1.A Implementation Of Navigation Bar

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Navigation Bar Example</title>

<link rel="stylesheet" href="styles.css"> <!-- Link to your CSS file -->

</head>

<body>

<header>

<nav>

<ul>

<li><a href="#home">Home</a></li>

<li><a href="#about">About</a></li>

<li><a href="#services">Services</a></li>

<li><a href="#contact">Contact</a></li>

</ul>

</nav>

</header>

<section id="home">

<h2>Home Section</h2>

<!-- Content for the home section -->

</section>

<section id="about">

<h2>About Section</h2>

<!-- Content for the about section -->

</section>

<section id="services">

<h2>Services Section</h2>

<!-- Content for the services section -->

</section>

<section id="contact">

<h2>Contact Section</h2>

<!-- Content for the contact section -->

</section>

</body>

</html>

/\* Reset default styles \*/

body, h1, h2, p {

margin: 0;

padding: 0;

}

/\* Basic styles for the navigation \*/

header {

background-color: #333;

color: #fff;

padding: 10px 0;

}

nav ul {

list-style-type: none;

margin: 0;

padding: 0;

text-align: center;

}

nav ul li {

display: inline;

margin-right: 20px;

}

nav ul li a {

color: #fff;

text-decoration: none;

padding: 10px 15px;

}

nav ul li a:hover {

background-color: #555;

}

/\* Style for the active/current link \*/

nav ul li a.active {

background-color: #4CAF50;

}

2. **:** Create a simple HTML page that includes the use of headings, paragraphs, and at least two semantic tags like <article> or <section>. Add a table with data of your choice and a form with fields for a user's name, email, and a submit button.

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Simple HTML Page</title>

<style>

/\* Basic CSS for styling \*/

body {

font-family: Arial, sans-serif;

line-height: 1.6;

margin: 20px;

}

article {

border: 1px solid #ccc;

padding: 10px;

margin-bottom: 20px;

}

h1, h2, h3 {

color: #333;

}

table {

width: 100%;

border-collapse: collapse;

margin-bottom: 20px;

}

table, th, td {

border: 1px solid #ccc;

padding: 8px;

text-align: left;

}

form {

max-width: 400px;

border: 1px solid #ccc;

padding: 20px;

}

form label {

display: block;

margin-bottom: 10px;

}

form input[type="text"], form input[type="email"] {

width: calc(100% - 20px);

padding: 8px;

margin-bottom: 10px;

}

form input[type="submit"] {

background-color: #4CAF50;

color: white;

padding: 10px 20px;

border: none;

cursor: pointer;

}

form input[type="submit"]:hover {

background-color: #45a049;

}

</style>

</head>

<body>

<header>

<h1>Welcome to My Simple HTML Page</h1>

</header>

<nav>

<ul>

<li><a href="#about">About</a></li>

<li><a href="#services">Services</a></li>

<li><a href="#contact">Contact</a></li>

</ul>

</nav>

<main>

<section id="about">

<h2>About Us</h2>

<article>

<h3>Our Story</h3>

<p>We started our journey with a vision to...</p>

</article>

<article>

<h3>Our Mission</h3>

<p>To deliver...</p>

</article>

</section>

<section id="services">

<h2>Our Services</h2>

<article>

<h3>Service 1</h3>

<p>Description of service 1...</p>

</article>

<article>

<h3>Service 2</h3>

<p>Description of service 2...</p>

</article>

</section>

<section id="contact">

<h2>Contact Us</h2>

<form action="#" method="post">

<label for="name">Your Name:</label>

<input type="text" id="name" name="name" required>

<label for="email">Your Email:</label>

<input type="email" id="email" name="email" required>

<input type="submit" value="Submit">

</form>

</section>

</main>

<footer>

<p>&copy; 2024 Example Company. All rights reserved.</p>

</footer>

</body>

</html>

3. **:** Apply the CSS box model to ensure that your page content has appropriate margins and padding. Create a layout using div tags and style them to arrange content in a multi-column format using floats or flexbox.

