

C. Flag

time limit per test: 2 seconds

memory limit per test: 512 megabytes

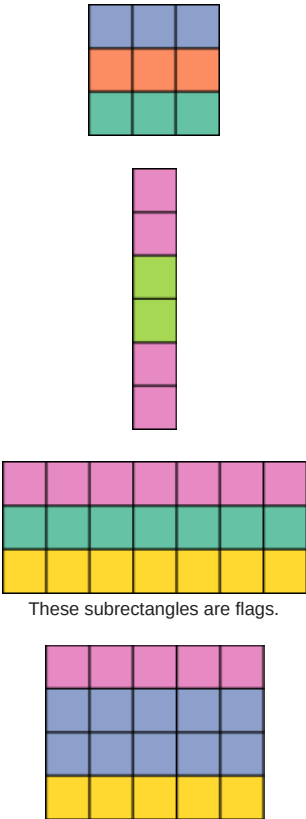
input: standard input

output: standard output

Innokenty works at a flea market and sells some ~~random stuff~~ rare items. Recently he found an old rectangular blanket. It turned out that the blanket is split in  $n \cdot m$  colored pieces that form a rectangle with  $n$  rows and  $m$  columns.

The colored pieces attracted Innokenty's attention so he immediately came up with the following business plan. If he cuts out a subrectangle consisting of three colored stripes, he can sell it as a flag of some country. Innokenty decided that a subrectangle is similar enough to a flag of some country if it consists of three stripes of **equal** heights placed one above another, where each stripe consists of cells of equal color. Of course, the color of the top stripe must be different from the color of the middle stripe; and the color of the middle stripe must be different from the color of the bottom stripe.

Innokenty has not yet decided what part he will cut out, but he is sure that the flag's boundaries should go along grid lines. Also, Innokenty won't rotate the blanket. Please help Innokenty and count the number of different subrectangles Innokenty can cut out and sell as a flag. Two subrectangles located in different places but forming the same flag are still considered different.



These subrectangles are flags.

Codeforces Round #567 (Div. 2)

Finished

Practice

Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

Practice

You are registered for practice. You can solve problems unofficially. Results can be found in the contest status and in the bottom of standings.

Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

Submit?

Language: GNU G++11 5.1.0

Choose file: 选择文件 未选择任何文件

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't guarantee that the solution is absolutely correct and it will pass system tests.

Submit

Problem tags

brute force

combinatorics

data structures

dp

implementation

No tag edit access

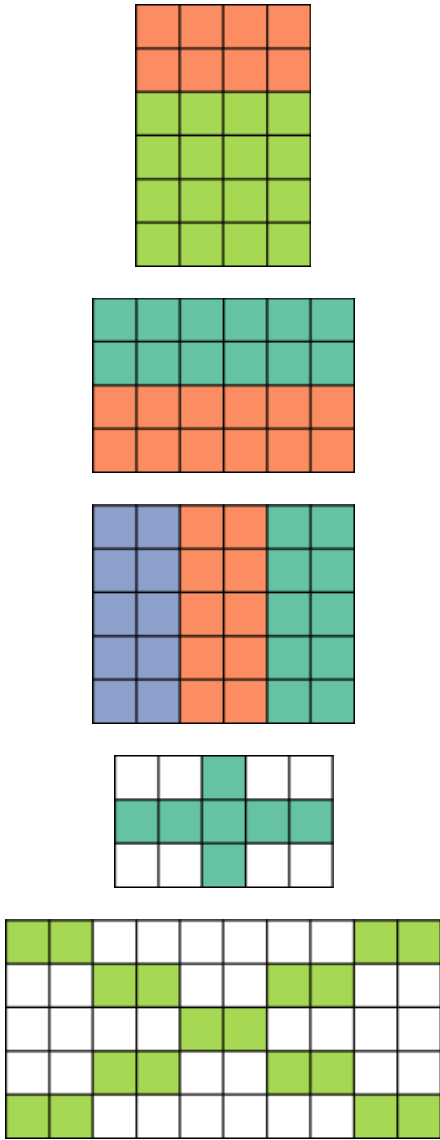
Contest materials

Announcement #1 (en)

Announcement #2 (ru)

Tutorial #1 (en)

Tutorial #2 (ru)



These subrectangles are not flags.

Input

The first line contains two integers  $n$  and  $m$  ( $1 \leq n, m \leq 1\,000$ ) — the number of rows and the number of columns on the blanket.

Each of the next  $n$  lines contains  $m$  lowercase English letters from 'a' to 'z' and describes a row of the blanket. Equal letters correspond to equal colors, different letters correspond to different colors.

Output

In the only line print the number of subrectangles which form valid flags.

Examples

<b>input</b>	<b>Copy</b>
<pre>4 3 aaa bbb ccb ddd</pre>	
<b>output</b>	<b>Copy</b>
<pre>6</pre>	
<b>input</b>	<b>Copy</b>
<pre>6 1 a a b b c c</pre>	
<b>output</b>	<b>Copy</b>
<pre>1</pre>	

Note

a	a	a
b	b	b
c	c	b
d	d	d

a	a	a
b	b	b
c	c	b
d	d	d

The selected subrectangles are flags in the first example.

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