

AMNESIA

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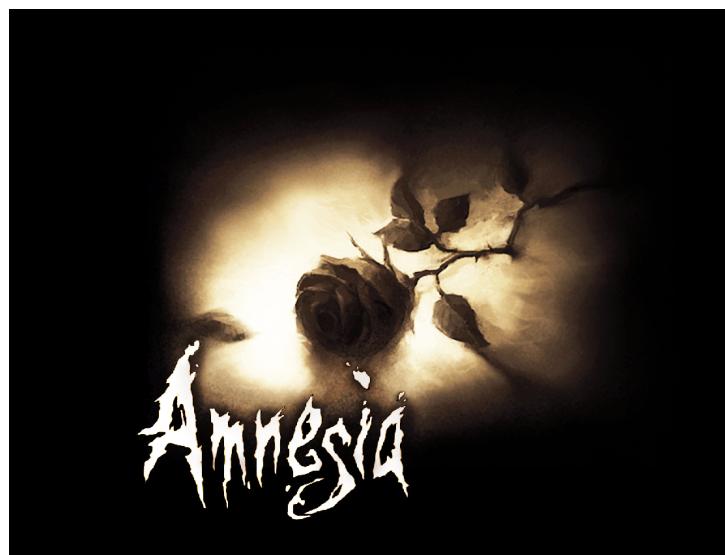
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Contributions

Sarvesh Behati

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- Designing and making of the level “The Final Escape”
- Contribution in the level “The Bunker”
- Contribution in the game testing and debugging

Priyanshu Nareda

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- Major contribution in the art and design aspect of the game
- Contribution in the Modeling and designing of different models, objects and levels of the game
- Creation of documentation of the game

Shubham Verma

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- Led the development of the level “The Dark Descent”
- Contribution in the level “The Rescue”

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- Major contribution in the making of the player controller
- Contribution in the scripting of different objects and levels
- Contribution in the testing and debugging of the game

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- Major contribution in the development of the player-object interaction
- Contribution in the scripting of different objects and levels

Project Overview

"Amnesia" is a 3D game based on Unity game engine, developed for windows and mac. Amnesia is a horror and thriller genre game also carrying some essence of action and adventure experience.

The game is primarily programmed in C#, with the assistance of the AI navigation plugin.

Game Details:

The game is based in the village called Mayfair which is surrounded by the mist mountains from all sides and is guarded by "The Wall" at the entrance. The game further contains 7 different levels namely-

1. Amnesia: The Beginning
2. Amnesia: The Dark Descent
3. Amnesia: The Light of Life
4. Amnesia: Rebirth
5. Amnesia: The Rescue
6. Amnesia: The Bunker
7. Amnesia: The Final Escape

The game further contains many other houses and objects scattered around in the village.

User Interface details:

1. Attribute Canvas: This Canvas displays attributes, including health, hunger, and spirituality bar. It provides players with real-time information about their character's condition.
2. Death Canvas: This Canvas is activated when the player's character dies. It can be closed with the key "K", facilitating the respawning process.
3. Message Canvas: This Canvas is used to display notes to the player with level details.

Technologies Used in The Project

Unity 2023 LTS: It is a game engine and Amnesia is based on unity. Unity was used to design the game and implement the scripts and different animations in the game.

Unity development assets: Different assets from unity assets store were needed to design the game and different objects, the assets being-

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1. Flooded Grounds by Sandro T
 2. Terrain Sample Assets Pack by Unity Technologies
 3. Conifers [BOTD] by frost
 4. Grass Flowers Pack by ALP
 5. Free Scavenger by Paul N.
 6. 3D Models from SketchFab

Microsoft visual studio: Most of the script writing work has been done in this IDE.

C#(sharp): This language is used for writing scripts of the objects.

Canva: This platform is used for designing the images that are implemented in the game.

Blender 3.6 LTS: This is a designing software, which was used to design various game objects both 3D and 2D ones.

