

Team: Peter Gutenko, Tarah Peltz, Audrey Randall, Chance Roberts

Title: The Trash Panda Dilemma

Project Summary: A raccoon, an opossum, and a rat want to help improve the public image of “pests” everywhere however they can. Together, their abilities make them the perfect group to gather coins for the humans that have fallen down into the sewers. In this side-scroller, platformer game, you can play as a raccoon, who is able to claw through obstacles, an opossum who can play dead in the face of foes so they leave you alone, and a rat who can squeeze into those hard to reach spaces. Gather as many coins as you can while avoiding foes, poisons, and traps.

Our system consists of two parts: the game logic and the database. The game logic system handles all of ins and outs of gameplay while the database stores information about scores.

Project Requirements:

Business Requirements

ID	Requirement
BR-01	All assets that we use we should have the legal rights to actually use so we don't get sued.
BR-02	All assets that we used that we did not make ourselves we should give credit for so we don't get sued.
BR-03	User will be incentivised to return to the game because new content will be available. Game could be monetized in the future with exclusive content
BR-04	Username for high score must be a non null string

User Requirements

ID	Requirement
UR-01	As a player, I can move forwards and backwards within a level.

UR-02	As a player, I can jump over obstacles
UR-03	As a player,I can climb up ladders
UR-04	As a player, I can pick up coins
UR-05	As a player, I can add more health to the character currently in use by picking up trash
UR-06	As a player, I can maintain my health by picking up food items specific to the character I'm currently playing.
UR-07	As a player, I can rotate through characters so I can play as the character that I will need for a specific scenario.
UR-08	As a player, I can view my high scores and the high scores of other players to see how I stack up.
UR-09	As a player, I can equip my characters with hats that I have found in the levels to make my characters look cuter.
UR-10	As a player, I can pause the game at any point.
UR-11	As a player, I can find a help menu if I pause the game just in case I forget how to play or I find a bug.
UR-12	As a player, I want to be able to alert the developers of any bugs that I run into so that they could potentially get fixed.
UR-13	As a player, I also want to view the leaderboard from the main menu so I can see how I stand up to the rest without playing the game.
UR-14	As a player, I want to be able to start the game from the main menu so I could actually play the game.
UR-15	As a player, I want to be able to exit the game from the pause menu so I can easily stop playing.

