Name: Gage Nardi   Mark _____/50

1. Brief introduction __/3

My feature for the Wonky Wizards videogame is the level functionality and the tile mapping for each level of the game.
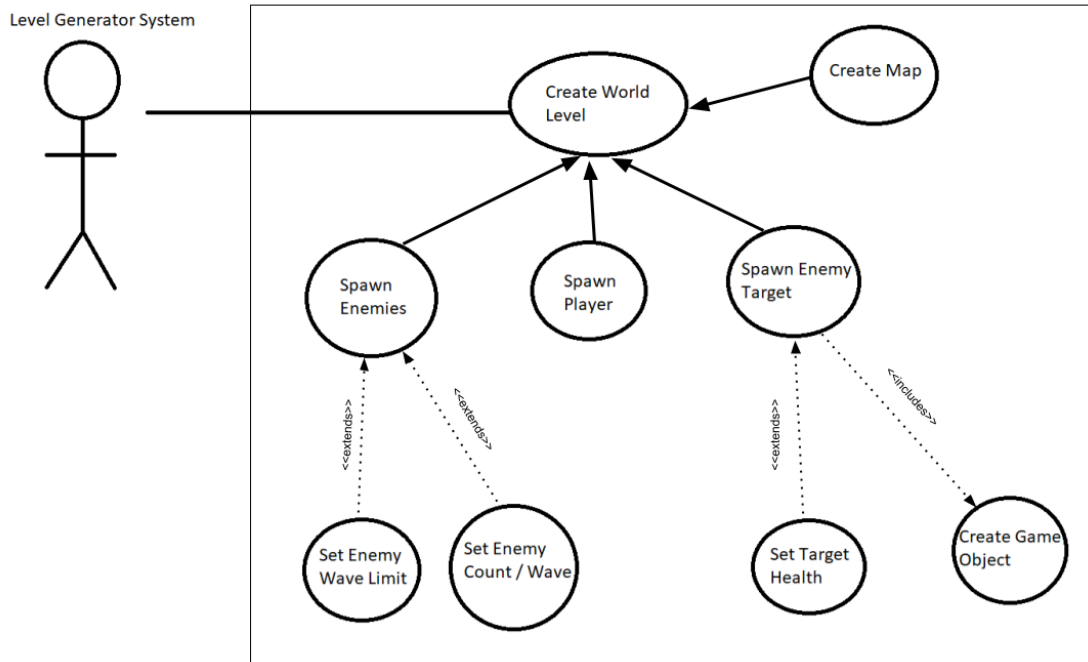
When a level is generated, my job is to make sure that all the correct elements of each level spawns in the correct areas of the map. Also make sure each element has the correct data assigned to them (EX: health). There will be a total of 8 playable levels with 7 different maps. Each map will have a different layout and setting bringing different playing experiences each level. Each level will increase in difficulty as well as introduce new enemies the player will have to learn to fight against. Some levels will have a boss that is in the final wave that the player will need to defeat before finishing the level and moving onto the next.

Additionally, I'm responsible for making the tile maps of each map. Tile maps are important to make the map interactive with the code so we can add certain elements and controls to the game.

My assignment for my team lead section is to make the game playable on other devices besides PC.

2. Use case diagram with scenario _/14

Use Case Diagram

Level Generator System

Create Map

Create World Level

Spawn Enemies

Spawn Player

Spawn Enemy Target

Set Enemy Wave Limit

Set Enemy Count / Wave

Set Target Health

Create Game Object

<<extends>> <<extends>> <<extends>> <<includes>>

Scenario

Name: Levels

Summary: The level generator system builds the level and creates the map.

Actors: Level Generator System.

Preconditions: Player hit play from main menu.

Basic sequence:

    Step 1: Create world level.

    Step 2: Create the map.

    Step 3: Spawn the player.

    Step 4: Spawn the Enemy Target.

    Step 5: Spawn the Enemies.

Exceptions:

    Step 1: Spawn Boss(es) if any in level.

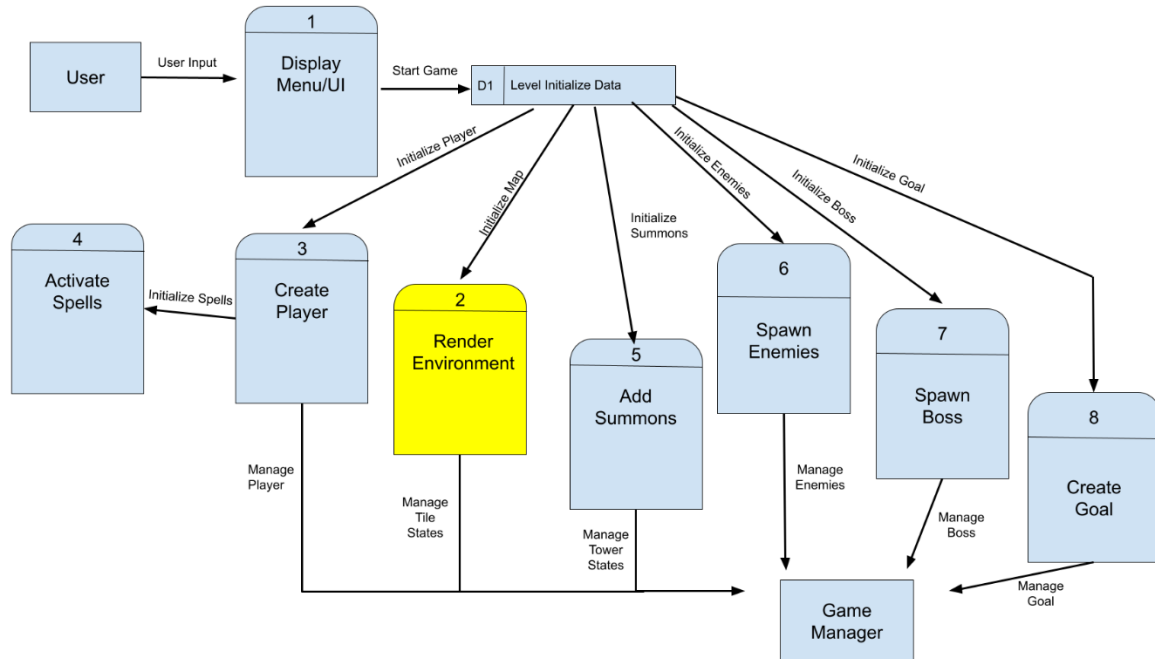**Post conditions:** Level is ready to play.

