PROMINEO TECH

Front End Technologies Week 11 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 Code:

```html
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="node_modules/bootstrap/dist/css/bootstrap.css">
9       <style> .col-4 {
10          height:200px;
11          border-color:□black;
12          border:2px solid;
13          }
14          .card{
15              margin-right: 500px;
16              margin-left: 500px;
17              padding: 20px;
18              border-width: 5px;
19          }
20      </style>
21  </head>
22  <body>
23
24      <br>
25      <br>
26      <br>
27      <center>
28          <div  id="alert"></div>
29      <div class=" card text-center">
30          <h1  id="text">
31  Green's Turn
32          </h1>
33      </div>
34      <br>
35      <div class="card " >
36          <div class="row text-center">
37              <div class="col-4 btn  btn-hover " id="0" >
38
39              </div>
40              <div class="col-4 btn bg-transparent btn-hover " id="1">
41
42              </div>
43              <div class="col-4 btn bg-transparent btn-hover " id="2">
44
45              </div>
46          </div>
47          <div class="row text-center">
48              <div class="col-4 btn bg-transparent btn-hover " id="3">
```

```
50              </div>
51              <div class="col-4 btn bg-transparent btn-hover " id="4">
52
53              </div>
54              <div class="col-4 btn bg-transparent btn-hover " id="5">
55
56              </div>
57          </div>
58          <div class="row text-center">
59              <div class="col-4 btn bg-transparent btn-hover " id="6">
60
61              </div>
62              <div class="col-4 btn bg-transparent btn-hover " id="7">
63
64              </div>
65              <div class="col-4 btn bg-transparent btn-hover " id="8">
66
67              </div>
68          </div>
69
70      </div>
71      <br>
72      <button class="btn btn-hover btn-primary" type="'button" id="restart">
73          Restart Game
74      </button>
75      </center>
76      <script src="node_modules/bootstrap/dist/js/bootstrap.bundle.js"></script>
77      <script src="node_modules/jquery/dist/jquery.js"></script>
78      <script src="index.js"></script>
79  </body>
80  </html>
```

```javascript
const buttons=document.querySelectorAll('.col-4');
player='o';
const wins=[
    [0,1,2],
    [3,4,5],
    [6,7,8],
    [0,3,6],
    [1,4,7],
    [2,5,8],
    [0,4,8],
    [2,4,6]
];


console.log(buttons);
function game(){
    buttons.forEach(btn=> btn.addEventListener('click',()=>{
        player = (player == 'x') ? 'o' : 'x';
        let winner = false;
        console.log(winner);
            if(player == 'x'){
            btn.setAttribute('class','col-4 btn btn-hover bg-success disabled');
            document.getElementById('text').innerHTML= "Yellow's Turn";


                }


            else if(player == 'o'){
            btn.setAttribute('class', 'col-4 btn btn-hover bg-warning disabled');
            document.getElementById('text').innerHTML= "Green's Turn";


            }


        let greenWin= 'col-4 btn btn-hover bg-success disabled';
        let yellowWin= 'col-4 btn btn-hover bg-warning disabled';


                //Green Wins
            if(document.getElementById('0').className == greenWin
                && document.getElementById('1').className == greenWin
                && document.getElementById('2').className == greenWin

                    ||
```

```
45              ||
46
47              document.getElementById('3').className == greenWin
48              && document.getElementById('4').className == greenWin
49              && document.getElementById('5').className == greenWin
50
51              ||
52
53              document.getElementById('6').className == greenWin
54              && document.getElementById('7').className == greenWin
55              && document.getElementById('8').className == greenWin
56
57              ||
58              document.getElementById('0').className == greenWin
59              && document.getElementById('3').className == greenWin
60              && document.getElementById('6').className == greenWin
61
62              ||
63
64              document.getElementById('1').className == greenWin
65              && document.getElementById('4').className == greenWin
66              && document.getElementById('7').className == greenWin
67
68              ||
69
70              document.getElementById('2').className == greenWin
71              && document.getElementById('5').className == greenWin
72              && document.getElementById('8').className == greenWin
73
74          ||
75
76              document.getElementById('0').className == greenWin
77              && document.getElementById('4').className == greenWin
78              && document.getElementById('8').className == greenWin
79
80              ||
81
82              document.getElementById('2').className == greenWin
83              && document.getElementById('4').className == greenWin
84              && document.getElementById('6').className == greenWin
85      ){
86          let alertDiv = document.createElement('div');
87          let parentAlert = document.getElementById('alert');
88          document.getElementById('text').innerHTML = 'Green Wins!';
89          parentAlert.appendChild(alertDiv).setAttribute('id', 'alertDiv');
90          document.getElementById('alertDiv').setAttribute('class', 'alert alert-success');
91          document.getElementById('alertDiv').innerHTML = 'Green Wins!';
```

```
 91                 document.getElementById('alertDiv').innerHTML = 'Green Wins!';
