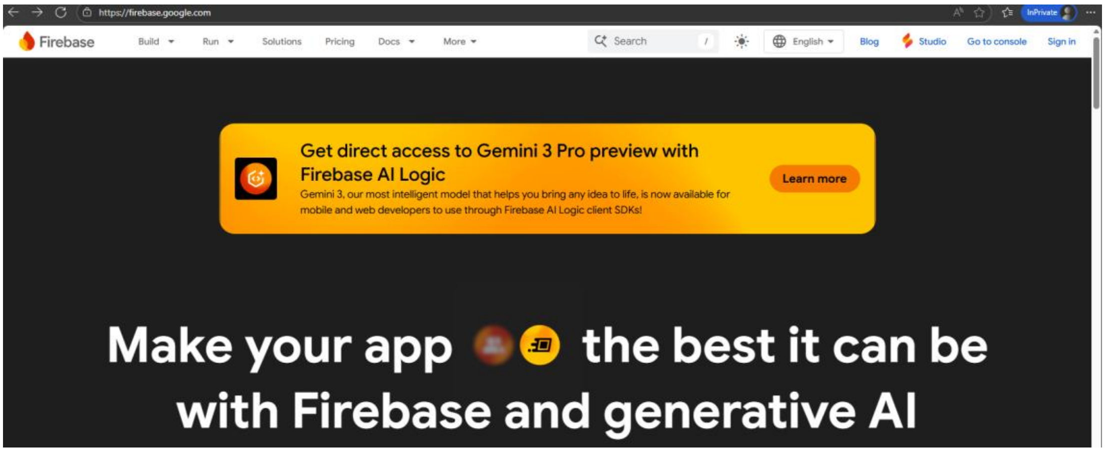
How to run this project?

1. Register Firebase Account

Open that link to create a Firebase Account https://firebase.google.com/

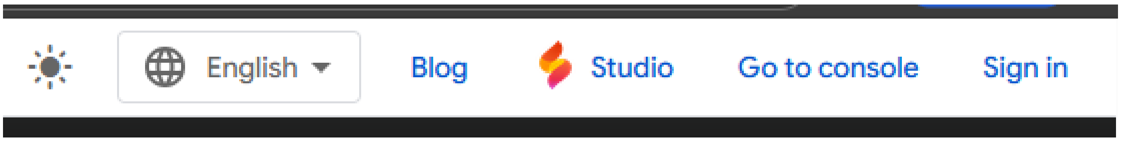


Get direct access to Gemini 3 Pro preview with Firebase AI Logic

Gemini 3, our most intelligent model that helps you bring any idea to life, is now available for mobile and web developers to use through Firebase AI Logic client SDKs!

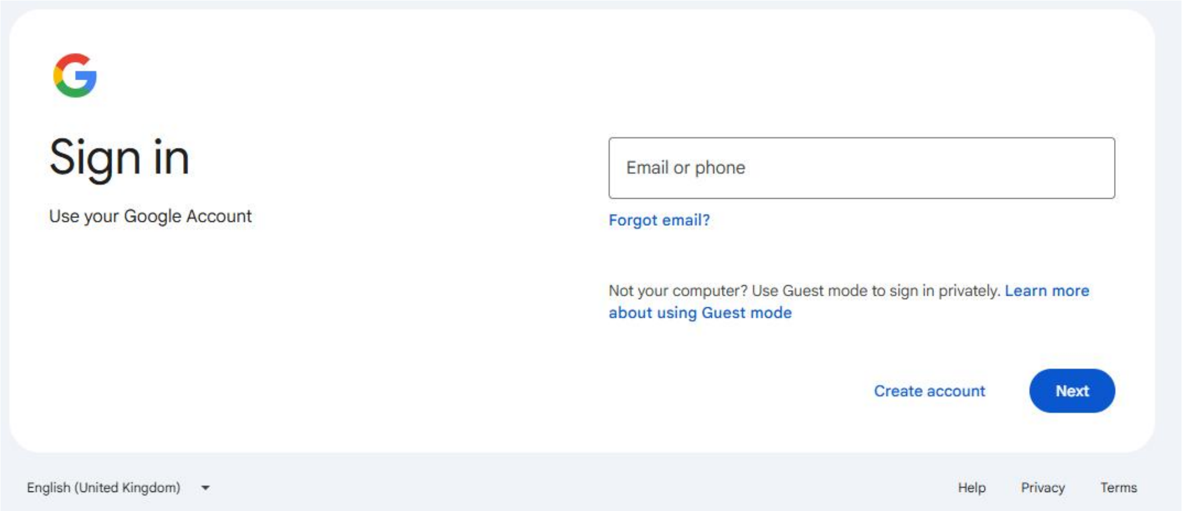
Make your app the best it can be with Firebase and generative AI

You can switch Language on the top-right corner.



Click **Sign In** with your **Google Account.**

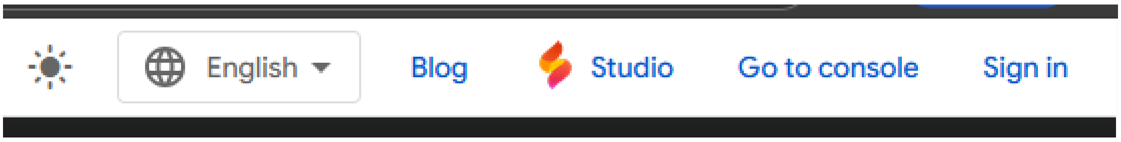
If you don't have, please sign up one **Google Account.**



