ESAT ESCUELA SUPERIOR DE ARTE Y TECNOLOGÍA

> **Gameplay and level design**
> Jordi Carazo
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GDD DOCUMENT

MEMORY

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INDEX

1.- Introduction of the Game

The Last Sacrifice is a Survival Horror video game set in a dark fantasy monastery, where the playerwill incarnatea low-class hunter who has been kidnapped by a macabre cult that performs human sacrifices. In this disturbing setting, he must survive deadly threats, manage his limited resources, and solve puzzles to find a way to escape.

The game aims to offer a constantly tense experience, with a strong focus on oppressive atmosphere, environmental storytelling, and exploration, drawing inspiration from classics of the genre.

2.- Gender, platforms and references

2.1 Gender

The Last Sacrifice belongs to the genre of**Survival Horror.**

Fig. 01: Capture of Silent Hill (Konami, 1999)

Fig. 02: Cover of Resident Evil HD Remaster (Capcom, 2015)

Fig. 03: Captura de Resident Evil HD Remaster (Capcom, 2015)

It's a subgenre of the horror genre that involves the player trying to survive with limited resources while evading or confronting enemies and solving puzzles to progress. It was popularized by titles such as Resident Evil, Silent Hill, and Alone in the Dark.

2.2 Platforms

The game will be released exclusively for computers, being published on the Steam platform for download.

Fig. 04: Steam logo (Valve, 2014)

2.3 Target Audience

The Last Sacrifice aims to reach two types of target audiences:

- **Adult target audience, 30 to 45 years old:**The game aims to appeal to the nostalgia of classic survival horror players, as it will feature elements used in more retro survival horror games, highlighting the use of a fixed camera and tank controls. Therefore, it is targeting players who grew up with this system.
- **Horror gamer audience:**On the other hand, it also seeks to appeal to an audience that regularly plays horror games and enjoys a type of experience in which they must manage their resources and survive in a tense and defenseless environment.

2.4 References

2.4.1 Resident Evil

Resident Evil (known in Japan as Biohazard) is a series of games in the genre*Survival Horror*developed by Capcom. They will be taken as reference*Resident Evil(1996), Resident Evil 2(1998)* and *Resident Evil 3: Nemesis(1999).*

Fig. 5, 6, 7: Portadas de Resident Evil 1, Resident Evil 2 y Resident Evil 3: Nemesis (Capcom, 1996-1999)

He **Core Loop**The game is inspired by the classics of the genre*Survival Horror*, paying homage to the essence and mechanics of the most iconic titles of this era, such as the first three Resident Evil games.

He **combat system and enemy design**are directly inspired by*Resident Evil*As in this classic, the player will have limited ammunition, forcing them to make decisions about whether to confront them or try to avoid them. Some enemies, such as zombies, are used as a reference, as they act as obstacles in the level. Being slow, their main threat lies in the potential loss of resources if the player decides to fight them, encouraging resource management.

The limitation of the**inventory** is another essential aspect taken as a reference. Following the classical mechanics of*Resident Evil*, the player will have limited inventory space, forcing him to carefully manage resources, keeping only the most essential items.

Finally, the**puzzles**will be another component that is taken as inspiration, as well as the way in which the player interacts with them. ThesepuzzlesThey are designed to promote exploration and encourage player interaction with the environment, much like classic survival horror.

As a conclusion to the original Resident Evil trilogy we take:

- The Core Loop of the Game
- The Inventory System
- Combat System and Enemy Design

2.4.2. Tormented Souls

The Tormented Souls game was released in 2021. It was developed by Dual Effect and has arrived on the PlayStation 4, PlayStation 5, Switch, Windows, Xbox One, Xbox Series X/S platforms.**(1)**

Fig. 8: Portada de Tormented Souls (Dual Effect, 2021)

This video game is based on the classics of the survival horror genre, finding inspiration in games like Resident Evil 1 and Alone in the Dark.
Mainly, the reference for the project is taken from Tormented Souls**camera design**and the**player displacement**. In addition, the entire**gameplay and setting**They are intended to foster the sense of tension that these types of games evoke, which is also what this project aims to achieve. Using a fixed camera and slow panning, shots can be created that contribute to that horror aesthetic. This, combined with a narrative with a dark and mysterious tone, aims to make the player feel helpless.

In conclusion of Tormented Souls we take as reference:

- The use of your cameras
- Gameplay and setting

2.4.3. Post Trauma

Post Trauma is a survival horror game being developed by Red Soul Games and is slated for release in 2025 on PC and consoles. The title has a free demo available on its itch.io page.**(2)**

Fig. 9: Portada de Post Trauma (Red Soul Games, 2025)

In Post Trauma the player takes control of Roman, a train driver who finds himself trapped in a twisted and terrifying alternate reality.

Although the full game is not yet available, the free demo serves as a reference because it takes the**concept of the fixed camera**and evolves it, because in addition to using static cameras and rotating cameras focusing on the player, it uses**rail cameras**which have a trajectory that follows a curve that helps give the player a cinematic experience. Also notable as a camera reference is the use of**Dutch Plans**, which are slightly rotated cameras that create a feeling of instability and tension in the viewer.

On the other hand, in general, the**puzzles**The game's puzzles are designed so that the player must explore to find clues and search for specific combinations that lead to the solution. This puzzle concept is inspired by the idea of creating complex riddles that are both entertaining and rewarding to solve.

In Post Trauma Conclusion we take as reference:

- His movie camera
- The way you search for clues to your puzzles.

2.4.4 Resident Evil 2 Remake

Resident Evil 2 Remakeis a reimagining of the original 1998 game developed by Capcom. It was released in 2019 and uses the RE Engine, which provides an enhanced visual experience with photorealistic graphics and intense environmental details. This remake also modernizes the gameplay and level design, maintaining iconic elements from the original but adapting them to a more immersive and dynamic approach. **(3)**

Fig. 10: Cover of RE 2 Remake (Capcom, 2019)

This title serves as a prominent reference for being a game of the Survival Horror genre, which**combines elements of exploration, puzzle solving, resource management and tense combat.**Furthermore, it seeks to generate an experience similar to the one proposed for the project, using lighting and sound to create an oppressive atmosphere and foster a sense of horror. The remake is used as a reference because it contains improvements to the puzzles and mechanics compared to the original version. An example of this is the improved integration of the puzzles into the game's narrative context, as elements from the environment (e.g., the police station) are used, reinforcing immersion.

Another point that inspires this title is its**level and puzzle design.**A clear example of this is the design of the library, an area that serves as a reference for one of the project's zones, which is also a library.

In RE 2 Remake, the library is expansive, containing different levels of height and shelves. It's worth noting that this location features a puzzle that involves moving shelves to form a bridge and cross to the other side, a key idea that serves as inspiration for one of the challenges in The Last Sacrifice. The monastery library is intended to include pushable shelves, and one of the objectives for advancing in the level will be to push them to create a bridge and cross over them.

Fig. 11: RE 2 Remake Library (Capcom, 2019)

At the level of**gaming experience,**It's noted how RE 2 Remake proposes that the puzzle areas be more brightly lit, and even includes safe zones where the player can save their progress and store items, which also serves as a reference for the project, which will feature a cloister with a save point and will be the safe zone. It's noteworthy that in this game, the safe zones feature more relaxing music, which contrasts with the oppressive atmosphere of other areas. Therefore, it is considered that this title perfectly reflects the experience that the game aims to generate in the player, being a horror game.

In conclusion, from Resident Evil 2 Remake we take:

- The gaming experience it creates for the player through atmosphere and lighting.
- The level design (mainly of the library, with verticality and a large room) and thepuzzles.
- Contrast safe zones with other zones.

3.- Narrative synopsis

The Last Sacrifice takes place in a completely fictional environment, where the world is divided between two primordial forces: order and chaos. The latter was sealed in a dagger to prevent the chaos thatseemshe and his followers posed a threat to the rest of the world. The game takes place in one of the monasteries dedicated to the god of chaos, filled with pagan decorations and symbolism. It has inspirations in dark fantasy and inside there arenodsa cult that worships the god of chaos and is located deep within an ancient winter forest.

The protagonist of the story is a hunter belonging to the lower nobility who, after going out for a day of hunting, gets caught in a storm and inadvertently ends up in the depths of the forest. There he is intercepted and captured by members of a cult who intend toemploy him assacrifice and free his god from the prison that holds him. After waking up in an ancient and dark monastery after being kidnapped by the sect that inhabits it, he will have to escape from his cell, defeating sinister enemies and solving different puzzles that will allow him to advance. The monastery itself is full of torture devices, ancient divine writings and dark statues in every corner, thus amplifying a dark and hostile atmosphere. The members of this sect will try to catch him on his journey through the cursed monastery, since the hunter is the last piece of a ritual they have been performing for hundreds of years with the aim of invoking the ancient god and spreading chaos.

The antagonistic figure in the story is the cult that seeks to employ the player as a sacrifice. The cult is divided into different castes depending on how long they have been in the cult and how much of themselves they sacrifice to favor the Chaos God. Initiates are the lowest echelon of the hierarchy and, as their name suggests, are the newest members of the cult. They have no notable characteristics and wear the basic uniform of a tunic with a bird mask. Second are the abominations; these form the core of the cult. Thanks to their great stature and physical power, they are tasked with acting as security for the site, defending important relics or guarding its halls. The highest members of the sect are the deacons, who have accumulated years of arcane knowledge about their Chaos God and the world. Accessing this knowledge has irreparably deformed their bodies. These deacons will do anything for the Forgotten One and are an essential part of the cult's rituals.

4.- Visual Aspect

As mentioned above,*The last sacrifice* It is a horror game, so to emphasize the fear in the player, the visual aspect has been decided to move towards realism.

An example of this would be the references for textures and materials. In this case, the main reference is*No Rest For the Wicked.*

Fig. 12: Examples of theNRFTW (MOON STUDIOS GMBH, 2024)

In the images above, you can see how, although not entirely realistic, figures and environments close to humans or real-life scenarios are presented.

As for the environments, thesecan be much more detailed than characters becausehe game belongs to the genus of terror. In this way, they can become a very important partimportant to inspire fear and panic in the player.

Unlike textures and materials, the main reference for the visual style of the environments is some of the works of the “Senior Environment Concept Artist” Alessandro Paviolo.

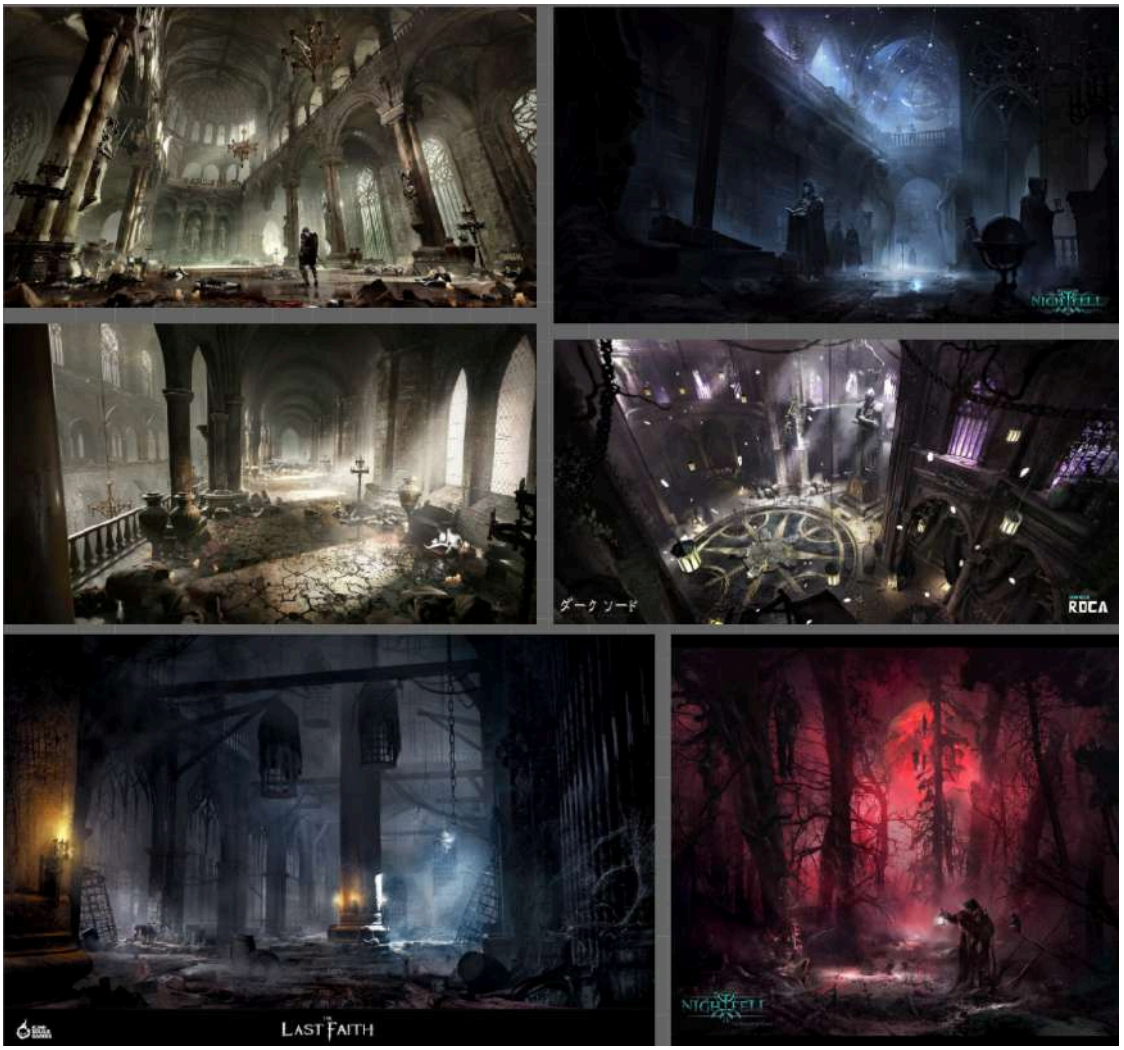
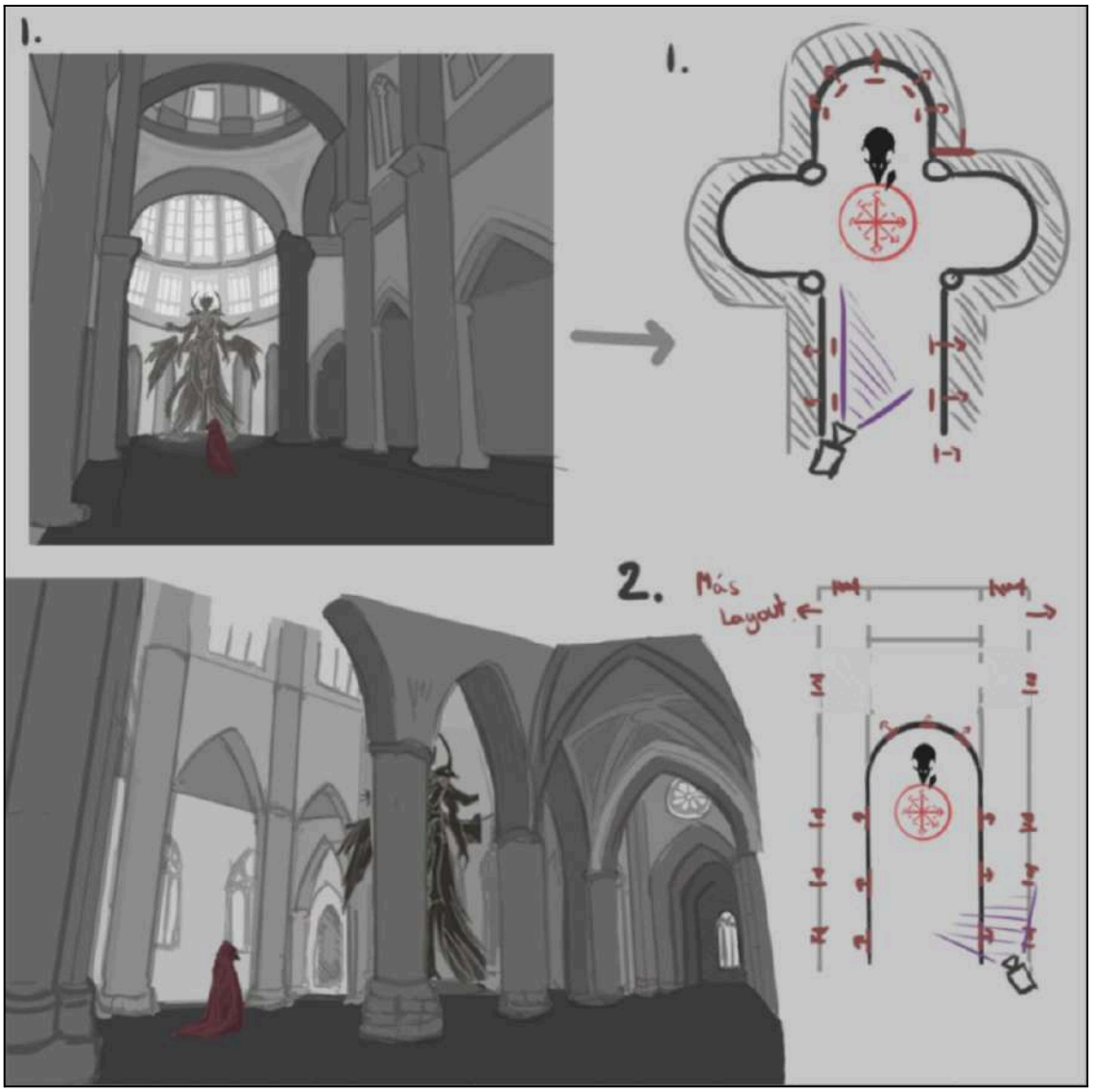


Fig. 13: Set of images from the Portfolio (Alessandro Paviolo)

As can be seen in the images, the architecture of the locations is vast and expansive, allowing for the placement of assets or puzzle pieces. They are also decorated with repetitive elements characteristic of their respective areas, whether libraries, catacombs, or churches.



Figs. 14: Concepts of the Place of Ritual (Inés Jackson, 2024)

Another important point to convey through art is atmosphere. In a survival horror video game, this is essential for conveying different emotions or sensations to the player. The work of Alessandro Paviolo has also been used as a reference, as in the images above, he successfully depicts enigmatic environments that provoke uncertainty.

5.- Project Overview

5.1 Golden rules

As for the project's foundations, it has as its pillars or "Golden Rules" a series of elements that will be particularly emphasized during development, among which the following stand out:

- **Horror:**Horror is the most basic element of the genre, as its name suggests.*The Last Sacrifice*It will have various elements that reinforce this concept, from the enemies to the environments themselves, sounds or atmosphere will help reinforce this concept.
- **Puzzles:** *The Last Sacrifice* presents players with an environment filled with threats and hostile areas, which is why puzzles, in addition to being very common in the genre, provide an entertaining way to reduce the pace of the game between areas, allowing the player to take it more calmly and regain composure.
- **Exploration:**The Survival Horror genre is usually very dependent on exploration, and*The Last Sacrifice* is no exception, as it will feature a relative diversity of rooms, halls, and hallways grouped into distinct zones. These will be closely tied to the flow of the game, not only through movement but also through the exploratory nature of the genre's puzzles.
- **Narrative:**Every game has a story to tell, and in the case of*The Last Sacrifice,* Since this is a situation initially unknown to the player, they will gradually discover more elements and concepts of the world they find themselves in, thus reinforcing the feeling of immersion in the game.

5.2 Core Loop

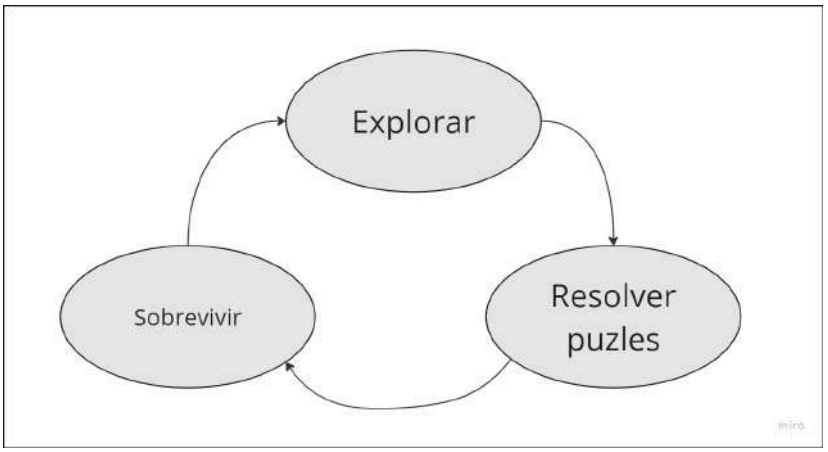


Fig. 15: Schematic of the Game Core Loop

The player's primary objective during a game session is to explore the environment in search of solutions to various puzzles, carefully manage their limited resources, and survive the threats that lurk. The game's Core Loop is divided into three segments:

- **Explore:**Exploration is one of the most important parts of the game, as it is the primary way in which the player can find puzzles, enemies, or items such as ammunition and keys that will allow them to open blocked paths.
- **Solve Puzzles:**The player will encounter various puzzles that will serve as challenges, and solving these puzzles will be rewarded by unlocking rooms or finding key objects that can help them in future puzzles and challenges.
- **Survive:** Although the player has access to the crossbow and it gives them the option to defend themselves, they will have to make the decision whether to fight or evade enemies, given that they have few resources.

5.3 Game Loops

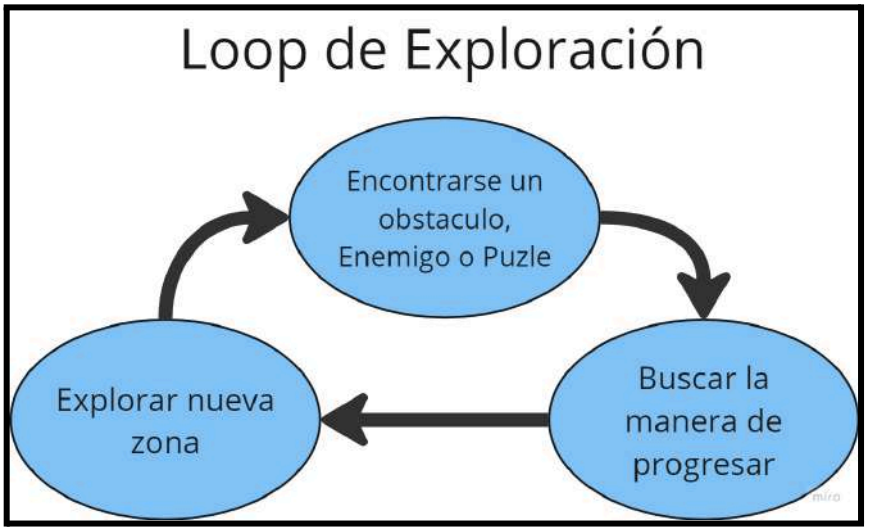


Fig. 16: Scanning Loop

The Exploration Loop is simple and serves as the link to the rest of the gameplay. The player will solve obstacles through the Survival Loop or the Puzzle Loop.

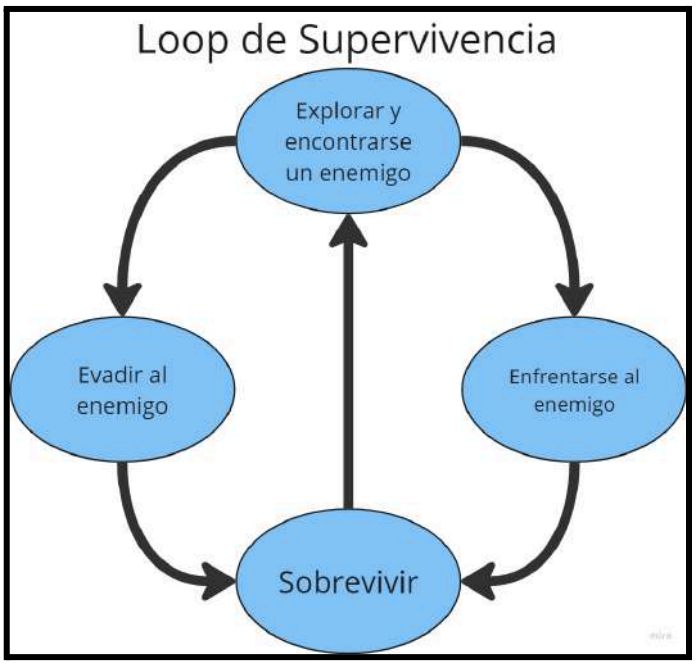


Fig. 17: Survival Loop

The survival loop is the process that goes through the player's head when they encounter an enemy. Depending on the player's health, ammunition, and skill, they can decide whether to engage and kill the enemy or try to avoid them.

