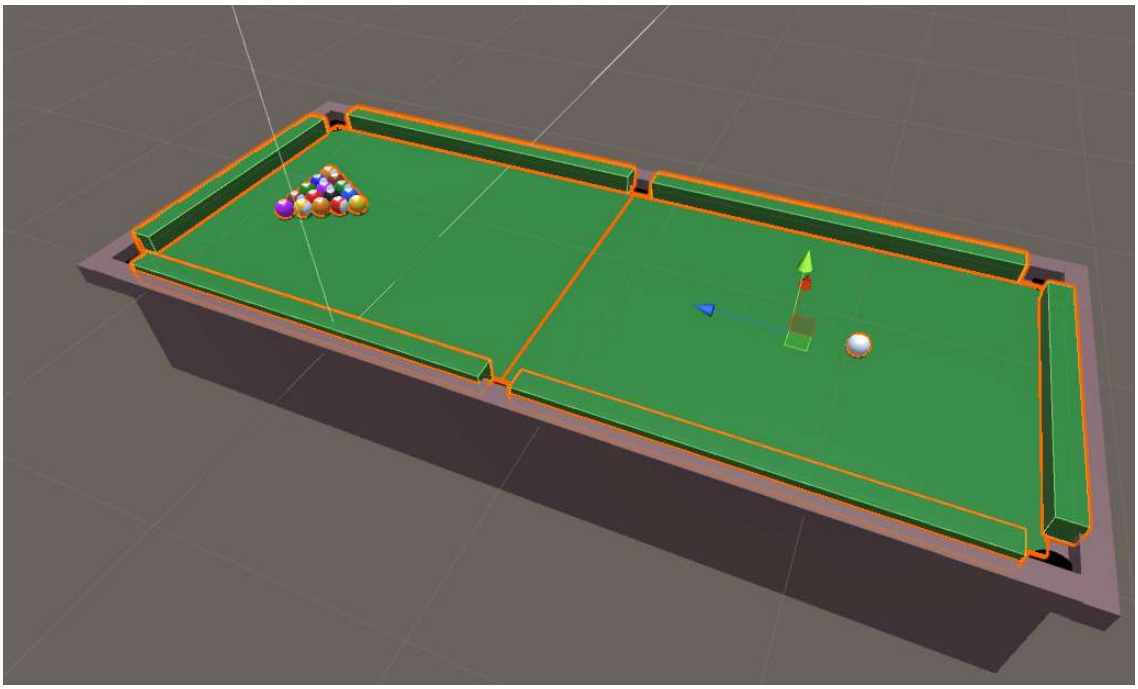
IMD CA 2 POOL GAME

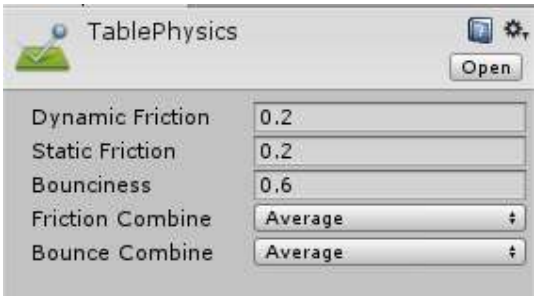
conor oneill

X00110726 Semester 8

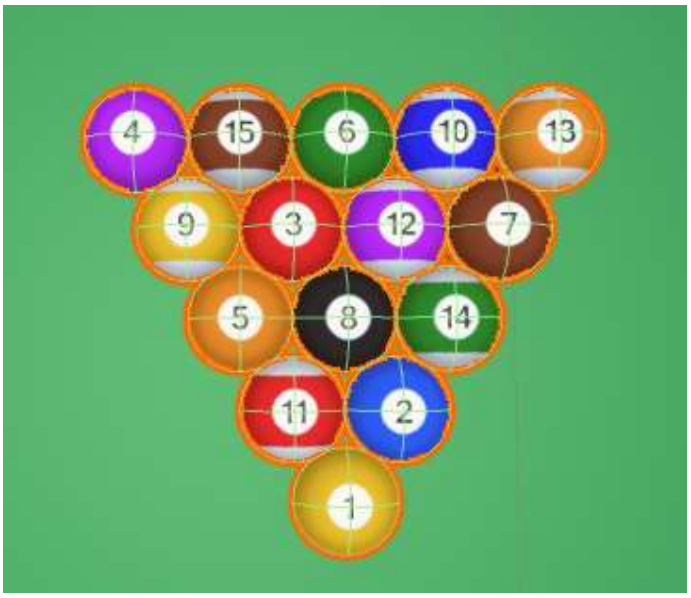
Pool Table



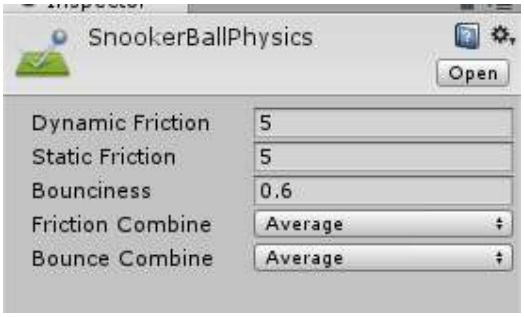
For modelling the pool table I simply created two planed and extended them the length of the board I required, in place of the bumpers of the table I used cubes which I extended to the appropriate size. I Then modelled the base of the table using 2 larger separate cubes. In order to get the colours I required I created a brown colour for the base of the table and the surrounding edges, I then applied this material to the mesh of the parts. For the green felt of the table and the bumpers I created a green coloured material and placed the material on the required parts. In order to achieve real world effects of the pool table and bumpers I created a physics material for the table, in this I set the required friction and bounciness in order to achieve a life like response from the bumpers and felt.



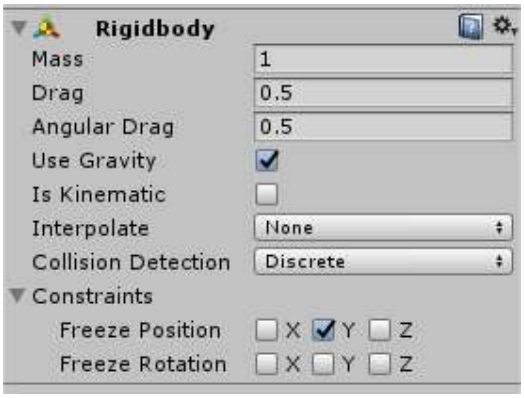
Pool Balls



For the pool balls, I Used a free asset from the asset store called Eight-Ball Rack [0] , as we have not yet done modelling I would not be able to properly apply stripes and spots myself had I generated the spheres. So, I thought that the eight-rack would suite the game nicely as they were easy to import and use. Once important I found that the game balls did not really interact as they should in real life , the physics seemed lacking, balls didn't bounce off one and other and just seemed to hit and their momentum would carry them in the same direction. In order to fix this I created a Physics material for the pool balls. Again, I set the friction and bounciness to what I felt most realistic.



