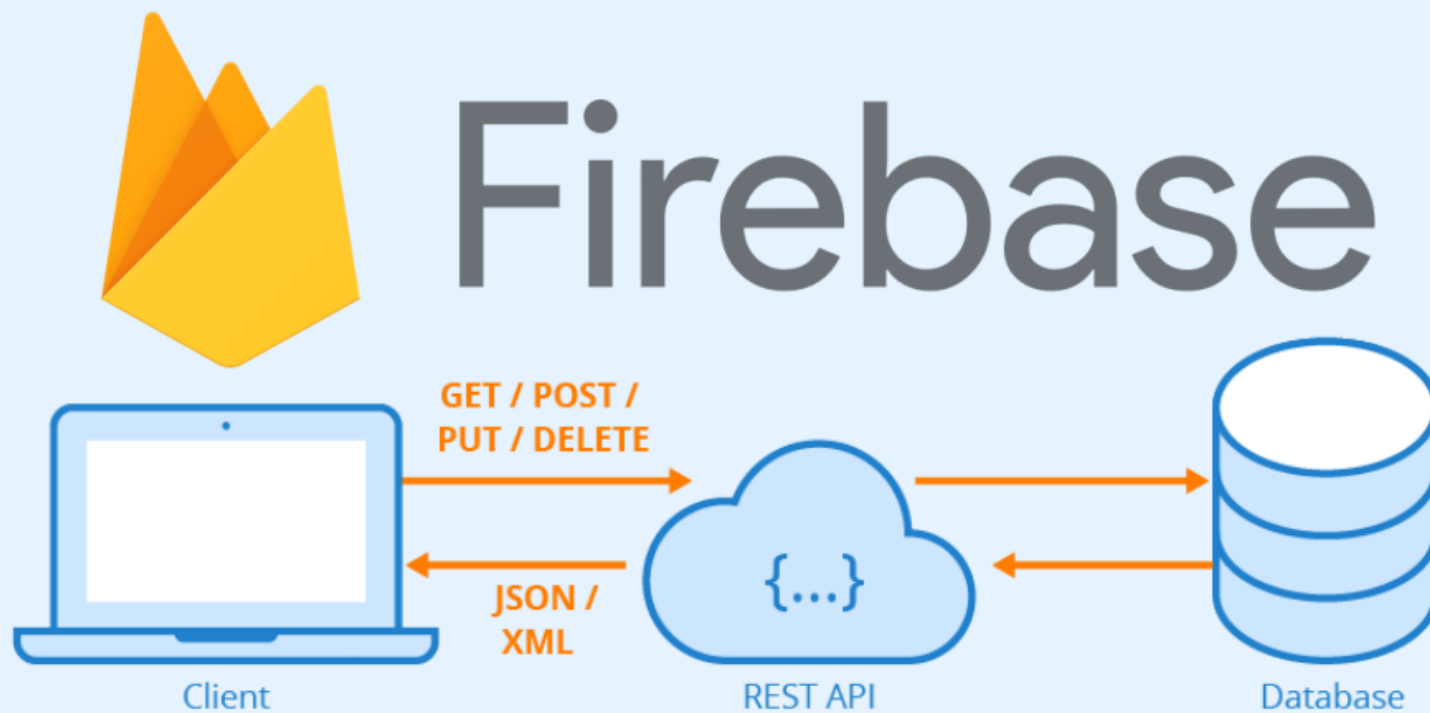


REACT NATIVE

Working with Firebase

Authentication + Firestore

What is firebase?

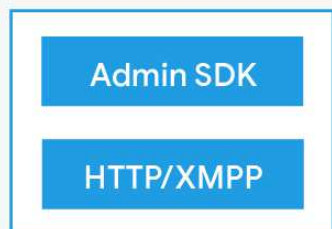


1

Message building
and targeting



Notifications
Console GUI

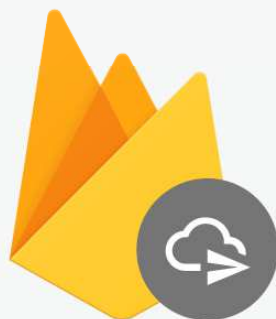


Trusted
Environment

Send to topic
or instance

2

FCM
backend



3

Platform-level
message transport

Android
transport layer

iOS / APNs

Web Push

4

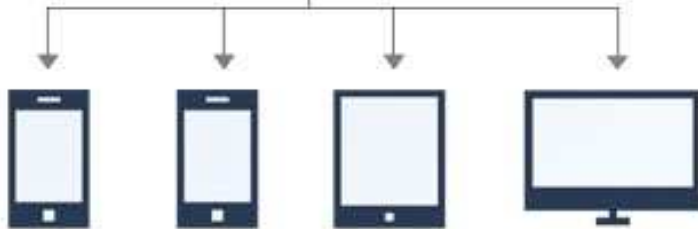
SDK
on device





Firebase

The Realtime Backend
for your App!