Goals of The Project

I. Gaming Goals of Amnesia

- A. Immersive Fear and Suspense: The primary goal is to create an immersive and fear-inducing experience for players. This involves a combination of atmospheric environments, eerie sound design, and well-timed scares.
- B. Engaging Storyline: Horror games often have a compelling storyline that unfolds as the player progresses, keeping them engaged and invested in the narrative.
- C. Intense Atmosphere: The game aims to maintain a constant sense of tension and excitement, creating an intense atmosphere throughout the gameplay.
- D. Puzzle-solving and Challenges: Incorporating challenging puzzles or situations that require quick thinking can enhance the thriller aspect, keeping players on the edge of their seats.
- E. Exploration: Adventure games typically encourage exploration of diverse environments, uncovering hidden secrets, and discovering the game world's lore.
- F. Narrative-driven Gameplay: A strong emphasis on storytelling, character development, and player choices helps drive the adventure forward and keeps players invested in the narrative.
- G. Dynamic Combat and Gameplay: The focus is on providing engaging and dynamic combat mechanics, allowing players to feel empowered as they confront enemies or overcome obstacles.



H. Progressive Difficulty: Action games often have a progressive difficulty curve, ensuring that players face increasingly challenging scenarios as they advance through the game.

II. Future Commercial Goals of Amnesia

A. Player Base Growth:

- User Acquisition: Attract and retain a significant player base.
- Community Building: Establish an active and engaged community around the game.

B. Player Satisfaction:

- Positive Feedback: Garner positive reviews and testimonials from players.
- Player Retention: Encourage players to continue playing and exploring the game.

C. Innovation:

- Unique Selling Points: Introduce unique features that set the game apart.
- Technological Advancements: Utilize cutting-edge technologies to enhance the gaming experience.

Innovation in project

Utilization of non-linear narrative techniques, player choices, and multiple endings to create a highly immersive and personalized story experience, with an original plot and storyline.

Use of innovative and educated coding techniques are used in writing scripts of the object and many new and creative ideas are used in designing the objects and their animations.

Design of Project

Project Amnesia is designed to create a comprehensive game system with various classes and interactions to build a rich gaming experience. The design incorporates elements like player attributes, enemies, levels, and user interfaces to create an engaging and interactive gameplay environment.

- 1. Player Class and PlayerController:** The heart of the game is the `Player` class, which represents the main character. It possesses attributes such as `Movement`, `Health`, `Hunger`, and `Spirituality`. The `PlayerController` class complements the `Player` by handling the control of player movements and managing the player's well-being. The player can move, maintain health, manage hunger, and improve spirituality, making it a central figure in the game's mechanics.
- 2. Gun Class:** The `Gun` class provides the player with the ability to shoot and calculate damage to engage in combat with enemies. This class enhances the player's interactive experience, adding an element of strategy and skill to the game.
- 3. PickupController:** The `PickupController` class handles the interactions between the player and the game's environment. It enables the player to pick up various objects, potentially affecting the player's attributes and advancing through levels. This class adds an exploratory element to the game as players search for items and power-ups.
- 4. Enemy Class and EnemyController:** The game features adversaries represented by the `Enemy` class. These enemies can follow the player and engage in combat. The `EnemyController` manages enemy navigation, including pathfinding and movement towards the player. The enemies provide challenges and obstacles for the player to overcome, adding excitement and unpredictability to the gameplay.
- 5. Level Class:** The `Level` class is responsible for managing game levels, including item pickups and enemy placement. It facilitates progression by allowing the player to collect objects and confront enemies. Different subclasses, such as `Lake`, `Maze`, `FrozenFire`, `Church`, `Farm`, `Graveyard`, and `Igloo`, represent different levels with unique challenges and goals. Each level presents the player with distinct objectives and obstacles, creating variety and depth in the game.
- 6. Canvas and UI Classes:** The game features a graphical user interface (UI) to display the player's attributes and relevant information. The `Canvas` class serves as the base for UI functionality. It interacts with `AttributeCanvas`, which displays the player's attributes (Health, Hunger, Spirituality) and `DeathCanvas`, which displays notifications when the

player dies. These UI elements improve the player's immersion and provide essential feedback during gameplay.

7. Scene Class: The `Scene` class controls the game's scenes, including the start menu, complete game environment, and end menu. This class manages scene transitions, allowing players to navigate through different stages of the game.

Interactions and Connections: The classes are interconnected to create a cohesive gaming experience. The 'Player' interacts with the 'Enemy' class for combat, the 'Level' class for collecting items and advancing, and the 'Canvas' class for attribute display and notifications. The 'Scene' class enables transitions between different scenes, providing a structured game flow.

Level Class in further detail

The Level class includes several subclasses, each representing a distinct level within the game:

1. The Beginning: This level features challenges related to lakes, including the collection of diamonds and keys, while avoiding dangers associated with water.

2. The Dark Descent: The Maze level includes random maze generation, where players must navigate through complex mazes while also placing holy crosses.

