Questions Asked in Online Assessment for SWE Intern Role at GOOGLE India

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Platform: HackerEarth
Time: 60 Mins
Questions: 2
Level: Medium
Full Marks: 60

Alphabet Ordering (30 M)

A string Is call. good If all characters form a monotonous sequence (non Increasing or non decreasing),
You are given a string S consisting of lower case EnglIsh alphabet. Determine the minimum numbers of contiguous substrIngs In which S must be broken such that each substrIng is good

Note: A substrIng Is a contiguous Sequence of characters In a string

Input format
The first and only line contains string S.

Output format
Print an Integer denoting the required answer.

Constraints
1<=len(S)<=100000

All the characters in the string S will be lower case English alphabets.

Sample Test Cases

Input 1: abcdcba
Output 1: 2

Input2: gfcbdhdd
Output2: 3

Input3: ffdhbbbdeeggbb
Output3: 4

Input4: cadhfbbacf
Output4: 4

Input5: hheaadbdgdggd
Output5: 5

Input6: hcbehahccaag
Output6: 5

Maximum Subarray (30 M)

You are given an array of N elements. You are also given an Integer K. You can select any subarray of the given array, delete that subarray from the array and join the remaining array elements.
You can perform this operation **at most once**.

For eg, If the array is : [5, 7, 5, 4, 5, 8, 2] and you select [5, 4, 5] as the subarray that is deleted, then the resultant array becomes [5, 7, 8, 2]

You are required to find the length of the largest resultant array that contains an equal number of elements that are strictly greater and smaller than K.

Note: A subarray is a contiguous set of elements of an array.

Input format
N
N K
N integers- Elements of arr[i]

Output format
Print the required answer for each test case In a new line

Sample Input and Output

Input:

3
6 5
5 9 7 8 2 4
7 5
5 7 5 4 5 8 2
8 5
5 7 2 8 7 4 5 9

Output:

5
7
6

Input:

Output:

1
2
6

Input:

3
14 19
3 3 17 17 11 14 5 5 5 1 3 20 12
13 2
20 20 13 7 16 20 19 9 13 4 20 16 20
10 19
19 18 14 19 12 13 12 12 13 18

Output:

2
0
1