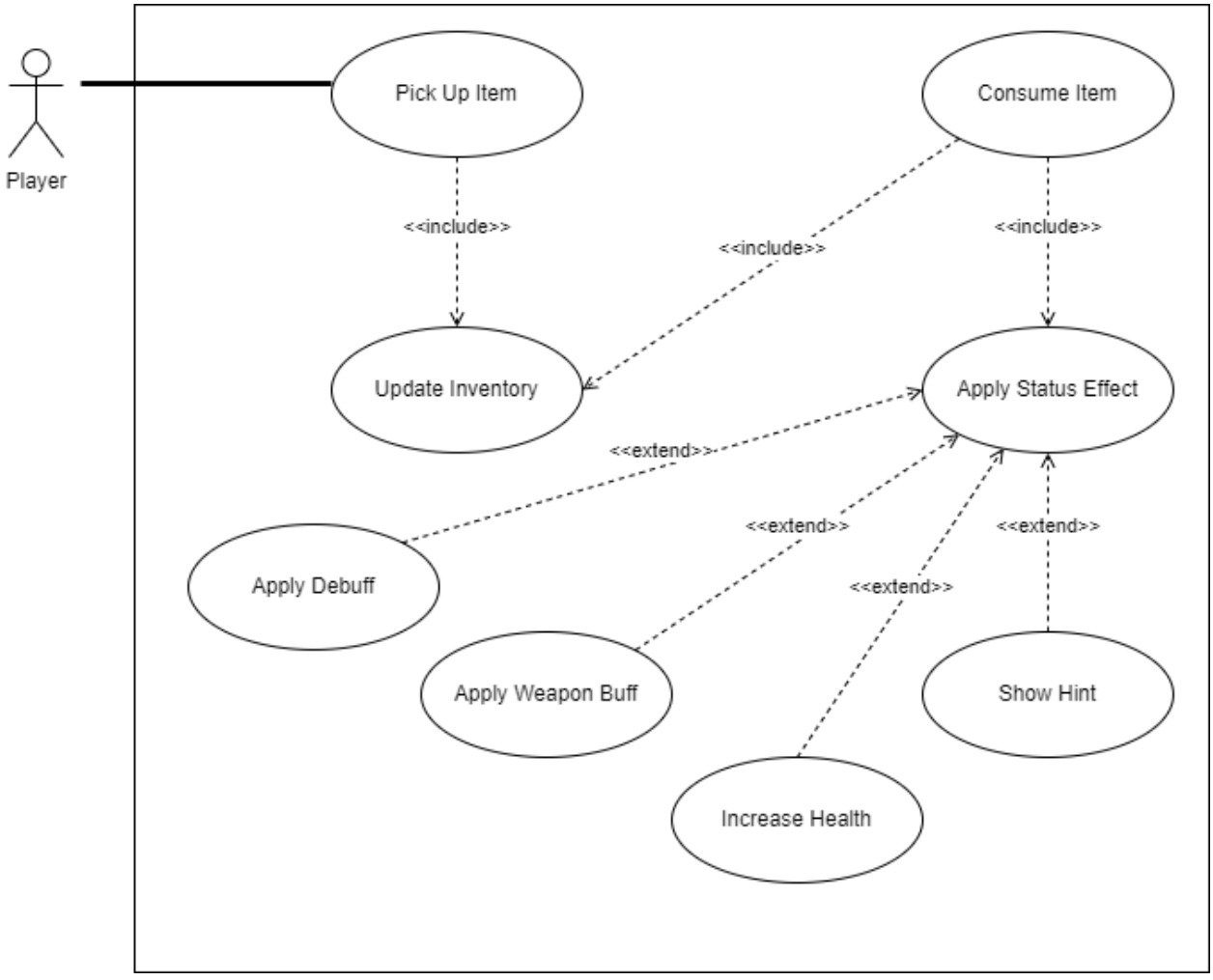
Name: Cole Paulik Mark _____/50

1. Brief introduction _/3

As the user plays the game, they will pick up items like ingredients and weapons that will be used to help them progress through the game. The user will also pick up powerups that will aid them in making it through the game farther by healing any damage they may have taken.