3. The Light of Life: In this level, players will find floatable stones, candles to pick up, and must deal with the dangers of a frozen lake.

4. Rebirth: The Church level primarily focuses on cross placement activities.

5. The Rescue: Players encounter a dangerous spotlight movement, along with the task of rescuing farmers and picking up shovels.

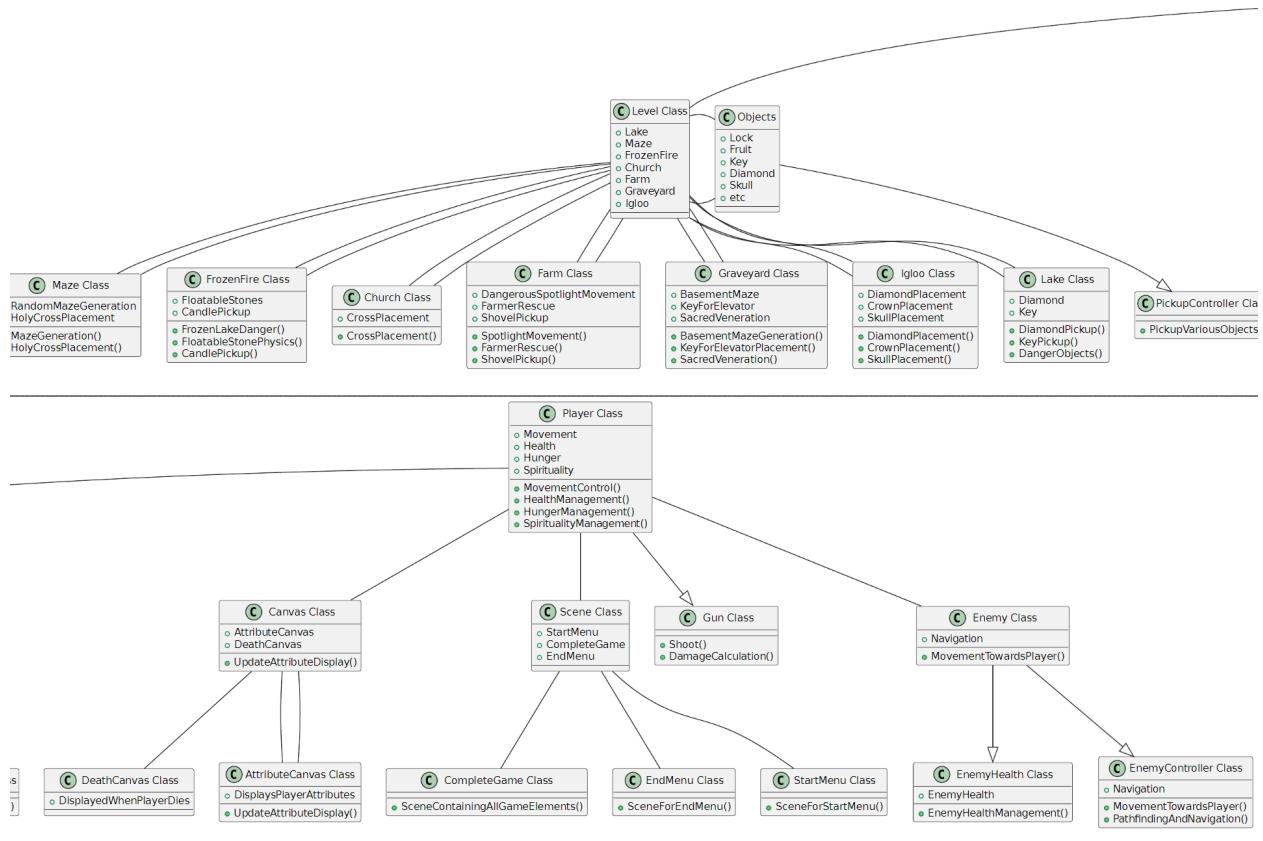
6. The Bunker: This level involves basement maze generation, placing keys for elevators, and engaging in sacred veneration activities.

7. The Final Escape: Players explore this level to locate and collect diamonds, place crowns, and discover unique skull placements.

