

Features of my final application

My To Do list app can create, read, update and delete tasks. I can also tag and filter tasks.

I also implemented some additional features, such as:

- Implemented Daily Tasks and One-off Tasks. Daily tasks are meant to represent tasks that we need to do on a daily basis. The state of the daily tasks will be reset to 'uncompleted' every day, to help users track if they have completed a task for the day.
- View completed tasks
- Displaying default tasks for a first-time user. These tasks teach new users how to use the application.
- Setting deadlines for tasks

Accomplishments

Firstly, I managed to deploy my application to Heroku. To save time deploying, I set up a continuous integration/development pipeline from my Github repo to Heroku.

Secondly, I used Semantic UI React to display UI components in the app.

Thirdly, I explored the usage of cronjobs. For my application, I wrote a cronjob to reset the state of daily tasks every day.

Fourthly, while minor, I decided to implement hot reloading. This allows me to view the changes to my application without having to refresh the browser.

Difficulties

A major difficulty I had was to implement a user registration and log in system. I experimented with the Rails Devise gem, but I did not manage to integrate the registration system in time. As a workaround, I generated random keys using a secure random number generator and stored them in the user's cookies. The application will identify the user based on these keys and retrieve the user's tasks.

Another difficulty I had was to manage the state of my application. I decided to store the state of my app in higher level components. In the future, I could use Redux to better manage the state of my project.

Possible improvements

Firstly, I could have learnt how to write test code for Rails and front-end frameworks. This would have helped me to save a lot of time that I spent testing and debugging my application.

Secondly, I could have integrated Typescript in my project, which would have helped me to reduce the occurrence of typing related errors when developing the app.

Final thoughts

I am pleased that I was able to create a full-fledged working application with React on Rails. Previously, while I dabbled in Ruby on Rails, I had problems progressing with my projects because of installation issues and a lack of understanding of web

development principles. In the course of developing this app, I tried to push myself the hardest I could, and am happy with the result.