

Web Technology

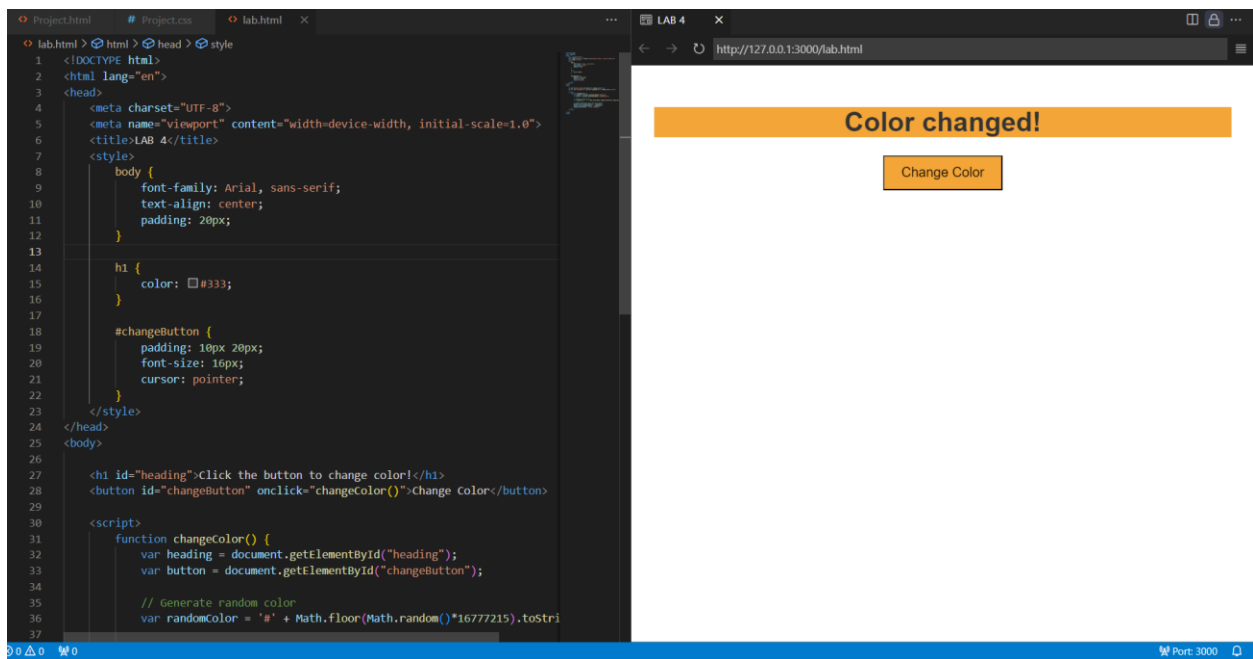
Lab Assignment - 4

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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.

OUTPUT:



CODE:

```
<!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).padStart(6, '0');
      document.body.style.backgroundColor = randomColor;
      heading.textContent = 'Color changed!';
      button.textContent = 'Change Color';
    }
  </script>
</body>
</html>
```

```
    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);

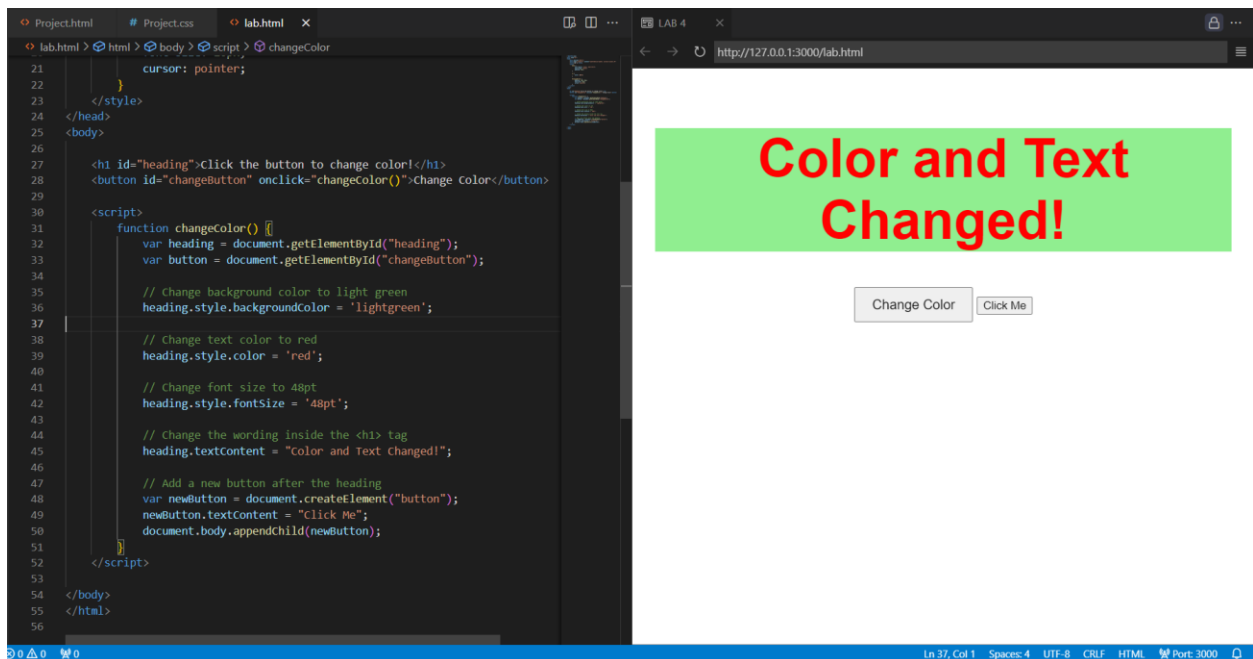
        // Change background color and text content
        heading.style.backgroundColor = randomColor;
        button.style.backgroundColor = randomColor;
        heading.textContent = "Color changed!";
    }
</script>

</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>.**

OUTPUT:



CODE:

```
<!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!";

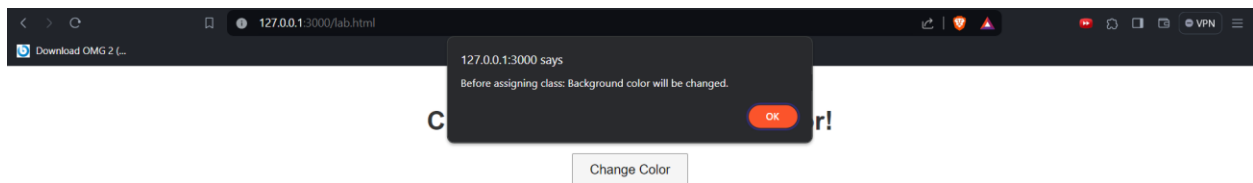
  // Add a new button after the heading
```

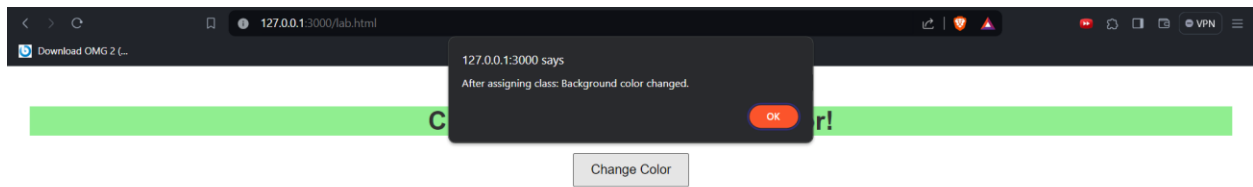
```
var newButton = document.createElement("button");
newButton.textContent = "Click Me";
document.body.appendChild(newButton);
}
</script>

</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.

