



UNIVERSITI TUNKU ABDUL RAHMAN (UTAR)

**DESIGN AND IMPLEMENTATION OF A
DUAL-DIMENSION DETECTIVE HORROR GAME TO
ENHANCE PLAYER TENSION AND
DECISION-MAKING**

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BACHELOR OF ARTS (HONOURS) GAME DESIGN

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Declaration

I, Lim Si Kai declare that this thesis report entitled “Design And Implementation of A Dual-Dimension Detective Horror Game to Enhance Player Tension And Decision-Making,” is my own original work except for the citation from the references. The report has not been accepted or submitted to any party and will only be submitted to Degree of Bachelor of Arts (Honours) Game Design under the University Tunku Abdul Rahman.

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Date: 20/5/2026

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Abstract

This Final Year Project is about designing and developing a dual-dimension detective horror game. The main idea of the project is to let the player explore a normal world and a spirit dimension in the same environment. The normal world is mainly used for investigation, clue searching, and understanding the story. The spirit dimension is used to show hidden information, supernatural danger, and a darker version of the same place.

The project looks at how this type of dimension switching can help create tension and affect player decision-making. When the player switches between the two worlds, the environment, clues, danger, and atmosphere can change. This makes the player think about when to stay in the normal world and when to enter the spirit dimension.

A practice-based research method is used in this project. The game prototype is developed together with a questionnaire survey. The survey collects opinions from respondents about horror atmosphere, dual-dimension design, investigation gameplay, level design, navigation, and decision-making. The respondents were not required to play the prototype, so the results are used to support the design direction instead of proving the final effectiveness of the game.

From the project, the dual-dimension idea can support detective horror gameplay by making players observe the environment, compare different versions of the same space, and make choices based on risk and reward. However, the prototype is still limited because of time and development scope. Future improvement can include clearer player guidance, better puzzle design, stronger visual and audio effects, and more advanced ghost behaviour.

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CHAPTER 1.0: Introduction

Video games can create different feelings through gameplay, story, sound, visuals, and player interaction. In horror games, tension is usually created through darkness, danger, uncertainty, disturbing environments, and the pressure of making choices. However, if a horror game only uses jump scares or repeated enemy encounters, the fear can become less effective after the player understands the pattern.

This project focuses on a dual-dimension detective horror game. The game combines investigation, supernatural elements, environmental storytelling, and decision-making. The player explores two versions of the same environment, which are the normal world and the spirit dimension. Each version of the environment gives different information, danger, and interaction.

In the game, the player acts as a detective who investigates supernatural cases in haunted locations. The player needs to explore the area, collect clues, observe the environment, and interact with important objects. The spirit dimension is not only used as a visual change. It also works as part of the gameplay because it can reveal hidden clues, ghost traces, strange events, and paths that cannot be seen in the normal world.

The main purpose of this project is to study how dual-dimension level design, environment art, and narrative elements can support tension and decision-making in a detective horror game. The project also looks at how the difference between the normal world and the spirit dimension can affect how the player moves, investigates, and reacts to danger.

1.1 Problem Statement

Horror games usually depend on fear, tension, and uncertainty to keep the player engaged. Many horror games use jump scares, scripted events, or direct enemy encounters to scare the player. These methods can work for a short moment, but they may become predictable if they are repeated too often. When the player already knows what type of scare will happen, the horror effect can become weaker.

In detective or investigation-based horror games, the gameplay can also become too passive if the player only needs to collect clues or follow a fixed path. If the investigation does not involve risk, pressure, or decision-making, the player may feel less involved. This can reduce the feeling of danger and make the horror atmosphere weaker.

A dual-dimension system can be used to improve this problem. The normal world can be used for clue searching, investigation, and story understanding. The spirit dimension can show hidden supernatural elements, dangerous areas, and different paths. This can make the same environment feel different and create more tension for the player.

However, the dual-dimension system must be designed properly. If it only changes the visual appearance, it may feel like decoration and not an important gameplay mechanic. Therefore, this project focuses on how to design a dual-dimension detective horror game where switching between dimensions affects tension, navigation, investigation, and decision-making. The project also explores how level design, environment changes, atmosphere, and clues can work together to create a stronger horror experience.

1.2 Objectives

The objectives of this project are:

1. To design and implement a dual-dimension detective horror game that enhances player tension.
2. To examine how level design and spatial layout influence player decision-making across different dimensions.
3. To explore how environment art and narrative elements can be integrated into gameplay to support psychological tension.

1.3 Research Questions

This project is guided by the following research questions:

1. How can a dual-dimension system enhance tension in a detective horror game?
2. How does level design influence player decision-making when navigating between the normal world and the spirit dimension?
3. How can environment art and narrative elements support psychological horror and investigation gameplay?
4. How can visual and audio feedback help players understand danger, clues, and supernatural events?
5. How effective is the implemented prototype in delivering tension, exploration, and decision-making?

1.4 Significance of the Research

This project is significant because it explores how horror game tension can be created through more than direct scares or enemy attacks. Instead of depending only on jump scares, the project focuses on environmental tension, uncertainty, spatial changes, and player decision-making. This allows the horror experience to feel more interactive and connected to gameplay.

The dual-dimension system provides a way to make the same environment feel different depending on the player's current state. By changing the visual style, available clues, enemy presence, and interactable objects between dimensions, the game encourages players to think carefully before switching dimensions. This creates a stronger connection between mechanics and atmosphere.

This research may benefit game designers who are interested in creating horror games that use space, level design, and environmental storytelling to create tension. It also provides useful insight into how supernatural mechanics can be integrated into detective gameplay. For the project team, this study helps guide the development of the game prototype by connecting design decisions with player experience.

In addition, this project is relevant to game art and level design because it examines how visual contrast between two dimensions can affect mood, navigation, and player interpretation. The normal world can establish realism and investigation, while the spirit dimension can distort familiar spaces into something dangerous and unfamiliar. This contrast helps strengthen the psychological horror experience.

1.5 Project Scope

The scope of this project is focused on the development of a playable prototype for a dual-dimension detective horror game. The prototype will include a limited but complete gameplay experience that demonstrates the main mechanics and design direction of the full game concept.

The project scope includes:

- A playable detective character controlled by the player.
- A small horror-themed level or environment.
- A normal world version of the level.
- A spirit dimension version of the same level.
- Basic investigation mechanics such as clue collection and object interaction.
- Environmental storytelling through props, lighting, layout, and visual design.
- Dimension-switching mechanics.
- Puzzle or progression elements connected to both dimensions.
- Basic horror events, ghost presence, or threat-based encounters.
- User interface elements that support gameplay understanding.
- Sound effects and atmosphere to support tension.
- Survey-based evaluation to support the design direction of the prototype.

The project does not aim to develop a full commercial game. Due to time and production limitations, the prototype will focus on demonstrating the core gameplay concept, visual direction, and player experience instead of creating a large-scale game with multiple complete levels.

