

Name: **Anay Abhijit Joshi**

Project (Web Application Name): **Fitness Spectrum**

Publicly Hosted Link: <https://fitness-spectrum.netlify.app>

GitHub Repository: https://github.com/anay-a-joshi/project_1_svelte

PROJECT DESCRIPTION

The Movement and Health Goal Tracking Application, named “Fitness Spectrum,” is a user-friendly platform designed to help individuals set and track their daily health-related goals and activities. The application encourages users to maintain healthy habits by offering a streamlined and intuitive interface for logging various activities such as water consumption, yoga/stretching durations, moods, and time allocations for specific skills. The system provides real-time feedback, customizable themes, and progress visualizations, ensuring users remain engaged and motivated as they pursue their health and wellness goals.

KEY FEATURES, CONTROLS AND USER-GOALS

* Daily Activity(ies) Logging

Users can log more than 6 different daily activities, including water intake, yoga/stretching, and end-of-day reflections. The application offers a variety of input types, such as buttons, sliders, and checkboxes, and many more, making the activity logging process quick and easy.

* Visual Feedback

After each activity is logged, the application provides immediate visual feedback or a message, confirming that the entry has been saved

successfully. This feedback ensures users are confident that their data is recorded without errors. In the event of a discrepancy or error, users are promptly notified and guided to resolve the issue.

- * **Graphical Overview of the User's Efficiency**

Progress tracking is at the heart of **Fitness Spectrum**. Users can visualize their achievements through simple graphs, such as **doughnut charts**, and a **percentage monitor**, which help them assess consistency and performance against their daily goals.

- * **Theme Customization**

The application offers both light and dark mode themes, giving users the flexibility to select their preferred display style for better usability and comfort, tailored to their environment.

- * **Previous/Past Entry(ies) Modification**

Users can revisit and edit their past entries, ensuring that their records are always up to date and accurate. This feature enables users to correct mistakes or add missed entries from previous days, if any, ensuring the tracking data is comprehensive.

You can see it here – “<https://youtu.be/wwGkD5-ycD8>”

- * **User's Goal /Target Setting**

Users can set and track goals for a set of specific activities. For example, they can set goals to drink a certain amount of water or engage in yoga/stretching for a target duration each day and much more. The application helps users monitor their progress toward these goals effectively.

- * **Add/Delete New Activity (with Verification)**

A standout feature of the **Fitness Spectrum** web application is the ability for users to add or delete new activities based on their evolving health goals. The app includes a **verification process (corporate world's principle)**, ensuring that any changes are deliberate. Users receive alerts and confirmation messages on the success or failure of their requests, preventing accidental deletions or additions. For this prototype, the verification process is simulated by a manual review, represented by a "customer service" approval process (in this case, I, i.e., the project owner).

IMPLEMENTATION FOCUS

The **Fitness Spectrum** application is built using client-side code, meaning all data is stored locally without a backend or database. Flat files and local storage manage user data, making this approach ideal for prototypes and small-scale applications. This design focuses entirely on front-end interaction and user experience, avoiding the complexity of server-side functionality.

INTERVIEWS & FEEDBACK

What do you hope to learn from these interviews?

The main learnings which I am expecting from the interviews with the application users are as follows:

1. How are the individuals currently approaching health and wellness journaling or tracking?
2. What features these users are finding helpful or what features are lacking in existing tools' user interface (UI)?
3. The preferences and expectations regarding tracking specific activities (e.g., skill practice, exercise, water intake, moods), for generating daily activities' tracker maybe like graphs, pie charts, etc. that could be most helpful...
4. The ease-of-use and customizability the users would desire in a goal-tracking system/application.
5. How would the users interpret "success" in terms of achieving health goals and receiving feedback from the application?
6. Are visual data representations (like charts, summaries, etc.) important to the users or are they just looking for some application to keep track of their daily routine/activities?
7. Are there any specific needs for revisiting and editing past entries, and are there any customization requirements for tracking these activities or maybe for some other part in this application?

What questions did you ask?

Most of my questions were focused on getting to know the user-needs and satisfying the requirements of the project. For instance:

1. Do you currently track your health and wellness (e.g., working on a skill, water intake, moods)? If yes, how do you do it? If not, would you like to do it?
2. What motivates you to keep track of your health or wellness activities?
3. What specific health or wellness activities do you want to track (e.g., exercise, water intake, mood, or etc.)?
4. Do you set specific goals for these activities (like 5 hours of working on a skill, drinking 3L of water daily, etc.)? If yes, how do you currently manage these goals?
5. What features in a journaling or tracking tool/application would make it easier for you as a user to log your daily activities, and make the most out of this application?
6. How often do you find yourself forgetting to track an activity? Would quick reminders or notifications or prompts help?
7. What type of data input (text, checkboxes, dropdowns) is most convenient for you when logging activities? Do you prefer writing or quick button-press or sliding-bars (i.e., slider) or dropdowns or something else?
8. How would you prefer to see an overview of your activities (e.g., weekly summary, graphs, averages)? Do you really want it in a graphical way or will normal writing form work too?
9. Do you often revisit or edit previous entries? If so, for what reasons and for what activities?
10. How would you like the system/application to display past entries (e.g., calendar view, scrolling list, sequential days) or doesn't matter?
11. Would you like the ability to customize what activities you track? If yes, how would you modify them?
12. How important is visual customization (themes, colors) in maintaining your motivation to track activities?
13. Do you prefer dark theme (light text with dark background) or light theme (dark text with light background) for the application/system?
14. What kind of feedback do you expect after logging activities (e.g., a confirmation message, progress towards goals) or just a "Submitted Response" message works?
15. How do you measure success in achieving your health goals (e.g., reaching a target, consistency over time, or etc.)?

What did your interview participants tell you? What did you learn from them?

All the interview participants which I chose are students from the University of Cincinnati. One of the participants, 22 years old, tracks health activities like steps and water intake using an app available online. He values seeing progress through simple graphs but often forgets to log entries and prefers a more intuitive system with quick-short reminders or notifications. Second participant, 20 years old, occasionally tracks moods and skill's dedicated time, finds data entry tedious, favors quick options like checkboxes or sliding-bars (i.e., slider), and wants easy access to mood summaries throughout the week. Third participant, 24 years old, likes tracking workouts and goals but wants customization options, like adding yoga, swimming, running, etc. and removing irrelevant activities which occurred in the past, to keep the tracking process simple and be focused for achieving the aimed goals.

Some of my most important learnings which are preferred by the users or interview participants are ease-of-use (nothing complex), simple user interface (UI), customization features maybe for tracking the activities or adding/deleting some new/old activity, ability to set a goal (week/month/year), review past entries to note the progress, visual images or graphs, and notifications/updates after any change....

Create a written list of design goals and requirements for the user interface.

Here is the written list of the design goals and requirements for the User Interface (UI) of the project:

1. Customization Features/Options
2. Quick-Short Notifications or Reminders
3. Intuitive and Simple User Interface (UI)
4. Visual Images or Graphical Overview
5. Quick Data Entry Options (using checkboxes or sliding-bars (i.e., slider) or dropdowns)
6. Changeable Themes (Dark/Light) and Colorful User Interface (UI)
7. Goal Setting (week/month/year)
8. Ability to View and Update Previous/Past Entries

Choose 3 interesting design challenges to explore.

These are 3 design challenges, most likely, to explore for the User Interface (UI) project, as per my viewpoint:

1. Designing and creating a simple, easy-to-use, user-friendly User Interface (UI).
2. Designing a clean and intuitive process for viewing, updating, and deleting the past/previous user entries.
3. Designing and generating simple-to-understand graphs or summaries for allowing the user to track his/her progress over time.

Show your prototype sketches to 2 people (friends, family members, classmates). Record the feedback.

The feedback was satisfying the expectations as both users liked the simplicity and intuitive nature of the User Interface (UI). Most important being the ability to use checkboxes, dropdowns and sliding-bars (i.e., slider) rather than writing in a textbox; along with the idea of updating the past/previous entries, helped a lot to convince the users for utilizing this application for tracking their daily activities or future goals.

Create a user profile for a mock user. This mock user will be the test case for your application. Write a brief description of them and how they would use this application.

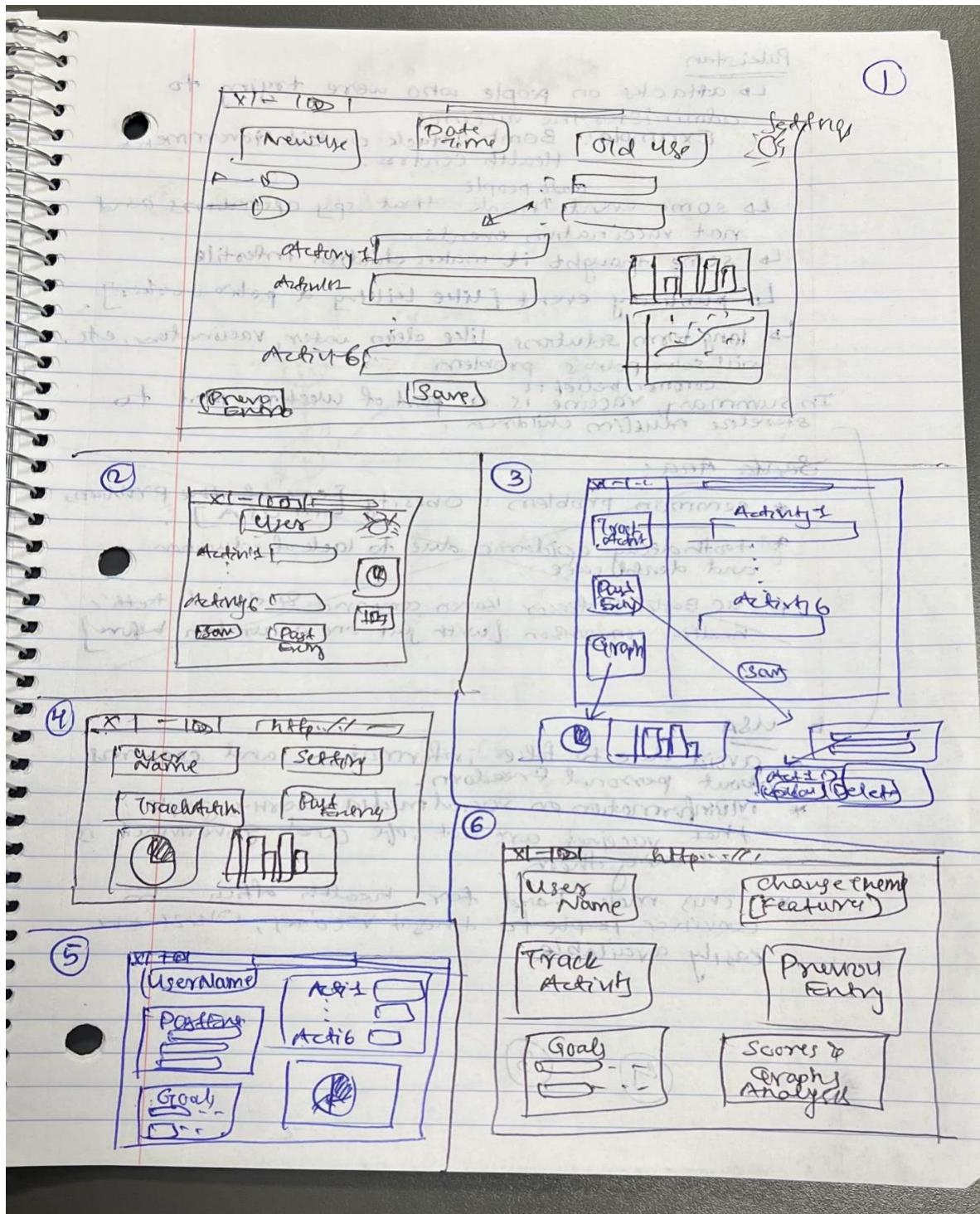
User's Name: **Jerry** (student at the University of Cincinnati)

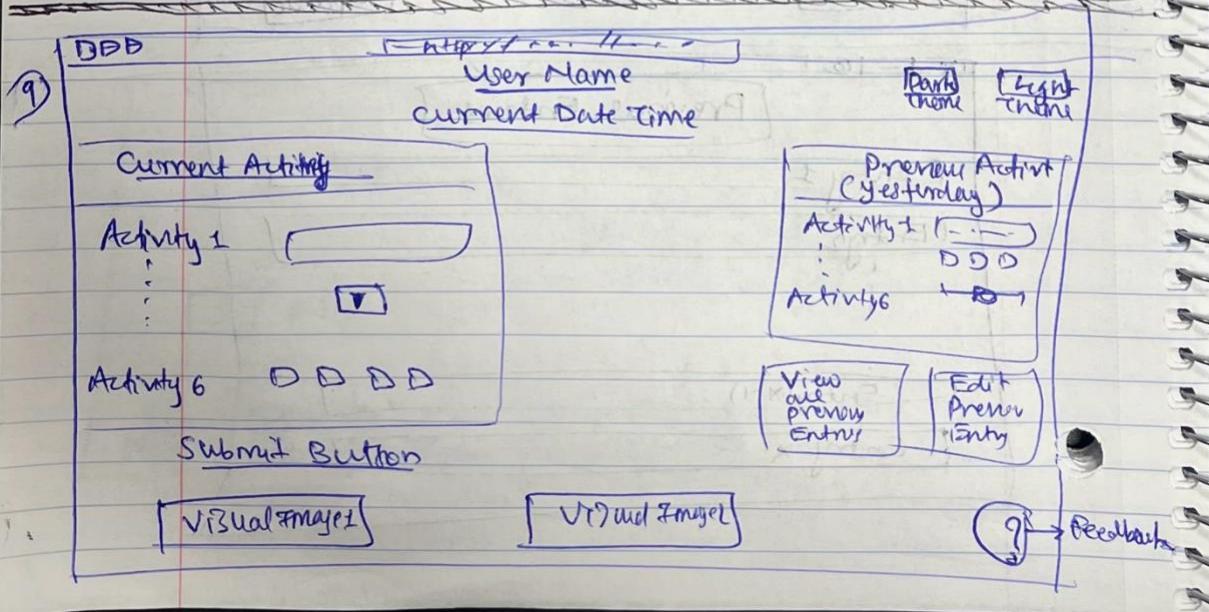
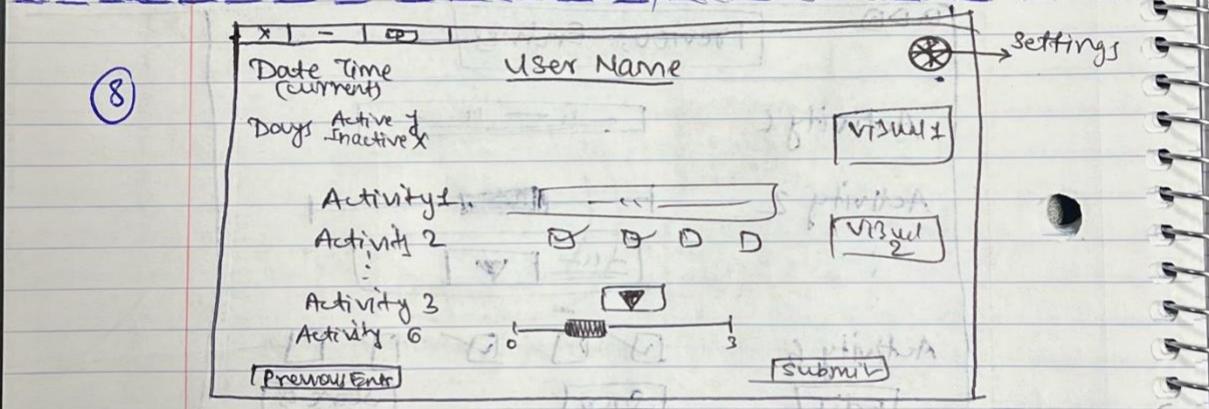
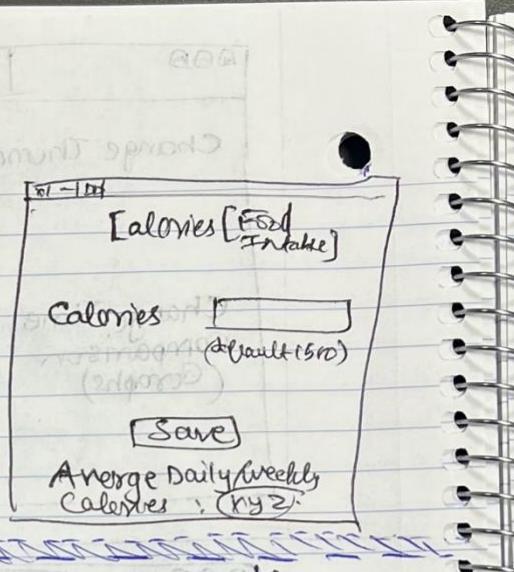
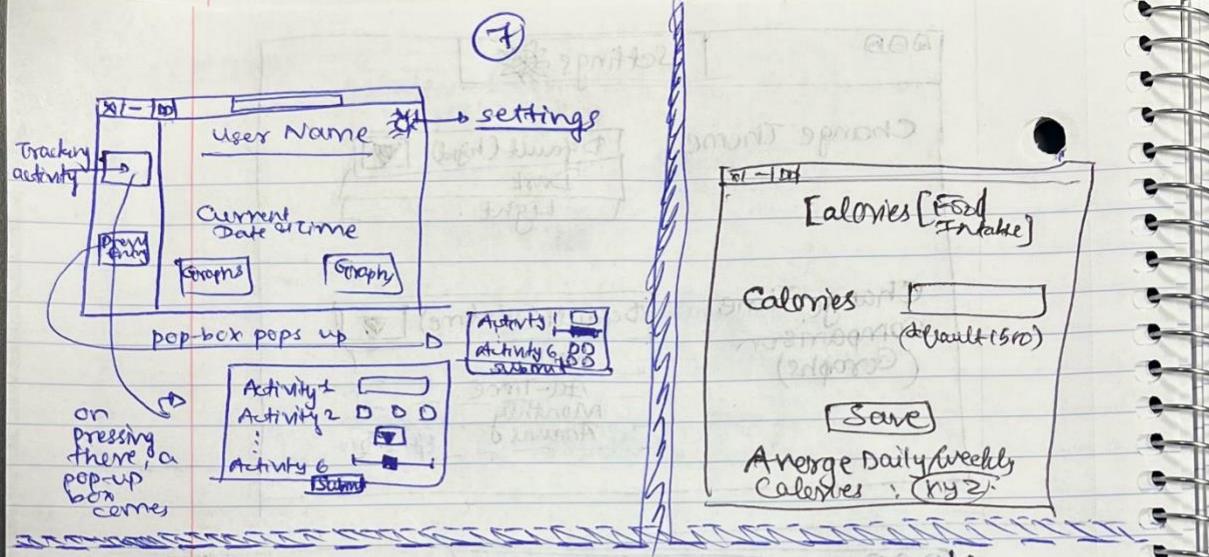
Jerry will use the app to keep the track of his daily activities like skill doing/practice time (example: Coding), water intake, etc. He might also set small goals for staying healthy such as aiming to do the skill for 5 hours, drink 4L of water, etc. and view the progress over time in a graphical format with respect to the specific date. Jerry will also review and test the quick-short reminders/notifications for any change in his user profile.

