**Tic-Tac-Toe**

**Project Description & Goal**

The goal of this project is to develop Tic-Tac-Toe in a console application to allow the user to play Tic-Tac-Toe through the console. See https://playtictactoe.org/ to see what Tic-Tac-Toe is.

**Project Specifications**

* Output a brief description of the game and how to play.
* X’s go first, O’s go second.
* Accept user input via a coordinate system. Ask them first for the vertical position, and then the horizontal position. IE top middle position would be 0, 1.
* Display the game with ascii characters like so:
  + | | |X|
  + |X| | |
  + | |O| |
* If either player gets 3 in a row, declare the winner and end the game. Otherwise declare a tie and end the game.

**Required Methods**

* **ReturnType MethodName(Parameters)**
* **int VerifyBoard(char[,] board)**
* **void ProcessTurn(char player)**
* **void DrawBoard(char[,] board)**

**Project Learning Objectives**

* Learn how to work with 2D arrays.
* Learn how to evaluate data to see if it meets a certain requirement.

**Project Demonstrated Competencies**

1. User is correctly prompted for their input, and they are given the current state of the game every turn.
2. The game knows when a player has won or when the game is a tie.
3. Upgrade the project to a 4x4 grid instead of a 3x3 grid. However, keep the rule that 3 in a row wins.

**Rubric**

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|  | **Description of perfect implementation** | **Score** |
| Competency #1 | The user is provided every useful bit of information every turn, and it is formatted to be easily readable. | \_\_\_  50 |
| Competency #2 | The game correctly ends when a win/tie occurs. | \_\_\_  50 |
| Competency #3 | The game can now be played on a 4x4 grid instead of a 3x3 grid. Any 3 in a row combination still wins the game though. | \_\_\_  +15 |