WEB TECH
LAB 4

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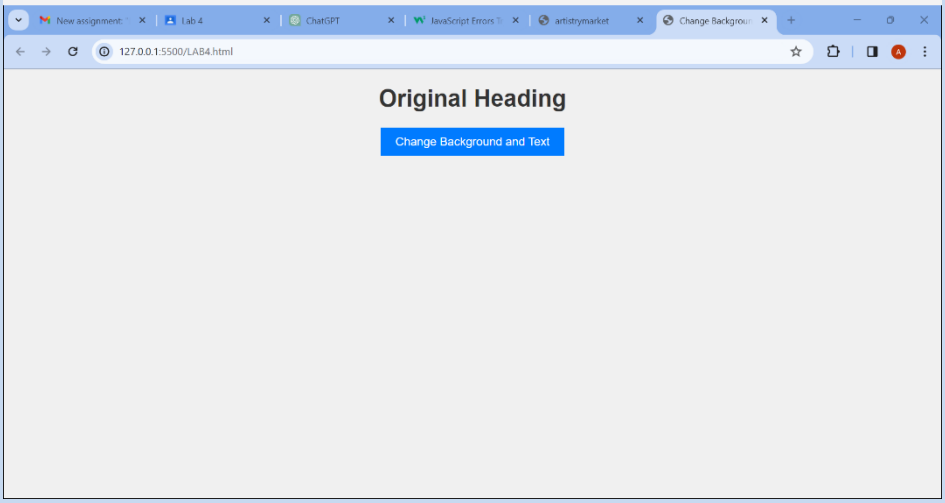
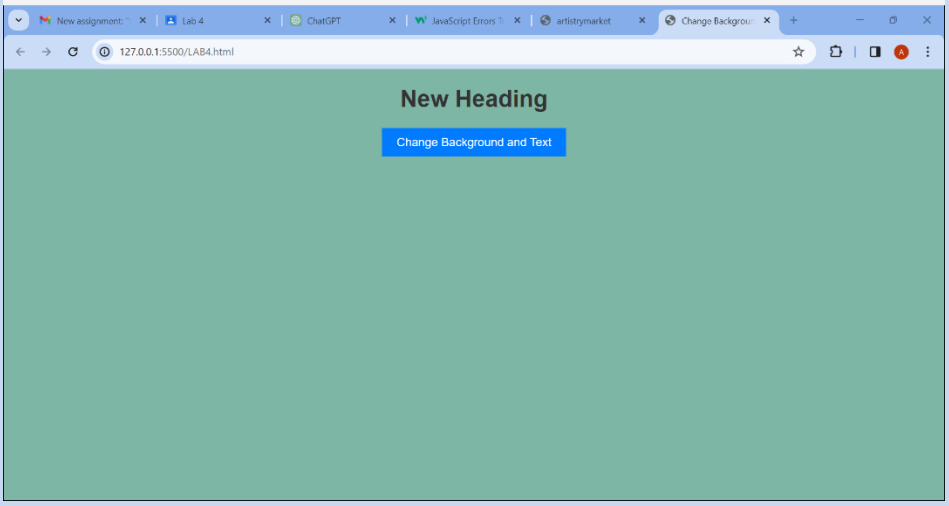
Q1. Create a webpage that has a heading and a button. Write a script to change the background color and text when the button is clicked.

```html
<!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;
    transition: background-color 0.5s ease;
  }
  h1 {
    color: #333;
  }
  button {
    padding: 10px 20px;
    font-size: 16px;
    background-color: #007bff;
    color: #fff;
    border: none;
    cursor: pointer;
    transition: background-color 0.3s ease;
  }
  button:hover {
    background-color: #0056b3;
  }
</style>
</head>
<body>
<h1 id="heading">Original Heading</h1>
<button id="changeButton">Change Background color and Text</button>
```

```
<script>
  document.getElementById('changeButton').addEventListener('click', function() {
    var randomColor = '#' + Math.floor(Math.random()*16777215).toString(16);
    document.body.style.backgroundColor = randomColor;
    document.getElementById('heading').textContent = 'New Heading';
  });
</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.

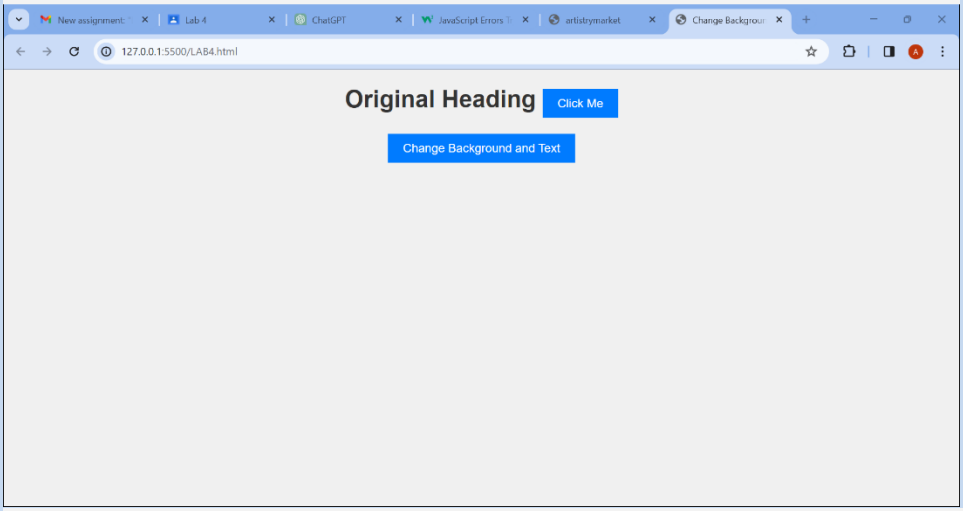
c. Change the fontSize to 48pt.

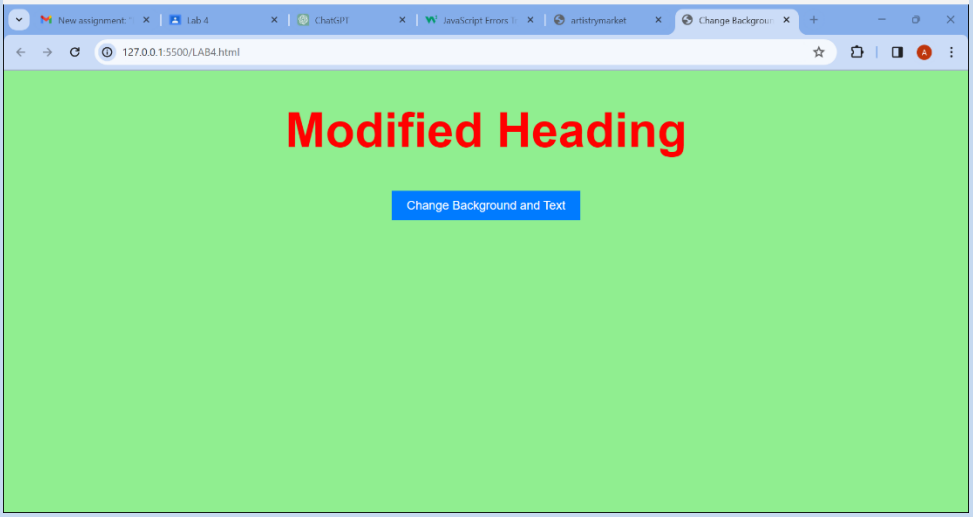
d. Change the wording inside the <h1> tag in the Javascript.

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: #f0f0f0; /* Default background color */
    transition: background-color 0.5s ease;
  }
  h1 {
    color: #333; /* Default text color */
  }
  button {
    padding: 10px 20px;
    font-size: 16px;
    background-color: #007bff;
    color: #fff;
    border: none;
    cursor: pointer;
    transition: background-color 0.3s ease;
  }
  button:hover {
    background-color: #0056b3;
  }
</style>
</head>
<body>
<h1 id="heading">Original Heading <button id="clickMe">Click Me</button></h1>
<button id="changeButton">Change Background and Text</button>

<script>
  // JavaScript to change background color and text when button is clicked
  document.getElementById('changeButton').addEventListener('click', function() {
    // Make the background light green
    document.body.style.backgroundColor = 'lightgreen';

    // Make the text red
    document.getElementById('heading').style.color = 'red';
```

```
    // Change fontSize to 48pt
    document.getElementById('heading').style.fontSize = '48pt';

    // Change the wording inside the <h1> tag
    document.getElementById('heading').textContent = 'Modified Heading';
  });
</script>
</body>
</html>
```