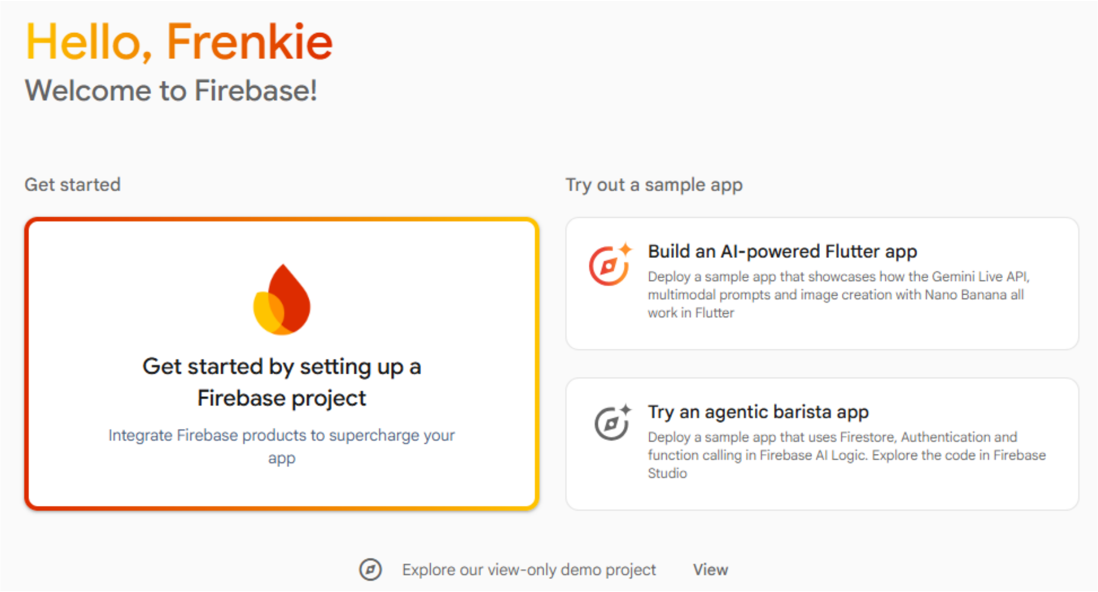
Not your computer? Use Guest mode to sign in privately. Learn more about using Guest mode

2. Create Firebase Projects

Click **“Go to Console”** on the Menu



Click **“Get started by setting up a Firebase project”** to create a Firebase Project.



Hello, Frenkie

Welcome to Firebase!

Get started

Get started by setting up a Firebase project

Integrate Firebase products to supercharge your app

Try out a sample app

Build an AI-powered Flutter app

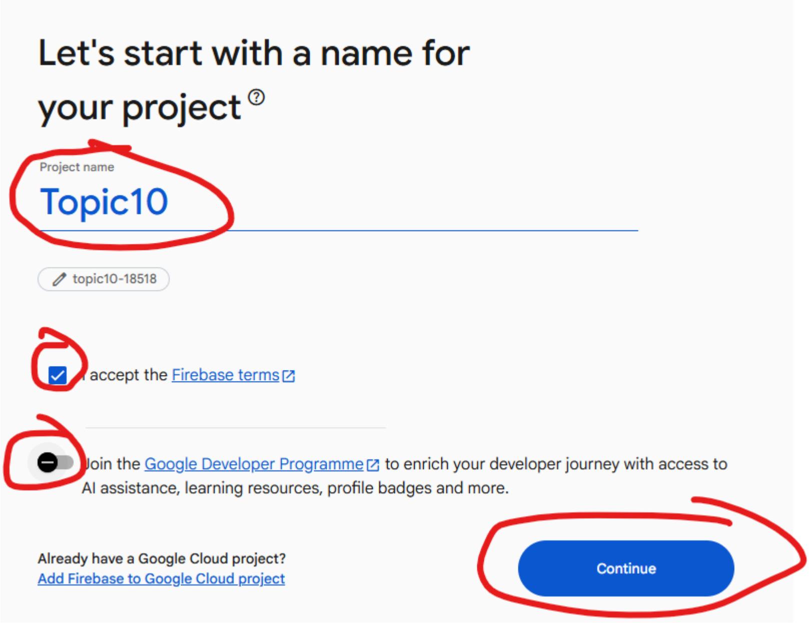
Deploy a sample app that showcases how the Gemini Live API, multimodal prompts and image creation with Nano Banana all work in Flutter

Try an agentic barista app

Deploy a sample app that uses Firestore, Authentication and function calling in Firebase AI Logic. Explore the code in Firebase Studio

Explore our view-only demo project

1– **Type your project name**



Let's start with a name for your project

Project name: Topic10

topic10-18518

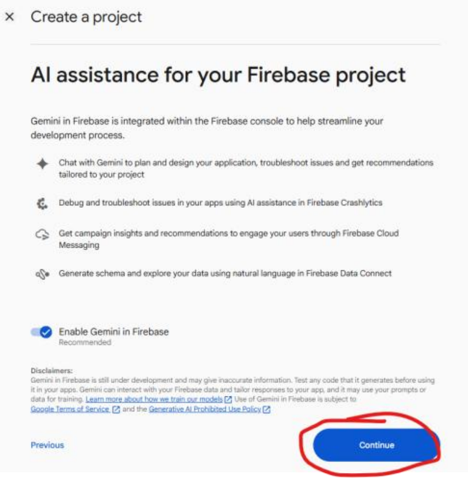
☑ I accept the Firebase terms

Join the Google Developer Programme to enrich your developer journey with access to AI assistance, learning resources, profile badges and more.

Already have a Google Cloud project?

