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

1-Number of Zeros in a Given Array

Started on	Friday, 19 September 2025, 2:07 PM
State	Finished
Completed on	Saturday, 20 September 2025, 8:36 PM
Time taken	1 day 6 hours
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

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 %)

```c
#include<stdio.h>

int dac(int arr[], int low, int high, int n)
{
    if(high<low){
        return 0;
    }
    int mid=(low+high)/2;
    if(arr[mid]==0 && (mid==0|| arr[mid-1]==1)){
        return n-mid;
    }
    else if (arr[mid]==0){
        return dac(arr,low,mid-1,n);
    }
    else{
        return dac(arr,mid+1,high,n);
    }
}

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

    int ans=dac(arr,0,n-1,n);
    printf("%d",ans);
}
```

	Input	Expected	Got	
✔	5 1 1 1 0 0	2	2	✔
✔	10 1 1 1 1 1 1 1 1 1 1	0	0	✔
✔	8	8	8	✔

	0			
	0			
	0			
	0			
	0			
	0			
	0			
	0			
✔	17	2	2	✔
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	0			
	0			

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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