Making of Document GD S3

MAKING OF GAME DESIGN SEMESter 4

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Inhoud

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# Phase 1 – Concept

For the concept of the game we first had to decide a good genre for us to continue with. Since we both wanted a good challenge we decided on a rogue-like. Rogue likes have a lot of generation and depth in combat because they require lots of variables, this seemed like a great challenge to us. The theme of our game would be the clearing of a dungeon, and eventually defeating the main boss.

## Mechanics

We wanted to have a deep and extensive combat system that would allow us to really challenge ourselves in our approach and design. For this we decided to make a game where we could

* Use movement abilities, such as dashing, jumps.
* Have multiple equipable weapons, each with different attacks.
* Have multiple mobs, each with different behavior
* Have random floors with easily customizable textures

It was also important for us that players are able to pick up weapons that are found throughout the dungeons, and that the floors are made up of rooms that lock themselves up after the player has entered, so that players are forced to clear the room before they can continue.

## Dynamics

We want to make monsters that have special behavior(s) depending on their kind, for example ranged or close-range monsters. This forced a strategic attempt from the player to effectively kill the monsters. The monsters have an AI script that allows them to make decisions based on their surroundings, which in turn gives the player a bigger challenge in killing them.

The weapon system will have a lot of guns such as pistols, rifles, shotguns and lasers, and because of this the player has a wide variety of methods to kill the monsters. These weapons all have their own use in a specific situation and provide the option to use strategy.

The rooms have purposes, such as a regular killing room, a shop room, or a boss room. Depending on what room the player is going to enter, a choice on what do has to be made. This forces the player to think about their next step.

## Aesthetics

The rooms and monsters are in a fantasy-dungeon type style, but do not necessarily adhere to this theme. Guns and odd monsters are going to be in the dungeons although they are not found there in the real world. This allows us to be creative in the process of creating monsters, weapons and rooms.

The drawing style of the game will be a 128x128 pixel style, mainly because we have the option to draw our own pixel art. Although this takes time, if it is planned correctly we can make very good use of it.

# Phase 2 – Design

All the content shown in the figures is (possible partly) created by me.

## Mechanics

We made a class diagram (figure 1) for our game, which quickly explained how the weapons, player and monster work together in the code. Because we did this, we felt like we would be better prepared for the coding challenges up ahead.

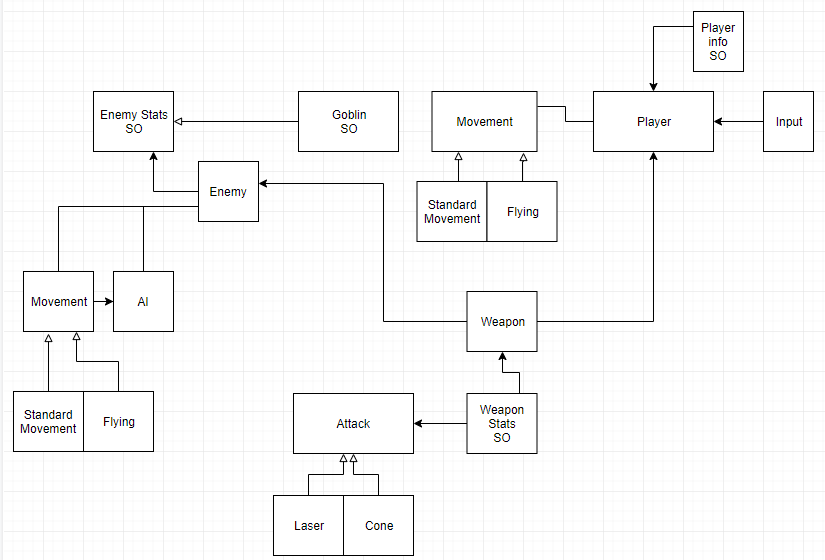


Figure 1

With this we started out making the player, which has the ability to look at the mouse cursor (which will later be the Xbox controller) (Figure 2).



Figure 2

After this is started looking for a script that allows AI to be created, and once I found a suitable script I ended up with a working AI (figure 3). The AI follows the target, but goes around the designated walls, which is perfect for our project.

