



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.XXX
 - b. Create a tic-tac-toe grid using your HTML element of choice. XXX
 - c. When a cell in the grid is clicked, an X or O should appear in that spot depending on whose turn it is. XXX
 - d. A button should be available to clear the grid and restart the game. XXX
 - e. When a player has won, or the board is full and the game results in a draw, a Bootstrap banner should appear across the screen announcing the winner.

Screenshots of Code:



PROMINEO TECH

```
JS index.js > [o] startGame
1  let square = $('.square');
2  let ticGrid = $('#tic.Grid');
3  const squares = Array.from(document.getElementsByClassName("square"));
4  let playerO = 'O';
5  let playerX = 'X';
6  let ticroundtxt = document.getElementById('ticroundtxt');
7  let winnerBanner = $('#winnerIsBanner');
8  //to start w/o
9  let currentPlayer = playerO;
10 const startGame = () => [
11
12  //to make square clickable
13  squares.forEach(square => {
14    square.addEventListener('click', squareClicked);
15  });
16
17  function squareClicked(e) {
18    //currenttarget -> squares id
19    const id = e.currentTarget;
20    //to change the square to currentPlayer
21    squares[id] = currentPlayer;
22    e.currentTarget.innerHTML = currentPlayer;
23    //if player has won then the game will cease
24    if (winOccurs(currentPlayer)) {
25      //....//txt is cleared for turn order
26      ticroundtxt.innerHTML = `${currentPlayer} won`;
27      return;
28    }
29    //to rotate the player order
30    currentPlayer = currentPlayer === playerO ? playerX : playerO;
31    //to reflect the turn order
32    ticroundtxt.innerHTML = `${currentPlayer}'s turn`;
33
34  }
35
36
37 ]
```



PROMINEO TECH

```
JS index.js > [?] startGame
34      ...
35      ...
36      ...
37
38  const winOccurs = (currentPlayer) => {
39      ...
40      ...
41      ...
42      ...
43      ...
44      ...
45      ...
46      ...
47      ...
48      ...
49      ...
50      ...
51      ...
52      ...
53      ...
54      ...
55      ...
56      ...
57      ...
58      ...
59      ...
60      ...
61      ...
62      ...
63      ...
64      ...
65      ...
66      ...
67      ...
68      ...
69      ...
70      ...
71
72  JS index.js > [?] startGame
73      ...
74      ...
75      ...
76      ...
77      ...
78      ...
79      ...
80      ...
81      ...
82      ...
83      ...
84      ...
85      ...
86      ...
87      ...
88      ...
89      ...
90      ...
91      ...
92      ...
93      ...
94      ...
95      ...
96      ...
97      ...
98      ...
99      ...
100     ...
101     ...
102     ...
103     ...
```



PROMINEO TECH

```
JS index.js > [②] startGame
  92     ... else if ($.square.r1.c1).text() === player0 && ($.square.r2.c2).text() === player0 && ($.square.r3.c3).text() === player0) {
  93     .... console.log(`${currentPlayer} has won the left diagonal row!!!`);
  94     .... return true;
  95   }
  96   ... else if ($.square.r1.c1).text() === playerX && ($.square.r2.c2).text() === playerX && ($.square.r3.c3).text() === playerX) {
  97   .... console.log(`${currentPlayer} has won the left diagonal row!!!`);
  98   .... return true;
  99 }
100   ... else if ($.square.r1.c3).text() === player0 && ($.square.r2.c3).text() === player0 && ($.square.r3.c3).text() === player0) {
101   .... console.log(`${currentPlayer} has won the right row!!!`);
102   .... return true;
103 }
104   ... else if ($.square.r1.c3).text() === playerX && ($.square.r2.c3).text() === playerX && ($.square.r3.c3).text() === playerX) {
105   .... console.log(`${currentPlayer} has won the right row!!!`);
106   .... return true;
107 }
108   ... else if ($.square.r1.c3).text() === playerX && ($.square.r2.c2).text() === playerX && ($.square.r3.c1).text() === playerX) {
109   .... console.log(`${currentPlayer} has won`);
110   .... return true;
111 }
112   ... else if ($.square.r1.c3).text() === player0 && ($.square.r2.c2).text() === player0 && ($.square.r3.c1).text() === player0) {
113   .... console.log(`${currentPlayer} has won`);
114   .... return true;
115 }
116 };
117
118 restart.addEventListener("click", () => {
119   .... squares.forEach((square) => {
120     .... square.innerText = "";
121   });
122   .... currentPlayer = player0;
123 });
124 startGame ();
125
126
127
```



