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Approach to the project

In terms of approach for the project, initially we decided on who will take on specific layer for this project, since I am the fourth member my choices were alternate front end or test suites and documentation. I chose the test suite and documentation as another member will be working on the front end and wanted to do something different and more on the book keeping side of things. To further understand how we were going are going to approach this project we all individually examined the genebank file to see how the information were presented and what was needed to complete tasks for each layer. This gave us insight in terms of what information's was needed and how to build the API and continue further development to be able to complete tasks for each layer.

Interaction with the team

Majority of our interaction were after the Biocomputing II lectures or outside of class meeting time at Birkbeck. During the Easter break communication was primarily through the WhatsApp group and GitHub when codes or function were ready, as I was away for a good chunk of Easter break due to a job opportunity in the States. A number of meetings happened at Birkbeck in the library and in empty classroom to catch up and check on progress and stages where each of us were on, during the term and when I was back in London for exams. Overall the interactions were positive with every member of the group, since I probably was one of the weaker programmer in the group I was able to learn from stronger programmer, their style of coding, and their approach in building their specific layer through working on documentation and test suite for their layer. There were occasion disagreement ranging from scientific to, programing, and connecting each tier, but the group was able to resolve conflict and come up with an agreement when it arises.

Requirements for my contribution

The test suite and automated documentation were my main focus of this project. I think it required me to understand how team member were building their layer of the project to build a test suite. Also, needed to understand the code written in order to do documentation. Beyond understanding codes, I had to explore method for web testing like selenium and needed to understand how it performs test and how to incorporate the library into test our browser. For the documentation, I needed to understand how doxygen works to build automated documentation for codes.

The development process

The development process was a bit challenging in the beginning as I was not sure how other group members were defining their function and not sure if I am creating the right test for what they needed. As the project progress, it did get better as build my knowledge and had a better understanding as to how each layer connects and building the browser and also working on documentation. Development of the entire project involved defining API, populating the database, querying in the database, as well as building functions along then way and connecting CGI scripts with the front end as well. Developing documentation involved me going to other members of the groups codes to try to understand how they build the functions.

Code testing

I worked on building test suits, approaches I took was understanding their function and what they were designed to call. Because of time constraint a good chunk codes in the test suite were not fully tested as different layer were still a work in progress and we were at different stages of the project. The testing I was able to do was based on what's available at the time.

Known issues

There were a variety of issues as the project progressed, initially the main problems we had was having everyone connect to the database, defining API, and what functions should be part of which layer. Later down the road as more involved having everything connect and do proper queries for each layer. There were also minor issues with github as I was documenting me and another author was editing at the same time, so some of the codes ended up disappearing. More of a last-minute issue certain documentation header I added fulfill documentation requirements were interfering with codes written.

Alternative strategies

For the documentation and test suites, defining everything earlier would have been very helpful. Because my part involves looking at other people's codes definitely as a group getting more familiar with Github would have been useful to avoid issues down the road and building test suites earlier. For documentation was more getting use to the syntax and how doxygen is incorporated.

Personal insights

Overall completing the project was very difficult for me personally coming for more of a biology background. I did make many mistakes throughout the project, but other members of were very helpful. Initial challenge involved me being the fourth member and really understanding where do I fit in the entire process. It was overall a challenging project to put together, but feel like I did gain a lot from this based on learning test suites and documenting

codes of other. My coding still may not be the best or tops in our class, but do feel more comfortable coding and tasks similar to this connecting biology with web development.