Original Project Proposal

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1. The project I want to work on is an authentication server for user login. The project will consist of a user client socket that launches and connects to a server socket. From there, the user will have to enter their username and password in the client, and have the data be sent to the server for authentication. When the information is verified, the server will send the information back to the client that requested authentication. This app will also support the use of multiple clients being run at the same time, all trying to authenticate on the same server. This multithreading will behave like a real world login server. The information will be displayed for the user in a simple login UI that is easy to understand, and practices industry standards for login UIs. The logic for this app will include the implementation of multithreading, as well as the simple logic used to complete logins (checking usernames against passwords to see if they match ones on file).
2. I want to work on this project because it gives me a good chance to work on higher level java concepts like multithreading, while doing so in a situation that is vital for many scenarios in the workforce.
3. To successfully complete the project, I will need to **improve my Java skills** in these areas: I will need to work on my Swing or Fx skills. I don’t have a lot of experience with this aspect of Java, so some research will have to be done on my part to fully understand how to do each of these for incorporation into this project. I will also need to work on implementing the MVC design pattern into a project of this scale. I have experience doing this in the past, but I’m sure I’ll run into some issues with it when trying to implement it into a larger project.
4. I will need to **learn new Java skills** in these areas: I will need to learn new Java for implementing server and client sockets, as well as how to use multithreading to allow for multiple clients to connect to a singular server at the same time.
5. I will have the following challenges to overcome in implementing my project using the MVC design pattern: This project will be hard to implement MVC with because in order to have separate client and server sockets running independently of each other, this project will have to be set up a little different. This means using two main() methods, one for the server and one for the client. I will have to use two sets of MVCs, one for the server and one for the client.
6. Explain whether and why you will use Swing or Fx to complete your project. How familiar are you with Swing and Fx? (Realize that if you use a GUI editor (e.g., the one in NetBeans for Swing or SceneBuilder for Fx) that you are own your own as far as help goes.)  
   I will try to use Swing for the completion of this project. I am more comfortable with Swing then I am with Fx, and it will make the implementation of the other aspects of the project easier. I am not very familiar with either of these, and don’t have much experience working with either on larger scale projects.
7. Why should I believe that you can complete the project you propose on time, with working code that demonstrates the features you will promise for each deliverable?  
   I can complete this project on time because I have experience with the creation of authentication apps in the past. This means that I can use my knowledge in this area to help build the skeleton of the app. After the skeleton is built, I can implement the new features I plan on adding.