LearnMaster

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Who are we?

We are LearnMaster! LearnMaster is a revolutionary application designed to streamline your learning process, making studying more efficient and enjoyable. LearnMaster allows users to create customized study sets, flashcards, and quizzes tailored to their individual learning needs.

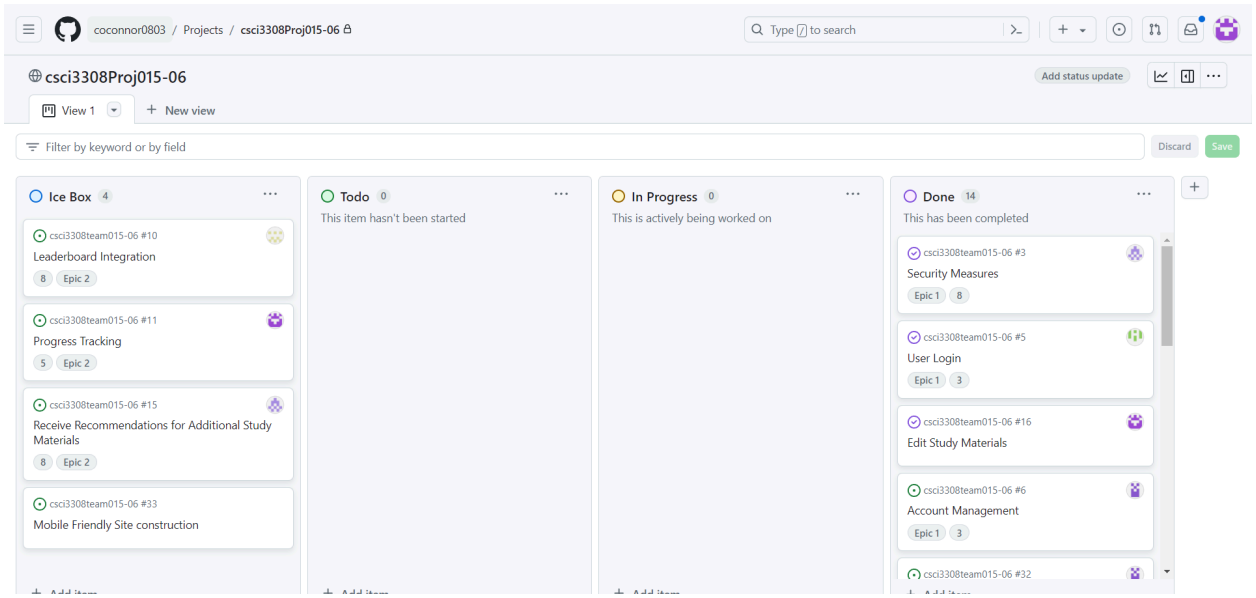
With LearnMaster, you can easily create and manipulate study materials on any subject imaginable. Whether you're studying for a test, learning a new language, or mastering a new skill, LearnMaster provides the tools and resources you need to succeed.

One of LearnMaster's standout features is its interactive quiz. The quiz allows the user to be met with a fully randomized quiz based on the terms and definitions you create! For each study set you can choose to quiz yourself on the material you have made. We are able to track your score so you can learn and master any concept you desire

Another great aspect of LearnMaster is its flashcards. Got a test coming up? Turn your study set into flashcards to keep up with your studying. Practice as much or as little as you want to stay prepared for your next educational endeavor.

In summary, LearnMaster is the ultimate study companion for students of all ages and levels. With its user-friendly interface, customizable study materials, and effective learning features, LearnMaster is revolutionizing the way we learn.

Project Tracker:
https://github.com/users/coconnor0803/projects/1/views/1



Git Repo:
https://github.com/coconnor0803/csci3308team015-06

Video:
https://youtu.be/vB-cwfePiYQ

Individual Contributions:

Colin O'Connor

For my portion of the project I worked on creating the home page, creating working routes in the index.js file, and worked on testing and connecting the database as well as database management. Most of the pages on the application were dependent on the homepage. This page was where all study sets were created or deleted and was vital in routing you to every other page with working data. The routes I created made sure that all data was either created or deleted without wasting data. I also created our database and tables so we had a working backend.

Kyle Okura

For my portion of the project I worked on framing the initial pages, along with the navigation bar and many of the UI elements on the pages. Hovering and clicking on elements gives a reaction to the user to give them feedback from the page. I also helped to create some of the API routes, along with the initial tests on the early stage of the project.

