Pattern in a matrix
Examen final d’Informàtica, FME (2015-01-12)

Using the definitions

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

implement a function

```cpp
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.

\[
\begin{pmatrix}
  a & b & b \\
  b & b & c \\
\end{pmatrix}
\begin{pmatrix}
  a & a & b & b \\
  a & b & b & c \\
  b & b & c & a \\
\end{pmatrix}
\]

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**

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