* Majority Element II

1 2 1 2 1 2 1 2 5 4 5 3

- Can store in a map & check occurrences more than $\frac{n}{3}$

- Can use Boyer Moore Majority Voting Algorithm.

  2 variables for values ($\frac{n}{3} < $ count $\rightarrow$ at most 2 elements can be there)
  2 variables for counts

- Iterate through each.

  matching with 1
  count 1 +

  matching with 2
  count 2 +

  count 1 = 0
  value 1 = i
  count = 1

  count 2 = 0
  value 2 = i
  count = 1

  else
  count 1 --
  count 2 --

1 2 3 3 5 4 5

V1=1	V1=1	V1=1	V1=4	V1=4	V1=4	
C1=1	C1=1	C1=0	C1=1	C1=1	C1=0	
V2=1	V2=2	V2=2	V2=2	V2=5	V2=5	
C2=0	C2=1	C2=0	C2=0	C2=1	C2=0	

==finally, we iterate again & check whether== ==for== those 2 ~~variable~~ values are occurring more than $n/3$

1. 1 2 2 2 5 1

$v_1 = 1$	$v_1 = 1$	$v_1 = 1$	$v_1 = 1$	$v_1 = 1$	$v_1 = 1$	$1 = 1$	✓
$c_1 = 1$	$c_1 = 1$	$c_1 = 2$	$c_1 = 2$	$c_1 = 1$	$c_1 = 0$	$c_1 = 1$	
$v_2 = -1$	$v_2 = 2$	$v_2 = 2$	$v_2 = 2$	$v_2 = 2$	$v_2 = 2$	$v_2 = 2$	✗
$c_2 = 0$	$c_2 = 1$	$c_2 = 1$	$c_2 = 2$	$c_2 = 1$	$c_2 = 0$	$c_2 = 0$	

count of $1 = 3 > n/3$