

CVWO Assignment AY20/21 - Final Submission

Jovyn Tan Li Shyan (A0225607H)

Working application: <https://task-manager-jtls.netlify.app/>

Thoughts on the Assignment

Though I had tried HTML and CSS before, I had never worked with React, Ruby or Ruby on Rails. Hence, the assignment was very motivating for me to pick up these frameworks and languages, as well as to apply my learning to a concrete project.

Initially, I was very confused and lost for both React and Ruby on Rails. Though I tried watching YouTube videos to understand, I realised I learn better through reading and hence I read up on the Rails and React documentation instead. I learnt that understanding concepts and hands-on practice must complement each other: after reading up on the MVC model, translating the abstract ideas into code helped me to understand the ideas better. Learning two frameworks in one month was a fun and exciting experience, and applying the learning to a web development project also brought about several other learning points.

Deployment

Deploying the front-end to Netlify, and the back-end to Heroku, helped me gain a deeper understanding of the structure of the project. Through troubleshooting, I learnt about environment variables, addressing security concerns (such as storing sensitive keys in environment variables), and the structure of the app.

Moving forward, I would be interested to learn more about the best practices in securing an app. I am interested in computer security and web development seems to be a good place to start learning and applying knowledge.

Code Quality

Knowing that my code would be viewed by others, I was motivated to make an effort to write cleaner and clearer code. This was an interesting experience as I would usually be content with any code that works, regardless of the code quality. By attempting to write better code, I can more confidently take pride in what I have done. Git was also very useful as a version control system, as it allowed me to keep track of what changes I had made, and revert to a previous commit when I make mistakes.

That said, I am still not entirely familiar with the best practices of structuring, organising or writing code, and this is something I hope to continue to work on.

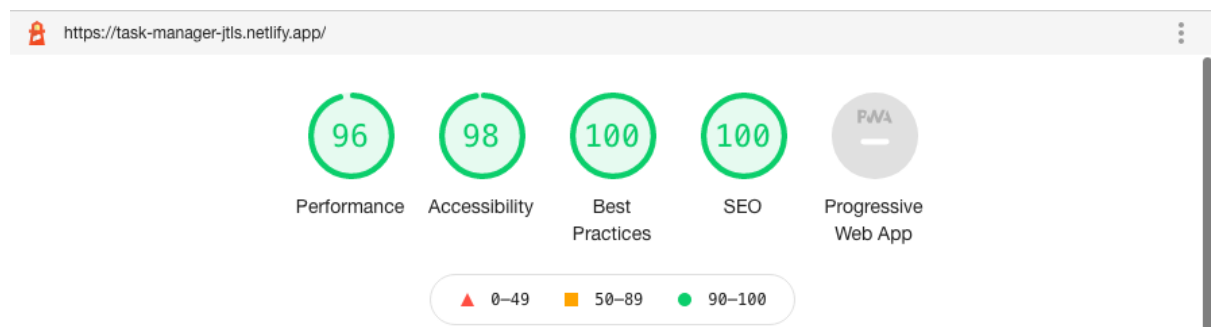
In the future, I hope to learn and implement Test Driven Development to improve the reliability and stability of my apps. Automating the development workflow seems like an interesting concept, as I will no longer have to manually test my app on various browsers or viewports.

Web Development and Accessibility

I hoped that the app would have a clean, minimalist look that I would enjoy using myself, and that all features would be intuitive and easy to use. I particularly enjoyed designing the user interface and layout of the app, as it was fun to think of how to integrate the various features while retaining an uncluttered look.

I also learnt about accessibility, something I had previously never considered. Realising that many of my favourite websites are not accessible was a shock and I hope that my app can be accessible both visually and through other means such as screen readers. It goes to show that web development is more than programming, as there is a lot of thought that goes into UI/UX and accessibility as well.

I'd like to look more into Progressive Web Apps, which I did not account for when running tests using the Chrome Lighthouse Tool (screenshot below). Nevertheless, I am proud of the Lighthouse audit scores:



Implementing features

Admittedly, I did not manage to implement several features that I had hoped to do, such as dark mode or undo buttons, due to time constraints. I did not account for the fact that I would be much busier in January, due to semester 2 beginning as well as other commitments. I realised that I had to prioritise and decide what would be the most important to implement. I prioritised implementing features that would be a different learning experience from what I already know. For instance, I chose to implement Redux instead of editable tags, since I had already practiced implementing CRUD operations on both tasks and categories.

