

## EE/CprE/SE 491 WEEKLY REPORT 5

02.27.24 - 03.5.24

**Group Number:** 07

**Project Title:** Gamified Security Awareness

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

### **Team Members/Role:**

Charan Gurrnkonda - 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

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### ● **Weekly Summary**

- This past week has been vital in charting the course for the remainder of the semester, particularly concerning our project, CyEscape. Our client emphasized the need to refine our concept, solidifying the various levels our game will feature and clarifying our objectives for the semester. As for group progress, we're collectively exploring and becoming acquainted with Unity. The game engine offers a suite of tutorials, which, combined with its use of C#, a language akin to Java, makes our learning process more manageable because we have experience with Java in our past computer science courses. This simplifies our work and accelerates our journey toward the exciting elements of game development!

### ● **Past week accomplishments**

- **Charan Gurrnkonda:** This week has been somewhat repetitive of the last, with my efforts focused on getting familiar with Unity and working through the 2D Sprite tutorials. However, come our Thursday group meeting, I have laid-out a couple of ideas on scoping our project and what we can feasibly accomplish in our game development this semester.
- **Charles Millar:** This past week has been a little slow for the entire group with midterm exams and assignments. Despite the busy week our group still maintained

our regular meeting schedule, continuing to drive the project forward. These meetings keep our group, clients, and advisor all on the same page. Over the past week I have focused on familiarizing myself with Unity and looking into Unity's 2D game design options.

- **Caleb L:** This past week, I continued messing with Unity and developing more mock-level ideas implementing various Cyber Security concepts. With Unity, I went through the tutorial and began understanding the UI. Additionally, I searched the asset store for textures, sprites, and other designs we could base our initial designs on. I created three more level designs for the mock levels that considered network security, encryption/decryption, and social engineering techniques.
- **Brayden Lamb:** Last week we met with our client again for a short meeting and asked some follow-up questions. I looked up how to import assets into Unity and played around a little with the engine. I also looked into Blender as a way to easily make assets so there is less work to do in Unity.
- **Derek Lengemann:** This past week, we were able to meet with our client for our meeting and had the chance to ask some clarifying questions. This meeting also helped to keep our advisor on the same page with us and with the clients. I continued to spend time with Unity learning more from different tutorials and have made a small mock game.
- **Parker Schmitz:** This week I continued work on programming a controllable sprite in Unity. Unity's manual and scripting API documentation has been a tremendous help, as well as Unity's forums to find other people's examples. One issue I was having was the jump would not register every time the jump button was pressed. I deduced that this was due to the separation of the input reading and physics step. The jump button would only register for one frame, and that frame was unlikely to overlap with the physics step, which is separate from the framerate. If jump was pressed at the same time the physics step occurred, the character would jump. I solved this with some booleans that are set when jump is pressed, and are reset after the jump executes.
- **Pending issues**
  - **Charan Gurrankonda:** No pending issues on my side. Ownership Discussion w/ Client is still pending.
  - **Charles Millar:** I have no pending issues.

- **Caleb L:** There are no major pending issues on my part. When looking through the asset store, I realized that most of the asset packs that looked applicable cost a decent amount of money. I am not aware of a budget, nor have we discussed it with our client so we will see next meeting.
- **Parker Schmitz:** We will need a way for all of us to work on and access the game while we develop it. Unity has a built-in version control system, but GitHub may be preferable, as it is more general, and will allow us to open source the project if we so desire. I am not aware of any size limitations on GitHub, but even if there are, I doubt our project will be too large for GitHub.
- **Brayden Lamb:** No issues.
- **Derek Lengemann:** There are no pending issues.

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### **Individual contributions**

| <b>NAME</b> | <b>Individual Contributions</b>  | <b>Hours This Week</b> | <b>HOURS Cumulative</b> |
|-------------|--|------------------------|-------------------------|
| Charan G.   | <ul style="list-style-type: none"> <li>- Continuing 2D Sprite Tutorial</li> <li>- Scoping Out Project</li> <li>- Laying Out Final Game Stages/Levels</li> <li>- Game Plan For Semester Written Down</li> </ul> | 3                      | 21                      |
| Charles M.  | <ul style="list-style-type: none"> <li>- Unity research</li> </ul>   | 2                      | 21                      |
| Caleb L.    | <ul style="list-style-type: none"> <li>- Finished Unity tutorial and scoured the Asset Store</li> <li>- Continued creating level ideas</li> </ul>  | 3                      | 21                      |
| Parker S.   | <ul style="list-style-type: none"> <li>- Created controllable sprite in Unity</li> </ul>   | 5                      | 21                      |
| Brayden L.  | <ul style="list-style-type: none"> <li>- Played with Unity</li> <li>- Researched Blender</li> </ul>  | 3                      | 31                      |
| Derek L.    | <ul style="list-style-type: none"> <li>- Unity Tutorials</li> </ul>  | 3                      | 21                      |

- **Plans for the upcoming week (03.5.24 - 03.19.24)**
  - **Charan Gurrnkonda:** I aim to complete the 2D Sprite Tutorial in Unity and then start crafting prototype levels to explore my design capabilities. In addition, I will collaborate with my teammates, offering guidance where needed and assisting in allocating well-defined responsibilities for the semester.
  - **Charles Millar:** In the upcoming week, I hope to get a better understanding of the next steps for our project through our group meeting. This will more than likely entail doing something with Unity, but I would like to narrow down exactly what features of Unity we are using and what needs to be done. I am

hopeful that in the near future we will be able to bring our game idea to life with the development of some initial levels.

- **Caleb L:** I plan to continue creating level ideas and searching for valuable assets until our team meeting on Thursday. I will show my new ideas and findings from the Asset Store during the meeting. Once I hear my team's thoughts on my ideas and their findings, we will decide on the next action plan.
- **Parker Schmitz:** This next week I will continue to work on the basis for the game. I plan to set up a GitHub for the project so we can use version control and everyone in the group can develop our game. Otherwise I wish to expand the movement capabilities of the player, perhaps adding a double jump, a wall jump, and/or a dash/air dodge.
- **Brayden Lamb:** By the end of this week I want to make a detailed first room within Unity so that I can show it to the group at our meeting. I will go through tutorials for Blender so I can learn more about using the product.
- **Derek L:** By the end of this week, our team will have an idea of what our first level we will develop will be and decide various responsibilities for each of our team members. I will continue to look at various Unity tutorials that will help with the development of our game.
- **Summary of weekly advisor meeting**

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