React Native Firebase Authentication

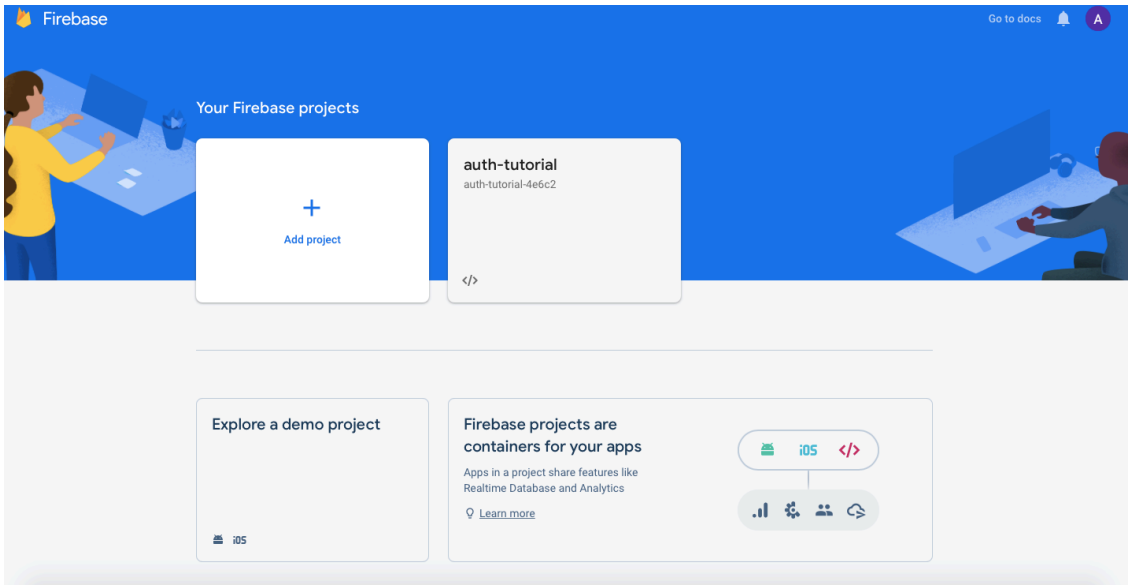
What is Firebase?

Firebase is a Cloud-hosted, NoSQL database which lets you store and synchronize data in real-time among users and is built on the Google infrastructure. In addition to standard NoSQL database functionality, Firebase includes analytics, authentication, performance monitoring, messaging, crash reporting etc. Because it is a Google product, there is also integration into a lot of other products such as the Play Store, Data Studio.

How to use Firebase?

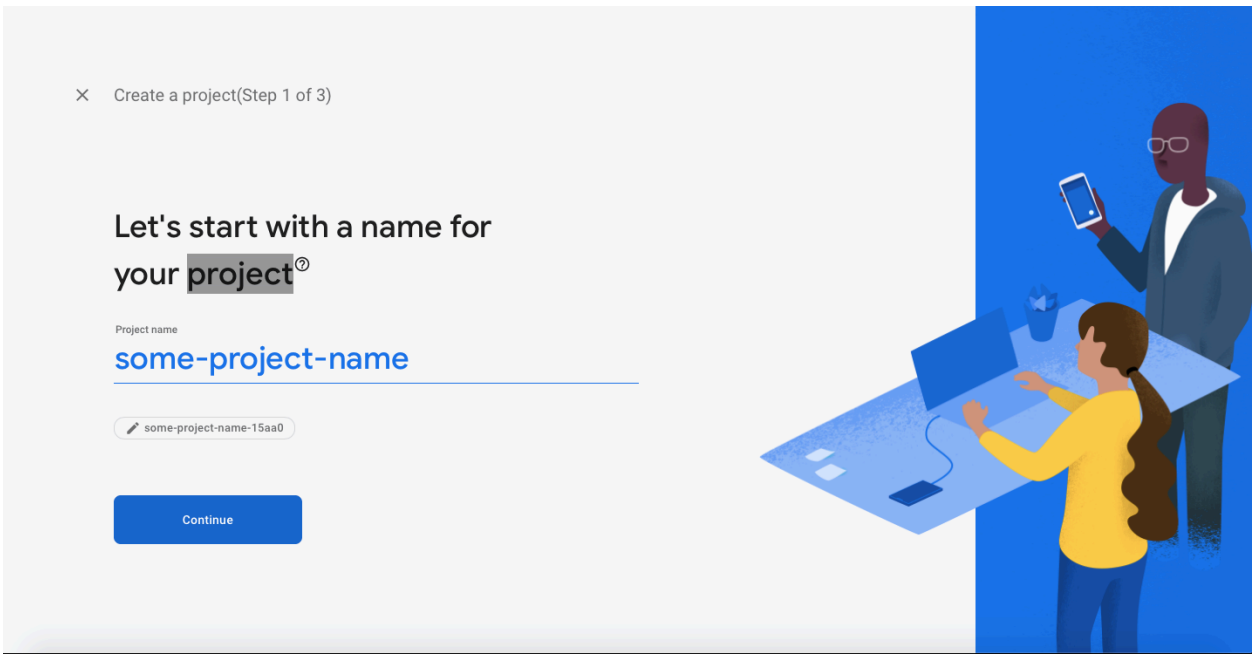
To use the authentication feature of Firebase follow the next steps where the new project is created on already signed in account:

1. As soon as you sign in to your google account, you are presented with page where there is an option "Add project". Click on it and move to the next page.

