Started on	Sunday, 10 November 2024, 7:25 PM
State	Finished
Completed on	Sunday, 10 November 2024, 7:36 PM
Time taken	11 mins 7 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
3   int max(int a, int b) {
4       return (a > b) ? a : b;
5   }
6
7   int longestNonDecreasingSubsequence(int arr[], int n) {
8       int dp[n];
9       int maxLength = 1;
10
11      for (int i = 0; i < n; i++) {
12          dp[i] = 1;
13          for (int j = 0; j < i; j++) {
14              if (arr[i] >= arr[j]) {
15                  dp[i] = max(dp[i], dp[j] + 1);
16              }
17          }
18          maxLength = max(maxLength, dp[i]);
19      }
20
21      return maxLength;
22  }
23
24  int main() {
25      int n;
26      scanf("%d", &n);
27
28      int arr[n];
29      for (int i = 0; i < n; i++) {
30          scanf("%d", &arr[i]);
31      }
32
33      printf("%d\n", longestNonDecreasingSubsequence(arr, n));
34
35      return 0;
36  }
```

	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 ►