

A LANTERN IN THE DARK

Level 3 DBGA Online Blended Course's game project



The Necromancers team

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What Is “A Lantern in the Dark”

Game pillars

Light

- Shadows surround the environment
- The only light is the lantern on the player and some torches
- The light radius is proportional to the player's health
- The more the player receives damage the less light is around him

Combat

- The environment is populated by different enemies, they will try to harm the player if they see him
- The player has different weapons to fight enemies

Narrative

- The game revolves around a story
- The journey inside the keep will bring the main character from a simple squire to a mighty hero

Gameplay loop

Add a scheme for the gameplay loop.

Beat the enemies – Discover the area – Find the objects – Go to the next area

Player objectives

Survive and kill enemies

Escape and reach the exit

Discover the plot and find his friends

Avenge his friends by killing the Necromancer.

Player perspective

Isometric camera reference.



Image from: <https://www.shacknews.com/article/123766/how-to-zoom-diablo-2-resurrected>



Image from: <https://www.ign.com/articles/tunic-review-xbox-pc-steam>

Player representation

The player in this game I represented by a Squire of a group of knights. In this adventure will find, with the help of the light, his courage to beat the Necromancer and exit from the castle

Player's emotional experience:

At the core of the Player's emotional experience with *A Lantern in the Dark*, there are:

- **LOSTNESS:** The player will find himself in a hostile keep and has to find a way to escape from it
- **CHALLENGE:** The player will be at the mercy of the enemies; he has to master the combat system and the ability system in a way to beat enemies and bosses that will find on his path
- **HOPE:** The player is lost in this hostile and obscure keep, but with a glimmer of hope given by the lantern, his only ally.

Visual Style and Asset Used

Art Style: The game will have a low poly and cartoonish style. A part small portion of the area around the player, the game is surrounded by the darkness

References: For the visual aspect of the game will be used the following third-party asset:

- **KayKit - Character Pack: Skeletons:**
 - Author: Kay Lousbnerg
 - Page Link: <https://kaylousberg.itch.io/kaykit-skeletons>
- **KayKit - Character Animations:**
 - Author: Kay Lousbnerg
 - Page Link: <https://kaylousberg.itch.io/kaykit-animations>
- **KayKit - Dungeon Pack:**
 - Author: Kay Lousbnerg
 - Page Link: <https://kaylousberg.itch.io/kaykit-dungeon>
- **Free Modular Low Poly Dungeon Pack**
 - Author: RGS_Dev
 - Page Link: <https://rgsdev.itch.io/free-modular-low-poly-dungeon-pack-by-rgsdev>
- **FREE Cartoon Halloween Pack - Mobile/VR**
 - Author: Lumo-Art 3d
 - Page Link: <https://assetstore.unity.com/packages/3d/environments/fantasy/free-cartoon-halloween-pack-mobile-vr-45896#reviews>
- **Ultimate Low Poly Dungeon**
 - Author: Broken Vector
 - Page Link: <https://assetstore.unity.com/packages/3d/environments/dungeons/ultimate-low-poly-dungeon-143535#reviews>

Game Narrative

Story premise

The most famous Knights in all the Reign are called to battle once again: an ominous shadow grew inside the Abandoned Keep (in the Lost Lands), and the King fears that the long-forgotten Evil has risen again in the depths. The party of mighty heroes accepts the quest to investigate the Abandoned Keep: among them, a young and unskilled squire follows the steps of his heroes, hoping to become strong and brave like them.

As they approach the Keep, the squire is fearful and frightened: despite their differences, the heroes don't look at the squire as a weak burden, but as a comrade or like an older brother caring for his young sibling.

However, neither one of them knew what they would face inside the Keep: as they followed the path through darkness the group was attacked by nasty skeletons, puppets of the great Evil.

Caught by surprise, the group is in great difficulty: during the fight, the squire is caught by fear and the heroes yell at him to leave and save his life while they struggle.

With all of his strength, the squire starts running, but the Keep is dark and he cannot see: suddenly he falls through a hole in the ground. As he awakes, he's unharmed but alone and surrounded by darkness: it's here that the player will begin the journey to find an exit from the keep.

Gameplay

Micro Gameplay

Movement system

The character can move by running and rolling in a direction to avoid enemies and obstacles.

Key Input:

- **Keyboard:**
 - **Movement:** WASD
 - **Roll:** Spacebar
- **Gamepad:**
 - **Movement:** Left Stick
 - **Roll:** RT button (Xbox controller) – R2 Button (PlayStation Controller)

Combat system

The path to escape from the castle is not safe. The player will fight against a bunch of skeletons. In the beginning, he will have just his sword and shield, but during the game, the player will collect the other weapons in a way to fight them in many ways.

Attack

A movement in which the character will hit the enemies based on animation, doing certain damage and hitting in a specific arc depending on which weapons he uses.

Combo

Several subsequent attacks; the last will have a special effect depending on the weapon wielded.

Parry

A defensive action that the player can perform with the Shield.

It consists in a movement that makes the character perform a parry of incoming attacks in an arc in front of him, with a defensive stance animation.

Taking up the shield and lowering it are two different actions but consist of a unique animation; between these two elements any incoming attack will be parried = they will not harm the player.

Performing a successful Parry will enter the enemy in the Stun state.

Stun

A state that can happen both to the player and enemies. It's an animation that occurs when failing certain conditions, while this animation occurs the subject receives more damage and cannot attack.

- To the player: conditions to be implemented
- To the enemy: the enemy will be stunned after a combo of the player or after a parry done successfully

Lock:

The player can lock the enemies during the fight to be more efficient

On the enemy locked will appear an icon that advises the player on which enemy is locked

Weapons

In the game, there are different weapons that the character can use.

Weapons	Type	Combo	Attack	Effects	Location
Sword	Melee	3	Slash, Slash, Thrust	None	Main Hub
Axe	Melee	1	Area attack	Instant kill	Area.005
Shield	Melee	xxx	Parry	Parry incoming attacks	Main Hub

Key Input:

- **Keyboard:**
 - **Attack:** Left Mouse Button
 - **Parry:** Right Mouse Button
 - **Lock:** Tab Button
- **Gamepad:**
 - **Attack:** RB button (Xbox controller) – R1 Button (PlayStation Controller)
 - **Parry:** LB button (Xbox controller) – L1 Button (PlayStation Controller)
 - **Lock:** R button (Xbox controller) – R3 Button (PlayStation Controller)

Light system

The player will always be shrouded in darkness, but he will have a magic Lantern that helps him lightening the way through his journey. The Lantern will be essential for both exploration and combat:

- **Seeing better:** the player can use the Lantern to increase the light in the area for a short moment
- **Repelling enemies:** the Lantern will have a cool-down active ability to repel enemies away from the player

The light also represents the health of the main character.

Health system

Character health in this game is a hidden statistic represented by the light cast by the lantern attached to the player.

If the player is hit by an enemy, he will lose health depending on the damage of that attack, losing health will result in a lesser light cast around the character.

The player will regain health after a delay, this delay will be less if the player is closer to some lit torches.

Power-ups

The player will have some powers to use around the Keep to better fight and explore, these are power-ups from the magic Lantern.

Seeing Better

The lantern emits a strong light around him, pushing away the nearby enemies.

Repelling enemy:

Show better the environment for X seconds.

Key Input:

- **Keyboard:**
 - **Light Push:** 1 Button
 - **Light Expansion:** 2 Button
- **Gamepad:**
 - **Light Push:** X button (Xbox controller) – Square Button (PlayStation Controller)
 - **Light Expansion:** Y button (Xbox controller) – Triangle Button (PlayStation Controller)

Macro Gameplay

Exploration system

The Keep is a large building, spacing from cellars to towers. It will be divided into different rooms fully explorable by the player.

Lost heroes:

While exploring the keep, the player might find them and they will reward him with new equipment.

Story elements:

With the exploration, the player will find story and lore elements that will help him to understand the world around him.

Story elements list:

This section will contain information about the story elements and their location on the map.