Add Firebase to Google Cloud project

2- Continue, Continue



Create a project

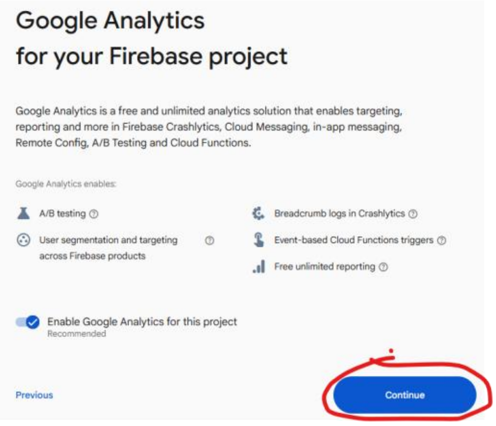
AI assistance for your Firebase project

Gemini in Firebase is integrated within the Firebase console to help streamline your development process.

- Chat with Gemini to plan and design your application, troubleshoot issues and get recommendations tailored to your project
- Debug and troubleshoot issues in your apps using AI assistance in Firebase Crashlytics
- Get campaign insights and recommendations to engage your users through Firebase Cloud Messaging
- Generate schema and explore your data using natural language in Firebase Data Connect

Enable Gemini in Firebase
Recommended

Disclaimers:
Gemini in Firebase is still under development and may give inaccurate information. Test any code that it generates before using it in your apps. Gemini can interact with your Firebase data and tailor responses to your app, and it may use your prompts or data for training. Learn more about how we train our models Use of Gemini in Firebase is subject to Google Terms of Service and the Generative AI Prohibited Use Policy



Google Analytics for your Firebase project

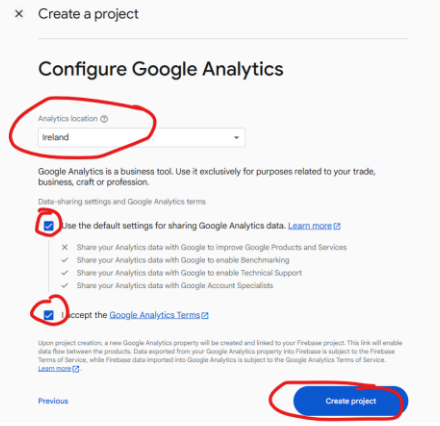
Google Analytics is a free and unlimited analytics solution that enables targeting, reporting and more in Firebase Crashlytics, Cloud Messaging, in-app messaging, Remote Config, A/B Testing and Cloud Functions.

Google Analytics enables:

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

Enable Google Analytics for this project
Recommended

3- Set the Location and Create the Project



Create a project

Configure Google Analytics

Analytics location: Ireland

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

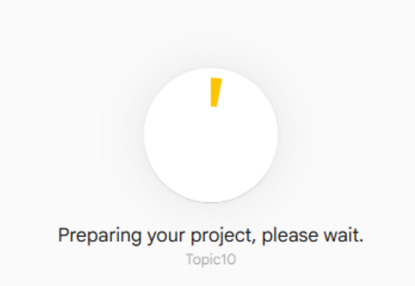
☑ Use the default settings for sharing Google Analytics data. Learn more

- ✕ 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

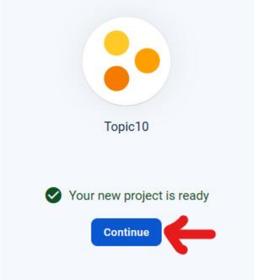
Upon project creation, a new Google Analytics property will be created and linked to your Firebase project. This link will enable data flow between the products. Data exported from your Google Analytics property into Firebase is subject to the Firebase Terms of Service, while Firebase data imported into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

4- Waiting



Preparing your project, please wait.
Topic10

5- Project created completely.

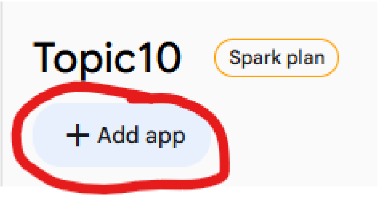


Topic10

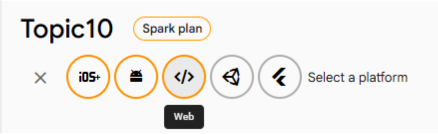
Your new project is ready

3. Add Firebase to App

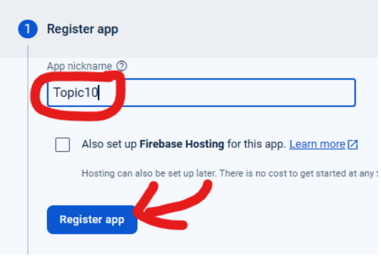
1– Click "+ Add app" button



2– Select **Web** as Platform



3– Set **"Nick Name"** and **register App**.



1 Register app

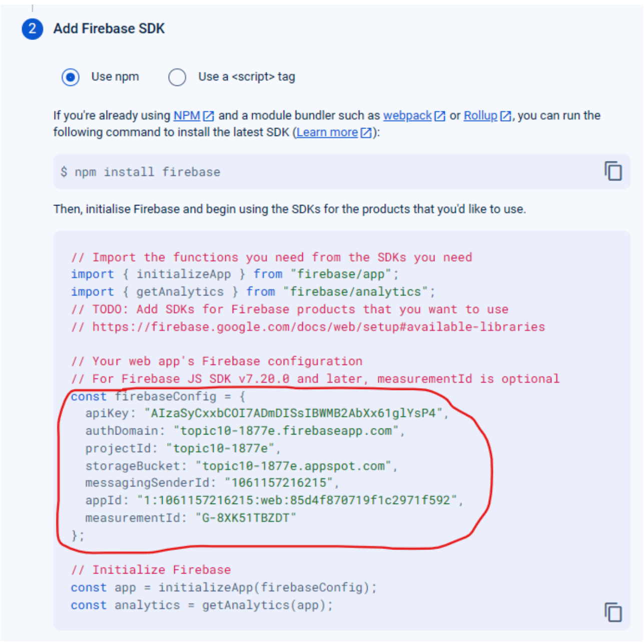
App nickname

Topic10

□ Also set up **Firebase Hosting** for this app. Learn more

Hosting can also be set up later. There is no cost to get started at any

4– Copy the **firebaseConfig** in your TXT file. You will use it later.



