CMPT 276: Phase 4 Report

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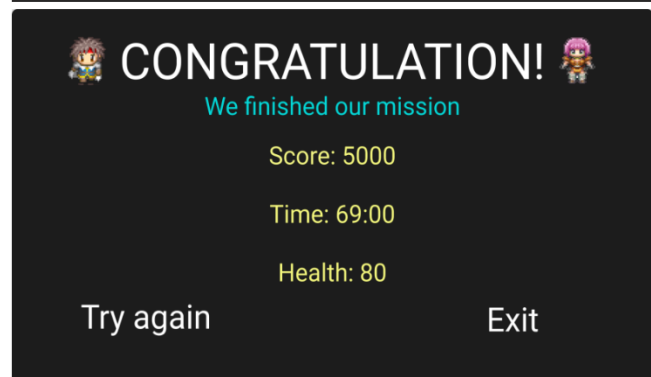James Wu

The Game

      Our game is a multi-room maze game that features four different rooms/levels each with varying difficulty and layout. In each of the three levels, there will be barriers, moving enemies, non-animated enemies, and rewards. The player is able to access the different levels through stairs. The goal of the game is to collect all keys, avoid traps and enemies, and get on the stairs. The player will lose their health if they touch the enemy, and end the game when health is 0. The Player can collect bonuses to earn more credit and escape the tower in a limited time.

How the final product varied from our original plan and design:

About Design: What we ended up with is really close to our design in terms of how it looks.

Mock-up User Interface:

Our Final Product:

Functionality:

- We design a Tips for player who have question about this game, but we didnt not implement it due to time limit

- Once player loses all health, touches the lava pit, or time runs out, the game will be ended, but on time counting part we does not implement it well.

- We want player can collect treasure to get more score, but due to time limit we did not implement it.

- We want to design a trap that can hide under board, we finally we decide to make it visible.

UML design:

- At first we want to design a large factory to creat all movable entity,and involve all aggressive entity in our game. But later we found that lava pit was also included in this entity so we delete the movable entity class. Instead, we designed exclusive class for every concret entity individually.

What we learn:

- Conmunication is the most important thing in team project, especially on the middle of our development, requirement and idea is used to be always changes.
- We should have Better separation of concern to prevent sphagetti code.

Tutorial:

- The main objective of the game is to keep the health of the player greater than 0 and collect every key on the map.
- The main character can move up, down, left, and right
    - When the game starts, there are only 2 possible moves, right or down
    -
- The main character can encounter the following entities:
    - Demon (Enemy): The demon will move around the board randomly and if it touches the player, the player will lose 1 health point. Once all 3 health points are taken, the player loses the game.
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    - Lava pit (Trap): If the player touches the lava pit, the game is instantaneously over.
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    - Treasure (Bonus Reward): Colliding with treasure increases score by 1. This entity spawns randomly for a certain time.
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    - Health (Bonus Health): Colliding with health increases health by 1. This entity spawns randomly for a certain time.
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    - Barriers (Wall): This restricts the player's movement (the player cannot move into the barrier)
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    - Key: All keys must be collected in order to win the game.
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    - Stair: Once all keys have been collected, the player is allowed to leave.
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- How to win the game:
    - The player must keep health above 1 health point and avoid all demons and lava pits. Once all keys have been collected, the player must leave by reaching the stairs to win the game.
- Ways to lose the game:
    - Losing 3 health points to a demon.
    - Colliding with a lava pit.