Task 2: Select and Modify Elements

Objective:

Create a simple webpage with a paragraph and two buttons. When the first button is clicked, the text of the paragraph should change to "Button 1 clicked!". When the second button is clicked, the text of the paragraph should change to "Button 2 clicked!".

Pre-requisites:

- Basic HTML
- Basic JavaScript (variables, functions, event listeners)
- Basic understanding of the DOM (Document Object Model)

Concepts Covered:

- Selecting HTML elements using JavaScript
- Adding event listeners to elements
- Modifying the content of HTML elements

Setup:

Install Node.js:

- Ensure Node.js is installed on your machine. You can download it from nodejs.org.

Tasks:

1. **Create HTML Structure:**
    - **Task:**
        - Create an HTML file named `index.html` with the following structure:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Select and Modify Elements</title>
</head>
<body>
    <p id="text">Initial Text</p>
    <button id="button1">Button 1</button>
    <button id="button2">Button 2</button>
    <script src="script.js"></script>
</body>
</html>
```

    - **Outcome:**
        - Ensure the HTML structure is correct and includes a paragraph and two buttons.
2. **Implement JavaScript Functionality:**

- **Task:**
  - Create a JavaScript file named `script.js`.
  - In `script.js`, select the paragraph element with the id `text`.
  - Select the buttons with the ids `button1` and `button2`.
  - Add event listeners to both buttons:
    - When `button1` is clicked, change the text of the paragraph to "Button 1 clicked!".
    - When `button2` is clicked, change the text of the paragraph to "Button 2 clicked!".
- **Outcome:**
  - Ensure the JavaScript file correctly selects the elements and updates the text based on button clicks.

Example:

JavaScript File (`script.js`):

```
// Select the paragraph element
const text = document.getElementById('text');

// Select the buttons
const button1 = document.getElementById('button1');

// Add event listeners to the buttons
button1.addEventListener('click', function() {
    text.innerText = 'Button 1 clicked!';
});
```

Instructions:

- **Perform the following tasks:**
  - Write the required code in `index.html` and `script.js`.
  - Open `index.html` in a web browser to ensure the code executes without errors and demonstrates the use of basic JavaScript concepts for DOM manipulation.

Example Input:

1. Actions: Click Button 1, then click Button 2

Expected Output:

1. After clicking Button 1: "Button 1 clicked!"
2. After clicking Button 2: "Button 2 clicked!"

Resources:

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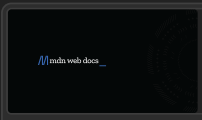
  Grammar and types - JavaScript | MDN
  This chapter discusses JavaScript's basic grammar, variable declarations, data types and li...
  https://developer.mozilla.org/en-US/docs/Web/JavaScript/Guide/Grammar_and_types#declarations

- 
  EventTarget: addEventListener() method - Web APIs | MDN
  The addEventListener() method of the EventTarget interface sets up a function that will b...
  https://developer.mozilla.org/en-US/docs/Web/API/EventTarget/addEventListener
- 
  Document Object Model (DOM) - Web APIs | MDN
  The Document Object Model (DOM) connects web pages to scripts or programming langu...
  https://developer.mozilla.org/en-US/docs/Web/API/Document_Object_Model

Videos:

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GitHub Instructions:

1. **Open in Visual Studio Code:**
   - After clicking on the "Open in Visual Studio Code" button from the GitHub Classroom confirmation page, Visual Studio Code (VSCode) will open the repository directly.
   - If prompted, select "Open" or "Allow" to open the repository in VSCode.
2. **Open the Terminal in VSCode:**
   - In VSCode, open a terminal by selecting Terminal > New Terminal from the top menu.
3. **Complete the Task:**
   - In VSCode, write your solution in the `index.html` and `script.js` files.
4. **Run and Test Your Code:**
   - Open `index.html` in a web browser to ensure it works correctly.
5. **Commit Your Changes:**
   - In the VSCode terminal, add your changes to git:

```
git add index.html script.js
```

- Commit your changes with a meaningful message:

```
git commit -m "Completed task 2"
```

6. **Push Your Changes to Your Repository:**
   - Push your changes to your forked repository:

```
git push origin main
```

7. **Create a Pull Request:**
   - Go to your repository on GitHub.
   - Click on the "Pull Requests" tab.
   - Click the "New Pull Request" button.
   - Ensure the base repository is the original template repository and the base branch is `main`.
   - Ensure the head repository is your forked repository and the compare branch is `main`.
   - Click "Create Pull Request".
   - Add a title and description for your pull request and submit it.

Summary of Commands:

```
# Open in Visual Studio Code

# Open terminal in VSCode

# Complete the task by editing index.html and script.js

# Add, commit, and push your changes
git add index.html script.js
git commit -m "Completed task 2"
git push origin main

# Create a pull request on GitHub
```