

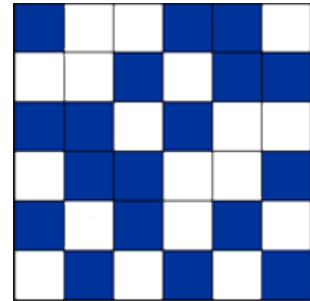
# Siena College's 32<sup>nd</sup> Annual High School Programming Contest

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### March 29, 2019

#### Gold Problem #7: Three in a Row

**Background Information:** A Three in a Row puzzle is a type of logic puzzle where you have to color a squares of an  $n \times n$  board either White or Black,. The restrictions are that each row and column must have the same number Blue and White squares, and that neither a row nor a column may have three consecutive squares of the same color.



of

Your program will be given a positive even integer  $N$ , followed by  $N$  strings of {B, W, O} characters. Your program must replace each O with either a B or W, so that the conditions listed above are met. Each puzzle has a unique solution.

#### Programming Problem:

**Input:** A positive even integer  $N \leq 18$ , followed by  $N$  strings of {B, W, O} characters, each string on its own line.

**Output:**  $N$  strings of {B, W} characters that is a correct solution to the puzzle.

**Example 1:**

**Input:**

```
6
OOOOOO
WOWOWO
WOOOOO
OWOOWW
WOBOBO
OOOOOB
```

**Output:**

```
BWBWBW
WBWBWB
WBWBWB
WBWBWB
WBWBWB
WBWBWB
```

**Example 2:**

```
8
OOOOOBBO
OOOOWOOO
BOBOOOOO
OWOWOOOW
WOOOOBOO
OOOOWOOO
WOWOOBOO
OWOBOOOO
```

```
WBBWWBBW
WBWBWBWB
BWBWBWBW
BWBWBWBW
WBWBWBWB
BWBWBWBW
WBWBWBWB
BWBWBWBW
```