

# Liminal



## Stress, heal, reinforcement

### Abstract

Liminal is an escape room game where the player answers a series of questions in a long corridor to find a password to leave the small room into a more spacious and peaceful environment. The idea of the game is to feel a more escapist feeling in a rough tight space that the player may be going through as well as finding a sense of peace in the soul back when you are facing mental health.

### Intro

According to the National Alliance on Mental Illness, over 40 million adults in the US have an anxiety disorder. Studies also show that up to 35% of the population experiences a panic attack at some point in their life. In recent years, mental health awareness has increased tremendously with advocacy for therapists, physical exercise, meditation, and numerous other methods to combat anxiety. Many studies, including Scult et al, found that problem solving through puzzles, riddles, brainteasers, etc can actually help alleviate anxious feelings. Because anxiety often disorients the brain and disturbs one's thoughts, puzzles can create a sense of peace and order through clearing your brain by focusing on a single task.

Studies, like Casemiro et al, also show that any form of cognitive stimulation is proven to form stronger neural connections and help prevent anxiety, depression, panic attacks, etc. This includes memory recall, using logic, creativity, imagination, etc. Positive reinforcement has also been found to alleviate anxiety. By providing a desirable response to a certain behavior, a person is more likely to engage in said behavior. When an individual is rewarded, i.e. through praise, attention, compliment, a treat, for a certain exercise that is used to treat anxiety, they are more likely to repeat that exercise.

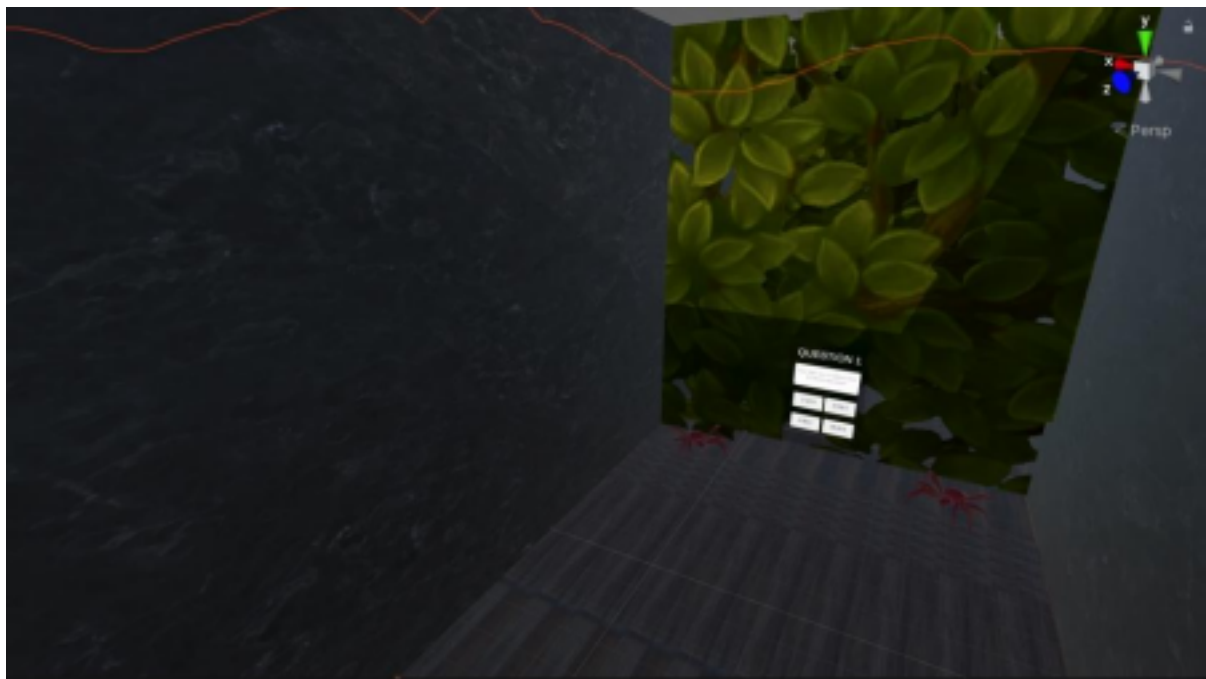
Liminal combines these findings into a virtual reality game where a player is immersed into a stressful escape room environment where they can walk through these methods to alleviate their stressful state and “escape” the escape room.