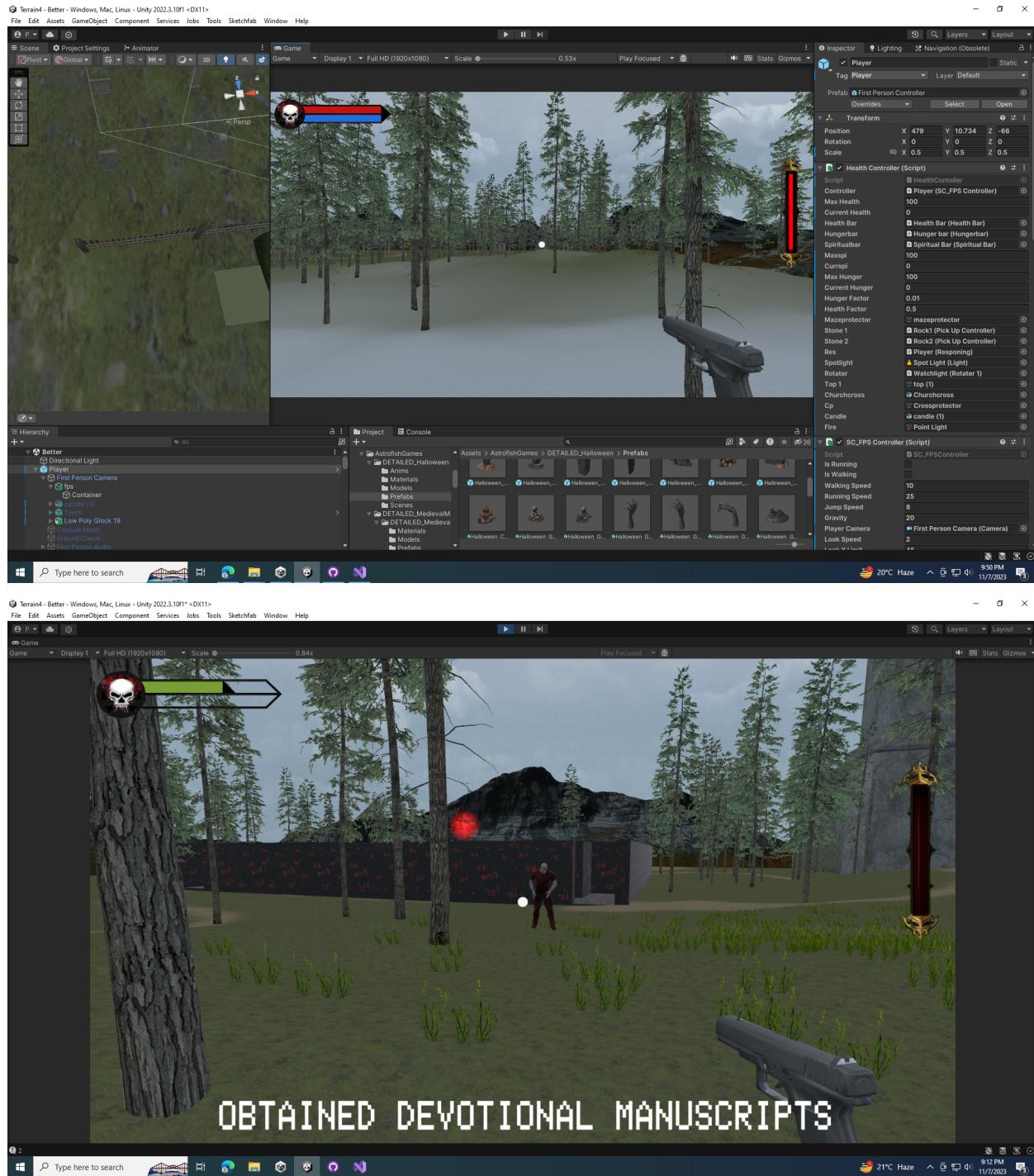
Each of these levels introduces unique challenges and objectives, keeping the gameplay fresh and engaging as players progress through the game. These levels are carefully designed to provide a diverse and immersive gaming experience, adding depth and excitement to the overall gameplay.