Synchronize Across Web and Mobile Devices



Realtime Database



Authentication



Cloud Messaging



Storage



Hosting



Remote Config



Test Lab



Crash Reporting

What is Firebase?

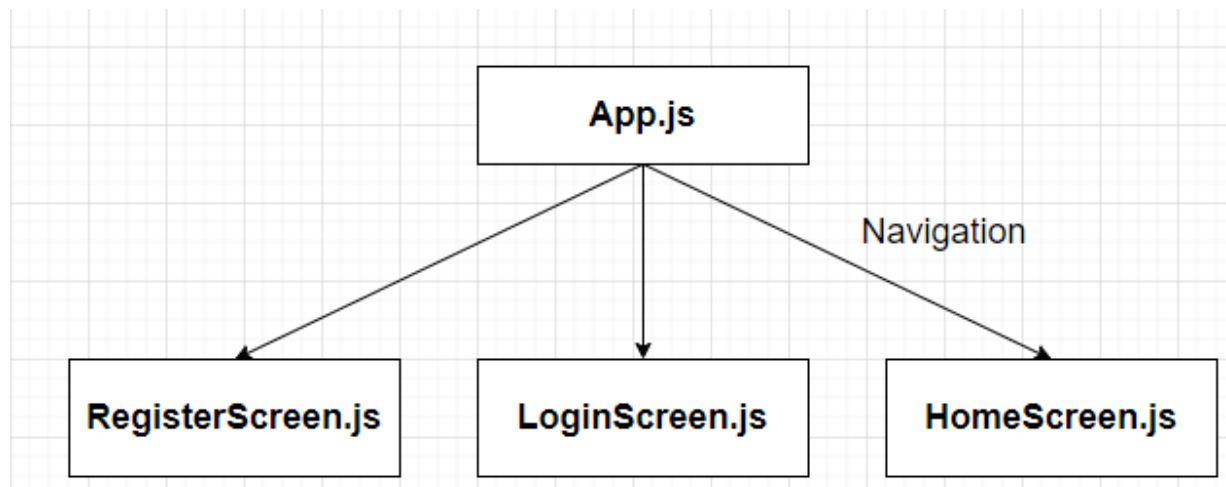
- **Firebase** is a platform for web and mobile app development, which includes simple and powerful APIs without the need for a backend server (serverless).
- **Firebase** support 2 platform Android and IOS.
- **Firebase** is Google's cloud-based database service.
- **Firebase** also provides a complete list of products to support Developers in their development app. Two database options are Firestore and Firebase's Realtime Database. It also enables serverless application development through the integration of Cloud Functions.

Lab: Authentication with Firebase

- Create project with 3 screens: **Register**, **Login**, **Home**
- Register, Login: Email, Password
- If authenticate = true → navigate to HomeScreen
- If authenticate = false → navigate to LoginScreen. After register success, navigate to LoginScreen. If not yet register, navigate Register
- If process LoginScreen == true → navigate to HomeScreen

