CVWO Final Submission Write-Up

Accomplishment

I have devoted my entire winter holiday as well as the first two school weeks on learning web development and building the to-do list app. As someone from a mathematical background, learning web development was more challenging for me compared to algorithms or mathematics. The learning curve is extremely steep and there is a large and diverse skill set we need to master in order to become a web developer. I did not even know basic HTML or Linux command at the start. But I plowed through, gaining an overview of the MVC web development framework and RESTful architecture. To my surprise, the greatest takeaway for me from this assignment was not any specific web development skill, but the interest and perseverance in programming: to learn CS in the hard way, to read the documentation, to sit down and figure out the nitty-gritty details, but also enjoy the sense of fulfillment of creating products that could benefit the community. Apart from the steep learning curve, the toughest obstacle I have encountered throughout the assignment was learning how to stay calm when I keep failing at debugging. It can be frustrating, but I have gained much patience and experience facing unknown bugs during this project. I believe this could be greatly helpful in my future CS career.

Skills Acquired

1. Ruby, Ruby on Rails 5 and MVC framework
2. HTML and Embedded Ruby
3. Javascript, CSS, and Bootstrap
4. Linux command, git and GitHub
5. Basics of RDBMS (Sqlite3 and PostgresSQL)
6. Vim and VS code
7. Importance of modularity

Skills to Learn

1. Ajax
2. Front-end frameworks (e.g. Angular JS, ReactJS)
3. Jquery
4. In-depth knowledge of database an SQL
5. Web development frameworks of other languages (e.g. Java, PHP)

User Manual

This is a web-based to-do list app that allows users to record their daily tasks. Signing up and login is required for privacy and security.

Navigation bar

Click the "TODO LIST" / "home" button to back to the homepage.
If not logged in: click the "login" button to login.
If already loggd in:
Click the person logo on the nav bar to the user page.
Click the "All Users" button on the nav bar to view the list of all users (only names of users will be displayed, the user is not allowed to view others' tasks)
Click "logout" button to log out.
Green messages will be displayed to show that the user has successfully logged in/out.

User authentication (Signing up)

For new users, click the "sign up" button above the cute kitten on the homepage to sign up. The user is required to enter his/her particulars (Name, email, password and password confirmation) in order to sign up.

Validations are enforced (e.g. length of email and password) with error messages displayed if signing up was unsuccessful.

The user will be automatically logged in and redirected to the user page after signing up.

User authentication (Login)

For existing users, click the "login" button on the navigation bar (top right-hand corner), then enter the email and password to log in. A red error message will appear if the login was unsuccessful (e.g. email and password do not match).

Create

Click "New task" button to create new tasks. The attributes allowed for a task include title, deadline, details, and tags. The title is compulsory and others are optional. Separate each tag with space.

Task Index

On the user page, all tasks of the user will be displayed in two categories: completed and ongoing. In each category, tasks are sorted by their deadlines, with the most urgent one at the top. Completed tasks will be crossed out. A clock indicates the task is ongoing (click to mark it as completed) whereas a tick indicates the task is completed (click to mark it as ongoing). The title and deadline are displayed, with the option to update and delete. Urgent tasks will have its deadline marked red with the tip "due in xx days/today/OVERDUE".

Read

Click on the task title to view the tasks. All information of a task is displayed, with the option to mark it as "completed"/"ongoing", update and delete.

Update

Click the pencil to edit a task. The user can edit any attributes, with preivous information pre-filled.

Delete

Click the trash bin to delete a task. A confirmation box will appear to allow the user to confirm the delete action.

Tagging

A task can be created with any number of tags or no tag at all. Separate each tag with space. Click "All tags" button to view the list of all tags the user has added. Click any tag to view the list of all tasks with this tag. Click "delete tag" to delete a tag.

Search

The search bar is on the user page. The user can enter one or more tags (separated with space) to find a list of tasks with the input tags.

EasterEgg

Click the cute kitten to be redirected to the CVWO homepage.