**Lab 2 Report**

**Contributions to the project**

I was in charge of implementing the movement for the player. It was simple as all we need to do is use the input system from Unity library to do this. Then we can add the script to the player. I also add the NPC. I use prefabs to do this as there are many NPCs in the game. We also have different materials for the NPCs and player. We decided to use different colours to differentiate the players and NPCs.I made three different sizes NPCs and they all have different mass and speed. The bigger the NPC, the slower they move. After the movement for the NPCs was added, I went on and add the collision for the NPCs and the walls. The NPCs also bounce off each other.

**New features learnt from developing the 3D game**

I learned about the collision using the library that was in built in Unity. I also learn the different between Awake and Start. The different is that Awake is done earlier than start. I also learned how to change the size of game objects. All we need to do is get the local scale from transform. We can then add on the vector3 to change the size to make it bigger or smaller. I also learned how deal with merge conflict.

**Bugs and error faced**

At the start of the game, the player and the NPCs were going through the walls. We resolve the issue by using onCollision instead of onTrigger. The other problem we were facing was that the NPCs was bouncing off each and wall and was going out as the wall was not high enough. We freeze the Y position to the ground so even if they collide with each other, they would not leave the ground. The NPCs were also going too fast at one point and just disappear from the screen after a while. The issue was the speed was cumulative up to a point where it was too much for the game. To deal with this, we set a maximum value to how much the NPCs can move. Later on, we decided to change the colour of the player as indicator of what the player can consume, in the code, we change the RBG value by (255, 0, 0) for example but what happen was that the player was glowing and this was not intended so we change the value to 0 to 1 in each category.