

Senior Project: Storytelling & Game Design

A venture in interactive storytelling through game design; how does game development as a medium need to be conducted to tell a story to another person

Augustus Soto, Ricky Ram

California Polytechnic State University

| | |
|--|----|
| Senior Project: Storytelling & Game Design | 1 |
| Introduction..... | 2 |
| Application/Product | 2 |
| Background | 3 |
| Design..... | 3 |
| Implementation | 4 |
| Analysis & Verification | 6 |
| Related Work..... | 14 |
| Future Work..... | 14 |
| Future Work..... | 15 |
| Conclusion..... | 17 |

Introduction

In the realm of game development, the fusion of storytelling with interactive play has often led to the creation of impactful experiences. Our project contributes to this field by addressing a gap: the need for games that not only entertain but also provide deep personal insight. The project's goal is to create a game where players can reflect on their past experiences through the protagonist's journey, offering both entertainment and catharsis.

Based on the field of game design, there are plenty of amazing immersive experiences, but the genre we chose, and our focus are different. Our solution of telling stories effectively and concisely is important in this field and many others. "The Hollowed Heart," our point-and-click game, addresses the continual need for connecting stories by offering a focused narrative about Sleepy Hollow and a man's journey to reconnect with himself. Our solution aims for clear and impactful storytelling, distinguishing our game in a field that often overlooks the importance of narrative depth and coherence. This approach tries to fill a critical gap, providing a meaningful and engaging experience that resonates on a personal level with players.

Application/Product

The product is a point-and-click adventure game following a detective whose personal life is in disarray. Players guide the protagonist through a mystery that parallels his inner conflicts, solving puzzles that are metaphors for his emotional challenges. The user

experience is central, designed to resonate on a psychological level, with artwork and mechanics carefully crafted to support this goal.

Background

We want to tell a story that is about how we can be blinded by our past experiences and need to heal to move forward in life, which hopefully people can relate to and learn something from. This takes shape in the form of a game (point & click, see Do Not Escape series) about a police officer whose s/o has left him, and he is tasked with solving a mystery while also having to resolve his mental and personal issues.

The conceptual foundation of our game lies at the intersection of narrative theory and psychological models of reflection and healing. Building on the legacy of point-and-click adventure classics, we aim to innovate the genre with a game that doubles as a medium for self-discovery and narrative engagement. This project draws upon the rich history of interactive storytelling to provide a unique experience.

Design

Our design philosophy prioritizes narrative integration within gameplay. The game's mechanics, including dialogue trees and inventory systems, are not just tools for progression but also storytelling elements. The artwork, crafted in a pixelated style, is intentionally chosen to evoke nostalgia while enabling deep narrative immersion. Our work organization is driven by the need to satisfy user requirements for engagement and emotional connection.

We structured the game to ensure that each element, from character interactions to environmental details, serves the overarching story. This approach ensures an experience where players are not only entertained but also invested in the protagonist's journey of self-discovery.

