

## 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 %)

```

1 #include <stdio.h>
2
3
4 int max(int a, int b) {
5     return (a > b) ? a : b;
6 }
7
8 int lnds(int arr[],int n) {
9     int dp[n];
10    for (int i = 0; i < n; i++) dp[i] = 1;
11
12    for (int i = 1; i < n; i++) {
13        for (int j = 0; j < i; j++) {
14            if (arr[j] <= arr[i]) dp[i] = max(dp[j] + 1, dp[i]);
15        }
16    }
17    return dp[n-1];
18 }
19
20
21
22
23
24 int main(){
25     int n;
26     scanf("%d", &n);
27     int arr[n];
28     for (int i = 0; i < n; i++) {
29         scanf("%d", &arr[i]);
30     }
31
32     int result=lnds(arr,n);
33     printf("%d\n",result);
34
35     return 0;
36 }
37
38
39
40
41
42

```

	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

Jump to...



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