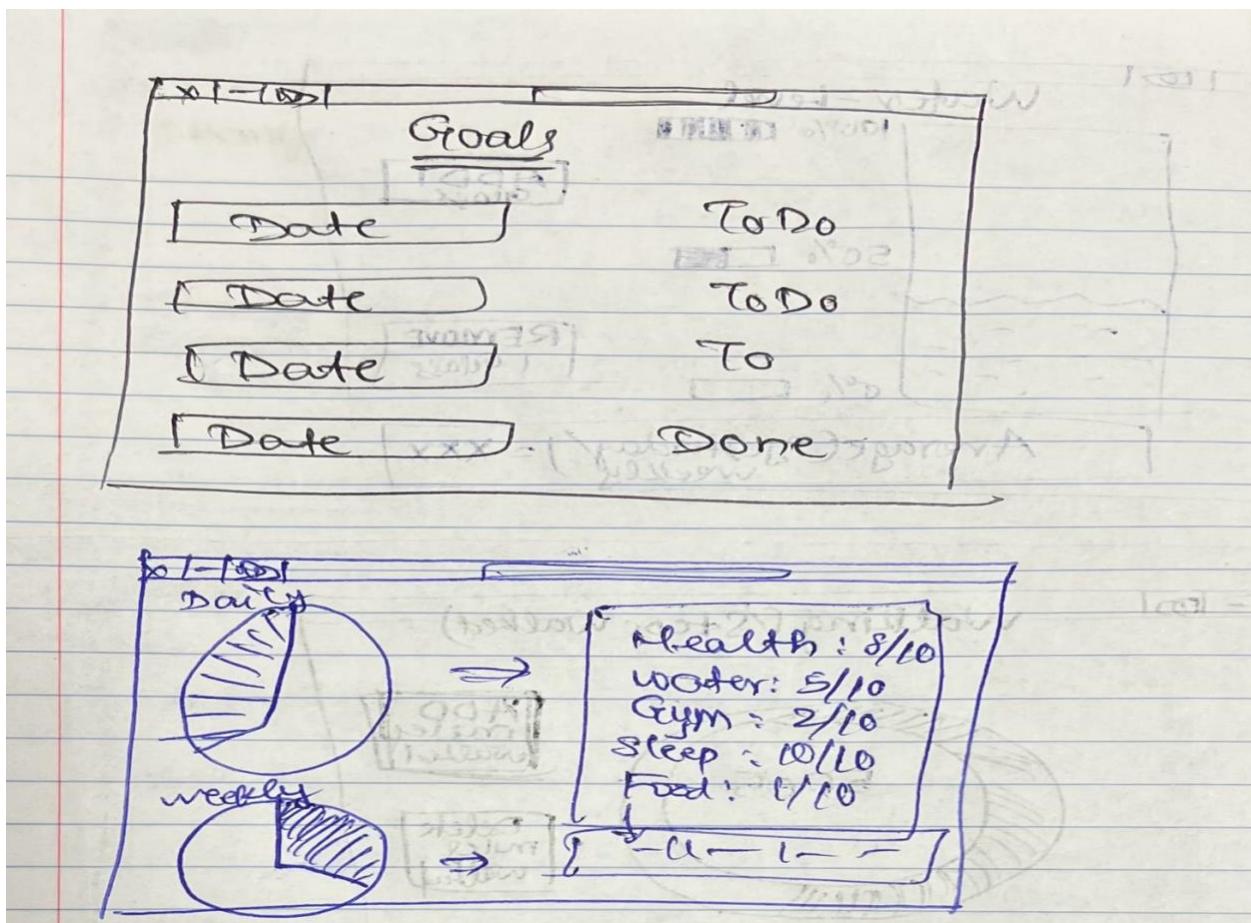
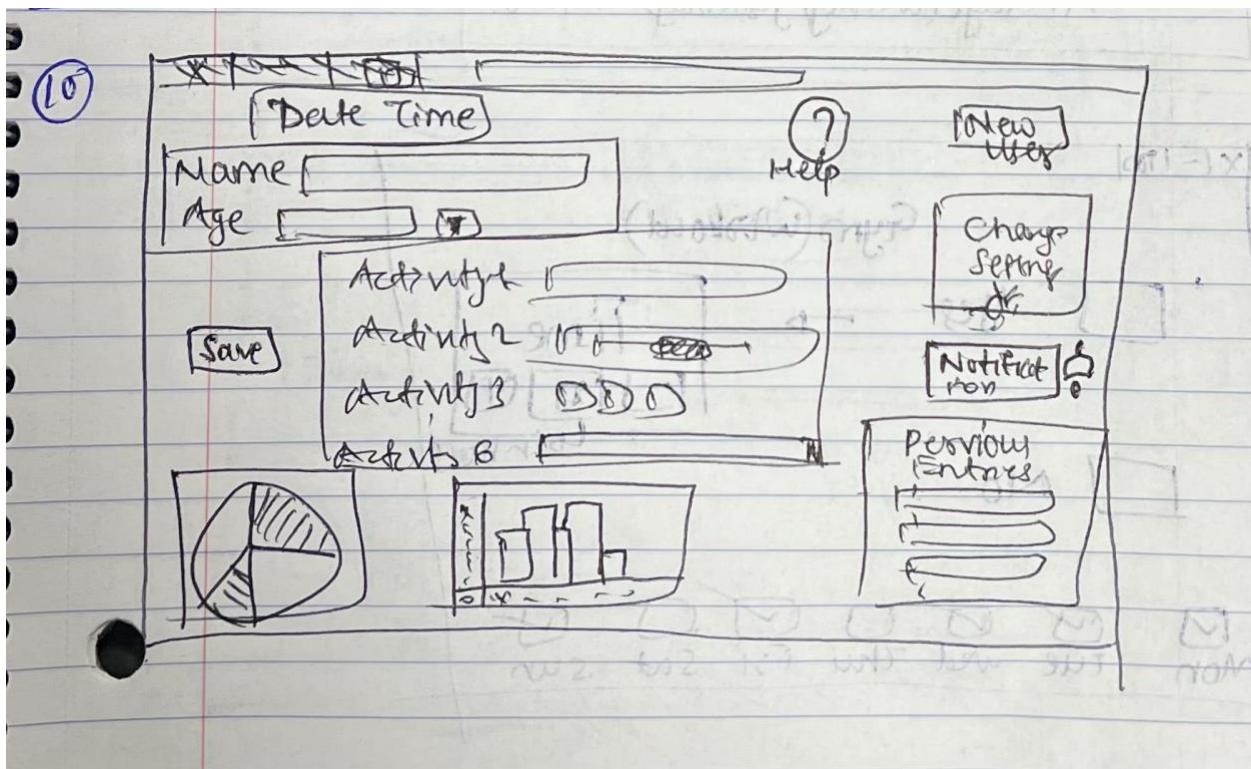
SKETCHING

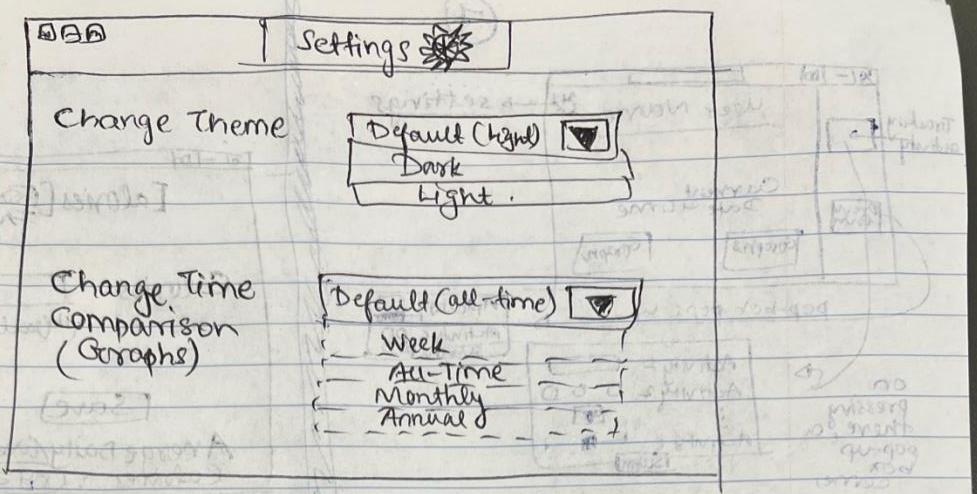
Generate 10-plus-10 sketches.

Here are the expected UI sketches along with the individual components which might be displayed on the User Interface (UI) :









Previous Entries

Activity 1

Activity 2

Activity 3

Activity 4

Activity 5

Activity 6

Edit Save Save & Update

Previous Entries

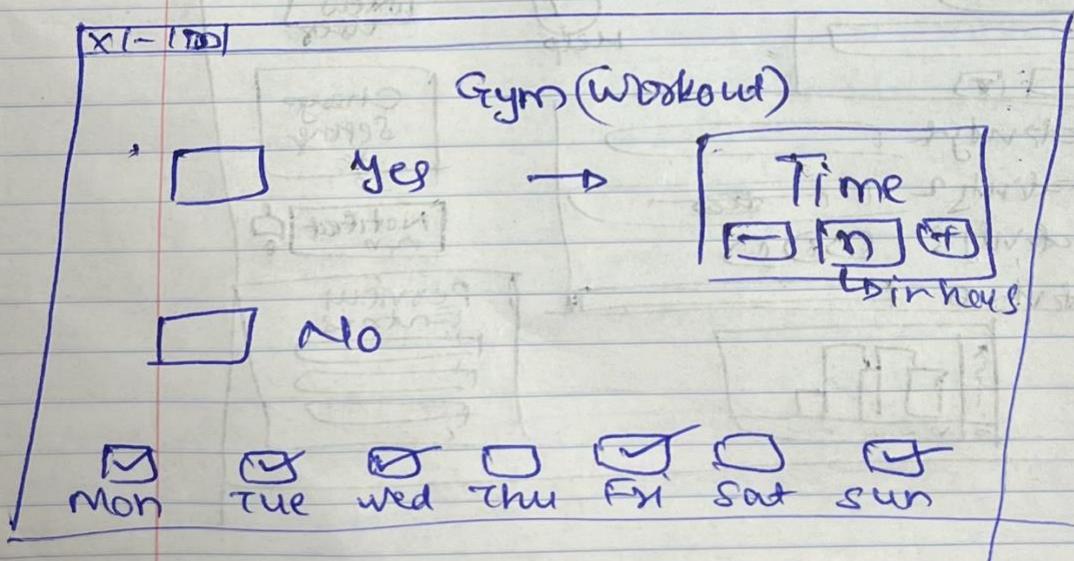
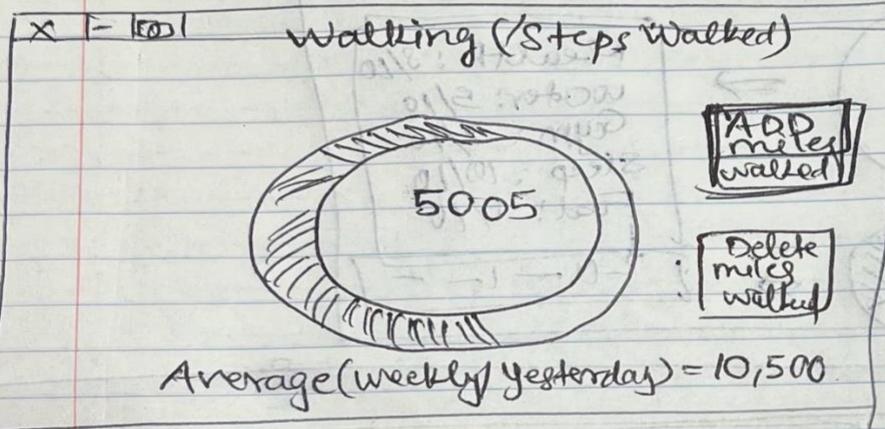
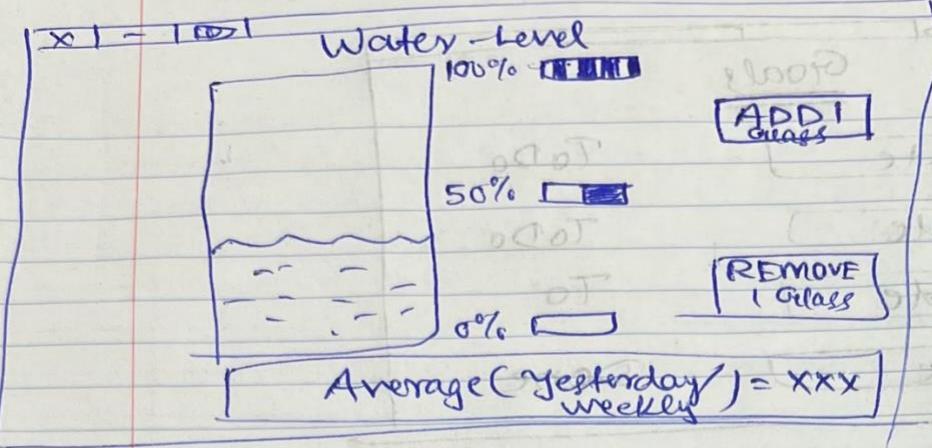
Entry 1