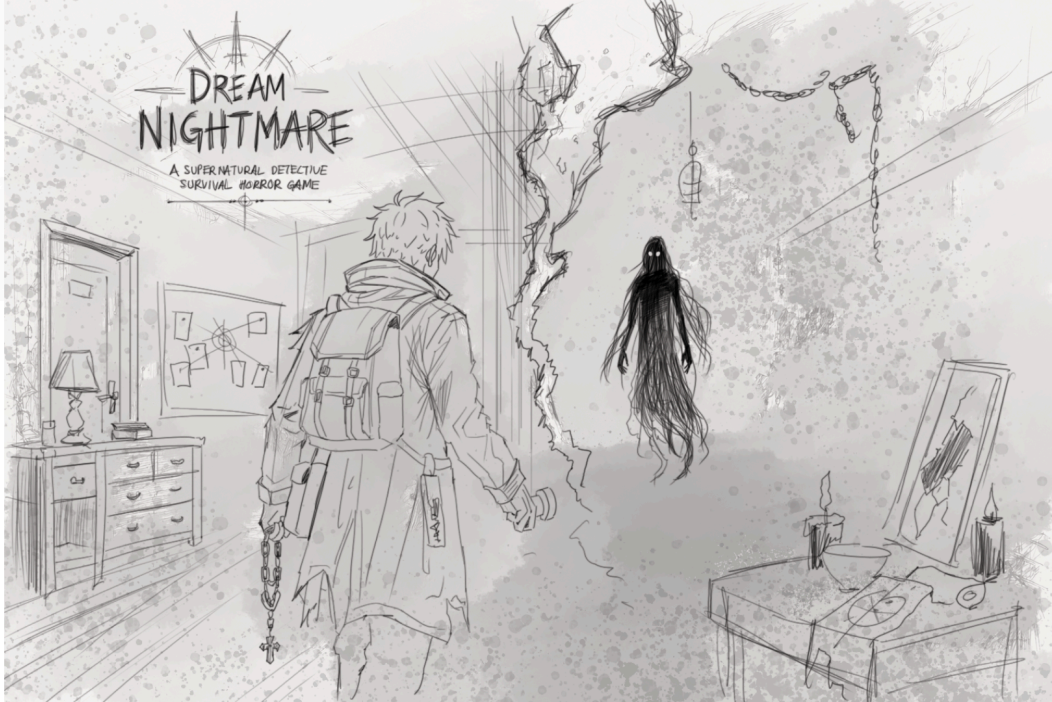


Figure 1.1: Normal World and Spirit Dimension Environment Concept



Hallway
from
Room

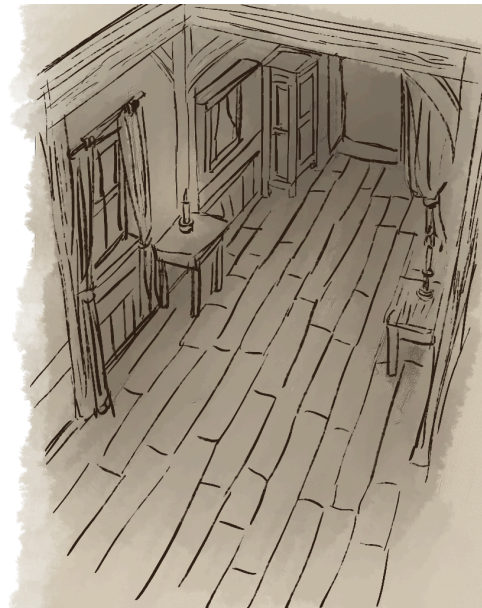


Figure 1.2: Environment Concept

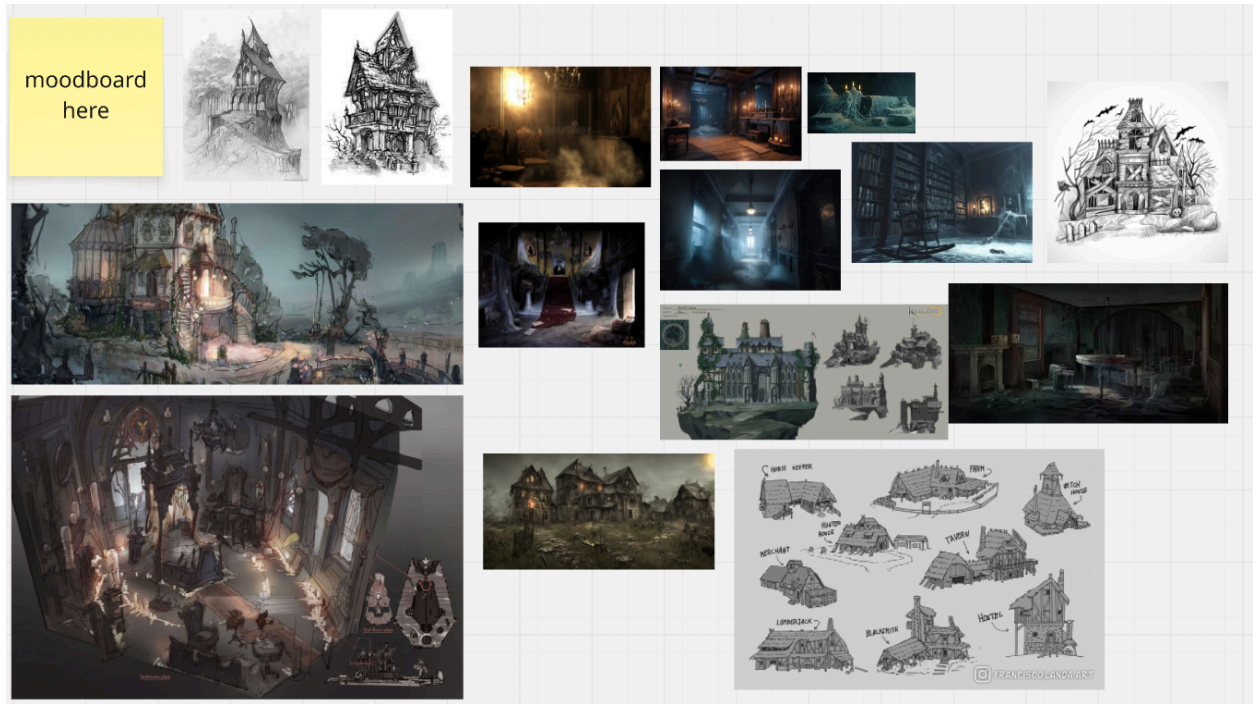


Figure 1.3: Normal World and Spirit Dimension Moodboard

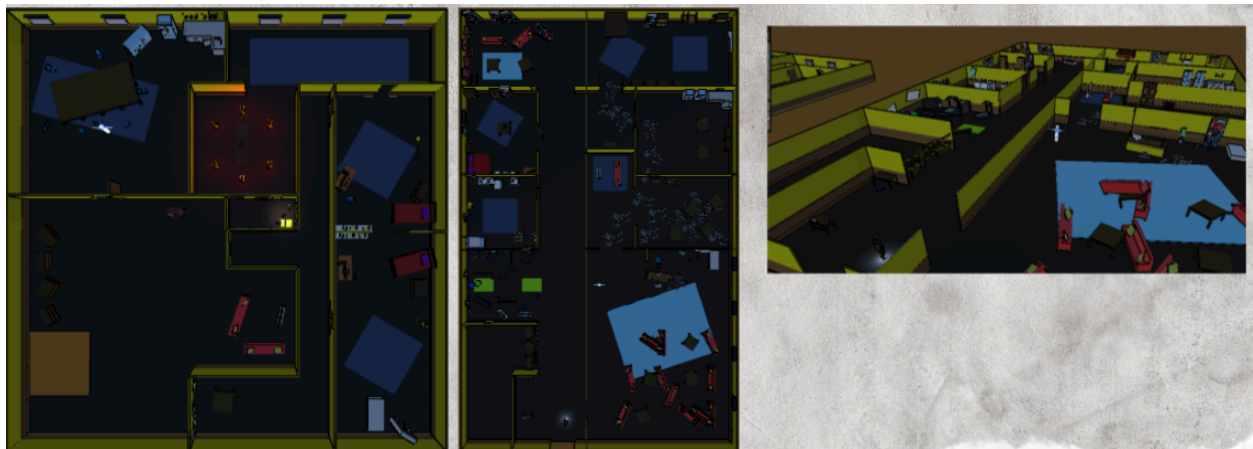


Figure 1.4: Prototype Level Layout

1.6 Limitations of the Project

This project has several limitations. First, the prototype is developed within the limited duration of the Final Year Project period. Therefore, the game content, level size, number of enemies, number of puzzles, and amount of narrative content are limited.

Second, the project is developed by a student team with limited resources compared to a professional game studio. Some assets, animations, sound effects, and visual effects may be simplified or created as placeholders during early development.

Third, the evaluation of the project involves a limited number of survey respondents. As a result, the feedback collected may not represent the experience of all horror game players. However, the survey feedback can still provide useful insight into how respondents view the dual-dimension system, level design, and horror atmosphere.

Finally, the implementation focuses mainly on the prototype's core mechanics and atmosphere. Some advanced features, such as complex artificial intelligence, large branching narratives, or highly polished cinematic sequences, may be outside the current project scope.

1.7 Summary

In summary, this chapter introduced the background, problem statement, objectives, research questions, significance, scope, and limitations of the project. The project focuses on designing and implementing a dual-dimension detective horror game that enhances player tension and decision-making. By combining investigation, level design, environmental storytelling, and supernatural dimension switching, the project aims to create a horror experience where players feel pressure not only from enemies, but also from the decisions they make while exploring the game world.

The next chapter will review related games, concepts, and studies that support the development of this project, including horror game design, detective gameplay, environmental storytelling, psychological tension, and dual-world or dimension-based mechanics.

Chapter 2.0: Literature Review

This chapter reviews existing studies, game designs, and theoretical concepts related to horror games, detective gameplay, environmental storytelling, and dual-dimension mechanics. The purpose of this chapter is to identify current design approaches, analyze their strengths and weaknesses, and highlight gaps that this project aims to address.

The literature review focuses on four key areas:

- Horror game design and player tension
- Detective and investigation-based gameplay
- Environmental storytelling and spatial design
- Dual-dimension or parallel world mechanics

These areas are directly related to the development of the proposed dual-dimension detective horror game.

2.1: Horror Game Design and Player Tension

Horror games aim to create emotional responses such as fear, anxiety, and tension. Traditional horror design often relies on jump scares, scripted events, and enemy encounters. While these methods can be effective in the short term, repeated exposure may reduce their impact.

Modern horror game design focuses more on **psychological tension**, which is created through:

- Uncertainty
- Limited information
- Environmental atmosphere
- Sound design
- Player vulnerability

Psychological horror is often more effective because it engages the player's imagination rather than relying only on visual scares.

For example, games like:

- *Silent Hill series*
- *Amnesia: The Dark Descent*
- *Outlast*

use darkness, sound cues, and limited resources to create fear without constant direct threats.

Key concept:

Tension increases when the player is unsure about what will happen next.



Figure 2.1: Horror Environment Reference with Limited Visibility



Figure 2.2: Investigation and Clue System Reference

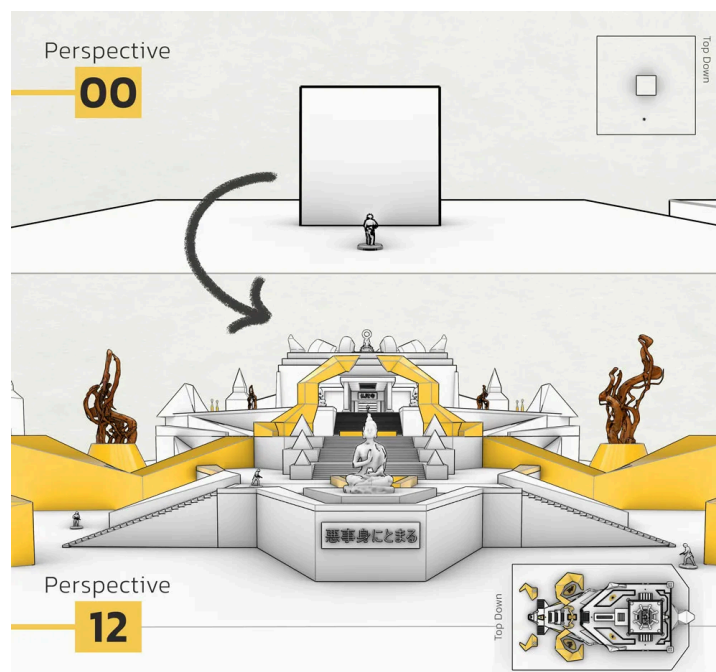


Figure 2.3: Level Layout and Decision Point Reference



Figure 2.4: Normal World and Spirit World Interaction Diagram

2.2 Detective Gameplay and Investigation Mechanics

Detective gameplay focuses on observation, deduction, and decision-making. Players are required to:

- Collect clues
- Analyze information
- Connect evidence
- Make conclusions

However, many investigation-based games can become passive if the gameplay is too linear or lacks challenge.

Games such as:

- *Phasmophobia*
- *L.A. Noire*
- *Return of the Obra Dinn*

introduce different investigation approaches, including:

- Evidence-based deduction
- Environmental clues
- Dialogue interaction
- Pattern recognition

In horror detective games like *Phasmophobia*, tension is created by combining investigation with danger. Players must gather evidence while avoiding supernatural threats.

Key issue identified:

- Investigation alone is not enough
- Must combine with **risk or pressure** to maintain engagement

2.3 Environmental Storytelling in Games

Environmental storytelling refers to the use of game environments to communicate narrative without direct dialogue or text.

This includes:

- Object placement
- Lighting
- Level design
- Visual details
- Sound design

Instead of telling the player directly, the environment allows the player to **discover the story themselves**.

For example:

- A broken chair may suggest struggle
- Blood stains may indicate past events

- Lighting changes may suggest danger

Games such as:

- *Dark Souls*
- *The Last of Us*
- *Resident Evil*

use environmental storytelling effectively to immerse players in the world.

In horror games, environmental storytelling is important because it:

- Builds atmosphere
- Creates tension without enemies
- Encourages exploration
- Supports narrative immersion

Key concept:

Environment itself becomes a storytelling tool.

2.4 Level Design and Player Decision-Making

Level design plays a critical role in guiding player movement, decision-making, and emotional experience.

In horror games, level design can influence:

- Player navigation
- Sense of safety vs danger
- Escape routes
- Exploration paths

Key level design techniques include:

- Narrow corridors → increase tension
- Open spaces → reduce tension
- Limited visibility → increase uncertainty
- Maze-like structures → create confusion

Decision-making becomes important when players must choose between:

- Safe path vs risky path
- Exploration vs escape
- Staying vs moving forward

In this project, level design is used together with dual-dimension mechanics to create different gameplay experiences within the same space.

2.5 Dual-Dimension and Parallel World Mechanics

Dual-dimension mechanics involve having two versions of the same game world. Players can switch between these worlds, and each version provides different gameplay elements.

Examples include:

- *The Medium* → Real world vs spirit world
- *Dishonored 2* (*Clockwork Mansion* / *Crack in the Slab*)
- *The Legend of Zelda: A Link Between Worlds*

These mechanics are used for:

- Puzzle solving
- Exploration
- Narrative progression

In horror games, dual-dimension systems are especially effective because they:

- Create contrast between safe and dangerous states
- Reveal hidden information

- Distort familiar environments
- Increase tension when switching

However, a common issue is that dual-dimension mechanics are sometimes used only for puzzles and not fully integrated into core gameplay.

Key gap identified:

- Need stronger integration between dimension switching and player tension

2.6 Gap Analysis

From the literature and game analysis above, several gaps can be identified:

1. Many horror games rely too heavily on jump scares instead of sustained tension.
2. Investigation gameplay often lacks pressure or meaningful consequences.
3. Environmental storytelling is used, but not always integrated with gameplay mechanics.
4. Dual-dimension systems are often limited to puzzles rather than full gameplay integration.

This project aims to address these gaps by:

- Combining investigation with danger
- Using dual-dimension as a core mechanic
- Integrating environment, narrative, and gameplay
- Enhancing player tension through decision-making

2.7 Summary

This chapter reviewed key concepts and existing works related to horror game design, detective gameplay, environmental storytelling, level design, and dual-dimension mechanics. The analysis shows that while each area has been explored individually, there is an opportunity to integrate these elements into a single system that enhances player tension and engagement.

The next chapter will describe the design methodology and technical approach used to develop the proposed game prototype.

Chapter 3.0: Methodology

This chapter describes the methodology used in the design and development of the dual-dimension detective horror game. It explains the overall approach, system design, gameplay structure, and technical implementation used to achieve the objectives stated in Chapter 1.

The methodology focuses on how different elements—such as level design, dual-dimension mechanics, environmental storytelling, and player interaction—are designed and integrated into a functional prototype. This chapter also justifies the design decisions based on the concepts discussed in the literature review.

3.1 Research Design

This project uses a practice-based research approach with support from a questionnaire survey. This approach is suitable because the project is not only about writing research, but also about making a game prototype. The game prototype is used to show the main idea of a dual-dimension detective horror game.

The practice-based part focuses on designing and developing the gameplay system, level idea, environment direction, and dimension switching mechanic. The survey part is used to collect opinions from respondents about horror atmosphere, dual-dimension level design, investigation elements, navigation, and decision-making.

This method helps the project connect design work with user opinion. The prototype shows how the idea is applied in game form, while the survey helps support whether the design direction is understandable and suitable for a detective horror game.

3.2 Research Method

The research method used for this project is a questionnaire survey. A survey was chosen because feedback can be collected from several respondents in a short time. Since the project has limited time, this method is more practical than doing a long playtest session.

The survey focuses on player opinions about horror level design, dual-dimension mechanics, investigation gameplay, navigation, and decision-making. Most of the questions use a five-point Likert scale, where respondents can choose from “Strongly Disagree” to “Strongly Agree.” This helps show whether respondents agree or disagree with the design ideas used in the project.

The survey also includes open-ended questions. These questions allow respondents to write their own opinions, such as what makes a horror level tense, what makes a level confusing, and what features are important in a detective horror game.

The respondents do not need to play the prototype before answering the survey. The survey is mainly used to collect general opinions based on their gaming experience. Because of this, the results are used to support the design direction, not to fully prove the final quality of the prototype.

3.3 Respondents / Sampling

The target respondents for this survey are people who have experience playing video games. The respondents can include students, friends, classmates, casual players, and people who are interested in horror, adventure, puzzle, detective, mystery, or exploration games.

