

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



1-Number of Zeros in a Given Array

Started on	Wednesday, 17 September 2025, 8:08 AM
State	Finished
Completed on	Wednesday, 17 September 2025, 8:48 AM
Time taken	40 mins 37 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 %)

```
1 #include <stdio.h>
2
3 int main(){
```

```

4   int n;
5   scanf("%d", &n);
6   int a[n];
7   for(int i=0;i<n;i++){
8       scanf("%d",&a[i]);
9   }
10  if(a[n-1] == 1){
11      printf("0");
12  }
13  else{
14      int l = 0;
15      int h = n-1;
16      int m = (h + l)/2;
17      int s = 0;
18      for(int i=0;i<n;i++){
19          if(a[m] == 0){l = 0;
20              h = m-1;
21              for(int j=l;j<=h;j++){
22                  if(a[j] == 0){
23                      s = j;
24                      break;
25                  }
26              }
27          }
28          else{
29              l = m+1;
30              for(int j=l;j<=h;j++){
31                  if(a[j] == 0){
32                      s = j;
33                      break;
34                  }
35              }
36          }
37      }
38  }
39  }
40  }
41
42  printf("%d", n-s);
43  }
44  return 0;
45
46  }

```

	Input	Expected	Got	
✓	5	2	2	✓
	1			
	1			
	1			
	0			
	0			

	0			
✓	10	0	0	✓
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
	1			
✓	8	8	8	✓
	0			
	0			
	0			
	0			
	0			
	0			
	0			
	0			
	0			
	0			
✓	17	2	2	✓
	1			
	1			
	1			
	1			
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	1			
	1			
	1			
	0			
	0			

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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