


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

4-DP-Longest non-decreasing Subsequence

Started on	Wednesday, 5 November 2025, 6:50 AM
State	Finished
Completed on	Wednesday, 5 November 2025, 6:51 AM
Time taken	39 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:[-1,3,4,5,2,2,2,3]

the subsequence is [-1,2,2,2,2,3]

Output:6

Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2
3 int main() {
```



```

4   int n;
5   scanf("%d", &n);
6   int arr[n];
7   for (int i = 0; i < n; i++)
8       scanf("%d", &arr[i]);
9
10  int dp[n];
11  for (int i = 0; i < n; i++)
12      dp[i] = 1;
13
14  for (int i = 1; i < n; i++)
15      for (int j = 0; j < i; j++)
16          if (arr[i] >= arr[j] && dp[i] < dp[j] + 1)
17              dp[i] = dp[j] + 1;
18
19  int max = dp[0];
20  for (int i = 1; i < n; i++)
21      if (dp[i] > max)
22          max = dp[i];
23
24  printf("%d\n", max);
25  return 0;
26 }
27

```

	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.

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