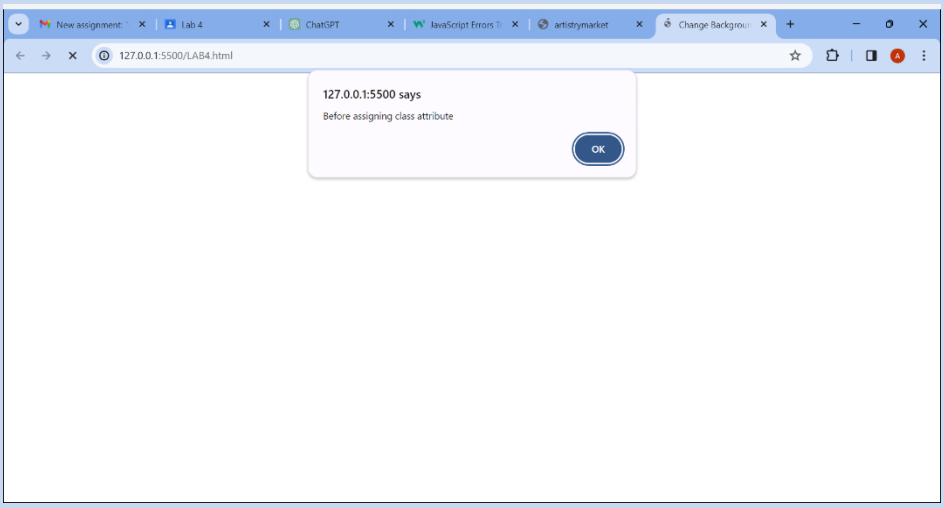


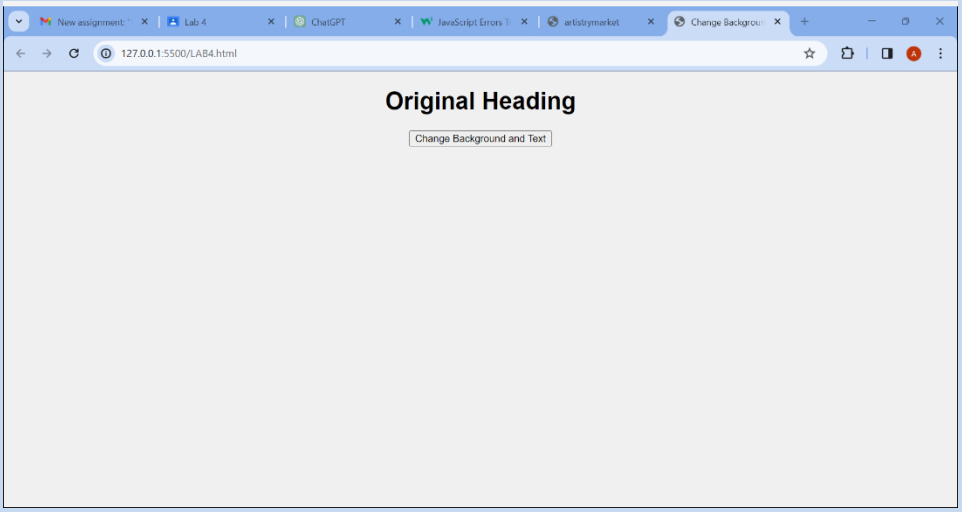


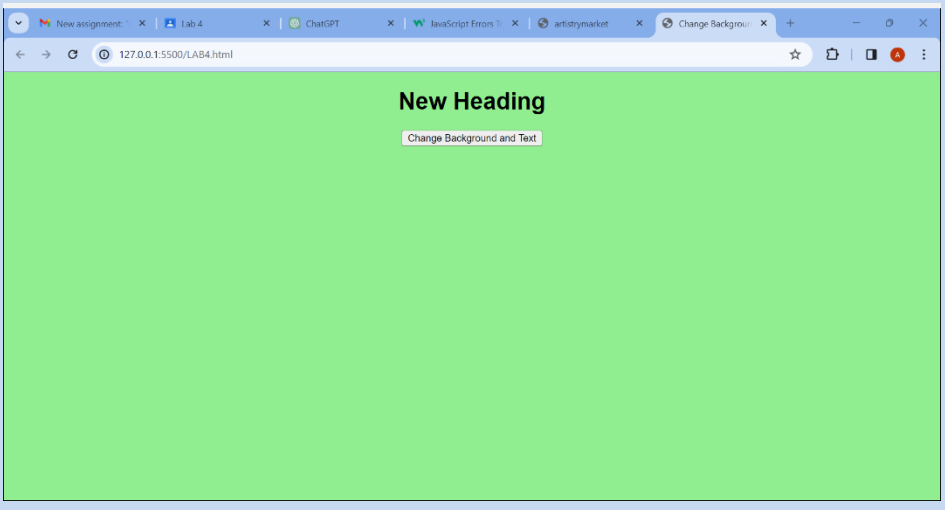
Q3. T3. For T1, set the color of the background directly with the class attribute. Generate alerts before and after assigning the class attribute to document object.

```
<!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;
    background-color: #f0f0f0; /* Default background color */
    transition: background-color 0.5s ease;
  }
  .light-green-background {
    background-color: lightgreen;
  }
</style>
</head>
<body>
<h1 id="heading">Original Heading</h1>
<button id="changeButton">Change Background and Text</button>

<script>
  // Alert before assigning class attribute
