

Task 2

JOI and IOI

Task

Write a program which, given a string, counts the occurrence of "JOI" and "IOI" each as consecutive 3 letters in the string.

The string consisting of the capital letters in the alphabet. For example, "JOIOIOI" contains 1 "JOI" and 2 "IOI".



Input

The input file contains a single line. The first line of the input file contains a string which consists of at most 10000 capital letters.

Output

You should submit the output file which consists of 2 line. Line 1 should contain one integer, the number of the occurrence of "JOI". Line 2 should contain one integer, the number of the occurrence of "IOI".

Sample input and output

Sample inputs

Sample input 1

JOIJOI

Sample input 2

JOIOIOIOI

Sample input 3

JOIOIJOINXNXJIOIOIOJ

Sample outputs

Sample output 1

2
0

Sample output 2

1
3

Sample output 3

2
3