

Started on Monday, 1 September 2025, 3:33 PM

State Finished

Completed on Monday, 1 September 2025, 4:06 PM

Time taken 32 mins 34 secs

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 int count(int a[],int l, int h, int n){
3     if(l>h)
4         return 0;
5     int m=(l+h)/2;
6     if(a[m]==0 && (m==0 || a[m-1]==1))
7         return n-m;
8     if(a[m]==1)
9         return count(a,m+1,h,n);
10    else
11        return count(a,l,m-1,n);
12 }
13 int main()
14 {
15     int n;
16     scanf("%d",&n);
17     int a[n];
18     for(int i=0;i<n;i++)
19     {
20         scanf("%d",&a[i]);
21     }
22     printf("%d",count(a,0,n-1,n));
23 }
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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