Entry 2

Entry 3

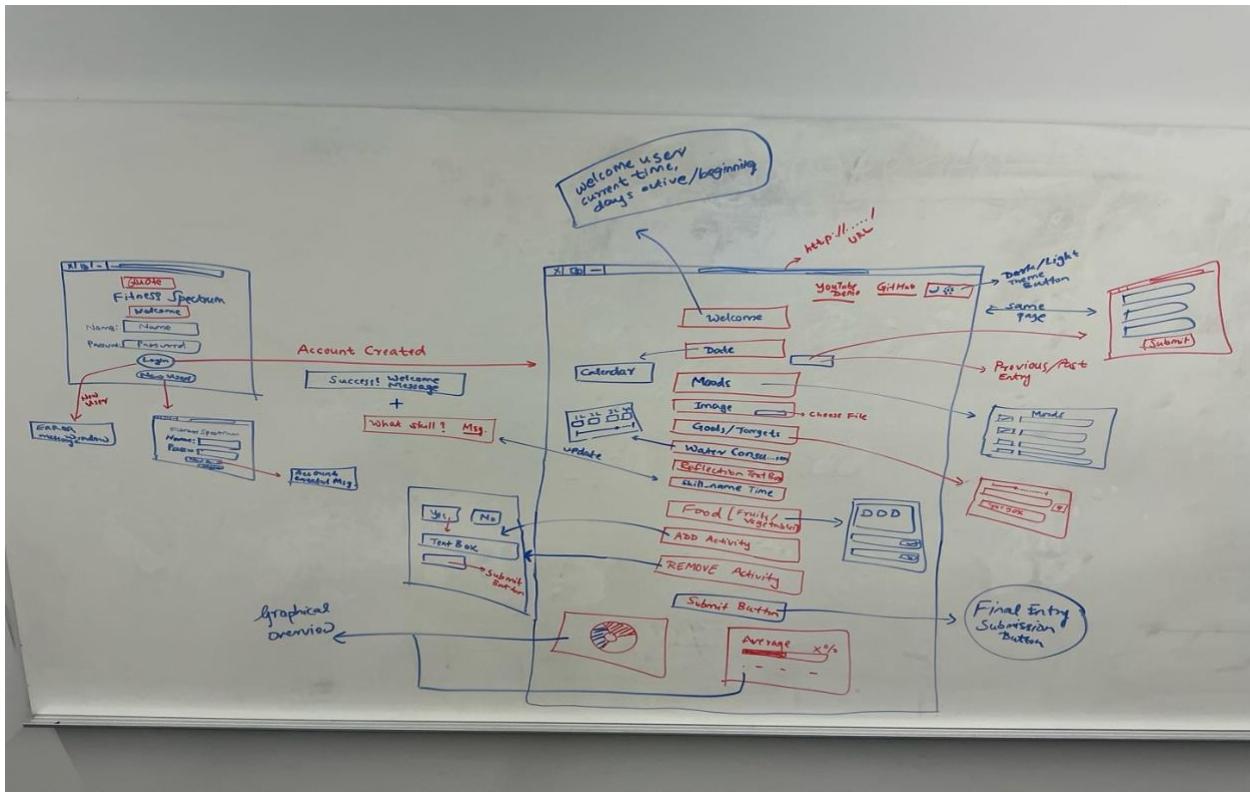
Entry (x-1)

Entry x

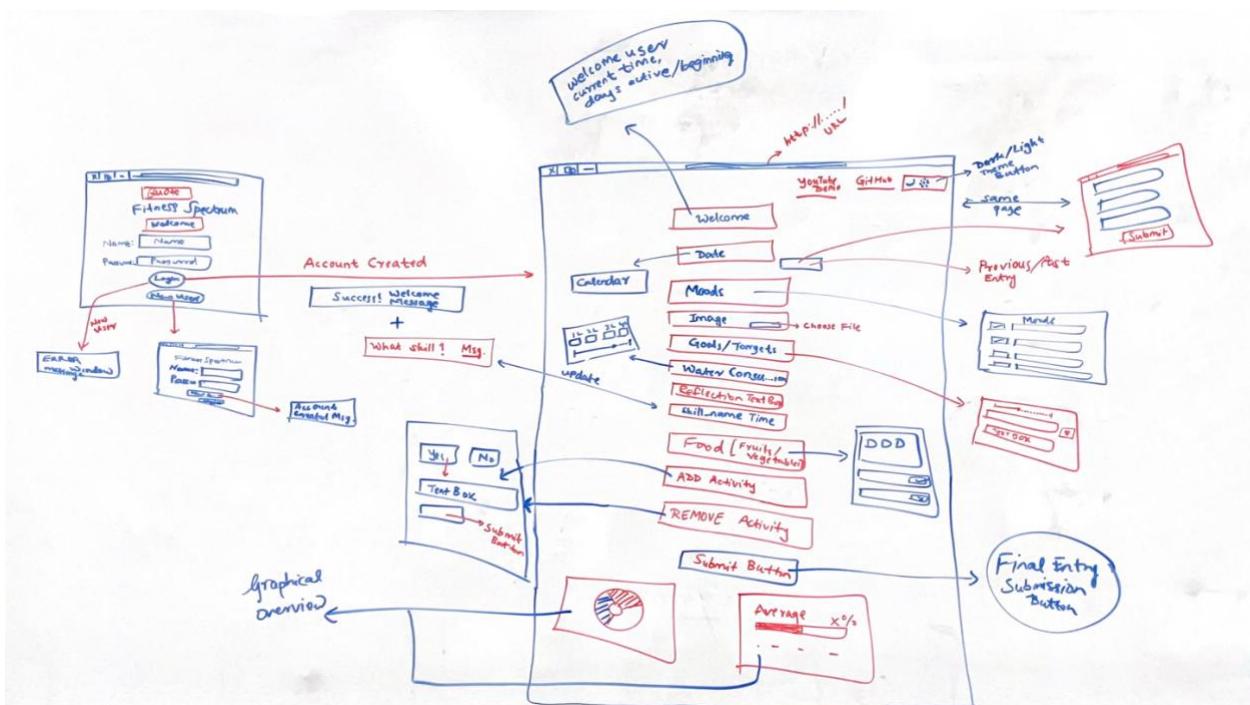


Create a prototype sketch of your envisioned interface.

Original Version:



Scanned version:



WEB APPLICATION'S IMPLEMENTATION

The **Fitness Spectrum** application was built using modern front-end technologies with a focus on simplicity, performance, and ease of use. The implementation is entirely client-side, leveraging JavaScript and Svelte for interactive components and user interface logic. No backend or database is used, data is managed through flat files and local storage to simplify development and improve performance for small-scale use.

CORE TECHNOLOGIES and KEY LIBRARY

- * **Svelte**

Svelte is a modern framework that compiles components into highly efficient vanilla JavaScript, providing an optimized and responsive interface. Unlike traditional frameworks like React or Vue, Svelte shifts most of the work to compile time, reducing the need for a virtual DOM and improving runtime performance.

- * **JavaScript**

The core logic of the application is written in JavaScript, enabling dynamic interaction, handling user input, updating the DOM (Document Object Model), and managing state across various components.

- **Chart.js**

Chart.js is used to generate interactive, visually appealing charts that display user progress. This library is lightweight, easy to implement, and provides highly customizable chart options, such as doughnut charts used for visualizing water intake progress and more.

- * **HTML**

HTML (HyperText Markup Language) is used to structure the content and layout of the web pages, forming the foundation for how the elements are organized and presented in the browser.

- * **CSS**

Custom CSS styles give the application a clean and modern look. CSS variables are used to manage theme switching between light and dark modes, ensuring consistency across components. The design is primarily desktop-focused, but responsive techniques have been applied to ensure the interface adjusts well to different screen sizes.

CODE STRUCTURE

The application's codebase is organized into multiple Svelte components. Below is the folder structure for the key files and directories:

- **project_1_svelte**
 -
 -
 - **src**
 -
 - **App.svelte (PARENT)**
 - **app.css**
 - **svelte_components (CHILDREN)**
 - **activity_progress.svelte**
 - **dailyFeelings.svelte**
 - **dailyImage.svelte**
 - **fruits.svelte**
 - **journaling.svelte**
 - **newActivity.svelte**
 - **removeActivity.svelte**
 - **timeOnActivity.svelte**
 - **userDetails.svelte**
 - **userLogin.svelte**
 - **visualFeedback.svelte**
 - **waterConsumption.svelte**
 - **yoga.svelte**
 - **README.md**

A screenshot of a dark-themed file explorer interface, likely from a code editor like VS Code. The sidebar shows the project structure:

- PROJECT_1_SVELTE
 - .vscode
 - node_modules
 - public
 - src
 - assets
 - lib
 - svelte_components
 - activity_progress.svelte
 - dailyFeelings.svelte
 - dailyImage.svelte
 - fruits.svelte
 - journaling.svelte
 - newActivity.svelte
 - removeActivity.svelte
 - timeOnActivity.svelte
 - userDetails.svelte
 - userLogin.svelte
 - visualFeedback.svelte
 - waterConsumption.svelte
 - yoga.svelte
 - # app.css
 - App.svelte
 - main.js
 - vite-env.d.ts
 - .gitignore
 - index.html
 - jsconfig.json
 - package-lock.json
 - package.json
 - README.md
 - svelte.config.js
 - vite.config.js

DATA MANAGEMENT

Since the app doesn't rely on a backend or a database, as mentioned earlier, local storage is used to persist user data. Each time a user logs some of the activities (e.g., water intake, mood), the data is stored in the browser's local storage, ensuring that it remains available across sessions unless manually cleared.

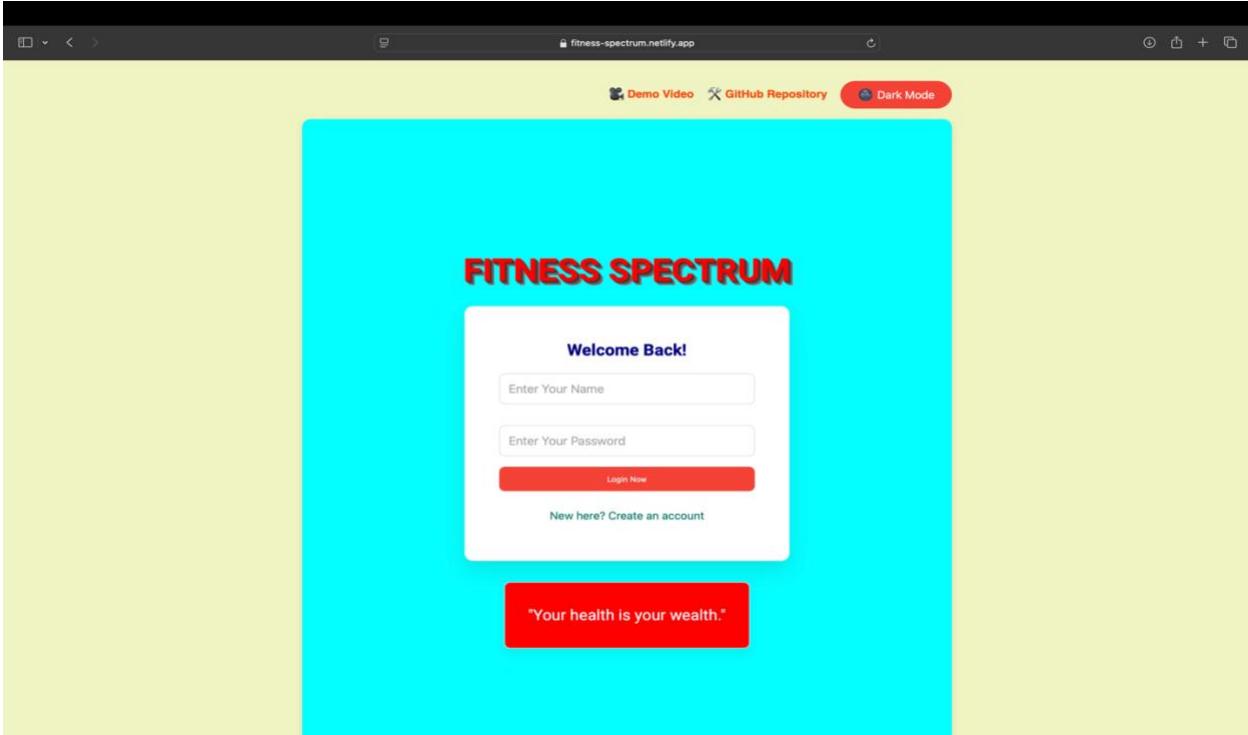
Key Benefits of Local Storage:

- Persistent data without the need for a server.
- Fast access, as all data is stored locally in the browser.
- Simplified development by avoiding complex server-side setups.

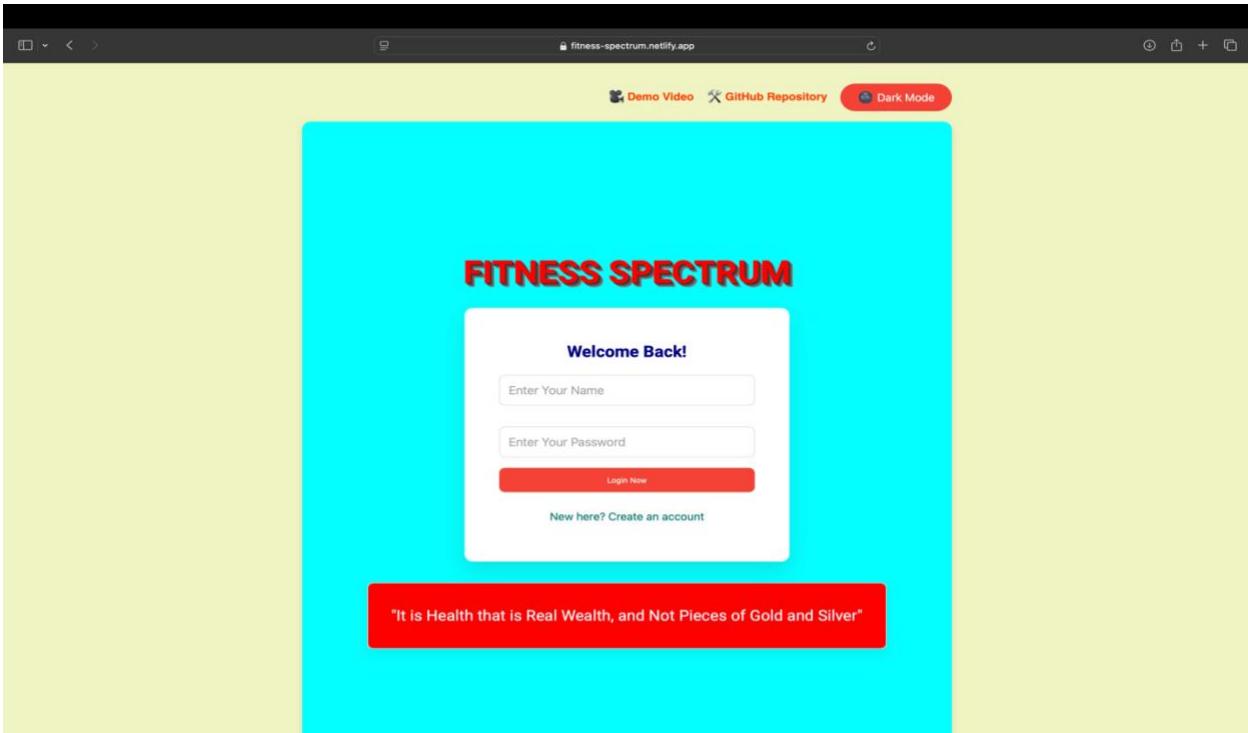
Flat Files:

The static structure of the project is managed through flat files, with components separated into ".svelte" files. These files organize the structure and logic of individual parts of the application. This modular approach makes the codebase easy to maintain and update.