2. Use case diagram with scenario _14

Use Case Diagrams



Scenarios

Name: Pick Up Item

Summary: The user picks up an item and stores it in their inventory. From the inventory the player will be able to consume the item. The item will apply an effect such as buffing weapon damage, increasing the players health, apply a debuff to the player, or show hints on what ingredients the player needs to grab.

Actors: Player

Preconditions: Items have spawned in the room.

Basic sequence:

Step 1: The Player enters a room

Step 2: The player picks up an item off the ground

Step 3: The player consumes the item from their inventory

Step 4: The item applies an effect to the player

Exceptions:

Step 1: The item applies a weapon buff, increases player health, applies a debuff to the player, or gives a hint to the player.

Post conditions: The item is now in the inventory or consumed and the player can pick up more items.

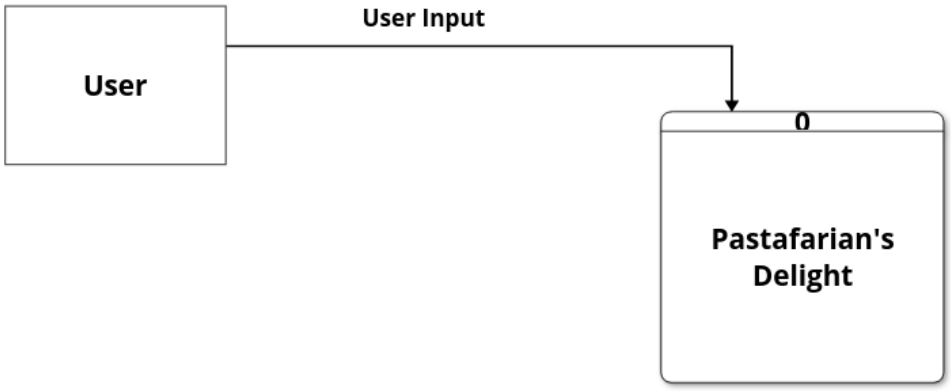
Priority: 2*

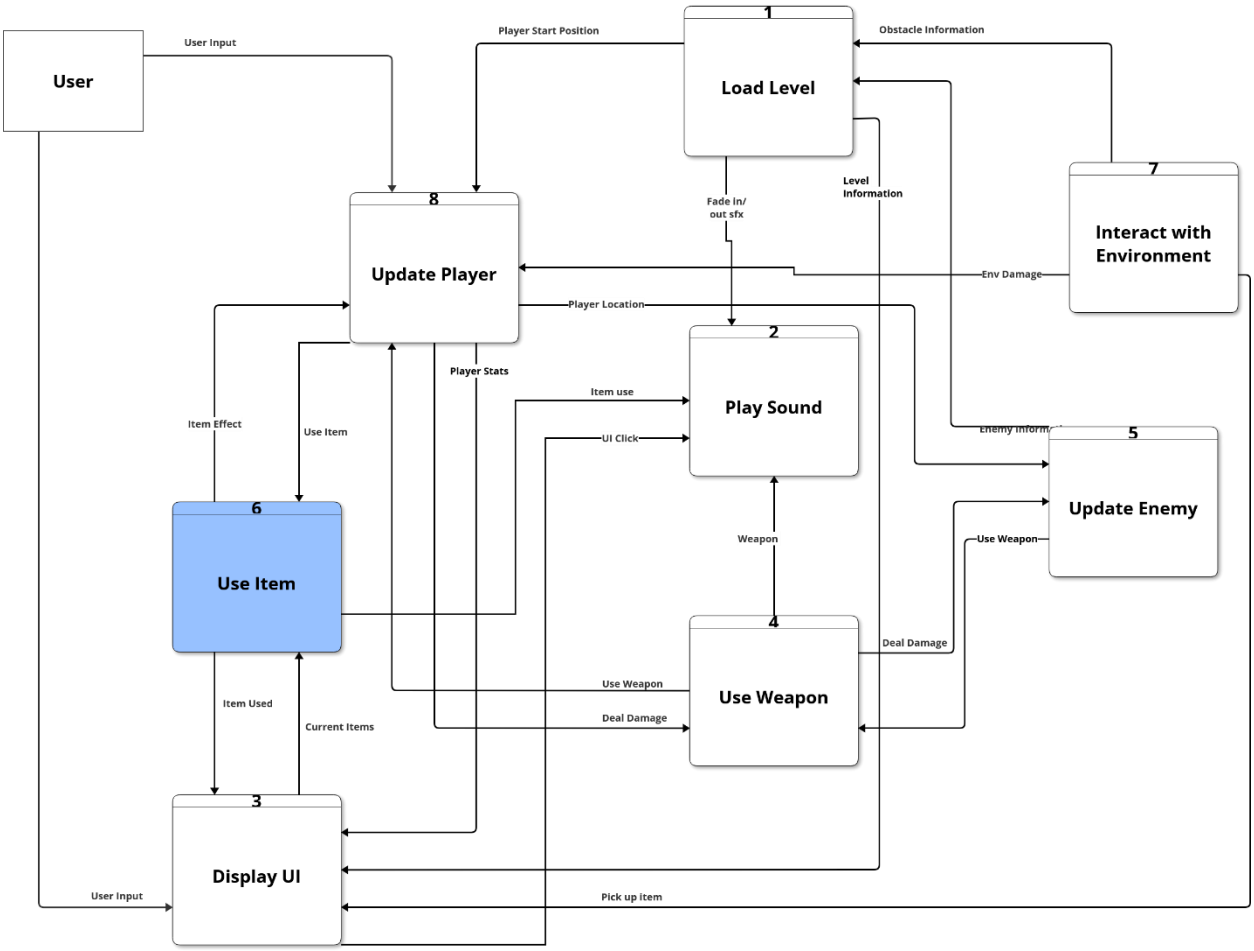
ID: I01

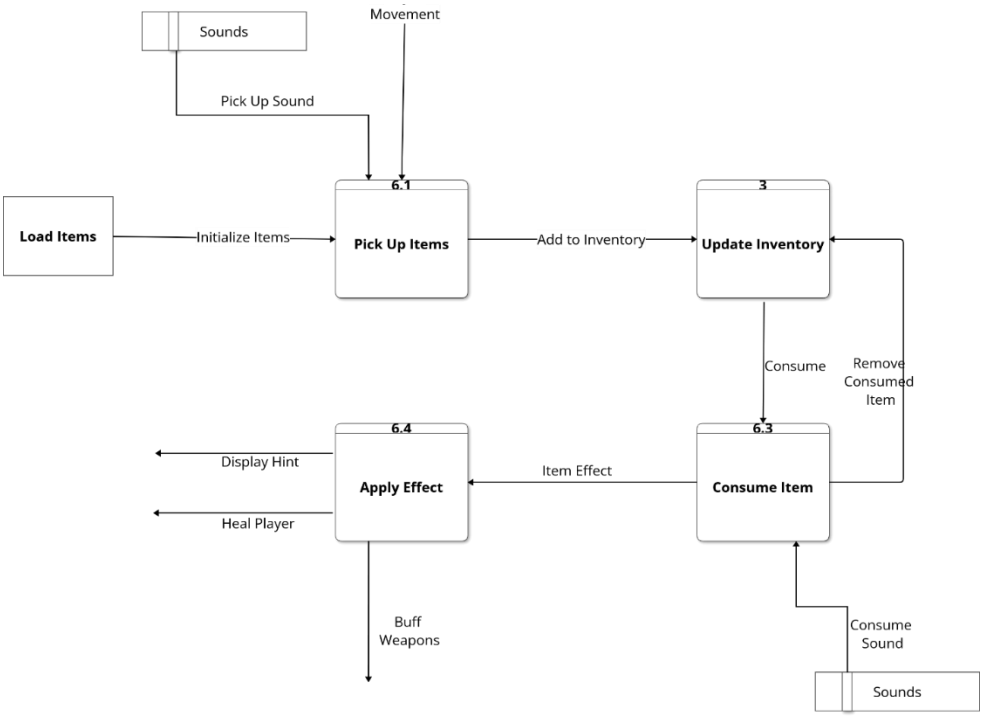
*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