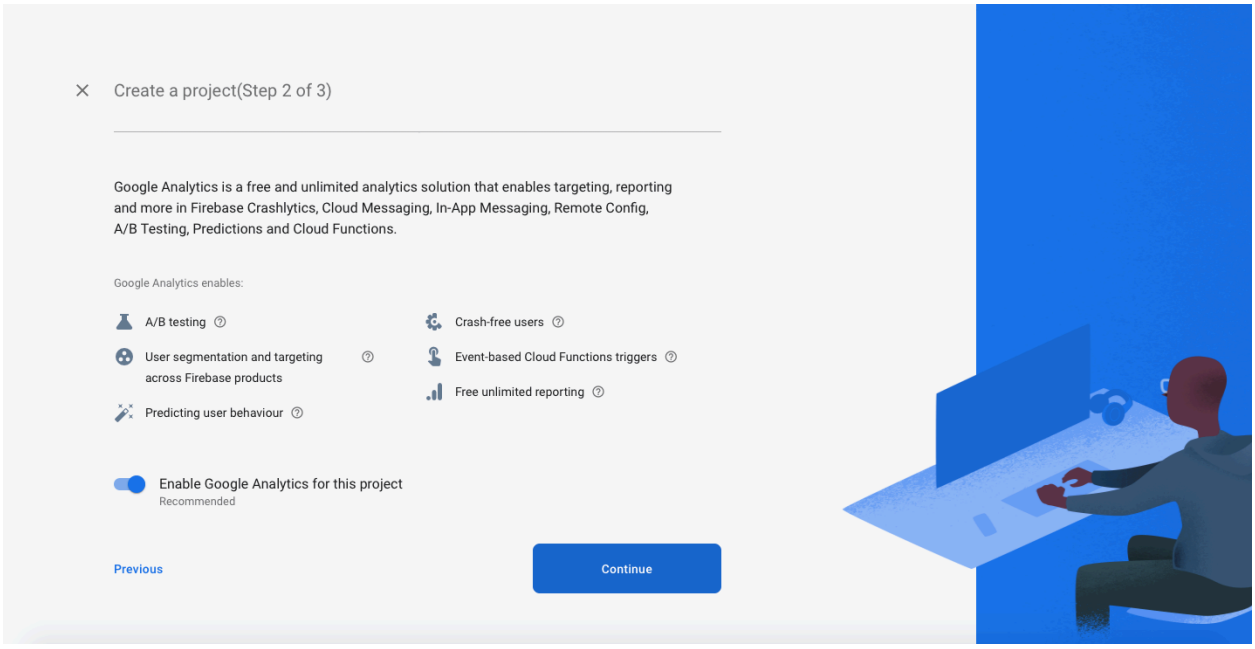


Step 1

2. In second page, write the name of project that you are creating press Continue (Step 2(a)). In following page review the information about Google Analytics and press Continue (Step 2(b)).

