The TCS Global Coding Contest



ONLINE EDITOR (E)

05 Hr **57** Min **29** Sec

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Coding Area

A B C D E F

7X7

+ Problem Description

CODU is solving a 7x7 sudoku. Help him in solving the unique Sudoku.

Rules are as follows

- 1. There are 7 regions coloured differently. Each region must have a single occurrence of numbers between range [1, 7].
- 2. Regions don't have a fix shape and it can change from input to input.
- 3. Each row must have a single occurrence of numbers between range [1, 7] across all input.
- 4. Each column must have a single occurrence of numbers between range [1, 7] across all input.

Some numbers in some rows, columns and regions will be given. These will be between [1, 7].

Zero (0) denotes that the number is covered. Uncovering it will give a number between [1, 7].

Your task is to fill the numbers [1,7] where there is a 0 such that the 7x7 Sudoku is solved.

7x7 Sudoku is said to be solved when every region, every column, every row has exactly one occurrence of numbers [1,7].

+ Constraints

7 < Known/Given numbers in Entire Sudoku < 14

+ Input

Input consists of 14 lines.

First 7 lines denote the positions of numbers [1,7] in respective row and column.

Next 7 lines denote the shape of the regions inside the Sudoku. These will be denoted by 7 unique characters between alphabets [a-z].

+ Output

Print the solved Sudoku.

7 lines, each line containing 7 space separated integers honoring all the conditions.

+ Time Limit

1

+ Examples

Example 1

Input

0000060

0 0 0 0 0 0 0

2651743

0003000

000000

000000

000000

aaabbbb

aaaabbc

dddeebc

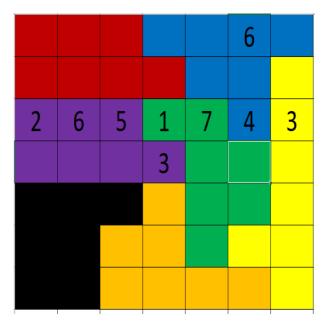
ddddeec

fffheec

ffhhecc

ffhhhhhc

The above input can be visualized as follows-



Output

TCS: CodeVita - Coding Arena 1245367 3567124 2651743 4713256 7126435 5432671 6374512 Explanation There could be many different solutions. Producing any solution as output is acceptable. Example 2 Input 000000 0000400 3006000 0000601 5000003 0010002 200005

rrrbbbb

grrrrbo

ggggbbo

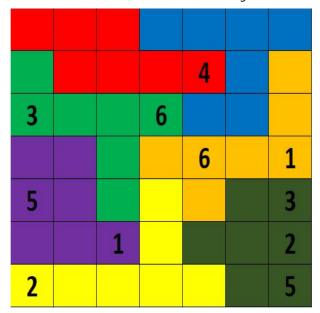
ppgoooo

ppgdoll

pppdIII

dddddII

The above input can be visualized as follows-



Note that the shape of the regions in both the inputs are different.

Output

7134526

1652437

3526174

4273651

5741263

6315742

2467315

Explanation

There could be many different solutions. Producing any solution as output is acceptable.

Upload Solution [Question : E]

I, **suraj patni** confirm that the answer Took help from online sources submitted is my own. (attributions)

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