PROMINEO TECH

```
< index.html > html > body > div.container > h1
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      <link rel="stylesheet" href="index.css">
8      <title>Tic Tac Toe</title>
9  </head>
10 <body>
11     <div class="alert alert-info alert-dismissible fade show" role="alert" id="winnerIsBanner">
12         ...
13         <button type="button" class="close" data-dismiss="alert" aria-label="Close">
14             <span aria-hidden="true">&times;</span>
15         </button>
16     </div>
17 
18 
19     </div>
20     <div class="container">
21         <h1>Tic Tac Toe</h1>
22         <h2 id="ticroundtxt">Play!</h2>
23     <!-- the header -->
24 
25     <center> <table id="tic.Grid">
26         <tr>
27             <td>
28                 <div class="square r1 c1">
29                     ...
30                     </div>
31                 </td>
32             <td>
33                 <div class="square r1 c2">
34                     ...
35                     </div>
36                 </td>
37             <td>
38                 <div class="square r1 c3">
```

Ln 21, Col 1



PROMINEO TECH

index.html > html > body > div.container > h1

```
24      <center> <table id="tic.grid">
25          <tr>
26              <td>
27                  <div class="square r1 c1">
28
29
30                      </div>
31                  </td>
32                  <td>
33                      <div class="square r1 c2">
34
35                          </div>
36                      </td>
37                      <td>
38                          <div class="square r1 c3">
39
40                              </div>
41                          </td>
42                      </tr>
43                      <tr>
44                          <td>
45                              <div class="square r2 c1">
46
47                                  </div>
48                              </td>
49                              <td>
50                                  <div class="square r2 c2">
51
52                                      </div>
53                                  </td>
54                                  <td>
55                                      <div class="square r2 c3">
56
57                                          </div>
58                                      </td>
59                                  </tr>
60                                  <tr>
```

Ln 21, Col 29



PROMINEO TECH

```
index.html > html > body > div.container > h1
50 .....<div class="square r2 c2">
51 .....</div>
52 .....</td>
53 .....<td>
54 .....<div class="square r2 c3">
55 .....</div>
56 .....</td>
57 .....</tr>
58 .....<tr>
59 .....<td>
60 .....<div class="square r3 c1">
61 .....</div>
62 .....</td>
63 .....<td>
64 .....<div class="square r3 c2">
65 .....</div>
66 .....</td>
67 .....<div class="square r3 c3">
68 .....</div>
69 .....</td>
70 .....<td>
71 .....<div class="square r3 c3">
72 .....</div>
73 .....</td>
74 .....</td>
75 .....</td>
76 .....</tr>
77 .....</table></center>
78 <center><button id="restart">Restart</button></center>
79 </body>
80 </html>
81
82
83 .....<script src="node_modules/jquery/dist/jquery.js"></script>
84 .....<script src="index.js"></script>
85 </body>
86 </html>
```

Ln



PROMINEO TECH

```
# index.css > .square
1  body {
2    margin:0;
3    background-image: url('spaceship.background.png');
4    background-size: cover;
5    color: black;
6  }
7
8
9  #ticroundtxt {
10   display: flex;
11   justify-content: center;
12   font-size: 30px;
13 }
14
15
16 #restart {
17   padding: 10px 10px;
18   background-color: black;
19   color: white;
20   font-size: 20px;
21   transition: 200ms transform;
22 }
23
24 #restart:hover {
25   cursor: pointer;
26   /* makes button slightly go up when hovered over it is nice - planning on using this to help create the illusion of movement for the players */
27   transform: translateY(-3px);
28 }
29
30 .square {
31   border: 10px solid black;
32   background-color: black;
33   font-size: 150px;
34   text-align: center;
35   height:150px;
36   width: 150px;
37   cursor: pointer;
38 }
39
40
# index.css > .square
1  padding: 10px 10px;
2  background-color: black;
3  color: white;
4  font-size: 20px;
5  transition: 200ms transform;
6 }
7
8
9  #restart:hover {
10   cursor: pointer;
11   /* makes button slightly go up when hovered over it is nice - planning on using this to help create the illusion of movement for the players */
12   transform: translateY(-3px);
13 }
14
15 .square {
16   border: 10px solid black;
17   background-color: black;
18   font-size: 150px;
19   text-align: center;
20   height:150px;
21   width: 150px;
22   cursor: pointer;
23 }
24
25
26 h1 {
27   font-size: 40px;
28   text-align: center;
29   color: black;
30   font-family: Arial, Helvetica, sans-serif;
31 }
32
33 h3 {
34   font-size: 25px;
35   text-align: center;
36   color: black;
37   font-family: Arial, Helvetica, sans-serif;
38 }
```

Screenshots of Running Application:



PROMINEO TECH





PROMINEO TECH





PROMINEO TECH





PROMINEO TECH



URL to GitHub Repository:

<https://github.com/JoleneMel/Tic.Tac.Toe.Week6>