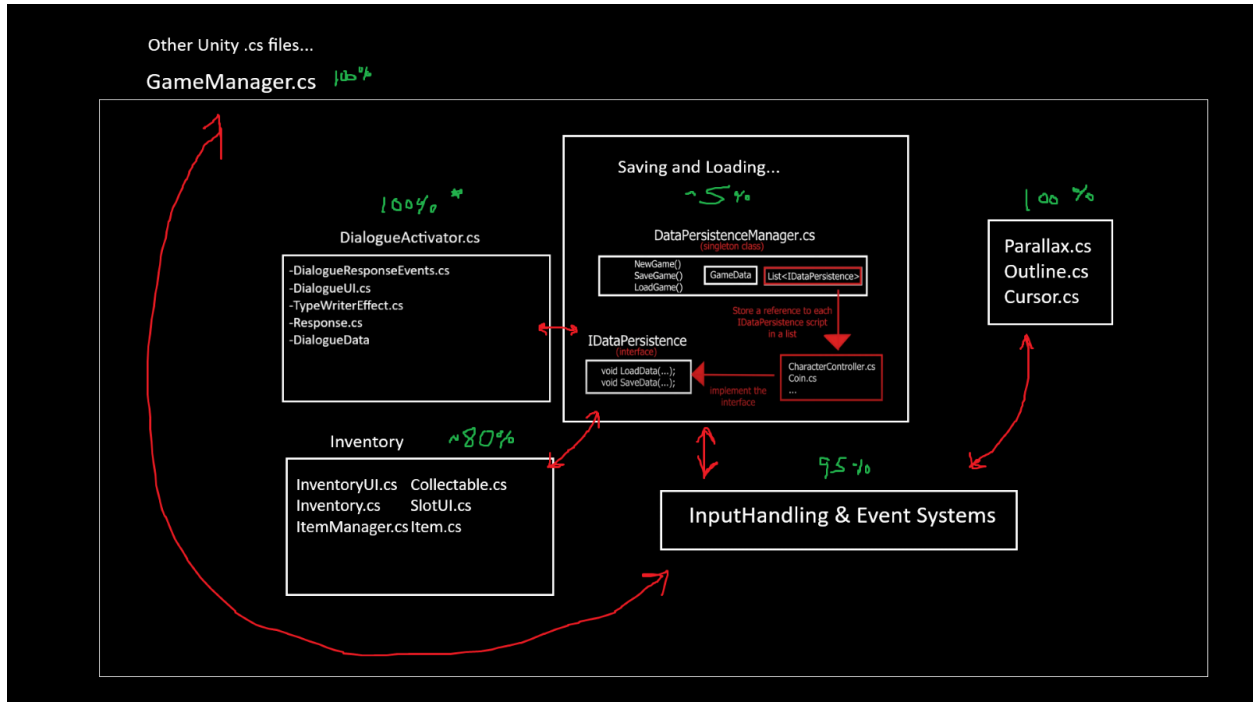
Key factors guiding our work include user feedback, which emphasizes the importance of narrative depth and accessibility, and a commitment to blending traditional and innovative design elements to create a unique, memorable gameplay experience.

Implementation

Unity C# code was employed to script the game's mechanics and gameplay systems. Aseprite was chosen for sprite creation due to its pixel art optimization, while Pixellit, a web-based pixel art maker, and Photoshop were used for additional asset creation and refinement. The implementation process involved as much automation as possible to meet deadlines, with adaptations to the artwork made based on user feedback and necessary storytelling elements for the narrative adaptation.

The overall implementation is organized around a few key components, each connecting cohesively to form the final product. Separate scripts handled various aspects such as player interaction, dialogue trees, and inventory management. Non-trivial aspects like the dynamic dialogue system were designed to allow for branching conversations that affect the story's outcome. This system integrates closely with inventory management, where items collected can unlock new dialogue options or influence character interactions. The artwork, created and optimized in Aseprite and Pixellit, is imported into

Unity, where it is animated and layered to create immersive environments and characters. Each asset is aligned with the narrative to maintain coherence and enhance the storytelling experience.



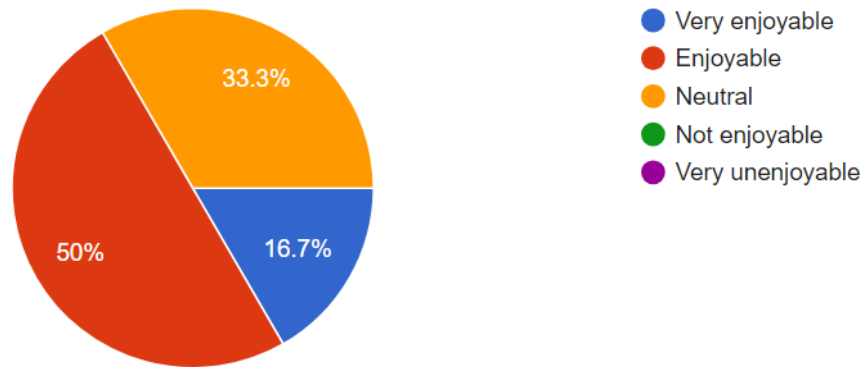
An example of a flowchart diagram used to implement the GameManager in Unity

Overall, the development process was iterative, with continuous testing and refinement cycles informed by user feedback. This ensured that each element of the game not only functioned correctly but also contributed meaningfully to the overall narrative and player experience. The cohesive integration of these components results in a seamless and engaging point-and-click adventure that tells a compelling story of Sleepy Hollow and our main character's quest for self-discovery.

