Module 6: The Document Object Model
Practice Activity 6.4: Working with the DOM

Activity 1: Adding Elements Dynamically

```html
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="UTF-8" />
        <meta name="viewport" content="width=device-width, initial-scale=1.0" />
        <title>Dynamic Paragraph Example</title>
        <style>
            body {
                font-family: Arial, sans-serif;
                text-align: center;
                margin: 20px;
            }
        </style>
    </head>
    <body>
        <h1>Dynamic Paragraph Activity</h1>
        <button id="addParagraphBtn">Add Paragraph</button>
        <script>
            // Function to be called when the button is clicked
            function addParagraph() {
                // Create a new paragraph element
                const newParagraph = document.createElement("p");
                // Set the initial text content
                newParagraph.textContent =
                    "This is a dynamically added paragraph!";
                // Append the new paragraph to the body or any other container
                document.body.appendChild(newParagraph);
            }
            // Add event listener to the button
            const addButton = document.getElementById("addParagraphBtn");
            addButton.addEventListener("click", addParagraph);
        </script>
    </body>
</html>
```

Activity 2: Validating a Form and Providing Feedback

```html
<!DOCTYPE html>
<html lang="en">
    <head>
        <meta charset="UTF-8" />
        <meta name="viewport" content="width=device-width, initial-scale=1.0" />
        <title>Form Validation</title>
        <style>
            .error-message {
                color: red;
            }
        </style>
    </head>
    <body>
        <h2>Form Validation</h2>
        <form id="myForm">
            <label for="name">Name:</label>
            <input type="text" id="name" name="name" />
            <div id="nameError" class="error-message"></div>
            <label for="email">Email:</label>
            <input type="text" id="email" name="email" />
            <div id="emailError" class="error-message"></div>
            <input type="submit" value="Submit" />
        </form>
        <script>
            document
                .getElementById("myForm")
                .addEventListener("submit", function (event) {
                    // Reset error messages
                    document.getElementById("nameError").innerHTML = "";
                    document.getElementById("emailError").innerHTML = "";
                    // Get form values
                    const name = document.getElementById("name").value;
                    const email = document.getElementById("email").value;
                    // Validate name
                    if (name === "") {
                        document.getElementById("nameError").innerHTML =
                            "Name is required.";
                        event.preventDefault(); // Prevent form submission
                    }
                    // Validate email
                    const emailRegex = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;
                    if (!emailRegex.test(email)) {
                        document.getElementById("emailError").innerHTML =
                            "Invalid email address.";
                        event.preventDefault(); // Prevent form submission
                    }
                });
        </script>
    </body>
</html>
```