

Firebase Demo

Some inspirations



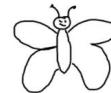
<https://rest.virtualcarelab.com/>

Memorypedia

memory dream



color



creepy



killer doll



potato



far west horse

small fish



a very big lake A very



light-ness regret



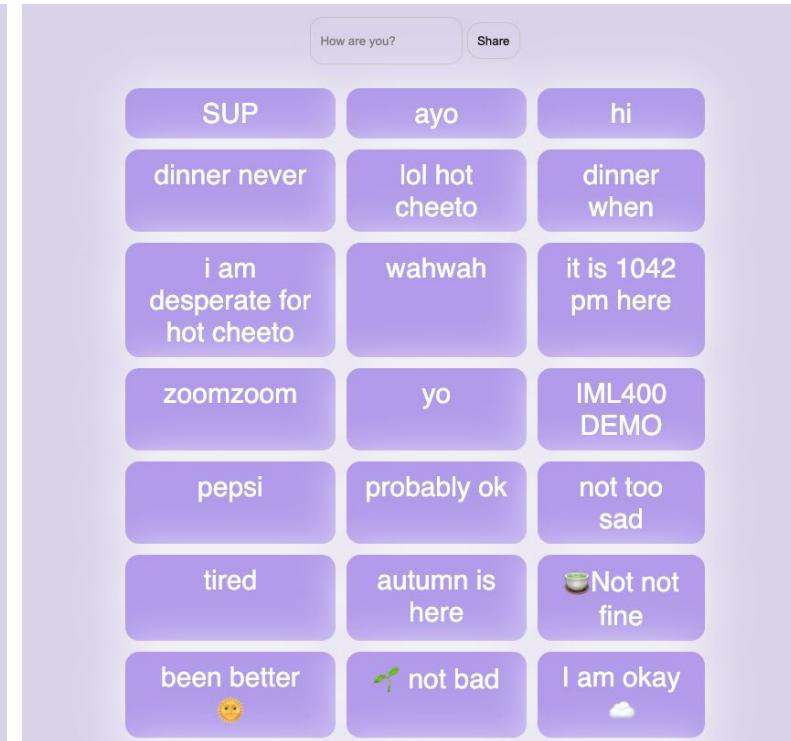
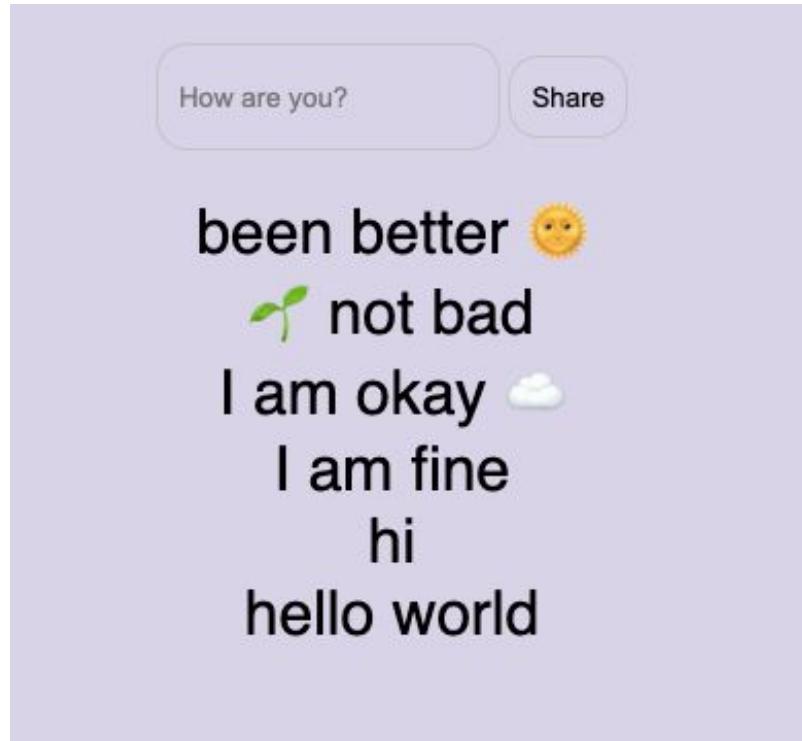
RETURN TO THE HOMEPAGE

Project link: <https://memorypedia.herokuapp.com/>

Code repo: <https://github.com/drawwithcode/2020-cqals>

Embed JavaScript to your website examples:

