

A. Word

time limit per test: 2 seconds
 memory limit per test: 256 megabytes
 input: standard input
 output: standard output

Vasya is very upset that many people on the Net mix uppercase and lowercase letters in one word. That's why he decided to invent an extension for his favorite browser that would change the letters' register in every word so that it either only consisted of lowercase letters or, vice versa, only of uppercase ones. At that as little as possible letters should be changed in the word. For example, the word `HoUse` must be replaced with `house`, and the word `ViP` — with `VIP`. If a word contains an equal number of uppercase and lowercase letters, you should replace all the letters with lowercase ones. For example, `maTRix` should be replaced by `matrix`. Your task is to use the given method on one given word.

Input

The first line contains a word `S` — it consists of uppercase and lowercase Latin letters and possesses the length from 1 to 100.

Output

Print the corrected word `S`. If the given word `S` has strictly more uppercase letters, make the word written in the uppercase register, otherwise - in the lowercase one.

Examples

input
<code>HoUse</code>
output
<code>house</code>
input
<code>ViP</code>
output
<code>VIP</code>
input
<code>maTRix</code>
output
<code>matrix</code>

→ Attention

Package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then value 800 ms will be displayed and used to determine the verdict.

Codeforces Beta Round #55 (Div. 2)

Finished

→ Virtual participation

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Start virtual contest

→ Problem tags

implementation strings

No tag edit access

→ Contest materials

- Announcement 
- Tutorial 