Project Deliverable H


Prototype II1 and Customer Feedback



GNG 1103- Engineering Design

Group 13: Reeve Schweiger, Dev, Benjamin, Keval




Due: Sunday, March 24th, 2024

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## Introduction:

The objective of the third prototype is to improve the second prototype based on the user feedback, and finish gestating critical components of the virtual reality. Based on the prototype

test plan below the, we should be adding the final touches on the environment and show our prototype to a general audience and take note on their emotional responses, and opinions. The additions added will be to complete the final prototype which if all goes well, will be presented on design day. Furthermore, feedback received from in class presentations will also be discussed and improved in order to prepare for the final presentation.

## Prototype objectives:

Based on the prototype test plan, for this prototype we should be added the final unity asses/additions to the environment and test the emotional response and well as usability. In order to conduct our test, we will show user (group of peers) the one-minute video of prototype 111 and ask for feedback/comments. During the test we will also take note of the body language/emotions that the users are portraying and take note of that. In order to prepare for design day, we are also starting to rehearse our speaking parts of the presentation and making the poster board for our groups station.

## Presentation feedback

Presenter 1 (Reeve)
- You were well dressed for the event
- You used "uh" as a space-filler frequently
- You used your hands effectively
- You spoke well

Presenter 2 (Keval)
- You were well dressed for the event
- You spoke well
- You had your arms crossed while waiting, as others spoke

Presenter 3 (Dev)

- You read from your phone, rather than taking a prompt from the presentation and speaking to the bullet points
- You wore running shoes
- You were moving around (shifting weight, fidgeting) while not presenting (very distracting)
- Your hand use was ok to good
- Your volume needs to increase

Presenter 4 (Benjamin)
- Your attire was not business casual … it was casual. Colourful plaids are not considered presentation-appropriate, and any shirt must NEVER be left untucked on a male
- You repeatedly used "The … uhm …". When you don't know what to say, pause and take a breath, then continue as you regain focus
- Your hands were making small, nervous gestures
- Hand gesture should be intentional and focused on emphasizing something

- You seemed uncomfortable making eye contact
- Your volume was good, and your diction was clear

Overall observation: Your team was very effective in responding to questions. That may sound like a trivial thing, but I've seen presentations saved because the team was effective in the Q&A session.

Based on the feedback provided from Professor Sykes, to prepare for the final group presentation, we must extend our presentation time so that it surpasses the minimum time frame of 10 minutes. Furthermore, our group should implement practice sessions, in order to prevent pauses and awkward transitions between talking points. In order to implement a more fluent presentation, we are tasked to prepare slides which affective portray what we are trying to explain, which will also allow for each member to have talking points present if they are lost in what to say.

## User Feedback

As listed in the prototype test plan we had a couple of objectives which consisted on testing the emotional response, as well as the usability of the virtual environment. This objective was tested by presenting our prototype 111 to a group of peers, and note their reactions, as well as potential issues that may arise based on the usability of the game. Based on these tests the feedback we noted/received included:

- "Interesting storyline of hacking of the software during a routine software update, shows one of the client's main concerns well.
- "Shows well an eery depiction of a city under the control of these weapons"
- "Message was understood well, and I was able to understand the point your group is trying to portray"
- "Nice Video, but the lighting was kind of distraction, since the environment is kind of dim."
- "I like the added cars and nets that you have put in the environment, I think that is adds to the environment, and makes it look scarier."
- "The environment does not seem like a place I would like to live in, so It does show the threat of autonomous weapons well."

Based on this group of users, we are able to conclude that our message is portrayed well, and it provides a good emotional response from the users. The lightning comment may be something that we could fix within our design in order to improves accessibility to older users that may have an issue with the dim lighting. Overall, this test went well and can be considered as a pass. Improvements can still be made, and we can test another group of peers which with the improvements before design day.

