WebTech LAB

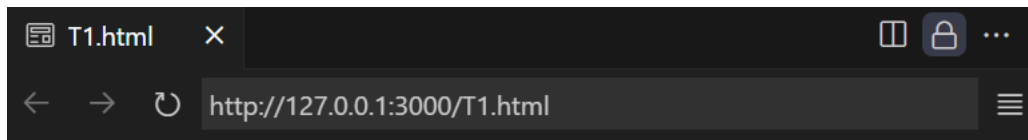**Name: Pranjal Khare**

RollNo: 22CS2038
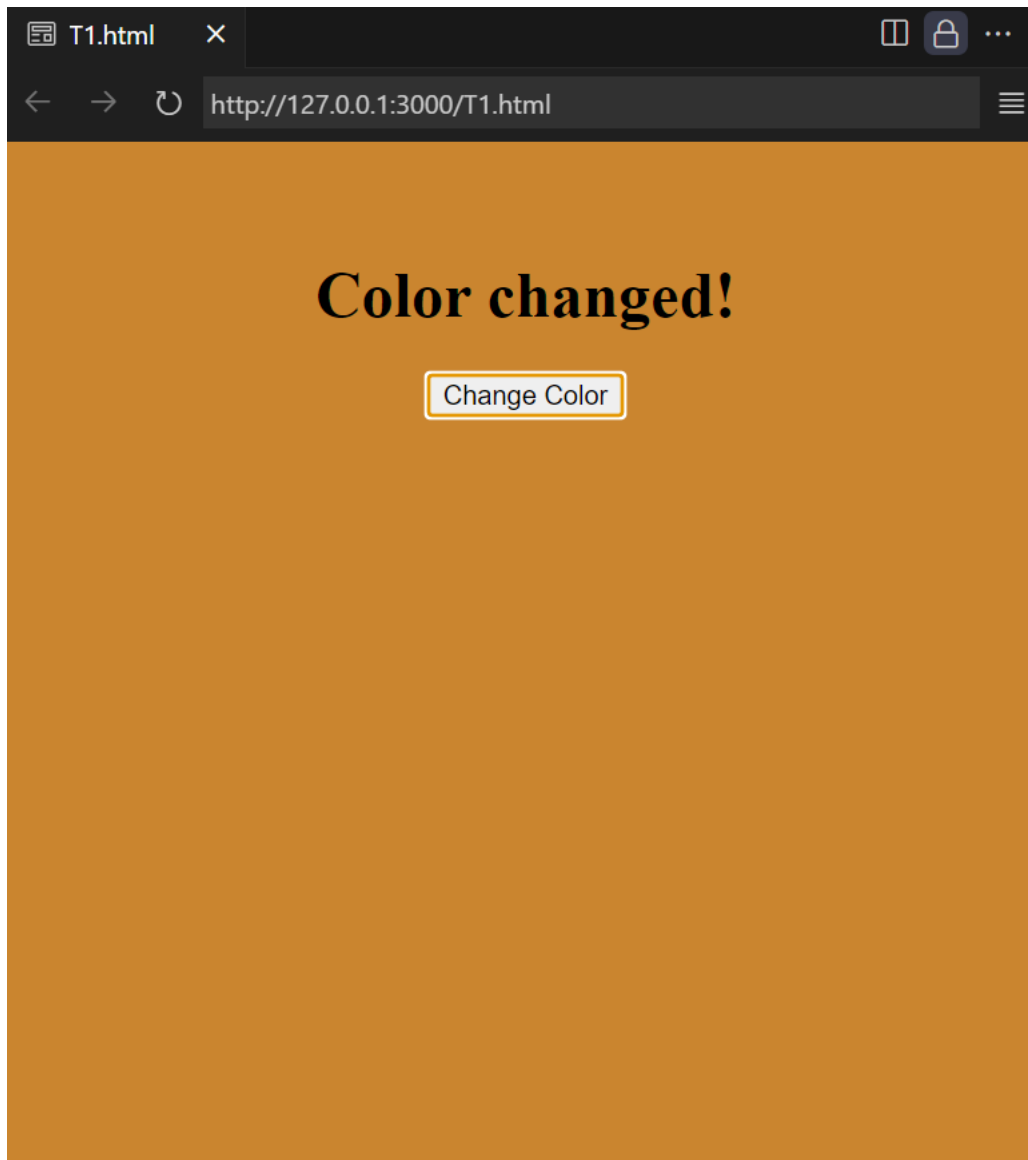
T1. Create a webpage that has a heading and a button. Write a script to change the background color and text when the button is clicked.

```html
<html>
<head>
    <style>
        body {
            text-align: center;
            padding: 50px;
            transition: background-color 0.5s;
        }
    </style>
</head>
<body>
    <h1 id="heading">Click the button to change color</h1>
    <button id="colorButton">Change Color</button>
    <script>
        document.getElementById("colorButton").addEventListener("click",
function() {
            var randomColor = getRandomColor();
            document.body.style.backgroundColor = randomColor;
            document.getElementById("heading").innerText = "Color changed!";
        });
        function getRandomColor() {
            var letters = '0123456789ABCDEF';
            var color = '#';
            for (var i = 0; i < 6; i++) {
                color += letters[Math.floor(Math.random() * 16)];
            }
            return color;
        }
    </script>
</body>
</html>
```

