University of Ottawa

Faculty of Engineering

GNG11003 – Engineering Design

PD H: Prototyping III and Customer Feedback

Team F3.1

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Date Submitted: March 27th 2022

Introduction

As design day is approaching, we are finalizing the last details of our prototype. From the previous prototype, we are missing start and quit button, together with a dialogue system therefore our main goal in this 3rd prototype is to accomplish them.

Client Feedback / Survey Results

Since the project plot was based on Eddie's story, one of the panellists, professor Hannan recommended to get in contact with him in order to check if the project plot had reflected his experience and how close it is for reality. During the meeting with Eddie, our team had showed the full plot of the project and played the scenes that reflect Eddie's experience. Also, our team presented the dialogue script that was added to each scene in Unity. The intention of showing the dialogue is to ensure that appropriate and accurate verbal comments were used against our character and that would reflect the actual experience of Eddie. The feedback we have received from Eddie was great. He applauded the work that was done and suggested to add couple functions to the plot. For example, He suggested to add a thought bubble that shows the inner thought of the character where he questioned the reason behind treating him inappropriately. Our team took his suggestions into consideration and worked on adding what was suggested to the plot.

Prototype Objective:

The objectives of prototype III are to adding new functional button and the dialogue system for the game. In order to do the dialogue system, our team prepare a script to present to one panelist for his opinion before implementing it inside unity. We will also try to send the game to some potential user to get feedback from them

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 and how long)	Test Observations And results
1	Are we able to pick up object? This will help us add interactivity to our experience.	A draft script and a game object. Test by interacting with object.	Object will be in game players "hand"	We will not focusing on this anymore	Instead of this way of using interactivity we will use buttons to connect with the dialogue
2	Can we select a button that will start the scene? The button is needed to switch the scene and progress the story so the user is in a different scene.	A draft script for button. Test by clicking button.	The starting button allows users to start experience the plot that is chosen for the video.	Start: Friday March 16th Test duration: 30 minutes	Yes, when a button is pressed by clicking the mouse it will switch the scene and

					continue the story
3	Can we select the button to end the application? After the experience is over, we need something to show the user it is over.	A draft script for button. Test by clicking button.	Can click quit button to exit	Start: Friday March 18th Test duration: 30 minutes	After the whole experience is over and there are no scene to play then the next click of the mouse button goes and fades to black.
4	Will the scenes be able to transition smoothly? We want to simulate a blink when switching scenes so that it does not feel choppy going from scene to scene.	Transitions from scene to scene by a draft script saying from right clicking mouse.	Scripts to make the scenes change when an action happens	Start: Friday March 11th Test duration: 30 minutes	Able to move scenes with a click of a button and in between each scene it fades to black.
5	Will selecting a poster make it zoom in? The posters in the room need to be interactable so the user can get background information about the character and who they are.	A draft script for button, and gui popping up if button is clicked. Test by clicking button.	This option allows users to interact with the posters added to the video by clicking on the posters.	Start: Friday March 18th Test duration: 30 minutes	We did not have enough time to implement this. We believe this would be a good feature to the game so in the future this could be a possibility to add this.
6	When clicking one option for dialogue trigger, will a different dialogue from another Character be shown? The dialogue will run smoothly and be easy to follow to help get our message across.	A draft script for button, and gui popping up if button is clicked. Test by clicking button.	The response of the characters will depends on the option that the user will choose for the dialogue trigger. Dialogue, the other characters will respond	Start: Friday March 18th Test duration: 30 minutes	We decided to go a different route and use audio dialogue, so the user is more immersed in the experience. Instead of having the user click to respond to dialogue we made pauses

					in the audio for the user to respond. In the future we will try to implement dialogue boxes for the characters thoughts.
7	Will tutorial boxes pop up on screen after we select game?

After the start we need a way to show the user how to control their character so that they don't need to focus on that and can focus on the story. | A draft script for text so that an explanation pops up when the user gets close to an item | The tutorial box helps users go through the steps and actions they need to take in each scene. | Start: Friday March 18th

Test duration: 30 minutes | We did not have time to implement this feature because we decided it was not the most important in the future this could be a feature added. |
| 8 | Will interacting with remote (gameobject) turn the TV on?

