

Vedhavyas Pavankalyan G L 2023-IT-A**V2****Started on** Sunday, 19 October 2025, 5:49 PM**State** Finished**Completed on** Sunday, 19 October 2025, 5:50 PM**Time taken** 30 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     int a[n];
7     for (int i = 0; i < n; i++)
8         scanf("%d", &a[i]);
9     int dp[n];
10    for (int i = 0; i < n; i++)
11        dp[i] = 1;
12    int max = 1;
13    for (int i = 1; i < n; i++) {
14        for (int j = 0; j < i; j++) {
15            if (a[i] >= a[j] && dp[i] < dp[j] + 1)
16                dp[i] = dp[j] + 1;
17        }
18        if (dp[i] > max)
19            max = dp[i];
20    }
21    printf("%d", max);
22    return 0;
23 }
```

	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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