**Cross Platform App Development Lab Experiment No.10**

**Aim**: Implementation and integration with Firebase backend and application deployment.

**Objectives**:

1. Implement Firebase backend services in an application.
2. Integrate the application with Firebase for data storage and authentication.
3. Deploy the application to a hosting service.

**Theory**:

**- Firebase Backend:**

- A cloud-based platform provided by Google.

- Offers services like real-time database, authentication, cloud functions, and more.

- Suitable for mobile and web applications.

**- Integration with Firebase:**

- Connect the application to Firebase using SDKs.

- Utilize Firebase services such as Firestore for database and Firebase Authentication for user management.

**- Application Deployment:**

- The process of making an application available for use.

- Involves hosting the application on servers accessible over the internet.

- Firebase Hosting is a common solution for web applications.

**Requirements**:

- Firebase account for backend services.

- Application codebase with Firebase SDK integrated.

- Deployment account or service for hosting.

**Tools**:

- Firebase Console for backend configuration.

- Firebase SDK for application integration.

**Implementation/Code:**

- Configuration file of firebase database

// Import the functions you need from the SDKs you need

import { initializeApp } from "firebase/app";

// TODO: Add SDKs for Firebase products that you want to use

// https://firebase.google.com/docs/web/setup#available-libraries

import {getAuth} from "firebase/auth";

import {getFirestore} from "firebase/firestore";

// Your web app's Firebase configuration

const firebaseConfig = {

  apiKey: "AIzaSyDF5ZoBL9U9u5zAa4b5J47HE6pxhFV6cIY",

  authDomain: "scrapmanagement-2f0ae.firebaseapp.com",

  projectId: "scrapmanagement-2f0ae",

  storageBucket: "scrapmanagement-2f0ae.appspot.com",

  messagingSenderId: "61024284114",

  appId: "1:61024284114:web:9db9ab612a04c79b6dac0b"

};

// Initialize Firebase

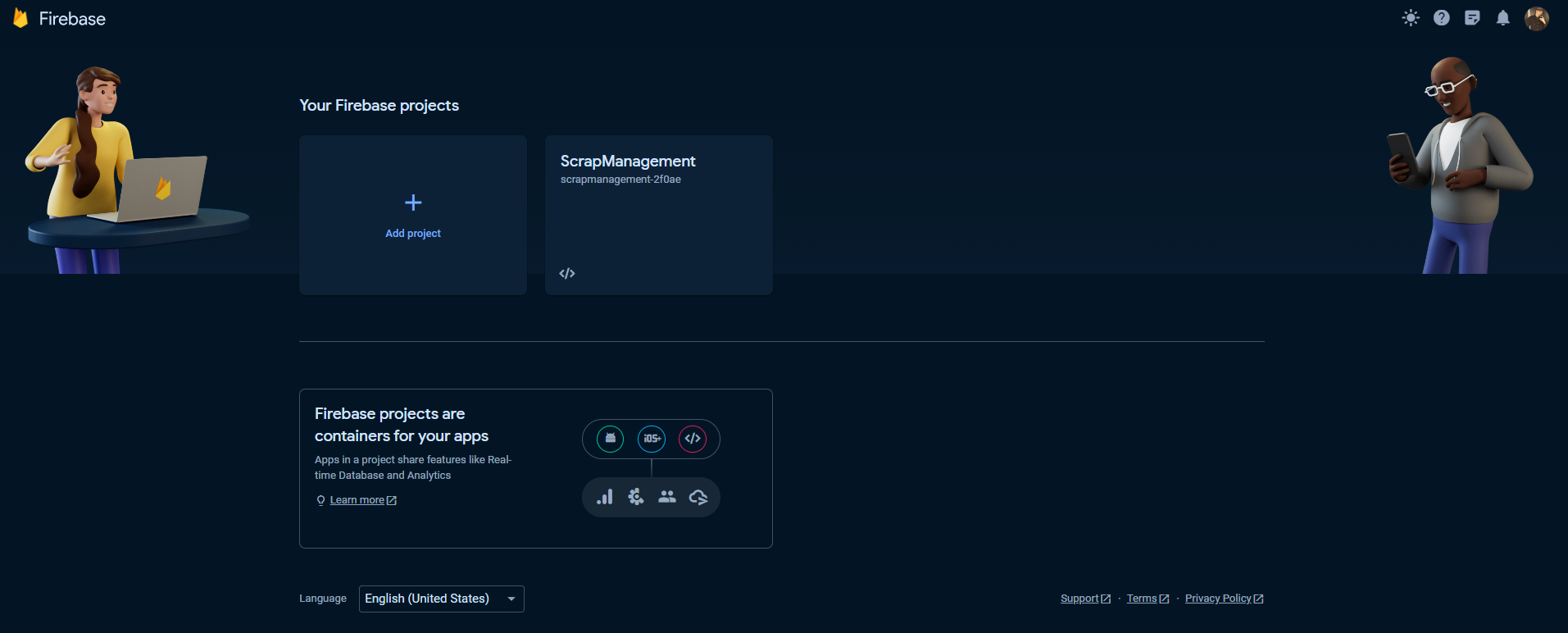
const app = initializeApp(firebaseConfig);

