Book-Directory

1. Introduction

For my project I would like to implement a simple idea, so that I can learn the best way possible. I think of doing a book directory, with a small list of books and authors. Maybe the Website would also include some Bestseller lists and the best books of the week. It could be a good starting point for learning about NodeJS and MongoDB and express.

Some features would be:

- A home page
- Every user has a list of books he likes, that only he can see. He can add, delete and modify the books
- Depending on which book you click, it will show you its details.
- MongoDB database

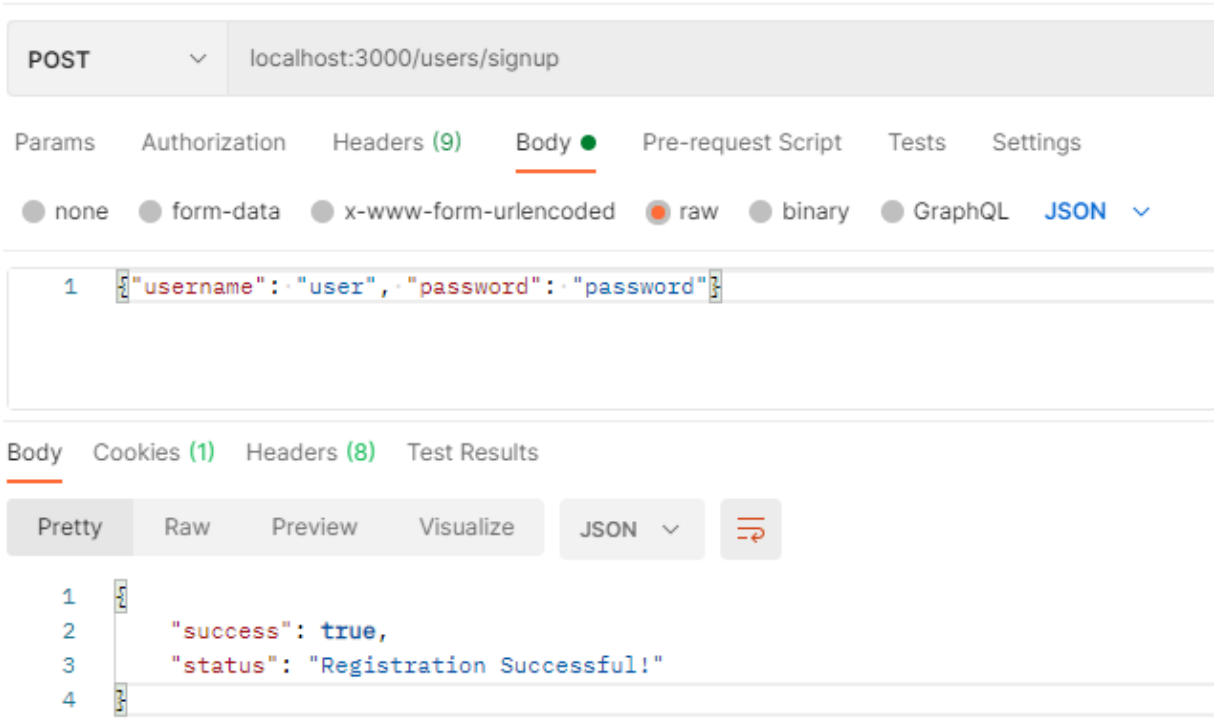
```
var bookSchema = new Schema({
    title:  {
        type: string,
        required: true
    },
    author:  {
        type: String,
        required: true
    },
    image: {
        type: String,
        required: true
    },
    description: {
        type: string,
        required: true
    },
    publishingCompany: {
        type: string,
        required: false
    },
    year: {
        type: string,
        required: true
    },
    isbn: {
        type: Number,
        required: true,
        unique: true
    }
}, {
    timestamps: true
});
```

