

LIS.java

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1
2 import java.util.Arrays;
4
5 class LongestIncreasingSequence{
6     static Scanner scan ;
7     static int[] O ;
8     static int n;
9     static int[] LIS;
10    static int[] A;
11
12    static boolean isGood(int b, int a){
13        int ai = -1;
14        int bj = -1;
15        for(int i = 0; i<n; i++)
16        {
17            if(O[i]==a)
18                ai = i;
19        }
20        for(int j = 0; j<n; j++)
21        {
22            if(O[j]==b)
23                bj = j;
24        }
25        if(ai>bj && ai!=-1 && bj!=-1)
26        {
27            return true;
28        }
29        else return false;
30    }
31    static void lis(){
32
33        Arrays.fill(LIS, 1);
34        for(int a =0; a<A.length; a++){
35            for(int b = 0; b<a ; b++){
36                if(isGood(A[b],A[a]) && LIS[a]<LIS[b]+1)
37                {
38                    LIS[a]=LIS[b]+1;
39                }
40                System.out.println(Arrays.toString(LIS));
41            }
```

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42     }
43 }
44
45 public static void main(String[] args) {
46     scan = new Scanner(System.in);
47     n = scan.nextInt();
48     O = new int[n];
49     A = new int[n];
50     LIS = new int[n];
51     for(int i = 0; i<n; i++)
52     {
53         O[i] = scan.nextInt();
54     }
55     while(scan.hasNext()){
56         Arrays.fill(A, -1);
57         for(int i = 0; i<n; i++)
58         {
59             A[i] = scan.nextInt();
60         }
61         lis();
62         System.out.println(maxLIST(LIS));
63     }
64 }
65
66 static int maxLIST(int[] LIST) {
67     int maxLIS;
68     int maxIndex = 0;
69     maxLIS = LIST[0];
70     for(int m = 1; m<LIS.length; m++)
71     {
72         if(LIS[m]>=LIST[maxIndex])
73         {
74             maxLIS = LIST[m];
75             maxIndex = m;
76         }
77     }
78     return maxLIS;
79 }
80 }

```