Name: Kenny Kline Mark ______________________/50

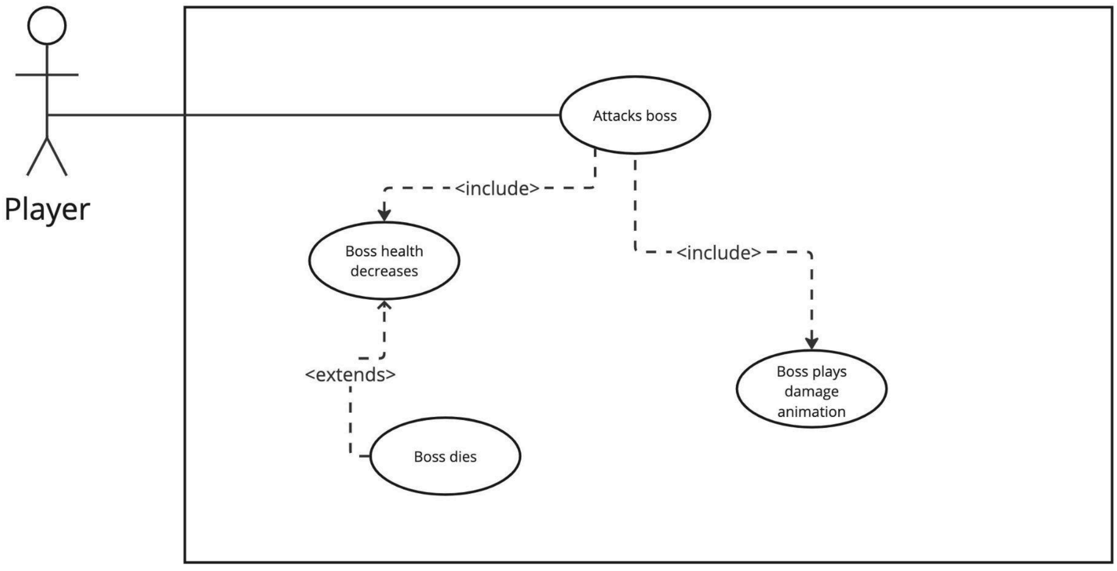
1. Brief introduction __/3

In the video game, The Shipwreck Protocol, I will be working on the boss fights. I will be making at least 2 bosses, one of which will be in the water environment.

My job is to make sure that the bosses are loaded into the level correctly. The player will need to be able to attack them and do damage. The bosses will also need to be able to deal damage to the player. The bosses will also need to be positioned such that they block off part of the map the player wants to get to in order to force the player to do the boss fights.

2. Use case diagram with scenario __14

Use Case Diagrams



Scenarios

Name: Boss health decreases

Summary: The boss takes a certain amount of damage.

Actors: Player.

Preconditions: Player attacks the boss.

Basic sequence:

Step 1: Player attacks the boss

Step 2: The boss receives the signal that it should take damage

Step 3: The boss subtracts the correct amount of damage from its health

Step 4: The boss plays an animation for taking damage

Exceptions:

The boss's health reaches 0 after taking the damage

In this case, trigger the death animation, and then remove the enemy from the game after the animation finishes.

Post conditions: Boss's health is decreases (or, in the exception, the boss no longer exists)

