

## CVWO Final Submission

### Reflection

From the beginning I knew this project would be a challenging task, considering I had no prior web development experience and I only had knowledge in JavaScript and a little HTML and CSS to help me. Before this, I mainly used plain programming languages, like JS and Python, to solve computational problems. However, I soon discovered that building a working application is a totally different ball game from solving coding puzzles.

For this project I needed to learn to use frameworks, namely React and Rails, which was a very different experience from learning programming languages. A notable feature of React was its declarative nature, a style where I describe what my webpage should look like rather than worry about how the HTML is generated and updated. This was a paradigm shift for me when compared to the imperative nature of languages like JS and Java which I was more familiar with. Meanwhile for Rails, their philosophy of “convention over configuration” ultimately helped reduce the amount of code I needed to write, but in exchange it did give me a harder time when I wanted to understand what Rails was doing without my explicit direction.

When I was just starting this project, I had originally believed that I would be learning just 2 things, “React” and “Rails”, and I would be ready to build my app. But in the end, I actually gained so much more from this project. I gained a better understanding of things like the Model-View-Controller (MVC) pattern, REST APIs and databases. Along the way I also learnt more about important technologies like version control systems (git), package managers (yarn) and linters (ESlint) which are all essentials for building software. What I realised is that a software developer needs to know numerous different concepts and technologies to perform well at their job. So perhaps, my greatest takeaway from this project is not any one particular skill, but rather the experience I have gained in learning how to learn.

All in all, this assignment has been an incredible learning experience that will surely aid me in the rest of my Computer Science journey. I am immensely satisfied that I

managed to complete this task manager application successfully and I am looking forward to embarking on more projects in the future!

## User Manual

Upon loading the app, you will be taken to the to-do list page. Here, you can view the full list of to-dos currently stored in the app. To reveal or hide the full details, the tags and the edit and delete buttons for a to-do, click on the arrow button on the right of the to-do. Click the arrow button on the list's header to expand or collapse every to-do.

### **Add a new to-do**

- Click the add button on the top right of the to-do list page.
- Fill up the form with the to-do's name, tags, and extra details. Only the name field is compulsory.
- Click the Add button to create the new to-do.

Note: To assign multiple tags, the tags should be separated with spaces. The tags are also restricted to being lowercase to avoid creating distinct tags with the same name, e.g. "Work" and "work".

### **Edit a to-do**

- Expand the to-do using the arrow button on the to-do's right.
- Click the edit button (the pencil icon).
- Modify the form fields as necessary and then finalise it by clicking the Edit button.

### **Mark a to-do as done**

- Click the checkmark button on the left of a to-do to mark it as completed.
- Click the checkmark of a completed to-do to mark it as incomplete.

### **Delete a to-do**

- Expand the to-do using the arrow button on the to-do's right.
- Click the delete button (the trash icon).

## **Search for to-dos**

- Fill up the tags field and/or the text field at the top of the to-do list page.
- Click the search button.

After clicking search, the list will only show to-dos that possess the tags entered and contain the exact text (case-insensitive) in the text field either in the to-do's name or in the to-do's full details.

Note: To recover the full list of to-dos after doing a search, either do a blank search or simply reload the page.