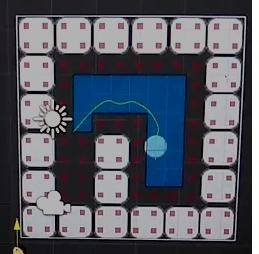
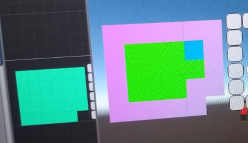
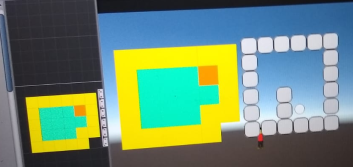


Figure 3

After this is started out with the rooms, they had to be made in such a way so that the textures are easily replaceable, so that we can recycle them for separate floors. I made this as a starter (figure 4, 5).



After creating the rooms I started with the generator, because this seemed like the biggest challenge which we could do right of the bat. The algorithm I wrote placed the rooms in a random manner, but they still had to be connected, so for this I made a node system which placed the exits of rooms only where they were supposed to be, and replaced the exits which were unused with walls. (figure 6).

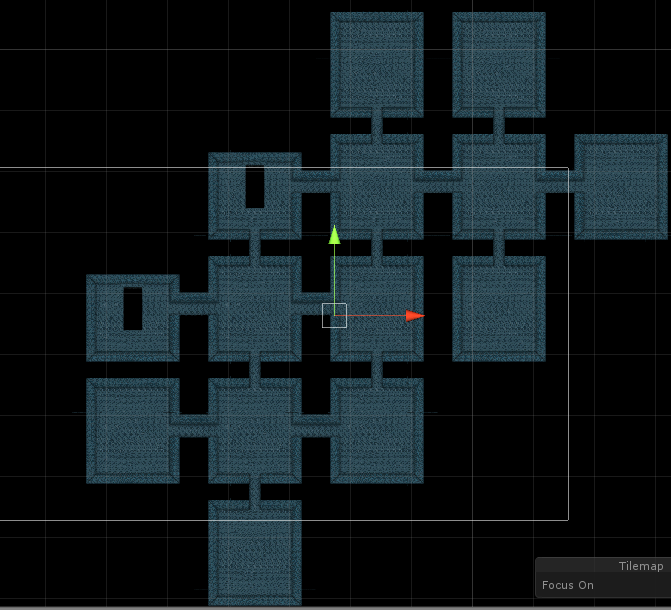


Figure 6

After this i worked on making rooms which could only be spawned in with a specific configuration. See the room marked in red (Figure 8).

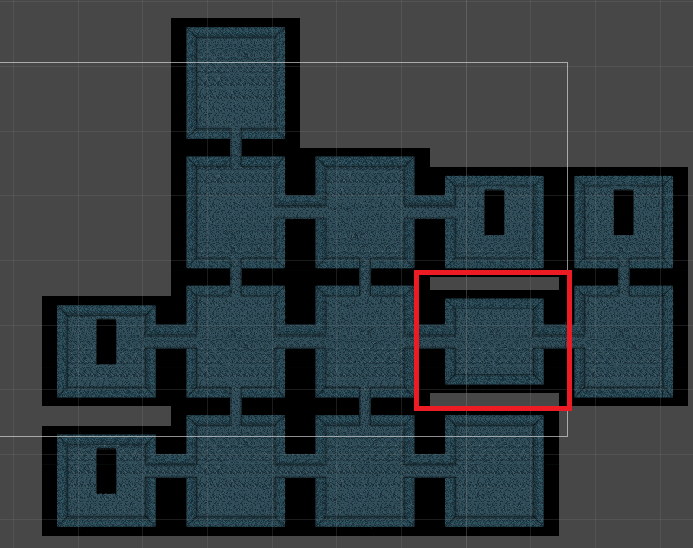


Figure 8

After this came the spawning of the mobs and the creating of the gates for the separation of the rooms. Because Lucas had already provided me with mobs to spawn in, it was easy for me to add them to the rooms (figure 9). The gate scripts still had to be written though.

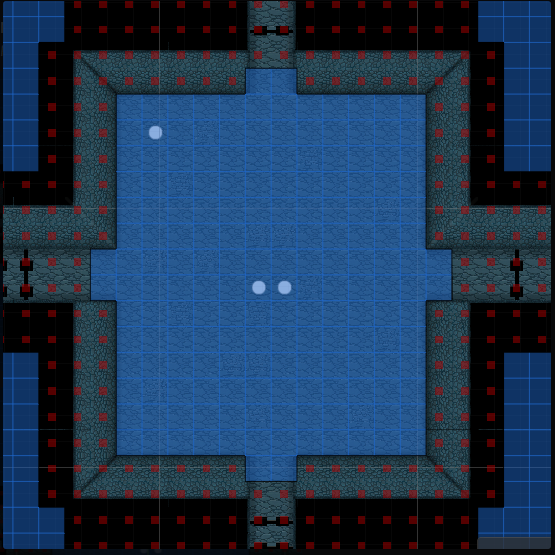


Figure 9

The placing and creating of the gates was finished, and after a lot of debugging I also got them to close when a player entered the room (Figure 10).