Priority: 1*

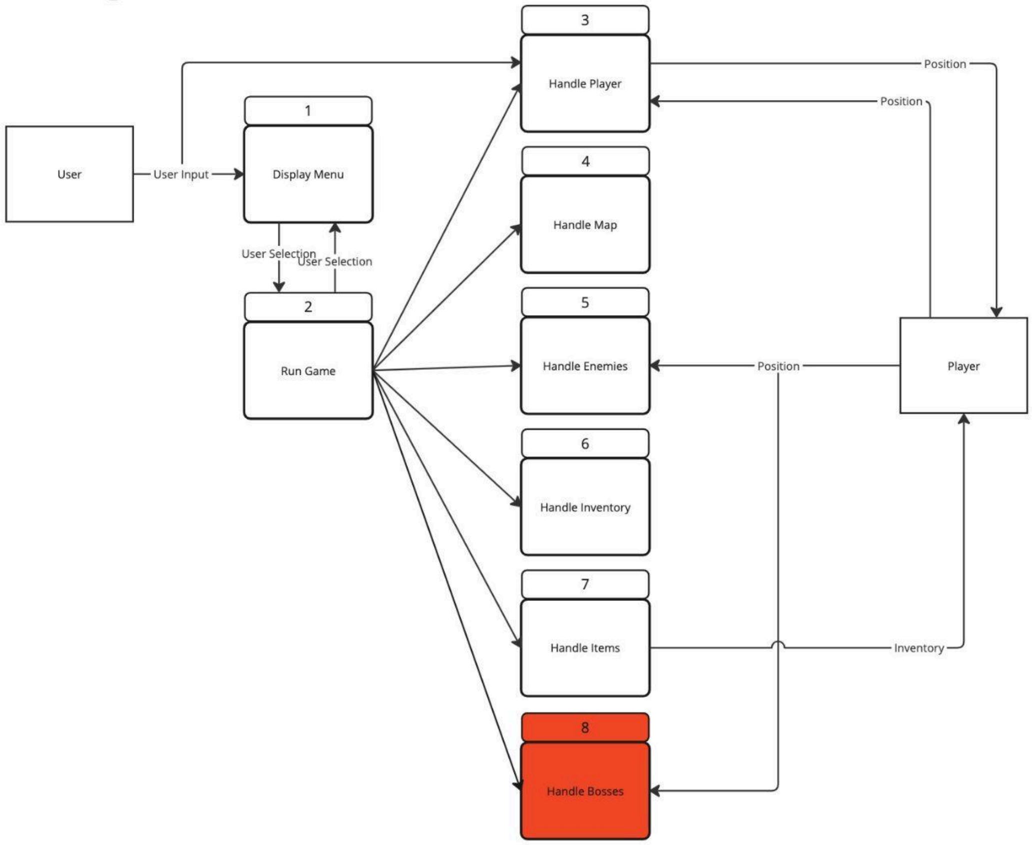
ID: B01

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

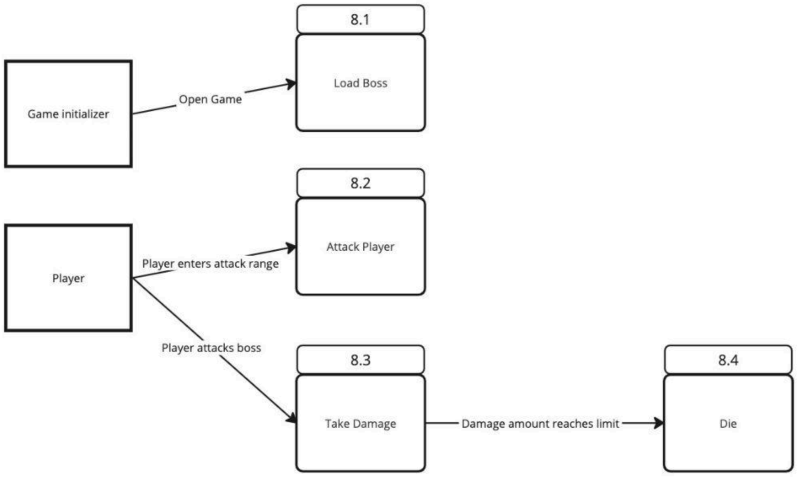
3. Data Flow diagram(s) from Level 0 to process description for your feature ______14

Data Flow Diagrams

Diagram 0



Handle Bosses



Process Descriptions

Load Boss

Add the boss to the world.

Initialize the boss with full health.

Attack Player

Start the attack movement

If the boss's weapon hits the player, send an event to the player object to take damage

Reset to continue playing the idle animation.

Take Damage

If the boss's health is greater than 0, subtract the damage amount from the boss's health.

If the boss's new health is less than 1, call the die function.

Die

Play the death animation.

Remove the enemy from the scene.