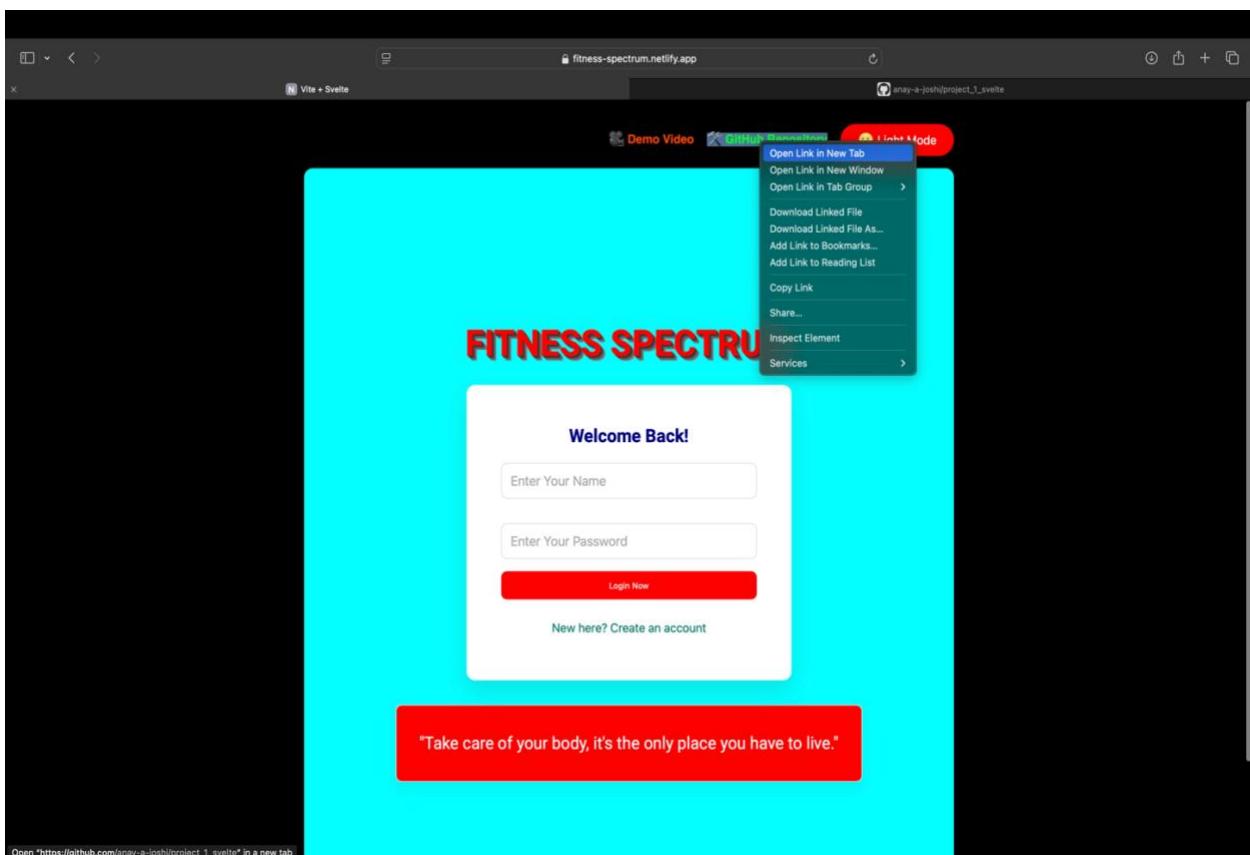
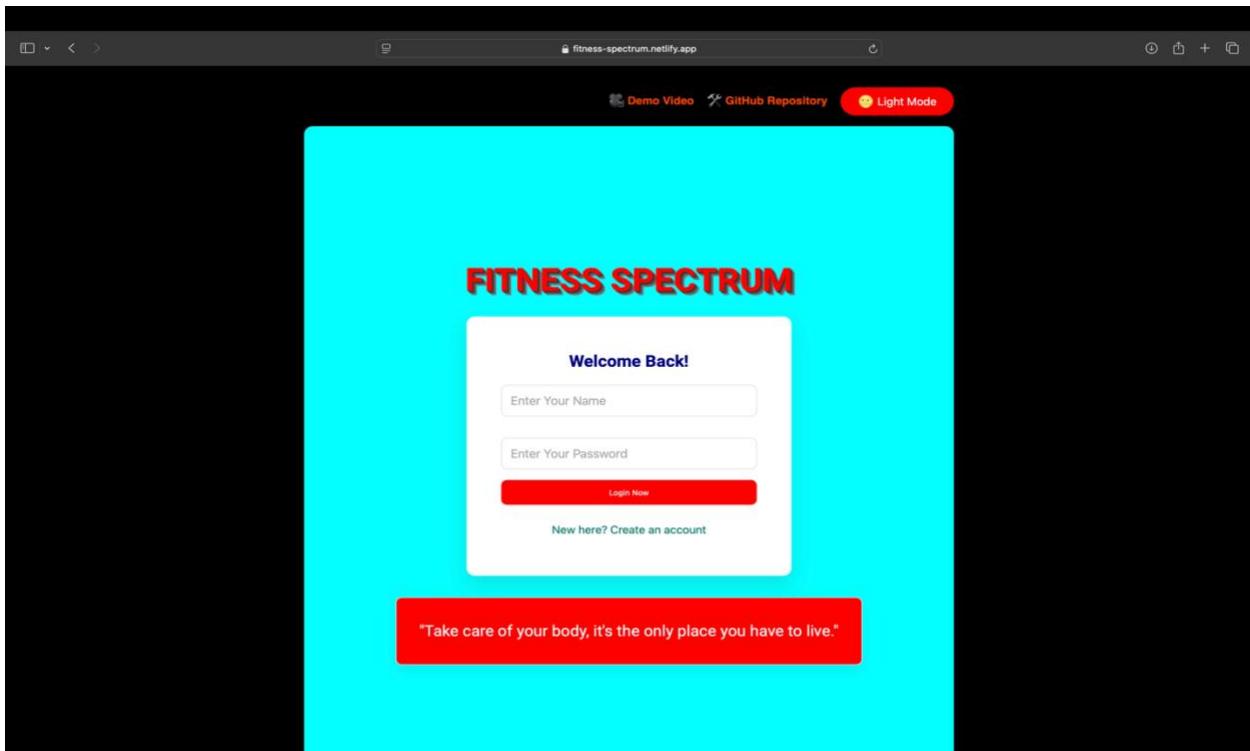
FITNESS SPECTRUM SCREENSHOTS

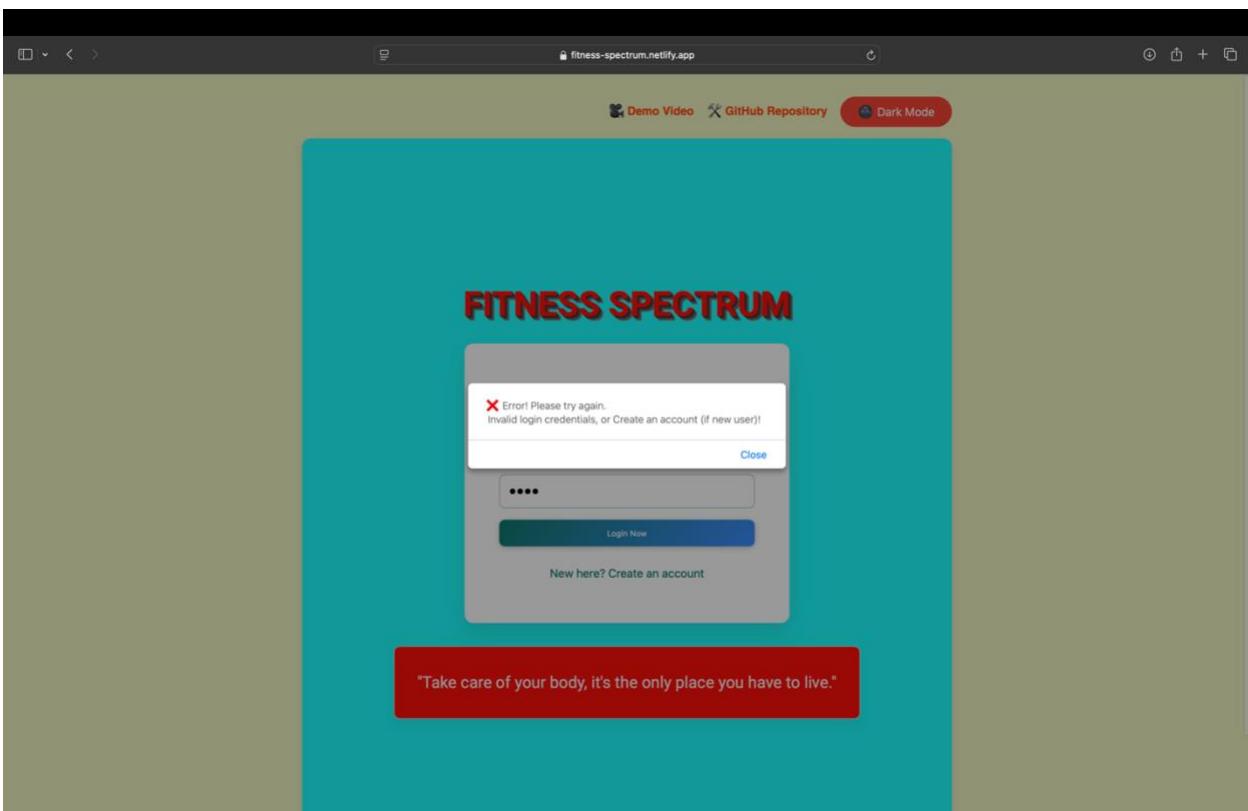
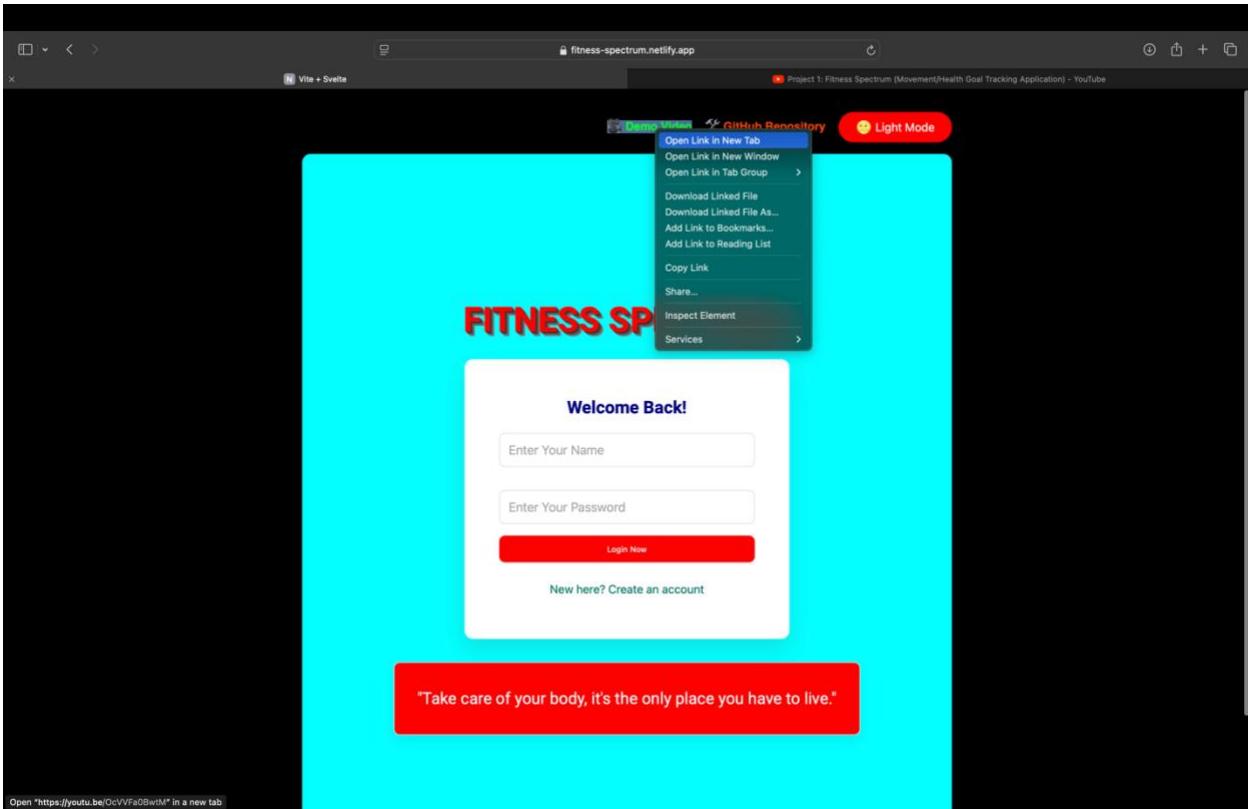


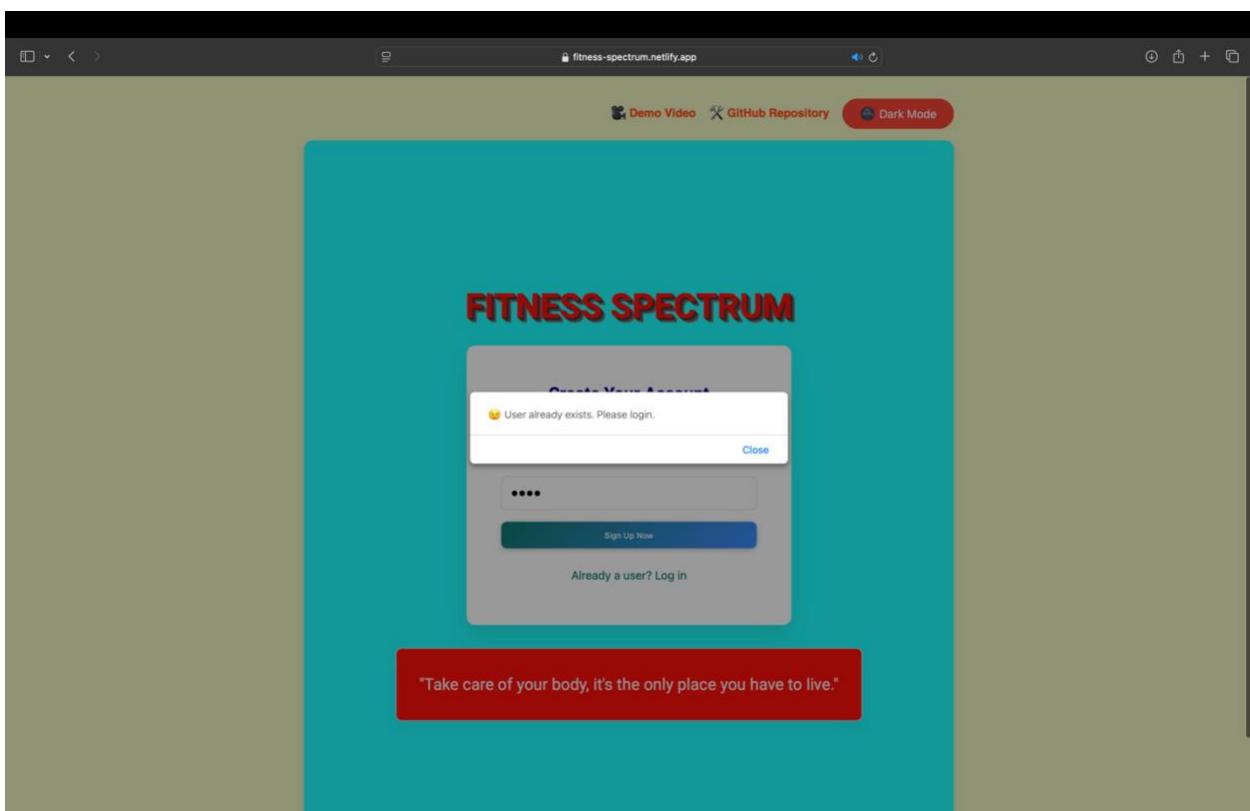
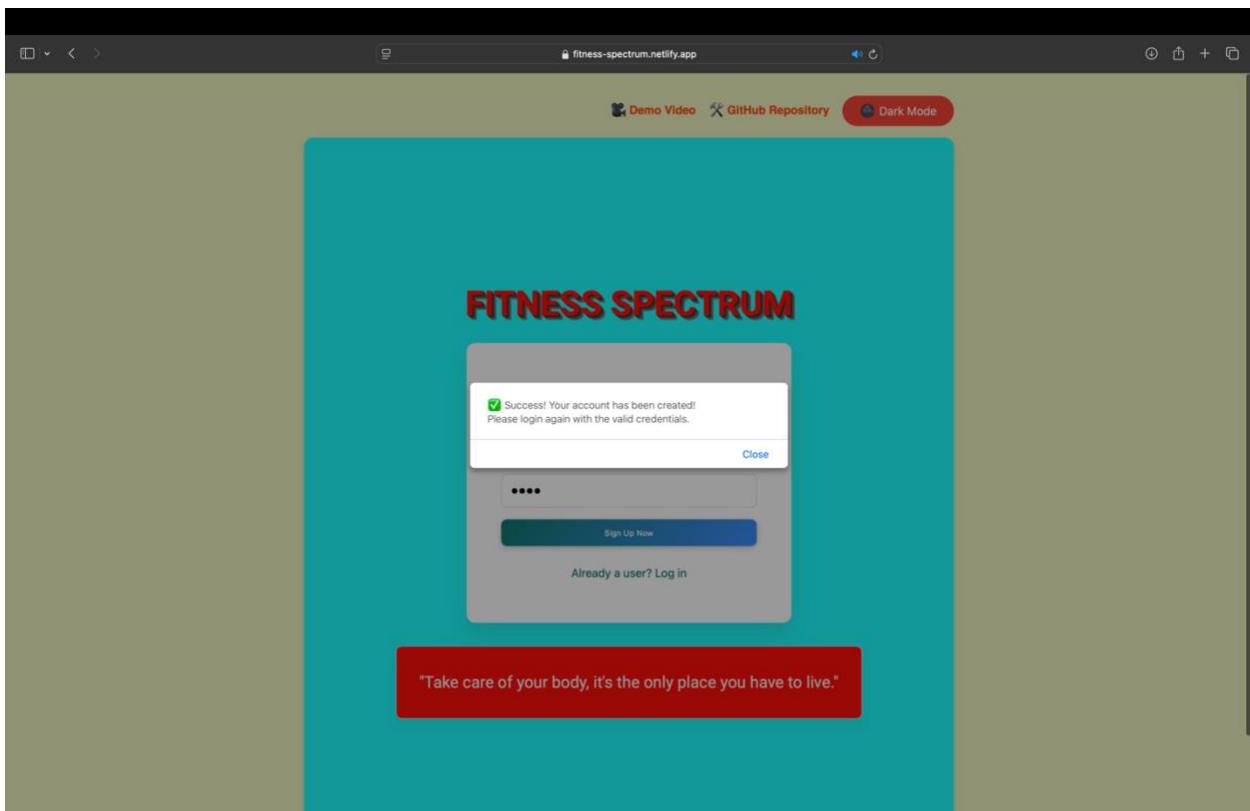
New Quotes (for every Refresh):

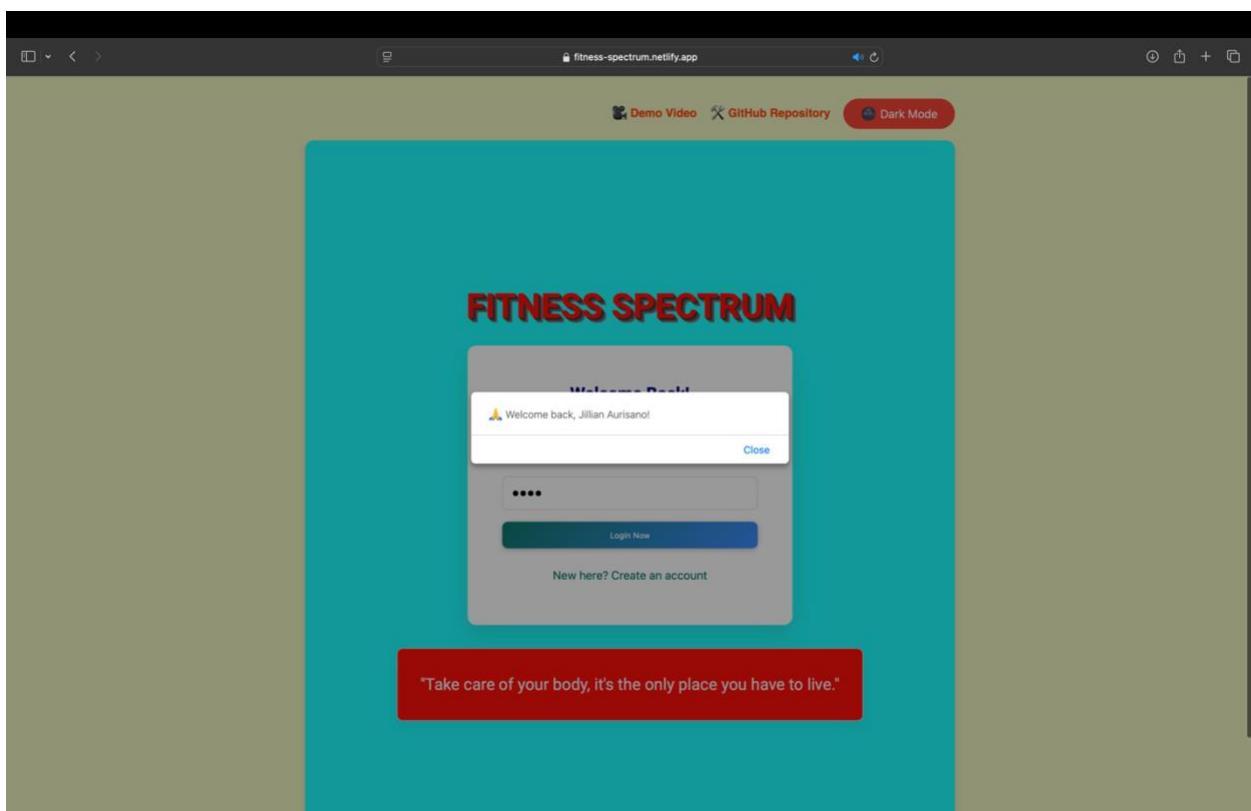
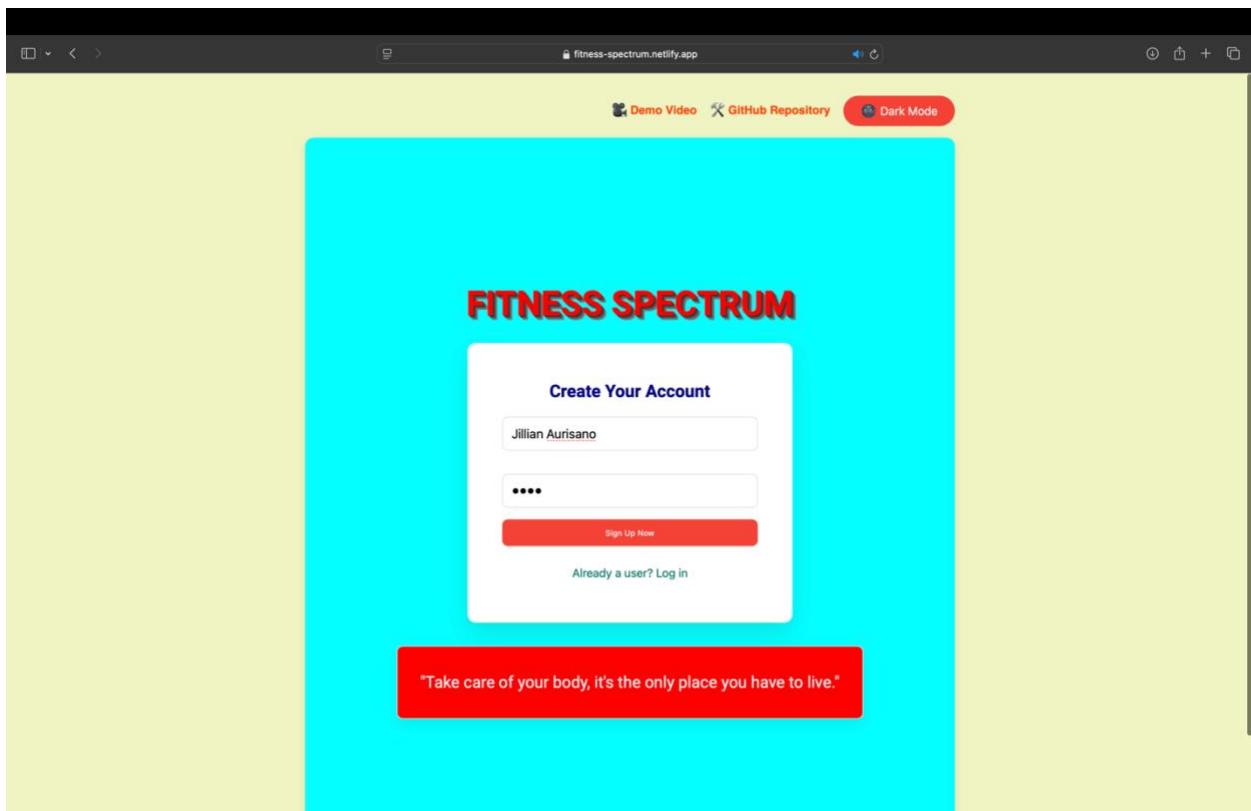


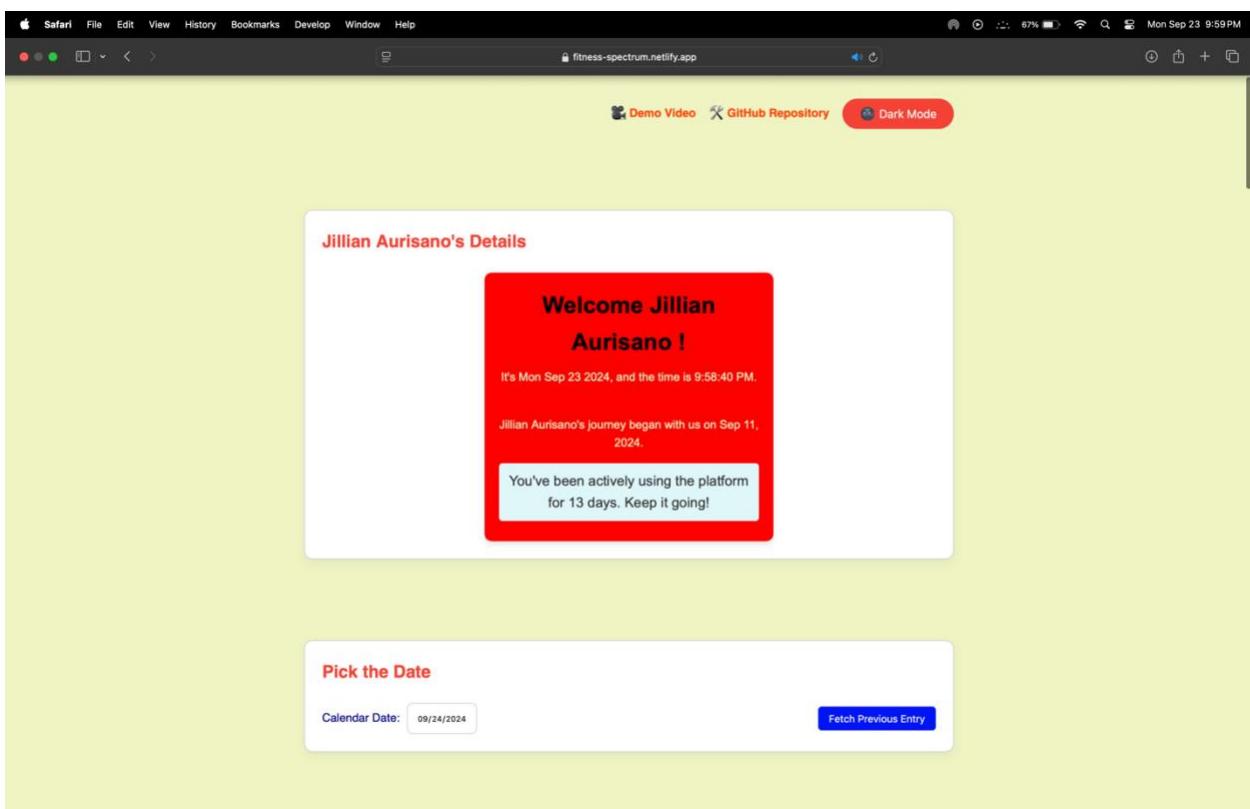
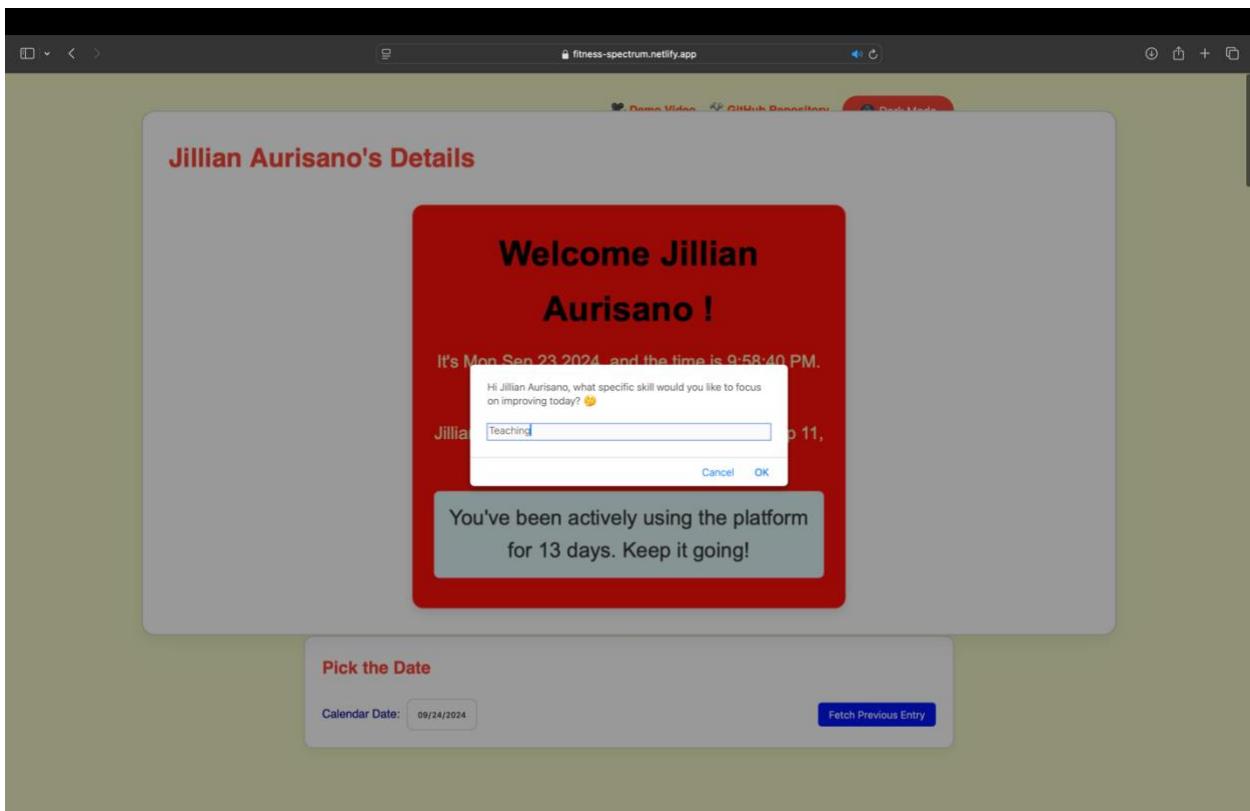
Themes (Light Mode 😊 -> Dark mode 😎)

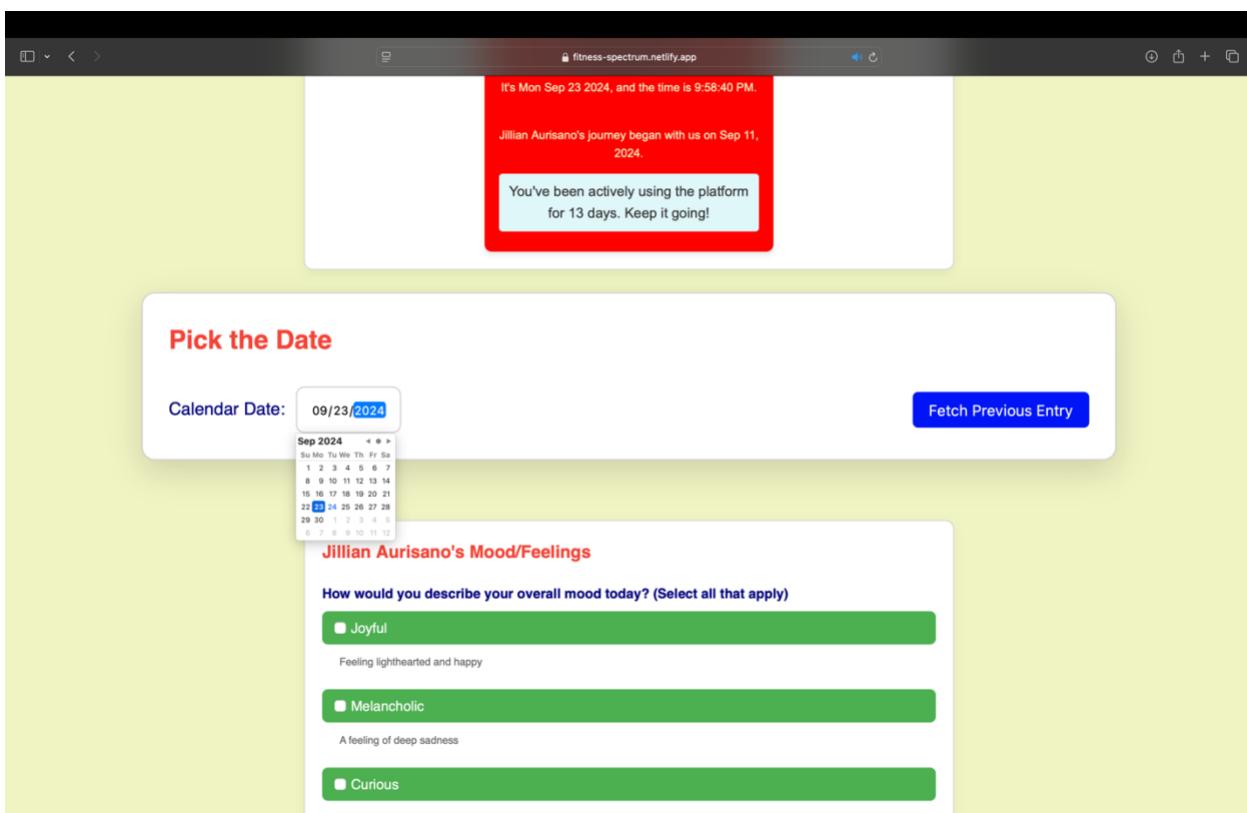
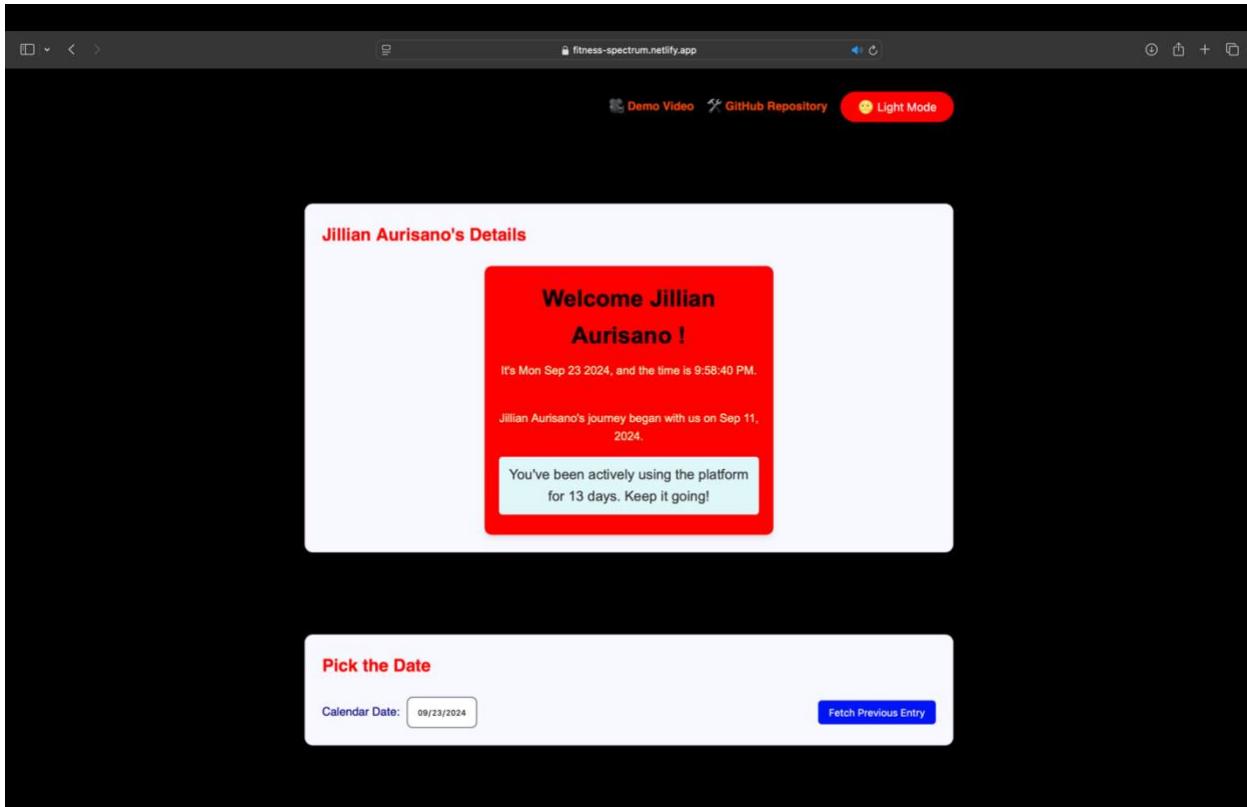












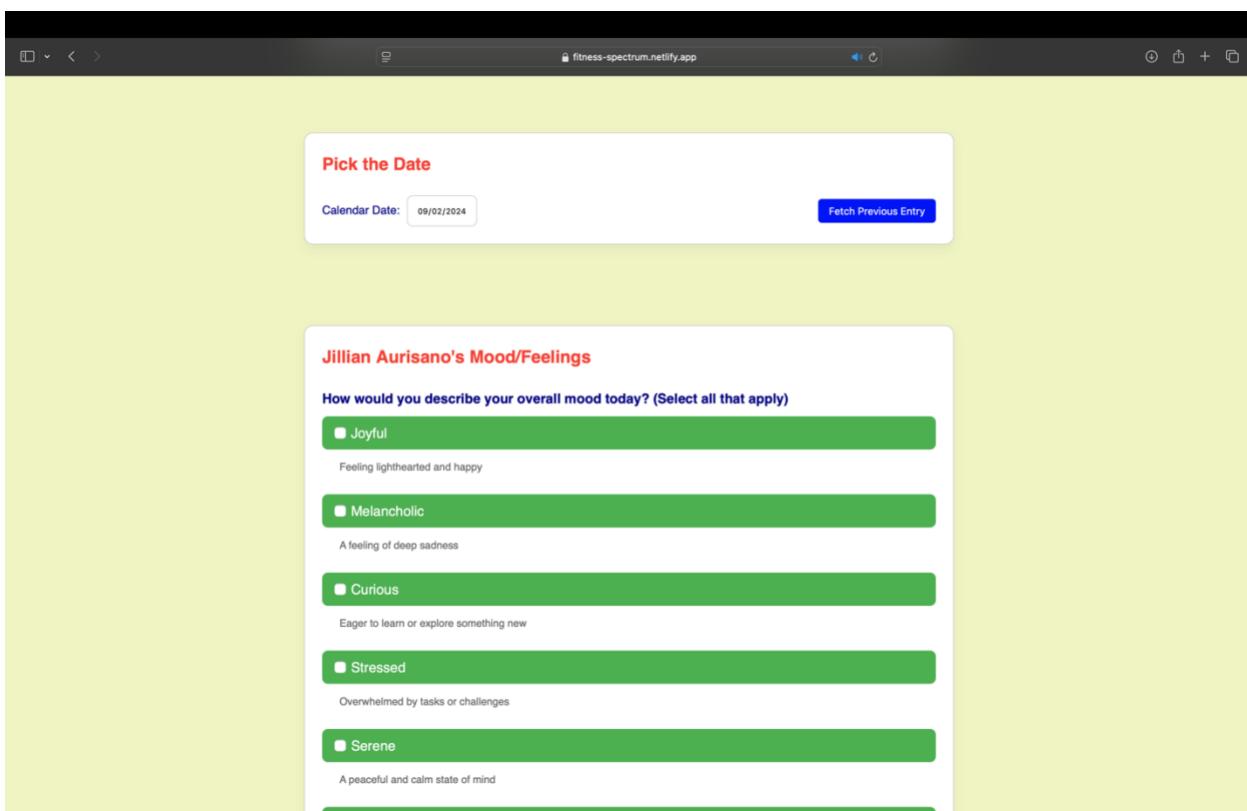
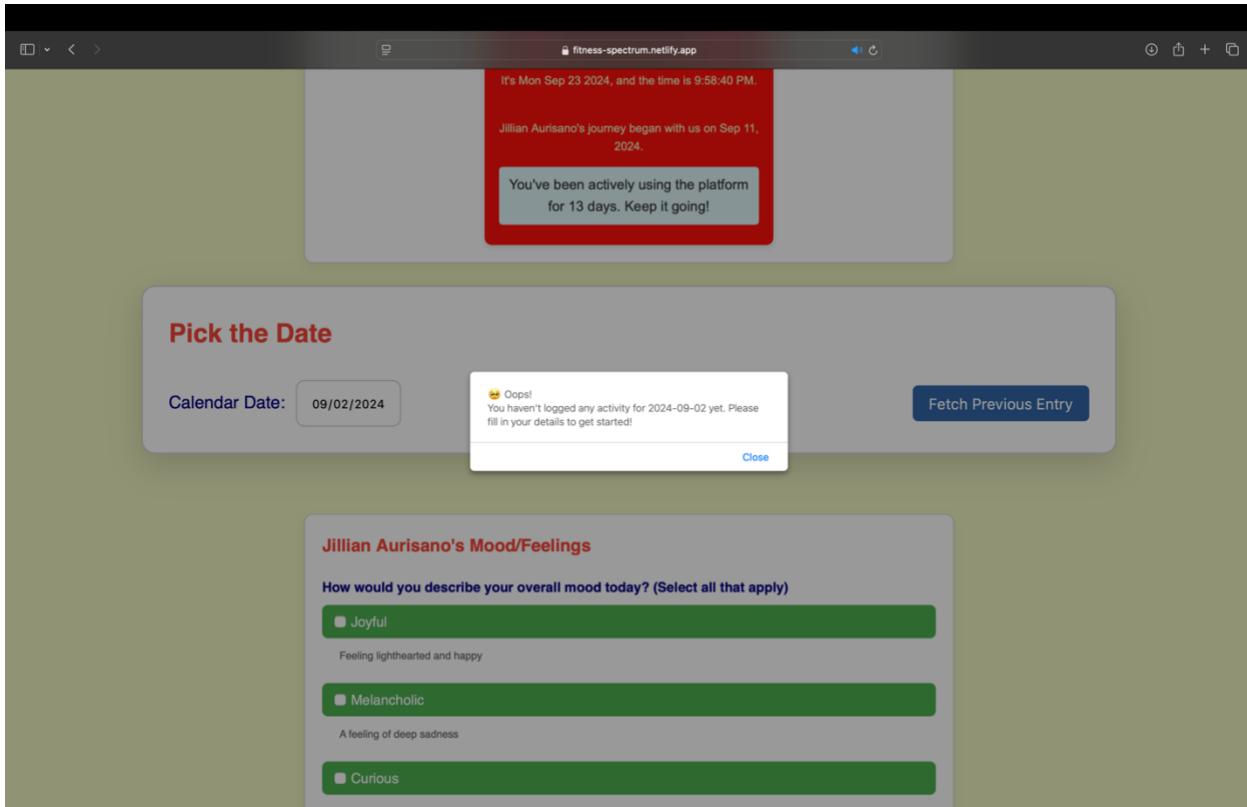


Image of the Day (Please Upload)

Share your Captured Moment and Add a Caption

Choose File no file selected

Goals/Targets

Time Spent on Teaching (Hours) by Jillian Aurisano:

6

Jillian Aurisano's Yoga/Stretching Duration (Minutes):

100

Jillian Aurisano's Body Hydration Goal (Liters):

4

Jillian Aurisano's Body Hydration

Track Your Water Hydration for Today

8 oz / 1 Liter 32 oz / 2 Liter 64 oz / 3 Liter 102 oz / 4 Liter 128 oz / 5 Liter

Today's Insights of Jillian Aurisano

End of the Day Thoughts

What made your day unique today?

Teaching

Teaching Progress Tracker

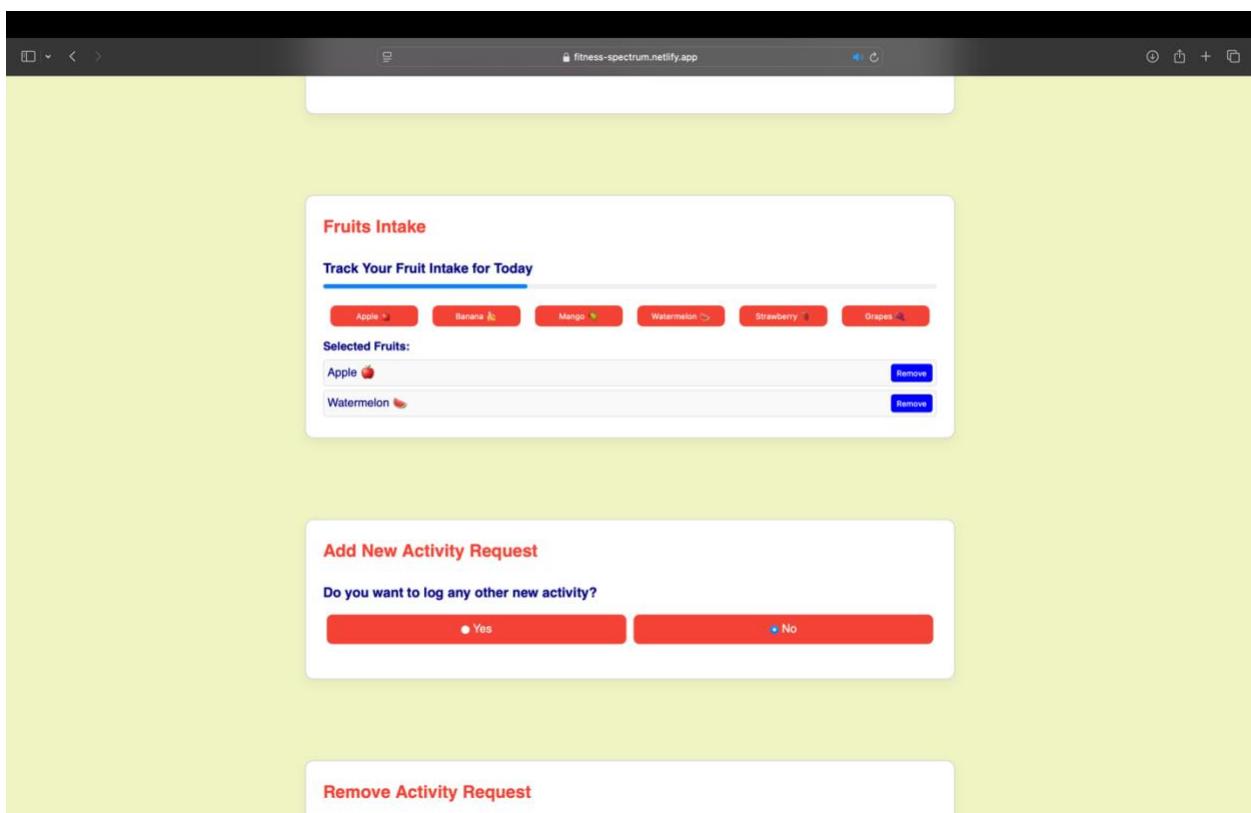
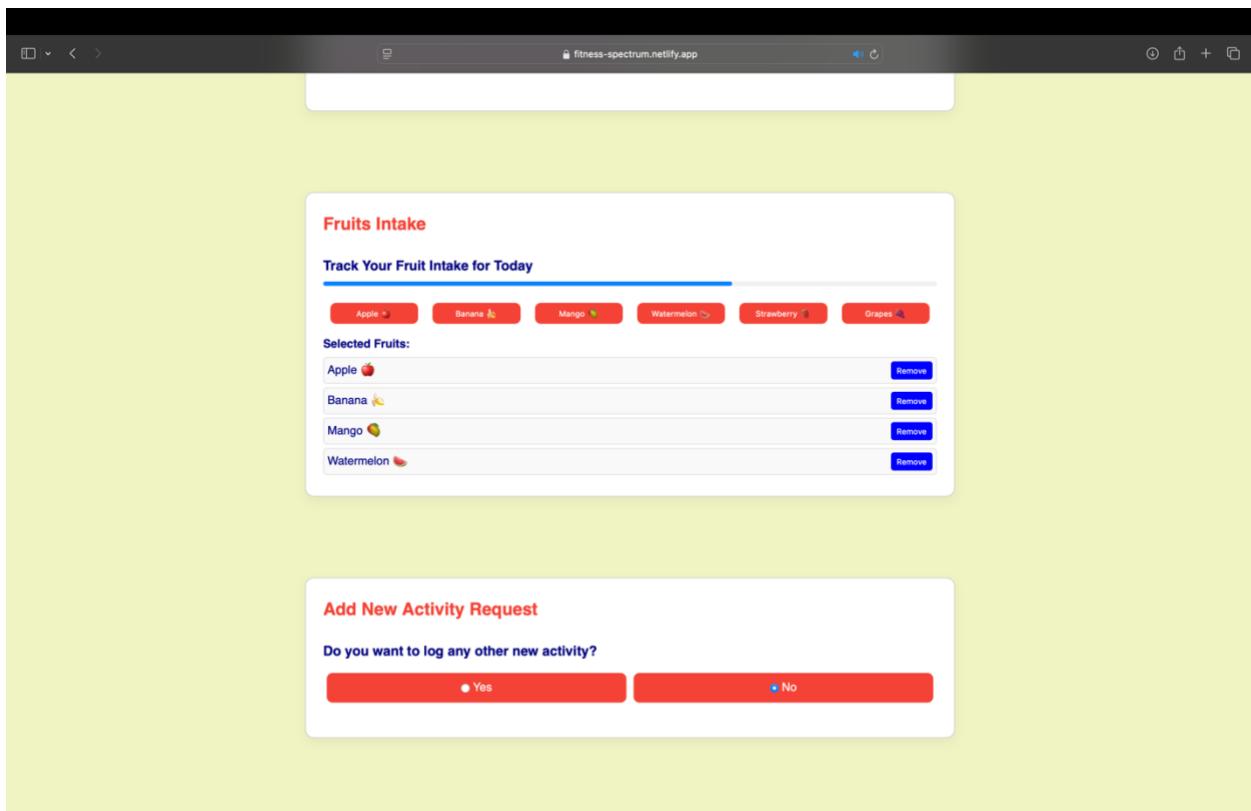
Hours dedicated to Teaching today:

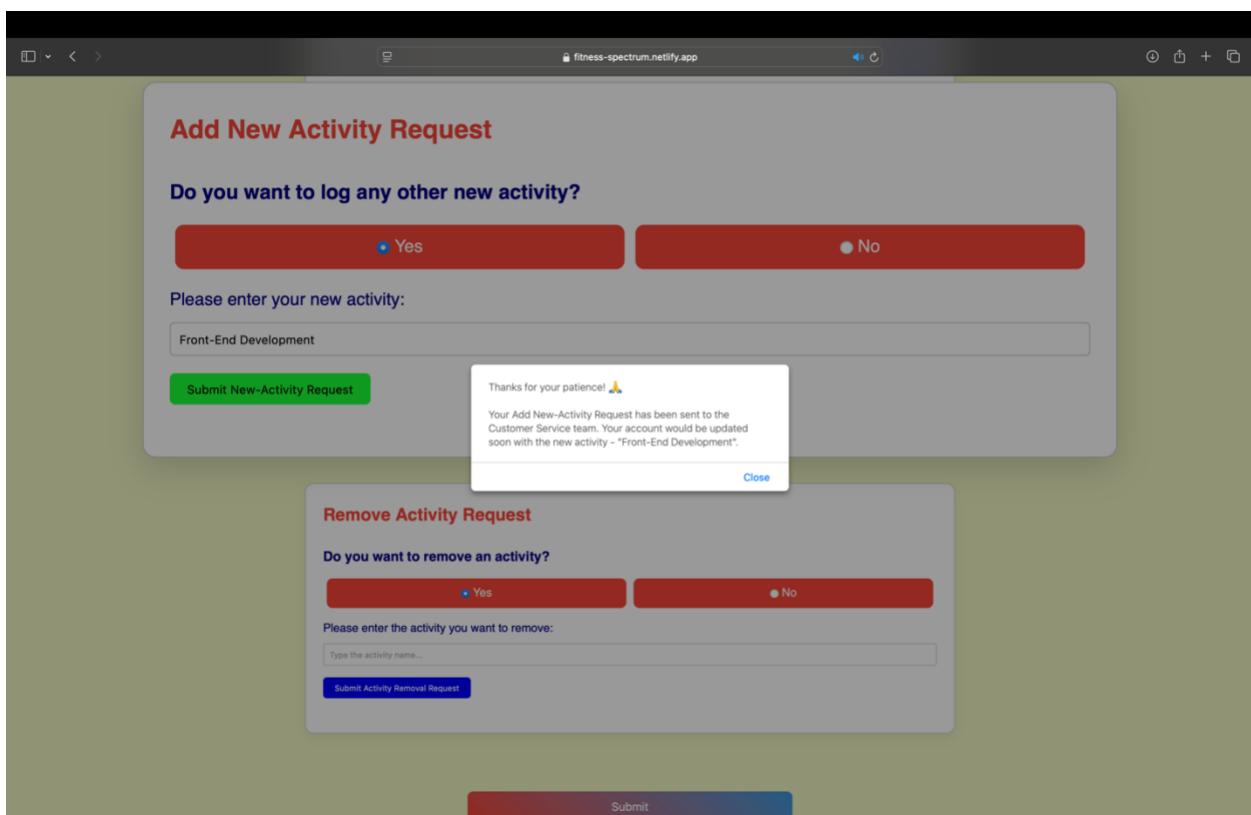
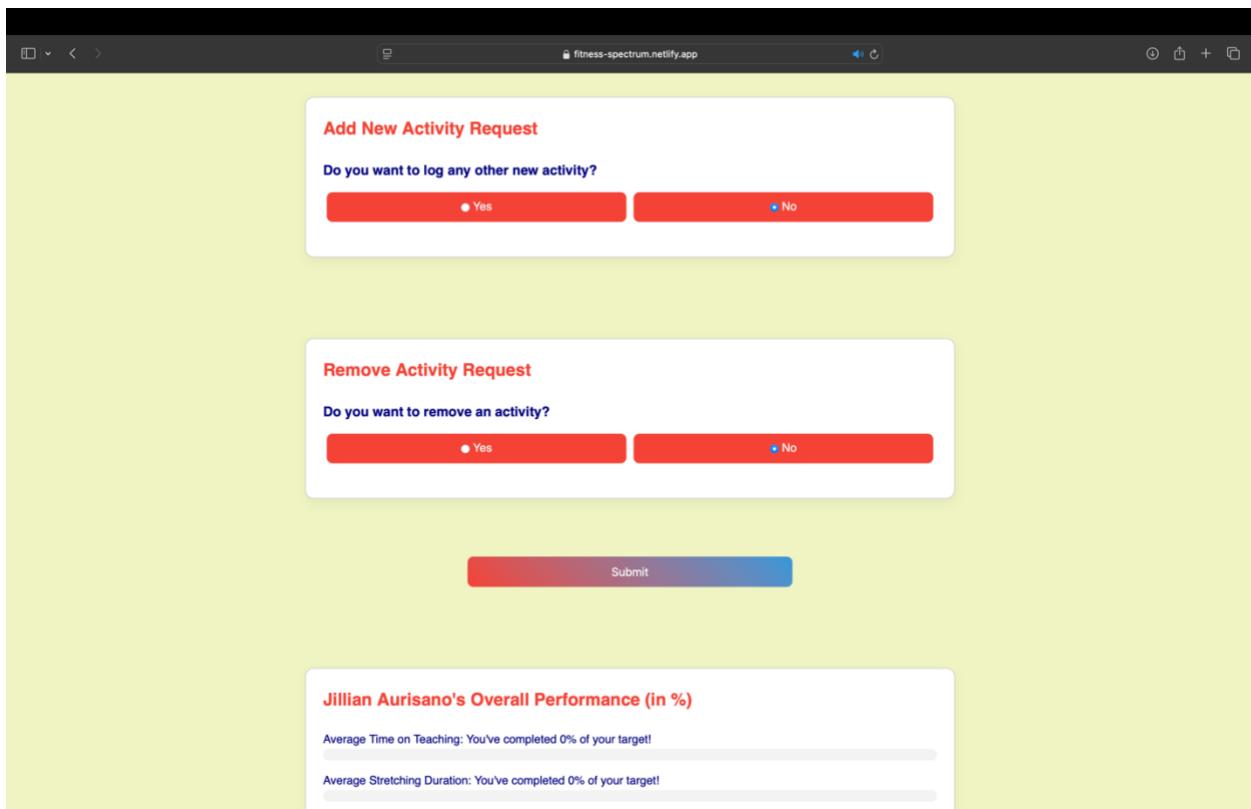
0

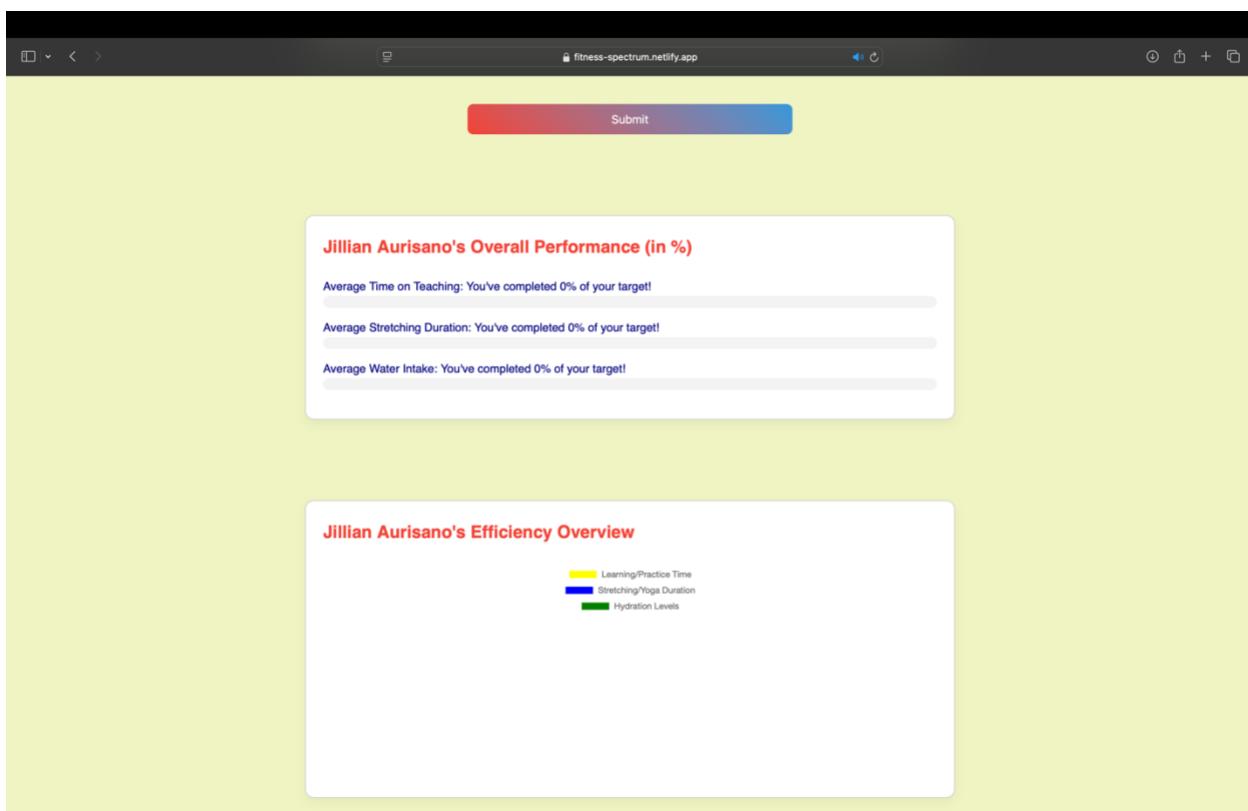
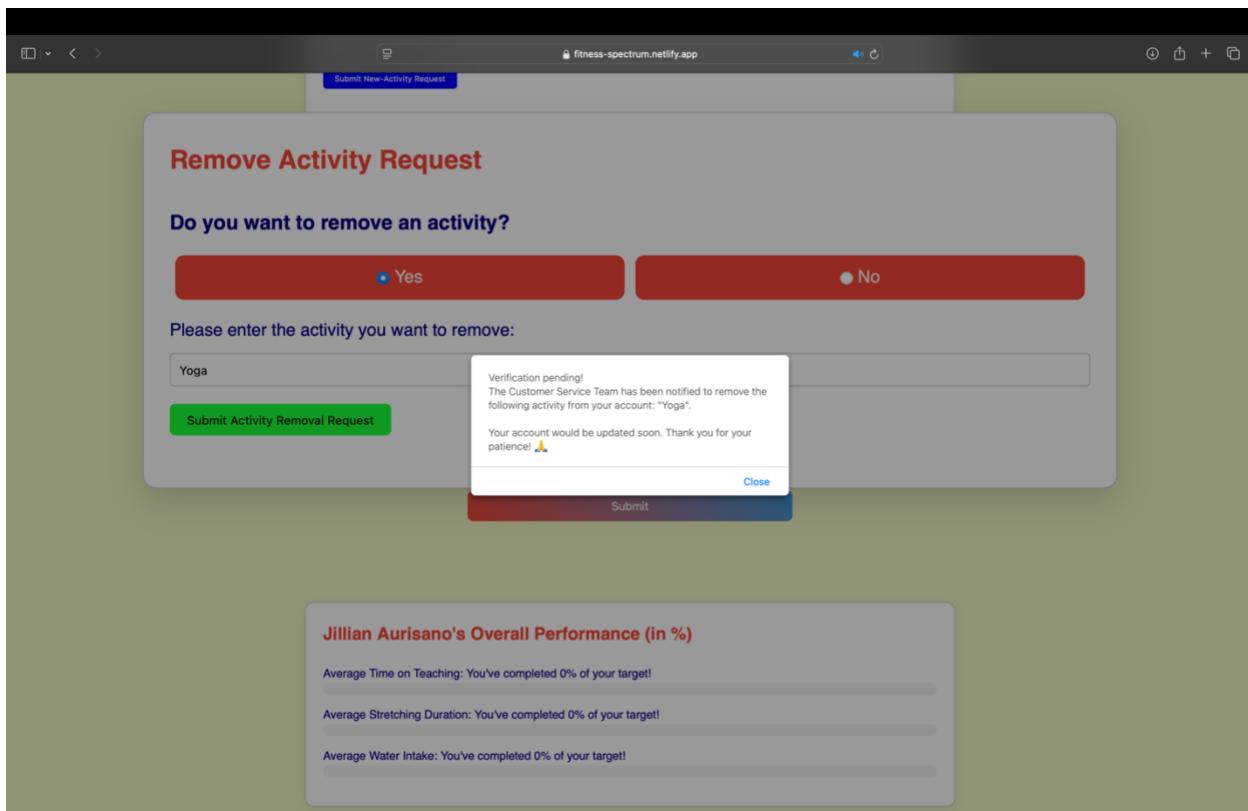
Jillian Aurisano's Yoga/Stretching

