

Web Technology

Lab Assignment - 4

Name: UDAY AGARWAL

Roll No: 22MC3040

T1. Create a webpage that has a heading and a button. Write a script to change the background color and text when the button is clicked.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>LAB 4</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      text-align: center;
      padding: 20px;
    }

    h1 {
      color: #333;
    }

    #changeButton {
      padding: 10px 20px;
      font-size: 16px;
      cursor: pointer;
    }
  </style>
</head>
<body>

  <h1 id="heading">Click the button to change color!</h1>
  <button id="changeButton" onclick="changeColor()">Change
  Color</button>
```

```

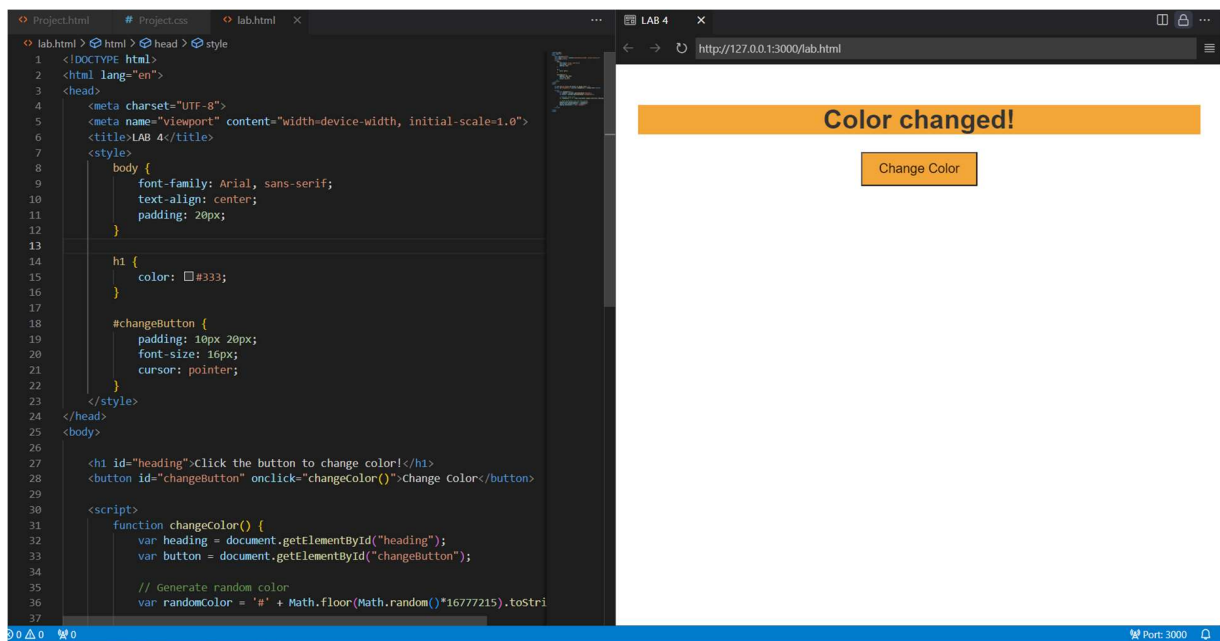
<script>
    function changeColor() {
        var heading = document.getElementById("heading");
        var button = document.getElementById("changeButton");

        // Generate random color
        var randomColor = '#' +
Math.floor(Math.random()*16777215).toString(16);

        // Change background color and text content
        heading.style.backgroundColor = randomColor;
        button.style.backgroundColor = randomColor;
        heading.textContent = "Color changed!";
    }
</script>

