

Back To School '16: Harambe

Time limit: 2.0s **Memory limit:** 256M

One bright morning, **d**'s English teacher needed help marking some essays. Naturally, **d** went out of his way to help him. When **d** gets the papers, he notices that the essays are riddled with improper capitalization everywhere.

Wanting to help his classmates (but not having enough time to properly fix their errors), **d** decides to convert the entire essay into either lowercase or uppercase text. He wants to do the least work possible, so he will convert an essay to lowercase if it already has more lowercase characters than uppercase, and vice-versa. If a tie occurs, he will leave the essay as it is.

Having a lot of essays to fix, **d** asks you to write a program to help him!

Input Specification

The input will consist of one line, containing one essay. The essay will have spaces and alphanumeric characters only. It is guaranteed that there are no more than 1024 characters in the essay. The essay may contain leading whitespace.

Output Specification

Output the modified essay, according to the rules above.

Sample Input

```
mITOCHONDRIA iS tHE pOWERHOUSE oF tHE cELL
```

Sample Output

```
MITOCHONDRIA IS THE POWERHOUSE OF THE CELL
```