

# Web Technology

## Lab Assignment 4

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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>

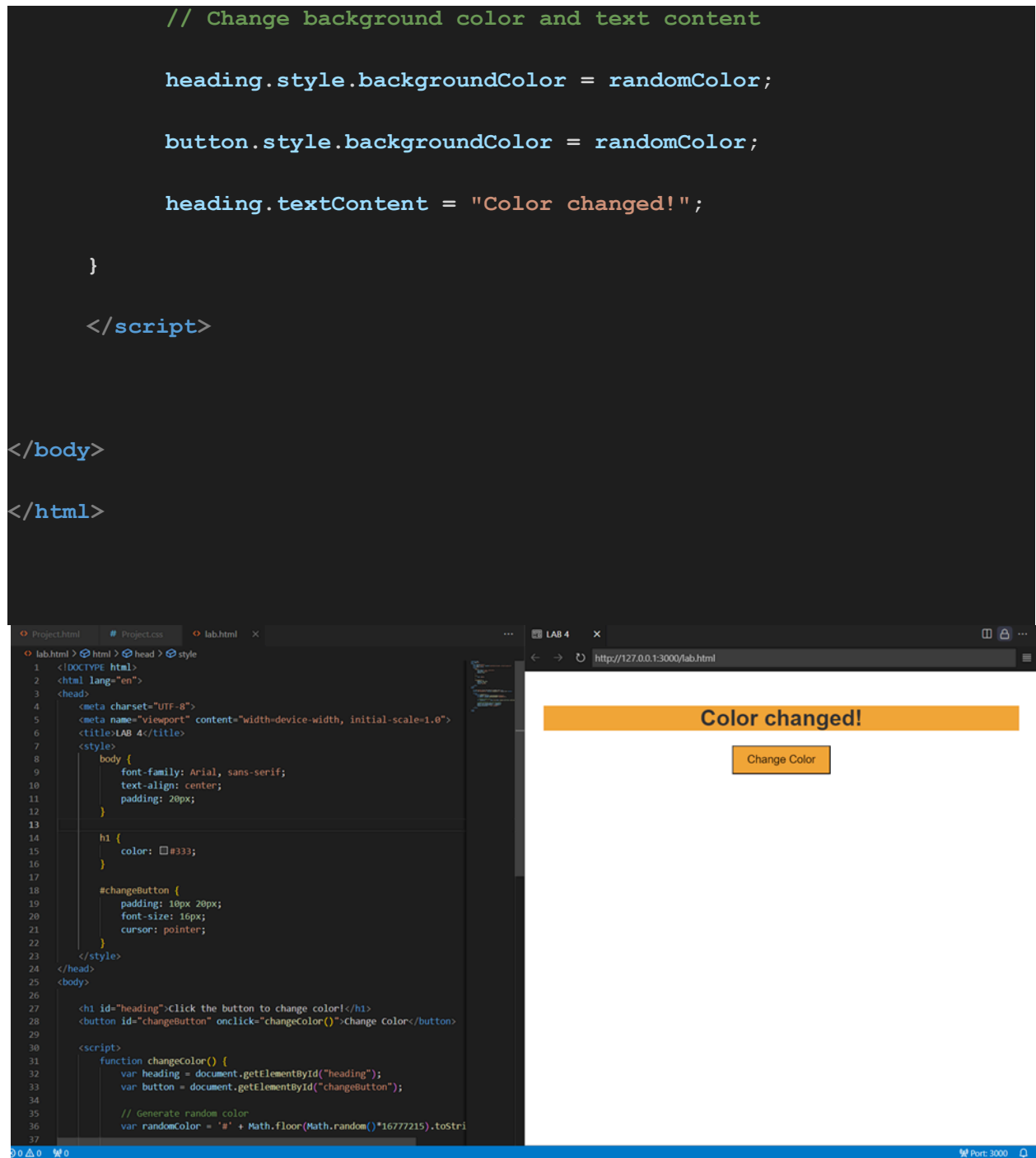
function changeColor() {

    var heading = document.getElementById("heading");

    var button = document.getElementById("changeButton");

