

# Project Demo Report

Project Group: *Escape the Wizard's Hut* - VR Puzzle Experience

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## ***1) Discuss your observations of users' behavior and thoughts about your system***

We created an escape room that had a wizard theme to it. We included several different "wizard elements" such as different potions and wands that are required for escaping. In order to escape, the user had to find the ingredients for the potions by interacting with the area provided and finding wands by using the potions. The main focus of our project was the atmosphere. All of the objects were a similar style to preserve the idea of actually being in the wizard hut. Also, a vast number of the items in the world could be interacted with. This allowed for a strong sense of presence for the player. To create this, we ensured that most of the objects in the hut that appeared to be grabbable, were grabbable, and ensuring that the animals in the scene could move on their own. On top of the animals walking and running on their own, several of the animals could be interacted with. All of this was created with the mindset of creating a strong sense of presence for any user.

We had eleven people who tried our project complete a survey at the end to gain a sense of how users felt. Several people did not complete the survey but gave us feedback right after they completed the simulation. On the survey, we included several different categories for the user to consider: overall experience, movement, puzzle satisfaction, visuals, immersion, and sound. All of the categories were rated one-ten with one being the worst and ten being the best. Every single category had an average of above nine. Out of the different categories, controls and puzzle satisfaction scored the lowest with 9.2/10. Immersion scored the highest with 9.7/10.

We were also given written feedback through the survey. Many people commented on the immersion of the game, saying things such as, "I like the design and aesthetic of the game. It was very engaging", and that they liked the "unique environment and visual elements". Several people also commented on the little things that we added to make the game more immersive and enjoyable, such as the functioning chess board and the crossbow to shoot the animals. The main improvement feedback that we received was to fix the bugs in the simulation. For several players, the potions, mainly the shrink potion, would seemingly randomly glitch through the world, also causing the player to be unable to grab anything. This required a full restart of the game every time it occurred. Users also mentioned that the time of effect for the grow and shrink potions felt long.

## ***2) Integrate your observations with the course material***

Several of the topics that we covered through this course were prevalent in this project. Some of these include presence and interactions.

Presence was the main piece of course material that we focused on in this project. Even though some aspects of the simulation are not possible in reality, we wanted these actions

to feel real in the simulation. For instance, we wanted to make sure that the effects of the potions felt real to the user. To accomplish this, we made sure that the player character took about a second to grow instead of growing instantly. This feeling of self-presence was also heightened by having parts of the simulation where the user needed to crouch in real-life in order to see an object they needed or to get past an obstacle.

Interactions were also important throughout the simulation. A good example of this was the telekinesis wand in the escape room simulation. This wand cast a ray cast from the tip of the wand into the scene (which was colored pink so the user could see what they were pointing at), which allowed the user to grab certain objects that they couldn't normally get to.

### ***3) Discuss lessons learned about VR and changes you would make to your project***

The main issue that we encountered with our project was the issue with the potions occasionally breaking the game, forcing a restart of the game. While we are not fully confident on where this issue is coming from, the first thing we would change would be fixing this bug, as it is the main issue in the game.

As for general improvements, we would most likely add to the different random elements in the game. Most of the users tried things that were because of the VR environment. For instance, several users tried to light the books and animals on fire with the fireball wand. Also, several people attempted to kill the animals with the swords included in the hut. Adding more special little features like this would increase the presence of the simulations as certain actions would become more realistic.