Characters:

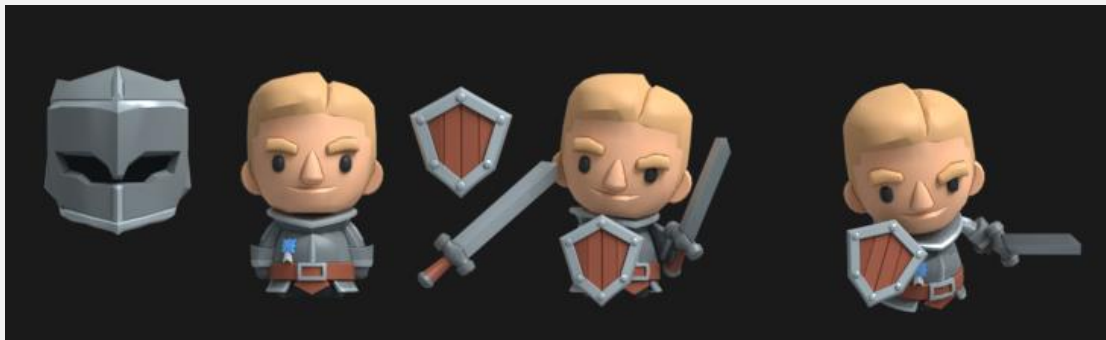
Main characters

The Squire:

The protagonist of the game, he's a wannabe hero who started venturing with the Heroes not a long time ago. He follows his heroes hoping to become as strong and mighty as them, helping them where he can. He has no strong confidence and in the game's opening, he loses hope fast, running away from his friends in fear.

His craven actions, and finding his friends scattered in the Keep, will make him mature, building him as the definitive hero.

Visual Aspect:



The Lantern:

A mysterious lantern that can talk to the player.

The player will find it in the first room of the dungeon, as soon as he regains consciousness after falling.

The lantern is vital for the story and the gameplay, as this character will explain what is happening to the player through dialogues, also giving him context on what to do next or what is happening around him.

This living object will also lighten the player's surroundings, making it possible for him to see; taking damage will weaken the lantern's light, to the point that darkness will surround it.

Visual Aspect:



Important characters

The Paladin:

a strong and faithful member of the Heroes, the leader of the party; he wields a Sword to slay his foes and a Shield to protect himself and his comrades; he has a strong will and fortitude.

The Barbarian:

a wild warrior of the Heroes, but also the oldest and wisest of the group; he wields the Axe. The player will find him dead in Area.005 and will receive the Axe as an object to equip in the inventory

The Necromancer:

The main boss of the story will wait for the player's arrival at the end of the keep rooms.

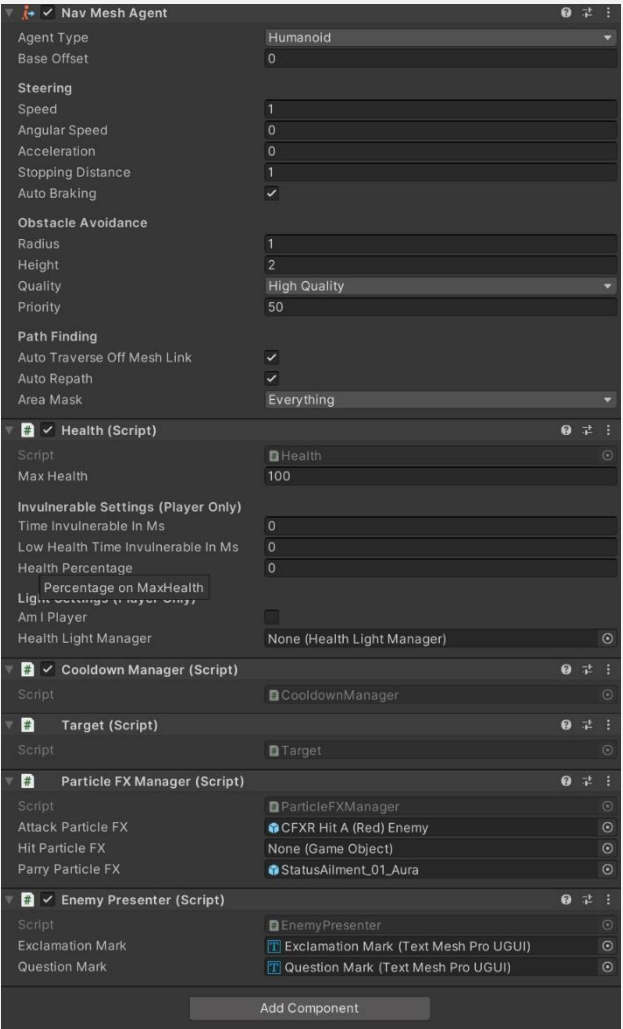
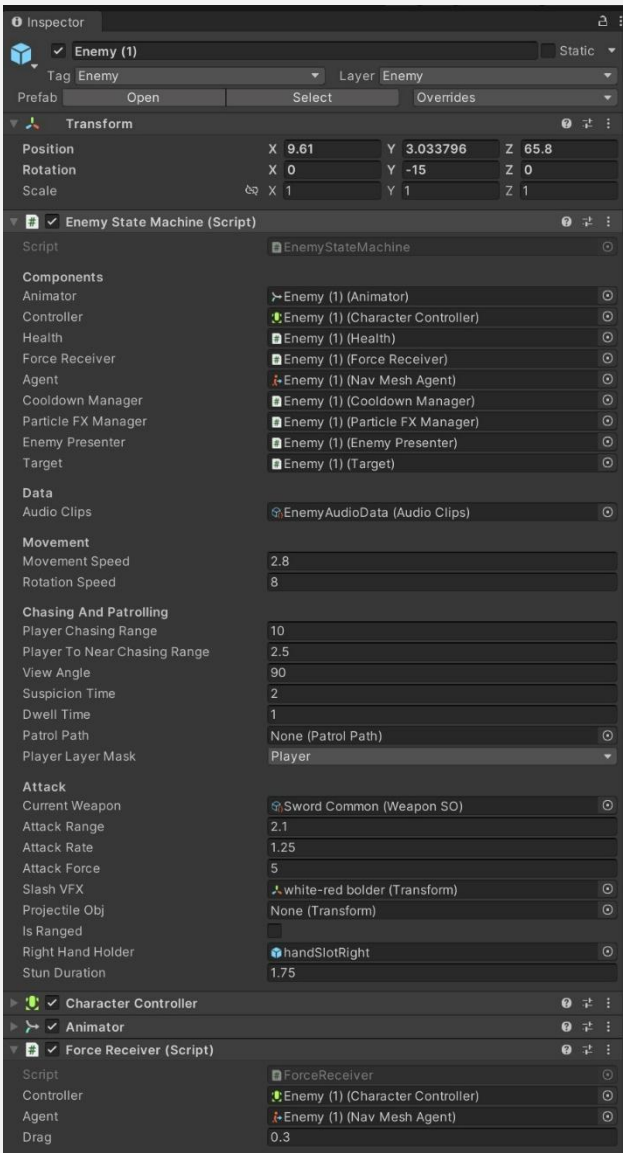
Enemies

This section will list all the enemies that the team wants to introduce in the game and their specifics.

Skeleton swordsman

Skeleton with a sword that will attack the player with a melee attack

Parameters:



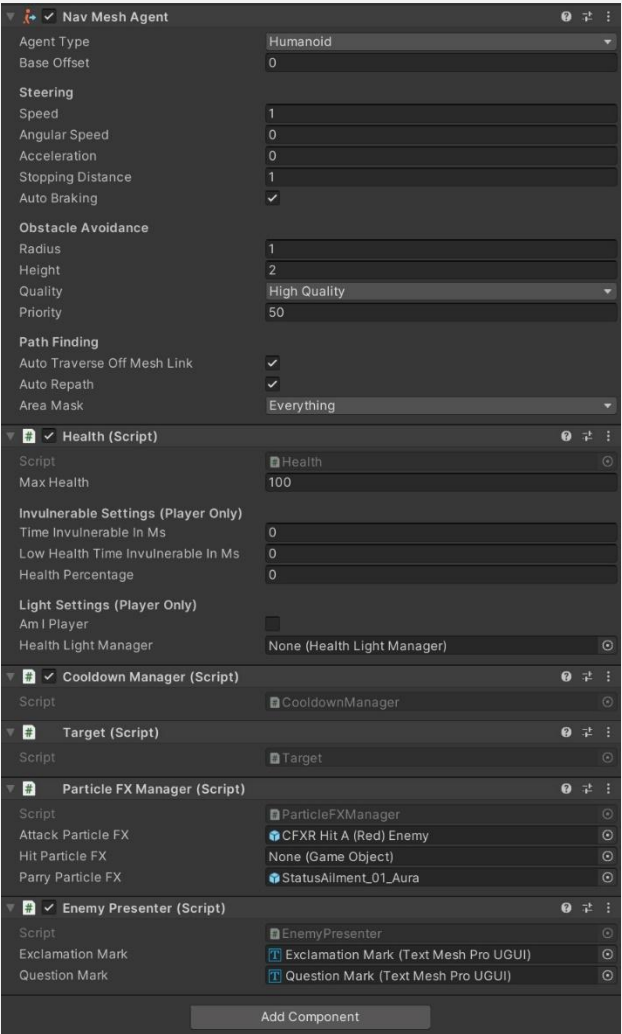
Visual Aspect:



Skeleton archer

0A skeleton that uses a bow, shooting arrows at the player.

