Web Programming

Laboratory work #4

QUIZ APP

Author:
Mamaliga Dumitras
std. gr. FAF-191

Supervisor:
Alexei Șerșun

Chișinău 2022

1 Task

Your task for this lab is:

- Pick a front-end framework;

- Modify them to build an application for to-not-do list;

- Create a web app that has the following functions:

  - shows a landing page with different quizzes;

  - the user can pick a quiz and play it;

  - after the game has ended, the user can see their score. (how?).

- The app should have attractive UI;

- Consume Quiz API to fetch data from back-end server.

2 Results

I developed this laboratory with ReactJS and CSS. Firstly I downloaded postman in order to study the API and see its structure. After that I created an access token which allowed me to make requests regarding the users and quizzes. After visualizing the application in my head and using a little figma I started developing it in React and build the core components and pages. In order to make this app multi-page I used react-router which allowed me to create different paths for pages and navigate through them. For requests I used Axios.
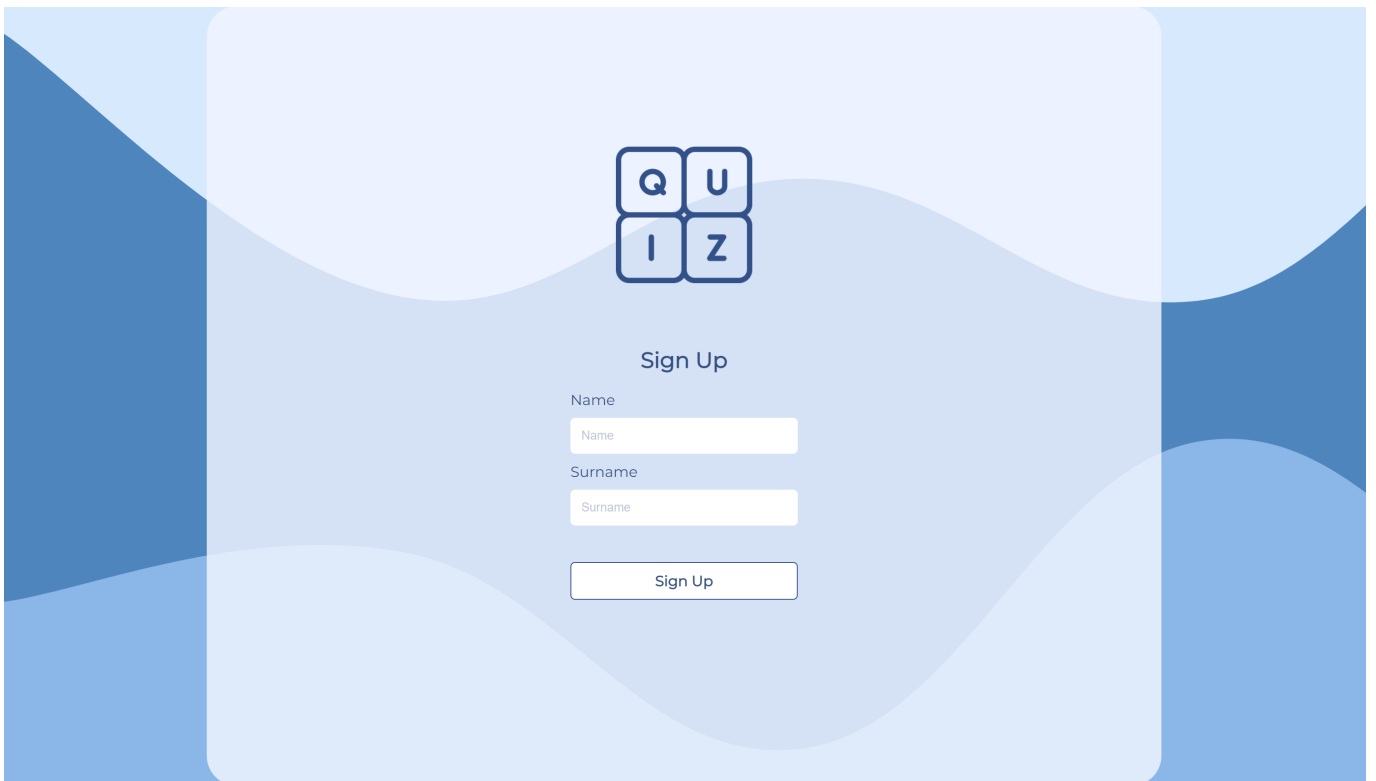
In the Signup.js component I created users and saved in local storage the information about them(name, surname, id), then I created 3 quizzes about HTML, CSS, JS which I get in the landing page so the user can select and play them. In the landing page when the user clicks on a quiz I save its ID in local storage and then navigate to /quiz where the quiz starts. Before the quiz starts I make a get request to the API with the ID of the quiz from local storage and I get a response with all the information about the questions and answers which I render on the screen. Every time a user answers a question I send a post request to the API with the answer selected, quiz id and user id and I get a response which tells me if the user answered correctly. This information I save in an array which I use at the end when calculating the score. When the user answers the last question I set the state of showScore to true and I render the score which I calculated in a function based on the array length and true elements.

