**Script for VR Escape Room Presentation:**

**Inspiration:**

Escape Rooms in the past decade have become a trend, going from just 22 locations in America in 2014 to over 2,000 by 2021 and 1,500 in the UK. Since we a share a common enjoyment of solving logical puzzles, we thought why not make an escape room in VR, with plenty of puzzles to test the mental capabilities of the players. Along with the rise in popularity of VR and AR, which the global market has increased more than seven-fold between 2018 to 2022 (from $27 billion to $209 billion), combining 2 popular activities should be ideal for an enjoyable experience.

<https://escaperoomreno.net/escape-room-popularity/>

<https://techjury.net/blog/virtual-reality-statistics/>

**Game Mechanics:**

The left joystick controls movement while the right joystick controls turning for our alien. Alternatively, turning your head also controls turning. The A button, which is located on the right controller, can be used to interact with the surrounding environment, including using it to solve puzzles to advance through the game.

What we wanted to implement but didn’t get the time to include the B button, which is also located on the right controller, that allows you to open your inventory and access items stored in it. Holding down both side triggers will let you crouch and crawl through low spaces. Many puzzles had to be cut as well, like moving colored blocks to their respective sensors and using levers or keypads to unlock doors.

**Development Process:**

Before even starting our project, we had to learn how to use Unity, including a bit of scripting in the programming language C#. After having a basic understanding of how to use Unity, we had to find some assets online that would fit well into our escape room game. Initially, we planned for the theme to be helping a princess escape a witch’s tower, but after designing the princess model, we concluded it looks more like an alien, so the theme became an alien trying to escape a facility. We soon found an ominous looking laboratory for our alien to escape. Then came implementing the controls and character interactions with the environment. Only then could the puzzles be developed. Along the way of development, many hours of watching YouTube tutorials and searching up errors on the web had to be endured, and eventually we were able to output a working prototype of our escape room.

**Pitfalls and Difficulties:**

Many pitfalls were encountered along the road:

* Lack of programming experience for most of us had little to no experience in programming, and for those who did have experience with programming, had no experience scripting with C# in unity.
* Limited time as basically only a bit over 2 weeks of time was given to learn unity and then build a VR game from scratch.
* Personal affairs - many of us had our own situations outside of the classroom, whether it was scheduled or not, it took out time to work on the game, and when all members of the group are not present to work and discuss, progress is slowed.
* Communication - all group members not being present to work together means communication was less than ideal, for texting is not very efficient. Plus, some of us are not the best at English (like me, I speak American).

The consequences from all of the above was essentially the same:  
Scaling down the final project - Many ambitious plans were scrapped, from gameplay mechanics, to plot points, and game duration. This is not uncommon for many game developers in the industry, more often than not, developers are unable to meet initial deadlines so that they either push back the deadline for a more polished game or have to rush the development process just to be within the set time frame.

**Future Plans:**

Of course, before making any new plans, we should first design and implement anything that did not make it into our current project that was previously planned. After that though, we can probably expand the map and add more rooms with crazier puzzles. We can implement a gun and using it to shoot at targets (or even security personnel), mixing different fluids to create a solution. Jumping as a mechanic can be implemented for any puzzle that involves parkour. Climbing can be implemented to go up ladders or scale certain walls. In short, many ambitions short circuited by technical difficulties.