



Front End Technologies Week 5 Coding Assignment

Points possible: 70

Category	Criteria	% of Grade
Functionality	Does the code work?	25
Organization	Is the code clean and organized? Proper use of white space, syntax, and consistency are utilized. Names and comments are concise and clear.	25
Creativity	Student solved the problems presented in the assignment using creativity and out of the box thinking.	25
Completeness	All requirements of the assignment are complete.	25

Instructions: In VS Code, or an IDE of your choice, write the code that accomplishes the objectives listed below. Ensure that the code compiles and runs as directed. Take screenshots of the code and of the running program (make sure to get screenshots of all required functionality) and paste them in this document where instructed below. Create a new repository on GitHub for this week's assignments and push this document, with your JavaScript project code, to the repository. Add the URL for this week's repository to this document where instructed and submit this document to your instructor when complete.

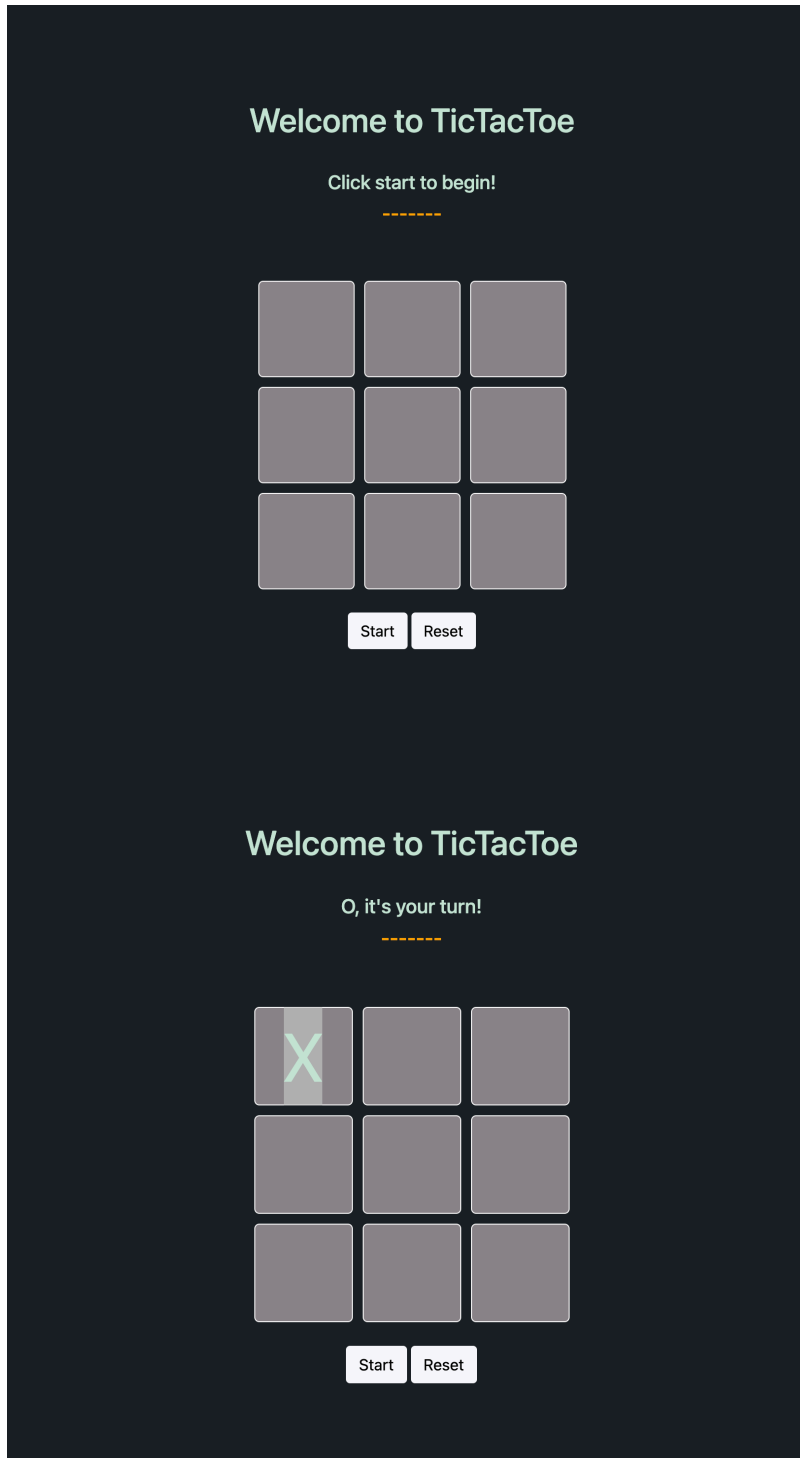
Coding Steps:

