Maximum Element as in appearing more than n/2 times:

Brute:

def majorityElement(v: [int]) -> int:

    d={}

    for i in v:

        d[i]=d.get(i,0)+1

    for i,j in d.items():

        if j>int(len(v)//2):

            return i

Optimal:

Booye Moore ‘s voting algorithm:

The majority of element wont be canceled out by other elements

def majorityElement(v: [int]) -> int:

    count=0

    candidate=-1

    for i in v:

        if count==0:

            candidate=i

            count+=1

        elif i==candidate:

            count+=1

        else:

            count-=1

    return candidate