

23MX18 - WAD

Exercise – 5

JavaScript

1. Execute the below snippets, make changes in it and understand

Document selectors:

i.

```
<html>
<body>
  <h1>Hello World!!</h1>
  <button onclick="changeThisPageFunc();">Click Me!</button>
  <script type="text/javascript">
    changeThisPageFunc = function() {
      document.body.style.backgroundColor = "lightblue";
      document.body.innerHTML = "<h1>I am a little blue today</h1>";
    }
  </script>
</body>
</html>
```

ii.

```
<html>
<head>
  <style>
    .myclass {
      background-color: lightblue;
    }
  </style>
</head>
<body>
  <h1>Hello World!!</h1>

  <button onclick="changeThisPageFunc();">Click Me!</button>
  <script type="text/javascript">
    changeThisPageFunc = function() {
      alert("body has class = "+document.body.className);
      document.body.className = "myclass";
      alert("body has class = "+document.body.className);
      document.body.innerHTML = "<h1>I am a little blue today</h1>";
    }
  </script>
</body>
</html>
```

iii.

```
<html>
<body>
  <h1>Hello World!!</h1>
  <button onclick="changeThisPageFunc();">Click Me!</button>
```

```

<script type="text/javascript">
  changeThisPageFunc = function() {
    // this will not work
    document.body.h1.style.backgroundColor = "lightblue";
  }
</script>
</body>
</html>

```

iv.

```

<html>
<body>
  <h1>Hello World!!</h1>
  <button onclick="changeThisPageFunc();">Click Me!</button>
  <main>
    <h1>Hello Main</h2>
    <p>The quick brown fox jumped over the lazy dog.</p>
  </main>
  <script type="text/javascript">
    changeThisPageFunc = function() {
      var myMain;
      document.body.style.backgroundColor = "lightblue";
      myMain = document.querySelector('main');
      myMain.innerHTML = "<h3>Where have all the flowers gone?<h3>";
      myMain.style.height = "50px";
      myMain.style.width = "50%";
      myMain.style.backgroundColor = "lightgreen";
    }
  </script>
</body>
</html>

```

Events:

(Events used in above code snippets:

Onclick, onchange, onkeyup, onkeypress, onmouseup, onmousedown, onmousemove, window.onload, window.setInterval, window.clearInterval)

i.

```

<html>
<head>
  <title>Colors</title>
</head>
<body>
  <label for="redi">Red:</label>
  <input type="text" id="redi" min="0" value="255" /> <br>
  <label for="greeni">Green:</label>
  <input type="text" id="greeni" value="255" /><br>
  <label for="bluei">Blue:</label>
  <input type="text" id="bluei" value="255" />
  <br>
  <button onclick="changeColor();">Change Color</button>

```

```

<script>
  changeColor = function() {
    red = document.querySelector('#redi').value;
    green = document.querySelector('#greeni').value;
    blue = document.querySelector('#bluei').value;
    colorStr = "rgb("+red+", "+green+", "+blue+)";
    document.body.style.backgroundColor = colorStr;
  }
</script>
</body>

```

ii.

```

<html>
  <head>
    <title>Colors</title>
  </head>
  <body>
    <label for="redi">Red:</label>
    <input type="text" id="redi" onchange="changeColor()" value="255" /> <br>
    <label for="greeni">Green:</label>
    <input type="text" id="greeni" onchange="changeColor()" value="255" /> <br>
    <label for="bluei">Blue:</label>
    <input type="text" id="bluei" onchange="changeColor()" value="255" />
    <br>
    <button onclick="changeColor();" >Change Color</button>

    <script>
      changeColor = function() {
        red = document.querySelector('#redi').value;
        green = document.querySelector('#greeni').value;
        blue = document.querySelector('#bluei').value;
        colorStr = "rgb("+red+", "+green+", "+blue+)";
        document.body.style.backgroundColor = colorStr;
      }
    </script>
  </body>
</html>

```

iii.

```

<html>
  <head>
    <title>Colors</title>
  </head>
  <body>
    <label for="redi">Red:</label>
    <input type="range" min=0 max=255 id="redi" onchange="changeColor()" value="255" /> <br>
    <label for="greeni">Green:</label>
    <input type="range" min=0 max=255 id="greeni" onchange="changeColor()" value="255" /> <br>
    <label for="bluei">Blue:</label>
    <input type="range" min=0 max=255 id="bluei" onchange="changeColor()" value="255" />
    <br>
    <script>

```

```

changeColor = function() {
    red = document.querySelector('#redi').value;
    green = document.querySelector('#greeni').value;
    blue = document.querySelector('#bluei').value;
    colorStr = "rgb(" + red + "," + green + "," + blue + ")";
    document.body.style.backgroundColor = colorStr;
}
</script>
</body>
</html>

