

THIVYASRI T 2024-CSE ▾**T2****Started on** Wednesday, 15 October 2025, 9:03 AM**State** Finished**Completed on** Wednesday, 15 October 2025, 9:05 AM**Time taken** 2 mins 42 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 cmp(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), cmp);
16
17    long long maxSum = 0;
18    for (int i = 0; i < n; i++)
19        maxSum += (long long)arr[i] * i;
20
21    printf("%lld", maxSum);
22    return 0;
23 }
24

```

	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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