

Web Technology

Lab Assignment - 4

Name: Shubham Gupta Roll No: 22MC3031

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
```

```

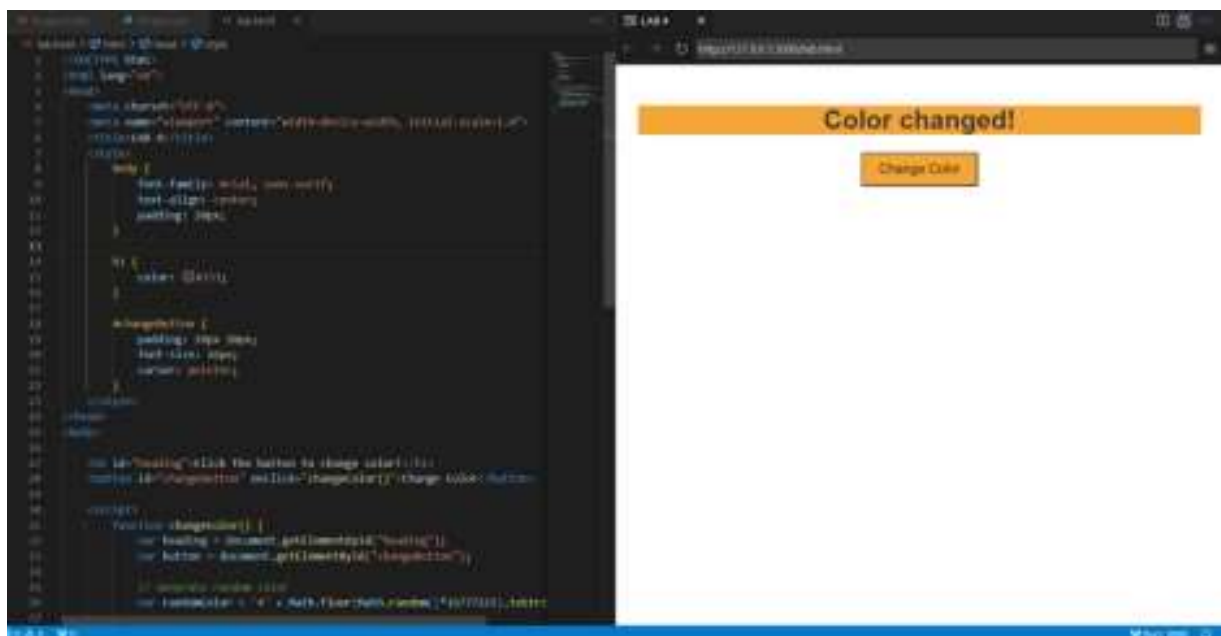
Color</button>
<script>
  function changeColor() {
    var heading = document.getElementById("heading"); var button =
document.getElementById("changeButton");

    // 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';

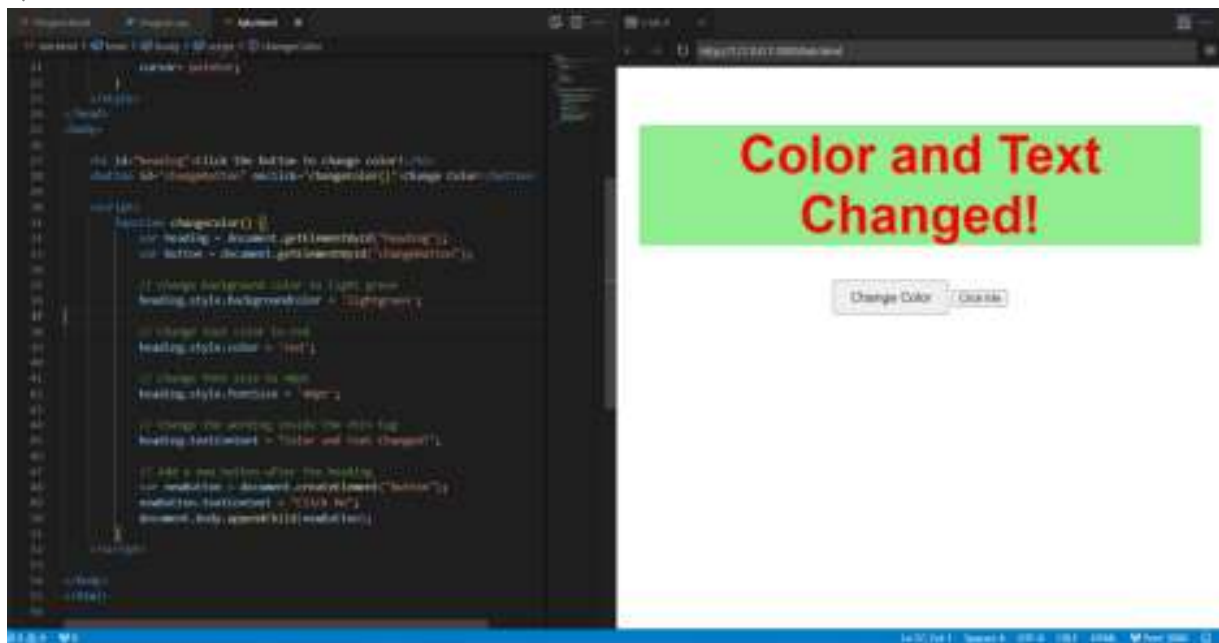
// Change font size to 48pt
heading.style.fontSize = '48pt';

