Name <u>Aneesha Shrestha</u>   Mark _____/50

1. Brief introduction __/3

As TL5, I will be working on enemy character design and fight movements. We have levels, each with enemies with their own unique movesets due to the storyline of the game. I am planning on each level to have 2-3 different types of enemies, similar to other classic platformer games.

My duties will be planning the enemies moves, how they attack, and how the main character interacts with them. I will be working on doing that with some help from TL1. Each moveset must be tailored to the story and the character. For example, one of the bosses, Jeff Bezos, is fighting from inside his amazon warehouse. Therefore, an example of a moveset tailored to his level would be his delivery drones making sweeping attacks at the main character while conveyer belts throws boxes to do damage. It's also important to make the moveset have weaknesses that the user can exploit to defeat the levels.

I'll also have to make sure that the enemies have a hit point or health bar, so that the character can defeat the enemy, if they choose to do so. Additionally, most enemies will only be confined to a certain section of the game, like how conveyor belts throwing boxes won't be able to move and follow the player throughout the level. After designing these moves, I'll spend time implementing them and then testing the enemies against different users so I can properly evaluate the character enemy interactions and the difficulty, and make adjustments accordingly.

2. Use case diagram with scenario   __14

Use Case Diagrams
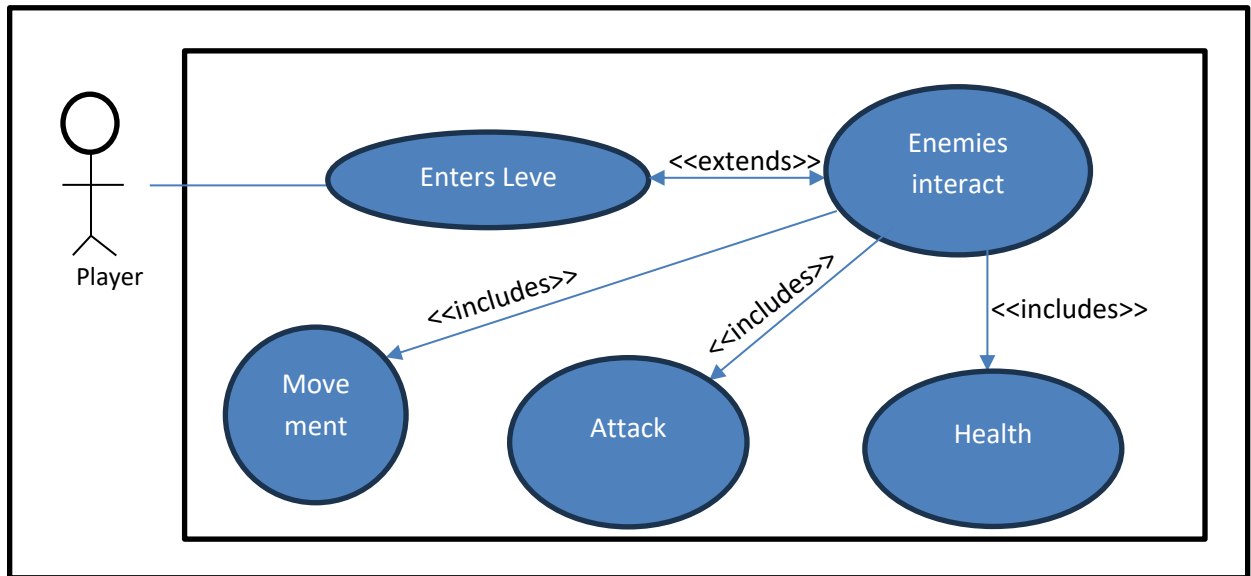
Scenarios

Name: Levels

Summary: The player enters a level, and must either dodge or attack the enemy characters to make it to the end of the level.

Actors: User/Player.