2 Add Firebase SDK

● Use npm ○ Use a <script> tag

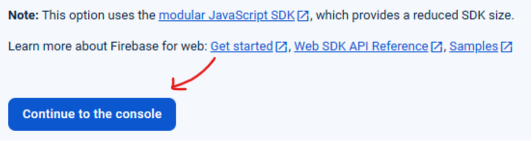
If you're already using NPM and a module bundler such as webpack or Rollup, you can run the following command to install the latest SDK (Learn more):

```
$ npm install firebase
```

Then, initialise Firebase and begin using the SDKs for the products that you'd like to use.

```
// Import the functions you need from the SDKs you need
import { initializeApp } from "firebase/app";
import { getAnalytics } from "firebase/analytics";
// TODO: Add SDKs for Firebase products that you want to use
// https://firebase.google.com/docs/web/setup#available-libraries

// Your web app's Firebase configuration
// For Firebase JS SDK v7.20.0 and later, measurementId is optional
const firebaseConfig = {
  apiKey: "AIzaSyCxxbCOI7ADmDISsIBWMB2AbXx61glYsP4",
  authDomain: "topic10-1877e.firebaseapp.com",
  projectId: "topic10-1877e",
  storageBucket: "topic10-1877e.appspot.com",
  messagingSenderId: "1061157216215",
  appId: "1:1061157216215:web:85d4f870719f1c2971f592",
  measurementId: "G-8XK51TBZDT"
};

// Initialize Firebase
const app = initializeApp(firebaseConfig);
const analytics = getAnalytics(app);
```

5– Continue to the console!

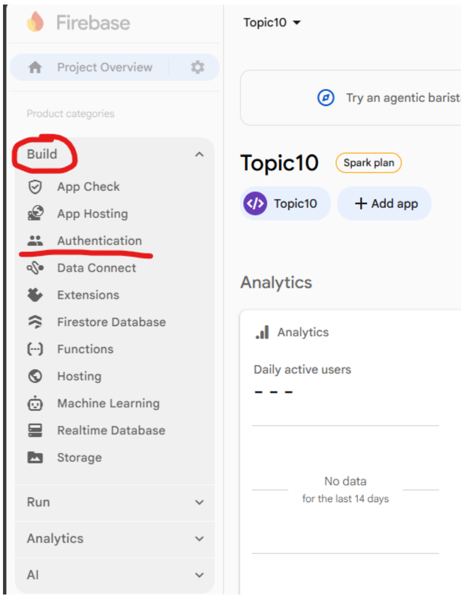


Note: This option uses the modular JavaScript SDK, which provides a reduced SDK size.

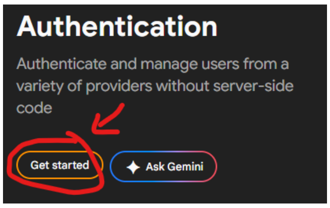
Learn more about Firebase for web: Get started, Web SDK API Reference, Samples

4. Set User Authentication

1- In the top-left menu (Product categories), select **Build -> Authentication**

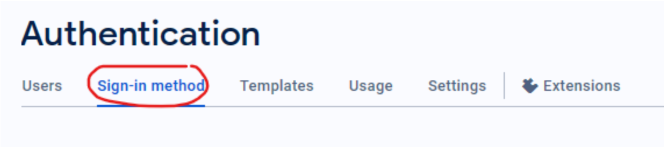


2- Get Started



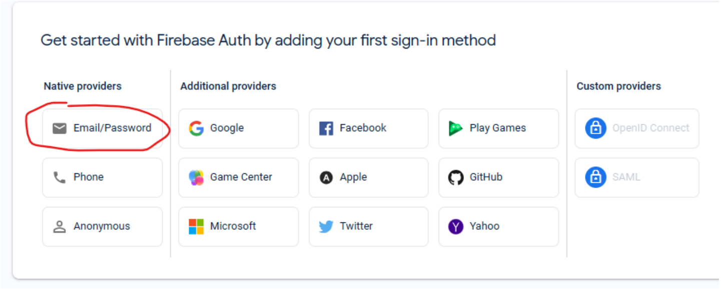
Authenticate and manage users from a variety of providers without server-side code

3- Click Sign-in Method



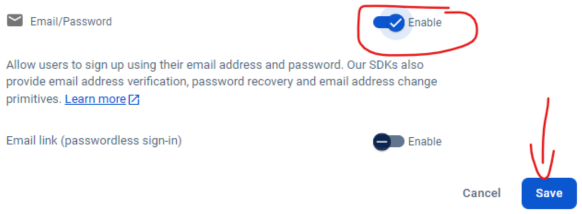
4- There are many sign-in methods.

In this project, we used the easiest one – **Email/Password**



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

6- Enable that method and save.