  alert("Before assigning class attribute");

  // JavaScript to change background color and text when button is clicked
  document.getElementById('changeButton').addEventListener('click', function() {
    // Alert after assigning class attribute
    alert("After assigning class attribute");

    // Assigning the class attribute to change the background color
    document.body.classList.add('light-green-background');

    // Change the text of the heading
    document.getElementById('heading').textContent = 'New Heading';
  });
</script>
</body>
</html>
```





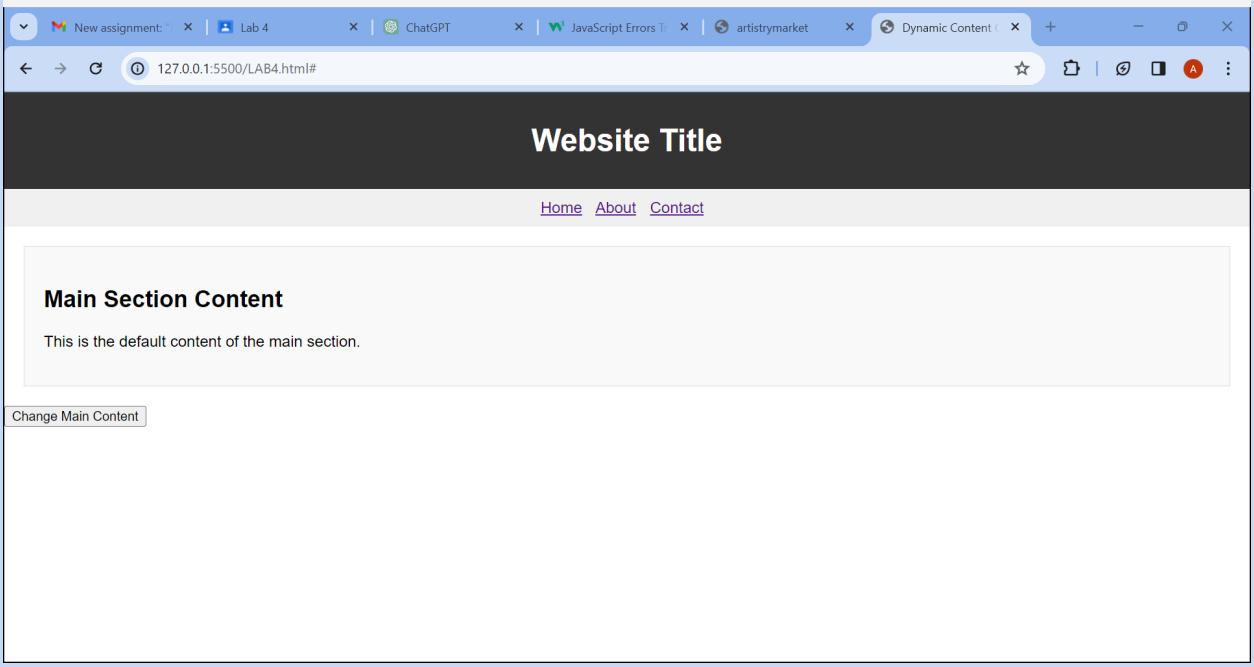


T4. Design a page having contents within and outside the main section. The page must contain a button that when clicked replaces

