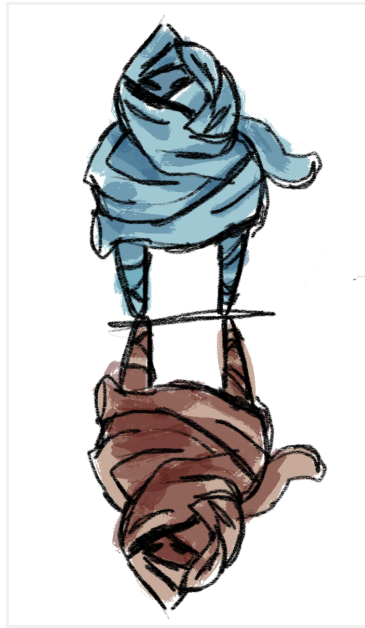




Alpha Release

Soulbound Escape



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Overview

In this report, we show our progress with respect to our target criteria set for this milestone. Our main goal this time is to get the fully functioning game loop implemented in order to do a proper first play test of the game. The main objective is to get all the core mechanics implemented and add the first finishing touches to make the game feel the most fun to play.

Progress

As of now, we have everything implemented that was in our desired target and below. The high target is under way of being implemented in some spots but has plenty of room for improvement. The biggest task for this milestone was to get a map generator up and running that would suit our needs.

Overall, we are up to schedule and the progress feels stable for us, so we are going to continue working further in the next milestone in the same manner. Below you can see our progress in the to-do list.

Low Target

- ~~World flip mechanic~~
- ~~Simple map generation~~

Desired Target

- ~~Procedural map generation~~
- ~~Interactables~~
- ~~Animations~~
- ~~SFX~~

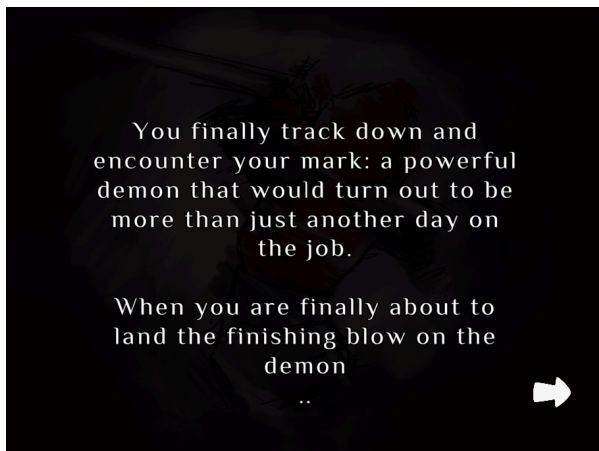
High Target

- ~~Boss enemy~~
- ~~More enemy types~~
- Adaptive difficulty
- ~~Complex interactables~~
- Audio

- Story

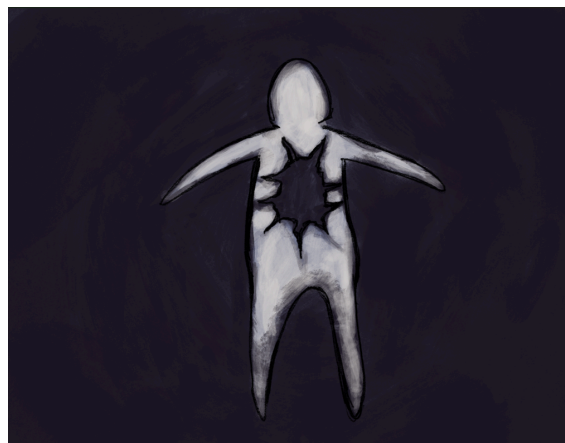
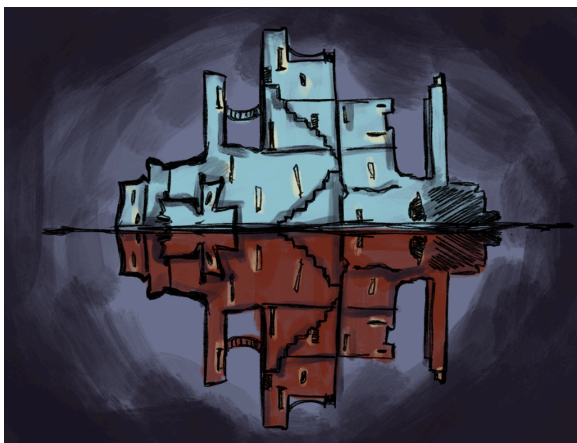
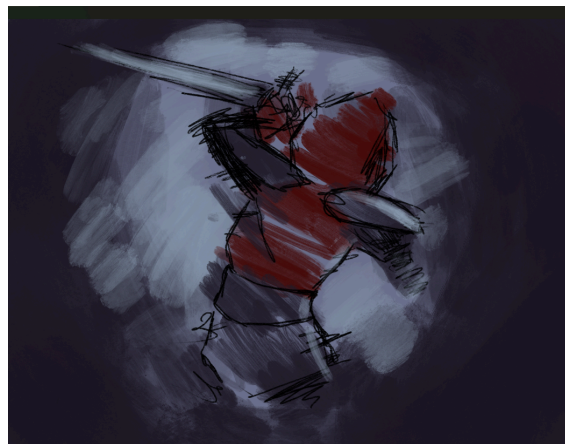