1. Using any of the tools you've worked with so far, create a game of tic-tac-toe.
 - a. A heading should say whether it is X's or O's turn and change with each move made.
 - b. Create a tic-tac-toe grid using your HTML element of choice. When a cell in the grid is clicked, an X or O should appear in that spot depending on whose turn it is.
 - c. A button should be available to clear the grid and restart the game.



- d. When a player has won, or the board is full and the game results in a draw, a Bootstrap alert or similar Bootstrap component should appear across the screen announcing the winner.

Screenshots of Running Code:





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Welcome to TicTacToe

O, it's your turn!

X WINS!!

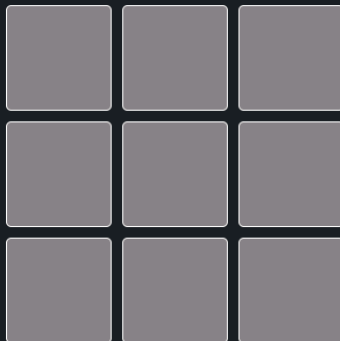


Start

Reset

Welcome to TicTacToe

X Goes first!



Start

Reset



FROM INEO TECH

ScreenShots of Code:

```
index.js | resetGame
1 //Creating a current player variable that starts the game with player X. In tic tac toe X goes first.
2 let currentPlayer = 'X';
3 //this is an array where the X's and O's will be pushed to for comparison for a winner
4 let currentBoard = [];
5
6 //this function resets the game when the reset button is clicked
7 function resetGame(){
8
9     currentBoard = [];
10    document.getElementById('displayturn').innerHTML = 'X Goes first!';
11    document.getElementById('winner').innerHTML = '-----';
12    console.log(currentBoard);
13    document.getElementById('0').innerHTML = '';
14    document.getElementById('1').innerHTML = '';
15    document.getElementById('2').innerHTML = '';
16    document.getElementById('3').innerHTML = '';
17    document.getElementById('4').innerHTML = '';
18    document.getElementById('5').innerHTML = '';
19    document.getElementById('6').innerHTML = '';
20    document.getElementById('7').innerHTML = '';
21    document.getElementById('8').innerHTML = '';
22    newGame();
23 }
24
25 //this function is to switch the player by reassigning the currentPlayer value to the other player's mark, either X or O.
26 function switchPlayer(){
27     if(currentPlayer === 'X'){
28         currentPlayer = 'O';
29         document.getElementById('displayturn').innerHTML = 'O, it's your turn!';
30     } else if(currentPlayer === 'O'){
31         currentPlayer = 'X';
32         document.getElementById('displayturn').innerHTML = 'X, it's your turn!';
33     }
34 }
35
36 //this function purpose is to run through the entire possible winning combinations and if there is a match with the index numbers in the currentBoard array then
37 //the function will change the text to display the winner. The players can still click boxes if they want but the winner will not change.
38 function checkForWinner(){
39     if(currentBoard[0] === 'X' && currentBoard[1] === 'X' && currentBoard[2] === 'X'){
40         document.getElementById('displayturn').innerHTML = "Sorry O,";
41         document.getElementById('winner').innerHTML = "X WINS!!";
42     } else if(currentBoard[0] === 'O' && currentBoard[1] === 'O' && currentBoard[2] === 'O'){
43         document.getElementById('displayturn').innerHTML = "Sorry X,";
44         document.getElementById('winner').innerHTML = "O WINS!!";
45     }
46     else if(currentBoard[3] === 'X' && currentBoard[4] === 'X' && currentBoard[5] === 'X'){
47         document.getElementById('displayturn').innerHTML = "Sorry O,";
48         document.getElementById('winner').innerHTML = "X WINS!!";
49     } else if(currentBoard[3] === 'O' && currentBoard[4] === 'O' && currentBoard[5] === 'O'){