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>Dynamic Content Change</title>
<style>
  body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 0;
  }
  header {
    background-color: #333;
    color: white;
    padding: 10px;
    text-align: center;
  }
  nav {
    background-color: #f0f0f0;
    padding: 10px;
  }
  nav ul {
    list-style-type: none;
    margin: 0;
    padding: 0;
    text-align: center;
  }
  nav ul li {
    display: inline;
    margin-right: 10px;
  }
  main {
    padding: 20px;
  }
  .default-content {
    background-color: #f9f9f9;
    padding: 20px;
    border: 1px solid #ddd;
  }
  .new-content {
    background-color: #007bff;
    color: white;
```

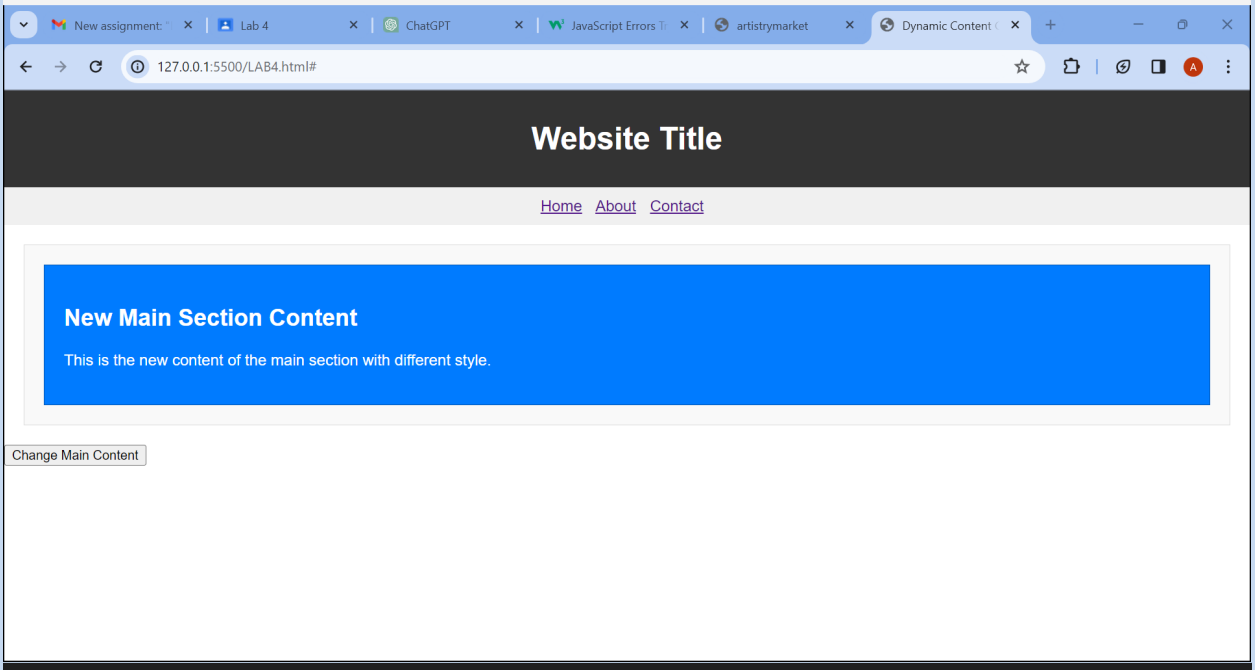
```
    padding: 20px;
    border: 1px solid #0056b3;
  }
</style>
</head>
<body>
<header>
  <h1>Website Title</h1>
</header>
<nav>
  <ul>
    <li><a href="#">Home</a></li>
    <li><a href="#">About</a></li>
    <li><a href="#">Contact</a></li>
  </ul>
</nav>
<main>
  <section class="default-content" id="mainSection">
    <h2>Main Section Content</h2>
    <p>This is the default content of the main section.</p>
  </section>
</main>
<button id="changeContentButton">Change Main Content</button>

<script>
  document.getElementById('changeContentButton').addEventListener('click',
function() {
    var mainSection = document.getElementById('mainSection');
    mainSection.innerHTML = `
      <section class="new-content">
        <h2>New Main Section Content</h2>
        <p>This is the new content of the main section with different style.</p>
      </section>
    `;
  });
</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.

