RAJALAKSHMI ENGINEERING COLLEGE

DEVISHREE J 2024-CSE D2

Started on	Wednesday, 3 September 2025, 9:29 AM
State	Finished
Completed on	Sunday, 7 September 2025, 9:33 AM
Time taken	4 days
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, ..., N).Write an algorithm based on Greedy technique with a Complexity O(nlogn).

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 %)

```c
#include <stdio.h>

void sort(int arr[], int n) {
    for (int i = 0; i < n-1; i++) {
        for (int j = 0; j < n-1-i; j++) {
            if (arr[j] > arr[j+1]) {
                // Swap
                int temp = arr[j];
                arr[j] = arr[j+1];
                arr[j+1] = temp;
            }
        }
    }
}

int main() {
    int n;
    scanf("%d", &n);
    int arr[100];

    for (int i = 0; i < n; i++) {
        scanf("%d", &arr[i]);
    }

    sort(arr, n);

    int sum = 0;
    for (int i = 0; i < n; i++) {
        sum = sum + arr[i] * i;
    }

    printf("%d\n", sum);
    return 0;
}

```

	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.

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