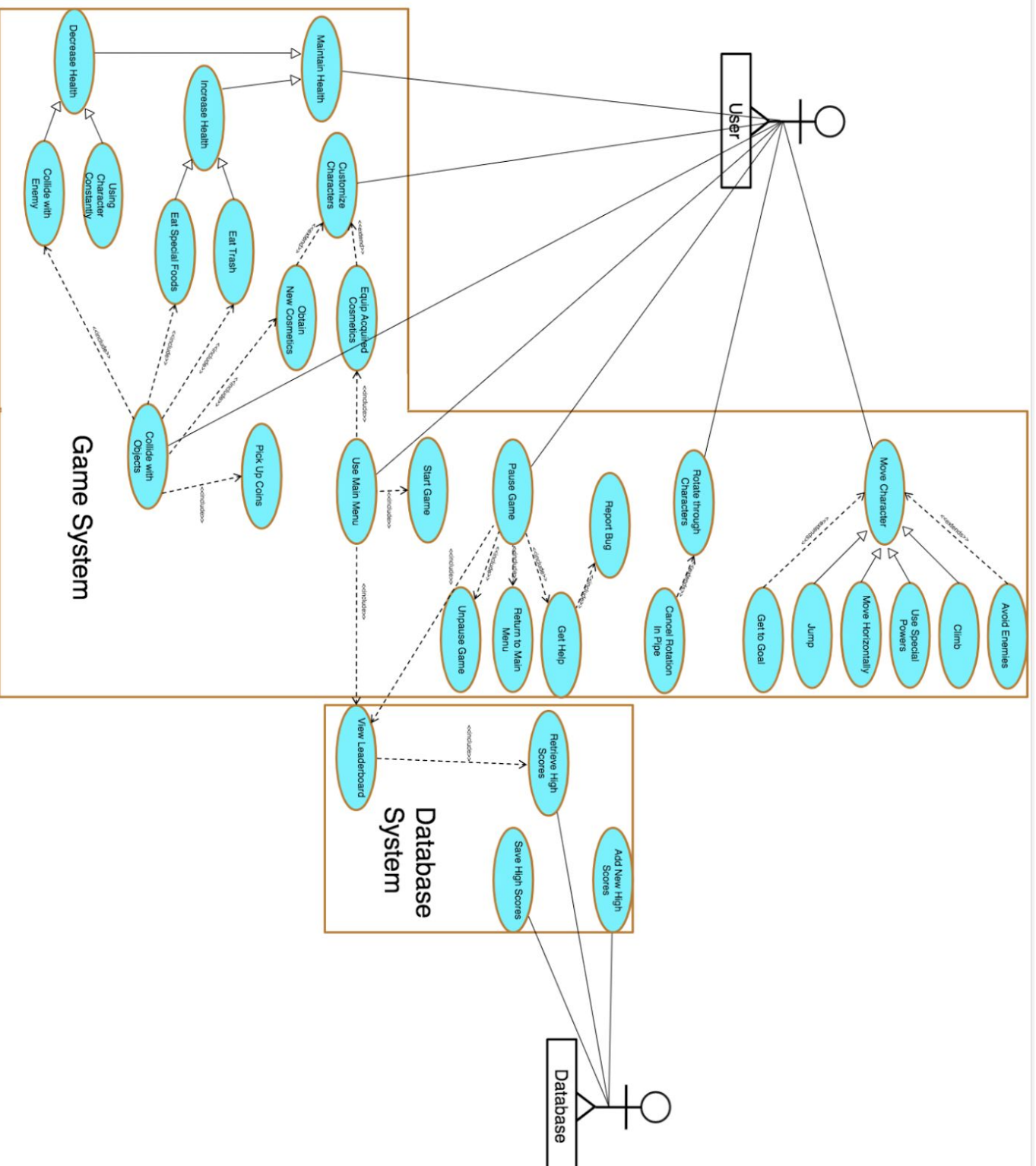
UR-16	As a player, I want to be able to access the leaderboard from the pause menu to see how I'm doing in comparison to other players
UR-17	As a player, I want to be able to climb walls to access different parts of the areas and possible secrets.
UR-18	As a player, I want to be able to add my score to the leaderboard.

Non-Functional Requirements

ID	Requirement
NFR-01	The game shall not drop below 60 FPS on any computer 5 years old or newer to allow our game to feel as though it is playable.
NFR-02	The health meter will accurately reflect the health of all three characters at all times.
NFR-03	Each level will have an appropriate length such that the characters will have enough energy to finish the level if food is picked up and allocated appropriately and enemies are avoided. No level shall be mathematically impossible to complete.
NFR-04	The Database can be viewed without any user input so the player's immersion isn't dropped.
NFR-05	The score displayed during the game and after completion will be accurate at all times

Use Case Diagram:

The Use Case Diagram may be found on our GitHub with the filepath [OOP-game-dev/diagrams/UseCaseDiagram.pdf](https://github.com/Audrey-Randall/OOP-game-dev/blob/master/diagrams/UseCaseDiagram.pdf). The hyperlink for that is (https://github.com/Audrey-Randall/OOP-game-dev/blob/master/diagrams/UseCaseDiagram.pdf)



Use Case Document - Case #16:

Use Case ID:	UR-16
Use Case Name:	View Leaderboard
Description:	Player can view the leaderboard from the menu