http://127.0.0.1:3000/T1.html

Click the button to change color

Change Color

← → ↻ http://127.0.0.1:3000/T1.html
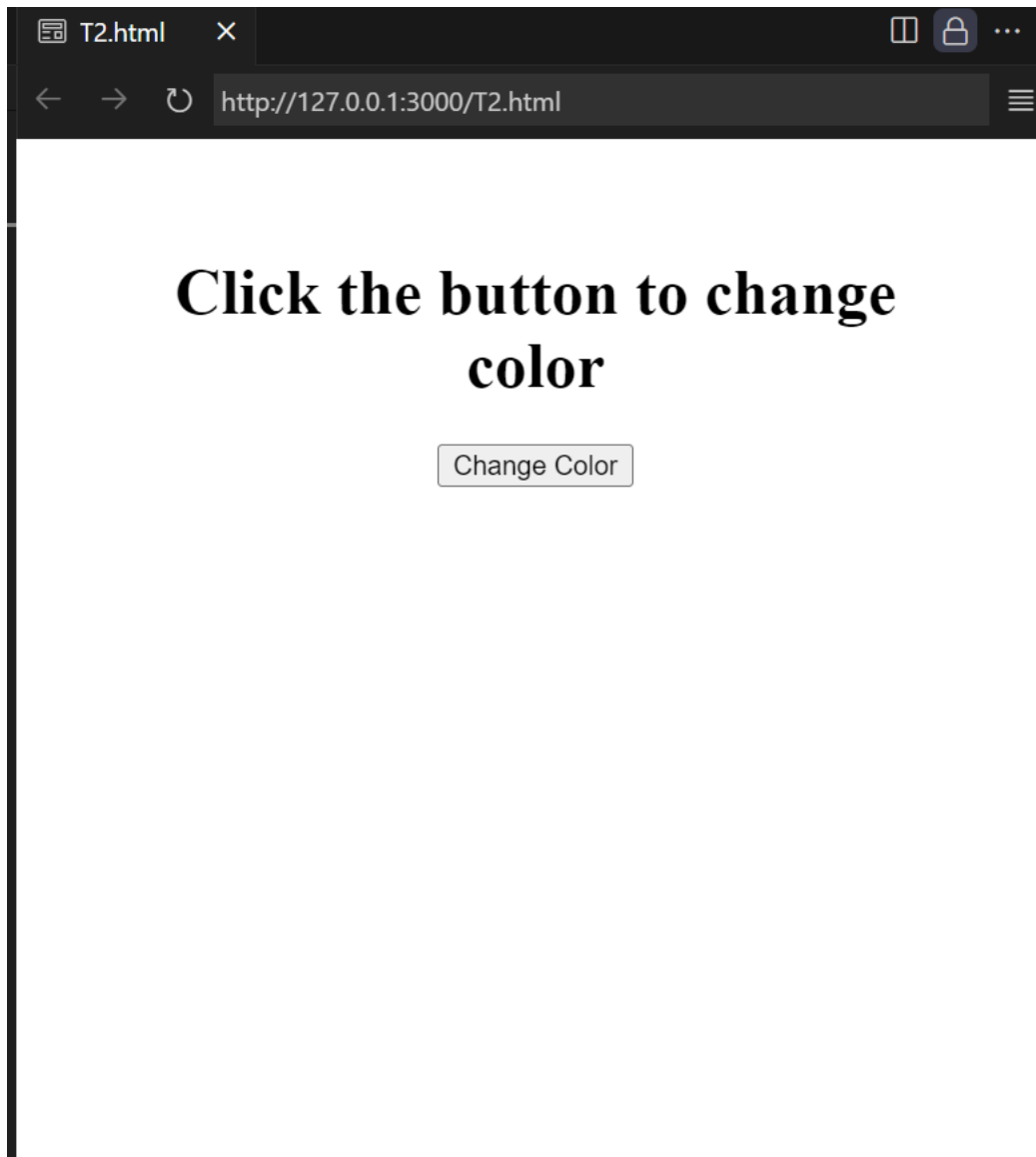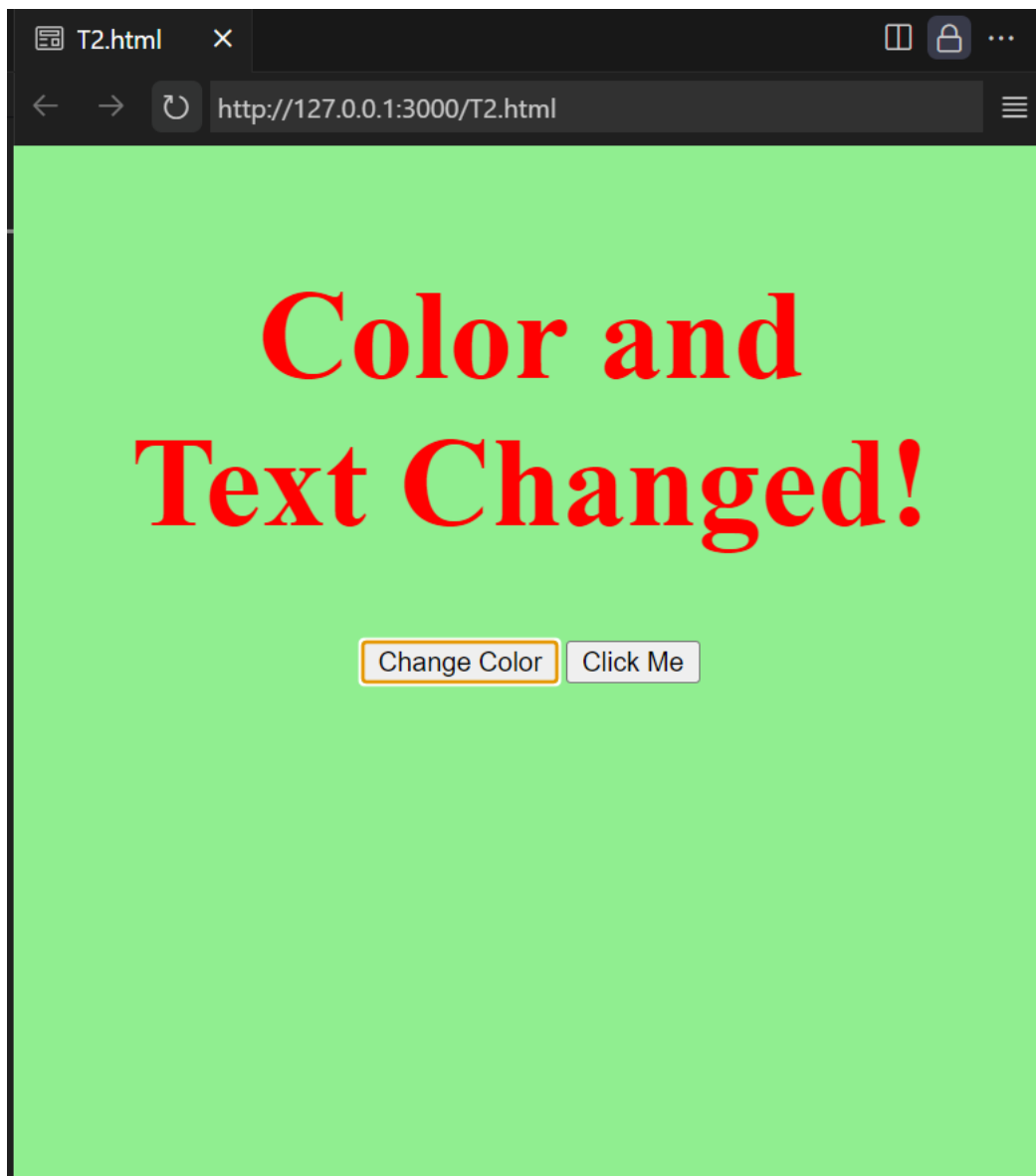
Color changed!

