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SWE 573

Software Development Practice

24.12.2022

Pinner

https://github.com/dogukanarslan/software-development-practice

http://18.191.213.23/

HONOR CODE

Related to the submission of all the project deliverables for the Swe573 2022 Fall semester project reported in this report, I declare that: - I am a student in the Software Engineering MS program at Bogazici University and am registered for Swe573 course during the 2022 Fall semester. - All the material that I am submitting related to my project (including but not limited to the project repository, the final project report, and supplementary documents) have been exclusively prepared by myself. - I have prepared this material individually without the assistance of anyone else with the exception of permitted peer assistance which I have explicitly disclosed in this report

Credentials for testing

Mail: john@doe.com

Password: 123456

All work in this project is performed by me, Doğukan Arslan.

Table of Contents

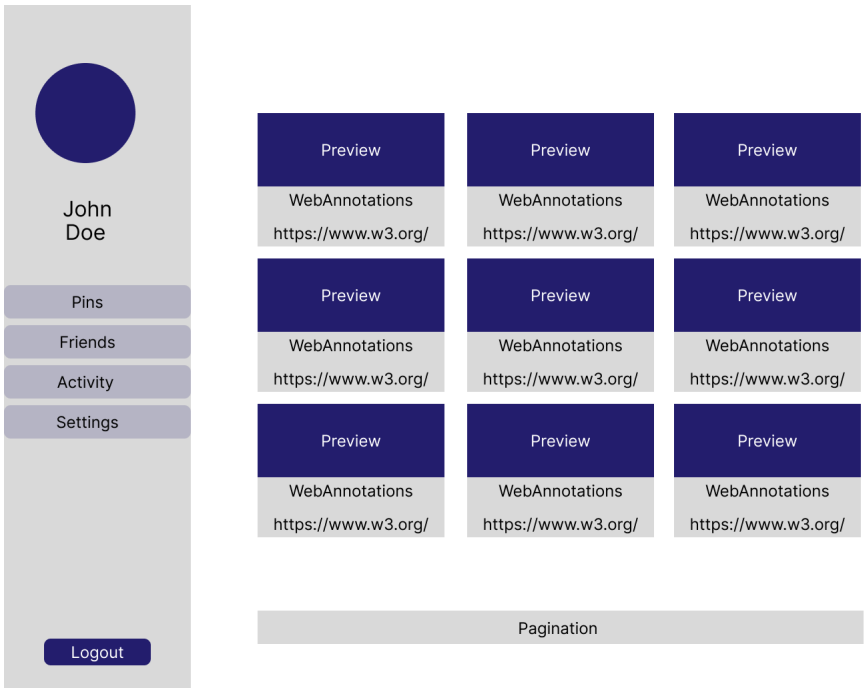
Overview

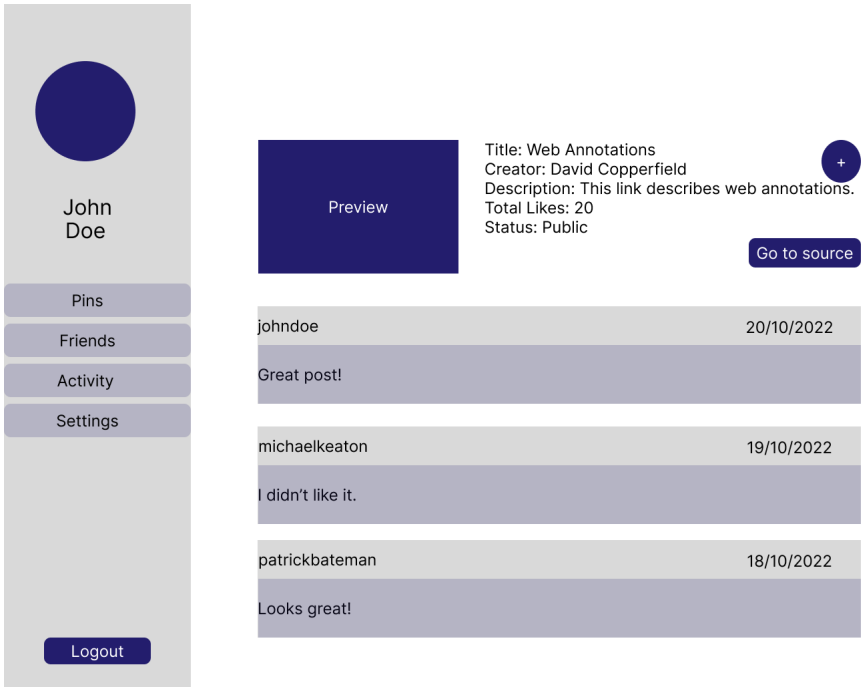
Pinner is a web application which you can save and share resources that you gathered all around the web as a pin. In addition to sharing, you can also interact with other users by following them and liking/disliking pins that they shared. Development of Pinner is written using ExpressJS, web framework for NodeJS, and MongoDB, NoSQL database, for storing data. This project is deployed to Amazon Web Services EC2 machine as a Docker container.

