

## Problem D. Palindromes

Input file: *standard input*  
Output file: *standard output*  
Time limit: 2 seconds  
Memory limit: 512 mebibytes

Little Vitechka loves palindromes. On his birthday, little Mitechka presented him a table with  $m$  lines and  $n$  columns filled with lowercase Latin letters. But Mitechka didn't know that Vitechka likes a table only if at least one line in it is a palindrome. Now Mitechka wants to cut his table along columns into several tables in such way that Vitechka likes all the resulting tables. Mitechka wants to minimize the number of the resulting tables. Help him to find this number.

### Input

The first line contains two integers  $m$  and  $n$  ( $1 \leq m \leq 10$ ,  $1 \leq n \leq 10^5$ ).

Next  $m$  lines contain the description of the table. Each of them contains a string of  $n$  lowercase Latin letters.

### Output

Print one number: the answer to the problem.

### Example

standard input	standard output
2 11 xyaaabaaaxy aaaaxyzaaba	3