</body>
</html>

```



T2. For T1, experiment with the Javascript code by trying the following things:

- a. Make the background light green.
- b. Add a line that makes the text red.
- c. Change the fontSize to 48pt.
- d. Change the wording inside the <h1> tag in the Javascript.
- e. Add <button>Click Me</button> after the closing </h1>.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>LAB 4</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      text-align: center;
      padding: 20px;
    }

    h1 {
      color: #333;
    }

    #changeButton {
      padding: 10px 20px;
      font-size: 16px;
      cursor: pointer;
    }
  </style>
</head>
<body>

  <h1 id="heading">Click the button to change color!</h1>
  <button id="changeButton" onclick="changeColor()">Change
Color</button>

  <script>
```

```
function changeColor() {
    var heading = document.getElementById("heading");
    var button = document.getElementById("changeButton");

    // Change background color to light green
    heading.style.backgroundColor = 'lightgreen';

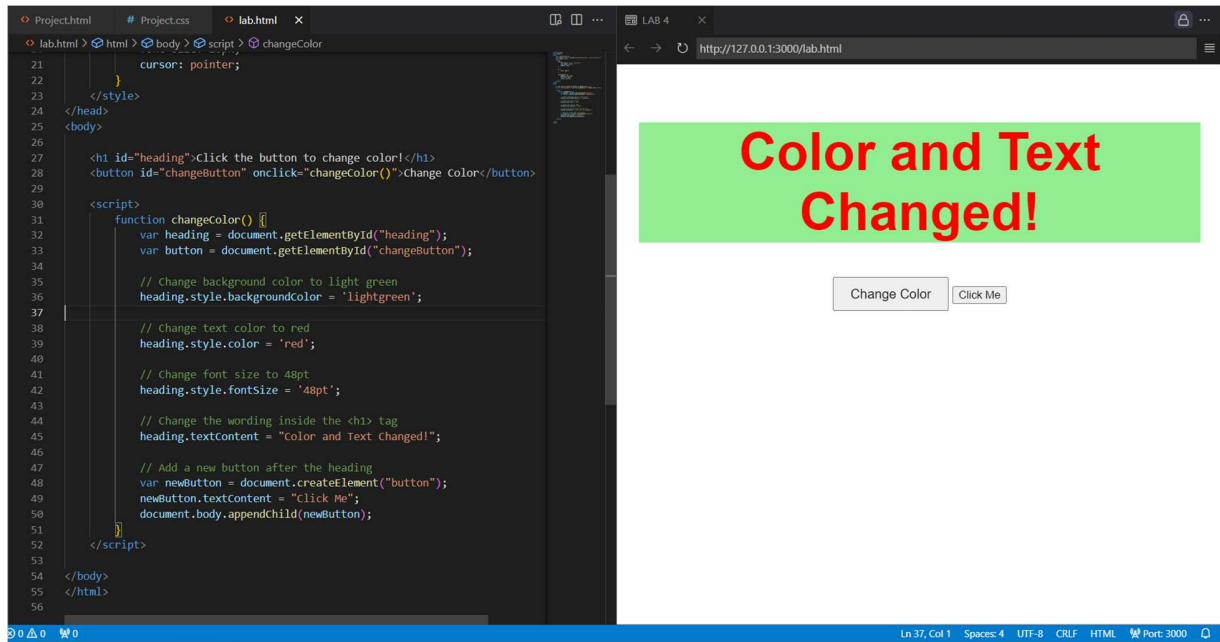
    // Change text color to red
    heading.style.color = 'red';

    // Change font size to 48pt
    heading.style.fontSize = '48pt';

    // Change the wording inside the <h1> tag
    heading.textContent = "Color and Text Changed!";

    // Add a new button after the heading
    var newButton = document.createElement("button");
    newButton.textContent = "Click Me";
    document.body.appendChild(newButton);
}
</script>

</body>
</html>
```



T3. For T1, set the color of the background directly with the class attribute. Generate alerts before and after assigning the class attribute to document object.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>LAB 4</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      text-align: center;
      padding: 20px;
    }