2. Design and Implementation

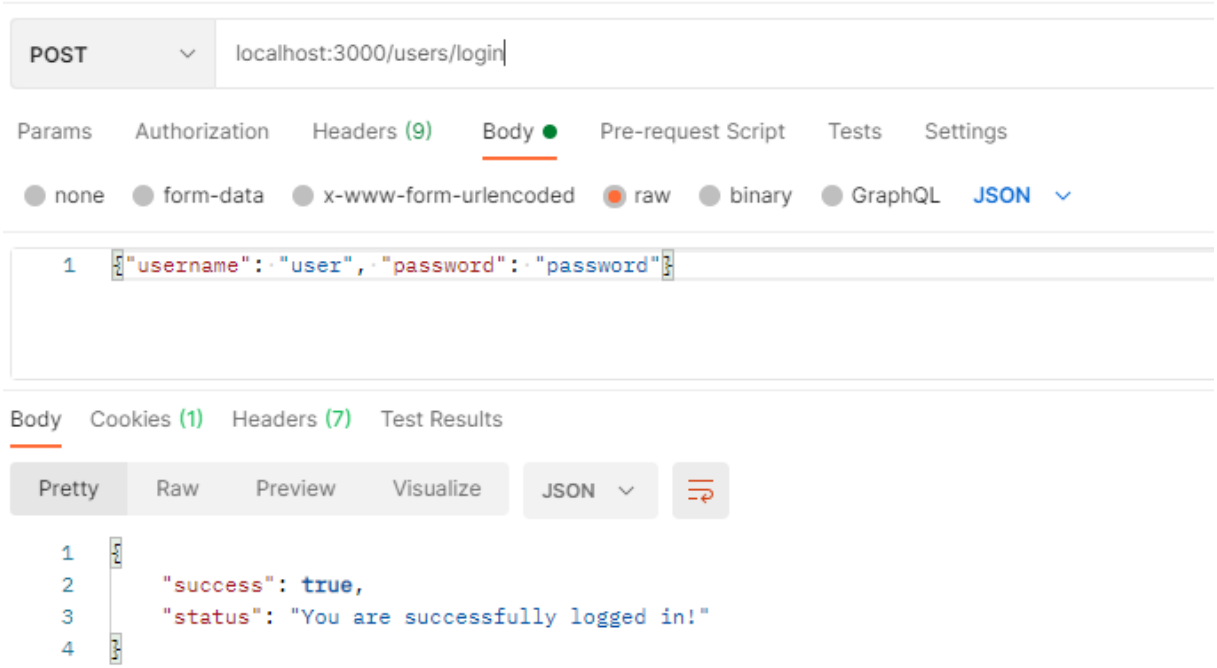
First I created two simple html files: “index.html” and “favoritelist.html”. In this honor I won’t concentrate on the Design as in the last two honors, because this is about the server-side development.
I went on by generating an Express application using the express-generator (“honorsServer”). I then implemented a REST API and created a “bookRouter” in my “routes” folder within the Express application and included it in the app.js.
I created a schema for the book.
Furthermore I set up the MongoDB database and connected to it.
In the “bookRouter” file I then handle all my requests. As mentioned before the operations: GET, POST and DELETE are supported on “/books”. This is important to add and delete books.
Additionally I added a db.json file, which contains sample books to add.

I also decided to add user authentication with passport. So now it supports signup, login and logout.

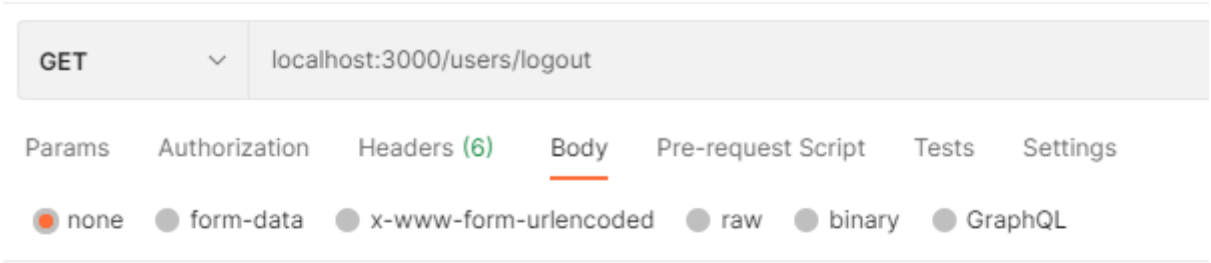
Down below we can see, how a user is successfully signed up. A logged in user can now add, delete and get the book list. As soon as he signs out, he is not authorized anymore to GET, POST or DELETE.