Firebase + plain JavaScript



Live Site: https://qianqian-ye.com/iml300-fall2025/firebase-text-input/Code_link

Embed JavaScript to your website examples:

Firebase + p5.js

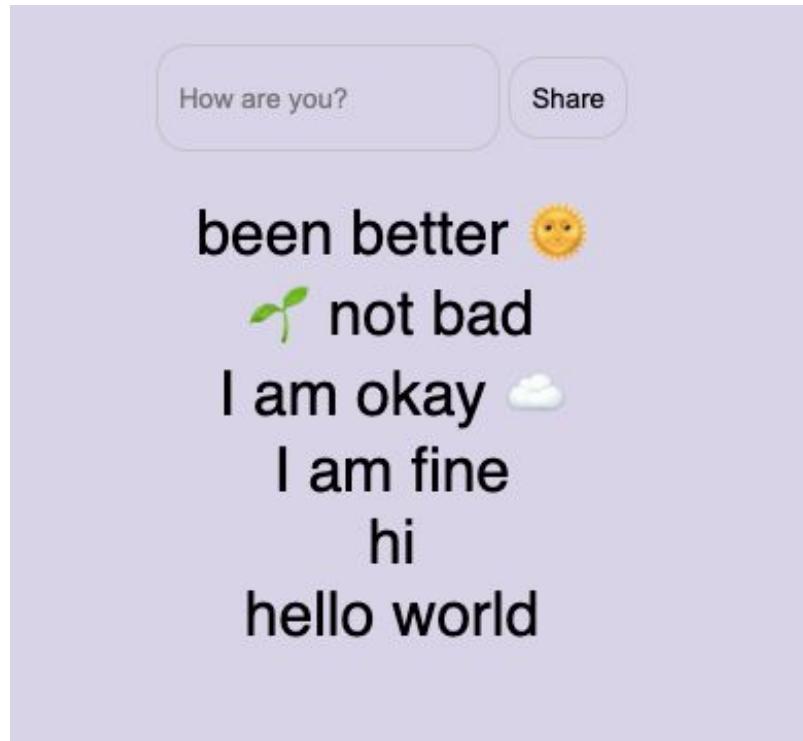


Live Site: <https://qianqian-ye.com/iml300-fall2025/firebase-p5-canvas/>
[Code link](#)

In-class Firebase Workshop

1. Remix from this project

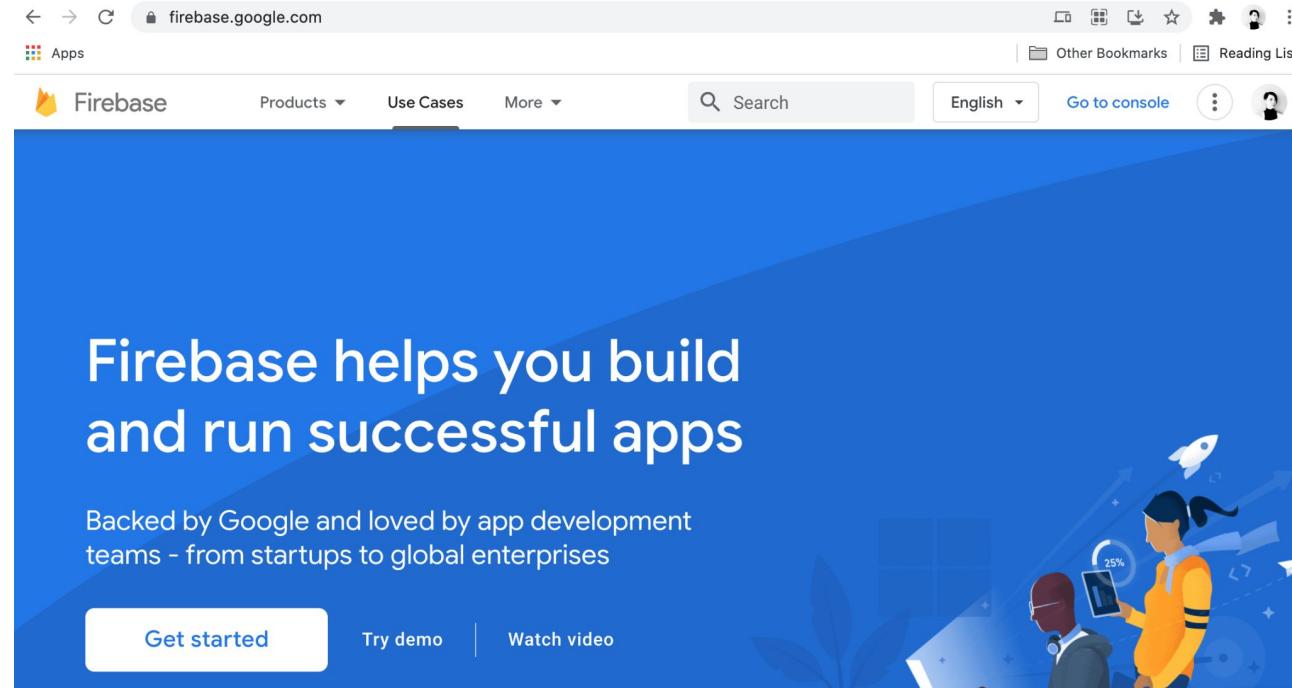
[Code link](#)