4. Acceptance Tests _______9

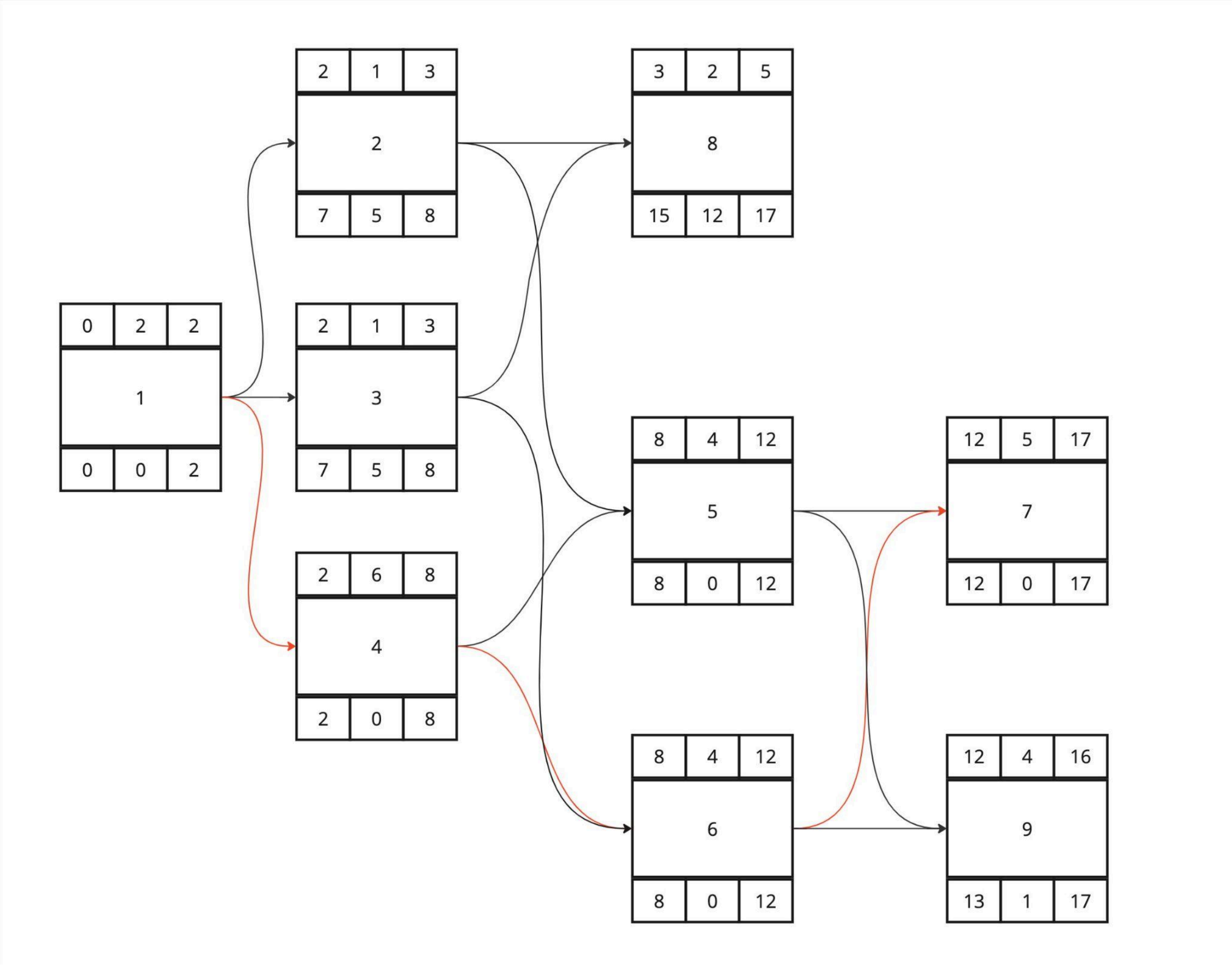
- Test the function which decreases the enemy's health
  - Test that the function, when called, decreases the enemy's health by the correct amount
  - Test that when the enemy's health gets below 1, the death function is called
  - Test that decreasing the health past 0 does not cause an error (ie: if the enemy's health is 3, and the player deals 10 damage, we do not get an error by setting the enemy's health to -7)
- Test the function which runs when the enemy dies
  - Test that the function correctly runs the death animation
  - Test that the function removes the enemy from the game

5. Timeline ________/10

Work items

Task	Duration (Hours)	Predecessor Task(s)
1. Boss superclass design	2	-
2. Water-Boss subclass design	1	1
3. Land-Boss subclass design	1	1
4. Boss superclass implementation	6	1
5. Water-Boss subclass implementation	4	2,4
6. Land-Boss subclass implementation	4	3,4
7. Testing	5	5,6
8. Documentation	2	2,3
9. Sprites/Animation	4	5,6

Pert diagram



Gantt timeline

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