

Started on Saturday, 30 August 2025, 7:35 PM

State Finished

Completed on Saturday, 30 August 2025, 8:05 PM

Time taken 30 mins 19 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 {
5     int x = *(int*)a;
6     int y = *(int*)b;
7     if(x<y) return -1;
8     if(x>y) return 1;
9     return 0;
10 }
11 int main()
12 {
13     int n;
14     scanf("%d",&n);
15     int arr[n];
16     for(int i=0;i<n;i++)
17     {
18         scanf("%d",&arr[i]);
19     }
20     qsort(arr,n,sizeof(int),compare);
21     long long sum=0;
22     for(int i=0;i<n;i++)
23     {
24         sum+=(long long)arr[i]*i;
25     }
26     printf("%lld\n",sum);
27     return 0;
28 }
```

	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.