RESEARCH QUESTIONS

- How can we design puzzles around key story events and give players enough freedom without making it a handheld experience?

- Does a unique gameplay experience in each chapter of the story add to the novelty of the experience?

- How can you alter player experience based on their prior interactions without changing the overarching narrative?

- How to create a fail state for stories central to the gameplay?

* How can we design puzzles around key story events and give players enough freedom without making it a handheld experience?

Games such as “What remains of Edith Finch”, “Disco Elysium”, “Firewatch” and “Return of the Obra Dinn” are the sources of inspiration for the game I’m trying to make. So going through the talks by these developers, game designers and narrative designers working on the game will give me some ideas of what their thought process was when they were working on the game, the issues they’ve faced and ways they’ve solved it either technical or design based. Also going through various reviews by people who’ve played the game and critiques would help get another perspective on these games by seeing what the audience thinks was bad/ good.

To answer this question, we must first understand what is a puzzle? A puzzle is a problem which challenges the player to tests their knowledge about the situation. In a puzzle, the solver is expected to put pieces together (or take them apart) in a logical way, to arrive at the correct solution and complete a task. There are three types of puzzles, internal logic, where the puzzles are based on the game’s rules and setting, to designer logic, where the puzzles are arbitrary and confusing, to lock and key, where the puzzles have one fixed solution that can be solved in multiple ways [1].

Clara Fernández-Vara, an expert in adventure game analysis points out that puzzles in adventure games are frequently integrated into the narrative events, and the game story is advanced through puzzle solving, she further defines these types of puzzles as “narrative puzzles” [2]. According to a paper by Wei Huaxin and Betty Durango [3], narrative puzzles are distinct design elements that play a role in the unfolding and the player’s experience of game plot. They review other previous literature on puzzles and identify four main functions that narrative puzzles can perform for game storytelling: preparation and acquisition, advancement and guidance, creating plot variation, and pacing and structuring.

Preparation and acquisition: This function involves puzzles that help the player acquire narrative information or in-game items that are useful for future puzzles. These puzzles may not have an obvious solution or goal, but they provide short-term aesthetic experiences and introduce the player to the game world and its logic.

Advancement and guidance: This function involves puzzles that move the game plot forward and guide the player to the next plot segment. These puzzles are often integrated into the narrative events and require the player to interact with objects or characters in the game world. They may also unlock clues or objectives that show the player where to go next.

Creating plot variation: This function involves puzzles that have potential to change the plot trajectory and create different outcomes based on the player’s performance. These puzzles are often embedded with crucial plot points or branching points, where the player’s actions and choices can lead to different consequences or endings. These puzzles can enhance the player’s agency and engagement with the game narrative.

Pacing and structuring: This function involves puzzles that help pace the plot and gameplay along the game progression. These puzzles can align the level of difficulty or complexity with the narrative arc to create dramatic tension or rhythm. They can also serve as narrative units that organize the game plot into segments or chapters. These puzzles can improve the player’s comprehension and immersion in the game narrative.

The paper concludes that puzzles in narrative games are not only a gameplay mechanic but also a storytelling device that can enrich the game’s plot and the player’s experience.

Some common mistakes when designing puzzles include making them too difficult or easy, not providing enough feedback to the player, and not considering the player’s perspective when designing the puzzle.

[1] Bycer, J., 2020. A Study Into Puzzle Design in Video Games. Game Wisdom.

[2] Fernández-Vara, C. (2019) Introduction to game analysis. London: Routledge

[3] Wei, H & Durango, B 2019, Exploring the Role of Narrative Puzzles in Game Storytelling. in Proceedings of the 2019 DiGRA International Conference: Game, Play and the Emerging Ludo-Mix. Digital Games Research Association

[4] Schell, J., 2019. The Art of Game Design: A Book of Lenses. 3rd ed. Boca Raton: CRC Press

[5] Ermi, Laura & Mäyrä, Frans. (2005). Fundamental Components of the Gameplay Experience: Analysing Immersion.. Worlds in Play: Int. Perspectives on Digital Games Research

[6] Bozdog, M., & Galloway, D. (2020). Worlds at Our Fingertips: Reading (in) What Remains of Edith Finch. Games and Culture, 15(7), 789–808. <https://doi.org/10.1177/1555412019844631>

[7] Riedl, M. O. and Bulitko, V. (2012) “Interactive Narrative: An Intelligent Systems Approach”, AI Magazine, 34(1), p. 67. doi: 10.1609/aimag.v34i1.2449.

[8] Breslin, J. (2019) Hierarchy of Fail States in Game Design. Available at: https://game-wisdom.com/critical/hierarchy-of-fail-states-game-design

Designing puzzles around key story events while giving players enough freedom can be a challenging task. One approach is to design puzzles that are interconnected, where solving one provides clues for another. This way, if a player gets stuck on one puzzle, they can try another1. Another approach is to design puzzles around a particular aesthetic choice or combine mechanics that haven’t been used together before2.

[Exploring the Role of Narrative Puzzles in Game Storytelling | DiGRA](http://www.digra.org/digital-library/publications/exploring-the-role-of-narrative-puzzles-in-game-storytelling/)

Wei, H & Durango, B 2019, Exploring the Role of Narrative Puzzles in Game Storytelling. in Proceedings of the 2019 DiGRA International Conference: Game, Play and the Emerging Ludo-Mix. Digital Games Research Association

According to a paper by Wei Huaxin and Betty Durango1, narrative puzzles are distinct design elements that play a role in the unfolding and the player’s experience of game plot. They propose an initial taxonomy of the functions a narrative puzzle can perform for game storytelling, such as:

Revealing information: Puzzles can be used to deliver exposition, backstory, clues, or foreshadowing in an interactive way. For example, in The Witness, solving puzzles reveals audio logs that provide insights into the game’s world and themes.

Creating tension: Puzzles can be used to create suspense, urgency, or conflict in the narrative. For example, in The Last of Us, some puzzles require the player to protect their companion from enemies while finding a way to proceed.

Enhancing immersion: Puzzles can be used to make the player feel more involved in the game world and the story. For example, in Myst, puzzles are integrated into the environment and require the player to explore and manipulate objects that are part of the game’s lore.

Expressing character: Puzzles can be used to convey the personality, motivation, or emotion of a character. For example, in Portal, puzzles are designed by GLaDOS, an AI antagonist who taunts and tests the player throughout the game.

Enabling agency: Puzzles can be used to give the player choices and consequences that affect the narrative outcome. For example, in The Walking Dead, some puzzles involve moral dilemmas that influence how other characters react to the player.

The paper also discusses some potential design patterns that involve narrative puzzles, such as:

Puzzle as obstacle: The puzzle is a challenge that blocks the player’s progress and must be overcome to advance the story. This pattern is common in adventure games and can be used to create tension or reveal information.

Puzzle as reward: The puzzle is a bonus that rewards the player for exploring or completing a task and provides additional information or content. This pattern is often used in open-world games and can be used to enhance immersion or express character.

Puzzle as branching point: The puzzle is a decision point that offers multiple solutions or paths and leads to different narrative outcomes. This pattern is rare in games and can be used to enable agency or create tension.

<https://www.researchgate.net/publication/265206701_A_Model_for_the_Design_of_Puzzle-based_Games_Including_Virtual_and_Physical_Objects>

Melero, Javier & Davinia, Hernández-Leo. (2014). A Model for the Design of Puzzle-based Games Including Virtual and Physical Objects. Educational Technology & Society. 17. 192-207.

There are several techniques for designing puzzles in games. One approach is to design puzzles that are interconnected, where solving one provides clues for another. This way, if a player gets stuck on one puzzle, they can try another. Another approach is to design puzzles around a particular aesthetic choice or combine mechanics that haven’t been used together before.

When integrating puzzles into gameplay, it’s important to consider the role of puzzles in the game and how they fit into the overall narrative and gameplay experience. Puzzles can be used to set intermediate goals for the player or to blend action with detective work.

* Does a unique gameplay experience in each chapter of the story add to the novelty of the experience?

In “What Remains of Edith Finch”, playing a part in the life of each character feels like a new experience and makes the story more engaging. It adds different ways to move or to take the form of another subject to make us go though the story from another perspective. Similarly, in “It Takes Two” which is a co-op game, every location has different ways to solve puzzles by using the level design and alternating between the players helping each other to solve puzzles. This makes for exciting gameplay and the player doesn’t know what to expect next peaking their curiosity.

[(PDF) Fundamental Components of the Gameplay Experience: Analysing Immersion. (researchgate.net)](https://www.researchgate.net/publication/221217389_Fundamental_Components_of_the_Gameplay_Experience_Analysing_Immersion)

Ermi, Laura & Mäyrä, Frans. (2005). Fundamental Components of the Gameplay Experience: Analysing Immersion.. Worlds in Play: Int. Perspectives on Digital Games Research.  
  
Gameplay experience is a complex and multidimensional phenomenon that emerges from the interaction between a game and a player. In The Art of Game Design [4], Jesse Schell talks about how people experience games by focusing and in a way getting lost in the world of the game and describes this state of sustained focus, pleasure, and enjoyment is referred to as “flow,” which has been the subject of extensive study by psychologist Mihalyi Csikszentmihalyi and many others. The key components to put the player in a state of flow are clear goals, no distractions, direct feedback, and challenges. Flow activities must manage to stay in the narrow margin of challenge that lies between boredom and frustration, for both unpleasant extremes cause our mind to change its focus to a new activity.

A picture containing text, line, screenshot, diagram

Description automatically generated

This means that the players focus keeps changing based on the challenges faced. The game must keep the player engaged to stay in the flow channel. The Diagram below shows the state which will probably feel much more interesting to a player. It is a repeating cycle of increasing challenge, followed by a reward, often of more power, which gives an easier period of less challenge.

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Researchers can interpret the paper Fundamental Components of the Gameplay Experience [5] and conclude that immersion is one of the key components of gameplay experience and it can be divided into three types: sensory, challenge-based and imaginative immersion.

Sensory immersion is related to the audio-visual execution of games, challenge-based immersion is related to the goals and tasks of games, and imaginative immersion is related to the characters, story and fantasy of games.

What Remains of Edith Finch (here after WRoEF) is a great example to showcase storytelling with different experiences by allowing the player to play a part in the life of each character which feels like a new experience and makes the story more engaging. As stated in the article by Mona Bozdog and Dayna Galloway [6], “The game is structured as a collection of short stories within a larger story. Each story is distinct and belongs to a different genre, using different storytelling techniques. The game’s overall structure borrows from the literary technique of a frame narrative by developing a collection of stories within a story within a story.”

WRoEF has a unique gameplay experience because it uses different interaction schemes and genres for each of its characters. It adapts literary structures, forms, techniques, and intertextuality to tell the stories of the Finch family members and their tragic deaths. It also uses text and voice-over narration in an aesthetic and playful way, making them “alive” and “endowed with personality”. The text also “functions as a visual and aural link to the past”.

[Gameplay, Emotions and Narrative: Independent Games Experienced (cmu.edu)](https://kilthub.cmu.edu/articles/book/Gameplay_Emotions_and_Narrative_Independent_Games_Experienced/10005641)

Marak, K., Markocki, M. and Brzostek, D. (2019) Gameplay, emotions and narrative: Independent Games experienced, figshare. Carnegie Mellon University. Available at: https://kilthub.cmu.edu/articles/book/Gameplay\_Emotions\_and\_Narrative\_Independent\_Games\_Experienced/10005641 (Accessed: April 13, 2023).

This book is about the emotional and narrative immersion in digital games. It explores how the story and mechanics of games can create different player experiences. It uses case studies and close reading of selected independent games that have innovative and experimental approaches to gameplay. It also examines how games can evoke various emotions in the players and challenge their expectations and needs. The book is intended for academic audiences interested in digital games and their cultural significance.

The book argues that games can evoke various emotions in the players and challenge their expectations and needs by using different techniques and strategies. For example, some games use the avatar and the NPCs to create a sense of identification and empathy with the characters, while others use the mechanics and the feedback to create a sense of agency and responsibility for the actions and consequences. Some games also use the narrative and the ludic elements to create a sense of wonder, curiosity, or horror, depending on the theme and the genre of the game. The book shows how these techniques and strategies can affect the player’s enjoyment, satisfaction, and meaningfulness of the game experience.

[Worlds at our fingertips: reading (in) What Remains of Edith Finch — Abertay University](https://rke.abertay.ac.uk/en/publications/worlds-at-our-fingertips-reading-in-iwhat-remains-of-edith-finchi)

Bozdog, M., & Galloway, D. (2020). Worlds at Our Fingertips: Reading (in) What Remains of Edith Finch. Games and Culture, 15(7), 789–808. <https://doi.org/10.1177/1555412019844631>

* How can you alter player experience based on their prior interactions without changing the overarching narrative?

