# Preproduction

## Overview

The game will be a simple version of pool. The player will have control over the cue ball and alternate between the two players, they play against themself.

## Aesthetic Goals

1. The first aesthetic goal I have is for the game to be strategic. By that I mean that the player should consider where they would like to hit the ball. This would be successful if the player felt that the most effective way to play was to make choices about how they hit the ball as opposed to just hitting the ball randomly and hoping for the best. This kind of behaviour would indicate that the goal was not being successful.
2. The second goal I have is to provide a kind of satisfaction for the player that means they care about getting the balls in. If it is too easy to get a ball in, then the player won’t really care when they do manage to hit one in. If it is too hard the player will just feel consistently frustrated. So there should be a good balance in difficulty to make the experience for the player positive and challenging without being frustrating.

## Core loop

The player’s core loop will look as follows:

1. Move around the cue such that they strike the cue ball in some direction
2. Wait for the balls to finish moving around the table
   1. If they hit a ball in of their own colour without knocking in the cue ball, they go again
3. When their turn is over swap to the other player (which the player will also control)
4. When all of one player’s balls have been knocked in, that player wins

The core loop provides the gameplay on top of which the strategic element, of how to hit your balls in the fastest, and the difficulty dynamic, of how hard the balls are to hit in are built. The difficulty can be managed by the size of the pockets relative to the size of the balls (the mechanics).

# Version History & Production

## V1 (10/11)

* Set up basic object structure with cushions, pockets, and 1 of each relevant game object for prefab creation (yellow ball, red ball, cue ball, cue) attaching relevant components (colliders, rigid bodies, etc.)

## V2 (11/11)

### v2.1

* + Cue now follows mouse position

### v2.2

* + Cue collisions with the cue ball now propel the cue ball
  + Cue collisions with other balls pick up the cue ball

### v2.3

* + Balls collide elastically with teach other
  + Added drag to balls
  + Balls can now be sunk and are removed from the table when they are
    - The cue ball intentionally cannot be sunk

## V3 (12/11)

### v3.0

* + Due to the single player nature of the game, the intention is now to get all balls in and there is no turn system. The player should just hit the balls until they get all the balls in, at which point they have won.

## V4 (13/11)

### v4.0

* + Configured standard starting position
  + Added extra power to the break shot

## V5 (13/11)

### v5.0

* + Added Sounds for collisions, pocketing, and strokes

# Postmortem

Originally, I set out to make a turn based pool game that followed the normal play flow of billiards. As I progressed however, I changed some of the mechanics to make the game simpler to play and better for one person. I implemented the original version as I had planned with standard billiards play, however I adjusted things like removing the ability to hit the cue ball into a pocket, to avoid confusing the player with foul rules, and removing turn enforcement, since the player is likely to be playing by themselves and so having the game control turns itself does not make too much sense since the only difference it would make would be to enforce more rules over what things could or could not be hit. Doing this would overburden the player and decrease the experience potentially making things frustrating, which I wanted to avoid. This was in keeping with my goal of not making difficulty a frustration. Overall the development went quite smoothly and generally I learned more about the mechanics of the Unity editor such as more about sounds, materials, collision control, etc.