2. Go to Firebase & Click 'Get started'

<https://firebase.google.com/>

If you have issues signing up with your usc.edu email address, try your other email address.



The screenshot shows the Firebase homepage with a blue background. At the top, there is a navigation bar with icons for back, forward, and refresh, followed by the URL 'firebase.google.com'. To the right of the URL are standard browser controls for zoom and settings. Below the URL is a 'Apps' section with a grid icon and the word 'Apps'. The main content area features the Firebase logo (a yellow flame icon) and the text 'Firebase' in white. Below this, there are dropdown menus for 'Products', 'Use Cases', and 'More', as well as a search bar and a language selector set to 'English'. To the right of the search bar is a 'Go to console' button and a user profile icon. The central text on the page reads 'Firebase helps you build and run successful apps' in large white font. Below this, a smaller text states 'Backed by Google and loved by app development teams - from startups to global enterprises'. At the bottom, there are three buttons: 'Get started' (in a white box), 'Try demo', and 'Watch video'. To the right of these buttons is a stylized illustration of two people, a man in a suit and a woman in a yellow hoodie, working on a tablet. The background of the illustration features a rocket launching and arrows pointing upwards, symbolizing success and growth.

3. Add your Firebase project

<https://console.firebaseio.google.com/u/0/>

The image shows a three-panel interface for creating a new Firebase project.

Left Panel: Your Firebase projects

- Header: Your Firebase projects
- Project 1: visitor presence (visitor-presence)
- Project 2: firebase demo (fir-demo-4c506)
- Project 3: Collective p5 canvas (collective-p5-canvas)
- Project 4: collective-input (collective-input)
- Buttons: Add project (+) and </>

Middle Panel: Create a project (Step 1 of 3)

Header: Create a project (Step 1 of 3)

Section: Let's start with a name for your project[®]

Input: Project name **firebase demo**

Buttons: Continue (blue) and </> (grey)

Right Panel: Create a project (Step 2 of 2)

Header: Create a project (Step 2 of 2)

Section: Google Analytics enables:

- A/B testing
- User segmentation & targeting across Firebase products
- Predicting user behavior
- Crash-free users
- Event-based Cloud Functions triggers
- Free unlimited reporting

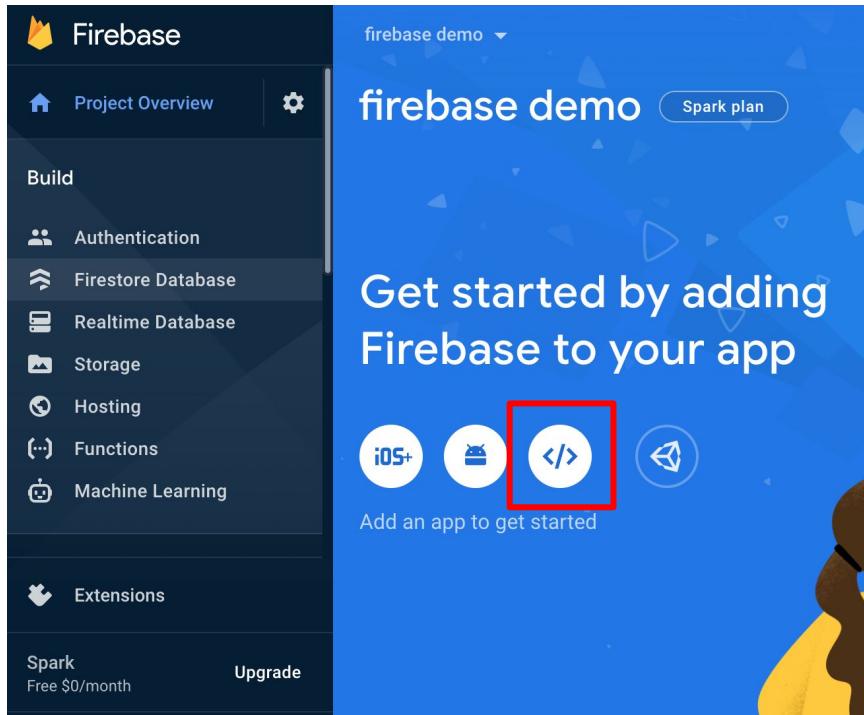
Input: Enable Google Analytics for this project