Analysis & Verification

How enjoyable was the game demo?

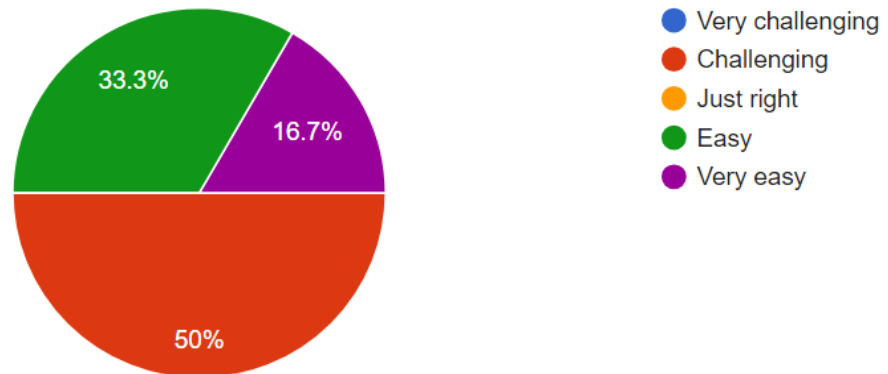
6 responses



About two-thirds of players found the game to be enjoyable, which is something we are glad about. This positive response indicates that our game's core concept and gameplay have resonated well with most players. However, there is room for improvement to make the game more enjoyable for the remaining one-third of players who did not find it engaging.

How challenging did you find the puzzles?

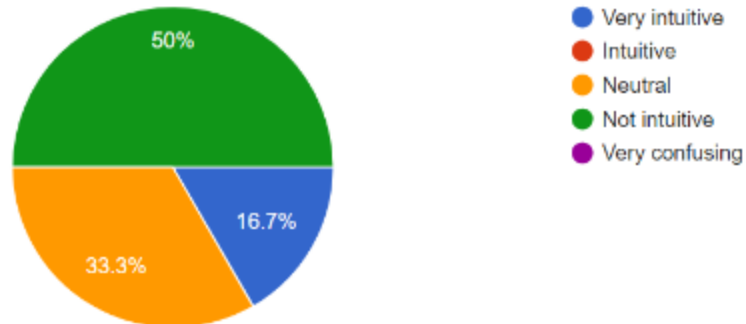
6 responses



Some people thought the puzzles were easy while others found them challenging. In a case like this, we would like more feedback to help further our optimization and tuning of the game. For now, we believe the puzzles are at an appropriate difficulty, but continuous playtesting and adjustments will help us strike a better balance.

How intuitive were the game controls?

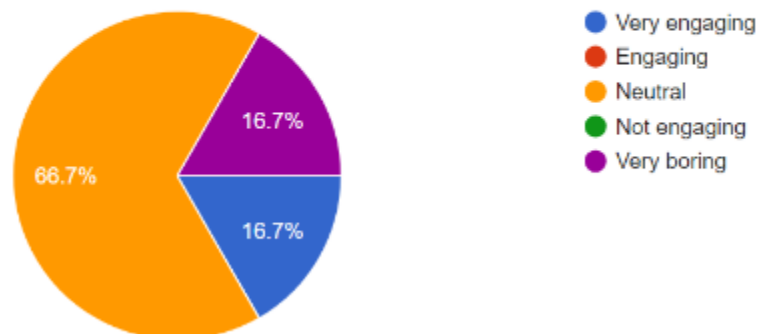
6 responses



There needs to be a major overhaul of controls to be more intuitive for the player. Having more variety in controls may help. We will explore different control schemes and refine the existing ones to ensure that players can navigate and interact with the game effortlessly.

How engaging was the storyline?

6 responses



Due to time constraints, not everything in the script could be adapted for the game. If we were to continue working on this project, enhancing the storyline would be our first

task. Ensuring a cohesive and engaging narrative is critical, and we would focus on incorporating all the elements of the script to create a richer story experience.

