Assignment – 1

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Q 1. Design a web page which will display Calculator. (Use HTML, CSS and
        JavaScript)

Q 2. Design a web page to play Tic Tac Toe game. (Use HTML, CSS and
JavaScript)

Q1 - Calculator using html, css, JS

< html-1, css>

```
1    <!DOCTYPE html>
2    <head>
3      <head>
4
5        <meta charset="utf-8">
6        <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
7
8
9        <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/css/bootstrap.min.css"
10            integrity="sha384-MCw98/SFnGE8fJT3GXwEOngsV7Zt27NXFoaoApmYm81iuXoPkFOJwJ8ERdknLPMO" crossorigin="anonymous">
11
12       <title>Calculator with JS</title>
13
14    <style>
15      *{
16        font-family: monospace;
17        text-align: center;
18      }
19      input{
20        width: 100px;
21        height: 100px;
22        margin: 15px;
23        border: 0px ;
24        border-radius: 5px;
25        font-size: xx-large;
26        box-shadow: 3px 3px 5px grey;
27        transition: transform .5s,border 0.5s;
28
29      }
30      #display{
31        color: white;
32        width: 500px;
33        text-align: right;
34        font-size: 400%;
35      }
36      input:hover{
37        -ms-transform: scale(1.2,1.2);
38        transform: scale(1.2,1.2);
39        box-shadow: 0px 0px 0px;
40        border: 1px solid lightgray;
41      }
42    </style>
43    </head>
```

< html-2, js>

```html
44      <body>
45          <div class="container-fluid">
46              <h1> Assignment 1 - Calculator Using Javascript</h1>
47              <form name="calculator">
48                  <div class="d-flex justify-content-center">
49                      <input class="bg-dark" id="display" type="text" name="answer"/>
50                  </div>
51                  <div class="d-flex justify-content-center">
52                      <input type="button" value=" 1 " onclick="calculator.answer.value += '1'"/>
53                      <input type="button" value=" 2 " onclick="calculator.answer.value += '2'"/>
54                      <input type="button" value=" 3 " onclick="calculator.answer.value += '3'"/>
55                      <input type="button" value=" + " onclick="calculator.answer.value += '+'"/>
56                  </div>
57                  <div class="d-flex justify-content-center">
58                      <input type="button" value=" 4 " onclick="calculator.answer.value += '4'"/>
59                      <input type="button" value=" 5 " onclick="calculator.answer.value += '5'"/>
60                      <input type="button" value=" 6 " onclick="calculator.answer.value += '6'"/>
61                      <input type="button" value=" - " onclick="calculator.answer.value += '-'"/>
62                  </div>
63                  <div class="d-flex justify-content-center">
64                      <input type="button" value=" 7 " onclick="calculator.answer.value += '7'"/>
65                      <input type="button" value=" 8 " onclick="calculator.answer.value += '8'"/>
66                      <input type="button" value=" 9 " onclick="calculator.answer.value += '9'"/>
67                      <input type="button" value=" x " onclick="calculator.answer.value += '*'"/>
68                  </div>
69                  <div class="d-flex justify-content-center">
70                      <input type="button" value=" C " onclick="calculator.answer.value = ''"/>
71                      <input type="button" value=" 0 " onclick="calculator.answer.value += '0'"/>
72                      <input type="button" value=" = " onclick="calculator.answer.value = eval(calculator.answer.value)"/>
73                      <input type="button" value=" / " onclick="calculator.answer.value += '/'"/>
74                  </div>
75              </form>
76          </div>
77      </body>
78  </html>
```

