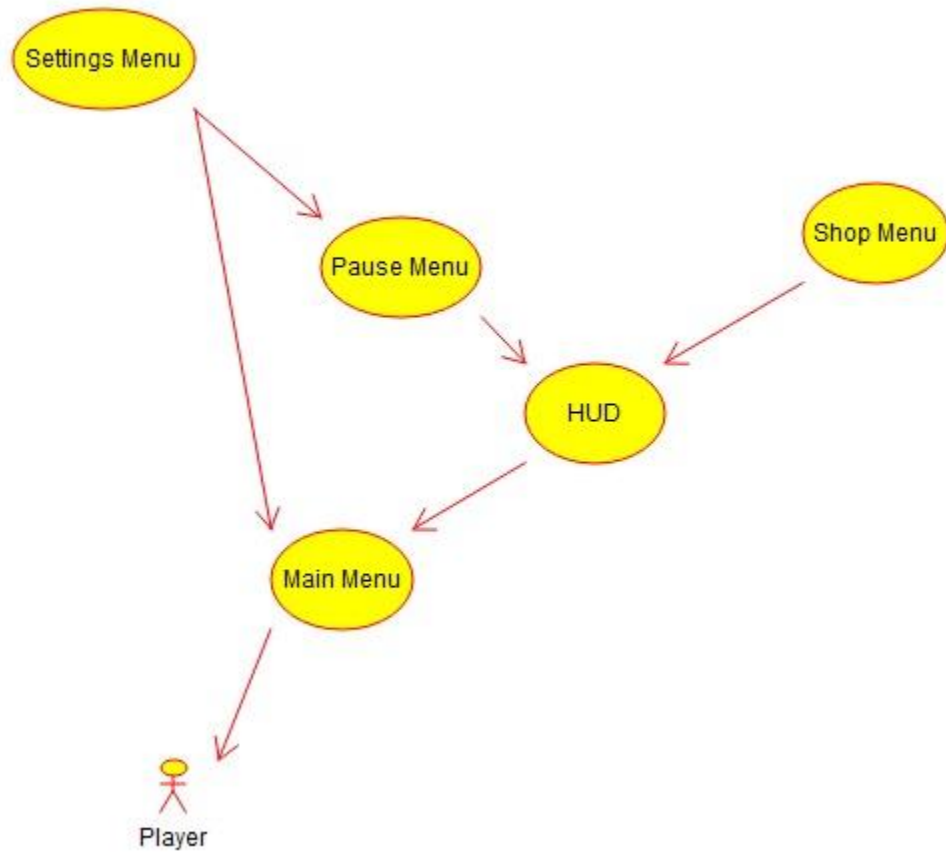


1. **Brief Introduction.** My features for the Septicemia video game are the UI and the upgrade system. This will include the following menus and subfeatures:
 - a. **Main Menu.** When the player boots up the game, they will be presented with a main menu with the following prompts:
 - i. Play Game
 - ii. Settings
 - iii. Quit To Desktop
 - b. **Pause Menu.** When the player is in-game, they will be able to pause at any time and will be presented with a pause menu with the following prompts:
 - i. Resume
 - ii. Settings
 - iii. Quit To Menu
 - iv. Quit To Desktop
 - c. **Settings Menu.** When the player selects settings from either of the two previous menus they will be presented with a settings page with the following settings:
 - i. Volume Slider
 - ii. DRBC Mode Checkbox
 - d. **In-game HUD.** This will be displaying the following information at all times during gameplay:
 - i. Player Health Bar
 - ii. Brain (Collectables dropped by enemies) Counter
 - iii. Current Wave Counter
 - e. **Shop Menu.** When the player interacts with the shopkeeper npc they will be presented with a menu which allows them to spend their collected brains to upgrade their character. The shop menu will display the following:
 - i. Brain Counter
 - ii. Upgrade Purchasing System

2. Use Case Diagram With Scenarios

Use Case Diagrams



Scenario 1

Name: Upgrading the Player

Summary: Spending brains at the shop

Actors: Player

Basic Sequence:

- 1) Wave ends
- 2) Shop opens
- 3) Player interacts with npc
- 4) Shop menu opens
- 5) Player buys upgrades
- 6) Player closes shop
- 7) Next wave begins

Exceptions:

- 1) Wave ends

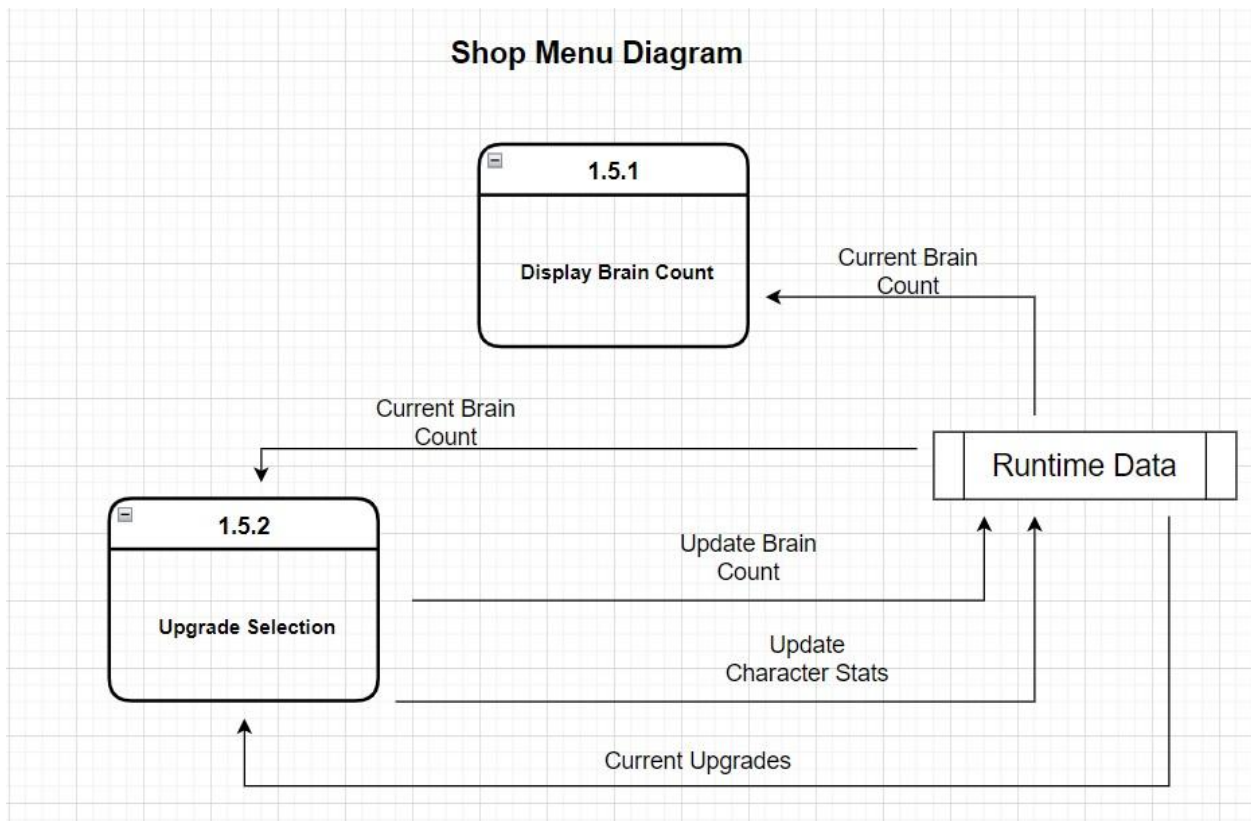
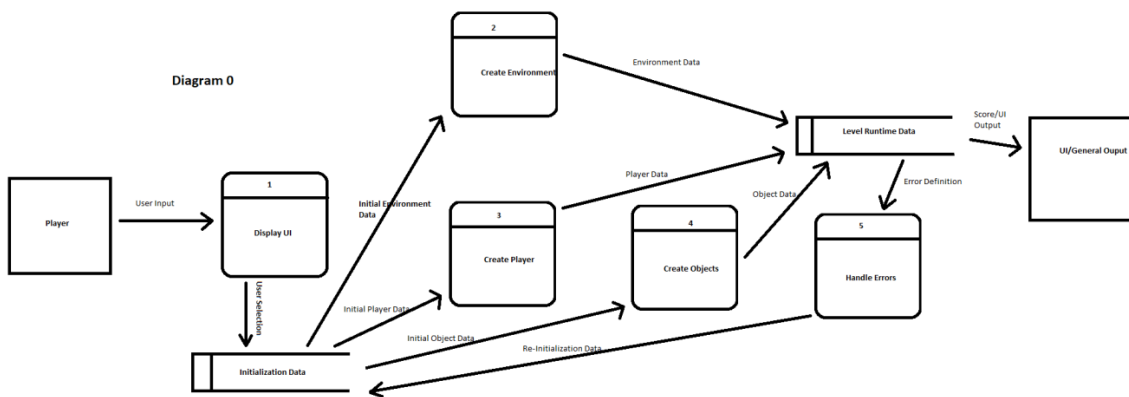
- 2) Shop Opens
- 3) Player interacts with npc
- 4) Shop menu opens
- 5) Player pauses the game
- 6) The pause menu comes up

Post Conditions: The pause menu trumps every other menu and has highest precedence.

Priority: 1

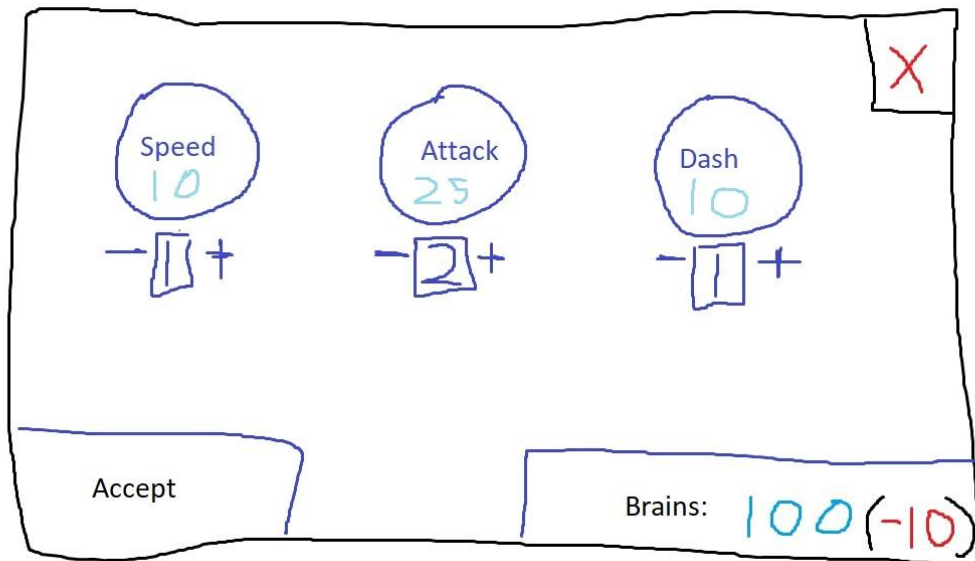
ID: UP1

3. Data Flow Diagram(s) From Level 0 To Process Description For Your Feature



Process Description For Process 1.5.2: Upgrade Selection

The user interacts with the shopkeeper npc and is presented with the shop menu. The player's current brain count is displayed on the bottom along with several upgrades they can choose from. These upgrades have a cost (in brains) and the player can pick as many as they can afford. The brain counter is updated automatically when the player selects the "apply" button. (**Note:** Early concept art, very likely to change).



4. Acceptance Tests

User Input: This feature involves a lot of user input (clicking buttons). I'm not sure if I can automate a test of the user clicking on the screen but I'd do that if I could.

Spending Brains: I could also test to make sure spending brains in the shop works (being updated properly).

Upgrading Character: I could make a test for ensuring that buying upgrades in the shop properly changes the player stats.

Pausing the Game: I could also test to ensure the game is properly paused when it should be.

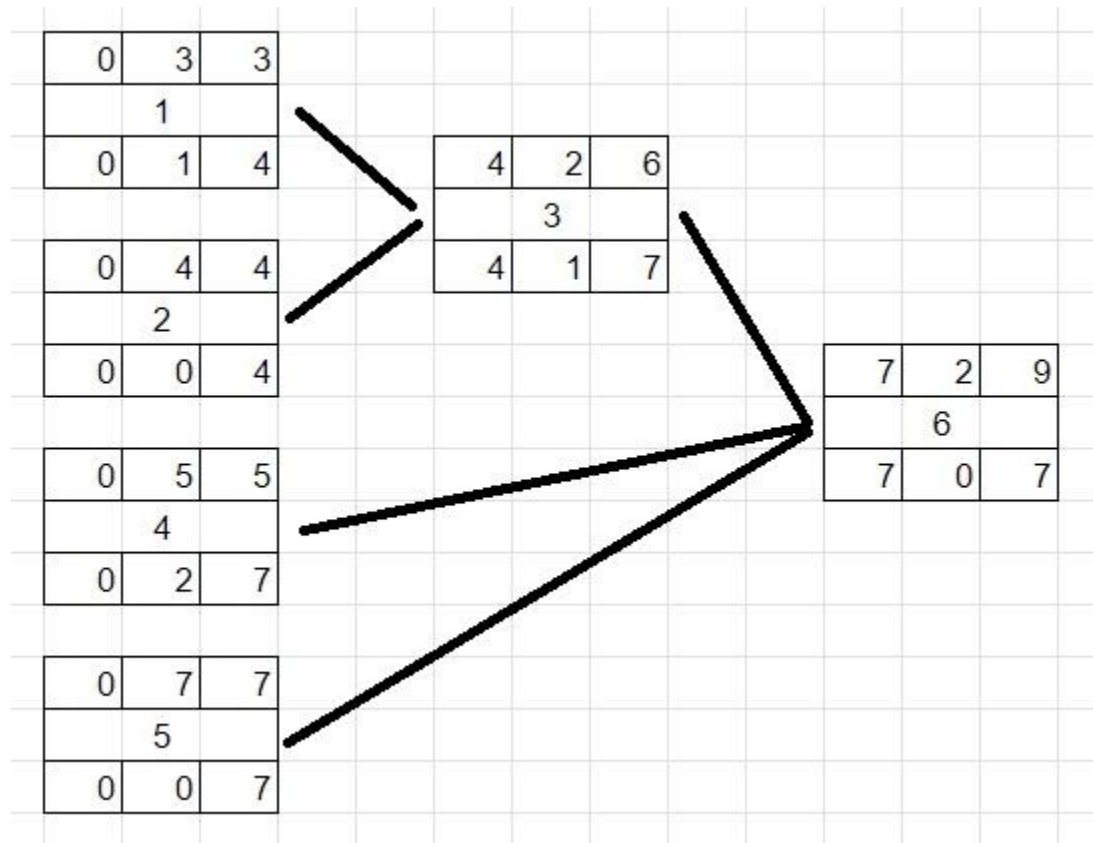
Wave Update: Another test could be to ensure the wave counter in the HUD is updated properly.

5. Timeline

Work Items

Task	Duration (hours)	Predecessor Task(s)
1. Create Main Menu	3	-
2. Create Pause Menu	4	-
3. Create Settings Menu	2	1, 2
4. Create HUD	5	-
5. Create Shop Menu	7	-
6. Integrate Feature	2	1, 2, 3, 4, 5

Pert Diagram



Gantt Timeline

Key	
	Work Hours
	Slack Hours
Hours (Right)	
Job (Below)	
	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
1	
2	
3	
4	
5	
6	