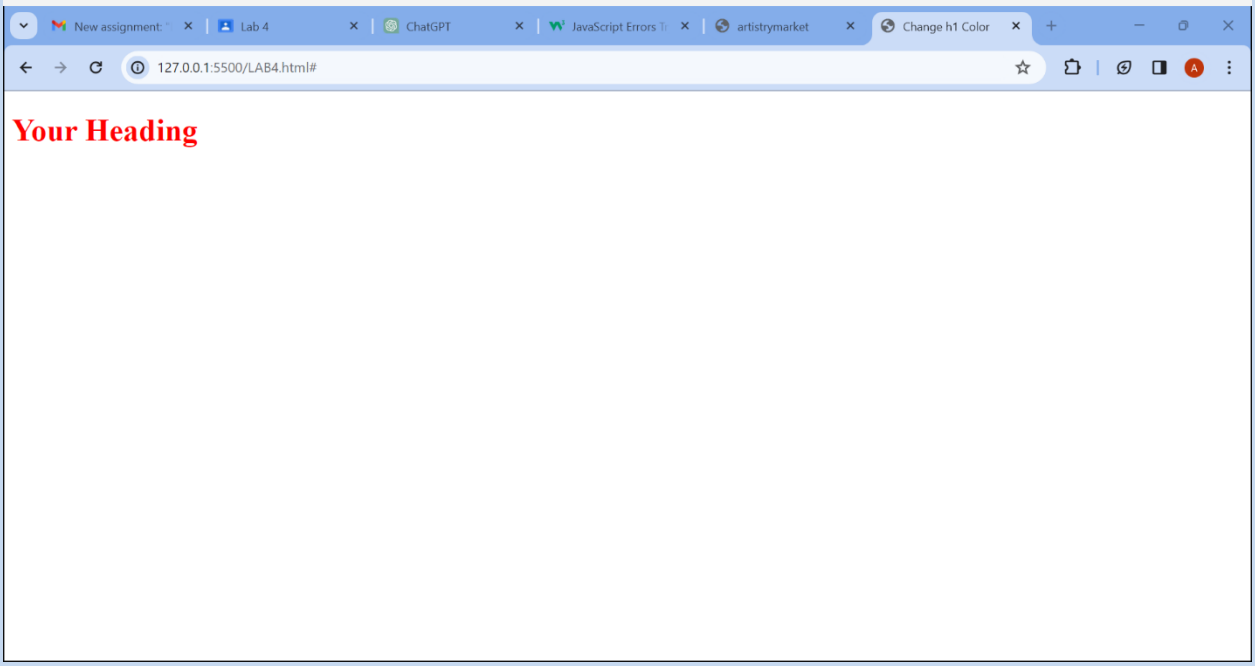
1. <!-- By getElementById -->

```
<!DOCTYPE html>
```



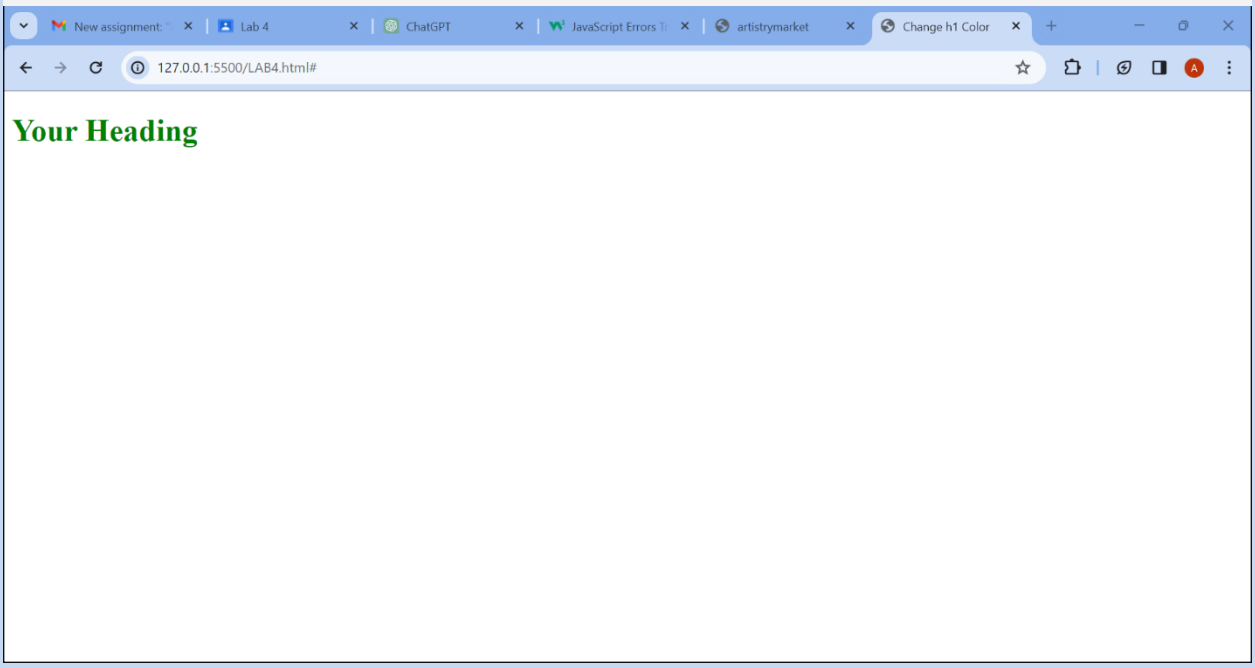

```
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Change h1 Color</title>
</head>
<body>
    <h1 id="myHeading">Your Heading</h1>
```

```
    <script>
        var headingElement = document.getElementById("myHeading");
        headingElement.style.color = "red";
    </script>
</body>
</html>
```



