<u>Final Major Project Reflective Report</u>

Submitted by:

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Content

Introduction

According to my Final Major Project game "Nightmare Doctor" is a first-person psychological horror game developed and produced using Unreal Engine 5. The game design is inspired by several games such as ENDLOOP, The Bridge Curse 2, Portal, and Pools.

ENDLOOP and Pools are Walking Simulation psychological horror games that utilize thematically appropriate scenery and sound effects to make the game feel more immersive. The Bridge Curse 2, a horror game from a Taiwanese developer, is worth exploring for me because of its smooth and evocative plot. Then there's Portal a gameplay mechanic of traveling from one portal to another, which I took advantage of and added to my game project.

My main purpose for just making this game was to enhance my professional portfolio by showcasing a variety of skills including game design, blueprint scripting, storytelling, and project management. Additionally, the purpose of this project is also a direct route for me to look for job opportunities in the games industry related to the type of games I make, specifically positions that match my expertise in game development and design.

The aim of Nightmare Doctor is not just to make another horror game, but to explore the psychological and emotional responses of the player in the face of subconscious fears and challenges. By integrating detailed dream horror elements, advanced AI behaviors and an engaging narrative, the game aims to provide players with an immersive and emotional experience. The project also aims to reflect current trends in the gaming industry where psychological horror and emotional interactions are becoming increasingly popular themes.

For a more immersive introduction to Nightmare Doctor, you can watch the official game trailer here: https://youtu.be/HfAT3kIsuCE

This trailer provides a glimpse into the game's atmosphere, gameplay mechanics, and the overall psychological horror experience it offers.

Besides the game trailer, here is the full gameplay showcase you can watch: https://youtu.be/-E-YT4TIHXI

Application of Academic Theories in Development

Uncanny Valley and AI Behavior Models

During the development of Nightmare Doctor, I drew heavily on academic theories surrounding the uncanny valley effect and AI behavior, as discussed in the literature 'What Design Choices are Effective in Inducing Fear and Tension in First-Person PC Horror Games?' discussed in. The research highlights the importance of enemy AI and movement patterns in creating feelings of tension and fear. I applied these theories by designing enemies that exhibited an uncanny valley appearance and combining them with wrap-around behaviors to evoke feelings of fear and discomfort in the player.
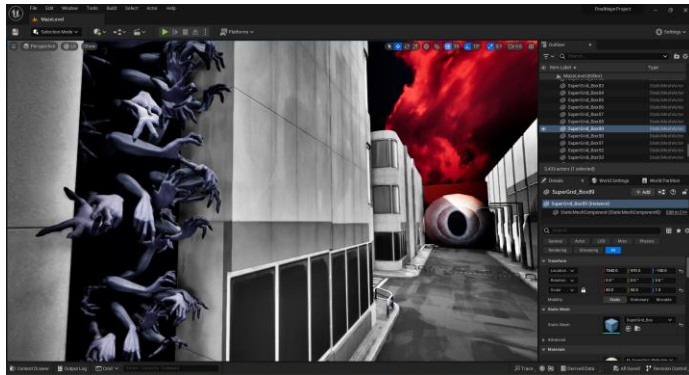
(Screenshot from Unreal Editor)

The AI logic in Doctor Nightmare focuses on two main behaviors: chasing and outflanking, which are essential elements of horror games. This approach is inspired by classic games such as Pac-Man, which create tension through simple but effective AI mechanics. By implementing these AI behaviors, the game creates an environment where the player constantly feels chased and threatened, thus enhancing the sense of psychological terror.


(Screenshot from Unreal Editor)

In this level I had the AI use the Weeping Angle mechanic, where the player's line of sight can't be taken away from them, and once it is they walk towards the player. This allows for a more interactive gameplay and also creates a sense of psychological terror.

Visual and Audio Orchestration

Another key area of development was the coordination of visual and auditory elements to evoke tension and fear. This idea was influenced by the book The Effects of Vision and Sound on Physical Arousal and Tension in Horror Games, which emphasizes the importance of sound in creating tension. In Nightmare Doctor, sound design plays a crucial role in making the player feel uneasy. Ambient sounds, sudden noises and eerie music are used to create a constant sense of unease, even when there is no immediate visual threat.

