

Project Report Part 2

Christopher Chan

As a teammate, I think I did as much as I could coming in late. I didn't notice the group chat on Campuswire for quite a while as I was busy with other work but of course when I came into the group, I sincerely apologized to my group and got right to work. Most of my work involved helping out in the backend segment of the coding. I helped propose the architectural design for what solution we should use to allow for our program to have multiple users use it at once. After the proposal, I helped a little bit with the coding for the solution we agreed on but moved quickly to finish the part 1 of the project report right away after I noticed that nobody had started that yet. After the project report, I did all of the code documentation onto the README file for both the front end and the back end code before recording my part in the project video. I also did some video editing on our recording after we had finished it because we did several takes to get the information right and to clean up some mistakes that we said on camera so that the finished product would look more professional. In regards to what I would have done differently for this project, I definitely wished that I had noticed the group chat earlier than I did. Yes, the minus 20 points off the bat wasn't the best but in my opinion, that value paled in comparison to the extra work my teammates had to do because I wasn't there earlier. I always value my teammates more than myself when working as a group because that's just how I believe teams work. Everyone has to do their part and me not being there when they first started the project really made me feel guilty for potentially setting back my teammates' grades. In addition, if I had gotten started with the team, I would have done more coding work, which ultimately, is the point of this class: getting lots of coding exposure. Had I done more of the coding work, I feel like I would have gained more experience while working on the project.

Brandon Lamer-Connolly

For the first one to two weeks we worked on the project, I was working on making GUIs for the client class. Amy was also helping me with this too. However, Amy focused on the login or creating account GUIs, and I focused on making the GUIs to display the user's profile, friends list, and search menu. While the GUIs I originally designed underwent debugging and other improvements to become the ones submitted with the final version of the project, my original design goals were still present throughout the whole process. After discussing everything with the team to make sure we were all in accord, I went to work designing GUIs that were simple and intuitive. In particular, my teammates and I believed that whenever interacting with the app and opening up new menus/GUIs, everything should lead back to one main menu. We did not believe creating a single window app would work well because we'd have to implement something like a back button, for example, and we didn't think that we could do that with the restricted time we had. So then, it was up to me to build our multi-window-capable app user interface that, with input from teammates and manual testing, was refined into what we submitted. After coding the initial GUIs, our team did a little bit of a shakeup in terms of dividing tasks amongst each other, and as a result, I worked and consulted with Vincent to refine and debug the code for the GUIs.

If I could do this project all over again, I would've sought more opportunities to video call teammates and work on the project at the same time (collaborating through GitHub). While I think our team did a great job, I definitely think we could've built something even better if we had the opportunity to meet and work in person. However, traveling home for break and other obstacles presented itself where we couldn't do that. While I also understand that each member of the team has other things going on in their lives in which more frequent zoom calls may not have actually worked out, I wish I had at least tried regardless of the complications that discouraged me from trying to schedule something. Don't get me wrong, our team had routine zoom meetings each week, and I think we did great work. To summarize, I feel like a lot of the fun of the project is working together simultaneously and feeding off of each other's creative energy; the circumstances of the past weeks made that difficult and, at the time, unfeasible.

Parker Laughner

My job for this project was to write all of the test cases for the backend of our project. In order to do this I started by looking at old RunLocalTest files from previous projects to figure out how they worked. Once I had a good idea of how to write the test cases and set up the class to run all of the test cases I started to hammer away at writing all of the test cases. I learned how to use the Reflect library to write methods that would test a number of things on every method, field, and class such as if they had the correct accessor type, whether a class was concrete or abstract, whether or not something was static or final, and how to check correct return types and parameters. I also made sure to write two test cases for each method to ensure that they would work properly with proper input and if they would handle improper input without failing. This required me to figure out how to write JUnit test cases that would effectively test the functionality of a method. I knew from writing the previous test cases how to set test cases that would check to see a number of things like if two values are equal, if a value is true or false, and if a value was null so I used that knowledge to run a number of tests to see if every single one of our non-GUI methods would work as they were intended. If I were to do things again I would definitely start working on test cases much earlier; I underestimated just how many test cases I would have to write and how long it would take for me to write every test case. I would also likely try to write more thorough test cases if I had to do this again because some of the test cases I felt were a bit lacking but I ended up submitting them anyways because of just how many more test cases I still had to write in such a short time. Lastly, I would want to work more on the actual implementation of the project, especially on the frontend working with GUIs. I don't really have much experience with creating GUIs so I think the experience gained from making them on this project would be of great use to me in future projects. That said, I am still glad I got some experience writing test cases and testing code so I can write more sturdy and hard to break code in the future.

