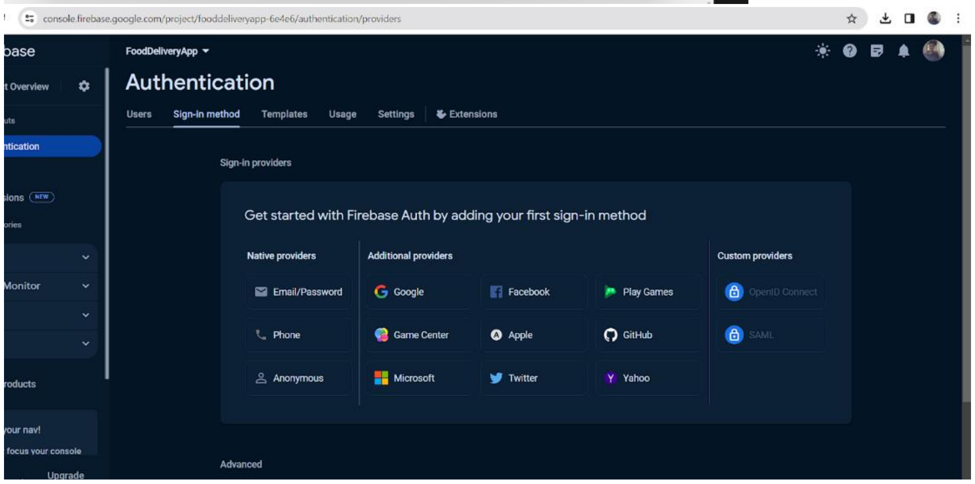
```
$ flutterfire configure --project=fooddeliveryapp-6e4e6
```

This automatically registers your per-platform apps with Firebase and adds a `lib/firebase_options.dart` configuration file to your Flutter project.

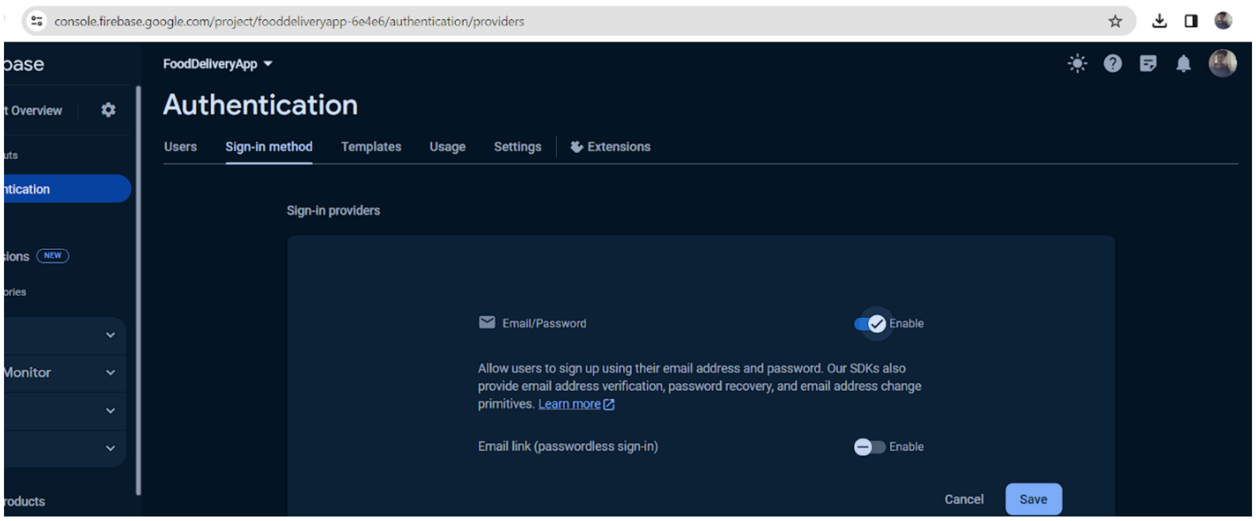
3. Initialize Firebase and add plugins



```
C:\Windows\System32\WindowsPowerShell\v1.0\
C:\Windows\System32\OpenSSH\
C:\Program Files (x86)\NVIDIA Corporation\PhysX\Common
C:\WINDOWS\system32
C:\WINDOWS
C:\WINDOWS\System32\Wbem
C:\WINDOWS\System32\WindowsPowerShell\v1.0\
C:\WINDOWS\System32\OpenSSH\
C:\Program Files\Java\jdk-17.0.4\bin
C:\Program Files\MySQL\MySQL Server 8.0\bin
C:\Program Files\NVIDIA Corporation\NVIDIA NvDLISR
C:\Program Files\Git\cmd
%SystemRoot%\system32
%SystemRoot%
%SystemRoot%\System32\Wbem
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\
%SYSTEMROOT%\System32\OpenSSH\
C:\Program Files\nodejs\
C:\ProgramData\chocolatey\bin
C:\Program Files\Docker\Docker\resources\bin
C:\Users\Pranav\AppData\Local\Pub\Cache\bin
```