Visually, the game employs dark, dreamlike environments that distort reality and further intensify the psychological horror. The use of AI-generated visual assets helps to achieve a coherent and disturbing aesthetic that complements the audio design and fully immerses the player in the nightmarish world.
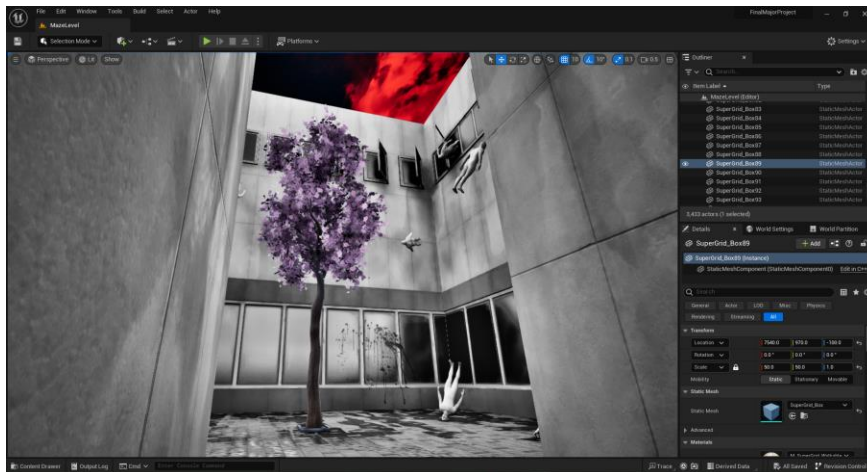
(Screenshot from UE)

**Emotion and Player Interaction**

The emotional impact of the game was another focus of the development process. I drew on research about the role of emotion in the horror experience when designing Nightmare Doctor to engage the player on a psychological level. The game's narrative and decision-making mechanics are designed to evoke fear, anxiety and introspection in the player. By forcing the player to face their fears and make difficult choices, the game stimulates a strong emotional response, creating a deeply immersive experience that goes beyond traditional gameplay.

AI Technology in Game Development

Artificial Intelligence technology played an important role in the development of Nightmare Doctor, especially in the audio, music and visual design of the game. By using AI tools, I was able to streamline the creative process and achieve high-quality effects that enhance the overall atmosphere and immersion of the game.

AI in Audio Design

Usually it's downloaded from copyright free audio sites such as Pixabay, Freesound, ncs, etc. So for this game I used Suno AI to complete my music in the game.
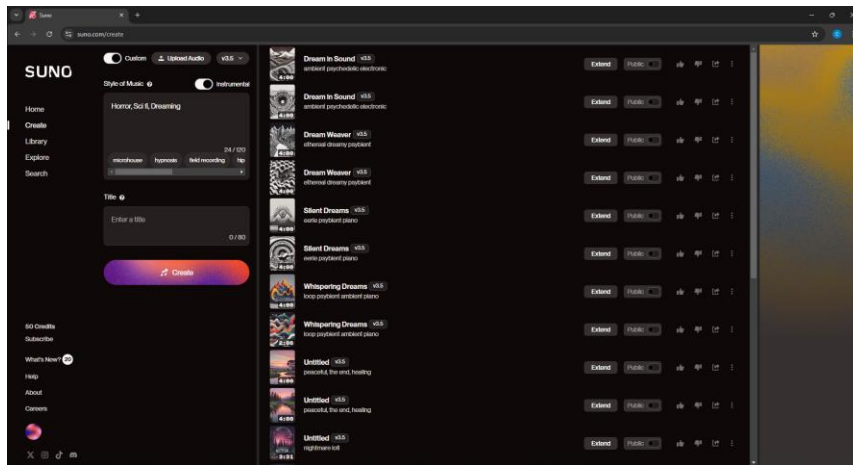
(Screenshot of Suno AI)

In Suno AI I can type in the style I want, the direction, the melody these keywords and so on and it will produce it!