Email/Password

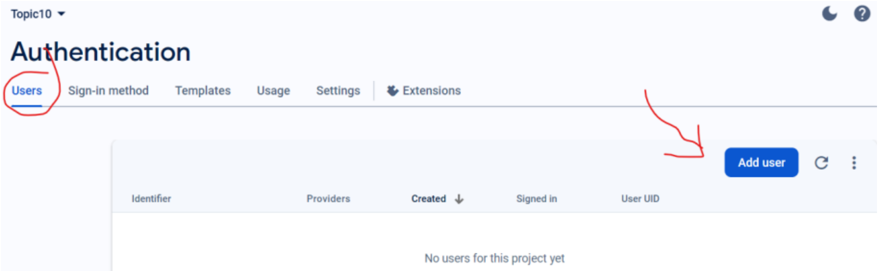
☑ Enable

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

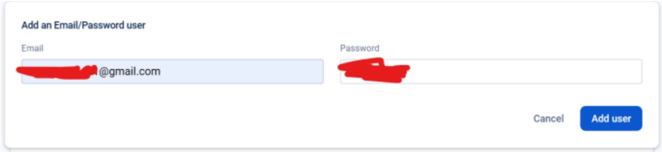
7- Click **“Users”** in the menu, then **Add user.**



Identifier	Providers	Created	Signed in	User UID

No users for this project yet

8- Set the **email** and **password** in Authentication, then **Add User**

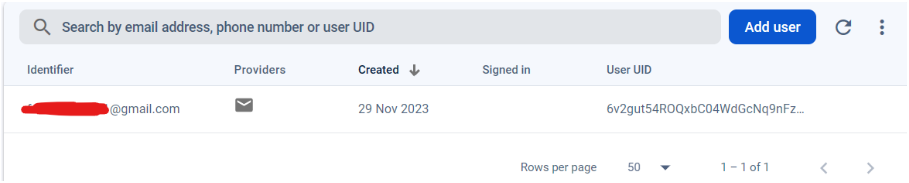


Add an Email/Password user

Email: [redacted]@gmail.com

Password: [redacted]

9- You can see that **User** is Added in Firebase Authentication

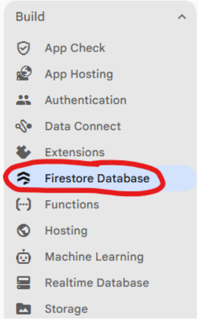


Identifier	Providers	Created	Signed in	User UID
[redacted]@gmail.com	✉	29 Nov 2023		6v2gut54ROQxbC04WdGcNq9nFz...

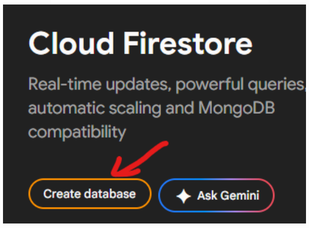
Rows per page 50 1 – 1 of 1

5. Check Firestore Database

1- In the top-left menu (Product categories), select **Build -> Firestore Database**



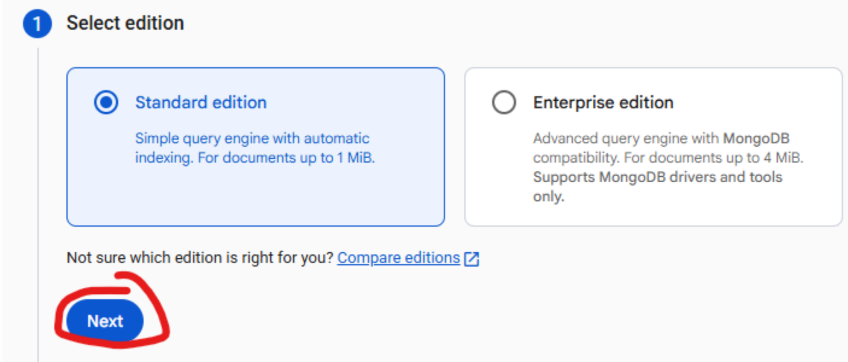
2- Create database



Cloud Firestore

Real-time updates, powerful queries, automatic scaling and MongoDB compatibility

3- Select Standard Editon, click "next"



1 Select edition

● Standard edition

Simple query engine with automatic indexing. For documents up to 1 MiB.

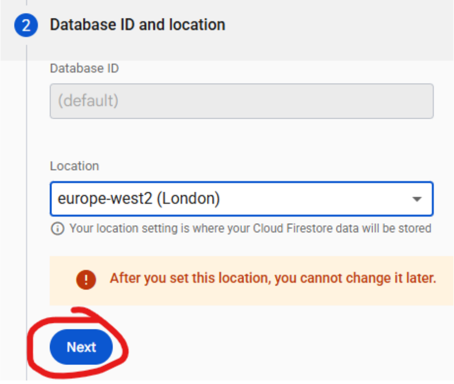
○ Enterprise edition

Advanced query engine with MongoDB compatibility. For documents up to 4 MiB. Supports MongoDB drivers and tools only.

Not sure which edition is right for you? Compare editions

4- Set Location

I select **Europe-west2(London),** because that server is closest to where I live.



2 Database ID and location

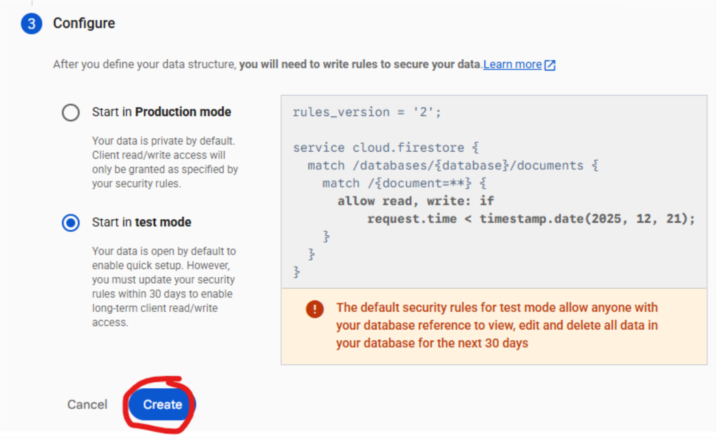
Database ID: (default)

Location: europe-west2 (London)

Your location setting is where your Cloud Firestore data will be stored

After you set this location, you cannot change it later.

5- Configure – **Start in Test mode**, then **Create.**



After you define your data structure, **you will need to write rules to secure your data.** Learn more

○ Start in **Production mode**

Your data is private by default. Client read/write access will only be granted as specified by your security rules.

