**CVWO Final Submission Write-up**

Introduction:

Compared to the code I submitted mid-assignment, this application is totally different. Since 30th Dec last year, I have rebuilt the application an additional 2 to 3 times. This was because I wanted to add more functionality and improve the user experience. I felt that it would be easier to start from scratch rather than build it into my existing application. It was a grueling and arduous process, but I learnt more than I could have possibly imagined.

Improvements since the previous submission:

1. Drag and drop functionality
2. Kanban style layout
3. Categorization of tasks
4. CRUD operations for categories AND tasks
5. Searchability of tasks

Difficulties faced:

My old application was completed unsuitable for Kanban implementation. Hence, I had to rebuild the application from scratch (several times). I also had to learn how to write drag and drop functions and implement them. I spent many hours scouring the web for tutorials on how to write drag and drop components.

Another issue I faced was using the rails backend to categorize tasks. I was unable to understand fully how to do this categorization using rails. Thus, I transferred the problem to the front end and solved it there.

I coded each task in the to-do list to have a category reference, recorded as the unique id of the category it belongs to. From there, I simply used React’s filter function to ensure that each category will only display the tasks that belong to it.

Future Improvements:

1. Improve the visual aesthetic of drag and drop
   1. Make transitions smoother
   2. Make the drag look more obvious
2. Implement task categorization in the backend
3. Implement Cron job
4. Improve on UI by drawing inspiration from other web applications
   1. Add icons to each button to make it more intuitive
   2. Rearrange layout to make the website more aesthetically pleasing in general

Conclusion:

Although the end product is simple, the process I went through to build it was anything but. Learning React, basic Rails, Git and Heroku all in one 6 week holiday was extremely challenging, and in a very different way as compared to the CS modules that I took the previous semester. I would never have learnt this much simply following a tutorial or copying someone else’s code repository, and for that, I am thankful for the opportunity, and happy that I was able to build the to-do list to its current level. My code is far from perfect, but it has taught the importance of building your own projects. I am now more inspired to develop my skills and explore my interests by building my own software projects.