Started on	Tuesday, 3 September 2024, 2:17 PM
State	Finished
Completed on	Tuesday, 8 October 2024, 2:03 PM
Time taken	34 days 23 hours
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 %)

```c
#include <stdio.h>

int firstZero(int arr[], int low, int high)
{
    if (high >= low)
    {

        int mid = low + (high - low)/2;
        if (( mid == 0 || arr[mid-1] == 1) && arr[mid] == 0)
            return mid;

        if (arr[mid] == 1)
            return firstZero(arr, (mid + 1), high);
        else
            return firstZero(arr, low, (mid -1));
    }
    return -1;
}


int countZeroes(int arr[], int n)
{
    int first = firstZero(arr, 0, n-1);


    if (first == -1)
        return 0;

    return (n - first);
}


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

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

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

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

◄ 5-G-Product of Array elements-Minimum

Jump to...

2-Majority Element ►