 92                 winner = true;
 93                 console.log(winner);
 94
 95
 96                 for(const button of buttons){
 97                     button.classList.add('disabled');
 98                 };
 99
100                 //----------------------------------------------------------//
101                 //Yellow Wins
102             }
103             else if(document.getElementById('0').className == yellowWin
104                 && document.getElementById('1').className == yellowWin
105                 && document.getElementById('2').className == yellowWin
106
107                     ||
108
109                 document.getElementById('3').className == yellowWin
110                 && document.getElementById('4').className == yellowWin
111                 && document.getElementById('5').className == yellowWin
112
113                     ||
114
115                 document.getElementById('6').className == yellowWin
116                 && document.getElementById('7').className == yellowWin
117                 && document.getElementById('8').className == yellowWin
118
119                     ||
120                 document.getElementById('0').className == yellowWin
121                 && document.getElementById('3').className == yellowWin
122                 && document.getElementById('6').className == yellowWin
123
124                     ||
125
126                 document.getElementById('1').className == yellowWin
127                 && document.getElementById('4').className == yellowWin
128                 && document.getElementById('7').className == yellowWin
129
130                     ||
131
132                 document.getElementById('2').className == yellowWin
133                 && document.getElementById('5').className == yellowWin
134                 && document.getElementById('8').className == yellowWin
135
136                 ||
137
138                 document.getElementById('0').className == yellowWin
```

```javascript
        document.getElementById('0').className == yellowWin
        && document.getElementById('4').className == yellowWin
        && document.getElementById('8').className == yellowWin

            ||

        document.getElementById('2').className == yellowWin
        && document.getElementById('4').className == yellowWin
        && document.getElementById('6').className == yellowWin)


        {
            document.getElementById('text').innerHTML = 'Yellow Wins!';
            let alertDiv = document.createElement('div');
        let parentAlert = document.getElementById('alert');

        parentAlert.appendChild(alertDiv).setAttribute('id', 'alertDiv');
        document.getElementById('alertDiv').setAttribute('class', 'alert alert-warning');
        document.getElementById('alertDiv').innerHTML = 'Yellow Wins!';
        winner = true;
        console.log(winner);
        for(const button of buttons){
            button.classList.add('disabled');
        };
        }
        else if(document.getElementById('0').classList.contains('disabled') &&
        document.getElementById('1').classList.contains('disabled') &&
        document.getElementById('2').classList.contains('disabled') &&
        document.getElementById('3').classList.contains('disabled') &&
        document.getElementById('4').classList.contains('disabled') &&
        document.getElementById('5').classList.contains('disabled') &&
        document.getElementById('6').classList.contains('disabled') &&
        document.getElementById('7').classList.contains('disabled') &&
        document.getElementById('8').classList.contains('disabled') &&
        winner == false


        ){
            document.getElementById('text').innerHTML = 'Draw!';
            let alertDiv = document.createElement('div');
            let parentAlert = document.getElementById('alert');

            parentAlert.appendChild(alertDiv).setAttribute('id', 'alertDiv');
            document.getElementById('alertDiv').setAttribute('class', 'alert alert-dark');
            document.getElementById('alertDiv').innerHTML = 'Draw!';
            console.log('draw');
            console.log(winner);
        }
```

```javascript
184                     }
185
186         }));
187
188         const restart = document.getElementById('restart');
189         restart.addEventListener('click',() =>{
190             document.getElementById('0').setAttribute('class', 'col-4 btn btn-hover bg-transparent');
191             document.getElementById('1').setAttribute('class', 'col-4 btn btn-hover bg-transparent');
192             document.getElementById('2').setAttribute('class', 'col-4 btn btn-hover bg-transparent');
193             document.getElementById('3').setAttribute('class', 'col-4 btn btn-hover bg-transparent');
194             document.getElementById('4').setAttribute('class', 'col-4 btn btn-hover bg-transparent');
195             document.getElementById('5').setAttribute('class', 'col-4 btn btn-hover bg-transparent');
196             document.getElementById('6').setAttribute('class', 'col-4 btn btn-hover bg-transparent');
197             document.getElementById('7').setAttribute('class', 'col-4 btn btn-hover bg-transparent');
198             document.getElementById('8').setAttribute('class', 'col-4 btn btn-hover bg-transparent');
199             player = 'o';
200             document.getElementById('text').innerHTML= "Green's Turn";
201             document.getElementById('alertDiv').remove();
202             winner = false;
203         })
204
205
206     };
207
208
209
210     game();
211
```

