

# Game Design Document

## 2.5D Metroidvania Game

2.5D: 2D movement (x and y only); 3D environments and characters.

Metroidvania: Non-linear and utility-gated exploration and progression.



Figure 1: 2.5D game examples



Figure 2: Metroidvania map and level layout examples

# Storyboard

## Setting

Gothic Victorian City



Figure 3: Gothic Victorian city moodboard

## Cthulhu Mythos

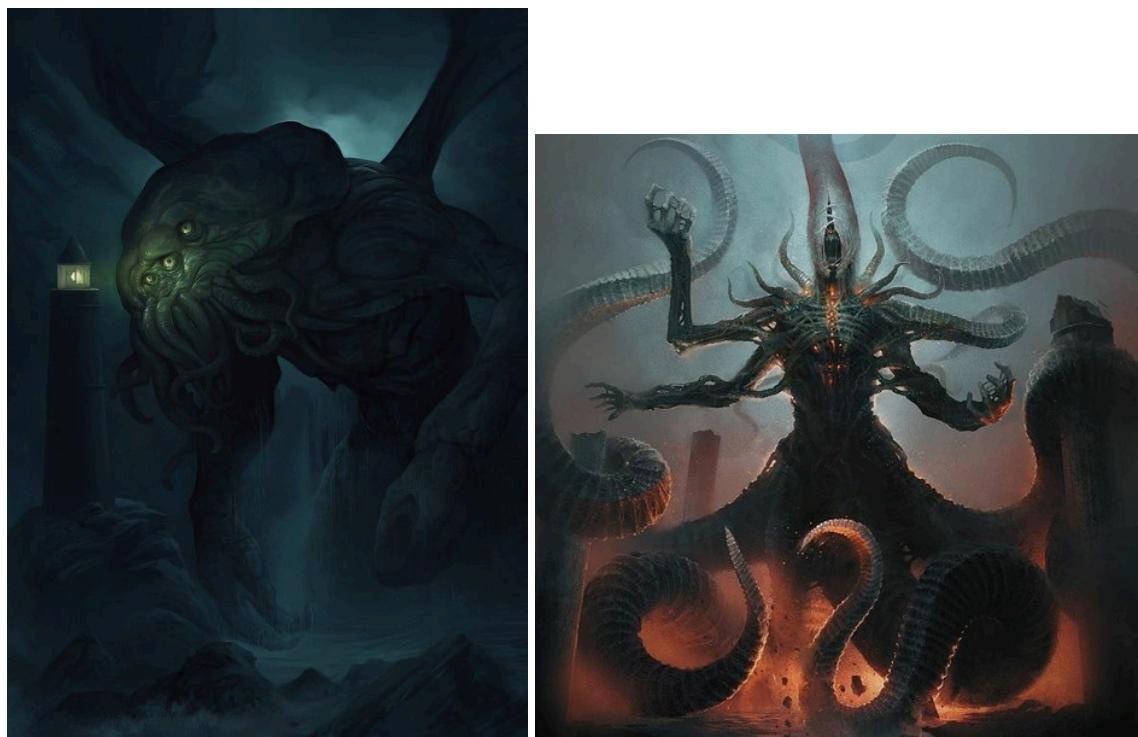




Figure 4: Lovecraftian horror moodboard

## Story Overview

A Cosmic Eye, a small crystalline rock, has been sent to Earth by the Great Old Ones. This crystal draws from all sorcery used on Earth in order to create Nyarlathotep, a Great Old One who will bring madness and chaos to Earth. The goal of the game is to stop Nyarlathotep from being created from the Cosmic Eye.

The player will discover the existence and significance of the Cosmic Eye through exploration to find research notes. They will then explore to find the Cosmic Eye, discover several methods to destroy it, and then carry out one of these plans.

The player begins on the farm, where they go through a tutorial on using Cosmic Sorcery by the Mentor character. The Mentor character is killed by soldiers, and the player must escape being hunted by those soldiers. This leads them to the city, where they will be able to explore to find answers about what is going on.

They will find research notes and diary entries that will give them clues about the Eye and the massacre of monks ordered by the Archbishop. They will have to piece information together over lots of different notes.

After finding the Cosmic Eye, the player will need to figure out how to destroy it from notes. They will then need to head to a new area to destroy it and prevent Nyarlathotep's creation.