Change Color

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>.

```html
<html>
<head>
    <style>
        body {
            text-align: center;
            padding: 50px;
            transition: background-color 0.5s, color 0.5s, font-size 0.5s;
        }
```

```
        #heading {
            color: black;
            font-size: 24pt;
        }
    </style>
</head>
<body>
    <h1 id="heading">Click the button to change color</h1>
    <button id="colorButton">Change Color</button>
    <script>
        document.getElementById("colorButton").addEventListener("click",
function() {
            document.body.style.backgroundColor = "lightgreen";
            document.getElementById("heading").style.color = "red";
            document.getElementById("heading").style.fontSize = "48pt";
            document.getElementById("heading").innerText = "Color and Text
Changed!";
            var newButton = document.createElement("button");
            newButton.innerText = "Click Me";
            document.body.appendChild(newButton);
        });
    </script>
</body>
</html>
```

http://127.0.0.1:3000/T2.html

Click the button to change color

Change Color

http://127.0.0.1:3000/T2.html

Color and
Text Changed!

[Change Color] [Click Me]

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.

```html
<html>
<head>
    <style>
        .blue-background {
            background-color: #3498db;
        }
        .green-background {
            background-color: #2ecc71;
        }
        body {
            text-align: center;
            padding: 50px;
            transition: background-color 0.5s;
        }
```

```html
        </style>
</head>
<body>
    <h1 id="heading">Click the button to change color</h1>
    <button id="colorButton">Change Color</button>
    <script>
        function getRandomColorClass() {
            var classes = ['blue-background', 'green-background'];
            var randomIndex = Math.floor(Math.random() * classes.length);
            return classes[randomIndex];
        }
        alert("Before assigning the class attribute!");
        document.getElementById("colorButton").addEventListener("click",
function() {
            var randomColorClass = getRandomColorClass();
            document.body.className = randomColorClass;
            document.getElementById("heading").innerText = "Color changed!";
            alert("After assigning the class attribute!");
        });
    </script>
</body>
</html>
```

http://127.0.0.1:3000/T3.html
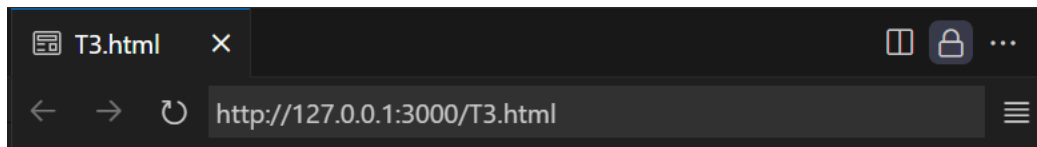
Click the button to change color

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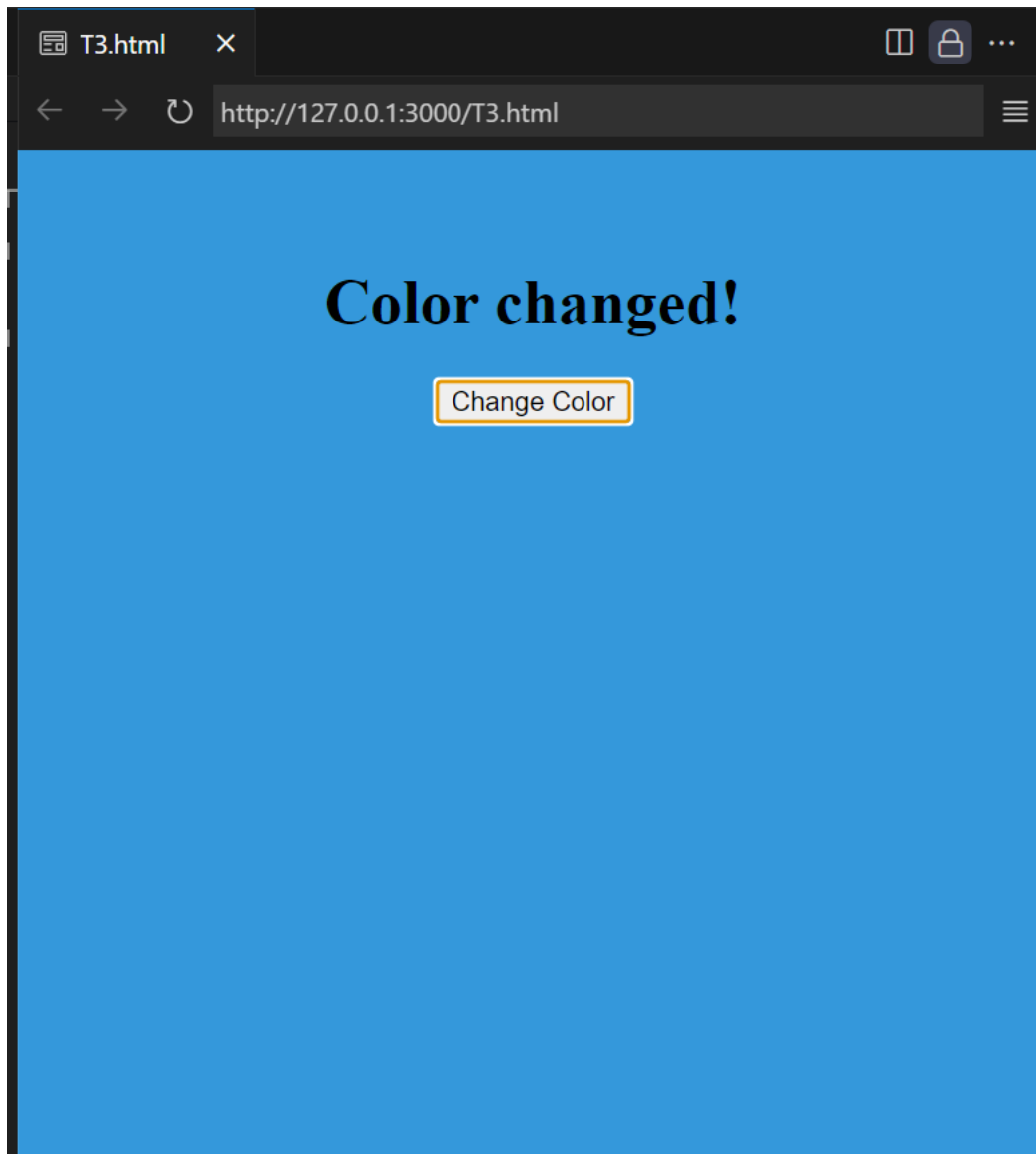
T4. Design a page having contents within and outside the main section. The page must contain a button that when clicked replaces the content of the main section with another content having different style.

```
<html>
<head>
    <style>
        body {
            font-family: Arial, sans-serif;
            text-align: center;
            margin: 20px;
        }
        #mainSection {
            background-color: #f0f0f0;
            padding: 20px;
            margin: 10px;
            border-radius: 8px;
```

```
        }
        #button {
            background-color: #3498db;
            color: #ffffff;
            padding: 10px 20px;
            font-size: 16px;
            cursor: pointer;
            border: none;
            border-radius: 4px;
        }
        #newContent {
            color: #2ecc71;
            font-size: 24px;
            margin-top: 20px;
        }
    </style>
</head>
<body>
    <h1>Page with Content Replacement</h1>
    <div id="mainSection">
        <p>This is the initial content inside the main section.</p>
    </div>
    <button id="button" onclick="replaceContent()">Replace Content</button>
    <script>
        function replaceContent() {
            var mainSection = document.getElementById("mainSection");
            mainSection.innerHTML = "<p id='newContent'>This is the new
content with different style.</p>";
        }
    </script>
</body>
</html>
```

