

10pt	Not attempted 5166/6703 users correct (77%)
13pt	Not attempted 2812/4784 users correct (59%)

8pt	Not attempted 6365/6542 users correct (97%)
24pt	Not attempted 720/2799 users correct (26%)

15pt	Not attempted 700/1275 users correct (55%)
30pt	Not attempted 189/295 users correct (64%)

ACMonster	100
wata	100
vepifanov	100
VArtem	100
2rf	100
Nerevar	100
cmd	100
rng..58	100
sourspinach	100
Fdg	100

Problem A. The Repeater

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the [Quick-Start Guide](#) to get started.

Small input
10 points

Solve A-small

Large input
13 points

Solve A-large

Problem

Fegla and Omar like to play games every day. But now they are bored of all games, and they would like to play a new game. So they decided to invent their own game called "The Repeater".

They invented a 2 player game. Fegla writes down **N** strings. Omar's task is to make all the strings identical, if possible, using the minimum number of actions (possibly 0 actions) of the following two types:

- Select any character in any of the strings and repeat it (add another instance of this character exactly after it). For example, in a single move Omar can change "abc" to "abbc" (by repeating the character 'b').
- Select any two adjacent and identical characters in any of the strings, and delete one of them. For example, in a single move Omar can change "abbc" to "abc" (delete one of the 'b' characters), but can't convert it to "bbc".

The 2 actions are independent; it's not necessary that an action of the first type should be followed by an action of the second type (or vice versa).

Help Omar to win this game by writing a program to find if it is possible to make the given strings identical, and to find the minimum number of moves if it is possible.

Input

The first line of the input gives the number of test cases, **T**. **T** test cases follow. Each test case starts with a line containing an integer **N** which is the number of strings. Followed by **N** lines, each line contains a non-empty string (each string will consist of lower case English characters only, from 'a' to 'z').

Output

For each test case, output one line containing "Case #x: y", where x is the test case number (starting from 1) and y is the minimum number of moves to make the strings identical. If there is no possible way to make all strings identical, print "Fegla Won" (quotes for clarity).

Limits

1 ≤ **T** ≤ 100.
1 ≤ length of each string ≤ 100.

Small dataset

N = 2.

Large dataset

2 ≤ **N** ≤ 100.

Sample

Input	Output
5	Case #1: 1
2	Case #2: Fegla Won
mmaw	Case #3: 4
maw	Case #4: 0
2	Case #5: 3
gcj	
cj	
3	
aaabbb	
ab	
aabb	
2	
abc	
abc	
3	
aabc	

```
abbc  
abcc
```

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