This project uses convenience sampling. This means the survey is shared with people who are easier to reach within the available time. This method is suitable for this Final Year Project because the data collection time is limited, and the purpose is to get initial feedback instead of representing all horror game players.

The survey also asks basic background questions, such as age, gender, gaming frequency, preferred game genres, and years of gaming experience. These questions help give context to the survey results.

3.4 Survey Instrument

The survey is created using Google Forms. It is divided into several sections so that the questions are easier for respondents to answer. The first section collects demographic information. The other sections ask about horror atmosphere, dual-dimension design, investigation gameplay, level design, navigation, and player guidance.

Most questions use a five-point Likert scale. The scale starts from 1, which means “Strongly Disagree,” and ends at 5, which means “Strongly Agree.” This format is used because it is simple for respondents and easy to summarize later.

The survey also includes open-ended questions. These questions are added so respondents can explain their opinions in their own words. Their answers can help identify common comments about tension, atmosphere, clue design, navigation, and the dual-dimension idea.

The survey sections are shown in Table 3.1.

Section	Focus
Section A	Demographic background
Section B	Horror atmosphere, tension, and immersion
Section C	Dual-dimension game design
Section D	Investigation, clues, and decision-making
Section E	Level design, navigation, and player guidance
Section F	Open-ended feedback

Table 3.1 Survey Sections

3.5 Data Collection Procedure

The survey is distributed online using Google Forms. Before answering, respondents are given a short explanation about the purpose of the survey. The form also explains that the survey is for academic use and that the answers will be kept anonymous.

Respondents answer the questions based on their own gaming experience and understanding of game design. They are not required to play the prototype before answering. This is because the survey is used to understand general opinions about horror atmosphere, dual-dimension design, investigation gameplay, navigation, and decision-making.

The survey link is shared with classmates, friends, and other available respondents. Some responses can also be collected during the project exhibition. After the responses are collected, the results are checked and summarized to find common patterns and opinions.

3.6 Data Analysis Method

The survey results are analysed using simple descriptive analysis. For the Likert-scale questions, the responses are summarized by looking at the frequency and average score. This helps show whether most respondents agree or disagree with the design ideas in the survey.

The open-ended answers are reviewed manually. Similar answers are grouped into common themes, such as horror tension, atmosphere, navigation, clue design, player confusion, and the dual-dimension mechanic. These themes are then used to support the discussion in Chapter 5.

This project does not use complex statistical analysis. The purpose of the analysis is to support the design evaluation and understand whether the game concept matches general player expectations.

3.7 Ethical Consideration

The survey is only used for academic purposes. Respondents are informed that joining the survey is voluntary. They can choose not to answer if they do not want to continue.

The survey does not collect personal information such as name, student ID, phone number, or email address. The answers are treated as anonymous and confidential. The collected data is only used for this Final Year Project thesis and related academic work.

A consent question is also included in the Google Form so that respondents understand the purpose of the survey before they answer.

3.8 Horror and Tension System

Tension is created through multiple elements working together.

Methods Used:

- Limited visibility
- Sudden environmental changes
- Audio cues (whispers, footsteps, distortion)
- Presence of unseen threats
- Dimension-based danger

Instead of constant enemies, tension is built gradually through atmosphere and uncertainty.

Design Purpose:

- Maintain player anxiety
- Avoid predictable horror patterns

3.9 Technical Implementation

The prototype is developed using a game engine

Key Technical Components:

- Scene management system
- Camera system
- Lighting and post-processing
- Interaction scripts
- Dimension switching logic
- Audio system

Example Implementation:

- Press key → trigger dimension switch

- Change materials / lighting
- Enable/disable objects
- Activate ghost entities



Figure 3.6: Dimension Switching System Logic

3.10 Testing and Evaluation Method

The evaluation method for this project is based on a questionnaire survey. The survey is used to collect opinions about design elements that are related to detective horror games. These elements include horror atmosphere, dual-dimension level design, investigation mechanics, environmental storytelling, navigation, and decision-making.

The respondents do not need to play the prototype before answering. They answer based on their own gaming experience and understanding of game design. Because of this, the survey result is used to support the design direction, not to fully prove how effective the prototype is during gameplay.

The evaluation focuses on a few main areas. First, it looks at whether lighting, sound, uncertainty, and environmental details can increase tension. Second, it looks at whether switching between the normal world and spirit dimension can make exploration and decision-making more interesting. Third, it looks at whether clues, puzzles, and environmental storytelling can support detective gameplay.

The Likert-scale answers are summarized using average scores, while the open-ended answers are reviewed to find common opinions and suggestions. These findings are discussed in Chapter 5.

3.11 Summary

This chapter explained the method used for the project. The project uses a practice-based approach because it involves designing and developing a game prototype. A questionnaire survey is also used to collect opinions from respondents.

The chapter explained the research design, survey method, respondent group, survey instrument, data collection process, data analysis method, and ethical consideration. It also explained how the horror and tension system and technical implementation are planned in the prototype.

The next chapter will explain the result of the game development, including the environment, gameplay systems, user interface, and how the main systems are connected together.

Chapter 4.0: Results and Analysis

This chapter presents the design and implementation of the dual-dimension detective horror game. It focuses on how the concepts discussed in previous chapters are translated into a functional game prototype.

The chapter covers the visual design, gameplay systems, environment construction, user interface, and technical implementation. Each section explains both the design intention and how it is implemented in the game.

4.1 Game Overview

The developed game is a **dual-dimension detective horror prototype**, where the player takes the role of a detective investigating a supernatural case.

The core gameplay revolves around:

- Exploration
- Investigation
- Dimension switching
- Environmental interaction
- Puzzle-solving

The player navigates through a haunted environment, collects clues, and switches between the normal world and the spirit dimension to progress.

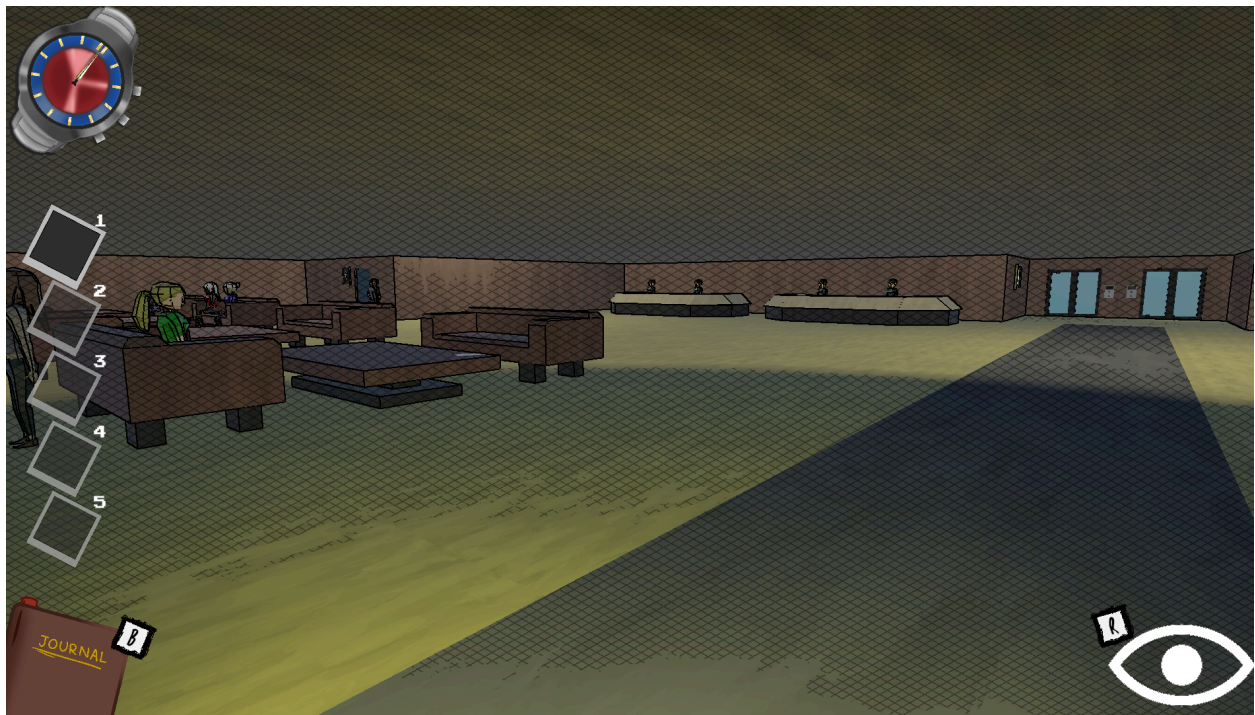


Figure 4.1: Gameplay Environment Screenshot

4.2 Character Design

The player character is designed as a detective figure, representing investigation and exploration.

Design Features:

- First-person / third-person perspective
- Basic movement (walk, run, interact)
- Interaction ability with objects
- Ability to switch dimensions

The character design focuses more on functionality rather than complex animation, as the main emphasis is on gameplay mechanics.

4.3 Environment Design

The environment is designed to create a horror atmosphere while supporting investigation gameplay.

Key Design Elements:

- Indoor setting
- Narrow corridors to increase tension
- Rooms with interactive objects
- Controlled lighting to create mood

The environment uses dark tones, limited visibility, and detailed props to enhance immersion.

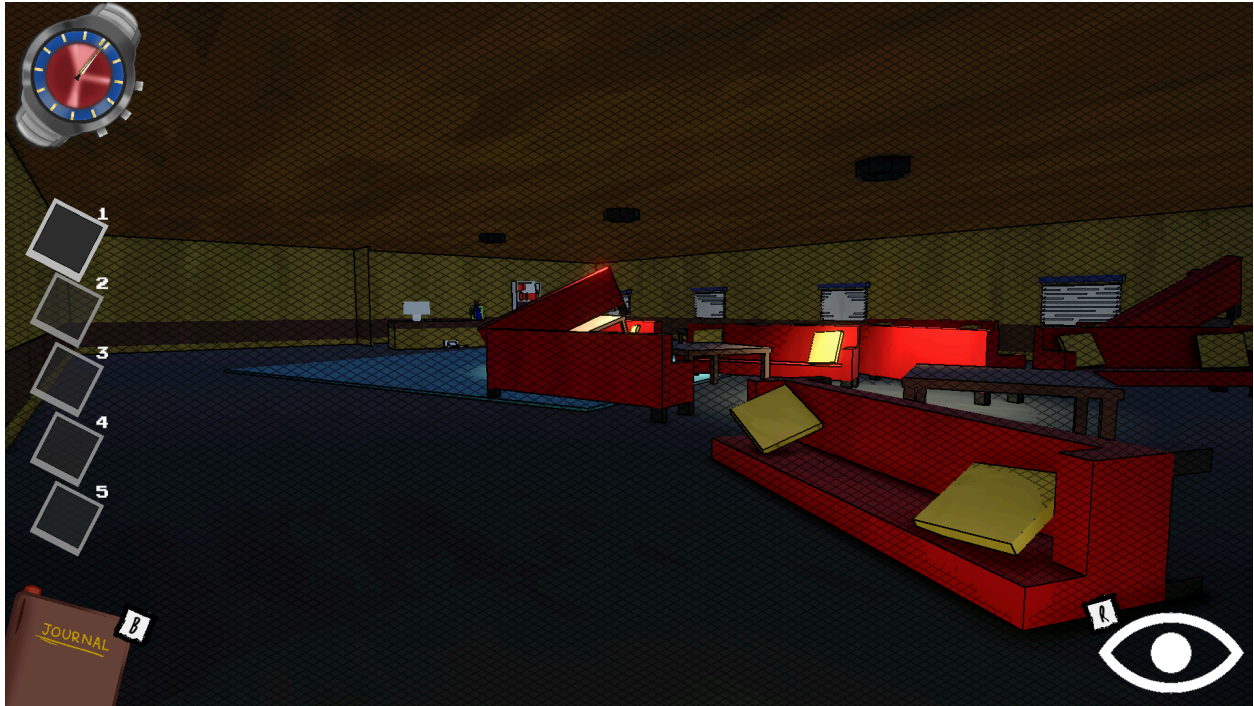


Figure 4.3: Environment Overview Screenshot

4.4 Dual-Dimension Environment Design

Each environment has two versions:

Normal World:

- Clean or realistic appearance
- Used for investigation
- Lower threat level

Spirit Dimension:

- Distorted visuals
- Darker lighting

- Presence of supernatural elements
- Hidden objects revealed

The difference between the two dimensions helps create contrast and tension.



Figure 4.4: Normal World and Spirit Dimension Comparison

4.5 Level Design

The level is designed to guide the player while maintaining uncertainty.

Features:

- Multiple rooms and pathways
- Locked/unlocked areas
- Puzzle locations
- Clue placement

The player must explore the level to find clues and progress.