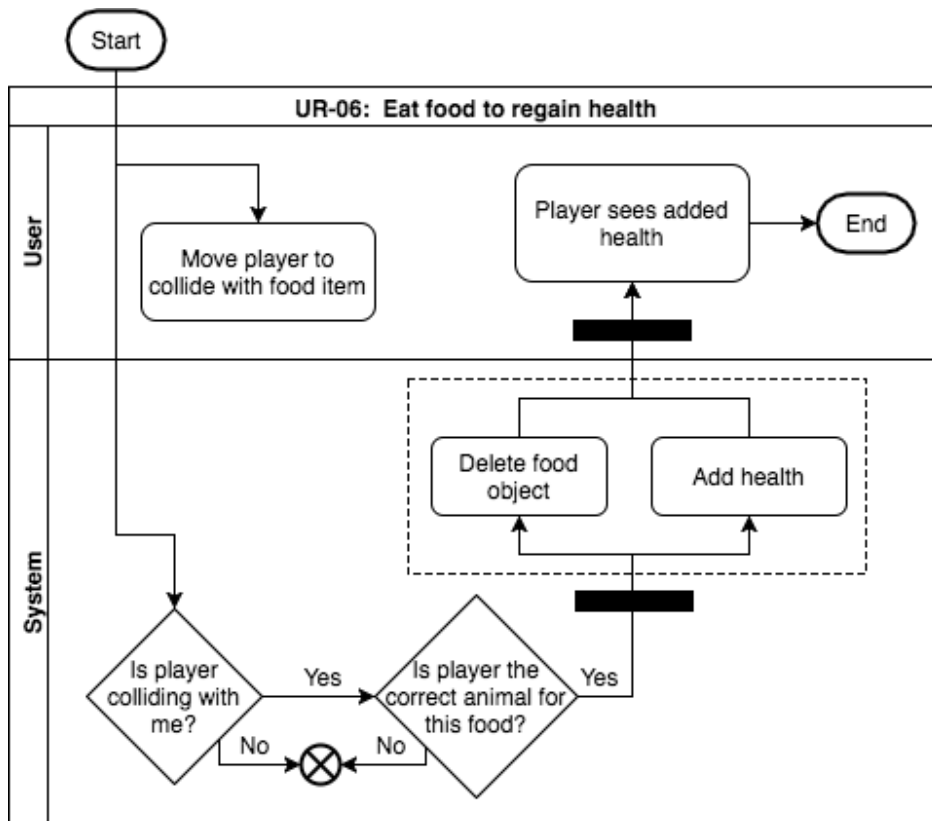
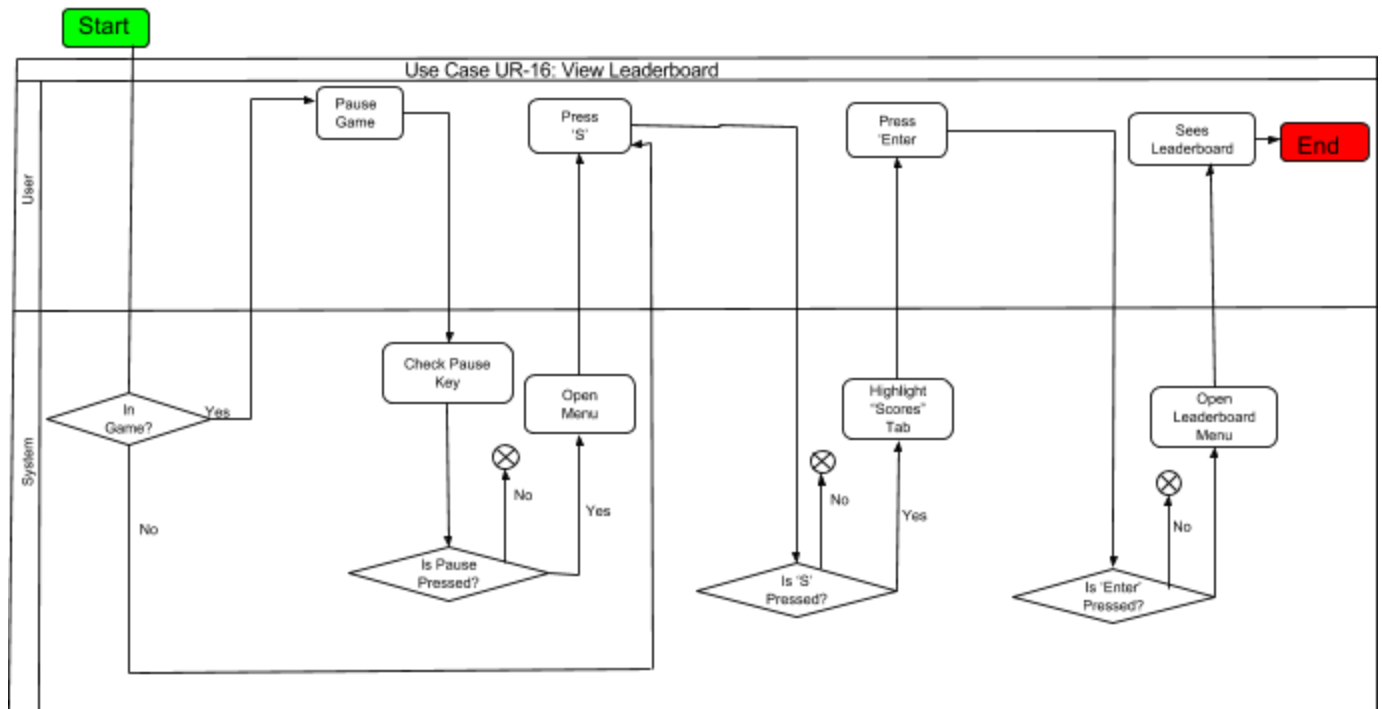
Actors:	User													
Pre-conditions:	User is in the game													
Post-conditions:	User has observed leaderboard													
Frequency of Use:	At player's discretion: unlikely to be more frequent than a few times per hour.													
Flow of Events:	<table><tr><th></th><th>Actor Action</th><th>System Response</th></tr><tr><td>1</td><td>Press "Esc" to Pause the Game</td><td>Game pauses and brings up the menu.</td></tr><tr><td>2</td><td>Select "Leaderboard" tab with the arrow keys</td><td>Menu highlights the "Leaderboard" tab.</td></tr><tr><td>3</td><td>Hit Enter</td><td>The Leaderboard Tab opens up, showing the leaderboard.</td></tr></table>			Actor Action	System Response	1	Press "Esc" to Pause the Game	Game pauses and brings up the menu.	2	Select "Leaderboard" tab with the arrow keys	Menu highlights the "Leaderboard" tab.	3	Hit Enter	The Leaderboard Tab opens up, showing the leaderboard.
	Actor Action	System Response												
1	Press "Esc" to Pause the Game	Game pauses and brings up the menu.												
2	Select "Leaderboard" tab with the arrow keys	Menu highlights the "Leaderboard" tab.												
3	Hit Enter	The Leaderboard Tab opens up, showing the leaderboard.												
Variations:	1. Game was not in progress already, skip to Step 2.													
Exceptions:	None													
Developer Notes:	None													

