09/09/2021

Hello Debra,

I hope you are having a good afternoon! I'm emailing in regards to the first client meeting. During the meeting, we began with introductions and got to know more about Ben, Tram, and Jeannine. We learned that Tram is the original creator of the paper-based game and the last game that Ben and Jeannine play was Pong. Notable points that we discussed with the clients were the use of graphs and diagrams within the Software Requirements Specification, that the project is for the education of cyber security students, and how they would use the product as training for new employees at Medtronic. Lastly, we finalized and scheduled weekly meetings with the clients occurring every Monday from 12:30 to 1:00. If you have any further questions about the meeting, please reach out to us at any time.

Best regards, Nelson Lau

09/12/2021

Hi Debra,

I hope you are having a good week! I'm emailing you in regard to our client meeting on Monday, September 13th, from 12:30 to 1:30. During the meeting, Ben and Tram were unable to attend, however, Jeannine was able to answer our questions. Talking points that we discussed were software that the team can use as references and unfortunately, they did not have software references, but she did compare it to dungeons and dragons due to the turn-based game design. We also talked about browsers that the project should be implemented in. Primarily, Chrome and Microsoft Edge would be the main browsers with Firefox being the secondary browser. Lastly, we finalized and scheduled a meeting where Tram would be able to give the team and I a demonstration of the game. The meeting will be taking place on Thursday, September 16th, from 3:45 to 4:45. If you have any further questions about the client meeting, please reach out to us at any time.

Thank you, Nelson Lau

09/20/2021

Hello Debra.

I hope you had a fantastic weekend! I'm emailing in regards to the client meeting that we had today

(09/20/2021). During the meeting, we discussed the following questions and topics listed below:

- 1. Will the project be exclusively on computer, or will it be on tablet and mobile device as well?
- 2. Security specifics and requirements.
- 3. Will Medtronic provide a server to the team for hosting the game?
- 4. Specific performance requirements such as number of users supported per game and number of simultaneous users.
- 5. Are there any standards of Medtronic that we need to comply with?

Overall, I thought the meeting went very well and the team and I were able to get great information from the clients. Notable points from our discussion were to focus mainly on desktop implementations of the project, the game should be able to host 20 teams that consist of 2 to 6 people, and focusing on a strong and solid infrastructure for the project will set us up well for the future. If you have any further questions about the meeting, please reach out to us at any time.

Best regards, Nelson Lau

09/27/2021

Hello Debra,

I hope you had a fantastic weekend! I'm emailing in regards to the client meeting that we had today (09/27/2021). During the meeting, we discussed the following questions and topics listed below:

- 1. What should happen if someone in the game losses connection? Should the game pause?
- 2. Potential voting system for team decisions.
- 3. Going over the Software Requirements Specification document. (Answering potential questions/concerns)

Overall, the meeting was somewhat short, but I thought it went well and the team and I got great feedback from the clients. For question one, the clients would like it if when one person disconnects from the current game session, the game would still resume while trying to get the individual back into the game. If the instructor is the one that disconnects, this is where we would need to pause the game. For question two, the clients seemed to like the idea of the voting system being implemented into the program rather than having one person in the team decide for everyone. Lastly, the clients were not able to review the Software Requirements Specification, but a word document version was sent to allow comments.

Best regards, Nelson Lau

10/04/2021

Hello Debra,

During our client meeting on October 4th, we presented our presentation on the different hardware frameworks and database options. Below are the decisions we made:

- For frontend framework, the most appealing option to Ben was React for its lack of cost and widespread usage.
- For the backend framework, Ben did not explicitly select one of the options, and told us that we are to select the one that fits the needs of the project best.
- For the database, MySQL was the select database due to its widespread usage and best compatibility with different hosts.
- For web services, Heroku was selected by Ben due to its quick and relatively simple
 deployment but expressed that he would like us to be able to transfer to Amazon Web
 Services if needed.

Going forward, our focus is on starting the initial planning process for implementing these frameworks and getting all of these systems working together.

Thanks,



10/18/2021

Hello Debra,

During our client meeting on October 18th, we went over a few topics:

- To start, we put the overall project into perspective, giving Ben, our client, what features we expect to deliver by the end of the semester, and what features we had to leave for the next semester.
- We went over the two previous emails that Ben had sent regarding the overall gameplay, game structure, and game logic. A lot of the meeting was to clarify many of the different aspects of the game.

• We also went over Jason's flowchart showing the underlying structure of the game, and went over the prototype of the lobby system that Jason had put together.

Going forward, our focus is on working more on the prototype of the game and additionally revising our requirements document to a new version implementing the changes to the project.

Thanks,



Zachary Kelly

CyberBlock Dev Team

E zachary.kelly@ucdenver.edu

10/25/2021

Hello Debra,

For our meeting on 25th oct, the following were the agendas of the meeting.

- 1. We discussed about the three categories of defense for a particular attack.
- 2. We gave our client ben a brief overview of the status of our work.

The meeting concluded with some improvements on the strategy of the game. The team is currently focusing on finishing up the requirements and design documents.

