

A. Squats

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

Pasha has many hamsters and he makes them work out. Today, n hamsters (n is even) came to work out. The hamsters lined up and each hamster either sat down or stood up.

For another exercise, Pasha needs exactly $n/2$ hamsters to stand up and the other hamsters to sit down. In one minute, Pasha can make some hamster either sit down or stand up. How many minutes will he need to get what he wants if he acts optimally well?

Input

The first line contains integer n ($2 \leq n \leq 200$; n is even). The next line contains n characters without spaces. These characters describe the hamsters' position: the i -th character equals 'X', if the i -th hamster in the row is standing, and 'x', if he is sitting.

Output

In the first line, print a single integer — the minimum required number of minutes. In the second line, print a string that describes the hamsters' position after Pasha makes the required changes. If there are multiple optimal positions, print any of them.

Examples

input
4 xxXx
output
1 XxXx
input
2 XX
output
1 xX
input
6 xXXxXx
output
0 xXXxXx

Codeforces Round #242 (Div. 2)

Finished

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.


Start virtual contest

→ Problem tags

implementation

No tag edit access

→ Contest materials

- Announcement 
- Tutorial 