



Dashboard My courses



CS23331-DAA-2024-CSE / 1-Number of Zeros in a Given Array

## 1-Number of Zeros in a Given Array

Started on	Tuesday, 30 September 2025, 9:33 AM
State	Finished
Completed on	Tuesday, 30 September 2025, 10:09 PM
Time taken	12 hours 35 mins
Marks	1.00/1.00
Grade	10.00 out of 10.00 (100%)

**Question 1** | Correct Mark 1.00 out of 1.00 **Problem Statement**

Given an array of 1s and 0s this has all 1s first followed by all 0s. Aim is to find the number of 0s. Write a program using Divide and Conquer to Count the number of zeroes in the given array.

**Input Format**

First Line Contains Integer m – Size of array

Next m lines Contains m numbers – Elements of an array

**Output Format**

First Line Contains Integer – Number of zeroes present in the given array.

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

```
1 #include <stdio.h>
2
```

```
3 int countZeroes(int arr[], int low, int high, int size) {
4     if (high >= low) {
5         int mid = low + (high - low) / 2;
6
7         if ((mid == 0 || arr[mid - 1] == 1) && arr[mid] == 0)
8             return size - mid;
9         else if (arr[mid] == 1)
10            return countZeroes(arr, mid + 1, high, size);
11        else
12            return countZeroes(arr, low, mid - 1, size);
13    }
14    return 0;
15 }
16
17 int main() {
18     int m;
19     scanf("%d", &m);
20     int arr[m];
21     for (int i = 0; i < m; i++)
22         scanf("%d", &arr[i]);
23     int result = countZeroes(arr, 0, m - 1, m);
24     printf("%d\n", result);
25     return 0;
26 }
```

	Input	Expected	Got	
✓	5 1 1 1 0 0	2	2	✓

	Input	Expected	Got	
✓	10 1 1 1 1 1 1 1 1 1	0	0	✓

✓	8 0 0 0 0 0 0 0 0	8	8	8	✓
✓	17 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0	2	2	2	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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