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

HIENLTH

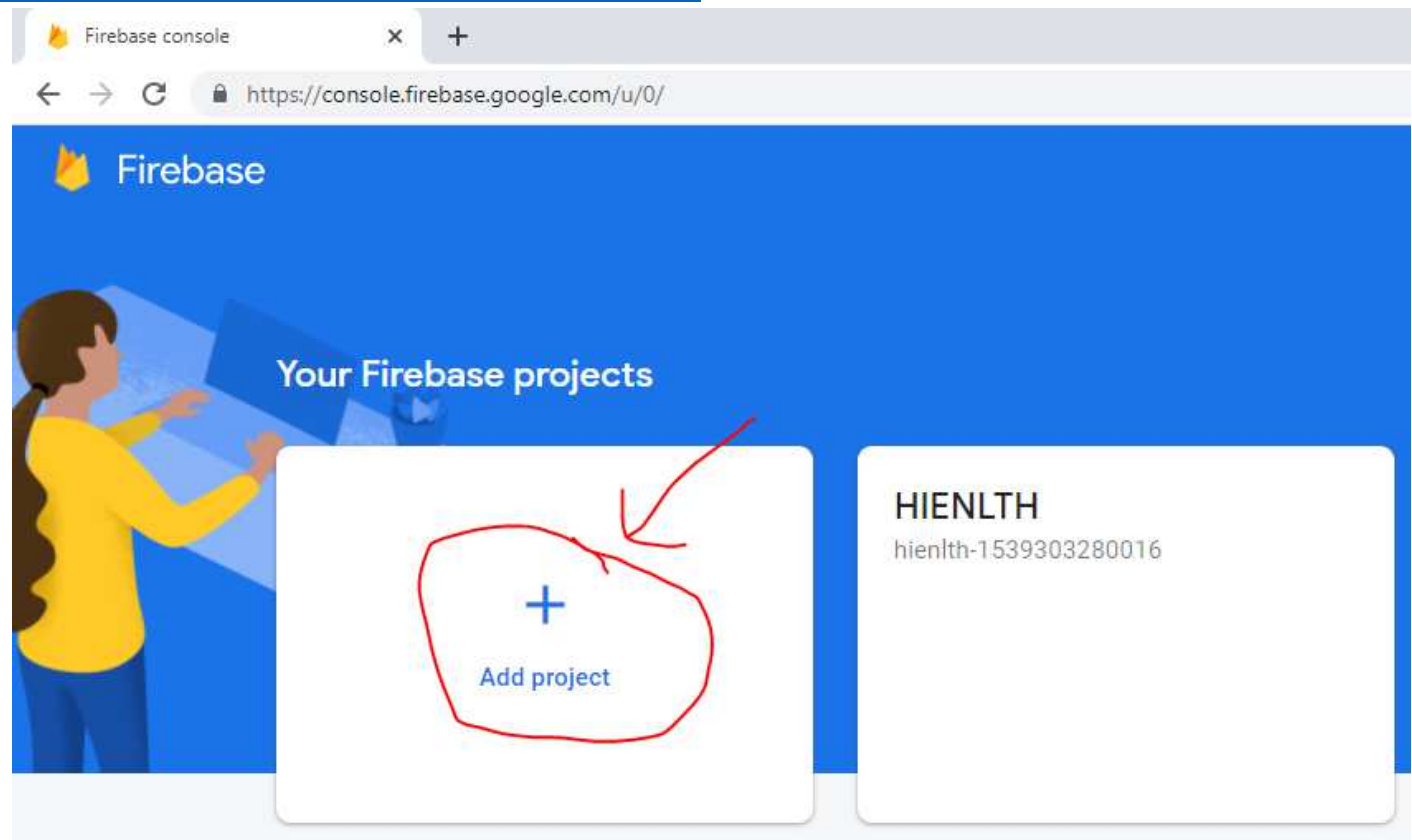


Getting Start with Firebase

1. Create Firebase Project in the Firebase console.
<https://console.firebase.google.com> (need Google account)
2. Retrieve ***apiKey***, ***authDomain***, ***databaseURL***, and ***storageBucket*** from Firebase console.
3. Create a new react-native project
4. Install Firebase from npm
5. Add it into react-native project

