

Hammy's Adventures!

Requested tasks and how we accomplished them:

1. Controls:
 - a. Ball able to roll, jump, and stop: we utilized resources from you to determine how to complete this, arrow keys and aswd can move Hammy up, down, left, and
 - b. 0 to stop the ball: We decided to not implement this option, after going through each level with stop in mind, the ease and style of the game wouldn't make sense with a quick stop button. A hamster cannot come to a complete stop in a quick amount of time - he has to slowly roll to a stop.
 - i. To add an extra control since we eliminated this, we added the option for the user to control the camera via the mouse scroll
 - c. 5 to start the game: this button acts as a resume, if you have clicked 6, or it acts as a start to the game if you haven't started it yet.
 - d. 6 to stop the game: when pressing 6 it brings you to a pause menu where you can either resume, restart (start the current level over), or go to the main menu.
2. Levels:
 - a. We created 5 differing levels throughout the game with most of them containing moving meshes to increase the difficulty and decrease player health.
3. Winning and losing:
 - a. To win the game you must reach the end of all five levels
 - b. In order to lose you must lose all three of your lives and then the game starts from the beginning of level 1
4. Collectables:
 - a. We have two types of object that our hamster can pick up, cheese and coins!
 - i. He can pick up this cheese and it increases his health until the health bar is maxed out. After that, picking up the cheese has no benefit to the user.
 - ii. Coins are used to keep score, upon picking up one coin your score increases by one.
5. Health:
 - a. There is a health scale visible to the player throughout gameplay, increasing upon cheese consumption and decreasing when interacting with obstacles.
 - b. When it decreases all the way to 0 (for example in level 1 if you were to hit the lava) you lose your life.
6. Respawn:
 - a. When all of Hammy's health has run out, it causes him to die and lose a life, this sets him back at the beginning of the level he was on. Unless you have no lives left, in which case it sets him back to the very beginning of level 1.

7. Game difficulty:
 - a. Our game has three difficulty states (0-3), the difference between the different levels is that your health increases faster. Everything is more deadly. Additionally, in harder modes, you start with fewer lives so more is at stake. In level one, you begin the level with 3 lives, and health decreases slowly. For level 2 you begin with 2 lives and health decreases at a medium pace. For level 3 you begin with only 1 life and health decreases rapidly.
8. Progression:
 - a. The progress bar at the top demonstrates how close you are to completing the game. Upon completion of level 1, the bar is filled 1/5th of the way, upon completion of level 2, the bar is filled 2/5ths of the way, etc.g
9. Obstacles:
 - a. In several of our levels, there are obstacles that move the player around and in turn decrease their health when touched. For example, in level 1 when you get hit by a moving barrel, it has the possibility to move you into the lava or at least lowers your health.
10. Scoring:
 - a. The score of the game is determined by how many coins are picked up by Hammy. At the beginning of each level, the maximum score is displayed which is the high score of the game.
11. Sound effects:
 - a. In order to include sound effects we included a sound upon each collectible and included a background sound to play throughout the game.

Resources utilized:

- UE5 Textbook
- Past labs
- Information from class

Additional Features to highlight:

- Each level acts as a completely different environment, from jumping across lily pads to climbing up pyramids, it uses a large variety of themes.
 - One level, level 3, is a maze and requires a little bit of test navigation to find the exit.
 - With the maze, in order for the user to be able to see the maze well, we eliminated jumping so that the user cannot cheat this level
- Another feature we implemented was moving the camera during gameplay to help the player. This can be done via the mouse scroll.

- Our menu screens offer the user a variety of possible tasks or places to navigate to, with the main menu screen offering different ways to begin the game or navigate, and the in-game pause menu offering a variety of resources for the player to utilize.