I implemented all the basic logic for the app:

- viewing a list of quizzes

- viewing a single quiz

- creating a user (and storing its ID somewhere)

- playing a quiz for a user

- submitting the responses out of the list (multiple choice)

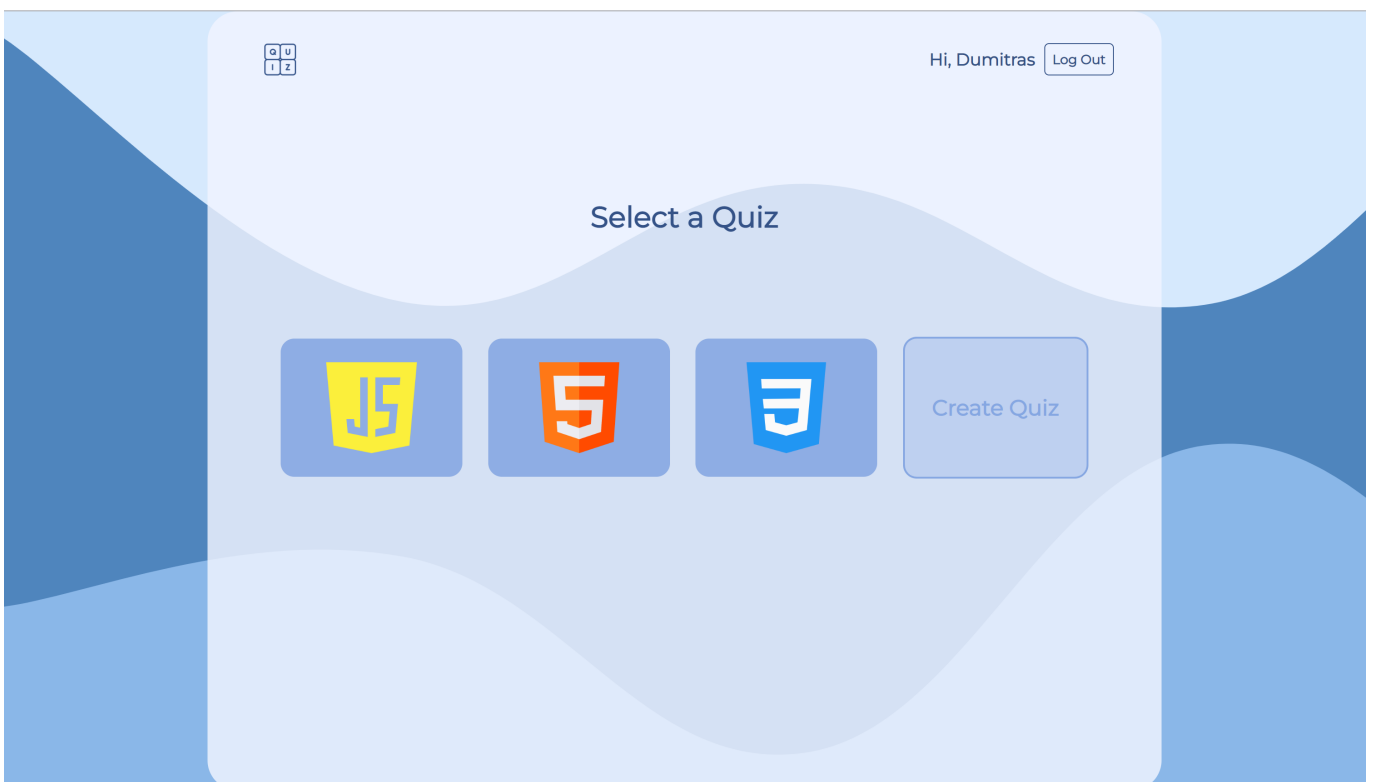- showing the total score

- background music

Below you can see some examples of the app.
This is the Sign up page where I create the user using these inputs.
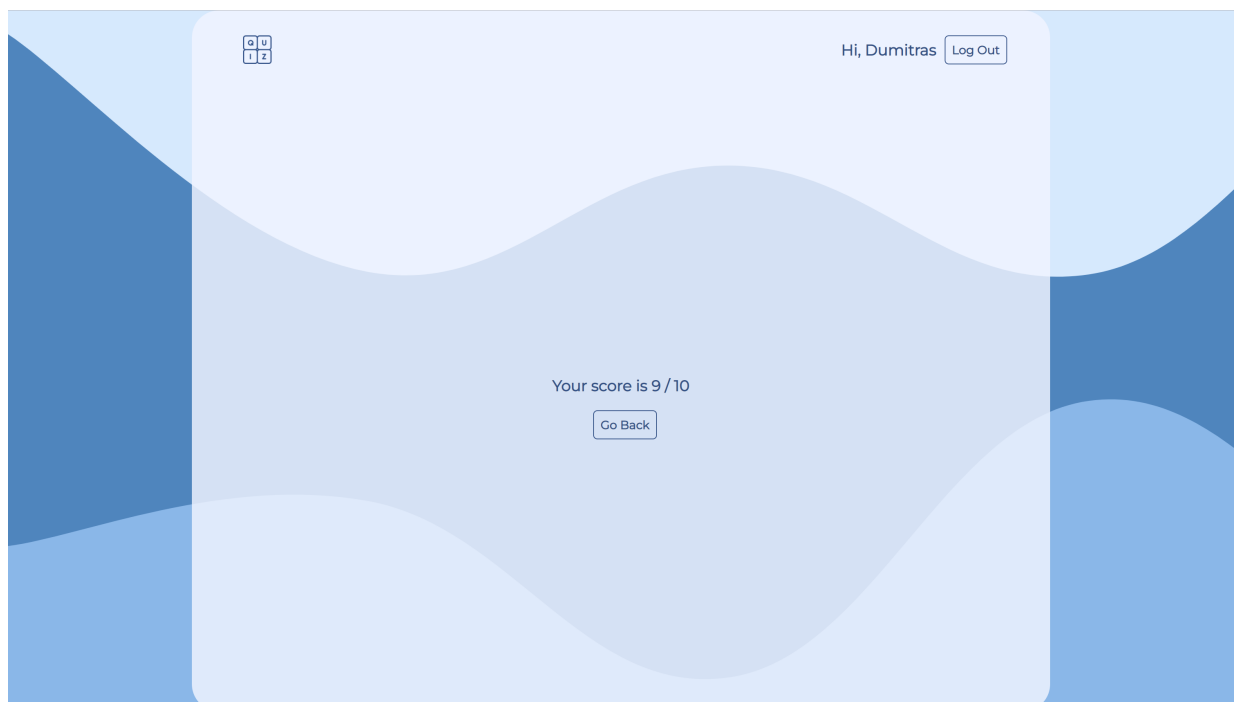

Here is the landing page with all the quizzes. Also I have a nav-bar with the logo which takes you to the landing page, a welcome message with the users name and a logout button which takes you to the sign up page.

After clicking on any quiz the specific quiz starts, showing the question number,title and four answers.

After finishing the quiz user gets this message with his score for this specific quiz.

3 Conclusion

After implementing this laboratory work, I learned how to develop a multi-page app with React JS. I learned about functional components and different hooks like use state and effect. Also I learned about conditional rendering, how to use an API and make http requests with axios. I think that by doing this laboratory work I gained a lot of valuable information and experience about React JS and API's and the process of developing React JS front-end.

Git Repository: `https://github.com/Dunitrashuk/Lab4_PW`