<u>Dashboard</u> / <u>My courses</u> / <u>CS23331-DAA-2023-CSE</u> / <u>Greedy Algorithms</u> / <u>5-G-Product of Array elements-Minimum</u>

| Started on | Tuesday, 27 August 2024, 1:09 PM |
|--------------|----------------------------------|
| State | Finished |
| Completed on | Tuesday, 27 August 2024, 1:19 PM |
| Time taken | 10 mins 5 secs |
| Marks | 1.00/1.00 |
| Grade | 10.00 out of 10.00 (100%) |

```
Question 1
Correct
Mark 1.00 out of 1.00
```

Given two arrays array_One[] and array_Two[] of same size N. We need to first rearrange the arrays such that the sum of the product of pairs(1 element from each) is minimum. That is SUM (A[i] * B[i]) for all i is minimum.

For example:

| Input | Result | |
|-------|--------|--|
| 3 | 28 | |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |

Answer: (penalty regime: 0 %)

```
#include <stdio.h>
 2
    #include <stdlib.h>
 3
 4 v int cmp_asc(const void *a, const void *b) {
 5
        return (*(int*)a - *(int*)b);
 6
 7
 8 v int cmp_desc(const void *a, const void *b) {
 9
        return (*(int*)b - *(int*)a);
10
11
12 v int main() {
13
        int n;
14
        scanf("%d", &n);
15
16
        int array_One[n], array_Two[n];
17
18
        for(int i = 0; i < n; i++) {</pre>
19
20
             scanf("%d", &array_One[i]);
21
22
23 🔻
        for(int i = 0; i < n; i++) {</pre>
24
             scanf("%d", &array_Two[i]);
25
26
27
        qsort(array_One, n, sizeof(int), cmp_asc);
28
        qsort(array_Two, n, sizeof(int), cmp_desc);
29
30
        int result = 0;
31
32 •
        for(int i = 0; i < n; i++) {</pre>
33
             result += array_One[i] * array_Two[i];
34
35
36
        printf("%d\n", result);
37
38
        return 0;
39 }
```

| | Input | Expected | Got | |
|---|-------|----------|-----|---|
| ~ | 3 | 28 | 28 | ~ |
| | 1 | | | |
| | 2 | | | |
| | 3 | | | |
| | 4 | | | |
| | 5 | | | |
| | 6 | | | |
| ~ | 4 | 22 | 22 | ~ |
| | 7 | | | |
| | 5 | | | |
| | 1 | | | |
| | 2 | | | |
| | 1 | | | |
| | 3 | | | |
| | 4 | | | |
| | 1 | | | |
| ~ | 5 | 590 | 590 | ~ |
| | 20 | | | |
| | 10 | | | |
| | 30 | | | |
| | 10 | | | |
| | 40 | | | |
| | 8 | | | |
| | 9 | | | |
| | 4 | | | |
| | 3 | | | |
| | 10 | | | |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◄ 4-G-Array Sum max problem

Jump to...

1-Number of Zeros in a Given Array ►