3. Data Flow diagram(s) from Level 0 to process description for your feature _____14

Data Flow Diagrams




User
User Input
1
Load Level
Player Start Position
Obstacle Information
Level Information
Fade In/ out sfx
7
Interact with Environment
Env Damage
8
Update Player
Player Location
Player Stats
2
Play Sound
Item use
UI Click
Item Effect
Use Item
Enemy Inform
5
Update Enemy
Use Weapon
6
Use Item
Weapon
4
Use Weapon
Deal Damage
Use Weapon
Deal Damage
Item Used
Current Items
3
Display UI
User Input
Pick up item


Sounds
Movement
Pick Up Sound
Load Items
Initialize Items
6.1
Pick Up Items
Add to Inventory
3
Update Inventory
Consume
Remove Consumed Item
6.4
Apply Effect
Display Hint
Heal Player
Item Effect
6.3
Consume Item
Buff Weapons
Consume Sound
Sounds

Process Descriptions

Load items
- If Item is can be picked up pick up item
  - Update the inventory UI
  - Play pick up sound
- If item is consumed
  - Remove item from inventory
  - Update inventory UI
  - Play consume sound
  - Apply Item Effect:
    - If item is healing
      - Heal Player
    - Else if item is weapon buff
      - Buff weapon
    - Else
      - Display hint

4. Acceptance Tests _____9

The input that my processes will be taking is the player picking up and using items. There are going to be When a player uses an item it will give a status effect to the player which can be healing, increasing weapon damage, and possibly increasing player speed.

Healing test:

This test will require adjusting the healing effect that an item does on a player. To conduct this test, I'll test what different strengths of healing do to a player and what happens when a player attempts to heal beyond their maximum health. We'll want to make sure that the player can't heal so much that it overflows the health values which could kill the player instead of healing them.

Weapon buff test:

Similar to the healing test we'll adjust the damage buff effect that a player's weapon can use. To conduct this test, I'll test the different values of weapon buffs and what happens if a player buffs their weapon too much. We'll make sure that the weapon can only have a maximum buff modifier so that it doesn't overflow the weapon buff modifier values so that the weapon doesn't damage.

Player speed test:

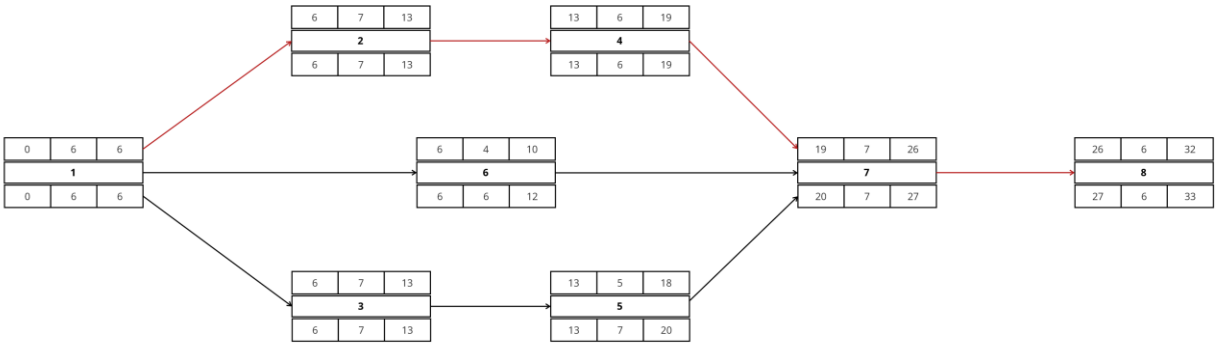
When the player picks up an item that affects the player's speed, we'll test that the speed has a limited time that it is active and how the speed modifiers affect the players movement. For example, we'll test that the players' speed doesn't become so fast that they lose collision and exit the map.

5. Timeline _____/10

Work items

Task	Duration (Hours)	Predecessor Task(s)
1. Item Class Creation	6	-
2. Power Up Creation	7	1
3. Miscellaneous Items Creation	7	1
4. Power Up Effect Characteristics	6	2
5. Hint Item Characteristics	5	3
6. Player Stats Checks	4	1
7. Implementation	7	4, 5, 6
8. Testing	6	7

Pert diagram



Gantt timeline