This is one of the more complicated questions since I’m bound by the story and cannot have branching dialogues like other games do. Nor can I have a stats system which would change the players interaction completely because the story is linear and I’m trying to deliver an experience. Some ways I will explore are dynamic difficulty adjustments which won’t make a drastic impact on the story but make things easier for some players. Few dialogues for actions performed by players by just changing the main dialogue. This could add replayability value to the game. Personalization of the player character will also be explored.

<https://ojs.aaai.org/aimagazine/index.php/aimagazine/article/view/2449>

Riedl, M. O. and Bulitko, V. (2012) “Interactive Narrative: An Intelligent Systems Approach”, *AI Magazine*, 34(1), p. 67. doi: 10.1609/aima

One of the key challenges in creating interactive narrative systems is how to balance user agency with coherent story progression. In “Interactive Narrative: An Intelligent Systems Approach” (2012) [7], the authors have suggested different ways to tackle this challenge, such as using plot graphs, experience managers, and player modeling.

A plot graph is a representation of a story where nodes represent narrative events and arcs denote precedence constraints. This means that no event can occur unless all events constrained to occur prior to it have already occurred.

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Figure x. A Branching Story Graph

Some events are experience manager actions that can be performed at any time to increase the probability that certain trajectories occur. A search process generates possible trajectories, including experience manager actions, and evaluates the trajectories according to an author-defined heuristic. An experience manager is an artificial narrow intelligence agent that monitors the virtual world and intervenes to drive the narrative forward according to some model of quality of experience. The experience manager must look ahead into possible futures of the user’s experience to determine the best intervention, if any, to bring about a structurally coherent experience. The experience manager must also reason about the effects of its interventions in the virtual world to bring about the desired narrative experience.

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Figure x. The Experience Management Problem Is to Compute Trajectories through State Space.

Player modeling involves learning a model of the user’s individual differences, such as preferences and play style, to tailor the narrative experience to the user. This can be done by mapping observed player behavior in the fiction world into abstractions or by eliciting structured feedback from users across many interactive narrative experiences.

The article also discusses the importance of incorporating believable characters into an interactive narrative framework. Believable characters are virtual agents that exhibit personality and emotion as they interact with the environment and the user. There can be a tension between an experience manager, which is trying to bring about a global structure to the user’s interactive experience, and virtual characters, which are attempting to perform local actions that promote believability.

Adaptive difficulty changes the game’s difficulty level based on how well the player is doing. For instance, the game can make things harder or easier by changing the number of enemies, the amount of resources, or the type of obstacles. This way, the player can enjoy a game play that is balanced and engaging for their skill level and preferences.

Another method is branching paths, which lets the player make choices that have an impact on the game state or other characters. For example, the player can help or hurt a certain NPC and face different results, such as unlocking a new area, gaining or losing an ally, or triggering a reward or a trap. This way, the player can see different outcomes and consequences based on their actions and decisions.

The last method is dynamic content, which creates or changes the game’s content based on what the player does or likes. For example, the game can add more secrets, collectibles, or easter eggs for the player to discover if they like to explore every corner of the game world. The game can also generate more challenging or varied enemies for the player to fight if they like to combat every foe they meet. The game can also provide more options or feedback for the player to customize their character or equipment if they like to do so. This way, the player can have a personalized and tailored game play that matches their interests and style.

* How to create a fail state for stories central to the gameplay?

We’re trying to tell a story and the player doesn’t fail according to the story. And it wouldn’t be a game, or a fun one if it wasn’t challenging enough to kill the player. Some games add abilities to heal oneself whereas other games play around with the difficulty level. Having multiple ending is another way of going about it because even though we have a linear story, we still give the player some control over their character and it should feel like it. Another method would be by having a soft fail state where the player is allowed to continue but with the bare minimum resources needed.

A fail state is a situation where the player cannot progress or achieve the desired outcome in a game, and has to either restart or quit. A fail state can be used to create tension, challenge, feedback, or consequences for the player’s actions. However, a fail state can also be frustrating, boring, or unfair if not designed well. There are different degrees of punishment for failing, such as losing time, progress, or resources.

After reading The hierarchy of fail states in game design [8], we understand that creating a fail state for stories central to the gameplay is a matter of balancing the severity and frequency of the punishment for failing, and making it interesting and meaningful for the player. Some possible ways to do this are:

Using checkpoints or quick saves to preserve the player’s state and progress and allow them to retry the section they failed without losing too much time or resources.

