

```
1 <!DOCTYPE html >
2 <html >
3
4 <head>
5   <meta charset="utf-8">
6
7   <!-- the text that goes in the browser tab -->
8   <title>Lesson 16 JavaScript Control Structures</title>
9
10  <!--
11  File:   \\cssd.local\d\dropboxes\Website Development I\STobiasson140048\
12  Lesson16JavaScriptControlStructures2022-11-29.html
13  maintained by {Shane Tobiasson}
14  updated by {ST} on {11/29/22} at {9:15AM}
15  -->
16
17  <!-- embedded style sheet -->
18  <style>
19    tr.line0 { /*top line*/
20      background-color: black;
21      color: white;
22      font-weight: bold;
23    }
24
25    td.column0 { /*left side column*/
26      background-color: black;
27      color: white;
28      font-weight: bold;
29    }
30
31    td.active { /*cells activated by the function*/
32      background-color: red;
33    }
34
35    td:hover { /*what happens when the mouse hovers over a cell*/
36      background-color: green;
37      color: white;
38    }
39
40    table, td { /*general settings for the table*/
41      border: 1px solid black;
42      border-collapse: collapse;
43      padding: 3px;
44      min-height: 20px;
45      min-width: 30px;
46      text-align: center;
47    }
48
49  </style>
50
51  <!--function declarations-->
52  <script>
53
54    function activateCells(classes){
55      let activeCells = [];
56      console.log( classes ); // added by JMH
57    };
58
59    // the following function was added by JMH as another demo
60    var ToggleCellSelection = function( elem ) {
61      console.log( typeof elem );
```

```
62     console.log( window.getComputedStyle( elem ).backgroundCol or );
63     if ( window.getComputedStyle( elem ).backgroundCol or == "rgb(0, 128, 0)" ) {
64         elem.style.backgroundCol or = "lightgreen" ;
65     } else {
66         elem.style.backgroundCol or = "white" ;
67     }
68 }
69
70 </script>
71
72 <!-- set the icon to use in the browser tab -->
73 <link href="images/OldManInTheMountain_16x16.ico" rel="icon" type="image/x-icon">
74 </head>
75
76 <body>
77
78 <!-- a JavaScript script -->
79 <script>
80     "use strict";
81
82     // STEP 3
83     // writes 0 1 2 3 4 5 6 7 8 9
84     //for (let k = 0; k < 10; k++) {
85     // document.writeln(k + " ");
86     //} ;
87
88     // STEP 4
89     // writes 0 10 20 30 40 50 60 70 80 90
90     //for (let k = 0; k < 10; k++) {
91     // document.writeln(k * 10 + " ");
92     //} ;
93
94     // STEP 5 & 6
95     // writes 0 1 2 3 4 5 6 7 8 9 in table cells
96     //document.writeln("<table>");
97     //for (let k = 0; k < 10; k++) {
98     // document.writeln("<td>" + k + "</td>");
99     //} ;
100    //document.writeln("</table>");
101
102    // STEP 7
103    /*// writes 0 1 2 3 4 5 6 7 8 9 in table cells
104    document.writeln("<table>");
105    // top level for loop controls table rows
106    for (let a = 0; a < 1; a++) {
107        document.writeln("<tr>");
108        // an if statement for the top left corner of the table
109        if (a == 0) {
110            document.writeln("<td>&nbsp;</td>");
111        }
112        // for loop that controls the cells in the row
113        for (let k = 0; k < 10; k++) {
114            document.writeln("<td>" + k + "</td>");
115        } ;
116        document.writeln("</tr>");
117    };
118    document.writeln("</table>"); */
119
120    // STEP 8
121    // writes a new table tag
122    document.writeln("<table>");
```

```
123 // top level for loop controls table rows
124 for (let a = 0; a < 17; a++) {
125     document.writeln("<tr class='line" + a + "'>"); // creates new table row element for
125     every iteration of for loop
126     if (a == 0) { // an if statement for the top row of the table
127         document.writeln("<td>&nbsp;</td>"); // blank cell in the top left corner
128         for (let k = 0; k < 16; k++) { // generates cells for the row
129             document.writeln("<td>" + (k) + "</td>");
130         };
131     }
132
133     // all other rows besides the top row
134     else {
135         document.writeln("<td class='column0'>" + (a - 1) + "</td>"); // left hand column
135         only
136         // for loop that controls the cells in the row
137         for (let k = 0; k < 16; k++) { // populates the cells in the row with classes for
137         line and column
138             let classes = "line" + a + " column" + (k + 1);
139             let id = "line" + a + "_column" + (k + 1);
140             //console.log(classes);
141             //console.log(id);
142             document.writeln("<td id='" + id + "' class='" + classes + "'>" + (k * (a - 1))
142             + "</td>");
143             //add an event listener to the table cell that was just created
144             // JMH commented out the following two statements
145             // document.getElementById(id).addEventListener("click",
145             activateCells(classes));
146             // console.log()
147             // JMH added the following statement based on the article "Passing
148             // Arguments to event Listeners in JavaScript"
149             document.getElementById(id).addEventListener(
150                 "click", () => { activateCells( classes );
151                 ToggleCellSelection( document.getElementById(id) ) } );
152         };
153     };
154     document.writeln("</tr>"); // ends the current row
155 };
156 document.writeln("</table>"); // ends the table
157
158
159 </script>
160
161 </body>
162
163 </html >
```