EE/CprE/SE 492 WEEKLY REPORT 10/25
January - December
Group Number: 1
Project Title: Applying and Evaluating Blockchain in Energy Delivery Systems
Client: Grant Johnson
Advisor: Dr. Gelli Ravikumar
Team Members/Roles:
Owen Snyder - Frontend/UI Developer
Josh Edwards - Backend API Developer
Emileo Xiao - Testing/Evaluation Lead
Dylan McCormick - Lab Integration Lead
Thai Pham - Blockchain Lead

Weekly Summary (Short summary about what the group did for the week. This should be about a paragraph in length. These are just a few questions to help you get started. What was the overall objective for the week? In general, what tasks were completed? Were there any changes made to the project?)

The overall objective of the week was to get a diagram of how we think things will work now that we are closer to an actual implementation and to work towards moving our project onto VM's. We are still working on getting our blockchain network set up and running so that we can combine our implementations.

Past week accomplishments (Please describe/summarize as to what was done, by whom, when and, collectively as a group. This should be about a paragraph or two in length. Bulleted points are acceptable as well. Please keep only your technical details related to your project. Figures, schematics, flow diagrams, pseudocode, and project related results are acceptable, but please ensure that they are legible (clear enough to read) and to provide an explanation. If researching a topic, please add a few details about what was learned and how it is relevant to the project. If two or more people worked on a single task, be sure to distinguish how each member contributed to the task. Specific details relating to the assistance provided to other members may be included here. Do not include classwork, such as individual reflection assignments, and group meetings as part of your duties.)

Owen Snyder - Researched past team's implementation of UI integration with the backend, and possible implementations for the UI going forward once the BC network is implemented.

Josh Edwards - Learning about React and ExpressJS to make the API endpoints and how to deploy said endpoints within the Linux VM's that have been provided.

Emileo Xiao - Hyperledger Caliper returns a benchmark report that returns data based on the tests it has run on the tutorial blockchain. Created the flowchart diagram of our work using VMs and the different softwares.

Dylan McCormick - Used standard python websockets and async.io to implement a working aggregated queue system for receiving and sending out data to our API.

Thai Pham - Designing chain code and network/node environment

Pending issues (If applicable: Were there any unexpected complications? Please elaborate.)

Owen Snyder - N/A

Josh Edwards - N/A

Emileo Xiao - N/A

Dylan McCormick - N/A

Thai Pham - N/A

Individual contributions (Creating this section is optional, but it is Required to include the "Hours Worked for the Week" and their "Total Cumulative Hours" for the project for each member somewhere relevant in your report. Your individual weekly hours should be at a minimum of 6-8 hours for this course. So please manage your time well. Also, ensure that
individual contributions support your claim to the weekly hours. Be honest with the reports.) NAME Individual Contributions (Quick list of contributions. This should be short.)

Team Member	Contributions	Weekly Hours	Total Hours(from this semester)

Owen Snyder	Research on UI Implementation	4	20.5
Josh Edwards	Continued Python Websockets, Packaging and forwarding data to API	3	22
Emileo Xiao	Worked with Thai to expand the blockchain	6	26
Dylan McCormick	Research python libraries to find good options for async websocket requests/implemented	6	26.5
Thai Pham	Researching and going through HyperLedger-Fabric documents as well as old team's code to learn how to create chain code.	2	22

Comments and extended discussion (Optional)
Feel free to discuss non-technical issues related to your project.

Plans for the upcoming week (Please describe duties for the upcoming week for each member. What is(are) the task(s)? Who will contribute to it? Be as concise as possible.)

Owen Snyder - Continue development of UI portion and help other team members with development of more urgent parts of the project

Josh Edwards - Finish the API endpoints, begin talking with Thai about what format the requests need to be in for the Smart Contracts to be able to execute efficiently.

Emileo Xiao - Discuss with Owen on how he wants to format the benchmark report data that is returned from Hyperledger Caliper on the frontend UI. Try to create more elaborate benchmark tests.

Dylan McCormick - Possibly assist on getting the blockchain running and then getting information about receiving data from power cyber labs python module.

Thai Pham - Currently researching on how to develop chain code and shell scripting to be able to move beyond the tutorial and lean towards personalized implementation for the project. Will probably look through old teams material to see if there's anything of value to use.

Summary of weekly advisor meeting (If applicable/optional)
(Provide a concise summary on the contents and progress made during the advisor meeting.)

We met with our client and advisor. Advice was to have a diagram for how our VM parts work together and to make sure we work on getting our node network set up on our VM's.