Noah Wagner
As a team member of LearnMaster, I took the lead in developing the create study set feature, ensuring it provides users with versatile options for inputting study materials. One key aspect I implemented was the ability for users to manually input a title, term, and definition, enhancing the customization and personalization of study sets. Additionally, I integrated functionality for users to upload a file containing terms and definitions, further streamlining the process. Collaborating closely with the team, I ensured seamless integration of these features into our application's frontend and backend.

To implement the manual input fields, I added the following HTML code snippet within the form for creating a study set:

```
<label for="title">Title:</label><br>
<input type="text" id="title" name="title" class="form-control"><br>

<label for="term">Term:</label><br>
<input type="text" id="term" name="term" class="form-control"><br>

<label for="definition">Definition:</label><br>
<input type="text" id="definition" name="definition" class="form-control"><br><br>
```

For handling file uploads and extracting terms and definitions, I implemented the following JavaScript code snippet in the backend file handling the route for creating a study set:

```
// Handle file upload
const upload = (req, res) => {
  // Access uploaded file
  const file = req.files.file;
  // Process file content to extract terms and definitions
  // Code to parse the file content and extract terms and definitions goes here
};
```

By working closely with my team, I ensured that these features were seamlessly integrated and aligned with our application's objectives of providing a user-friendly and efficient study tool.

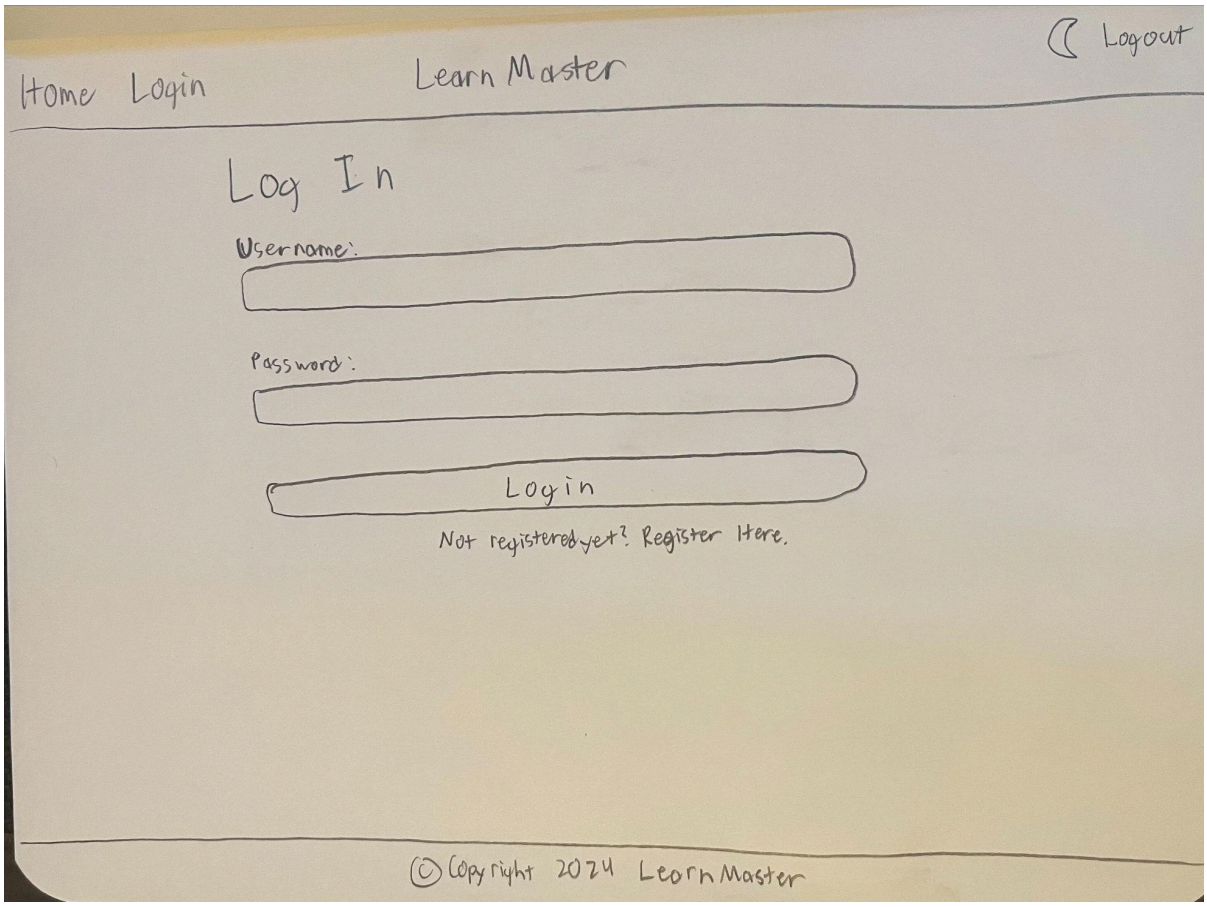
Adarsh Charugundla
For the LearnMaster project, I contributed to the interactive quiz feature and some extra security measures. For every study set that was created, I wanted to create a quiz feature that would dynamically generate the questions and answers based of the terms