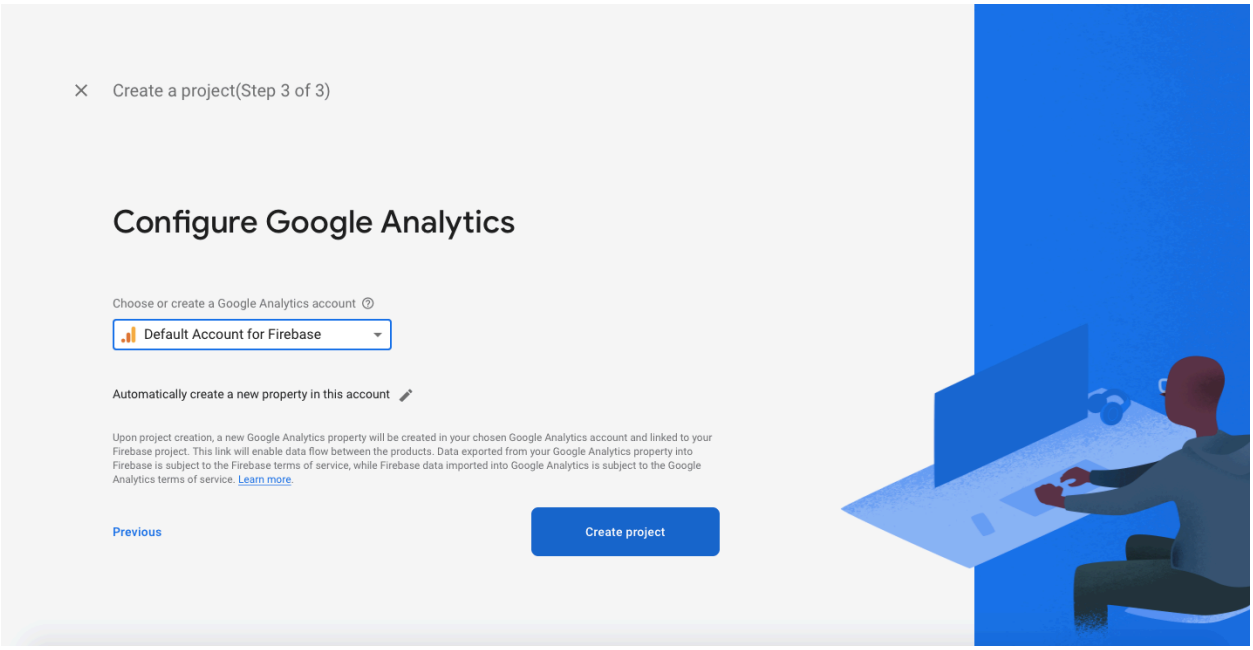


Step 2 (a)

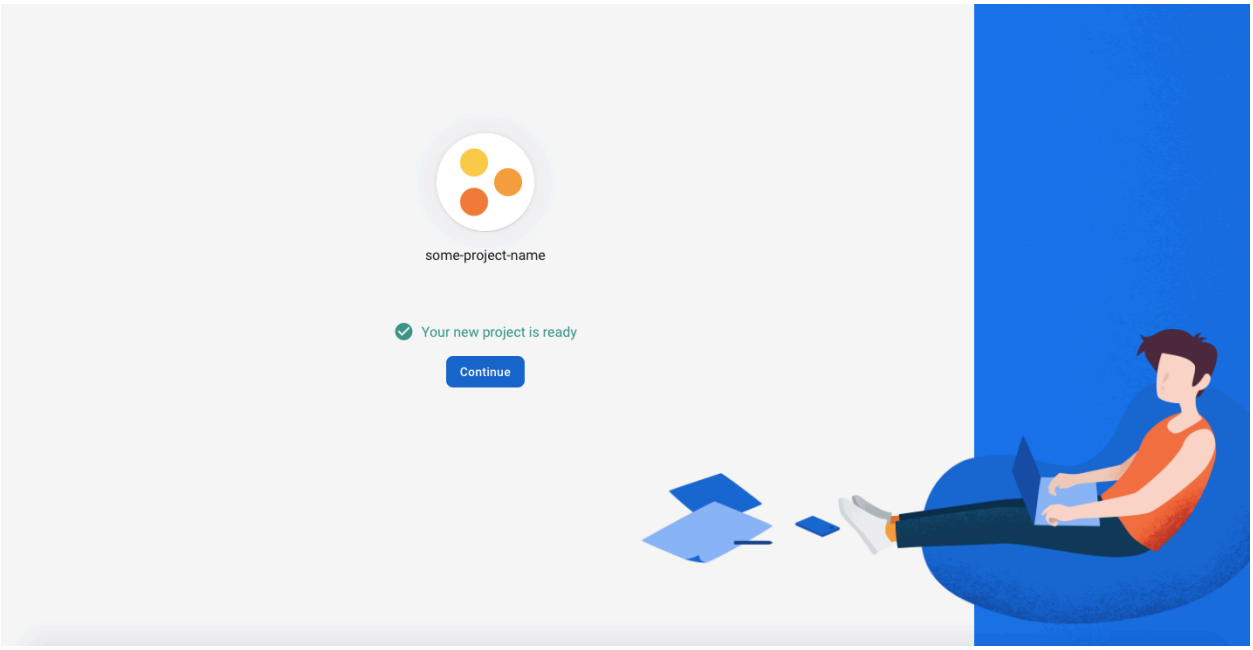


Step 2 (b)

3. Next, in dropbox field choose “Default Account for Firebase” and press Continue (Step 3(a)). Then, it will be required to wait a little to let the cloud create the project. In the following step, press Continue (Step 3(b)).

