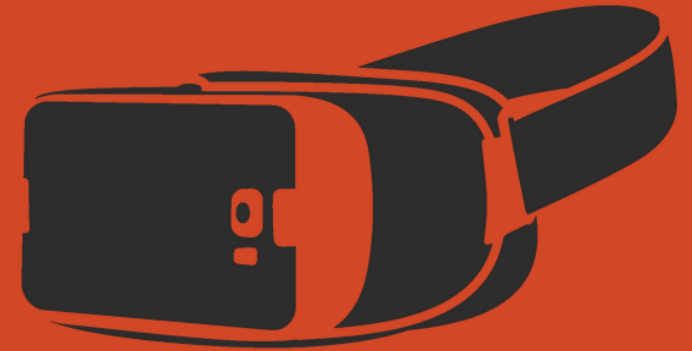


# BODY STORMING ASSIGNMENT 2

Emerging Technology INFR 4460U

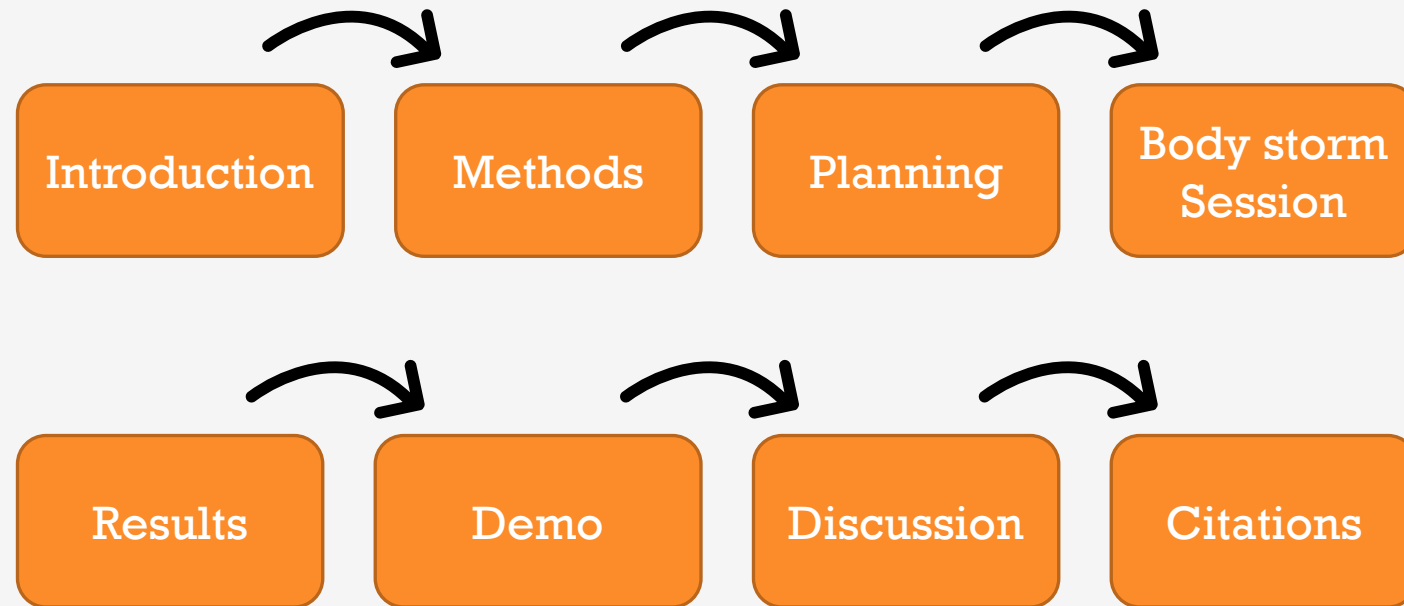


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# OUTLINE

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# INTRODUCTION

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## Project Overview:

- Creating an interactive horror game using virtual reality alongside heart rate monitors to explore the advantages and limitations of utilizing multiple immersive technologies concurrently.

## Body Storming:

- For this assignment, we planned how the gameplay would look and put it to the test. By running a body storming session with our roommates, we were able to discover problems in our plan, fine tune gameplay details, as well as alternative solutions.