    // Generate random color

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



**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';

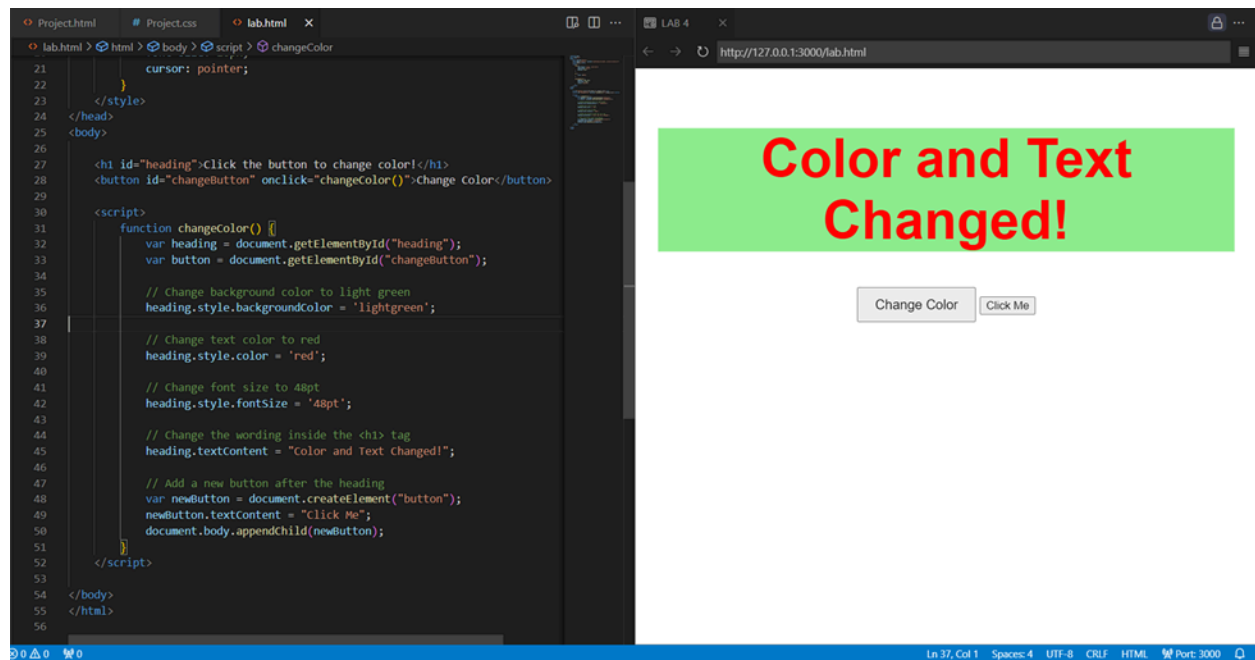
        // Change the wording inside the <h1> tag
        heading.textContent = "Color and Text Changed!";

        // 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");

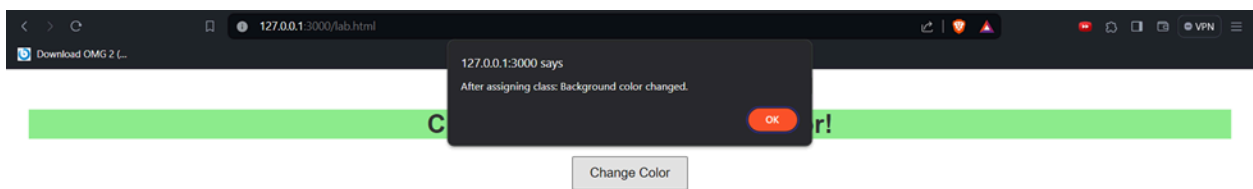
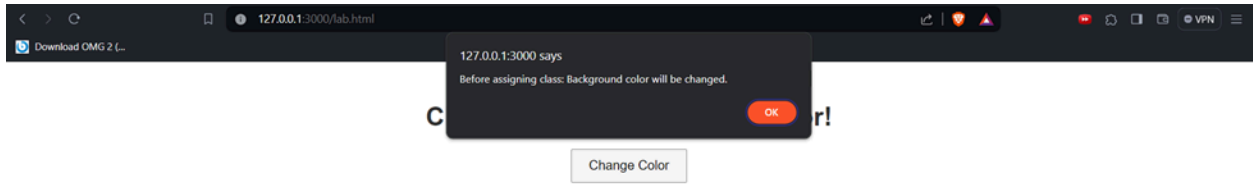

    alert("After assigning class: Background color changed.");

