

# Majority Element

## Problem Statement

Medium, Points: 4

Given an array A of N elements. Find the majority element in the array. A majority element in an array A of size N is an element that appears strictly more than  $N/2$  times in the array.

Example 1:

Input:

N = 3

A[] = {1,2,3}

Output:

-1

Explanation: Since, each element in {1,2,3} appears only once so there is no majority element

Example 2:

Input:

N = 5

A[] = {3,1,3,3,2}

Output:

3

Explanation:

Since, 3 is present more

than  $N/2$  times, so it is

the majority element.

Your Task:

The task is to complete the function majorityElement() which returns the majority element in the array. If no majority exists, return -1.

Expected Time Complexity:  $O(N)$ .

Expected Auxiliary Space:  $O(1)$ .

Constraints:

$1 \leq N \leq 10^7$

$0 \leq A_i \leq 10^6$

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