

ASK/VIEW DOUBT

SOLUTION

HINT

Problem

Result

Longest Increasing Subsequence

Send Feedback

Given an array with N elements, you need to find the length of the longest subsequence of a given sequence such that all elements of the subsequence are sorted in strictly increasing order.

Input Format

Line 1 : An integer N

Line 2 : Elements of arrays separated by spaces

Output Format

Line 1 : Length of longest subsequence

Input Constraints

1 <= n <= 10^3

Sample Input :

6

5 4 11 1 16 8

Sample Output 1 :

3

Sample Output Explanation

Length of longest subsequence is 3 i.e. (5,11,16) or (4,11,16).

Sample Input 2:

3

1 2 2

Sample Output 2 :

2

1

using namespace std;

2

3

int lis(int arr[], int n) {

4

5

6

/*Write your code here.

7

*Don't write main().

8

*Don't take input, it is passed as function argument.

9

*Don't print output.

10

*Taking input and printing output is handled automatically.

11

*/

12

int* out = new int[n];

13

out[0]=1;

14

15

for(int i=1;i<n;i++){

16

out[i]=1;

17

for(int j=i-1;j>=0;j--){

18

if(arr[j]<arr[i]){

19

if(out[j]+1>out[i]){

20

out[i]=out[j]+1;

21

}

22

}

23

}

24

int max=0;

25

for(int i=0;i<n;i++){

26

if(out[i]>max)

27

max=out[i];

28

}

29

return max;

30

}

31

< PREVIOUS

> NEXT

CUSTOM INPUT

SUBMIT SOLUTION