**Digital Lab**

Assume that you work for the Digital Processing Lab. They ask you to write a program with an input binary matrix A, which contains the pattern to search on other binary matrix B. The input file include the size and elements for both A and B. The recognition process consists in scanning row by row (horizontal scanning) the matrix B, when a pattern is located on B you must mark this pattern. To mark a located pattern change 1 to 2 and 0 to * on B. The output file of your program will be the matrix B with the located patterns marked.

**Input**
The first line of the input contains the size of A, next lines contains the matrix A row by row, next line contains the size of B and next lines contains the matrix B row by row.

**Output**
The output is the matrix B with the located patterns marked.

**INPUT FILE**
2 2
1 0
1 1
5 5
1 1 0 0 0
0 1 1 0 0
1 0 0 1 0
1 1 1 1 0
0 0 1 1 1

*Note: The input file contains the size of the matrix A, the matrix A, the size of the matrix B and the matrix B.*

**OUTPUT FILE**
1 2 * 0 0
0 2 2 0 0
2 * 0 1 0
2 2 1 2 *
0 0 1 2 2

**INPUT FILE**
1 1
1
5 5
1 1 0 0 0
0 1 1 0 0
1 0 0 1 0
1 1 1 1 0
0 0 1 1 1

**OUTPUT FILE**
2 2 0 0 0
0 2 2 0 0

2 0 0 2 0
2 2 2 2 0
0 0 2 2 2

**INPUT FILE**
1 1
0
5 5
1 1 0 0 0
0 1 1 0 0
1 0 0 1 0
1 1 1 1 0
0 0 1 1 1

**OUTPUT FILE**
1 1 * * *
* 1 1 * *
1 * * 1 *
1 1 1 1 *
* * 1 1 1

**INPUT FILE**
2 6
1 0 0 1 0 1
1 1 1 0 1 0
5 5
1 1 0 0 0
0 1 1 0 0
1 0 0 1 0
1 1 1 1 0
0 0 1 1 1

**OUTPUT FILE**
1 1 0 0 0
0 1 1 0 0
1 0 0 1 0
1 1 1 1 0
0 0 1 1 1