Will the Tv show relevant information | A draft script that allows users to pick an object (e.g TV remote). Also, a draft script that will turns on the TV immediately after the user pick up the object. | By clicking on the on/off button on the remote, the user will be able to turn on the TV. | Start: Friday March 18th

Test duration: 30 minutes | We decided to put a placeholder image for now but will look into making it a video |

Prototype III Analysis and Results:

For prototype III the team has figured out how to attach the main camera to the main character, as shown in Figure 1. This allowed the scenes to be seen from first person perspective. This was done by dragging the main camera in hierarchy into the main character asset. Then, the scripts that allowed the camera to be attached to the character and move with it was written, resulting in the scenes to be first person perspective. Also, our team was able to create a mirror reflection which was done by adding an additional camera to the scenes and size it to be as the same size as the mirrors added to the scenes (e.g Dorm room and Bathroom scenes). This will allow users to know their character by seeing its reflection, as shown in Figure 2.

Another feature that was added to the scenes was the audio. In order to create a scenario for each scene, a dialogue audio was created. This was done copy and pasting the dialogue script into text to speech. Then, edited the audio to match the scene and imported MP 3 file to Unity and attach each audio document to its specific scene.

Also, the team added some features to the living room and dorm room scenes such as walls pictures. These pictures that were added to the Dorm room are the character's pictures, Family picture, picture represent our panellists a of our panellist as shown in Figure 3. The pictures that were added to the living room scene, which will be the last scene, were the character graduation photo, the Excellence certificate, Nelson's Mandela quate and Juneteenth scene on TV, as shown in Figure 4. The reason behind adding these pictures to the living room is to show that although our character has experienced racism and felt different from others, that does not prevent him from achieving his gaols and be a successful person.

Lastly, the team is still working on adding the thought bubble that will present the inner thoughts of the main character. This will allow users to experience what the main character feel when he experience such incidents from others.

Figure 1: Attaching the main camera to the character.
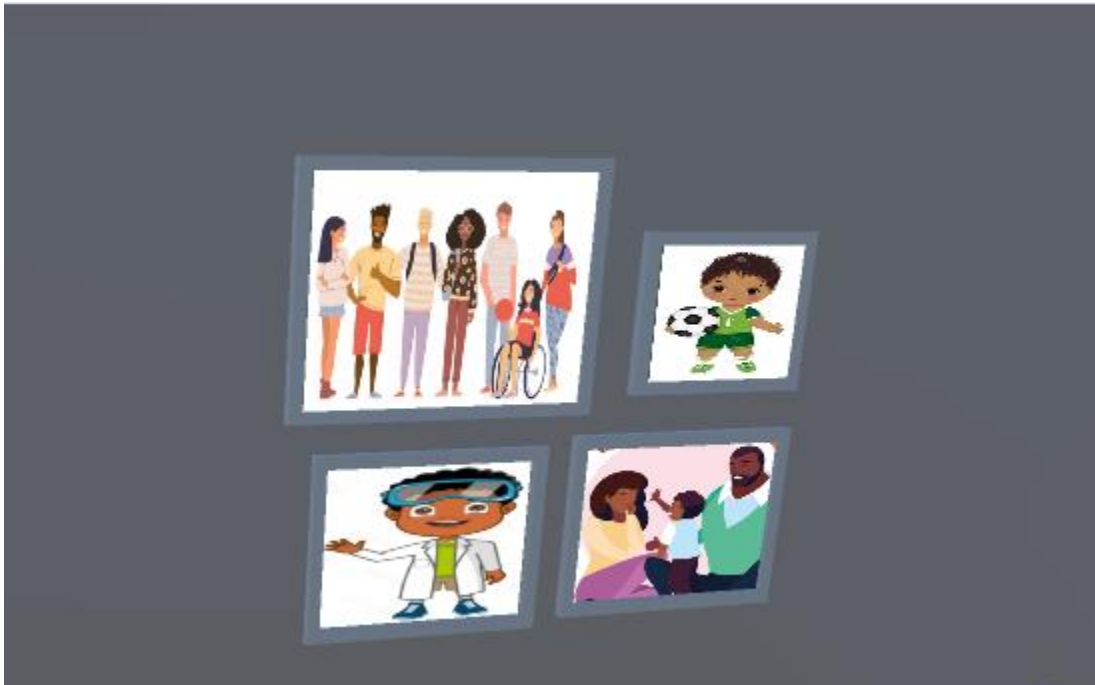
Figure 2: The mirror reflection.

