Dashboard / My courses / CS23331-DAA-2023-CSE / Dynamic Programming / 4-DP-Longest non-decreasing Subsequence

Started on	Sunday, 10 November 2024, 4:35 PM
State	Finished
Completed on	Sunday, 10 November 2024, 4:58 PM
Time taken	23 mins 37 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100**%)

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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 find(int n, int a[]){
4      int ans=0;
5      for(int i=0 ; i<n ; i++){
6          if(ans > n-i)
7              return ans;
8
9          else{
10             int l = i, r = n-1, t = 1;
11             while(l < r){
12                 if(a[l] <= a[r] && (l==i || a[l] >= a[l-1])){
13                     if(a[r] >= a[r-1])
14                         r--;
15                     else
16                         l++;
17                     t++;
18                 }
19                 else if(a[l+1] >= a[l]){
20                     l++;
21                     r++;
22                 }
23                 else
24                     break;
25             }
26             if(ans<t)
27                 ans=t;
28         }
29     }
30     return ans;
31 }
32
33 int main(){
34     int n;
35     scanf("%d",&n);
36     int a[n];
37     for(int i=0;i<n;i++)
38         scanf("%d",&a[i]);
39
40     printf("%d",find(n,a));
41 }
```

	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...

Correct

Marks for this submission: 1.00/1.00.

◄ 3-DP-Longest Common Subsequence

Jump to...