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Final Project Final Report

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Game Details and Description:

Welcome to Pac-Man FPS!! In this game you play as one of the ghosts from the original Pac-Man game and you take your revenge on Pac-Man and the Pac-Man Royal Family. You have to traverse mazes with multiple floors and different objectives. Objectives include collecting power pellets, and defeating enemies and bosses. You have a laser blaster to defeat enemies and it is played like a first person shooter. I only had time to implement 2 mazes, a beginner Maze and an Expert Maze. I tried to have the beginner maze to be like a tutorial and then ramp up the difficulty in the expert maze (expanding upon the concepts introduced in the first maze.). Power Pellets and killing Pac-Man butlers reward you with score points and your high score will be saved after you defeat the boss and finish the maze. If you lose all your health or fall you will die and a game over screen will pop up, with options to restart the level, go to the title screen or quit. You can also get back to the maze select screen anytime you want by pushing 'Q'.

When in the maze your objective will appear on the top of the screen and it will change depending on what floor you're on. The first floor you have to collect all the power pellets to proceed, on the second floor you have to defeat all the Pac-Man Butlers to proceed, and on the third floor you have to defeat some form of boss. After you clear your objective in the first and second floors you will also be tasked with finding the key/button/switches to the door that leads you to the next floor. These buttons can also vary in number. Each floor has platforming challenges and breakable walls you can destroy with your laser blaster. Your health, score and objectives are displayed on screen. When you get to the boss their health also shows up. At the end it will flash your score and determine if it's a new high score or not.

The atmosphere of the game is mysterious and scary but then there's this relaxing music. So it's kind of weird. The intended Audience would be people who are more experienced in first person shooters. The Expert maze can be very tricky but also very fun.

Iteration Timeline:

I would break the last iterations into these 5 categories:

Iteration 1: The Basics, and Player Movement

Iteration 2: UI, Basic Maze Design, Core Gameplay, Collectibles, and Animations

Iteration 3: AI, Shooting, Design Rest of Maze, and Player Death

Iteration 4: Boss, Win Conditions, Saving High Score and Finishing the First Map

Iteration 5: Making the Second Map, Testing, Bug Fixing, and Final Details

What I Learned:

I learned a lot about Unity programming this year. I wanted to challenge myself to make a first person shooter which I have never done before. I took this idea I had in Game Engine Concepts class of the tank maze game with a Pac-Man twist for some reason, and fleshed it out into a bigger project. The comparison between the two projects shows how much I learned. This was my first time using the Nav mesh and AI for my enemies to chase the player. It's basic but still gets the job done. I learned how to code a gun and use ray casting to detect what the object hit. I learned how to have the camera rotate when moving the mouse. I also learned basic animation in Unity for my power pellets and text. Overall I feel way more confident and