within that study set. In order to accomplish this, I created a separate script.js file that would lay out the quiz and make all the quiz elements functional. The dynamic generation was possible by creating a route to index.js where the questions/answers would be populated by querying the database. I also created a password strength checker that uses regular expressions to verify if the password has a special character and a number.

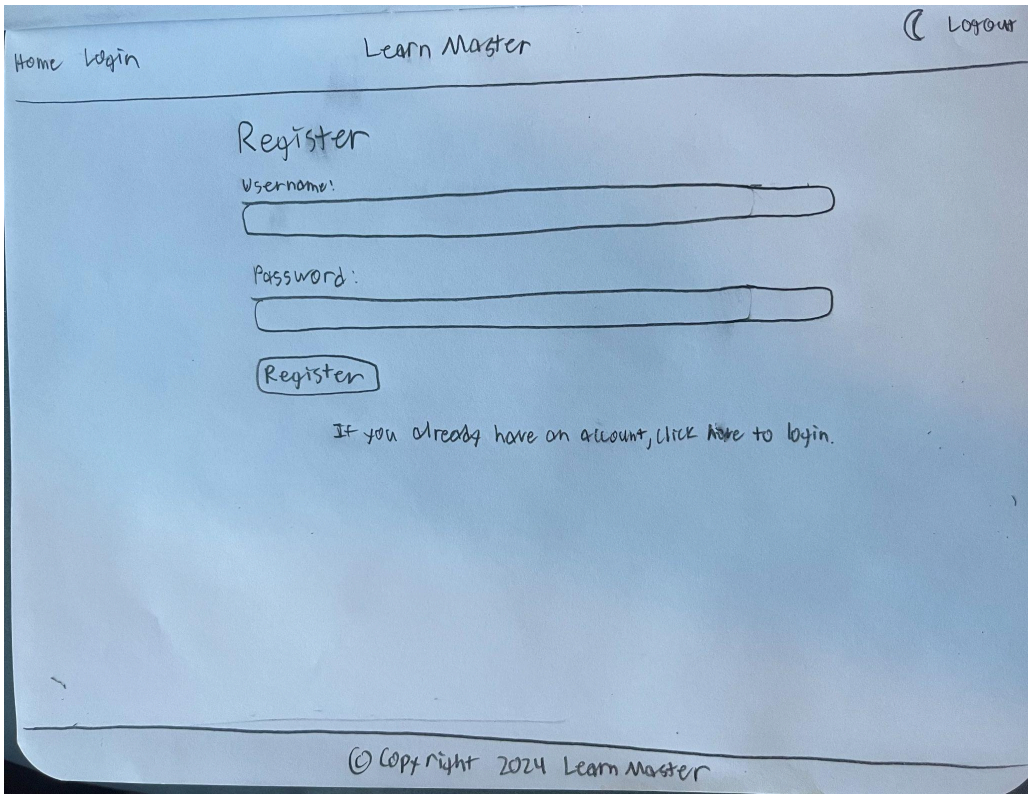
Matthew Egyed

I contributed to LearnMaster with the crucial study feature and ui improvements. For the study feature, it was necessary to have the following requirements: a connection with the database to provide the user's specific terms and definitions, an integration with the sets to show the specified collection, an interactive notecard simulation that has a visual flipping action, and a beginner friendly interface for navigating the terms. To accomplish this I relied heavily on javascript to meet these specifications and make it as lightweight yet visually appealing as possible. Additionally, I made ui improvements in the layout of pages, the color schemes, and intuitive navigation to overall enhance the experience on each page of the application. Another big improvement was overhauling each page to have a well working darkmode, which many users find almost necessary when interacting with websites. It was especially critical for our software, as dark mode can help increase focus and decrease eye strain for longer study sessions. I accomplished this with heavy use of CSS, along with modifying different handlebars files to account for this. To integrate the toggle, I used javascript to make the icon change for a visually intuitive user interface. Instead of a simple checkmark of flip toggle, it is easily perceptible with the use of sun and moon icons indicating the ability to switch between dark and light mode.