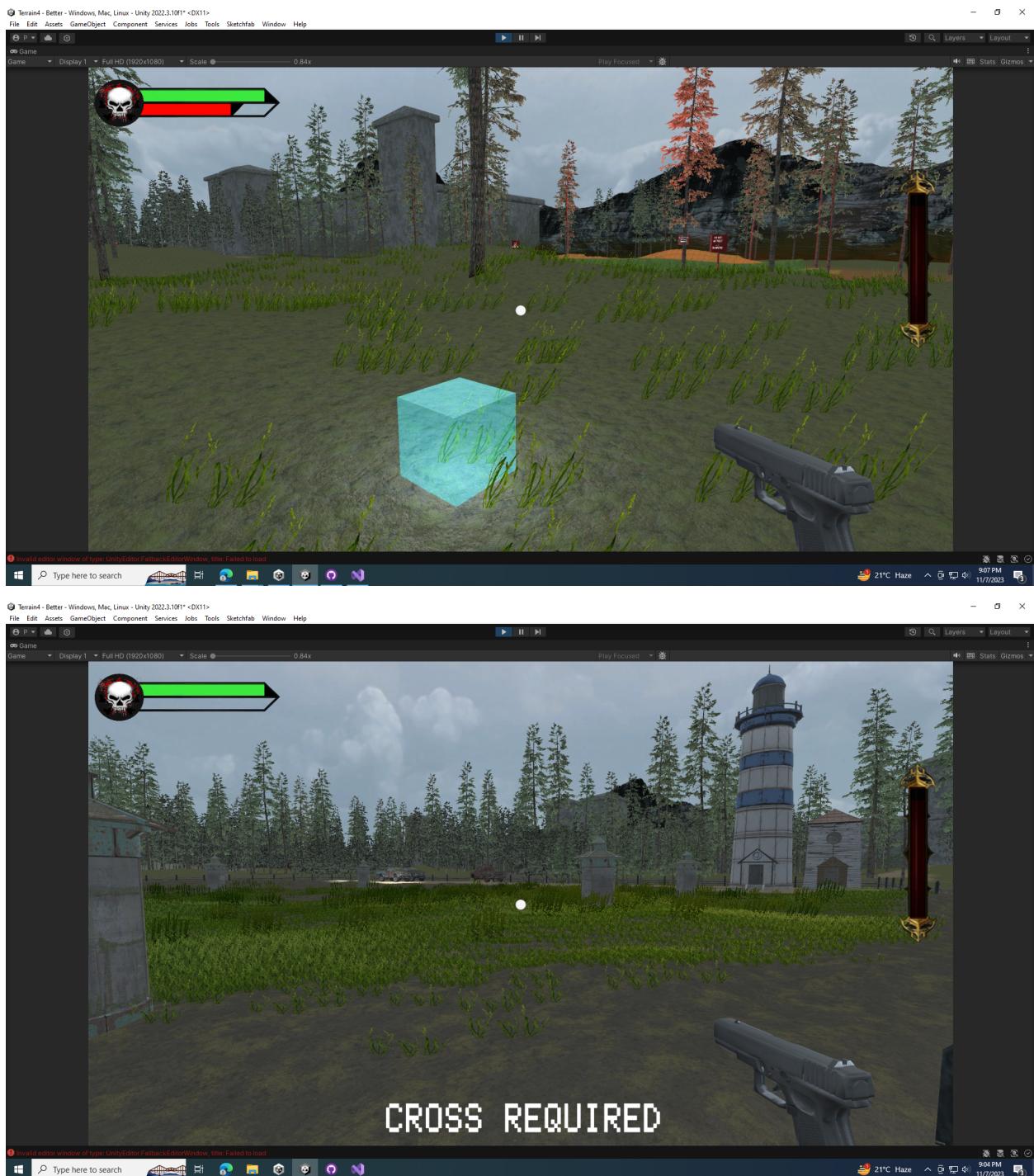


UML Diagram of the Project



Snapshots of Project







Outcome of The Project

Community Impact:

- Can cultivate a dedicated fanbase.

Longevity:

- Sustained interest in the game over an extended period.

Player Satisfaction:

- Positive feedback and testimonials from players.
- High player retention rates and long play sessions.

Future Opportunities:

- Potential for sequels, prequels, or spin-offs.
- Opportunities for collaboration, partnerships, or licensing.

Testing and Quality Assurance

The testing process for “Amnesia” includes:

- Unit testing for individual components.
- Integration testing to ensure seamless interaction.
- User interface testing to verify UI functionality.
- Level testing for design, functionality, and balance.
- Bug testing to address issues and glitches.
- Performance testing and compatibility testing.
- Usability testing for player experience.
- Beta testing with a group of players to gather feedback and make final adjustments.

The background is a dark, almost black, space. In the center, there is a bright, glowing light source that resembles a cracked surface or a fire. A single rose is positioned in front of this light, its form silhouetted against the glow. The word "Amnesia" is written in a jagged, white, gothic-style font, overlaid on the image. The letters are slightly transparent, allowing the background and the rose to be seen through them.

Amnesia