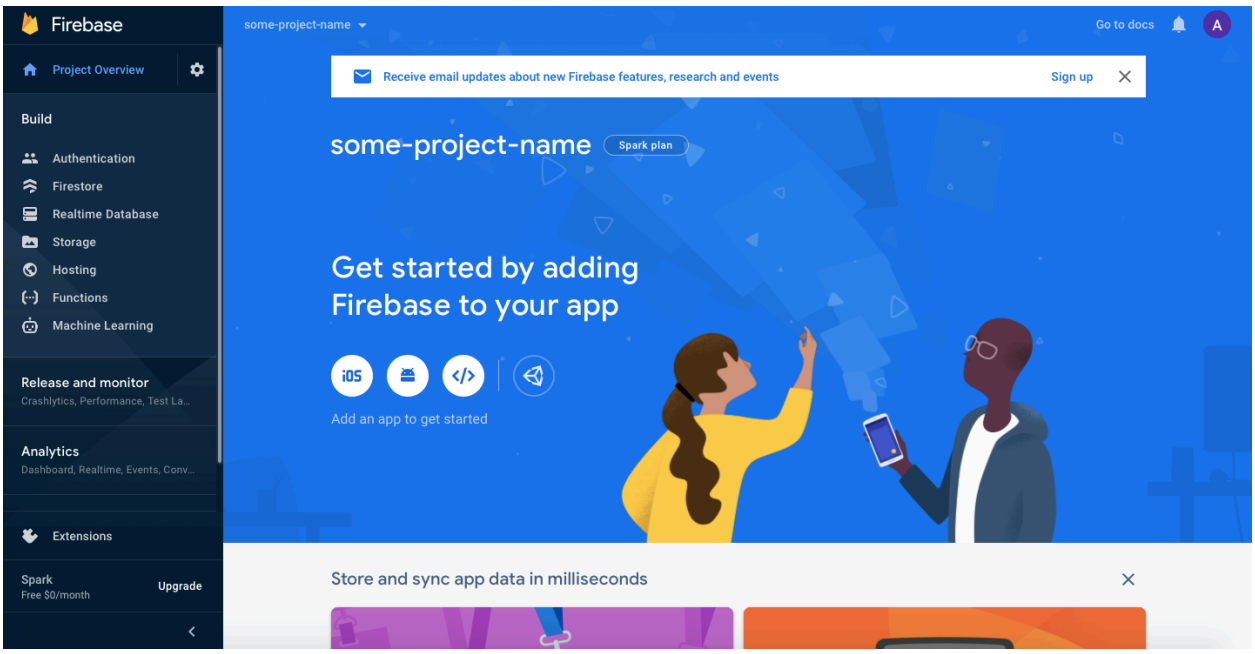


Step 3(a)

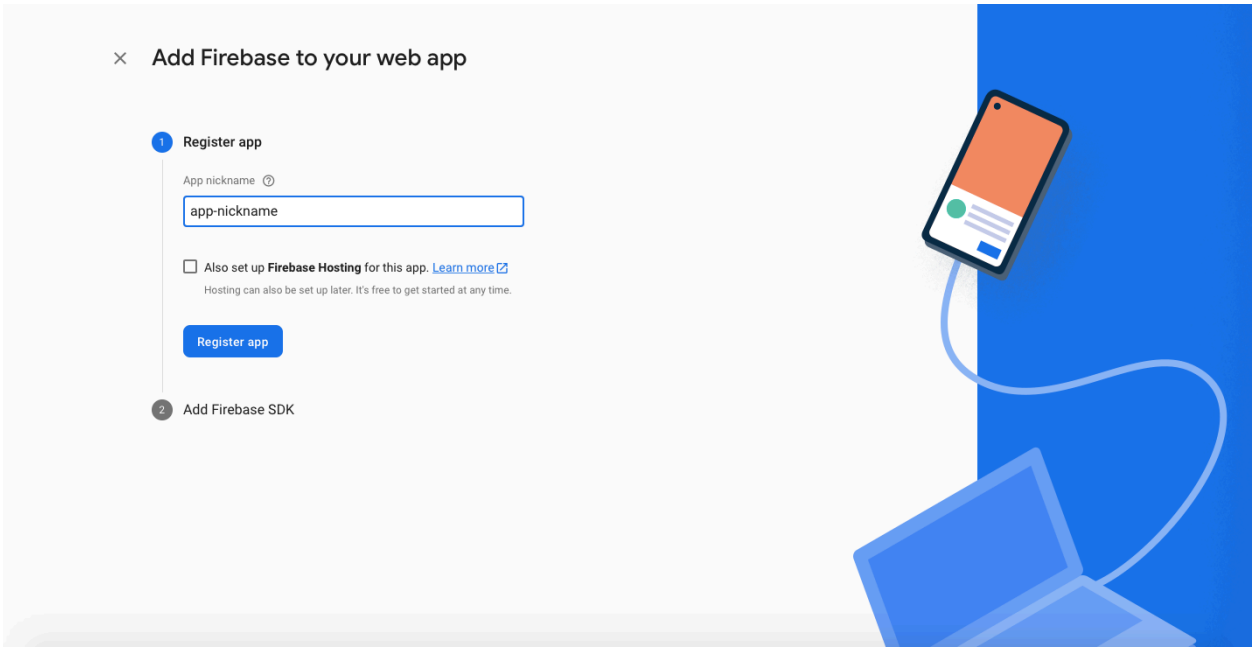


Step 3(b)

4. Once the project is created, you can jump to the configuration of database. In opened page you can see three options (IOS, Android and Web). Click on "Web" icon (Step 4(a)) and you will be forwarded to the page where you should register your app and add nickname to it (Step(b)). Press Register.



