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Started on	Friday, 23 August 2024, 2:39 PM
State	Finished
Completed on	Friday, 23 August 2024, 2:47 PM
Time taken	7 mins 38 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  int main()
3  {
4      int n;
5      scanf("%d",&n);
6      int a[n];
7      for(int i=0;i<n;i++)
8      {
9          scanf("%d",&a[i]);
10     }
11     int sum=0;
12     for(int i=1;i<n;i++)
13     {
14         int temp=a[i];
15         int j=i-1;
16         while (j >= 0 && a[j] > temp)
17         {
18             a[j + 1] = a[j];
19             j--;
20         }
21         a[j + 1] = temp;
22     }
23     for(int i=0;i<n;i++)
24     {
25         sum=sum+(i*a[i]);
26     }
27     printf("%d",sum);
28 }
```

	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.

[← 3-G-Burger Problem](#)

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[5-G-Product of Array elements-Minimum ►](#)