```

iv.

```

<html>
<head>
<title>Colors</title>
</head>
<body>
<label for="redi">Red:</label>
<input type="range" min=0 max=255 id="redi" onmousemove="changeColor()"
    onmouseup="showValues()" value="125" /> <span id="redv"></span><br>
<label for="greeni">Green:</label>
<input type="range" min=0 max=255 id="greeni" onmousemove="changeColor()"
    onmouseup="showValues()" value="125" /><span id="greenv"></span><br>
<label for="bluei">Blue:</label>
<input type="range" min=0 max=255 id="bluei" onmousemove="changeColor()"
    onmouseup="showValues()" value="200" /><span id="bluev"></span>

<br>
<script>
changeColor = function() {
    red = document.querySelector('#redi').value;
    green = document.querySelector('#greeni').value;
    blue = document.querySelector('#bluei').value;
    colorStr = "rgb(" + red + "," + green + "," + blue + ")";
    document.body.style.backgroundColor = colorStr;
}
showValues = function() {
    document.querySelector('#redv').innerHTML = document.querySelector("#redi").value;
    document.querySelector('#greenv').innerHTML = document.querySelector("#greeni").value;
    document.querySelector('#bluev').innerHTML = document.querySelector("#bluei").value;
}
window.onload = function() { changeColor(); showValues(); }
</script>
</body>
</html>

```

v.

```

<html>
<body>
<button onclick="stop();">Stop</button>
<script>
changeColor = function() {
    red = Math.floor(Math.random()*255);

```

```

    green = Math.floor(Math.random()*255);
    blue = Math.floor(Math.random()*255);
    colorStr = "rgb(" + red + "," + green + "," + blue + ")";
    document.body.style.backgroundColor = colorStr;
    //window.setInterval(changeColor, 1000);
}
stop = function() {
    window.clearInterval(intId);
}
intId = window.setInterval(changeColor, 1000);
</script>
</body>
</html>

```

Create Element:

i.

```

<html>
<body>
    <button onclick="savetime()">Time</button>
    <table id="timetable">
    </table>
    <script type="text/javascript">
        savetime = function() {
            t = document.querySelector("#timetable")
            trow = document.createElement("tr")
            td = document.createElement("td")
            contents = document.createTextNode(Date())
            td.appendChild(contents)
            trow.appendChild(td)
            t.appendChild(trow)
        }
    </script>
</body>
</html>

```

ii.

```

<html>
<table id="mytable"></table>
<script>
tbl = document.querySelector("#mytable")
for(i = 0; i < 10; i++) {
    row = document.createElement("tr")
    cell = document.createElement("td")
    cell.innerText = i
    row.appendChild(cell)
    tbl.appendChild(row)
}
</script>
</html>

```

2. Make a simple web page that contains an <h2> with the word "Hello" a text input box, and a button. When the user types a word or phrase into the input box and presses the button, replace the old h2 with the word entered. Using animation, make the word spin.
3. Make a simple web page that contains a button and a paragraph with the id of count Whenever this button is pressed increment the count by 1 and update the paragraph text. Also update the font size so that as the number gets larger, so does the font.
4. Repeat the previous exercise but make a list of numbers. In this case you will not be able to simply update the innerHTML of the paragraph, you will need to use the document.createElement() and document.appendChild() functions to add a new list item.
5. Given the following html. Every time the button is pressed you should add a row to the table, where the new row of the table contains the sum of the previous two rows. You should make use of the lastChild, previousSibling, and innerText attributes in this exercise.

```
<html>
  <body>
    <button onclick="addrow()">Next</button>
    <ul id="mytable"><li id=0>1</li><li id=1>1</li></ul>
  </body>
</html>
```

6. Create an html page with two text input boxes and four buttons. The buttons should be labeled +, -, *, and /. When one of these buttons is pressed you should get the value from both text input boxes and add, subtract, multiply, or divide the numbers entered in the text input boxes. The result should be displayed below the buttons. Note In order to do math on the values you read from the text input boxes you will need to use Number.parseInt on the value. for example suppose you get a reference to input box 1 using myIn1 = document.querySelector("#in1id"); then the statement value1 = Number.parseInt(myIn1.value) converts the string from the text input box to an integer.
7. Starting with the code given, create a page that looks like the following image: The rest of the page must be created using javascript. You must use document.createElement and the appendChild functions.

```
<html>
  <body>
    <button onclick="makePage();">Click Here</button>
  </body>
</html>
```

[Click Here](#)

I am an H1

This is a paragraph followed by a list

- I. This is first
- II. This is second

8. Write a function that each time it is clicked will do the following:

- i. Turn the background of the page light blue.
- ii. Add another H1 to the page that says "So Long 130"
- iii. Changes the font color for the H1 to red

By each time, I mean that if the button is clicked 10 times there should be 10 H1's on the page.