Level design also changes depending on the dimension:

- Paths may open/close
- Objects may appear/disappear

4.6 Gameplay Mechanics

4.6.1 Movement System

The player can:

- Move forward/backward
- Turn camera
- Interact with objects

This allows exploration of the environment.

4.6.2 Dimension Switching System

This is the core mechanic of the game.

Function:

- Player presses a key → switch dimension
- Environment changes
- New objects/enemies appear

Implementation:

- Enable/disable objects
- Change lighting and materials
- Trigger sound effects

This system creates risk-reward decisions.

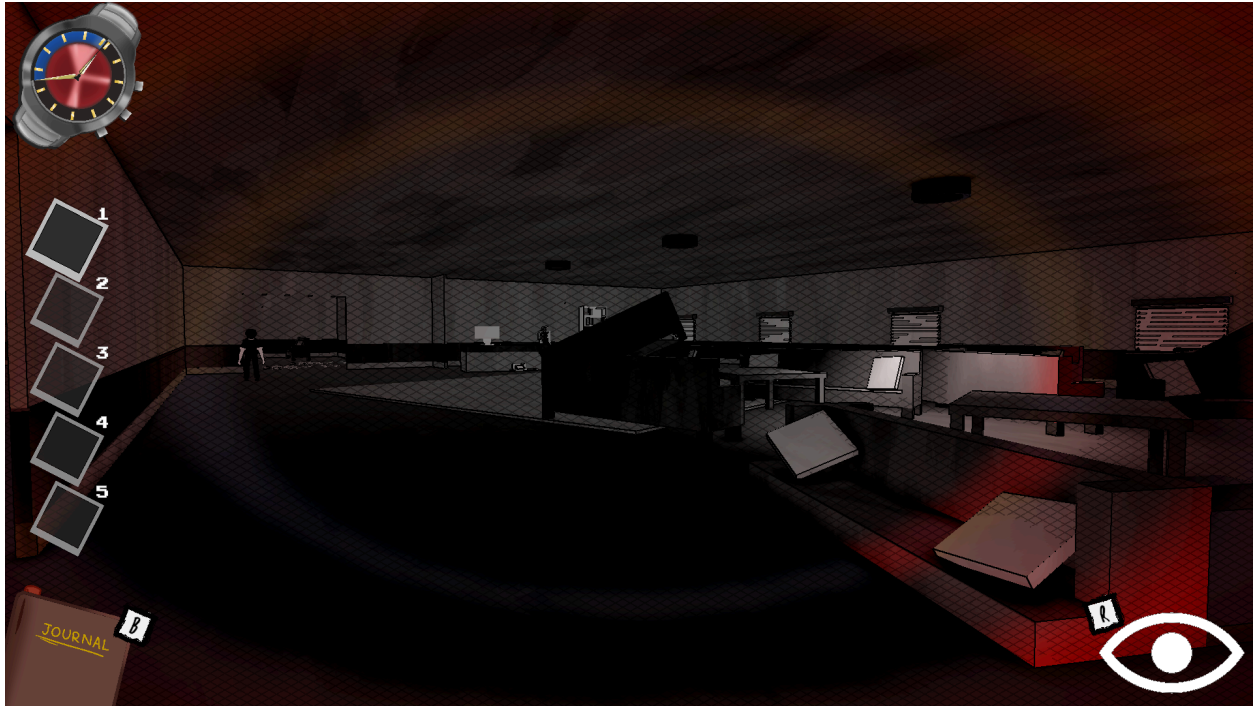


Figure 4.6: Dimension Switching Effect

4.6.3 Investigation System

The player can interact with objects to collect clues.

Features:

- Highlight interactable objects
- Display clue information
- Trigger events

This supports detective gameplay.

4.6.4 Puzzle System

Puzzles are used to control progression.

Examples:

- Finding codes
- Unlocking doors
- Using clues

Some puzzles require switching dimensions to solve.



Figure 4.7: Interaction or Clue Collection UI

4.6.5 Horror Event System

Horror elements are triggered during gameplay.

Types:

- Sound effects
- Visual distortion
- Ghost appearances
- Environmental changes

These events are used to create tension.

4.7 User Interface Design

The UI is designed to be simple and functional.

UI Elements:

- Interaction prompt
- Clue display
- Game menu
- Pause menu

The UI avoids clutter to maintain immersion.



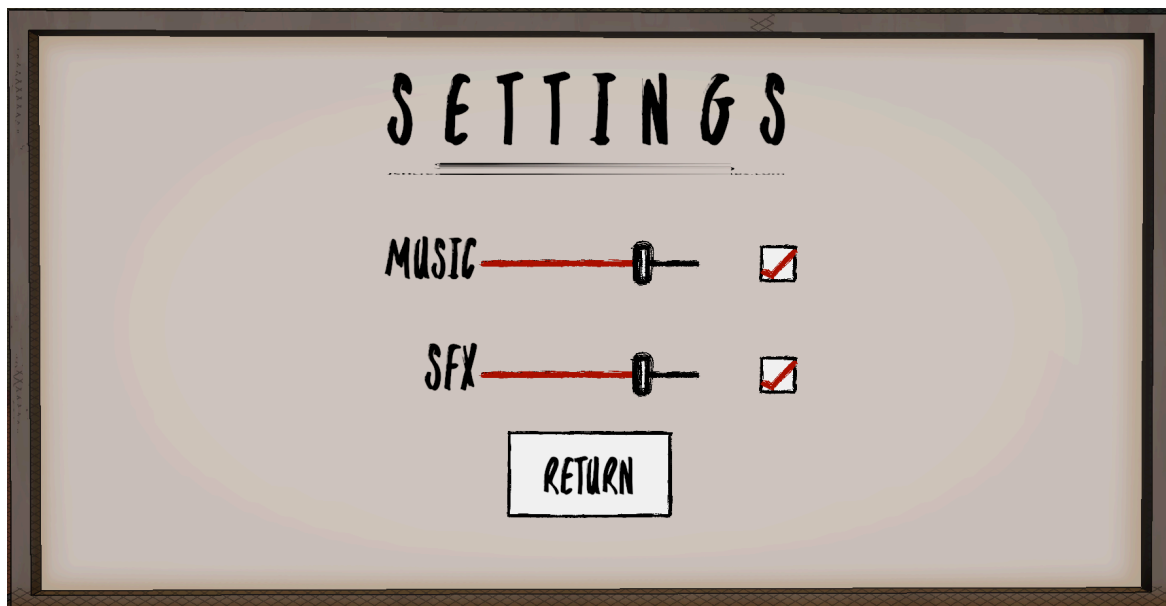
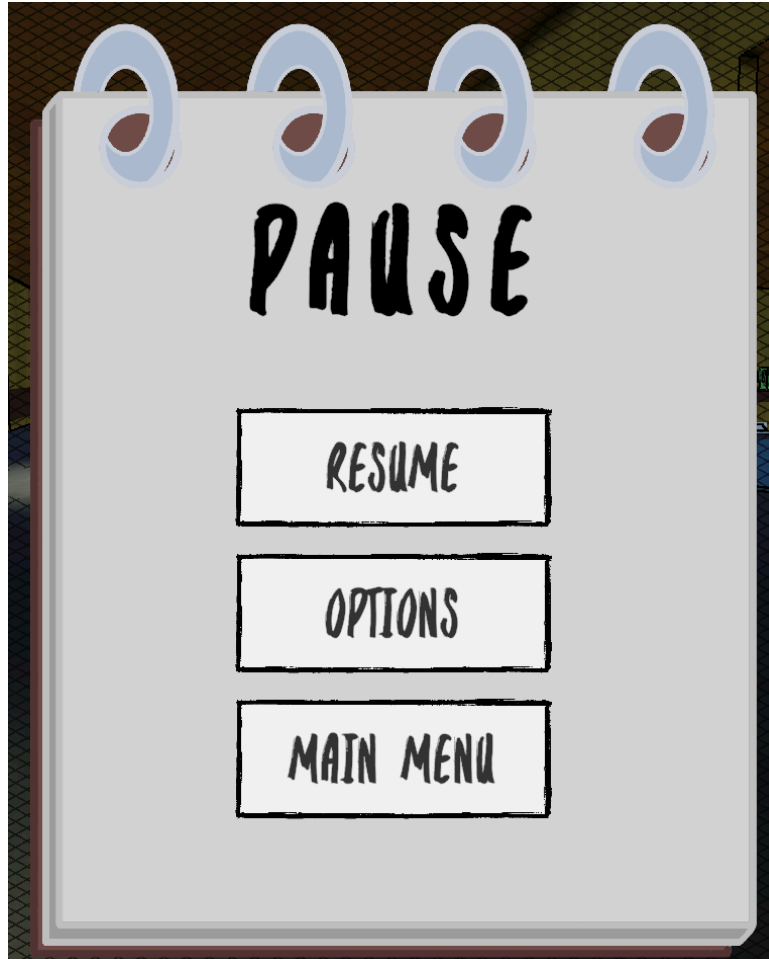


Figure 4.9: User Interface Screenshot

4.8 Audio Design

Audio plays a major role in creating tension.

Audio Elements:

- Ambient sounds
- Footsteps
- Environmental noise
- Horror sound effects

Sound is used to:

- Warn player
- Build atmosphere
- Enhance fear

4.9 Technical Implementation

The game is developed using a game engine.

Key Systems:

- Script-based interaction system
- Dimension switching logic
- Lighting and post-processing
- Scene management
- Audio system

Example Implementation:

- Key input → trigger script
- Script → switch objects and lighting
- Trigger events based on player position

4.10 Integration of Systems

All systems are integrated to create a complete gameplay experience.

Integration Example:

- Player explores → finds clue
- Clue requires dimension switch
- Switch → reveals new path
- Progress → triggers horror event

This integration ensures that mechanics are connected, not isolated.

4.11 Evaluation Preparation

The prototype was prepared to support the explanation of the game concept, gameplay systems, and design direction. Since the main evaluation method of this project is a questionnaire survey, the prototype is used as a design reference rather than a full playtesting requirement.

The evaluation focuses on whether the proposed game design elements are suitable for a detective horror game. These elements include horror atmosphere, dual-dimension design, investigation mechanics, environmental storytelling, navigation, and player decision-making.

The survey was prepared to collect respondents' opinions based on their general gaming experience and understanding of game design. The results are then used to support the discussion of the project's design direction in Chapter 5.

Focus:

- Horror atmosphere and tension
- Dual-dimension game design
- Investigation and clue mechanics
- Level design and navigation
- Player decision-making

4.12 Summary

This chapter presented the design and implementation of the dual-dimension detective horror game. The game integrates environment design, gameplay mechanics, and technical systems to create a prototype focused on tension and decision-making.

The next chapter will discuss the survey findings and explain how the results support the design direction of the project.

Chapter 5.0: Discussion

This chapter discusses the findings collected from the questionnaire survey. The survey was conducted to understand respondents' opinions on how horror atmosphere, dual-dimension level design, investigation mechanics, environmental storytelling, navigation, and player guidance can affect player tension and decision-making in detective horror games.

The findings are used to support the design direction of the project rather than to evaluate a completed commercial game. Since respondents were not required to play the prototype, the discussion focuses on general player perception and how the survey results relate to the design and implementation of the proposed dual-dimension detective horror game.

5.1 Survey Setup

A questionnaire survey was used to collect feedback about the design direction of the project.

The survey asked respondents about horror atmosphere, dual-dimension design, investigation mechanics, clue searching, level design, navigation, environmental storytelling, and player decision-making.

The respondents answered the survey based on their own gaming experience. They were not required to play the prototype before answering. This is because the main purpose of the survey is to understand whether the game idea and design direction are suitable for a detective horror game.

The survey includes demographic questions, Likert-scale questions, and open-ended questions. The demographic part is used to understand the respondents' gaming background. The Likert-scale questions are used to see how much respondents agree with each design statement. The open-ended questions allow respondents to give their own opinions and suggestions.

5.2 Survey Results Overview

The survey results show how respondents think about horror game design, dual-dimension mechanics, and decision-making. The results are not used as proof that the prototype is fully successful. Instead, the results are used to support the design direction and show whether the idea is understandable to players.

For horror atmosphere, the survey focuses on lighting, visual style, sound, ambience, uncertainty, and environmental details. These are important because horror games do not only depend on enemies. The mood of the place can also make the player feel tense.

For dual-dimension design, the survey looks at whether switching between a normal world and a spirit dimension can make exploration more interesting. This is related to the main mechanic of the project. If respondents agree with this idea, it supports the use of two connected versions of the same level.

For investigation and decision-making, the survey focuses on clues, puzzles, observation, risk, and player choices. These parts are important because a detective horror game should not only ask the player to collect objects. It should also make the player think, observe, and decide what to do next.

5.3 Discussion of Horror Tension and Atmosphere

The survey results support the idea that horror tension can come from atmosphere, lighting, sound, uncertainty, and environmental details. These elements are important because they affect

how the player feels while exploring the game area. For example, a dark hallway, strange sound, or unclear visual detail can already make the player feel unsafe before an enemy appears.

This is related to the project because the game is designed to create tension through the environment. The project does not only depend on jump scares. The normal world is used to make the player investigate and understand the location. The spirit dimension is used to make the same place feel more dangerous and unfamiliar.

The survey also supports the use of psychological tension. The game does not need to show danger all the time. Sometimes, the player can feel more tension when they are unsure about what will happen next. This fits the detective horror genre because the player needs to explore and think while still feeling that something might happen.

5.4 Discussion of Dual-Dimension Design

5.4 Discussion of Dual-Dimension Design

The dual-dimension system is the main idea of this project. The survey results show that respondents generally think two connected worlds can make exploration more interesting. In this project, the two worlds are the normal world and the spirit dimension.

The normal world is used for investigation, clue collection, and environmental storytelling. The spirit dimension is used to reveal hidden information, supernatural traces, changed spaces, and possible danger. Because of this, the player needs to think before switching dimension.

This mechanic is important because it should not only change the visual style. If the spirit dimension only looks different but does not affect gameplay, the system may feel weak. Therefore, the project uses the spirit dimension as part of the gameplay. It can affect exploration, clue discovery, puzzle progress, and tension.

5.5 Discussion of Investigation and Decision-Making

The survey results suggest that investigation can make horror games more engaging when the player needs to observe, search for clues, and make decisions. Detective gameplay should not only be about picking up items. It should also make the player look at the environment and connect information.

This supports the design of the project because the game combines investigation with supernatural horror. The player explores the environment, finds clues, and decides when to use the spirit dimension to reveal hidden information. This makes the investigation process more connected to the horror mechanic.

Decision-making is also important in this project. When the player switches into the spirit dimension, they may find clues or paths, but they may also face more danger. This creates a simple risk-and-reward situation. The player needs to decide whether it is safer to stay in the normal world or enter the spirit dimension to continue the investigation.

5.5.1 Relation to Project Objectives

Objective 1: Enhance player tension

The survey findings support the idea that player tension can be created through atmosphere, lighting, sound, uncertainty, and dimension switching. This matches the first objective because the project is designed to create horror tension without depending only on jump scares.

Objective 2: Influence decision-making

The survey findings show that risk, exploration, clue discovery, and dual-dimension mechanics can support decision-making. This relates to the second objective because the player needs to decide when to explore, when to switch dimension, and when to move forward.

Objective 3: Integrate environment and narrative

The survey findings also show that props, lighting, visual cues, and environment details can support story and immersion. This relates to the third objective because the project uses the environment to show story details and build psychological tension.

5.5.2 Strengths of the Design Direction

Based on the survey discussion, the design direction has several strengths. The dual-dimension idea can create contrast between investigation and danger. The normal world can be used for clue searching and story understanding, while the spirit dimension can make the same place feel more unsafe.

The horror atmosphere can also be supported through lighting, sound, uncertainty, and environment details. These elements help create tension even when there is no enemy directly attacking the player.

The investigation mechanic is another strength because it encourages the player to observe the environment more carefully. This fits the detective horror concept, where the player should think and investigate instead of only running away from danger.

5.5.3 Weaknesses and Areas for Improvement

The project still has several areas that can be improved. Player guidance needs to be clearer so the player does not feel lost. If the objective or path is not clear enough, the player may feel confused instead of tense.

Clue visibility and interaction feedback also need improvement. Important objects should be easier to notice without making the game too obvious. The dimension-switching mechanic should also be explained clearly, especially during the early part of the game.

More polish is also needed for visual effects, audio feedback, puzzle progression, and ghost behaviour. These improvements can make the prototype feel more complete in the future.

5.5.4 Connection with Literature Review

The discussion connects with the literature review in Chapter 2. Horror tension can be supported by uncertainty, sound, limited visibility, and atmosphere. This is similar to the design direction of this project, where the game uses dark environments, sound cues, and supernatural changes to create tension.

Environmental storytelling is also connected to this project because the story is not only told through text or dialogue. Props, room layout, lighting, and clues are used to help the player understand what happened in the game world.

Dual-dimension mechanics also support exploration and puzzle solving when they affect gameplay. However, the project also shows that the player still needs clear guidance. If the player does not understand where to go or why they need to switch dimension, the experience may become confusing. Because of this, the design idea is useful, but it still needs better clarity and polish.

5.6 Limitations of Evaluation

There are some limitations in the evaluation. First, the survey is based on respondents' opinions instead of direct gameplay testing. This means the results can support the design direction, but they cannot fully show how players will react when playing the prototype.

Second, the number of respondents is limited because of the available time. A small number of respondents may not represent all horror game players. However, the results are still useful because they give early feedback about the game idea.

Third, the survey answers are based on personal opinion. Some respondents may answer based on their own preference or past gaming experience. Because of this, the results should be understood as supporting feedback, not final proof that the game is fully effective.

Even with these limitations, the survey is still helpful for this project. It shows that the dual-dimension detective horror concept is understandable and has potential for further development.

5.7 Summary

This chapter discussed the survey findings. The results show that horror atmosphere, uncertainty, lighting, sound, environment details, and level design are important for creating tension in a horror game.

The discussion also shows that the dual-dimension mechanic can support exploration and decision-making if it affects gameplay properly. The normal world and spirit dimension can give the same environment different meanings. This can help create contrast between investigation and danger.

Investigation mechanics such as clues, puzzles, and environmental storytelling can also encourage players to observe the game world more carefully. However, the project still needs clear guidance, stronger visual cues, and better objective design so that the player does not feel lost.

Overall, the survey findings support the direction of the project. The results also show what can be improved if the game is developed further.

Chapter 6.0: Conclusion

This chapter concludes the Final Year Project by summarizing the overall findings, reflecting on the objectives, discussing limitations, and suggesting possible future improvements. The project focused on the design and implementation of a dual-dimension detective horror game to enhance player tension and decision-making.

6.1 Summary of the Project

This project aimed to design and develop a playable game prototype that combines detective gameplay, environmental storytelling, and a dual-dimension system.

The core concept of the game revolves around allowing the player to explore a haunted environment while switching between two dimensions:

- The normal world, used for investigation and exploration
- The spirit dimension, which introduces danger, hidden clues, and environmental changes

The prototype includes key features such as:

- Player movement and interaction
- Dimension switching system
- Investigation mechanics
- Puzzle elements
- Horror events and atmosphere

Through the integration of these systems, the game provides a gameplay experience that emphasizes tension, uncertainty, and decision-making.

6.2 Achievement of Objectives

The objectives outlined in Chapter 1 were generally achieved through the design, implementation, and survey evaluation of the project.

Objective 1: To design and implement a dual-dimension detective horror game that enhances player tension.

This objective was achieved through the design of two connected versions of the same environment: the normal world and the spirit dimension. The normal world supports investigation and exploration, while the spirit dimension introduces supernatural danger, altered visuals, and hidden information. The survey findings support this direction, as respondents generally agreed that horror atmosphere, lighting, sound, uncertainty, and environmental details can contribute to player tension.

Objective 2: To examine how level design and spatial layout influence player decision-making across different dimensions.

This objective was achieved through the design of a level structure that encourages players to compare two versions of the same space. The player must decide when to explore, when to switch dimensions, and how to interpret environmental clues. The survey findings also support the importance of level layout, navigation, and guidance in shaping player experience.

Objective 3: To explore how environment art and narrative elements can be integrated into gameplay to support psychological tension.

This objective was achieved through the use of environmental storytelling, visual contrast, lighting, props, and atmosphere. Instead of relying only on direct dialogue or cutscenes, the game environment is designed to communicate story information through visual details. The survey findings support this approach, as respondents agreed that environmental details and visual cues can improve immersion and understanding.

Objective 4: To develop a playable prototype.

A functional prototype was developed to demonstrate the core design concept, including investigation, dimension switching, environmental interaction, and horror atmosphere. Although the prototype is limited in scope, it provides a foundation for further development.

6.3 Contributions of the Project

This project contributes to game design in several ways:

- Demonstrates how dual-dimension mechanics can be integrated into horror gameplay
- Shows how environmental storytelling can support both narrative and gameplay
- Highlights the importance of combining investigation with tension
- Provides a prototype that can be further developed into a complete game

The project also contributes to understanding how players respond to different gameplay systems, particularly in horror settings.

6.4 Limitations of the Project

Despite achieving its objectives, the project has several limitations.

1. Limited Development Scope

- The prototype includes only a small environment
- Not all planned features could be implemented

2. Time Constraints

- Development time restricted the level of polish
- Some systems remain basic or simplified

3. Limited Survey Evaluation

- The survey used a limited number of respondents.
- The findings are based on general opinions rather than direct gameplay testing.

4. Technical Constraints

- Some visual effects and AI systems are limited
- Performance optimization is not fully developed

6.5 Future Work

Several improvements can be made in future development.

1. Expanded Game Content

- Add more levels and environments
- Introduce more complex puzzles

2. Improved AI and Enemy Design

- Implement smarter ghost behavior
- Add different types of enemies

3. Enhanced Visual and Audio Effects

- Improve lighting and post-processing
- Add more immersive sound design

4. Better Player Guidance

- Add tutorial system
- Improve UI feedback
- Provide clearer objectives

5. Advanced Gameplay Systems

- More complex investigation mechanics
- Dialogue system or NPC interaction

- Multiple endings based on player choices

6.6 Final Conclusion

In conclusion, this project explored the design and implementation of a dual-dimension detective horror game to enhance player tension and decision-making. The project combines investigation gameplay, horror atmosphere, environmental storytelling, and dimension switching into one prototype concept.

The normal world and spirit dimension system provides contrast between investigation and danger. This allows the same environment to serve different gameplay purposes and encourages players to make decisions based on clues, risk, and environmental changes. The survey findings support the idea that horror atmosphere, dual-dimension design, lighting, sound, and environmental storytelling can contribute to player tension and immersion.

Although the project is limited by time, development scope, and survey-based evaluation, it successfully demonstrates the potential of combining detective gameplay with supernatural horror mechanics. Future improvements can include clearer player guidance, more complex puzzles, improved ghost behavior, stronger audio-visual effects, and larger playable environments.

Overall, the project provides a strong foundation for further development and shows how dual-dimension level design can support tension, exploration, and decision-making in detective horror games.

Chapter 7.0: Reference

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Chapter 8.0: Appendices

This chapter includes the supporting documents for the Final Year Project. The appendices contain the Game Design Document (GDD), consultation logbook, survey form, survey result materials, and additional visual references related to the project. These materials support the game design process, research method, and project development discussed in the previous chapters.

Appendix A: Game Design Document (GDD)

A.1 Game Title

Dream Nightmare

A.2 Genre

Dream Nightmare is a 3D detective horror game with adventure, survival horror, puzzle-solving, and supernatural investigation elements. The game focuses on exploration, clue collection, environmental storytelling, and tension created through the use of two connected dimensions.

A.3 Target Platform

The target platform for the prototype is PC. PC is selected because it is suitable for keyboard and mouse controls, 3D exploration, horror atmosphere, and prototype testing during the Final Year Project exhibition.

A.4 Game Overview

Dream Nightmare is a dual-dimension detective horror game where the player takes the role of a detective investigating supernatural cases. The player explores haunted locations, collects clues, interacts with objects, and switches between the normal world and the spirit dimension to uncover hidden information.

The normal world is used mainly for investigation and exploration. In this dimension, the player can search for evidence, understand the environment, and follow the story. The spirit dimension is a darker and more dangerous version of the same space. It reveals hidden clues, supernatural traces, blocked paths, and horror events that cannot be seen in the normal world.

The main idea of the game is to make the player think carefully before switching dimensions. The spirit dimension may help the player progress, but it also creates more danger and tension. This creates a risk-and-reward decision for the player.

A.5 Narrative Premise

The story follows a detective who investigates a series of mysterious supernatural cases. Each location contains traces of past events, hidden clues, and spiritual disturbances. As the detective explores different haunted places, the player slowly discovers that the normal world and spirit dimension are connected.

The spirit dimension reveals the hidden truth behind each case. However, entering this dimension also exposes the player to stronger supernatural danger. The deeper the player investigates, the more the detective realizes that the haunting may be connected to a larger mystery.

A.6 Core Gameplay Loop

The core gameplay loop of Dream Nightmare is:

1. Explore the environment.
2. Search for clues and interactable objects.
3. Read the environment through props, lighting, sound, and layout.
4. Switch between the normal world and spirit dimension when needed.
5. Solve puzzles or unlock progression using collected clues.
6. Encounter horror events or supernatural threats.
7. Continue the investigation until the level objective is completed.