OUTPUT:





CODE:

```
<!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.");

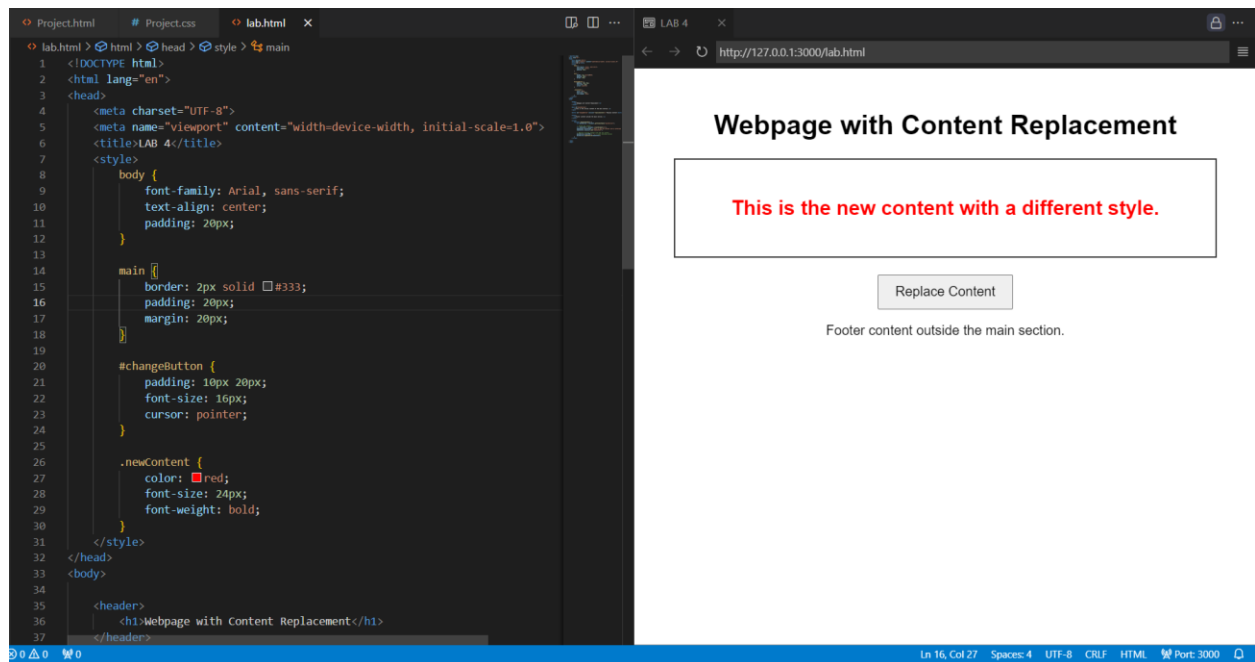
}
</script>

</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.

OUTPUT:



CODE:

```
<!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>
```



```
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
```

```

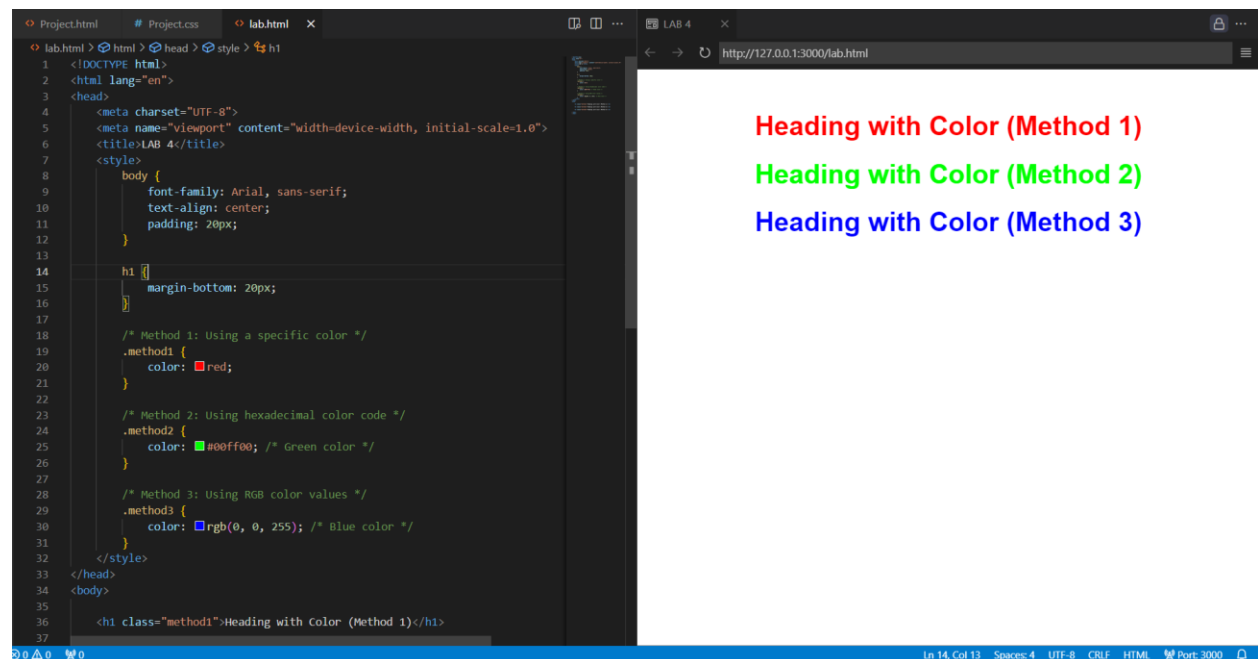
        mainSection.appendChild(newContent);
    }
</script>