So in terms of audio design, AI is used to generate various sound effects and background music. The AI-assisted sound design allows for the production of eerie, tension-building sound effects that complement the game's psychological horror theme. These AI-generated sounds were then fine-tuned and integrated into the game to ensure that they were consistent with the visual and narrative elements to create a coherent and disturbing atmosphere.

AI in Visual Design

Artificial Intelligence also played a crucial role in the visual design of Nightmare Doctor. I utilized AI tools to assist in generating textures, environments and other visual assets. This approach not only saved time, but also created unique and detailed environments that contributed to the game's surreal and dreamlike aesthetic. Using AI in the visual design allowed me to experiment with different styles and effects, which ultimately enhanced the overall visual impact of the game.

For the visual design I used Photoshop, Lexica, Dall-E as AI tools to create the graphic design and UIUX to be added to the game.
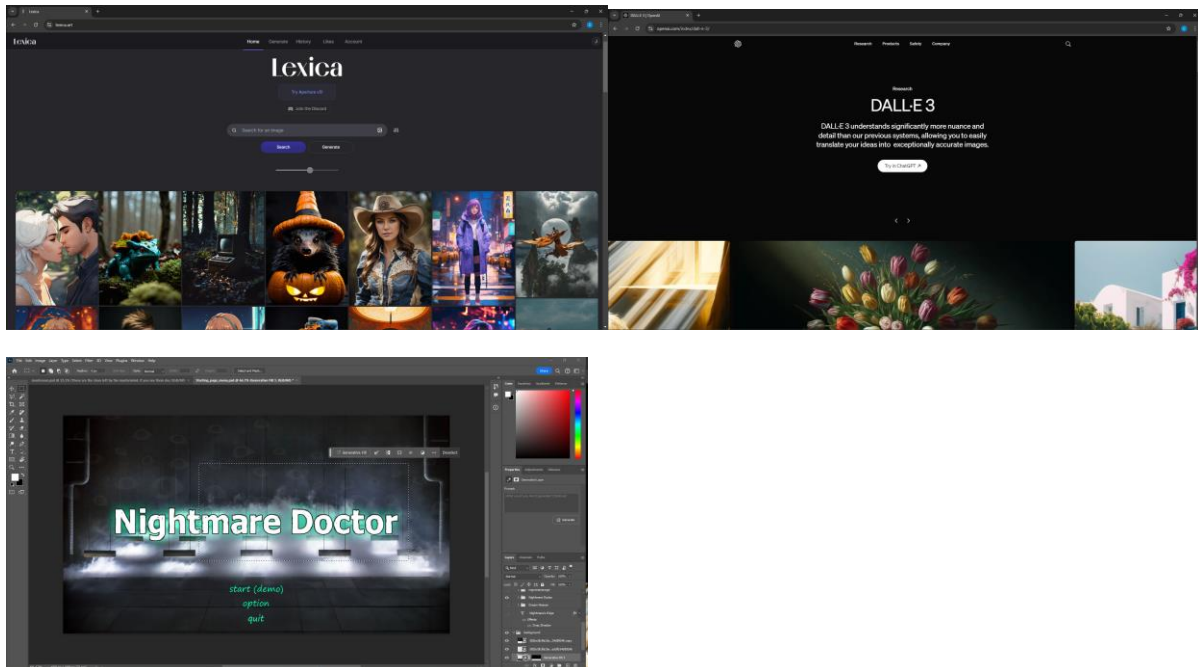

Incorporating AI technology into the development process had a significant impact on the overall efficiency and creativity of the project. By automating certain aspects of the design, I was able to focus more on refining game mechanics and narrative elements. The use of AI also gave me more flexibility to experiment with different ideas and concepts, resulting in a more polished and immersive final product.