Story and Main Menu



In order to create a better immersion feeling and introduce the player to the atmosphere of the game, we decided to include our protagonist's backstory in the game. This is integrated on a stage, where the user starts the game in the main menu. Currently, the main menu is simple, has 2 buttons, from which 2 are functional (start and exit). Design will be changed in the later development.

Directly after pushing the start button, the introduction begins. The story is shown as text, appearing letter by letter in front of pictures drawn by us to illustrate the narrative. Changing to the next part of the story is done with a button in the bottom right corner. Some simple visual and sound effects make the story more interesting to observe.





Gameplay loop

The main objective in the game for now is to collect 3 key items randomly placed in either overworld or underworld: a key chain, a potion and candles. Once the player locates and collects them, they can open a portal to escape which also appears randomly on either over- or underworld.

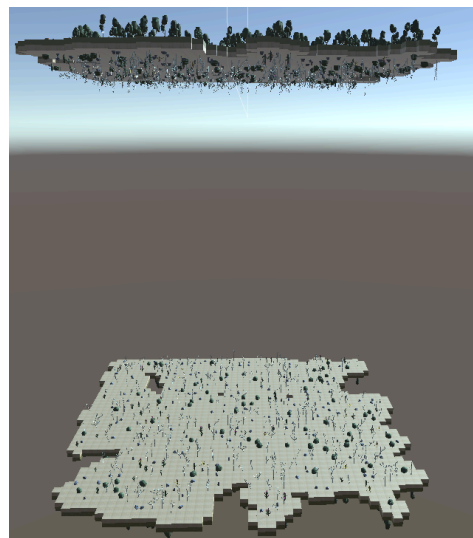
During this, enemies will try to hinder the player and kill them and if the player dies on either over- or underworld before escaping through the portal, they lose. If they survive and manage to escape, they win.

Planned later down the line is to add a final boss fight and more mechanics regarding the world flipping and curios to interact with.

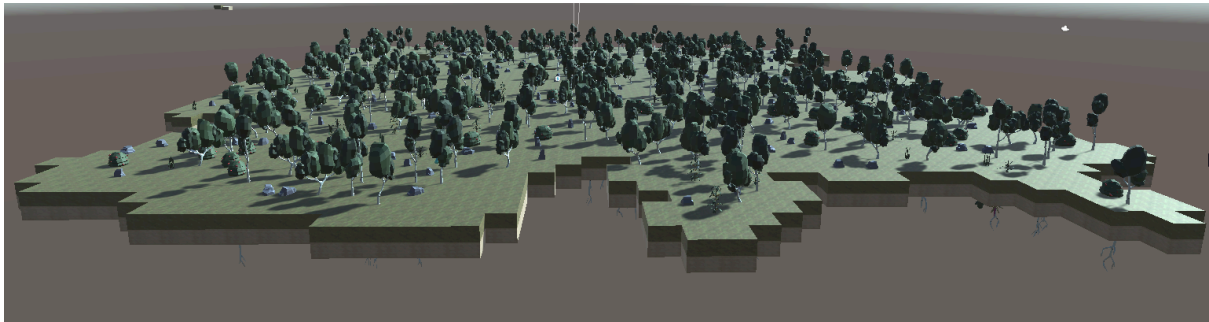
Map Generation

Previously we used a simple platform as a map to demonstrate our main mechanics with both the up- and downside representing the overworld and underworld. This would cause some confusion when flipping the camera to swap character controls as, due to the nature of our camera setup, objects would appear somewhere else which seems unintuitive.

We pivoted our approach to generate two worlds both having an overworld and underworld while one of each serves as a dummy world just to keep up the illusion of playing on one world with two sides. This would alleviate the problem of swapping camera perspectives by having the overworld and underworld on the same side but physically separated. Additionally we added a plane separating overworld and underworld on both planes with a semi-transparent space texture to improve immersion with context to the story.