## Narrative Themes

- **The Unknown:** The player's main drive is to find out what is happening and to learn the secrets of the cosmos. They will find plenty of answers but it will always create more questions.
- **Reliance on The Great Old Ones:** The city has integrated the power and knowledge of the Old Ones into all of the public services, and their logos and insignias all integrate the Old Ones in some way.
- **An insurmountable number of problems created by rapid progress:** a period of prosperity followed by chaos throughout the city which has sent all societal systems into disarray aside from the armed organisations.
- **Ignorance:** every character has committed themselves to a path despite not knowing the risks. Common symbolism of covered or missing ears (the refusal or incapacity to take in information).
- **Player is alone:** NPCs avoid or attack you, shops quickly change their signs to "closed" as you walk by, no allies in combat, frequent puzzle-solving sections in eerily empty areas.

## Worldbuilding

The citizens of Dunwich discover the existence of the Great Ones and learn to commune with them. Once they learn of and commune with Yog-Sothoth (omniscient Great One) they learn cosmic sorcery from him. Yog-Sothoth bestows endless knowledge onto the citizens and they therefore advance very rapidly. Organisations are formed around the Great Ones and their knowledge and power is incorporated into all public services as well as the every-day life of the high class citizens.

Cosmic Sorcery draws from the user's health or another living being's health. Only trained Monks are permitted to use Cosmic Sorcery, and unlawful use is punishable by death.

## Characters / Content

### Player Character

Orphan farmer who is trained in Cosmic Sorcery by the Mentor, a retired monk. Ordinary and feeble in appearance.



Figure 5: The main character of Pinstripe. Our player character will resemble his physical build.

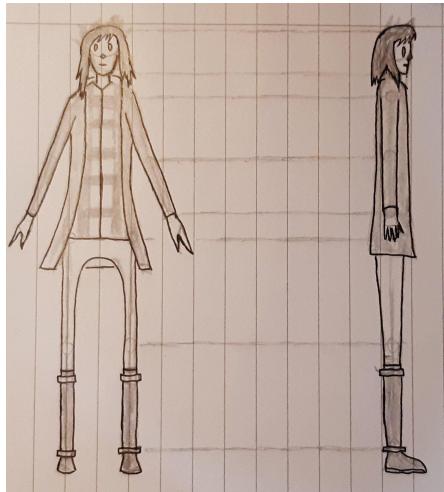


Figure 6: Character Sheet for our Player Character



Figure 7: Final Player Character Model, fully textured

We wanted to create a character that gave the impression of being frail and physically weak compared to his future opponents.

Because of his background, we've designed him to have basic but tattered clothes to represent his farmer lifestyle and the kind of person he is.

In the course of the game he will experience both the wonders of magic but also come to terms with truths he wished not to have known.

### Mentor

Powerful and wise sorcerer, but ignorant to the dangers of The Great Ones and cosmic sorcery. When he and his brother were growing up his father took more of an interest in his brother than him due to the fact that he is deaf. This led to him and his brother having a strong bond as his brother always looked out for him. He learnt cosmic sorcery from tomes donated to him by his brother in secret. He teaches the player as he feels a connection to them since they have been segregated and pushed aside like he has.

The mentor gets attacked and is murdered after the tutorial of the game. His death serves the narrative purpose of forcing the player into exploration and seeking answers in order to survive.



Figure 8: Possible appearance for the mentor.

### Theobald

Within the group of scholars that first communed with Yog-Sothoth. His obsession with protecting his family causes him to become obsessed with obtaining greater knowledge that he can use to protect them. This slowly disfigures him and sends him insane beyond the ability to communicate. He is now hidden in a dungeon in the Grand Library where he awaits his execution.

Estranged himself from his brother to protect him from knowing about the Great Ones, but believed that he would benefit from learning cosmic sorcery.

“Theobald” means bold people, as in he is within the group of scholars bold enough to commune with the Great Ones, and that was his downfall.

### Archbishop

Sets the game’s events in motion by outlawing unofficial use of Cosmic Sorcery in an attempt to slow the manifestation of Nyarlathotep.

He has a machine that is hidden in the Grand Cathedral. The machine was made in order to destroy the Cosmic Eye, but when he tries to do it, it fails to break the Eye and begins to deform him. He heads back to his quarters with the Eye to look through his notes and find some way to reverse this process or finish the job of destroying the Eye. He dies as a result of his disfigurement.

### Monks of The Great Ones / Cultists

Referred to as cultists by sceptics. They split into different factions, each centering around a different Great One. Found in the Monasteries and Cathedrals, occasionally visiting the Grand Cathedral (the meeting place for all factions).

The Yog-Sothoth faction are based in The Grand Library, and they consider themselves scholars as opposed to monks.

