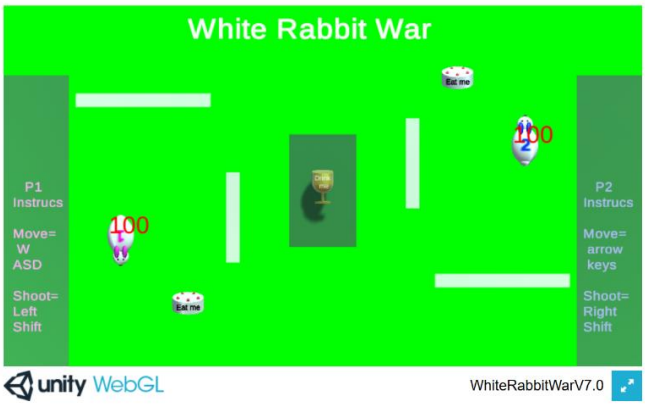
Kathleen Lowe CS328 Fundamentals of Game Design P1: Two Player Combat Game

1. White Rabbit War V7.0 Screenshot (my computer as server)
https://kathleenlowe.github.io/WhiteRabbitWarV7.0/.



2. Gameplay

Each player controls a rabbit. Player 1 (pink) and Player 2 (blue) rabbits can move and shoot projectiles using the instructions shown on the sides of the screenshot. Motion includes forward, backward, left-rotation, and right-rotation. Holding the shoot key down causes projectiles to be fired at a rate that is limited by cooldown.

Rabbits can also make bombs by the eating cakes that are shown in the screenshot. Cakes are generated at random positions at a constant rate. Each rabbit makes a bomb that will only harm the enemy rabbit. (Bombs are labeled "P# Bomb" in the player color.) Eating a cake grows the rabbit to large-size, which makes it more challenging to maneuver around the walls. Rabbits can shrink to small-size by drinking the potion above the hedge in the center of the screenshot.

Players start with 100 health as shown in red above the rabbits. Rabbits take damage by being shot with projectiles, as well as by colliding with an enemy bomb or teleport wall. Damage varies by collider type. Rabbits can run under hedges to partially obscure their position and orientation. Upon reaching zero health, a player is declared to have perished and the game restarts.

3. Design Decisions

Initial concept had multiple cakes and potions distributed about the play area. It was decided that this might initially overwhelm players. Instead, the game starts with few consumables, and others are added at random locations to create a feeling of surprise.

Original plan was that eating cake would cause the rabbit to teleport back to spawn position in order to prevent one player from eating all the cakes. However, players found this amount of teleporting to be disruptive to their experience. Therefore, teleportation was linked to wall collisions which are rarer.

Also, cakes and potions were to incrementally change rabbit size. It was discovered that the localScale scaling function can exhibit unpredictable behavior when used incrementally on classes with inheritance. Instead, rabbits shift from normal to small and large sizes. This has the added benefit of players immediately understanding the size effect of cake and potion.

4. Features to Add

Would like rabbits to be able to create defensive structures and call for some kind of help.

5. Lessons Learned

First, Unity's manual is not great. The best help came from Googling how others solved the particular problem I was having. Second, the game I ended up making was VERY different from the one I thought I was going to make. Play testing each iteration led to new ideas to try.