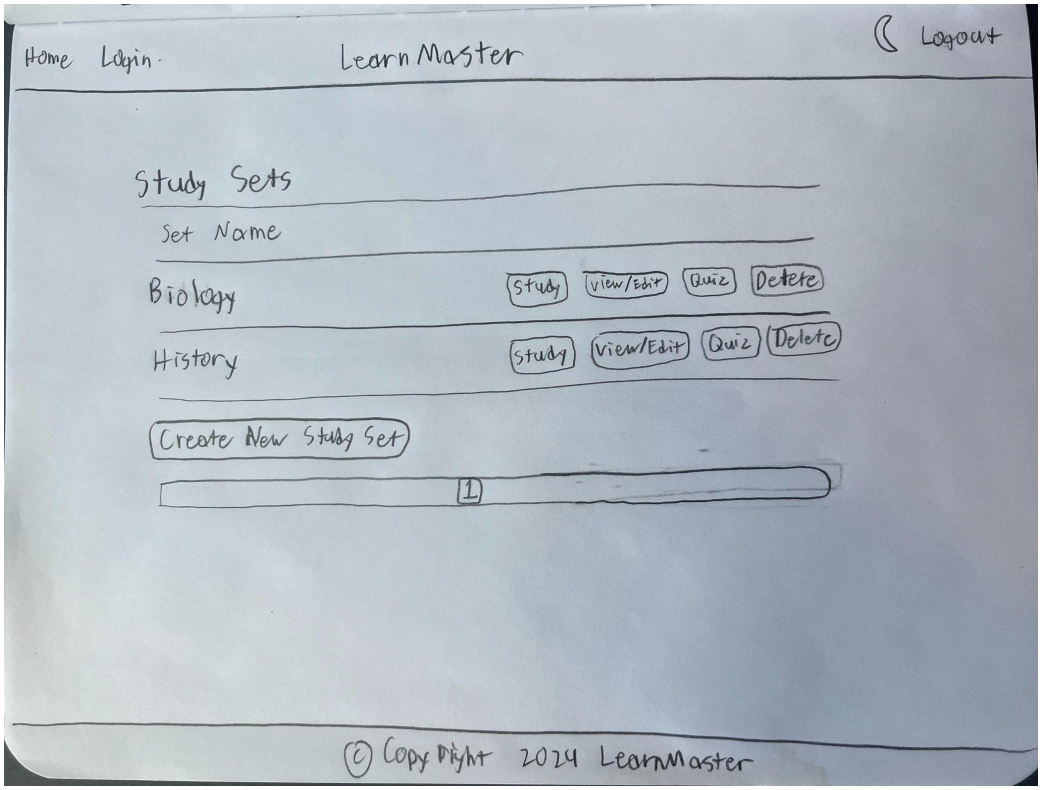
Wireframes:
Login:



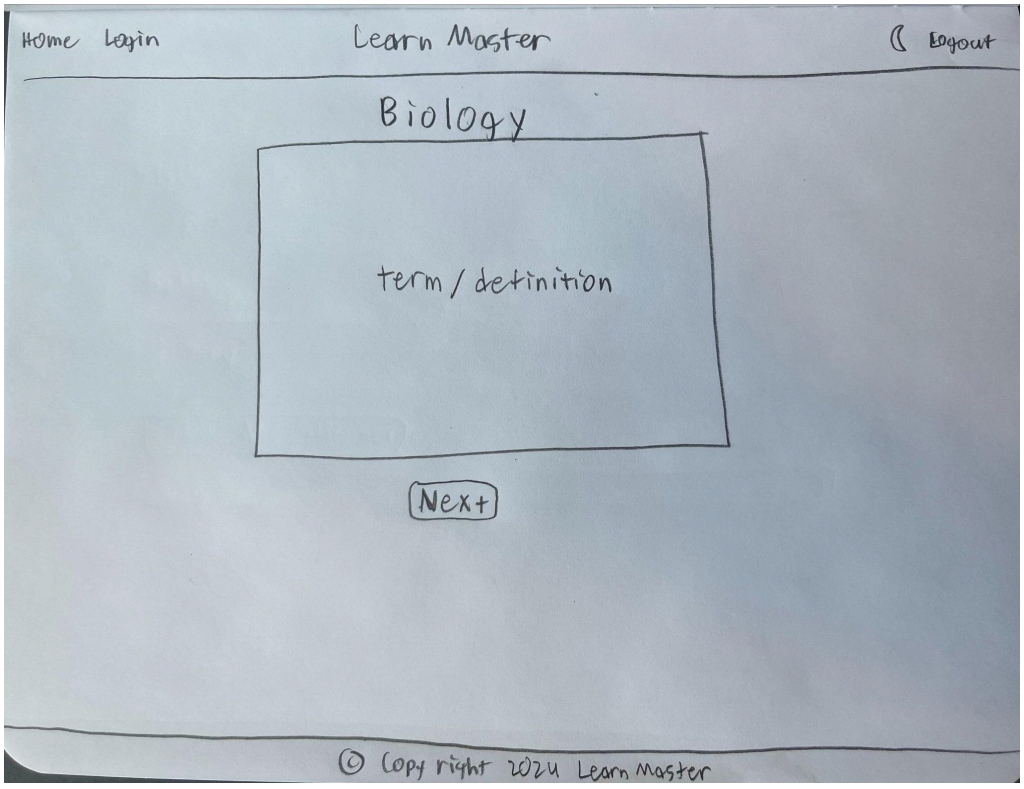
Register:



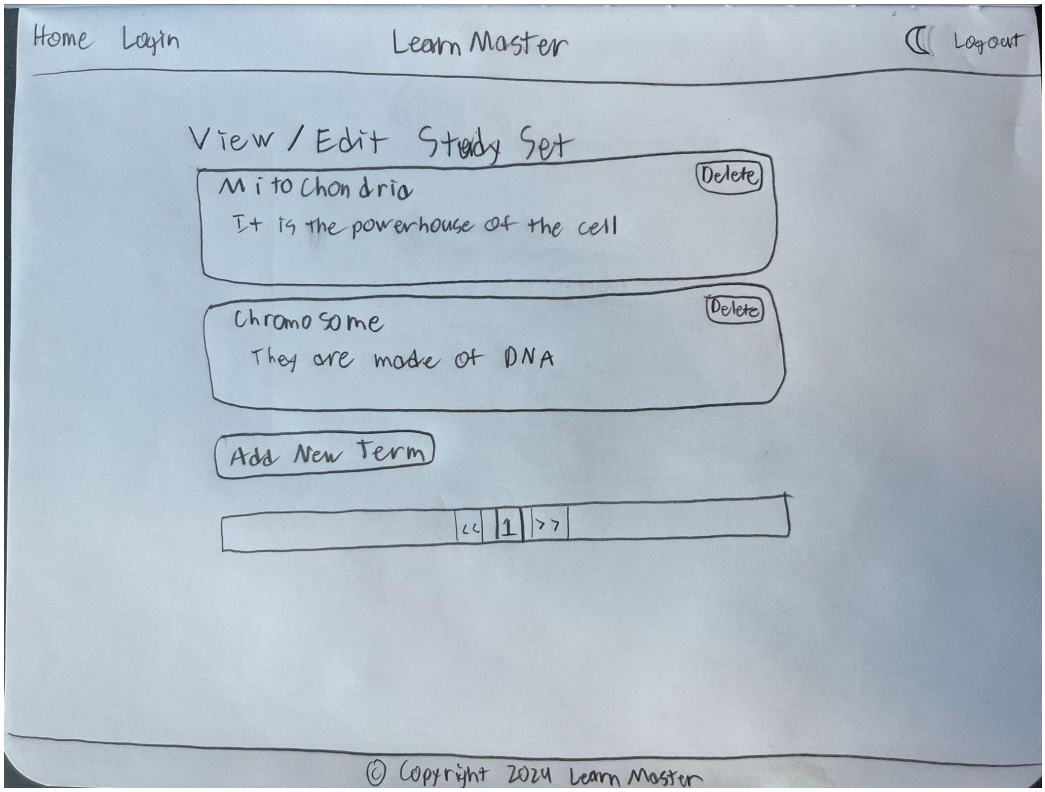
Home:



Study:



View/Edit:


Home Login
Learn Master
Logout
View / Edit Study Set
Mitochondria
It is the powerhouse of the cell
Delete
Chromosome
They are made of DNA
Delete
Add New Term
<< 1 >>
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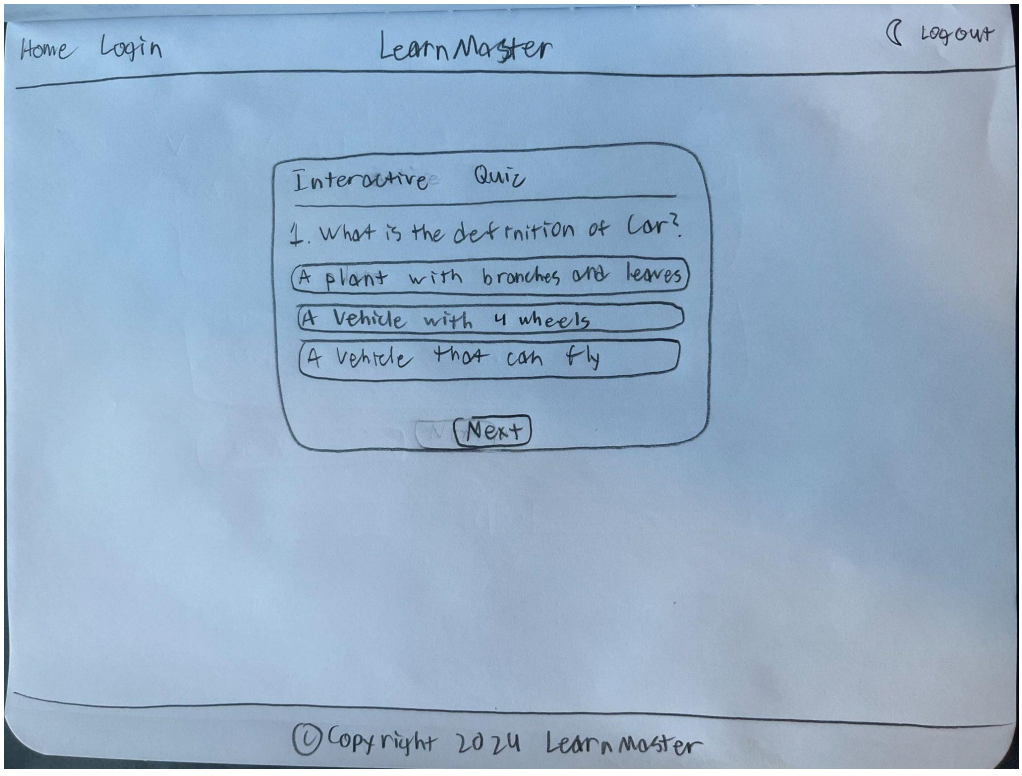
Quiz:


Home Login
Learn Master
Logout
Interactive Quiz
1. What is the definition of Car?
A plant with branches and leaves
A Vehicle with 4 wheels
A Vehicle that can fly
Next
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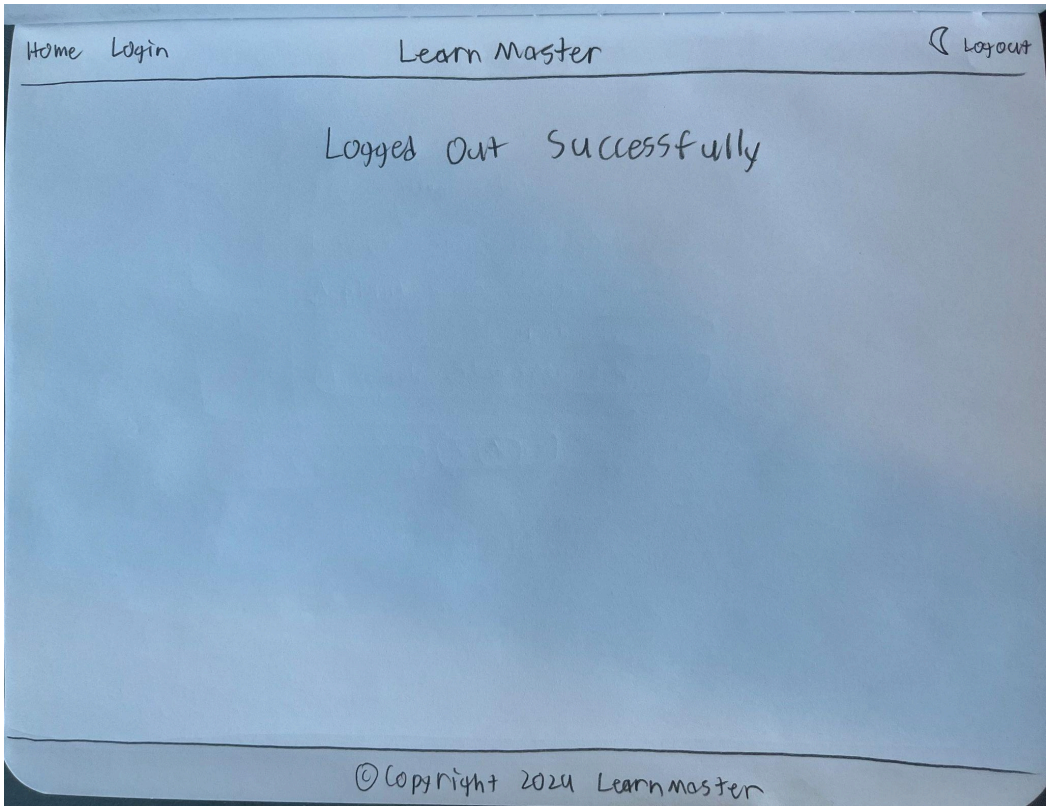
Logout:



Use Case Diagram:

https://lucid.app/lucidspark/f1ffa209-be10-448c-bdb0-4c8cd235badb/edit?viewport_loc=-2004%2C-53%2C2560%2C1271%2C0_0&invitationId=inv_66b59a2e-24ca-405c-83bb-0a5a1a2fc193

Test Plan Observations:

Test Cases:

1. Adding a Study Set:
    - Description: User creates a new study set by providing a title, terms, and terms.
    - Steps:
        1. User navigates to the "Create Study Set" page.
        2. User fills in the title and adds terms with their respective definitions.
        3. User submits the form.
    - Expected Outcome: Study set is created successfully, and the user is redirected to the home page.
2. Deleting a Study Set:
    - Description: User deletes an existing study set.
    - Steps:
        1. User navigates to the home page.
        2. User selects the study set they want to delete.
        3. User clicks on the delete button.
    - Expected Outcome: The selected study set along with its terms is deleted, and the user is redirected to the home page.
3. Adding a Term:
    - Description: User adds a new term with its definition to an existing study set.
    - Steps:
        1. User navigates to the "View Study Set" page.
        2. User clicks on the "Add Term" button.
        3. User fills in the term and its definition.
        4. User submits the form.
    - Expected Outcome: The new term is added to the study set, and the user is redirected back to the "View Study Set" page.
4. Deleting a Term:
    - Description: User deletes an existing term from a study set.
    - Steps:
        1. User navigates to the "View Study Set" page.
        2. User finds the term they want to delete.
        3. User clicks on the delete button next to the term.
    - Expected Outcome: The selected term is deleted from the study set, and the user remains on the "View Study Set" page.

Observations:

1. Adding a Study Set:
    - User Action: The user successfully created a new study set with a title and several terms.

- Reasoning: The user needed to prepare for an upcoming exam and decided to create a study set for better preparation.
- Consistency: The user's behavior aligns with the use case.
- Deviation: There was no deviation from the expected actions.

2. Deleting a Study Set:
    - User Action: The user navigated to the home page, selected a study set, and clicked the delete button.
    - Reasoning: The user wanted to remove a study set they no longer needed.
    - Consistency: The user's behavior is consistent with the use case.
    - Deviation: There was no deviation from the expected actions.
3. Adding a Term:
    - User Action: The user added a new term and its definition to an existing study set.
    - Reasoning: The user found a new term related to their study set and decided to add it.
    - Consistency: The user's behavior aligns with the use case.
    - Deviation: There was no deviation from the expected actions.
4. Deleting a Term:
    - User Action: The user deleted an existing term from the study set.
    - Reasoning: The user realized they had entered the wrong term and decided to remove it.
    - Consistency: The user's behavior is consistent with the use case.
    - Deviation: There was no deviation from the expected actions.

Deployment:
http://recitation-15-team-06.eastus.cloudapp.azure.com:3000/login