# METHODS

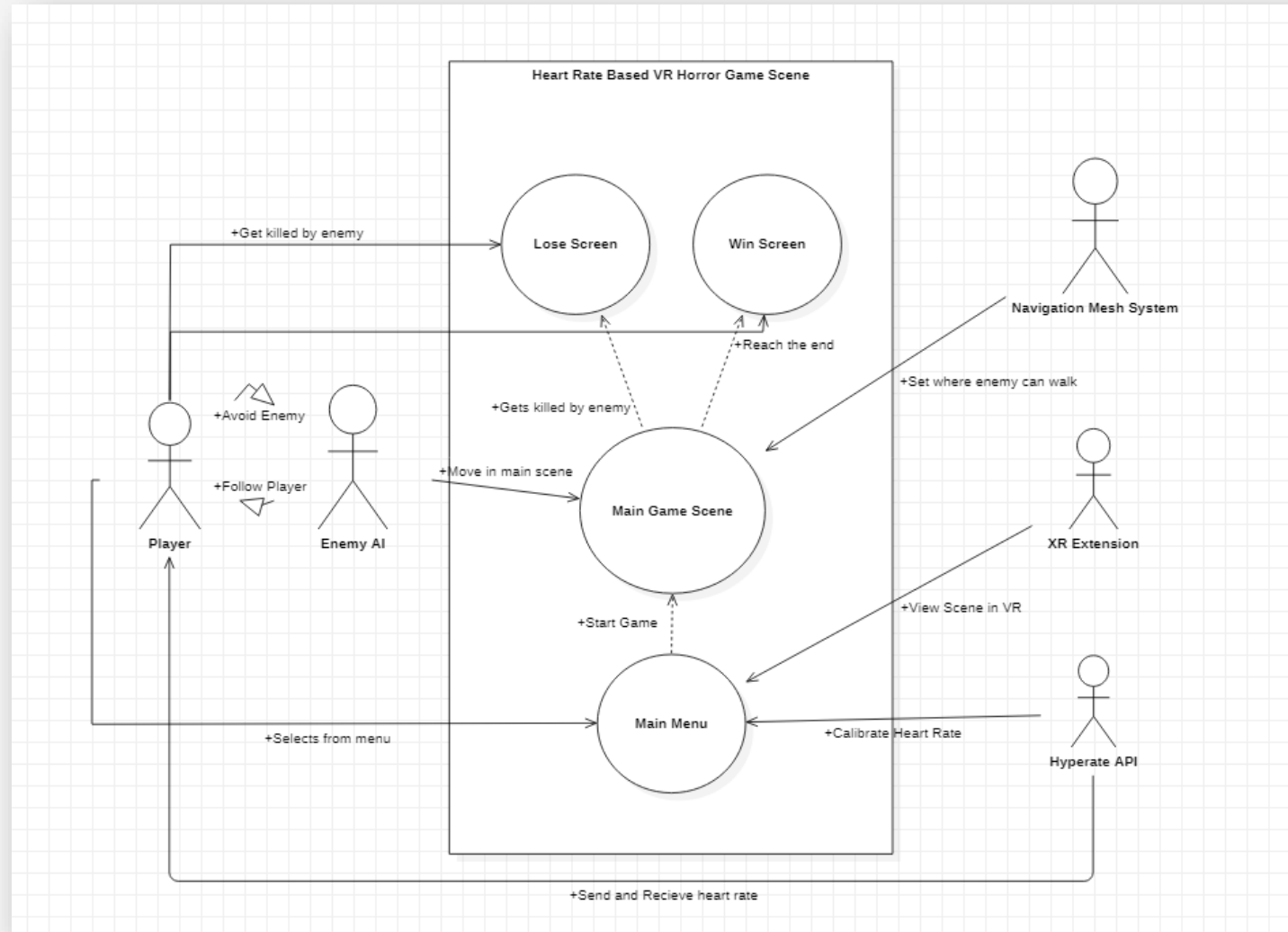
What was needed:

- For the body storming session to be effective, we needed to plan how the session would be run and give participants an idea before hand.
- We then created a Use Case demonstrating how the game would be laid out.
- Then, we created a 3D representation of the game scene, so participants knew what to expect. We achieved this by using FrameVR.io.
- We needed a Persona to iron out any missing details.



