Started on	Wednesday, 17 September 2025, 3:33 PM
State	Finished
Completed on	Wednesday, 17 September 2025, 3:36 PM
Time taken	2 mins 31 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100**%)

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
3  int countZeroes(int arr[], int low, int high, int size) {
4      if (high < low)
5          return 0;
6
7      int mid = (low + high) / 2;
8
9      // Check if mid is first 0
10     if (arr[mid] == 0 && (mid == 0 || arr[mid - 1] == 1))
11         return size - mid;
12     else if (arr[mid] == 1)
13         return countZeroes(arr, mid + 1, high, size);
14     else
15         return countZeroes(arr, low, mid - 1, size);
16 }
17
18 int main() {
19     int m;
20     scanf("%d", &m);
21
22     int arr[m];
23     for (int i = 0; i < m; i++) {
24         scanf("%d", &arr[i]);
25     }
26
27     int result = countZeroes(arr, 0, m - 1, m);
28     printf("%d\n", result);
29
30     return 0;
31 }
32
```

	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	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.