CSCI 4940 – Capstone Project

Group #2

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Professor: Dr. Ge

Final Progress Report

# Introduction

This is a 2D aerial view dungeon crawler game, which is inspired by the Legend of Zelda game series. The character would navigate through the dungeon solve puzzles, collecting keys, and defeating the boss at the end. The system to solve some of the puzzles and get through obstacles is the use of familiars. The familiars are the creatures that would be found by continuing through the dungeon. After getting through at the end of the dungeon and defeating the boss at the end the character would collect or get some special item at the end of the dungeon. The game is built using Godot engine, and coded in GDscript.

# Problem Formulation

Early in the semester we decided that the game would be an RPG dungeon crawler, and that the game would not be completed by the end of the semester, so we would require showing basic concept of the game. Therefore, we needed to complete the boss fight first then it would be tested and demoed. Thus, this required detailed designed planning for the boss fight. The boss would be located in the middle of the pit and the character would be able to swing from tree limb to tree limb, to get away from the boss’s attack. Also, we would need some early enemies to fight and a traversable dungeon to go through. The character would also need some animal familiars to help getting through the dungeon. The character and enemies would need some sort of indication that damage would be taken as well.

# Proposed Solution

In order to complete this game within the semester, we needed to split of the task of creating the game. We needed to complete the boss room and boss fight first, then we can expand upon that. We needed to create all the graphics and animation by ourselves without using any imported art from any sources. We needed this project more object oriented and coded it in GDscript because originally we thought of revising the code in C++, but with how the project currently designed, it will be difficult rewriting all the code for the entities. As this would make the game unstable and with the amount of time given, it will take too long. We needed to show at least several enemies to fight and demonstrate instead of the boss in the room, thus we discussed what kind of enemies the character would be facing. The katydid was the first enemy to be completed and later coding for the wolves, foxes, and dryads AI.

# Implementation

We split up tasks so we can at least make it look presentable during presentation. We drew up all the graphics using a software called Krita and set all the animation frames into a grid like. We coded everything with using GDscripts and use git for file management. Setup the code Global.gd and Damage.gd to make it more accessible anywhere when we start coding it. We completed the boss fight first and then coded our first enemy, the katydid. We made each of the entities it’s own scene so it will be more reusable. We expanded the dungeon rooms to make it more traversable, so the character can explore and move around more freely. The past month we completed the enemy AI, so it will attack the player when the player enters the room. We added a heath bar indicator and a mapping system to indicate where the player is at and how much health points the player have. When an enemy attack or gets too close to the player, the player would flash red indicating he has taken damage and be knocked back. Then we expanded upon the idea of the boss fight, by swing platform to platform by using the snake familiar. As the boss attacks using his vine spikes, a tree branch would drop, and player then can be used to attack the boss with it.

# Conclusions

# References

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