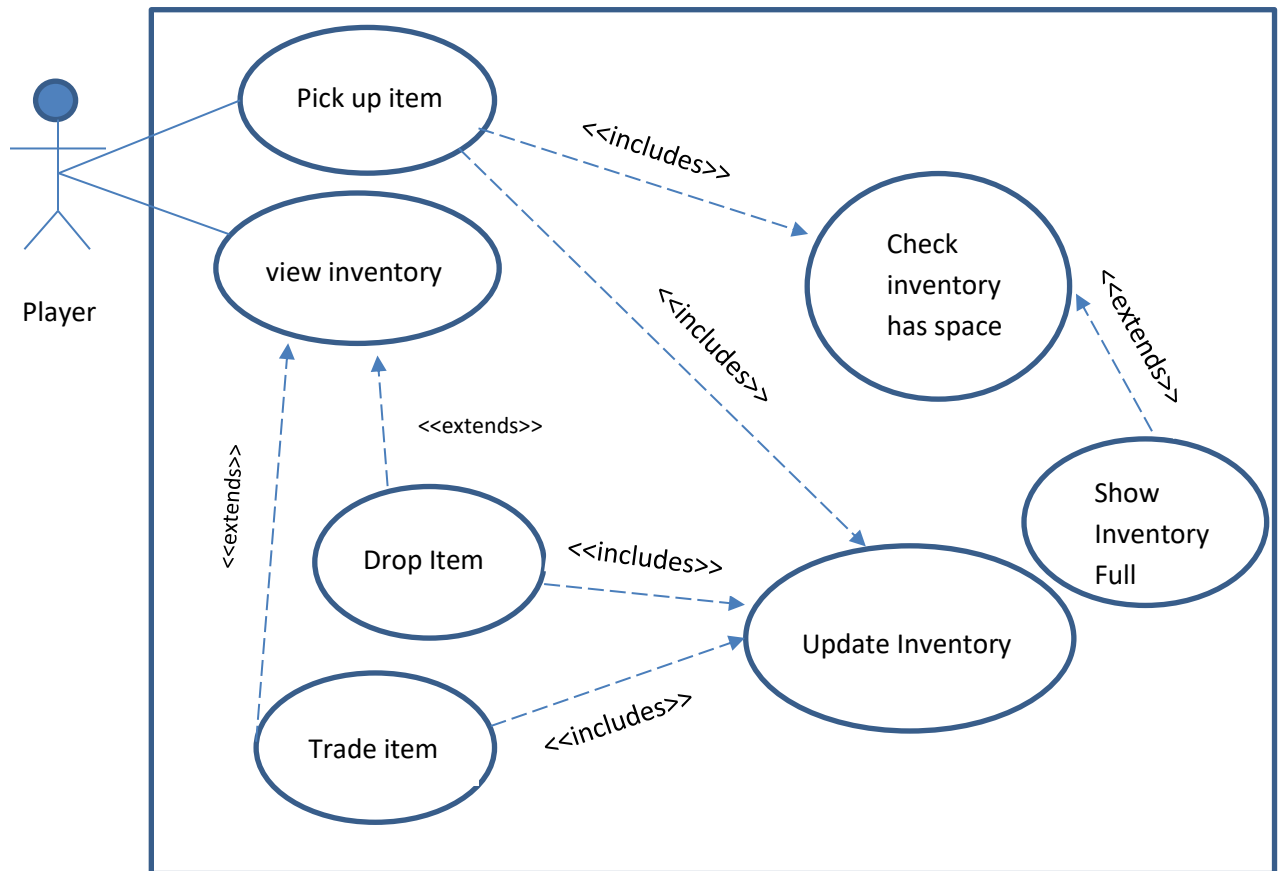


1. Brief introduction _/3

In order to contribute to Existential, I will implement character inventory, inventory interactions, and a single level. The inventory feature will be my main feature. It will give the character the ability to hold up to 15 items which will be traded and used throughout the game. I will focus the champion around the inventory feature.

2. Use case diagram with scenario _14

Use Case Diagram



Scenarios

Name: Pick up item

Summary: The player picks up an item in the game.

Actors: Player.

Preconditions: The player has navigated to the item already placed on the map.

Basic sequence:

Step 1: Enter proper controls to pick up the item.

Step 2: Check if the inventory has space for the item.

Step 3: Add the item to inventory.

Exceptions:

Step 1: Inventory is full: display “inventory full” and do not pick up item.

Post conditions: Item is added to inventory and is visible when inventory is viewed.