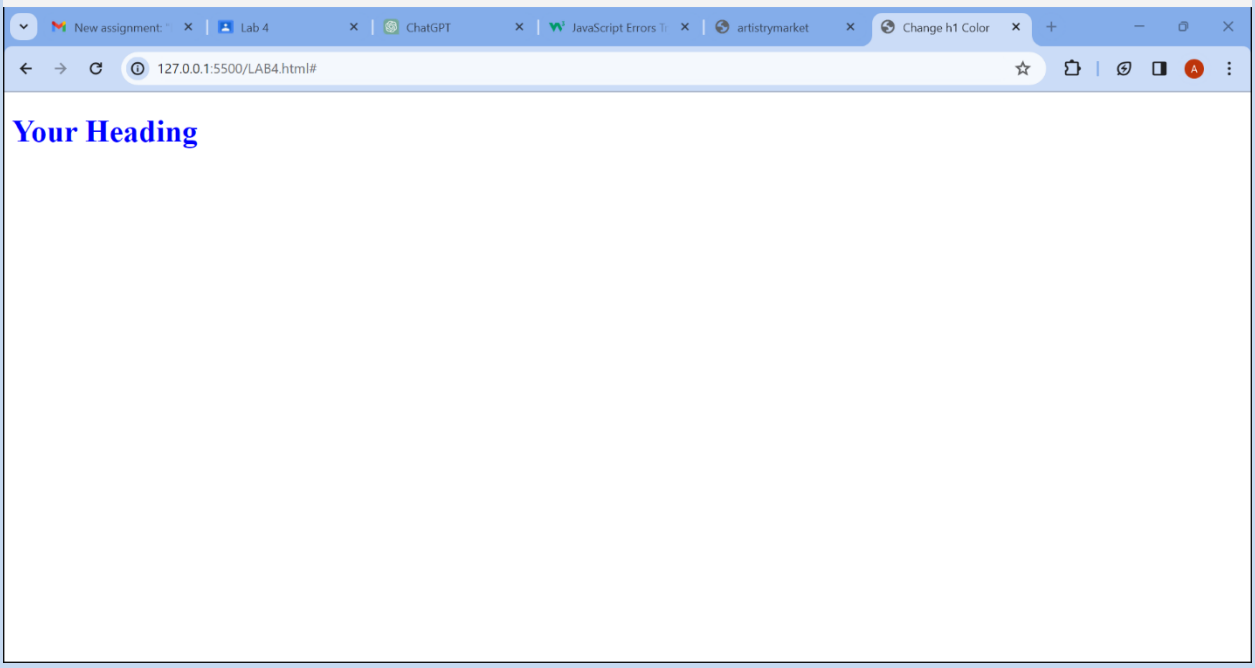
2. <!-- By document.querySelector -->

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Change h1 Color</title>
</head>
<body>
    <h1 class="myClass">Your Heading</h1>

    <script>
        var headingElement = document.querySelector(".myClass");
        headingElement.style.color = "green";
    </script>
</body>
</html>
```



3. <!-- By getElementsByTagName -->

```
<!DOCTYPE html>
<html lang="en">
<head>
```



Q6. 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.