Game Description

This game is a take on classic snake game but in 3D space. Snake moves constantly and player can turn left and right as well as speed up movement by using ADW keys on the keyboard.

The objective is to collect as many tokens as possible. Each collected token adds another segment to the snake's body and also increases the speed by small increment.

The defeat condition is triggered by hitting a wall or colliding with own tail.

White portals should be avoided as collision with them leads to the loss of all current progress and teleports the snake anywhere within the game field which often leads to collision with a wall and defeat.

The magic pink sphere spawns 10x tokens which makes it easy for player to make progress much quicker. However, to retrieve this sphere it is important not to collide with the stand that contains it because it would lead to defeat as well as the collision with a wall.

First Playtest

By the first playtest the game contained multiple performance issues.

- The camera movement was glitchy
- It was discovered that at certain speed and angle player could crush through a wall
- For some reason the snake would increase/decrease altitude which lead to either collision with the floor or inability to collect tokens

Second Playtest

By the second playtest I was able to fix camera movement so that it followed the snake glitch-free. Some adjustments were made to the snake and space physics so that the snake stayed contained within the game space and the number of undesirable collisions was reduced.

However, when the major physics and camera issues were fixed, some performance issues were discovered:

- Although the collision with the floor was eliminated, collision between body sections lead to unexpected endgame
- The win condition that was added in a form of magic sphere was conceptually unclear and was technically faulty because it lead to win and defeat at the same time
- Although altitude shifts were significantly reduced, some weird behaviour was still present especially at higher speeds or at sharp turns

- It was mentioned that the controls were to difficult (interpreted as turning angle wasn't sharp enough)

Third Playtest
- Collision with body segments was resolved as well as altitude shifts
- Win condition was removed and the magic sphere is now spawning tokens but is difficult to collect
- Turn angle was adjusted as well as speed and velocity increase throughout the game

All problems revealed in the third playtest were mainly related to design questions.
- Magic sphere stand should suggest that it's unsafe to collide with it
- General aesthetics of the game space
- Score should be more visible.

Conclusion
Aesthetic issues were addressed in final adjustments. Portals are more visible, magic sphere is shiny, the stand has spikes which suggests that it's unsafe. Score is white on black.

Tutorial on which the project was based:
https://www.youtube.com/watch?v=7SB1IQN3MtE&list=PL47vwJBRNh1yn_29bPEg-xO9GOasPH2-g