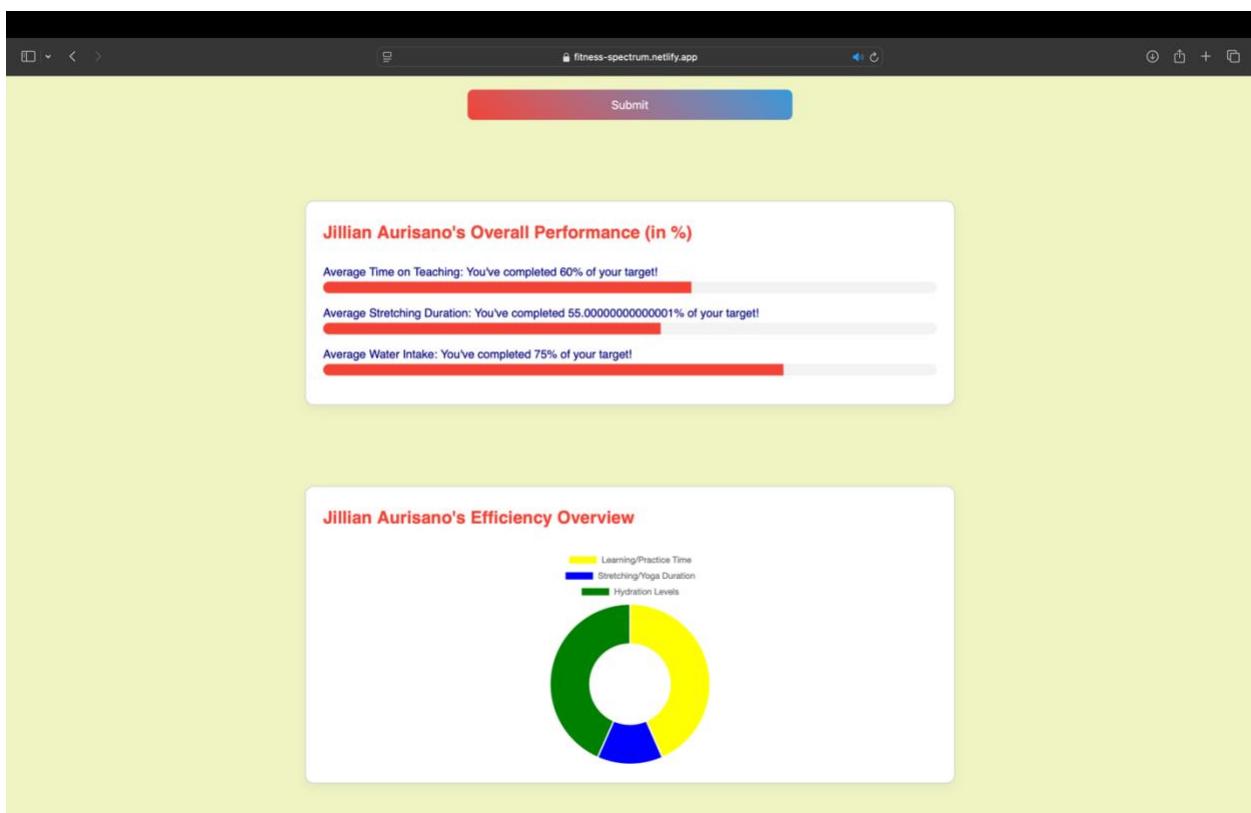
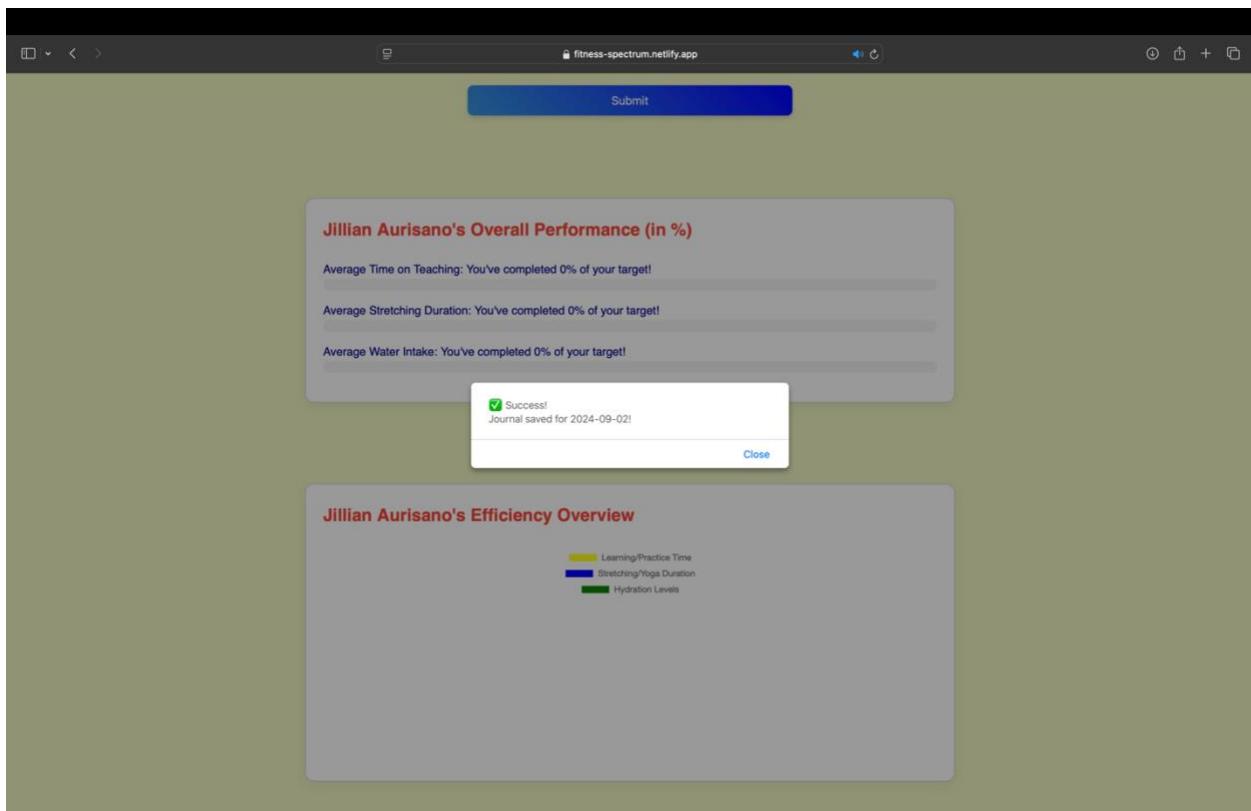
Did you manage to fit in some yoga today?

Yes No









Aurisano !

It's Mon Sep 23 2024, and the time is 9:58:40 PM.

Jillian Aurisano's journey began with us on Sep 11, 2024.

You've been actively using the platform for 13 days. Keep it going!

Pick the Date

Calendar Date: 09/15/2024

Fetch Previous Entry

Jillian Aurisano's Mood/Feelings

How would you describe your overall mood today? (Select all that apply)

Joyful
Feeling lighthearted and happy

Melancholic
A feeling of deep sadness

Jillian Aurisano's Mood/Feelings

How would you describe your overall mood today? (Select all that apply)

Joyful
Feeling lighthearted and happy

Melancholic
A feeling of deep sadness

Curious
Eager to learn or explore something new

Stressed
Overwhelmed by tasks or challenges

Serene
A peaceful and calm state of mind

The screenshot shows a web-based fitness application interface. At the top, there is a header bar with browser controls and the URL `fitness-spectrum.netlify.app`. Below the header, there are two main sections:

- Image of the Day (Please Upload)**: A section for users to upload a photo and add a caption. It includes a file input field containing `d2_diagram.jpg`.
- Goals/Targets**: A section for tracking time spent teaching, yoga/stretching duration, and body hydration goals. It contains three input fields with values 5, 100, and 4 respectively.

Below these sections is a large card titled **Jillian Aurisano's Body Hydration**. It features a title **Track Your Water Hydration for Today** and a progress bar. Below the progress bar are five red buttons with hydration goals: 8 oz / 1 Liter, 32 oz / 2 Liter, 68 oz / 3 Liter, 102 oz / 4 Liter, and 136 oz / 5 Liter.

The screenshot shows a continuation of the fitness application interface. At the top, there is a header bar with browser controls and the URL `fitness-spectrum.netlify.app`. Below the header, there are three main sections:

- Today's Insights of Jillian Aurisano**: A section for users to share their thoughts at the end of the day. It includes a text input field with the placeholder "Hello! It was an awesome day..."
- Teaching**: A section for tracking teaching hours. It features a title **Teaching Progress Tracker** and a text input field with the value 3.
- Jillian Aurisano's Yoga/Stretching**: A section for tracking yoga/stretching. It includes a question "Did you manage to fit in some yoga today?", two red buttons for "Yes" and "No" (with "Yes" selected), and a text input field for "How long did you practice yoga today? (Minutes)". The input field has a value of 35. Below the input field is a message: "Great job! You've completed 35 minutes of yoga today."

Add New Activity Request

Do you want to log any other new activity?

Yes No

Remove Activity Request

Do you want to remove this activity?

Success! Journal saved for 2024-09-15!

[Close](#)

Jillian Aurisano's Overall Performance (in %)

Average Time on Teaching: You've completed 0% of your target!

Average Stretching Duration: You've completed 0% of your target!

[Average Water Intake](#)

[Submit](#)

Jillian Aurisano's Overall Performance (in %)

Average Time on Teaching: You've completed 60% of your target!

Average Stretching Duration: You've completed 35% of your target!

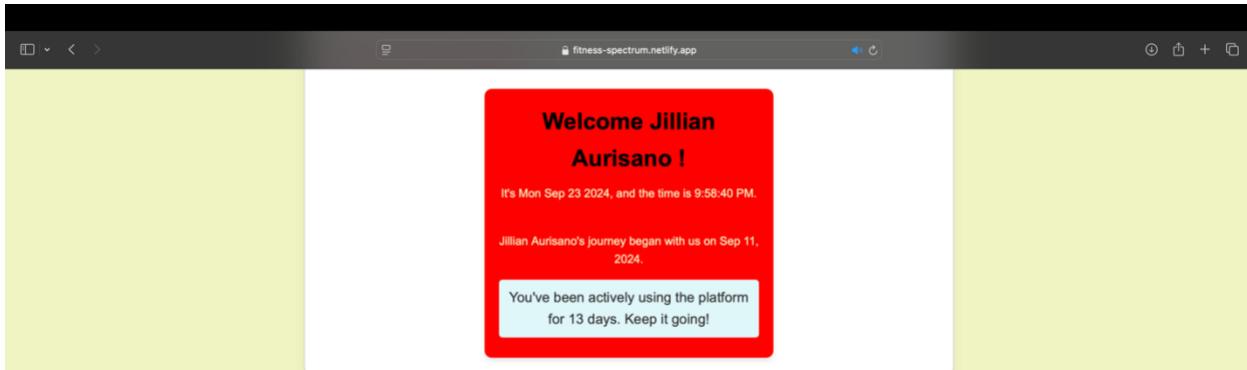
Average Water Intake: You've completed 25% of your target!

Jillian Aurisano's Efficiency Overview

Legend:

- Yellow: Learning/Practice Time
- Blue: Stretching/Yoga Duration
- Green: Hydration Levels





Pick the Date

Calendar Date: 09/02/2024

Fetch Previous Entry

Sep 2024 < * >
Sun Mon Tue Wed Thu Fri Sat
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 1 2 3 4 5
6 7 8 9 10 11 12

Jillian Aurisano's Mood/Feelings

How would you describe your overall mood today? (Select all that apply)

Joyful
Feeling lighthearted and happy

Melancholic

The screenshot shows a layered interface. A red header bar is at the top. Below it, a red rounded rectangle contains the same welcome message as the first screenshot. In the foreground, there is a semi-transparent gray box covering the date picker and mood section. This gray box contains a smaller red rounded rectangle with the following text:

Great!
Your data entry for 2024-09-02 has been loaded successfully.

Close

Fetch Previous Entry

Pick the Date

Calendar Date: 09/02/2024

Jillian Aurisano's Mood/Feelings

How would you describe your overall mood today? (Select all that apply)

Joyful
Feeling lighthearted and happy

Melancholic

Jillian Aurisano's Details

Welcome Jillian
Aurisano !

It's Mon Sep 23 2024, and the time is 9:58:40 PM.

Jillian Aurisano's journey began with us on Sep 11, 2024.

Great!
Your data entry for 2024-09-15 has been loaded successfully.

Pick the Date

Calendar Date: 09/15/2024

Fetch Previous Entry

Jillian Aurisano's Mood/Feelings

How would you describe your overall mood today? (Select all that apply)

Jillian Aurisano's Body Hydration

Track Your Water Hydration for Today

8 oz / 1 Liter 32 oz / 2 Liter 64 oz / 3 Liter 102 oz / 4 Liter 136 oz / 5 Liter

Today's Insights of Jillian Aurisano

End of the Day Thoughts

Hello!
It was an awesome day...

Teaching

Teaching Progress Tracker

Hours dedicated to Teaching today:

3

For detailed information, please watch –

[Demo Video \(YouTube\)](#)

&

[Demo Video \(Continued\)](#)

ARTIFICIAL INTELLIGENCE (AI)

During the development of the “Fitness Spectrum” application, AI tools were utilized to assist with both documentation and coding. Specifically, AI was instrumental in providing guidance on learning “Svelte”, a framework I had never used before, as well as offering help with debugging and optimizing parts of the code, if any. AI suggested solutions for fixing bugs and provided coding snippets, making it easier to grasp core Svelte concepts and implement the required features effectively.

STRENGTHS

- **Learning Support:**

AI provided easy-to-understand explanations and code snippets, which accelerated my learning process for Svelte, a new technology for me.

- **Bug Fixing:**

The AI was helpful in identifying common coding issues, providing solutions to resolve them quickly, which improved development speed.

- **Documentation:**

AI also assisted in generating detailed, structured, and easy-to-follow documentation, ensuring all aspects of the project were clearly explained.

LIMITATIONS

- **Documentation Support:**

At times, AI-generated long descriptions that didn't always include all the important details or keywords needed for clear explanations.

- **Advanced Features:**

AI provided a good starting point, but certain advanced functionalities required further customization to meet specific project goals.

FUTURE WORK

As the **Fitness Spectrum** application continues to evolve, several exciting features can be added to enhance the user experience and provide greater flexibility:

- * **Performance Comparison**

I might introduce a feature that allows users to compare their performance with others in the same age group or with similar activity levels. This could motivate users by providing context on how they are progressing relative to their peers, potentially fostering a sense of community or friendly competition.

- * **Email Notifications & Reminders**

I might also implement a system that sends personalized email reminders to users, prompting them to complete their daily goals such as stretching, drinking water, or logging activities. This would encourage consistency and help users stay on track with their health goals. The notifications could also include summaries of their progress over the week or month, keeping them engaged with their wellness journey.

- * **Secure Activity Addition/Removal with AI Assistance**

To prevent accidental changes, users will be required to enter their password when adding or removing an activity. Once authenticated, the system will temporarily generate a new activity using AI-generated templates, complete with customizable input parameters like checkboxes, sliders, and buttons. Users can further personalize the activity template to fit their needs, ensuring a smooth and flexible experience.

To prevent accidental additions or deletions of activities, currently, I implemented a verification process for this project, ensuring that users cannot directly add or remove activities themselves. This decision was based on my past-experience where my friend's 5-year-old son, while using my laptop, accidentally deleted an activity I was working on. In that app, the user could delete or add activities with just a simple confirmation button press – “Yes! Delete/Add.”, leading to this unintended action. To avoid similar issues, I introduced a verification request button for any activity changes, similar to

policies used in the corporate world. This way, users can be confident that no one else can modify their account's activities without manual verification by me (with the users again) before any addition or removal of any activity takes place.

- * **Activity Limitations and Future Expansions**

Since the project requirements were focused solely on front-end development and limited to local storage (with no database allowed), I opted not to include the recording of fruit intake data and image of the day. Due to the limited storage capacity in local storage, I prioritized meeting the core requirements of tracking and fetching user-entered data for at least 6-7 activities. My main goal was to fulfill the project requirements and ensure full points (in this project) by satisfying all the given conditions. In future updates, I plan to allow users to record and access data for all activities available on the platform.

- * **Consistent vs. Daily Goal Setting**

Initially, I intended to allow the users to set different goals for a set of different daily activities based on the selected date, in short, different goals for different dates. However, based on feedback from the interview participants, users preferred that any changes to any activity goals apply to all dates, by default, whenever the user updates these goals for any specific activity. I think that this preference likely stems from the fact that people generally stick to set goals over a period, rather than changing them daily. In the future, I plan to expand my platform to offer both options: the ability to change goals for all dates (as current implemented) or to set unique goals for each day's entry.

- * **Monthly and Annual Averages**

In the future, once users have accumulated data over a month or year, I will introduce features that calculate the "average" of activities, based on monthly or annual data, similar to how monthly or annual averages are calculated.

Level 4 (Implementation):

No new design goals or requirements were revealed in the interviews beyond what was already addressed in Levels 1-3. All identified requirements have been successfully implemented, ensuring full alignment with both the interview feedback and the project's outlined goals.

GitHub Repository

https://github.com/anay-a-joshi/project_1_svelte

Web Application Link

<https://fitness-spectrum.netlify.app>

Demo Video (YouTube)

<https://youtu.be/OcVVFa0BwtM>

<https://youtu.be/wwGkD5-ycD8> (**Demo Continued - Short Video**)