Question 1

Correct

Mark 1.00 out of 1.00

Flag question

Question text

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

```c
#include <stdio.h>
#include <stdlib.h>

int cmp(const void *a, const void *b) {
    return (*(int*)a - *(int*)b); // ascending
}

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

    qsort(arr, n, sizeof(int), cmp);

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

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

	Input	Expected	Got	
✔	5 2 5 3 4 0	40	40	✔
✔	10 2 2 2 4 4 3 3 5 5 5	191	191	✔
✔	2 45 3	45	45	✔

Passed all tests! ✔