CS23331-Design and Analysis of Algorithms-2023 Batch-CS

Quiz navigation

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Finish review

Status	Finished
Started	Wednesday, 19 March 2025, 10:57 PM
Completed	Wednesday, 19 March 2025, 11:01 PM
Duration	4 mins 12 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

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  countzeroes(int arr[],int low,int high){
    if(low ==high){
        return 1-arr[low];
    }
    int mid = (low + high )/2;
    int leftzeroes = countzeroes(arr,low,mid);
    int rightzeroes=countzeroes(arr,mid+1,high);
    return leftzeroes + rightzeroes;
}

int main(){
    int n;
    //printf("enter the no.of elements");
    scanf("%d",&n);
    int arr[n];
    //printf("enter the array element (1s followed by 0s) : ");
    for(int i=0;i<n;i++){
        scanf("%d",&arr[i]);
    }
    int zeroes = countzeroes(arr,0,n-1);
    printf("%d\n",zeroes);
    return 0;
}
```

	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 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.

Finish review

◄ Problem 5: Finding Complexity using counter method

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2-Majority Element ►