



JAYARAMAN S 2024-CSE ▾

J2

Started on Friday, 19 September 2025, 2:01 PM**State** Finished**Completed on** Friday, 19 September 2025, 2:03 PM**Time taken** 1 min 15 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 an array of N integer, we have to maximize the sum of $\text{arr}[i] * i$, where i is the index of the element ($i = 0, 1, 2, \dots, N$). Write an algorithm based on Greedy technique with a Complexity $O(n \log n)$.

Input Format:

First line specifies the number of elements- n

The next n lines contain the array elements.

Output Format:

Maximum Array Sum to be printed.

Sample Input:

5

2 5 3 4 0

Sample output:

40

Answer: (penalty regime: 0 %)

```

1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int compare(const void *a, const void *b) {
5      return (*(int *)a - *(int *)b);
6  }
7
8  int main() {
9      int n;
10     scanf("%d", &n);
11     int arr[n];
12     for (int i = 0; i < n; i++) {
13         scanf("%d", &arr[i]);
14     }
15     qsort(arr, n, sizeof(int), compare);
16     long long sum = 0;
17     for (int i = 0; i < n; i++) {
18         sum += (long long)arr[i] * i;
19     }
20     printf("%lld\n", sum);
21     return 0;
22 }
```

	Input	Expected	Got	
✓	5	40	40	✓
	2			
	5			
	3			
	4			
	0			

	Input	Expected	Got	
✓	10 2 2 2 4 4 3 3 5 5 5	191	191	✓
✓	2 45 3	45	45	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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