

CS 175: Roll-A-Bunny

Final Project Report

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1 Roll-A-Bunny Overview

For our CS 175 project, we decided to create a game called **Roll-A-Bunny** by building on what we've learned in class, and extending it to create this cross-platform game in Unity.

1.1 Goal

Roll-A-Bunny is a combination of two classics: Whack-A-Mole + Roll-A-Ball. The goal of Roll-A-Bunny is to roll your player (a sphere) over all 9 bunnies while collecting as many yellow collectibles (12 in total) as possible in under 60 seconds. You win if you are able to roll over all 9 bunnies and your score will be the number of collectibles you were able to collect in the process. If you are unable to roll over all 9 bunnies within 60 seconds, you will unfortunately lose the game.

Throughout these 60 seconds, the bunnies will pop up and down in their respective positions on the 3 by 3 grid and the yellow collectibles will be rotating in place, scattered across the surface.

1.2 Navigation

Your player can be controlled via the arrow keys or the WASD keys. There are 4 walls that enclose the 3 by 3 space and your player will be limited to this area.

1.3 Scoring / Metrics

- Bunnies - each bunny will only appear in its designated cell on the 3 by 3 grid, and upon collision with a bunny, it will disappear and the bunny counter will be incremented by 1.
- Yellow Collectibles - upon collision with a yellow collectible, the collectible will disappear and your score will be incremented by 1.

2 Project Components and Hierarchy

2.1 Bunnies

2.2 Terrain

2.3 Walls

We created 4 identical walls to enclose the bunnies and our player, so that the player does not roll off the screen.

2.4 Collectibles

2.4.1 Rotating Collectibles

2.5 Text

3 Camera and Lighting

3.1 Camera Following Player

4 Design

4.1 Collision Detection

4.2 Prefabs

4.3 Assets