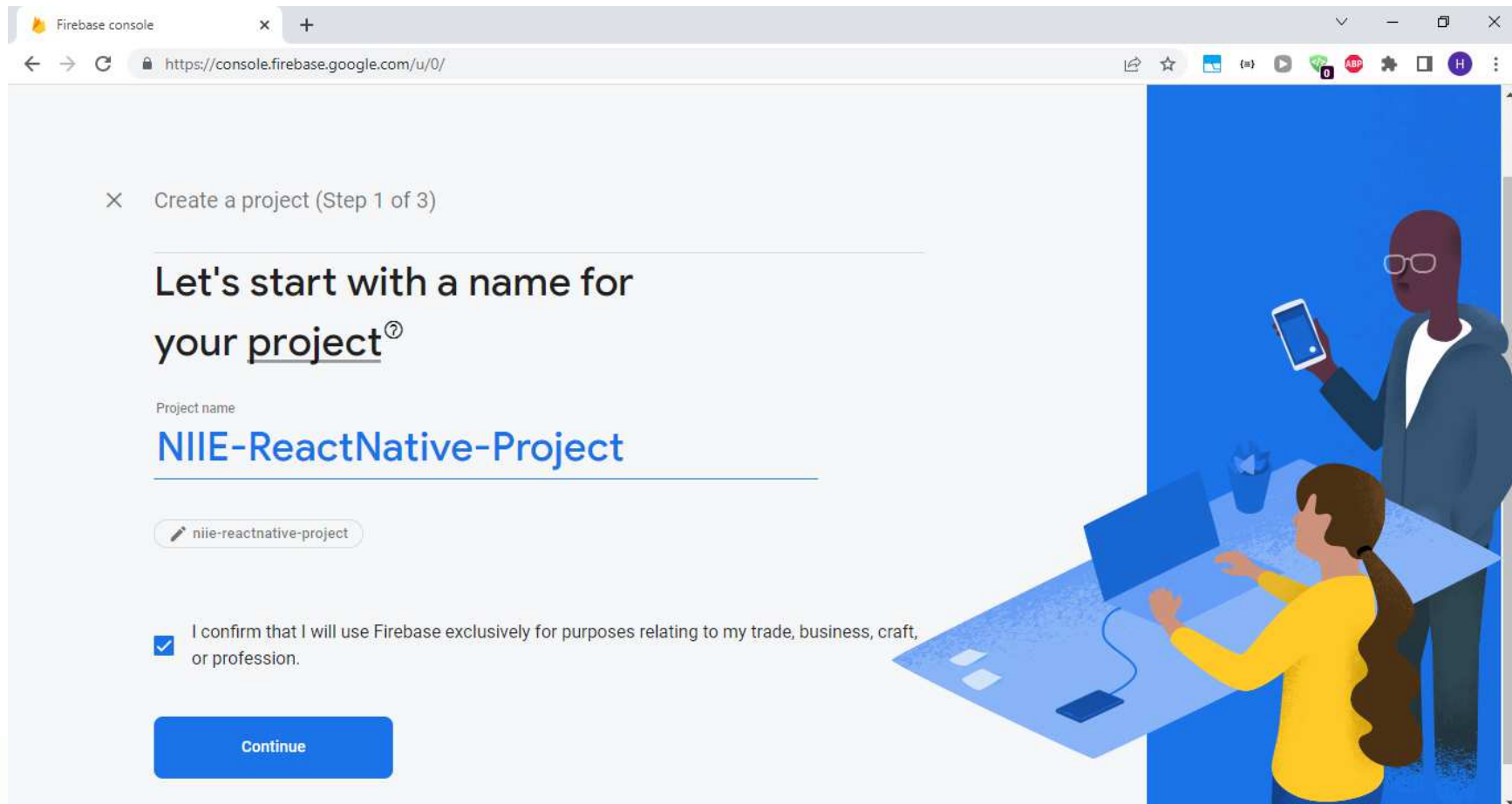
Create Firebase Project

- Login Google account
- Go to <https://console.firebase.google.com>
- Add project



HIENLTH

- Fill project name




× Create a project (Step 1 of 3)

Let's start with a name for your project[?]

Project name

NII-ReactNative-Project

 nii-reactnative-project

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

Continue

HIENLTH

- Should turn OFF Google Analytics

×

Create a project (Step 2 of 2)

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 ?

×

Crash-free users ?

×

User segmentation & targeting across Firebase products ?

×

Event-based Cloud Functions triggers ?

×

Free unlimited reporting ?

☐

Enable Google Analytics for this project
Recommended

[Previous](#)

Create project

- Select location country & Accept terms

× Create a project (Step 3 of 3)

Analytics location ⓘ

Vietnam

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](#)

[Previous](#) [Create project](#)

HIEUNLTH


NIIE-ReactNative-Project – Overview

+

← → ↺

https://console.firebase.google.com/u/0/project/niie-reactnative-project/overview

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 **Firebase**

🏠 Project Overview

⚙️

Build

👤 Authentication

🔥 Firestore Database

📡 Realtime Database

📁 Storage

🌐 Hosting

⚡ Functions

🤖 Machine Learning

Release & Monitor

Crashlytics, Performance, Test La...