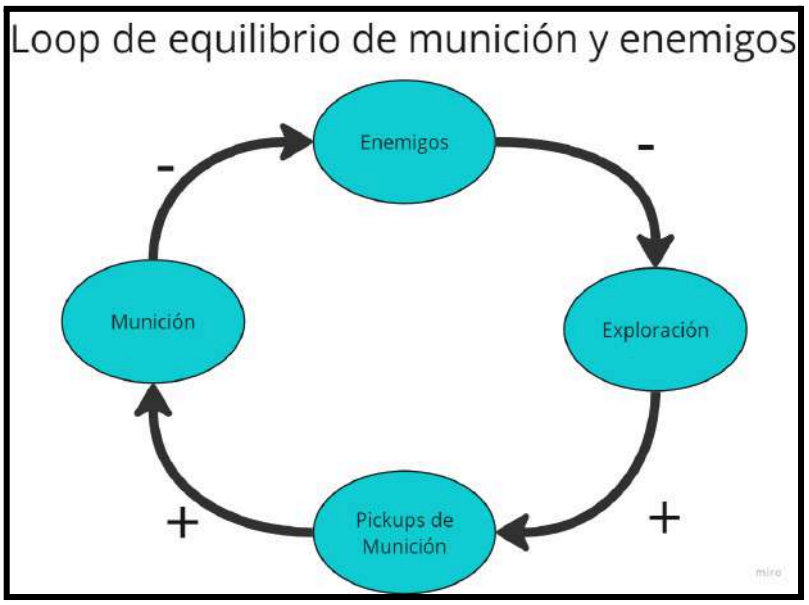


Fig.18: Ammo and enemy balance loop

The survival loop connects to the balance between ammunition and enemies, as this is the main resource you'll need to manage throughout the game. Ammunition is limited, and there is a finite number of pickups within the levels. Eliminating an enemy now makes an area safe and makes exploring that specific area easier.

This loop is what gives the player the tools necessary to make a decision on whether to fight or evade enemies.

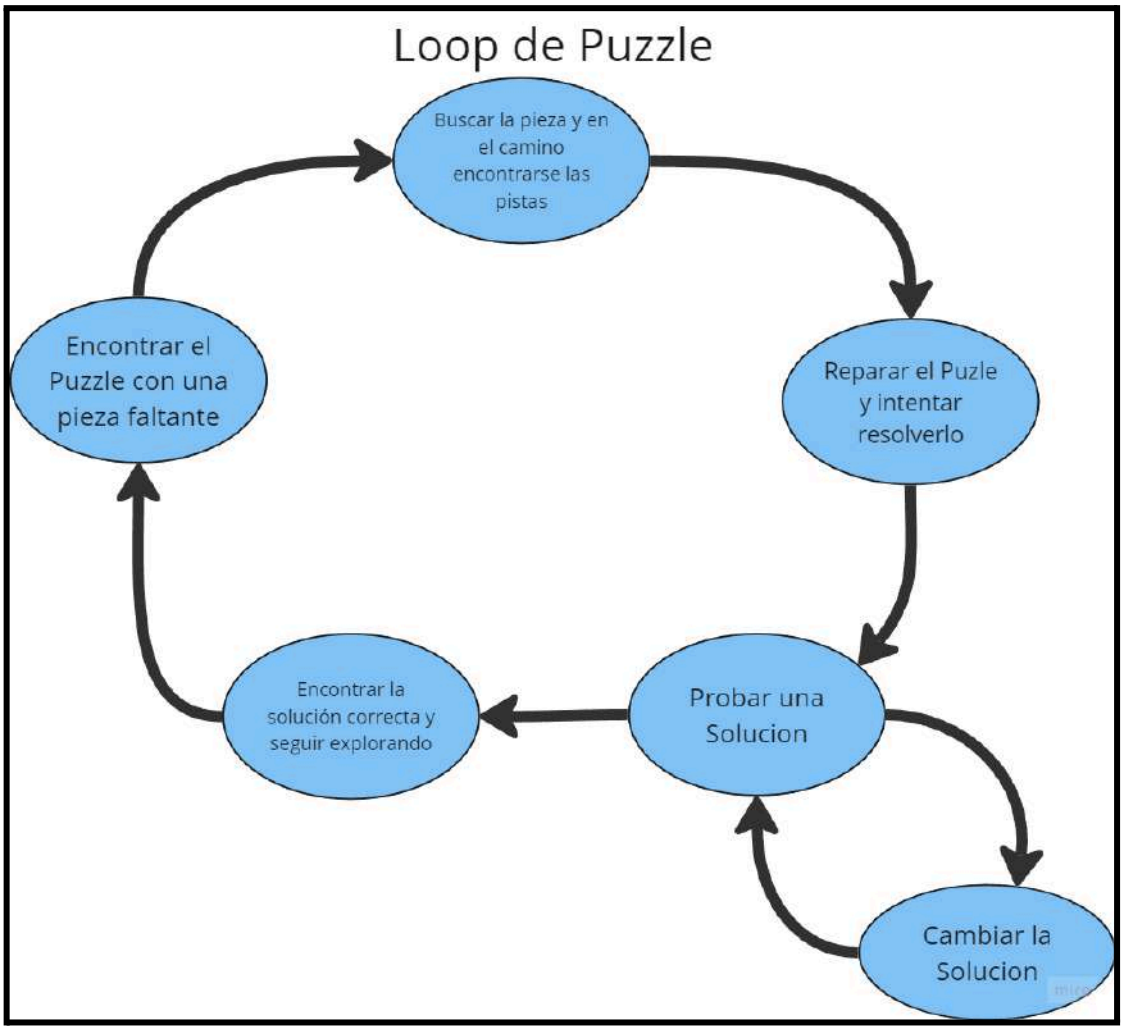


Fig.19: Walk the Puzzle

The puzzle loop explains the process the player must follow to solve a puzzle. As a general rule, the player cannot interact with the puzzle the first time they encounter it, as they will be missing a piece or object necessary to interact with it. The player will have to explore in search of the piece, and within this process, they will find the clues necessary to solve it. Once the player has all the clues and the missing piece, they can attempt to solve the puzzle.

5.4 MDA

The Last Sacrifice aims to generate emotions in players that are similar to both the reference games and the genre in general, and therefore seeks to find a**general feeling of unease, vulnerability or fear.**This is one of the most important points when it comes to a Survival Horror game, since being part of the genre, the audience is looking for this type of emotions.

When it comes to level design, to make the player feel constant tension and anxiety, an approach has been chosen where the environments are reinforced.Claustrophobic or labyrinthine environments. These will feature various locked doors and obstacles that encourage the player to explore to find keys or solve puzzles that allow them to advance. In a space filled with uncertainty, tight spaces and constant blockagesboundwill make the player investigate other areas, thus fostering that feeling ofterror and insecuritywhen moving through areas that may possibly harbor different dangers that threaten their survival.

The sensations that are sought to generate in terms of level design are linked to the placement and type of camera that is used.will employ, given that dueSince the camera doesn't depend on the player, they'll never have control over what they see, much less be prepared for a hidden enemy. The fixed camera also influences the player's perception of controlling their character, as they won't see the character the same way from different perspectives, making them feel small when focused from above or being chased when the camera follows the player.

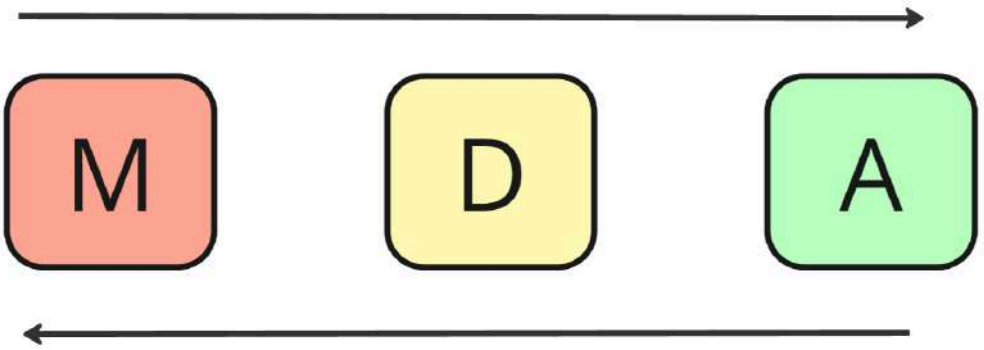


Fig. 20: MDA scheme

When facing an enemy, the goal is to generate a feeling of weakness and helplessness in the player, since although the player has two options, fight or flee, the most effective option will be flight. This is because the combat design aims to highlight the**false security or tension**, because although theplayeris able to confront them, the lack of ammunition and the enemies' low health will work against the player and their low health. On the other hand, if the player decides to flee, the fear or tension they may feel is reinforced.

In addition to the unknown and vulnerability, the environment also plays a very important role in how we intend to make the player feel. The setting isn't just the place where the events take place; it also tells a story through implicit narrative. The settings the player will encounter as the game developswill submergethe player in places full of corpses, blood, tapestries and stained glass windows that will greatly increase both the tension and fear that the player suffers.

However, the sections that differ greatly from exploration or survival are the puzzles. In these cases, the goal is to reinforce a certain sense of**security and peace of mind**In this way, the player will not only be able to complete the puzzles calmly, but will also be able to take these sections more calmly.

5.5 Tetrad

The following section will analyze the game's tetrad, with the aim of assessing the balance of its basic elements based on the approach taken for the project.

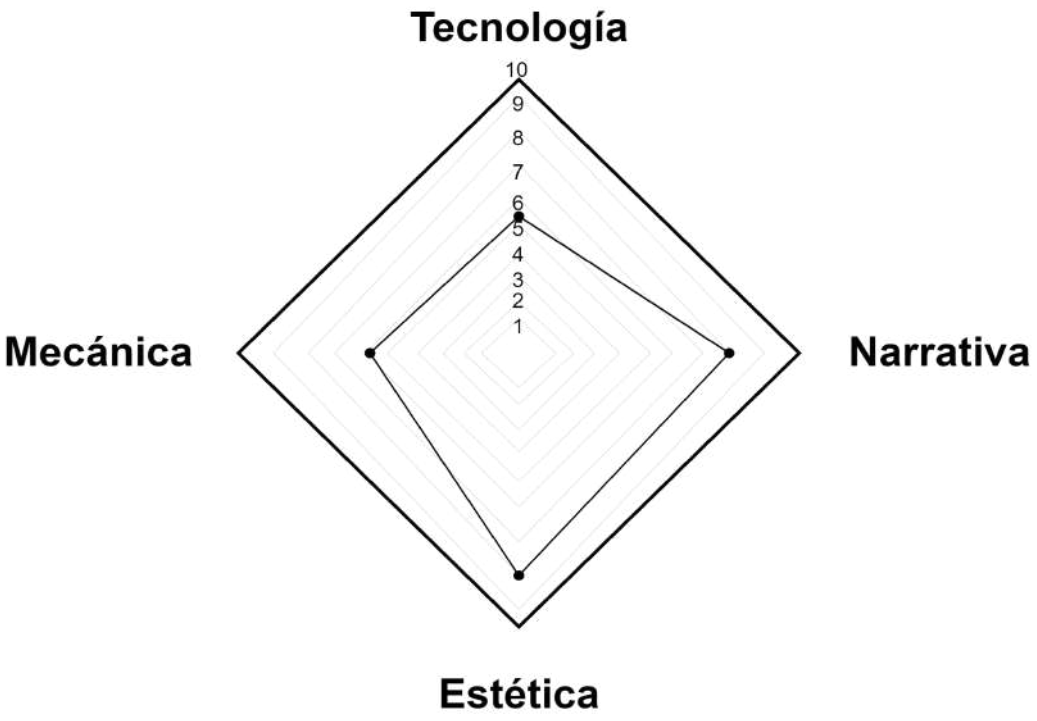


Fig. 21: Tetrad of the Survival Horror project.

As can be seen in the diagram above, it can be determined that The Last Sacrifice presents a greater focus on the aesthetic and narrative part.

The **technology**The functionality required to play the video game isn't overly demanding, allowing the user to choose between a keyboard and mouse or a controller. The only requirement to play is a computer, so technology is a minor aspect. This is in keeping with the overall approach of the project, as it's a demo, so it's a simple game that doesn't require very advanced technology to play.

The**mechanics**The game's systems are also simple, allowing the player to overcome different challenges and puzzles with a single interaction action that combines different types of elements to interact with. In addition, the player can aim, shoot, and use an inventory. Overall, the game's systems are simple, as the goal is to create variety in level composition and pacing to generate fun gameplay with few mechanics.

The **narrative**It's a relevant aspect of the game. Horror video games tend to have a deep and primarily environmental narrative. This aims to increase player immersion, making them feel part of the story and identify with the protagonist in order to empathize and feel the same emotions (anxiety, terror, vulnerability, etc.). The exploration of a survival horror game seeks to have the player discover parts of the story and experience sensations of terror. The narrative approach and

focus for this project is for the player to gain information about what's happening in the game world through puzzles and enemies, and draw conclusions based on what they see. Thus, the narrative is a highly valued point in the tetrad, as it aims to foster the desired gaming experience, placing the player in a situation of danger and uncertainty (making their goal escape from a monastery where they've been kidnapped) and confronting them with strange and horrific threats (a cult that sacrifices humans). Due to the importance of the narrative in the game, it is considered a highly visible aspect of the project.

Finally, the**aesthetics**It's a highly relevant element of the game, and therefore features heavily in the project. The Last Sacrifice focuses on offering the player a good gaming experience by generating a sense of fear, insecurity, tension, and helplessness, which can be achieved through effective use of aesthetic elements. The setting, which aims to be dark, oppressive, and sinister, combined with the use of sound effects such as footsteps or screams and disturbing music, will contribute to generating the gameplay experience intended for the project. The art and visual aesthetics of the levels are essential to achieving this, creating realistic environments that foster immersion and play with the player's anticipation of what they cannot see. In the monastery, the player will find dark areas, narrow corridors, and a multitude of visual and sound effects that create an atmosphere of terror. For these reasons, and based on the project's intended achievement, aesthetics are considered the most prominent aspect of the game and highly valued in the tetrad.

5.6 Kinds of Fun

This section will analyze the types of fun presented by the video game, focusing on the aspects each type achieves and why, as well as analyzing how the different elements of the game will be used to achieve each type.

The Last Sacrifice appeals to three types of fun mainly:

- **Sensation:**This type of fun focuses on the**sensory and emotional experiences**that the player gains through the game. The project's goal is to immerse the user and evoke different sensations, generating a specific gaming experience. This will be achieved through the use of visual elements, setting, and sounds, creating sensations of terror, intrigue, vulnerability, and tension. Therefore, the game's aesthetic will be a prominent aspect, utilizing the atmosphere and detailed, realistic environments to foster this experience and immersion, making the player feel different emotions.

- **Discovery:**It is a type of fun that appeals to the**player satisfaction and interest in exploring and discovering new elements or new areas within the game world.**This relates to the intrigue of discovering new mechanics, objects, or enemies, and in the case of the project, it is closely linked to the discovery of puzzles and the clues needed to solve them.**The Last Sacrifice's focus on survival and managing limited resources forces the player to explore other rooms.**, which fosters this sense of discovering new elements, and even influences the player's interest in learning more about the game world's history and discovering events or notes that deepen the narrative. In a survival horror game, the fun of exploring also comes from the satisfaction of finding a way to solve a riddle or puzzle, and from the constant intrigue of seeing all the dangers hidden in the levels, which generates greater immersion and a greater commitment from the player to seek out all the secrets in each area.

- **Narrative:**It refers to the player's enjoyment of the**Discover parts of the story and stay immersed in the game through the plot and the events and happenings of the game.**The project proposes a primarily environmental narrative, capturing the player's interest in the world-building and story conveyed by the game's elements, objects, settings, and art. The player's interpretation of events based on what they see and discover fosters immersion and provokes emotional involvement, empathizing with the protagonist and becoming curious about what's happening in the monastery.

Overall, the project's three fundamental types of fun are closely linked, and appeal to a focus on player immersion, fostering it and generating an entertaining gaming experience through sensations of fear, anxiety, and insecurity.

Sensación	Descubrimiento	Narrativa
• Diversión a través de las **experiencias sensoriales** • Uso de la **ambientación**, sonidos, elementos visuales, entornos. • **Inmersión, experiencia de tensión**, terror, intriga.	• Diversión a través de la **exploración y el descubrimiento de nuevos elementos en el juego.** • Fomento de la exploración mediante la **gestión de recursos limitados y los puzles.** • **Inmersión**, sensación de satisfacción.	• Diversión a través de la **trama y los eventos narrativos** del juego. • **Uso de narrativa ambiental**, objetos y puzles que muestran parte de la historia. • **Inmersión**, empatía por el protagonista, experiencia de terror y vulnerabilidad.

Fig. 22: Summary table of the Kinds of Fun of the Survival Horror project.

6.- Player Design

6.1 General Player Attributes

As for the general attributes that the player possesses, we find the following:

- Life
    - Description: It will be represented based on individual hit points and will have an average value relative to the enemies.
    - The player will have an average amount of life.
    - Life will be represented based on the player's animation, when they have less life, it will be harder for them to walk and there will also be an outline with blood stains on the screen.
- Movement and turning speed
    - Description: The speed attribute will vary depending on the player's navigation:
        - Walking speed
        - Running speed
        - Crouch speed
        - Spin speed
    - The player will have a medium movement speed
- Capsule height,thiswill vary depending on whether the player is standing or crouching.
- Armament
    - Amount of ammunition
    - Firing Speed

6.2 Controls

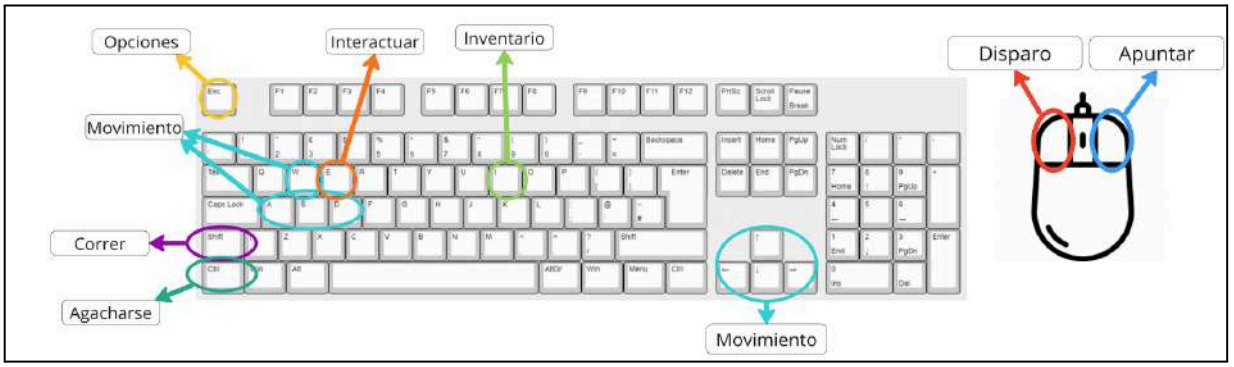


Fig. 23: Keyboard controls

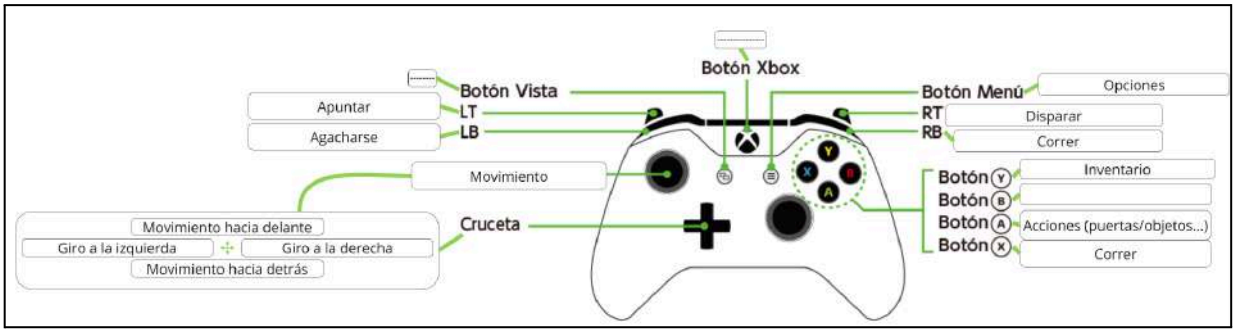


Fig. 24: Controls

Action	Command	Keyboard
Scrolling forward and backward	**Left joystick or D-pad**	**Tecla W y S**
Turn left and right	**Left joystick or D-pad**	**Key A and D**
Aim	**LT**	**Right click**
Shoot	**RT**	**Left click**
Bend	**LB**	**Ctrl**
Run	**RB**	**SHIFT**
Interact	**A**	**AND**
Upload objects	**Left joystick or D-pad**	**IN**
Open/Close inventory	**AND**	**I / TAB**

Break	**Menu Button**	**ESC**

6.3 Camera

Description:

Each camera is associated with a collision volume within the level.. When the playable character model enters this collision volume, the camera associated with this**will take control of the player's screen**.

Design Details

- Functionality:
    - The player approaches a chamber volume and enters it.
    - The camera associated with this volume automatically takes control of the player's screen. The transition will be instantaneous.
    - Depending on the type of camera associated, the behavior changes.
- Camera Types:
    - Static camera: This is**completely static and not broken**. It will be used in small rooms where the player is expected to explore and search for objects.

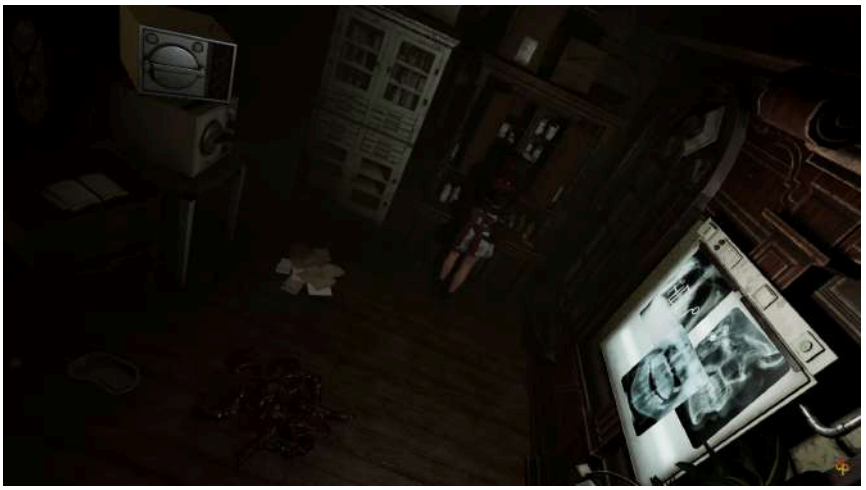


Fig 25: ExampleStatic camera in Tormented Souls (Dual Effect, 2021)

    - Static camera with rotation: This camera is**static position but rotates following the player.**They will be used in gameplay rooms

Fig. 26 ExampleRotating static camera in Tormented Souls (Dual Effect, 2021)

- Dynamic On-Rail Camera: This camera is associated with a spline. Each key on the spline is associated with a camera position value. The camera detects the closest point on the spline to the player and interpolates the camera position between the values assigned to the keys.**Rotates following the player.**

Fig. 27, ExampleRail camera (Dual effect, 2021)

- Use cases:
  - If the player is inside two chamber volumes at the same time, the volume the player entered most recently will take priority.

