Final Deliverable Apr.12.2021

## **Group16 Project Reflection**

Joshua, Kennan, Kevin

## **Instructions:**

When starting the game click on "New Game" or go to "Level Select" and select Level 1 (It is important to go to level 1 first to follow the tutorial to learn how to play). All instructions for how to play the game are within the tutorial window in the bottom right hand corner. The basic controls are: WASD keys to move, E/TAB opens the inventory, scroll wheel or 1/2/3/4 to change hotbar slots, mouse aim and left click for action (attack if holding sword, place tower if holding tower, etc.), and finally right click on towers to open/close their upgrade display. Your objective is to defend against the waves of dungeon enemies by attacking them with your sword or by building towers to attack them. You must defeat several waves without letting too many enemies reach the end of the level, or take too much damage yourself.

## **Known problems:**

As a while we are happy with our final product; most known bugs were removed. Unfortunately, some minor bugs discovered late in development are still present. The biggest one is that a lot of physics actions were placed inside Update() instead of FixedUpdate(), so on slower machines many animations (such as picking up items) are extremely slow and unreliable. This was only discovered very late in development as a computer was under load, and we did not have time to adjust everything. Another large one we've found is that it is possible for a crowd of enemies to push the player through the walls of the dungeon. This was not fixed as it is a relatively rare event and was only discovered very recently we opted to use our remaining time for more crucial features to the gameplay. Another small bug involves menus; any menu which freezes the game (ex. New recipe unlock, intro screen) can be voided by opening and closing the pause menu. The fix for this would require some form of MenuManager, and we decided it was not worth the effort as we had little time left. Some problems come in the form of features we didn't implement. One such issue is that the level select screen has all levels unlocked from the start. Ideally only the levels the player has beat up to should be unlocked, but this would require data storage which we didn't get to. Another similar issue is that music volume varies slightly between levels, so independent SFX/Music volume sliders would be ideal, but again would require data storage. There are also a handful of small bugs such as towers occasionally shooting before aiming, and some health bars rendering underneath walls.

## Reflection:

If we were to do this project again, we would change a few things. Most importantly we would have left much more time for balancing, as even still some levels feel a bit unfair or too easy. Having done additional and more frequent playtesting for active feedback would have been very helpful too. Ideally, we would also have been able to use all original sprite assets; many of them are from online sources, including the main tilemap itself). Finally, if we were able to manage our time better, it would have been nice to add more items, enemies, and levels to extend the playtime of the game. Overall, we are quite pleased with the final game.