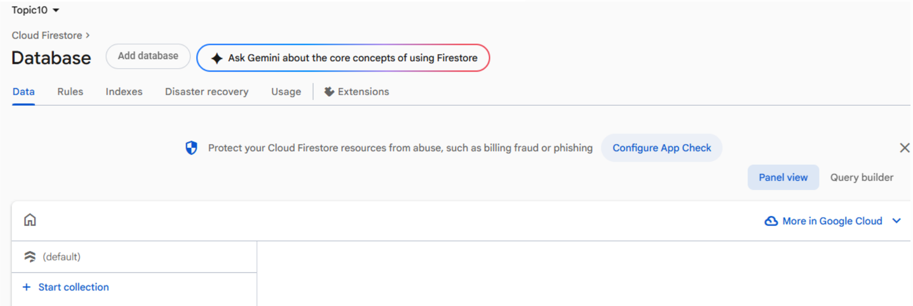
● Start in **test mode**

Your data is open by default to enable quick setup. However, you must update your security rules within 30 days to enable long-term client read/write access.

```
rules_version = '2';

service cloud.firestore {
  match /databases/{database}/documents {
    match /{document=**} {
      allow read, write: if
          request.time < timestamp.date(2025, 12, 21);
    }
  }
}
```

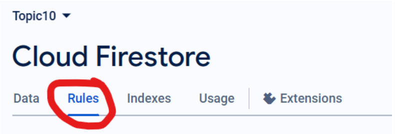
The default security rules for test mode allow anyone with your database reference to view, edit and delete all data in your database for the next 30 days

6- Firestore Database created successfully

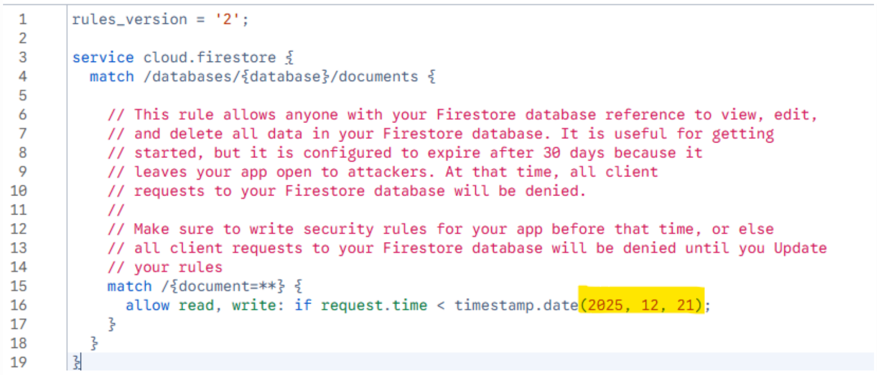


Protect your Cloud Firestore resources from abuse, such as billing fraud or phishing

7- Pay attention to the **Security Rules!**

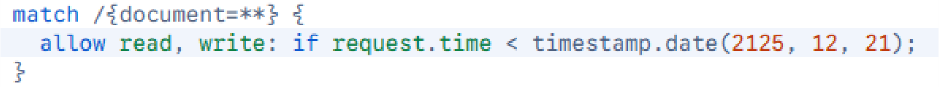


If the date is expired, you cannot use that Firebase App anymore. You must ensure that **the effective date of Firebase App should be after the current date.**

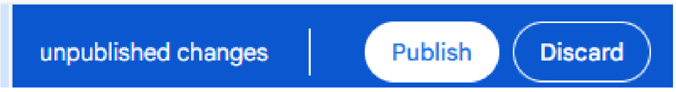


```
rules_version = '2';

service cloud.firestore {
  match /databases/{database}/documents {

    // This rule allows anyone with your Firestore database reference to view, edit,
    // and delete all data in your Firestore database. It is useful for getting
    // started, but it is configured to expire after 30 days because it
    // leaves your app open to attackers. At that time, all client
    // requests to your Firestore database will be denied.
    //
    // Make sure to write security rules for your app before that time, or else
    // all client requests to your Firestore database will be denied until you Update
    // your rules
    match /{document=**} {
      allow read, write: if request.time < timestamp.date(2025, 12, 21);
    }
  }
}
```

The default effective period is just one month; you can change it by yourself. For example, change the year from 2025 to 2125, then publish.



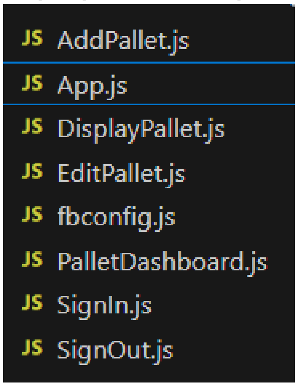
```
match /{document=**} {
  allow read, write: if request.time < timestamp.date(2125, 12, 21);
}
```



6. Install and config React Project

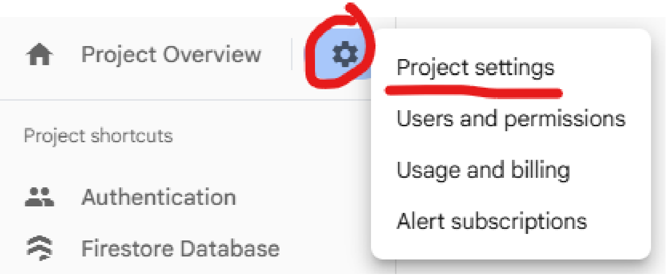
1– Build the React Framework
Use VS Code to open a new folder then type
npx create-vite@latest frontend –template react
VS Code will create a React Framework for this project.
Or you can just open codesandbox (https://codesandbox.io/)

2– **Copy, paste and replace** the 8 files in this project.