As a result of their faith and boundless devotion to both their cult and the great ones, these fanatical scholars have lost their sense of sight which is represented by the green colour of their eyes.

As for the overall design of the monk we decided to go with a model that was available on the assets store to save time and allocate work to the other members as efficiently as possible.

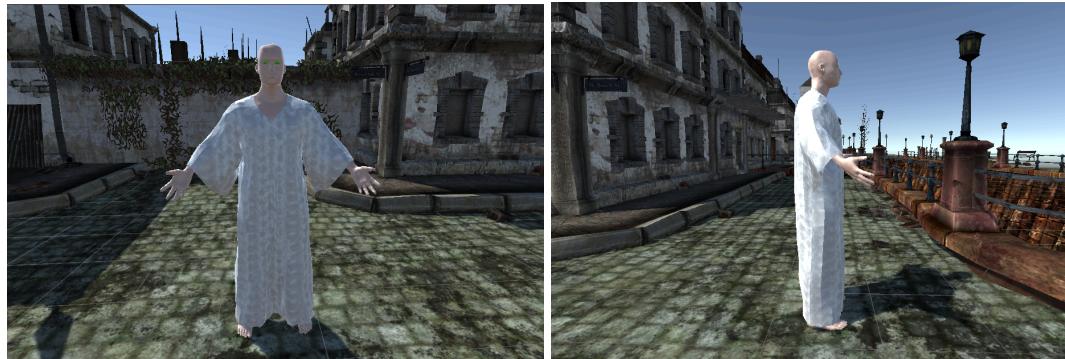


Figure 9: Final monk enemy model

## Soldiers

Ordered to attack you on sight. Soldiers will all have masks (see figure 8).

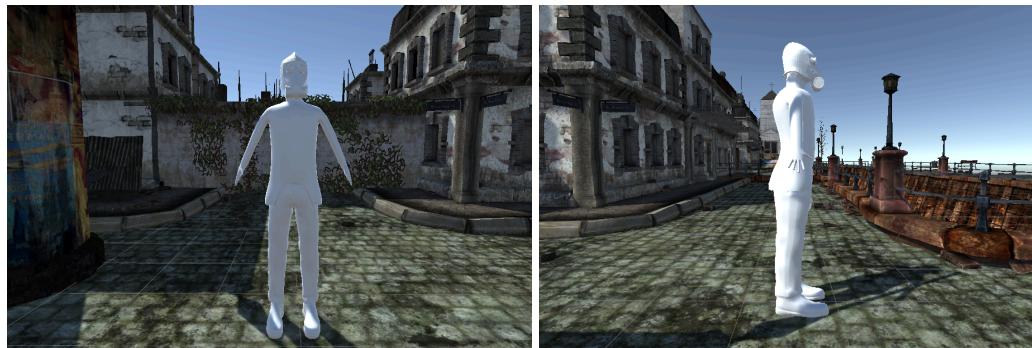


Figure 10: Final soldier enemy model

The other defining feature are their steampunk styled masks which completely hide their faces. In game, these soldiers will be set at a slightly larger scale than the Main Character to show the difference in physical strength.

## Nyarlathotep, the “Crawling Chaos”

The main antagonist of the game.

After the citizens of Dunwich start using Cosmic Energy, the Great Old Ones take a curious interest in them. They decide to create Nyarlathotep from the Cosmic Energy being used in Dunwich, to act as their messenger and enact their will. But the birth of a God is a slow process. They create a crystallised seed resembling a cosmic eye, which draws from all the Cosmic Energy used on Earth to create Nyarlathotep. The more Cosmic Energy is used, the faster Nyarlathotep will manifest.

Yog-Sothoth foretells Nyarlathotep's arrival to the scholars - and that he will spread madness and chaos across the world once he is fully manifested.

Nyarlathotep will be capable of taking any appearance he chooses, and wherever he will go, the screams of madmen can be heard. Monks nearby the Cosmic Eye that have gone mad will scream in terror and/or pain.

## Yog-Sothoth

Bestows the knowledge of Cosmic Energy to the citizens of Dunwich, as well as many other secrets of the universe.

Omniscient, and is locked outside of the universe. The first communion with Yog-Sothoth sparked rapid advancements in cosmic knowledge, resulting in a drastic increase in the use of Cosmic Sorcery, attracting the attention of the Great Old Ones.

Never appears in-game. Only referenced by characters.

## Levels

### Farm

Player character's home. Game starts here. The farm is found on the outskirts of the city. Cannot return to the farm after reaching the cultist monastery because too many enemies are fighting at the gate.