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Combined Example: Styled HTML Page</title>

<link rel="stylesheet" href="styles.css"> <!-- Link to your CSS file -->

<style>

/\* Reset default styles \*/

body, h1, h2, h3, p {

margin: 0;

padding: 0;

}

/\* Basic styling \*/

body {

font-family: Arial, sans-serif;

line-height: 1.6;

margin: 20px;

}

header {

text-align: center;

margin-bottom: 20px;

}

nav ul {

list-style-type: none;

margin: 0;

padding: 0;

text-align: center;

}

nav ul li {

display: inline;

margin-right: 20px;

}

nav ul li a {

text-decoration: none;

color: #333;

padding: 10px 15px;

}

nav ul li a:hover {

background-color: #f0f0f0;

border-radius: 5px;

}

.container {

display: flex;

flex-wrap: wrap;

justify-content: space-between;

}

.column {

flex: 1;

margin: 0 10px;

padding: 15px;

background-color: #f9f9f9;

border: 1px solid #ccc;

border-radius: 5px;

}

.column h2 {

margin-bottom: 10px;

}

.column article {

margin-bottom: 15px;

}

table {

width: 100%;

border-collapse: collapse;

margin-bottom: 20px;

}

table, th, td {

border: 1px solid #ccc;

padding: 8px;

text-align: left;

}

form {

max-width: 400px;

margin-top: 15px;

padding: 20px;

background-color: #f9f9f9;

border: 1px solid #ccc;

border-radius: 5px;

}

form label {

display: block;

margin-bottom: 10px;

}

form input[type="text"],

form input[type="email"],

form input[type="submit"] {

width: calc(100% - 20px);

padding: 8px;

margin-bottom: 10px;

}

form input[type="submit"] {

background-color: #4CAF50;

color: white;

padding: 10px 20px;

border: none;

cursor: pointer;

}

form input[type="submit"]:hover {

background-color: #45a049;

}

footer {

text-align: center;

margin-top: 20px;

padding: 10px 0;

background-color: #333;

color: #fff;

}

</style>

</head>

<body>

<header>

<h1>Welcome to My Combined Example: Styled HTML Page</h1>

</header>

<nav>

<ul>

<li><a href="#about">About</a></li>

<li><a href="#services">Services</a></li>

<li><a href="#contact">Contact</a></li>

</ul>

</nav>

<main class="container">

<section id="about" class="column">

<h2>About Us</h2>

<article>

<h3>Our Story</h3>

<p>We started our journey with a vision to...</p>

</article>

<article>

<h3>Our Mission</h3>

<p>To deliver...</p>

</article>

</section>

<section id="services" class="column">

<h2>Our Services</h2>

<article>

<h3>Service 1</h3>

<p>Description of service 1...</p>

</article>

<article>

<h3>Service 2</h3>

<p>Description of service 2...</p>

</article>

</section>

<section id="contact" class="column">

<h2>Contact Us</h2>

<form action="#" method="post">

<label for="name">Your Name:</label>

<input type="text" id="name" name="name" required>

<label for="email">Your Email:</label>

<input type="email" id="email" name="email" required>

<input type="submit" value="Submit">

</form>

</section>

</main>

<section>

<h2>Additional Content</h2>

<article>

<h3>Section Title</h3>

<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus efficitur dapibus nulla, non facilisis elit tincidunt a.</p>

</article>

<table>

<caption>Sample Table</caption>

<thead>

<tr>

<th>Header 1</th>

<th>Header 2</th>

<th>Header 3</th>

</tr>

</thead>

<tbody>

<tr>

<td>Data 1</td>

<td>Data 2</td>

<td>Data 3</td>

</tr>

<tr>

<td>Data 4</td>

<td>Data 5</td>

<td>Data 6</td>

</tr>

</tbody>

</table>

</section>

<footer>

<p>&copy; 2024 Example Company. All rights reserved.</p>

</footer>

</body>

</html>

4. **:** Enhance the page by adding CSS3 animations to the menu and form elements. Also, use media queries to make the page responsive, ensuring it looks good on both desktop and mobile screen sizes.  
  
<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Enhanced Example: HTML Page with Animations and Responsive Design</title>

<link rel="stylesheet" href="styles.css"> <!-- Link to your CSS file -->

<style>

/\* Reset default styles \*/

body, h1, h2, h3, p {

margin: 0;

padding: 0;

}

/\* Basic styling \*/

body {

font-family: Arial, sans-serif;

line-height: 1.6;

margin: 20px;

background-color: #f0f0f0;

}

header {

text-align: center;

margin-bottom: 20px;

animation: fadeInDown 1s ease-out;

}

nav ul {

list-style-type: none;

margin: 0;

padding: 0;

text-align: center;

animation: fadeInUp 1s ease-out;

}

nav ul li {

display: inline;

margin-right: 20px;