🧩 Extensions

Spark

No-cost \$0/month

Upgrade

NIIE-ReactNative-Project

Go to docs 🔔 🔴 H

📧 Receive email updates about new Firebase features, research, and events

Sign up ✕

NIIE-ReactNative-Project

Spark plan

Get started by adding
Firebase to your app


📱 iOS+

🤖 Android

📄 </>

🔗

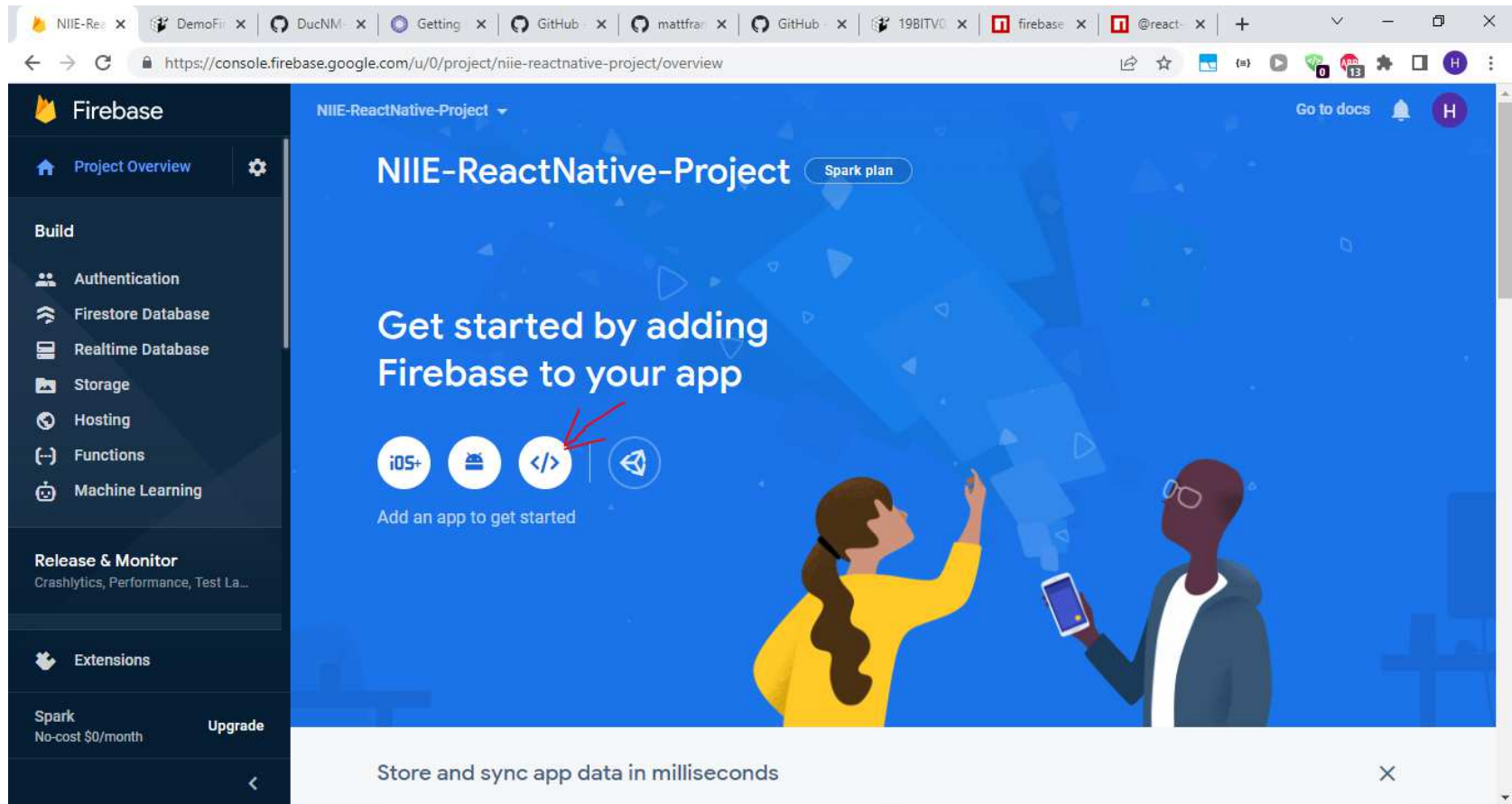
Add an app to get started



Store and sync app data in milliseconds

✕

Create Web app



× Add Firebase to your web app

1 Register app

App nickname ⓘ

nile_firebase_app

☐ Also set up **Firebase Hosting** for this app. [Learn more](#) ⓘ

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

Register app

2 Add Firebase SDK

- Copy and paste to:
firebase.js

HIENLTH

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:

```
$ npm install firebase
```

Then, initialize Firebase and begin using the SDKs for the products 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: "AIzaSyB-iOXfWcqonu3h6Fj5B4GuxAG2BKIFB1U",
  authDomain: "niie-reactnative-project.firebaseio.com",
  projectId: "niie-reactnative-project",
  storageBucket: "niie-reactnative-project.appspot.com",
  messagingSenderId: "694346415433",
  appId: "1:694346415433:web:1768e5e94b8af4adee2e98",
  measurementId: "G-D9B3ZR7JBN"
};


// Initialize Firebase
```


Copy

Build

 **Authentication**

 **Firestore Database**

 **Realtime Database**

 **Storage**


 **Hosting**

 **Functions**

 **Machine Learning**

Release & Monitor

Crashlytics, Performance, Test La...

 **Extensions**

Spark
No-cost \$0/month

Upgrade

NIE-ReactNative-Project

[Go to docs](#)



Authentication

[Users](#)

[Sign-in method](#)

[Templates](#)


[Usage](#)


Sign-in providers

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


Native providers

 **Email/Password**

 **Phone**

 **Anonymous**

Additional providers


 **Google**


 **Game Center**

 **Microsoft**


 **Facebook**

 **Apple**

 **Twitter**

 **Play Games**

 **GitHub**

 **Yahoo**

Firestore authentication

- <https://firebase.google.com/docs/auth> – ver 9
- Password authentication
 - Create new account (**createUserWithEmailAndPassword**)

Web version 9 (modular) Web version 8 (namespaced)

★ [Learn more](#) about the tree-shakeable Web v9 modular SDK and [upgrade](#) from version 8.

Copy code sample