Professional Practice and Industry Relevance

This project not only allowed me to showcase my technical and creative skills, but also enabled me to better adapt to industry trends and needs. The use of cutting edge technology such as Artificial Intelligence demonstrated my ability to keep up with industry developments, which is vital in a fast moving field such as game development.

Portfolio Enhancement and Skill Demonstration

Producing Nightmare Doctor has greatly enhanced my portfolio, highlighting my expertise in game design, blueprint scripting, art, storytelling and project management. By showcasing a well-rounded skill set, I am in a better position to apply for roles in the games industry, particularly in areas such as psychological horror, narrative-driven games and AI-enhanced design.
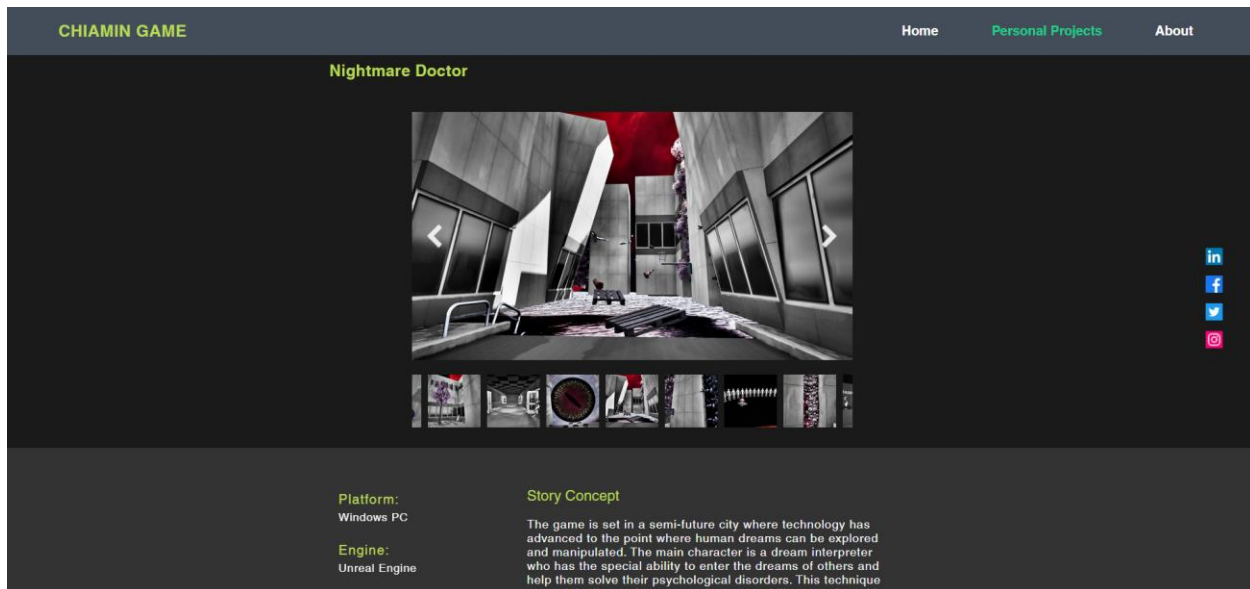
This game I have put into my portfolio https://cchiamin0719.wixsite.com/games/nightmare-doctor, This can be a good presentation to employers in companies as you can see what the work is about straight away, which will give you more of an advantage when interviewing for jobs.

There is a growing interest in psychological horror and emotional experiences in the games industry. Nightmare Doctor follows this trend by offering a game that is not only

entertaining but also explores deeper psychological themes. This alignment with industry trends makes the project relevant to companies looking for innovative and emotionally impactful games.

Throughout the development process, I actively interacted with the industry by attending playtesting events and discussions with professionals. These interactions provided valuable feedback that helped refine the game's mechanics and narrative. Additionally, I applied for positions at a number of companies that specialize in horror games and AI-driven experiences, using Nightmare Doctor as an important portfolio to showcase my abilities.

For example, I applied to Supermassive Games, Red Barrels, Bloober Team & Angry Demon Studio for the position of Game Designer. Although none of them had the position open or they were all open to Senior level positions, I took the leap of faith and applied and enquired. Unfortunately they are currently rejecting my application or still waiting to hear back from other companies.