Appearance and Feedback

Open Questions

Def-Prot-Art

DEF	PROT	ART
	• Camera switching when the player enters and exits volumes • Static camera • Static camera with rotation • Camera on Rail	

Justification

The game is a third-person shooter with a fixed camera. Based on reference games, specifically Tormented Souls and Post Trauma, these are the camera types they use to add a bit of dynamism to their games.

The three camera types have different functions and will be used for different types of gameplay. There can be multiple cameras per room.

The **Fixed static camera**It will be used in small areas where the player can find pickups or focusing on puzzles.

The **Static camera with rotation**will be used in larger rooms with gameplay.

The **Camera on Rail**It will be used in hallways and connecting rooms

6.4 Player Actions

MOVEMENT

Description

Movement is the basic mechanic of the game, and solely constitutes the player's movement through the game world. Being a Survival Horror inspired by the classics, it proposes a**tank-like movement.**

Design Details

- Player Action:
    - He **forward movement**This will be done by holding down the W key or the left joystick/up pad.
    - He **backward movement**This will be done by holding down the S key or the left joystick/D-pad down.

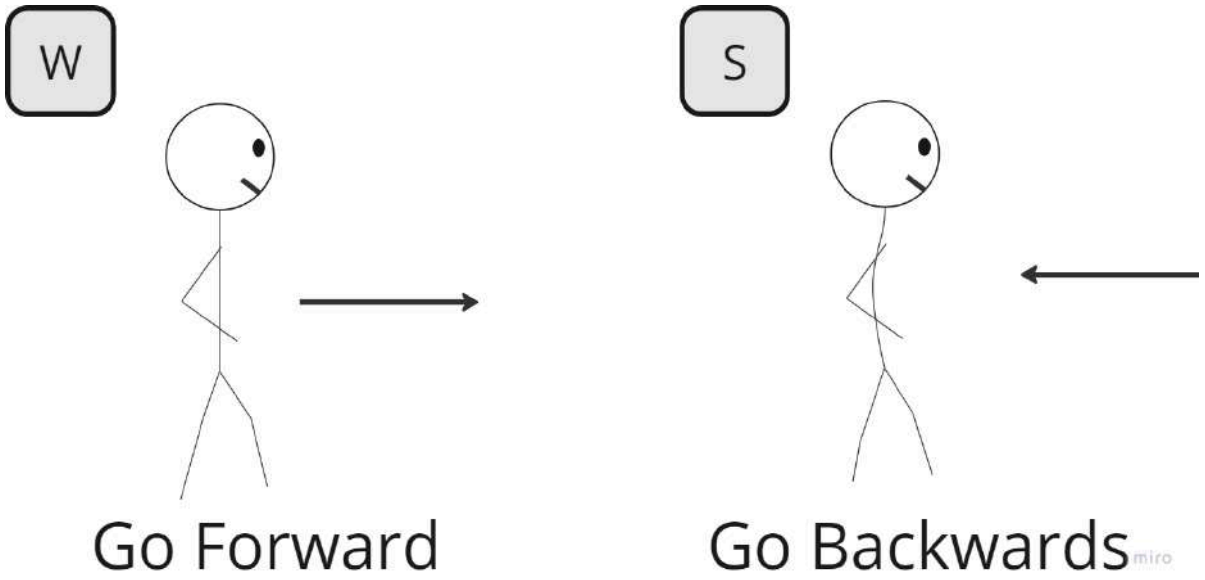


Fig. 28: Diagram of forward and backward movement.

- To**turn left,**hold down the A key or the left joystick/D-pad to the left.
- For**turn right,**hold down the D key or the left joystick/right D-pad.

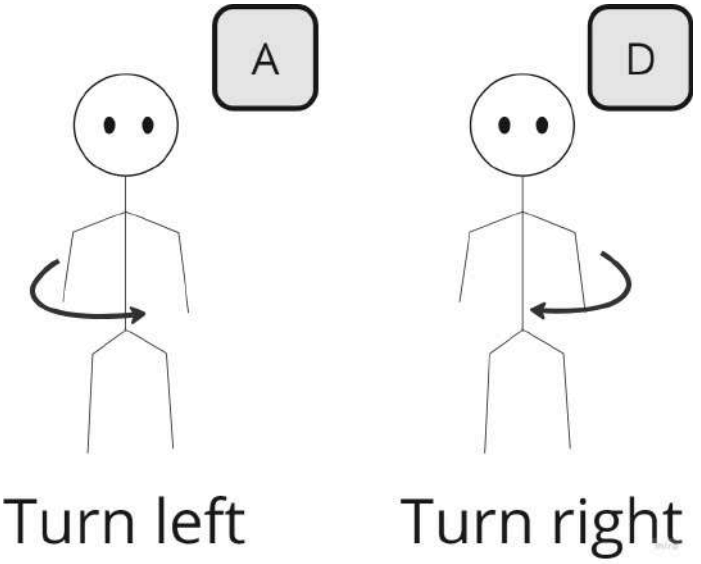


Fig. 29: Diagram of the rotation movement to the left and to the right.

- **While held down**the input, the player's movement will be performed.

- Functionality:
  - When the player holds down the input to move forward, the character will move in the direction they are facing.
  - If you move backward, the character will walk in the opposite direction to the one he is facing, so he will move backward.
  - Only when the player holds down the input to turn left or right will the character change its rotation and therefore the direction it is facing.

- Use cases:
    - Actions that can invalidate the move:
        - When the player aims to shoot with the crossbow, he will not be able to move.
        - When interacting with an inspection object.
        - When the player moves towards an enemy, they will collide with their collision, so they will not be able to move or push the enemy.
        - When the player interacts with the save item.
        - When the player interacts with a switch.
    - Pickups will not be able to block the player's navigation.

Visuals & feedback

At the asset and visual feedback level, we will need:

- Animations:
    - Player animation for walking forward.
    - Player animation for walking backwards.
    - Player animation for turning left.
    - Player animation for turning right.
- SFX:
    - Footstep SFX.

Open Questions

Def-Prot-Art

DEF	PROT	ART
	- Tank-like movement for the player. - Block movement when interacting and aiming.	- Animations for walking forward, backward. - Animations for turning left and right. - Footstep SFX.

Justification

Tank-like movement is used in this case because the project is inspired by classic survival horror games, which used this type of control. It's also linked to the fact that they will be used.**fixed cameras**, as the tank-like movement was designed at the time to improve the experience of playing with these cameras. However, these controls make for a more difficult experience due to their clumsiness.

RUN

Description

This mechanic allows the player to move faster through the game world.

Design Details

- Player Action:
    - The player can perform a sprint with the**Shift key or the RB button**.
    - The action will be carried out at**press and hold** el input.

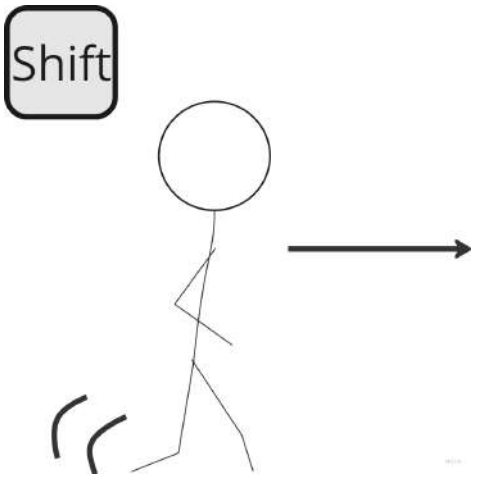


Fig. 30: Diagrama del sprint.

- Functionality:
    - Once the input is pressed, the character will move at a faster speed.
    - When you release the input, you will return to walking at normal speed.
- Use cases:
    - Running is only possible when the player is in a normal state, with no other active state that could invalidate this action. This mechanic is invalidated in the same cases as normal movement.
        - While aiming with the crossbow.
        - When interacting with an inspection object.
        - When the player moves towards an enemy, they will collide with their collision, so they will not be able to move or push the enemy.
    - You will not be able to run while crouching.

- The player will not be able to run backwards.

Visuals & feedback

At the asset and visual feedback level, we will need:

- Animations:
  - Player animation for running forward.
- SFX:
  - Footstep SFX.

Open Questions

Def-Prot-Art

DEF	PROT	ART
	- Increased player speed when holding input to run. - Block sprint when interacting, aiming with the crossbow, crouching, and walking backward.	- Animation of theplayerto run forward. - Footstep SFX.

Justification

Running helps the player advance faster, allowing them to speed up their exploration and giving them the opportunity to escape from fast-moving enemies. However, they also can't run too fast to contribute to the intended atmosphere of vulnerability.

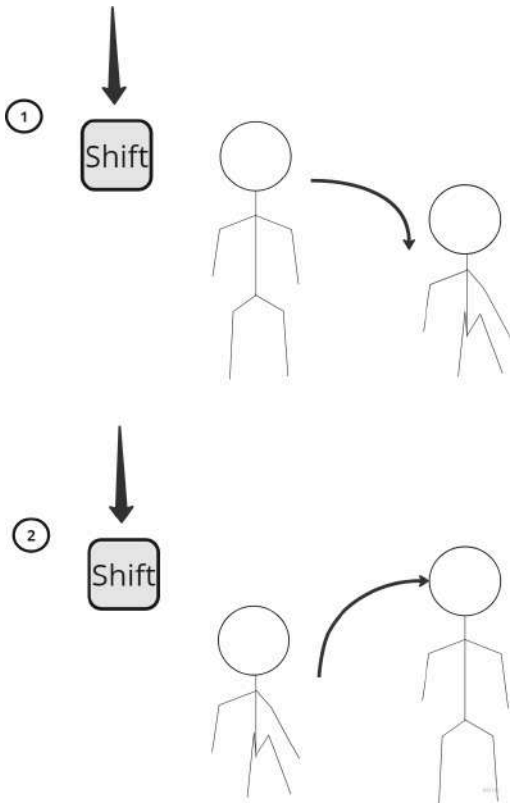
CROUCH

Description

This mechanic allows the player to traverse small gaps or low places.

Design Details

- Player Action:
    - The player can crouch by pressing the key**CTRL or the LB button**.
- Functionality:
    - When the input is pressed, the character will crouch. Pressing the same input again will stop the character from crouching.



Figs. 31: Crouch diagram.

    - Your speed while crouching will be reduced.
    - The height of the capsule will also be reduced (height to be determined).
- Use cases:

- When the player is crouching, he can cross gaps or very low areas that he could not pass through standing up.

- This navigation mechanic also relates to combat, as the player can crouch and stay behind an object to avoid being seen by the enemy.

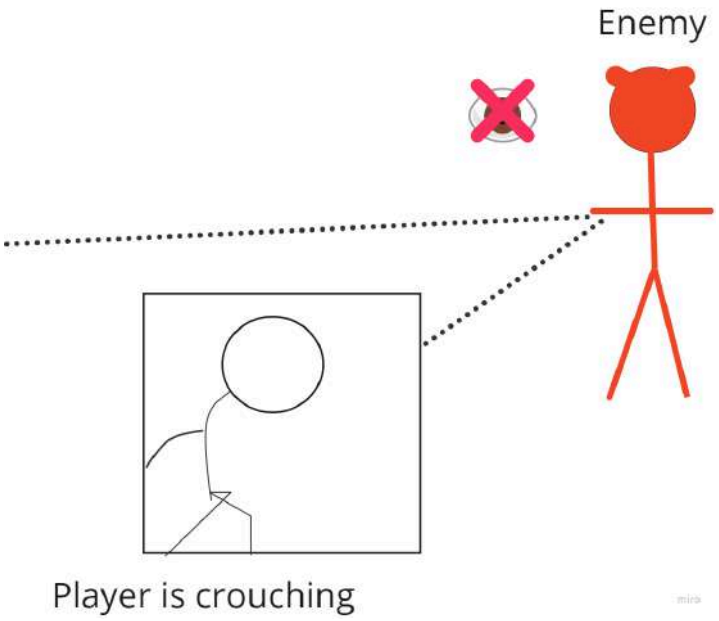


Fig. 32: Secrecy diagram.

- If the player crouches and approaches an interactable object, the 2D prompt will appear and they can interact with it as if they were standing. Doing so will stop the player from crouching and begin performing the corresponding interaction animation.

- If the player crouch-walks towards an object that can be climbed, they will not climb.

Visuals & feedback

At the asset and visual feedback level, we will need:

- Animations:
    - Crouching animation.
    - Animation for the character's movement while crouching and walking forward.
    - Animation for the character's movement while crouching and walking backwards.
    - Animation for the character's movement while crouching and turning to the left.
    - Animation for the character's movement while crouching and turning to the right.
- SFX:
    - Sounds of footsteps.

Open Questions

Def-Prot-Art

DEF	PROT	ART
	- He playercrouches when input is pressed. - Crouching allows you to interact with elements and switches to the interaction state. - Crouching prevents you from climbing onto objects.	- Animations for crouching, crouching, and crouching turns. - Sounds of footsteps.

Justification

This mechanic is included in the game because it allows the player more ways to explore, adding dynamism to movement through the game world (possibly including alcoves or small spaces that make the level design more interesting). It also contributes to the survival aesthetic and ties in with the player's need to escape from an unknown, ruined location.

INTERACT - General

Description: The interaction feature works with elements that detect its presence and will activate the corresponding functionality of the object after the player's action.

This feature would be the basis of all subsequent interactions, however each of them has

Design Details

- Player Action:
    - The player interaction action will be the “E” key on the keyboard or the “A” button on the Xbox controller.
    - This action only needs to be pressed once.
    - This action will only be triggered when the player is in interaction range of a**Object Interactuable**and the playable character model**be object-oriented**.

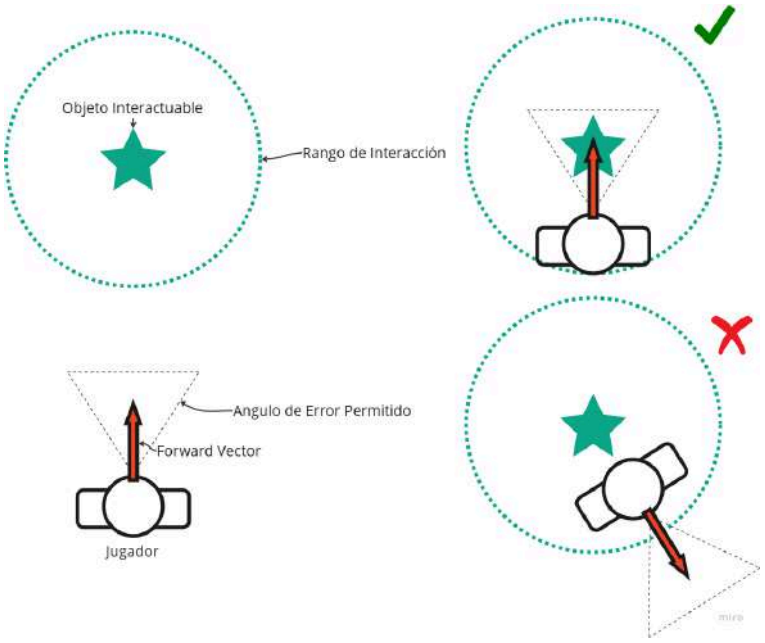


Fig. 33: General interaction rules

- Functionality:
    - The player approaches a**Object Interactuable** and enters its range of interaction.
    - If the playable character model is oriented towards the object, a 2D prompt will appear in the GUI indicating what action is to be performed and which button to press.
    - When the player performs the Interact action:
        - Player orientation towards the object will be correctedinteractuable.

        - The functionality, animation and result will each be explained in its Functionality section.

- Types of Interaction:
    - **Pushable Interactive Objects**
    - **Pickups**
    - **Inspectable Objects**
    - **Switches**
    - **Doors**
- Use cases:
    - In case multiple Interactable objects meet the usage requirements and the player activates the Interaction action, only one of the objects' functionality will be activated, which will be decided based on:
        - What is the player looking at?
        - Which is closer to the Player

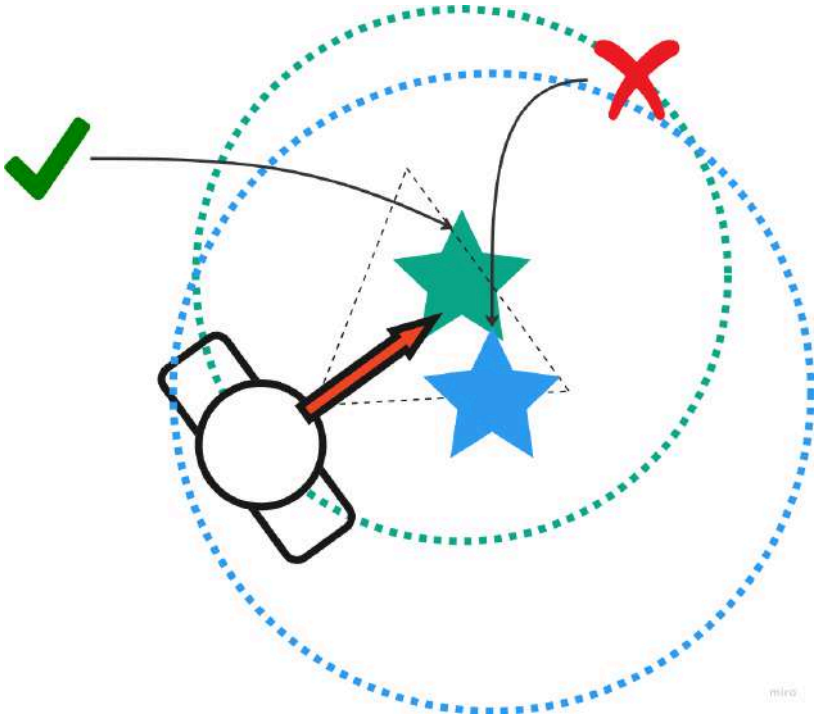


Fig. 34: General interaction use case diagram.

    - If the interaction cannot be performed for any reason, a failure sfx will sound.
    - This action will override any movement action.

Appearance and Feedback

At the asset and visual feedback level, we will need

- 2D interaction prompt
- Highlighting which object is going to be interacted with

SFX

- General Failure Sound

Open Questions

Def-Prot-Art

DEF	PROT	ART
	- Interaction activation button - 2D GUI Prompt Functionality - Execution of the ObjectInteractuable	- 2D interaction prompt - Highlighting which object is going to be interacted with - General failure sound

Justification

Interaction is one of the most important mechanics in the game and allows the player to interact with different elements. Since there are various types of interaction, general rules for interaction are established and attempts are made to avoid problems between them.

The explanation of the different types of interaction can be found in their specific section.

INTERACT - Pickups

Description: The Pickup Interact Feature is specific to interacting with pickup objects and their behavior before entering the inventory.

Design Details

- Player Action:
    - The same rules as General Interaction are used
- Functionality:
    - The moment the player performs the interaction action, the character model performs a generic object-grabbing animation and a sound plays when an item is put into the inventory.
    - The Pickup actor is destroyed and added to the inventory (see section on adding an item to the inventory within the Inventory card)
    - A message appears saying “(Item name) has been added to the bag”
- Types of Pickups:
    - Healing Object
    - Ammunition Item
    - Object of Lore the Clue
    - Keys
    - Crossbow
- Use cases:
    - Until the player has finished the pickup animation, the Pickup cannot move.
    - If there is no space in the inventory, the action is not performed and the error sound is heard along with a message saying that there is no space.

Appearance and Feedback

At the level of visual feedback it is needed

- General Pickup Animation

At the Audio level

- SFX of putting an object in the bag

Open Questions

Def-Prot-Art

DEF	PROT	ART
	- The Pickup object disappears from the level when interacting with it - The item is added to the inventory - The game message appears - The pick up object animation plays.	- General Pickup Animation - SFX of putting an object in the bag

Justification

Pickups are the connection between the game world and the inventory. Since there are several types of pickups, general rules were created that apply to all items of this type to simplify functionality.

CLIMBING/DESCENDING OBSTACLES

Description:

The player can move up and down elements of the game world. This is a way of interacting with objects that requires movement and allows access to higher or inaccessible areas.

Design Details

- Player Action:
    - **This interaction will be performed by holding the W key or the left joystick/crosshead**in front of an obstacle.
    - It will be done**holding down the input**(walking towards the object).

- Functionality:
    - When the input is held down, the player will climb onto the object.
    - Once on top, you can maintain the same input again by walking to the edge of the object to get off.

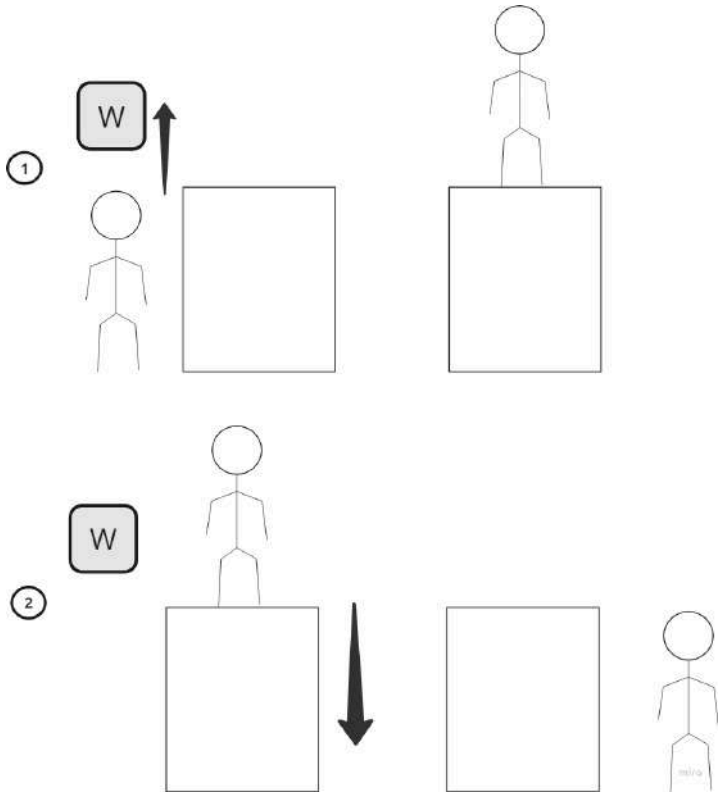


Fig. 35: Diagram of the action of raising and lowering elements.

- Use cases:

- If there is an enemy next to the obstacle, the player will only be able to climb or descend from the object on the side where there is no blocking element.

- The player can interact with mechanisms such as buttons or levers that are at the same height as the player while standing on top of an object. For example, the character can't reach a button and climbs onto a box to interact with it.

- You may only climb on objects that are no higher than a certain height, such as boxes. However, you may reach shelves or curbs if you climb on a box first.**The height of this type of climbable elements will be half the height of a standard wall.**

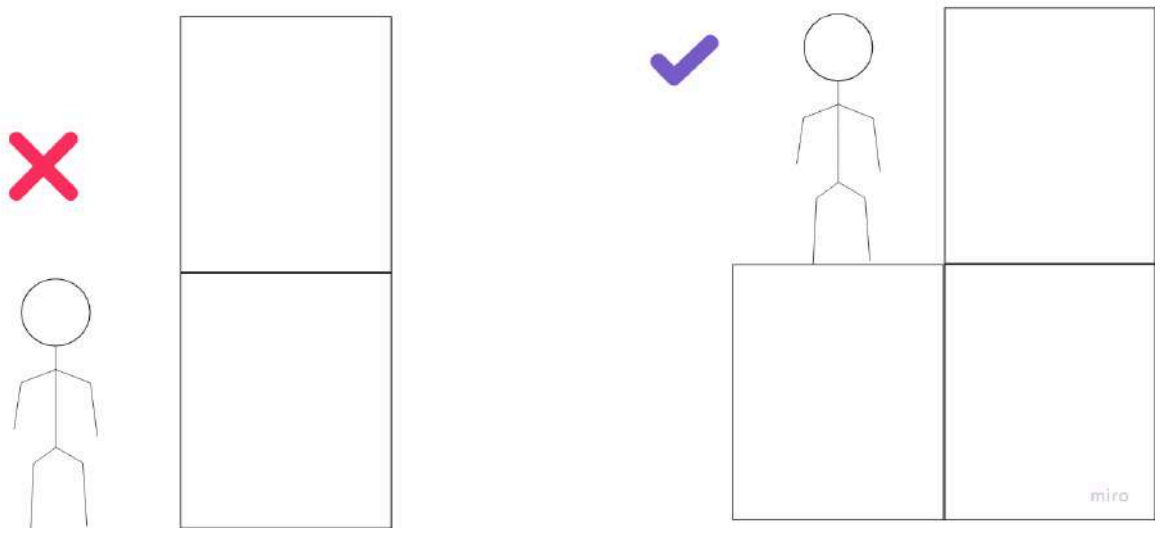


Fig. 36: Use case diagram for the action of raising and lowering elements.

