The hunt for Gollum

Along the skirts of the Dead Marshes I followed it, and then I had him. Lurking by a stagnant mere, peering in the water as the dark eve fell, I caught him, Gollum. He was covered with green slime. He will never love me, I fear; for he bit me, and I was not gentle. Nothing more did I ever get from his mouth than the marks of his teeth.

"The Lord of the Rings: The fellowship of the Ring"

Hearing Gandalf's advice, Aragorn has started hunting creature Gollum. After several days following his footprints, he has arrived to the Dead Marshes. He has a map of the marshes, that can be viewed as an $M_1 * M_2$ matrix containing lowercase letters form English alphabet (i.e. letters from 'a' to 'z').

Being a skilled ranger, Aragorn has been able to fully characterize Gollum preferred place (if you are interested, you should know that it must be dark, wet, creepy and full of fishes!). It can be described as an $N_1 * N_2$ matrix containing lowercase letters form English alphabet.

Your task is simple: write a program that, given Gollum's preferred place description and Aragorn's map, output all possible locations of the creature.

Let's look at an example: suppose Gollum's preferred place is described by the following 3 * 3 matrix:

aba

bab

aba

and that Aragorn's map looks something like this:

aababa

ababab

bababa

ababab

ababab

bababa

ababab

Then your program must output the following: (1,2), (1,4), (2,1), (2,3), (5,1) and (5,3), these being the upper-left corners of all places on the Dead Marshes that match Gollum's preferred place

description. If none match is found, you should output the string "NO MATCH FOUND…" without the quotes.

Input

Line 1: Two integers: N_1 and N_2.

Lines 2… $N_1 + 1$: A string with N_2 characters as described above.

Lines $N_1 + 2$: Two integers: M_1 and M_2.

Lines $N_1 + 3$… $N_1 + M_1 + 3$: A string with M_2 characters as described above.

Restrictions

$1 \leq N_1, N_2 \leq 300$

$1 \leq M_1 * M_2 \leq 2000$

$N_1 \leq M_1$

$N_2 \leq M_2$

Output

On each line print the upper-left corner of all places that match Gollum's preferred place description on the form "(x,y)" without the quotes, where x stands for the row and y for the column. They should be lexicographically sorted, i.e. imagine them as an ordered pair. Then $(x_1,y_1) < (x_2,y_2)$ if and only if $x_1 < x_2$ or, if they are equal, $y_1 < y_2$.

Example

Input:

3 3

aba

bab

aba

7 6

aababa

ababab

bababa

ababab

ababab

bababa

ababab

Output:

(1,2)

(1,4)

(2,1)

(2,3)

(5,1)

(5,3)