Name: Sample User Mark _____/50

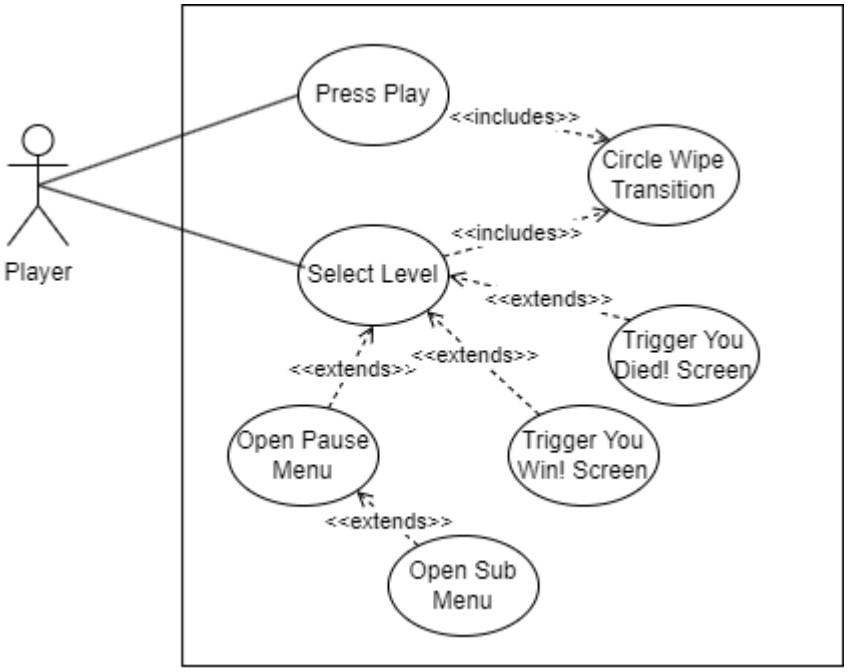
1. Brief introduction _/3

The first feature I've been tasked with making is all user interface screens for Peg Head. These screens include, but are not limited to, the following: the pause screen which players can enter mid game in order to retry the level, open up setings, or exit to level selection; the "YOU DIED!" screen which is displayed whenever a user dies and fails to complete a level; the "YOU WIN!" screen which is displayed whenever a user completes a level; the start screen which includes a "PLAY" button along with the game's title and a background graphic; the setings screen which is opened up through the pause menu; and a transition effect known as "circle wipe" which is played whenever the user changes scenes. Most of these user interfaces will be referenced from the game that is inspiring us, which is "Cuphead".

The second feature that I will be completing is finding sound effects and audio for all of the different objects in the game. This includes, but is not limited to, character death sounds, character hurt sounds, button click sounds, background music, boss fight music, and weapon sounds. To accomplish this task, I will go onto "freesound.org" most of the time to search a piece of audio that fits my specific scenario. Once again, to determine what type of sound I need for a given instance, I will look to "Cuphead" for ideas.

2. Use case diagram with scenario _14

Use Case Diagram



Scenarios

Scenario 1 (1st Use Case Diagram):

Name: Interact With Game UI

Summary: The player presses play, then the player selects a level from the level select screen. Both of these actions trigger the circle wipe transition into the their following scenes. When the player gets in game, they can trigger the "YOU WIN!" or "YOU DIED!" screens by their completion of the level or failure thereof. The player can also open the pause screen while in a level and then open a sub screen within the pause screen, if the player desires to do so.

Actors: Player

Preconditions: The player has launched the game using Unity and has pressed the "PLAY" button the play screen.

Basic sequence:

Step 1: The player presses the play button on the title screen, then a circle wipe transition plays as the screen changes to the level select screen.

Step 2: The player selects a level from the level select screen, then a circle wipe transition plays as they enter the level.

Step 3: The player either completes or fails to complete the level, in which case a "YOU WIN!" or "YOU DIED!" screen would be triggered.

Step 4: A playthrough-stats screen appears displaying how well the player did in completing the level, and also whether or not it is a new high score.

Step 5: The player exists the playthrough-stats screen, then a circle wipe transition plays, and the player re-enters the level select screen, restarting the game-loop.

Exceptions:

Step 3: The player could open up the pause menu beforehand and restart or exit the level.

Post conditions: The player has completed or failed to complete a level in the game and has returned to the level select screen.

Priority: 1

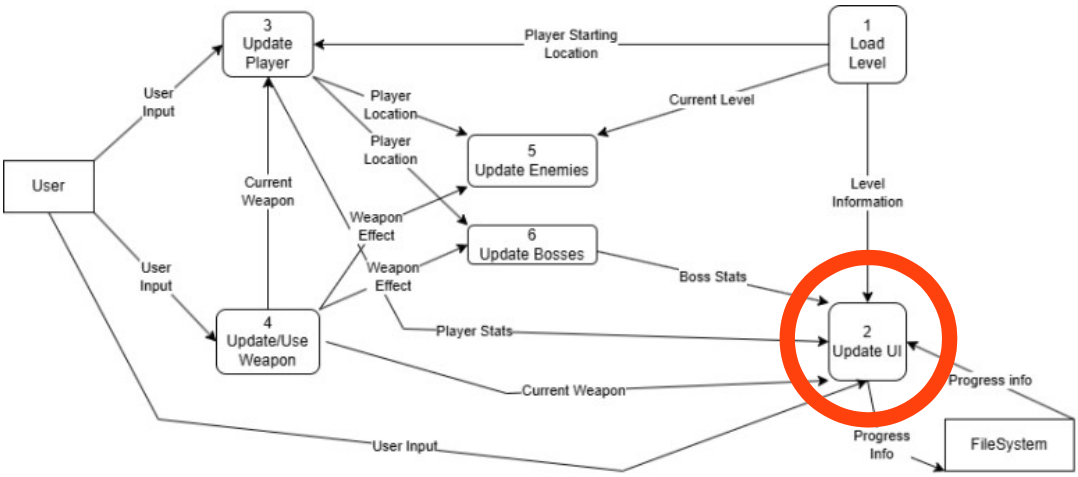
ID: IP1

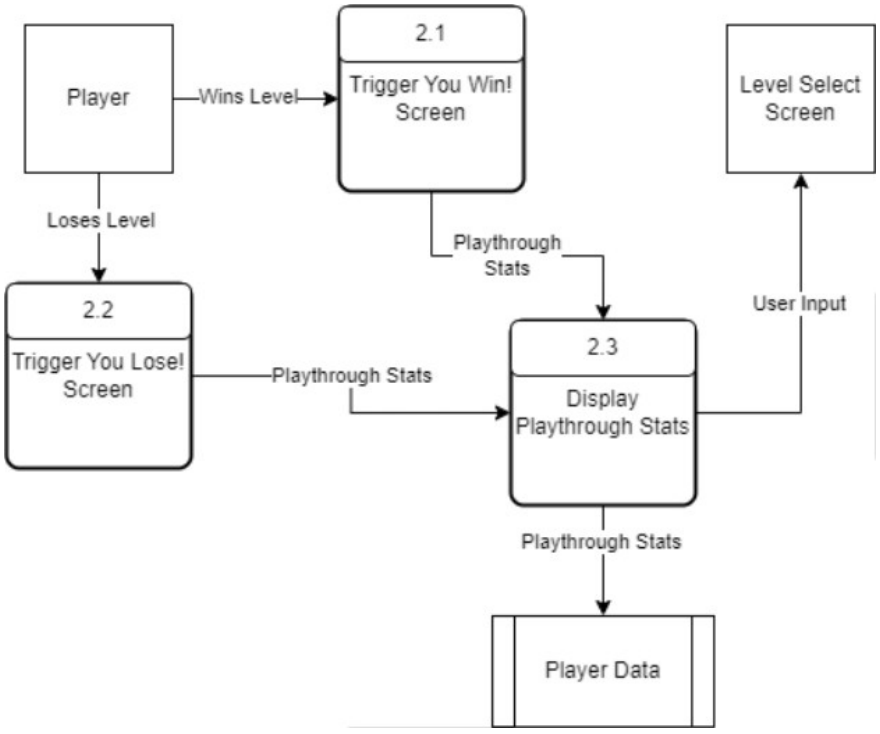
*The priorities are 1 = must have, 2 = essential, 3 = nice to have.

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

In the data flow diagrams below, I will be covering the Math Assignment Feature in entirety. I will describe the "Assign Environment Object" sub-process with a decision tree

Data Flow Diagrams





Process Descriptions

While in a level:

WHILE player is alive

IF player won level

trigger “YOU WIN!” screen

break out of the loop

IF player pressed pause button open the pause menu screen

open the pause menu screen

END WHILE

IF player is not alive

trigger “YOU LOSE!” screen

hide the triggered screen

send the stats to and display the play-through stats screen

save the play-through stats to player data for future comparison when the player completes the level again

the user exists the play-through stats screen to repeat the loop and at a level select screen

4. Acceptance Tests _____9

To test this feature, we will run the following tests:

User presses the pause button while in a level → Does this correctly open the pause menu?

User presses the pause button while in level select screen → Does this correctly not open the pause screen because the user is not in a level?

User completes a level for the first time → Does this trigger the “YOU WIN!” screen and then the play-through stats screen with the correct data indicating how the player performed throughout the level?

User completes a level for the Nth time → Does this trigger the “YOU WIN!” screen and then the play-through stats screen with the correct data indicating how the player performed throughout the level, while with the added requirement of conveying the comparison to their best performance on that level in previous tries?

User selects a level → Does this place the user in the correct level?

User dies in a level → Does this trigger the "YOU DIED!" screen and then the play-through stats screen with the correct data indicating how the player performed throughout the level?

Play-through stats entered into player data → Are the play-through stats present in the player's data after they finish the level?

User exits the play-through stats screen → Does this take the player immediately to the level select screen?

5. Timeline _____/10

Work items

Task	Duration (PWKs)	Predecessor Task(s)
1. Circle Wipe Transition	2	3
2. Play Through Stats Screen	6	1, 4, 5
3. Play Button Screen	4	-
4. You Died Screen	1	1
5. You Win Screen	1	1
6. Pause Screen	6	7
7. In Game HUD	6	1

Pert diagram

Gantt timeline