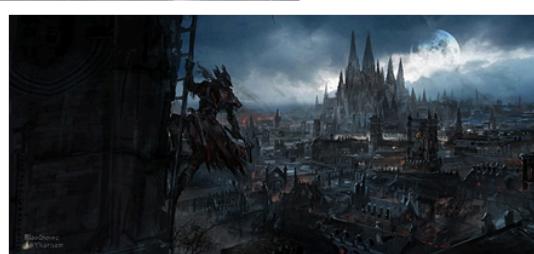
This area will be focused on platforming and will have only one or two basic enemy encounters.



The farm level would be very flat and bright. This is to get the player comfortable with the controls and to make the player feel attached to the farm causing them to feel more of an impact when they are forced to leave.

## City Streets (VSD)

The city streets connect to all the other levels. It serves as the central location. A combat focused area. There will be limited platforming and will have some challenging enemy encounters.



The city would be very sparse but compact. The player would feel claustrophobic and lost. This is to contrast the openness of the farm. The player would feel a sense of mystery and a sort of dread of this place. This is done so that the player can feel close to the main character as they would be feeling the same way. Very vertical and a lot of dead ends.

## Cultist Monastery

Used by a coven of Mages to sacrifice people to the Great Ones. A Dungeon is below the monastery, where these sacrifices are made and stored.

It will have only a few platforming sections, but these will be tricky.



This area would be a smaller area in the game. It would be old and rundown to bring a sense of wonder as it contrasts the city's bustling and alive nature. The layout would be very normal and reminiscent of an actual monastery. This would be to hide the truth from the player and keep them questioning as there would be small hints to what's going on.

## Grand Library

Grand Library is where the Yog-Sothoth coven are based.

Optional area, that acts as a red herring, but will reveal lots of lore. There is no combat in this section, and limited platforming. Can only be entered via jumping from balconies.

Player is able to commune with Yog-Sothoth to gain some insight into what you can do to stop Nyarlathotep. Must carry out the same ritual that the Cultists do.



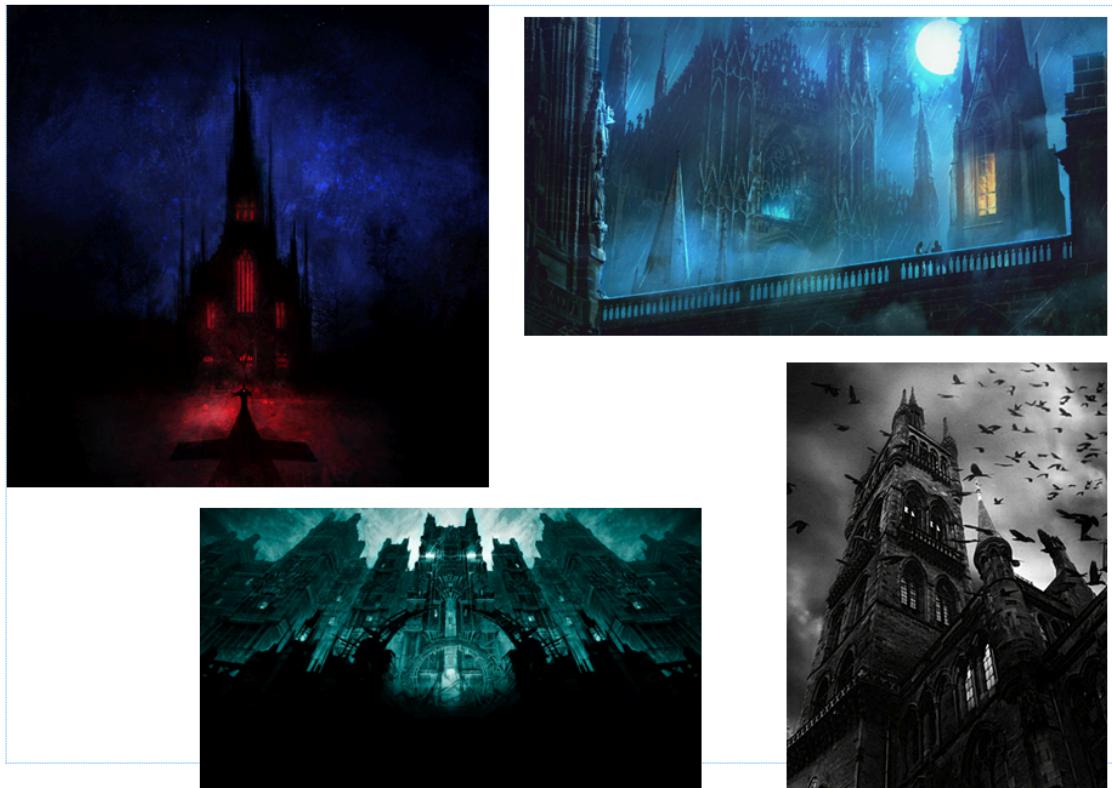
This is the main area for Yog-Sothoth so the area would be filled with knowledge. This is to reflect Yog-Sothoth all knowing and passive nature. The place would feel warm and pre-humanity.