My next problem was with the drag of the balls, the balls seemed to take an eternity to come to a stop once moving, so in order to fix this I set the drag and angular drag to suitable levels again giving a realistic result of how pool balls should behave.



Lighting

Lighting was placed above as required in the spec.

Pockets

For the pockets of the game I simply placed a flat sphere on each placing of the pocket, then on the pockets I placed a script that would setActive(false) each ball that came into contact with it, except for the white ball that would be replaced to the starting position automatically.

Maintaining Score

The scoring system in the game is a simple count of each type of ball (stripes/spots) using the ScoreManager script, each time a ball is potted it is deducted from the total of that type (using the pocket Script), if a black ball is while a stripe ad spot still remain the game automatically ends and a message stating that you potted the black is displayed. If the black ball is potted when there are no stripes and or spots remaining the message will display the appropriate winner.

Game Play

The player can control the game with the mouse by moving it around the screen the camera tracks along allowing the player to get whichever angle they want; the player then holds W key for the amount of power they want a quick tap will lightly hit the white a long press will result in a powerful strike.

Challenges

As the only real resources we were given that would aid this project where the rolling the ball tutorials , it was difficult to implement a cue and have it track along with the white ball appropriately and to pivot around a specific point, and with little to no tutorials online regarding this mechanism I

found it a bit ambitious for us to discover this by ourselves. I also was not able to implement a turn based system within the game.

References

[0] Eight-Ball Rack : https://www.assetstore.unity3d.com/en/#!/content/24730