I also had the opportunity to get involved with some gaming companies rather than keep blindly applying for jobs with my CV. It's from Rogue Sun's new upcoming VR game 'Leeroy'. Here I worked as a game tester, testing every level and content in the game and then giving them feedback on any bugs found or improvements needed. It was a great opportunity for me to get involved in the games industry and I learnt a lot during the process, this experience will help me in my future career opportunities and help me to improve my skills.

Player Feedback and Iteration

Nightmare Doctor

Based on your impressions after playing the game, write down your views on the following issues. Your feedback is of great help to me, thank you!

c.chiamin0719@gmail.com Switch account

Not shared

Have you played horror games before?

○ Yes
○ No
○ Maybe

General Experience

How would you rate your overall experience with *Nightmare Doctor*?

| | 1 | 2 | 3 | 4 | 5 | |
Poor ○ ○ ○ ○ ○ Excellent

What aspect of the game did you find the most immersive or captivating?

Your answer

Was there any part of the game that made you feel particularly scared or anxious?

○ Yes
○ No
○ Other:

Psychological Impact

Did the game succeed in creating a sense of fear or tension?

| 1 | 2 | 3 | 4 | 5 |
Not Well ○ ○ ○ ○ ○ Extremely Well

Which elements of the game (e.g., story, visuals, sound) contributed most to the psychological horror?

Your answer

Were there any moments that you felt were too intense or overwhelming?

○ Yes
○ No
○ Other:

Gameplay Mechanics

How would you rate the gameplay mechanics in terms of enhancing the horror experience? (e.g., controls, puzzles, interactions)

| 1 | 2 | 3 | 4 | 5 |
Poor ○ ○ ○ ○ ○ Excellent

Did you encounter any issues or bugs during gameplay? If so, please describe them.

Your answer

Were the controls intuitive and easy to use, or did they contribute to the feeling of tension or unease?

☐ Intuitive and Easy
☐ Contributed to Tension
☐ Difficult/Frustrating
☐ Other:

Did the difficulty of the game affect your immersion in the psychological horror?

| 1 | 2 | 3 | 4 | 5 |
Too Hard ○ ○ ○ ○ ○ Too Easy

How effective was the sound and music in building tension and fear?

| 1 | 2 | 3 | 4 | 5 |
Not Effective ○ ○ ○ ○ ○ Extremely Effective

Did you experience any performance issues (e.g., lag, frame drops) that impacted your immersion? Yes/NO
*If yes, please describe

Your answer

Is the game UI clear and easy to understand?

○ Yes
○ No
○ Other:

Suggestions & Final Thoughts

Do you have any additional comments or feedback?

Your answer

How balanced did you feel the progression of fear and tension was throughout the game?

| 1 | 2 | 3 | 4 | 5 |
Not Balanced ○ ○ ○ ○ ○ Very Balanced

Story & Immersion

How engaging did you find the story

| 1 | 2 | 3 | 4 | 5 |
Not Engaging ○ ○ ○ ○ ○ Very Engaging

How effective were the game's atmosphere (graphics, sound, design) in enhancing your sense of fear and unease?

| 1 | 2 | 3 | 4 | 5 |
Not Effective ○ ○ ○ ○ ○ Extremely Effective

Graphics & Audio

How would you rate the visual design in conveying a psychological horror atmosphere?

| 1 | 2 | 3 | 4 | 5 |
Poor ○ ○ ○ ○ ○ Excellent

(Screenshots of Google form feedback)

In order to better understand the player experience of Nightmare Doctor, I designed a detailed Google Form feedback questionnaire https://forms.gle/dWr1AirJJ6hp6uiu8 . The purpose of this questionnaire was to gather actual feedback from players about the strengths and weaknesses of the game, as well as their emotional responses. Through this questionnaire, I was able to assess whether the game achieved the desired psychological horror effect and find areas for improvement from the player's perspective.