Use Case Document - Case #6:

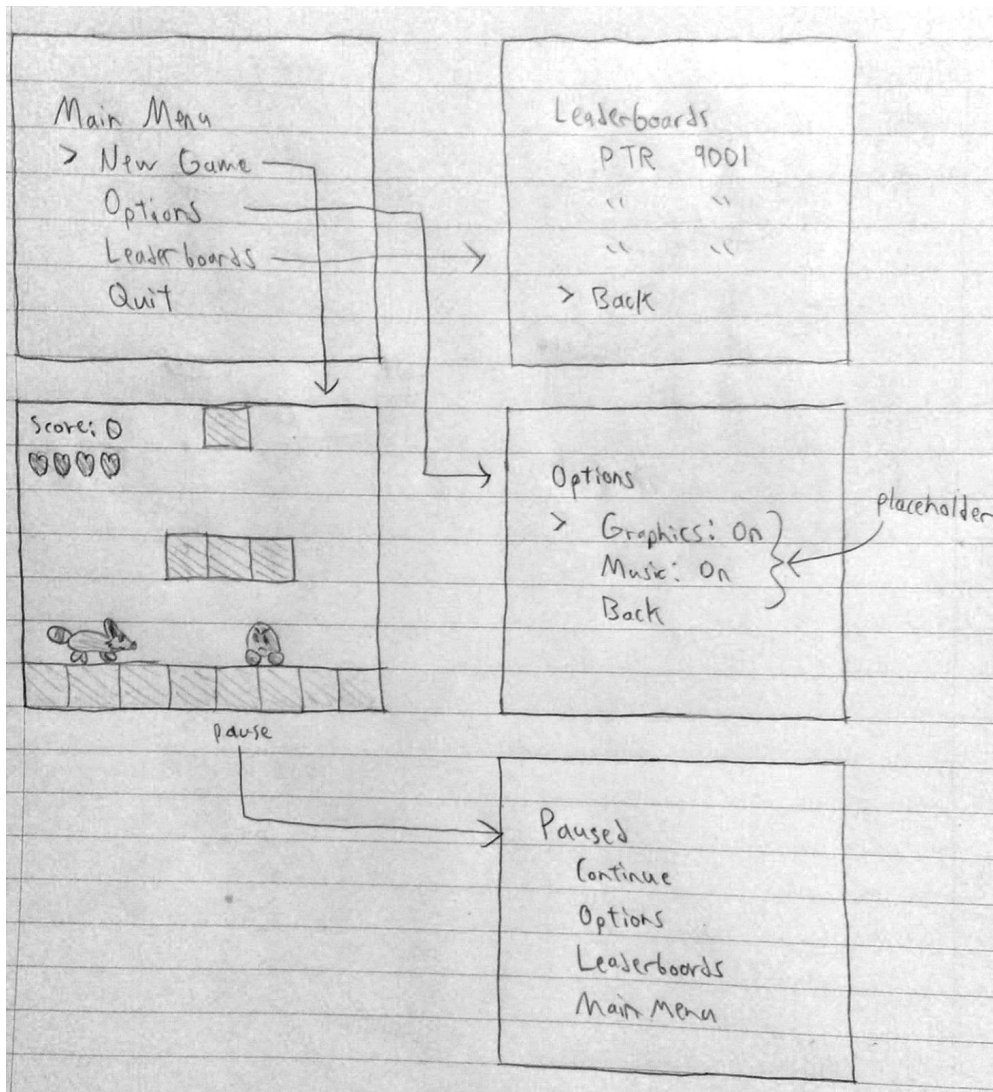
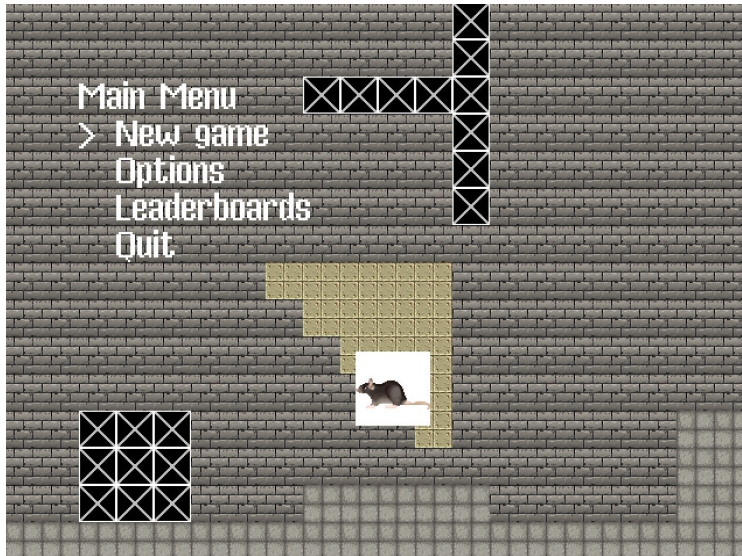
Use Case ID:	UC-06
Use Case Name:	Maintain Health
Description:	Player can regain health by eating food. The player's character's health slowly decreases while being used.

Actors:	User		
Pre-conditions:	Health is not 0, but is fluctuating		
Post-conditions:	Health is more full		
Frequency of Use:	Constant		
Flow of Events:			
		Actor Action	System Response
	1	Presses buttons 1, 2, or 3.	Player switches to a character
	2	Player uses the character	Character's health slowly decreases over time; the two unused character's health slowly increases over time
	3	Player sees trash; Walks over to it	Player collides with trash; gets minor health increase
	4	Player uses the character	See step 2
Variations:	3. If the player is the raccoon, you could collide with nuts to get a major health increase.		
	3. If the player is the rat, you could collide with cheese to get a major health increase.		
	3. If the player is the possum, you could collide with berries to get a major health increase.		
Exceptions:	If the player's health is 0, it does not increase or decrease.		
Developer Notes:	None		