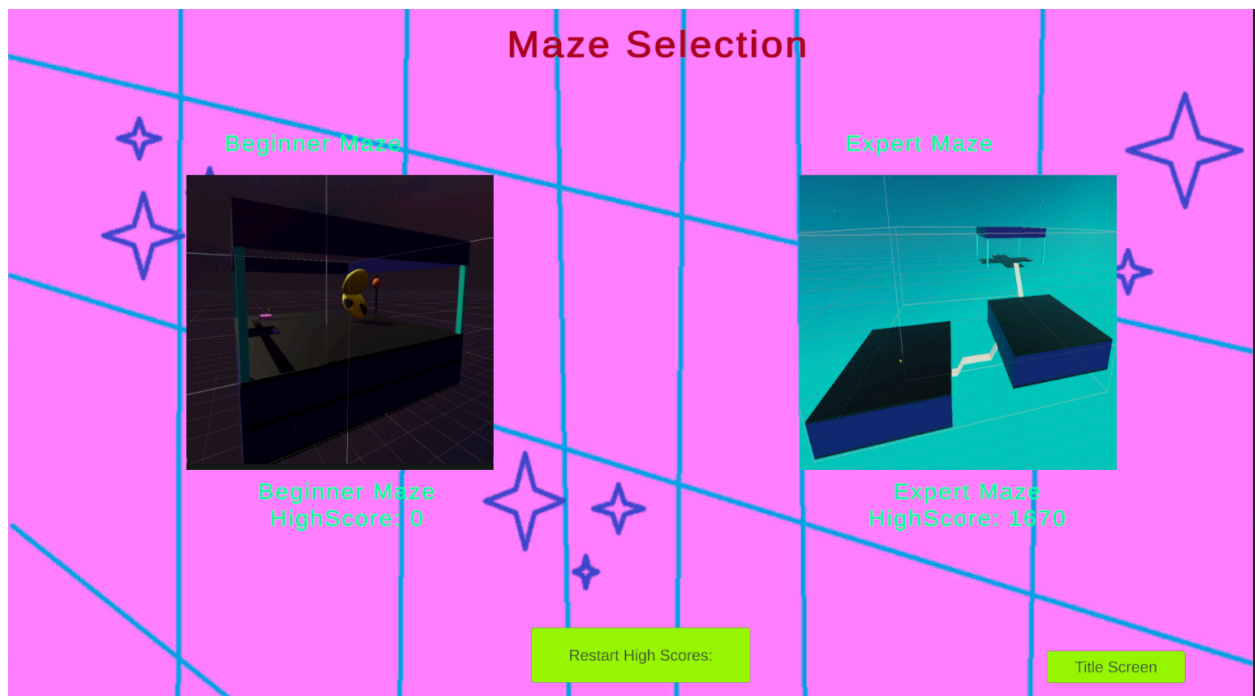
comfortable working with Unity than last semester in Game Engine Concepts. Sure I look for tutorials for help sometimes but I am beginning to do more stuff on my own.

Future Plans: Conclusion

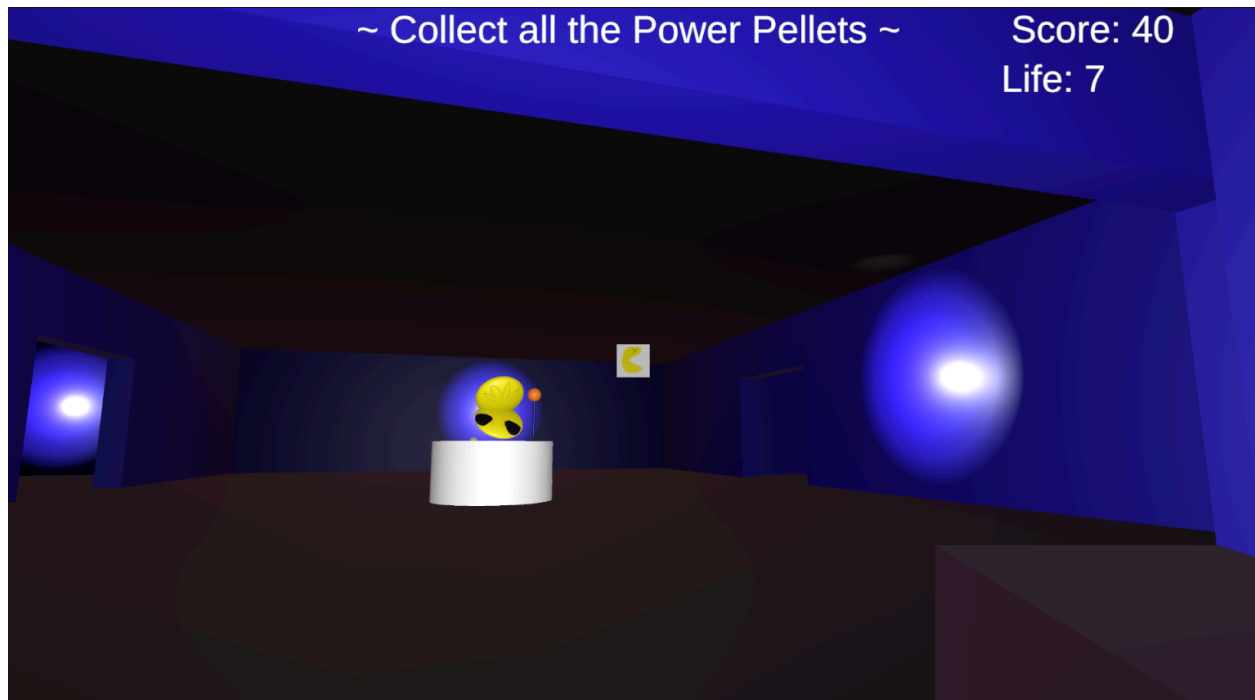
For this project it may seem like I got all I wanted to accomplish, but I still wanted to do so much more. I wanted to have more elaborate mazes with more floors and different enemy types but I just ran out of time. However, I might continue to work on this game after the semester is over. Also my project's code is spaghetti code and definitely could have done a better job organizing it. I will try to refactor it. I was just rushing to get this project done so I can focus on other finals and projects. In the end, even though I can get frustrated at the bugs and issues while coding the game, I still had a lot of joy and fun making it. I hope you give it a try and have fun too.

