

Started on Saturday, 30 August 2025, 6:22 PM

State Finished

Completed on Saturday, 30 August 2025, 6:27 PM

Time taken 5 mins 24 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  int compare(const void*a,const void *b){
4      return (*(int*)a-*(int*)b);
5  }
6  int main(){
7      int n;
8      scanf("%d",&n);
9      int arr[n];
10     for(int i=0;i<n;i++){
11         scanf("%d",&arr[i]);
12     }
13     qsort(arr,n,sizeof(int),compare);
14     long long maxsum=0;
15     for(int i=0;i<n;i++){
16         maxsum+=(long long)arr[i]*i;
17     }
18     printf("%lld\n",maxsum);
19     return 0;
20 }
```

	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.