Use cases:

This todo task manager will display a list of tasks that the user needs to do on the main page. The user can add new tasks to the list. The user can then click on the button "Done" when the task is completed to change its status to "done" or click on "Undo" button if they wish to change the task status back to "not-done". The task will then have a line-through when its status is "done". The user can also edit the description and the tag of the task. Once the task is completed, the user can choose to delete the task from the lists. The main page will also have a dropdown list with all the tags of the different tasks. Selecting a dropdown value will filter the task list to display only those tasks with the matching tag.

Execution plan:

The todo manager will be built by consuming JSON API using React and Rails according to this guide: https://dev.to/able/building-and-consuming-a-json-api-with-rails-and-react-42p6. The JSON file will contain the keys: "body", "status" and "tag".

Key	Value (Representation)
body	The description of the task
status	"done" or "not-done"
tag	A tag to categorize the task

For adding new tasks, the user will have to input the description and a tag for the task. Once submitted, React will send a post request to the JSON API to add the new task.

For editing, "done" and "undo", React will send a "PATCH" request to change the values of the respective keys.

For deleting tasks, React will send a "DELETE" request to remove the task.

For displaying tasks on the main page, React will send a "GET" request to the JSON API and subsequently convert each task into an element of an array and then display each element.

There will also be a dropdown box with all the values of different tags. Selecting a value from the dropdown will show all the tasks with the same tag. This will be done by filtering and keeping those tasks whose tags are the same as the selected value. Then, each element of the filtered array will be displayed.

Current progress:

The todo manager is able to perform CRUD operation and also limited amount of tagging and filtering of tasks. Currently, there is no CSS, apart from the line-through, on the app. The UI can be better improved by including bootstrap and basic styling to make it slightly more appealing.

The app is currently deployed on a Google Compute Engine VPS at http://34.94.62.224/.