Name: Garrett Pearsall   Mark _____/50

1. Brief introduction __/3

The feature that I am going to be working on is the weapons in the game. I am going to incorporate two main types of weapons, melee and range. I will receive inputs from user and enemy to initiate swing or projectile depending on what weapon used and will output if the collision is true to deal damage.
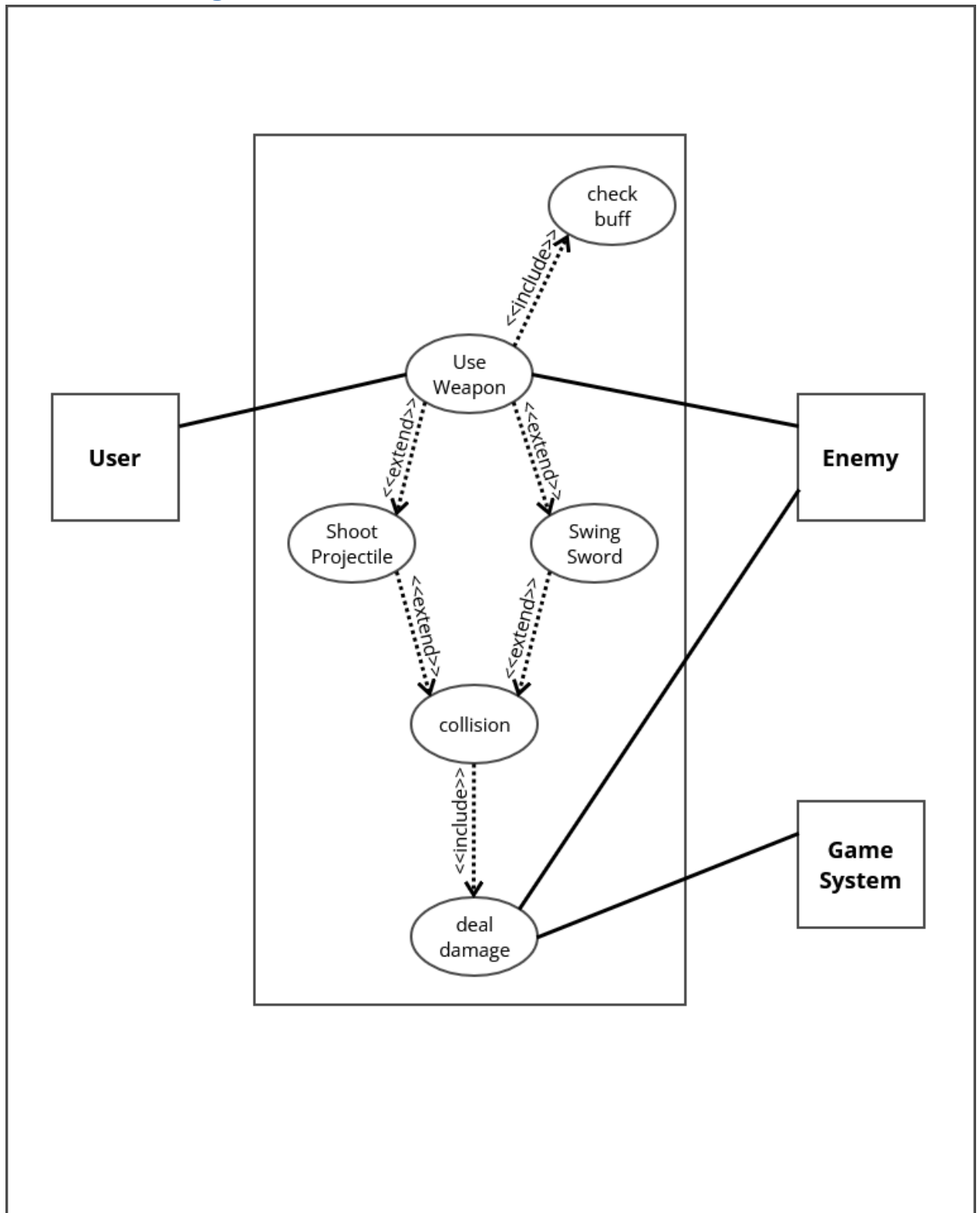
2. Use case diagram with scenario __14

[Use the lecture notes in class.

Ensure you have at least one exception case, and that the <<extend>> matches up with the Exceptions in your scenario, and the Exception step matches your Basic Sequence step.

Also include an <<include>> that is a suitable candidate for dynamic binding]

Example:

Use Case Diagrams

Scenarios
[You will need a scenario for each use case]

Name: Use Weapon

Summary: An entity(player or enemy) uses one of the two types of weapons to try and hit a different entity.

Preconditions: Player has to be initiated with a weapon, level has to be initiated, and enemies have to be initiated

Basic sequence:

    Step 1: Entity initiated an attack

    Step 2: System checks for any active buffs

    Step 3: Swing melee weapon

    Step 4: Collides with enemy

    Step 5: Deal damage

Exceptions:

    Step 3.1: Ranged weapon is used and initiates a projectile

    Step 4.1: Misses the enemy and deal damage is void

    Step 4.2: Collides with wall and damage is void

Post conditions: Damage only the enemy if hit
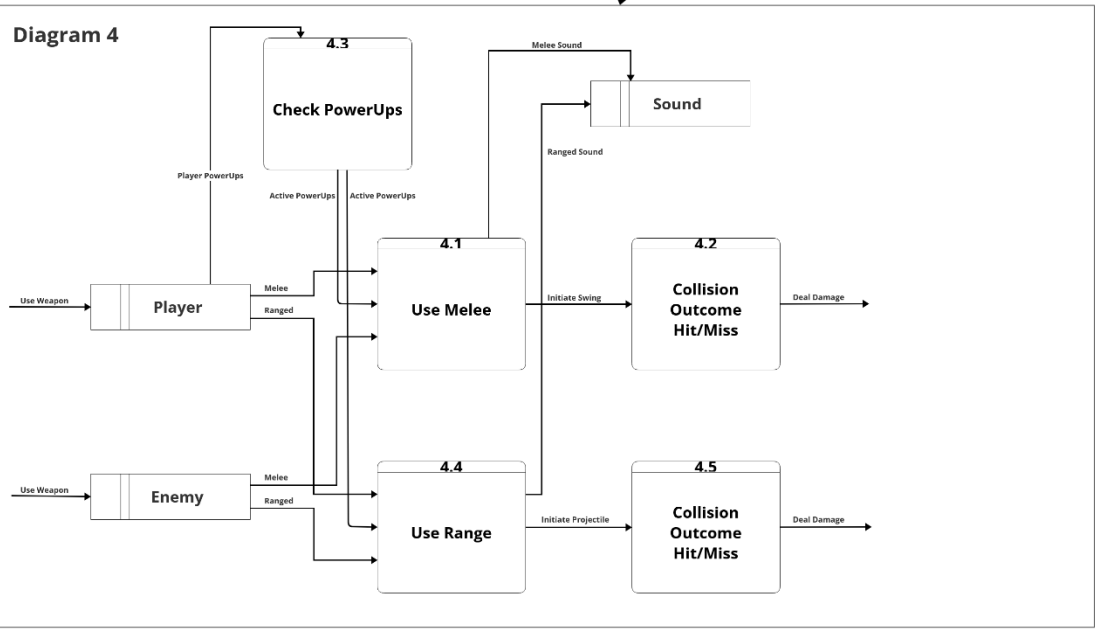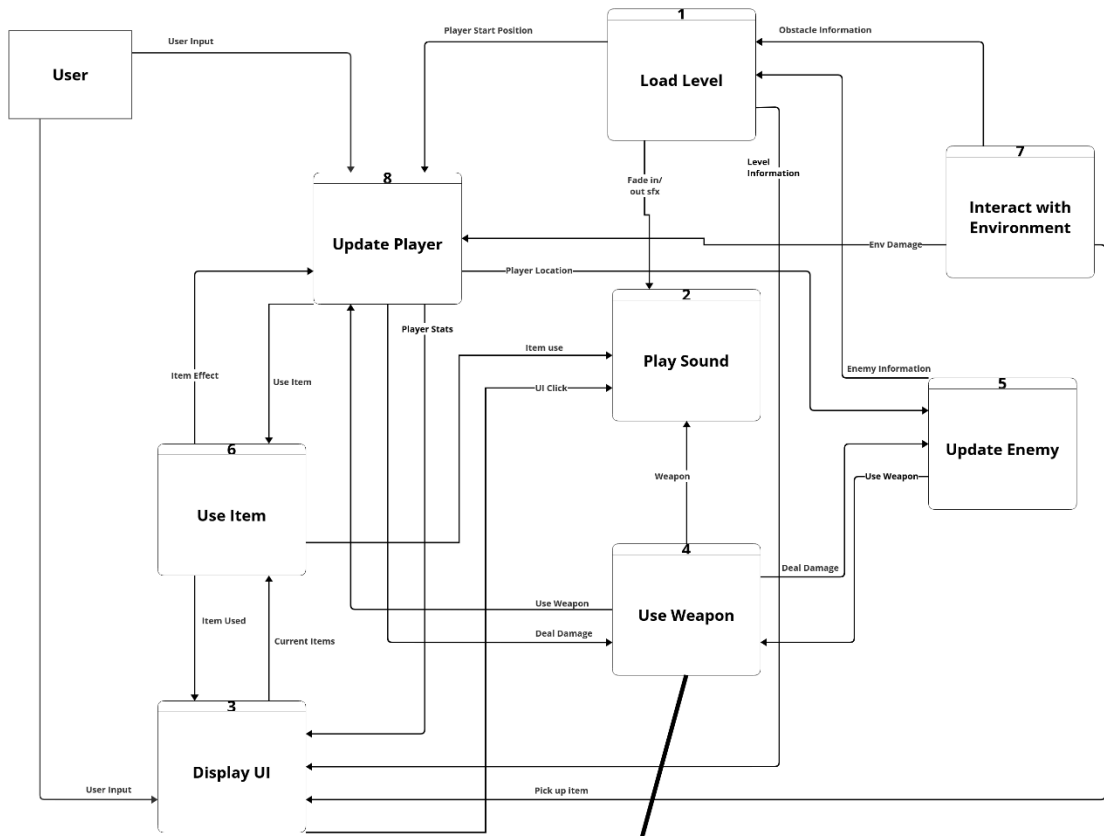
Priority: 1*

ID: C01

*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

[Get the Level 0 from your team. Highlight the path to your feature]

Example:

Data Flow Diagrams

Main Diagram

User — User Input →

1 Load Level
- Player Start Position
- Obstacle Information
- Level Information
- Fade in/out sfx

8 Update Player
- Player Location
- Player Stats

7 Interact with Environment
- Env Damage
- Enemy Information

2 Play Sound
- Item use
- UI Click
- Weapon

6 Use Item
- Item Effect
- Use Item
- Item Used
- Current Items

5 Update Enemy
- Use Weapon

4 Use Weapon
- Use Weapon
- Deal Damage
- Deal Damage

3 Display UI
- User Input
- Pick up item

Diagram 4

4.3 Check PowerUps
- Player PowerUps
- Active PowerUps
- Active PowerUps

Sound
- Melee Sound
- Ranged Sound

Player
- Use Weapon
- Melee
- Ranged

4.1 Use Melee
- Initiate Swing

4.2 Collision Outcome Hit/Miss
- Deal Damage

Enemy
- Use Weapon
- Melee
- Ranged

4.4 Use Range
- Initiate Projectile

4.5 Collision Outcome Hit/Miss
- Deal Damage

Process Descriptions

Use Weapon:

    IF player OR enemy initiates an attack

        If any buffs are active

            Apply buff to attack

        Endif

        If used weapon is melee

            Initiate swing

            Record collision

        Endif

        If used weapon is ranged

            Initiate projectile

            Record collision

        Endif

        If collision is true

            Deal damage

        Endif

    Endif

4. Acceptance Tests _____9

[Describe the inputs and outputs of the tests you will run. Ensure you cover all the boundary cases.]

Projectile Test

Check what happens when shoot projectile is spammed(simulated by autoclicker)

The game will have the following outcomes:

- Each projectile will follow the correct process
- Game will maintain regular functionality

Health Test

Check what happens when health goes over max.

The game will have the following outcomes

- Health will always go to zero and not below zero
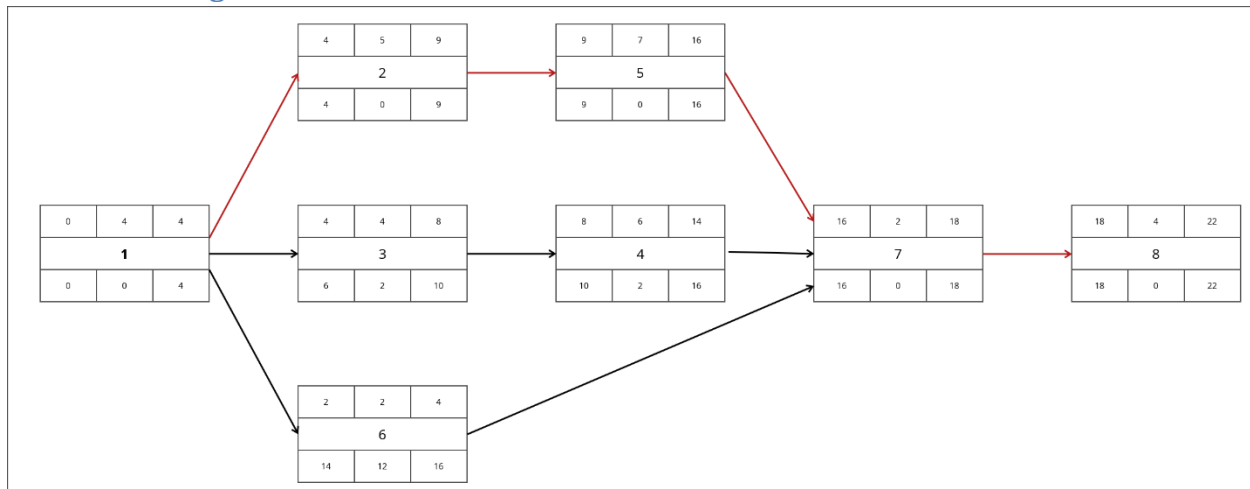- Damage will never deal more than remaining health.

5. Timeline _____/10

[Figure out the tasks required to complete your feature]

Example:

Work items

Task	Duration (Hours)	Predecessor Task(s)
1. Weapon Class Creation	4	-
2. Melee Weapon Creation	5	1
3. Ranged Weapon Creation	4	1
4. Projectile Characteristics	6	3
5. Melee Swing Creation	7	2
6. PowerUp Checks	2	1
7. Implementation	1	4, 5, 6
8. Testing	4	8

Pert diagram

Gantt timeline