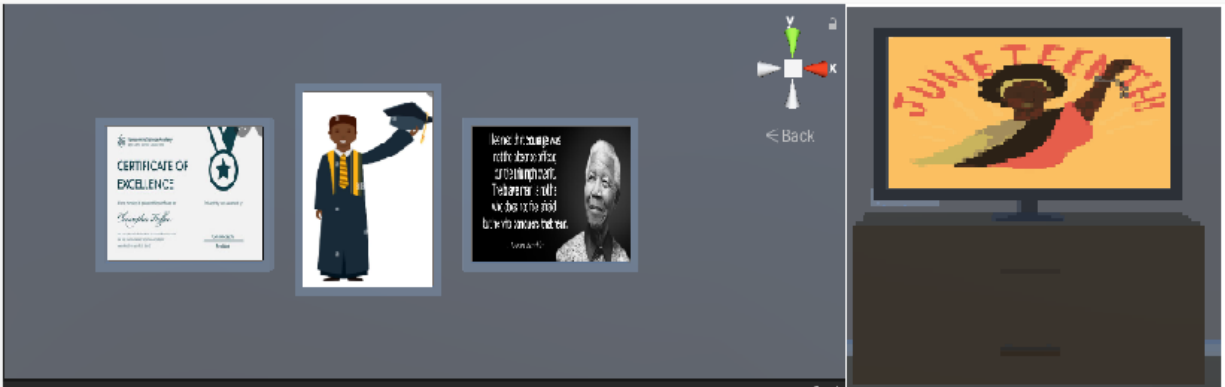Figure 3: The pictures added to the Dorm room scene

Figure 4: Pictures added to the living room scene.

Customer feedback:

We present our project to some friends and potential customers and here are some feedbacks that they gave us and only three out of ten gave custom feedbacks:

"The cage scene gives a good feeling of what the character is feeling. The ability to interact with object is a nice because it gives you the back story of the character. However, it would be nice for the main character be able to make friend with a npc and if there is a clear objective for the main character"

"It would be appreciated if we can hear the thoughts of the character as they're going through the bullying or at least some sort of reflection afterwards to sort out the emotions"

"Its great to see that there are people who are creating a teaching tool for empathy towards the unfair treatment of minority groups. The experience was overall great but this would be best if there's another instance where the character goes through something"

We also conducted a survey in a controlled group of 10 people asking them questions on how they feel about our products. The list of people asked can be found in the appendix alongside their contact information and some chose not to disclose their email.

Figure 5. Chart summarizing the responses to survey question #1

Figure 6. Chart summarizing the responses to question #2

Figure 7. Chart summarizing the responses to question #3

As for the challenges of the prototype, we are feeling the pressure of the time crunch for this project. There is a risk that we will not be able to finish in time. However, if we as a team, work smarter rather than harder, we may be able to finish this on time. By "working smarter", it means we work on it and divide our tasks up in a parallel manner (to ensure that we are not depending on the completion of other people's tasks). We are also behind schedule; however, we will make it up by working an extra day in the following week.

Conclusion:

To conclude, this third prototype is to refine some feature in our 2nd prototype and add dialogue system in our game. This is to ensure that when our user is using our experience, they are efficiently learning empathy.

Appendix B:

Table 1: Survey Participants and Contact information

Participant Name	Participant Email
Sherissa Francis	Sfran115@uottawa.ca

Noor Madhoun	Nmadh025@uottawa.ca
Jesse Levine	---email not given----
Yasin Elmi	Yelmi2@uottawa.ca
Michael Thompson	Mthomp23@uottawa.ca
Adam Orchard	Aorch0431@uottawa.ca
Graydon Berneche	----email not given---
Alyssa Rufo	----email not given---
Methelyn Carbon	-----email not given---
Hergieley Genducao	-----email not given---

The Wrike screen shot:

https://www.wrike.com/frontend/ganttchart/index.html?snapshotId=QGWgqo0OUh4An1UtKEIa0JG1eGLUG5Lj%7CIE2DSNZVHA2DELSTGIYA