const auth = getAuth(app);

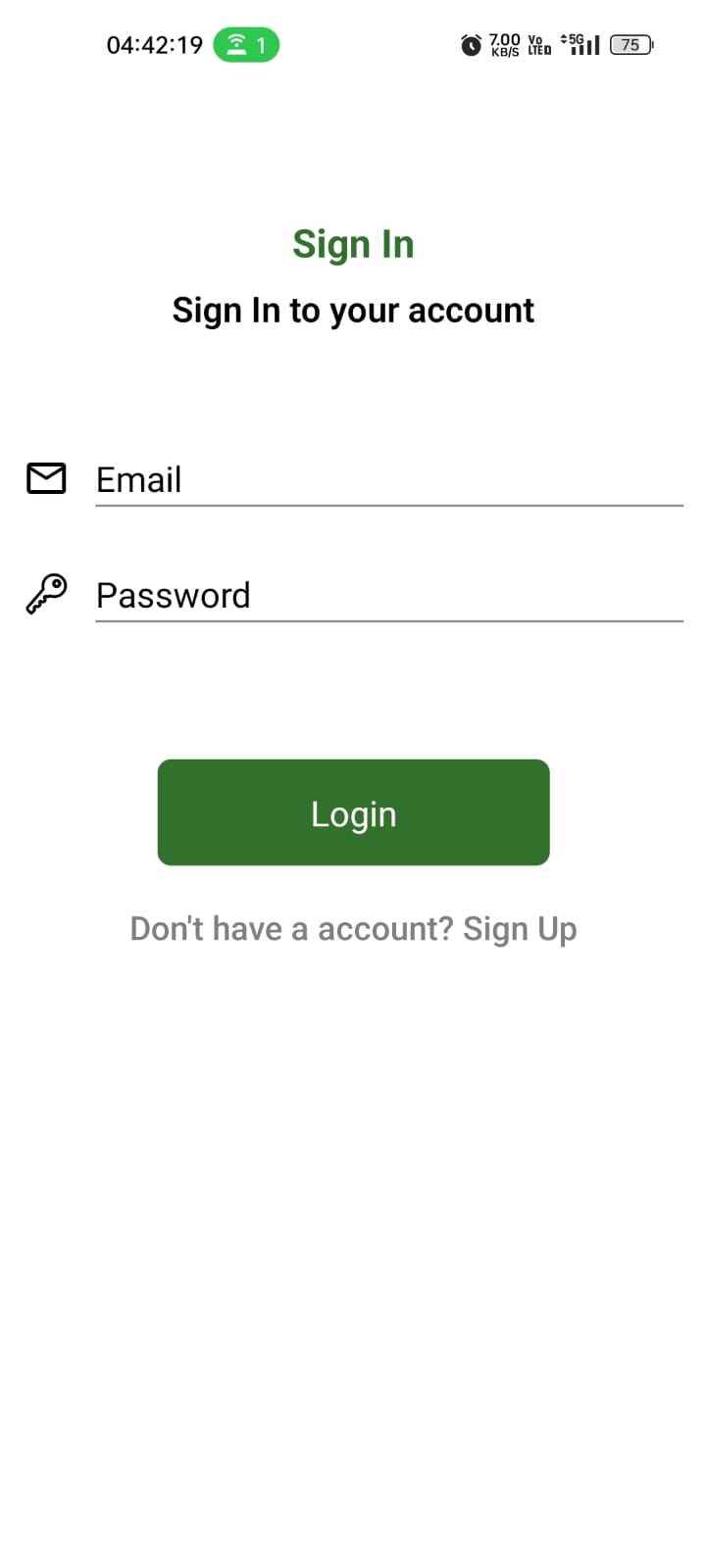
const db = getFirestore();

export {auth,db};

