Flag columns X59349_en

A flag is represented by a square character matrix, where each character represents a color. For example, matrix:

```
W G W Y
W G W Y
W G W Y
```

represents a flag with four vertical lines (columns) of colors 'W', 'G', 'W' and 'Y'.
Given a flag of this type, we want to know how many columns meet the following conditions:

1. There is one position in the column, which cannot be the first one, and only one that changes the color with respect to the color above it.
2. The color change position has to be at the secondary diagonal or below it.

Remember that the secondary diagonal of a $n \times n$ matrix is the one that joins the upper right corner $(0, n-1)$ with the lower left $(n-1, 0)$.
For example, in the above flag there is no column that meets the requirements. The following matrix:

```
W Y G B B
W W Y B B
W W Y B B
W W Y Y Y
G W G Y G
```

has two columns that satisfy both conditions, the first and the fourth. For the second column the last requirement fails. For the third and fifth the first fails.
Write a code to compute how many columns meet the two requirements in a flag.
Exam score: 3.50 **Automatic part:** 40.00%

Input

The input is a sequence of cases. Each case consists of an integer n greater than zero followed by $n \times n$ characters representing by rows the colors of a flag.

Output

For each case and in one line, the number of columns of the flag that satisfy the requirements described above.

Sample input

```
5
W Y G B B
W W Y B B
W W Y B B
W W Y Y Y
G W G Y G

3
```

```
A A A
A B A
A C B

3
A A A
B B B
B B B


2
W W
Y W

4
A A A A
A A A A
B B B B
B B B B
```

Sample output

```
2
1
2
1
3
```

Observation

Complete a code with the following main function that you cannot change.

```
int main() {
    int n;
    while (cin >> n) {
        Flag flag = read_flag(n);
        cout << column_count(flag) << endl;
    }
}
```

Problem information

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Generation : 2021-06-10 07:58:39