Reflective Essay

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- ## Approach to the project

    - ### Interaction with the team

Communication with the group was done primarily through a WhatsApp group chat. My teammates regularly gave updates regarding the progress on their sections of the project. We had occasional joint calls to catch up on progress. At the start of the project I informed my team that I would be behind due to my work commitments and they were understanding. When I had any queries my teammates would be responsive and generously take the time to explain their code.

    - ### Overall project requirements

Requirements were suggested by group members shortly after our initial contact and each group member was assigned a role in the project.

    - ### Requirements for my contribution

After reading through the brief I decided to have four pages of the website: An index page with the search form; A page with a list of all the entries; A details page for each entry; A results page if multiple results were returned from the search form. I wanted a minimalistic style with a simple and intuitive design.

- ## Performance of the development cycle

From my perspective the group did a really good job on making the business layer and database layer functions. While making the front-end I was able to easily understand how to call the business-layer functions and therefore figure out how to format the output in HTML. Unfortunately I began the development of the front-end at an extremely late part of the process and so I was not able to contribute feedback.

- ## The development process

At first I drew some diagrams of how I envisioned the website. I quickly decided that I wanted to implement radio buttons to simplify the search form and to use tabs to tidy the details page.

I started first with programming the features of the index page. I started with the radio buttons and the form as well as the link to the list of all entries. Then I worked on producing the table for the list of all entries page. Finally I worked on the details page.

Once the basic functionality for each page was complete, I drew a sketch of a layout for the CSS. CSS was implemented in the same order of index page, list all page, and details page.

While the CSS was being implemented I also made the website header and footer.

A short amount of time was spent in the design stage. The development stage took much longer due to having to find solutions to issues while implementing my ideas. Designs were altered continuously throughout the development stage as attempts to implement them revealed development issues.

- Code testing

I cloned the repository to my Birkbeck pandora server via the Jupyter Lab. I then edited the install.sh and config.py scripts to allow me to work on the alternative front-end without affecting the main front-end.

I would edit code and run the install.sh script to update the website. Then I would check the website to see if the code worked and edit the code as necessary.

While working on the CSS I would use Google Chrome's developer mode to inspect the CSS elements and change them to experiment and understand how they were effecting the format of my website.

- Known issues

Unfortunately I was unable to implement the restriction enzyme feature. I could not get the business-layer function to work.

- What worked and what didn't – problems and solutions

At first I tried to use a JavaScript to alter the search box depending on which radio-button was checked. This method was too difficult to implement so I found a way to send the form information from the radio buttons and allow the cgi scripts to handle them to perform the correct search.

I also attempted to use JavaScript to handle the tabs in the details page. However I decided to use a more elegant CSS solution which required less code.

At first I used tables to control the orientation of all the features on the website. Then I discovered method CSS to control orientation with the display: flex CSS for <div>.

- Alternative strategies

If I was able to begin working on the alternative front-end earlier I could have given some feedback on the function for the restriction enzymes.

There are some features I would have liked to include such as being able to sort the table of all the entries. I would have also liked to have created a button to copy the sequences to the clipboard.

- Personal insights

I found designing the front-end to be very interesting. I have learned a valuable way of allowing scripting tools to be readily accessed by users. This challenge has allowed me to learn so much about web design and gain a lot of confidence in learning how to implement the design of a website layout. I learned many different techniques of implementing CSS to control not just the appearance of the website but also it's function.