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CS23331-DAA-2024-CSE / 4-DP-Longest non-decreasing Subsequence

4-DP-Longest non-decreasing Subsequence

Started on	Saturday, 18 October 2025, 10:54 AM
State	Finished
Completed on	Saturday, 18 October 2025, 11:06 AM
Time taken	12 mins 1 sec
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 max(int a,int b){
    return (a>b)?a:b;
}
int Longest(int c[],int n){
    int d[n];
    for(int i=0;i<n;i++){
        d[i]=1;
    }
    for(int i=1;i<n;i++){
        for(int j=0;j<i;j++){
            if(c[i]>=c[j]){
                d[i]=max(d[i],d[j]+1);
            }
        }
    }
    int r=d[0];
    for(int i=1;i<n;i++){
        r=max(r,d[i]);
    }
    return r;

}
int main(){
    int n;
    scanf("%d",&n);
    int a[n];
    for(int i=0;i<n;i++){
        scanf("%d",&a[i]);
    }
    int r=Longest(a,n);
    printf("%d",r);
}
```

	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

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