

## Final Project Proposal: 8 ballin'

jimin's final project will be a recreation of an 8 ball video game in Processing.

### Game features:

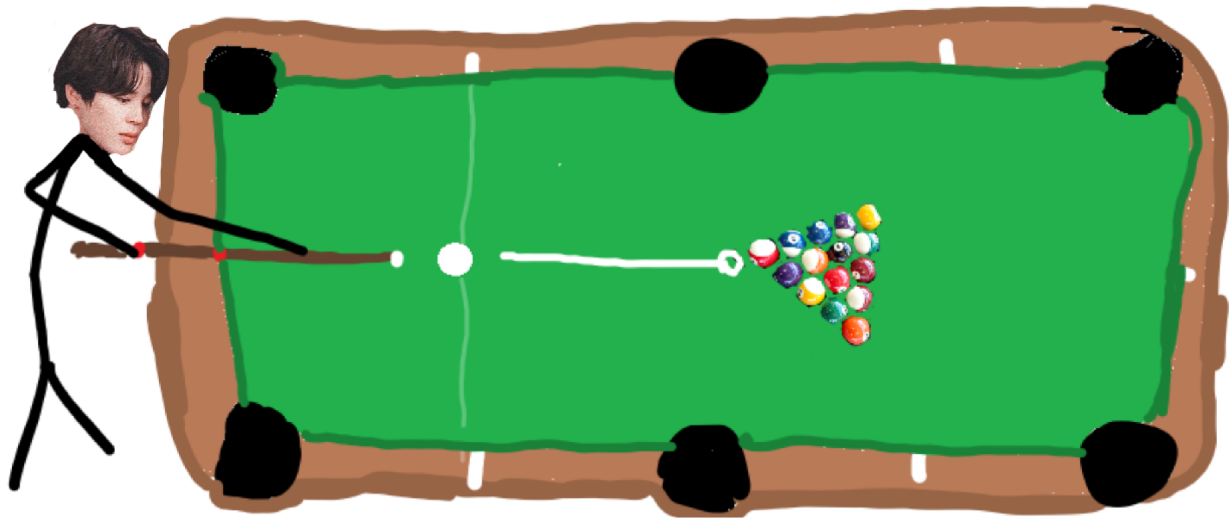
- Start menu to choose 1v1 mode or 2v2 mode
  - Mayhaps we have fields for users to set their names
  - Mayhaps we have options (ie: hide trajectory)
- Sixteen Balls

1		solid yellow	9		yellow stripe
2		solid blue	10		blue stripe
3		solid red	11		red stripe
4		solid purple	12		purple stripe
5		solid orange	13		orange stripe
6		solid green	14		green stripe
7		solid maroon	15		maroon stripe
8		solid black	16		cue ball, white

- The table is "open" at the start. It is open until a player legally pockets any ball other than the 8 after the break. The player is assigned the suit of the pocketed ball (solid / stripe)
  - After all the balls from the suit are pocketed, the player's target ball is the 8 ball for the remainder of the game.
- Illegally pocketing (pocketing the ball before all from the player's chosen suit are) the 8 ball is an instant-lose.
- To win:
  - Pocket all balls from player suit
  - The player designates which pocket the 8 ball will be pocketed into and then successfully pockets the 8 ball into that pocket
    - If the ball is pocketed into a pocket other than the one designated, the player loses
    - If the ball is not pocketed into any pocket, the player's turn is over.

### Gameplay:

- 2D top-down view



### Topics used:

- Queue
  - Keep track of turn order
- Stack
  - Stack for each pocket to keep track of what balls have been pocketed
  - Pop off the balls when the game is over and animate them going back to start position for restarting the game.
- Tree
  - The balls at the starting position look like a binary tree
- Switch statement
  - Manage program and ball states