

//Majority Element

Given an array arr. Find the majority element in the array. If no majority exists, return -1. A majority element in an array is an element that appears strictly more than $\text{arr.size()} / 2$ times in the array.

Examples :

Input : arr[] = {1, 1, 2, 1, 3, 5, 1}

Output : 1

Explanation: Note that 1 appear 4 times which is more than $7 / 2$ times

Input : arr[] = {3, 3, 4, 2, 4, 4, 2, 4}

Output : -1

Explanation: There is no element whose frequency is greater than the half of the size of the array size.

Input : arr[] = {3}

Output : 3

Explanation: Appears more than $n/2$ times

Code:

```
#include<stdio.h>
int main()
{
    printf("Majority Element of the array\n\n\n");

    int n, i, j, x, m, count;
    printf("Enter the array length: ");
    scanf("%d", &n);

    int a[n];

    printf("Enter the array elements: ");

    for(i=0; i<n ; i++){
        scanf("%d", &a[i]);
    }

    x=n/2;
```

```
for(i=0; i<n; i++){
    count = 1;
    for(j=i+1; j<n; j++){
        if(a[i]==a[j]){
            count++;
        }
    }
    if(count>x){
        m=a[i];
        break;
    }
}
if(count>x){
    printf("%d\n", m);
}
else{
    printf("-1\n");
}

}
```