Priority: 1*

ID: LG01

*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

3. Data Flow diagram(s) from Level 0 to process description for your feature _____/14

Data Flow Diagrams

Process Descriptions

Render Environment:

    IF the level is not generated

        Create the map

        Spawn Enemies

        Spawn Player

            Assign player spells

        Spawn Enemy Target

            Assign target's health

        Set Enemy wave limit

    IF the level includes a boss

        Spawn Boss
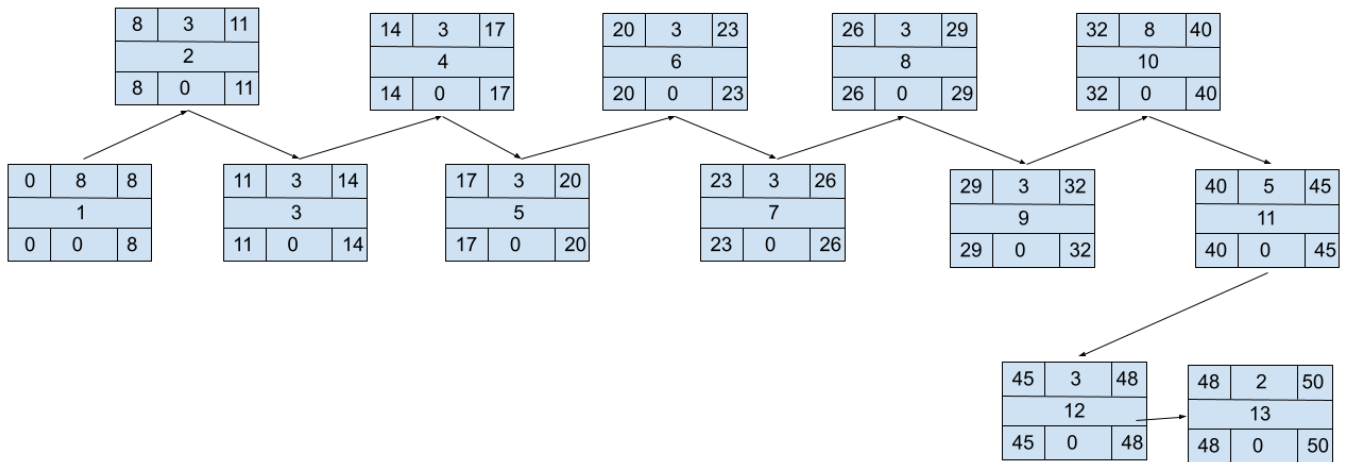
4. Acceptance Tests _____/9

For my feature of creating the levels, there will be a total of 8 different playable levels. Each level will include a different map environment, increased enemy wave limit count, and have a unique enemy target. Some levels may include a boss that will be included in the final wave of the level. To make sure each of the levels are loaded correctly, there will be a function that is called before the level begins for the player. The function is called testLevelLoad() and will make sure the correct level environment has loaded. It will be able to check by comparing the current level's 2d array with a saved array that is used as a template for each level. If there is a difference in the two arrays, the game will attempt to re-load the environment correctly.

5. Timeline _____/10

Work items

Task	Duration (hrs)	Predecessor Task(s)
1. Develop rough draft of levels	8	-
2. Level 1 Design/Implementation	3	1
3. Level 2 Design/Implementation	3	2
4. Level 3 Design/Implementation	3	3
5. Level 4 Design/Implementation	3	4
6. Level 5 Design/Implementation	3	5
7. Level 6 Design/Implementation	3	6
8. Level 7 Design/Implementation	3	7
9. Level 8 Design/Implementation	3	8
10. Programming Level System Manager	8	9
11. Programming testLevelLoad()	5	10
12. Mobile compatibility	3	11
13. VR compatibility	2	11

Pert diagram

8	3	11
	2	
8	0	11

14	3	17
	4	
14	0	17

20	3	23
	6	
20	0	23

26	3	29
	8	
26	0	29

32	8	40
	10	
32	0	40

0	8	8
	1	
0	0	8

11	3	14
	3	
11	0	14

17	3	20
	5	
17	0	20

23	3	26
	7	
23	0	26

29	3	32
	9	
29	0	32

40	5	45
	11	
40	0	45

45	3	48
	12	
45	0	48

48	2	50
	13	
48	0	50

Gantt timeline

Gage

Tile Mapping/Levels	Predicted Time (hrs)	Actual Time (hrs)
Develop rough draft of levels	8	
Level 1 map design/implementation	3	
Level 2 map design/implementation	3	
Level 3 map design/implementation	3	
Level 4 map design/implementation	3	
Level 5 map design/implementation	3	
Level 6 map design/implementation	3	
Level 7 map design/implementation	3	
Level 8 map design/implementation	3	
Programming Level System Manager	8	
Programming testLevelLoad()	5	
Mobile compatibility	3	
VR compatibility	2	