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## **GAME UPDATES:**

Our game design evolved far more than it changed. One example of this is the enemy. After we completed the enemy movement and attacking we built upon that to create the boss for the final level. The boss ended up having different phases in which it would both move differently and attack differently. This design change/evolution increased the difficulty of the game and gives the player a greater challenge as they now have to account for a smarter and more unpredictable enemy.

Another change we made was to our second level of the game. Originally we made it so that if you touched a red rectangle you would instantly die. We realized that this made the level highly difficult, and so we decided to implement a collision system to allow for walls in the level. This then allowed us to implement a maze algorithm that functions as a real maze as opposed to our previous randomly generated maze.

Another change we made was to the enemies. Originally we had individual sprites for each enemy, which worked but became excessive when working with large numbers of enemies. Once we implemented a linked list it became a lot easier to work with enemy removal. This also made it so that when we used enemies later in the game we could use the predeveloped linked list to update and remove the enemies. This idea was also replicated for the projectile system.

Another mechanical change to the game was the addition of a 1v1 mode. When we were generating ideas for the game, we initially wanted to have a solely level structure, where the player progresses through a series of levels. However, we realized the addition of a dueling system adds more variety to the game. The player is able to play against one another, while we also utilized a powerups system to add further dimensionality to the game.

In a similar manner, another addition to our game which we did not initially anticipate was the incorporation of printing game actions to a txt file. Although this doesn't provide any further functionality for the user, it allows the creator of the game to easily debug. If we want to test collisions or the bounds of a sprite, we can simply add a call to a method, which will add the action to the file and allow us to see the full list of actions, when the player dies.

Finally, a more specific change was how our collisions were detected. Before implementing graphics we had a system which detected collisions between circles, however, when graphics were implemented, we changed it to detect overlaps in the sprites. This was because of some of the more irregular shapes the sprites were.

The grand scheme of our game, a level structured game, did not change drastically, however, we did adapt to add smaller features or structure to the game and code, which enabled the player to have greater variety and the creator to have greater control over the sprites and the interactions between the sprites.