Thank you, Ridhisha

11/01/2021

Hello Debra,

For our meeting on 1st Nov, the following were the summary of our client meeting.

- 1. We revised the software requirement document
- 2. We concluded that all admin functions will be conducted using MySQL workbench.
- 3. The client mentioned that they would like the instructor to have the ability to move players around into different team once they join.
- 4. We demoed the database to our client.
- 5. The client promised to provide us with a spreadsheet of attack and defense for different levels of difficulty.
- 6. We gave our client ben a brief overview of the status of our work.

The meeting concluded with some improvements on the strategy of the game. The team is currently focusing on socket programming.

Thank you, Ridhisha

11/08/2021

Hello everyone,

For our meeting on Nov 8th, we discussed the defense matrix for an attack. We came to the conclusion that we either might have to write a program to retrieve all the defenses from the defense matrix or rely on spreadsheet provided by the client. A greater preference will be given to the second option. We also talked about the completion of the database and concluded the meeting with a current work progress.

- 3.
- 4. Jason: work on adding server-side buying phase features and the second player interface. Estimated date of completion (Nov-11)
- 5. Nelson: work on the integration of the database to the working site. Estimated date of completion (Nov 11)
- 6. Ridhisha: working on client side of the buying phase features and the second player interface. Estimated date of completion (Nov-11)
- 7. Zach: help with database and source code. Estimated date of completion (Nov-11)

8.

Plese let me know me know if you have further questions.

Sincerely, Ridhisha

11/15/2021

Hello everyone,

For our meeting on Nov 15th, we discussed the defense matrix and the progress on the spreadsheet. We had a brief design document discussion that led to a demo of the current project to emphasize the design style. The client suggested that we add some accessibility to the user defense to further elaborate the defenses. We concluded the meeting with current work progress.

Please let me know if you have further questions.

Sincerely, Ridhisha

11/29/2021

Hello Debra,

For our meeting with our client today (11/29), we discussed following items:

- 1. We went through the updated Attack-Defense-Spreadsheet Ben created. Ben walked us through the purpose of each column, which gave us a clearer understanding of how he wants the application to be done/improved. For instance, each attack will have a defense note associated with it to help students understand the mitigation process, and each attack will have a complete description and a shortened description that will be shown during gameplay. Also, Ben wants to change how an attack gets generated. Instead of simulating dice rolls, he wants to just use random number generator directly. As a result, we will change our design accordingly.
- 2. Since the mentioned spreadsheet is still a work in progress by Ben, which only have beginner difficulty level attacks and defenses completed, Ben suggested that we will use placeholder for intermediate and expert difficulty level for our prototype, and we will populate the rest of attacks and defenses once Ben finishes the spreadsheet, presumably after winter break.
- 3. We added Ben and Tram to Slack and made them owners of our GitHub repository. And we talked about the possibility of having a demo session with Ben and his colleagues when we have our prototype ready, but we need to further discuss our availability before we can set a date for it.

Please let me know if there are any questions.

Thanks, Xin (Jason)

12/06/2021

Hello Debra.

For our meeting with our client today (12/06), we discussed following items:

1. We had another long discussion on defense-cost distribution with Ben and Tram, which is to figure out the question "how much money should players be given". We don't want players to be able to buy most of the defenses, since that would invalidate the intention of the game, which is to learn how to defend against cyberattacks with limited resources; on the other hand, we don't want players to only have so few defenses that playing the game is not an enjoyable experience. We concluded that this number depends on the number of rounds set by the instructor, and it can be non-linear. For example, for a game with 1~5 rounds, it can be 30 dollars; for a game with 5~8 rounds, it can be 45 dollars, and so on.

- Another thing is we should test play the game and then try to fine tune this parameter next semester.
- 2. We also talked about our pilot run on the 21st with Ben and his colleagues. Ben suggested that we can be flexible in what we want to present depending on how we feel about the state of the game at that point. For example, if we feel like the game needs more testing and fine tuning, we can just show screenshots and gather feedback on user interface (whether it is intuitive and accessible, etc.).

Please let me know if there are any questions.

Thanks, Xin (Jason)

12/13/2021

Hi Debra,

For our meeting with our client today (12/13), we gave a demo of our prototype over Zoom. Our client was content with the prototype, and then we talked about possible improvements to the game and our plan for the upcoming pilot on the 21st.

- 1. A few feedbacks were given by our client:
- 2. a. In buy defense phase, order defenses by alphabetical order or cost
- 3. b. In defend phase, if a team plays right defenses against rolled attack, highlight such defenses.
- 4. c. Having an adaptive selection system on attacks so that it is easier for teams to score points.
- 5. We took notes of these suggestions and told our client we can implement these changes next semester.

6.

7. For the pilot, Ben suggested that we present enough information at the beginning of the meeting to get his coworkers familiar with the project. He also suggested that we prepare specific questions beforehand so that we can gather feedbacks after the demo.

Please let me know if there are any questions.

Thanks, Xin (Jason)