## Prototype:
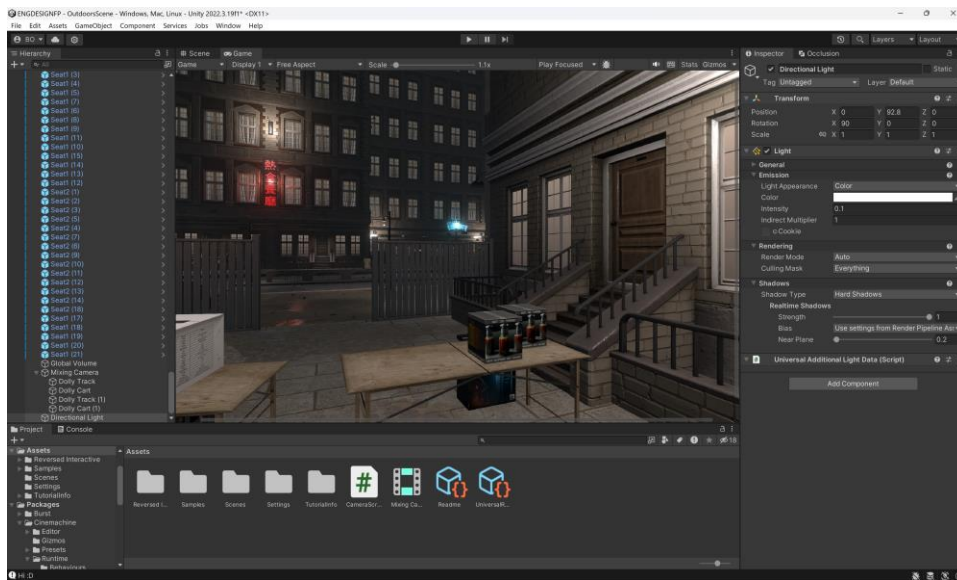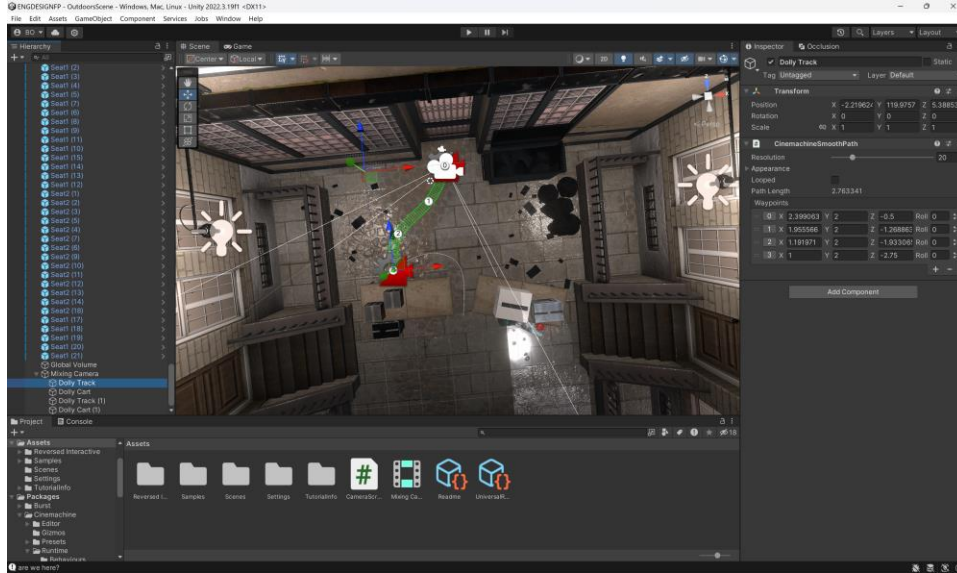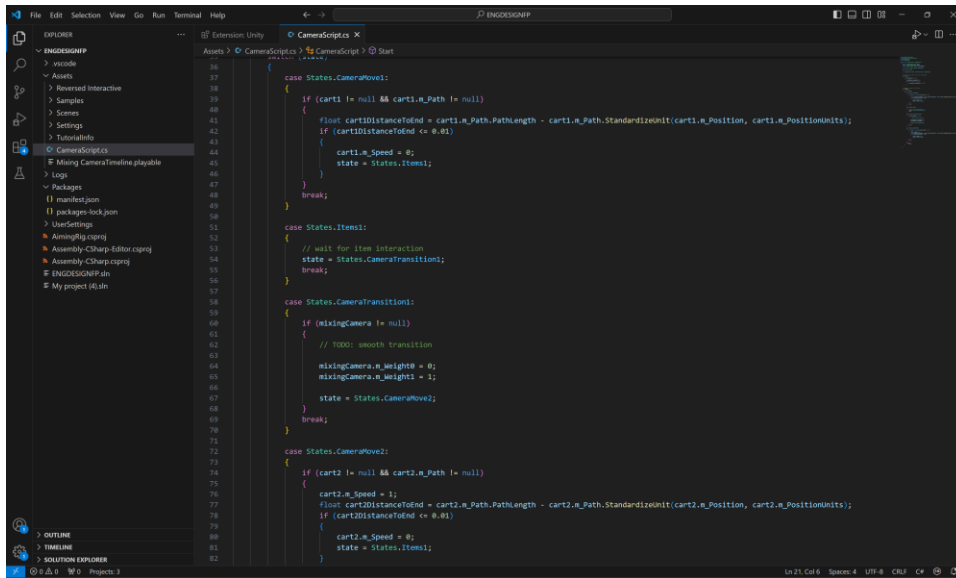
## Bill Of Materials:

| Bill of Material | | | |
|---|---|---|---|
| Material | Cost | Description | |
| Unity | 0$ | Download software | |
| VR Headset | 0$ | Provided equipment | |
| Lighting | 0$ | Free from Unity | |
| Destroyed Cars | 5$ | From Unity | |
| Neon District Environment | 30$ | From Unity | |
| Single Entity Robot | 0$ | From Unity | |
| Tarps/nets | 0$ | Made By Benjamin | |
| Rain effect | 0$ | From Unity | |
| Total cost: | 35$ + Taxes | | |

## Prototyping Test Plan:

| Test ID | Test Objective (Why) | Description of prototype used and of basic test method (what) | Description of results to be recorded and how these results will be used (how) | Estimated Test duration and planned start date (when) |
|---|---|---|---|---|
| 1. | Determine if interactions of the player are functional | Add different interactable unity assists and test whether the player is able to pick up and interact with the object. | The results will be recorded as a success of failure depending on whether the player is able to interact with the object. | Pass |
| 2 | Determine if additional environment assets are functional | Add audios/background sounds in in Unity and test whether they are functional within the environment. | Results will be recorded as a success or failure depending on whether the audio is functional. | Pass |
| 3 | Test the movability of the player (whether the character is able to move around in any direction) | Within the game mode of unity, test whether the keys associated with movement are functional. | Results will be recorded as a success or failure depending on whether the character is able to move around | Pass |

| | | | the playable area. | |
|---|---|---|---|---|
| 4 | Determine If all Unity assets are functional within the environment. | Make sure all additional assets such as, the prop cars, nets etc are compatible within the environment. | Results will be recorded as a success or failure depending on whether any defects found were found regarding the props. If the test is a failure more compatible props will be exchanged within the environment. | Pass |
| 5 | Determine if all the code are functional within the environment | Make sure all assets including props audio and player movability are functional in the gameplay function of Unity. | Results will be recorded as a success or failure depending on if all assets, and functions within Unity are functional. | Pass |
| 7 | Testing the emotional response from the client. | Present environment to a group of peers and observe emotional responses | Results will be the observation of the group of peers while in being in the | Pass |

| | | | virtual reality. Notes will be the emotions each person evoked. Test will be recorded as success if appropriate emotions were displayed by the group of peers. | |
|---|---|---|---|---|
| 8 | Reducing risk and uncertainty of the environment (user testability) | Gather a group of peers to test the functionality of the virtual environment (whether the environment is easy to use) | Results will be notes taken from the group of peers based on their feedback and observed behaviors of the group of peers. Test will be a success if the group of peers are able to easily navigate the environment. | Pass |
| 9. | Testing the functionality of the virtual environment using the Headsets | When our environment is fully completed, we will test whether it runs smoothly using the V.R headsets | Results will be recorded by each member whether their experience using the headset runs smoothly | Due Date: Before Design Day Stopping criteria: the environment runs smoothly |

| | | | | and is easy to navigate.

Tested: By all group members |
| --- | --- | --- | --- | --- |

## Conclusion:

Completion of the third prototype is where we have made the most progress in terms of completed task, bringing us closer to having our finished project for design day. Implementation of final unity assets and well as editing the overall aesthetic of our virtual environment was one of the main proprieties during this prototype. Furthermore, by testing the emotional response and the ease of use of our environment was an important task for this deliverable. By these tests we were able to determine whether we had successfully integrated the main needs of the clients into our environment. Any notes and comments from the peers we had shown the video will be implement before design day. As a last note, before design day our group plans on using the VR headsets provided to ensure that our video is prepared for design day and runs without problem.