

## Problem 2 – Labyrinth Escape

You are given a rectangular field of size NxM, filled with numbers and directions. On each cell on the field there will be a direction marked with the letters I, r, u, d.

By given position (R, C) (Rth row and Cth column) the directions are as follows:

From (R, C) go I => (R, C-1)

From (R, C) go r => (R, C+1)

From (R, C) go u => (R-1, C)

From (R, C) go  $d \Rightarrow (R+1, C)$ 

The numbers in the field are always as follows:

On the first row the values are from 1 to M, on the second row – from M+1 to 2\*M, on the third row – from 2\*M +1 to 3\*M, on the Nth row – from (N-1)\*M to N\*M.

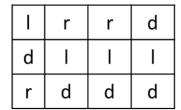
By given start position, find the path outside of the field, or print if you are lost.

#### **Example:**

N = **3** 

M = 4

Start position: 13



1	2	3	4
5	<b>√</b> 6	<b>₹</b> 7	8
9,	10	11	12

#### Input

The method Solve accepts a zero-based array of strings. The arguments are as follows:

args[0] contains M and N separated by a single space (" ")

args[1] contains R and C - the start position (the star position is zero-based)

args[2] to args[N+2] contain exactly M characters(only the letters 'l', 'r', 'u' or 'd')

#### Output

The output data should be printed on the console.

The output should contain a single string — "out SUM\_OF\_NUMBERS\_IN\_THE\_PATH" or "lost NUMBER\_OF\_CELL\_IN\_THE\_PATH"

"out SUM\_OF\_NUMBERS\_IN\_THE\_PATH" means the at some point you can go outside of the field

"lost NUMBER\_OF\_CELL\_IN\_THE\_PATH" means that you are stepping on a cell that is already visited

### **Constraints**

- N and M will be always between 1 and 500
- Allowed working time for your program: 0.2 seconds. Allowed memory: 16 MB.



# **Examples**

Input example	Output example
<pre>args =[ "3 4", "1 3", "lrrd", "dlll", "rddd"]</pre>	out 45
<pre>args =[ "5 8", "0 0", "rrrrrrd", "rludulrd", "durlddud", "urrrldud", "ullllll"]</pre>	lost 21
<pre>args =[ "5 8", "0 0", "rrrrrrd", "rludulrd", "lurlddud", "urrrldud", "ullllll"]</pre>	out 442