Project 3 Tic Tac Toe

**CMP 128: Programming Through Web Development**

**Fall 2022**

**This assignment is due by 11:59 PM on December 13th, 2022 on Blackboard.**

This assignment will assess your knowledge of for loops, arrays, and event handlers. Your goal is to implement the game of Tic-Tac-Toe.

Tic-Tac-Toe is a simple game involving a 3 by 3 square area. Two players (X and O) take turns marking a square with their symbol. The player who marks three squares either horizontally, vertically or diagonally, wins. If no player is able to achieve this, then the game results in a tie.

Starter code is provided to you [here](https://cuny907-my.sharepoint.com/:u:/g/personal/emira_shano44_login_cuny_edu/EfrKuQj5scRCliBLMzczMDYBvU0hlvRVJKNX7iD1Y0ODtg?e=tDs1sj&download=1). The HTML file and the CSS files are completed for you. The 3 x 3 grid consists of buttons which should respond to events.

[A sample of the expected behavior can be found here.](https://cuny907-my.sharepoint.com/:v:/g/personal/emira_shano44_login_cuny_edu/ERzzcRiX6_5DkSnZrApu4FoBphUU2Q4KMfpWT8nH09ak6Q?e=y28cu8)

You must implement the following features to receive full credit: **(55pts)**

* Access all the button elements and save them to a **single** array variable. **(7pts)**
* Use a for loop to add event listeners to every button in the variable mentioned above. **(8pts)**
* Create a function which checks the innerText property of every button to determine if there is a winner. This function should check all possible winning scenarios and return either true or false (There are 8 possible winning scenarios, so we will need 8 if statements in this function) **(15pts)**
* When a player clicks on a button:
  + The text of the button that was clicked should update to display that player's symbol. **(5pts)**
  + The text at the bottom of the button grid should change so the other user knows it’s their turn. (When it’s player X’s turn and they click any button, the text should update to say “O’s Turn” and when it’s player O’s turn and they click any button, the text should update to say “X’s Turn”) **(5pts)**
  + Remove the event listener attached to that button using the removeEventListener() method. **(5pts)**
* Change the text at the bottom of the button grid to display which player won or if there is a tie. **(10pts)**

You will need to keep track of the current player's turn. What should we create in our code when we need to keep track of something? You should also keep track of the number of clicks. One entire round of the game is exactly 9 clicks (the same number of buttons). If the function we defined above returns false and the number of clicks is 9 then that means there was no winner.

**Submissions**

* You are required to submit a zipped folder of your .html file, .css file, and .js file on Blackboard.
  + [How to zip files on Windows](https://support.microsoft.com/en-us/windows/zip-and-unzip-files-f6dde0a7-0fec-8294-e1d3-703ed85e7ebc)
  + [How to zip files on MacOS](https://support.apple.com/guide/mac-help/zip-and-unzip-files-and-folders-on-mac-mchlp2528/mac)
* **No late submissions will be accepted.**