Started on	Wednesday, 3 September 2025, 10:13 AM
State	Finished
Completed on	Sunday, 7 September 2025, 11:59 AM
Time taken	4 days 1 hour
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>
#include <stdlib.h>
int compare(const void *x, const void *y) {
    int a = *(int*)x;
    int b = *(int*)y;
    if (a < b) return -1;
    else if (a > b) return 1;
    else return 0;
}

int main() {
    int a;
    scanf("%d", &a);
```

```
    scanf("%d", &a);

    int b[a];
    for (int i = 0; i < a; i++) {
        scanf("%d", &b[i]);
    }
    qsort(b, a, sizeof(int), compare);

    long long max_sum = 0;
    for (int i = 0; i < a; i++) {
        max_sum += (long long)b[i] * i;
    }
    printf("%lld\n", max_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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