}

nav ul li a {

text-decoration: none;

color: #333;

padding: 10px 15px;

transition: background-color 0.3s ease;

border-radius: 5px;

}

nav ul li a:hover {

background-color: #555;

}

.container {

display: flex;

flex-wrap: wrap;

justify-content: space-between;

animation: slideInLeft 1s ease-out;

}

.column {

flex: 1;

margin: 0 10px;

padding: 15px;

background-color: #f9f9f9;

border: 1px solid #ccc;

border-radius: 5px;

animation: slideInRight 1s ease-out;

}

.column h2 {

margin-bottom: 10px;

}

.column article {

margin-bottom: 15px;

}

table {

width: 100%;

border-collapse: collapse;

margin-bottom: 20px;

animation: fadeIn 1s ease-out;

}

table, th, td {

border: 1px solid #ccc;

padding: 8px;

text-align: left;

}

form {

max-width: 400px;

margin-top: 15px;

padding: 20px;

background-color: #f9f9f9;

border: 1px solid #ccc;

border-radius: 5px;

animation: zoomIn 1s ease-out;

}

form label {

display: block;

margin-bottom: 10px;

}

form input[type="text"],

form input[type="email"],

form input[type="submit"] {

width: calc(100% - 20px);

padding: 8px;

margin-bottom: 10px;

border: 1px solid #ccc;

transition: border-color 0.3s ease;

}

form input[type="text"]:focus,

form input[type="email"]:focus {

border-color: #555;

}

form input[type="submit"] {

background-color: #4CAF50;

color: white;

padding: 10px 20px;

border: none;

cursor: pointer;

transition: background-color 0.3s ease;

}

form input[type="submit"]:hover {

background-color: #45a049;

}

footer {

text-align: center;

margin-top: 20px;

padding: 10px 0;

background-color: #333;

color: #fff;

animation: fadeInUp 1s ease-out;

}

/\* Media Queries for Responsive Design \*/

@media screen and (max-width: 768px) {

.container {

flex-direction: column;

}

.column {

margin: 10px 0;

}

}

/\* Keyframe Animations \*/

@keyframes fadeInDown {

from {

opacity: 0;

transform: translateY(-20px);

}

to {

opacity: 1;

transform: translateY(0);

}

}

@keyframes fadeInUp {

from {

opacity: 0;

transform: translateY(20px);

}

to {

opacity: 1;

transform: translateY(0);

}

}

@keyframes slideInLeft {

from {

opacity: 0;

transform: translateX(-20px);

}

to {

opacity: 1;

transform: translateX(0);

}

}

@keyframes slideInRight {

from {

opacity: 0;

transform: translateX(20px);

}

to {

opacity: 1;

transform: translateX(0);

}

}

@keyframes fadeIn {

from {

opacity: 0;

}

to {

opacity: 1;

}

}

@keyframes zoomIn {

from {

opacity: 0;

transform: scale(0.9);

}

to {

opacity: 1;

transform: scale(1);

}

}

</style>

</head>

<body>

<header>

<h1>Welcome to My Enhanced Example: HTML Page</h1>

</header>

<nav>

<ul>

<li><a href="#about">About</a></li>

<li><a href="#services">Services</a></li>

<li><a href="#contact">Contact</a></li>

</ul>

</nav>

<main class="container">

<section id="about" class="column">

<h2>About Us</h2>

<article>

<h3>Our Story</h3>

<p>We started our journey with a vision to...</p>

</article>

<article>

<h3>Our Mission</h3>

<p>To deliver...</p>

</article>

</section>

<section id="services" class="column">

<h2>Our Services</h2>

<article>

<h3>Service 1</h3>

<p>Description of service 1...</p>

</article>

<article>

<h3>Service 2</h3>

<p>Description of service 2...</p>

</article>

</section>

<section id="contact" class="column">

<h2>Contact Us</h2>

<form action="#" method="post">

<label for="name">Your Name:</label>

<input type="text" id="name" name="name" required>

<label for="email">Your Email:</label>

<input type="email" id="email" name="email" required>

<input type="submit" value="Submit">

</form>

</section>

</main>

<section>

<h2>Additional Content</h2>

<article>

<h3>Section Title</h3>

<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus efficitur dapibus nulla, non facilisis elit tincidunt a.</p>

</article>

<table>

<caption>Sample Table</caption>

<thead>

<tr>

<th>Header 1</th>

<th>Header 2</th>

<th>Header 3</th>

</tr>

</thead>

<tbody>

<tr>

<td>Data 1</td>

<td>Data 2</td>

<td>Data 3</td>

</tr>

<tr>

<td>Data 4</td>

<td>Data 5</td>

<td>Data 6</td>

</tr>

</tbody>

</table>

</section>

<footer>

<p>&copy; 2024 Example Company. All rights reserved.</p>

</footer>

</body>

</html>

5. **:** Take the static HTML page from Day 1 and integrate Bootstrap. Refactor the navigation bar, table, and form to use Bootstrap components. Ensure the page is responsive using Bootstrap's grid system.