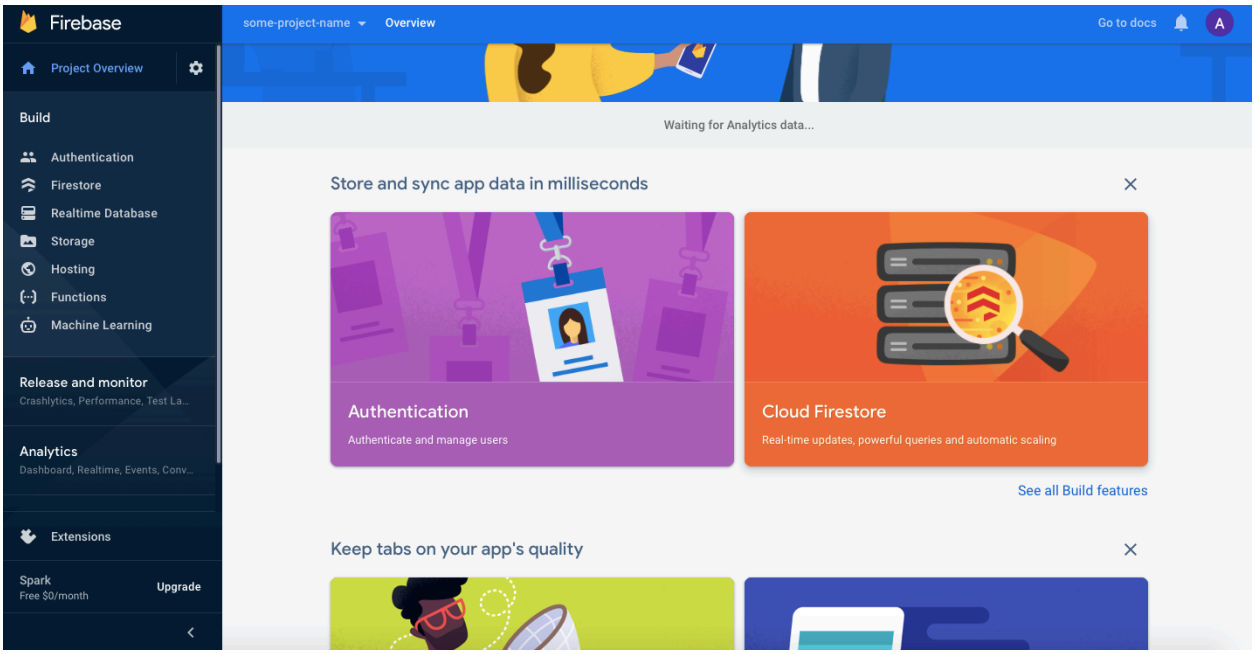
Step 4(a)



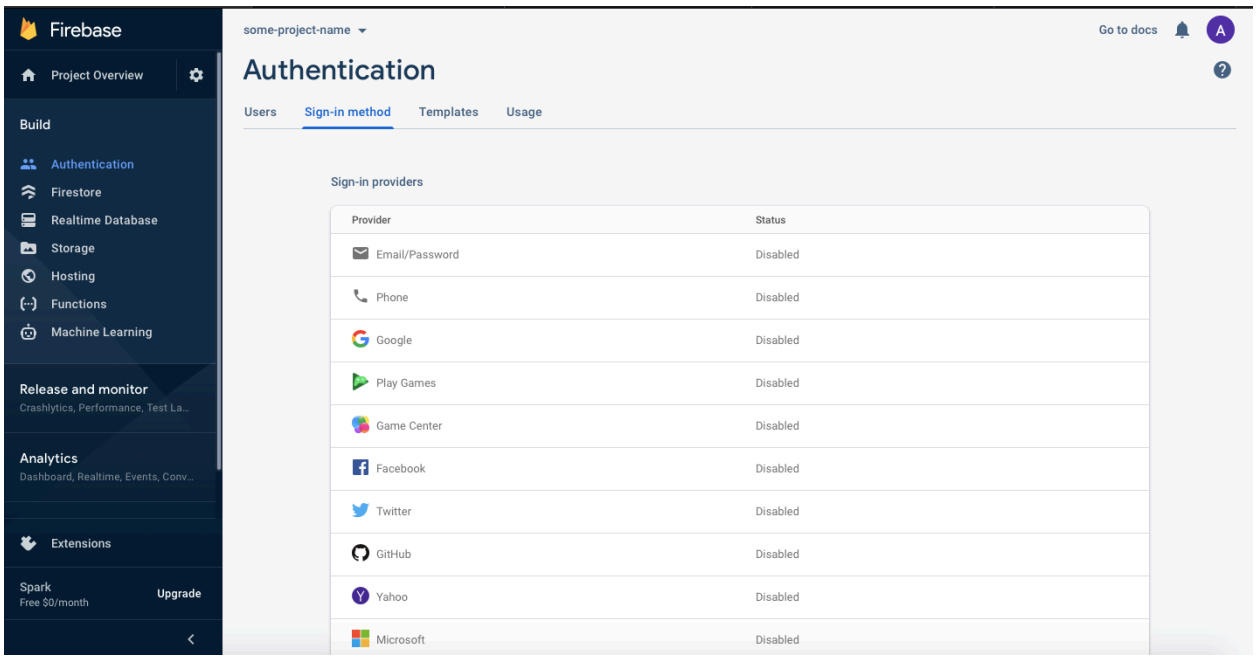
Step 4(b)