Get started with Firebase Auth by adding your first sign-in method



console.firebase.google.com/project/fooddeliveryapp-6e4e6/authentication/providers

FoodDeliveryApp

Authentication

Users | Sign-in method | Templates | Usage | Settings | Extensions

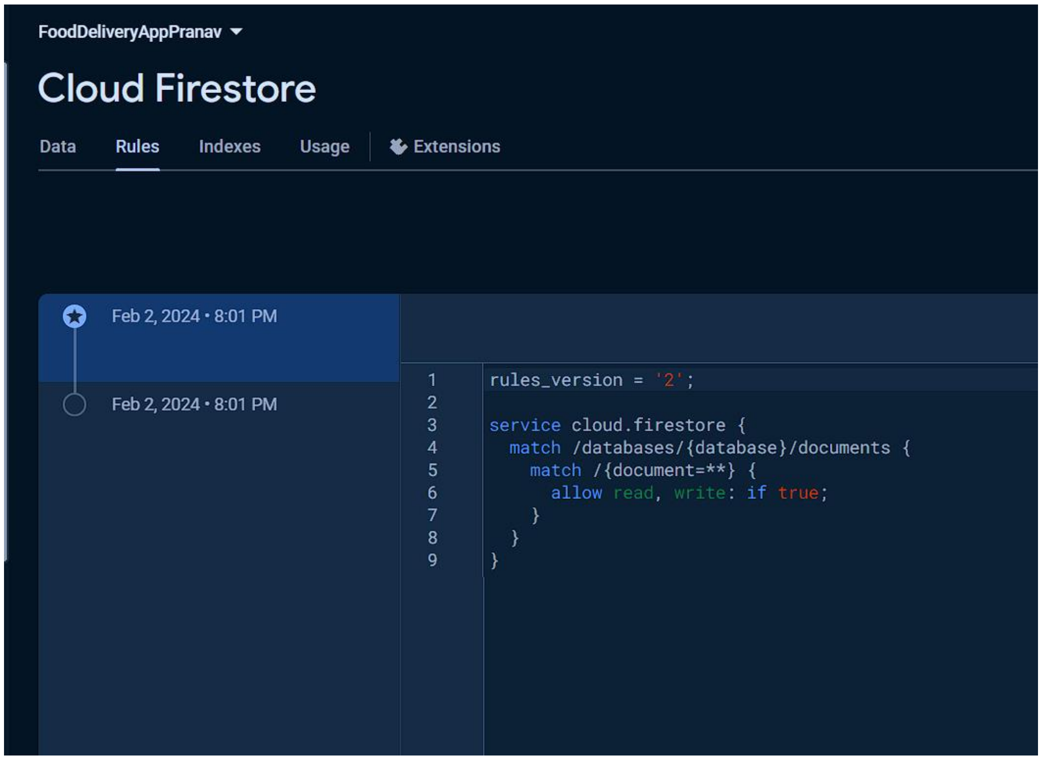
Sign-in providers

Email/Password — Enable [✓]