Parameters:



Visual Aspect:



The Necromancer:

The Necromancer is the enemy and has the possession of the castle. He is placed in the Boss arena and has the ability to summon skeletons

Parameters:

It has no parameters. The player can beat him at the end of the boss fight by attacking him

Visual Aspect:



Level Design and Environment

The game takes place almost entirely in the Necromancer's Keep: an abandoned castle that belonged to the old King's sorcerer, the same sorcerer that now has turned to the dark arts and became a necromancer, waging war on the realm of the living.

This section will contain a description of the Keep corridors, rooms, and dungeons.

First Area:

Area Explanation:

This is an introductory area and is the first area the player encounters.

It is the place where the player falls in the introductive cutscene. The main character is surrounded by the dark until he finds the Lantern. It speaks to him and, as soon he understood the good intention of the protagonist decides to help the player with his mission

Preview Images



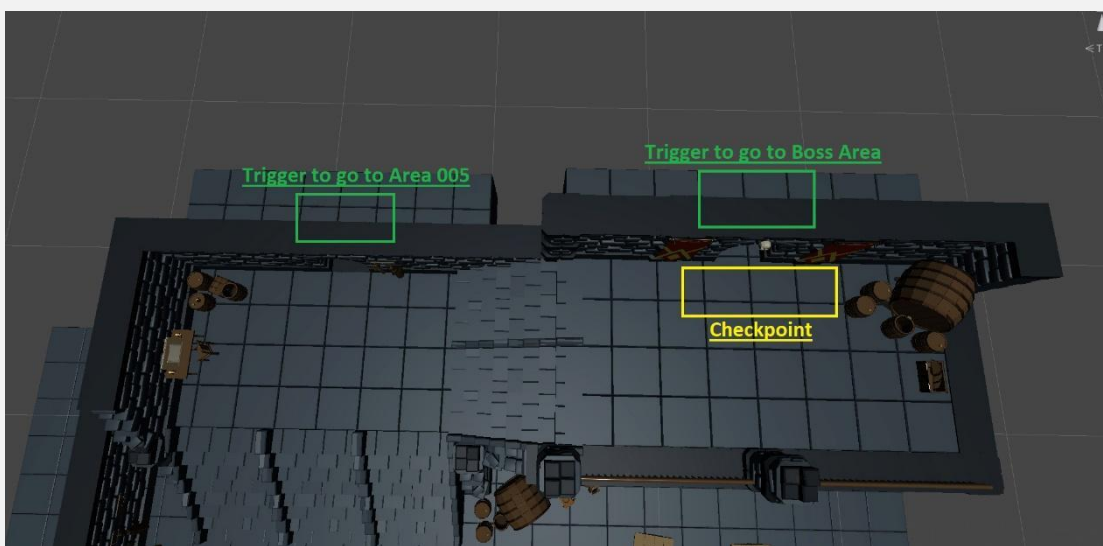
Main Hub:

Area Explanation:

This is the safe place for the player where he encounters his first fallen friend, who gives him the sword and shield. He will inform the player about what happened and what he has to do to escape from the keep.

This section works also as a level selector

Preview Images



Area 001:

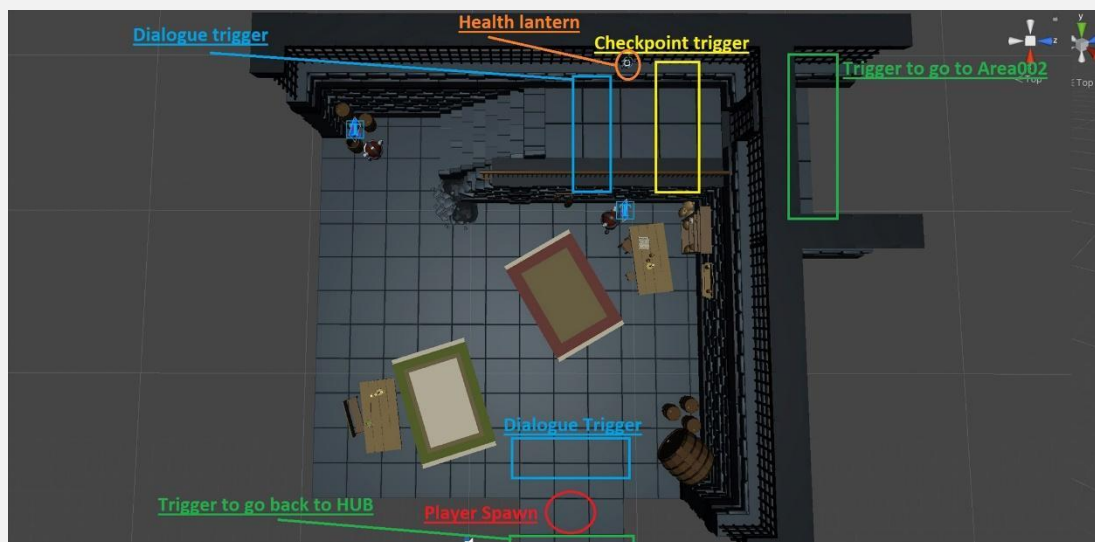
Area Explanation:

This is the introductive area the of the game where the basic mechanics are explained to the player and where the player can learn how to play with the game mechanic.

In this area, the player learns the basics of:

- Combat system
- How it is possible to attack enemies from behind
- How to heal himself

Preview Images

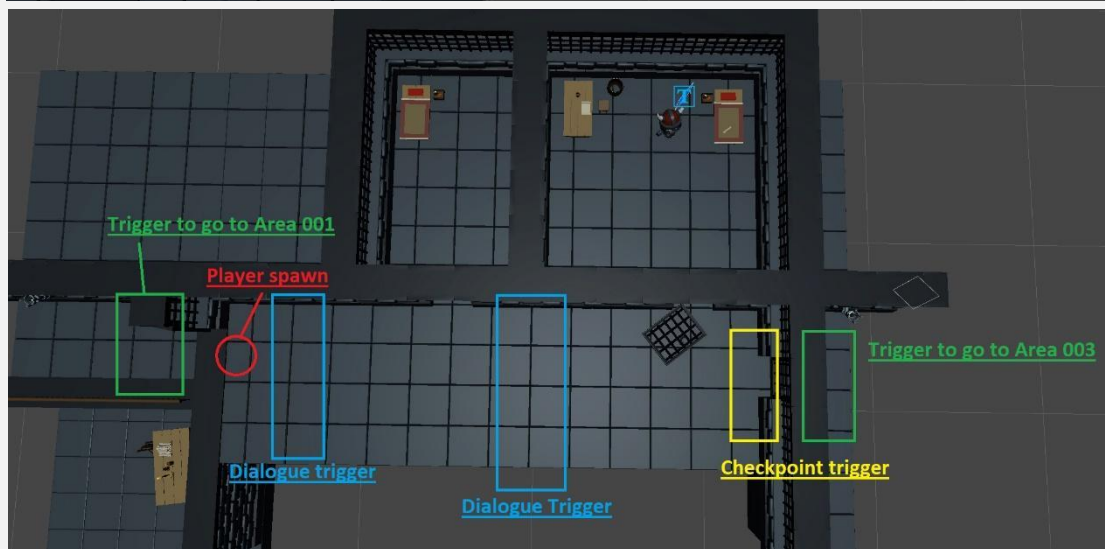
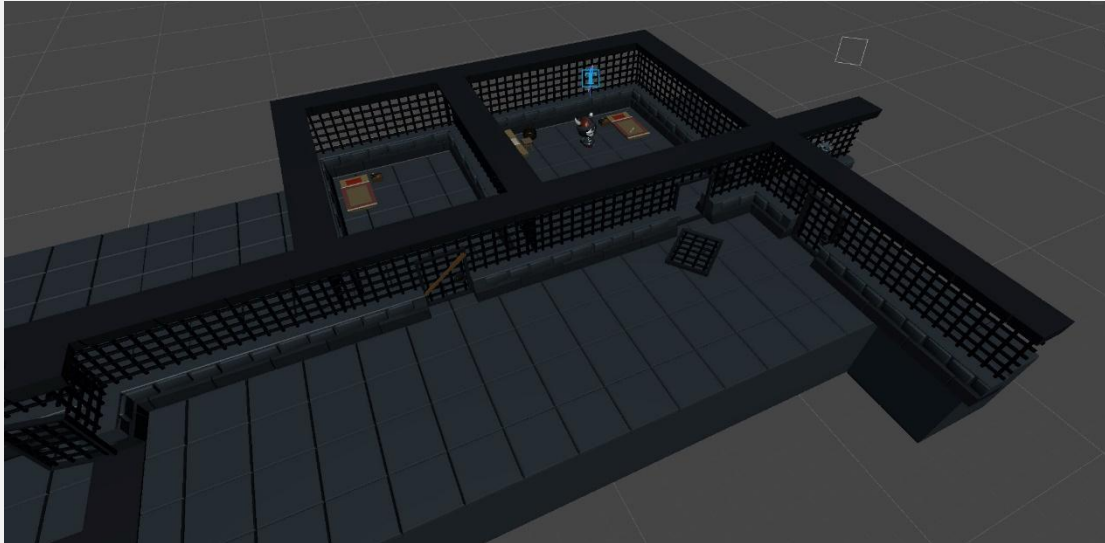