```
import { getAuth, createUserWithEmailAndPassword } from "firebase/auth";

const auth = getAuth();
createUserWithEmailAndPassword(auth, email, password)
  .then((userCredential) => {
    // Signed in
    const user = userCredential.user;
    // ...
  })
  .catch((error) => {
    const errorCode = error.code;
    const errorMessage = error.message;
    // ..
  });
```

auth_signup_password.js

Firestore authentication - Password authentication

- Sign in a user with an email address and password
 - **signInWithEmailAndPassword**

Web version 9 (modular) Web version 8 (namespaced)

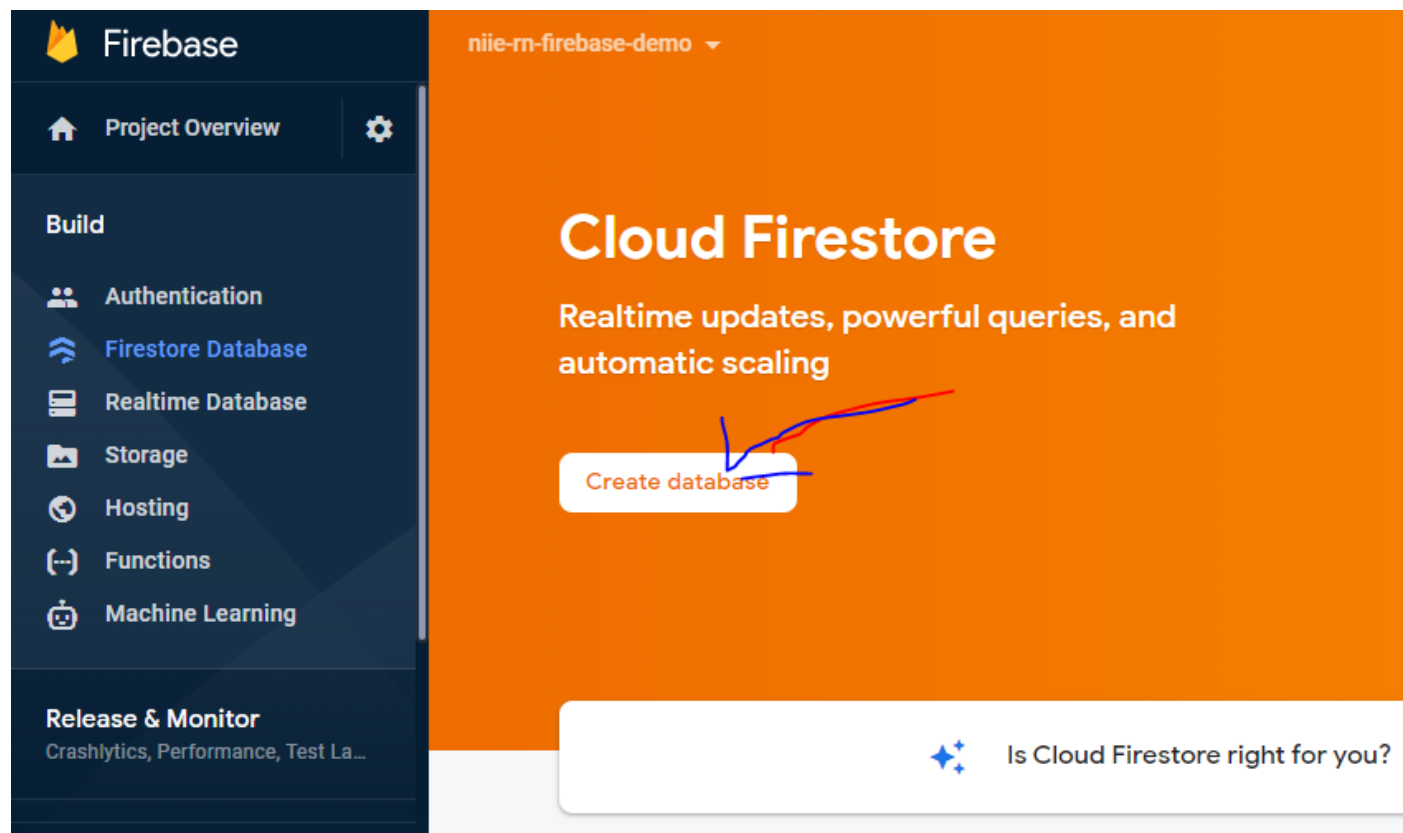
★ [Learn more](#) about the tree-shakeable Web v9 modular SDK and [upgrade](#) from version 8.

```
import { getAuth, signInWithEmailAndPassword } from "firebase/auth";

const auth = getAuth();
signInWithEmailAndPassword(auth, email, password)
  .then((userCredential) => {
    // Signed in
    const user = userCredential.user;
    // ...
  })
  .catch((error) => {
    const errorCode = error.code;
    const errorMessage = error.message;
  });
```

auth_signin_password.js

Enable firestore



Create database

- 1 Secure rules for Cloud Firestore — 2 Set Cloud Firestore location

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 false;
    }
  }
}
```

i All third party reads and writes will be denied

Enabling Cloud Firestore will prevent you from using Cloud Datastore with this project, notably from the associated App Engine app

Cancel

Next

- Select a location

Create database ×

✓ Secure rules for Cloud Firestore — 2 Set Cloud Firestore location

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

⚠ After you set this location, you cannot change it later. Also, this location setting will be the location for your default Cloud Storage bucket. [Learn more](#)

