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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>Change Background Color and Text</title>
<style>
  body {
    font-family: Arial, sans-serif;
    text-align: center;
    background-color: #f0f0f0;
  }
  h1 {
    color: #333;
  }
  #changeButton {
    padding: 10px 20px;
    font-size: 16px;
    cursor: pointer;
  }
</style>
</head>
<body>

<h1 id="heading">Welcome to My Webpage</h1>
<button id="changeButton">Change Background Color and Text</button>

<script>
  function changeStyles() {
    var body = document.body;
    var heading = document.getElementById("heading");

    var colors = ['#ff6347', '#7fffd4', '#dda0dd', '#ffd700', '#00ffff',
'#ffa07a'];
```

```
var randomColor = colors[Math.floor(Math.random() * colors.length)];

body.style.backgroundColor = randomColor;

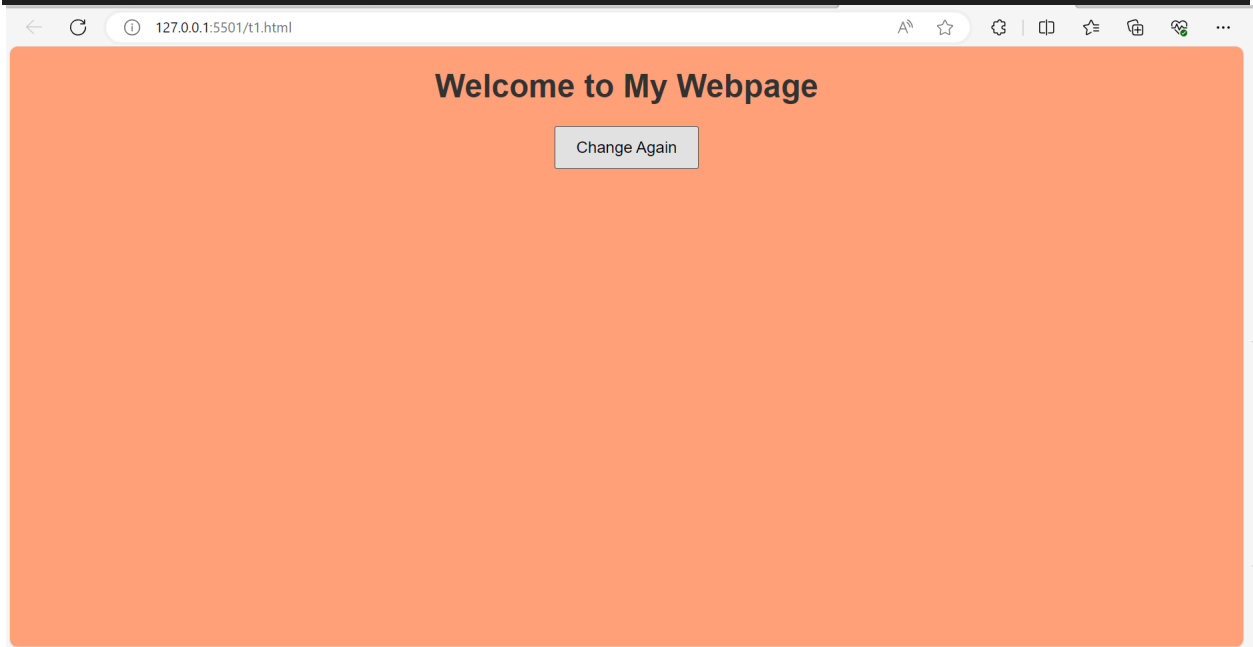
var textColor = getBrightness(randomColor) > 128 ? '#333' : '#fff';
heading.style.color = textColor;

document.getElementById("changeButton").innerText = "Change Again";
}

function getBrightness(hex) {
  var r = parseInt(hex.substr(1, 2), 16);
  var g = parseInt(hex.substr(3, 2), 16);
  var b = parseInt(hex.substr(5, 2), 16);
  return (r * 299 + g * 587 + b * 114) / 1000;
}

document.getElementById("changeButton").addEventListener("click",
changeStyles);
</script>

