Card Repetitions   Z61488_en

Write a **program** to report the *consecutive repetitions* in a sequence of Poker cards. The goal is to detect consecutive subsequences of identical cards, of length $k \geq 2$, and write to the output a phrase describing each subsequence using the typical Poker names. We will consider 4 cases: "Pair" ($k = 2$), "Trio" ($k = 3$), "Poker" ($k = 4$), and longer repetitions ($k > 4$). If a card does not appear repeated in the sequence, nothing needs to be written. There's no need to consider overlapping, only the longest consecutive subsequences have to be reported.

Input

The input consists of a sequence of characters representing the cards. As in the problem "Better Card", the characters for the cards are A, 2, 3, ..., 9, 0, J, Q, and K. The sequence of cards ends with a period, i.e., the character '.', and it can be empty.

Output

You must detect the consecutive repetitions of cards and write to the output the description corresponding to the number of times k that the card C has been repeated: "Pair of Cs", "Trio of Cs", "Poker of Cs" or "k Cs!". Each description should be on a different line and in the order in which they appear in the input sequence. Refer to the public test cases for concrete examples.

Observation

In this problem, the input must be processed character by character; if you use strings or any method to store the card sequence, the problem will be considered **invalid**. Also, note that the sequence is supposed to come from an unlimited source of cards, so no maximum length can be assumed.

Sample input 1	Sample output 1
`11.`	`Pair of 1s`

Sample input 2	Sample output 2
`JJJ8A.`	`Trio of Js`

Sample input 3	Sample output 3

`122333KKKK9.`	`Pair of 2s`
	`Trio of 3s`
	`Poker of Ks`

Sample input 4	Sample output 4
`1AAAAA5QQQQQQQQ7.`	`5 As!` `8 Qs!`

Problem information

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