This loop supports the detective horror experience by combining investigation, decision-making, and tension.

A.7 Core Gameplay Mechanics

Dual-Dimension System

The dual-dimension system is the main mechanic of the game. The player can switch between the normal world and the spirit dimension. Each dimension changes the way the player sees and understands the environment.

Normal World:

- Used for investigation and exploration.
- Lower danger compared to the spirit dimension.
- Contains normal environmental clues and story details.
- Helps the player understand the location and objective.

Spirit Dimension:

- Reveals hidden clues and supernatural traces.
- Changes the mood, lighting, and atmosphere.
- May reveal new paths or interactable objects.
- Creates more tension through danger, distortion, and horror events.

Investigation System

The investigation system allows the player to search for clues and interact with important objects. Clues may appear as notes, photos, keys, ritual items, marks, or objects placed in the environment. These clues help the player understand the story and solve progression problems.

Environmental Interaction

The player can interact with selected objects in the environment. Interaction may trigger clue collection, dialogue, object inspection, door unlocking, or horror events. This helps the environment feel more meaningful instead of being only a background.

Puzzle and Progression System

Puzzles are used to control level progression. Some puzzles require the player to collect clues in the normal world and then switch to the spirit dimension to reveal missing information. This connects the puzzle system with the dual-dimension mechanic.

Horror Event System

Horror events are used to create tension during exploration. These may include sudden sounds, visual distortion, ghost appearances, object movement, flickering lights, or environmental changes. The horror events are designed to support atmosphere and uncertainty instead of relying only on jump scares.

A.8 Level Design Overview

The full game concept includes four main locations:

Level 1: Apartment

The apartment introduces the player to basic investigation and clue collection. The environment is smaller and easier to understand, allowing the player to learn how to explore, interact, and understand the difference between the normal world and spirit dimension.

Level 2: Warehouse

The warehouse focuses more on navigation, locked paths, and hidden evidence. The larger space creates more uncertainty and encourages the player to explore carefully. The spirit dimension can reveal hidden routes, clues, or supernatural traces.

Level 3: Hotel

The hotel level focuses on tension, vertical navigation, and room-based investigation. Players may need to search different rooms, follow clues, and understand how the haunting affects each part of the building.

Level 4: Police Station

The police station acts as a later and more serious investigation area. It connects the detective theme with the supernatural mystery. The player may need to use previous knowledge from earlier levels to understand the final case and complete the investigation.

A.9 Player Controls

The basic control scheme is:

WASD: Move player

Mouse: Camera control

E: Interact with objects

Shift: Run

F: Interact with doors

R: Switch between normal world and spirit dimension

Esc: Pause menu

The controls are designed to be simple so that the player can focus on exploration, investigation, and horror tension.

A.10 User Interface Design

The user interface is designed to be simple and not too distracting. Since this is a horror game, the UI should not cover too much of the screen. The main UI elements include:

- Interaction prompt
- Clue display
- Objective text
- Pause menu
- Simple item or clue notification

The UI is used to guide the player, but it should not remove the feeling of mystery and exploration.

A.11 Visual Style

The visual style of Dream Nightmare uses a dark and moody horror direction. The normal world uses more realistic lighting and believable environment design. The spirit dimension uses darker colours, distorted visuals, stronger contrast, and supernatural elements to make the same space feel unfamiliar and dangerous.

The contrast between the two dimensions is important because it helps the player clearly understand that they are moving between two different states of the same environment.

A.12 Audio Style

Audio is used to support tension and atmosphere. The sound direction includes ambient noise, footsteps, whispers, object sounds, sudden sound cues, and low background ambience. Sound is important because it can warn the player, create uncertainty, and make the environment feel more alive.

The spirit dimension uses more disturbing and unnatural sounds to make the player feel unsafe.

A.13 Individual Project Scope

For this Final Year Project, the individual scope focuses on game design, level design, environmental storytelling, narrative flow, dual-dimension design, and documentation. The work includes planning the gameplay structure, organizing the level concept, designing the investigation flow, preparing thesis documentation, and supporting the survey-based research evaluation.

A.14 Group Member Contribution

This section explains the contribution of each group member in the development of Dream Nightmare. The project was completed as a group project, and each member handled different parts of the game development and documentation.

Table A.1

Group Member Contribution

No.	Name	Student ID	Email	Contribution
1	Lim Si Kai	2303855	limsikai21@gmail.com	2D art and animation support; level design; 3D asset support; environment planning; normal world and spirit dimension design; thesis and GDD documentation; survey and logbook support.

2	Chua Yi Zheng	2304876	alsonchua18@gmail.com	Programming; gameplay mechanics; sound design; player interaction system; technical implementation; game system support.
3	Khoo Zi Jian	2205898	kennethkhoo161017@gmail.com	3D art and animation support; technical art; UI design; interface layout; visual implementation; game presentation support.

A.15 Future Improvements

The project can be improved in the future by adding more complete levels, stronger ghost behaviour, clearer player guidance, improved clue feedback, more polished audio-visual effects, and more complex puzzles. The dual-dimension system can also be expanded so that more gameplay actions change depending on the player's current dimension.

Appendix B: Consultation Logbook

This appendix records the weekly consultation and progress summary for the Final Year Project. The logbook shows the development progress from the early concept stage until the later thesis and prototype preparation stage.

Project Paper Consultation Logbook	
Project Title	Dream Nightmare
Student Name	LIM SI KAI
Student ID	2303855
Year/Semester	Y3 S1
Supervisor	Sir Ang Kok Yew and Ms Chow Mee Mooi

WEEK 01	
Comments: - Started brainstorming the core idea for the FYP game. - Finalized genre as 3D detective survival horror. - Discussed main mechanics, dual world system, ghost identification, and crafting ideas. - Draft early concept + rough sketch layouts.	Supervisor signature:  Ts. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman
Progress (please circle the feedback) 1 2 3 4 (5) Poor Satisfactory Good	Date: 10/5/26
WEEK 02	
Comments: - Prepared proposal slides and refined the game summary. - work on initial narrative structure and character back story. - Researching on similar game and reference for level design and environment.	Supervisor signature:  Ts. DR. ANG KOK YEW Deputy Dean Student Development & Industrial Training Faculty of Creative Industries Universiti Tunku Abdul Rahman
Progress (please circle the feedback) 1 2 3 4 (5) Poor Satisfactory Good	Date: 10/5/26

WEEK 03

Comments:
 - completed more detailed game proposal content including mechanics, USP, flowchart, and player loop.
 - started sketching environment layout
 - Do some music research for environment sound and background music.
 - Draw a general biz map for navigation.

Supervisor signature:



Ts. DR. ANG KOK YEW
 Deputy Dean
 Student Development & Industrial Training
 Faculty of Creative Industries
 Universiti Tunku Abdul Rahman

Progress (please circle the feedback)

1 2 3 4 (5)

Poor Satisfactory Good

Date:

10/5/26

WEEK 04

Comments:
 - Focused on Level Design:
 i) blocked out sketches
 ii) moodboard
 iii) apartment sketches
 - make some props
 Feedback: show more concept art

Supervisor signature:



Ts. DR. ANG KOK YEW
 Deputy Dean
 Student Development & Industrial Training
 Faculty of Creative Industries
 Universiti Tunku Abdul Rahman

Progress (please circle the feedback)

1 2 3 4 (5)

Poor Satisfactory Good

Date:

10/5/26

WEEK 05

Comments:
 - Finalised the layout for apartment
 - Blocked out a tutorial level
 - Put texture on the blocked out level
 - Make more props
 - collected more reference and planning more for warehouse

Supervisor signature:



Ts. DR. ANG KOK YEW
 Deputy Dean
 Student Development & Industrial Training
 Faculty of Creative Industries
 Universiti Tunku Abdul Rahman

Progress (please circle the feedback)

1 2 3 4 (5)

Poor Satisfactory Good

Date:

10/5/26

WEEK 06

Comments:

- make shader graph
- make some more props
- cel shading all the material
- start making sound effect

Supervisor signature:

Progress (please circle the feedback)

1 2 3 4 (5)
Poor Satisfactory Good

Date:

10/5/26

WEEK 07

Comments:

- Make around like 50-ish model/asset
- Make level 2
- Make objective clearer

Supervisor signature:

Progress (please circle the feedback)

1 2 3 4 (5)
Poor Satisfactory Good

Date:

10/5/26

Project Paper Consultation Logbook	
Project Title	Dream Nightmare
Student Name	Lim Si Kai
Student ID	2303855
Year/Semester	Y3S2
Supervisor	Ts Dr Ang Kok Yew

WEEK 01	
Comments: - Discussed the initial FYP game concept and project direction. - Proposed a detective horror game with supernatural investigation elements. - Identified the main gameplay idea: exploring a haunted environment and collecting clues. - Received feedback to refine the project scope and focus on a manageable prototype.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 (5) Poor Satisfactory Good	Date: 12/5/26
WEEK 02	
Comments: - Refined the game title, genre, and core concept. - Developed the idea of using a normal world and spirit dimension as the main gameplay system. - Discussed how dimension switching can support horror tension and investigation. - Started planning the project objectives, research questions, and problem statement.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 (5) Poor Satisfactory Good	Date: 12/5/26

WEEK 03

Comments:

- Worked on Chapter 1 content, including introduction, problem statement, objectives, research questions, significance, scope, and limitations.
- Clarified that the project focuses on dual-dimension level design, player tension, and decision-making.
- Reviewed how the project connects to game design and player experience.
- Updated the thesis direction based on supervisor feedback.

Supervisor signature:

Progress (please circle the feedback)

1 2 3 4 (5)

Poor Satisfactory Good

Date:

12/5/26

WEEK 04

Comments:

- Started Chapter 2 literature review.
- Researched related areas such as horror game design, detective gameplay, environmental storytelling, level design, and dual-dimension mechanics.
- Identified similar games for reference, including Silent Hill, Amnesia, Outlast, Phasmophobia, and The Medium.
- Organized the literature review structure and research gap.

Supervisor signature:

Progress (please circle the feedback)

1 2 3 4 (5)

Poor Satisfactory Good

Date:

12/5/26

WEEK 05

Comments:

- Continued refining the literature review and case study references.
- Compared how existing horror and investigation games create tension through atmosphere, clues, sound, and level layout.
- Developed the gap analysis for the project.
- Linked the research findings to the proposed dual-dimension detective horror game.

Supervisor signature:

Progress (please circle the feedback)

1 2 3 4 (5)

Poor Satisfactory Good

Date:

12/5/26

WEEK 06

Comments:

- Worked on Chapter 3 methodology and project design approach.
- Planned the questionnaire survey to collect opinions on horror atmosphere, dual-dimension design, investigation mechanics, navigation, and decision-making.
- Prepared survey sections, Likert-scale questions, and open-ended feedback questions.
- Reviewed the method for collecting and analyzing survey responses.

Supervisor signature:

Progress (please circle the feedback)

1 2 3 4 (5)

Poor Satisfactory Good

Date:

12/5/26

WEEK 07

Comments:

- Prepared the early prototype structure and game design documentation.
- Planned the main gameplay systems, including player movement, interaction, dimension switching, clue collection, puzzle progression, and horror events.
- Organized the prototype scope to focus on one small playable horror environment.
- Reviewed remaining tasks for Chapter 4 implementation and survey-based evaluation.

Supervisor signature:

Progress (please circle the feedback)

1 2 3 4 (5)
Poor Satisfactory Good

Date:

12/5/26

WEEK 08	
Comments: - Refined the FYP game direction based on supervisor feedback. - Updated the project scope for the prototype. - Organized the core gameplay flow: investigation, clue collection, spirit dimension, and exorcism. - Planned the next development tasks for the playable prototype.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date: 12/5/26
WEEK 09	
Comments: - Improved the game design documentation. - Clarified the player objective and main gameplay loop. - Updated mechanics for evidence collection, clue interaction, and level progression. - Discussed how the supernatural horror theme supports the gameplay.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 5 Poor Satisfactory Good	Date: 12/5/26
WEEK 10	
Comments: - Continued working on level design and environment planning. - Arranged the playable area, clue placement, and key interaction points. - Planned the navigation flow for the player. - Reviewed how the normal world and spirit dimension connect visually and mechanically.	Supervisor signature: 

Progress (please circle the feedback) 1 2 3 4 (5) Poor Satisfactory Good	Date: 12/5/26
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WEEK 11	
Comments: - Planned the implementation of player interaction systems. - Reviewed clue interaction, dialogue, object triggers, and environmental guidance. - Adjusted puzzle flow to make the gameplay less confusing. - Considered improvements for pacing, horror atmosphere, and player feedback.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 (5) Poor Satisfactory Good	Date: 12/5/26
WEEK 12	
Comments: - Continued improving prototype content and documentation. - Prepared visual references, level explanation, and gameplay details for the report. - Reviewed current implemented features. - Identified remaining issues that need fixing or polishing.	Supervisor signature: 
Progress (please circle the feedback) 1 2 3 4 (5) Poor Satisfactory Good	Date: 12/5/26

WEEK 13

Comments:

- Tested the prototype flow.
- Checked whether the player can understand the objective and progress properly.
- Reviewed bugs and unclear interactions.
- Planned improvements for visual cues, UI guidance, and audio feedback.

