# Final submission write-up

From this assignment, I have learnt quite a bit about database and user management, Ruby on Rails and Redux, as well as strengthened my understanding of React, Typescript, Docker, and Heroku. During the assignment, I faced numerous setbacks and roadblocks, which I had to exercise some flexibility to get around.

Ruby on Rails was a really new thing for me, and it took quite a while to get used to writing Rails code, as well as understand the structure of the backend. What I found really interesting about Ruby was the flexible syntax and concise operators such as "||=" which I have not seen before in other languages.

React and Typescript were both quite intuitive, especially with React hooks and ES6 making code more simplified. Even though I faced a number of difficulties while coding, the documentation and user base was extensive enough for me to find solutions by searching online. The library of available modules online also made it fast and easy to develop a decent looking product with proper functionality.

For Docker and Heroku, I had tried over and over (unsuccessfully) to deploy Docker containers to Heroku, as I had set up the app deployment to Docker before working on deploying to Heroku and wanted to maintain the same file structure for all my builds. The lack of adequate documentation regarding deploying docker-compose projects to Heroku led several frustrating hours of troubleshooting. However, I realised that I could just adjust my file structure and Docker files such that the project was directly deployable to Heroku, as technically there wasn't any reason to maintain the Docker container in Heroku as Heroku already provides a relatively consistent build environment. Thus, I did just that and managed to get it working. This, together with many other setbacks, helped me develop my skills of looking at the bigger picture

and considering other options instead of getting stuck and going deeper down a rabbit hole.

If I were to develop this project further, there are definitely things that could be added and improved on. For example, there could definitely be more abstraction in certain places, and a calendar view for the Todos could be implemented, as well as fuzzy searching, email verification and reminders, and custom sorting / coloured Todos.

In conclusion, this assignment has taught me quite a bit about full stack development using relatively modern technologies, and was a valuable experience that will surely be useful for future endeavours.