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## Pattern in a matrix

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Using the definitions

```
typedef vector<char> Row;  
typedef vector<Row> Matrix;
```

implement a function

```
int pattern (const Matrix& P, const Matrix& M);
```

to compute how many times the pattern  $P$  appears inside the matrix  $M$ . It is guaranteed that both matrices are rectangular. Furthermore, if  $P$  has dimensions  $r_1 \times c_1$  and  $M$  has dimensions  $r_2 \times c_2$ , then it holds  $1 \leq r_1 \leq r_2 \leq 50$  and  $1 \leq c_1 \leq c_2 \leq 50$ .

For instance, the pattern  $2 \times 3$  to the left appears twice in the matrix  $3 \times 4$  to the right.

$$\begin{pmatrix} a & b & b \\ b & b & c \end{pmatrix} \qquad \begin{pmatrix} a & a & b & b \\ a & b & b & c \\ b & b & c & a \end{pmatrix}$$

You may implement auxiliar procedures if needed.

### Hint

The expected solution simply checks the pattern on every possible position of the matrix.

### Observation

You only need to submit the required procedure; your main program will be ignored.

### Problem information

Author : Jordi Cortadella

Translator : Salvador Roura

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