    .lightGreenBackground {
      background-color: lightgreen;
    }

    h1 {
      color: #333;
    }
  </style>
</head>
<body>
  <h1 id="heading">Click the button to change color!</h1>
  <button id="changeButton" onclick="changeColor()">Change Color</button>
  <script>
    function changeColor() {
      var heading = document.getElementById("heading");
      var button = document.getElementById("changeButton");

      // Change background color to light green
      heading.style.backgroundColor = 'lightgreen';

      // Change text color to red
      heading.style.color = 'red';

      // Change font size to 48pt
      heading.style.fontSize = '48pt';

      // Change the wording inside the <h1> tag
      heading.textContent = "Color and Text Changed!";

      // Add a new button after the heading
      var newButton = document.createElement("button");
      newButton.textContent = "Click Me";
      document.body.appendChild(newButton);
    }
  </script>
</body>
</html>
```

```
        #changeButton {
            padding: 10px 20px;
            font-size: 16px;
            cursor: pointer;
        }
    </style>
</head>
<body>

    <h1 id="heading">Click the button to change color!</h1>
    <button id="changeButton" onclick="changeColor()">Change
Color</button>

    <script>
        function changeColor() {
            var heading = document.getElementById("heading");
            var button = document.getElementById("changeButton");

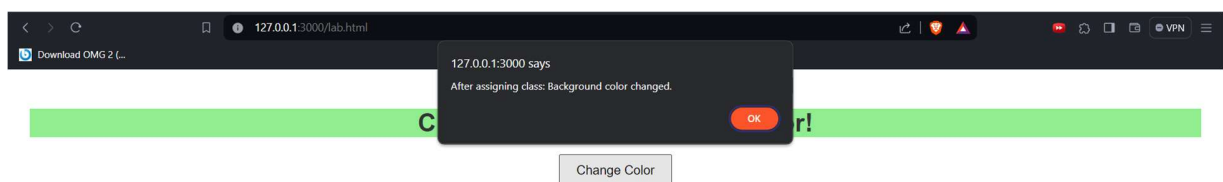
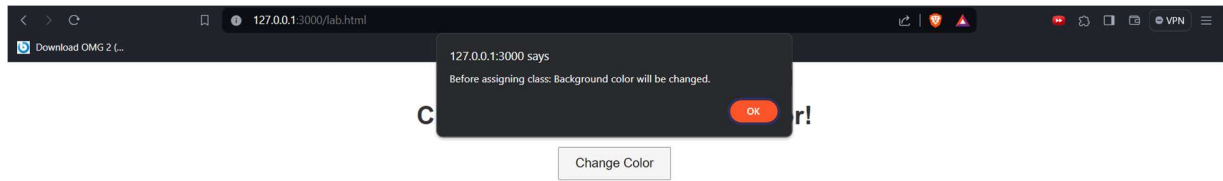
            // Alert before assigning the class
            alert("Before assigning class: Background color will be
changed.");

            // Assign the class to change the background color
            heading.classList.add("lightGreenBackground");

            alert("After assigning class: Background color changed.");

        }
    </script>

</body>
</html>
```



T4. Design a page having contents within and outside the main section. The page must contain a button that when clicked replaces the content of the main section with another content having different style.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
```

```

<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>LAB 4</title>
<style>
    body {
        font-family: Arial, sans-serif;
        text-align: center;
        padding: 20px;
    }

    main {
        border: 2px solid #333;
        padding: 20px;
        margin: 20px;
    }

    #changeButton {
        padding: 10px 20px;
        font-size: 16px;
        cursor: pointer;
    }

    .newContent {
        color: red;
        font-size: 24px;
        font-weight: bold;
    }
</style>
</head>
<body>

    <header>
        <h1>Webpage with Content Replacement</h1>
    </header>

    <main id="mainSection">
        <p>This is the initial content of the main section.</p>
    </main>

    <button id="changeButton" onclick="replaceContent()">Replace
Content</button>