- The player cannot raise or lower items by walking backwards.

Appearance and Feedback

At the asset and visual feedback level, we will need:

- **Animations:**
  - Animation of the player going up and down.

- A way to visually differentiate between items that can be uploaded and those that cannot.

Open Questions

-Can the player aim and shoot while standing on an object?

Def-Prot-Art

DEF	PROT	ART
	-By pressing the input, the player steps onto the box, and by walking towards the edge, he steps down. -You can't go up or down walking backwards.	-Player animation for going up and down. -Way to visually differentiate the elements that can be uploaded.

Justification

This interaction is included in the project because it's a way to make level design more interesting. It can be combined with other interactions to create fun little challenges and also allows for adding verticality.

6.5 Inventory system

INVENTORY

Description:

The Inventory Feature involves storing items that the player is exploring.

The Inventory acts as a pause and freezes the game until it is closed.

Design Details

- Player Action:
    - The action to open the player's inventory will be the key**“I”** from the keyboard or button**"AND"** from the Xbox controller.
- Functionality:
    - When the player performs the inventory action, the game is paused and the inventory window is displayed. While this screen is displayed**the inventory is considered open**
    - This inventory screen has 3 parts
        - a grid with all the existing objects in the inventory
        - A space for the image of the currently selected object
        - A space for the description of the currently selected object.

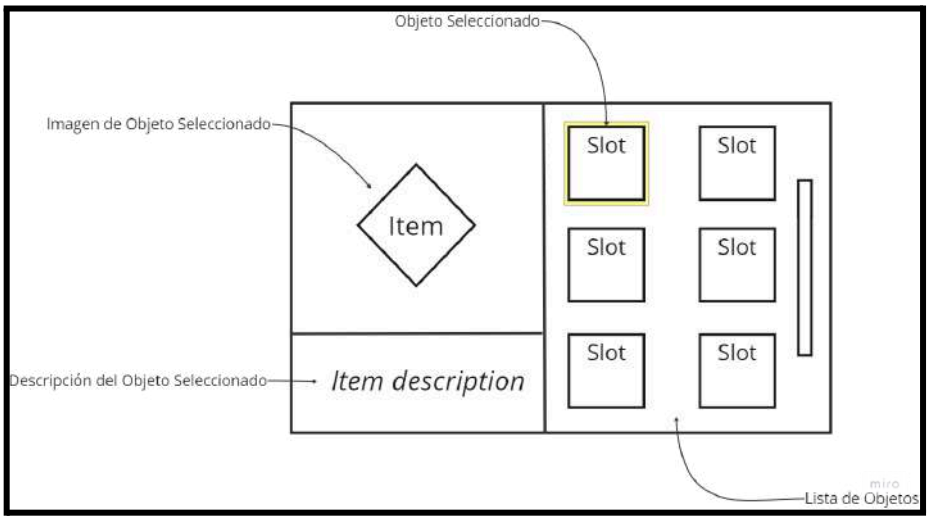


Fig. 37: Inventory diagram.

- The first item in the inventory will be automatically selected, displaying its image and description.

- When you change the selected object, the image and description on the screen will be updated to correspond to the new object.
- Using the inventory action when the inventory is already open makes the inventory window disappear and is considered closed and the game is resumed.
- The inventory has a maximum capacity of objects.
- Some items are stackable and do not require multiple inventory slots.
- Some items can be used. To use them, see Interacting from the Inventory.

- Adding Items to Inventory:
  - The player can add items to the inventory by picking up items from the Pickup as long as there is space within the inventory.
  - An inventory item has the following information:
    - Name
    - Description
    - Image
    - Object Type
    - Boolean of whether it is cumulative
    - Amount of accumulation of the object
    - Specific information depends on the type of object
      - e.g. The content of a Lore item
  - The first available slot in the inventory will be searched.
- Inventory Item Types:
  - Healing Object
  - Ammunition Item
  - Object of Lore the Clue
  - Keys
  - Crossbow
- Use cases:
  - While the inventory is open, the following factors will be taken into account.

- The game is considered paused. No dynamic elements can be moved while the game is paused.
- Player controls will transition to the menu navigation state.

Appearance and Feedback

At the level of Assets and Visual Feedback, they will be needed.

- Backgrounds and images needed to create the window structure.
- Highlighting the selected object

At the Audio level you will need

- SFX to open inventory
- SFX to close inventory
- Sfx of changing selected object.
- SFX of using object
- SFX usage failure

Open Questions

Def-Prot-Art

DEF	PROT	ART
	- Open Inventory - Close Inventory - Adding items to inventory - Using Inventory Items	- Inventory window art. - inventory window highlighting - SFX Open Inventory - SFX of Closing Inventory - SFX of Change Selected Object - SFX of using object - SFX usage failure

Justification

Being a survival horror game, survival and resource management are important. The inventory is useful for this, as it allows the player to control their resources and can provide clues about how to use these items using images and item descriptions.

6.6 Weapon System

Description:

This system is the player's way of eliminating threats from the game world, beingisthe different types of enemies.

Design details:

- Player actions
    - Aiming mechanics
    - Shooting Mechanics
- Functionality:
    - Aiming will put the player into combat state.
    - When shooting, it damages enemies.
    - It will waste ammunition
- Use cases
    - The armament system takes priority over the movement system
    - The interaction system prevails over the weapons system

Open Questions

Def-Prot-Art

DEF	PROT	ART
	- Aiming mechanics - Shooting Mechanics	- Aiming animation - Shooting animation - Reload animation

Justification

The weapon system gives the player the ability to defend themselves while surviving against enemies. While they may be able to defeat enemies, this isn't the optimal path, as running away from them is more effective, as ammunition will be very limited. Still, this mechanic has been implemented to foster player immersion and give the player the false sense that, despite being in a hostile environment, they are capable of confronting their captors.

Pointed

Description:

It is the way the player directs where he wants to shoot.

Design details:

- Player actions
    - When you press input, the player will enter the aiming state.
- Functionality
    - The player must carry the crossbow in his hand.
    - When in the targeting state:
        - The scrolling is blocked and you cannot move.
        - It can rotate in its position, only on the Z axis.
        - It will automatically target the nearest enemy with auto-aim implemented.
    - When aiming, auto-aim will target the nearest enemy within your effective range, whether they were already within range or entered after you started aiming.
    - This action will only be performed upon detecting the enemy.
    - **The ideal use case for the mechanic is to enter and exit the aiming state so that auto-aim works efficiently.**

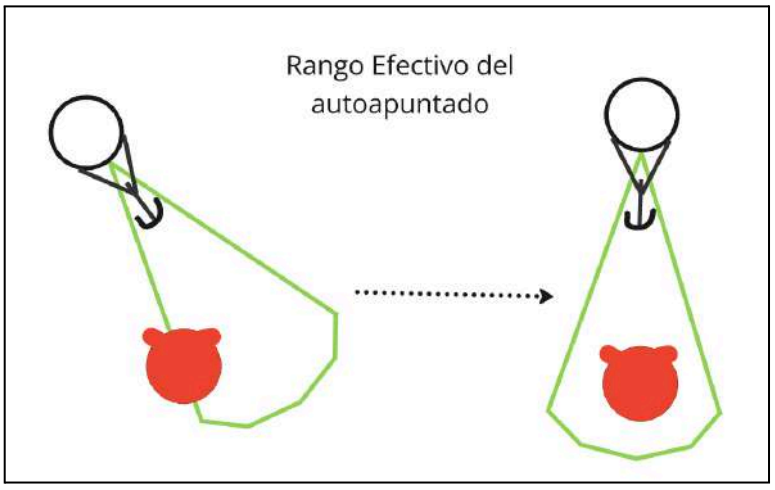


Fig. 38: Pointed diagram.

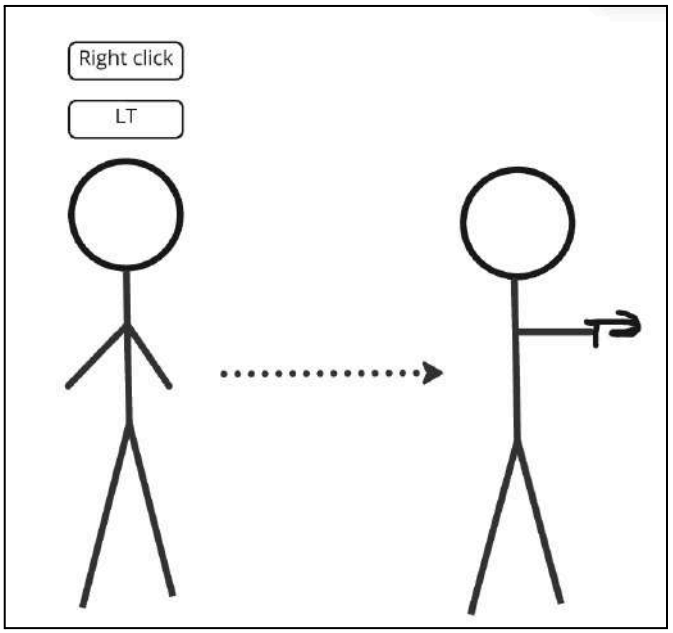


Fig. 39: Pointed diagram 2.

- Use cases
    - Aiming is prioritized over running or walking, where the player will stop moving and aim.
    - When they cannot be used:
        - When in the state of pushing a box
        - When in the state of interacting
        - By having the inventory open
        - When crouching

Visuals & feedback

- Animations:
    - Aiming animation
    - Rotation animation
- SFX:
    - SFX of moving the weapon to aiming position

Open Questions

Def-Prot-Art

DEF	PROT	ART
	- Pointing input - Motion lock - Rotation limited to Z axis - Auto-aim	- Aiming animation - SFX movement

Justification

An automatic aiming system was chosen because tank controls can be difficult to aim, so this approach is intended to solve this problem.

Shot

Description:

It is the way the player damages and eliminates enemies.

Design details:

- Player actions
    - By pressing the input, and being in the aiming state, the player will shoot
- Functionality
    - The player must possess an amount of ammunition greater than or equal to one.
    - Every shotcausewill deal one point of damage to enemies
    - Each shot will remove one unit of ammunition from the inventory.
    - Each shot will function as a weightless projectile, which must have a modifiable speed.

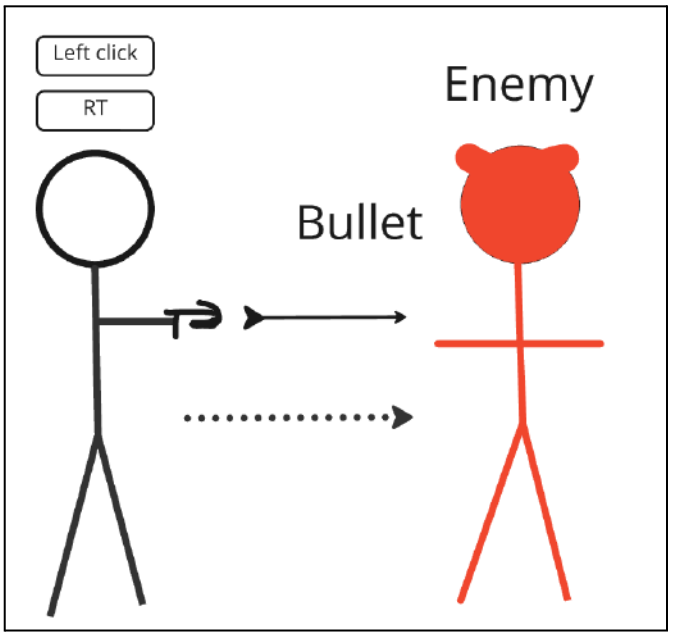


Fig. 40: Triggering diagram.

- Use cases
    - You can only shoot if the player is previously aiming.
    - Can only be shot if the player has ammunition

Visuals & feedback

- Animations:
    - Shooting animation
- SFX:
    - Shooting SFX

Open Questions

Def-Prot-Art

DEF	PROT	ART
	- Requirement to be pointing - How the shooting input works - Ammunition Possession Requirement - Inflict one point of damage - Eliminate an ammunition unit after firing	- Shooting animation - Shooting SFX

Justification

The weapon system gives the player the ability to defend themselves while surviving against enemies. While they may be able to defeat enemies, this isn't the optimal path, as running away from them is more effective, as ammunition will be very limited. Still, this mechanic has been implemented to foster player immersion and give the player the false sense that, despite being in a hostile environment, they are capable of confronting their captors.

6.7 Departure Saved

Description

The save game system allows the player to record and save their progress. This will only be possible when:

Design details:

- Player actions
    - Interacting with the save game stage item and spending a save game item
    - It is allowed to overwrite a game slot
- Functionality
    - The player interacts with the stage element corresponding to this action
    - The player owns at least one save game pickup
    - A screen with the saved game log is displayed
    - It is allowed to overwrite one of the starting slots
- Visuals & feedback
    - Animation:
        - Interaction with the stage element
    - SFX:
        - Game save feedback sound

Open Questions

Def-Prot-Art

DEF	PROT	ART
	- Storage pickup - Record all player actions and progress up to that point - Possibility of various games to save game	- Animation of interaction with the stage element - Match Guard Feedback SFX

Justification:

A pickup-based save system has been implemented, as this in itself can encourage exploration by the player, forcing them to stray from the "golden path" and explore new areas if they wish to save their progress. In addition, different save slots have also been opted for in case the player wishes to replay a specific sublevel or if different people share the same computer, so that a new save would not have to be created.

6.8 HUD

No HUD will be displayed on screen in The Last Sacrifice. The reasons for this decision are explained below:

- **Gaming experience**
    - The project aims to achieve an experience**immersive**, in which the player remains focused and experiences feelings of tension, terror, insecurity, or invulnerability. These types of emotions are sought to be fostered in a horror video game, so to achieve this, it is of great importance to create an appropriate environment, atmosphere, and setting, which keeps the player immersed in the experience.
    - The intention is to identify with the protagonist and empathize with his situation, so it is convenient to develop an experience**that includes the least amount of elements possible at the level of menus, interface, dialogues and any other element that breaks immersion**and remind the player that this is a video game.
- **Relevance of on-screen elements**
    - Linked to the desired immersion, the proposal is to design an interface that includes only the most relevant information. Therefore, it is considered unnecessary to display any type of on-screen data, as all the information the player needs will be found in the inventory or in the game world itself.
    - **The only UI element that will appear will be an outline or blood stains whenever the player is hurt or takes damage.**, as this is a way to visually indicate that the character is low on health, avoiding the inclusion of a traditional health bar that could break immersion. The intensity of the blood stains or outline will increase as the player's health decreases; this will be accompanied by heartbeat feedback that becomes increasingly louder.

6.9 Menus

This section presents a flowchart of the main screens of the main menu and the in-game menu, to provide an overview of how to navigate the interfaces, as well as a visualization of each specific screen to indicate which menus will appear in the game.

6.9.1 Main menu screen flow

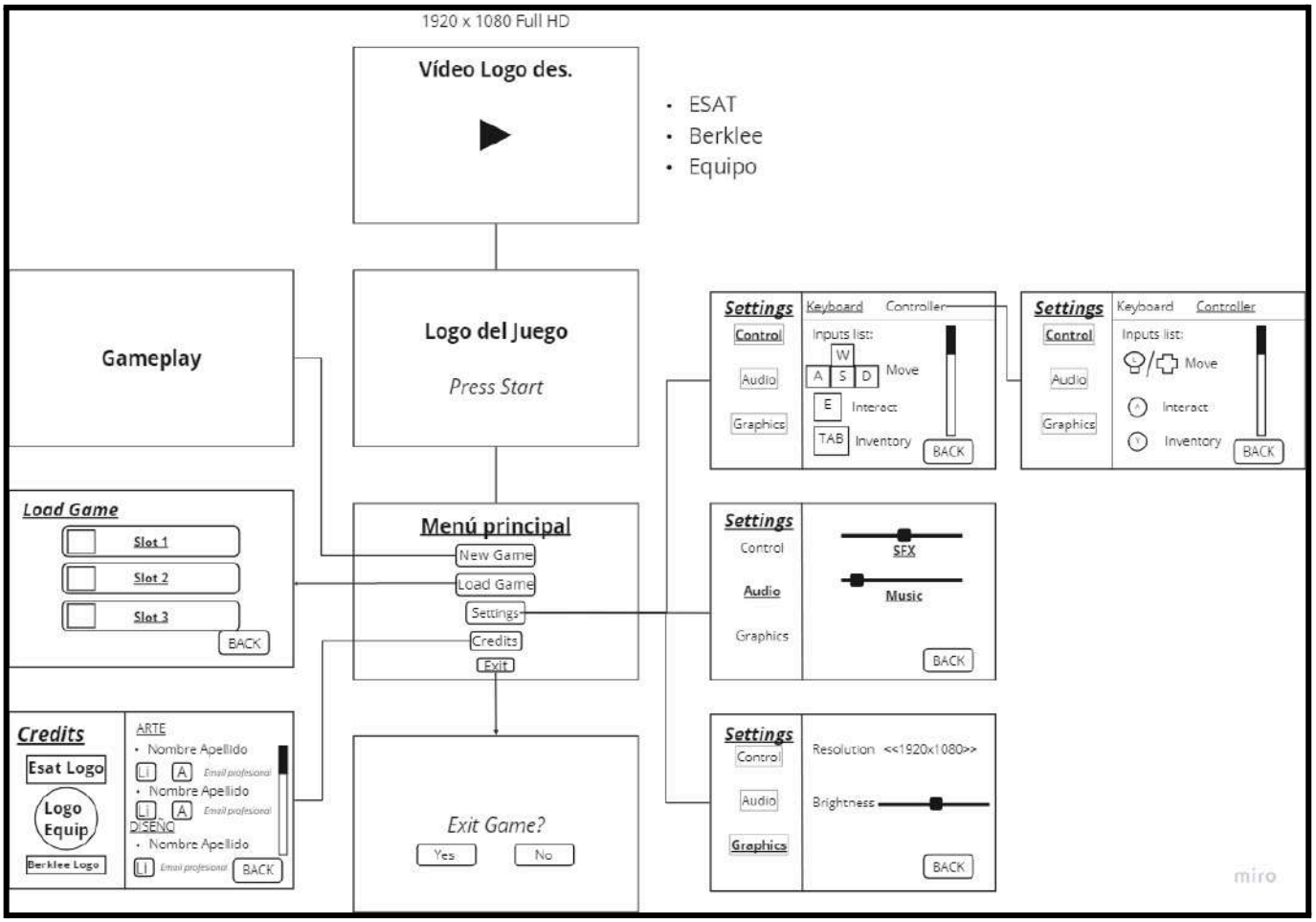


Fig 41: Main screen flow diagram.

6.9.2 Main Menu Screens

In the main menu we will find the following screens:

- **Main menu**

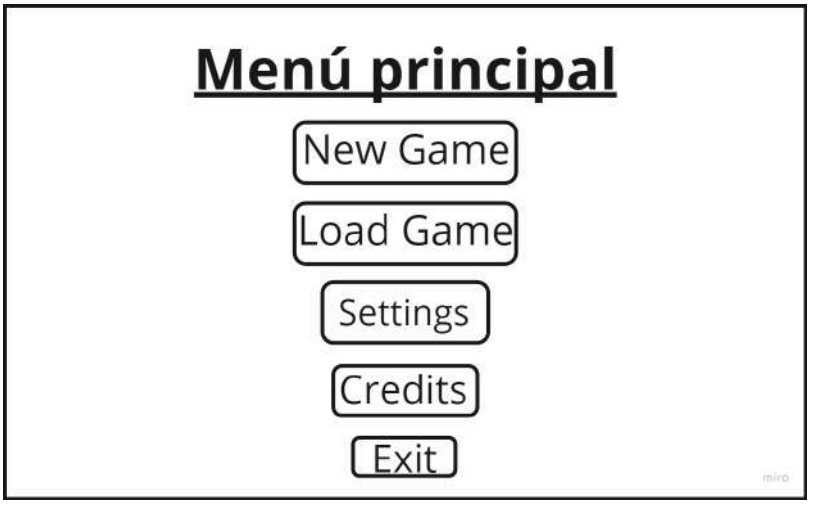


Fig. 42: Diagram of the main menu of the Survival Horror project.

- **Load game**

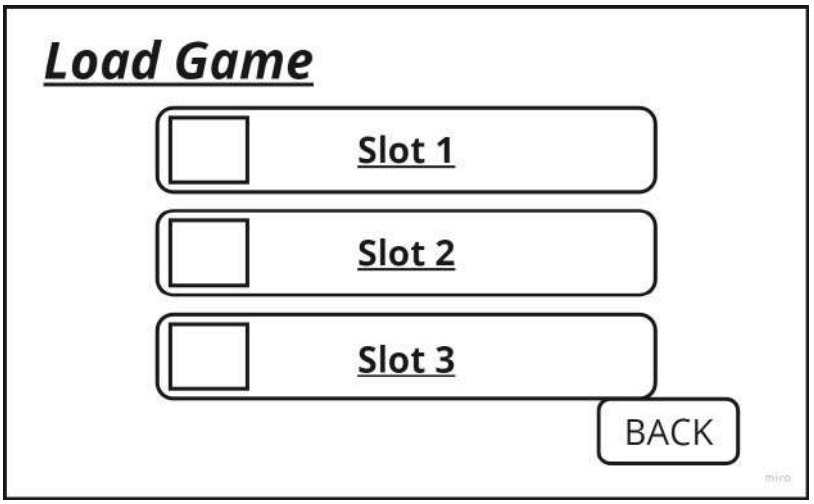


Fig. 43: Diagram of the loading game menu of the Survival Horror project.

- **Settings**

In the settings you will find different options and submenus for controls, audio and graphics settings.

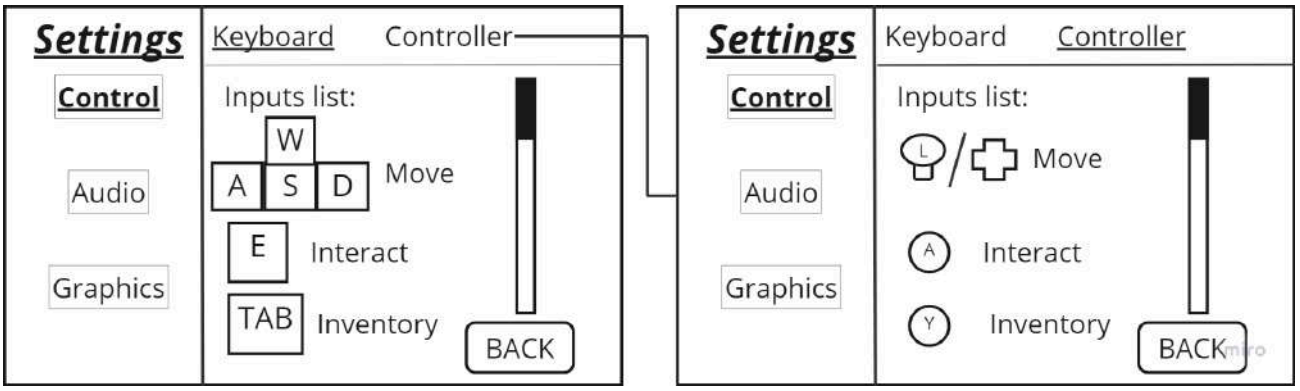


Fig. 44: Diagram of the Survival Horror project controls settings submenu.

