**LAB ASSIGNMENT – 14**

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**Prompt 01:**

**Create a simple webpage with a header, main content, and footer.**

**Make it responsive using HTML and CSS so it looks good on mobile and desktop.**

**code:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Simple Responsive Page</title>

    <!-- Load Tailwind CSS -->

    <script src="https://cdn.tailwindcss.com"></script>

    <!-- Configure Tailwind to use Inter font -->

    <script>

        tailwind.config = {

            theme: {

                extend: {

                    fontFamily: {

                        sans: ['Inter', 'sans-serif'],

                    },

                },

            },

        }

    </script>

    <style>

        /\* A simple style block for demonstration, though Tailwind handles most of this \*/

        body {

            font-family: 'Inter', sans-serif;

        }

    </style>

</head>

<body class="flex flex-col min-h-screen bg-gray-50 text-gray-800">

    <!-- Header Section -->

    <header class="bg-gray-800 text-white p-6 shadow-md">

        <div class="container mx-auto max-w-6xl">

            <h1 class="text-3xl font-bold text-center md:text-left">My Website</h1>

        </div>

    </header>

    <!-- Main Content Section -->

    <!-- 'flex-grow' makes this section expand to fill available space -->

    <main class="flex-grow container mx-auto max-w-6xl p-6">

        <h2 class="text-2xl font-semibold mb-4">Main Content Area</h2>

        <p class="mb-4">

            This is a simple responsive webpage. The header is at the top, the footer is at the bottom,

            and this is the main content area.

        </p>

        <!-- Removed the responsive grid to make it simpler -->

        <div class="bg-white p-6 rounded-lg shadow-md">

            <h3 class="text-xl font-semibold mb-2">Simple Section</h3>

            <p>

                This is a single content box.

            </p>

        </div>

    </main>

    <!-- Footer Section -->

    <footer class="bg-gray-200 text-gray-600 p-6 text-center">

        <div class="container mx-auto max-w-6xl">

            <p>&copy; 2025 My Website. All rights reserved.</p>

        </div>

    </footer>

</body>

</html>

**Preview:**

**A screenshot of a computer

AI-generated content may be incorrect.**

**Prompt 02:**

**Make a button using HTML and JavaScript.  
When clicked, show a message like “Button clicked!” using an alert**

**Code:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Simple Page</title>

    <!-- Load Tailwind CSS -->

    <script src="https://cdn.tailwindcss.com"></script>

    <style>

        /\* Basic font styling \*/

        body { font-family: sans-serif; }

    </style>

</head>

<body class="bg-gray-50 text-gray-800">

    <!-- Header Section -->

    <header class="bg-gray-800 text-white p-4 text-center">

        <h1 class="text-2xl font-bold">My Website</h1>

    </header>

    <!-- Main Content Section -->

    <main class="p-4">

        <h2 class="text-xl font-semibold mb-2">Main Content</h2>

        <!-- Simple section with a button -->

        <div class="bg-white p-4 rounded shadow">

            <p class="mb-4">Click the button below!</p>

            <!-- Button -->

            <button id="mainButton" class="px-4 py-2 bg-blue-600 text-white rounded hover:bg-blue-700">

                Click Me

            </button>

            <!-- Message will appear here -->

            <p id="messageArea" class="mt-4 font-semibold text-blue-700"></p>

        </div>

    </main>

    <!-- Footer Section -->

    <footer class="bg-gray-200 text-gray-600 p-4 text-center mt-6">

        <p>&copy; 2025</p>

    </footer>

    <!-- JavaScript for the button -->

    <script>

        // Get references to the elements

        const mainButton = document.getElementById('mainButton');

        const messageArea = document.getElementById('messageArea');

        // Show a message when the main button is clicked

        mainButton.addEventListener('click', () => {

            messageArea.textContent = 'Button clicked!';

        });

    </script>

</body>

</html>

**Preview:A screenshot of a computer

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**Prompt 03:**

**Create a contact form with Name, Email, and Message fields.  
Use JavaScript to check if all fields are filled and email is valid.  
Show a success message when the form is correct**.

**Code:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Simple Page</title>

    <!-- Load Tailwind CSS -->

    <script src="https://cdn.tailwindcss.com"></script>

    <style>

        /\* Basic font styling \*/

        body { font-family: sans-serif; }

        /\* Simple style for invalid fields \*/

        .invalid-field {

            border-color: #ef4444; /\* red-500 \*/

        }

    </style>

</head>

<body class="bg-gray-50 text-gray-800">

    <!-- Header Section -->

    <header class="bg-gray-800 text-white p-4 text-center">

        <h1 class="text-2xl font-bold">My Website</h1>

    </header>

    <!-- Main Content Section -->

    <main class="p-4">

        <!-- Simple section with a button -->

        <div class="bg-white p-4 rounded shadow mb-6">

            <h2 class="text-xl font-semibold mb-2">Simple Example</h2>

            <p class="mb-4">Click the button below!</p>

            <!-- Button -->

            <button id="mainButton" class="px-4 py-2 bg-blue-600 text-white rounded hover:bg-blue-700">