</body>
</html>
```



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

- Make the background light green.
- Add a line that makes the text red.
- Change the fontSize to 48pt.
- Change the wording inside the <h1> tag in the Javascript.
- 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>Change Background Color and Text</title>
<style>
  body {
    font-family: Arial, sans-serif;
    text-align: center;
    background-color: lightgreen;
  }
  h1 {
    color: #333;
    font-size: 48pt;
  }
  #changeButton {
    padding: 10px 20px;
    font-size: 16px;
    cursor: pointer;
  }
</style>
</head>
<body>

<h1 id="heading">Welcome to My Webpage</h1>
<button id="changeButton">Change Background Color and Text</button>
<button onclick="changeText()">Click Me</button>

<script>
  function changeStyles() {
    var body = document.body;
    var heading = document.getElementById("heading");
```

```
body.style.backgroundColor = "lightgreen";

heading.style.color = "red";

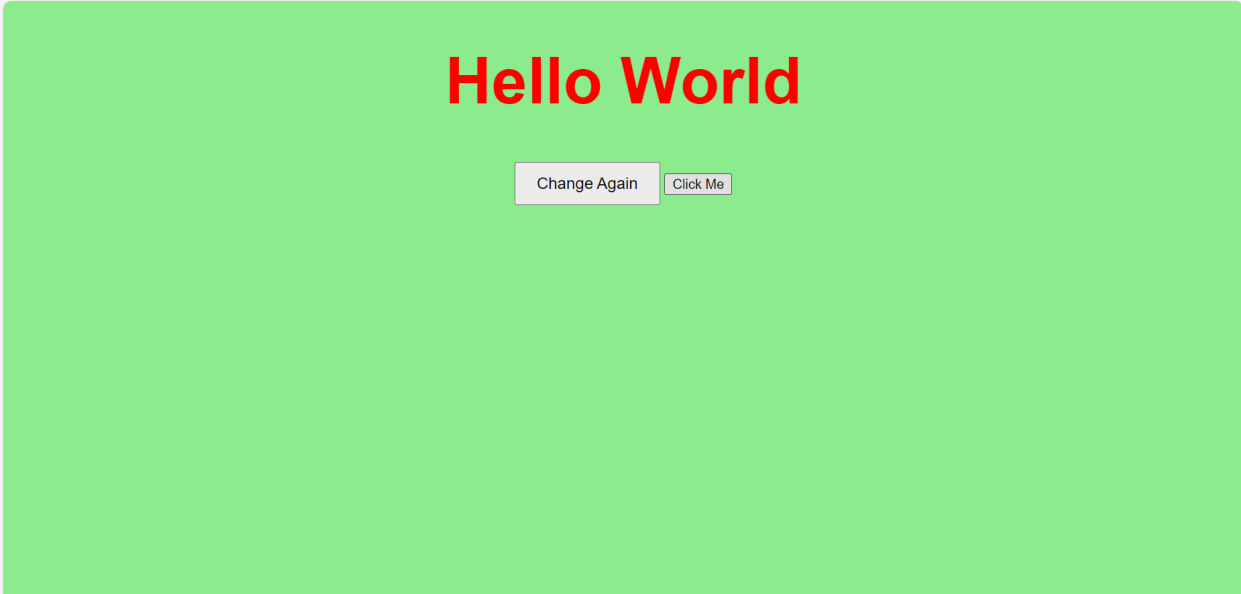
document.getElementById("changeButton").innerText = "Change Again";

heading.innerText = "Hello World";
}

function changeText() {
    var heading = document.getElementById("heading");
    heading.style.color = "blue";
}

document.getElementById("changeButton").addEventListener("click",
changeStyles);
</script>

</body>
</html>
```



The screenshot shows a web browser window with a light green background. In the center, the text "Hello World" is displayed in a large, bold, red font. Below the text, there are two buttons: "Change Again" and "Click Me". The browser's address bar shows the URL "127.0.0.1:5501/t2.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>Change Background Color and Text</title>
<style>
  body {
    font-family: Arial, sans-serif;
    text-align: center;
  }
  .light-green-background {
    background-color: lightgreen;
  }
  h1 {
    color: #333;
    font-size: 48pt;
  }
  #changeButton {
    padding: 10px 20px;
    font-size: 16px;
    cursor: pointer;
  }
</style>
</head>
<body>

<h1 id="heading">Welcome to My Webpage</h1>
<button id="changeButton">Change Background Color and Text</button>

