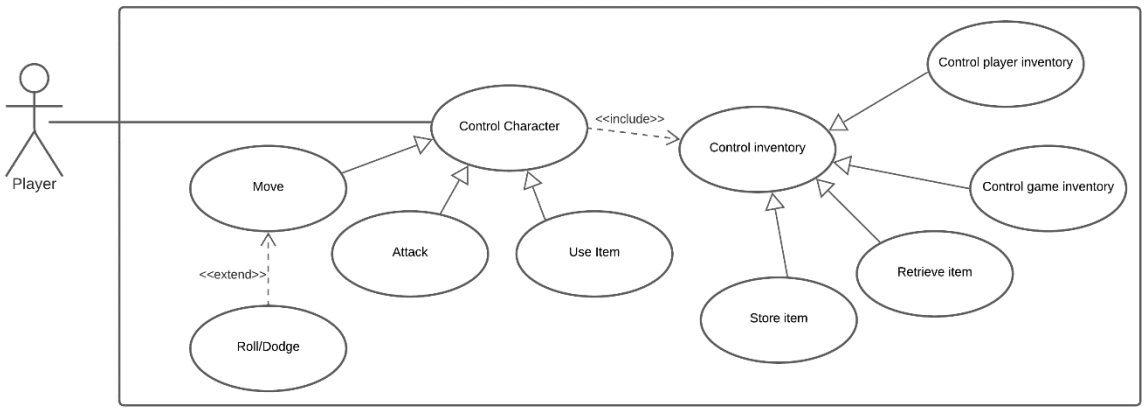
Name: Toby Mclenon Mark _____/50

1. Brief introduction _/3

Player data, player control, and inventory management.

2. Use case diagram with scenario _14

Use Case Diagrams



Scenarios

Name: Move

Summary: The player uses the “WASD” keys to move the character on the screen

Actors: Player

Preconditions: The player has been spawned

Basic sequence:

Step 1: Accept input of “WASD” and spacebar

Step 2: Move player in the respective direction

Exceptions:

Step 2: If spacebar is pressed, character will roll/dodge in the current direction

Post conditions: Players position in the world is changed

Priority: 1*

ID: 3aMOV

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

Name: Attack
Summary: The player uses the left mouse button to use an attack
Actors: Player
Preconditions: The player has been spawned
Basic sequence:
Step 1: Accept input of left mouse button
Step 2: Player uses attack
Step 3: Player damages an enemy
Exceptions:
Step 2: If no enemy is hit, then no damage is done
Post conditions: None
Priority: 1
ID: 3aATK

Name: Use item
Summary: The player uses the “Q” key to use the currently equipped item.
Actors: Player
Preconditions: The player is holding an item
Basic sequence:
Step 1: Accept input of “Q”
Step 2: Use item
Step 3: Item’s effect activates
Exceptions:
Step 3: If player is not holding an item, then do nothing
Post conditions: The effect of the item
Priority: 2
ID: 3aITM

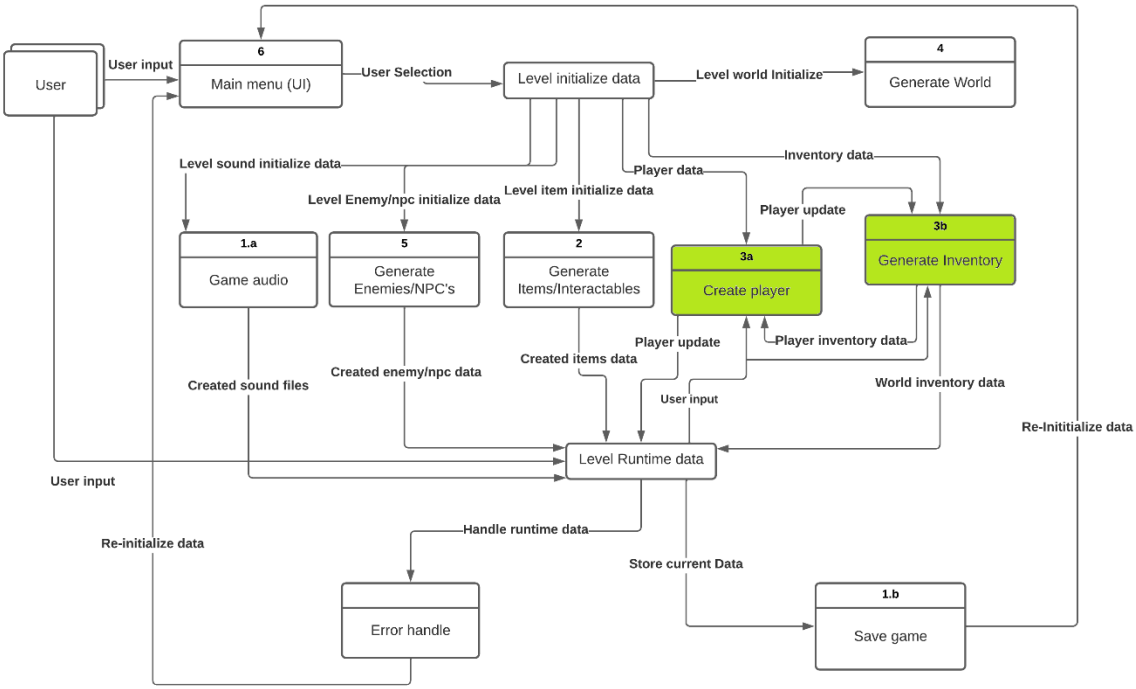
Name: Store Item
Summary: The player moves an item into their inventory
Actors: Player
Preconditions: The player has an item equipped
Basic sequence:
Step 1: Accept input of "I"
Step 2: Inventory opens
Step 3: Player drags equipped item into inventory
Exceptions:
Step 3: If inventory is full, dragging an item to a slot will swap items
Post conditions: Equipped item is stored
Priority: 3
ID: 3bSTR

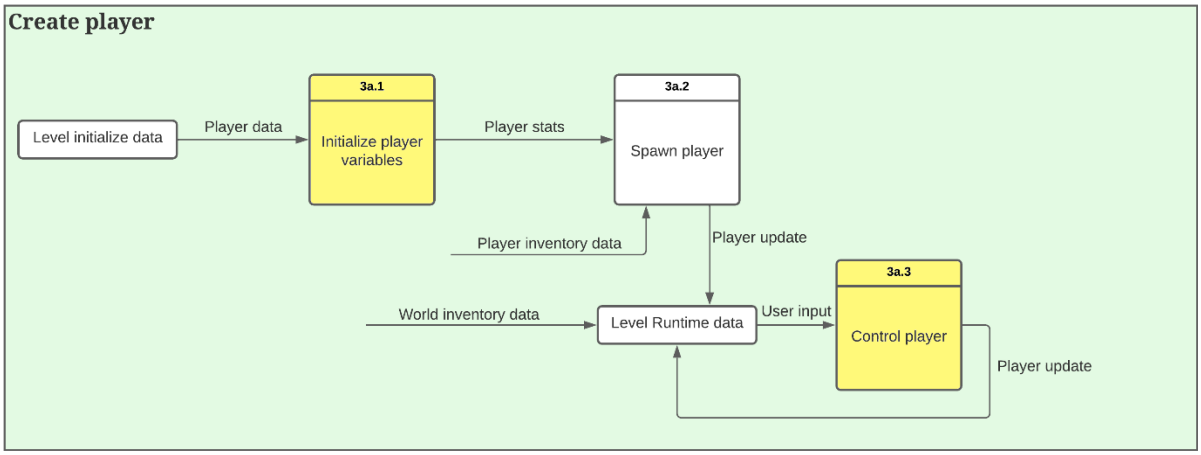
Name: Retrieve Item
Summary: The player moves an item from their inventory to equip it
Actors: Player
Preconditions: There is at least 1 item in the inventory.
Basic sequence:
Step 1: Accept input of "I"
Step 2: Inventory opens
Step 3: Player drags an item from their inventory into their equip slot
Exceptions:
Step 3: If an item is already equipped, then it will be swapped with into inventory
Priority: 3
ID: 3bRTV

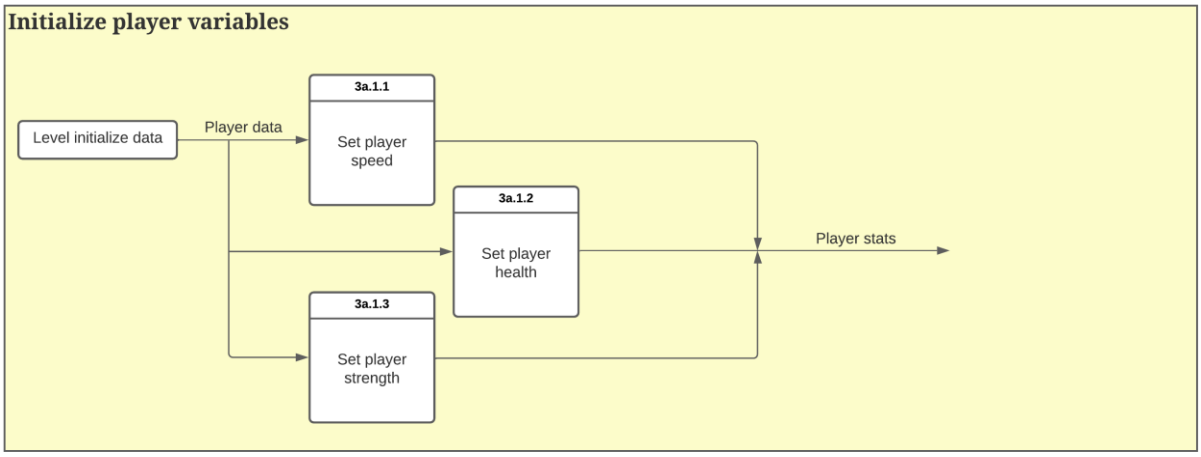
3. Data Flow diagram(s) from Level 0 to process description for your feature _____14

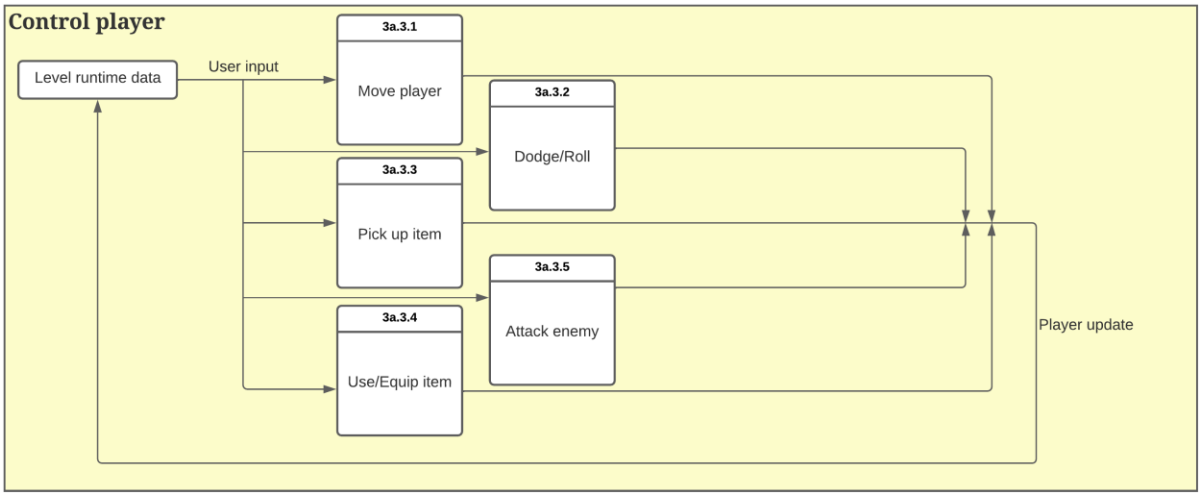
Data Flow Diagrams

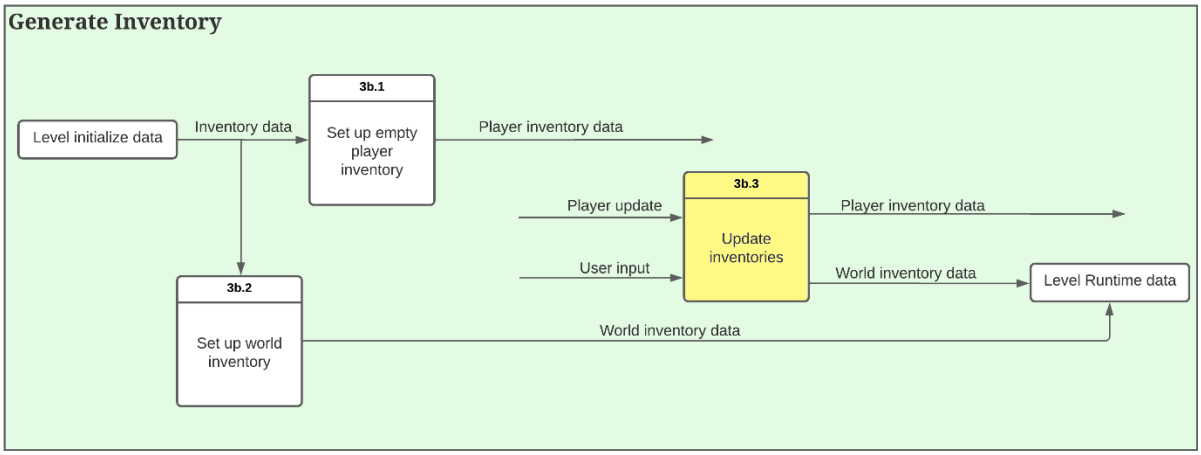
Level 0

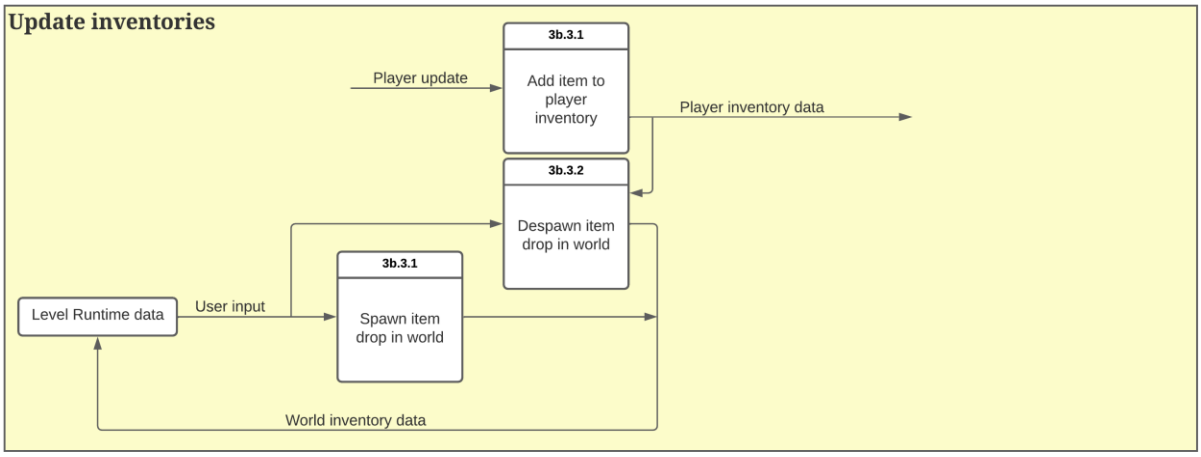





Initialize player variables
Level initialize data
Player data
3a.1.1
Set player speed
3a.1.2
Set player health
3a.1.3
Set player strength
Player stats


Control player
Level runtime data
User input
3a.3.1
Move player
3a.3.2
Dodge/Roll
3a.3.3
Pick up item
3a.3.4
Use/Equip item
3a.3.5
Attack enemy
Player update


Generate Inventory
Level initialize data
Inventory data
3b.1
Set up empty player inventory
Player inventory data
Player update
3b.3
Update inventories
Player inventory data
User input
World inventory data
Level Runtime data
3b.2
Set up world inventory
World inventory data



Process Descriptions

Initialize player variables:

Set all player variables to default values

Move player:

While player is providing movement input

…Move character

END WHILE

Dodge/Roll:

IF player presses dodge/roll button

…Make character dodge/roll

END IF

Pick up item:

IF player moves over item

…Pick up item into inventory

END IF

Use/Equip item:

IF player presses item button

…Use currently equipped item

END IF

Add item to player inventory:

IF player moves over item

…Place item in character inventory and remove from world

END IF

De-spawn item from world:

IF player moves over item

… Remove item from the game world

END IF

Spawn item drop in world:

IF enemy is killed or box is opened

…Spawn item into the world to be picked up

END IF

4. Acceptance Tests _____9

Example for player feature

Test various values in player variables for edge cases.

The test will consist of:

- Health: Above 100%
- Health: Below 0%
- Strength and Speed: At various large numbers
- Strength and speed: At negative values
- All variables for overflows and underflows.

Example for inventory management feature

Test various scenarios in inventory class for edge cases.

The test will consist of:

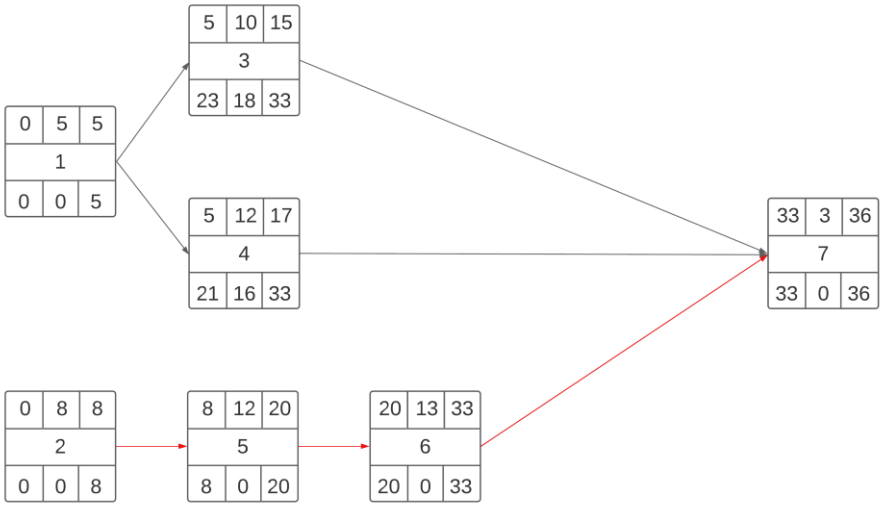
- Number of items: Above maximum inventory capacity
- Number of items: Less than 0
- Using an item when the player has none

5. Timeline _____/10

Work items

Task	Duration (Hrs)	Predecessor Task(s)
1. Player movement	5	-
2. Inventory research	8	-
3. Player/World interactions	10	1
4. Player/NPC interaction	12	1
5. Database Construction	12	2
6. Inventory management	13	2, 5
7. Testing	3	3, 4, 6

Pert diagram



Gantt timeline