Page with Content Replacement

This is the initial content inside the main section.

Replace Content

Page with Content Replacement

This is the new content with different style.

Replace Content
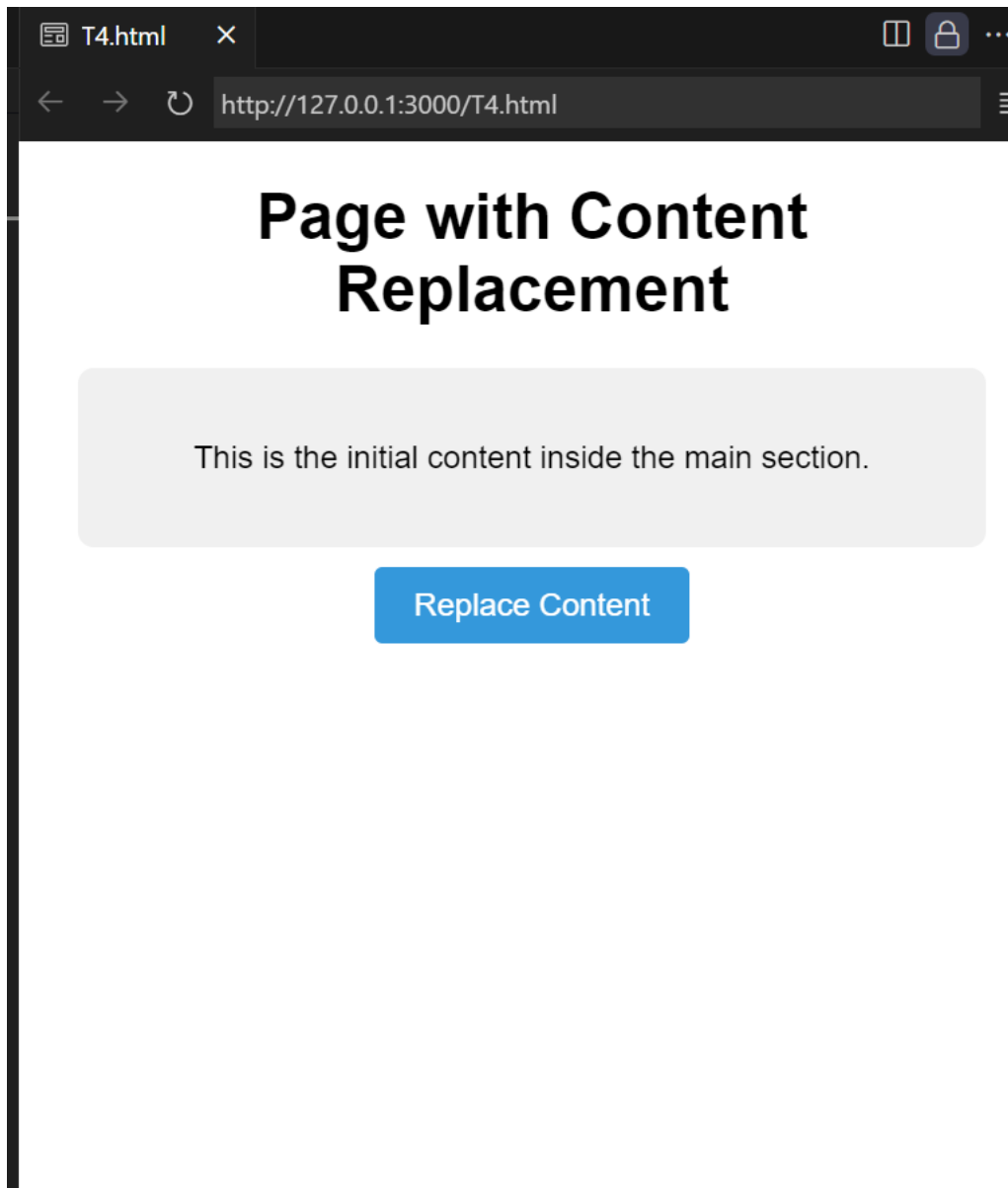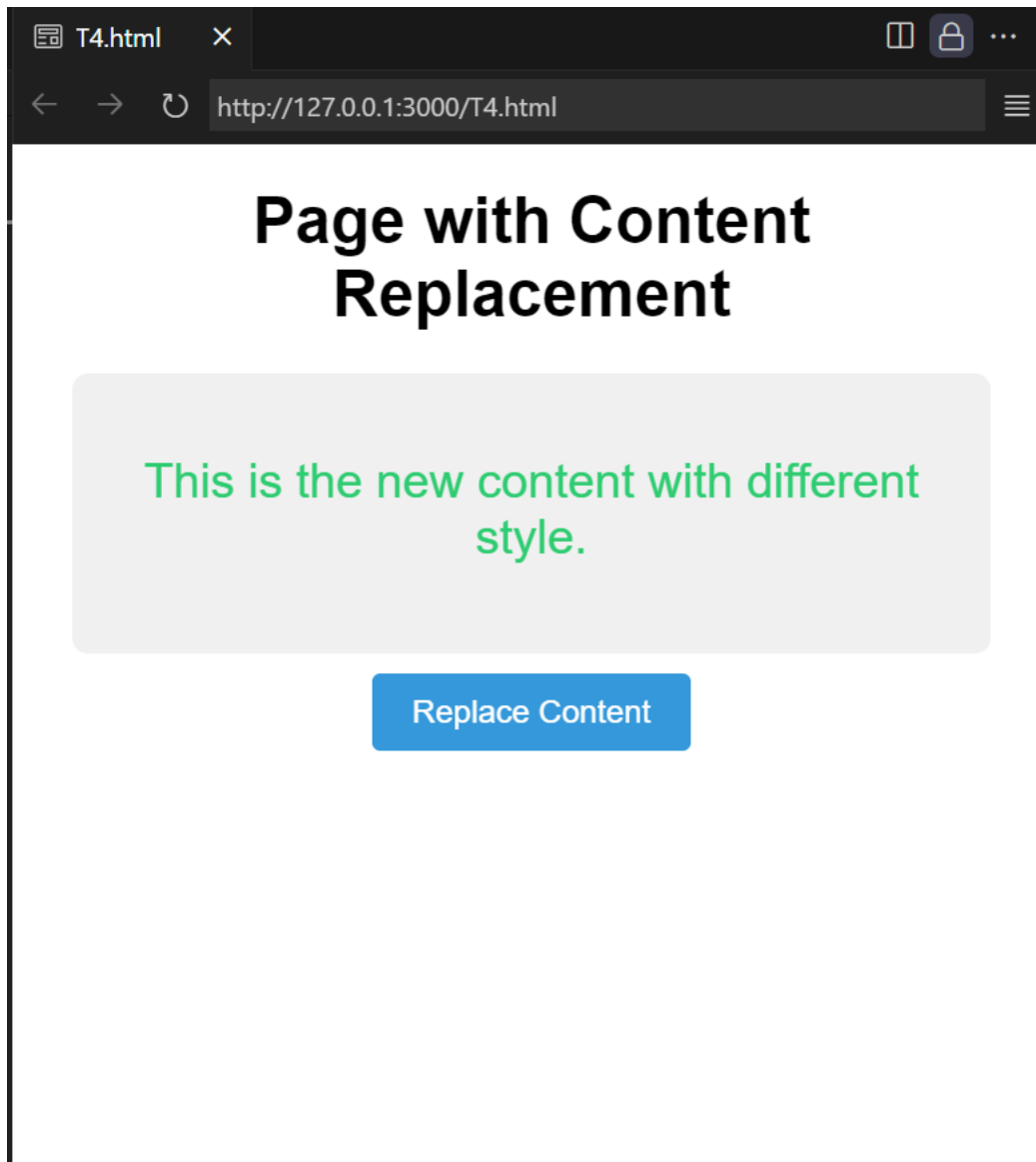
T5. Consider a h1 heading lying outside the main section in the page. Try changing the color