### Concept Art

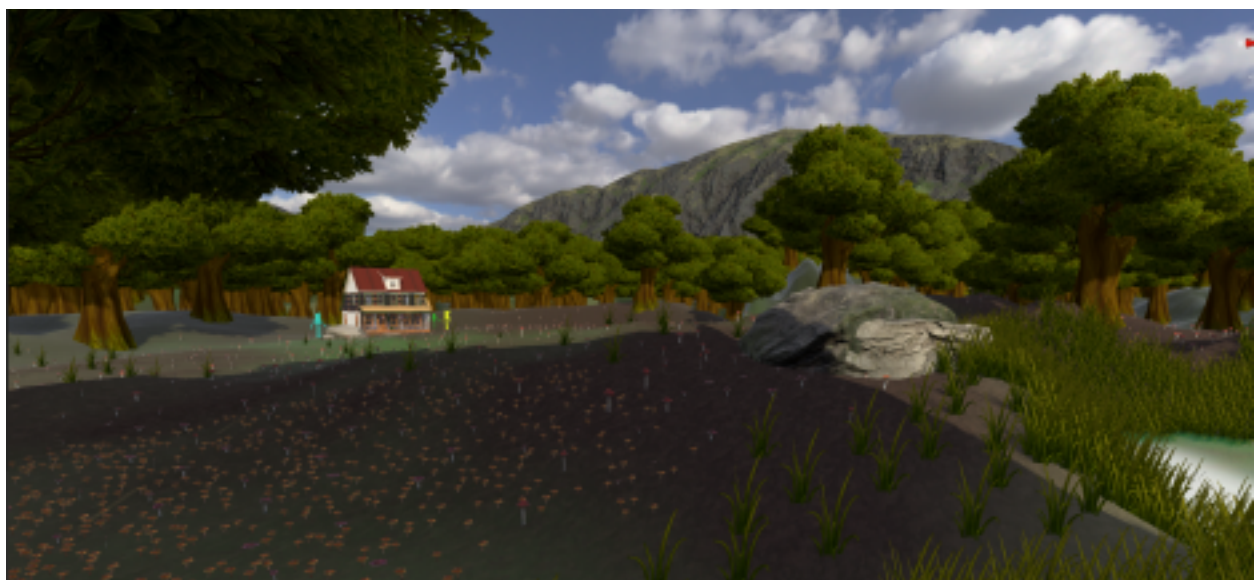
Liminal is an escape room game that has positive reinforcement, and the idea of reaching escapism in a small congested space where it may feel impossible to reach a goal. Many have felt that they feel trapped in small spaces and that the end goal of a stress-free place seems out of reach in their life. What can be done is to jump through a few obstacles and eventually you’ll get there. However, once those obstacles are dealt with, the world around you expands, and you feel much more at ease when you reach what you once thought was an unreachable goal.



**Stress:** refers to instability in a limited space and time limit to escape the room, but also refers to a tough state of mind.



**Heal:** is the purpose of the game is helping people overcome psychological trauma to come to nature.



**Reinforcement:** is provided in the game when the player answers the correct question right away, so they feel more encouraged to complete the end goal.

### **Synopsis**

The player starts in a small room with a small window to show the player's end goal. Also, the player hears the voice as instructions explaining how they can escape the tight space and leave to a better environment.

"You are in the dark - sad and tired. But then you decide to go for a walk. You open your door, and in front of you, a beautiful forest: trees, flowers, a river, and up high in the sky, a couple of mallards are flying. You want to step out into the forest, but first, you need to answer some questions."

Each time the player gets the question correct, a positive sound will ring and the player will be able to move on to the next question. If the player gets the question wrong, the environment of the room will change into a negative space and to move onward they have to answer the question correctly.

### **Collaboration between students of Kinetic Imaging, and Computer Science Department (VCU- Spring 2022)**

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### **Citations**

Casemiro, F. (n.d.). *Impact of cognitive stimulation on depression, anxiety, cognition and ...* Research Gate. Retrieved May 9, 2022, from [https://www.researchgate.net/publication/308133174\\_Impact\\_of\\_cognitive\\_stimulation\\_on\\_depression\\_anxiety\\_cognition\\_and\\_functional\\_capacity\\_among\\_adults\\_and\\_elderly\\_participants\\_of\\_an\\_open\\_university\\_for\\_senior\\_citizens/fulltext/57db695408ae72d72ea38490/Impact-of-cognitive-stimulation-on-depression-anxiety-cognition-and-functional-capacity-among-adults-and-elderly-participants-of-an-open-university-for-senior-citizens.pdf](https://www.researchgate.net/publication/308133174_Impact_of_cognitive_stimulation_on_depression_anxiety_cognition_and_functional_capacity_among_adults_and_elderly_participants_of_an_open_university_for_senior_citizens/fulltext/57db695408ae72d72ea38490/Impact-of-cognitive-stimulation-on-depression-anxiety-cognition-and-functional-capacity-among-adults-and-elderly-participants-of-an-open-university-for-senior-citizens.pdf)

*Facts & Statistics: Anxiety and Depression Association of America, ADAA . Facts & Statistics | Anxiety and Depression Association of America, ADAA. (n.d.). Retrieved May 8, 2022, from <https://adaa.org/understanding-anxiety/facts-statistics#:~:text=Did%20You%20Know%3F,of%20those%20suffering%20receive%20treatment>.*

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