5. Copy the firebaseConfig to your configuration page in code (it will be shown in following pages).

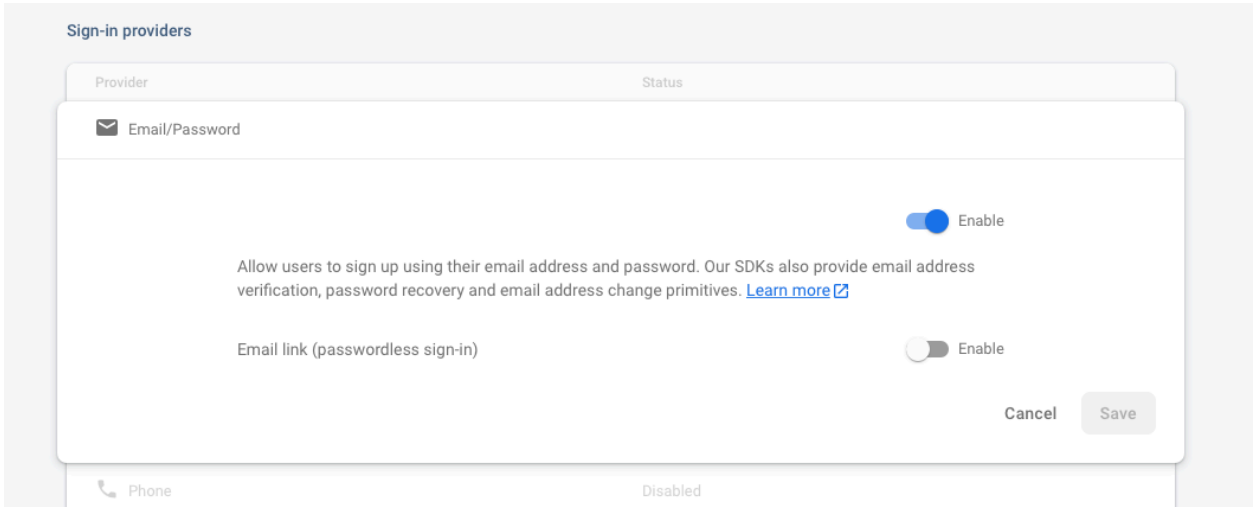
6. Press on continue to console:



7. Choose “Authentication” (Step 6) and in opened page click on “Email/Password” option (Step 7(a)). Then, enable upper icon of two disabled ones (Step 7(b)). Now we have our authentication option of Firebase database working.

