Question **1**

Correct

Mark 1.00 out of 1.00

Problem statement:

Find the length of the Longest Non-decreasing Subsequence in a given Sequence.

Eg:

Input:9

Sequence:[-1,3,4,5,2,2,2,2,3]

the subsequence is [-1,2,2,2,2,3]

Output:6

Answer: (penalty regime: 0 %)

```c
1   #include<stdio.h>
2   #include<string.h>
3   int max(int a,int b){
4       return a>b?a:b;
5   }
6   int lns(int * arr,int n){
7       int cost[n];
8        for (int i = 0; i < n; i++) {
9           cost[i] = 1;
10      }
11       for (int i = 1; i < n; i++) {
12          for (int j = 0; j < i; j++) {
13              if (arr[j] <= arr[i]) {
14                  cost[i] = max(cost[j] + 1, cost[i]);
15              }
16          }
17      }
18      return cost[n-1];
19  }
20  int main(){
21      int n;
22      scanf("%d",&n);
23      int arr[n];
24      for(int i=0;i<n;i++) scanf("%d",&arr[i]);
25
26      printf("%d",lns(arr,n));
27      return 0;
28  }
```

	Input	Expected	Got	
✔	9 -1 3 4 5 2 2 2 2 3	6	6	✔
✔	7 1 2 2 4 5 7 6	6	6	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

◄ 3-DP-Longest Common Subsequence

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1-Finding Duplicates-O(n^2) Time Complexity,O(1) Space Complexity ►