Screen Shots:

- Maze Selection Screen



- Basic Gameplay



- **Pac-Man Butlers!**



- **Pac-Man Wizard**

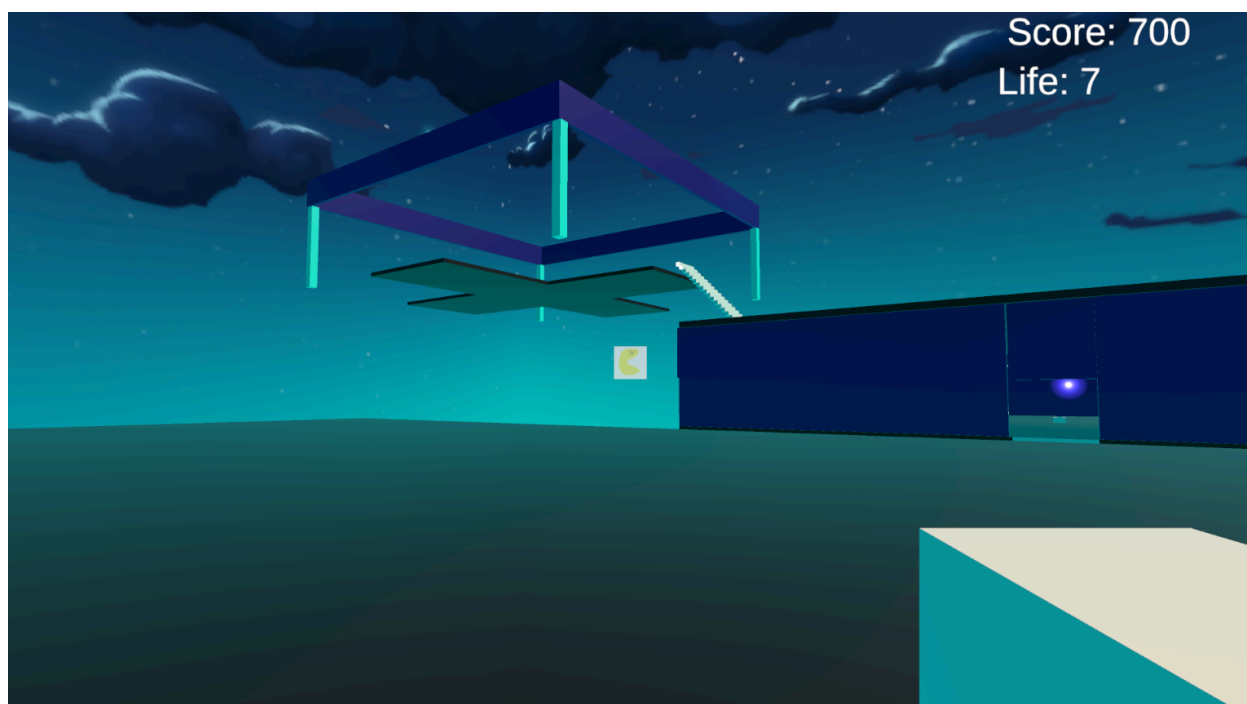


- **High Score Screen**



- **Expert Maze Gameplay**





- The Pac-Man with a Top-hat