## Grand Cathedral

The principle church of the cultists. Houses the Archbishop.

Can only be entered via jumping from balconies.

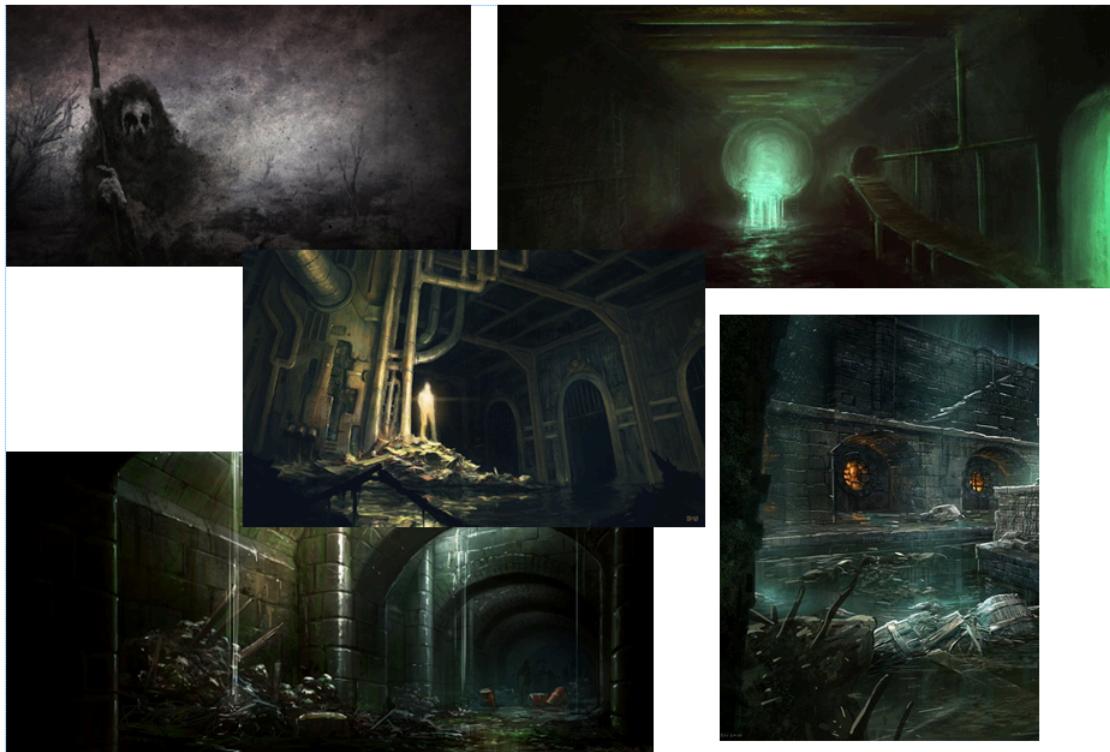
After picking up the shell, Nyarlathotep speaks through it, telling the player to bring the shell to the Temple/



This where the player is given a lot of information about what is going on. This information would create fear and dread in the player. The area would reflect with a lot of dark shadows and very eerie lighting colours. The area would be grand and intimidating to mirror the amount of twists and truths the player will discover.

## Sewer

After obtaining the Great One's Crystalised Shell, the player will make their way to the sewers which are infested by black tar which affects traversal.