50         document.getElementById('displayturn').innerHTML = "Sorry X,";
51         document.getElementById('winner').innerHTML = "O WINS!!";
52     }
53 }
```

```
JS index.js | index.html | index.css
index.js | resetGame
39     document.getElementById('winner').innerHTML = 'O WINS!!';
40 }
41
42     else if(currentBoard[6] === 'X' && currentBoard[7] === 'X' && currentBoard[8] === 'X'){
43         document.getElementById('displayturn').innerHTML = "Sorry O,";
44         document.getElementById('winner').innerHTML = "X WINS!!";
45     } else if(currentBoard[6] === 'O' && currentBoard[7] === 'O' && currentBoard[8] === 'O'){
46         document.getElementById('displayturn').innerHTML = "Sorry X,";
47         document.getElementById('winner').innerHTML = "O WINS!!";
48     }
49
50     else if(currentBoard[9] === 'X' && currentBoard[4] === 'X' && currentBoard[8] === 'X'){
51         document.getElementById('displayturn').innerHTML = "Sorry O,";
52         document.getElementById('winner').innerHTML = "X WINS!!";
53     } else if(currentBoard[9] === 'O' && currentBoard[4] === 'O' && currentBoard[8] === 'O'){
54         document.getElementById('displayturn').innerHTML = "Sorry X,";
55         document.getElementById('winner').innerHTML = "O WINS!!";
56     }
57
58     else if(currentBoard[2] === 'X' && currentBoard[6] === 'X' && currentBoard[8] === 'X'){
59         document.getElementById('displayturn').innerHTML = "Sorry O,";
60         document.getElementById('winner').innerHTML = "X WINS!!";
61     } else if(currentBoard[2] === 'O' && currentBoard[6] === 'O' && currentBoard[8] === 'O'){
62         document.getElementById('displayturn').innerHTML = "Sorry X,";
63         document.getElementById('winner').innerHTML = "O WINS!!";
64     }
65
66     else if(currentBoard[0] === 'X' && currentBoard[3] === 'X' && currentBoard[6] === 'X'){
67         document.getElementById('displayturn').innerHTML = "Sorry O,";
68         document.getElementById('winner').innerHTML = "X WINS!!";
69     } else if(currentBoard[0] === 'O' && currentBoard[3] === 'O' && currentBoard[6] === 'O'){
70         document.getElementById('displayturn').innerHTML = "Sorry X,";
71         document.getElementById('winner').innerHTML = "O WINS!!";
72     }
73
74     else if(currentBoard[1] === 'X' && currentBoard[4] === 'X' && currentBoard[7] === 'X'){
75         document.getElementById('displayturn').innerHTML = "Sorry O,";
76         document.getElementById('winner').innerHTML = "X WINS!!";
77     } else if(currentBoard[1] === 'O' && currentBoard[4] === 'O' && currentBoard[7] === 'O'){
78         document.getElementById('displayturn').innerHTML = "Sorry X,";
79         document.getElementById('winner').innerHTML = "O WINS!!";
80     }
81
82     else if(currentBoard[2] === 'X' && currentBoard[5] === 'X' && currentBoard[8] === 'X'){
83         document.getElementById('displayturn').innerHTML = "Sorry O,";
84         document.getElementById('winner').innerHTML = "X WINS!!";
85     } else if(currentBoard[2] === 'O' && currentBoard[5] === 'O' && currentBoard[8] === 'O'){
86         document.getElementById('displayturn').innerHTML = "Sorry X,";
87         document.getElementById('winner').innerHTML = "O WINS!!";
88     }
89 }
90
91 //these functions handles the cell clicks and pushes the contents into the currentBoard array for comparison later, it also runs the checkwinner function and will also switch
92 function cellClicks(){
93     document.getElementById('0').addEventListener('click', () => {
94         document.getElementById('0').innerHTML = currentPlayer
95     })
96 }
```



