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|---|---|
| **Started on** | Monday, 7 October 2024, 7:32 PM |
| **State** | Finished |
| **Completed on** | Monday, 7 October 2024, 8:16 PM |
| **Time taken** | 44 mins 33 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 %)

```c
1  #include <stdio.h>
2  int countZeros(int arr[], int left, int right) {
3      if (left > right) {
4          return 0;
5      }
6      if (left == right) {
7          return arr[left] == 0 ? 1 : 0;
8      }
9      int mid = (left + right) / 2;
10     int leftZeros = countZeros(arr, left, mid);
11     int rightZeros = countZeros(arr, mid + 1, right);
12     if (arr[mid] == 1) {
13         return rightZeros;
14     } else {
15         return leftZeros + rightZeros;
16     }
17 }
18 int findZeroCount(int arr[], int size) {
19     return countZeros(arr, 0, size - 1);
20 }
21
22 int main() {
23     int n;
24     scanf("%d",&n);
25     int arr[n];
26     for(int i=0; i<n; i++){
27         scanf("%d", &arr[i]);
28     }
29     int zeroCount = findZeroCount(arr, n);
30     printf("%d", zeroCount);
31
32     return 0;
33 }
```

| | Input | Expected | Got | |
|---|---|---|---|---|
| ✔ | 5<br>1<br>1<br>1<br>0<br>0 | 2 | 2 | ✔ |

|   | Input | Expected | Got |   |
|---|-------|----------|-----|---|
| ✔ | 10<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 | 0 | 0 | ✔ |
| ✔ | 8<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0 | 8 | 8 | ✔ |
| ✔ | 17<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>0<br>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 ►