CS23331-Design and Analysis of Algorithms-2023 Batch-CSE

Quiz navigation

1

Finish review

Started on	Tuesday, 29 October 2024, 2:35 PM
State	Finished
Completed on	Tuesday, 29 October 2024, 2:44 PM
Time taken	8 mins 54 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

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
#include<stdio.h>
int main(){
    int n,maxLength;
    scanf("%d",&n);
    int arr[n];
    for(int i=0;i<n;i++){
        scanf("%d",&arr[i]);
    }
    int dp[n];
    for(int i=0;i<n;i++){
        dp[i]=1;
    }
    for(int i=1;i<n;i++){
        for(int j=0;j<i;j++){
            if(arr[j]<=arr[i] && dp[i]<dp[j]+1){
                dp[i]=dp[j]+1;
            }
        }
    }
    for(int i=0;i<n;i++){
        if(dp[i]>maxLength){
            maxLength=dp[i];
        }
    }
    printf("%d",maxLength);
}
```

	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.

Finish review