The feedback collected showed that players generally agreed that Nightmare Doctor excelled in psychological horror, especially the AI behavior and audio design which had a clear impact on the creation of the horror atmosphere. Most players mentioned that the game's chase scenes and sound effects made them feel extremely tense and enhanced immersion. However, some players also noted that the jumping platform levels were challenging with high difficulty levels that required multiple repetitions to become more proficient at jumping. A majority of players also felt that the game's plot was not as well controlled as it could have been, and overall it was fine. Based on this feedback, I optimized certain elements of the game to improve the overall player experience.
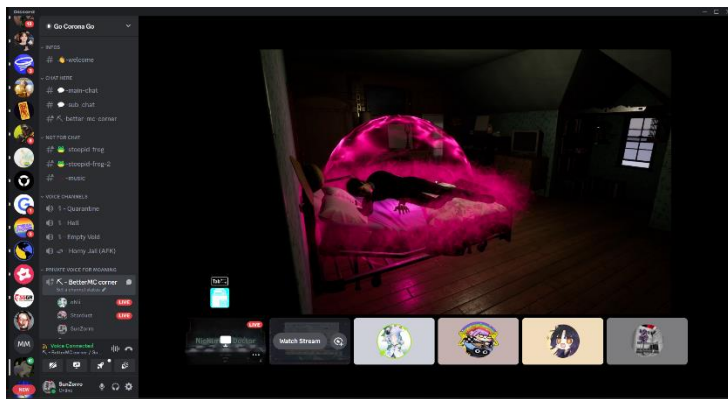
And also some of my friends have live streaming to play my game at Discord, so they can instantly give the gameplay feedback.

(Screenshot of Discord)

Based on player feedback, I adjusted the difficulty of the game's puzzles to make them more challenging but not frustrating. At the same time, I optimized the game's plot to make it more layered to further enhance the game's immersion. These improvements not only improved the quality of Nightmare Doctor, but also provided me with valuable experience for future projects.

Future Impact

The development of Dr Nightmare has provided me with valuable skills and experience to build on for my future career in the games industry. The project not only improved my technical skills, but also deepened my understanding of psychological horror and emotional investment in games.

This project has set me up well for my future career, particularly in narrative design, psychological horror and AI-enhanced game development. The skills and knowledge gained through this project will be directly applicable to my future work, allowing me to continue creating impactful and innovative games.

In the future, I plan to continue expanding my knowledge of AI technology and its application to game development. Additionally, I will focus on further improving my narrative design and storytelling skills, as these are key elements in creating emotionally resonant games.

Conclusion

Developing Nightmare Doctor was a rewarding experience that allowed me to explore new areas of psychological horror and emotionally engaging games. By integrating academic theories, AI techniques, and industry trends, I created a unique and impactful game that not only enhanced my portfolio, but also set me up for future success in the games industry.

This project has given me valuable insight into the intersection of fear, emotion, and play, and I am confident that the skills and experience gained will continue to benefit my career in game development.

To explore more of my professional work and connect with me, you can visit my LinkedIn profile and portfolio website:

LinkedIn Profile: https://www.linkedin.com/in/chiamin0719/

Portfolio Website: https://cchiamin0719.wixsite.com/games

I look forward to connecting with industry professionals and continuing to contribute to the field of game development.
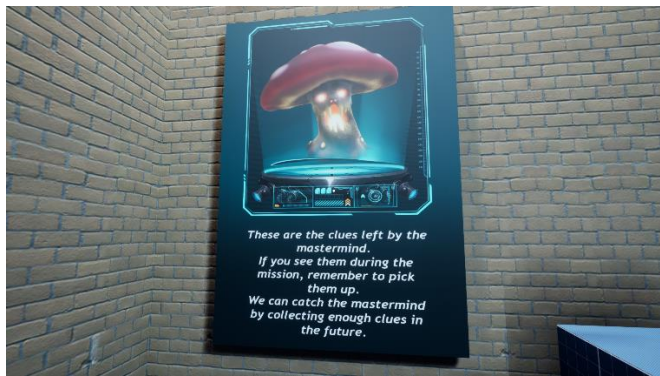
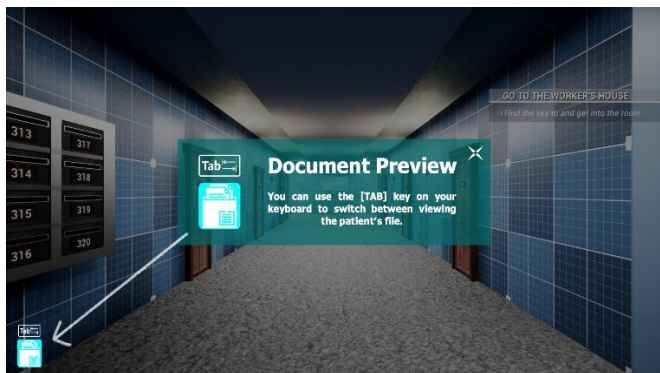**Screenshots from Nightmare Doctor**
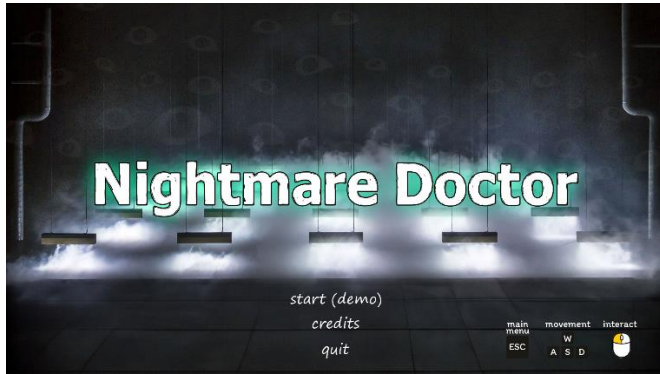
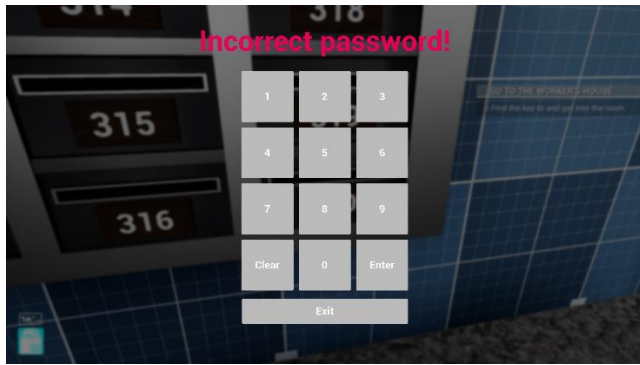Screenshot 1: Starting Page Menu

Screenshot 2: Quest system

Screenshot 3: Game Information

Screenshot 4: Tutorial Guider

Screenshot 5: Passcode puzzle
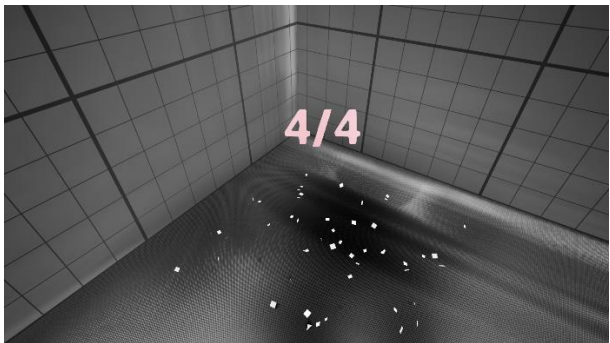

Screenshot 6: Patient room

Screenshot 7: Portal door

Screenshot 8: NPC interaction

Screenshot 9,10,11: Level 2 Environment

Screenshot 12: Collectable object (Clue)

Screenshot 13: Level 3 Environment

Screenshot 14: Weeping Angel (colleague)

Screenshot 15: Ending Scene

Screenshot 16: Ending Scene 2

Screenshot 17: Ending Scene 3

References

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