

Firebase

The main goal for these exercises is to try out some of the functionality that Firebase offers.

Setup

- 1) Create an account at <https://firebase.google.com> (If you have a Google account, then you also have an account for firebase).
- 2) Create a new Firebase project – Give it a name of your choice.
- 3) Create a web application (either with Visual Studio, your favorite Web IDE or just simply make a index.html and a script.js file)

User management

Create user

- 1) Make use of your firebase account by adding the needed initialization information inside your JavaScript file. (<https://firebase.google.com> has these information for you, so it is pretty much just copy & paste).
- 2) Make the HTML for two input fields. One for a username and one for a password. Also make a button for a create function.
- 3) In your JavaScript file, create the functionality to create a user in Firebase.
- 4) Test that your function is working by creating a user and check that the user is in your firebase project.

User Login

- 1) Make the HTML for two input fields. One for a username and one for a password. Also make a button for login function.
- 2) In your JavaScript, make the needed functionality to login with username and password.
- 3) Test that your function is working by try to login with a user that is created in your project.

Database

Firebase provides us with two databases. Both are document databases, but we will concentrate on the Firebase Real-time database for now, since the other one is in Beta state at the moment.

Receive data (1)

First we wish to read just a single value. Since Firebase is real-time database, we will be setting an event listener, so when every the value changes an event will accrue.

- 1) In your JavaScript code, make a reference to a value (of your choice) in your Firebase database.
- 2) Go to the firebase console, and insert/change the value to where the reference is listening and see the value being changed on your website.

Insert data (1)

- 1) Make an input field and a button in your html.

- 2) In your JavaScript, make the code to it inserts the value from the input field into your firebase database (make it write/update the field in firebase that you already have a listener that is listening to.)
- 3) Test your work by typing in some data to the field you created and see that it is updating your site when you are pressing the button.

Insert data (2)

- 1) Add an additional set of input field a button to your html.
- 2) In your JavaScript, make it so that this input field inserts (pushes) a new child object to the Firebase database (not just updates a path).
- 3) Test your solution by inserting data to your new input field and see that your data is being pushed to the Firebase database.

Receive data (2)

- 1) In your JavaScript file, make an event listener, which refers to the path in your Firebase database that contains all the children you are pushing. Make it so that it either prints out the data to the console log, or make it show in the html.
- 2) Test your solution by pushing new data from your website and see it being received by your listener.