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```
JS index.js • index.html # index.css
JS index.js > resetGame
14 //These functions handles the cell clicks and pushes the contents into the currentBoard array for comparison later, it also runs
15
16 function cellClick0(){
17     document.getElementById('0').addEventListener('click', () => {
18         document.getElementById('0').innerHTML = currentPlayer
19         document.getElementById('0').removeEventListener('click', cellClick0);
20         currentBoard[0] = currentPlayer;
21         checkForWinner();
22         console.log(currentBoard);
23         switchPlayer();
24     });
25 }
26
27 function cellClick1(){
28     document.getElementById('1').addEventListener('click', () => {
29         document.getElementById('1').innerHTML = currentPlayer
30         document.getElementById('1').removeEventListener('click', cellClick1);
31         currentBoard[1] = currentPlayer;
32         checkForWinner();
33         console.log(currentBoard);
34         switchPlayer();
35     });
36 }
37
38 function cellClick2(){
39     document.getElementById('2').addEventListener('click', () => {
40         document.getElementById('2').innerHTML = currentPlayer
41         document.getElementById('2').removeEventListener('click', cellClick2);
42         currentBoard[2] = currentPlayer;
43         checkForWinner();
44         console.log(currentBoard);
45         switchPlayer();
46     });
47 }
48
49 function cellClick3(){
50     document.getElementById('3').addEventListener('click', () => {
51         document.getElementById('3').innerHTML = currentPlayer
52         document.getElementById('3').removeEventListener('click', cellClick3);
53         currentBoard[3] = currentPlayer;
54         console.log(currentBoard);
55         switchPlayer();
56     });
57 }
58
59 function cellClick4(){
60     document.getElementById('4').addEventListener('click', () => {
61         document.getElementById('4').innerHTML = currentPlayer
62         document.getElementById('4').removeEventListener('click', cellClick4);
63         currentBoard[4] = currentPlayer;
64         console.log(currentBoard);
65         checkForWinner();
66         switchPlayer();
67     });
68 }
```

```
JS index.js • index.html # index.css
JS index.js > resetGame
151 }
152
153 function cellClick5(){
154     document.getElementById('5').addEventListener('click', () => {
155         document.getElementById('5').innerHTML = currentPlayer
156         document.getElementById('5').removeEventListener('click', cellClick5);
157         currentBoard[5] = currentPlayer;
158         console.log(currentBoard);
159         checkForWinner();
160         switchPlayer();
161     });
162 }
163
164 function cellClick6(){
165     document.getElementById('6').addEventListener('click', () => {
166         document.getElementById('6').innerHTML = currentPlayer
167         document.getElementById('6').removeEventListener('click', cellClick6);
168         currentBoard[6] = currentPlayer;
169         console.log(currentBoard);
170         checkForWinner();
171         switchPlayer();
172     });
173 }
174
175 function cellClick7(){
176     document.getElementById('7').addEventListener('click', () => {
177         document.getElementById('7').innerHTML = currentPlayer
178         document.getElementById('7').removeEventListener('click', cellClick7);
179         currentBoard[7] = currentPlayer;
180         console.log(currentBoard);
181         checkForWinner();
182         switchPlayer();
183     });
184 }
185
186 function cellClick8(){
187     document.getElementById('8').addEventListener('click', () => {
188         document.getElementById('8').innerHTML = currentPlayer
189         document.getElementById('8').removeEventListener('click', cellClick8);
190         currentBoard[8] = currentPlayer;
191         console.log(currentBoard);
192         checkForWinner();
193         switchPlayer();
194     });
195 }
196
197
198 //This function sets everything up and turns on the event listeners so we can start playing the game.
199 function startGame(){
200     document.getElementById('startgame').addEventListener('click', () => {
201         document.getElementById('displayturn').innerHTML = 'X goes first!'
202         document.getElementById('startgame').removeEventListener('click', startGame);
203         document.getElementById('0').addEventListener('click', cellClick0);
```



PROMINEO TECH

