Name: Luke Halla Mark _____/50

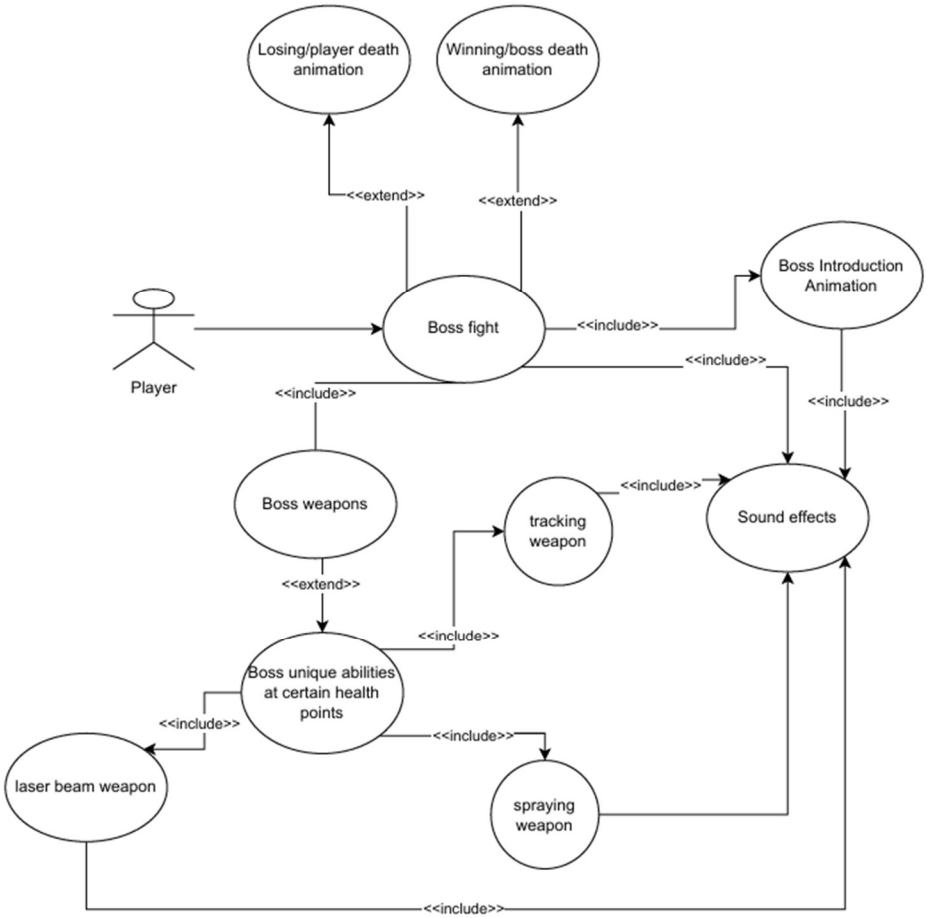
1. Brief introduction _/3

The feature I will be implementing is the boss fight. This will be the final battle at the end of the game that consists of unique mechanics like special abilities and new enemies. This will also include unique animations as the player weakens the boss.

2. Use case diagram with scenario _14

Example:

Use Case Diagrams



Scenarios

1. Boss Attacks

Name: Boss Special Abilities

Summary: The boss uses unique attacks to challenge the player.

Actors: AI, Player

Preconditions: The boss fight has started.

Basic sequence:

1. The player enters the boss area.
2. The boss starts attacking with basic moves.
3. At lower health, the boss uses stronger attacks.
4. The player dodges and counters.
5. The fight continues until the boss or player is defeated.

2. Boss Animation Changes

Name: Boss Weakening
Summary: The boss shows damage as its health drops.
Actors: AI, Animation System
Preconditions: The fight has started.
Basic sequence:

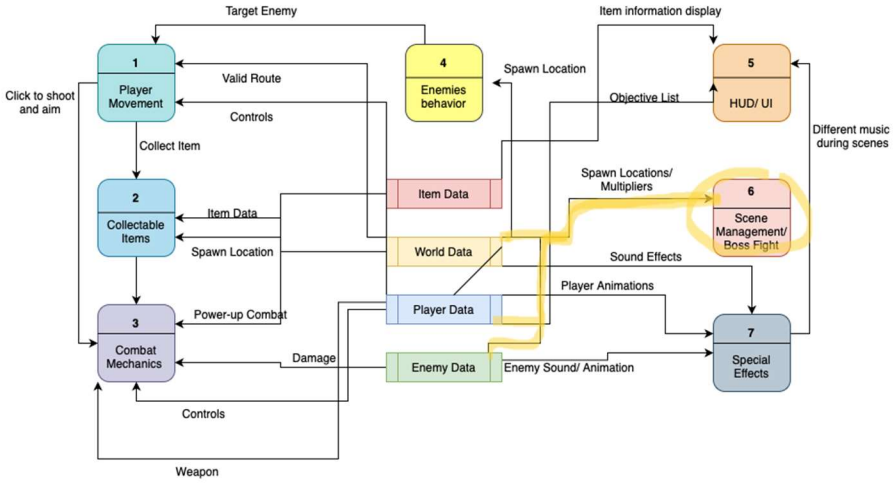
1. The boss appears in full strength.
2. After taking damage, it shows cracks or injuries.
3. At half health, the boss moves slower or looks enraged.
4. The player keeps fighting.
5. The boss collapses when defeated.

3. Player Death and Restart

Name: Player Defeat
Summary: If the player loses, they restart the fight.
Actors: Player, Game System
Preconditions: The boss fight has started.
Basic sequence:

1. The player fights the boss.
2. The player's health drops to zero.
3. A "Game Over" screen appears.
4. The player chooses to retry.
5. The fight restarts from the beginning

Data Flow Diagrams



3. Acceptance Tests _____9

Test: Boss Health System

Input:

- Start the boss fight with different player attack strengths.
- Reduce boss health incrementally through attacks.
- Simulate extreme cases

Expected Output:

- The boss starts with full health.
- Health decreases correctly based on damage taken.
- The boss enters different phases at set health thresholds.
- The boss dies when health reaches zero.
- The boss does not go below zero health.

Test: Boss Attack Patterns

Input:

- Player stands still to observe attacks.
- Player dodges or blocks attacks.
- Simulate multiple fights to check attack randomness.

Expected Output:

- The boss alternates between attack patterns.
- Stronger attacks trigger at set health thresholds.
- Attacks do not overlap or trigger too frequently.
- Attack damage remains within expected values.

Test: Boss Animation Transitions

Input:

- Reduce boss health at different speeds.
- Check animation triggers at 75%, 50%, and 25% health.

Expected Output:

- The boss starts in its default animation.
- Damage animations appear at correct health levels.
- The final animation plays upon defeat.

Test: Player Death and Restart

Input:

- Player takes intentional damage until health reaches zero.
- Player selects “Restart” or “Exit” on Game Over screen.

Expected Output:

- Game Over screen appears correctly.
- Restart brings the player back to the start of the fight.
- Exiting returns the player to the main menu.

4. Timeline _____/10

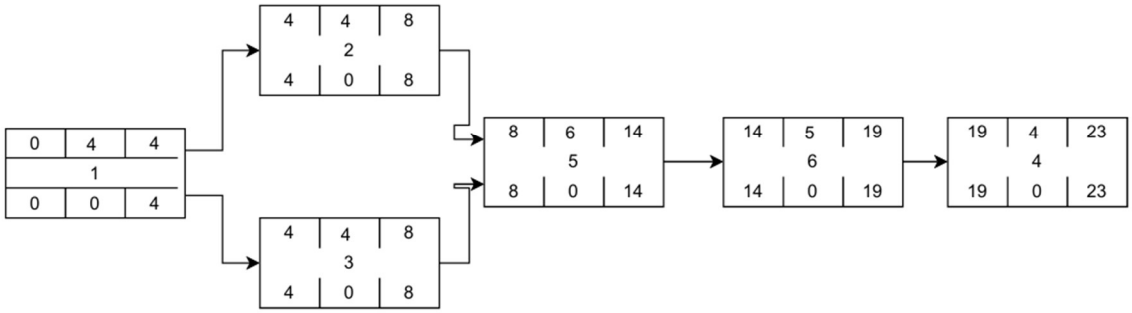
[Figure out the tasks required to complete your feature]

Example:

Work items

Task	Duration (PWks)	Predecessor Task(s)
1. Requirements Definition	1	-
2. Screen Design	4	1
3. Object Design	4	1
4. User Documentation	3	2,3,5,6
5. Programming	6	2,3
6. Testing	5	5

Pert diagram



Gantt timeline