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.

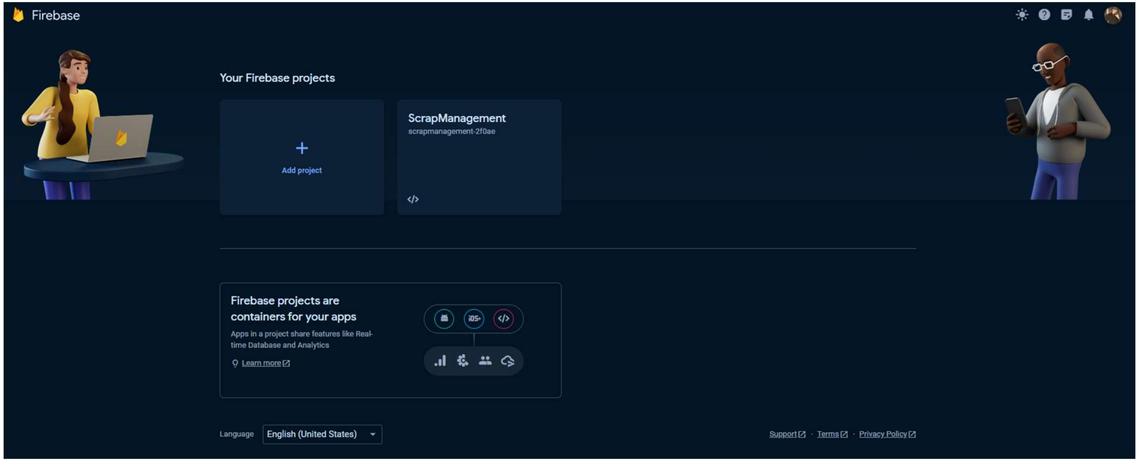
Implementation/Code:

- 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.



Your Firebase projects

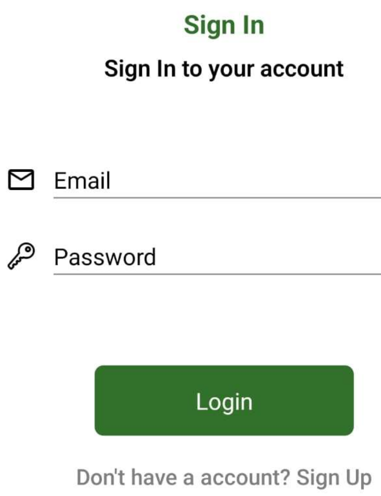
ScrapManagement
scrapmanagement-2f0ae

Firebase projects are containers for your apps

Apps in a project share features like Real-time Database and Analytics

Language: English (United States)

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



Sign In

Sign In to your account

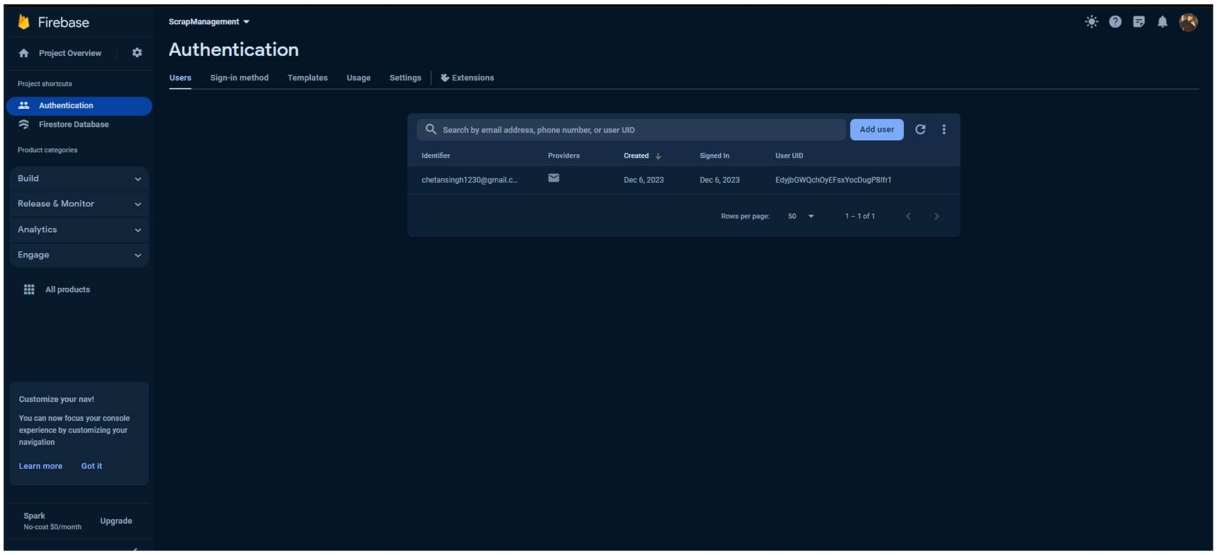
Email

Password

Login

Don't have a account? Sign Up

- User data stored in firebase



Identifier	Providers	Created ↓	Signed In	User UID
chetansingh1230@gmail.c...	✉	Dec 6, 2023	Dec 6, 2023	EdyjbGWQchOyEFsxYocDugP8Ifr1

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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