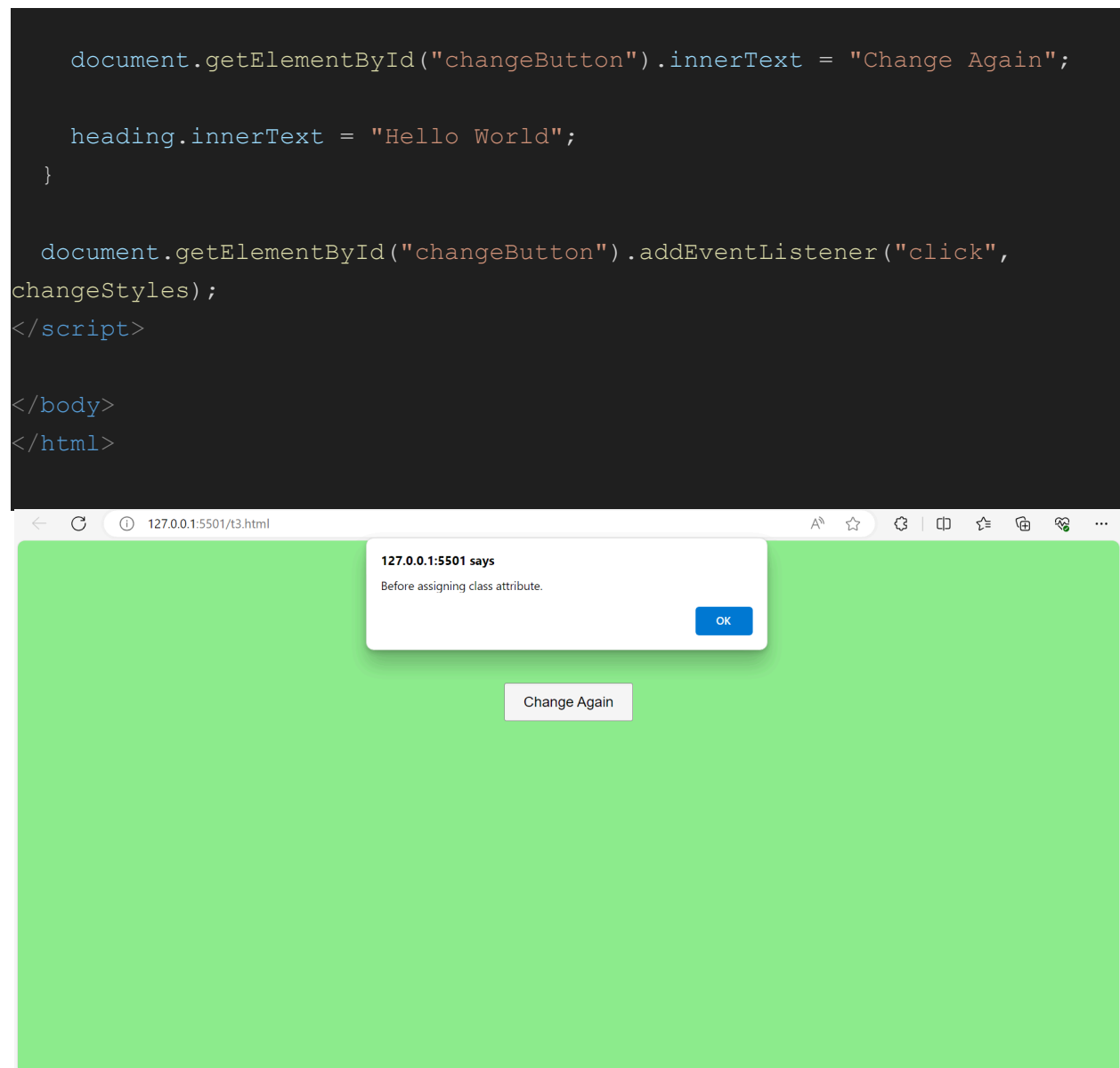
<script>
  function changeStyles() {
    alert("Before assigning class attribute.");

    document.body.classList.add('light-green-background');

    alert("After assigning class attribute.");

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

    heading.style.color = "red";
```



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>Page with Content Replacement</title>
<style>
```

```
body {
  font-family: Arial, sans-serif;
  text-align: center;
}
main {
  padding: 20px;
  margin: 20px auto;
  background-color: #f0f0f0;
  border: 1px solid #ccc;
  border-radius: 5px;
  width: 80%;
}
h1 {
  color: #333;
}
p {
  color: #555;
  font-size: 18px;
}
#changeButton {
  padding: 10px 20px;
  font-size: 16px;
  cursor: pointer;
  margin-top: 20px;
}
.alternate-content {
  background-color: #ffcc00;
  color: #fff;
  padding: 30px;
  border-radius: 10px;
}
</style>
</head>
<body>

<h1>Page with Content Replacement</h1>
<p>This is content outside the main section.</p>

<main id="mainSection">
  <h2>Main Section Content</h2>
```

```

    <p>This is the initial content of the main section.</p>
</main>

<button id="changeButton">Replace Main Content</button>

<script>
    function replaceContent() {
        var mainSection = document.getElementById("mainSection");
        var newContent = `
            <div class="alternate-content">
                <h2>Alternate Content</h2>
                <p>This is the alternate content with different styles.</p>
            </div>
        `;
        mainSection.innerHTML = newContent;

        document.getElementById("changeButton").addEventListener("click",
replaceContent);
    }
</script>

</body>
</html>

```

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.

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>T6</title>
    <style>
        body {
            font-family: sans-serif;

```



```
    margin: 10px;
    padding: 150px;
}

.container {
    display: grid;
    grid-template-columns: repeat(5, 0fr);
    grid-gap: 5px;
    margin-bottom: 20px;
}

.icon {
    width: 100px;
    height: 100px;
    border: 1px solid #dddddd;
    border-radius: 5px;
    text-align: center;
    line-height: 100px;
    font-size: 24px;
}

.version {
    font-size: 20px;
    text-align: center;
}
</style>
</head>
<body>
    <div class="container">
        <div class="icon">
            
        </div>
        <div class="icon">
            
        </div>
        <div class="icon">
```

```

</div>
<div class="icon">
  
  </div>
  <div class="icon">
    
  </div>
  <div class="version">57.0</div>
  <div class="version">16.0</div>
  <div class="version">52.0</div>
  <div class="version">10</div>
  <div class="version">44</div>
</div>
</body>
</html>
```

← ↻ ⓘ 127.0.0.1:5501/t6.html