Area 002:

Area Explanation:

This part of the game is set in the prisons of the castle. The player in this area will learn how to use the exploration abilities

Preview Images

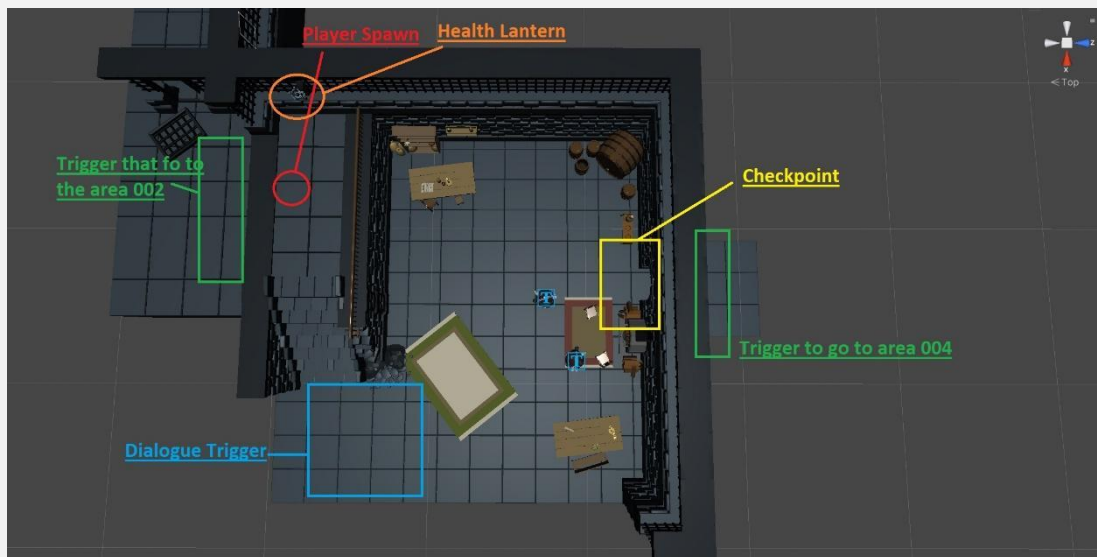


Area 003:

Area Explanation:

In this area the player will learn how to use the repelling enemys' ability, he will faces 2 melee enemy that will surround him blocking the way to the next area

Preview Images



Area 004:

Area Explanation:

The squire and the Lantern will be in a corridor proceeding to next area. They will speak about this situation encouraging each other

Preview Images

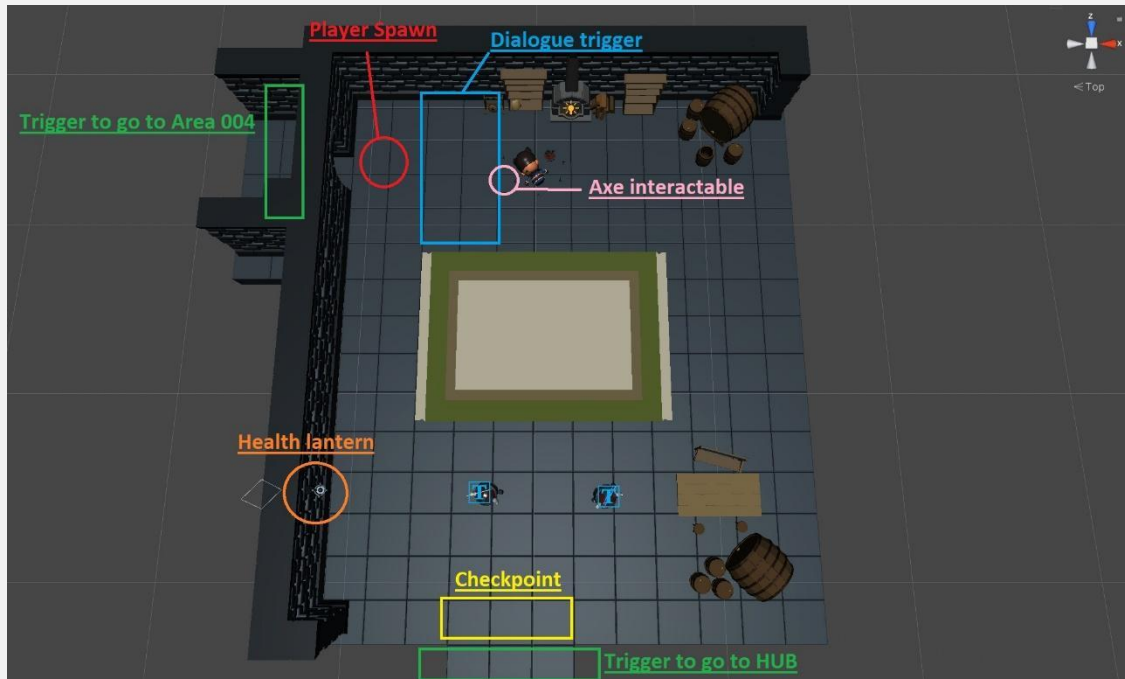
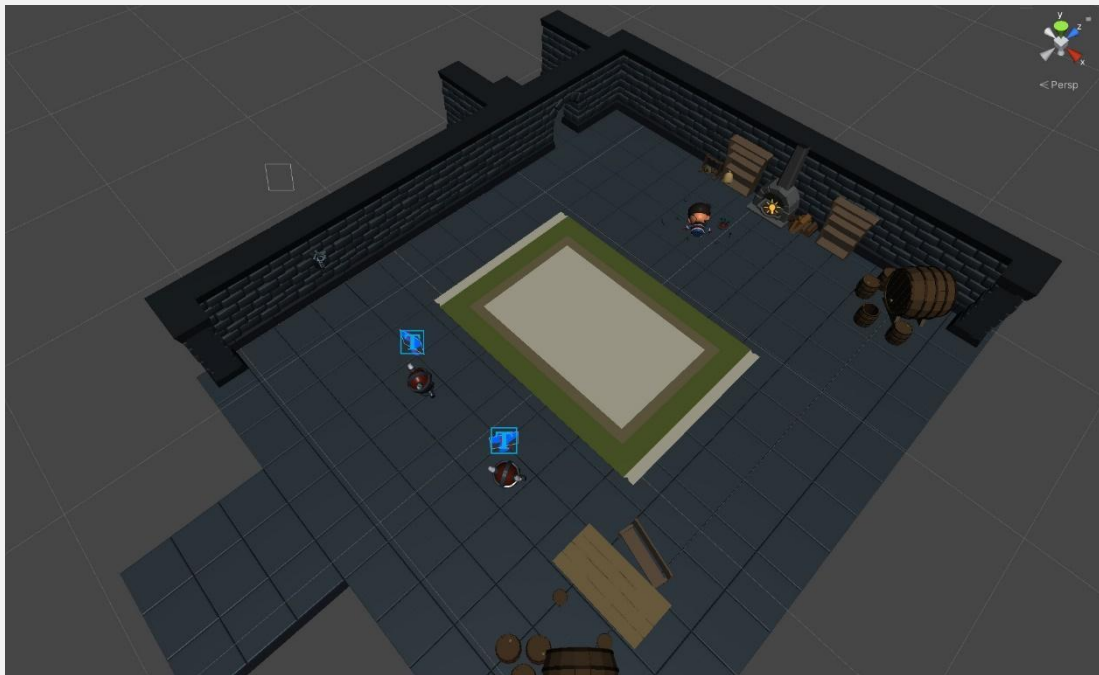


