Started on	Thursday, 9 October 2025, 10:27 PM
State	Finished
Completed on	Thursday, 9 October 2025, 10:43 PM
Time taken	15 mins 55 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 %)

```c
1  #include<stdio.h>
2  int main()
3 ▾{
4      int n;
5      scanf("%d",&n);
6      int arr[n];
7 ▾    for(int i=0;i<n;i++){
8          scanf("%d",&arr[i]);
9      }
10 int dp[n];
11 ▾for(int i=0;i<n;i++){
12     dp[i]=1;
13 }
14 ▾for(int i=1;i<n;i++){
15 ▾    for(int j=0;j<i;j++){
16 ▾        if(arr[i]>=arr[j]&&dp[i]<dp[j]+1){
17             dp[i]=dp[j]+1;
18         }
19     }
20
21 }
```

```
22    int max=dp[0];
23  ▾ for(int i=1;i<n;i++){
24  ▾     if(dp[i]>max){
25            max=dp[i];
26        }
27    }
28    printf("%d",max);
29    return 0;
30
31    }
```

	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.