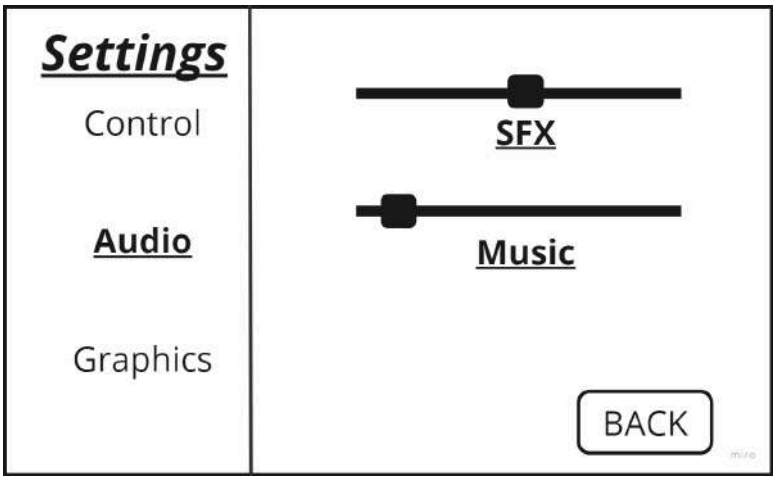


Fig. 45: Diagram of the audio settings menu of the Survival Horror project.

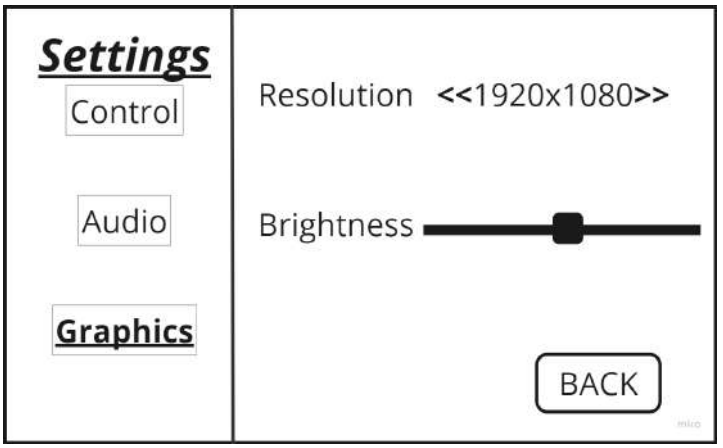


Fig. 46: Diagram of the graphic settings menu of the Survival Horror project.

- **Credits**

The credits will include the corresponding logos and a list of each participant in their specialty, along with their profiles and contact email addresses.

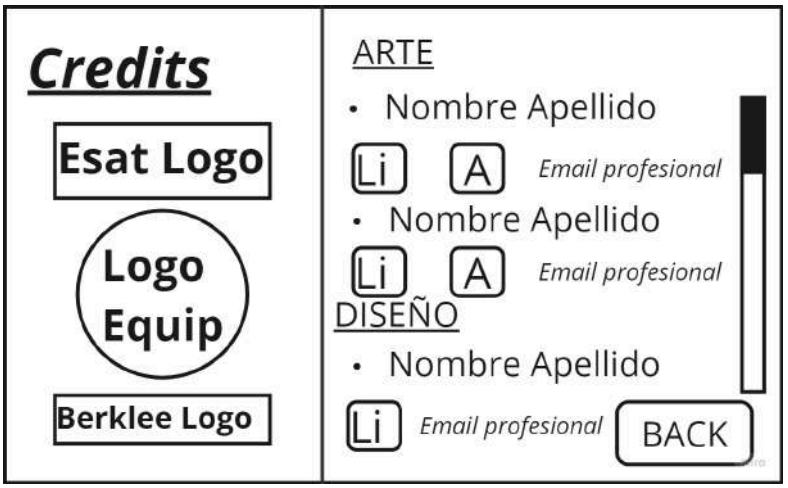


Fig. 47: Diagram of the credits screen of the Survival Horror project.

6.9.3 In-game screen flow

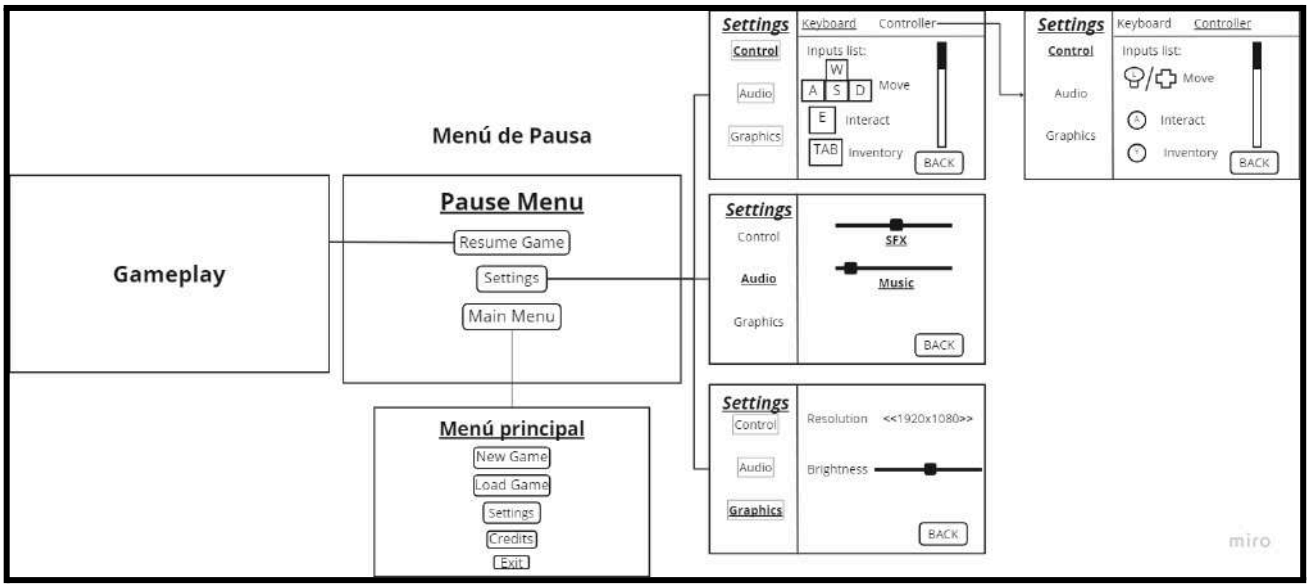


Fig. 48: Flowchart of the pause menu of the Survival Horror project.

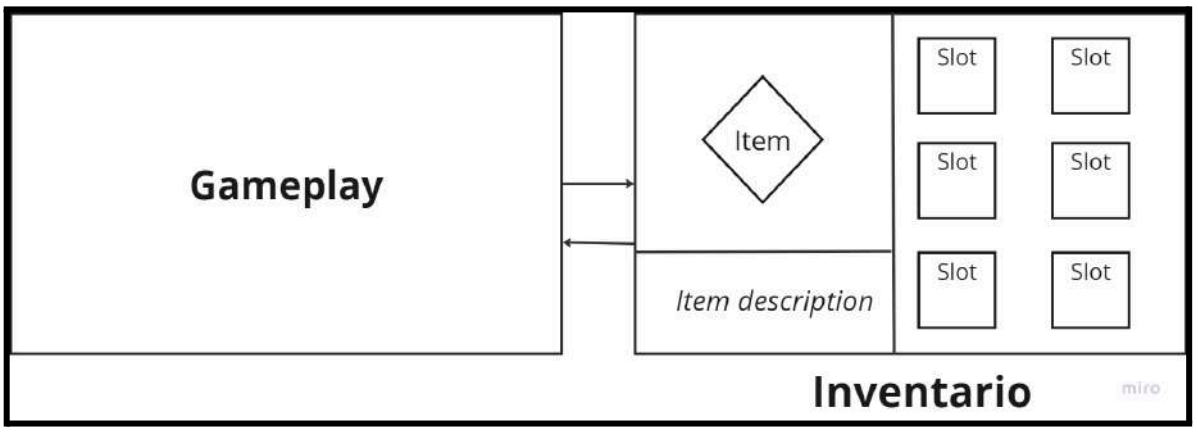


Fig. 49: In-game flowchart of the Survival Horror project.

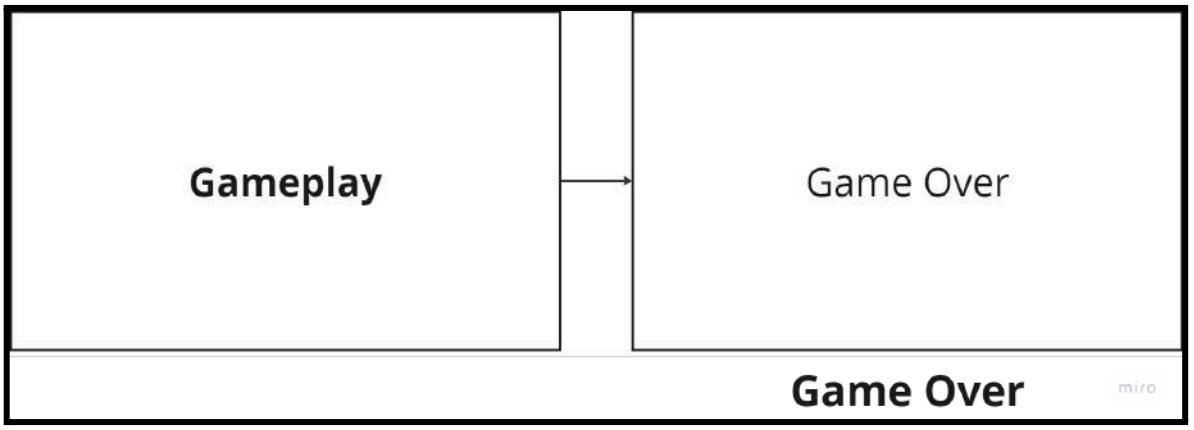


Fig. 50: Diagram of the credits screen of the Survival Horror project.

6.9.4 In-game screens

- **Inventory**

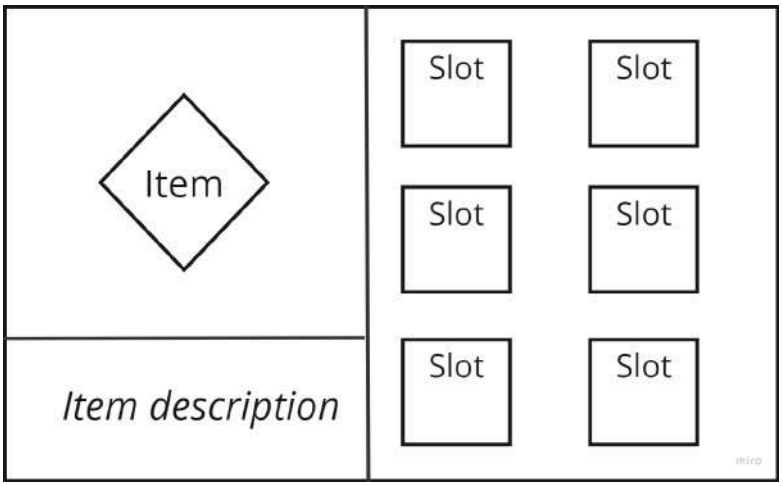


Fig. 51: Survival Horror project inventory diagram.

- **Break**

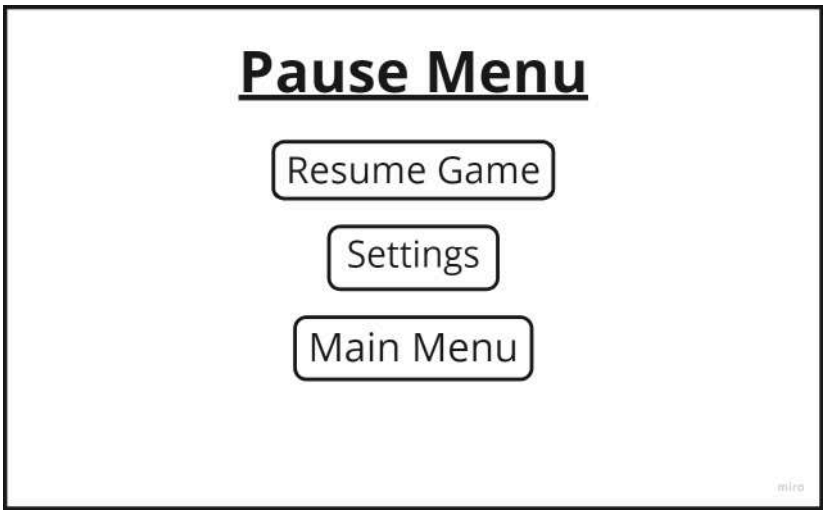


Fig. 52: Diagram of the pause screen of the Survival Horror project.

- **Dialogues**

  Dialogues will be displayed in subtitle format, which avoids creating a specific visual interface and is consistent with the horror aesthetic.

Fig. 53: Diagram of the dialogues of the Survival Horror project.

- **Game Over**

When the player runs out of lives, a Game Over screen will appear and the player will have to reload the game.

Fig. 54: Diagram of the Survival Horror project screen.

7.- Level elements

7. 1 NPC (Enemies)

Description

Enemies are artificial intelligence agents distributed throughout the game world with the intention of hindering the player's progress. The different enemy types share the same behavior; three different types of enemies can be encountered: the base minion, the runner, and the tank.

Design details:

- Attributes
  - IA
    - Detection Range: Maximum distance at which the agent will be able to detect the player
    - State: The enemy can be modified to be static (until it detects the player) or patrolling an area
      - Static: It appears instantiated at a specific point and does not move until it detects the player.

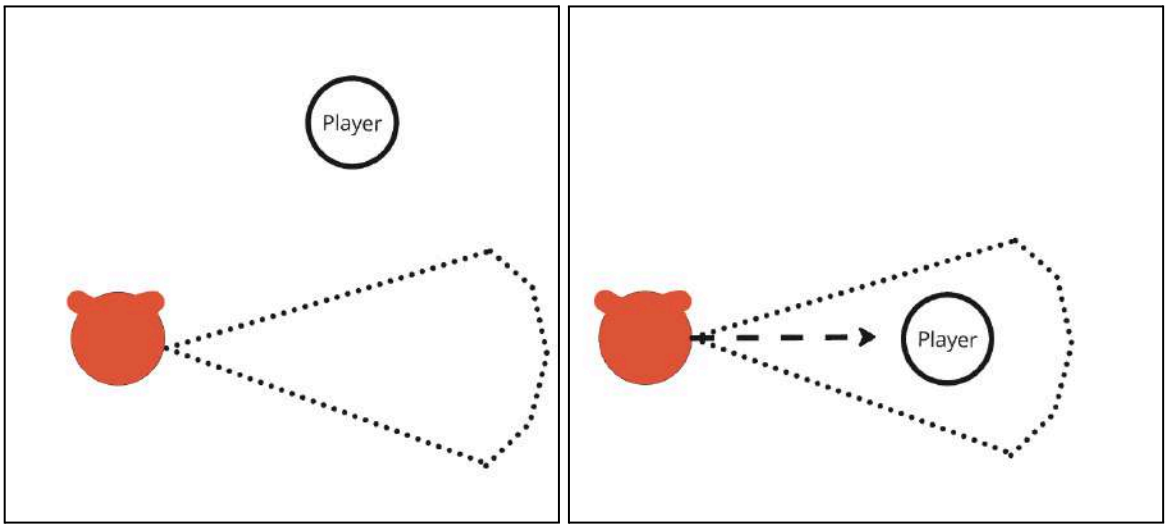


Fig. 55: Schematic of the static enemy.

- Patrol: It navigates through certain nodes until it detects the player and begins to chase him.

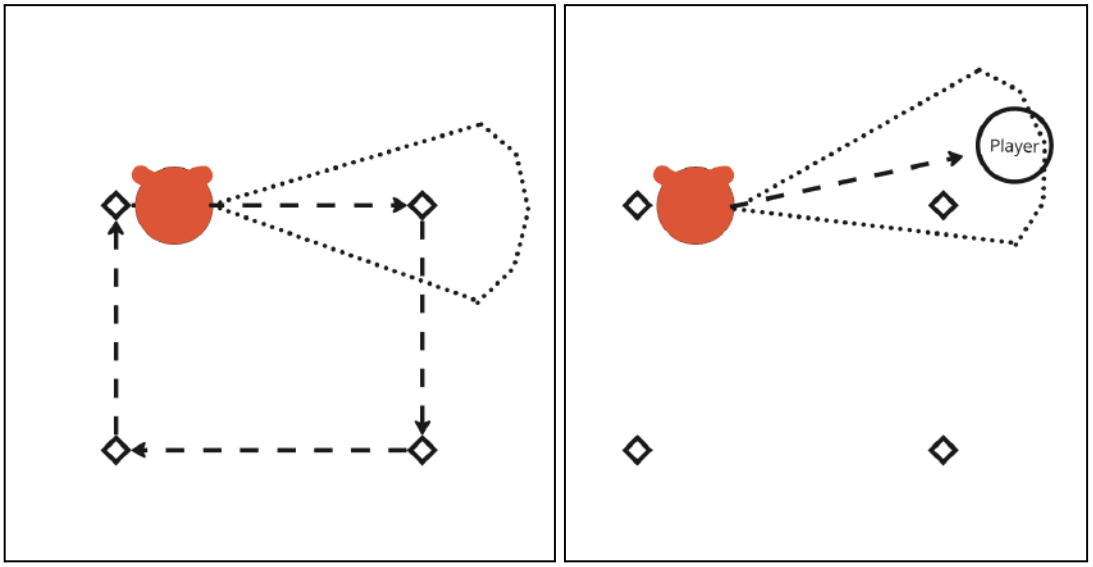


Fig. 56: Schematic of enemy patrol.

        - Attack: The enemy is blocked in the attack animation (does not block the player)
    - Life: amount of hit points an enemy can withstand
        - Low, Medium, High
    - Damage: Amount of hit points dealt by enemies
        - Low, Medium, High
    - Speed: Speed at which each enemy moves
        - Low, Medium, High
- Interaction with other systems
    - Crouch Detection: If the player's hitbox is not visible from the enemy's point of view, the player will not be detected.

Minion base

Description

The base minion is the most common enemy, and also the weakest. It can be found throughout the various sublevels and doesn't have any distinctive gameplay features.

Design Details

- Functionality
    - This enemy employs base AI behavior
    - This enemy will act as an obstacle for the player.
- Attributes
    - Life: Medium
    - Damage: Low
    - Speed: Medium

Fig. 57: Concept enemigo minion

Runner

Description

The runner will be the fastest enemy, posing a greater threat to the player than the base minion. It will only be found in the first two sublevels, and within these, more specifically in hallways, where it will appear, surprising the player and forcing them to flee to other areas of the sublevel.

Design Details

- Functionality
    - This enemy employs base AI behavior
    - This enemy will act as a way to waste bullets, and force the player to flee.
- Attributes
    - Life: Low
    - Damage: Medium
    - Speed: High

Fig. 58: Concept enemigo runner.

Tank

Description

The tank is the enemy that poses the greatest threat due to its high attack and health. This latter value, in contrast to its low bullet count, can present a very difficult situation for the player. Tanks are found in the final sublevels and are tied to specific rooms.

Design Details

- Functionality
    - This enemy employs base AI behavior
    - This enemy will act as an obstacle and a bullet sponge.
- Attributes
    - Life: High
    - Damage: High
    - Speed: Low

Fig. 59: Enemy Tank Concept.

7.2 Hazards

TRAPS

DescriptionTraps are elements of the game world that can be found in various rooms. Their purpose is to pose a threat to the player, but also to help slow down certain enemies.

Design Details

- Functionality:
    - If the player steps on a trap, they will take damage and be stunned for a moment.
    - If an enemy steps into a trap, the same thing will happen to him.
    - Amount of damage to be determined.
- Use cases:
    - If the player is running or crouching, they can also fall into the trap.
    - When the player is aiming or shooting and steps on a trap, they are invalidated and fall into the trap, taking damage.
    - When in an interaction state such as pushing, you will not be able to step on or pass through the trap.

Appearance and Feedback

At a visual level you need:

- Animations:
    - Animation of the trap being activated.
- SFX:
    - When theplayerfalls into the trap.
    - Scream of an enemy when he falls into the trap.
    - Trap sound when activated.
- *Screenshake* or effect when the player receives damage.

Open Questions

-Possibility of an animation for when the player falls into the trap and takes damage?

Def-Prot-Art

DEF	PROT	ART
	- The trap damages the player and stuns them for a few moments. - The trap deals damage to the enemy and stuns it for a few seconds.	- Animation of the trap when activated. - Player scream SFX. - Enemy scream SFX. - SFX of the trap closing. - -Effect of*screenshake*when the player receives damage.

Justification

Traps as an element of the game world add a certain challenge to level design, as the player must be aware of their surroundings to avoid falling into one and getting hurt. This increases the sense of tension and makes the environment more threatening. Furthermore, the possibility that enemies may also fall into the traps makes the player prefer to flee or run away from the enemy so that they follow them and fall into a trap.

7.3 Interactables (pickups, elevator, levers, buttons)

PUSHABLE ELEMENTS

Description:

The player has the ability to push or drag elements in the game world. This form of interaction combines with other interactions to create small challenges within the levels.

Design Details

- Player Action:
    - When the player approaches a pushable element, he can press the**E key or A button to start the interaction.**
    - Pressing the interact input again will release the object and end the interaction.
- Functionality:
    - When the player approaches the object, a 2D prompt will appear to interact.
    - When the interact input is pressed, the player enters the**state of pushing.**
    - Upon entering this state,can **Move the object forward with the W key or the left stick/up D-pad**, the**back with the S key or the left joystick/down pad**.
    - **The push/pull motion of the object will not be free.**The player can only move it in the direction the character is facing (forward) or in the opposite direction (backward).

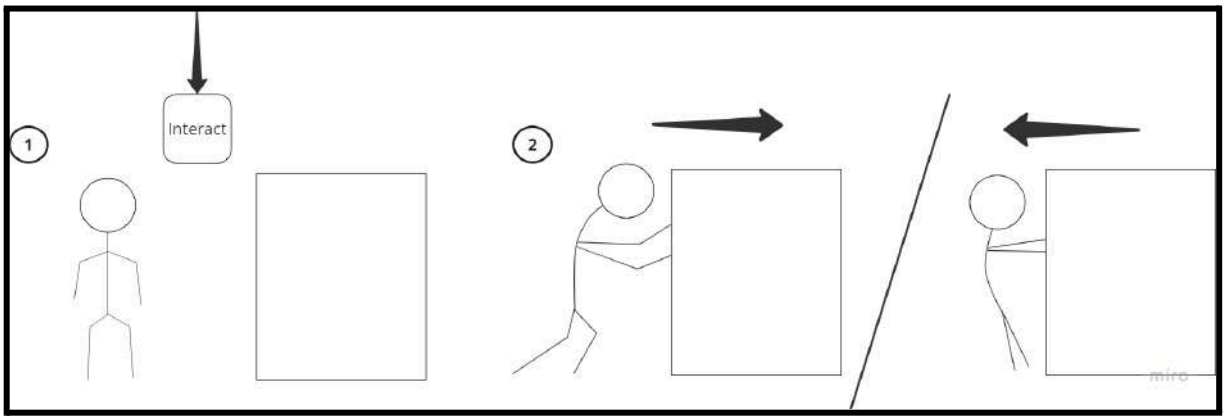


Fig. 60: Diagram of the action of pushing elements.

- Use cases:
    - When a pushable element is dragged to another element, it will not be able to push it, so it will**will remain fixed in that position**For example, a box that has been pushed against another box will not be able to move further because it is not possible to push the box in front of it (as long as the player does not interact with the latter to move it out of the way).
    - A pushable item will not be able to pass through pickups or enemies.
    - While the player is in the push state, they will only be able to move forward and backward, invalidating other interactions or actions.
    - Enemies will not be able to attack the player until they stop interacting with the object.

Visuals y Feedback

At the asset and visual feedback level, we will need:

- A way to visually distinguish the object from other non-gameplay elements.
- SFX:
    - Sound of object being dragged.
- Animations:
    - Player animation when pushing an item.

Open Questions

-Would it be possible to push an element that is part of a puzzle?

-What would happen then if you could push and interact in another way with that same object?

Def-Prot-Art

DEF	PROT	ART
	-When interacting with the interaction key, the player enters the push state. -You can only move forward and backward.	- Animation of theplayerwhen pushing an object. - Sounds of the object being dragged. - Visual way of distinguishing the object from other elements that cannot be pushed or are not interactable.

Justification

Like other types of interactions proposed for the project, this form of interaction with elements of the game world is considered to create more interesting and fun levels, encouraging the player to perform different actions and complete small challenges to advance and find clues.

