**The ChatApp**

Project Report

**Project Summary:**

Now that I am finally done with the project I am happy to say I did it. I have never built an application and this was the first app that I started to develop and finished. There is much more that I can add to this chat application and I plan to do so over the summer. When I first made the documentation for this software, I had a completely different vision of how my ChatApp would be implemented.

The current structure of the code is not at all how I first designed it in the design and analysis phase. I ended up using TreeMap’s and Vectors instead of BSTs for my data structures of the accounts. I had a very coding intensive term (not just this class but also CS333) and I was so busy and I found that to be a challenge. I also had challenges on how to implement a server and client class since I had never done so before. I had a challenging time with GUI but I figured it out and used swing. I found out later into the implementation that JavaFX is easier so next time I will use that. After having messed with the code more and more I learned how it worked and was able to finish it. On last challenge I had was the online users, but I got it to sort of work with the GUI, it works fine printing to the servers console.

**Features Implemented (Do they work?):**

* Log In – the user can log in into an existing account. If username or password are incorrect and error message is printed onto their screen and can try to log in again. This works.
* Register – the user can register to the app and it will check that the new username being registered is not and existing username. If it is, then the user gets an error message to try again. Otherwise they get logged in and their account saved to the ChatApp. This works.
* One-to-one client chat - Once the user is logged in they can start chatting and can chat. This works.
* One-to-multiple clients chat – Once more than one user is logged in they can chat with each other and the server sends each client’s message to one another. This works.
* Online Users – The feature of showing who are the online user in the GUI semi worked. However, I am able to print to console who has logged in and logged off in the server class since I kept a list of the online users. So in the end it works by printing to console and semi work by printing on GUI.
* Chat History – The chat history is so that a user can later access the chats. So far I have the chats being saved to a single file so this is not complete but I have it sort of working I hope to get partial credit at least.

**How to download and run project from GitHub:**

To download the ChatApp and run it on your java IDE compiler you must:

1. First you must log into your GitHub account.
2. Go to <https://github.com/ortegg/ChatApp>
3. You should be in the ChatApp repository now. Click on the green button that says “Clone or download”
4. Then click on “Download ZIP” and then wait for the ZIP file to download.
5. Once it is downloaded, open up your IDE and start a new project.
6. Unpack “master.zip”
7. Add the .java files to your java IDE project.
8. Now to run your ChatApp, first must run the server class first. Once it has started it should display that the server is running.
9. Now run the client class and this should open up the log in screen.
10. Log in or Register as a new user.
11. Once logged in you will be asked for your username again.
12. After you will now be in the chat and can chat now.
13. Run another client so that you can see the chat action between the two logged in clients.

Hope this helped.