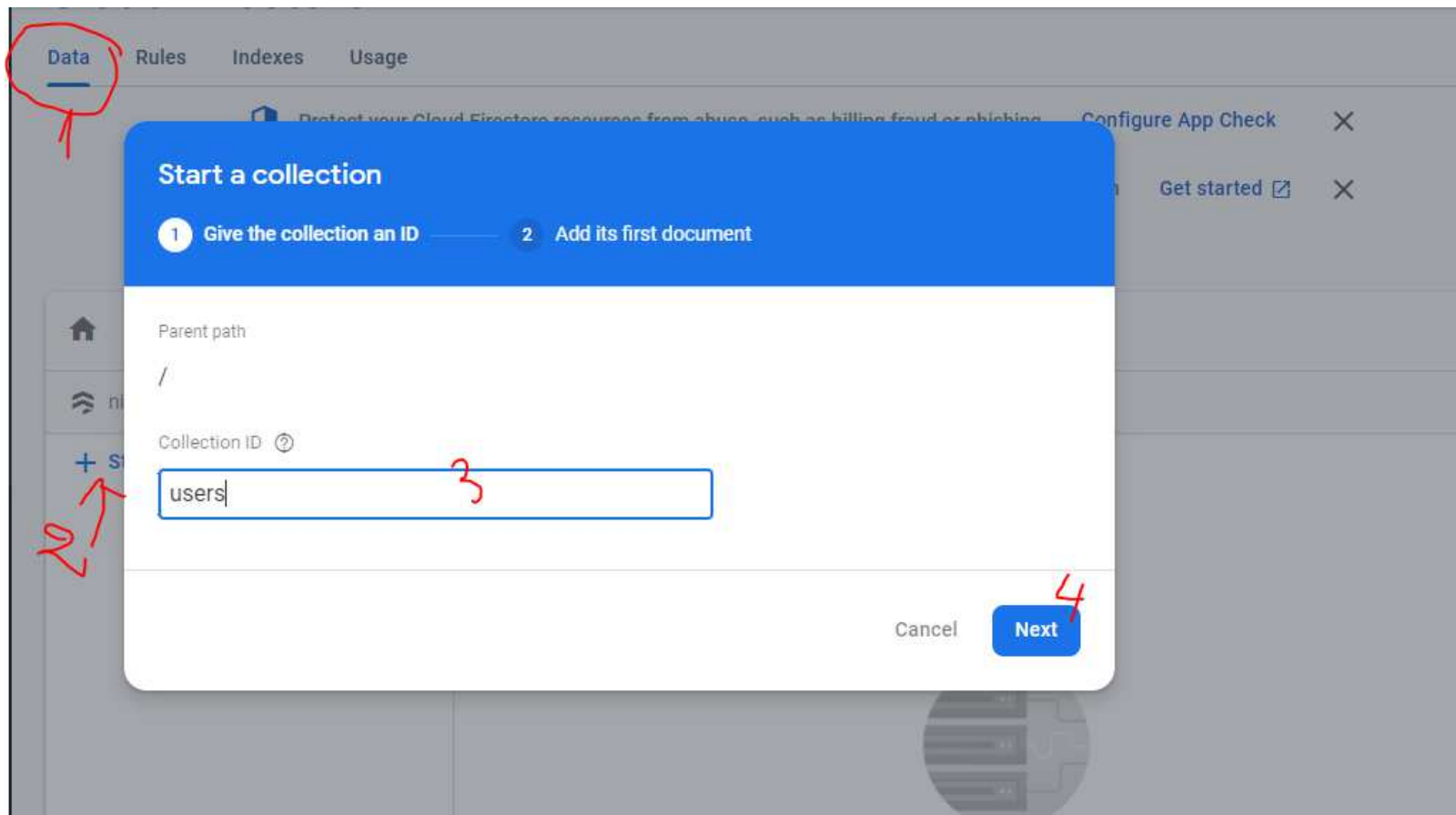
Cloud Firestore location

asia-northeast3

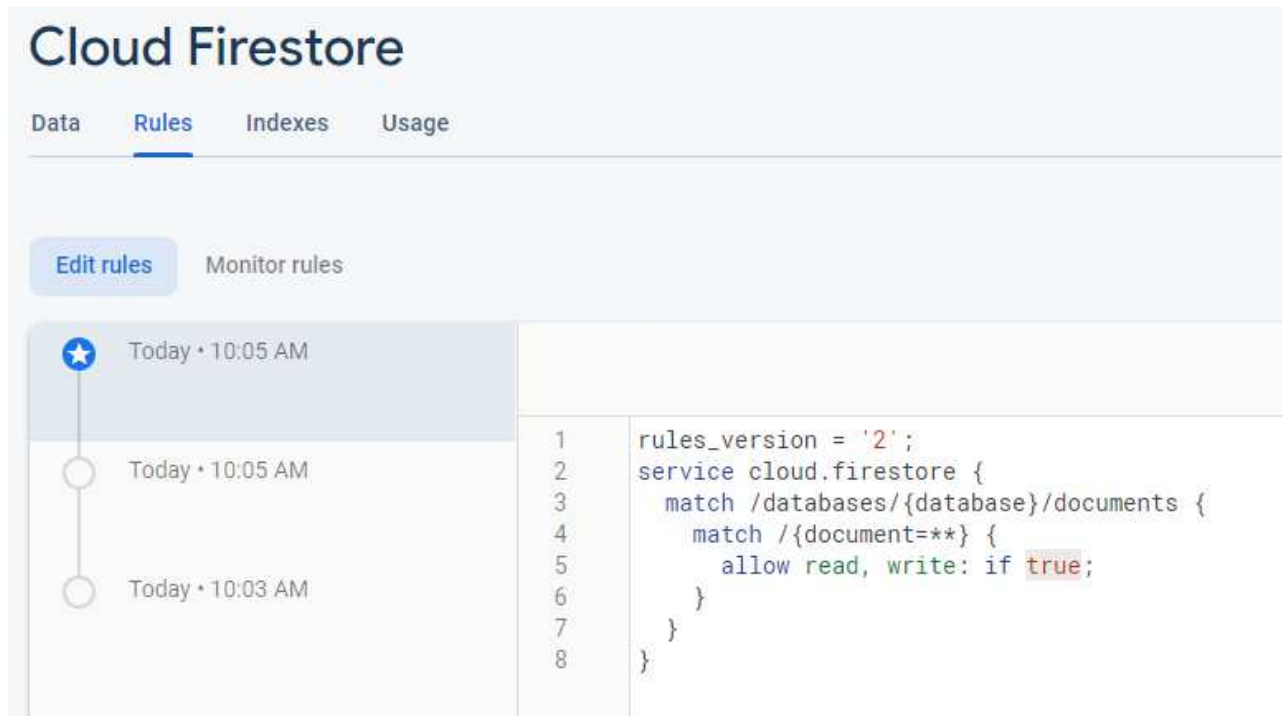
Enabling Cloud Firestore will prevent you from using Cloud Datastore with this project, notably from the associated App Engine app

Cancel **Enable**

Named a collection



- Set RULE permit change data



The screenshot shows the Google Cloud Firestore console with the 'Rules' tab selected. The 'Edit rules' button is active. On the left, a timeline shows three rule versions, all from 'Today' at 10:05 AM, with the first version being the selected one. The rule editor on the right contains the following code:

```
1 rules_version = '2';
2 service cloud.firestore {
3   match /databases/{database}/documents {
4     match /{document=**} {
5       allow read, write: if true;
6     }
7   }
8 }
```

Cloud firestore

- <https://firebase.google.com/docs/firestore>

Add a document

When you use `set()` to create a document, you must specify an ID for the document to create. For example:

[Web version 9 \(modular\)](#) [Web version 8 \(namespaced\)](#) [Swift](#) [Objective-C](#) [Java Android](#) [Kotlin+KTX Android](#) [Java](#) [More ▼](#)

★ [Learn more](#) about the tree-shakeable Web v9 modular SDK and [upgrade](#) from version 8.

```
import { doc, setDoc } from "firebase/firestore";