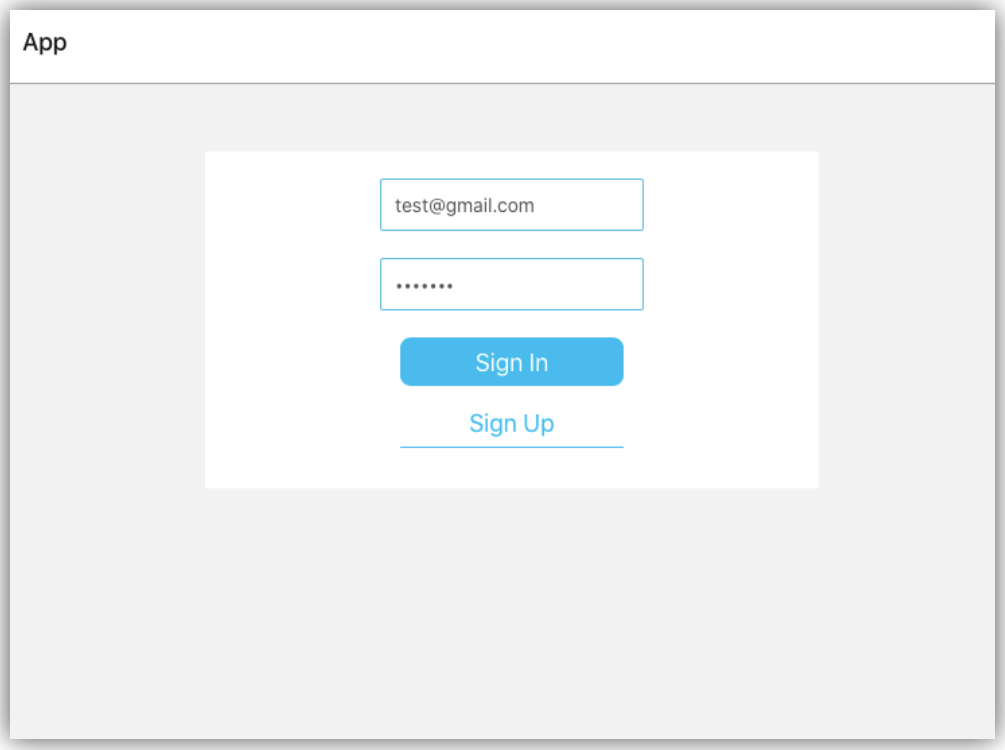


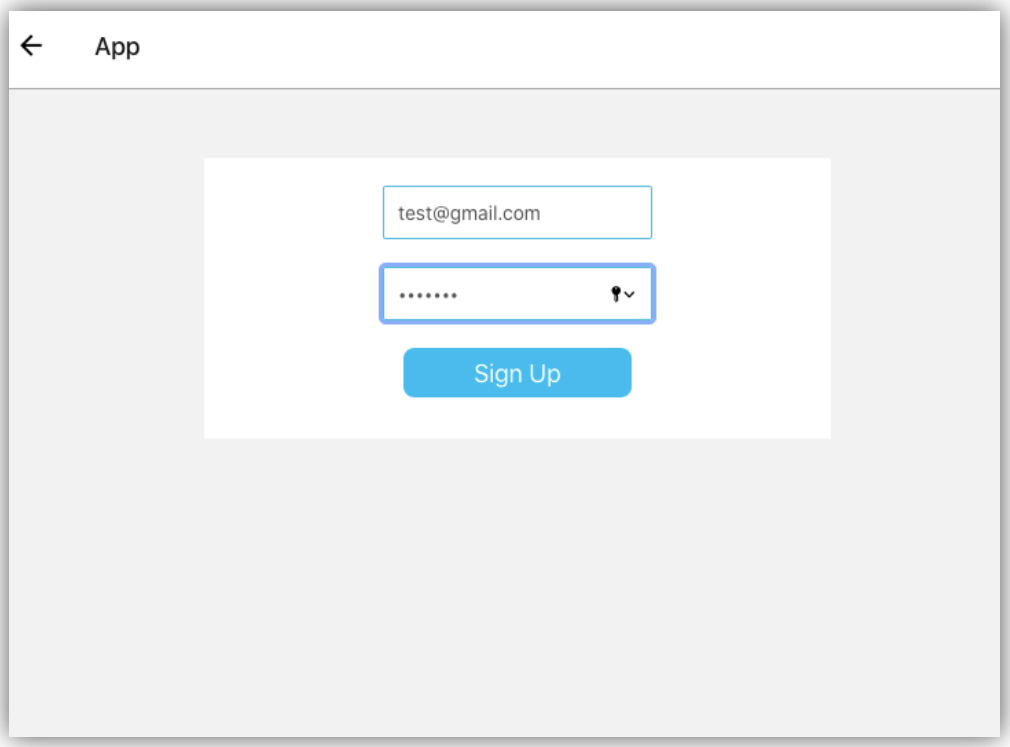
Step 7(a)