```



```

<footer>
    <p>Footer content outside the main section.</p>
</footer>

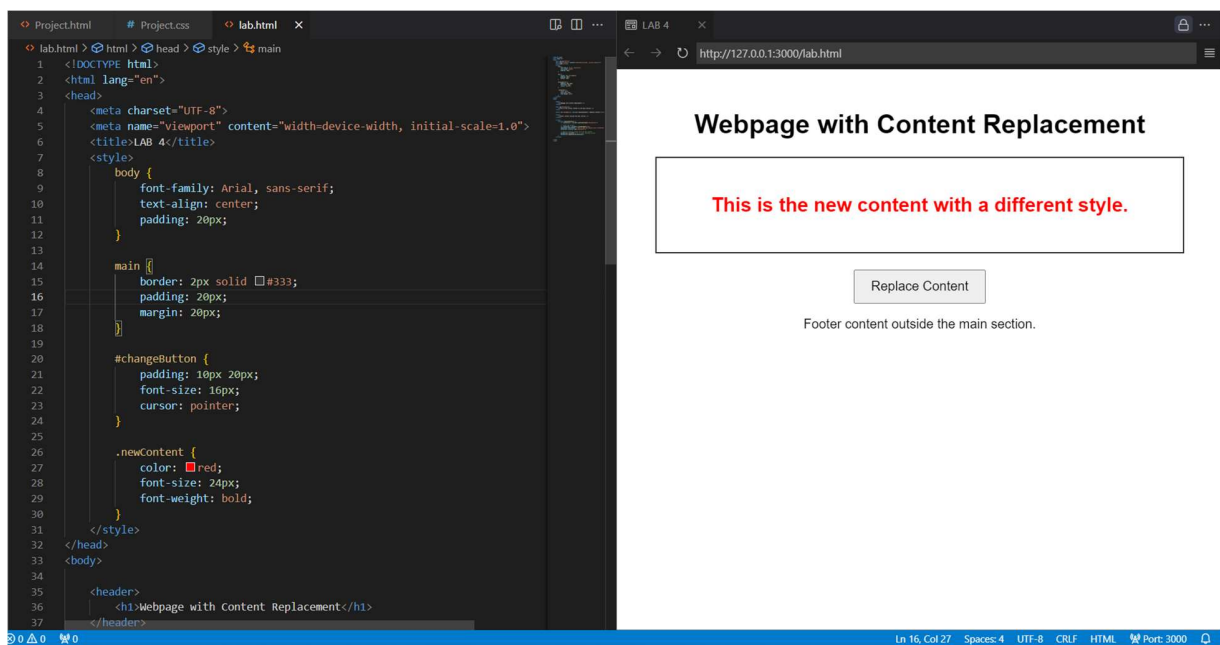
<script>
    function replaceContent() {
        var mainSection = document.getElementById("mainSection");

        // Create new content
        var newContent = document.createElement("p");
        newContent.textContent = "This is the new content with a
different style.";
        newContent.classList.add("newContent");

        // Replace existing content with the new content
        mainSection.innerHTML = ""; // Clear existing content
        mainSection.appendChild(newContent);
    }
</script>

</body>
</html>

```



T5. Consider a h1 heading lying outside the main section in the page. Try changing the color of h1 in at least 3 different ways.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>LAB 4</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      text-align: center;
      padding: 20px;
    }

    h1 {
      margin-bottom: 20px;
    }

    /* Method 1: Using a specific color */
    .method1 {
      color: red;
    }

    /* Method 2: Using hexadecimal color code */
    .method2 {
      color: #00ff00; /* Green color */
    }

    /* Method 3: Using RGB color values */
    .method3 {
      color: rgb(0, 0, 255); /* Blue color */
    }
  </style>
</head>
<body>