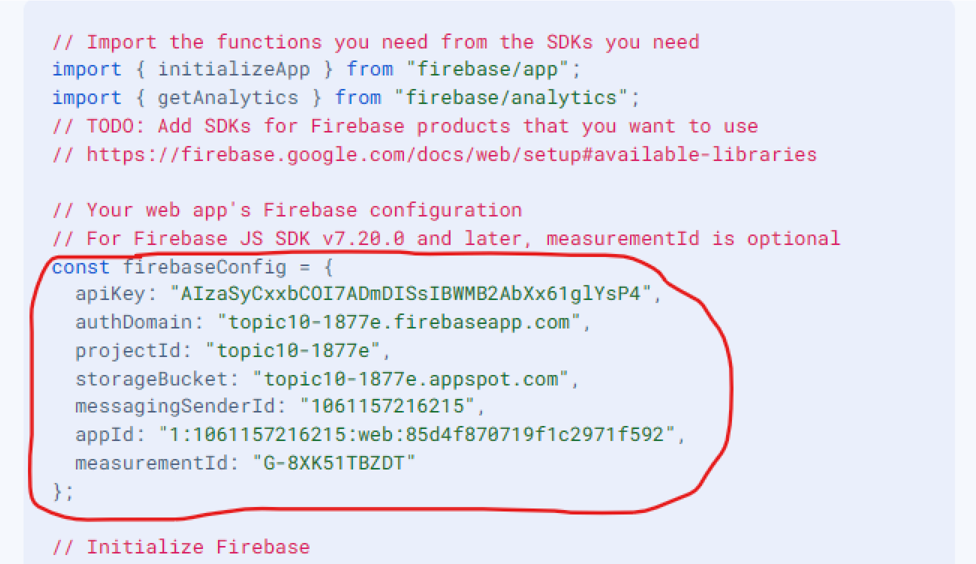


JS AddPallet.js
JS App.js
JS DisplayPallet.js
JS EditPallet.js
JS fbconfig.js
JS PalletDashboard.js
JS SignIn.js
JS SignOut.js

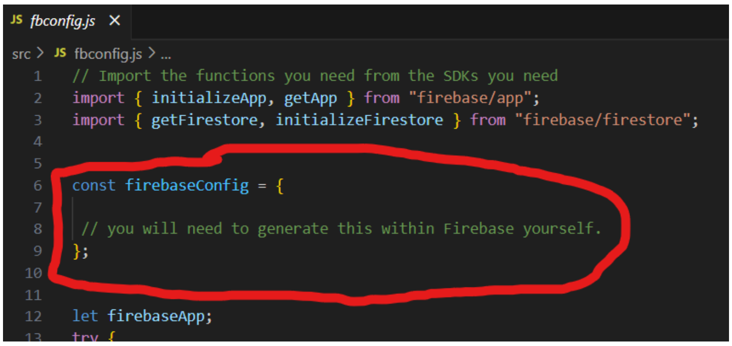
3– Set firebaseConfig.
Click the **Gear** beside Project Overview, select "**Project settings**".



In the firebase website, copy the String in **firebaseConfig**, and then paste it into the correspondent place in the JS file **fbconfig.js**



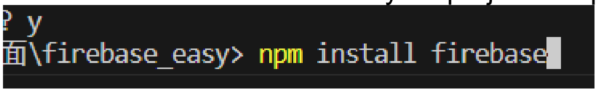
```
// Import the functions you need from the SDKs you need
import { initializeApp } from "firebase/app";
import { getAnalytics } from "firebase/analytics";
// TODO: Add SDKs for Firebase products that you want to use
// https://firebase.google.com/docs/web/setup#available-libraries

// Your web app's Firebase configuration
// For Firebase JS SDK v7.20.0 and later, measurementId is optional
const firebaseConfig = {
  apiKey: "AIzaSyCxxbCOI7ADmDISsIBWMB2AbXx61glYsP4",
  authDomain: "topic10-1877e.firebaseapp.com",
  projectId: "topic10-1877e",
  storageBucket: "topic10-1877e.appspot.com",
  messagingSenderId: "1061157216215",
  appId: "1:1061157216215:web:85d4f870719f1c2971f592",
  measurementId: "G-8XK51TBZDT"
};

// Initialize Firebase
```



```
// Import the functions you need from the SDKs you need
import { initializeApp, getApp } from "firebase/app";
import { getFirestore, initializeFirestore } from "firebase/firestore";


const firebaseConfig = {

  // you will need to generate this within Firebase yourself.
};


let firebaseApp;
try {
```

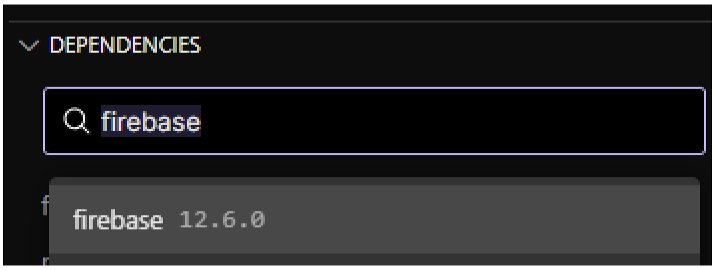
4- Install the dependency

1) If you are using VS Code, type **npm install firebase** in the terminal, it will install the latest stable version in your project's dependencies.



```
? y
面\firebase_easy> npm install firebase
```

2) If you are using CodeSanBox, find **DEPENDENCIES** in the left menu, and type **"firebase"** and install the latest version.