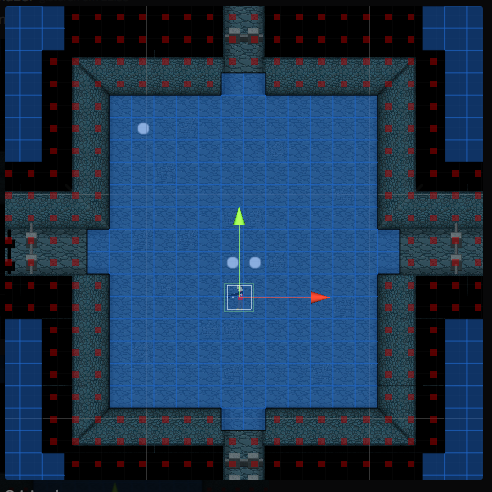


Figure 10

## Dynamics

My parts of the game did not include a lot of work on the dynamics of the game, but I did do a little AI tweaking which causes the mobs to move more naturally. The design of the rooms was also my responsibility and because of the addition of walls, there is a forced manner in which the rooms have to be cleared (figure 12, 13).

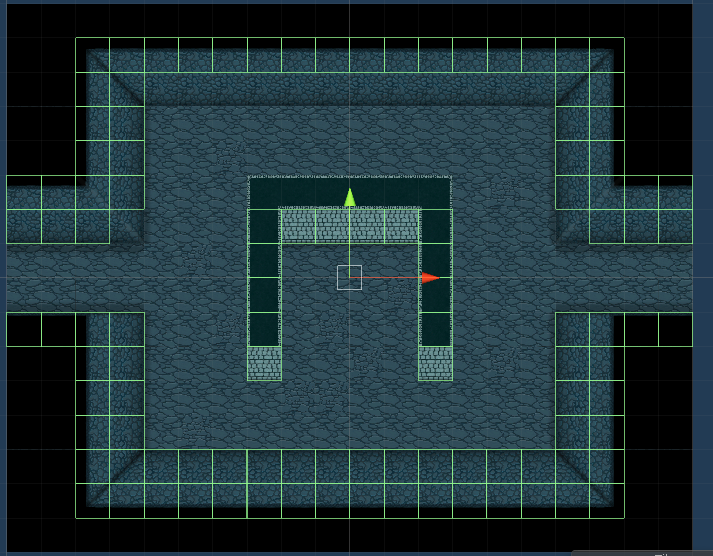


Figure 4 Figure 13

## Aesthetics

I made a lot of the sprites of the game, and took a lot of inspiration of a game called “The binding of Isaac” (figure 7). The style of the rooms and the way the played moves Is based off of this game.



Figure 7

With this inspiration in mind I made this spritesheet (figure 11).

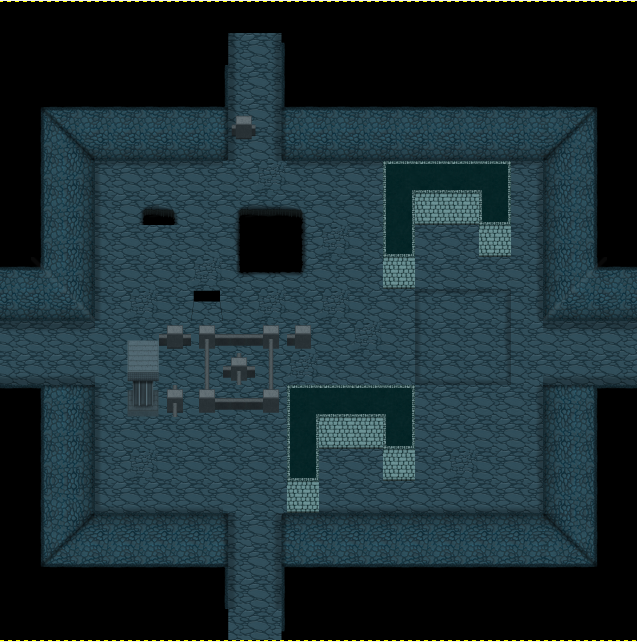


Figure 11

# Phase 3 – Deliverable

## Mechanics

## Dynamics

## Aesthetics

# Sources