1. Maze Scene

1.1 How I Made the Scene

I started my maze design by creating a plane with a design of my liking. Afterwards, I began making the walls for my maze by placing and sizing cubes. The design for my maze was inspired by old arcade game layouts such as Pac-Man. I left an open area in the middle of the maze as that is where I wanted to have the scripted object start. I wanted my code to be as simple and functional as possible. I initialized the script with three boolean functions and set two of them to false, setting up so that when my object starts moving it would keep going until specified. I used IEnumerators and for loops to monitor transitions and seamlessly make turns. I used Raycast and if else statements to detect whether there was an object in front of, to the right of, or to the left of the object. If there was a wall in front of the object, the object would turn 90 degrees clockwise before scanning again and proceeding forward. If there were no walls detected to the right, or in front of the object then it would proceed moving forward. If there was a wall to the right only then the raycast would detect that and allow for the object to proceed forward. If there was a wall in front of the object and to the right, then it would rotate 90 degrees counterclockwise before proceeding forward. These functions loop indefinitely unless the done function is true.

1.2. Maze Item Breakdown

1. Floor
2. Walls
3. Moving Object

1.3. Screenshots

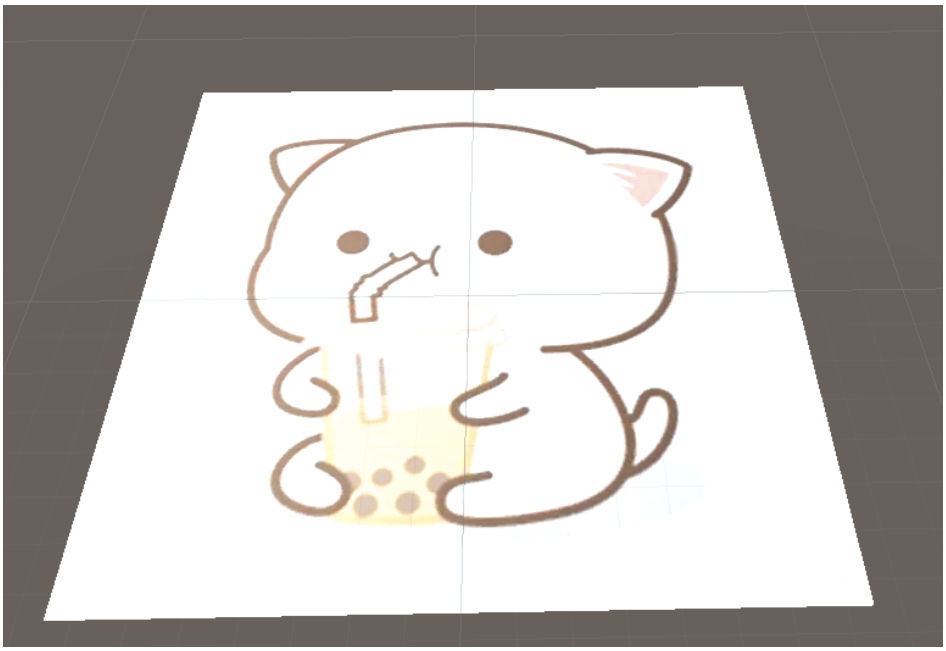

Fig. 1 Floor Design

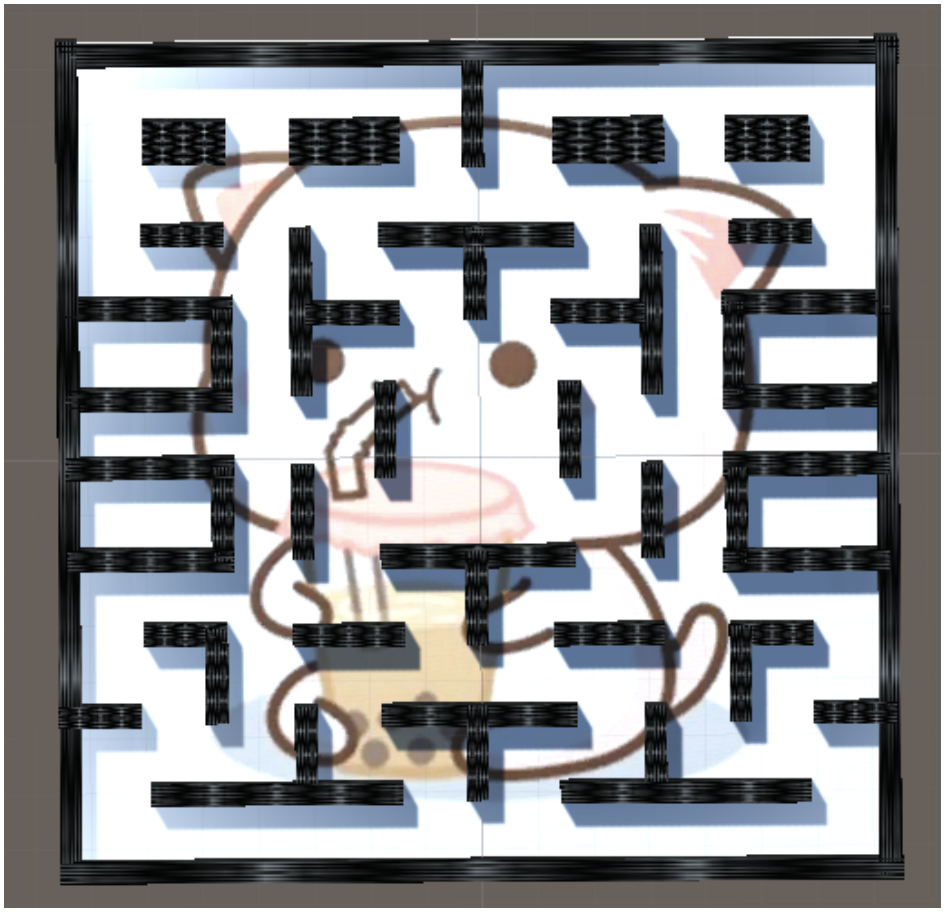

Fig. 2 Floor with Walls

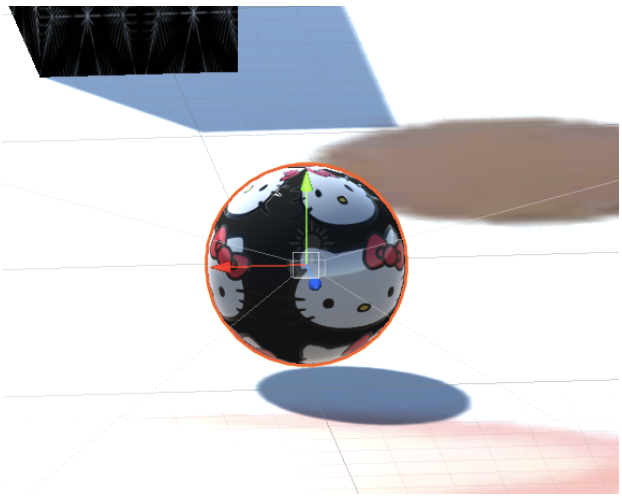

Fig. 3 Moving Object

2. Unity Project File

   Link to my project file: https://github.com/vkh12/Unity-Lab-3

3. YouTube Demo

   Link to video demo: https://youtu.be/ph4T1x30jsk