



Challenge: Robbery

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Difficulty: Medium

Submission Constraints:

- Time limit per test: **0,1 seconds**
- Memory limit per test: **Default (65 MB)**

Description

While Arthur Morgan was in the middle of the biggest heist of his life, he made a mistake by attacking one of the guards inside the mansion. With time running out and the guards outside rushing towards the mansion, Arthur must quickly devise an escape plan to leave the mansion and escape the guards before it's too late. The mansion is like a matrix of several interconnected rooms, where one room can either lead to another open room or lead to a closed room. Morgan must reach an open room at the edge of the mansion.

Inputs

You will be given 5 lines to help Arthur escape the mansion:

- First line: nbRow, the number of rows in the mansion.
- Second line: nbCol, the number of columns in the mansion.
- Third line: a string of 1 and 0 representing the mansion, where 1 represents an open room and 0 represents a closed room, the string is read row by row to form the mansion matrix.
- Fourth line: Xo, the row of Arthur's starting room.
- Fifth line: Yo, the column of Arthur's starting room.



Outputs

- If no escape is found, return an empty string.
- If an escape path is found, one line of the string representation of the escape path, aka the rooms coordinates 'Xo,Yo-X1,Y1-X2,Y2.....'.

Constraints

- There can only be one (or no) escape.
- The starting position (Xo, Yo) is guaranteed to be an open room.
- $0 \leq X_o < \text{nbRow} \leq 1000$.
- $0 \leq Y_o < \text{nbCol} \leq 1000$.

Examples

Input	Output
5 6 0 0 1 0 1 1 0 1 0 1 0 1 0 0 1 1 0 0 0 1 1 0 0 1 0 1 0 0 1 0 2 3	2,3-2,2-3,2-3,1-4,1

Hint

- Mansion matrix for the previous example:
001011
010101
001100
011001
010010