

Vedhavyas Pavankalyan G L 2023-IT-A**V2****Started on** Sunday, 19 October 2025, 5:43 PM**State** Finished**Completed on** Sunday, 19 October 2025, 5:44 PM**Time taken** 43 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    long long result = 0;
17    for (int i = 0; i < n; i++) {
18        result += (long long)arr[i] * i;
19    }
20    printf("%lld\n", result);
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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