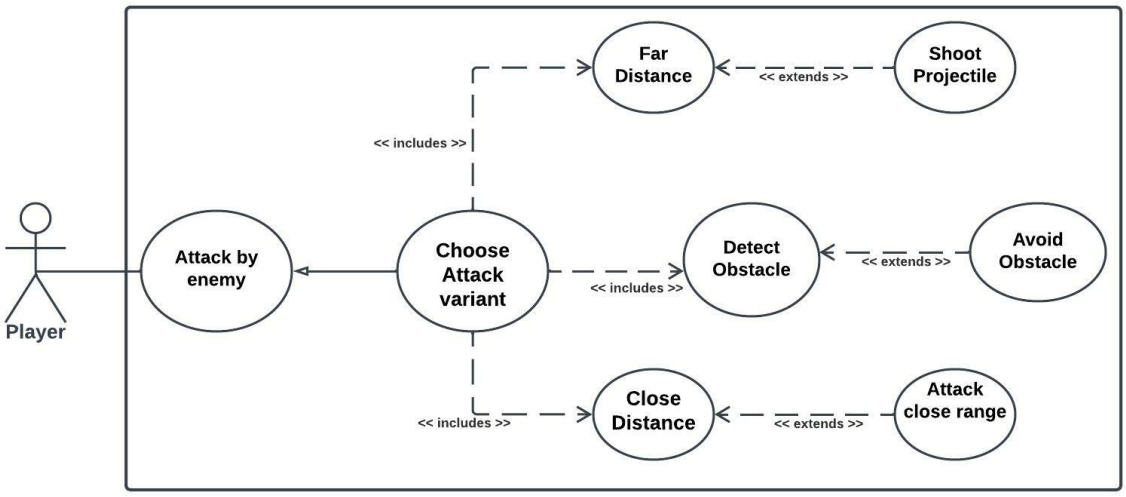
Name: DAWSON BURGESS Mark _____/50

1. Brief introduction __/3

For our game Bee Brawler: Exit the Hive, I am in charge of developing all of the general enemies the player will encounter (minus bosses and elites). There will be lots of enemy types, considering this a rouge-like game, where enemies and combat are some of the integral aspects of the game.

2. Use case diagram with scenario _14

Use Case Diagrams



Scenarios

Name: Close Distance

Summary: The player moves within the distance of an enemy that can use a melee attack, and then gets attacked.

Actors: Player

Preconditions: Player has walked within detection range and melee range of an enemy.

Basic sequence:

Step 1: Player walks within detection range of enemy.

Step 2: Enemy attempts to engage in combat.

Step 3: If enemy hits player, it damages the player until death or defeat.

Exceptions:

Step 1: Player is killed by the enemy, resetting the game.

Step 2: Enemy gets killed by a trap.

Step 3: Enemy gets killed by player before it can detect player.

Post conditions: Enemy attacks and damages the player.

