

The Game of Jaw Breaker

Jawbreaker is played on an N by N matrix filled with single letters. The objective of the game is to clear as many letters off the board as possible. A move consists of selecting a letter position that has at least one equal letter as a horizontal or vertical neighbor.

The selected letter and all equal letters that touch vertically or horizontally (but not diagonally) are removed from the board. Letters slide down in each column to take up the empty positions. If a column is empty, the columns to the left slide over to the right.

You are required to write a program that will play Jawbreaker. The first line of input presented to your program will contain the integer N . The next N lines of input will each contain exactly N characters and will specify the characters in the matrix.

The program will determine a sequence of moves required to remove the most characters from the matrix. The output from the program will be the minimal number of characters remaining after playing the game.

Test Data

Sample Input:

```
4
AAAA
BBBB
BBCB
BBBB
```

Expected Output:

```
1
```