Priority: 1

ID: C01

Name: Drop Item

Summary: The player removes an item from their inventory.

Actors: Player.

Preconditions: Player must view inventory and item must exist.

Basic sequence:

Step 1: Player selects item.

Step 2: Player selects remove.

Step 3: Show item has been successfully removed.

Exceptions:

Step 1: No items in inventory: selections will be useless and produce no action.

Post conditions: Item is no longer in the player inventory.

Priority: 1

ID: C02

Scenarios Continued

Name: View Inventory

Summary: The player views their current inventory.

Actors: Player.

Preconditions: Inventory has been initialized.

Basic sequence:

Step 1: Player selects the correct control to view inventory.

Step 2: Inventory menu is displayed.

Step 3: Player has option to drop item, trade item, or exit menu.

Step 4: When player is done with inventory, exit the menu.

Exceptions:

Step 1: Player drops item: go to scenario C02.

Step 2: Player trades item: go to scenario C04.

Post conditions: Player has viewed inventory menu and exited when done.

Priority: 1

ID: C03

Name: Trade Item

Summary: The player trades or exchanges an item in their inventory.

Actors: Player.

Preconditions: Player has item to trade and enters a trade situation in the game.

Basic sequence:

Step 1: Player views inventory.

Step 2: Player selects item to trade.

Step 3: Player selects trade button.

Exceptions:

Step 1: Player tries to trade wrong item: show "Item not tradeable" on screen.

Step 2: Player presses trade button with no item selected: button produces no action.

Post conditions: Player will see a new item added to their inventory and an old one deleted from it.

Priority: 2

ID: C04

Scenarios Continued

Name: Update Inventory

Summary: The player makes changes (add/drop/trade) to their inventory.

Actors: Player.

Preconditions: Inventory has been initialized and checks for all updates have passed.

Basic sequence:

Step 1: Specify action: trade, drop, or add

Step 2: For add: update inventory with label and picture of item added.

Step 3: For drop: remove the item picture and label from inventory.

Step 4: For trade: perform step 3 for the item being exchanged and step 2 for the item being acquired (in that exact order).

Exceptions:

Step 1: Player exits before update is completed: inventory will be unaltered.

Post conditions: Inventory has been updated according to specified intentions.

Priority: 1

ID: C05

Name: Check inventory has space

Summary: The game checks that the inventory has space for an item.

Actors: Player.

Preconditions: Inventory has been initialized and player tries to add item.

Basic sequence:

Step 1: Check size of current inventory.

Step 2: If the number is less than the max size, continue to add item.

Exceptions:

Step 1: Inventory is full: show "inventory is full"

Post conditions: Item is added to inventory or "inventory is full" has been shown.

Priority: 1

ID: C06

Scenarios Continued

Name: Show inventory full

Summary: Inventory full screen is shown.

Actors: Player.

Preconditions: Inventory has been filled and player tries to add item.

Basic sequence:

Step 1: Inventory is full is shown on the screen.

Exceptions: Player exits immediately after trying to pick up item with a full inventory:
show "inventory is full" action will be abandoned

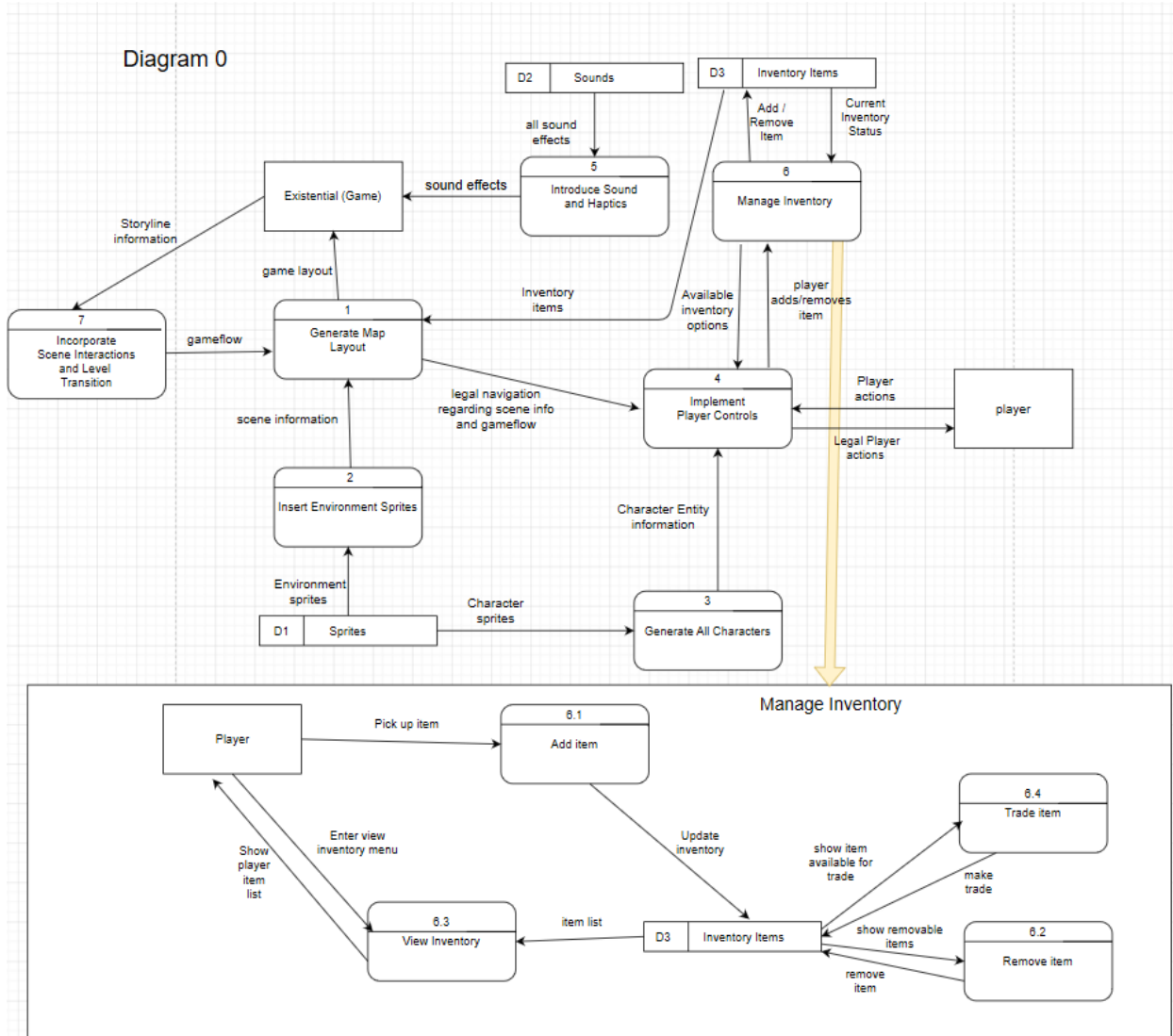
Post conditions: Inventory full is displayed.

Priority: 3

ID: C07

3. Data Flow diagram(s) from Level 0 to process description for your feature ____14

Data Flow Diagrams



Process Descriptions

Process View Inventory

```
WHILE player is playing
    IF player presses view inventory button
        Bring player to inventory screen
        WHILE viewing inventory screen
            IF player presses the exit inventory button
                Exit inventory screen
            IF player takes invalid actions or press illegal buttons
                Display pop-up error screen
        END WHILE
    END WHILE
END WHILE
```

Process Add Item

```
WHILE player is navigating around map
    IF player presses button to pick up valid inventory item
        IF player has less than the max inventory items
            Add item to player inventory and indicate success with pop-up message
        IF player has max items (full inventory)
            Display pop up message saying inventory full
            Do not add item
        END IF
    END IF
END WHILE
```

Process Trade Item

```
WHILE player is viewing inventory
    IF player selects tradeable* inventory item
        IF player selects trade button
            Initiate trade and indicate success with a pop-up message
        ELSE IF player selects non-tradeable item and selects trade button
            Pop up message that says the trade is not valid
        END IF
    END IF
END WHILE
*tradeable: the player is at a spot in the game where they can trade the item
```

Process Remove Item

```
WHILE player is viewing inventory
    IF player presses button to remove inventory item
        Remove inventory item
    END IF
END WHILE
```

4. Acceptance Tests _____9

Inventory Feature Verification Tests:

Action/Problem	Result/Solution	Notes
Player pick up item when inventory is full	Inventory full screen pops up. The player will not be able to pick up the item.	N/A
Player views empty inventory	Player sees inventory menu with no items in inventory.	The menu will still be visible.
Player tries to trade with the wrong item	Error screen will be displayed. No change to inventory will be made	Error screen will indicate that the wrong item was selected
Player tries to remove item that doesn't exist in their inventory	This will not occur because the item will have to be clicked to be removed. The item will not be displayed. Therefore, there is nothing to click.	N/A
Player tries to trade a non-existing item	The trade will not take place. No error message will occur.	This should not occur during normal gameplay because the item won't be visible or selectable for trading.
Player drops everything in their inventory	Player's inventory will be empty	N/A
Player fills inventory then removes all items in inventory	The player will have no issues managing their inventory within the established bounds. There should be no bugs with this action.	N/A
Player fills inventory, removes half of the items, and then fills it again	The player will have no issues managing their inventory within the established bounds. There should be no bugs with this action.	N/A
Player fills inventory, empties inventory, fills inventory halfway, then empties inventory completely	The player will have no issues managing their inventory within the established bounds. There should be no bugs with this action.	N/A
Player moves levels with inventory half full	All inventory items should continue to the next level with the player.	N/A
Player moves levels with full inventory	All inventory items should continue to the next level with the player.	N/A
Player moves levels with empty inventory	Player will have an empty inventory in the next level	N/A

5. Timeline ____/10

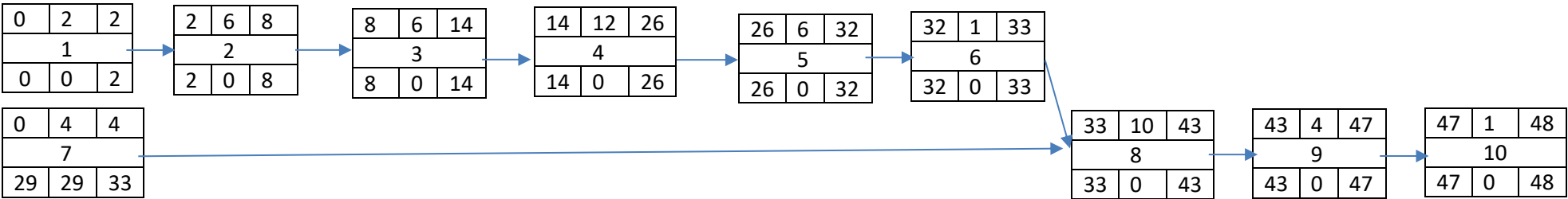
Work items:

Task	Duration (Hrs)	Predecessor Task(s)
1. Design inventory	2	-
2. Implement inventory design	6	1
3 Program interactable items for inventory	6	2
4. Program inventory functionality	12	3
5. Test inventory	6	4
6. Document inventory	1	5
7. Design level	4	-
8. Program level	10	6, 7
9. Test level	4	8
10. Document level	1	9

Work Items from Master Gantt Chart:

Tori			
1. Design inventory	2		planned
2. Implement inventory design	6		planned
3. Program interactable items for inventory	6		planned
4. Program inventory functionality	12		planned
5. Test inventory	6		planned
6. Document inventory	1		planned
7. Design level	4		planned
8. Program level	10		planned
9. Test level	4		planned
10. Document level	1		planned
			planned
			planned
totals	52	0	

Pert diagram

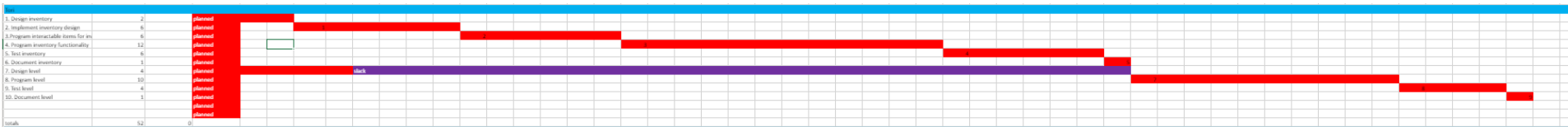


Gantt Timeline

Overview:

Tori			
1. Design inventory	2	planned	
2. Implement inventory design	6	planned	
3. Program interactable items for inventory	6	planned	
4. Program inventory functionality	12	planned	
5. Test inventory	6	planned	
6. Document inventory	1	planned	
7. Design level	4	planned	
8. Program level	10	planned	
9. Test level	4	planned	
10. Document level	1	planned	
		planned	
		planned	
		planned	
totals	52	0	

Full Gantt Chart



In Depth Gantt Chart View:

OneDrive Gantt Chart: https://vandalsuidaho-my.sharepoint.com/:x:/r/personal/hink0402_vandals_uidaho_edu/_layouts/15/Doc.aspx?sourcedoc=%7B684528FF-AF2F-46C4-BED8-5DC692C5CCE1%7D&file=GanttChart.xlsx&action=default&mobileredirect=true

First Half:



Second Half:

