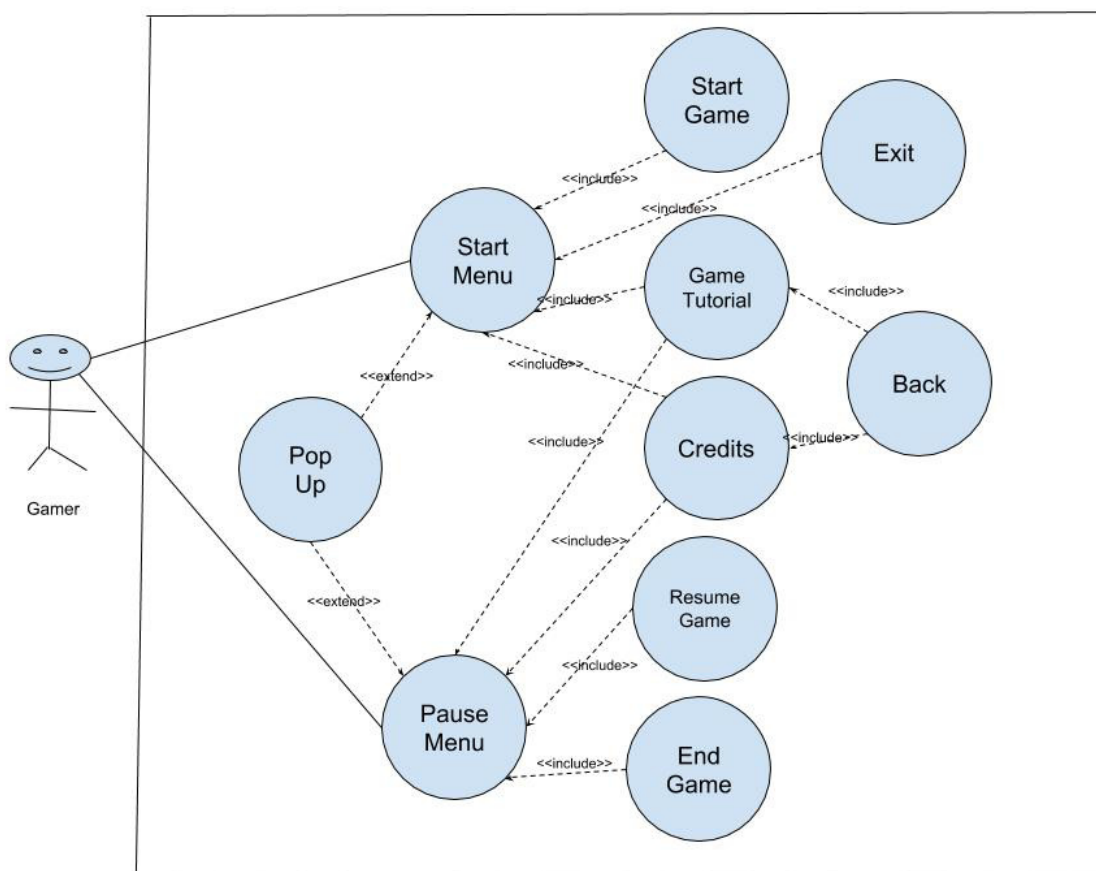# 1. Brief introduction __/3

I will be designing the game menus. The gamer will interact with a start menu and a pause menu. Both menus will have their appropriate display design and features.

2. Use case diagram with scenario __14

Use Case Diagrams

Display Menu

Scenarios

Name: Start Menu

Summary: Displays several options than can be selected before gameplay.

Actors: Gamer.

Preconditions: Beginning of game has been initialized.

Basic sequence:

      Step 1: Display options.

Step 2: Accept selection through left mouse click.

Step 3: Execute selected option.

Exceptions:

Step 1: Left mouse button is pressed when the cursor is not over a menu option.

Step 2: Display pop-up message.

Post conditions: Selected option is executed.

