

**CS 3540 – Alpha Release**  
**Team #8 - Presidential Serve**

**Public Link to the Game:**

<https://jonahbln.itch.io/presidentialservealpha>

**Game summary:**

In this action-packed game, you play as a skilled tennis player tasked with defeating a horde of ball aliens that have invaded Earth and captured the president. To progress to the next level, you must eliminate all the aliens in the current level. Armed with a tennis racket, you can shoot tennis balls at the aliens to defeat them. However, be warned that the aliens can shoot balls at you too, so keep your wits about you and dodge their attacks to preserve your health.

As you defeat each alien, they drop valuable health diamonds that can restore your health if you're ever in trouble. But don't get too comfortable - the aliens get stronger and more difficult to defeat as you progress through the levels. With challenging gameplay, intuitive controls, and fast-paced action, this game is sure to keep you entertained for hours on end. Are you ready to take on the ball aliens and save the president?

**Game mechanics:**

1. **Controlling player** - To move the player around the scene, you can use the WASD keys. Additionally, we have implemented a jump mechanic that can be activated by pressing the spacebar. To look around the scene, you can use your mouse.
2. **Shooting enemies** - When you click either the right or left mouse button, a ball will be shot from the racket in your hand. You must aim at the enemy in order to decrease their health. There is also a crosshair with raycasting behavior that spins, changes color, and grows when you are looking at an enemy, indicating that you are able to shoot at them.
3. **Health pickups** - these are dropped on the ground when you have killed an enemy, and when you run over these pickups, it increases your health by 20. There is also an animation on them when they are destroyed.
4. **Player/Enemy Health** - The player and each enemy have their own health system. The player's health slider is in the bottom left and starts off at 100%. When you reach 0%, you die, and the level restarts. The enemies each have their own health bar above their heads to indicate their remaining health. When they die, they release a particle system and spawn a health pickup.
5. **Enemy AI Behaviour** - The game features randomly spawning enemies that are initially in a patrol state, but can switch to a chase or attack state. When the player enters the enemy's chase state radius, the enemy will pursue them. In the attack state, the enemy has a smaller radius and will shoot tennis balls at the player, which can cause the player to lose health. If the player manages to escape the enemy's attack and chase state by running away, the enemy will return to its original patrol state and continue roaming the map.