await setDoc(doc(db, "cities", "new-city-id"), data);
```

[cities_document_set.js](#)

Cloud firestore

- <https://firebase.google.com/docs/firestore>

Update a document

To update some fields of a document without overwriting the entire document, use the `update()` method:

Web version 9 (modular) Web version 8 (namespaced) Swift Objective-C Java Android Kotlin+KTX Android Java More ▾

★ [Learn more](#) about the tree-shakeable Web v9 modular SDK and [upgrade](#) from version 8.

```
import { doc, updateDoc } from "firebase/firestore";

const washingtonRef = doc(db, "cities", "DC");

// Set the "capital" field of the city 'DC'
await updateDoc(washingtonRef, {
  capital: true
});
```

update_document.js ↻

Cloud firestore

- <https://firebase.google.com/docs/firestore>

Delete documents

To delete a document, use the `delete()` method:

[Web version 9
\(modular\)](#) [Web version 8
\(namespaced\)](#) [Swift](#) [Objective-C](#) [Java
Android](#) [Kotlin+KTX
Android](#) [Java](#) [More ▾](#)

★ [Learn more](#) about the tree-shakeable Web v9 modular SDK and [upgrade](#) from version 8.

```
import { doc, deleteDoc } from "firebase/firestore";  
  
await deleteDoc(doc(db, "cities", "DC"));
```

[delete_document.js](#)

References

- React Native Firebase
 - <https://rnfirebase.io>
- Firebase:
 - <https://firebase.google.com/docs>

*Thank
you!*