Supervisor signature:

Progress (please circle the feedback)

1 2 3 (4) 5
Poor Satisfactory Good

Date:

12/5/26

WEEK 14

Comments:

- Organized final FYP materials for submission.
- Reviewed completed prototype elements and documentation.
- Prepared presentation content and final progress update.
- Finalized game flow explanation, mechanics description, and future improvement plan.

Supervisor signature:

Progress (please circle the feedback)

1 2 3 4 (5)
Poor Satisfactory Good

Date:

12/5/26

Appendix C: Survey Form

This appendix contains the questionnaire survey used for the Final Year Project. The survey was created using Google Forms to collect respondents' opinions on horror atmosphere, dual-dimension game design, investigation mechanics, level design, navigation, and decision-making in detective horror games. Respondents were not required to play the prototype before answering the survey.

Survey Title:

(FYP) Analyzing How Dual-Dimension Level Design Can Impact Player Tension and Decision-Making in Detective Horror Games

Section A: Demographic

1. Age

- Below 18

- 18–21

- 22–25

- 26–30

- Above 30

2. Gender

- Male

- Female

- Prefer not to say

3. How often do you play video games?

- Daily
- Several times a week
- Once a week
- Occasionally
- Rarely

4. Which genres do you play the most? (can choose more than one)

- Action
- Adventure
- Puzzle
- Horror
- Detective / Mystery
- Survival
- RPG
- Shooter
- Simulation
- Other

5. How many years of gaming experience do you have?

- Less than 1 year
- 1–3 years
- 4–6 years
- 7–10 years
- More than 10 years

For Sections B to E, respondents answered using a five-point Likert scale:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Section B: Horror Atmosphere, Tension, and Immersion

1. Good horror atmosphere can increase player tension in a game.
2. Lighting and visual design can affect how scary or tense a horror game feels.
3. Sound effects and ambient audio can increase fear or suspense in horror games.
4. Uncertainty about what will happen next can make horror games more engaging.
5. A horror game can feel tense even without relying heavily on jump scares.
6. Environmental details such as props, shadows, and room layout can improve immersion in horror games.

Section C: Dual-Dimension Game Design

1. A game with two connected worlds or dimensions can make exploration more interesting.
2. Switching between a normal world and a spirit dimension can increase tension in a horror game.
3. A spirit dimension can make a familiar environment feel more dangerous or unsettling.
4. Hidden clues or paths in another dimension can encourage players to explore more carefully.
5. Dual-dimension mechanics can make players think more carefully before making decisions.
6. A dual-dimension system is more interesting when it affects gameplay, not only visual appearance.
7. Different versions of the same level can help create mystery and suspense.

Section D: Investigation, Clues, and Decision-Making

1. Detective or investigation elements can make horror games more engaging.
2. Searching for clues can encourage players to observe the environment more carefully.
3. Clue placement can affect how players understand the story and objective.
4. Decision-making becomes more meaningful when there is risk or danger involved.
5. Players may feel more tension when they must choose between safety and exploration.
6. Puzzles that require observation and clue collection can improve the detective gameplay experience.
7. Clear feedback is important when players interact with clues or important objects.

Section E: Level Design, Navigation, and Player Guidance

1. Level layout affects how tense a horror game feels.
2. Narrow corridors and dark spaces can increase tension in horror games.
3. Open or interconnected levels can encourage exploration and curiosity.
4. Too much freedom in a horror game can make players feel lost.
5. Too much guidance can reduce immersion and exploration.
6. Good navigation design helps prevent frustration while playing.
7. Visual cues within the environment can help players understand where to go.

Section F: Open-Ended Feedback

1. What type of level design makes a horror game feel tense to you?
2. What kind of environment details make you feel immersed in a horror game?
3. What do you think about games that let players switch between a normal world and a spirit/dark dimension?
4. What usually makes you feel confused or lost in a game level?
5. What features do you think are important in a detective horror game?
6. Any additional comments or suggestions?

Appendix D: Survey Results

This appendix presents the summary of survey responses collected through Google Forms. A total of 19 respondents participated in the survey. The survey was used to collect opinions on horror atmosphere, dual-dimension game design, investigation mechanics, level design, navigation, and decision-making in detective horror games.

The results are used to support the discussion in Chapter 5. Since the survey was based on general player opinions, the findings are used to support the design direction of the project rather than to prove the final effectiveness of the prototype.

D.1 Respondent Background

All 19 respondents agreed to participate in the survey. Most respondents were between 22–25 years old, followed by respondents aged 18–21. The majority of respondents were male, while some were female and one respondent preferred not to say.

Most respondents played video games daily or several times a week. This shows that most of the survey participants had regular gaming experience. In terms of preferred genres, action and adventure were the most common choices, followed by shooter, RPG, survival, puzzle, and horror games. More than half of the respondents also had more than 10 years of gaming experience.

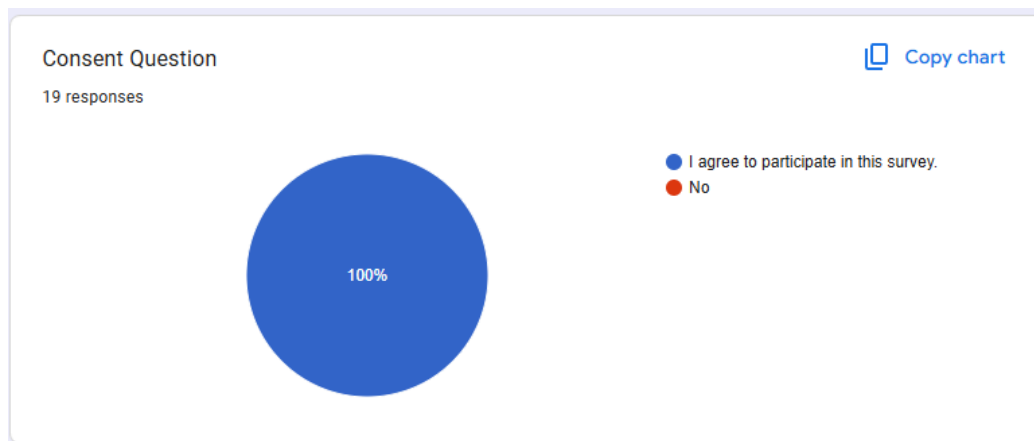


Figure D.1: Number of Survey Respondents and Consent Response

Section A: Demographic

1. Age

19 responses

 Copy chart

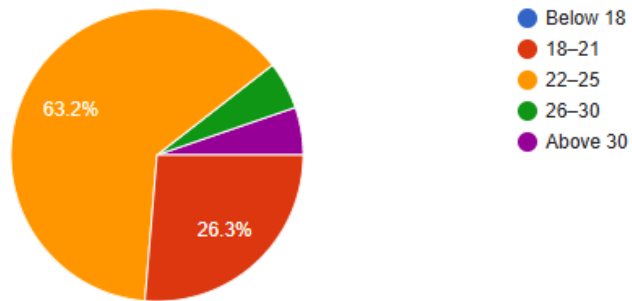


Figure D.2: Respondent Age Distribution

2. Gender

19 responses

 Copy chart

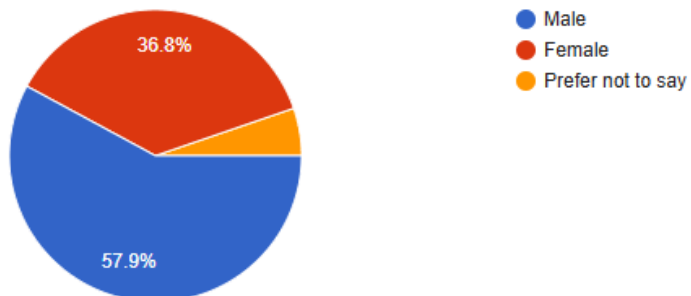


Figure D.3: Respondent Gender Distribution

3. How often do you play video games?

[Copy chart](#)

19 responses

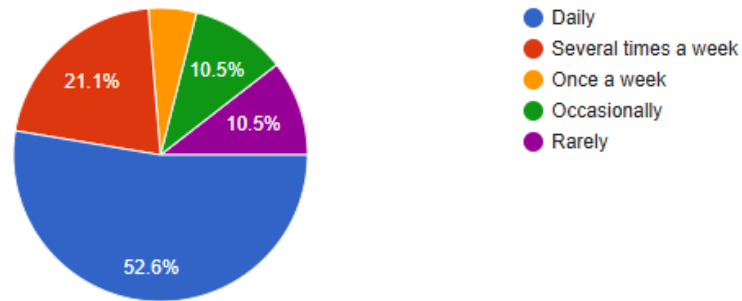


Figure D.4: Respondent Gaming Frequency

4. Which genres do you play the most?

[Copy chart](#)

19 responses

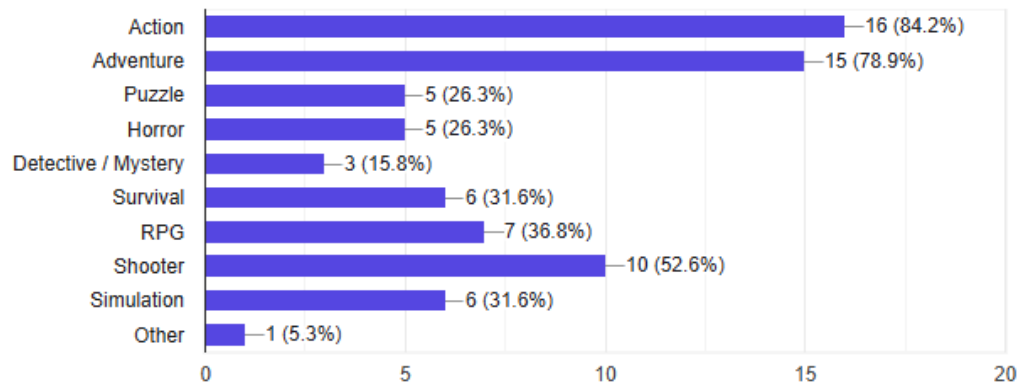


Figure D.5: Preferred Game Genres

5. How many years of gaming experience do you have?

19 responses

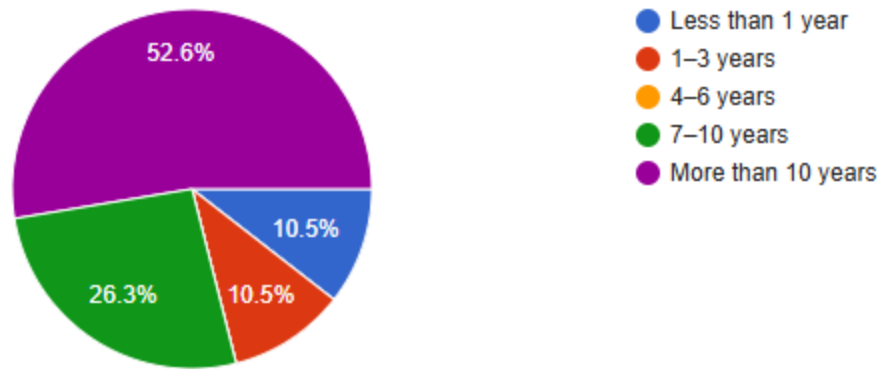


Figure D.6: Years of Gaming Experience

D.2 Main Survey Findings

The Likert-scale survey questions were grouped into four main categories. The average score was calculated based on a five-point scale, where 1 means “Strongly Disagree” and 5 means “Strongly Agree.” A higher score shows stronger agreement from the respondents.

Table D.1

Summary of Survey Category Average Scores

Category	Average Score
Horror Atmosphere, Tension, and Immersion	4.46 / 5
Dual-Dimension System	4.16 / 5
Investigation, Clues, and Decision-Making	4.32 / 5
Level Design, Navigation, and Player Guidance	4.32 / 5

Based on the survey results, the highest average score was found in Horror Atmosphere, Tension, and Immersion, with an average score of 4.46 out of 5. This shows that most respondents agreed that horror atmosphere, lighting, sound, uncertainty, and environmental details can increase tension and immersion in horror games.

The Investigation, Clues, and Decision-Making category received an average score of 4.32 out of 5. This suggests that respondents generally agreed that clue searching, observation, puzzles, and risk-based decisions can improve the detective horror gameplay experience.