Did you encounter any bugs or issues while playing the demo?

5 responses

No.

Not necessarily a bug, but some of the dialogue options were overlapping which made it difficult to read.

the boxes that show dialogue choices are not big enough, the text wraps around and overlaps on itself in the little grey area

response text smashed together when talking to npcs, specifically in the mansion.
low framerate

Nope!

What did you like most about the game demo?

6 responses

I found it silly and relaxing, in a good way.

Very cool art style

The gothic horror themes

cool visual style, puzzles were fairly intuitive I never got stuck (although I dont know how the maze works. i just clicked around until I got to the key randomly)

the cat

The art and puzzle\$

The dialogue needs to be reformatted, so text does not overlay on top of each other.

People liked the vibe and atmosphere of the world we built. Addressing these issues will improve readability and overall user experience. We will also investigate optimizing performance to eliminate low frame rates and other technical problems.

Players appreciated the art style, gothic horror themes, and intuitive puzzles. The cat character and the overall design of the game world received positive remarks. We will continue to build on these strengths, ensuring that the visual and thematic elements remain a standout feature of the game.

What did you like least about the game demo?

6 responses

The artstyle was mostly coherent, but the UI could use some major improvements, especially when it comes to indicating "picking up" an object.

I didn't have much background about my character or the other characters

Unclear objectives at points

not clear what I'm doing story wise at any given moment. it was simple enough to figure out where to go in the game but I didnt know what the characters were doing there or why Im going into this mansion etc. maybe a problem of it only being the demo though

how short it was, i was a little confused about the story

Some of the things you have to pickup were too obvious

Do you have suggestions for improvement?

3 responses

UI improvements, sound design.

many confirmation messages ("do you want to open the chest?" "do you want to enter..?" etc) were unnecessary. indication for when you are mousing over "yes" would be nice too, it doesnt really look like a button

scale up the pixel art, add context to the story at the beginning, add npc sprites, increase game framerate

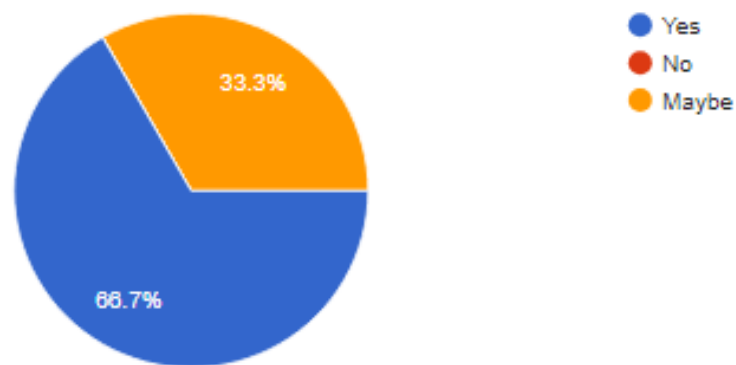
If we were to continue working on this project, our first task would be to make objectives clearer and bring the story to the forefront. The UI needs redoing. Players found some aspects of the UI confusing, and the objectives are unclear. We would prioritize

enhancing UI clarity and ensuring that players always have a clear understanding of their goals