  <h1 class="method1">Heading with Color (Method 1)</h1>

```

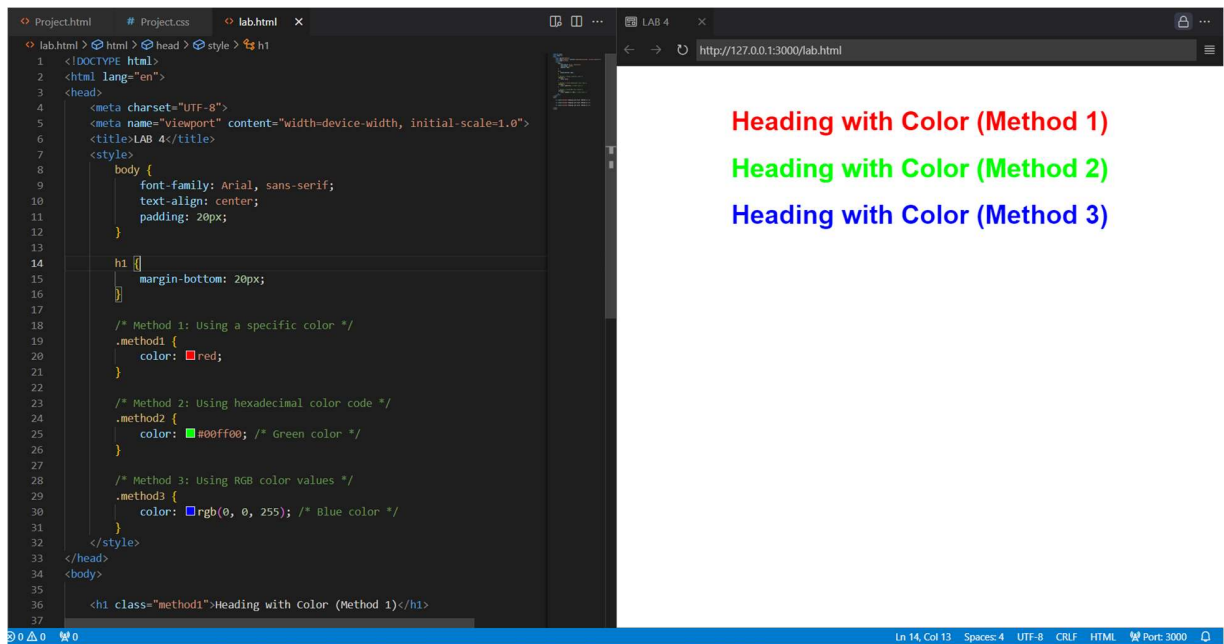
```

<h1 class="method2">Heading with Color (Method 2)</h1>






<h1 class="method3">Heading with Color (Method 3)</h1>

</body>
</html>

```



T6. Design a webpage using grid layout that displays the following:

				
57.0	16.0	52.0	10	44

The first row shows icons of various web browsers and the second row shows the latest version number.

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>LAB 4</title>
  <style>
    body {

```

```

    font-family: Arial, sans-serif;
    margin: 0;
    padding: 0;
}

.grid-container {
    display: grid;
    grid-template-rows: auto auto; /* Two rows with auto height */
    grid-template-columns: repeat(5, 1fr); /* Five columns with equal
width */
    gap: 10px; /* Gap between grid items */
    padding: 20px; /* Padding around the grid */
}

.grid-item {
    text-align: center;
}

.grid-item img {
    max-width: 100px; /* Limit maximum width of the icons */
}

</style>
</head>
<body>
    <div class="grid-container">
        <!-- First row: Icons of various web browsers -->
        <div class="grid-item"><p>Chrome</p></div>
        <div class="grid-item"><p>Edge</p></div>
        <div class="grid-item"><p>Firefox</p></div>
        <div class="grid-item"><p>Safari</p></div>
        <div class="grid-item"><p>Opera</p></div>

        <!-- Second row: Latest version numbers -->
        <div class="grid-item">57.0</div>
        <div class="grid-item">16.0</div>
        <div class="grid-item">52.0</div>
        <div class="grid-item">10</div>
        <div class="grid-item">44</div>
    </div>

```

```
</div>
</body>
</html>
```

