

Real Give Away

You will given a string "GOC".The character of this string can be uppercase or lowercase letter.

You need to change the case.That means if the i'th character of the string is uppercase then you change it to lowercase and if it is lowercase you will change it to uppercase.

Input

The first line will be the test case number ($t \leq 6$).

In every test case there will be a string of 3 characters . First charcter is "G" or "g",Second is"O" or "o" and third is "C" or "c";

Output

For each test case you have to print the converted string in a line .

Example

Input:

1

GoC

Output:

gOc