Buttons: Previous (grey), Create project (blue)

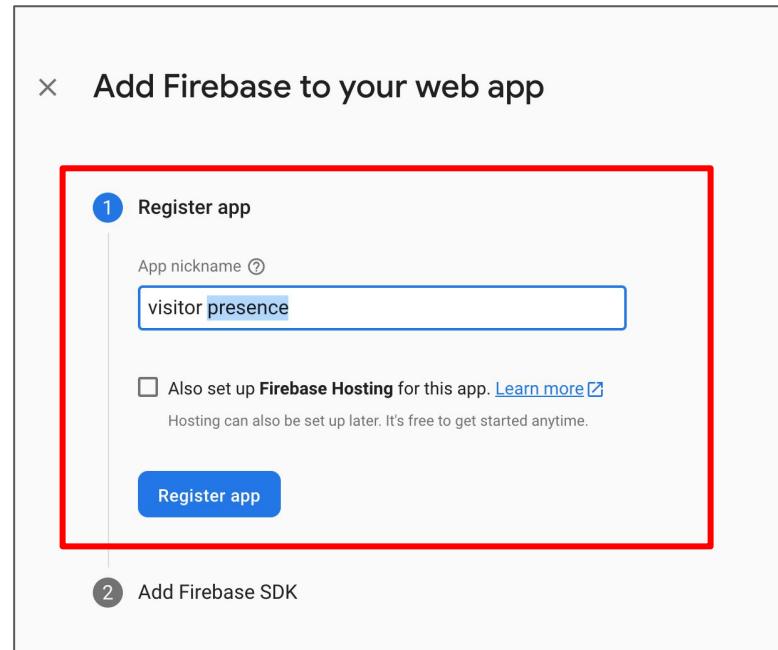
Bottom Panel: Provisioning resources...

A progress bar icon is shown, indicating the status of resource provisioning for the "firebase demo" project.

4. Adding firebase to your web app



The screenshot shows the Firebase Project Overview page for a project named 'firebase demo'. The page has a dark header with the Firebase logo and the project name. The main content area is blue with the text 'Get started by adding Firebase to your app' and three icons: iOS+, Android, and a blue circle with '</>'. A red box highlights the '</>' icon. Below the icons is the text 'Add an app to get started'. The left sidebar contains navigation links for Build (Authentication, Firestore Database, Realtime Database, Storage, Hosting, Functions, Machine Learning), Extensions, and a 'Spark' section indicating a free \$0/month plan. The 'Upgrade' button is also visible.



The screenshot shows a modal dialog titled 'Add Firebase to your web app'. It is divided into two main sections: '1 Register app' and '2 Add Firebase SDK'. The '1 Register app' section is highlighted with a red box. It contains a text input field for 'App nickname' with the value 'visitor presence'. Below the input is a checkbox for 'Also set up Firebase Hosting for this app' with the subtext 'Hosting can also be set up later. It's free to get started anytime.' and a 'Register app' button. The '2 Add Firebase SDK' section is partially visible at the bottom.

