
EE/CprE/SE 492 BI-WEEKLY REPORT 2

February 8 – February 22

Group number: sdmay24-20

Project title: Utilizing PAWR Program to Develop Advanced Hands-on Labs For Networking and Cybersecurity Courses

Client &/Advisor: Mohamed Selim

Team Members/Role: Camron Corcoran/Client Liaison, Bryan Pope/Technical Lead, Brendon Droege/Information Manager, Susanna Noble/Information Manager, Corey Lieu/Secretary, Leha Dutta/Project Manager

○ **Weekly Summary:**

This week two members of our group met with a representative from the ARA team to plan out lab implementations and how to efficiently utilize the ARA platform to develop said labs. For everyone else, the past two weeks were spent on familiarizing everyone with the ARA platform and running through a lab developed last semester to test basic functionality for our educational goals. As a group, we decided to change the focus of the labs developed to at least two specific classes here at ISU: CPR E 489, and CPR E 437/537. We will develop three separate labs tailored for each class that build off each other with increasing complexity, in addition to a few labs solely on cybersecurity.

○ **Past week accomplishments:**

- Camron:
 - Met with ARA representative, gained a better grasp on the networking labs to be developed.
 - Reached out to Dr. Qiao, who teaches CPR E 489 this semester with a potential integration of the lab we have successfully developed into the CPR E 489 curriculum.
 - Researched with Leha on the possible avenues for cybersecurity labs to be developed on the ARA platform.
- Bryan:
 - Also met with ARA representative, studied the 4G stack to prepare for networking lab development in the ARA sandbox environment.
 - Contributed to the lab document being written for the 4G throughput lab we have developed successfully.

- Brendon:
 - Updated the website heavily to include much of the progress we have made so far in the semester.
 - Researching other universities with similar networking courses, so we can try and network with faculty to spread the project and its goal.
 - Susanna:
 - Worked on translating the 4G lab we've already developed into a classroom ready document for students to be able to work through.
 - Looked over previous CPR E 489 labs to gain a better understanding of the types of labs that could be developed for that class. Planning to meet with Corey and Camron to discuss findings and a final plan.
 - Leha:
 - Worked through the 4G lab using the ARA platform and contributed to the document mentioned above as well.
 - Researched and gained a deeper understanding of wireless security in preparation for the cybersecurity labs to be developed and integrated.
 - Corey:
 - Finished working through the 4G lab using the ARA platform as well, contributed to the lab document
 - Looked into future CPR E 489 labs in order to prepare for meeting with Susanna and Camron for implementation of our own 4G labs.
- **Pending issues:**
- Our other developed lab is having issues being worked through on the ARA platform. We have discussed it with the team and they are working on a fix. Once we are able to verify that the lab functions correctly, we will update the lab document for this.

○ **Individual contributions:**

<u>NAME</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Camron	6	22
Bryan	7	18
Brendon	7	19
Susanna	6	18
Leha	7	20
Corey	5	17

- **Plans for the upcoming week**

- Camron/Leha:
 - Meet to finalize the cybersecurity lab plans and wait for ARA team's response to inquiry about 4G components for successful lab implementation.
- Bryan/Brendon/Susanna:
 - Begin to develop the next networking lab outline and draft up another lab document with Brendon and Susanna.
 - Work through the other developed lab once ARA fixes the functionality of the sandbox, and revise the formal lab document to be used in the classroom.
- Susanna/Camron/Corey:
 - Meet and discuss the CPR E 489, labs, draft up lab documentation for the potential wireless networking labs to use for the class.
 - Begin researching CPR E 437/537 labs for further reference

- **Broader Contexts:**

- After learning more about the ARA platform via first-hand experience with the sandbox environment and the successful implementation of the 4G throughput lab we have developed, we can conclude that our initial evaluation of the small negative impacts our project will have on the different areas of context holds quite well. Because our project deliverables are working, functional labs aimed at students in a lab environment, evidence of positive effects in the global, cultural, and social contexts will manifest in feedback from students who are able to successfully work through the labs, making sure it challenges and encourages questions from them.