DEPENDENCIES

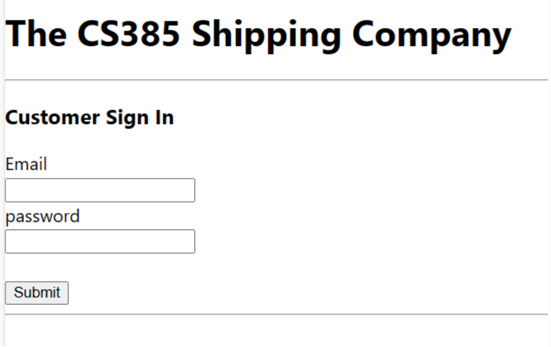
firebase

firebase 12.6.0

7. Run this project and test

1– Run the project

After you finished Step 6, you can run this project and test the CRUD now.
Type **npm run dev** in the terminal, the project will run at http://localhost:5173/



The CS385 Shipping Company

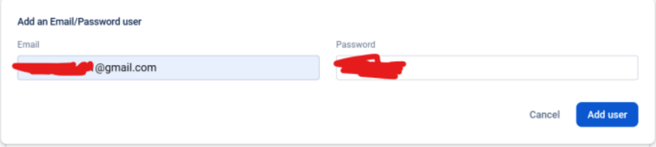
Customer Sign In

Email

password

2– Login

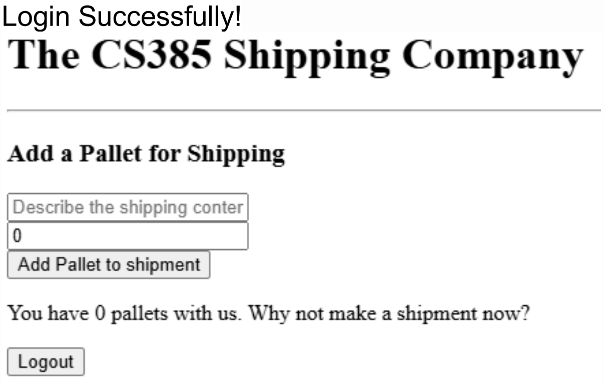
Login with the email/password you set in the step of Authentication.



Add an Email/Password user

Email: [redacted]@gmail.com

Password: [redacted]



Login Successfully!

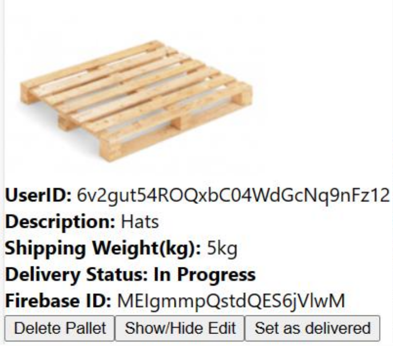
The CS385 Shipping Company

Add a Pallet for Shipping

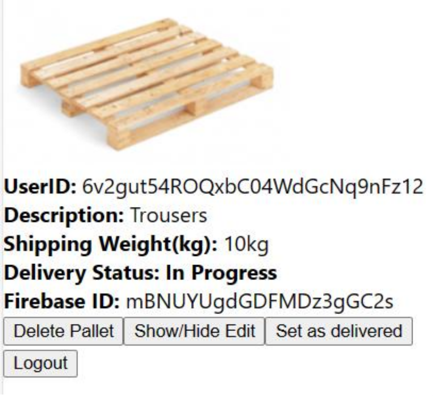
You have 0 pallets with us. Why not make a shipment now?

3- Add Pallet

Add two pallets, set the Pallet name and weight.
You can see they could be seen in the WebPages.

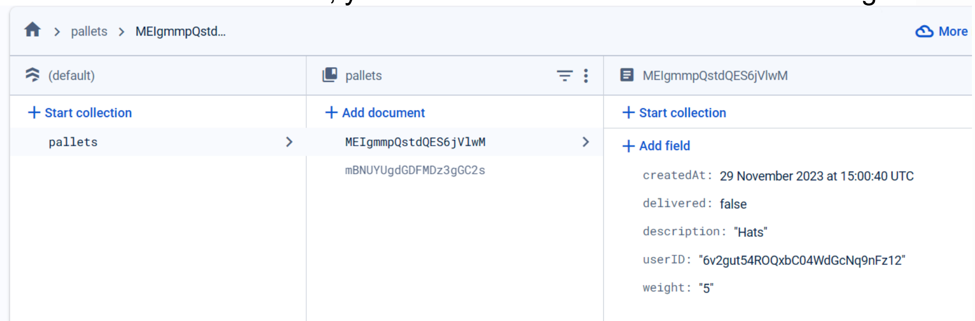


UserID: 6v2gut54ROQxbC04WdGcNq9nFz12
Description: Hats
Shipping Weight(kg): 5kg
Delivery Status: In Progress
Firebase ID: MEIgmmpQstdQES6jVlwM



UserID: 6v2gut54ROQxbC04WdGcNq9nFz12
Description: Trousers
Shipping Weight(kg): 10kg
Delivery Status: In Progress
Firebase ID: mBNUYUgdGDFMDz3gGC2s

Go to **Firestore Database**, you can also see the collections has changed.



pallets

MEIgmmpQstdQES6jVlwM
mBNUYUgdGDFMDz3gGC2s

createdAt: 29 November 2023 at 15:00:40 UTC
delivered: false
description: "Hats"
userID: "6v2gut54ROQxbC04WdGcNq9nFz12"
weight: "5"

The new **collection** pallets was added, it has two **documents**, each document has the **creationTime, deliveredStatus, description, userID and weight**.

4- To be continued

Try to play this project for fun.
You can also edit the information, delete the pallet or set it as delivered.
The data in Firestore database will be changed as well, because the **React App is now closely connected with Firebase Datatabse.**
That is how the CRUD works in the full-stack application.

5- Learn more knowledge by yourself

Such as how to register an account in the webpage and connected with Firebase.