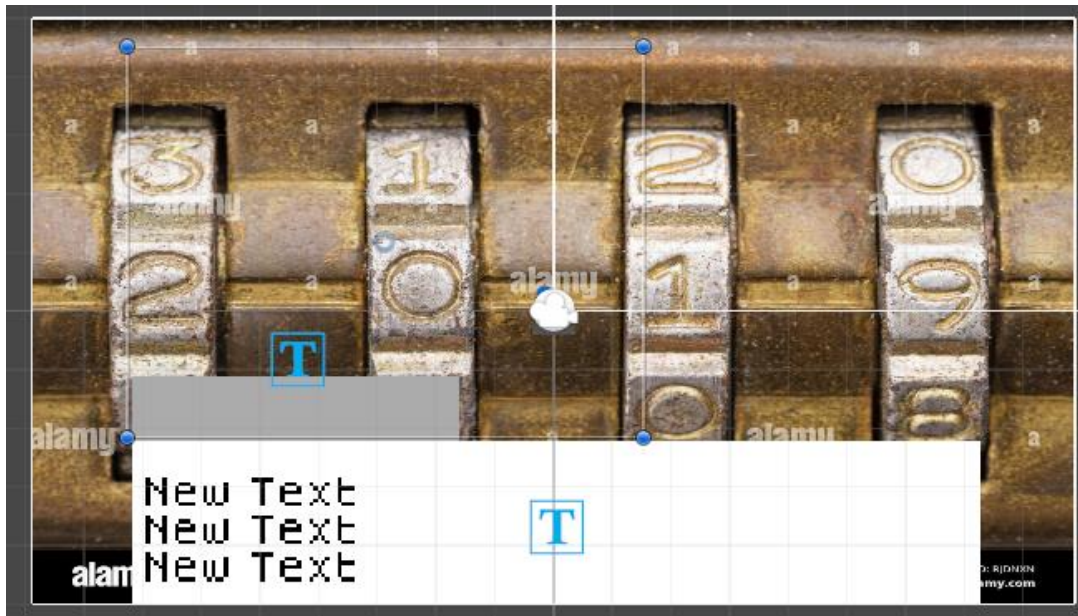
Scaling up the pixel art, adding context to the story at the beginning, adding NPC sprites, and increasing game framerate are all valuable suggestions. Implementing these changes would enhance the visual appeal and smoothness of the game. We would also improve the sound design and streamline the UI for better player interaction.

Would you be interested in playing the full version of this game?

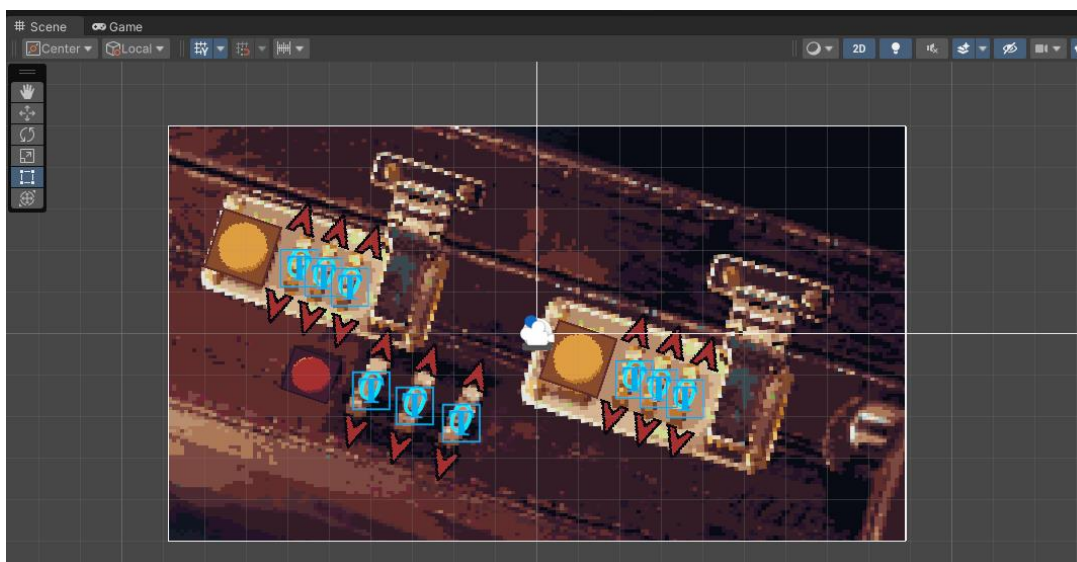
6 responses



People are interested in coming back to the game, which is a good sign. Further development and testing would yield a game that pushes the elements of story further through clearer and more concise gameplay and UI elements.



Lock before a revamp



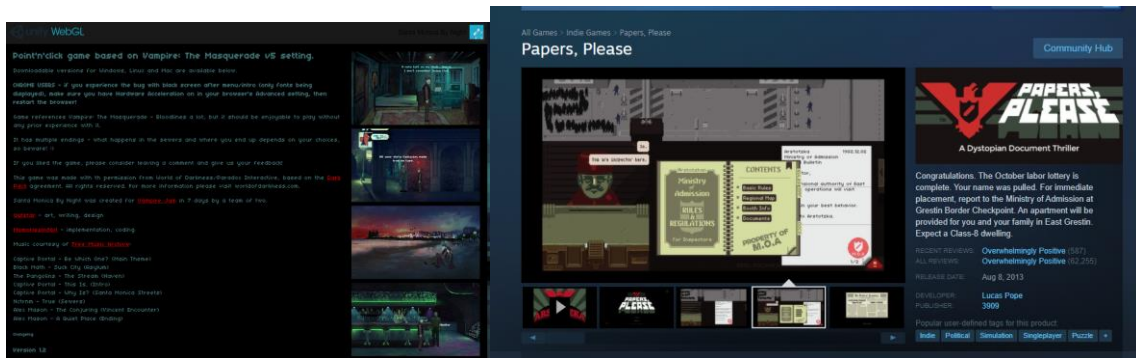
Lock system after a revamp

Some useful user feedback came in the form of direct feedback about certain puzzles or gameplay elements, which can be seen here; a single piece lock puzzle for three codes is reformatted to a more intuitive three code-three lock system

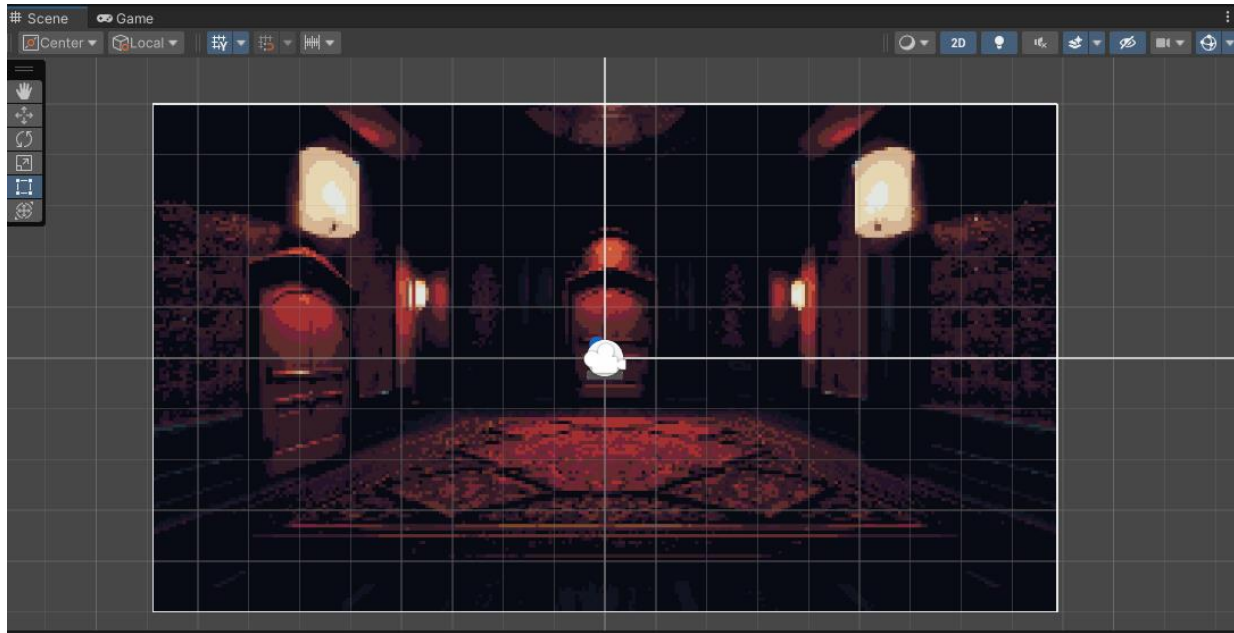
Related Work

The project is inspired by games such as the "Don't Escape" series, known for their strong narratives. While we draw on these inspirations, our game differentiates itself by focusing on the protagonist's personal growth as a core mechanic, rather than a backdrop.

