Sprint 4 Retrospective

What went well
- Coordination of mini tasks
- Cleaner code with better documentation
- More features were implemented
- More user stories were completed than others sprints

What we can work on and how/why it happened
- Doing better preemptive exploration of tasks, namely focusing on prerequisites and prioritization.
- Prioritizing features across web/app. We are trying to implement as much as we can to cover all aspects of requirements but some things aren't specified in requirements although it may seem as a no brainer to have those features included.
- Reinforcing soft deadlines
- More frequent meetings

This was the last sprint before finals and all of our collective assignments and term projects were due around the same time. This is evidenced by the extension of this Sprint and although it was arduous, good progress was made. We were also able to pick up the pace in a meaningful way.

- As was mentioned last sprint, as a large team with few meetings, coordination of tasks and whose responsibility they were was an issue. This sprint however, we saw a markedly better performance in that respect. Meetings were more focused and all members were asked to participate more actively to get a more detailed, nuanced idea of progress. This also helped us coordinate because related tasks/features could be discussed more between the people responsible for them, and opinions or suggestions could be generated by the rest of the group for solutions.
- A simple, yet meaningful initiative to improve documentation after comments by the TA about our code management were discussed among the team. Reinforcing its importance and presenting templates helped keep the team consistent, active in documentation, and respecting coding standards.
- Our team had been lacking for a while in terms of development progress and that has been a constant issue, but this sprint we have really hit our stride. We were able to pick up quite a bit of slack and progress immensely in terms of features.

We hope to keep up this momentum and believe that we will be able to finish our features in time.
- This sprint has been our most successful in terms of user stories. To elaborate a little from the point above, this has been the sprint where the most user stories were closed and acceptance tests performed. This is again a large improvement, and we hope to keep it up to finish our last few.

Although we made meaningful and substantial progress, we are still behind the expected timeline. This has led to the resurgence of old issues we worked on in the past.

- As we have consistently received feedback that our prototype is behind schedule, we have been rushing to meet expectations. This has led to issues regarding our preemptive/exporative work for tasks ahead of time. This has led to tasks taking longer than expected, or not marked as prerequisites for other tasks, leading to a slower timeline. This happened because, again, we were lacking in our preemptive work on the tasks, namely looking at prerequisites and prioritization more in depth. The simple solution will be to be more diligent in these explorations during meetings before assigning the tasks, as well as the order to complete them.
- By rushing, and not doing enough research into the tasks as mentioned above, we are also running into the issue of unexpected work appearing. Many of the small tasks/additions seem very obvious in retrospect but were not accounted for when planning for time. This has also contributed to a slower turnaround time. Again, this happened because of a lack of preparation and the solution involves spending more time as a team on this.
- As was the issue in early sprints when the team was still lacking cohesion and organization, work is being done in sporadic and disorganized bursts. As a team, soft deadlines are implemented to better breakdown our sprints and lead to simpler progress milestones to reach. Although we've been setting them, we have been too lax and these soft deadlines are not being respected as much as we would like. Thus, we need to start reinforcing them, and reminding members of their importance to smooth out the development process.
- Finally, our last issue is a lack of meetings. In the beginning of our sprints, we were only doing 1 meeting a week and found that this was lacking. Our solution in the past was to ramp that up to 2 per week and we saw large improvements in productivity. Unfortunately, as was mentioned above, we've all been extremely busy and fell back to bad habits with 1 meeting a week. This has not completely destroyed our productivity as can be seen by the amount of progress we made, but it is still an issue. The solution here being to encourage our group to hold

more meetings and to prepare for them with some progress reports on their work. This will help alleviate some of our problems above, as well as add transparency and efficiency to the team.