of h1 in at least 3 different ways.

```
<h1 style="color: blue;">Inline Style</h1>
```
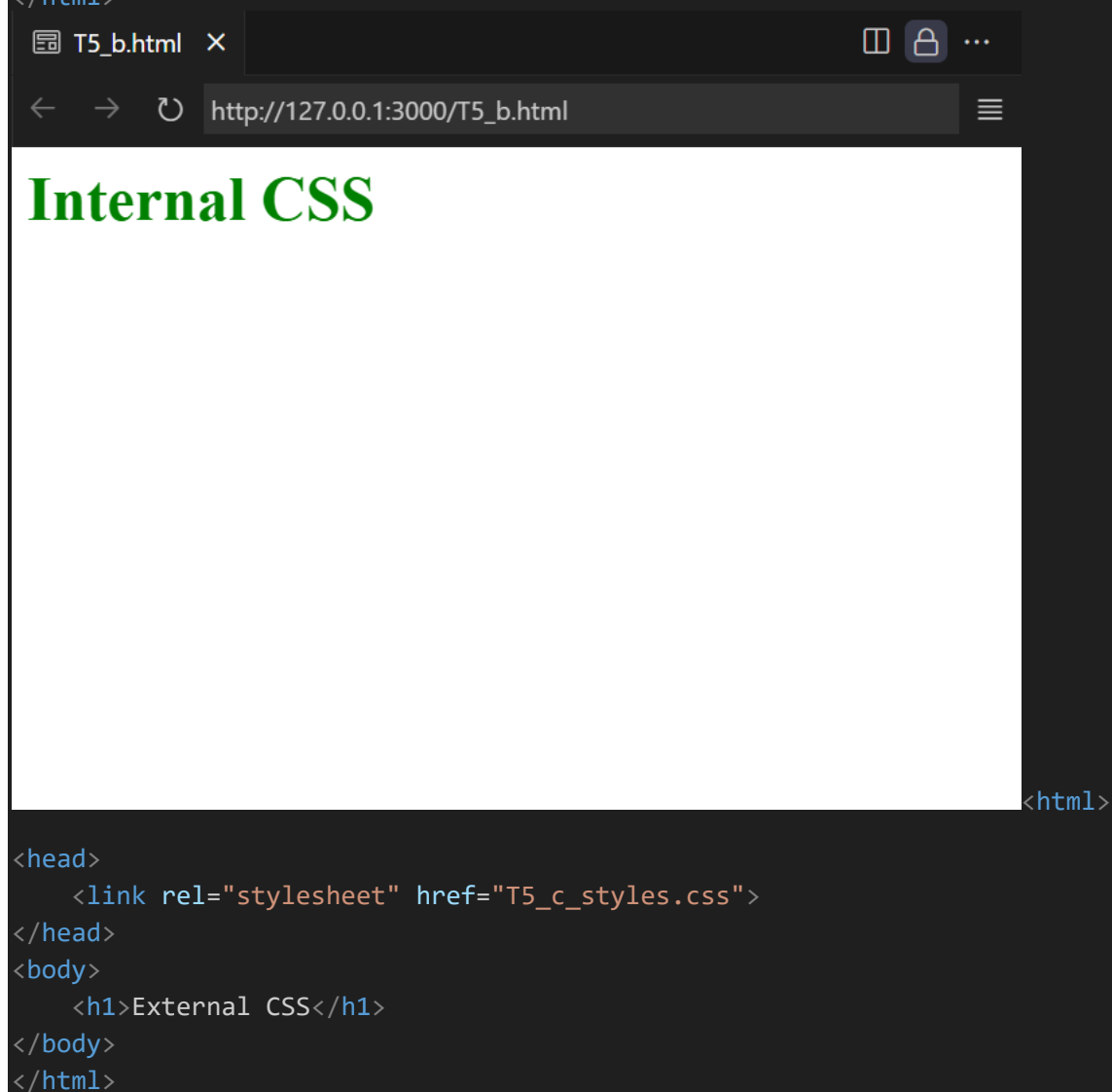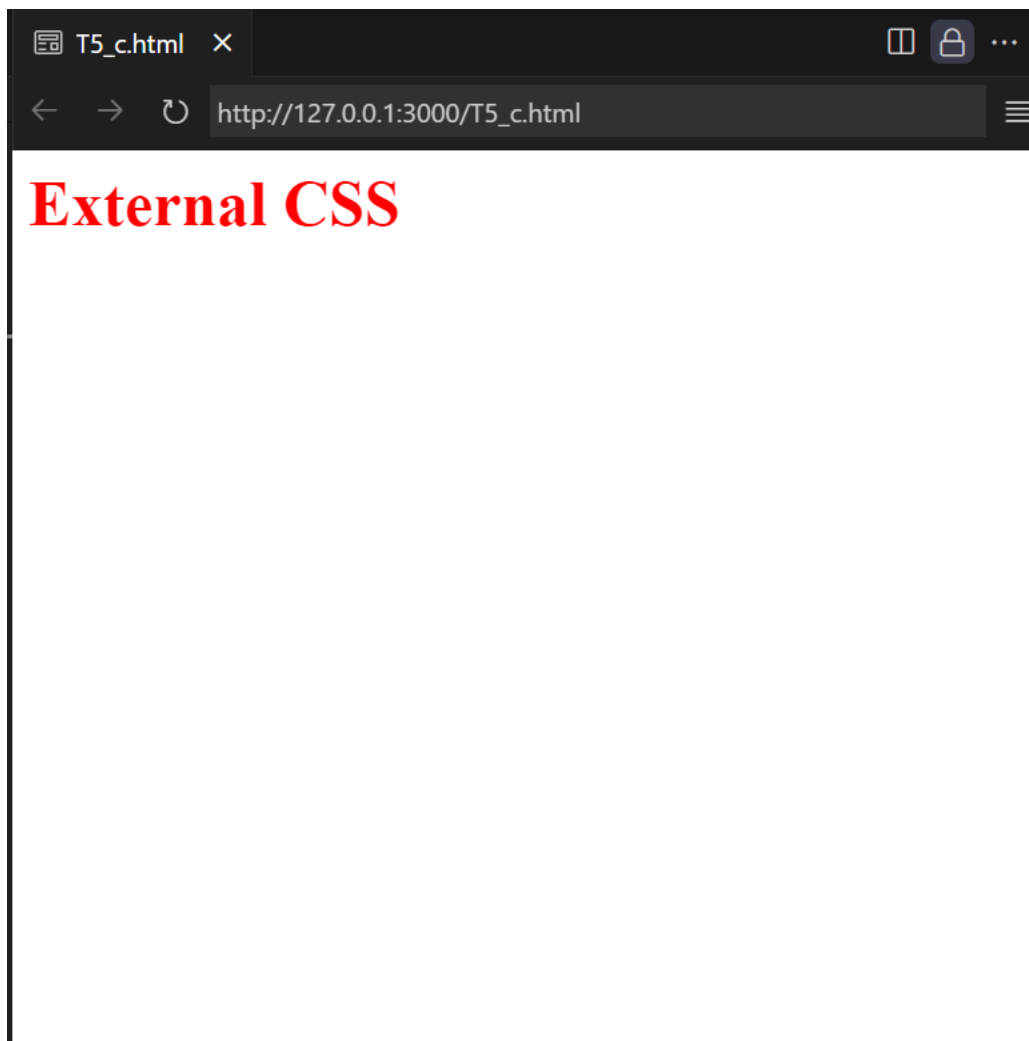
Inline Style

```html
<html>
<head>
    <style>
        h1 {
            color: green;
        }
    </style>
</head>
<body>

    <h1>Internal CSS</h1>

</body>
</html>
```