5. Adding firebase configuration to your script on Glitch

x Add Firebase to your web app

- Register app
- 2 Add Firebase SDK

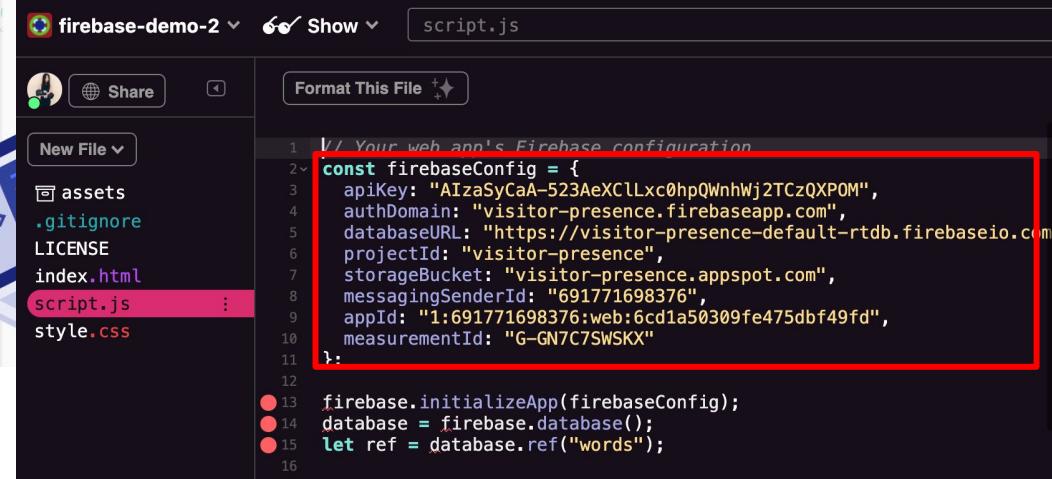
Use npm Use a <script> tag

Copy and paste these scripts into the bottom of your <body> tag, but before you use any Firebase services:

```
<script type="module">
  // Import the functions you need from the SDKs you need
  import { initializeApp } from "https://www.gstatic.com/firebasejs/9.4.1/firebase-app.js"
  import { getAnalytics } from "https://www.gstatic.com/firebasejs/9.4.1/firebase-analytics.js"
  // 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: "AIzaSyCaa-523AeXClLxc0hpQWnhWj2TCzQXPOM",
    authDomain: "visitor-presence.firebaseio.com",
    databaseURL: "https://visitor-presence-default-rtdb.firebaseio.com",
    projectId: "visitor-presence",
    storageBucket: "visitor-presence.appspot.com",
    messagingSenderId: "691771698376",
    appId: "1:691771698376:web:6cd1a50309fe475dbf49fd",
    measurementId: "G-GN7C7SWSKX"
  };

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



