

E. Roma and Poker

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

Each evening Roma plays online poker on his favourite website. The rules of poker on this website are a bit strange: there are always two players in a hand, there are no bets, and the winner takes 1 virtual bourle from the loser.

Last evening Roma started to play poker. He decided to spend no more than k virtual bourles — he will stop immediately if the number of his loses exceeds the number of his wins by k . Also Roma will leave the game if he wins enough money for the evening, i.e. if the number of wins exceeds the number of loses by k .

Next morning Roma found a piece of paper with a sequence on it representing his results. Roma doesn't remember the results exactly, and some characters in the sequence are written in a way such that it's impossible to recognize this character, so Roma can't recall whether he won k bourles or he lost.

The sequence written by Roma is a string s consisting of characters W (Roma won the corresponding hand), L (Roma lost), D (draw) and ? (unknown result). Roma wants to restore any *valid* sequence by changing all ? characters to W, L or D. The sequence is called *valid* if all these conditions are met:

- In the end the absolute difference between the number of wins and loses is equal to k ;
- There is no hand such that the absolute difference before this hand was equal to k .

Help Roma to restore any such sequence.

Input

The first line contains two numbers n (the length of Roma's sequence) and k ($1 \leq n, k \leq 1000$).

The second line contains the sequence s consisting of characters W, L, D and ?. There are exactly n characters in this sequence.

Output

If there is no *valid* sequence that can be obtained from s by replacing all ? characters by W, L or D, print NO.

Otherwise print this sequence. If there are multiple answers, print any of them.

Examples

input
3 2 L??
output
LDL

input
3 1 W??
output
NO

input
20 5 ?LLLLLWWWW????????

output

WLLLLWWWWWWLWLWDW