Using different degrees of failure depending on the situation, such as losing some resources, having to restart a level, or losing all progress. The big question about the fail state is: What’s lost and can it be recovered? In roguelikes, again, you lose everything when you die. For games aimed at more casual players, failing will usually mean repeating the section or level again.

Using fail states that are unpredictable or creative to add variety and humor to the gameplay, such as having loose controls, ragdoll physics, or unexpected consequences.

Using fail states that are relevant to the story or theme of the game, such as having different endings, branching paths, or character development depending on the player’s choices and actions.

Some examples of games that use fail states for stories in interesting ways are:

Heavy Rain: A cinematic adventure game where the player controls four characters who are involved in a serial killer case. The game has multiple endings and branches depending on the player’s choices and actions. If a character dies, the game does not end but continues with the other characters.

Undertale: A role-playing game where the player can choose to befriend or fight monsters. The game has different endings and dialogues depending on the player’s actions and morality. If the player dies, they can restart from their last save point, but some characters will remember their previous deaths.

Papers, please: A simulation game where the player works as an immigration officer in a fictional dystopian country. The game has multiple endings and storylines depending on the player’s decisions and performance. If the player makes too many mistakes or breaks the rules, they can be arrested, fired, or killed.

**3. Research Project: One-Way Ride**

In this section, I will present the findings of my design project which is influenced by elements from “What Remains of Edith Finch”, “Disco Elysium” and the “Mafia Series” to create a unique and engaging experience for the players. One-Way Ride is a hybrid game prototype that combines 3D top-down with multiple playstyles. I am experimenting with the application of game systems and mechanics as to how the narrative and game design will work in tandem with each other.

The game prototype is unique in the sense of how each chapter has its own playstyle on top of the 3D interaction and exploration system that drives the overall story. The narrative introduces new playstyles, for example gun combat, stealth, and a combination of various game mechanics.

The game prototype was developed using Unity and C#. The narrative is broken down into five chapters with each chapter being broken down into its own missions and objectives that not only make sense of the world in which the game takes place, but also make sense of the game’s genre and combination of playstyles. The prototype consists of the first 2 chapters which are:

• Chapter 1: The Whacking

• Chapter 2: Green Bills and Goons

We will go through the various design choices made, why the choices were made and what went right or wrong with respect to the research questions.

3.1 How can we design puzzles around key story events and give players enough freedom without making it a handheld experience?

> Player Movement: One-Way Ride implements a 3D top-down camera angle with click-to-move mechanics for the player, Mariano. This design choice was inspired by Disco Elysium, is a role-playing game whose gameplay is focused on exploration, dialogue, and decision-making. Being a 3D top-down game, exploration is key. The character walks to the location the player clicks and runs when double-clicked, allowing the player to explore the environment and interact with objects and characters by simply clicking on them. Click-to-move is implemented because it allows the player to focus more on the story and the interactions, rather than on the mechanics and the interface. It also makes the game more accessible and intuitive for players who are not familiar with complex controls or who prefer a more casual gameplay experience.

> Interaction System: The interaction system is designed to make the player more aware of the environment by hiding the outlines of interactable objects until the player is within a certain radius and line of sight. This encourages exploration and curiosity, as opposed to other games that make interactable objects too obvious and hand-held. The system also allows the player to initiate dialogues with other characters, inspect objects more closely, know more about objects in the environment or act as a cover for shooting. There are three types of interactables, Inspectable and Scripted, outlined in yellow and Cover in red. Disco Elysium hides interactables until you hover over it while also giving the player an option to make it easier by simply hitting the tab button to outline them. In Hogwarts Legacy, “Revelio” is a spell used to reveal hidden objects, messages, chests, puzzle components and invisible things. It starts to get repetitive as the player needs more information about the world and can cast the spell repeatedly.

> Intelligence System: The game uses inspectable and scripted interactables with a hidden intelligence system to provide clues and hints for the story progression. The player can interact with various objects in the environment to trigger dialogues that reveal more information about the world and the characters. Some of these interactions are dependent on the timing and sequence of events in the game whereas the story won’t move forward without some.

3.2 Does a unique gameplay experience in each chapter of the story add to the novelty of the experience?

> Levels of Exploration: Exploration is a key mechanic for the players to gain knowledge in the game. Every chapter is an event in Mariano’s past with the first and the last chapters set in the present. It is essential to have multiple floors in buildings such as warehouses and construction sites. Disco Elysium implements different floors and locations with a small loading scene between different levels and locations, which feels continuous despite being separate levels. The game prototype has cutscenes between each chapter as they occur in different years and within the chapter, everything flows naturally with the help of disappearing floors. Which fades out every floor above the player when they are indoors giving a more immersive experience.

> Stealth, Cover and Gunplay: In WRoEF, every character’s story is told in a different way by conveying a character’s emotion through their perspective of the same world. From playing as an owl, to sailing ships in your mind at work, wordplay and many more experiences. Similarly, One-Way Ride tries to use stealth, cover and shooting mechanics according to the story to have a dynamic gameplay. The dynamic cover system allows the use of dynamic animations allowing the player to crouch around cover which adjusts the crouch height keeping them hidden. This along with the cover-based shooting system allows for a mixed playstyle.

3.3 How can you alter player experience based on their prior interactions without changing the overarching narrative?

> Drunk and Health System: Disco Elysium has four skills which are Logic, which allows you to deduce facts to solve problems. Volition keeps your mind in check from impulses and negative emotions. Endurance determines your ability to withstand pain and other physical activities and Perception, which enhances the players understanding of an environment. All these skills affect and changes throughout the gameplay based on interactions and or decisions made during the run by creating branching storylines. In One-Way Ride, there are bottles scattered around the scene and the player can choose to drink from them or not. The drunk and health system are intertwined with the drunk meter which always reduces over time. Choosing to drink increases the drunk meter which in-turn reduces the maximum health the player can have. Drinking results in inaccurate aim during combat but at the same time reduces the damage received from rival gangs. Otherwise, players will have precise aim with more damage from the enemies.

3.4 How to create a fail state for stories central to the gameplay?

Some games use death as a narrative device that adds realism, drama, and choice to the story. Others use death as a gameplay mechanic that affects the difficulty, progression, and replayability of the game. Death in top-down games can be seen as an expression of the game’s vision and philosophy, as well as an invitation for the player to engage with the game’s world and systems. In Disco Elysium, the player can fail in multiple ways which affect the game differently. There are white checks which you can try again. Red checks, where the player will have to look for another way to solve an issue of accept the consequences. Other fail conditions include when u can’t progress, run out of time or lose all the health or morale. In this case, the game ends with a newspaper article that summarizes their demise and its impact on the world along with multiple other endings.  
Baldur’s Gate and Divinity: Original Sin are top-down RPGs that use a party system, where the player can control multiple characters and switch between them. If one character dies, the player can use another character to revive them with a spell, an item, or continue playing with the remaining characters.  
In One-Way Ride, there’s an autosave system which saves the objects interacted with and where the player is after important story events. Since the story is about the past of Mariano, failing would mean that it never happened. So, if the player dies in the game, there are a few lines where Mariano tries to recall the actual events as the game still plays in the background and is then reset to the last save point.

Challenges:

> While coming up with the idea of multiple levels of exploration, the main challenge was whether the game engine could handle as many objects in the scene and run with a consistent framerate as its going to be a continuous level. The issue was solved by using the occlusion culling in unity to only load and render the objects in the camera frustum.

> One of the main challenges was to balance the difficulty and pacing of each playstyle. Some testers found the shooting and surviving too hard. This affected their enjoyment and immersion in the game experience. Knowing that the shooting and cover had a learning curve, a small tutorial was implemented to fit and flow with the story.

> Since the prototype is a story driven game, coming up with mechanics that would alter player experience proved to be a tough task. It always seemed easy to just have branching dialogues based on player interaction with the NPC’s. But it wouldn’t be feasible along with the time constraint.

> One decision which had to be made earlier on was choosing between the different pipelines in unity. Performance wise, URP is better and can be used to build for mobiles and WebGL. But HDRP support much realistic graphics, volumetric fog, and a wide range of post-processing effects. Since the target platform is only PC and the game needed to look good and have high-fidelity graphics HDRP was the best solution.

> Being an Hons. project and working with a narrative designer, there was a lack of 2D and 3D artist to help bring out the look of the prototype. It was hard to manage both the mechanics and the level in the game engine simultaneously working on both. It felt like the project was lacking even though the mechanics were implemented. Adding to this there was a very limited time to develop the prototype and I had to take up multiple roles to ensure that the project was on track.