                Click Me

            </button>

            <!-- Message will appear here -->

            <p id="messageArea" class="mt-4 font-semibold text-blue-700"></p>

        </div>

        <!-- New Contact Form Section -->

        <div class="bg-white p-4 rounded shadow">

            <h2 class="text-xl font-semibold mb-4">Contact Us</h2>

            <!-- Contact Form -->

            <!-- 'novalidate' stops the browser's default validation -->

            <form id="contactForm" novalidate>

                <div class="mb-4">

                    <label for="name" class="block mb-1">Name</label>

                    <input type="text" id="name" class="w-full px-3 py-2 border border-gray-300 rounded">

                </div>

                <div class="mb-4">

                    <label for="email" class="block mb-1">Email</label>

                    <input type="email" id="email" class="w-full px-3 py-2 border border-gray-300 rounded">

                </div>

                <div class="mb-4">

                    <label for="message" class="block mb-1">Message</label>

                    <textarea id="message" rows="3" class="w-full px-3 py-2 border border-gray-300 rounded"></textarea>

                </div>

                <button type="submit" class="w-full px-4 py-2 bg-green-600 text-white rounded hover:bg-green-700">

                    Submit

                </button>

            </form>

            <!-- Form message area (for success or error) -->

            <p id="formMessage" class="mt-4 font-semibold"></p>

        </div>

    </main>

    <!-- Footer Section -->

    <footer class="bg-gray-200 text-gray-600 p-4 text-center mt-6">

        <p>&copy; 2025</p>

    </footer>

    <!-- JavaScript for the page -->

    <script>

        // === Button Click ===

        const mainButton = document.getElementById('mainButton');

        const messageArea = document.getElementById('messageArea');

        mainButton.addEventListener('click', () => {

            messageArea.textContent = 'Button clicked!';

        });

        // === Contact Form Validation ===

        const contactForm = document.getElementById('contactForm');

        const formMessage = document.getElementById('formMessage');

        // Simple email check function

        function isValidEmail(email) {

            // A basic check for email format

            return /^[^\s@]+@[^\s@]+\.[^\s@]+$/.test(email);

        }

        contactForm.addEventListener('submit', (event) => {

            // Stop the form from submitting

            event.preventDefault();

            // Get the form fields

            const name = document.getElementById('name');

            const email = document.getElementById('email');

            const message = document.getElementById('message');

            // Reset styles and message

            formMessage.textContent = '';

            name.classList.remove('invalid-field');

            email.classList.remove('invalid-field');

            message.classList.remove('invalid-field');

            let isValid = true;

            // Check if fields are empty

            if (name.value.trim() === '') {

                name.classList.add('invalid-field');

                isValid = false;

            }

            if (message.value.trim() === '') {

                message.classList.add('invalid-field');

                isValid = false;

            }

            // Check email

            if (email.value.trim() === '' || !isValidEmail(email.value.trim())) {

                email.classList.add('invalid-field');

                isValid = false;

            }

            // Show success or error message

            if (isValid) {

                formMessage.textContent = 'Success! Your message was sent.';

                formMessage.className = 'mt-4 font-semibold text-green-600';

                contactForm.reset(); // Clear the form

            } else {

                formMessage.textContent = 'Please fill out all fields correctly.';

                formMessage.className = 'mt-4 font-semibold text-red-600';

            }

        });

    </script>

</body>

</html>

**preview:**

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**Prompt 04:**

**Make a list of items on a webpage.  
Add two buttons one to add a new item and another to remove the last item using JavaScript.**

**Code:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Simple Page</title>

    <!-- Load Tailwind CSS -->

    <script src="https://cdn.tailwindcss.com"></script>

    <style>

        /\* Basic font styling \*/

        body { font-family: sans-serif; }

    </style>

</head>

<body class="bg-gray-50 text-gray-800">

    <!-- Header Section -->

    <header class="bg-gray-800 text-white p-4 text-center">

        <h1 class="text-2xl font-bold">My Website</h1>

    </header>

    <!-- Main Content Section -->

    <main class="p-4">

        <!-- New List Section -->

        <div class="bg-white p-4 rounded shadow">

            <h2 class="text-xl font-semibold mb-4">My List</h2>

            <!-- Buttons for list manipulation -->

            <div class="flex space-x-4 mb-4">

                <button id="addItemButton" class="px-4 py-2 bg-blue-600 text-white rounded hover:bg-blue-700">

                    Add Item

                </button>

                <button id="removeItemButton" class="px-4 py-2 bg-red-600 text-white rounded hover:bg-red-700">

                    Remove Last Item

                </button>

            </div>

            <!-- The list itself -->

            <ul id="itemList" class="list-disc list-inside bg-gray-50 p-4 rounded border">

                <li>First item</li>

                <li>Second item</li>

            </ul>

        </div>

    </main>

    <!-- Footer Section -->

    <footer class="bg-gray-200 text-gray-600 p-4 text-center mt-6">

        <p>&copy; 2025</p>

    </footer>

    <!-- JavaScript for the page -->

    <script>

        // === List Manipulation ===

        const addItemButton = document.getElementById('addItemButton');

        const removeItemButton = document.getElementById('removeItemButton');

        const itemList = document.getElementById('itemList');