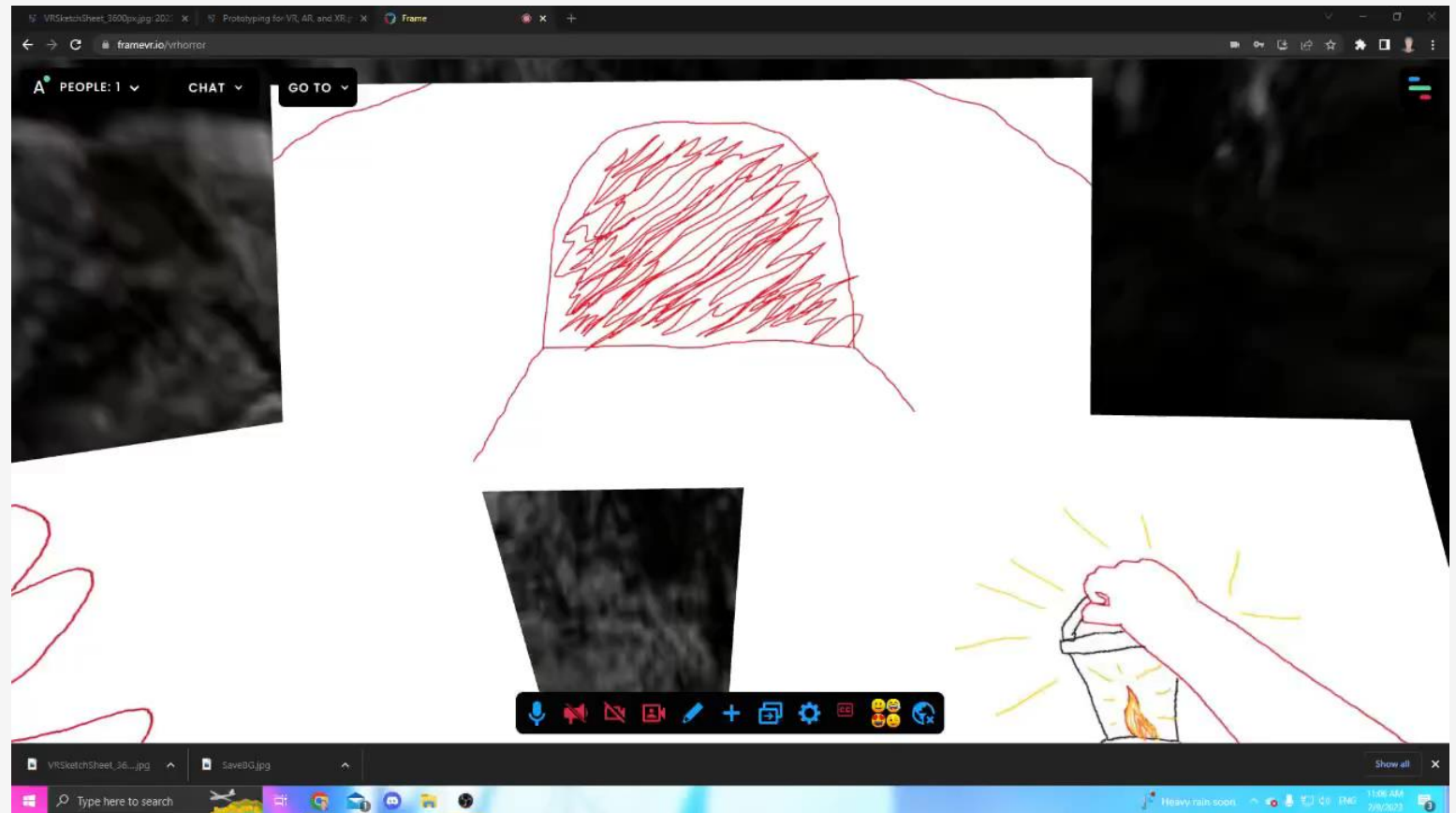
# PLANNING (USE CASE)

The use case gives us an overhead view of the bigger picture. How each element works together and what the purpose is.