}

</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

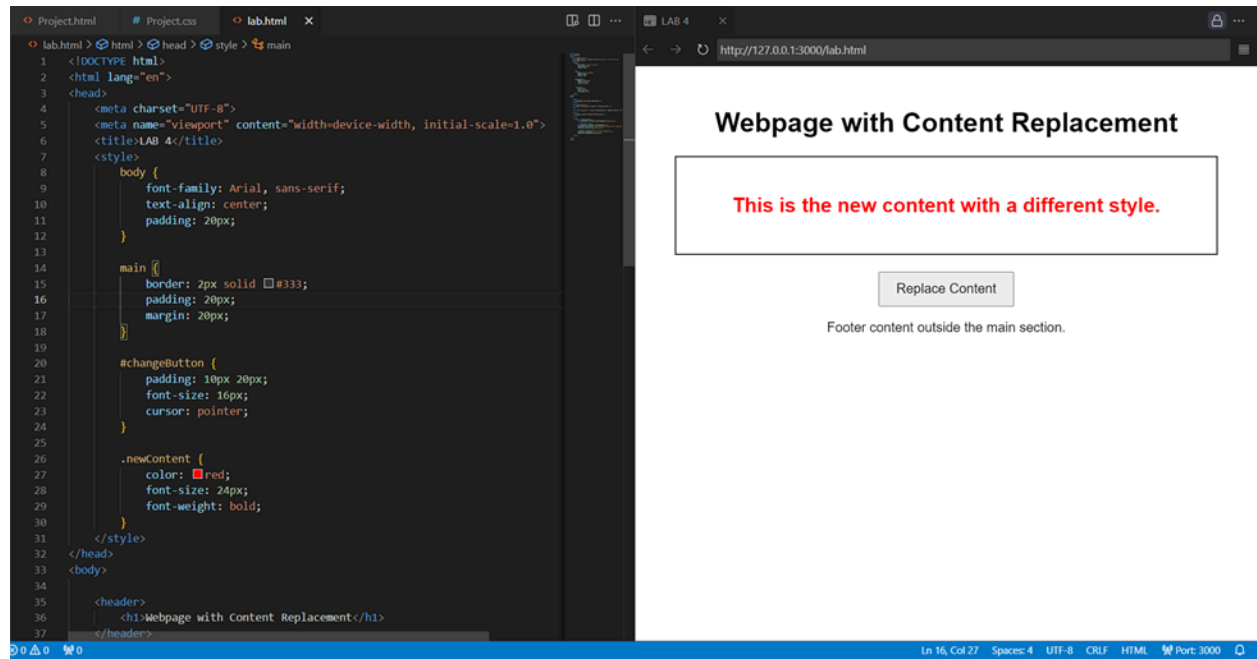
    mainSection.appendChild(newContent);

}

</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>
```

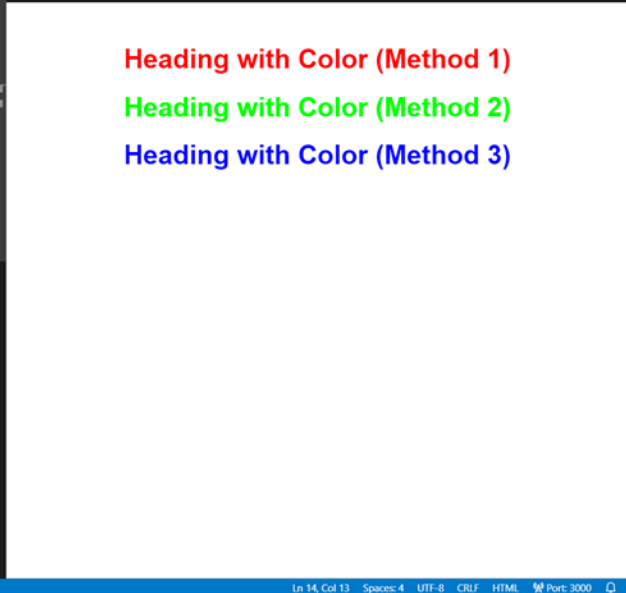
```
<h1 class="method1">Heading with Color (Method 1)</h1>

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

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

</body>

</html>
```



The screenshot shows a web browser window displaying the rendered page. The browser's address bar shows the URL `http://127.0.0.1:3000/lab.html`. The page content consists of three headings, each rendered in a different color: red, green, and blue. The browser's developer tools are open, showing the HTML and CSS for the page. The CSS file, `Project.css`, defines the styles for the headings. The `body` has a font-family of `Arial, sans-serif`, text-align of `center`, and padding of `20px`. The `h1` tag has a `margin-bottom` of `20px`. The `.method1` class has a `color` of `red`. The `.method2` class has a `color` of `#00ff00` (Green color). The `.method3` class has a `color` of `rgb(0, 0, 255)` (Blue color).






Heading with Color (Method 1)

Heading with Color (Method 2)

Heading with Color (Method 3)

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>

```

