BotClean Large



MegaMaid is a robot whose function is to move through a matrix and clean all of its *dirty* cells. It's positioned in some cell of an $h \times w$ matrix of *dirty* (d) and *clean* (-) cells. It can perform five types of operations:

- LEFT: Move one cell to the left.
- RIGHT: Move one cell to the right.
- UP: Move one cell up.
- DOWN: Move one cell down.
- CLEAN: Clean the cell.

Given the robot's current location and the configuration of *dirty* and *clean* cells in the matrix, print the *next* operation MegaMaid will perform (e.g., UP, CLEAN, etc.) on a new line.

Input Format

The first line contains two space-separated integers describing the respective \boldsymbol{x} (row) and \boldsymbol{y} (column) coordinates of MegaMaid's initial location.

The second line contains two space-separated integers describing the respective height, h, and width, w, of the matrix.

Each line i of the h subsequent lines contains a string of w characters describing row i in the matrix; each character j describes the character at location (i,j) according to the following key:

- b denotes MegaMaid's location (in a clean cell).
- d denotes a dirty cell.
- - denotes a clean cell.

Note: If MegaMaid is initially located in a dirty cell, the cell will be marked with a d (not a b).

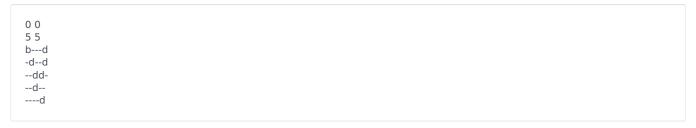
Constraints

- $1 \le w \le 50$
- $1 \le h \le 50$

Output Format

Print the next operation MegaMaid will perform (i.e., LEFT, RIGHT, UP, DOWN, CLEAN). It's important to only print the *next* operation, because your program will be called iteratively after performing each operation.

Sample Input



Sample Output

RIGHT			

Explanation