INSPECTABLE

Description: Inspectable objects are associated with a specific camera position which is interpolated at the time the interaction action is performed.

Design Details

- Player Action:
    - Use the General interaction rules
- Functionality:
    - The player interacts with the inspectable object.
    - The camera is interpolated from the current position to the camera position associated with the object
    - A descriptive text appears on the screen
    - When using the interaction action again, the camera returns to the original position.
- Use cases:
    - At the moment the player interacts with the inspectable object, he cannot move until he finishes interacting with the inspectable.

Appearance and Feedback

Open Questions

Def-Prot-Art

DEF	PROT	ART
	-	

Justification

Inspectables provide context and focus to level elements, whether for narrative or gameplay reasons. They're a way to provide clues to the player and connect them to the gameplay.

AMMO PICKUP

Description:

This object is an item that iswill instantiatein the game world and will take the form of ammunition for the player's weapon

Design Details

- Player Action:
    - Upon approaching and interacting, the player will pick up the ammo
- Functionality:
    - The ammunition pickup serves to increase the amount of ammunition the player has, the amount of ammunition granted can be considered medium or reduced.
    - ANDThe contents of the pickup would be transferred to the bullets attribute of the player's weapons.

Visuals y Feedback

- SFX:
    - Sound of collecting the item

Open Questions

Def-Prot-Art

DEF	PROT	ART
	- Interaction with the pickup - Increased ammo in inventory - Connection of ammunition with the shot	- Sound of picking up the pickup.

Justification

A pickup truck with a medium or low ammo supply has been chosen to force the player to run out of ammo if they aren't careful. This would encourage player exploration and give more visibility to secondary rooms.

PICKUP OF LIFE

Description:

This object is an item that iswill instantiatein the game world and will take the form of a healing item.

Design Details

- Player Action:
    - Upon approaching and interacting, the player will pick up the healing item.
    - When interacting with the item from the inventory, the item is consumed and the player is healed.
- Functionality:
    - The life pickup serves to restore a certain amount of the player's life, the amount of life granted can be considered average.

Visuals y Feedback

- SFX:
    - Sound of healing.

Open Questions

- When using the object there will be animationto heal?

Def-Prot-Art

DEF	PROT	ART
	- Interaction with the pickup - Increased health after interaction from inventory	- Sound of healing.

Justification

A pickup with a medium amount of health has been chosen to limit the player's actions to a certain extent, since if it doesn't heal enough, the player would be very reluctant to explore, while if it grants too much health, the sense of danger would be lost.

STORAGE PICKUP

Description

The save game system is responsible for allowing the player to record and save their progress.

Design details:

- Player actions
    - When interacting with the save stage elementdeparture andspend a save game item.
    - It is allowed to overwrite a starting gap.
- Functionality
    - The player interacts with the stage element corresponding to this action.
    - The player must own at least one save game pickup.
    - A screen with the saved game log is displayed.
    - It is allowed to overwrite one of the starting slots.
    - When saving the game, all actions performed by the player are recorded, such as:
        - Inventory items.
        - Enemies eliminated or their respective life amounts.
        - Progress of puzzles or unlocked rooms.

Visuals & feedback

- Animation:
    - Interacting with the stage element.
- SFX:
    - Game save feedback sound.

Open Questions

Def-Prot-Art

DEF	PROT	ART
	- Interaction with the pickup - Interaction with the stage element - Save game - Pickup requirement - Spending a pickup while saving the game - Overwrite saved game	- Animation of interaction with the save element. - Sound when saving game.

Justification

A pickup-based save system was chosen for several reasons. On the one hand, it encourages players to explore the levels. On the other hand, it also increases the difficulty and creates a sense of anticipation and overwhelm for the player, as they don't know when they'll be able to play and if they'll be able to save without dying.

LORE PICKUP

Description:

This is an inventory item containing text related to the game's narrative. It can also be used as a clue.

Design Details

- Player Action:
    - When interacting with the object from the inventory
- Functionality:
    - When using a Lore pickup from the inventory, a small window with text opens which the player can read.
    - When the player closes the window, he returns to the inventory.
- Use cases:
    - Can only be activated from inventory

Appearance and Feedback

Open Questions

Def-Prot-Art

DEF	PROT	ART

Justification

Lore Pickups allow us to expose the player to information and narrative through notes, books, and other texts.

ELEVATORS

DescriptionElevators are level elements that can be activated by interacting with a switch. They are used to raise and lower the player or level elements in rooms with different heights.

Design Details

- Functionality:
    - It is activated by interaction with a switch.
    - This is raised or lowered depending on its state before activation.
- Use cases:
    - If the elevator has a pushable object on it and the pushable object is activated it will move alongside the elevator.
    - If the elevator is elevated and any pushable object is underneath it, it cannot be activated.

Appearance and Feedback

- Elevator activation SFX
- Elevator Failure SFX

Open Questions

Def-Prot-Art

DEF	PROT	ART
		- Elevator activation SFX - Elevator Failure SFX

Justification

Elevators allow us to move objects between rooms of different heights which can help make level design more interesting.

DOORS

Description:

Doors are interactable objects that connect different spaces in levels. When the player interacts with them, they create a transition effect and transport the player to another area.

Design Details

- Player Action:
    - Use the Interaction action
- Functionality:
    - The player approaches and interacts with the door
        - The player cannot take any action until the interaction is finished.
    - A Fade to Black effect is made
    - The player and the corresponding level elements are loaded into the new room.
    - Control is returned to the player.
- Use cases:
    - General interaction use cases

Appearance and Feedback

At the audiovisual level it is needed

- SFX of opening door
- Fade to Black or transition screen

Open Questions

- Fade to black or transition screen?

Def-Prot-Art

DEF	PROT	ART
		- SFX of opening the door - Fade to black

Justification

Doors connect the different rooms and are the primary way for a player to escape enemies and navigate between areas.

SWITCHES

Description: These are static interactable objects which trigger specific functionality of the object upon player interaction.

Design Details

- Player Action:
    - The player performs the Switch Interaction action
- Functionality:
    - By giving the action by the player,
        - The player will stand still, unable to move, and focused on the object.
        - A generic interaction animation will be played (there will only be one for all interactables)
        - The functionality defined in the interactable object will be produced.
        - Your browsing will resume when the interaction ends.
        - It will run a defined interaction animation for each object
- Use cases:
    - Same use cases specified in general interact

Appearance and Feedback

At the asset and visual feedback level, we will need:

- Animations:
    - Generic player animation interacting with the object
- VFX:
    - Generic hit/trigger VFX.
- SFX:
    - Generic hit/trigger SFX.

Open Questions

Def-Prot-Art

DEF	PROT	ART

Justification

Switches allow you to have elements with object-specific logic, which helps us when solving puzzles, activating or deactivating traps and elevators.

8.- Level design

8.1 Game world (Gisela and Nico)

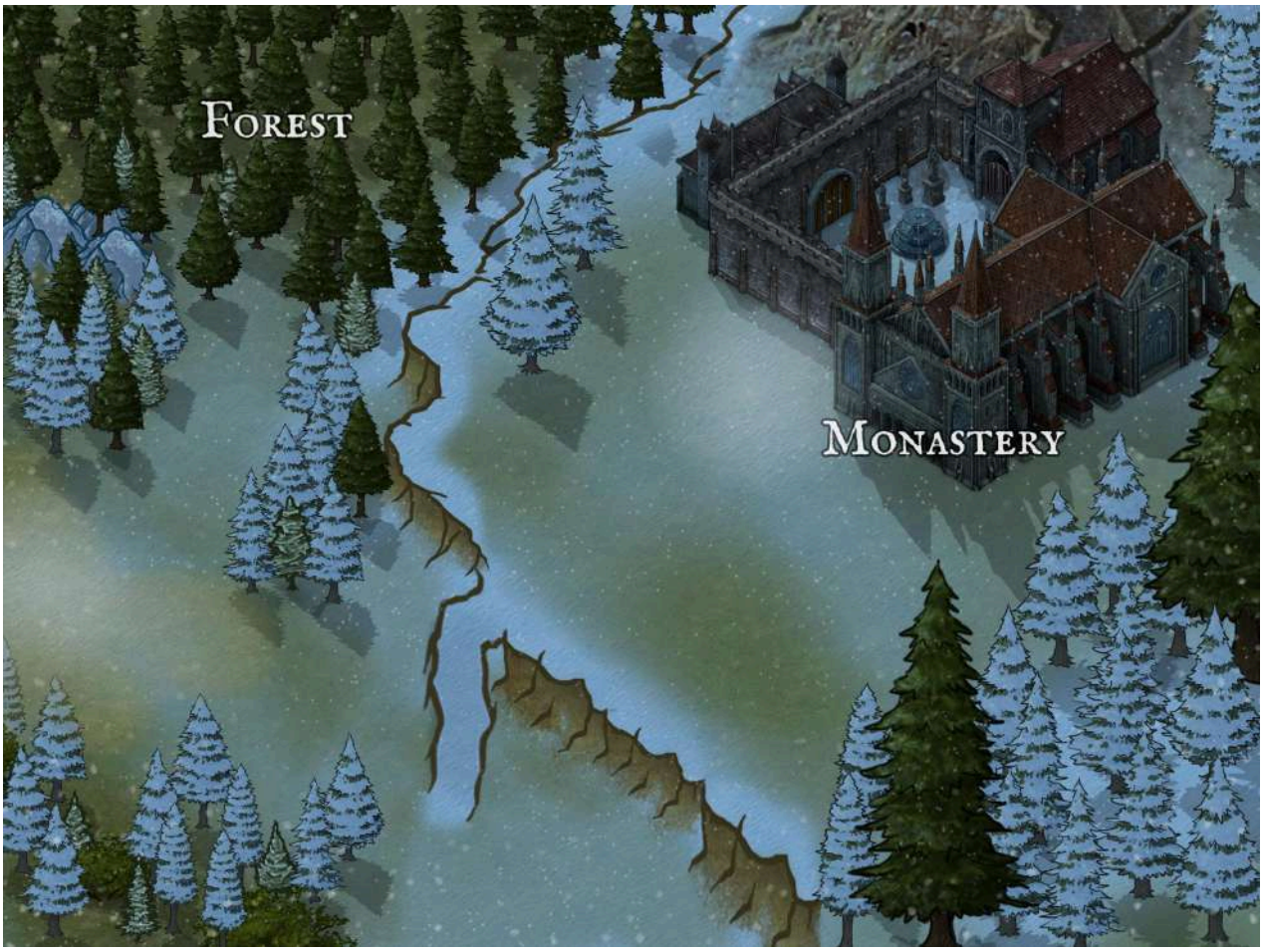


Fig. 61: Illustration of the game world

The game is set in an ancient monastery perched on a hill. Surrounding it is a vast forest inhabited by white rabbits. Everything in this setting exudes solitude and mysticism, and the silence of the night, along with the cold, snowy weather, evokes a sense of abandonment and mystery.

The abandoned monastery is the site of the cult of the Chaos god, who constantly seeks new sacrifices to feed his deity. The protagonist, a low-class hunter, decides to go rabbit hunting in the forest and is surprised and kidnapped by the sect.

As far as world design is concerned,*The Last Sacrifice* It proposes a certain diversity of environments that aim to reinforce feelings of fear, terror, and uncertainty. To this end, the base aesthetic for the environments will be a ruined monastery, which will feature four distinct areas, including a library, catacombs, a cathedral, and a cloister.

Below are some sketches and reference images from which the different scenarios will be developed:

- Cathedral

Fig. 62 and 63 Darksword: Battle Eternity 03 (Paviolo, 2023) and Early sketch of the Cathedral (Jackson, 2024)

- Dungeon and Library

Figs. 64 and 65 *The Last Faith*concept (Paviolo, 2024) and*Nightfell* Illustrations (Paviolo, 2021)

- Extra scenarios


Fig. 66 and 67 The Cathedral of Anor Londo (Paviolo, 2022) y The Cathedral of Anor Londo (Paviolo, 2022)

8.2 Levels

The following section presents the different sublevels of the game, detailing the flowchart, beatchart, and layouts for each. First, a unified legend for the flowcharts and layouts is shown.

Legends

Flowcharts

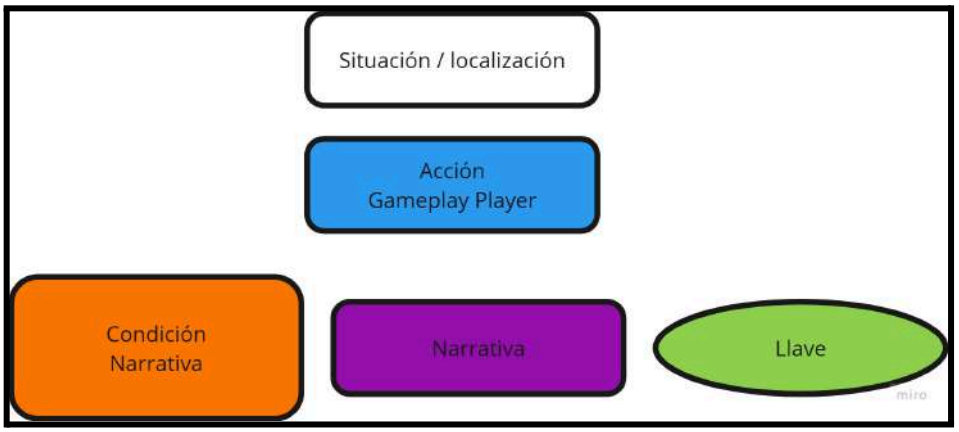


Fig.68 Flowchart Legend

Levels

Fig. 69 Leyenda Layouts

Sublevel 1

Flowcharts

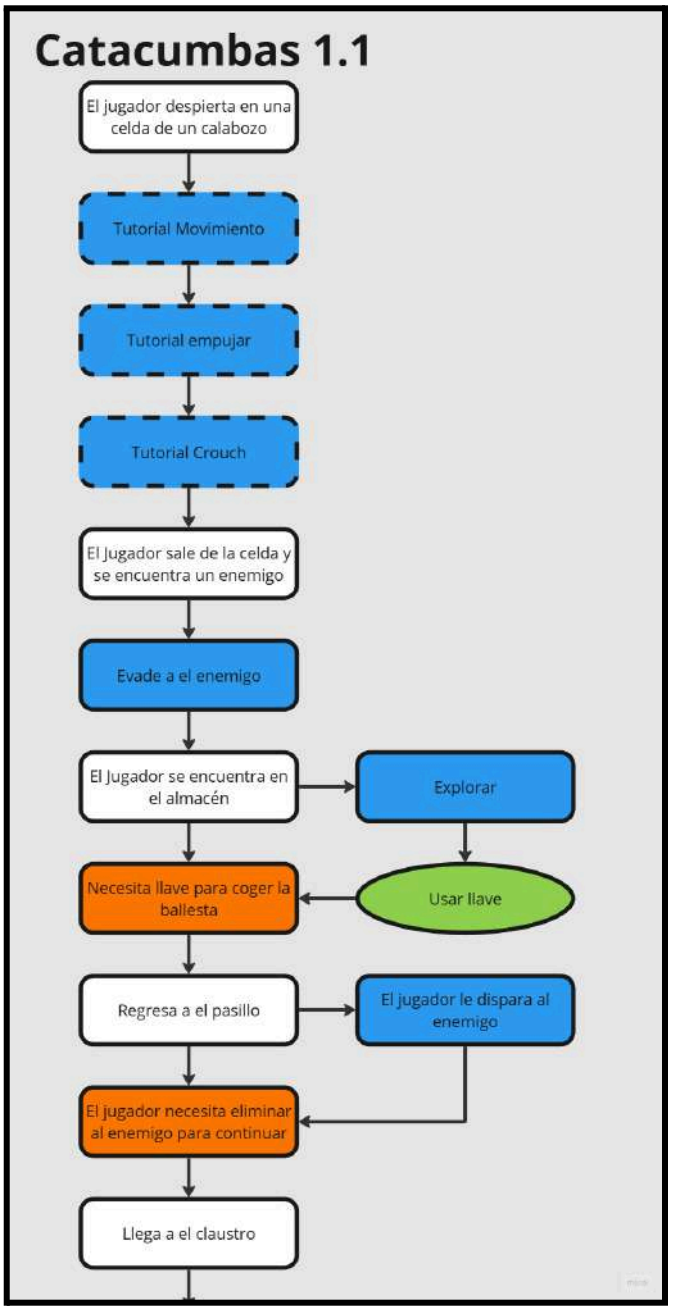


Fig. 70 Dungeons 1.1 Flowchart

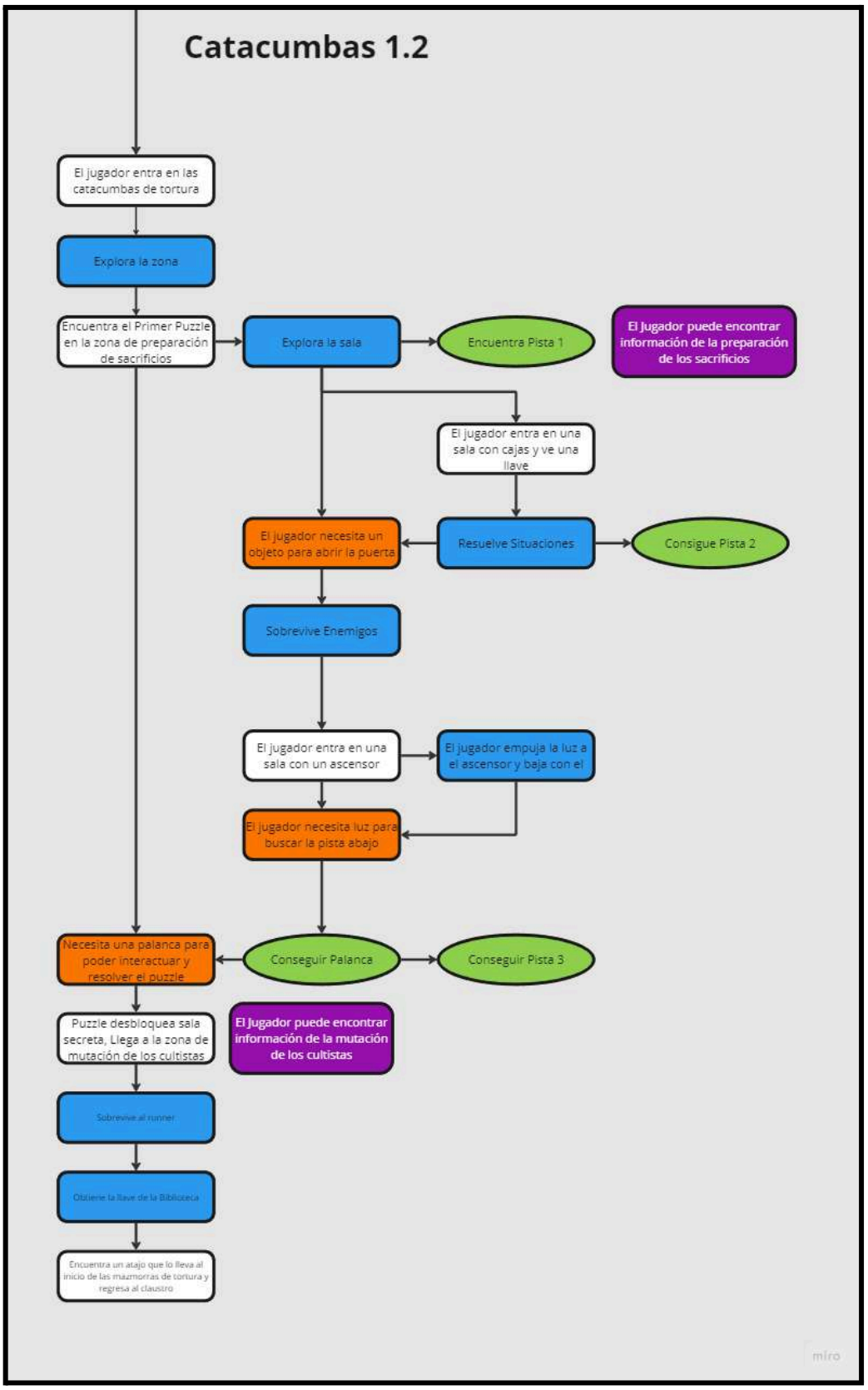


Fig.71 Flowchart Subnivel 1.2

- **Beatcharts**

SUBNIVEL 1.1		
FEATURES	Se introduce	Se reutiliza
Crouch	✓	
Disparo	✓	
Subir/Bajar obstáculos	✓	
Objeto empujable y escalable	✓	
Objeto empujable NO escalable		
Objetos inspeccionables	✓	
Interruptores	✓	
Ascensores		
Trampas		
Enemigo Minion	✓	
Enemigo Runner		
Enemigo Tanque		

Fig. 72 Beatchart Mazmorra 1.1

SUBNIVEL 1.2		
FEATURES	Se introduce	Se reutiliza
Crouch		✓
Disparo		✓
Subir/Bajar obstáculos		✓
Objeto empujable y escalable		
Objeto empujable NO escalable		
Objetos inspeccionables		✓
Interruptores		✓
Ascensores	✓	
Trampas		
Enemigo Minion		
Enemigo Runner	✓	
Enemigo Tanque		

Fig. 73 Beatchart Mazmorra 1.2

- **Layouts**

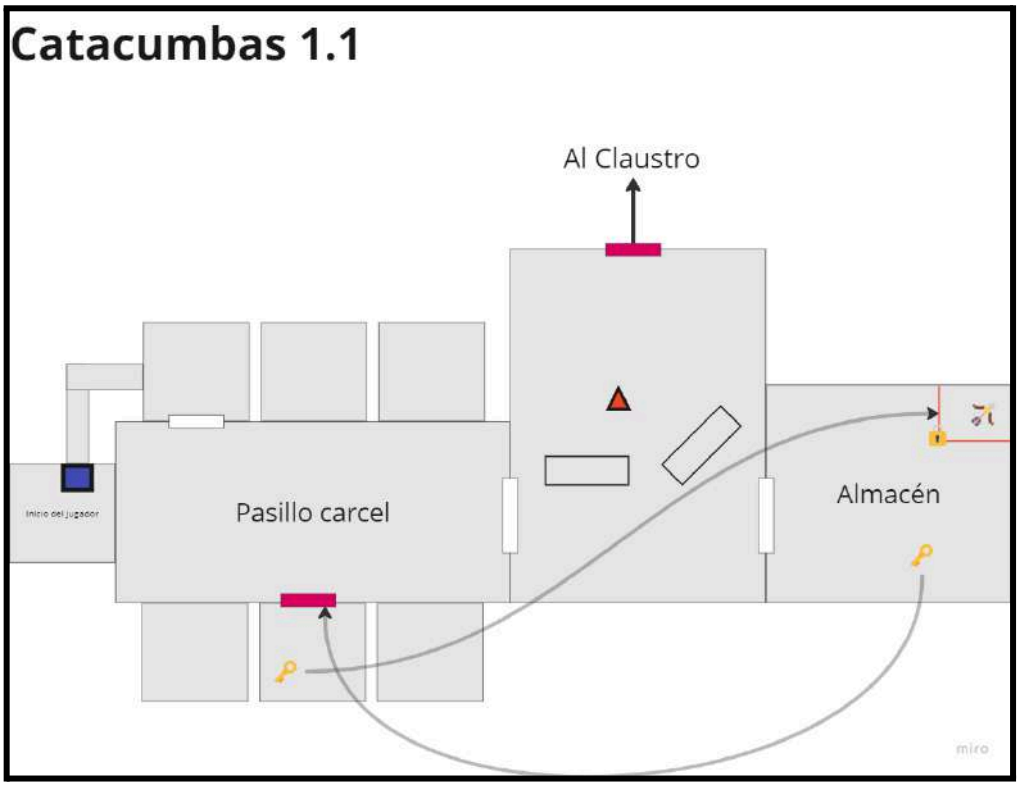


Fig. 74 Layout Catacumbas 1.1

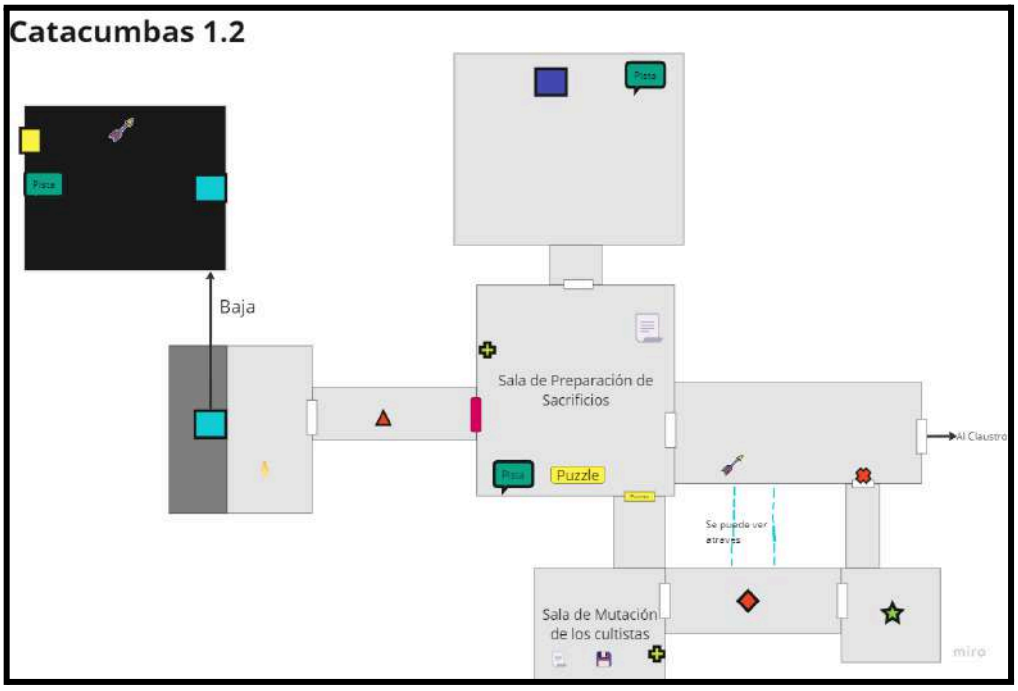


Fig. 75 Layout Catacumbas 1.2

Sublevel 2

- **Flowcharts**

The library flowchart is divided into two segments, detailing the actions the player must follow to advance through the level and reach the office, the room where the church key is located and where the tank enemy will appear for the first time.