Screenshots of Running Application:
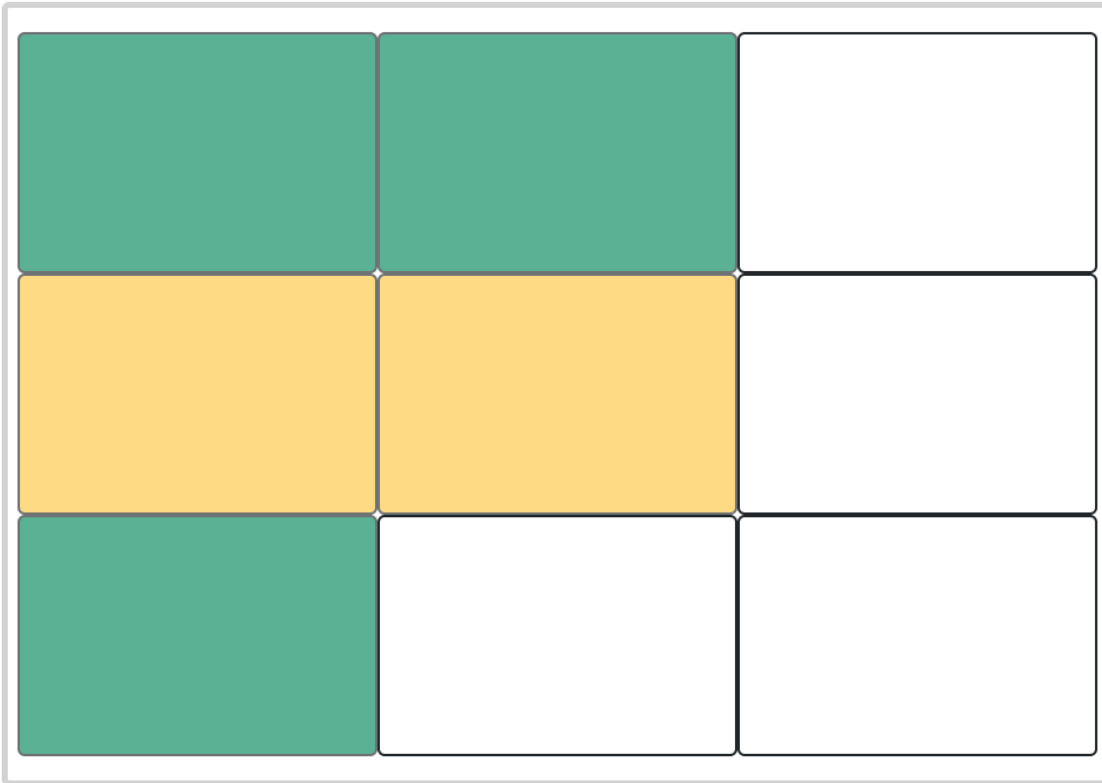
Green's Turn

