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Sprint 4

What I did

For sprint 4, I implemented the basic gamification feature and the habit reminder system. To stick to our space theme, I designed and implemented the leveling system for the user model centered around discovering space objects, like plants. Users gain experience from completing habits, and then level up at experience milestones. Every 5 levels, the user makes a new "discovery" and unlocks a new rank. Ranks are customizable and users can pick any rank they have unlocked so far to represent them. The focus was to give the users a sense of progression.

Challenges

One of the more complex tasks was the habit reminder feature. I initially tried to use Celery for scheduling reminders, but it was unnecessary complexity to figure out and to set upI switched to using Task Scheduler for Windows, which made the system easier to manage. Linux systems can use Cron, for Linux. Another challenge involved dealing with time zones and aligning user specified reminder times with system time. I implemented timezone datetime handling and gave a one minute buffer window to trigger reminders.

What I learned

This sprint helped me understand background task scheduling capabilities and time based logic in the backend. I also became more comfortable debugging UI issues since I had to look into why the calender was showing all habits not specific to the logged in user.

What I could improve

I think this has been a very successful sprint for me personally. One minor thing I'd like to improve on is probably writing more clean and readable code. After many iterations, code can get kind of messy. I'd like to keep a more consistent style and get into the habit of commenting often, so it's easier to maintain and look back later.

For the next and final sprint I will implement the leaderboard. It's logically very simple to do, so with my remaining time, I will touch up on the features that could be expended more, like the progress/analytics page, and more gamification.