File   C:/Users/rusha/Desktop/calculator%20using%20js.html

Assignment 1 - Calculator Using Javascript

1	2	3	+
4	5	6	-
7	8	9	x
C	0	=	/

Q2 - Tic Tac Toe

< html-1, css >

```html
1    <!DOCTYPE html>
2    <html lang="en">
3    <head>
4        <meta charset="UTF-8">
5        <meta name="viewport" content="width=device-width, initial-scale=1.0">
6
7        <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.1.3/css/bootstrap.min.css"
8            integrity="sha384-MCw98/SFnGE8fJT3GXwEOngsV7Zt27NXFoaoApmYm81iuXoPkFOJwJ8ERdknLPMO" crossorigin="anonymous">
9
10       <title>Tic Tac Toe</title>
11   <style>
12     .board{
13        margin-left: auto;
14        margin-right: auto;
15        background-color: #14141f;
16        width: 37.5vw;
17   }
18   .board button, .board input{
19        font-family: 'Open Sans', sans-serif;
20        border-color:  #14141f;
21        font-size: 6vw;
22        text-align: center;
23        color: lightgrey;
24        height: 12vw;
25        width: 12vw;
26        outline: none;
27   }
28   #message{
29        font-size: larger;
30   }
31   </style>
32   </head>
33   <body onload="startGame();">
34     <div class="container-fluid">
35       <div id="header" class="bg-dark row text-light p-3">
36           <h1>Tic Tac Toe</h1>
37           <!--<button id="reset" class="btn bg-dark text-light rounded p-3" onclick="reset()">Reset</button>-->
38       </div>
39         <div class="bg-secondary row text-light p-3 justify-content-center" id="message">
40           message of whose turn will go here
41         </div>
42         <br>
43         <br>
44         <div class="board rounded">
45           <div class="d-flex flex-row mx-1">
46               <button class="bg-dark mt-1 rounded" id="cell1" onclick="nextMove(this.id)"></button>
```
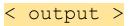
< html-2, js-1 >

```html
        <div class="board rounded">
          <div class="d-flex flex-row mx-1">
              <button class="bg-dark mt-1 rounded" id="cell1" onclick="nextMove(this.id)"></button>
              <button class="bg-dark mt-1 rounded ml-3" id="cell2" onclick="nextMove(this.id)"></button>
              <button class="bg-dark mt-1 rounded ml-3" id="cell3" onclick="nextMove(this.id)"></button>
          </div>
          <div class="d-flex flex-row mx-1">
              <button class="bg-dark rounded mt-2" id="cell4" onclick="nextMove(this.id)"></button>
              <button class="bg-dark rounded mt-2 ml-3" id="cell5" onclick="nextMove(this.id)"></button>
              <button class="bg-dark rounded mt-2 ml-3" id="cell6" onclick="nextMove(this.id)"></button>
          </div>
          <div class="d-flex flex-row mx-1">
              <button class="bg-dark mb-1 rounded mt-3" id="cell7" onclick="nextMove(this.id)"></button>
              <button class="bg-dark mb-1 rounded mt-3 ml-3" id="cell8" onclick="nextMove(this.id)"></button>
              <button class="bg-dark mb-1 rounded mt-3 ml-3" id="cell9" onclick="nextMove(this.id)"></button>
          </div>
        </div>
    </div>
  </body>
  <script>
      var turn="X";
      var winner =null;
      function startGame(){
          setMessage(turn +" gets started.");
      }
      function setMessage(msg){
          document.getElementById("message").innerText=msg;
      }
      function nextMove(cell){
          if(winner!=null){
              setMessage(winner+" already won the game.")
          }
          else if (document.getElementById(cell).innerText ==""){
          document.getElementById(cell).innerText=turn;
          switchTurn();
          }
          else{
              alert("That cell is already filled.");
          }
      }
      function switchTurn(){
          if(checkForWinner(turn)){
              setMessage("Congratulations, "+turn+ " You win!")
              winner=turn;
          }
```
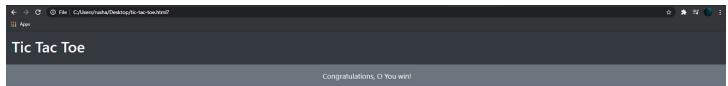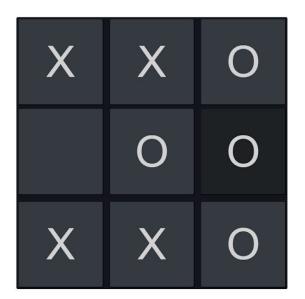
< html-3, js-2 >

```
84        function switchTurn(){
85            if(checkForWinner(turn)){
86                setMessage("Congratulations, "+turn+ " You win!")
87                winner=turn;
88            }
89            else if(turn=="X"){
90                    turn="O";
91                    setMessage(turn+" 's turn. ")
92            }
93            else{
94                turn="X";
95                setMessage(turn+" 's turn. ")
96            }
97        }
98        function checkForWinner(move) {
99            var ans = false;
100           if (checkRow(1,2,3,move) || checkRow(4,5,6,move) || checkRow(7,8,9,move) || checkRow(1,4,7,move)
101              || checkRow(2,5,8,move) || checkRow(3,6,9,move) || checkRow(1,5,9,move) || checkRow(3,5,7,move) )
102              {
103              ans=true;
104              }
105           return ans
106       }
107       function checkRow(a,b,c,move){
108           var ans = false;
109           if (getBox(a) == move && getBox(b) == move && getBox(c) == move){
110               ans=true;
111           }
112           return ans
113       }
114       function getBox(number) {
115           return document.getElementById("cell" + number).innerText
116       }
117       </script>
118   </html>
```

Apps

Tic Tac Toe

Congratulations, O You win!

X	X	O
	O	O
X	X	O

E - N - D

Apps

Tic Tac Toe