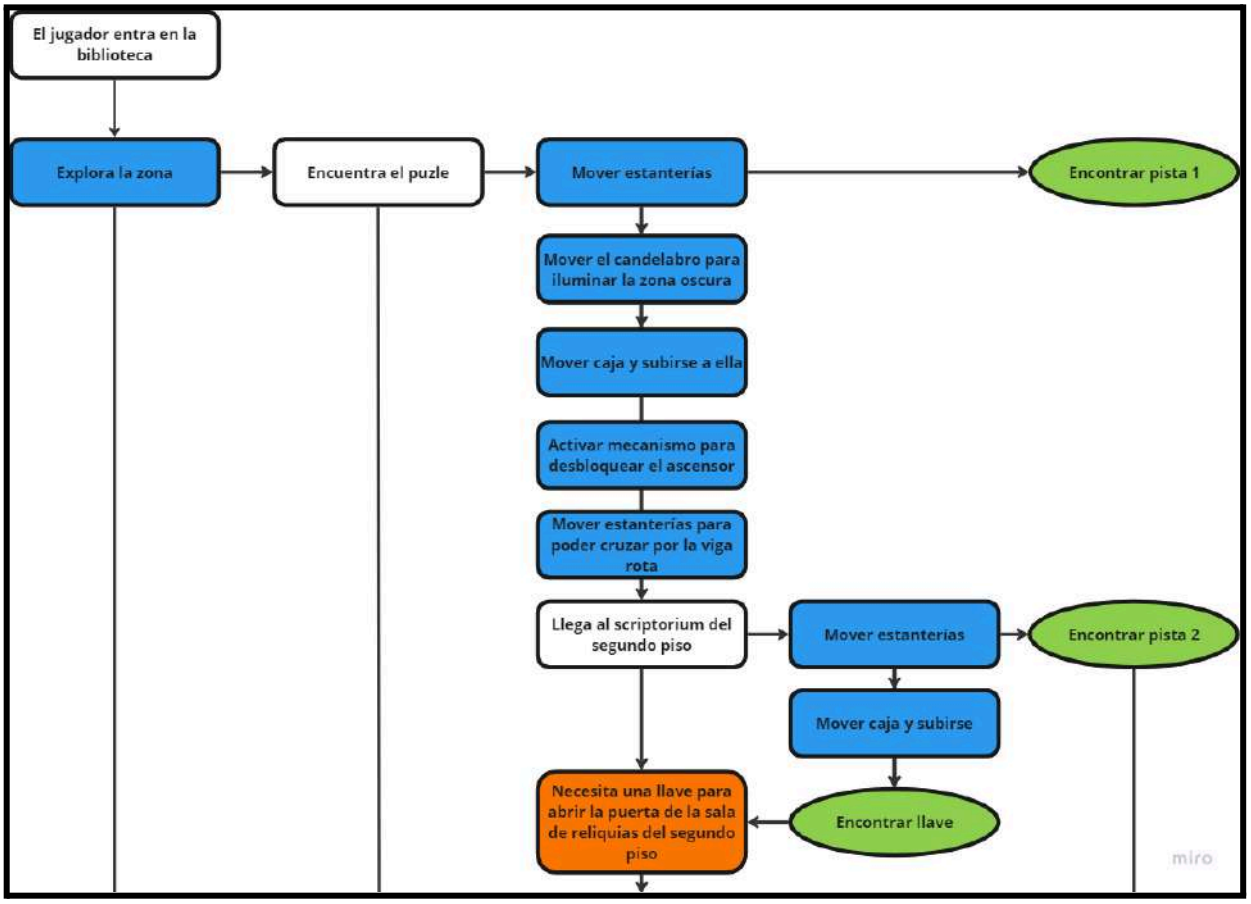


Fig. 76: Flowchart of sublevel 2 (part 1)

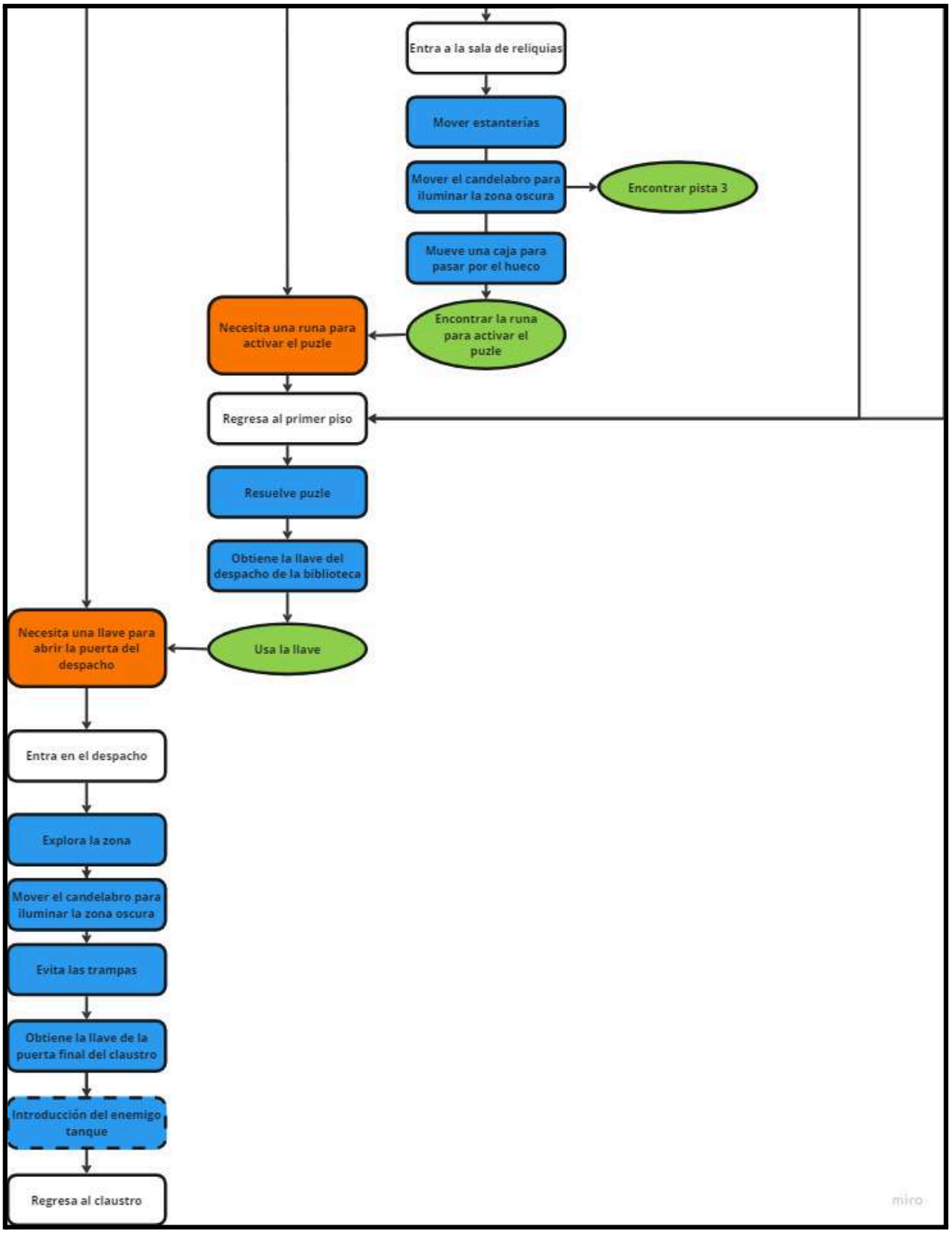


Fig. 77: Flowchart of sublevel 2 (part 2)

- **Beatchart**

At this level, the elements introduced in the previous sublevels are reused and new features are also presented.

SUBNIVEL 2		
FEATURES	Se introduce	Se reutiliza
Crouch		✓
Disparo		✓
Subir/Bajar obstáculos		✓
Objeto empujable y escalable		✓
Objeto empujable NO escalable	✓	
Objetos inspeccionables		✓
Interruptores		✓
Ascensores		✓
Trampas	✓	
Enemigo Minion		✓
Enemigo Runner		✓
Enemigo Tanque	✓	

Fig. 78: Beatchart del subnivel 2.

- **Layouts Biblioteca**

The library consists of two floors. The ground floor consists of a large main room containing the puzzle and the door to the leader's office. The upper floor overlooks the library's balconies, which lead to two smaller rooms: the scriptorium and the relic room. Thus, the player must explore the main room and reach the upper floor to find the clues needed to complete the puzzle.

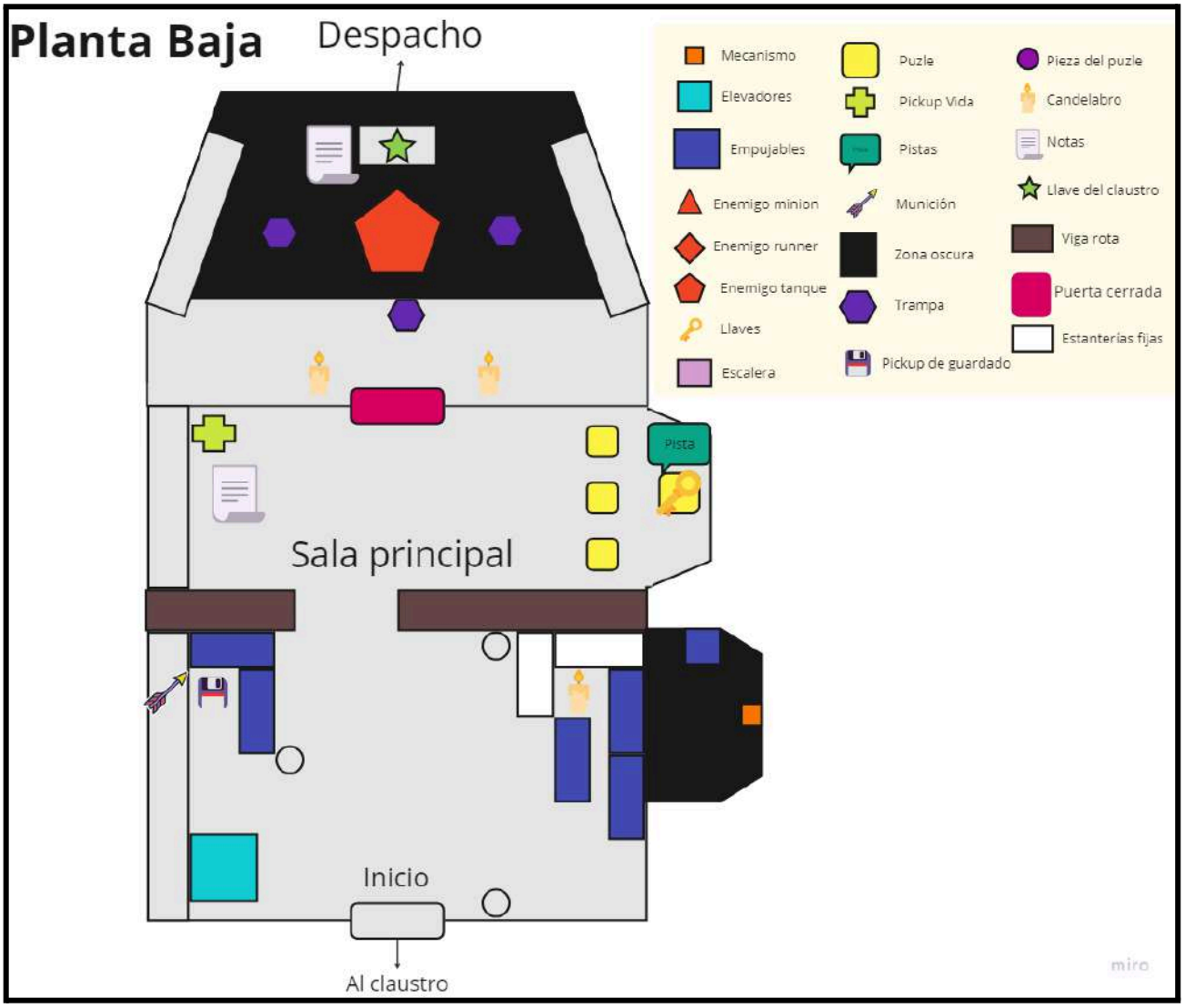


Fig. 79: Layout of the ground floor of the library.

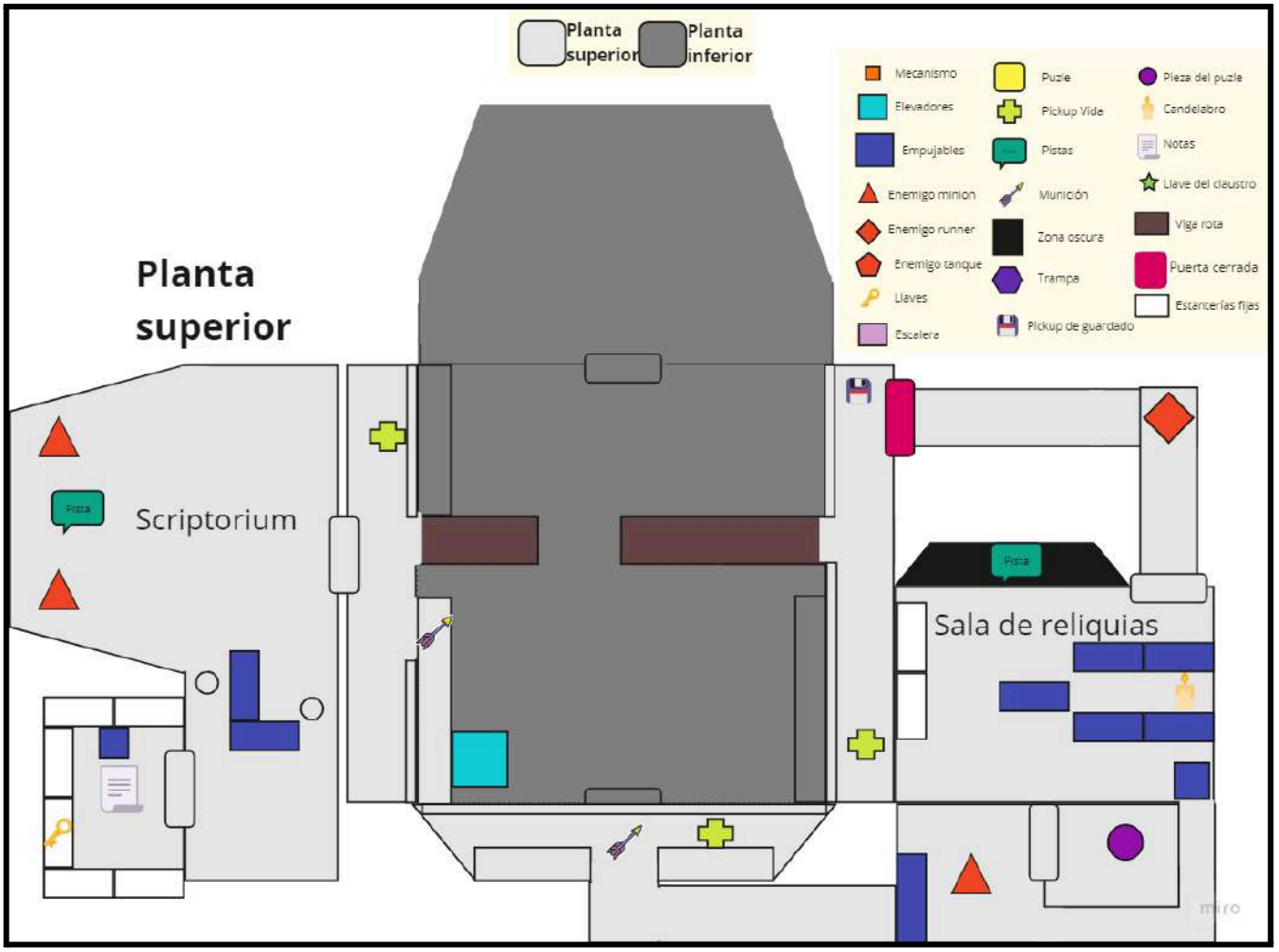


Fig. 80: Layout of the upper floor of the library.

Sublevel 3

- **Flowcharts**

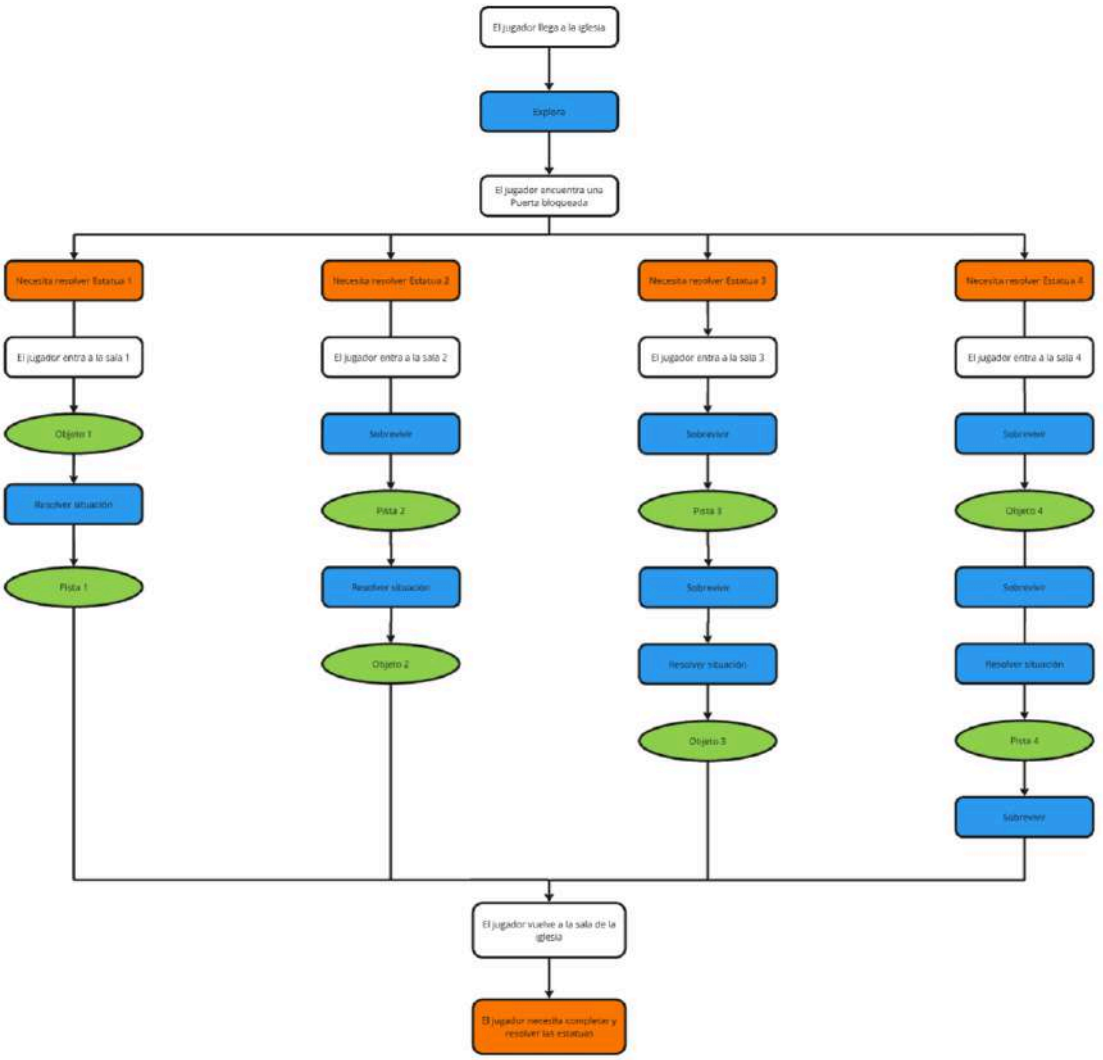
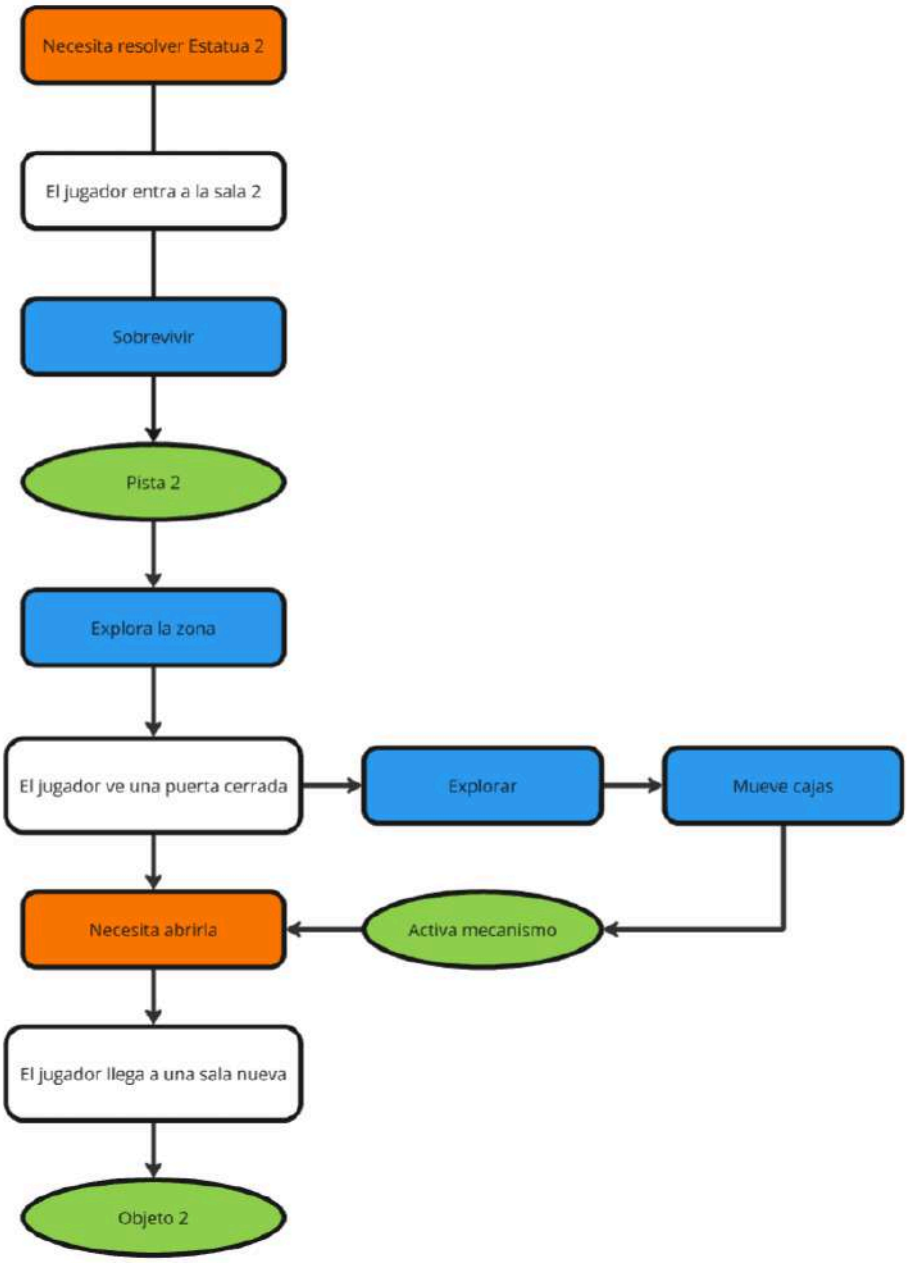


Fig. 81: General flowchart of sublevel 3.

