

RAKSHITA N 2024-IT ▾**R2****Started on** Tuesday, 18 November 2025, 11:09 AM**State** Finished**Completed on** Tuesday, 18 November 2025, 11:10 AM**Time taken** 48 secs**Marks** 1.00/1.00**Grade** **10.00** out of 10.00 (**100%**)

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 int main() {
4     int n;
5     scanf("%d", &n);
6
7     int seq[n];
8     for (int i = 0; i < n; i++)
9         scanf("%d", &seq[i]);
10
11    int dp[n];
12    for (int i = 0; i < n; i++)
13        dp[i] = 1;
14
15    for (int i = 1; i < n; i++) {
16        for (int j = 0; j < i; j++) {
17            if (seq[i] >= seq[j] && dp[i] < dp[j] + 1) {
18                dp[i] = dp[j] + 1;
19            }
20        }
21    }
22
23    int max_len = 0;
24    for (int i = 0; i < n; i++) {
25        if (dp[i] > max_len)
26            max_len = dp[i];
27    }
28
29    printf("%d\n", max_len);
30    return 0;
31 }
32 }
```

	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.

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