```
1 // Your web app's Firebase configuration
2 const firebaseConfig = {
3   apiKey: "AIzaSyCaa-523AeXClLxc0hpQWnhWj2TCzQXPOM",
4   authDomain: "visitor-presence.firebaseio.com",
5   databaseURL: "https://visitor-presence-default-rtdb.firebaseio.com",
6   projectId: "visitor-presence",
7   storageBucket: "visitor-presence.appspot.com",
8   messagingSenderId: "691771698376",
9   appId: "1:691771698376:web:6cd1a50309fe475dbf49fd",
10  measurementId: "G-GN7C7SWSKX"
11
12
13  firebase.initializeApp(firebaseConfig);
14  database = firebase.database();
15  let ref = database.ref("words");
```

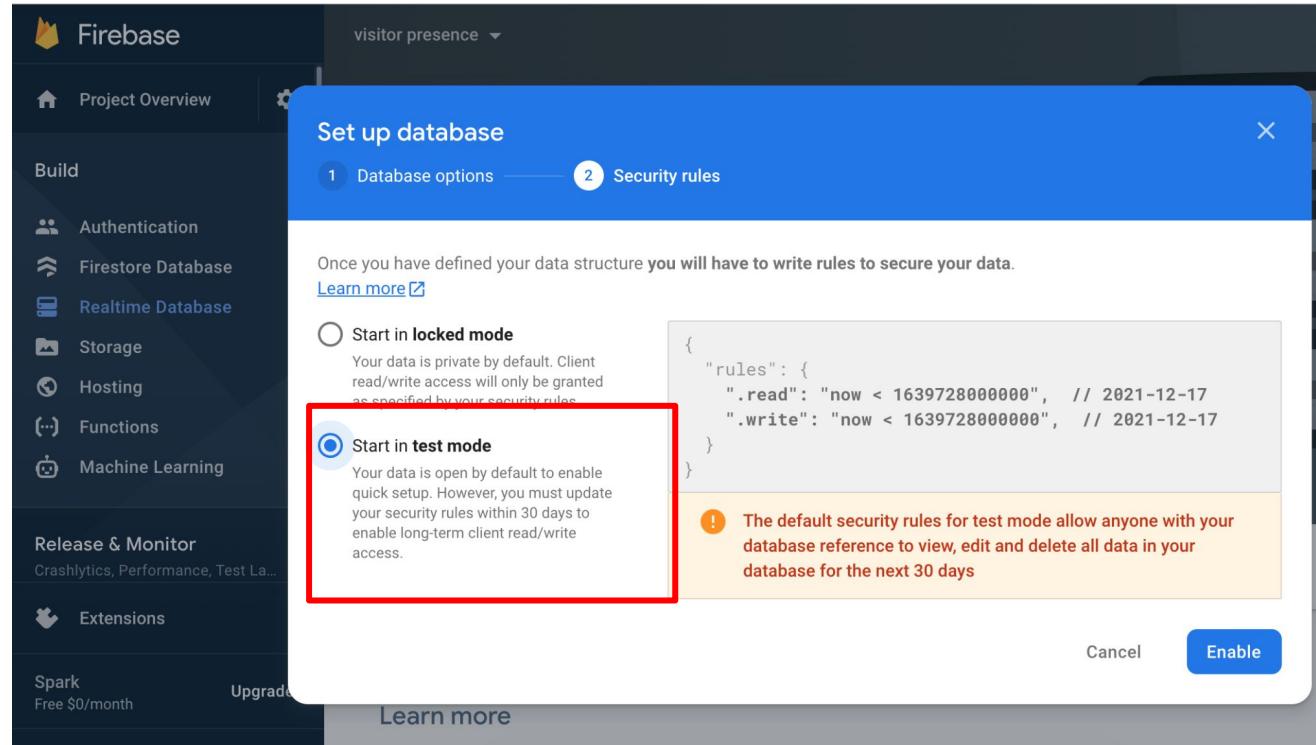
6.1 Set up the Realtime Database

The image shows the Firebase Realtime Database setup process across three stages:

- Project Overview:** The left sidebar shows the "Realtime Database" option highlighted with a red box. The main area displays the "Realtime Database" heading and a "Create Database" button, both of which are also highlighted with red boxes.
- Setup Database:** A modal window titled "Set up database" is open. It shows two steps: "1 Database options" and "2 Security rules". The "Realtime Database location" dropdown is set to "United States (us-central1)" and is highlighted with a red box. The "Next" button is visible at the bottom right of the modal.

6.2 Set up the Realtime Database

You can start with the 'test mode'



The screenshot shows the 'Set up database' dialog in the Firebase Realtime Database setup process. The dialog has two tabs: 'Database options' (selected) and 'Security rules'. A note at the top says: 'Once you have defined your data structure you will have to write rules to secure your data.' with a 'Learn more' link. Below are two options:

- Start in locked 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.

A red box highlights the 'Start in test mode' section. To the right, a code block shows the default security rules for test mode:

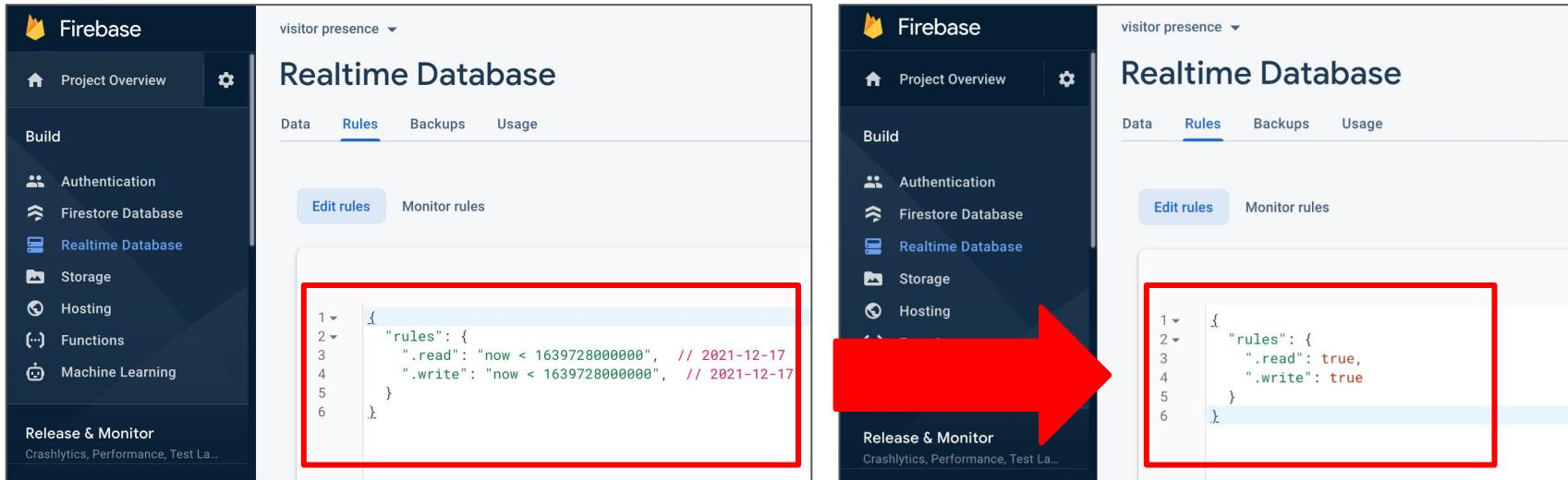
```
{  
  "rules": {  
    ".read": "now < 1639728000000", // 2021-12-17  
    ".write": "now < 1639728000000", // 2021-12-17  
  }  
}
```

An orange warning box states: '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.'

At the bottom right are 'Cancel' and 'Enable' buttons.

6.3 Set up the Realtime Database

You can update the rules later



The image shows two screenshots of the Firebase Realtime Database Rules editor side-by-side, connected by a large red arrow pointing from left to right.

Left Screenshot (Initial State): The Rules tab is selected. The code editor contains a timestamp-based rule:1 "rules": {
2 ".read": "now < 1639728000000", // 2021-12-17
3 ".write": "now < 1639728000000", // 2021-12-17
4 }
5
6 }

