

Computing for Voluntary Welfare Organizations, AY2020/21—Assignment
Final-assignment submission

Reflection of my accomplishments:

This was first time using React and I was worried whether I can finish this project. There were many struggles, but at the end, I was able to accomplish most of the goals that I initially planned which are CRUD of task and tag. Using libraries such as Formik and Material-ui helped a lot.

I am very happy that I was able to implement the subtask feature. There was a struggle with self-association in Rails backend and dealing with nested task objects in React frontend.

For example, initially, I was planning to manage tasks as nested objects in React. However, this required Rails API to send nested JSON which can become complex when there many nesting of subtasks. Therefore, I decided to store tasks and its subtasks without nesting in React. This made searching of subtasks easier without using search algorithms like BFS or DFS.

However, there was one problem that I was not able to fix which is the search feature of subtasks. There was a case where the parent task didn't pass the search filter but its subtask pass the search filter. In this case, I was not able to display the subtask because its parent task did not pass the searching filter. This is something I would like to fix in the future.

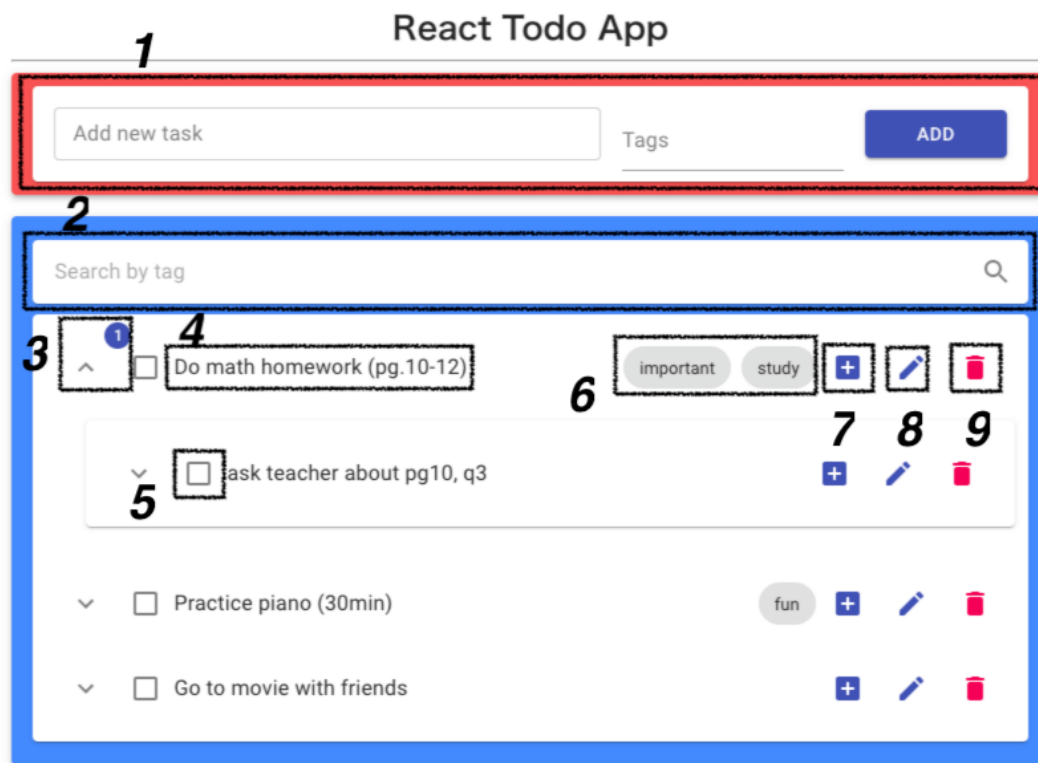
In this project, I was not able to use Cron, Docker, and Redux due to the lack of time and low priority of Cron and Docker. However, I was able to learn how to create Cron task and how Docker helps with creating a development environment.

For redux, I really liked the idea of managing state in one place and being able to access it from any components because there were many cases where I needed to pass states through props for many components which was redundant. However, due to the complexity and many terminologies in Redux, I was not able to understand enough to implement it in this project.

For the UI, I was able to make it clear as possible to the user. For example, displaying a number of incomplete subtasks and showing instruction when user hover the button. However, I had difficulties making the UI responsive and it did not look well on mobile which is something I need to work on further.

Also, editing UI on code was very tedious work. To solve this problem issue, I would like to use a design tool like Sketch so I can try different UI before I actually start coding.

User manual:



- 1: Form for adding new task
- 2: Search Bar. It will search task based on tags.
- 3: Button to show/hide subtasks. Number is number of incomplete subtasks
- 4: Name of Task
- 5: Checkbox to mark task complete/incomplete.
- 6: Tags
- 7: Button to add subtask
- 8: Button to edit task
- 9: Button to delete task