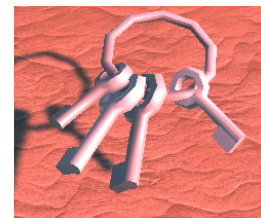
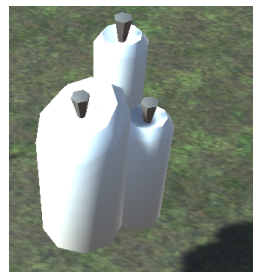
As for our map generation itself, we opted to employ an adapted version of a Cellular Automaton with Moore Smoothing to randomise our map. A Cellular Automaton uses a binary grid with width and length of the map as its size and with a specified probability randomly assigns each grid cell 0 or 1. In our case, a value 0 in a cell means this cell is empty and a value 1 means this cell has a map tile. With our grid cell generated, we use Moore Smoothing to connect the map tiles together by iterating through every cell and checking its neighbours. For each cell without a map tile, we check its 8 surrounding neighbour tiles and count the number of neighbours with a map tile. If there's 4 or more map tiles around the current cell we are on, we assign the current cell to be a map tile as well. This results in a randomly "island-shaped" which is what we want for our gameplay.



After generating our map shape, we randomly place environment objects like trees, rocks and plants around the map using the map information we just generated. Environmental objects are mirrored in the dummy world on the underside of the “real” overworld and underworld so that they are partially visible on the map borders to further upkeep the immersion of being on one world with two sides.

Interactables

As of now, we have x interactables in the form of the key objects to win the game: a potion, a key chain and candles. They will have a red outline highlight around them if the player is near them. Once they light up, the player can pick them up by pressing “E” and obtain the item. Once they collect all three, a portal will spawn for the player to escape.





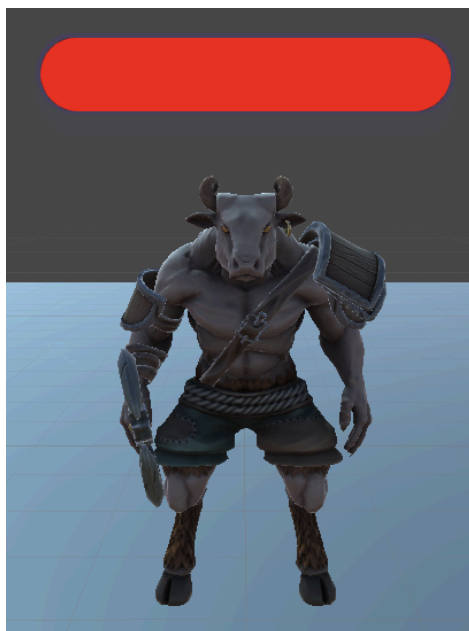
Enemies



Currently we have 2 basic enemy types and 2 different boss types. In the basic enemy types, we have a fast paced but weaker in terms of power mushroom enemy and a slower but more powerful cactus enemy. Both of the basic enemy types are way weaker in comparison to the player, so when the player attacks and lands a swing on the basic enemy types, there is a camera shake.

On the boss side, influenced by the boss type enemy triangle, we have powerful on Speed and Damage but weak on Toughness Minotaur boss, and powerful on Damage and Toughness but slow paced Knight boss. Both of the bosses have more HP and Damage in comparison to the basic enemy types but lacking in one of the aspects of the enemy traits triangle, which is ultimately designed for exploiting the weak aspect of the boss.

We are planning on putting in one more boss which will be the final boss and will be having all three but in different phases.





Combat System

The combat system has been refined with a variety of particle systems, which in the current state makes the hit feel more adequate. The basic enemies have only one type of particle system but boss type enemies have their specific particles when hit. On the player side, underworld and overworld characters have different colours of hit particle systems. While the player has an attack particle system to feel more real and satisfying, enemies don't have their own particle systems when they are attacking. There is a camera shake implemented on weaker enemy types, which is aimed to increase the feeling of power when fighting with weaker enemies.

As an update from the old combat system, the combat system is currently using an event system to deliver damage to the victim on the other side.

Evaluation and Takeaways

Most of our targets were reached this milestone with exception for a few high targets and we are on schedule. The only thing left to do is to add some finishing touches like more audio and ironing out some bumps. If we get excess time left in the coming weeks, we plan to further add some mechanics revolving around the world flip mechanic to incentivize the player to flip worlds and not make it a necessity for survival. Additionally, further exploring the avenue of introducing rogue-like elements like meta progression would be very promising to dive into as well.