</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.

OUTPUT:



CODE:

```

<!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;
    }
  </style>
</head>
<body>
  <h1 class="method1">Heading with Color (Method 1)</h1>

```

```
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>

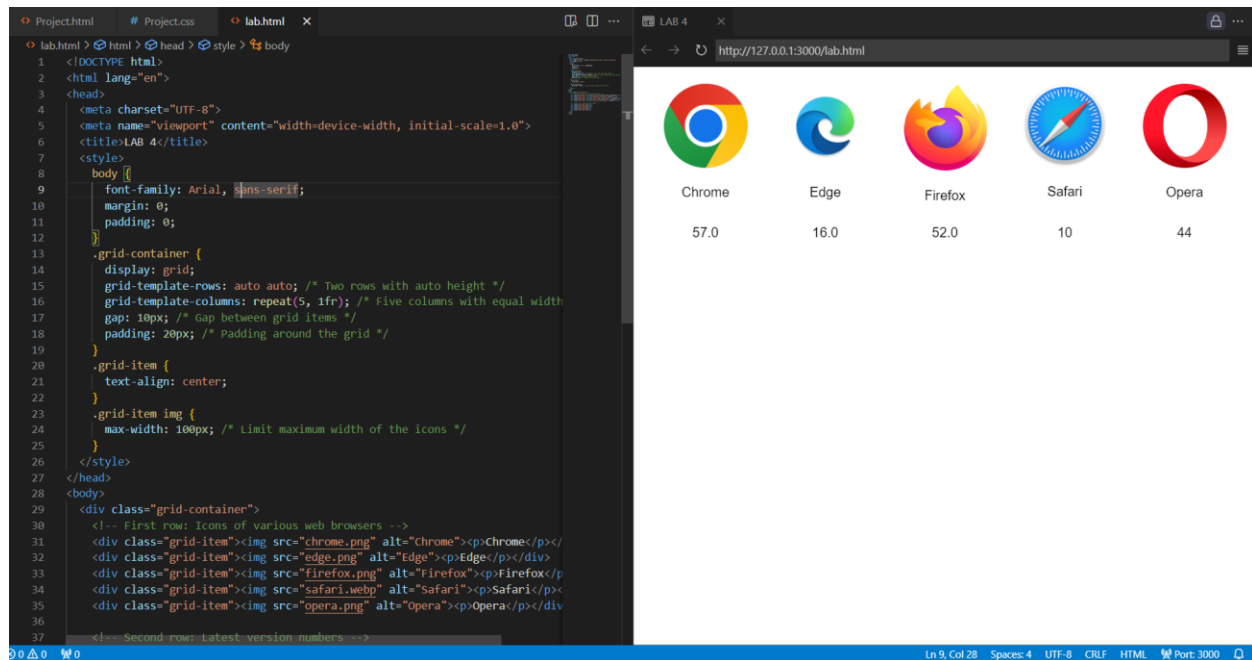
</body>
</html>
```

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.

OUTPUT:



CODE:

```
<!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"><p>57.0</p></div>
    <div class="grid-item"><p>16.0</p></div>
    <div class="grid-item"><p>52.0</p></div>
    <div class="grid-item"><p>10</p></div>
    <div class="grid-item"><p>44</p></div>
  </div>
  </body>
</html>
```

```
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>
```