Preconditions: User enters level and has a playable health

Basic sequence:

> **Step 1:** User enters level
>
> **Step 2:** Enemies that can be seen within the screen begin their movement and attack sequence
>
> **Step 3:** Player dodges attacks and continues throughout the level
>
> **Step 4:** As player moves, enemies that are no longer seen on the screen and that are confined to an area of the map are removed/become irrelevant
>
> **Step 5:** Enemies that can follow the player do, continuing to attack and damage the player unless defeated by the player's attacks
>
> **Step 7:** Character defeats level and ending cutscene plays, escorting player to next level

Exceptions:

> **Step 1:** Enemies defeats player, player is sent back to the start of the level
>
> **Step 2:** The game is in Dr. BC mode, in which case the enemies' attacks will not damage player

Post conditions: Level is defeated and player can move onto next level
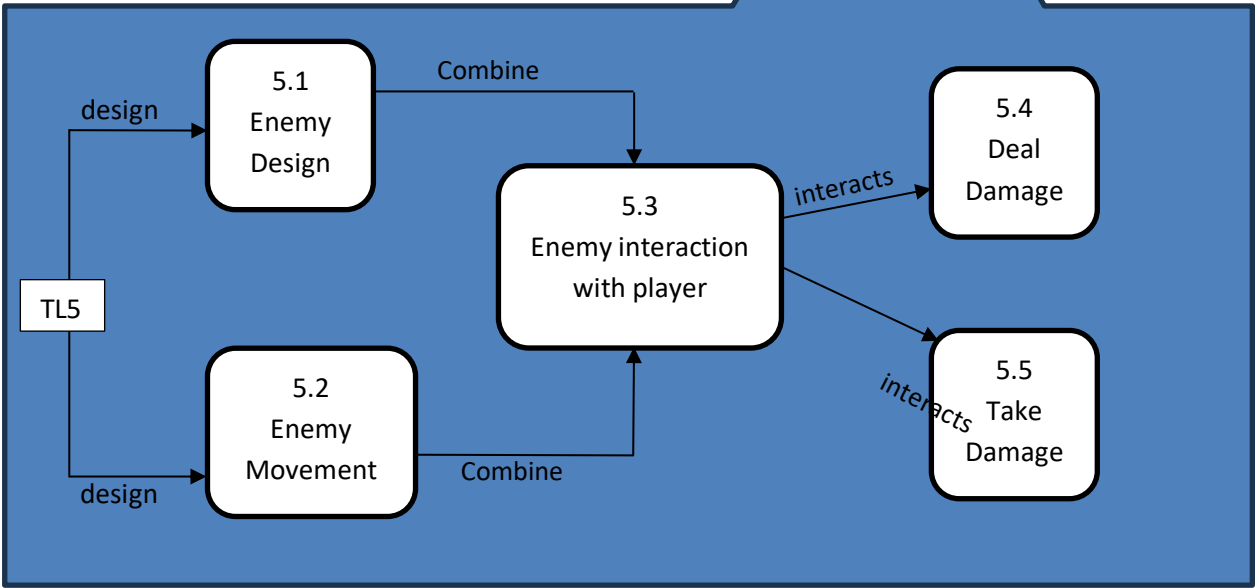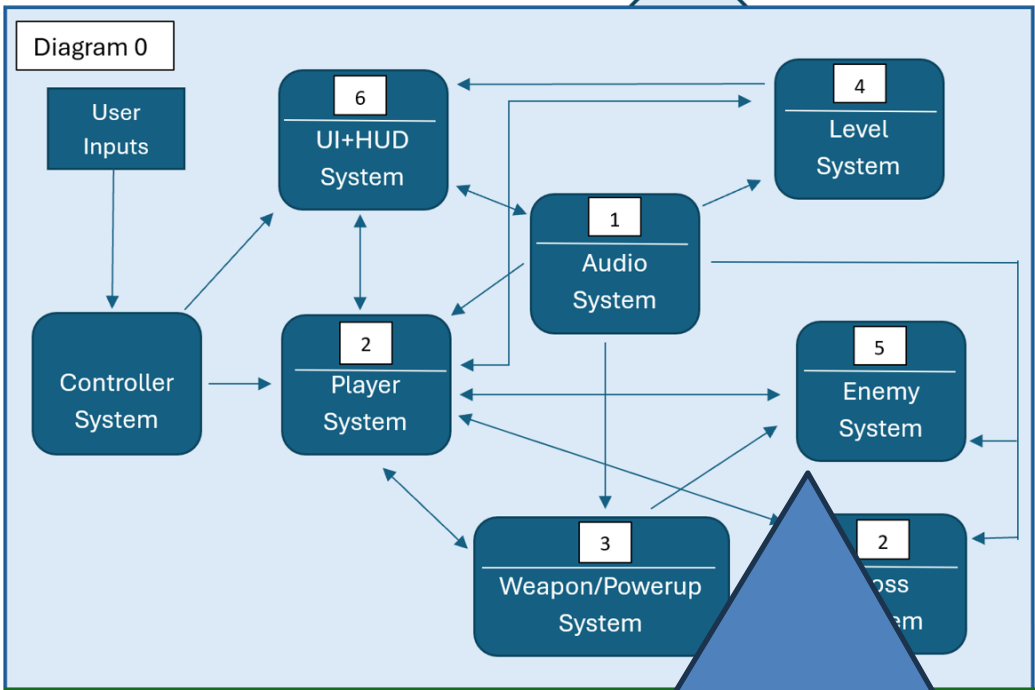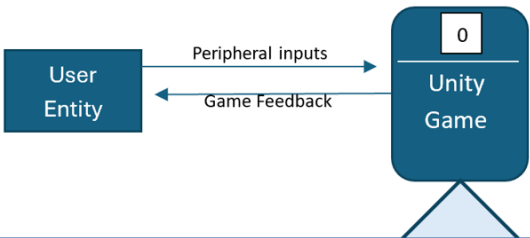
Priority: 2*

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:

Context

User Entity → Peripheral inputs → Unity Game [0]

Unity Game → Game Feedback → User Entity

Diagram 0

User Inputs

UI+HUD System [6]

Level System [4]

Audio System [1]

Controller System

Player System [2]

Enemy System [5]

Weapon/Powerup System [3]

Boss System [2]

design → 5.1 Enemy Design

5.1 Enemy Design → Combine → 5.3 Enemy interaction with player

TL5

design → 5.2 Enemy Movement

5.2 Enemy Movement → Combine → 5.3 Enemy interaction with player

5.3 Enemy interaction with player → interacts → 5.4 Deal Damage

5.3 Enemy interaction with player → interacts → 5.5 Take Damage

Process Descriptions

Level Begins:

IF enemy health != 0 && player is not dead:

      Movement = sweeping motion

      Minions attack player at fixed speed

      IF enemy health == 0: //the player has successfully hit and killed enemy

            Enemy dies;

      ELSE IF player dodges attacks:

            Keep attacking player

            IF enemy has movement options

                  Follow player throughout level

            ELSE

                  Enemy goes back to starting position, waiting until player re-enters portion of level that contains the enemy

ELSE IF player is dead:

      Play(enemyWinSequence)

      Restart level

ELSE IF player successfully finishes level:

      Play(Exit Sequence)

      End level

ELSE:

      Something went wrong: restart level

4. Acceptance Tests _____9

Movement test:

After creating character movement, let the enemy move in the background environment. The character should have:

1. Correctly interacted with background environments, such as platforms
2. Smooth movement that is followable by a user
3. Distinct changes in the movement
4. Ability to throw attacks and be killed

Interaction Test:

Once the enemy character can move correctly in a blank environment, I will put the main character in the environment and interact with the enemy. I'll try to use the character differently each time, with different playing styles. I'll be looking for:

1. Correct attack and damage taken from and to the player
2. Proper difficulty for the user when trying to defeat the enemy
3. Proper leveling up of difficulty as the user goes through different levels

4. Smooth cutscenes at the beginning and end of the level
    a. Dialogue between characters and defeat sequence
5. Correct animations when the enemy or the character hit/attack each other
6. Smooth transitions between preceding level and next level

5. Timeline _____/10Pert diagram

Task	Duration (HpW)	Predecessor Task(s)
Requirement Collection for Enemy Design	3	0
Sprite Design	4	1
Movement Design	4	1
Attack Design	4	1
Minimum Viable Product	10	1, 3, 4
Assigning Sprites to movement	2	2, 5
Testing on blank backgrounds	2	5,6
Testing with main character	4	7
Installation	2	8
Requirement Collection for AI	2	0
Building AI runner	10	10
Creating AI escape sequence	1	11
Testing and debugging AI on all levels	5	12
Installation/Finalization	2	13

Pert Chart in Git

Gantt timeline

In Git