# PLANNING (FRAMEVR.IO)

FrameVR.io gave us a chance to virtually prototype our scene in a 3D environment. This is helpful because participants can use it to visualize what gameplay will look like.





# PLANNING (PERSONA)

This Persona was created to get a better feel of our user type, goals, gameplay arc, controls, and events to ensure the idea was plausible.

## 3D Persona - Template



**Role:** Horror Game Enthusiast

### **User type:**

Gamer, Thrill seeker, good health condition

### **Familiarity with VR/AR:**

Entry Level - Intermediate

### **Emotional sensitivity:**

Claustrophobia, Easily scared, jump scares.

### **Emotion target:**

Scared, Excited, Feel immersed in virtual world.

### **Mood goal:**

Keep players in flow state between anxious and excited/happy. Out of comfort zone but in a safe environment

### **Presence goal:**

Active

### **User goals:**

To escape the space without dying

### **User tasks:**

Regulating your heart rate as best possible  
Get to the end as soon as possible  
Avoid the main-game enemy

### **Story arc:**

Navigate through the maze and avoid the ghost

### **Agency:**

Confined by maze and being chased by ghost

### **Diegetic events:**

Ghost gets more aggressive based on heart rate, you can check heart rate on watch on wrist

### **Sound events:**

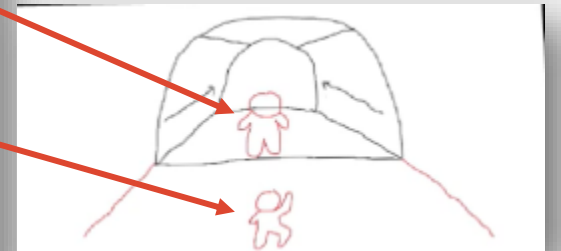
Environmental sounds, footsteps, ghost, jumpscare

### **Movement events:**

Walking/running through the cave, Look with head or right joystick.

# BODY STORMING SESSION

- Our participants would put on the headset, step out of the play boundary so that they could see the environment in black and white. They would also put on the apple watch so we could read their heart rate.
- After this, Ethan would mimic the game enemy by following the player as they navigated around the house.
- Andrew would then tell Ethan if the heart rate increased or decreased and would walk slower or faster accordingly.
- Daye took notes on the session to determine flaws or successes in the plan.

