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CVWO Mid Assignment Writeup

Use Cases:

1. User views all tasks
   - On the homepage of the web application, all created tasks are presented in a table format, with all attributes displayed accordingly
   - The user can also click on the table headers (containing the respective attribute titles) which will sort the tasks based on their respective attributes. The user can choose to sort via alphabetical order (for title), or chronological order (for deadline).
   - The user can alternatively view all the completed tasks on a separate page using the navigation bar on the left side of the web application

2. User creates a new task
   - On the same homepage of the web application, there will be a "Add New Task" link on the navigation bar that redirects the user to a separate page
   - This new page will contain input fields for all the task attributes
   - This includes a "tag" field that allows the user to either select an existing tag or create an entirely new tag
   - After the user has completed filling in the task details, he will click on the "Add Task" button
   - If the inputted task details are valid, the task is created, and the user is redirected back to the homepage

3. User edits a task
   - On the homepage of the application, the user can edit a specific task by clicking on the respective "edit" link
   - On click, the user is redirected to a separate page containing input fields, only that the task's respective attributes are pre-filled for the user inside these fields
   - After the user has completed editing the task details, the user will click on the "Edit Task" button
   - Once the edited task details are validated, the user will be redirected back to the homepage

4. User deletes a task
   - On the homepage, the user can choose to delete a specific task by clicking on the respective "delete" link
   - On click, the user will be prompted with a confirmation message to confirm that the user wants to delete that specific task

- If the user selects "Yes", then that selected task will be permanently deleted from the table

5. User searches for a particular category/tag
   - On the same homepage, there will be a dropdown selection bar that contains all the current categories/tags
   - When a particular tag is selected from this list, the table will automatically filter those tasks in the table whose tag matches the selected tag
   - To revert the selection, the user can select the default selection which will display all tasks irrespective of their associated tags
   - These selection tags will be case-sensitive, as we want stricter tags to differentiate the tasks

<u>Execution Plan:</u>

Frontend: React

Backend: Ruby on Rails

DB: SQLite

First, I will connect my application with the database (SQLite). After that has been set up, I will start on the basic CRUD operations. Also, I will be ensuring that the database works correctly when these operations are executed. Next, I will work on the secondary functionality of the webpage, which is the tagging system. After completing the required functionality of the webpage, I will then focus on the stylization of the website using CSS and Bootstrap to beautify my webpage.

Additional Features: (which may be implemented given time constraints)

1. Search feature for particular tasks
   - In the case of an exceeding number of tasks, users may find it difficult to locate their tasks even with the tagging system
   - This search functionality will make it quicker and easier for users to find the tasks that they want
   - This search function will also be case-insensitive to create a less strict search dependency

2. Task urgency tagging feature (Completed, Ongoing, Pending, Not Started)
   - A separate tagging feature that allows the user to indicate the tasks that are of greater priority
   - The navigation bar will include links to these 4 predetermined tags (Completed, Ongoing, Pending, Not Started) which will redirect the user to a separate page that shows all the tasks of that selected tag

3. Alert system that reminds the user of outstanding tasks that have failed to meet their deadline
   - On first start-up of the homepage of the web application, the user will be alerted on the number of incomplete tasks that have past the deadline