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 bubbleSort(int arr[], int n) {
    for (int i = 0; i < n - 1; i++) {
        for (int j = 0; j < n - i - 1; j++) {
            if (arr[j] > arr[j + 1]) {
                int temp = arr[j];
                arr[j] = arr[j + 1];
                arr[j + 1] = temp;
            }
        }
    }
}
int main(){
    int n,sum=0;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++)scanf("%d",&arr[i]);
    bubbleSort(arr,n);
    for(int j=0;j<n;j++){
        sum+=(arr[j]*j);
    }
    printf("%d",sum);
}
```

| | Input | Expected | Got | |
|---|---|---|---|---|
| ✔ | 5<br>2<br>5<br>3<br>4<br>0 | 40 | 40 | ✔ |
| ✔ | 10<br>2<br>2<br>2<br>4<br>4<br>3<br>3<br>5 | 191 | 191 | ✔ |