The functional example is now completed, with most of the background and base code also finished. Systems have been established to initiate the story's implementation, facilitating the creation of a functional demo for testing purposes, and paving the way for storytelling. Noteworthy progress has been achieved in asset generation, or at least in refining the process, which provides a solid foundation for estimating future timelines.



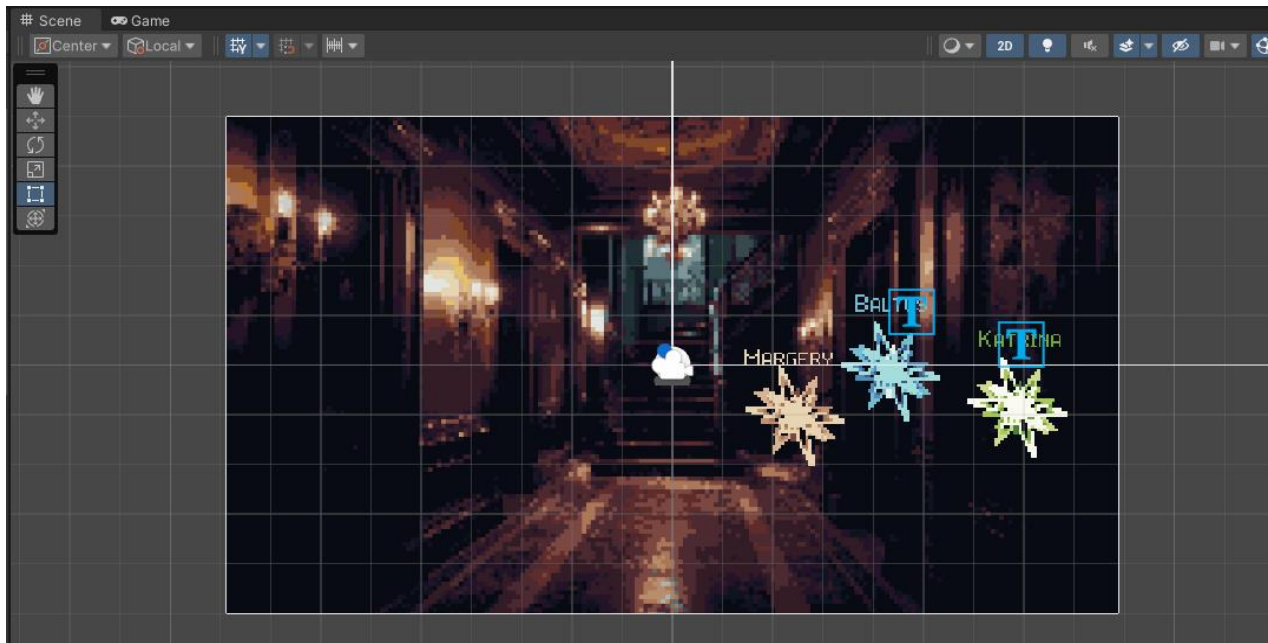
Future Work



One of the biggest issues was intuitive gameplay elements that coincided in the story; in future iterations of this project, more effort would be go towards scenes like this in terms of aesthetics, lighting, and animated backgrounds to stimulate user engagement in the game; engaged players in the game are also likely to commit to the story in theory.



Another important aspect of the project that would have been done better with time would be analytics and more detailed information about user feedback. While we got great albeit limited responses, tapping into Itch.io's system more through Unity integrations could have been a terrific way to learn more about where exactly users were getting stuck or progressing.



Characters in the game were rendered as sprites of stars instead of character models due to scarcity of character model assets available and time to create those assets. While it was visually interesting, relatability would go further with actual character designs.

Another aspect of the project that could be improved in future works would be sound design and sound FX. Music was something last minute that we added to the game and that added an entire other dimension to the work, which amplified the story and gameplay.

Future work also includes refining save states and event management systems, integrating music assets, and expanding the game's content based on user feedback. Further development will focus on enhancing the game's emotional impact and technical aspects.

Conclusion

Our project aims to create an engaging and emotionally resonant game that combines technical prowess with deep narrative integration. We believe we have successfully met our initial development goals and provided a valuable contribution to the field of interactive storytelling. The feedback from peers and advisors has been insightful, reinforcing the game's potential impact on players.