Priority: 2*

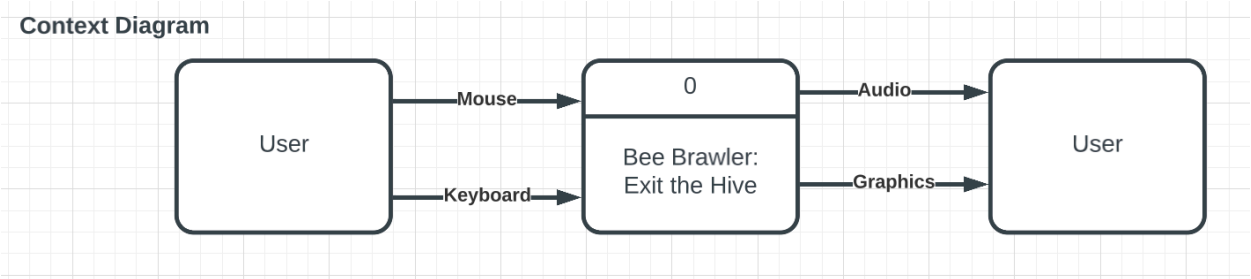
ID: DB01

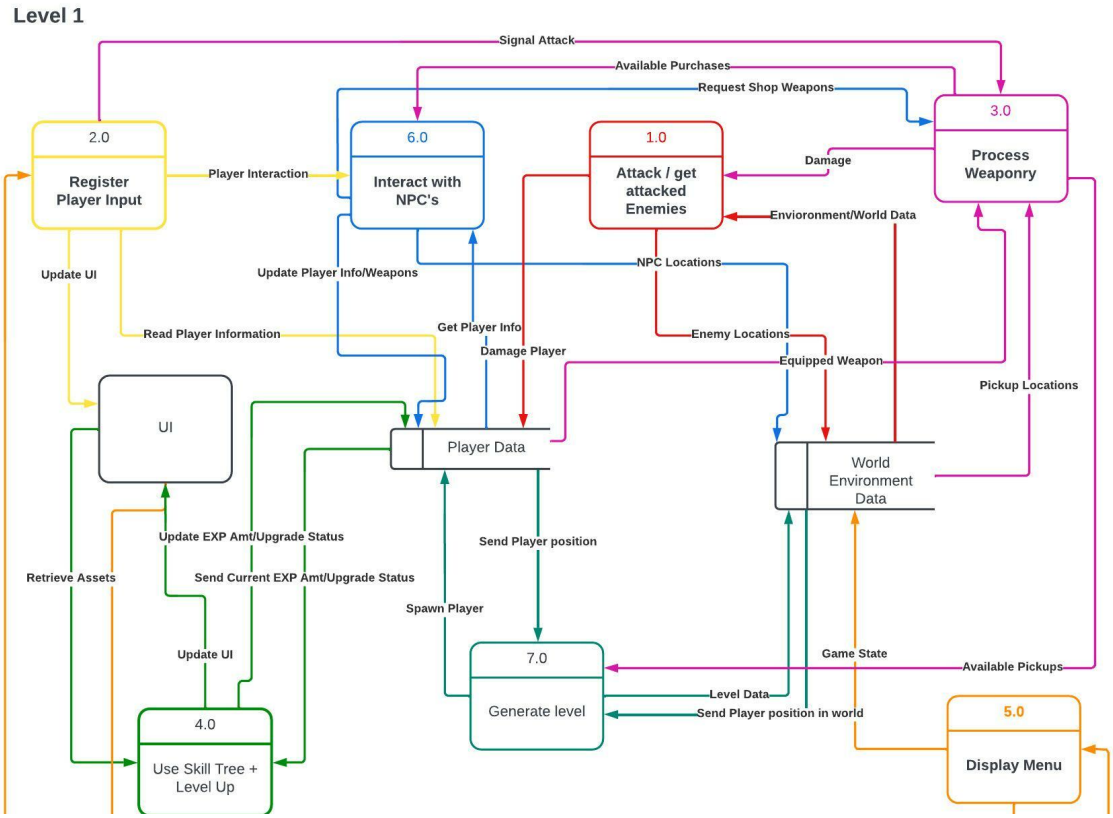
Name: Far distance
Summary: The player moves within the distance of an enemy that can use a ranged attack, and then gets attacked.
Actors: Player
Preconditions: Player has walked within detection range and projectile range of an enemy.
Basic sequence:
Step 1: Player walks within detection range of an enemy (longer distance).
Step 2: Enemy attempts to engage in combat.
Step 3: Enemy shoots a projectile of some sort.
Step 4: If enemy hits player, it damages the player until death or defeat.
Exceptions:
Step 1: Player gets killed by enemy, resetting the game.
Step 2: Enemy gets killed in a trap.
Step 3: Enemy gets killed by player before it can detect player.
Step 4: Player steps out of the range of the enemy.
Post conditions: Enemy shoots a projectile at the player.
Priority: 2*
ID: DB02

