Tomorrow’s Tic-Tac-Toe

**Pieces and Board:** This game is played on a rectangular \( n \) rows by \( m \) columns board. The default game has 3 rows by 4 columns with the configuration of Figure 1.

**To Move:** Players alternate placing their pieces (which are usually X’s and O’s) on the board in empty spaces.

**To Win:** The first player to reach 3-in-a-row (horizontally or vertically) with their pieces wins. If the board is filled and nobody has done this, the game is a tie.

**Compulsory Rule Changes:**
- Misère Rules: 3-in-a-row loses.
- Allow for diagonal wins.

**Position Representation:**
- \((T \text{ row row row ...})\)
  - \(T\) stores whose turn it is (X or O). Each \text{row} is in the form \(ppp\ldots\) where \(p\) is “X” or “O”, representing the corresponding piece on the board, or “–” if blank. The number of \text{row}’s in the position indicates the number of rows. In each \text{row}, the number of \(p\)’s indicates the number of columns.

E.g. representations for initial position (see Figure 1):
- \((x ---- x--- --o-)\)

Example game:

```
X-player starts

0  1  2  3
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4  5  6  7
```

X-player wins because she has a 3-in-a-row

Sample board mid-game (see board 5 in example game):
- \((o --xx-- xxoo --o-)\)