Dungeon Crawler

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During the first week of my project, I worked on writing code for the basic functions needed for

my game to work. This involved making 4 game scripts that affect the objects in the game,

including the player, the boundaries, the ball, and a script to make the gameplay, including the

UI. Things have changed in my initial project design. Although almost all of the UML diagrams

can be mirrored in this project. The idea of the project is a 2d game like before, where you have

to defend yourself against enemy attacks. The reason for this change is simply due to an

overload of work that came with the other project. With this new iteration of the game, I hope to

be able to start simple and build on top of it more complicated actions, similar to the board game

simulator we made. I found that the main problem with the last project was my non-extensive

knowledge of Unity because if I went with my previous project Idea I would spend way too much

time trying to figure out logistics with the unity interface, using time that I would much rather

spend writing code.

As far as patterns

- I use multiple inheritances when creating the obstacles and environment of m

  game. For instance, when creating the walls of my game, they all inherit from the

  class walls, with the variations of the wall inheriting from this.

- I use an observer pattern for most of my classes to update them with each other,

  although it is mainly used in my player controls script, to notify the others.

- I use the strategy pattern for the players of the game, this is because all of the

  players use a similar algorithm to determine their behaviours but each player can

  have different abilities.

In the future, I'm hoping to add ways to deepen the inheritance of the walls by creating common behaviours between them. For the players, I want to add the ability to get power-ups in the game which would change the code separately.

For my next iteration, I plan to add better animation moves to the characters, and more importantly add items in the game that randomly appear and add buffs to the players. I might also add a health bar and have health you can pick up. The purpose of this is to find ways to make interactions between classes and functions. I also plan to greatly increase the object orientation of my program. I plan to look into the best ways to increase object orientation in unity.

Here is my updated UML diagram.