

**Started on** Monday, 1 September 2025, 6:51 PM

**State** Finished

**Completed on** Monday, 1 September 2025, 7:47 PM

**Time taken** 55 mins 47 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 int main(){
8     int n;
9     scanf("%d",&n);
10    int*arr=malloc(n*sizeof(int));
11
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 sum=0;
18     for(int i=0;i<n;i++){
19         sum+=(long long)arr[i]*i;
20
21     }
22
23     printf("%lld\n",sum);
24     free(arr);
25     return 0;
26 }
```

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

	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.