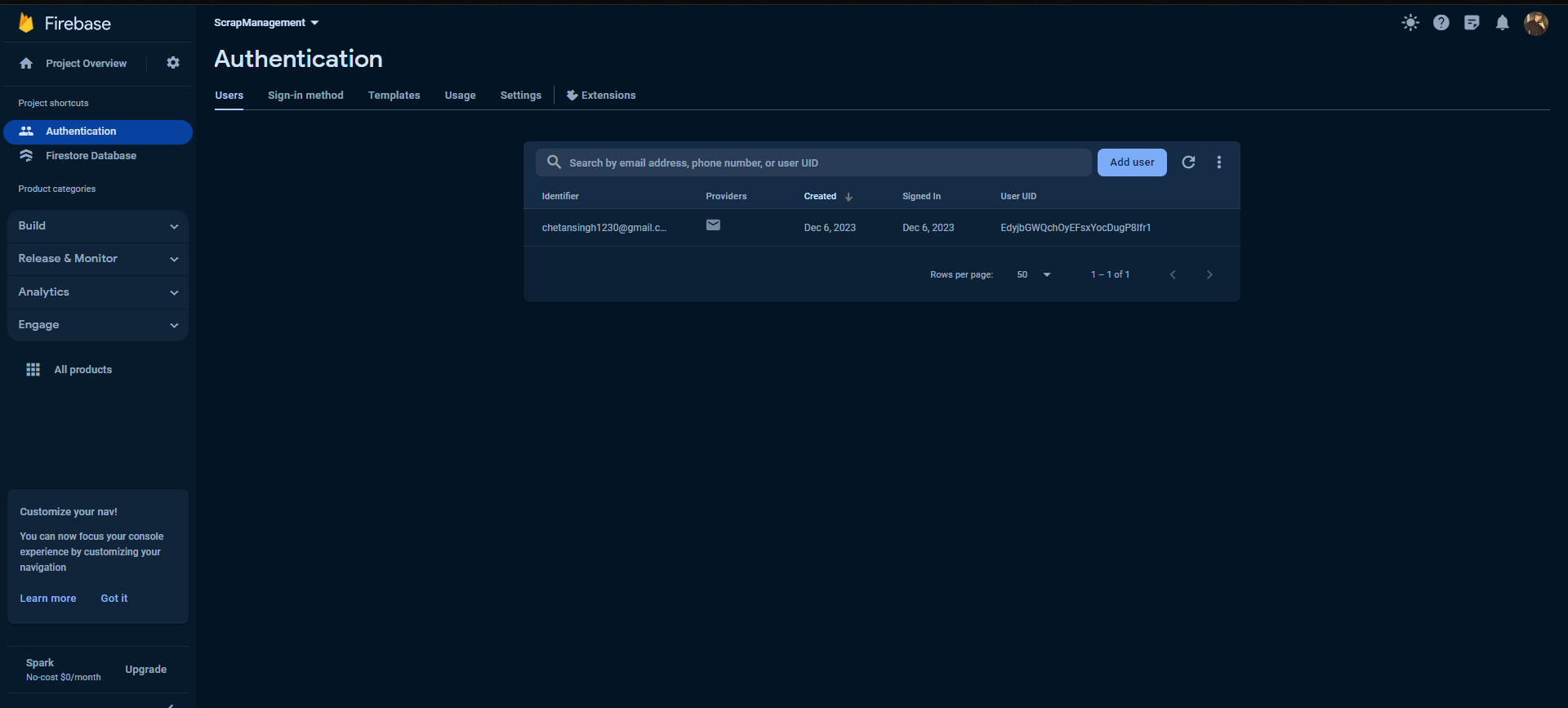
- Firebase console Interface for creating database.



- All user’s data is stored in stored in firebase database. (Like Login)



- User data stored in firebase



**Conclusion:**

We learnt to successfully implement and integrating Firebase backend services, we create a scalable and accessible solution with features like real-time data storage and user authentication.

**References:**

1. **Firebase Documentation:** https://firebase.google.com/docshttps://firebase.google.com/docs
2. **Firebase Hosting Documentation**: <https://firebase.google.com/docs/hosting>

https://firebase.google.com/docs/hosting