        // Keep track of how many items we have

        let itemCount = 2; // We start with 2 items

        // Add item

        addItemButton.addEventListener('click', () => {

            itemCount++; // Increment the counter

            // Create a new list item element

            const li = document.createElement('li');

            // Set its text

            li.textContent = 'New Item ' + itemCount;

            // Add it to the list

            itemList.appendChild(li);

        });

        // Remove last item

        removeItemButton.addEventListener('click', () => {

            // Find the last item in the list

            const lastItem = itemList.lastElementChild;

            if (lastItem) { // Check if a last item exists

                // Remove it from the list

                itemList.removeChild(lastItem);

                itemCount--; // Decrement the counter

            }

        });

    </script>

</body>

</html> **preview:**

A screenshot of a computer

AI-generated content may be incorrect.

**Prompt 05:**

**Create a button that opens a popup box (modal).  
Add text inside the modal and a close (X) button to hide it.  
Style it with CSS to look nice.**

**Code:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Simple Page</title>

    <!-- Load Tailwind CSS -->

    <script src="https://cdn.tailwindcss.com"></script>

    <style>

        /\* Basic font styling \*/

        body { font-family: sans-serif; }

    </style>

</head>

<body class="bg-gray-50 text-gray-800">

    <!-- Header Section -->

    <header class="bg-gray-800 text-white p-4 text-center">

        <h1 class="text-2xl font-bold">My Website</h1>

    </header>

    <!-- Main Content Section -->

    <main class="p-4">

        <!-- New Modal Button Section -->

        <div class="bg-white p-4 rounded shadow mb-6">

            <h2 class="text-xl font-semibold mb-4">Modal Example</h2>

            <button id="openModalButton" class="px-4 py-2 bg-purple-600 text-white rounded hover:bg-purple-700">

                Open Modal

            </button>

        </div>

        <!-- List Section -->

        <div class="bg-white p-4 rounded shadow">

            <h2 class="text-xl font-semibold mb-4">My List</h2>

            <!-- Buttons for list manipulation -->

            <div class="flex space-x-4 mb-4">

                <button id="addItemButton" class="px-4 py-2 bg-blue-600 text-white rounded hover:bg-blue-700">

                    Add Item

                </button>

                <button id="removeItemButton" class="px-4 py-2 bg-red-600 text-white rounded hover:bg-red-700">

                    Remove Last Item

                </button>

            </div>

            <!-- The list itself -->

            <ul id="itemList" class="list-disc list-inside bg-gray-50 p-4 rounded border">

                <li>First item</li>

                <li>Second item</li>

            </ul>

        </div>

    </main>

    <!-- Footer Section -->

    <footer class="bg-gray-200 text-gray-600 p-4 text-center mt-6">

        <p>&copy; 2025</p>

    </footer>

    <!-- The Modal -->

    <!-- It's hidden by default with the "hidden" class -->

    <div id="myModal" class="hidden fixed inset-0 bg-black/50 flex items-center justify-center p-4">

        <!-- Modal content -->

        <div class="bg-white rounded-lg shadow-xl p-6 w-full max-w-md relative">

            <!-- Modal header with close button -->

            <div class="flex justify-between items-center mb-4">

                <h3 class="text-xl font-semibold">Modal Title</h3>

                <!-- Close button (X) -->

                <button id="closeModalButton" class="text-gray-500 hover:text-gray-800 text-3xl font-bold">&times;</button>

            </div>

            <!-- Modal body -->

            <p>This is the content inside the modal popup box. You can put any text or HTML here.</p>

        </div>

    </div>

    <!-- JavaScript for the page -->

    <script>

        // === List Manipulation ===

        const addItemButton = document.getElementById('addItemButton');

        const removeItemButton = document.getElementById('removeItemButton');

        const itemList = document.getElementById('itemList');

        let itemCount = 2;

        addItemButton.addEventListener('click', () => {

            itemCount++;

            const li = document.createElement('li');

            li.textContent = 'New Item ' + itemCount;

            itemList.appendChild(li);

        });

        removeItemButton.addEventListener('click', () => {

            const lastItem = itemList.lastElementChild;

            if (lastItem) {

                itemList.removeChild(lastItem);

                itemCount--;

            }

        });

        // === Modal ===

        const openModalButton = document.getElementById('openModalButton');

        const closeModalButton = document.getElementById('closeModalButton');

        const myModal = document.getElementById('myModal');

        // Show the modal

        openModalButton.addEventListener('click', () => {

            myModal.classList.remove('hidden');

        });

        // Hide the modal

        closeModalButton.addEventListener('click', () => {

            myModal.classList.add('hidden');

        });

        // Also hide modal if user clicks on the background

        myModal.addEventListener('click', (event) => {

            // Check if the click is on the background (myModal) and not on the content box

            if (event.target === myModal) {

                myModal.classList.add('hidden');

            }

        });

    </script>

</body>

</html> **preview:**

***A screenshot of a computer

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