

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 max(int a, int b) {
4      return (a > b) ? a : b;
5  }
6
7  int main() {
8      int n;
9      scanf("%d", &n);
10     int arr[n];
11     for(int i = 0; i < n; i++) {
12         scanf("%d", &arr[i]);
13     }
14     int dp[n];
15     for(int i = 0; i < n; i++) dp[i] = 1;
16
17     for(int i = 1; i < n; i++) {
18         for(int j = 0; j < i; j++) {
19             if(arr[j] <= arr[i]) {
20                 dp[i] = max(dp[i], dp[j] + 1);
21             }
22         }
23     }
24
25     int ans = 0;
26     for(int i = 0; i < n; i++) {
27         if(dp[i] > ans) ans = dp[i];
28     }
29
30     printf("%d\n", ans);
31     return 0;
32 }
33
```

	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! ✓