One takeaway I have regarding this would be setting realistic goals and frequently checking against a timeline to decide if a goal should be dropped to keep a larger goal in focus. As my goal was to learn as much as possible about web development, I may have sacrificed a few improvements to user experience, but I hope that the app will still be useful and enjoyable while missing these features.

Summary

This assignment was a great learning experience for me to learn full stack web development. I had never developed anything of this scale before, and managing a codebase of this size required organisation and clarity, which I hope I have improved in. I learnt to face a seemingly overwhelming project by breaking it down into smaller steps, and to use Google to find solutions to my problems when debugging and troubleshooting. Despite the app's flaws, I feel that I have developed something I can be proud of, which is fulfilling and meaningful for me.

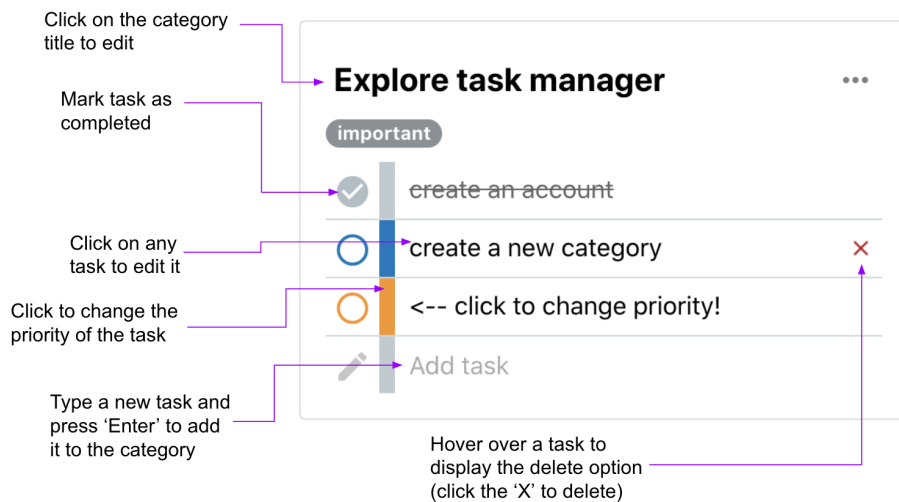
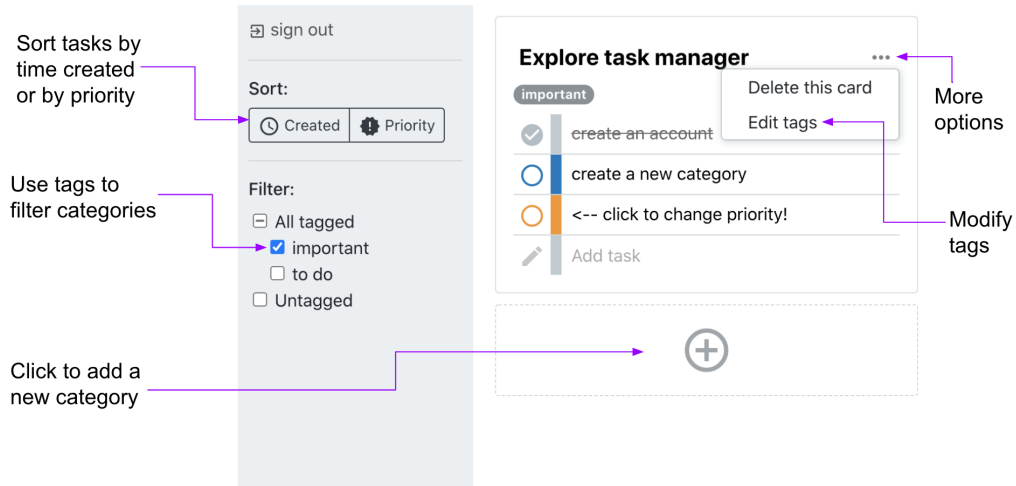
Software development is much more than coding. I enjoyed planning out the app, whether it was the database schema or the design of the frontend, as well as keeping track of what I set out to do and adjusting my priorities and goals along the way.

User Manual

Link to working application: <https://task-manager-jt1s.netlify.app/>

After log in/sign up, app categorises tasks into taggable categories, displayed in a board view.

Managing tasks



Modifying tags