- **Flowchart sala 1**

Figs. 82: Room 1 flowchart.

- **Flowchart sala 2**



Figs. 83: Room 2 flowchart.

- **Flowchart sala 3**

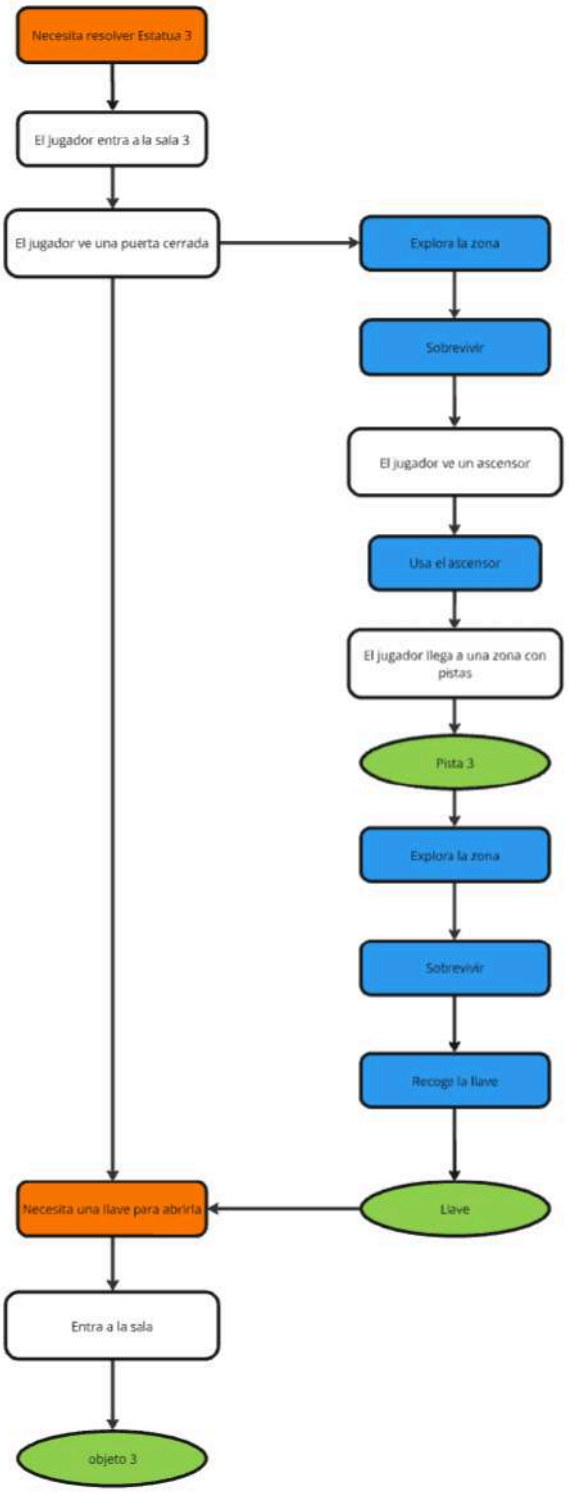


Fig. 84: Flowchart of room 3.

- **Flowchart sala 4**

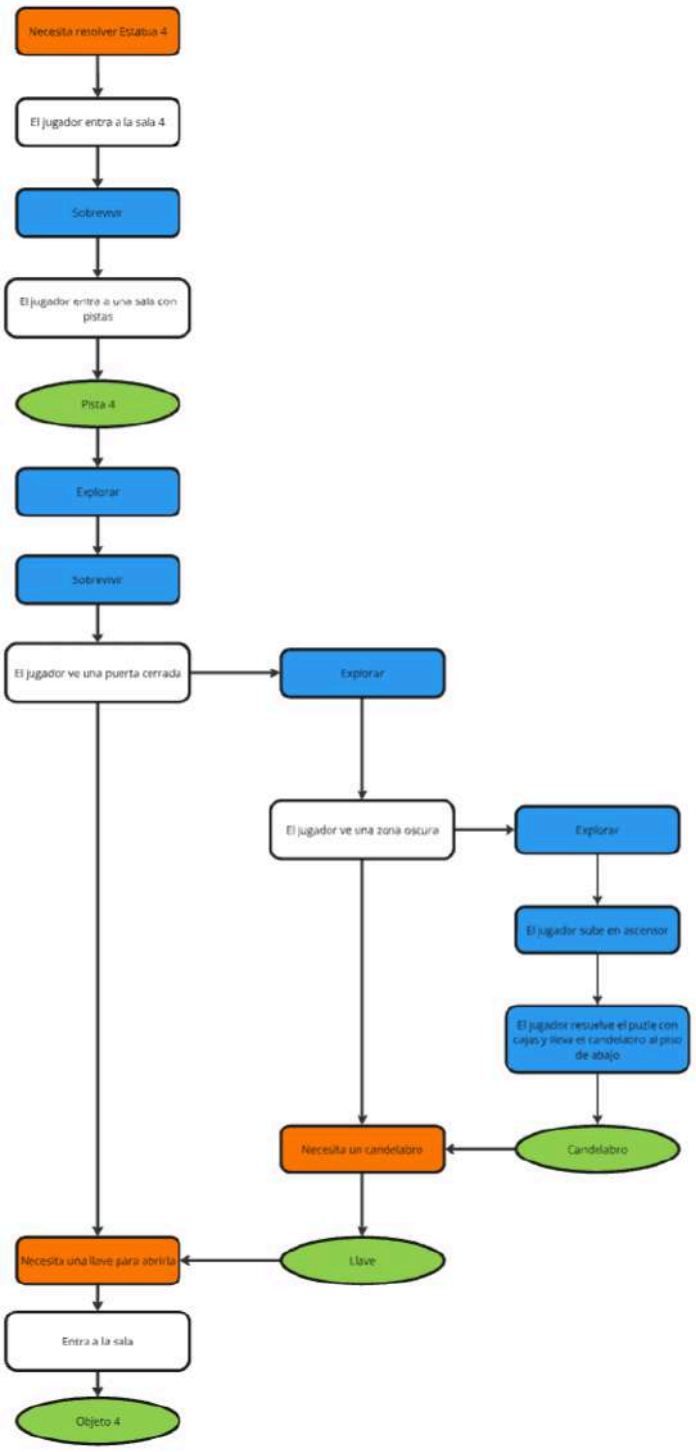


Fig.85: Room 4 flowchart.

- **Beatchart**

SUBNIVEL 3		
FEATURES	Se introduce	Se reutiliza
Crouch		✔
Disparo		✔
Subir/Bajar obstáculos		✔
Objeto empujable y escalable		✔
Objeto empujable NO escalable		✔
Objetos inspeccionables		✔
Interruptores		✔
Ascensores		✔
Trampas		✔
Enemigo Minion		✔
Enemigo Runner		
Enemigo Tanque		✔

Fig. 86: Beatchart del subnivel 3.

- **Layouts**

Cloister Layout

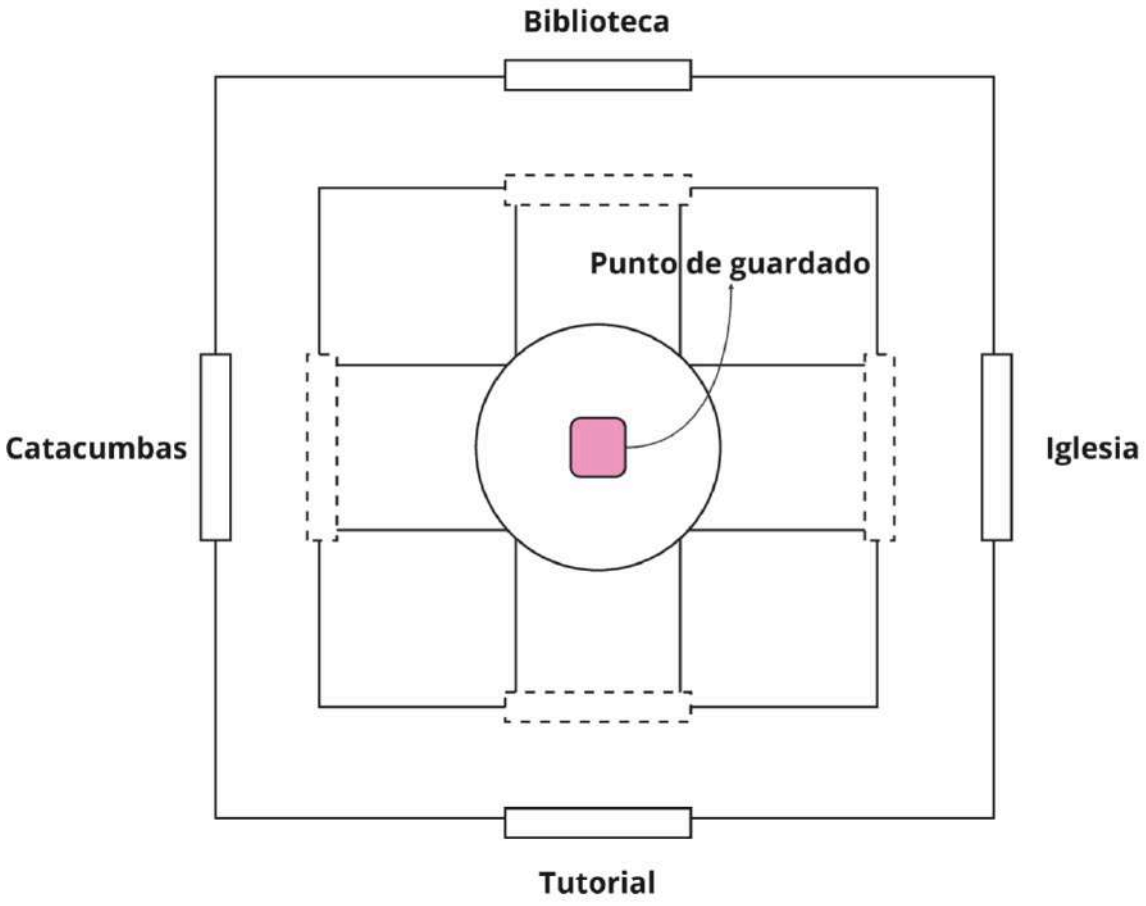


Fig. 87: Layout of the cloister.

General layout of the ritual area

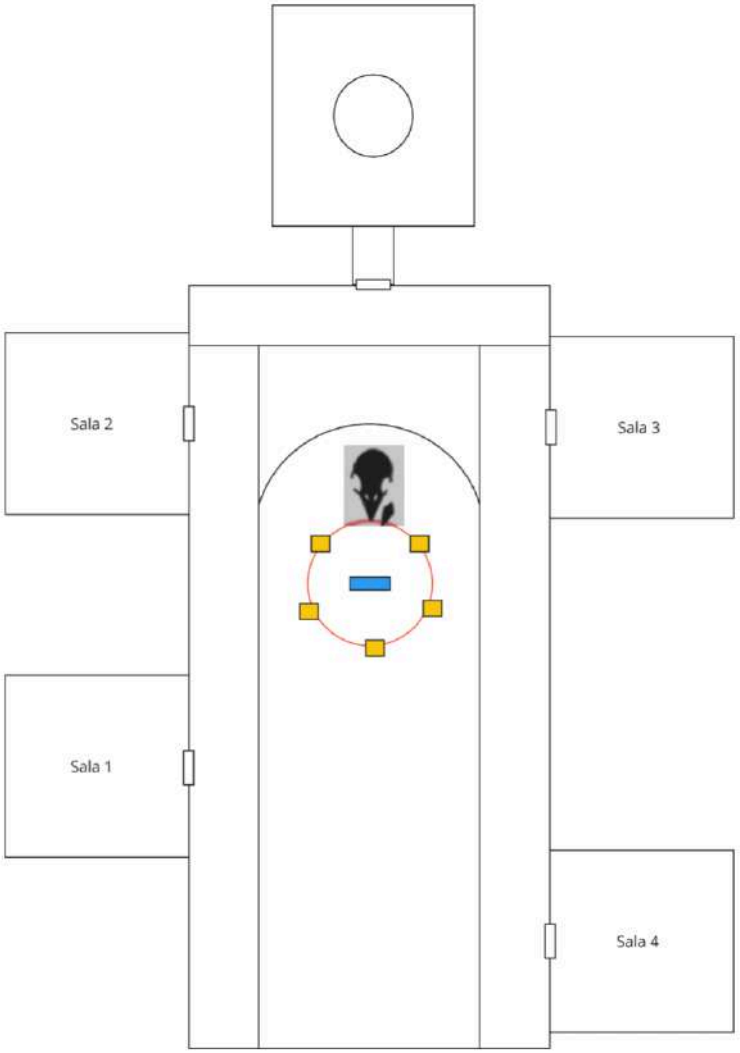


Fig. 88: Layout del nivel 3.

Room 1 and 2

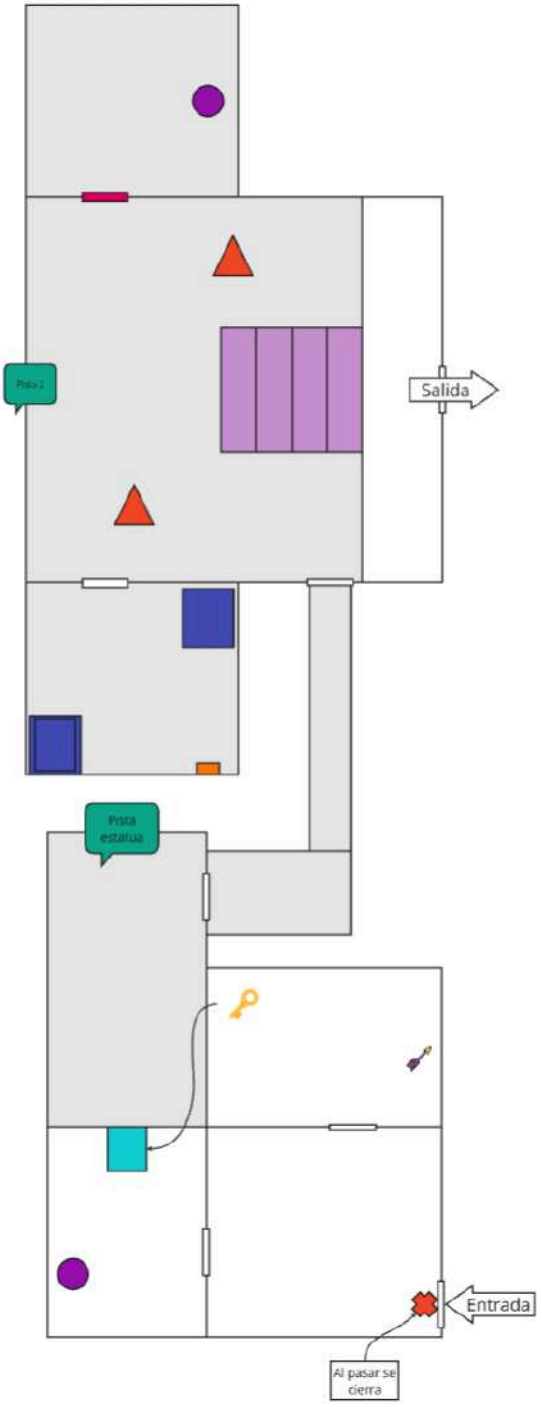


Fig. 89: Layout of rooms 1 and 2.

Room 3

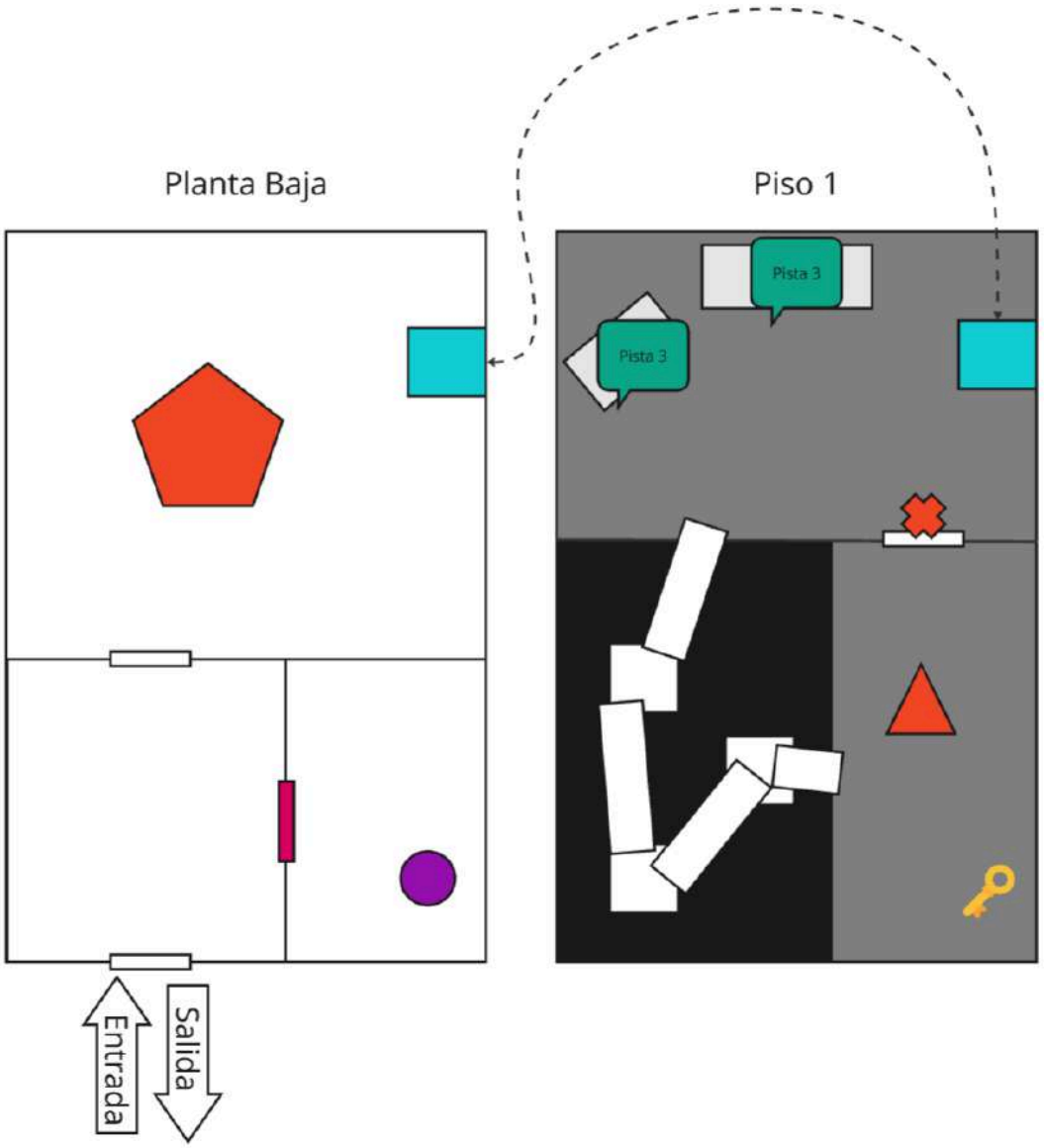


Fig. 90: Layout of room 3.

Room 4

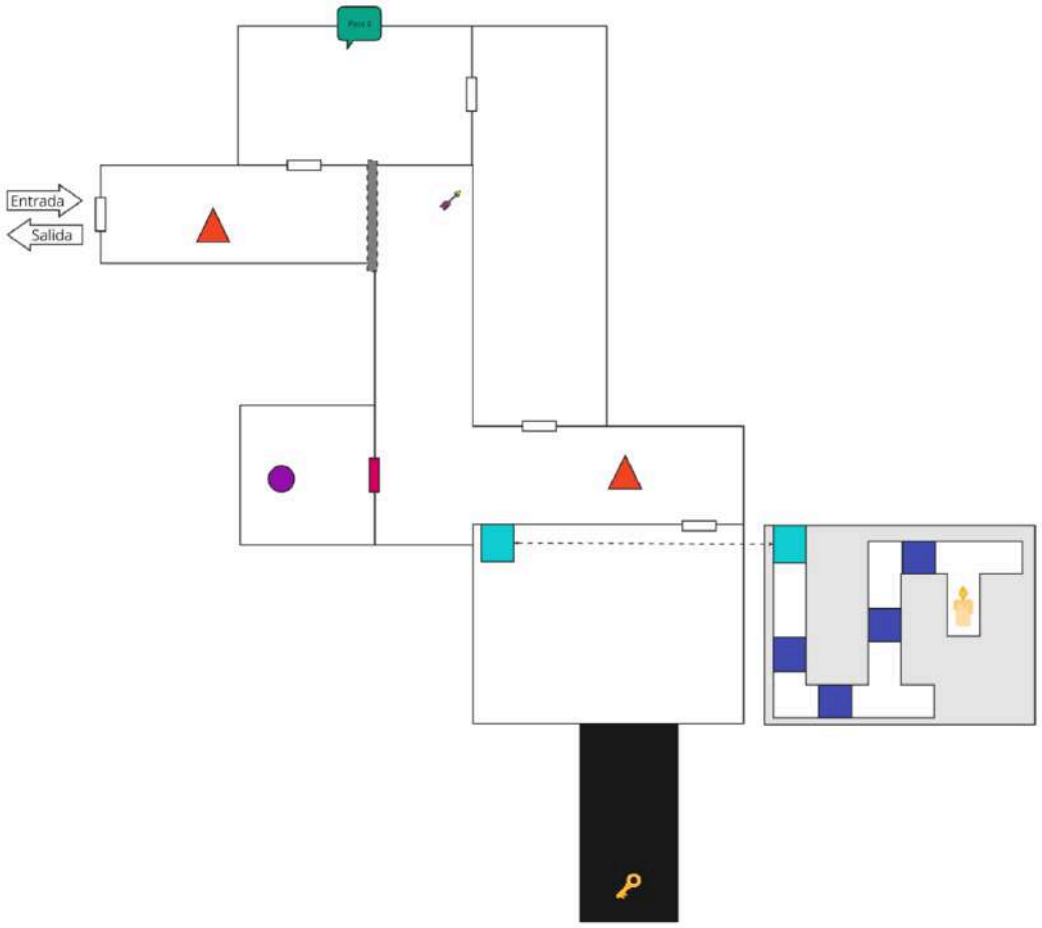


Fig. 91: Layout of room 4.

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Fig. 06: CAPCOM. *Resident Evil 2* [Video game]. Capcom, 1998

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Fig. 08: DUAL EFFECT. Cover of Tormented Souls [Digital Image] 2021. [Accessed December 1, 2024] Available at:https://store.steampowered.com/app/1367590/Tormented_Souls/?l=spanish

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Fig. 14: Schematic of the Game Core Loop

Fig. 15: Scanning Loop

Fig. 16: Survival Loop

Fig.17: Ammo and enemy balance loop

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