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Bootstrap Integration Example</title>

<!-- Bootstrap CSS -->

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css" rel="stylesheet">

<!-- Optional Bootstrap Icons -->

<link href="https://cdn.jsdelivr.net/npm/bootstrap-icons/font/bootstrap-icons.css" rel="stylesheet">

</head>

<body>

<nav class="navbar navbar-expand-lg navbar-light bg-light">

<div class="container">

<a class="navbar-brand" href="#">Your Brand</a>

<button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNav" aria-controls="navbarNav" aria-expanded="false" aria-label="Toggle navigation">

<span class="navbar-toggler-icon"></span>

</button>

<div class="collapse navbar-collapse" id="navbarNav">

<ul class="navbar-nav">

<li class="nav-item">

<a class="nav-link active" aria-current="page" href="#">Home</a>

</li>

<li class="nav-item">

<a class="nav-link" href="#">About</a>

</li>

<li class="nav-item">

<a class="nav-link" href="#">Contact</a>

</li>

</ul>

</div>

</div>

</nav>

<div class="container mt-4">

<div class="row">

<div class="col-lg-8">

<h2>Example Table</h2>

<table class="table">

<thead>

<tr>

<th>#</th>

<th>Name</th>

<th>Email</th>

</tr>

</thead>

<tbody>

<tr>

<td>1</td>

<td>John Doe</td>

<td>johndoe@example.com</td>

</tr>

<tr>

<td>2</td>

<td>Jane Smith</td>

<td>janesmith@example.com</td>

</tr>

<!-- Add more rows as needed -->

</tbody>

</table>

</div>

<div class="col-lg-4">

<h2>Example Form</h2>

<form>

<div class="mb-3">

<label for="name" class="form-label">Name</label>

<input type="text" class="form-control" id="name" placeholder="Enter your name">

</div>

<div class="mb-3">

<label for="email" class="form-label">Email address</label>

<input type="email" class="form-control" id="email" placeholder="name@example.com">

</div>

<button type="submit" class="btn btn-primary">Submit</button>

</form>

</div>

</div>

</div>

<!-- Bootstrap JavaScript -->

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>

</body>

</html>

6. **:** Create a JavaScript object representing a user with properties for name, email, and age. Write functions that manipulate this object, such as changing the name, updating the email, and calculating the user's birth year.

let user = {

name: "John Doe",

email: "john.doe@example.com",

age: 30,

changeName: function(newName) {

this.name = newName;

},

updateEmail: function(newEmail) {

this.email = newEmail;

},

calculateBirthYear: function() {

let currentYear = new Date().getFullYear();

return currentYear - this.age;

}

};

console.log(user);

user.changeName("Jane Smith");

console.log(user.name);

user.updateEmail("jane.smith@example.com");

console.log(user.email);

let birthYear = user.calculateBirthYear();

console.log(birthYear); // Calculation based on current year and user's age

7. **:** Use regular expressions in JavaScript to validate the email address entered in the form. It should check for the correct format of the email and display a message to the user if the format is incorrect

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Email Validation Example</title>

<style>

.error-message {

color: red;

}

</style>

</head>

<body>

<form id="emailForm">

<label for="email">Email:</label>

<input type="email" id="email" name="email">

<button type="button" onclick="validateEmail()">Validate</button>

<p id="emailError" class="error-message"></p>

</form>

<script>

function validateEmail() {

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

const email = emailInput.value.trim();

s

const regex = /^[a-zA-Z0-9.\_%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$/;

if (!regex.test(email)) {

document.getElementById('emailError').textContent = 'Please enter a valid email address.';

emailInput.focus(); // Keep focus on the email input for correction

return false;

} else {

document.getElementById('emailError').textContent = '';

return true;

}

}

</script>

</body>

</html>