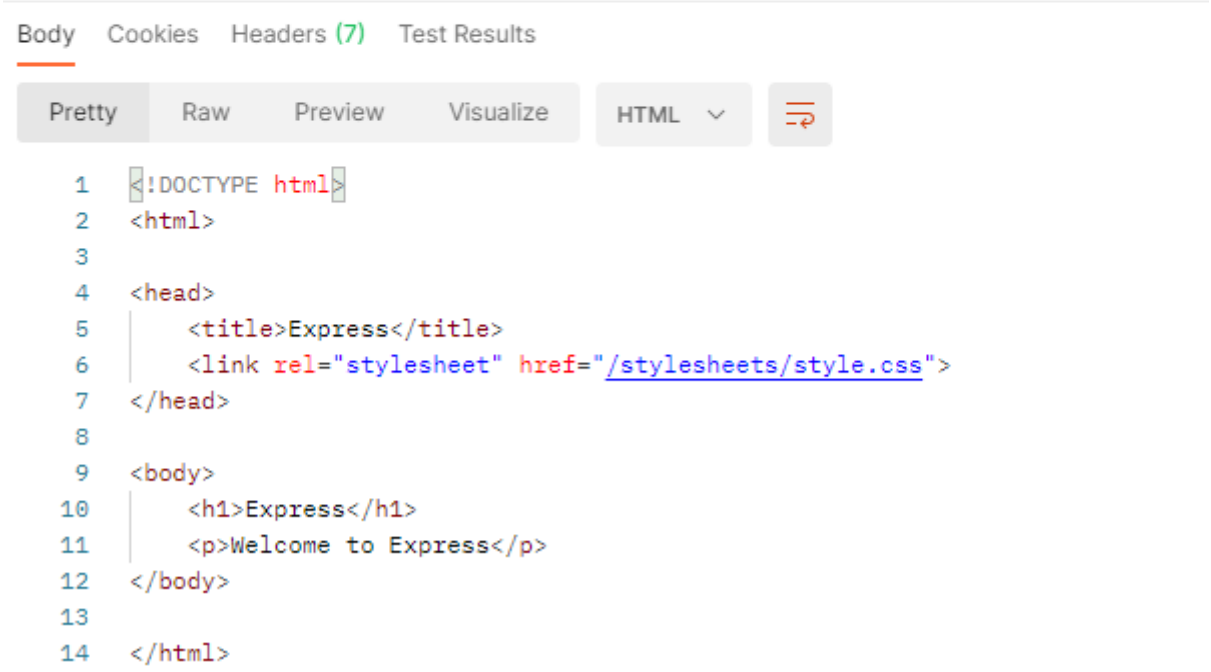


The user can now also log in successfully

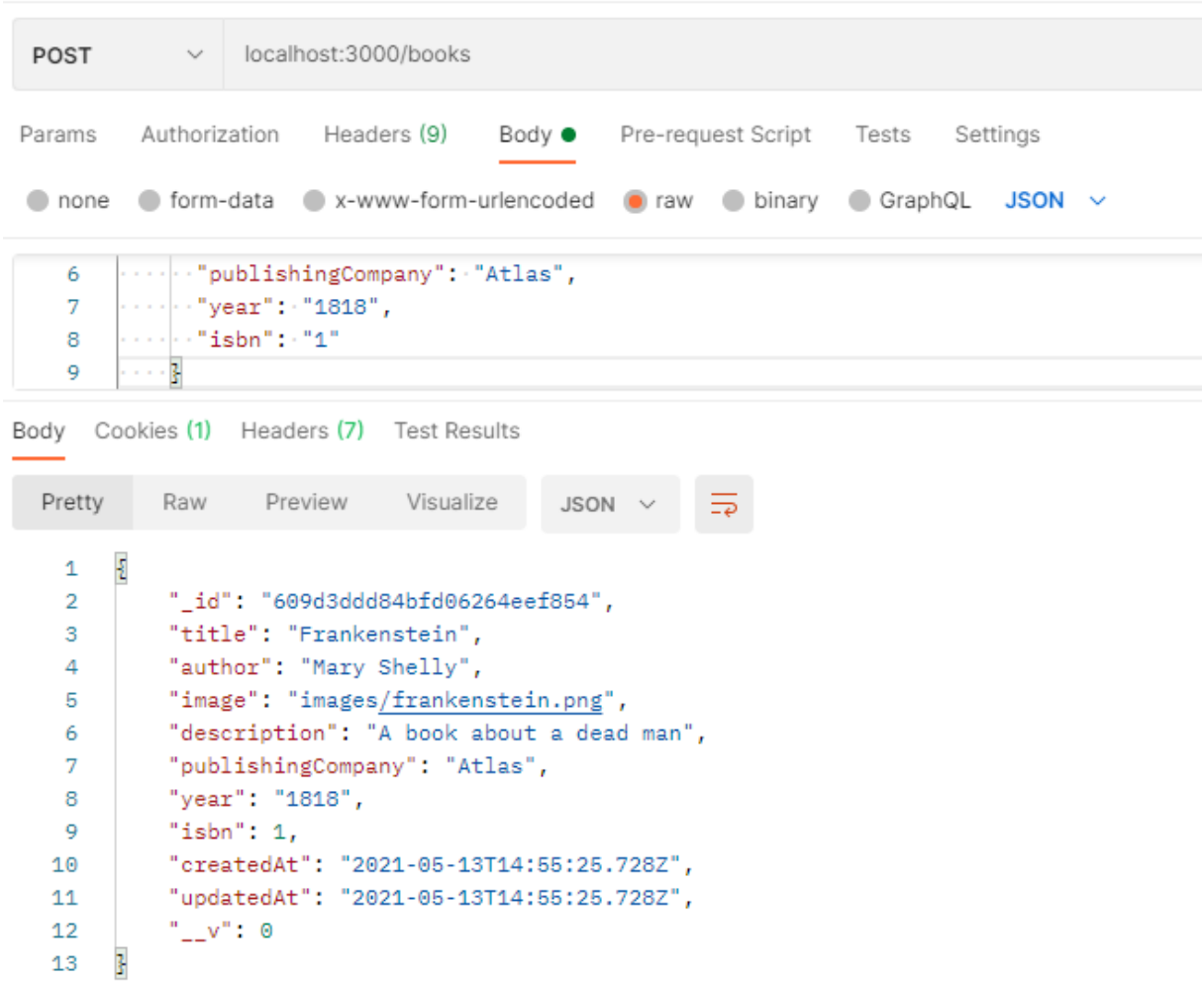


And of course logging out is also possible. Then the user gets redirected successfully to the main page





As a logged in user it is also possible to add books, as mentioned:



Here a book was successfully added. It is also possible to add other books or delete them as the user wishes.

3. Conclusion

I already stated the features and the results I obtained. They can be seen above in the screenshots. I would have done differently the following things: it was very difficult to decide how I want to do the authentication. I basically knew that I would have to do some sort of authentication, because it is a book directory, where users can collect their books and there is no sense it it to be public. There are many ways to authenticate users, I think I chose one of the easier ones.

4. References

- http://www.readprint.com/
- https://www.coursera.org/learn/server-side-nodejs/home/welcome
- https://www.goodreads.com/