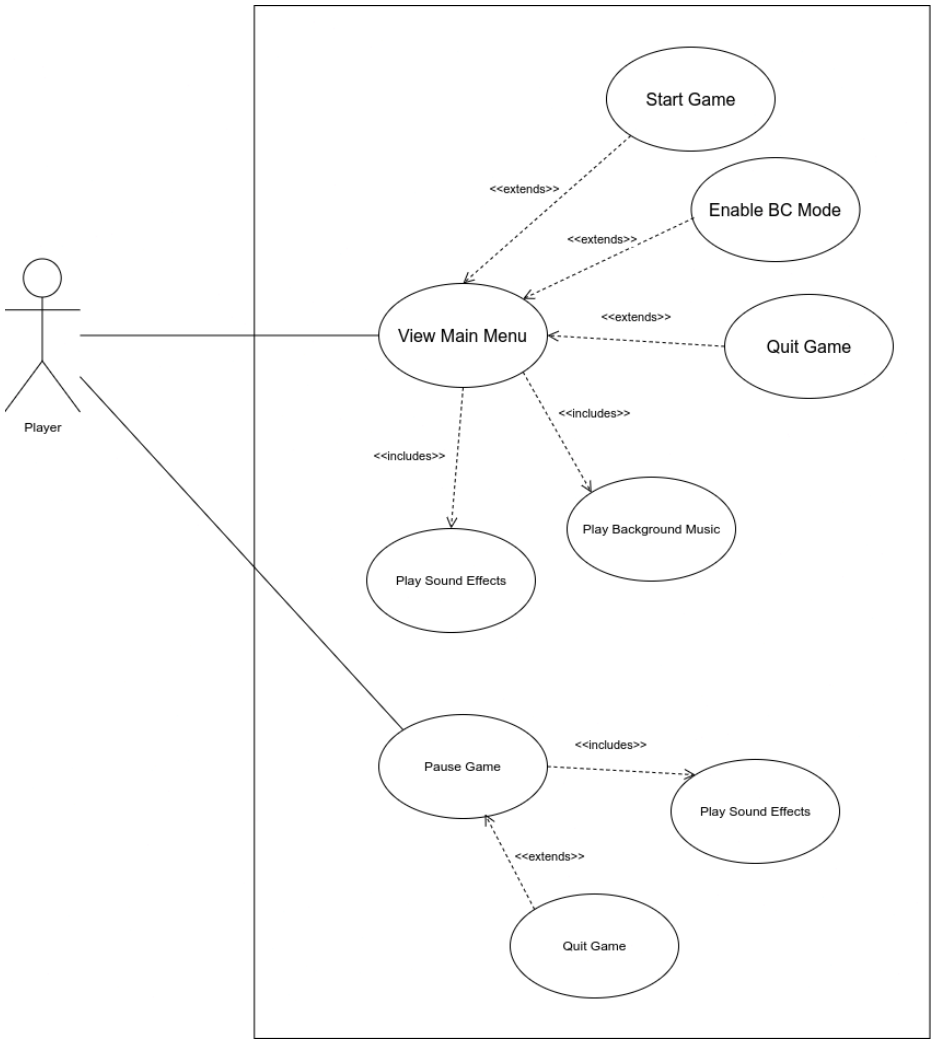
Name: Justin Baldwin Mark _____/50

1. Brief introduction __/3

I am the developer responsible for all menus, UI, item generation, and item pickup. I plan to create an immersive and interactive experience for the player as soon as the game starts. The main menu will immediately present the player with options to start the game, enable BC mode, or exit. The main menu design will set the tone for the game before the player even starts playing. Therefore, I plan to make a design that previews what the player will experience when they load into the game. The UI will also reflect these same design choices. Item generation and item pickup will be items such as health packs and ammo for the player to pick up. Upon item pickup, those changes will be immediately reflected in the UI and the item will disappear from the map.

2. Use case diagram with scenario __14

Use Case Diagram



Scenarios

Name: Main Menu

Summary: The main menu is shown immediately when the player starts the game.

Actors: Player

Preconditions: Game has been built and an .exe file has been downloaded by the user.

Basic sequence:

Step 1: HexTanx is opened by the user.

Step 2: Main menu is displayed.

Step 3: Accept player selection.

Step 4: Redirect to start game, enable/disable BC mode, or exit game.

Exceptions:

Step 3.1: Player selects play button: Level generation and game initialization begins.

Step 3.2: Player selects exit button: Exit the game.

Step 3.3: Player toggles BC mode: Enable BC mode.

Step 3.4: Player clicks anywhere else on the screen: Do nothing.

Post conditions: Game initialization and game play begins.

Priority: 2

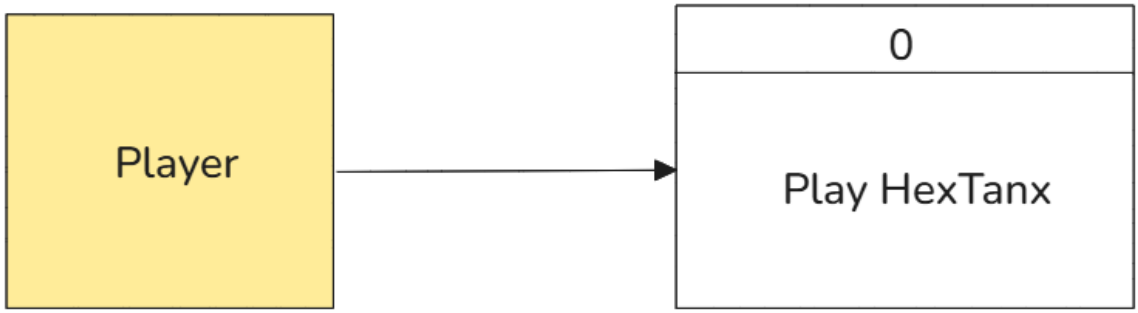
ID: C01

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

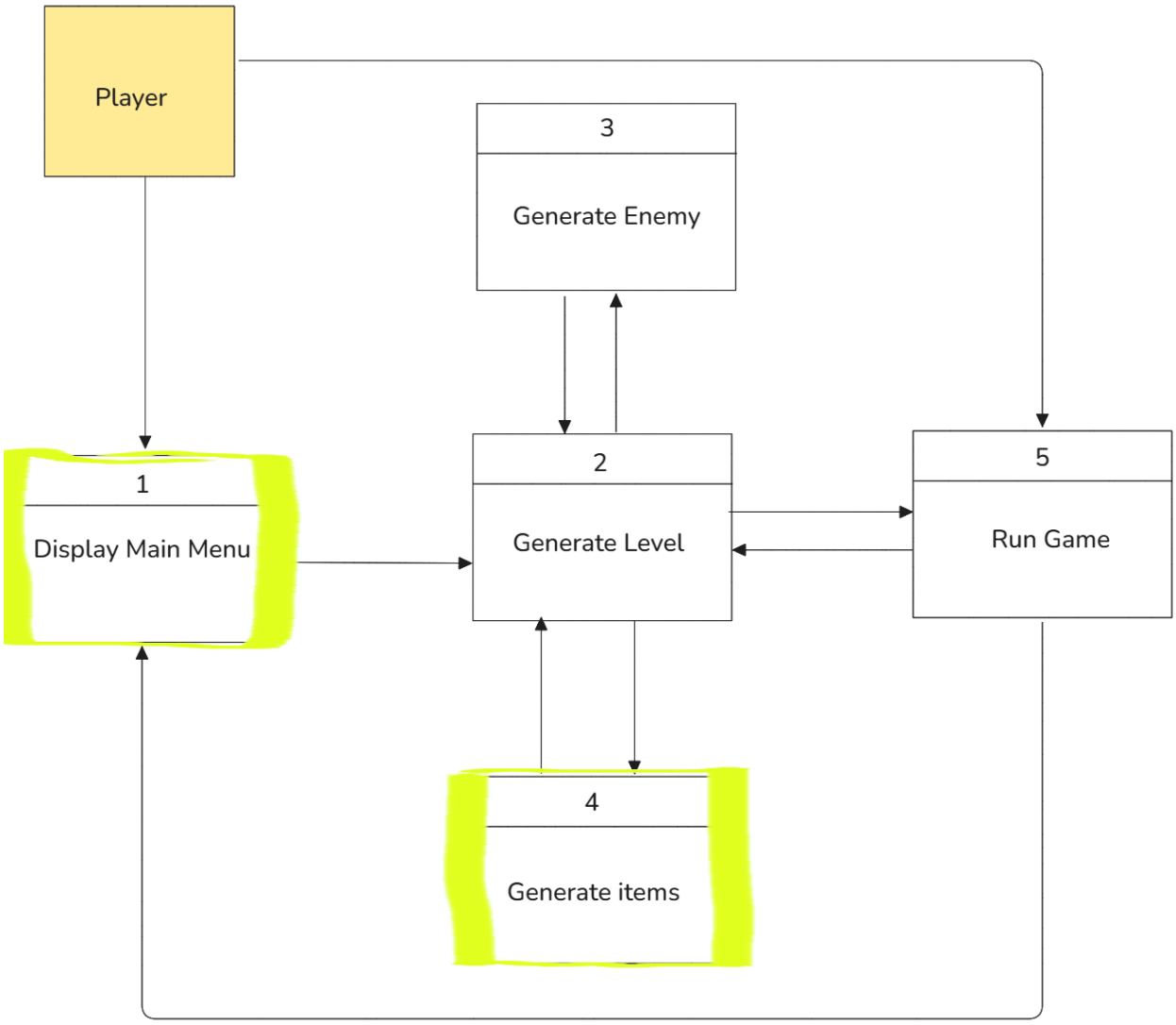
3. Data Flow diagram(s) from Level 0 to process description for your feature _____14

Example:

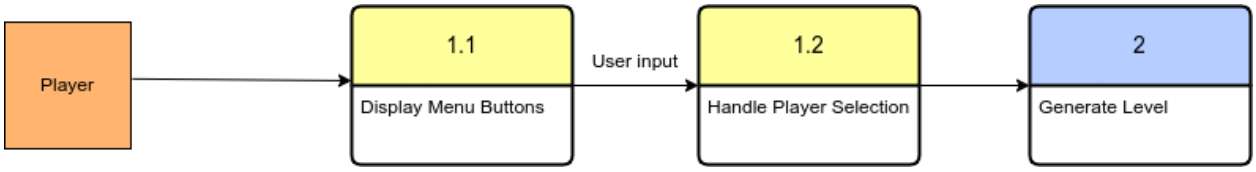
Level 0 Data Flow Diagram (Context Diagram)



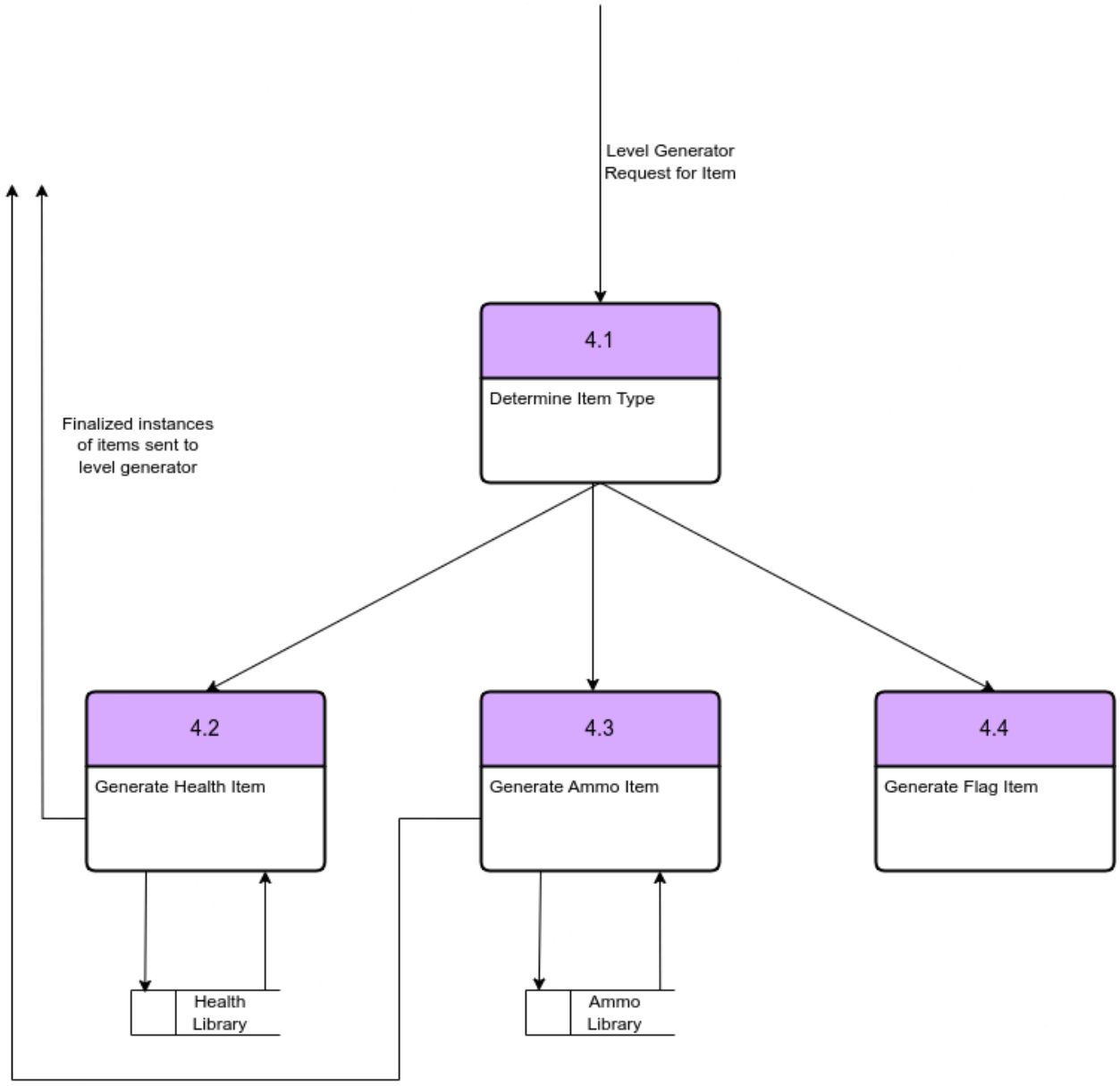
Level 1 Data Flow Diagram (Diagram 0)FD



Level 2 Data Flow Diagram (Main Menu Process)



Level 2 Data Flow Diagram (Item Generation)



Process Descriptions

Main Menu:

Display Menu items/buttons

If button pressed

Case 1: Player selects start game

Begin next process

Case 2: Player toggles BC mode

If BC mode is disabled

Enable BC mode

If BC mode is enabled

Disable BC mode

Case 3: Player selects exit game

Exit game

Else

Do nothing

Item Generation:

If request received for item generation from level generator

Generate flag and place at set location

Determine item type

Generate random number of 1 or 2

If number equals 1

Initialize health item and store in health library

Else

Initialize ammo item and store in ammo library

Send finalized instances of items to level generator

Else

Do nothing

4. Acceptance Tests _____9

Test for Main Menu

Test Case 1: Start New Game

Action: Press the “Start Game” button.

Expected Result: The game initializes and loads within 3 seconds. The output file contains the message “Game initialized successfully”.

Negative Case: If initialization fails, an error message will specify the exact point of failure. For example, “Error: Game initialization failed at scene 1 load”.

Test Case 2: Toggle BC Mode

Action: Toggle the “BC Mode” checkbox.

Expected Result: The box will be filled with a checkbox. The output file will contain a message stating “success” and the player stats that were changed.

Negative Case: If BC mode enable fails, an error message will specify the point of failure.

Test Case 3: Exit Game

Action: Press the “Exit” button.

Expected Result: The game closes with no errors. The output file contains the message "Game exited successfully".

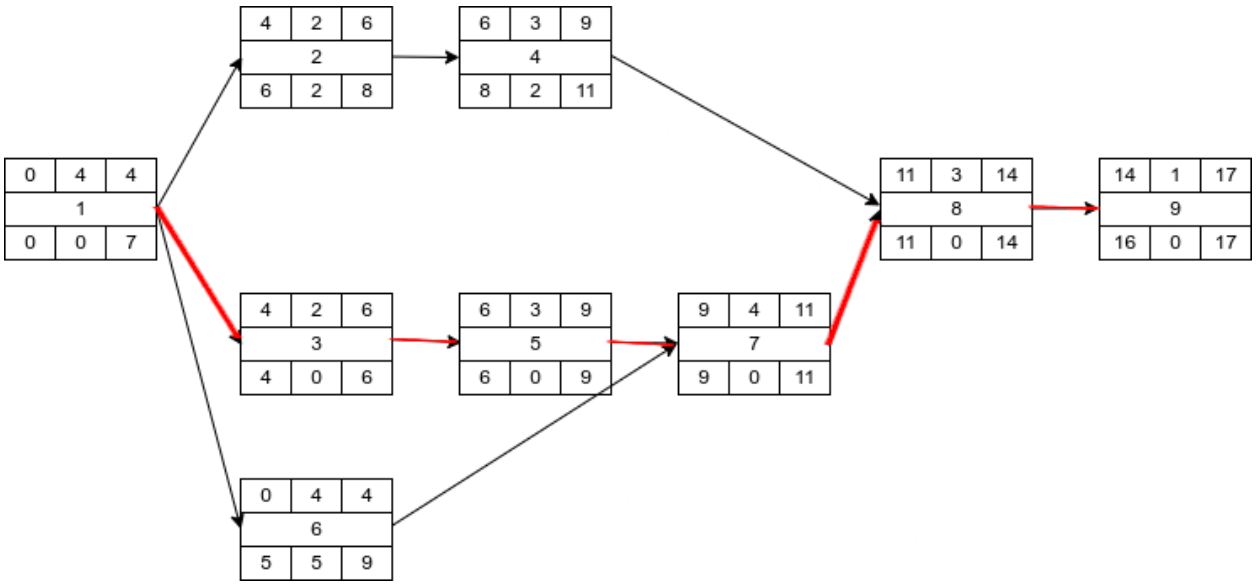
Negative Case: If game exit fails, an error message stating "Error: Exit function did not execute properly", will be logged.

5. Timeline _____/10

Work items

Task	Duration (PWks)	Predecessor Task(s)
1. Class Diagrams and Organization	4	-
2. Main Menu Design	2	1
3. UI Design	2	1
4. Main Menu Implementation	3	2
5. UI Implementation	3	3
6. Item Generation Implementation	4	1
7. Programming	4	4,5,6
8. Testing	3	7
9. Installation	1	8

Pert diagram



Gantt timeline