**Gym Project Testing**

One thing to immediately note is that this application does not work with older versions of XAMPP. This threw me for a loop, as I had to figure out why the application was not opening for a while. Also, if you do not delete index.html from the default htdocs folder in XAMPP, then the application will not be visible in web browsers. However, once I successfully solved these two problems, I was able to use the program.

As far as error handling, things could definitely be improved. For example, if you enter a username without a password, you are brought to an empty screen that says “Password should be empty.” However, the only way to retry a login is to actually hit the back button on the browser, instead of there actually being a button in the website. The same goes for if you enter a password and not a username. Also, when you enter incorrect info, the only message is “Failed to login!” rather than letting the user know that their information is incorrect. This is very unclear, as the user doesn’t know if the website is working incorrectly or if they mistyped their information.

In addition, when you register and do not match the password with the passwordConfirm field, there is an extremely unclear error. On top of this, the program does not have proper input validation and is open to SQL injection attacks. The main issue with the login errors is the fact that you are brought to a separate page, rather than a simple pop up error.

For main functionality, the login works correctly if the user information matches what is found in the database. However, once I login, it is unclear what type of user is logged in (member, employee, manager). For example, when I login as a member, the only option I see is to charge a member, yet members shouldn’t be able to charge other members. Also, it would be helpful if there was a way to remain signed in rather than having to login every time I return to the home screen. Charge member works correctly, but there is no indication of this on the member page of the website.

Continuing on functionality, the employee functions work well. They update values in the database correctly and are easy to understand. However, similar to the members, it would be nice to see a visual representation that these commands are doing their job correctly on the backend. Similarly, the manager section works well, but there is no option for a manager to register a member, which should be the case. Also, when registering an employee, there is absolutely no input validation (e.g. you can enter an email without @)

As far as code quality, the files are separated very clearly and intelligently. It is clearly named, so if things need to be changed it is very clear on where to go. However, as discussed earlier, there are several input validation errors which leads to bad error handling as well as SQL injection vulnerability. Also, code organization would be slightly better if there were separate folders instead of everything being under the same directory.

Everything within the code files is perfectly fine. There is clear indentation and the code is very easy to follow. The only suggestion I would give is to include more comments, as I found none while I looked through the code.