http://127.0.0.1:3000/T5_b.html

Internal CSS

```html
<html>
<head>
    <link rel="stylesheet" href="T5_c_styles.css">
</head>
<body>
    <h1>External CSS</h1>
</body>
</html>
```

```css
h1 {
    color: red;
}
```

External CSS

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

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

version number.

```
<html>
<head>
    <style>
        .grid-container {
            display: grid;
            grid-template-columns: repeat(5, 1fr);
            text-align: center;
        }
        .browser img {
            width: 100px;
            height: 50px;
            object-fit: contain;
            border: 1px solid black;
        }
        .version {
            border: 1px solid black;
```

```
                background-color: lightgray;
            }
        </style>
    </head>
<body>
    <div class="grid-container">
        <div class="browser">
            <img src="Chrome.jpg" alt="Chrome Icon">
            <div class="version">57.0</div>
        </div>
        <div class="browser">
            <img src="Edge.jpg" alt="Edge Icon">
            <div class="version">16.0</div>
        </div>
        <div class="browser">
            <img src="Firefox.jpg" alt="Firefox Icon">
            <div class="version">52.0</div>
        </div>
        <div class="browser">
            <img src="Safari.jpg" alt="Safari Icon">
            <div class="version">10</div>
        </div>
        <div class="browser">
            <img src="Opera.jpg" alt="Opera Icon">
            <div class="version">44</div>
        </div>
    </div>
</body>
</html>
```

http://127.0.0.1:3000/T6.html

57.0	16.0	52.0	10	44