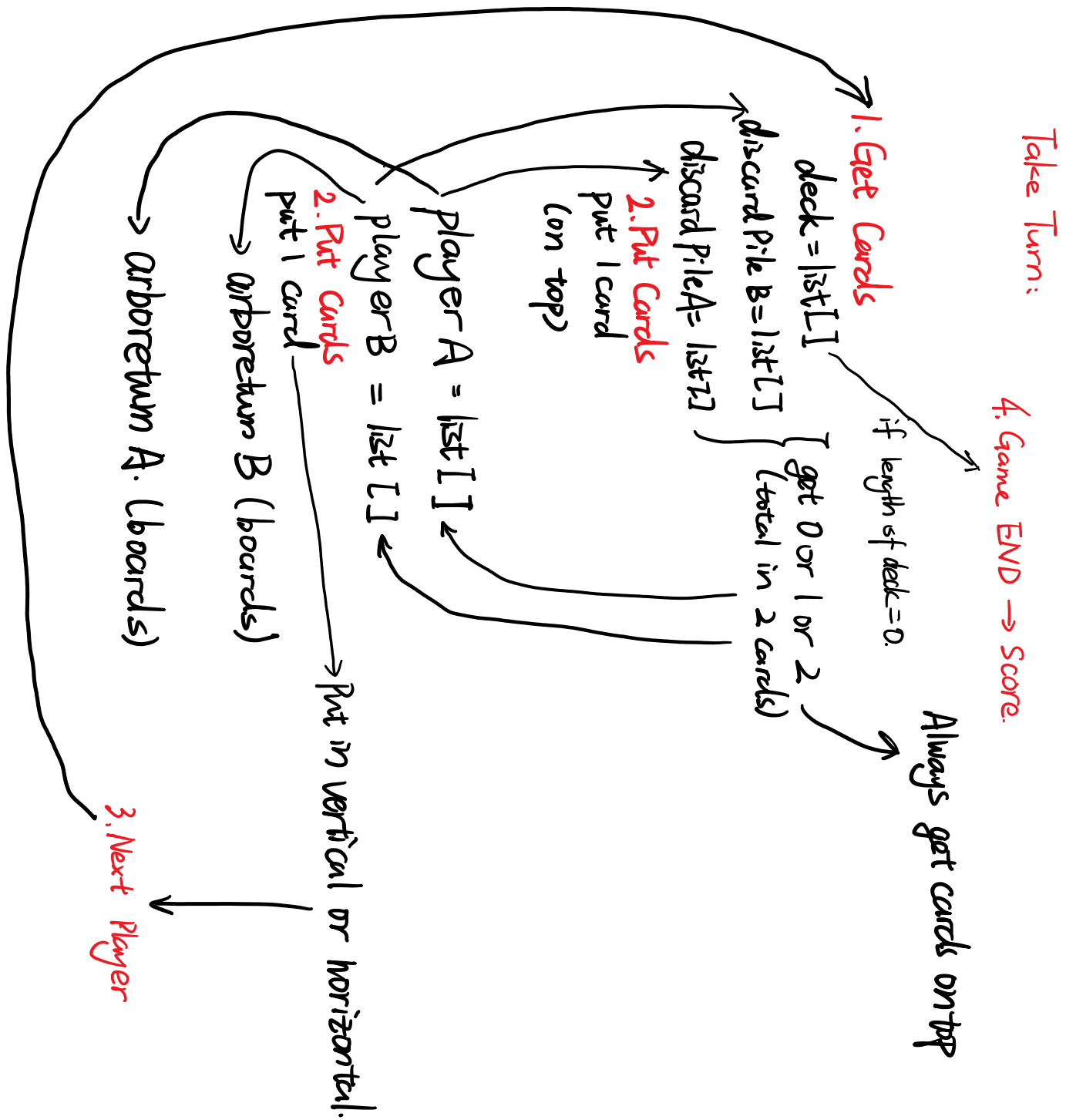


# 1110 Ass2 Sketch

Thursday, 24 March 2022 8:45 PM



Score:

1. Create dictionary (Hash Map)

for two players.

key - species of tree.

Value - 1. List of cards on hand ( $l=x$ )

2. Sum of cards on hand. ( $=y$ )

3. Sum of path ( $l=z$ )

2. Calculate  $y$  for player A ( $l=a$ )

Calculate  $y$  for player B ( $l=b$ )

3. Compare  $a$  and  $b$ .

$a=b=0 \Rightarrow$  Get player A's  $z$  and player B's  $z$ .

else  $\Rightarrow$  If one player's  $x$  contains 1 and another player's  $x$  contains 8, then the player who contains 8's  $y$  will reduce by 8.

$\Downarrow$

$a=b$

else: Get player with the larger  $y$ 's  $z$ .

Get  $z$ :

1. Check the first card and the last card are the same tree
2. Check the path is increasing.

3. Get  $z$ :

$z \equiv$  length of path + first Plus One + end Plus Two + extra Mark.

first Plus One: If the path start from 1 then +1

end Plus Two: If the path end with 8 then +2

extra Mark: If the length of path  $\geq 4$  and all

trees in path are the same species then + (length of path)

4. Sum up all  $z$ 's in player A's dictionary. ( $\alpha$ )

Sum up all  $z$ 's in player B's dictionary. ( $\beta$ )

5. Compare  $\alpha$  and  $\beta$ .

$\alpha = \beta \Rightarrow$  tie the game.

$\alpha > \beta \Rightarrow$  Player A win.

$\alpha < \beta \Rightarrow$  Player B win.