

# Checkerboard

You are given an  $n$ -by- $n$  grid where each square is colored either black or white. A grid is correct if all of the following conditions are satisfied:

- Every row has the same number of black squares as it has white squares.
- Every column has the same number of black squares as it has white squares.
- No row or column has 3 or more consecutive squares of the same color.

Given a grid, determine whether it is correct.

## Input

The first line contains an integer  $n$  ( $2 \leq n \leq 24$ ;  $n$  is even). Each of the next  $n$  lines contains a string of length  $n$  consisting solely of the characters 'B' and 'W', representing the colors of the grid squares.

## Output

If the grid is correct, print the number 1 on a single line. Otherwise, print the number 0 on a single line.

## Sample Input

```
4
WBBW
WBWB
BWWB
BWBW
```

## Sample Output

```
1
```