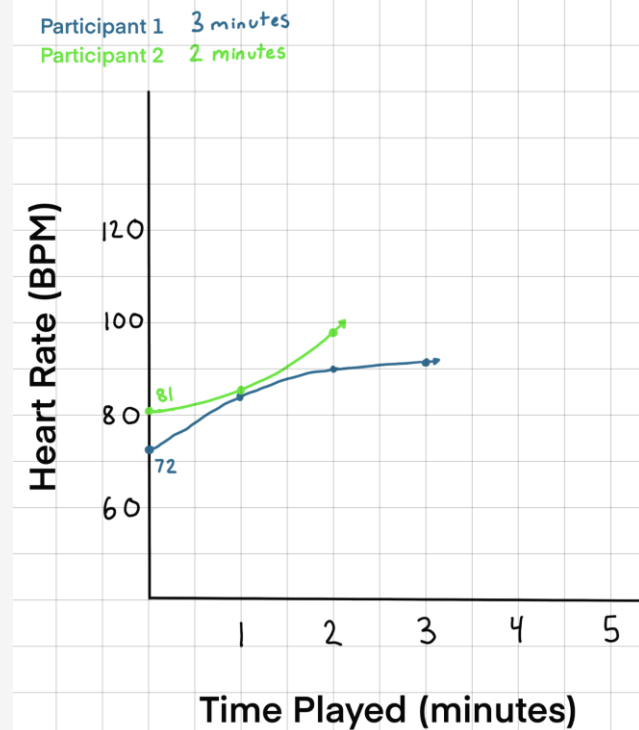




# RESULTS

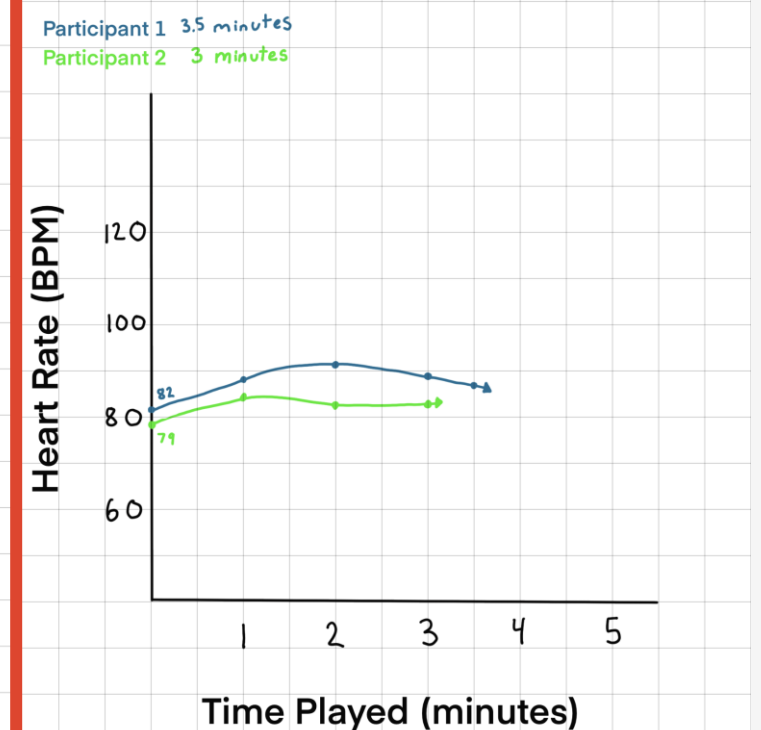
- We discovered that after the first attempt, the players heart rate did not increase as much as it had previously.
- We suspect that this is due to the “fear of the unknown” element.
- However, both of our participants did think that the idea had merit, and this was proven by an increased heart rate in both participants in the first attempts.
- We were glad that the results were similar between both participants because it shows us the correlation between how long the fear lasts in this horror game body storm session.

Round 1



Tons of variation

Round 2



Very little variation

# DEMO

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# FINAL DISCUSSION

## Progression

Free World Studios: VR & Heart Rate Monitors				
<input type="checkbox"/>	Item		Person	Status
<input type="checkbox"/>	Subitem		Owner	Status
<input type="checkbox"/>	Brain Storm	+	👤	Done
<input type="checkbox"/>	Design Thinking	+	👤	Done
<input type="checkbox"/>	Research	+	👤	Done
<input type="checkbox"/>	Report	+	👤	Done
<input type="checkbox"/>	+ Add Subitem			
<input type="checkbox"/>	Assignment 2: Body Storm	5	+	👤
<input type="checkbox"/>	Subitem		Owner	Status
<input type="checkbox"/>	Design Body Storming M...	+	👤	Done
<input type="checkbox"/>	Use Case	+	👤	Done
<input type="checkbox"/>	Run Session	+	👤	Done
<input type="checkbox"/>	Report	+	👤	Done
<input type="checkbox"/>	Powerpoint/ Video	+	👤	Working on it
<input type="checkbox"/>	+ Add Subitem			

- After planning and running this body storming session, we realized how beneficial it actually it. We were able to discover conclusive results with nothing more than the headset, apple watch, and participants. There was no need to have an actual game to gain feedback which probably saved us a lot of time developing the full game and then testing it and realizing flaws.
- We will take this into account and try to add random elements into our game to keep the fear of the unknown present at all times.
- One way we thought to do this was by adding a flickering effect to the lantern where it will turn off for a few seconds randomly which will instill fear at random moments in the game which adds one more element that players need to keep In mind.

# CITATIONS

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- de Lima, E. S., Silva, B. M., & Galam, G. T. (2022). Adaptive virtual reality horror games based on Machine learning and player modeling. *Entertainment Computing*, 43, 100515, from <https://www.sciencedirect.com/science/article/pii/S1875952122000398>
- Furr, N., & Harmon Furr, S. (2022). How to overcome your fear of the unknown. *Harvard Business Review*. from <https://cdn.fedweb.org/fed-115/2/How%2520to%2520Overcome%2520Your%2520Fear%2520of%2520the%2520Unknown.pdf>