Software Requirements Specification

1. The system shall store references of contents from different resources.
2. When a user saves content from any source, the system shall create a reference to the database.
3. When a user saves a pin, the system shall add it to pins page.
4. When a user creates a to-do, the system shall add it to the to-dos page.
5. When a user likes a pin, the system shall check if that post is previously disliked.
6. The system shall allow users to follow other users.
7. The system shall allow the user to search for pins by title and description.
8. The system shall allow the user to list all pins or pins that he/she follows.
9. The system shall allow the user to add to-do on the existing pin.
10. The system shall sort records by descending order.
11. The system shall sort records by created at column.
12. The system shall require user password at least 6 characters.
13. When a user creates an account, the system shall validate if it is a valid email address.
14. The system shall have reusable components.
15. The system shall list current user pins and all user pins separately.
16. The system shall have like and dislike functions for pins.
17. The system shall allow each post to be liked once by each user.
18. When a user deletes a to-do, the system shall redirect him to the to-dos page.
19. The system shall allow users to search for other users by name and surname.
20. The system shall prevent registering with an existing email.
21. If the current authentication token is not valid, the system shall redirect the user to the login page.

Design (Software and Mockups)





Status of Project

All requirements mentioned in software requirements specification part are completed, dockerized and deployed. There are features that planned in first mockups and didn't implement during development with some considerations in mind. One of those features is deleting a pin. Since this is a collaboration project and users can save other users pins, deleting a pin may cause a problem for other users when they want to access it later. Another not implemented features is listing pins as a

card, just like in mockups. This would take up too much space and it would take much more time to scroll down when there are too many pages. Instead of cards, listing data in a table was more suitable. And the data listed on table is not enough for a user, he/she can always visit details page for more information. Finally, commenting on pins that are available on first mockups, is not implemented, however current architecture of this project is quite suitable for adding it.

Status of Deployment

This project is dockerized and then deployed to AWS, EC2 machine.

Url: http://18.191.213.23/

System Manual

Pinner is a NodeJS project, to run this project locally you need to have NodeJS installed on your local system. Also, MongoDB must be installed on your system locally. Alternatively, you can use MongoDB cloud database. Before running the project locally, database URI and secret key must be added to .env file. To make this process easier, you can duplicate .env.example and rename it as .env file. After that, use your database URI, that you obtained from locally installed MongoDB, as MONGODB_URI variable. You should use another database for test cases. You can do it by initializing MONDB_TEST_URI variable with your existing database URI and adding /test-database to end of it. After completing these prerequisites, you should be able to run the project locally.

Since this project is dockerized, if you want to run project as a Docker container without installing any local dependencies such as NodeJS or MongoDB. You can run docker-compose up –d command in the project directory and Docker will create a container for the project and another container for the database and link them together. After it is done, the project should be available at port 80.

User Manual

Pinner is a web application where you can save resources as a pin. When you open the web application, you create an account with an email. This email should be unique in the system, you can’t create more than one account with the same email. After creating an account, you are logged in the system ama at homepage you can see pins that are created by other users. In homepage, you have two options for listing pins, one is listing pins from users that you follow, second is listing pins from all users. Since listing all pins would be chaos, pins from follower’s feature is implemented. If you are looking for a specific pin, you can search it by title and description. Pins are listed as a table, and you can view details of a pin by clicking the view button at the last column of the table.

In detail, you can edit the pin if you own it, otherwise you can't. You can save that pin for accessing it later and you can create a to-do with that pin. Saved pins and to-dos are listed on different pages, you can access them from the sidebar. Also, you can interact with a pin by liking or disliking it. Users that liked or disliked are listed in a modal that opens when you click on the like and dislike counts.

At users page, you can search for other users that are on the Pinner by name and surname and you can see details of it if you click on view button. In detail, you can follow or unfollow a user. This following is used when you are on homepage and listing all pins or pins from users that you follow. Also, you can see followers of that user and users that he/she follows when you click on following on followers count.

Tests

Test cases are implemented using Jest and there are tests for creating an account, logging in with that account and creating a new pin. Each test checks if the response has a correct status code and correct response body. When you run a test, it uses a database that is separated from the original database to prevent polluting the production data. You can define the database in .env file with MONGODB_TEST_URI.

Introduction Video

https://drive.google.com/file/d/1dB3TfW_hjaSkEKXCAXp0IvuObI1WWq3S/view?usp=share_link

Repository

https://github.com/dogukanarslan/software-development-practice

Technologies

- **ExpressJS**
- **EJS**
- **MongoDB**
- **Jest**
- **Docker**
- **JWT**
- **AWS**