```
JS index.js • index.html # index.css
JS index.js > resetGame
184 }
185
186 function cellClick8(){
187   document.getElementById('8').addEventListener('click', () => {
188     document.getElementById('8').innerHTML = currentPlayer
189     document.getElementById('8').removeEventListener('click', cellClick8);
190     currentBoard[8] = currentPlayer;
191     console.log(currentBoard);
192     checkForWinner();
193     switchPlayer();
194   });
195 }
196
197
198 //This function sets everything up and turns on the event listeners so we can start playing the game.
199 function startGame(){
200   document.getElementById('startgame').addEventListener('click', () => {
201     document.getElementById('displayturn').innerHTML = 'X goes first!'
202     document.getElementById('startgame').removeEventListener('click', startGame);
203     document.getElementById('0').addEventListener('click', cellClick0);
204     document.getElementById('1').addEventListener('click', cellClick1);
205     document.getElementById('2').addEventListener('click', cellClick2);
206     document.getElementById('3').addEventListener('click', cellClick3);
207     document.getElementById('4').addEventListener('click', cellClick4);
208     document.getElementById('5').addEventListener('click', cellClick5);
209     document.getElementById('6').addEventListener('click', cellClick6);
210     document.getElementById('7').addEventListener('click', cellClick7);
211     document.getElementById('8').addEventListener('click', cellClick8);
212   });
213   document.getElementById('resetgame').addEventListener('click', resetGame);
214 }
215
216
217 //this is the function we call to start the game.
218 function newGame(){
219   startGame();
220 }
221
222 newGame();
223
224
225
226
```

```
JS index.js • index.html x # index.css
index.html > html > body#wrapper.container > div#welcome > p#winner.h5
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta http-equiv="X-UA-Compatible" content="IE=edge">
6   <meta name="viewport" content="width=device-width, initial-scale=1.0">
7   <title>Tic Tac Toe</title>
8   <link rel="stylesheet" href="index.css">
9   <link rel="stylesheet" href="node_modules/bootstrap/dist/css/bootstrap.css">
10 </head>
11 <body class="container" id="wrapper">
12   <div id="welcome">
13     <h1>Welcome to TicTacToe</h1>
14     <br>
15     <p class="h5" id="displayturn">Click start to begin!</p>
16     <p class="h5" id="winner">-----</p>
17   </div>
18   <div id="board">
19     <div class="box" id="0"></div>
20     <div class="box" id="1"></div>
21     <div class="box" id="2"></div>
22     <div class="box" id="3"></div>
23     <div class="box" id="4"></div>
24     <div class="box" id="5"></div>
25     <div class="box" id="6"></div>
26     <div class="box" id="7"></div>
27     <div class="box" id="8"></div>
28   </div>
29   <br>
30   <button type="button" class="btn btn-light" id="startgame">Start</button>
31   <button type="button" class="btn btn-light" id="resetgame">Reset</button>
32
33
34   <script src="node_modules/jquery/dist/jquery.js"></script>
35   <script src="node_modules/bootstrap/dist/js/bootstrap.bundle.js"></script>
36   <script src="index.js"></script>
37 </body>
38 </html>
```



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```
JS index.js  ●  <> index.html  # index.css  X
# index.c Follow link (cmd + click)
1  />https://developer.mozilla.org/en-US/docs/Web/CSS/CSS\_Grid\_Layout/Basic\_Concepts\_of\_Grid\_Layout/
2
3  #board{
4    display: grid;
5    grid-template-columns: 100px 100px 100px;
6    grid-template-rows: 100px 100px 100px;
7    justify-content: center;
8    row-gap: 10px;
9    column-gap: 10px;
10   padding-top: 50px;
11 }
12
13 .box{
14   display: flex;
15   border-style: solid;
16   border-width: 1px;
17   border-radius: 5px;
18   border-color: #ffffff;
19   align-items:center;
20   justify-content: center;
21   background-color: #8b8589;
22   font-size:50pt;
23   font-family:'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
24   color: #c2e5d3;
25 }
26
27 #welcome{
28   padding-top: 100px;
29   color: #c2e5d3;
30 }
31
32 #wrapper{
33   text-align: center;
34   background-color: #1b1e23;
35 }
36
37 #winner{
38   color: orange;
39 }
```

JS index.js

<> index.html

index.css

 .gitignore X

 .gitignore

```
1  node_modules|
```



PROMINEO TECH

GitHub Repository Link:

https://github.com/romanaragon/FET5_TicTacToe.git



PROMINEO TECH



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