// 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;
    }
    #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");
```

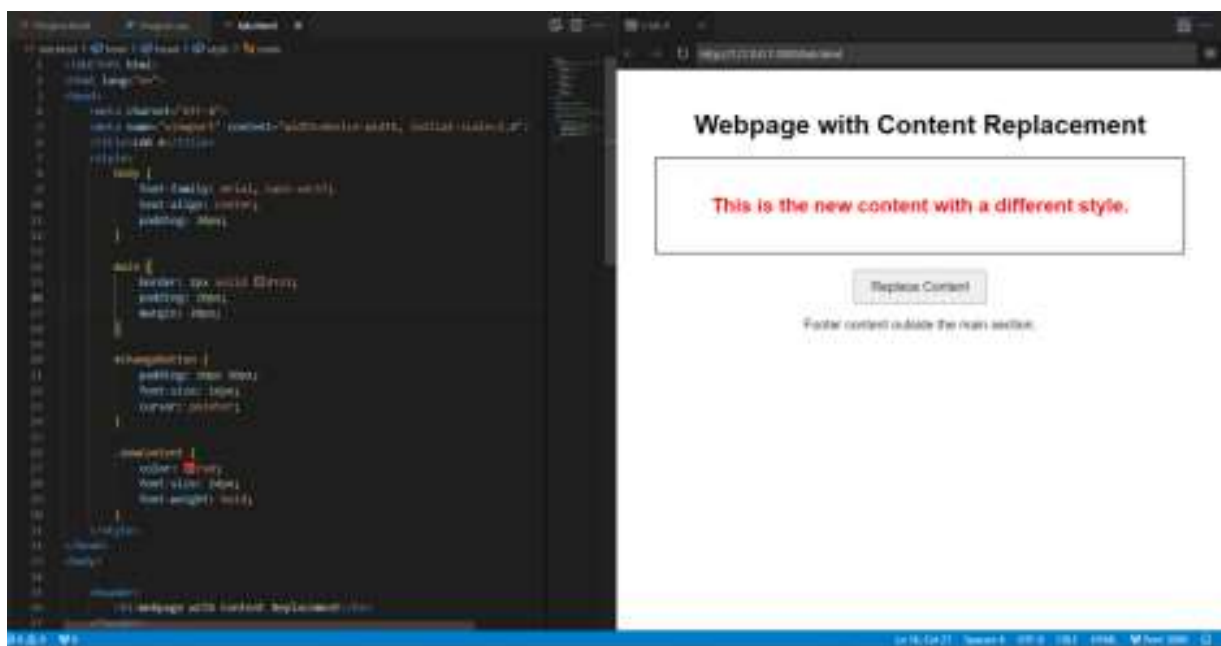


```

    // 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 */
}

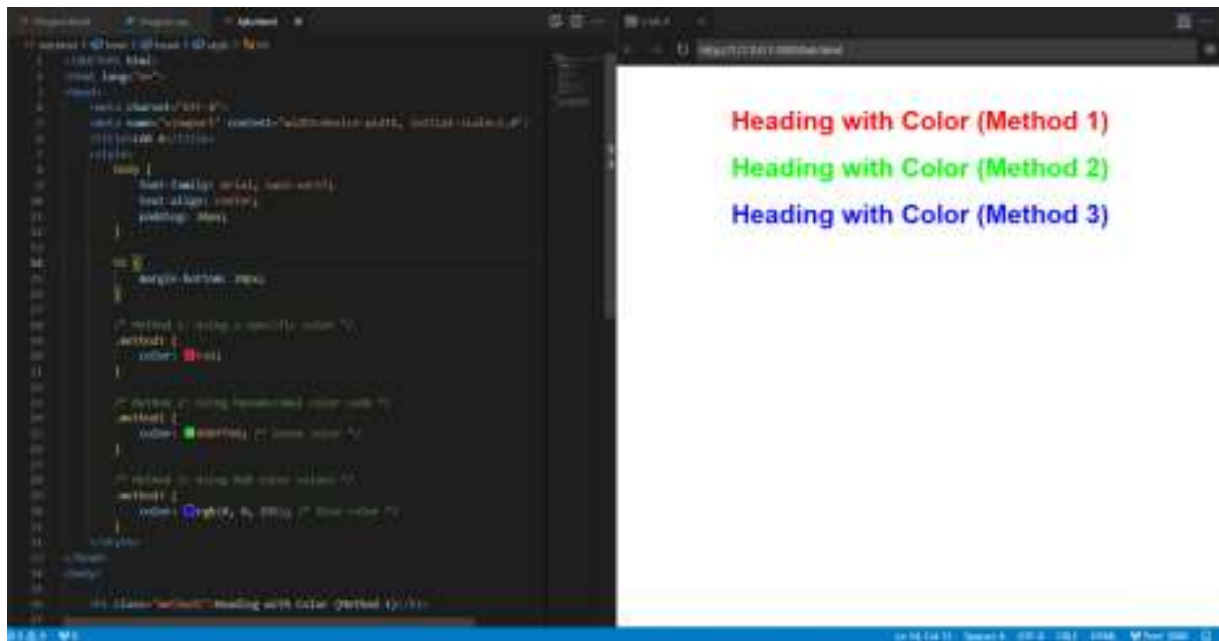
/* Method 3: Using RGB color values */
.method3 {
color: rgb(0, 0, 255); /* Blue color */
}

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

