Boyer-Moore Majority voting Alg.

→ used to find majority element among the given elements that have more than n/2 occurences.

→ works in O(n) time complexity and O(1) space complexity.

How it works?

→ Choose candidate from the array or sets of elements; if it is same as the candidate element, increment votes, else decrease the votes. If votes == 0, select new element as the candidate.

Part - 1

```
int i=0                 for ( int i=0 ;  i< arr.length ; i++)
 "  vote =0                 if ( votes ==0)
candidate = 1                   candidate = arr[i]
                                   votes =1 ;
                            else if (arr[i] == candiate)
                                        votes ++;
                            else
                                   votes --;
```

Part-2

```
int count=0;

for(i=0; i<arr.length; i++)

     if (arr[i] == candidate)

          count+

  if (count > arr.length |2)
          return   candidate

  return -1;
```

Source: Geeks for Geeks.