Area 005:

Area Explanation:

In this area the player will find one of his fallen friend. He is dead. The player can obtain his axe and learn a new way to attack the enemies. He will also face a new type of enemies: the archer skeleton

Preview Images

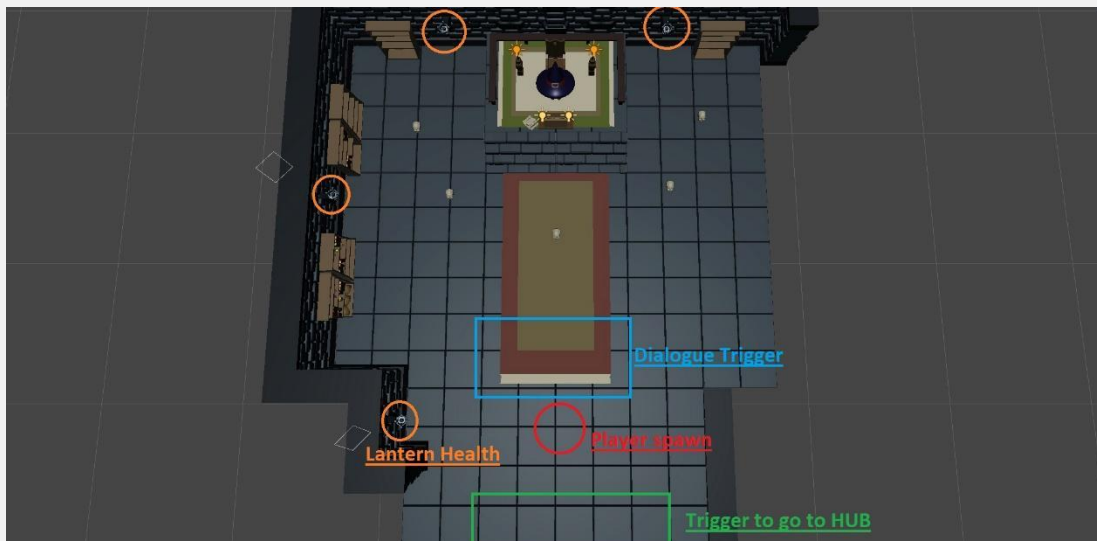
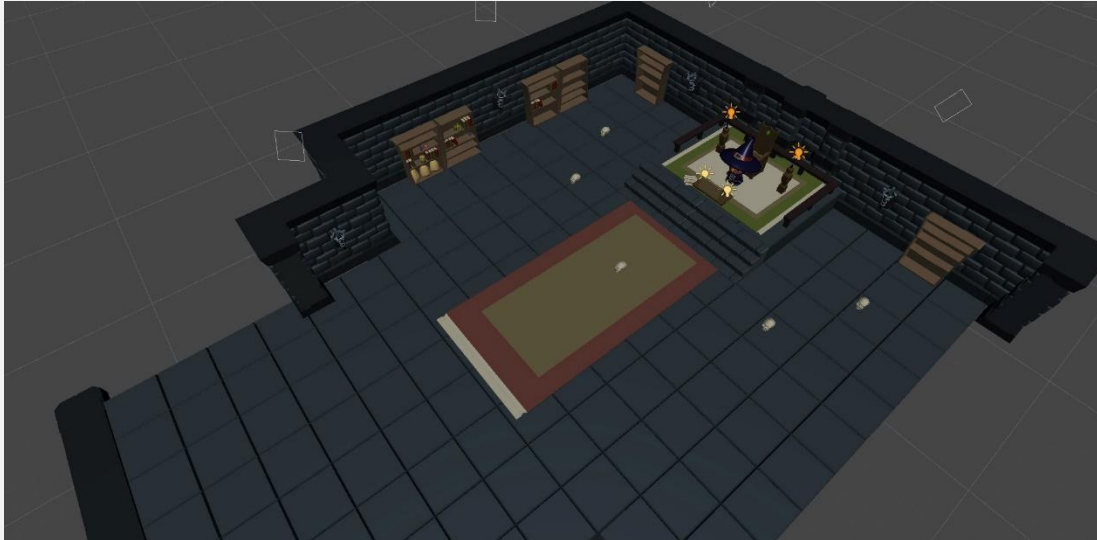


Boss Fight:

Area Explanation:

In this area the player will fight the Necromancer and his skeleton army. There are 2 hordes of enemies that will fight the player. As soon the player has defeated them, he can attack the Necromancer and with a huge light the game finish and the narrator will finish the story

Preview Images



User Interface

Comics Bubbles

Characters will have Comics Bubbles pop-ups above their head to express feedback, for example, enemies will alert with “!” or “?” depending on the sightings of the player, when the player will select a weapon it will be shown in a bubble above his head, available interactions will be visually suggested with relative bubbles.

Light Radius as Health

The light radius around the player will represent the health of the character, tuned like this:

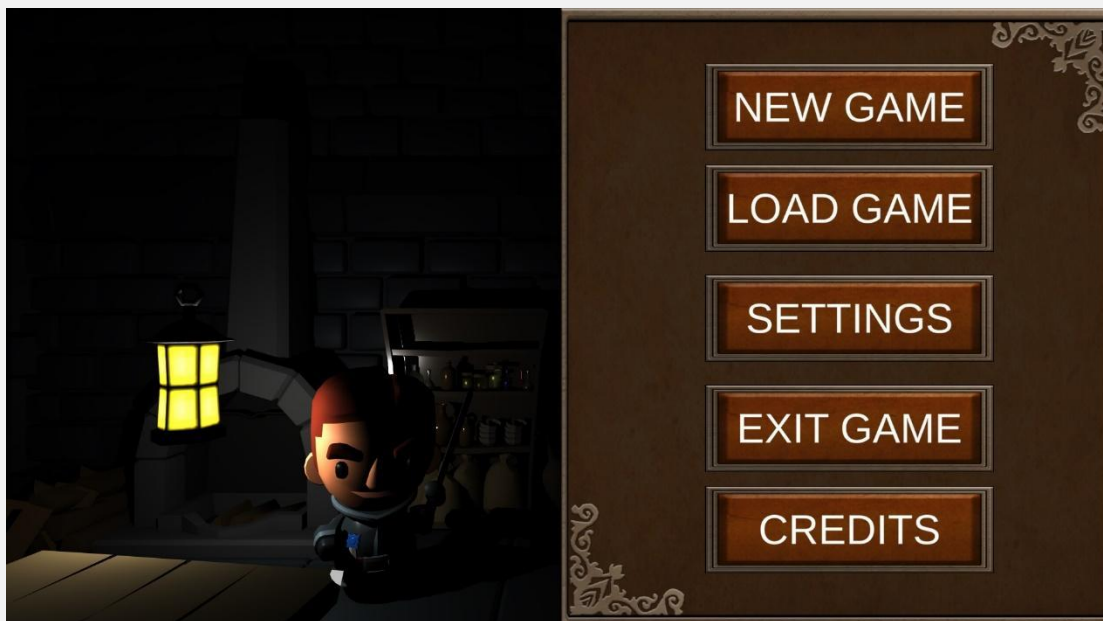
- The more health = the more light cast around the player
- The less health = the less light cast around the player

This will result in increasing difficulty when the player is low on HP, adding tension and a more sense of risk to the gameplay; this will also push the player to take strategic decisions and use the power-up to his advantage.