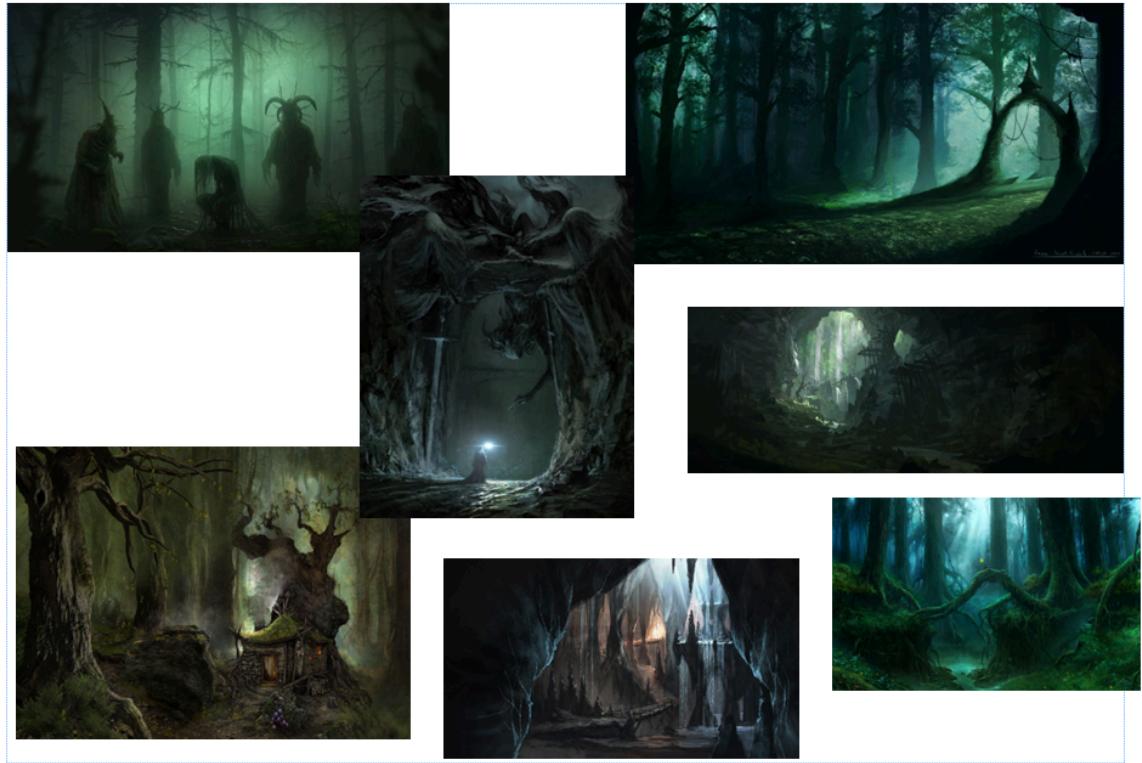


The sewers would be a very short level which is mostly a tight chase in a straight line. The feel of this section would capture this by showing lots of shadowy figures and not showing what's chasing you. A sense of fear would be installed in the player by using very dark and dim lighting as well as strange sounds from the distance.

## Forest / Caves

After exiting the sewer, the player finds themselves in a forest that leads to a winding cave. The cave is too dark to see, and is so winding that the player can't hope to find the Temple without the guidance of Nyarlathotep.

The caves have many branching paths, and features very difficult traversal.



This area would be very intertwined and maze-like. This is to invoke the fact that none else has made it this far and to both provide a sense of hope that the player is going to succeed but also a huge amount of danger as the player and the player character might never make it back. Greens and dark greys would be the most prominent colours in this section as well as a lot of overgrown vines and mossy rocks. The area would portray how nature grows around anything in its path.

## The One Temple/Cosmos

A long abandoned temple in the middle of the forest.

The player will be really overpowered in the Temple, one-hitting enemies and being almost untouchable.

The Temple is used with the shell as a gateway to reach the cosmos and encounter Nyarlathotep. The player will use the shell on Nyarlathotep, sealing him away.



The temple would start very normal like any old temple but then slowly warp and contort into a cosmic nightmare. This is the main area of the game and to create the scale of the player's journey and the stakes at hand the area would be very discombobulated and mind melting. There would be rooms that would lead back to the same room you have been in already.



The cosmic battle is the ending of the game and as such would feel completely unlike anything before. There would be no platforms or architecture. The particles and lighting would be the most important part of the area and would feel above reality just like Nyarlathotep.

# UI/UX



Figure 7: Lo-Fi UI Prototype

The HUD displays the HP and Magic Affinity. When losing HP, a tendril's length fades out and it becomes extremely short (see figure 7, left).

The UI would follow the theme of the tome. This would be your central hub for UI. It would hold your Spells and notes. There would be an interactivity to it as you would be able to flick through all the pages freely. As well as this there would be bookmarks that allow for quicker transitions between sections. It functions as the pause menu and will allow you to go to the main menu.

The tome would have an introduction with a bunch of clues and hidden meanings that become clear once the player reaches those parts of the game. There would be the ability to return to the introduction in the book marks section.

