Summary of Accomplishments

For the last sprint, we implemented the final major features to round out our application.

The leaderboard feature was fully implemented with datatables.js and shows the all time players with the highest experience. There are also daily, weekly, and monthly leaderboards that rank players based on experience gained during those times. The logged in user can see their personal ranking.

The friend system lets users send, accept, and decline friend requests to other users. There is a privacy option for each user which is on by default. Users that have privacy mode on will have their profile hidden from non friends. Friends will always be able to see other friends' profiles. The profile was also given a major UI lift and shows basic stats and achievements for the user. The user can also share their profile with social media links.

Habit management was improved by a lot, and users can mark habits as important with a star. Important habits are always displayed first in the habit list. Custom tagging for habits was also added, so users can tag their habits with "School" or "Work" etc. We also implemented a "skip" habit feature, allowing users to skip a habit instead of completing it, without breaking streaks. They don't count as missed or completed.

With all these additions to habits, it made sense to allow the user to filter their habit list. Users can filter by frequency, completeness, and custom tag.

The achievement system rewards users for reaching specific milestones, like completing their first 5 habits or reaching a 10 habit streak. These achievements are shown off on their profile with the date they got it.

There is also a daily login exp bonus, for when the first time the user logs in for the day. A streak of 7 rewards the user with a big exp bonus, but if the user does not log in for more than a day, the streak is reset. Each day the user can also spin the daily minigame wheel which grants additional exp.

We also improved the user interface throughout the entire site, remaking the navbar, user profile, utilizing Bootstrap for CSS, and Font Awesome for icons.

Finally we were able to deploy our website on an Amazon EC2 instance. The live website can be accessed at https://momentum.galeallc.com/.

Challenges and Roadblocks

Since this isn't a graphic design course, much of our website initially lacked visual appeal. The absence of engaging visuals made the interface feel less polished. We utilized Font Awesome's free icons to make the interface more intuitive. While the website still lacks some pictures and advanced visual elements, the addition of icons improved the overall user experience.

A major challenge was deploying the website as we didn't have any experience. Figuring out how to clone/mirror the repository, getting the right Python and dependencies, setting up the Nginx as proxy on the Unix system was time consuming and took a few hours. We implemented an AWS application load balancer in front of the EC2 instance hosting the application, then created a valid SSL certificate using AWS certificate manager. Fortunately, we could get access to an existing domain hosted on GoDaddy, which let us set the application as a subdomain. We pointed the subdomain to the AWS load balancer. Now the application has a secure HTTPS connection.

Client/Stakeholder Feedback

Since it is the last sprint, we did not have a sprint meeting with the client. However, we will have a final demo instead. We anticipate having good feedback because all the major goal features have been implemented successfully.

Some features could have been expanded, and some minor features were dropped due to time constraints. These include things like repeatable habits, customizable avatars with unlockable equipment based on milestones and daily quests for bonus rewards, personalization with light and dark mode settings, and more UI improvements like colors and pictures.