CODEFORCES β
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HOME   TOP   CONTESTS   GYM   PROBLEMSET   GROUPS   RATING   API   HELP   CALENDAR

PROBLEMS   SUBMIT CODE   MY SUBMISSIONS   STATUS   HACKS   ROOM   STANDINGS   CUSTOM INVOCATION

C. Flag

time limit per test: 2 seconds
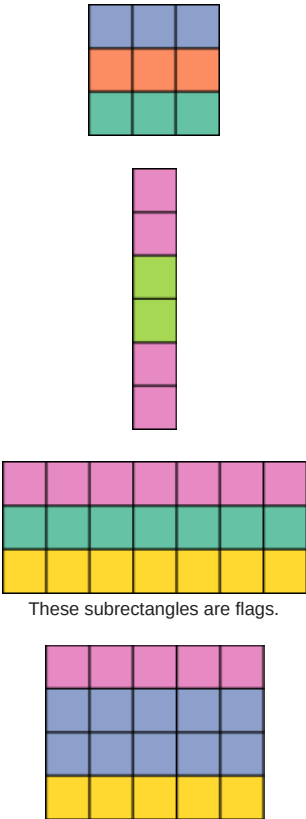memory limit per test: 512 megabytes
input: standard input
output: standard output

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.

→ Virtual participation

→ Practice

→ 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

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)   ✕

Codeforces Round #567 (Div. 2)
Finished
Practice
⭐
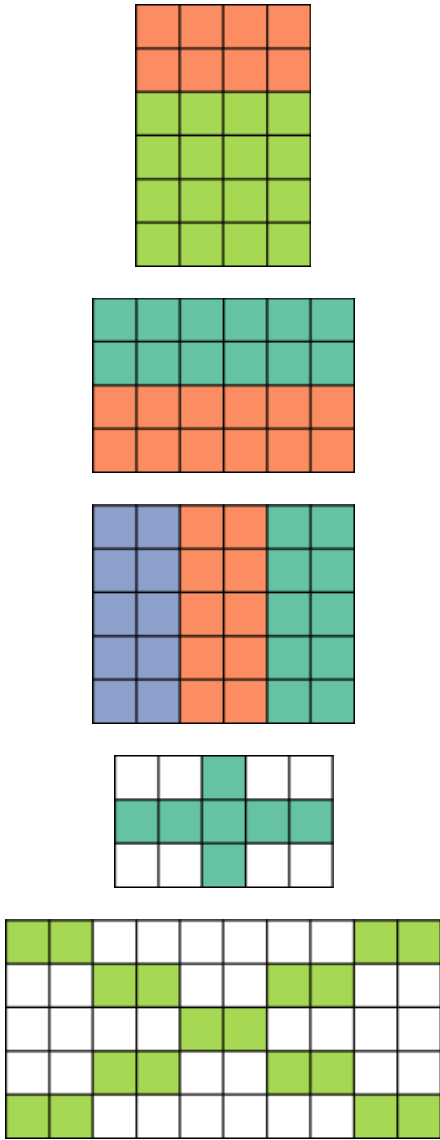
These subrectangles are not flags.

Input

The first line contains two integers n and m $(1 \le n, m \le 1\,000)$ — 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

input	Copy

```
4 3
aaa
bbb
ccb
ddd
```

output	Copy

```
6
```

input	Copy

```
6 1
a
a
b
b
c
c
```

output	Copy

```
1
```

Note

The selected subrectangles are flags in the first example.