The Level Design, Navigation, and Player Guidance category also received an average score of 4.32 out of 5. This shows that respondents agreed that level layout, narrow spaces, visual cues, and navigation design can affect tension and player experience.

The Dual-Dimension System category received an average score of 4.16 out of 5. Although this score is slightly lower than the other categories, it still shows a positive response. Respondents

generally agreed that switching between two connected worlds can make exploration more interesting and support mystery, tension, and decision-making.

D.3 Open-Ended Feedback Summary

The open-ended feedback allowed respondents to explain their opinions in their own words. The responses were reviewed and grouped into several common themes.

Table D.2

Summary of Open-Ended Feedback Themes

Theme	Summary of Respondent Feedback
Horror Level Design	Respondents mentioned that dark spaces, narrow corridors, sudden changes, limited vision, and unclear paths can make a horror game feel more tense.
Environmental Details	Respondents felt that props, lighting, shadows, blood stains, sound, and small visual details can make the game world feel more believable and immersive.
Dual-Dimension Mechanic	Respondents generally found the idea of switching between a normal world and a spirit or dark dimension interesting because it can reveal hidden clues, paths, or story details.
Navigation Confusion	Some respondents mentioned that unclear objectives, similar-looking rooms, and lack of visual guidance can make players feel lost.

Detective Horror Features	Respondents suggested that clue collection, puzzles, investigation, story hints, atmosphere, and meaningful choices are important features in a detective horror game.
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Overall, the open-ended responses support the main direction of the project. Respondents were interested in horror environments that create tension through atmosphere, level design, and uncertainty. The feedback also shows that the dual-dimension mechanic can be useful if it affects exploration, clue discovery, and story progression. However, the responses also show that clear objectives and visual guidance are important to prevent the player from feeling confused.

Appendix E: Additional Game Screenshots and Visual References

This appendix contains additional screenshots and visual references related to the development of Dream Nightmare. These materials support the design and implementation chapters by showing the game environment, level layout, user interface, interaction system, and visual direction of the normal world and spirit dimension.



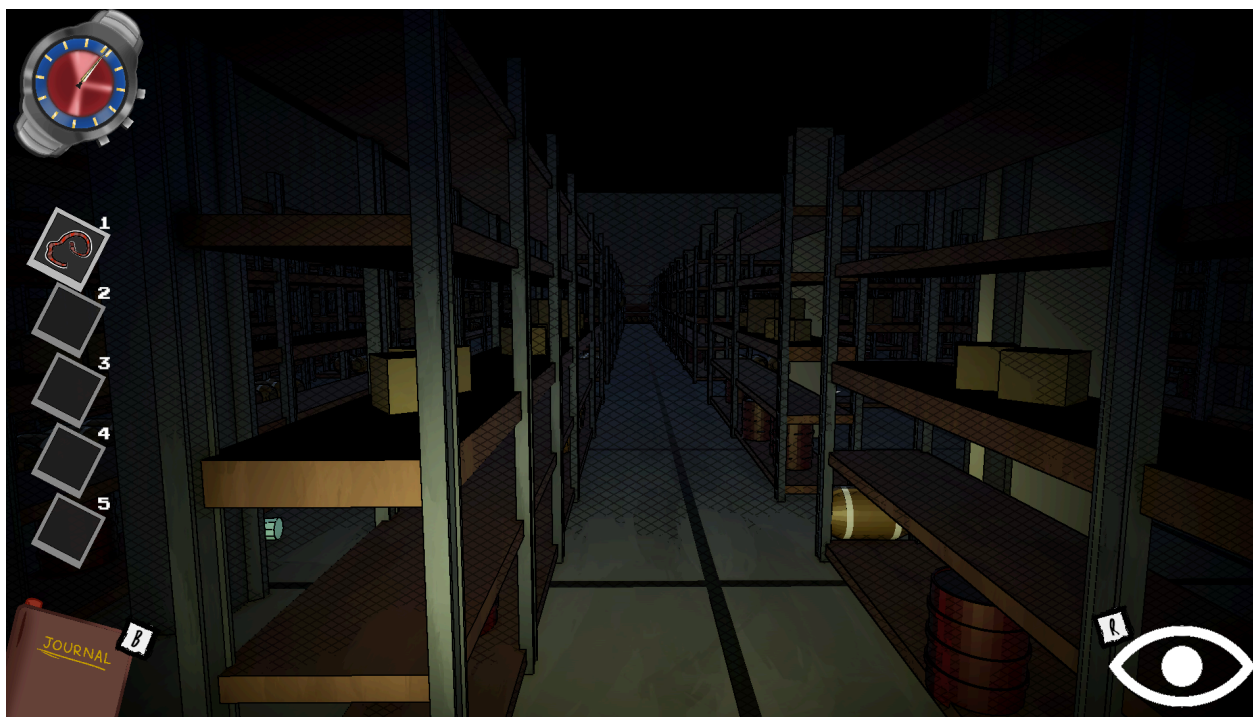


Figure E.1: Normal World Environment Screenshot



Figure E.2: Spirit Dimension Environment Screenshot



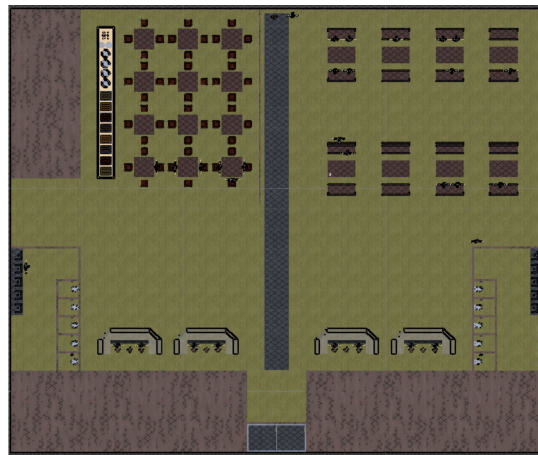
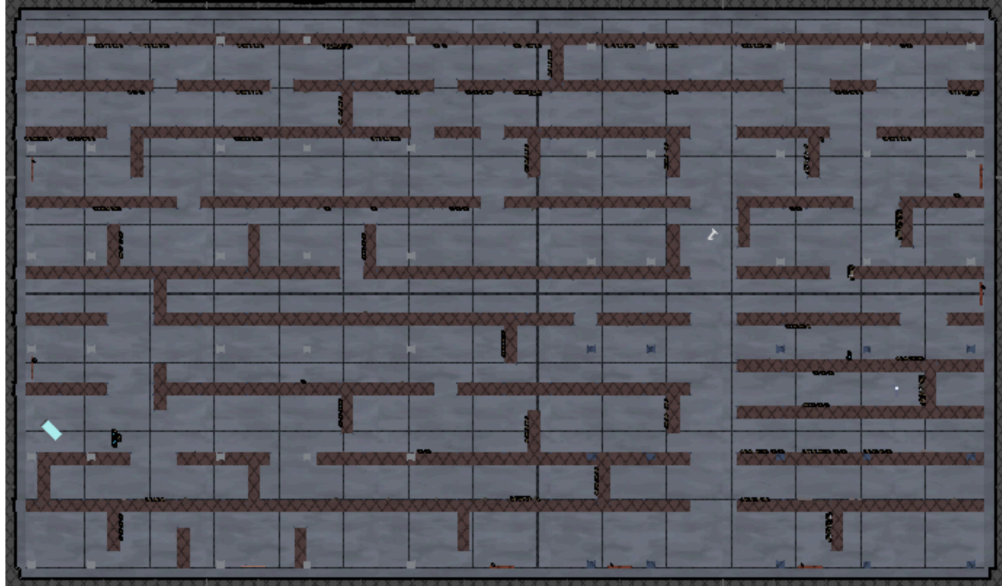


Figure E.3: Level Layout / Map Design

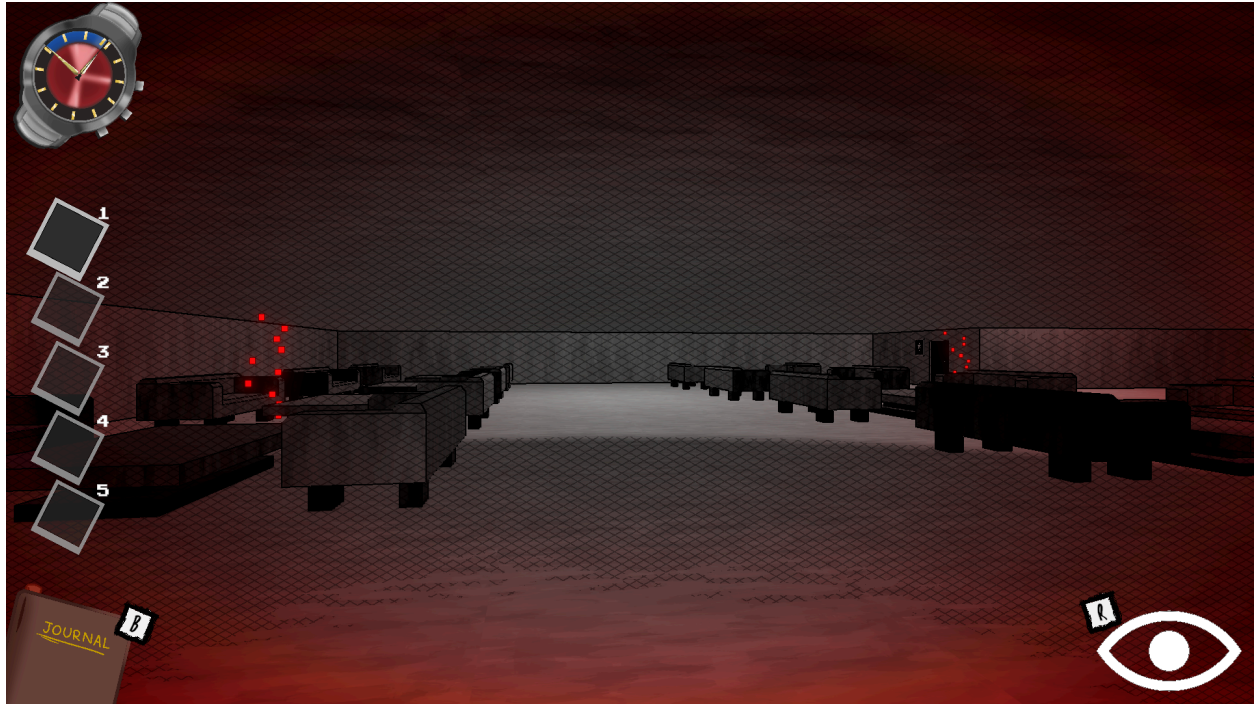


Figure E.4: Interaction or Clue Collection Screenshot

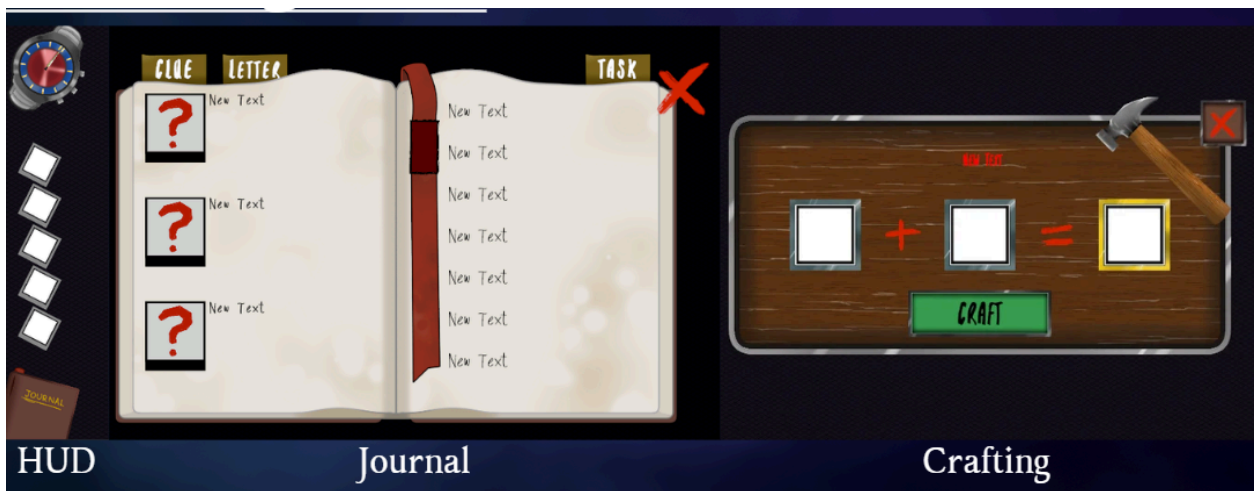




Figure E.5: User Interface Screenshot



Figure E.6: Booth / Exhibition Setup