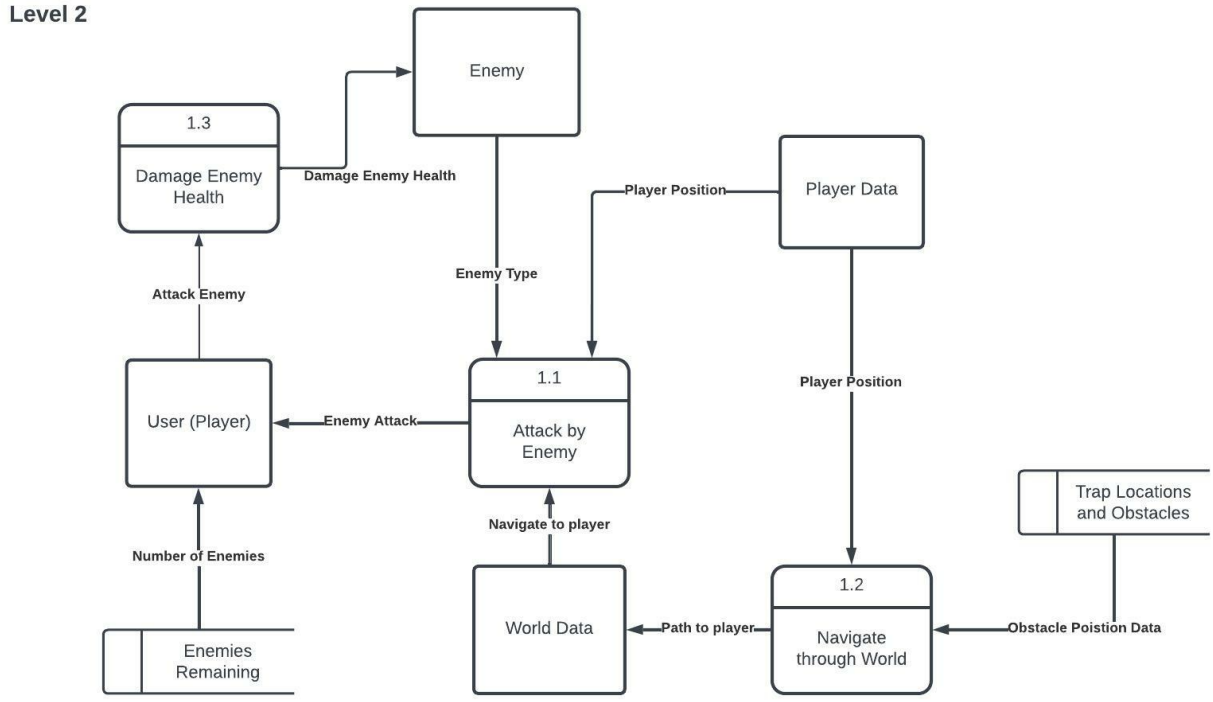
Name: Detect obstacle
Summary: Enemies detect and avoid obstacles in order to engage in combat with the player.
Actors: Player
Preconditions: The player has step into detection range, but there is a trap or obstacle between the player and enemy.
Basic sequence:
Step 1: Player walks within detection range of an enemy.
Step 2: There is a trap or obstacle in the path to the player.
Step 3: The enemy attempts to navigate around or through the obstacle/trap.
Exceptions:
Step 1: Player is killed in the game, causing a reset.
Step 2: Enemy dies during attempt to reach the character.
Step 3: Player steps out of range of the enemy.
Post conditions: Enemy attempts navigates around the obstacle or trap.
Priority: 3*
ID: DB03
*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