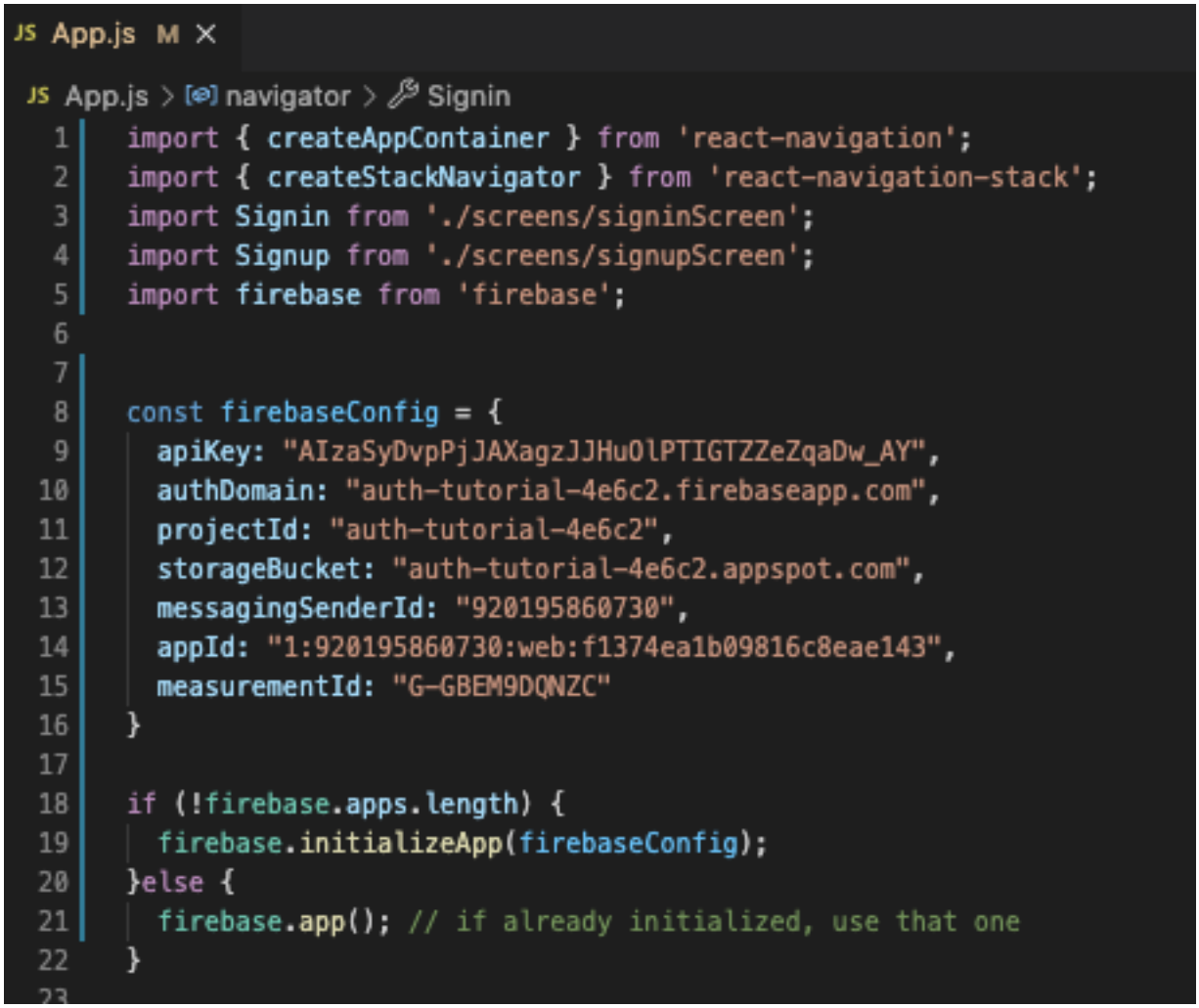
Step 7(b)

Create “Sign In” and “Sign Up” options
using Firebase authentication and React Native.





In order to create above app, first it's necessary to install firebase to react app by running "npm install firebase". Once it's installed copy and paste above mentioned firebaseConfig to our App.js file where we configure our database connection and routes between sign in and sign up pages:



Sign Up

Using the ***createUserWithEmailAndPassword()*** method, we create a new user and save its credentials:

```
signUp = (email, password)=>{
  if(this.state.password.length < 6){
    alert("Password should be at least 6 characters")
    return;
  }
  firebase.auth().createUserWithEmailAndPassword(email, password);
  alert("Account was created")
}
```

To call the created signUp function we assign it to onPress in TouchableOpacity:

```
<TouchableOpacity
        onPress = {()=> this.signUp(this.state.email, this.state.password)}
        style = {styles.button}
    >
        <Text style={styles.buttonText}>Sign Up</Text>
    </TouchableOpacity>
```

Sign In

Method ***signInWithEmailAndPassword()*** of the FirebaseAuth instance is used to log in the user:

```
signIn = (email, password)=>{
  firebase.auth().signInWithEmailAndPassword(email, password)
  .then(function(user){
    if(user){
      console.log("logged in");
    }
  }
  )
}
```

To call the created signIn function we assign it to onPress in TouchableOpacity:

```
<TouchableOpacity
        onPress = {()=> this.signIn(this.state.email, this.state.password)}
        style = {styles.buttonI}
    >
        <Text style={styles.buttonText}>Sign In</Text>
    </TouchableOpacity>
```

To prove that the user was actually created, it's possible to view the registered users in firebase web interface: