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Intro to Game Development

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Arcade VolleyBall Elaboration

Game Description

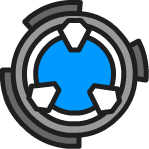
This elaborated version of Arcade Volley Ball is a single player platformer. Player need to control a robot to find the trophy.

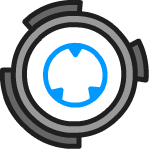
Play Instructions:

[A]/[D] – Move left/right

[Space] – Jump

[Left Mouse Button] – Shoot a ball at the cursor’s location

[Activator]: When shot by a ball, activate an elevator nearby.

[Replenisher]: When shot by a ball, reset player’s Volley Ball shooting cool down, allowing the player to shoot multiple balls rapidly, even in mid-air.

Design Document

My ultimate goal is to make Arcade VolleyBall into a single player game.

The single player version of the original game is probably to bounce the incoming ball to the opponent’s side. But without an opponent, there’s nothing to throw the ball into player’s side in the first place. So, to make up for the lack of the opponent, I removed the process of catching the ball completely, making the player character actively shooting out Volley Balls. In this way, the field can also be removed, as the player no longer needs to prevent any ball falling to any area. Then, the game becomes a platformer.

But shooting ball still needs to be a core mechanic of the game, as this game is only an elaboration on the original Arcade VolleyBall, and merging shooting balls and jumping sounds weirdly exciting. So I added activators that player need to shoot at while doing the platforming, and some of them are hidden behind surfaces so that the player needs to shoot at specific angles and use the original VolleyBall’s bounce system to hit the targets. Shooting ball will also add a reactive force on the player character, so shooting can also be used as double jump.

Because now the character will receive actual force and will need to move vertically as well as horizontally, my original animation-based movement system no longer works. So I make a legit physics-based character controller, with animation changing based on the current velocity and player input.

After the general concept and the character control were done, I just played around my character (while also trying to solve my maybe non-exist “stuttering problem”) and experimented with different Activator placement, finishing the first part of the prototype. Then I had the idea for Replenishers, which can refresh ball shooting cool down so the player can immediately shoot again to achieve multiple shots (jumps) without touching the ground. However, to shoot at the replenishers, the player needs to position the character carefully to receive the desired reactive force.

However, due to some time management issues, I only begin to work on this project on Saturday (before that time I was really preoccupied with one of my other projects), so I failed to create background, and do not have enough time to experiment my other ideas like barriers that only ball/character can pass through or spikes. Also, I end the level with a difficult platforming section, because I just failed to think up a better design. Maybe with more time, I can make the prototype much better.

Though I’m not very satisfied with the result, I personally do like the feel of the character’s movement, and I will probably spend more time to explore this prototype’s potential in the future.