Restart Game

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Yellow's Turn

Restart Game

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Green Wins!
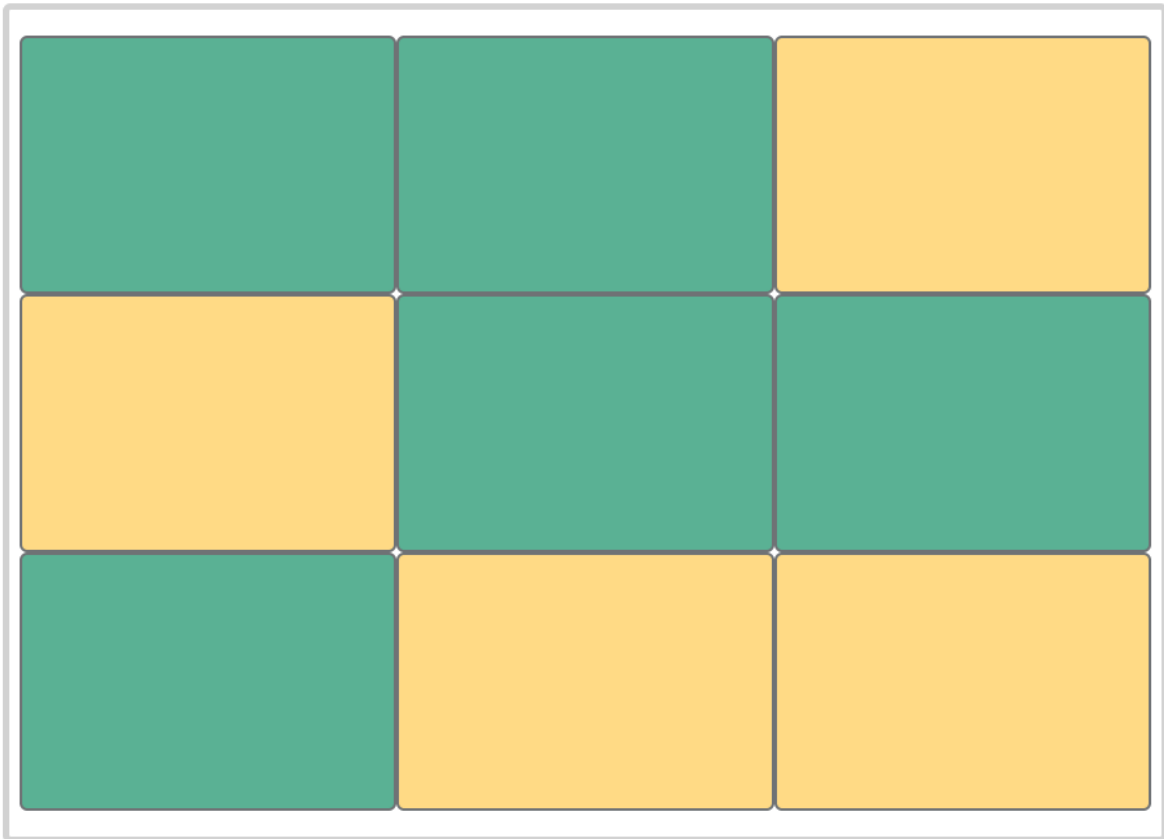
Restart Game

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Yellow Wins!

Restart Game

Draw!

Restart Game

URL to GitHub Repository: