**Assignment 5**: Event Handling

Task: Build a small interactive web application that responds to user events. Use event listeners and handlers to update the DOM dynamically.

Below is a simple example of a web application using HTML, CSS, and JavaScript to demonstrate event handling. In this example, we create a button that, when clicked, changes the text content of a paragraph dynamically.

HTML (index.html):

| **<!DOCTYPE html>**  **<html lang="en">**  **<head>**  **<meta charset="UTF-8">**  **<meta name="viewport" content="width=device-width, initial-scale=1.0">**  **<title>Event Handling Example</title>**  **<link rel="stylesheet" href="styles.css">**  **</head>**  **<body>**  **<div class="container">**  **<h1>Event Handling Example</h1>**  **<button id="changeTextButton">Change Text</button>**  **<p id="displayText">Click the button to change this text!</p>**  **</div>**  **<script src="script.js"></script>**  **</body>**  **</html>** |
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CSS (styles.css):

| body {  font-family: Arial, sans-serif;  margin: 0;  padding: 0;  display: flex;  align-items: center;  justify-content: center;  height: 100vh;  background-color: #f5f5f5;  }  .container {  text-align: center;  }  button {  font-size: 16px;  padding: 10px 20px;  cursor: pointer;  background-color: #4caf50;  color: #fff;  border: none;  border-radius: 4px;  }  button:hover {  background-color: #45a049;  }  p {  font-size: 18px;  margin-top: 20px;  } |
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JavaScript (script.js):

| // Function to handle button click event  function handleButtonClick() {  const displayTextElement = document.getElementById('displayText');  displayTextElement.textContent = 'Text changed! You clicked the button.';  }  // Adding event listener to the button  const changeTextButton = document.getElementById('changeTextButton');  changeTextButton.addEventListener('click', handleButtonClick); |
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In this example:

The HTML file includes a button and a paragraph element.

The CSS file styles the button and paragraph for a better visual appearance.

The JavaScript file adds an event listener to the button. When the button is clicked, it calls the handleButtonClick function, which updates the text content of the paragraph.

To test this, open the index.html file in a web browser. Clicking the "Change Text" button will dynamically update the displayed text. You can expand on this example by adding more interactive elements and event handlers based on your specific requirements.