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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;

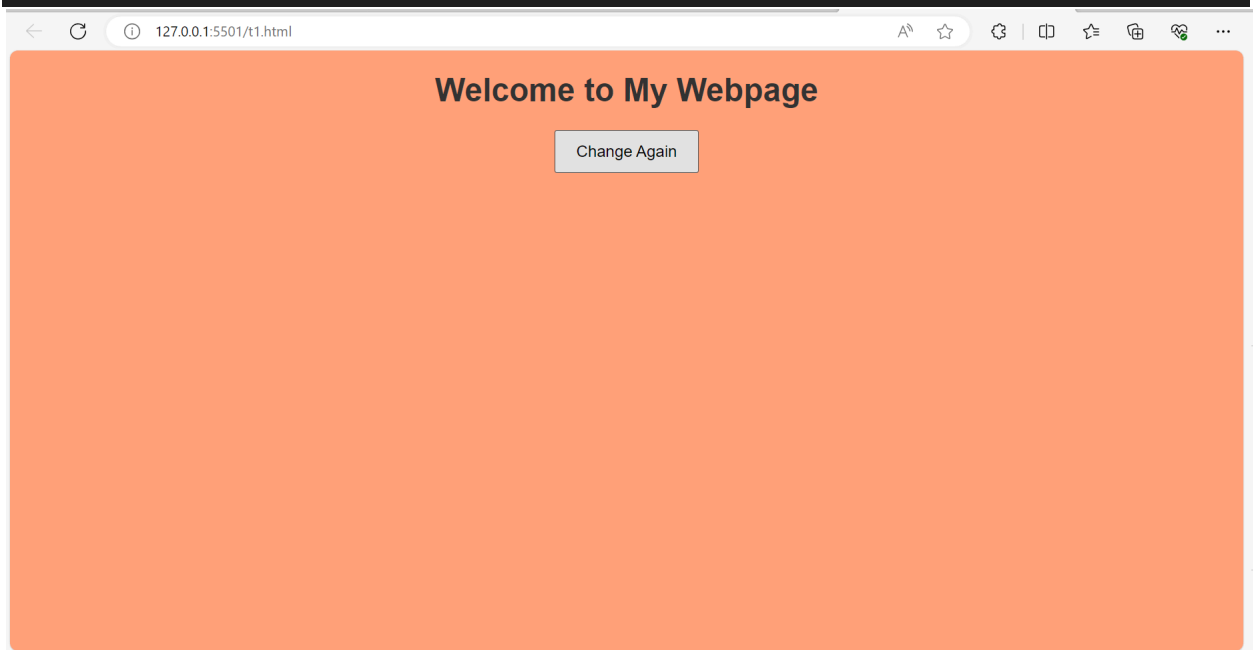
document.getElementById("changeButton").innerText = "Change Again";
}

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:

- 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>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";

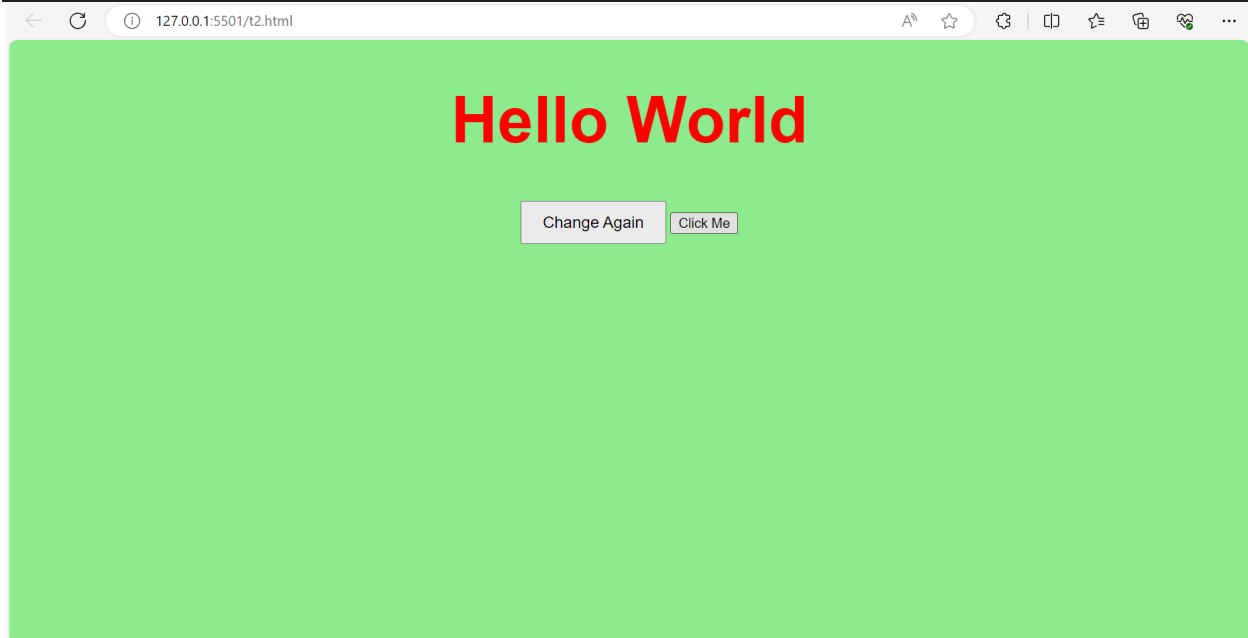
    heading.innerText = "Hello World";
}