HUD And Menus

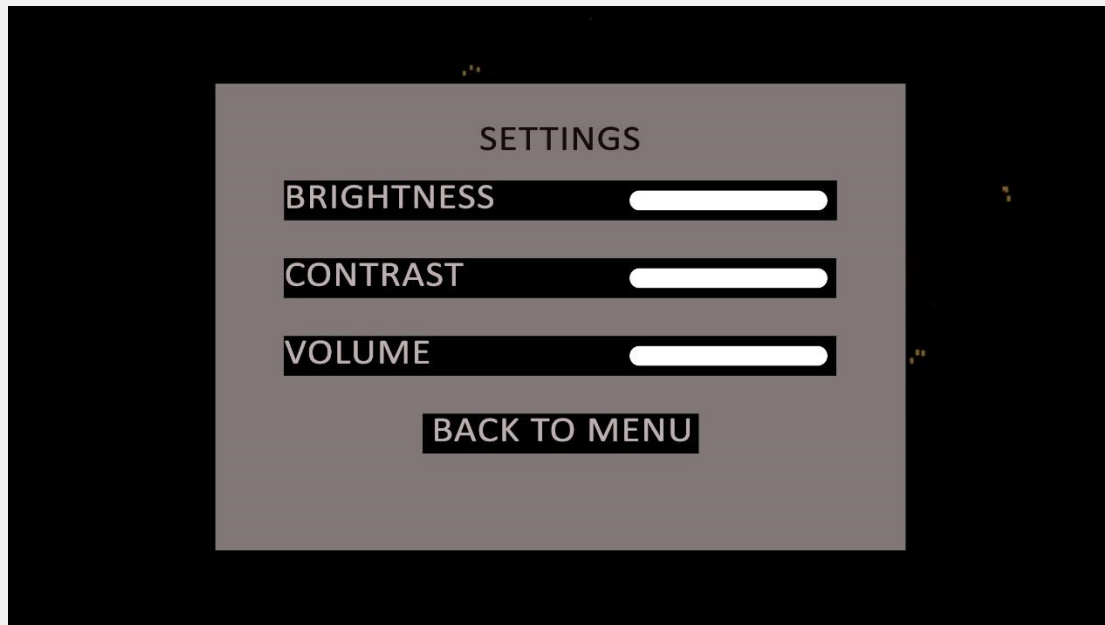
Main Screen

Visual example:



Settings screen

Visual example:



Loading screen

The loading screen is

Dialogue screen

Visual aspect:



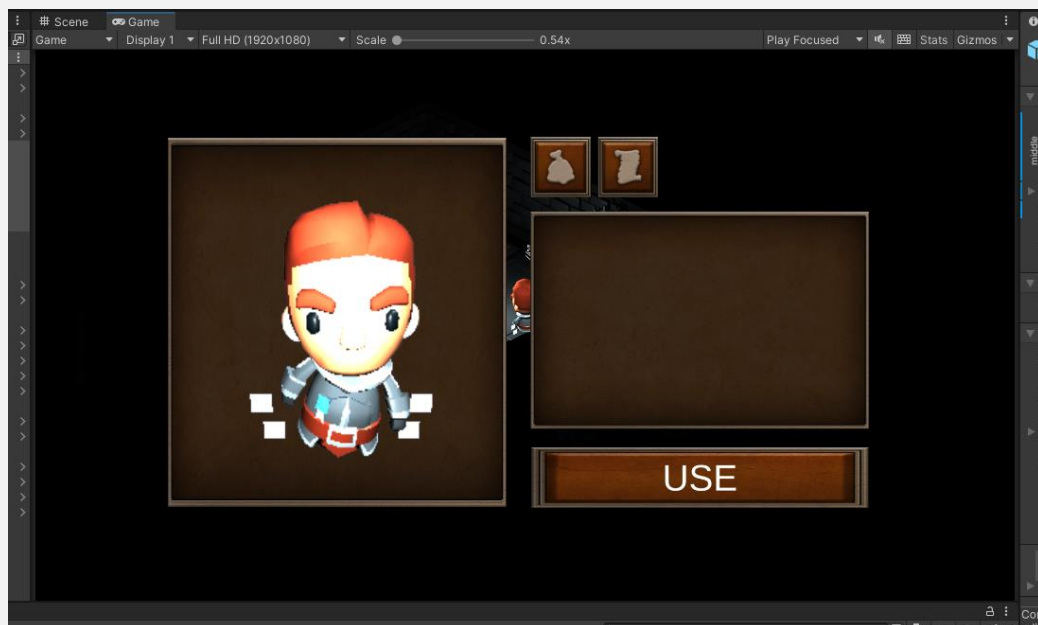
Pause Menu

Visual example:



Inventory:

Visual Example:



In-game HUD

Player Health:

The player's health will be shown by a reduction of the lights around him.

Ability cooldown:

- The cooldown of the ability will be shown as icons around the character
- The player will always see these icons and they do not rotate with the character
- The red icons represent the Light Push power-up
- The blue icons represent the Light Expansion power-up
- When the power-up is used, after a small delay the icons will be empty and will start refilling giving the player the feedback of the cooldown

Visual example:



Story screens

Visual example

Asset used:

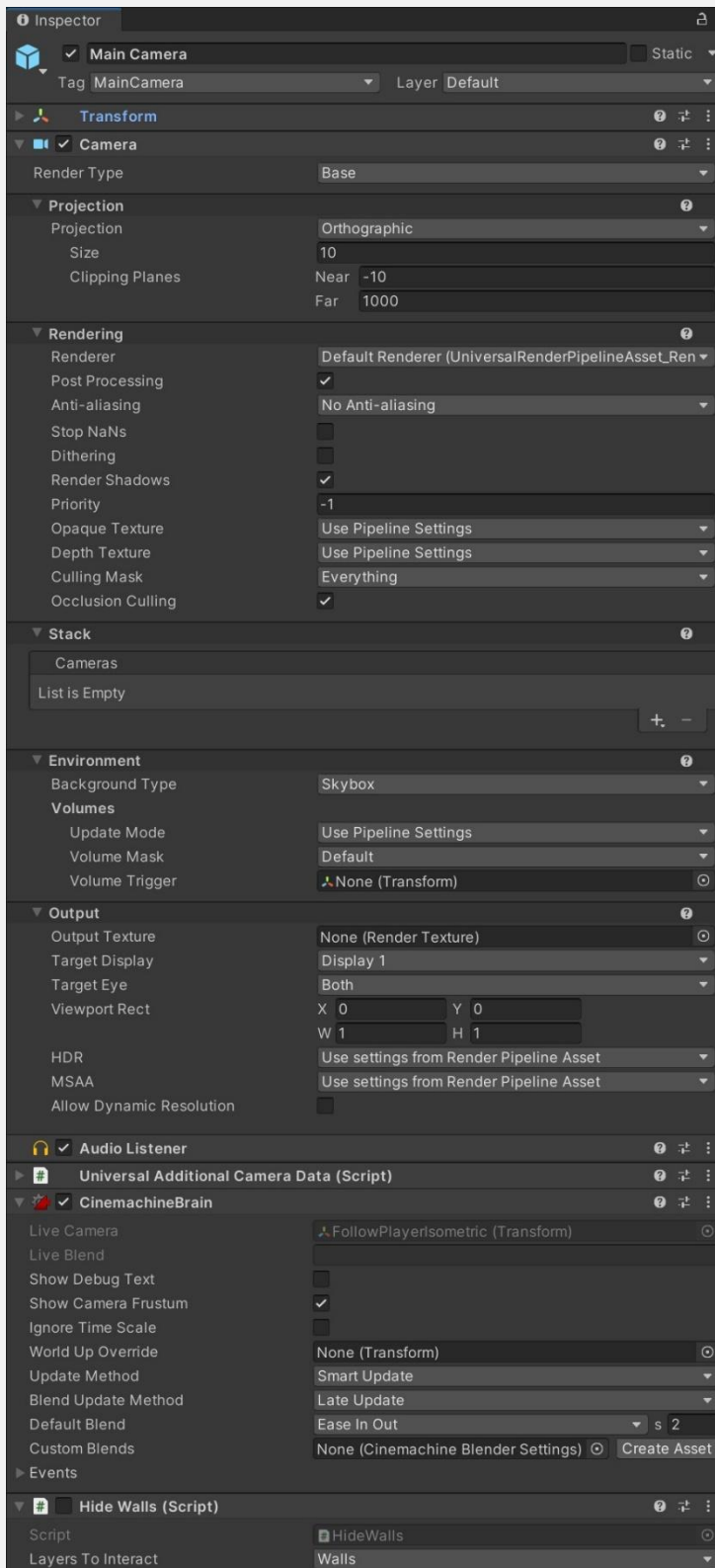
For the menus it was chosen to rely on an external asset:

- **Dark Brown GUI kit:**
 - Author: Ar Arcey
 - Page Link: <https://assetstore.unity.com/packages/2d/gui/dark-brown-gui-kit-201086#reviews>
- **Clean Vector Icons**
 - Author: Poneti
 - Page Link: <https://assetstore.unity.com/packages/2d/gui/icons/clean-vector-icons-132084#reviews>
- **Controller Icon Pack**
 - Author: Null Save
 - Page Link: <https://assetstore.unity.com/packages/2d/gui/icons/clean-vector-icons-132084#reviews>
- **Status Effects FREE**
 - Author: Travis Game Assets
 - Page Link: <https://assetstore.unity.com/packages/vfx/particles/spells/status-effects-free-238904#reviews>