Allow users to sign up using their email address and password. Our SDKs also provide email address verification, password recovery, and email address change primitives. Learn more

Email link (passwordless sign-in) — Enable

Cancel | Save



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Cloud Firestore

Data | Rules | Indexes | Usage | Extensions

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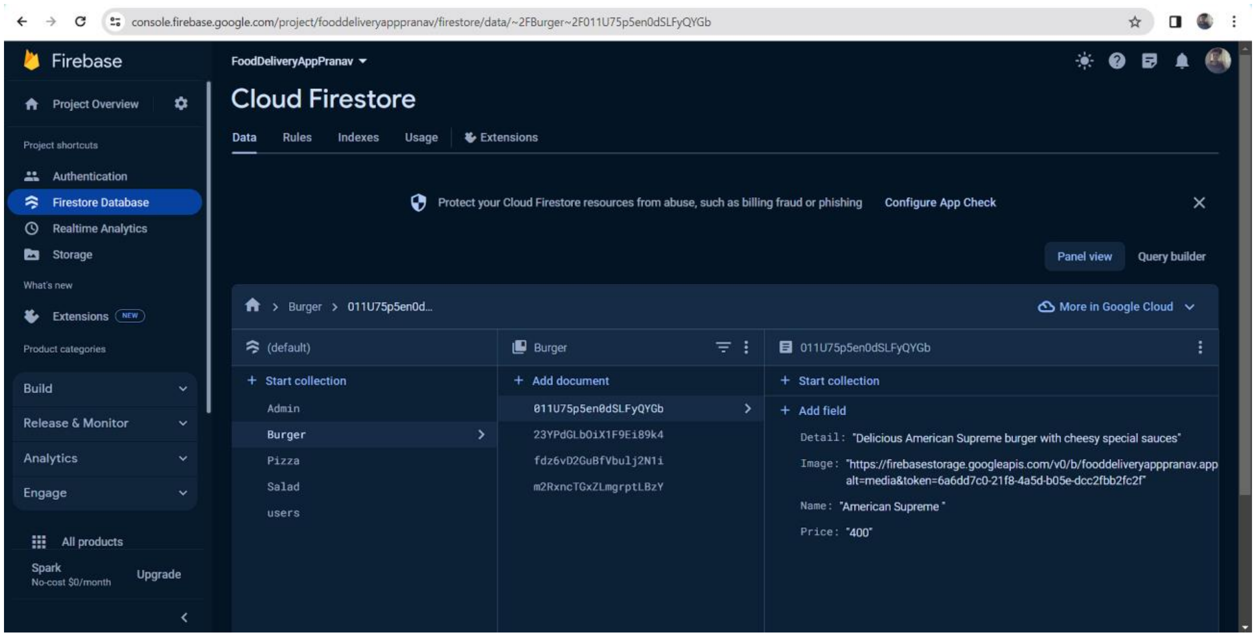
```
rules_version = '2';

service cloud.firestore {
  match /databases/{database}/documents {
    match /{document=**} {
      allow read, write: if true;
    }
  }
}
```



```
(default)      Burger                    011U75p5en0dSLFyQYGb
Admin          011U75p5en0dSLFyQYGb      Detail: "Delicious American Supreme burger with cheesy special sauces"
Burger         23YPdGLbOiX1F9Ei89k4      Image: "https://firebasestorage.googleapis.com/v0/b/fooddeliveryapppranav.app
Pizza          fdz6vD2GuBfVbulj2N1i             alt=media&token=6a6dd7c0-21f8-4a5d-b05e-dcc2fbb2fc2f"
Salad          m2RxncTGxZLmgrptLBzY      Name: "American Supreme "
users                                    Price: "400"
```

Conclusion :Thus I learnt to Connect Flutter UI with fireBase database