

EE/CprE/SE 491 WEEKLY REPORT 1

01.23.24 - 02.06.24

Group Number: 07

Project Title: Gamified Security Awareness

Advisor: Thomas Daniels | **Client:** Sudesh Kannan

Team Members/Role:

Charan Gurramkonda - Team Organizer + Primary Communication

Charles Millar - Testing/Developing

Caleb Lemmons - Information Application Lead

Parker Schmitz - Technical Lead

Brayden Lamb - Design/Visual Lead

Derek Lengemann - Testing/Developing

● **Weekly Summary**

Group 7 has achieved great progress in the initial weeks. We began by meeting with our client, Suresh, who provided a comprehensive overview of the project's requirements and the envisioned outcome for the final application. It quickly became apparent that the project offers a great deal of flexibility, encouraging us to explore and develop our own narratives and concepts. We are actively brainstorming and refining our ideas, with the aim of finalizing our game design by next Thursday (2.15.2024). Following this milestone, we are looking forward to playing around with new technologies and code!

● **Past week accomplishments**

- **Charan Gurramkonda:** All of us are engaging in similar activities during the brainstorming process. Personally, I've been exploring websites known to me that align with our project's theme, such as Cyber Start and HackTheBox, analyzing their strengths and weaknesses. Integrating these insights with my narrative for the game, I'm currently developing an engaging 2D spy agency storyline! In this story, the protagonist navigates through various stages or challenges to ultimately complete the game. My teammate, Parker, has contributed several excellent ideas that have motivated me to enhance his concepts with my own twist.

- **Charles Millar:** Our group has met a few times in the past week and is developing game ideas for the project. We aim to each bring a game idea with us the next time we meet. Our clients, Sudesh and Ethan, want us to create a game that incorporates cybersecurity education for developers. Unlike many other existing platforms, Ethan wants to create an enjoyable game and then incorporate security into the game. Doing this will make security feel like part of the game and not like the player is just playing a game they are not interested in to learn about security. This week, I have come up with two game ideas to present to the group during our next meeting, which I believe aligns with our client's goal. One idea is a virus game where the player is their own customizable virus with the goal of infecting as many machines as possible and growing their infected network empire. My second idea is a heist-style game where the player will break into some facility and disable obstacles such as doors, cameras, alarms, and turrets as they make their way to recover the desired loot.
- **Caleb L:** Like the rest of my group members, I was brainstorming ideas for the game mechanisms and story. We met up on Monday to exchange ideas and will finish by all sharing one idea to the group at our next meeting. Whether it be its own story or an add on to a previously discussed story.
- **Brayden Lamb:** Other than participating in the brainstorming phase with our team members, I have been looking into Unity to find out if that would be a good platform to use for our application. I also was looking into Web-based applications.
- **Derek Lengemann:** Similar to the rest of my group members I have participated in brainstorming various ideas for our group. I have also done my fair share of research into different game engines and what would work best for a platform to use for the group. AWS Cloud Quest and many other previous iterations of this idea have provided fascinating insight into the realm of cybersecurity training. I learned that while there are many various training programs out there, very few are able to be entertaining. Some of our group members were able to meet Monday, but we as an entire team will ultimately decide what the final idea will be in our next meeting.
- **Parker Schmitz:** I've been brainstorming ideas for gameplay for the past couple of weeks. When trying to come up with ideas, I try to imagine something I think would be fun, or something that I would play. So I came up with a 2D platformer Metroidvania. I churned the idea in my head and fleshed it out in a little more detail. There's more work to be done, however. If that's the idea we go with, finer details will need to be determined.
- **Pending issues**
 - **Charan Gurramkonda:** I have not encountered any unforeseen challenges. Being in the initial phases of the design process, I believe we have the flexibility to thoughtfully refine our concepts. The open-ended nature of the project initially surprised me, but after further discussions with my group, my confidence in our ideas has grown, and I now have a clearer direction for our brainstorming efforts.

- **Charles Millar:** Our group has been working well together, and we have not yet encountered many issues. The only issue I have noticed is that contacting Dr. Daniels is surprisingly difficult. We have reached out via email, but I think we may have to stop by his office sometime and try to contact him that way.
- **Caleb L:** There were no major unexpected complications. We are still in the early stages of the design process so I feel like we have some room to breathe and slowly improve on ideas. I am not a design guy so I ran into some walls when thinking of ideas but this was a minor inconvenience.
- **Parker Schmitz:** No complications thus far, though that should start changing soon. I foresee challenges when we really start to break our ideas down and really try to figure out what the game will be. We will need to decide on what technologies/software we want to use and what would be best for our use-case.
- **Brayden Lamb:** There haven't been any issues so far on my end except maybe our faculty member not really responding to emails. We might have to go to his office hours in person to communicate with him.
- **Derek Lengemann:** There were no complications that I have experienced so far. Apart from having not been able to meet with our faculty member. Our project will be rather large and open-ended so nailing down the exact details may be rather difficult.

Individual contributions

NAME	Individual Contributions	Hours This Week	HOURS Cumulative
Charan G.	- Brainstorming game narrative and aesthetics - Refreshing on OWASP Principles & Other Standards - Staying in communication with our client	4	8
Charles M.	- Brainstorming (2 game ideas) - Room reservations for team meetings - Reviewed OWASP Principles given by client	4	8
Caleb L.	- Brainstorming of game mechanics and story ideas - Reviewing OWASP cheat sheets to get familiar with the content and see what may stand out	4	8
Parker S.	- Brainstorming ideas	3	6
Brayden L.	- Looking into what it would take for a web-based application- - Downloading and watching video tutorials on Unity - Reviewing OWASP material to refresh my memory	6	10
Derek L.	-Brainstorming of game mechanics and ideas - Exploring different game engines and mechanics to understand what will make this project more entertaining than just training	5	8

- **Plans for the upcoming week (02.07 - 02.13)**

- **Charan Gurramkonda:** Our goals for the upcoming week include finalizing the game design, incorporating the best elements from each other's renditions, discussing the idea with our client, and maybe beginning the initial phase of coding. Personally, I will continue to stay in touch with our client and advisor and make sure we are headed in the right direction.
- **Charles Millar:** Our goal for the upcoming week is to choose a game idea from the pool of brainstormed ideas and begin to further develop the idea. This will most likely be developing a storyline, sketch visual ideas, game economy ideas, game mechanics, etc. These tasks will be split up aligning with team member's individual skills/goals.
- **Caleb L:** We will start to conclude our brainstorming process at our next weekly meeting by settling on a story idea. With this started, we can begin building our story and I can begin to add informative OWASP content to the story.
- **Parker Schmitz:** We will need to finalize our idea for the game and flesh it out more: The gameplay loop, what the player will be capable of, what the player can interact with, how the world will react to the player, etc. Once we have our idea finalized and some features fleshed out, we can start looking at what technologies will be suitable for seeing the game ideas come to fruition.
- **Brayden Lamb:** Come to our next meeting with a story/game idea and finalize as a group what idea we will go with so that we can get a proposal-type document to the client in the next week's meeting. Also figure out what platform we want to try first.
- **Derek L:** During our next meeting we will decide on what idea put forth by the team is the best idea to move forward with. We will begin building the story decided on by the team by the end of this week.

- **Summary of weekly advisor meeting**

Have reached out to Dr. Daniels but haven't met yet.