# CS23331-Design and Analysis of Algorithms-2023 Batch-CSE



Quiz navigation

1

Finish review

| | |
|---|---|
| **Started on** | Friday, 18 October 2024, 1:43 PM |
| **State** | Finished |
| **Completed on** | Friday, 18 October 2024, 1:43 PM |
| **Time taken** | 13 secs |
| **Marks** | 1.00/1.00 |
| **Grade** | **10.00** out of 10.00 (**100**%) |

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

Given an array `nums` of size `n`, return *the majority element.*

The majority element is the element that appears more than `⌊n / 2⌋` times. You may assume that the majority element always exists in the array.

**Example 1:**

```
Input: nums = [3,2,3]
Output: 3
```

**Example 2:**

```
Input: nums = [2,2,1,1,1,2,2]
Output: 2
```

**Constraints:**

- `n == nums.length`
- `1 <= n <= 5 * 10^4`
- `-2^31 <= nums[i] <= 2^31 - 1`

**For example:**

| Input | Result |
|---|---|
| 3<br>3 2 3 | 3 |
| 7<br>2 2 1 1 1 2 2 | 2 |

**Answer:** (penalty regime: 0 %)

```c
#include<stdio.h>
int count=0;
int num=0;
void find_major(int *arr, int l ,int h)
{
    if(l==h)
    {
        if (num==arr[l])
        {
            count++;
        }
        else if(count==0)
        {
            num=arr[l];
            count=0;
        }
        else
        {
            count--;
        }
        return;
    }

    int m=(l+h)/2;
    find_major(arr,l,m);
    find_major(arr,m+1,h);
}

int main()
{
    int n;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++)
        scanf("%d",&arr[i]);
    num=arr[0];
    find_major(arr,0,n-1);
    printf("%d",num);
}
```

| | Input | Expected | Got | |
|---|---|---|---|---|
| ✔ | 3<br>3 2 3 | 3 | 3 | ✔ |

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Finish review

← 1-Number of Zeros in a Given Array

Jump to...

3-Finding Floor Value →