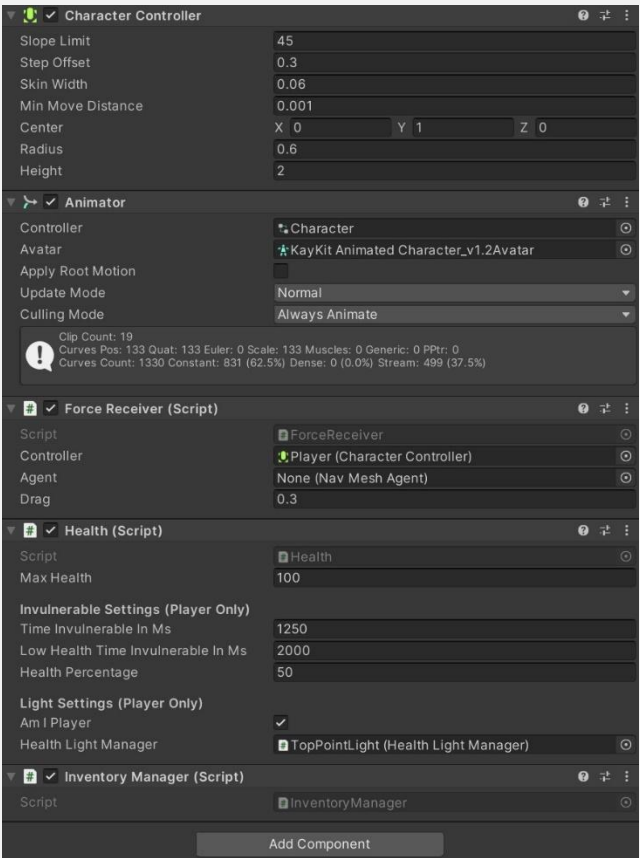
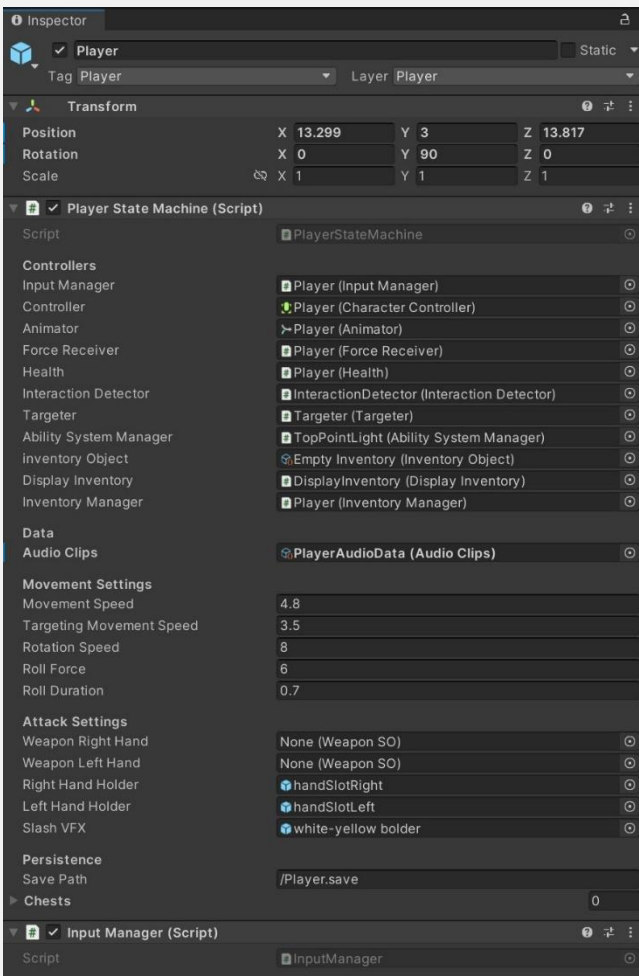
- **Cartoon FX Remastered Free**
 - Author: Jean Moreno
 - Page Link: <https://assetstore.unity.com/packages/vfx/particles/cartoon-fx-remaster-free-109565#reviews>
- **Stylized Slash VFX**
 - Author: HungNguyenVFX
 - Page Link: <https://assetstore.unity.com/packages/vfx/particles/stylized-slash-vfx-200233#reviews>

Technical parameters:

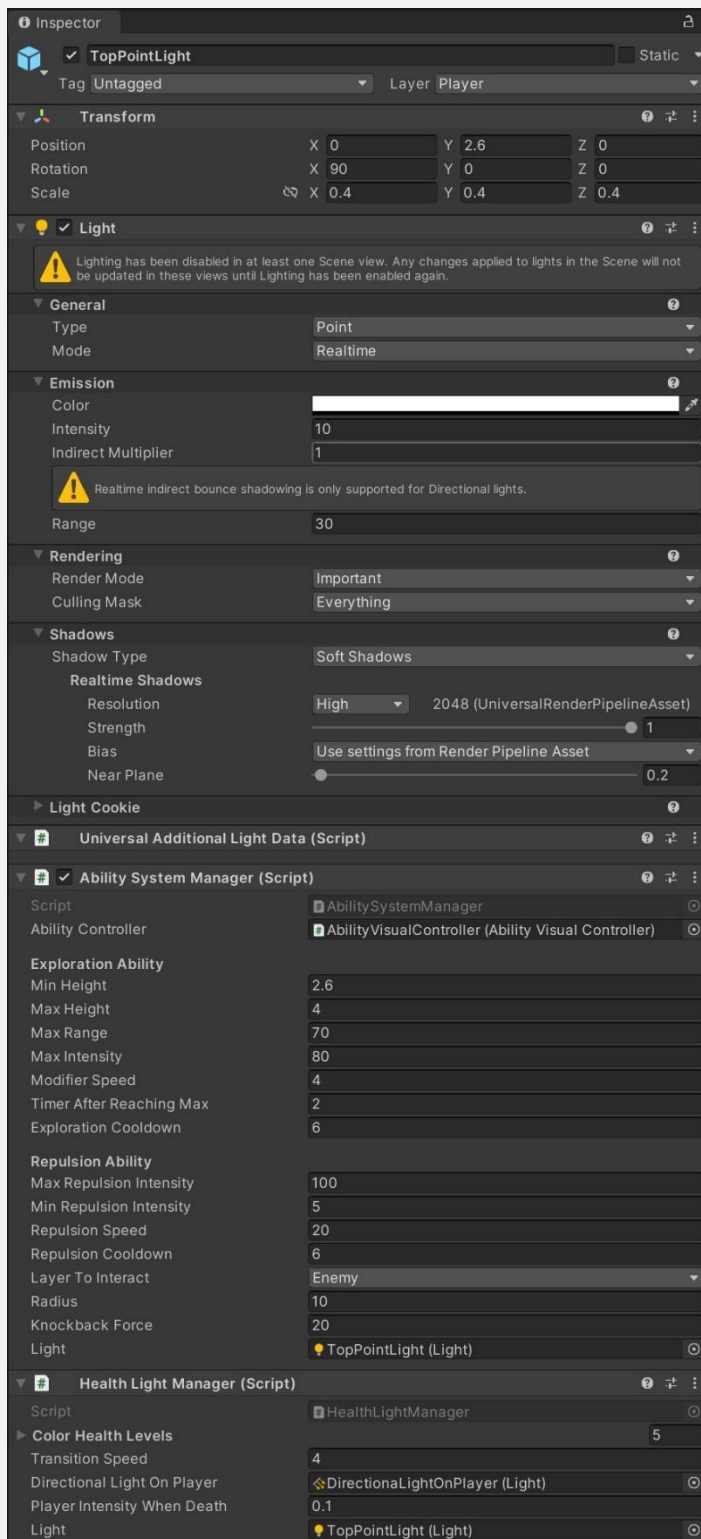
Camera:



Character:



Lantern:



Audio e Sound

Sound effects:

Player:

Below there are indicated all the SFX related to the player

Player movement:

- **Running 1**
 - Author: vmgraw
 - Page Link: <https://pixabay.com/sound-effects/running-1-6846/>

Player attack with sword:

- **Sword Wipes**
 - Author: deleted user 6479820
 - Page Link: <https://pixabay.com/sound-effects/sword-swipes-7174/>

Player parry:

- **Shield Guard**
 - Author: nekoninja
 - Page Link: <https://pixabay.com/sound-effects/shield-guard-6963/>

Player attack with Axe:

- **Sword Wipes**
 - Author: deleted user 6479820
 - Page Link: <https://pixabay.com/sound-effects/sword-swipes-7174/>

Player roll:

- **jumps**
 - Author: ttttr
 - Page Link: <https://pixabay.com/sound-effects/jumps-65494/>

Lantern Power-Up 1:

- **whip01**
 - Author: snowflakes
 - Page Link: <https://pixabay.com/sound-effects/whip01-6952/>

Lantern Power-Up 2:

- **FX Light**
 - Author: PixxelPro
 - Page Link: <https://pixabay.com/sound-effects/fx-light-90387/>

Enemy:

Below there are indicated all the SFX related to the enemies

Enemy movement:

- **Running 1**
 - Author: vmgraw
 - Page Link: <https://pixabay.com/sound-effects/running-1-6846/>

Enemy attack with sword

- **Sword Wipes**
 - Author: deleted user 6479820
 - Page Link: <https://pixabay.com/sound-effects/sword-swipes-7174/>

Enemy attack with crossbow

- **Sword Wipes (edited)**
 - Author: deleted user 6479820
 - Page Link: <https://pixabay.com/sound-effects/sword-swipes-7174/>

Enemy death

- **Bone Crack**
 - Author: Universfield
 - Page Link: <https://pixabay.com/sound-effects/bone-crack-121580/>

Environment:**Ambience sound:**

Below are indicated all the sound and ambience

- **Big Metal Chain**
 - Author: daveincamas
 - Page Link: <https://freesound.org/people/daveincamas/sounds/44076/>
 - Attribution 4.0 International (CC BY 4.0) = attribution required
- **Creepy Dungeon Ambience**
 - Author: DrMinky
 - Page Link: <https://freesound.org/people/DrMinky/sounds/166187/>
 - Attribution 4.0 International (CC BY 4.0) = attribution required
- **Creepy Dungeon Ambience**
 - Author: DrMinky
 - Page Link: <https://freesound.org/people/DrMinky/sounds/166187/>
 - Attribution 4.0 International (CC BY 4.0) = attribution required
- **Dungeon Air**
 - Author: Flamiffer
 - Page Link: <https://pixabay.com/sound-effects/dungeon-air-6983/>
- **Flammier**
 - Author: Dungeon Air
 - Page Link: <https://pixabay.com/sound-effects/dungeon-air-6983/>

Risk Analysis:

CODE	DEVELOPMENT RISKS	IMPACT	PROBABILITY	RISK RATING	PREVENTION	MITIGATION
C	CONCEPTING					
C1	Planning & Allocation	M	L	M	Using best practices and having solid organization tools like GitHub, Drive, Trello, etc.	Reorganize planning and keep up-to-date members with difficulty using daily stand-ups and meetings
C2	Ideation	M	L	M	A lot of meetings in pre-production for a solid ideation	Defining limited time and dividing Brainstorming in: mechanics, theme, and genres
C3	Scope	H	M	H	Defining limits for design and programming	Team meeting, change the design, read the initial concept, and avoid what is superfluous
C4	Already existing idea	H	M	H	Fine Pre-Production Market-Research	Re-design, adding unique mechanics.
P	PROTOTYPING					
P1	Complicated Mechanics	H	M	H	Making the game scalable starting with a few mechanics. Working through blocks	Team meeting, change the design, adjust programming
CODE	DEVELOPMENT RISKS	IMPACT	PROBABILITY	RISK RATING	PREVENTION	MITIGATION
P	PROTOTYPING					
P2	Mechanics Balance	H	M	H	Keep simple and few mechanics	Experimentation, fine-tuning, change design
P3	Level Design	H	M	H	Level design studying and documentation	Experimentation, fine-tuning, changing the design, playtesting
PP	PRE-PRODUCTION					
PP1	Unrealistic Pitching	M	L	M	Carefully reading together the pitch document and risk analysis to find issues	Team meeting, change the design, read the initial concept, and avoid what is superfluous
PP2	Underestimating Risks	H	M	H	Re-evaluate risks during the development	Team meeting, change the design
D	DEVELOPMENT					
D1	Main Gameplay Loop - Micro	M	L	M	Playtesting	Team meeting, fine-tuning, changing inadequate core mechanic
D2	Main Game Loop - Macro	M	M	M	Set milestones, Playtesting	Remove unnecessary processes, simplify the more complex process
D3	Reliance on external assets	H	H	H	Make lists of all the assets needed	Using free assets, modification of free assets
D4	Unexpected bugs	M	M	M	Do a lot of playtesting on different patterns of inputs	Focusing on solving core bugs and assigning bug priorities

Game Design Document

A Lantern in the Dark

The Necromancers

CODE	DEVELOPMENT RISKS	IMPACT	PROBABILITY	RISK RATING	PREVENTION	MITIGATION
D	DEVELOPMENT					
D5	Losing game data	H	L	M	using GitHub and local backups	Restoring old backups
D6	Illumination system reduce player visibility	H	H	H	Playtesting	Change the design and provide settings to help the user improve his game brightness
D7	Game too repetitive	M	H	H	Adding enough content to the gameplay	Change design to balance repetitive gameplay
D8	conflicts while merging	M	L	M	Splitting work effectively among programmers, working of different branches and scenes	Resolve the conflicts may be in team meetings if necessary
QA	TESTING / QUALITY ASSURANCE					
QA1	Unexpected bugs	M	L	M	Playtesting, Unit Tests, Good use of design patterns	Focusing on solving core bugs, consulting guides, asking for help to the core trainers or other teams, code refactoring
QA2	Finding <u>Playtesters</u> in our target audience	M	L	M	Team playtesting, Unit Test	Planning ahead, at worst we'll test with a <u>playtester</u> slightly above the target audience's age range
MK	MARKETING RISKS					
MK1	Competitors games	L	H	M	Having a strong USP to differentiate the gameplay	Implement new unique mechanics, features, or interactions
CODE	DEVELOPMENT RISKS	IMPACT	PROBABILITY	RISK RATING	PREVENTION	MITIGATION
RR	RESOURCE RISKS					
RR1	Limited availability of team members	M	M	M	Agreement on final project manifesto, time and tasks management	Reorganizing tasks among other team members and helping each other if someone is behind schedule
RR2	Low budget/quality assets	M	M	M	Accurate search for the project and testing inside Unity	Remove low-quality assets or find a good tuning for the game to use it anyway
TR	TECHNICAL RISKS					
TR1	Bad programming AI for enemies	H	M	H	Asking the mentors for help, use a state machine pattern	Change design, scripting more the enemies instead of defining <u>behaviors</u>
TR2	Problems with rendering of shadows	M	M	M	Studying more about casting shadows and rendering settings	Reduce at minimum the use of it even if changing the design is needed
TR3	Level designing not captivating for player	H	M	H	Studying design ideas of similar games	Playtesting and changing in design
TR4	Game difficulty too hard/easy	M	M	M	Studying good balance for gameplay	Re-design gameplay systems
TR5	Performance	H	L	M	Looking for a guide and tutorial about optimization	Keep engine default settings / as low as possible

SWOT Analysis:

For this project was done also a SWOT analysis that it is possible to resume in this way

- **STRENGTHS:**

- Interesting mechanics and progressive gameplay
- Captivating story and narrative
- Simple combat system
- Exploration and environment interaction
- Interesting illumination system correlated to the gameplay mechanic
- Asset simply to modify and recolouring
- Well-structured dungeon design

- **WEAKNESSES:**

- Lack of variety of free asset
- Constrained style due to the asset chosen
- Lack of artistic figures (3d Modeler, Sound artists, etc.)
- PC is the only final target to deploy
- Saturated market
- Lack of replayability
- We do not have a dedicated testing team
- Accessibility problems (E.G., player who have photosensitivity problems)

- **OPPORTUNITY:**

- Working on a 3d project in team
- We have mentors that follow us during the development
- A bigger team can produce a better work
- Improving programming skill
- Improving design skill

- **THREATS:**

- Light system limits the visibility of the player
- Almost all the team members have other and full-time jobs that can cause delay in working on the project
- Lack of experience in some design and programming aspects
- Rendering of the shadows can cause visualisation problems and bugs
- Lot of competition on the market
- Captivating level design for the player
- Short gameplay possibility
- Balancing problems (game too easy or too hard)

Legal Concerns:

Asset License:

All the asset used in this game are free to use

The asset license of reference are:

- Standard Unity Asset Store EULA
 - Link: <https://unity.com/legal/as-terms>
- Creative Common Zero (CC0)
 - Link: <https://creativecommons.org/publicdomain/zero/1.0/>
- Creative Common 4.0
 - <https://creativecommons.org/licenses/by/4.0/>