Vincent Vu

Right when the project was released, I set out to try and bring our teammates together so that we can start planning, distributing tasks, and get this project done as efficiently as possible. Throughout the project's duration, I was responsible for starting up the meetings,

initializing the group discussions, distributing the tasks, and setting out reminders and deadlines.

Our initial subteam setup was that Chris would take care of documentation, Brandon and Amy would do frontend, Parker would develop the JUnit tests, and I would be responsible for backend. I created the server classes and the file/database manager code. While I was developing the backend, I realized we needed a common protocol between the client and server. We needed the server to respond accordingly to whatever request comes from the client. Thus, I was responsible for also creating this common protocol and the request schema.

As the person who distributes the tasks, I also made the decision to redistribute some of the subteams we had initially agreed upon. I decided to take Amy and have her help with developing the JUnit tests, as the JUnit tests appeared to be a larger task than everyone had anticipated.

Afterwards, I was responsible for integrating the frontend and backend together. I consulted with Brandon on fixing any errors, and we ended up with a full rewrite as our final solution.

As the project came to a close, I was responsible for proofreading the documentation that Chris wrote, as well as bring everyone back together to record our presentation.

I feel like our team was productive throughout the duration of the project. However, like any other team, there could be some stuff that we could've done differently. For starters, I wished I laid a more solid ground and offered some advice while developing. This could have potentially solved the issue with integrating frontend and backend, as much of frontend was untested and did not correlate well with backend, leading to some complications. This was also one of the reasons why a full rewrite of the frontend was necessary. Another ground rule I wished I had communicated with my team is properly using GitHub, and when we were switching from one branch to another, as well as how often we should be committing and pushing to the repository. Additionally, I hoped that I had enforced slightly better communication, or at least used some other communication means that everyone was familiar with, because it seemed as though GroupMe wasn't the best option for us. Otherwise, I believe our team was a strong one, and I have no bad things to say about my teammates.

Amy Curtland

The first part of the project I worked on was the framework of the client. I created all of the calls to and from the server with a method to handle all of the information that would be needed within each request, along with the basic startup and connection to the server. This was done to provide a base of code for the GUI of the client to be built off of. Afterwards, I transitioned to writing out JUnit tests for the Client to allow for all of the testing to be written quickly to allow for manual testing to begin. This process involved testing that every field that was needed by the Client existed with the right modifiers and type, along with the methods. Afterwards, I began performing manual tests on the Client to search for possible edge cases that would cause issues. One possible issue I uncovered in this process was that the IO between server and client, which was initially a space delineated string, would fail if the user included a space inside of any of the fields being sent. Due to this, the IO system was rebuilt to

send objects as an array of fields, which prevents the different items being sent from being improperly parsed.

If I were to be in a project like this again, I would spend more time to build out the process the end delivery of the project would be built to at the start. In this process, I would define the desired process for each segment of the project, what types of fields will be used in different segments, what Classes and methods will be made throughout the process, and as much as possible to define what is being built. This way there will be less need to wait for one part of the project to be developed in a functional state before the parts that rely on it can be started, and the code to test the end product can be built at the same time as the end product and adjusted to any changes in development, rather than created after the first version of the product exists, and modified to fit any new modifications. This would increase the overall efficiency of the coding process.