UI will have a common visual style of scrawling through actual notes. Notes will be found in the environment.

Figure 8: Hi-Fi UI Prototype (WIP)



*Sap*

This helpful incantation will sap lifeforce from one entity and add it to your own.

Very Helpful, don't use on  
My tho p

*Energy Shockwave*

This spell will shoot a devastating ball of energy from the casters location.

Be careful not to stand to close to someone...

**Spells**

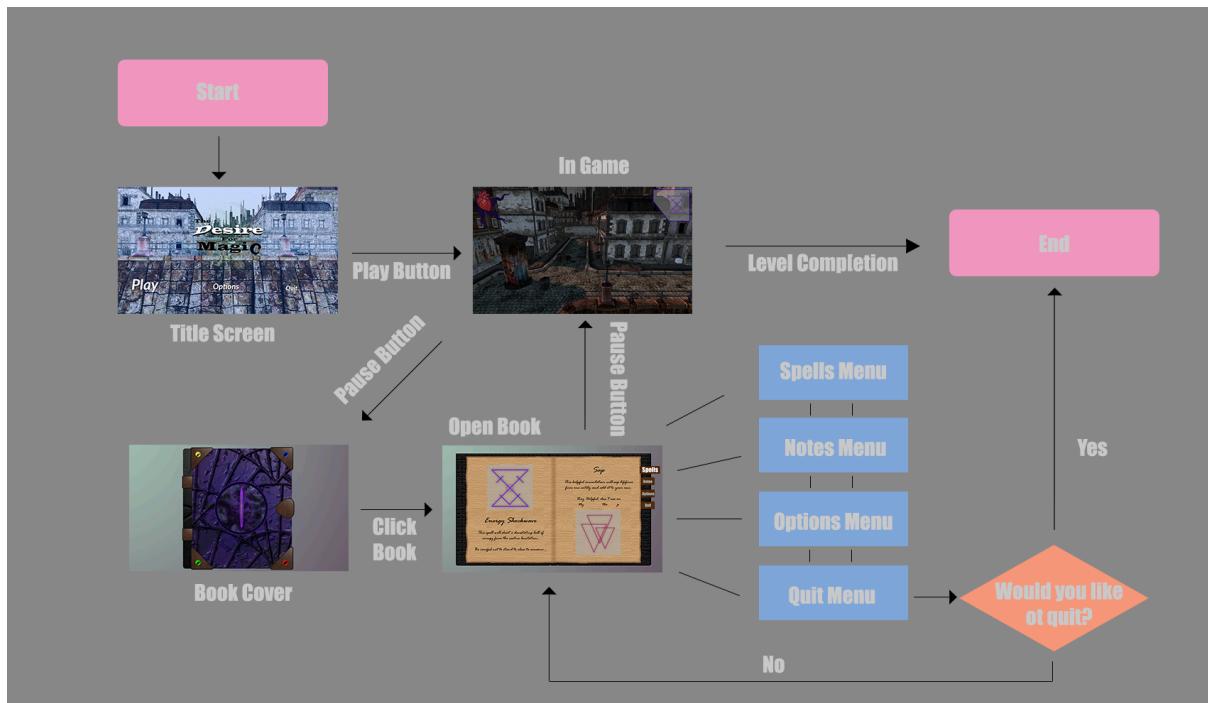
**Notes**

**Options**

**Quit**



# UI Flow



## Core Game Mechanics

### Gameplay Focuses

Combat will be challenging, to emphasise character's weakness

- Player as well as enemies can only take a few hits
- Player and enemies will have delays between their attacks to allow for recovery
- Spells will be powerful but have strong drawbacks
  - Spells cost HP
  - Emphasises the common Cosmic Horror theme of “forbidden or dangerous knowledge”

### Actions

Move Left and Right

Jump

Cast Spell

Interact

# Combat

## Player

Can't dodge, emphasising player character's lack of combat skill. Instead they will need to time their jumps to avoid damage.

## Enemies

Soldiers - basic enemies. Will rush the player on sight.

Monks - Cast spells, but don't move. They act as turrets.

## Damage Table

Character	HP
Player	3
Monk	2
Soldier	4

Attack	Damage	Cooldown
Soldier Melee	1	N/A
Monk Spell - Energy Shockwave	2	2 secs
Monk Spell - Sap Energy	1 (and heals for 1 HP)	2 secs
Player Spell - Energy Shockwave	2 (and costs 1 HP)	2 secs
Player Spell - Sap Energy	2 (and heals for 1HP)	2 secs

## Spells - Cosmic Energy

The player cannot cast a spell if they will die from it.