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

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

</body>
</html>

```



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>

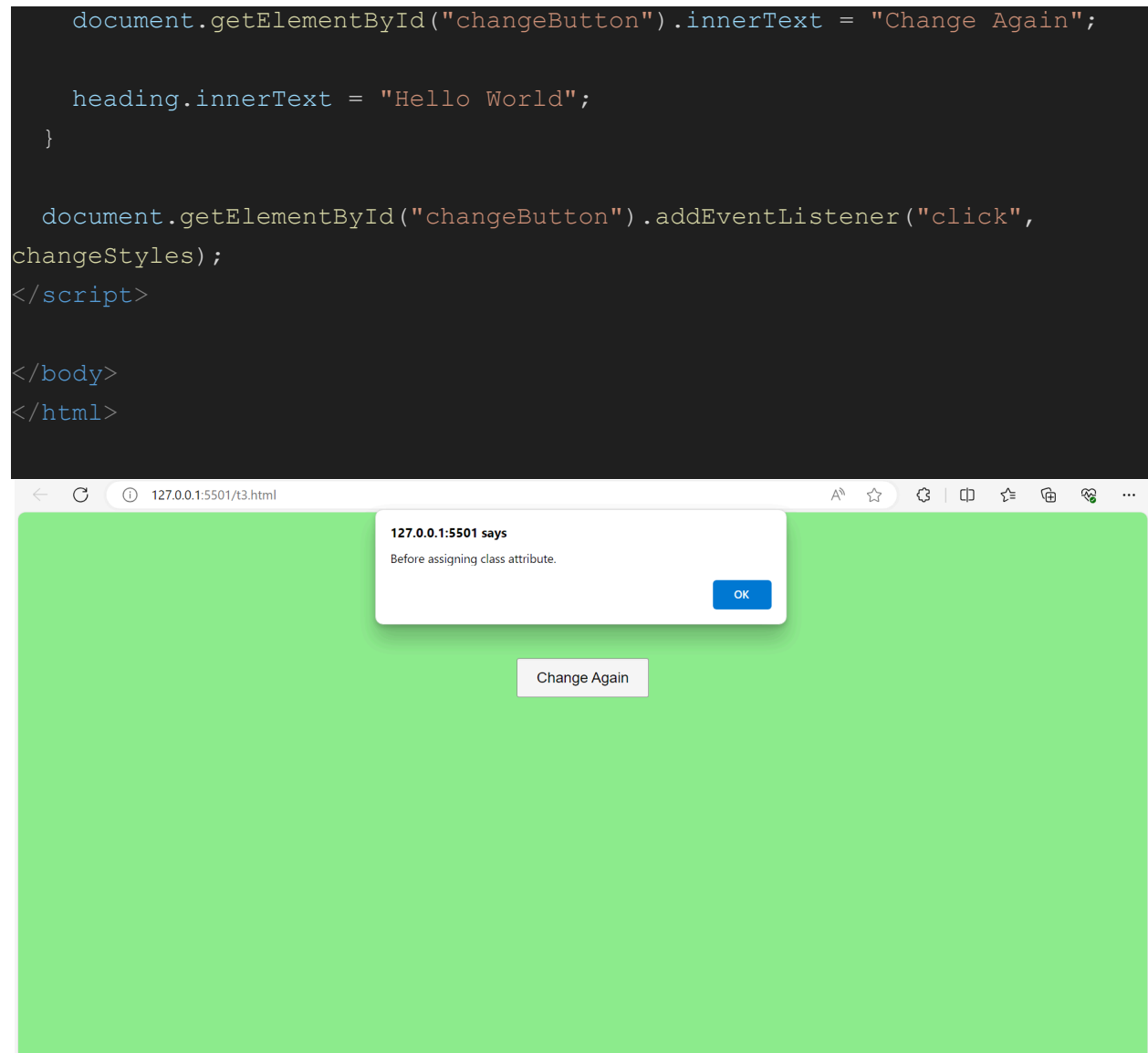
<script>
  function changeStyles() {
    alert("Before assigning class attribute.");

    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>
```





```

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>
```

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