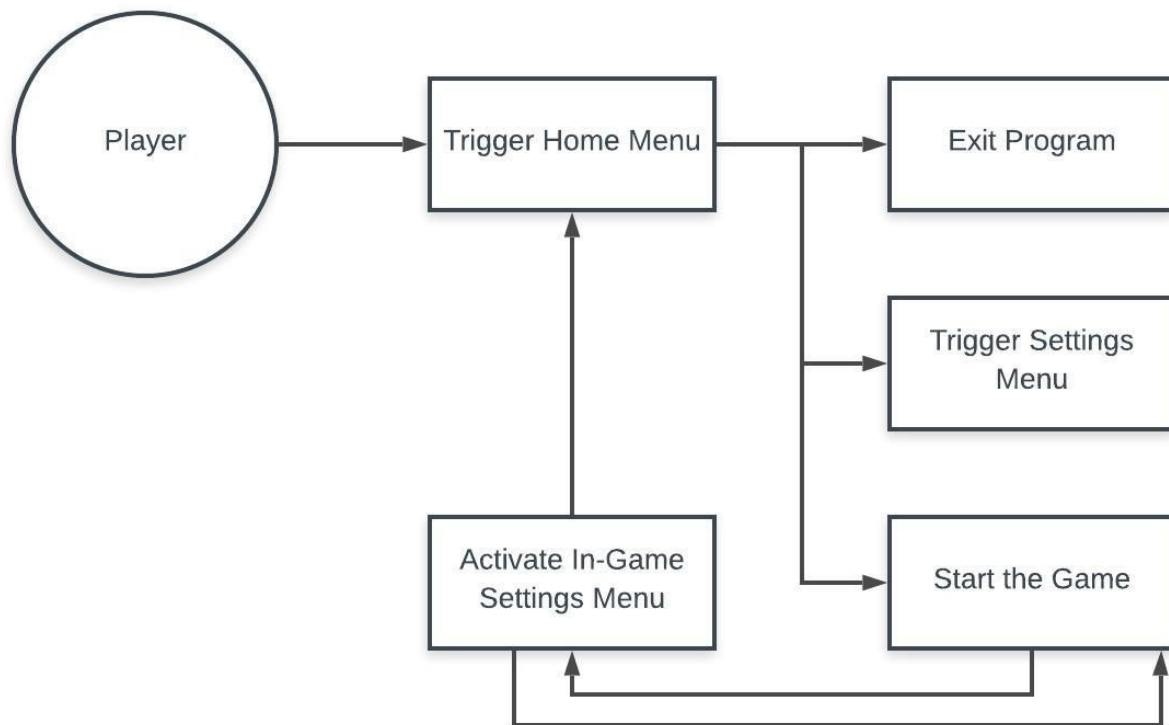


1. Brief Introduction ____/3

I will be handling the UI and Level Design of our game. The main features this will address include menus and the visual progression of the game. Effects of the Level Design will include visual transitions as the story of the game progresses and the user interacts with certain elements of the environment. (As this is difficult to represent with use-case diagrams, this will not be represented in this report.) UI effects will involve menus that are triggered at game start and when the user voluntarily triggers them in-game.

2. Use Case Diagram w/ Scenarios ____/14



Scenarios

Name: Trigger Home Menu

Summary: Activates the Home Menu.

Actors: Player.

Preconditions: Program has been started by the user or appropriate button has been clicked from a prior scene.

Basic sequence:

Step 1: (On first run) Load the menu on startup *or* (On transition from other menu) Accept input of corresponding button click.

Step 2: Show the menu and provide button selections for the user.

Exceptions:

None

Post conditions: Settings menu is displayed.

Priority: 1*

ID: C01

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

Name: Start the Game

Summary: Activates game from the Home Menu

Actors: Player

Preconditions: Home Menu has been initialized and corresponding button has been clicked

Basic sequence:

Step 1: Accept input of corresponding button click.

Step 2: Begin execution of game in the mode specified

Exceptions:

None

Post conditions: Game is initiated in specified mode

Priority: 1*

ID: C02

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

Name: Trigger Settings Menu

Summary: Opens the Settings Menu from the Home Menu

Actors: Player

Preconditions: Home Menu has been initialized and corresponding button has been clicked

Basic sequence:

Step 1: Accept input of corresponding button click.

Step 2: Move to Settings Menu and provide button selections to the user

Exceptions:

None

Post conditions: The Settings Menu is triggered

Priority: 1*

ID: C04

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

Name: Activate In-Game Settings Menu

Summary: Pauses the game and opens the in-game Settings Menu

Actors: Player

Preconditions: The game has been started and the Esc key has been pressed.

Basic sequence:

Step 1: Accept input esc key

Step 2: Pause the game and open the menu

Exceptions:

None

Post conditions: In-Game Settings Menu is made available with its selections options

Priority: 2*

ID: C05

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

Name: Exit Program

Summary: The program is terminated

Actors: Player

Preconditions: Home Menu has been initialized and corresponding button has been clicked

Basic sequence:

Step 1: Button has been clicked

Step 2: Terminate the program

Exceptions:

None

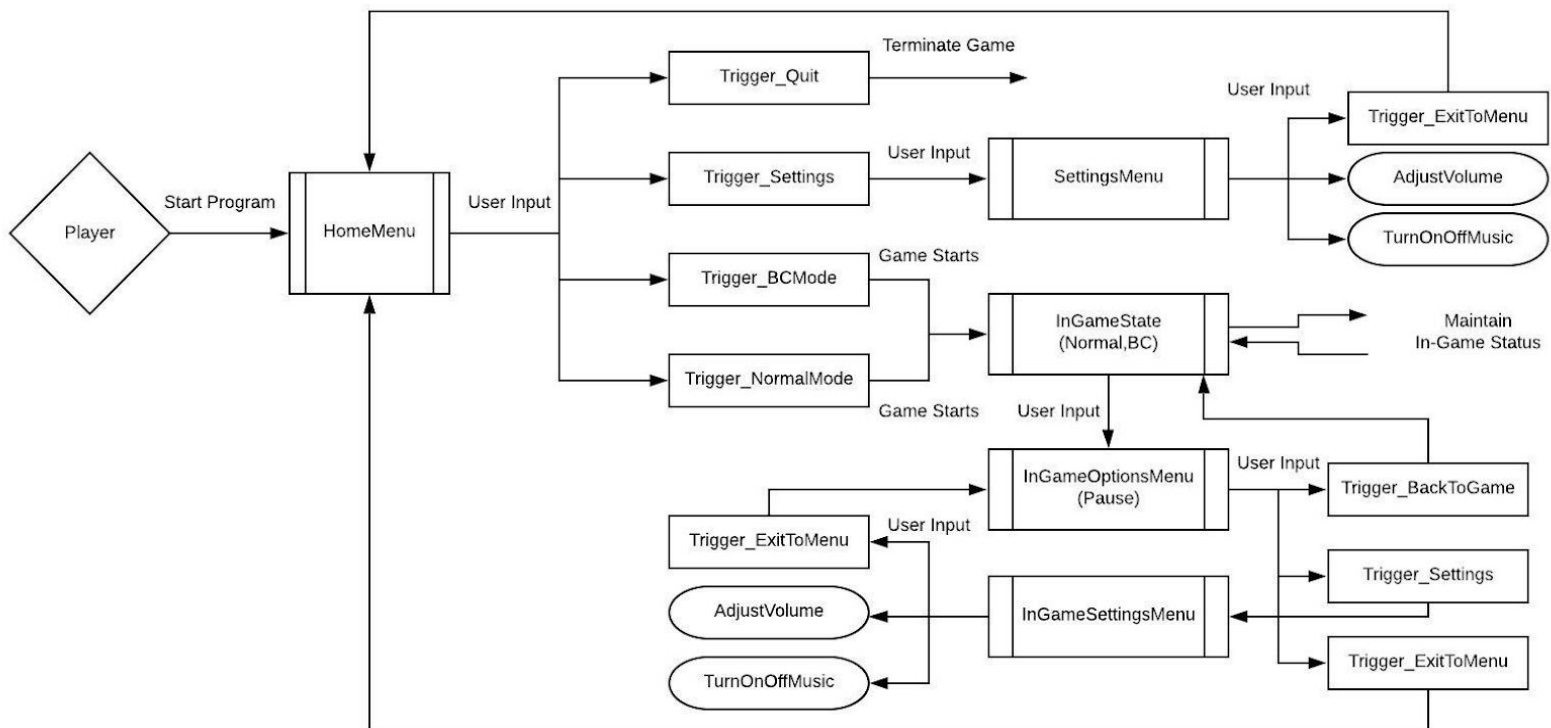
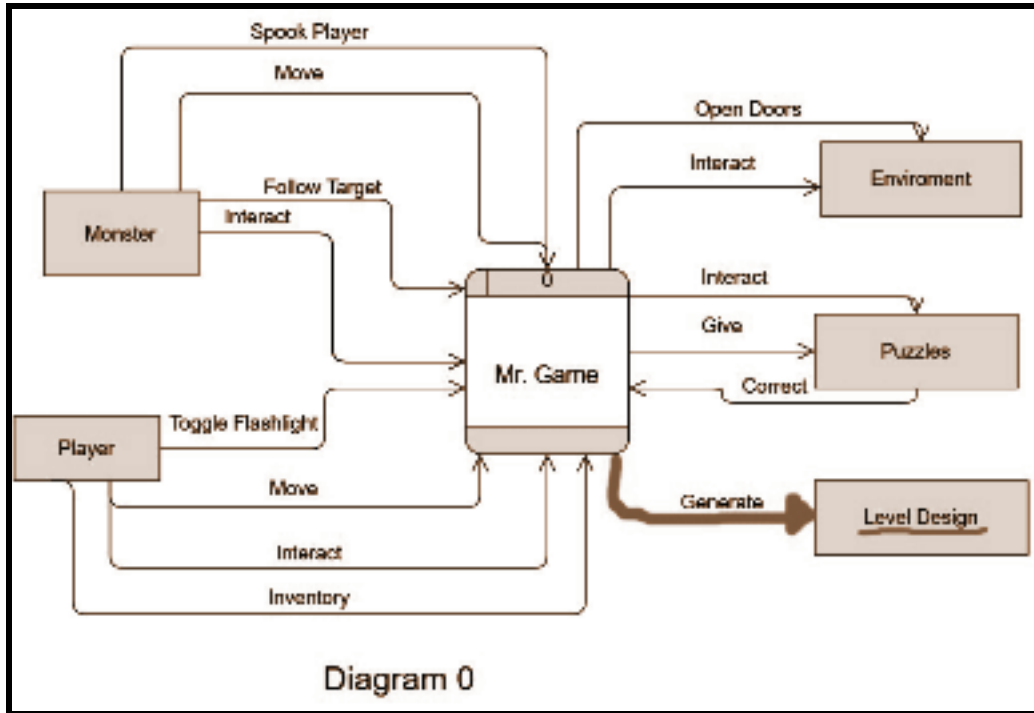
Post conditions: Program is terminated

Priority: 1*

ID: C06

*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



Process Descriptions

HomeMenu()

```
{  
If Player clicks Trigger_Quit  
    Terminate application  
If Player clicks Trigger_Settings  
    Go to SettingsMenu()  
If Player clicks Trigger_BCMode  
    Activate InGameState(BC)  
If Player clicks Trigger_NormalMode  
    Activate InGameState(Normal)  
}
```

SettingsMenu()

```
{  
If Player clicks Trigger_ExitToMenu  
    Go to HomeMenu()  
If Player moves AdjustVolume bar  
    If player moves bar to the left  
        Lower volume  
    Else  
        Raise volume  
If Player clicks TurnOnOffMusic buttons  
    If select On  
        Turn music on  
    If select Off  
        Turn music off  
}
```

InGameState(Normal,BC)

```
{  
If Player presses esc  
    Activate InGameOptionsMenu()  
}
```

InGameOptionsMenu()

```
{  
If Player clicks Trigger_BackToGame  
    Reactivate InGameState(Normal,BC)
```

```

If Player clicks Trigger_Settings
    Go to InGameSettingsMenu()
If Player clicks Trigger_ExitToMenu
    Terminate InGameState(Normal,BC)
    Go to HomeMenu()
}

```

InGameSettingsMenu()

```

{
If Player clicks Trigger_ExitToMenu
    Go to InGameOptionsMenu
If Player moves AdjustVolume bar
    If player moves bar to the left
        Lower volume
    Else
        Raise volume
If Player clicks TurnOnOffMusic buttons
    If select On
        Turn music on
    If select Off
        Turn music off
}

```

4. Acceptance Tests ____/9

MenuToLocation Test

With each menu, test to make sure that each button triggers the correct location for the program to take the user next.

Trigger multiple buttons in various orders and examine the state of the screen.

ElementRemoval Test

When a new scene is triggered, verify that all elements from the previous scene are removed from view and not accessible to the user.

Attempt to access previously accessible features from the former state and search for any irregular behaviors.

GameHold Test

When the game is paused and the InGameSettingsMenu is triggered, make sure that all in-game processes are held at a standstill and resume normally upon closure of the menu.

Activate menu at different points of game operation to examine how it affects in game processes or vice versa. Key game moments will be evaluated for irregular behavior when performing this test.

GameExit Test

When the InGameState is terminated and the HomeMenu state is triggered, check that all in-game processes have successfully terminated and do not affect the running of the system. Activate all states again (including relaunching the InGameState) to see if there are bugs.

Trigger all states in different orders and examine for irregular behavior. Will require multiple tests.

5. Timeline ___/10

Work Items

Tasks	Estimated Hrs.
determine required menus (1)	1
design menus (2)	2
program menus (3)	5
program saving score (4)	2
Integrate (5)	2
Testing (6)	1

Gantt Timeline