Once the player has the shell, they use its unlimited power source rather than their own HP.

2 total spells:

- Sap energy
  - Drain a nearby enemy's HP to add to your own.
  - No HP cost to use, but is the only way to regain HP.
- Energy shockwave
  - Blast of energy that pushes back enemies
  - AoE
  - Costs HP to cast

# Design Workflow/Process

## Weapon Assets

Weapons will be created using Maya. They will be high poly.

Textures created using Substance Designer.

Textured using Substance Painter.

## Player Character

The Character Sheet and Model Sheet were both created by hand. Immediately after their completion they were used as reference images for the modelling phase.

The Character was modelled using Maya. To begin we created a basic male mesh with no personalised features. Once that was done we started shaping this mesh into a design that was drawn for the model sheet earlier in order to get the desired shape.

Once the model was finished, it was exported and sent to Mixamo to both rig the character for animation but also to select the correct animations to use for it.

The Textures were created using Substance Designer in order to get the appropriate materials that compose the character such as his skin and his clothes and were then implemented in Substance Painter.

## Enemy Models

For the enemy soldier, its creation was about the same for the first few stages as well as the animation and texturing parts but on the other hand for the modelling phase a few changes were put into place. We used the Player characters model as a base for some of the components such as clothing otherwise we made it so that this enemy model would have a far more broader physique and since he was wearing a mask, there wasn't any need to model his face.

### **Soldier Helmet Source:**

alexkovalev, 2022. *Steampunk helmet Free 3D model* [online]. TURBOSQUID, alexkovalev.

Available from:

<https://www.turbosquid.com/3d-models/steampunk-helmet-free-3d-model-1879832>

### **Soldier Boots Source:**

Vinrax, 2022. *Army boots low-poly* [online]. TURBOSQUID, Vinrax. Available from:

<https://www.turbosquid.com/3d-models/free-3ds-model-low-poly-army-boots/718654>

As for the enemy monk, this model wasn't designed by our team. We acquired it on Unity's asset store, once obtained we sent it to Maya in order to scale it to the proper size and set it to a suitable poly count so that it would have the same amount of detail as the other models. Once that correction was done we set texture ID's in Maya and then we sent to substance to finalise the texturing process.

### **Monk source:**

DDbiology2010, 2014. *monk obj free* [online]. TURBOSQUID: DDbiology2010. Available from: <https://www.turbosquid.com/3d-models/monk-obj-free/833601>

## Level Assets

Obtained level assets from Unity Asset Store.

### **City level assets source:**

Triplebrick, 2019. *Modular Victorian Town* [online]. Unity Asset Store: Triplebrick. Available from:

<https://assetstore.unity.com/packages/3d/environments/historic/modular-victorian-town-9901#description>

### **Church asset source:**

Mauro Poggi, 2022. *Church & interior* [online]. Unity Asset Store: Mauro Poggi. Available from: <https://assetstore.unity.com/packages/3d/props/church-interior-215521>

## UI and Particles

UI elements created using Illustrator.

Particles obtained from Unity Asset Store.

### **Particle sources:**

Kakky, 2017. *KY Magic Effects Free* [online]. Unity Asset Store: Kakky. Available from: <https://assetstore.unity.com/packages/vfx/particles/spells/ky-magic-effects-free-21927#description>

Swift Games, 2020. *Magic VFX - Ice (FREE)* [online]. Unity Asset Store: Swift Games. Available from:

<https://assetstore.unity.com/packages/vfx/particles/spells/magic-vfx-ice-free-170242#description>

## Audio

### **Audio sources:**

Freesound. (n.d.). [online] Available at: <https://freesound.org> [Accessed 26 May 2022].

## QA Process

During the VSD, the QA process will be simplified due to reduced workforce. The contracted programmer and Producer will review builds to determine whether they should be modified or released. Issues are raised through meetings on Discord and tracked via Trello. Meetings are called whenever a feature is ready for review.

Suppose the idea is accepted during one of these meetings it could still not be accepted during the next meeting that's meant to review it. Sometimes the prototype is fixed by input based on the decisions of the whole team, and sometimes the idea is re-thought requiring a new prototype. A new attempt is done thus improving on the idea and creating a better prototype as the person creating it has already practiced by making the first prototype. In

some cases, if the team agrees that even though the idea sounded good for the game initially, it won't be suitable in the end the whole idea and the prototype are scratched but the whole thing could be re-visited later down the line.