Priority: 1*

ID: C01

Name: New Game.

Summary: Starts a new game.

Actors: Gamers.

Preconditions: "New Game" option is selected in Start Menu.

Basic sequence:

Step 1: A new game is initialized.

Post conditions: New game is in play.

Priority: 1*

ID: DS01

Name: Exit.

Summary: Exits game application.

Actors: Gamers

Preconditions: "Exit Game" option is selected in Start Menu.

Basic sequence:

Step 1: Game application closes.

Post conditions: Selected option is executed.

Priority: 3*

ID: DS02

Name: Game Tutorial.

Summary: A tutorial is displayed that describes game rules and gameplay controls. The "Back" option is available.

Actors: Gamers.

Preconditions: "Game Tutorial" is selected in Start Menu or Pause Menu.

Basic sequence:

Step 1: Display tutorial and "Back" option.

Step 2: Wait for "Back" option to be selected.

Step 3: Exit tutorial and display appropriate menu.

Exceptions:

Step 1: Left mouse button is pressed when cursor is not over a "Back" option.

Step 2: Display pop-up menu.

Post conditions: Tutorial is displayed.

Priority: 2*

ID: DS03

Name: Credits.
Summary: Displays game production information such as it's creators.
Actors: Gamers.
Preconditions: "Credits" option is selected in the Start Menu or Pause Menu.
Basic sequence:
  Step 1: Display game production information.
  Step 2: Wait for "Back" option to be selected.
  Step 3: Exit credits and display appropriate menu.
Exceptions:
  Step 1: Left mouse button is pressed when cursor is not over "Back" option.
  Step 2: Display pop-up menu.
Post conditions: Game production information is displayed.
Priority: 3*
ID: DS04

Name: Pop-up Message.
Summary: Displays an exception message when the left mouse button is pressed and the cursor is not over an appropriate selection.
Actors: Gamers.
Preconditions: Start Menu, Pause Menu, Game Tutorial, or Credits or is displayed.
Basic sequence:
  Step 1: Left mouse button is pressed when cursor is not over an appropriate selection.
  Step 2: Pop-up message is displayed.
  Step 3: Pop-up message disappears after a set time.
Exceptions:
  Step 1: Left mouse button is pressed when cursor is outside of game display: input not received.
Post conditions: Pop-up message disappears.
Priority: 3*
ID: DS05

Name: Back.
Summary: Displays the previous menu.
Actors: Gamers.
Preconditions: The "Back" option is selected in Game Tutorial or Credits.
Basic sequence:
  Step 1: Display previous menu.
Post conditions: The appropriate Game Menu is displayed.
Priority: 2*

ID: DS06

Name: Pause Menu.

Summary: Displays several options that can be selected during gameplay.

Actors: Gamers.

Preconditions: "P" is inputted through keyboard during gameplay.

Basic sequence:

> **Step 1:** Display options.
>
> **Step 2:** Accept selection through left mouse click.
>
> **Step 3:** Execute selected option.

Exceptions:

> **Step 1:** Left mouse button is pressed when cursor is not over a menu option.
>
> **Step 2:** Display pop-up menu.

Post conditions: Selected option is executed.

Priority: 2*

ID: DS07

Name: Resume Game.

Summary: Resumes gameplay for current game.

Actors: Gamers.

Preconditions: Pause Menu is displayed.

Basic sequence:

> **Step 1:** Left mouse button is pressed when cursor is over the "Resume Game" option.
>
> **Step 2:** Gameplay for current game is resumed.

Post conditions: Game is in play.

Priority: 3*

ID: DS08

Name: End Game.

Summary: Gameplay for current game ends and the Start Menu is loaded.

Actors: Gamers.

Preconditions: Pause menu is displayed.

Basic sequence:

> **Step 1:** Left mouse button is pressed when cursor is over the "End Game" option.
>
> **Step 2:** Game ends.
>
> **Step 3:** Start Menu is displayed.

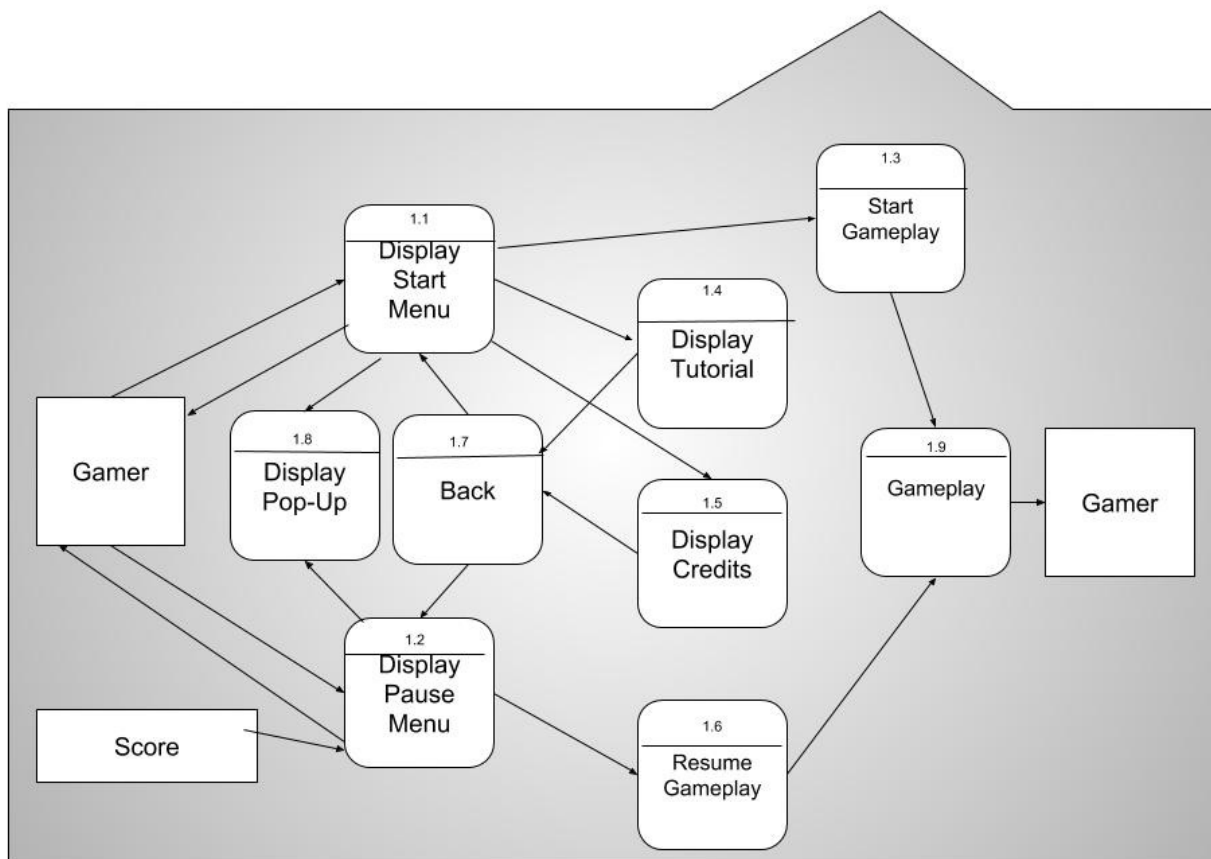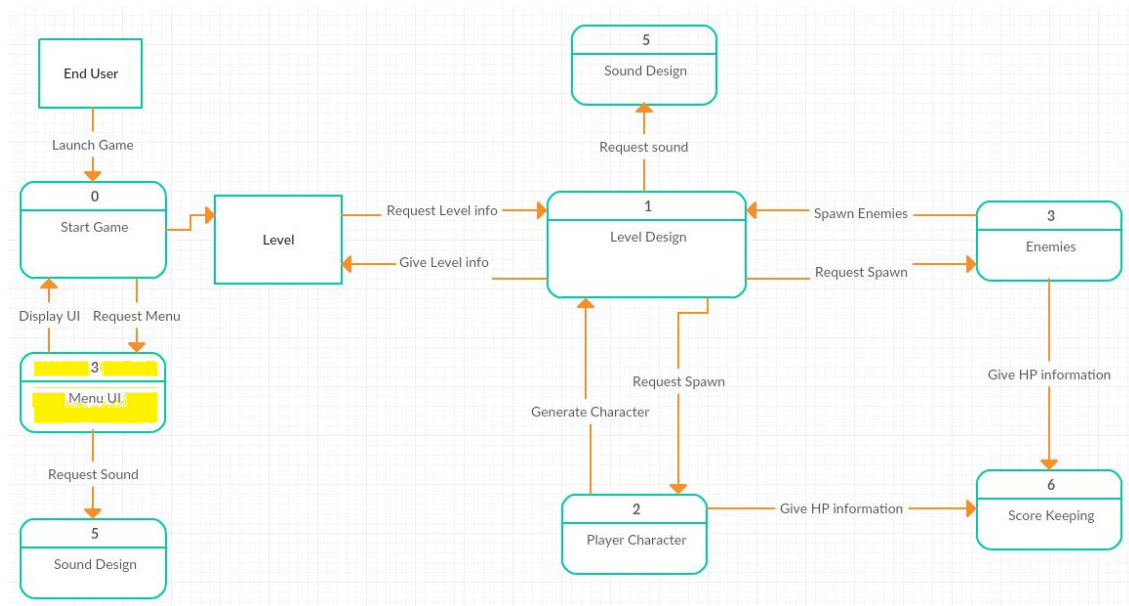**Post conditions:** Start Menu is displayed.

Priority: 3*

ID: DS09

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

Display Menu

Top Diagram (Level 0 / Context)

End User

Launch Game

| 0 | Start Game |

Level

Display UI   Request Menu

| 3 | Menu UI |

Request Sound

| 5 | Sound Design |

Request Level info

Give Level info

| 1 | Level Design |

Request sound

| 5 | Sound Design |

Spawn Enemies

Request Spawn

| 3 | Enemies |

Give HP information

Generate Character

Request Spawn

| 2 | Player Character |

Give HP information

| 6 | Score Keeping |

Bottom Diagram

1.1	Display Start Menu
1.3	Start Gameplay
1.4	Display Tutorial
1.5	Display Credits
1.8	Display Pop-Up
1.7	Back
1.2	Display Pause Menu
1.6	Resume Gameplay
1.9	Gameplay

Gamer

Score

Gamer

Process Descriptions

Display Start Menu:

WHILE gamer has not selected option DO

display the start menu

GET input from left mouse button

IF gamer selects **Start Game Play** DO

start game

IF gamer selects **Display Tutorial** DO

While gamer has not selected back option DO

Display Tutorial

END WHILE

IF gamer selects **Display Credits** DO

While gamer has not selected back option DO

Display Credits

END WHILE

IF gamer selects **Exit** DO

Exit

IF gamer selects invalid option DO

FOR 5 second DO

Display Pop-up

END WHILE

Display Pause Menu:

WHILE gamer has not selected option DO

display the pause menu

display the score

GET input from left mouse button

IF gamer selects **Resume Gameplay** DO

Resume Gameplay

IF gamer selects **Display Tutorial** DO

While gamer has not selected back option DO

Display Tutorial

END WHILE

IF gamer selects **Display Credits** DO

While gamer has not selected back option DO

Display Credits

END WHILE

IF gamer selects invalid option DO

FOR 5 second DO

Display Pop-up

Acceptance Tests _____9

Test Start Menu:

- Ensure design is correct
- Select each option and functionality on the Start Menu to ensure each option executes its intended purpose.
- Perform every action that should result in the display of the start menu to ensure start menu displays at proper time:
  + New game initialization
  + Appropriate back option selection
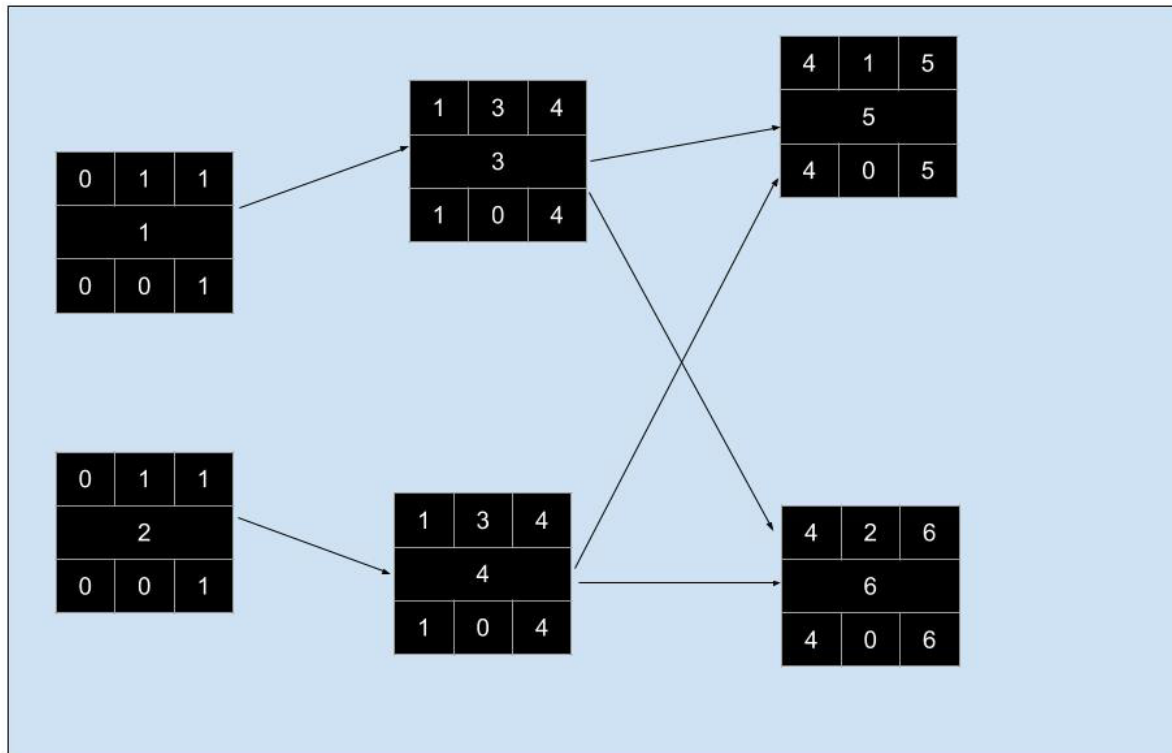 + New game selection

Test Pause Menu:

- Ensure design is correct
- Select each option and functionality on the Start Menu to ensure each option executes its intended purpose.
- Perform every action that should result in the display of the pause menu to ensure pause menu displays at proper time:
  + Gamer pauses during gameplay
  + Appropriate back option selection

4. Timeline _____/10

Work items

Task	Duration (PWks)	Predecessor Task(s)
1. Start Menu Design	1	-
2. Pause Menu Design	1	-
3. Start Menu Features	3	1
4. Pause Menu Features	3	2
5. User Documentation	1	1, 2, 3, 4
6. Testing	2	1, 2, 3, 4

Pert diagram

0	1	1
	1	
0	0	1

1	3	4
	3	
1	0	4

4	1	5
	5	
4	0	5

0	1	1
	2	
0	0	1

1	3	4
	4	
1	0	4

4	2	6
	6	
4	0	6

Gantt timeline

	1	2	3	4	5	6	7	8	9
1									
2									
3		1							
4		2							
5					3 & 4				
6					3 & 4				