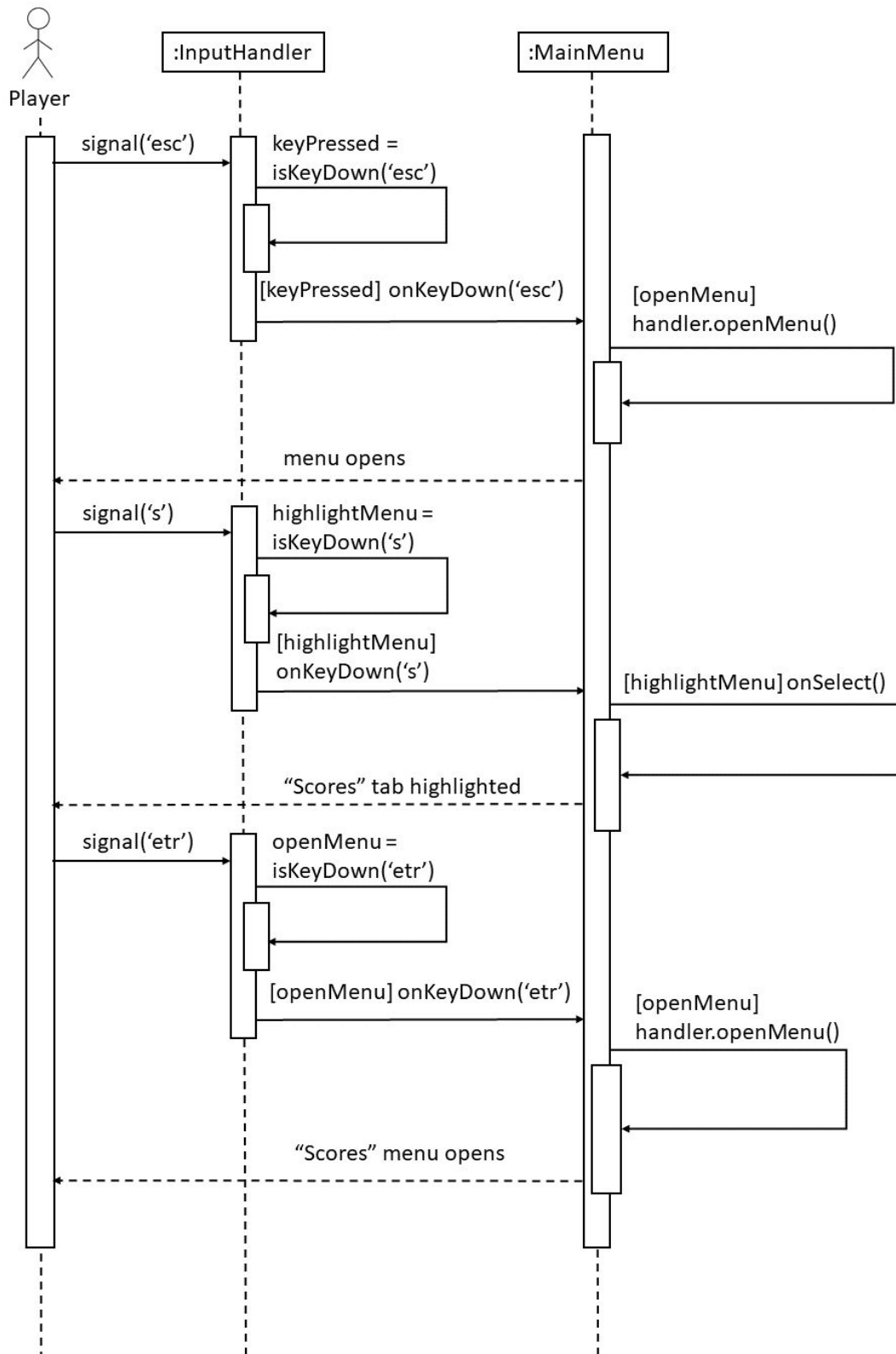
Activity Diagrams:



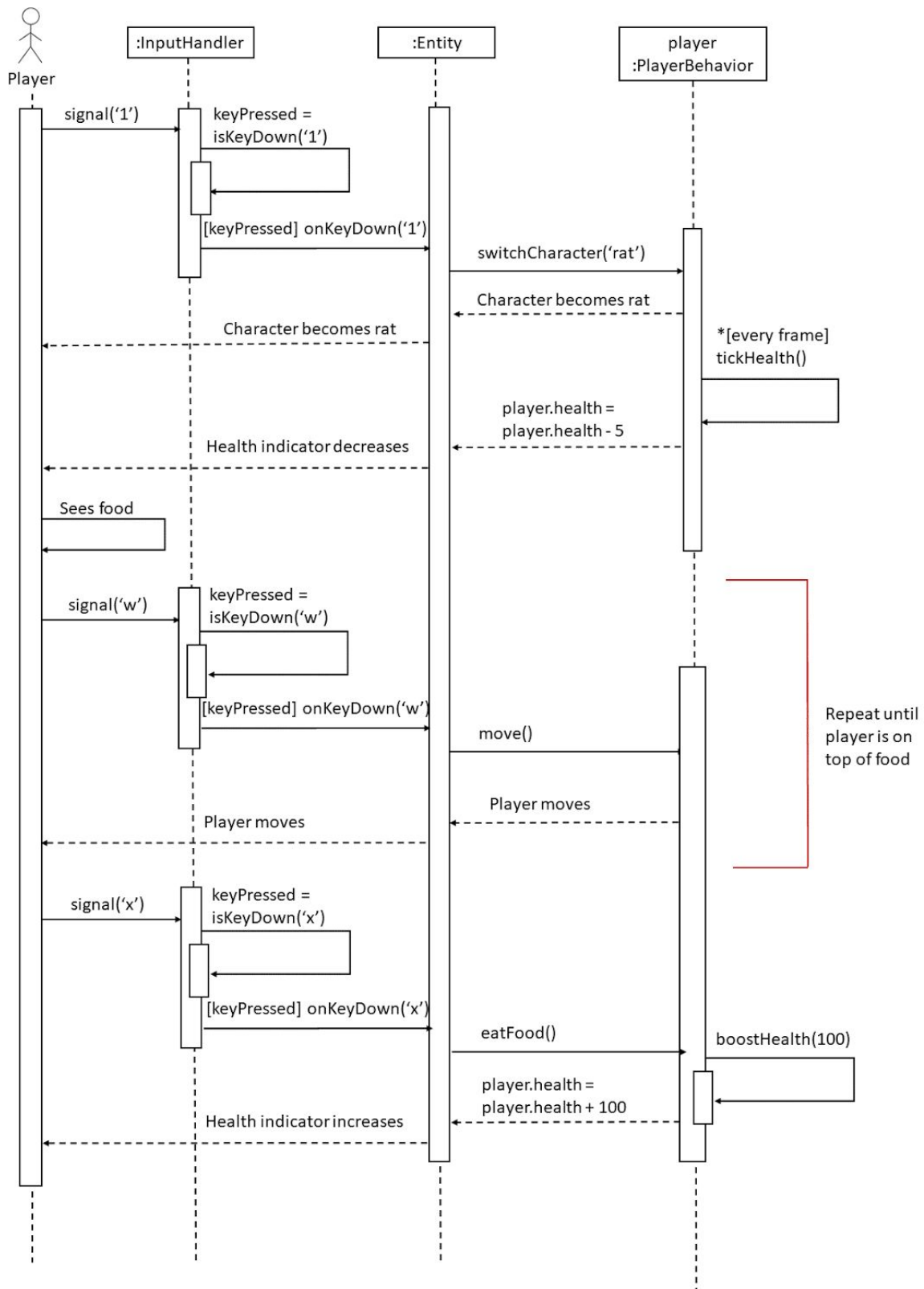
UI Mockups:



User Interaction Sequence Diagram - Use Case #6:



User Interaction Sequence Diagram - Use Case #10:



Class Diagram:

The Use Case Diagram may be found on our GitHub with the filepath

[OOP-game-dev/diagrams/class_diag.png](https://github.com/Audrey-Randall/OOP-game-dev/blob/master/diagrams/class_diag.png). The hyperlink for that is

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