```
The code is highlighted with a red box around the timestamped read and write rules.
```

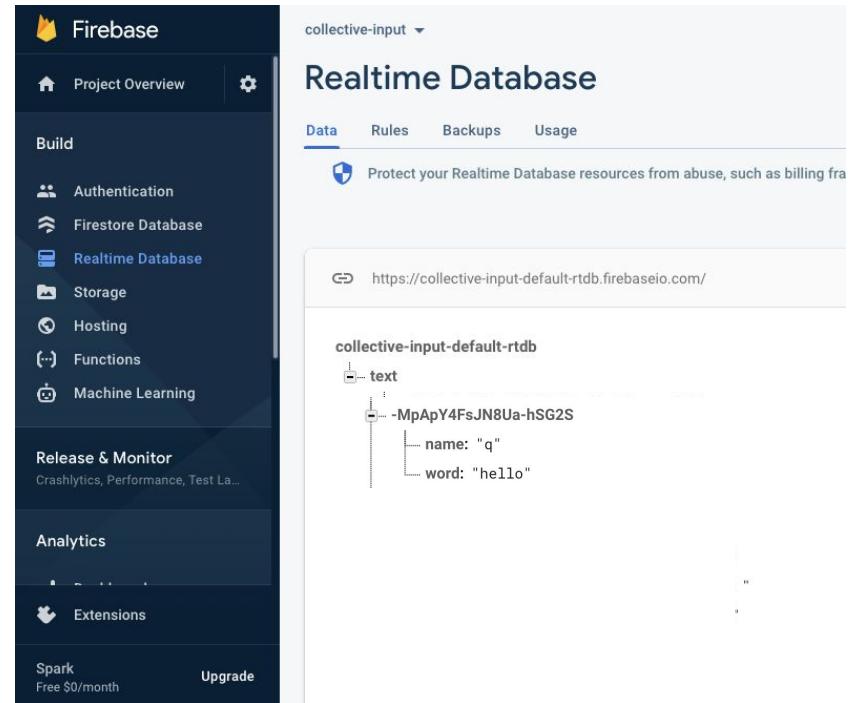
Right Screenshot (Final State): The Rules tab is selected. The code editor contains a general rule allowing all read and write operations:1 "rules": {
2 ".read": true,
3 ".write": true
4 }
5
6 }

```
The code is highlighted with a red box around the allow-all rules.
```

7.1 Check out the database

Uncomment the line 22-27 and refresh the page, then see the changes in Firebase Database
Then remove this entry from Firebase

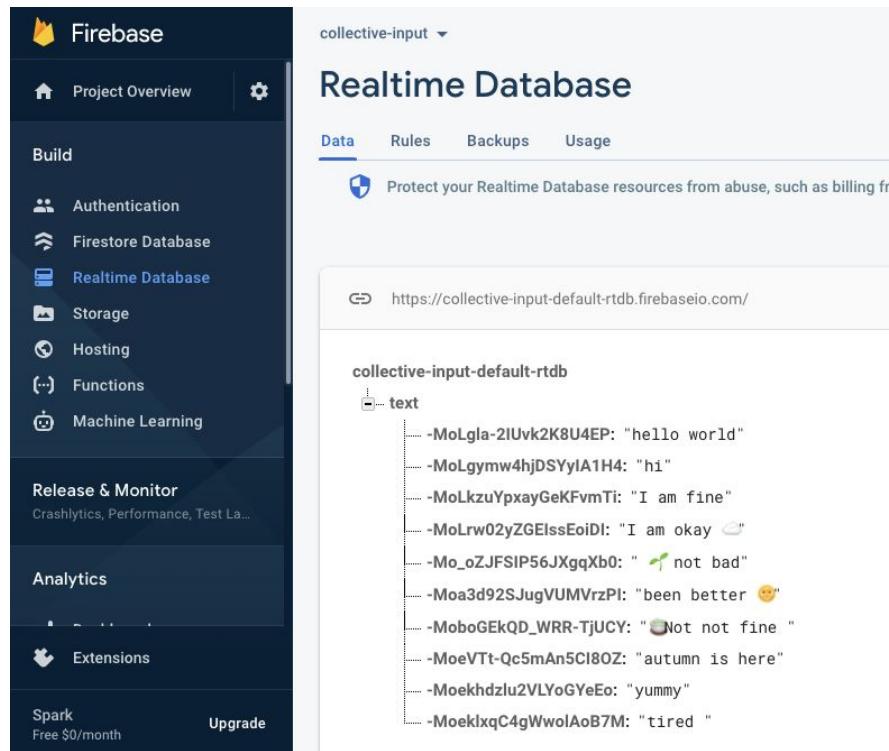
```
script.js > ...
1  // Import the functions you need from the SDKs you need
2  import { initializeApp } from "firebase/app";
3  // TODO: Add SDKs for Firebase products that you want to
4  // https://firebase.google.com/docs/web/setup#available-...
5
6  // Your web app's Firebase configuration
7  const firebaseConfig = {
8    apiKey: "AIzaSyDYLptGH0IFRu06S2-90-VciqZcKcDFuik",
9    authDomain: "iml300-fall25.firebaseio.com",
10   projectId: "iml300-fall25",
11   storageBucket: "iml300-fall25.firebaseiostorage.app",
12   messagingSenderId: "399849667098",
13   appId: "1:399849667098:web:81ff8c6a7af40d321cefa3",
14 };
15
16 // Initialize Firebase
17 const app = initializeApp(firebaseConfig);
18
19 const db = firebase.database();
20 let dbRef = db.ref("text");
21
22 // var data ={  
23 //   name: "q",  
24 //   word: "hello"  
25 // }
26
27 // dbRef.push(data);
```



The screenshot shows the Firebase Realtime Database interface. On the left is a sidebar with 'Project Overview', 'Build' (Authentication, Firestore Database, Realtime Database, Storage, Hosting, Functions, Machine Learning), 'Release & Monitor' (Crashlytics, Performance, Test Lab), 'Analytics', and 'Extensions'. The main area is titled 'Realtime Database' with tabs for 'Data', 'Rules', 'Backups', and 'Usage'. A shield icon with the text 'Protect your Realtime Database resources from abuse, such as billing fra...' is visible. Below the tabs, a URL 'https://collective-input-default-rtbd.firebaseio.com/' is shown. The data structure under 'Data' is 'collective-input-default-rtbd' with a single child node 'text' containing two children: '-MpApY4FsJN8Ua-hSG2S' and 'name: "q"'. This child node also contains a child 'word: "hello"'.

7. 2 Check out the database

Add text input in your Glitch project and see the changes in Firebase Database
You can remove any of the entries from Firebase



The screenshot shows the Firebase Realtime Database console. The left sidebar has a dark theme with the following navigation items:

- Project Overview
- Build
 - Authentication
 - Firestore Database
 - Realtime Database** (selected)
 - Storage
 - Hosting
 - Functions
 - Machine Learning
- Release & Monitor
- Analytics
- Extensions
- Spark (Free \$0/month) and Upgrade buttons

The main area is titled "Realtime Database" and shows the "Data" tab selected. It displays a list of messages under the path "collective-input-default-rtdb/text". The messages are:

- MoLgla-2IUVk2K8U4EP: "hello world"
- MoLgymw4hjDSYyIA1H4: "hi"
- MoLkzuYpxayGeKFvmTi: "I am fine"
- MoLrw02yZGEIssEoiDI: "I am okay 🌟"
- Mo_oZJFSIP56JXgqXb0: " 🌟 not bad"
- Moa3d92SJugVUMVrzPl: "been better 😊"
- MoboGEkQD_WRR-TjUCY: " 🌟 not fine "
- MoeVTt-Qc5mAn5Cl8OZ: "autumn is here"
- Moekhdzlu2VLYoGYeEo: "yummy"
- MoeklxqC4gWwolAoB7M: "tired "