
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 $arr[i] * i$, 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     }
```

```

13     scanf("%d",&n);
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	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.