1.1 Attack by Enemy

IF player enters detection range of an enemy
Use navigate to player, player position and enemy type to determine type of attack and path to player
Attack the player if conditions are met
IF enemy attack the player
Damage the player
ELSE IF Player kills enemy
Decrease number of enemies remaining
ELSE IF Player Leaves detection range
Enemy stops attacking

1.2 Navigate through world

IF there is an obstacle
get the obstacles position
move or attack around it
IF there is a trap
attempt to navigate around it
IF you there is not path around
move through the trap and take damage
ELSE there is no obstacles
resume activity as normal

1.3 Damage enemy health

IF the player attacks the player
IF the attack hits the enemy
damage the enemy
ELSE the attack misses
IF the enemy runs into a trap
damage the enemy

4. Acceptance Tests _____9

Invalid Spawn

Enemy spawns at random point

The spawn point is not valid ie the enemy cannot move or get to the player

Output

During the test, the enemy should de spawn if there is not a valid spawn point set or if the player cannot be reached.

Invalid Attack

Trigger the detection area of a ranged enemy

step out of the range of this enemy

Output

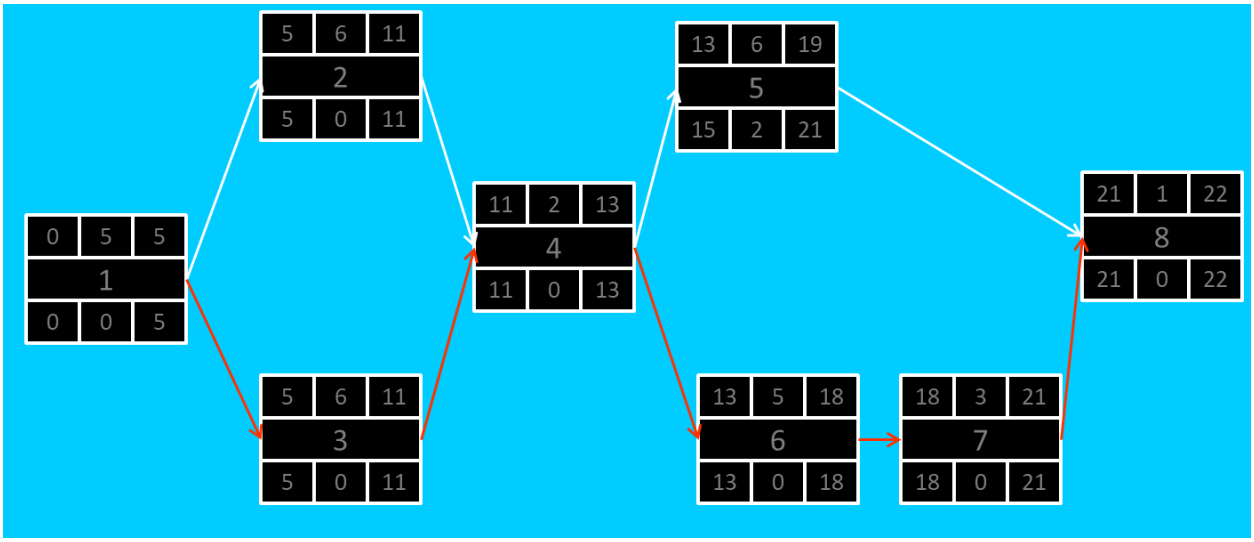
If the player steps out of the range of the projectile, the enemy should stop shooting at the player.

5. Timeline _____/10

Work items

Task	Duration (hours)	Predecessor Task(s)
1. Requirements Collection	4	-
2. Enemy Prototype	4	1
3. Basic (easy) enemies	3	2, world design
4. Enemies framework	3	3
5. Player interaction	5	4, player design
6. World interaction	3	4, world design
7. Attack variants	6	4
8. Complex enemies	8	7
9. Animation improvement	4	-
10. Elite enemies	6	8
11. Traps	5	-
12. Functionality testing	7	10
13. Final testing and tweaks	10	12

Pert diagram



Gantt timeline