**Exercise 1: Static vs Relative Position**

Create a box (<div>) and use different positioning modes like static and relative to see how they behave.

**Task:**

1. Create a div element with a fixed width and height.
2. Apply position: relative; to the box and move it 50px down and 30px to the right using top and left.
3. Add another div with position: static;. Observe the difference in how these two divs are placed.

**Solution:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>CSS Position Exercise</title>

<style>

.box {

width: 100px;

height: 100px;

background-color: lightblue;

margin: 10px;

}

.relative {

position: relative;

top: 50px;

left: 30px;

}

.static {

position: static;

}

</style>

</head>

<body>

<div class="box relative">Relative Box</div>

<div class="box static">Static Box</div>

</body>

</html>

**Exercise 2: Absolute Positioning**

Use position: absolute to position an element relative to its nearest positioned ancestor.

**Task:**

1. Create a div container with two nested boxes inside it.
2. Set the container's position to relative.
3. Position one of the nested boxes using position: absolute; top: 10px; right: 10px;.
4. Observe how the absolute positioning behaves relative to the container.

**Solution:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Absolute Positioning</title>

<style>

.container {

width: 300px;

height: 200px;

background-color: lightgray;

position: relative;

margin: 20px;

}

.box1 {

width: 100px;

height: 100px;

background-color: coral;

}

.box2 {

width: 100px;

height: 100px;

background-color: lightgreen;

position: absolute;

top: 10px;

right: 10px;

}

</style>

</head>

<body>

<div class="container">

<div class="box1">Box 1</div>

<div class="box2">Box 2 (Absolute)</div>

</div>

</body>

</html>

**Exercise 3: Fixed Positioning**

Create a header bar that stays fixed at the top of the screen when scrolling.

**Task:**

1. Create a header element.
2. Set its position to fixed and make it stick to the top of the viewport.
3. Add a long content section that allows you to scroll and see the header stay fixed.

**Solution:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Fixed Position Header</title>

<style>

body {

margin: 0;

}

.header {

position: fixed;

top: 0;

width: 100%;

background-color: navy;

color: white;

text-align: center;

padding: 15px 0;

}

.content {

margin-top: 60px;

padding: 20px;

height: 1500px;

background-color: lightgray;

}

</style>

</head>

<body>

<div class="header">

Fixed Header

</div>

<div class="content">

Scroll to see the header stay fixed at the top!

</div>

</body>

</html>

**Exercise 4: Sticky Positioning**

Use position: sticky to create a navigation bar that sticks to the top of the page when scrolling.

**Task:**

1. Create a div navigation bar at the top of the page.
2. Set its position to sticky and top: 0;.
3. Add content below the navigation bar and observe how the navigation sticks when you scroll past it.

**Solution:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Sticky Navigation</title>

<style>

body {

margin: 0;

}

.navbar {

background-color: #333;

color: white;

padding: 15px;

text-align: center;

position: sticky;

top: 0;

}

.content {

padding: 20px;

height: 1500px;

background-color: lightgray;

}

</style>

</head>

<body>

<div class="navbar">

Sticky Navigation

</div>

<div class="content">

Scroll to see the sticky navigation effect!

</div>

</body>

</html>

**Exercise 5: Z-Index with Absolute Positioning**

Use position and z-index to overlap elements.

**Task:**

1. Create three div elements.
2. Position each one with absolute positioning.
3. Use z-index to control the stacking order of the elements.

**Solution:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Z-Index and Positioning</title>

<style>

.box1, .box2, .box3 {

width: 100px;

height: 100px;

position: absolute;

}

.box1 {

background-color: red;

top: 50px;

left: 50px;

z-index: 1;

}

.box2 {

background-color: green;

top: 80px;

left: 80px;

z-index: 2;

}

.box3 {

background-color: blue;

top: 110px;

left: 110px;

z-index: 3;

}

</style>

</head>

<body>

<div class="box1">Box 1</div>

<div class="box2">Box 2</div>

<div class="box3">Box 3</div>

</body>

</html>

**Exercise 6: Login Form with Absolute Positioning**

Create a login form that is centered using position: absolute.

**Task:**

1. Create a login form with fields for username and password.
2. Use position: absolute to center the form horizontally and vertically in the viewport.

**Example Code:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Absolute Positioned Login Form</title>

<style>

body, html {

height: 100%;

margin: 0;

display: flex;

justify-content: center;

align-items: center;

background-color: #f0f0f0;

}

.login-form {

position: absolute;

top: 50%;

left: 50%;

transform: translate(-50%, -50%);

width: 300px;

padding: 20px;

background-color: white;

box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);

}

.login-form input {

width: 100%;

padding: 10px;

margin: 10px 0;

}

</style>

</head>

<body>

<form class="login-form">

<input type="text" placeholder="Username" required>

<input type="password" placeholder="Password" required>

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

</form>

</body>

</html>

**Exercise 7: Contact Form with Fixed Positioning**

Create a contact form that is always visible on the right side of the screen using position: fixed.

**Task:**

1. Create a contact form with fields for name, email, and message.
2. Use position: fixed to stick the form to the right side of the screen.

**Example Code:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Fixed Position Contact Form</title>

<style>

.contact-form {

position: fixed;

top: 50%;

right: 0;

transform: translateY(-50%);

width: 250px;

padding: 20px;

background-color: #333;

color: white;

box-shadow: -2px 0 5px rgba(0, 0, 0, 0.2);

}

.contact-form input, .contact-form textarea {

width: 100%;

padding: 10px;

margin: 10px 0;

}

</style>

</head>

<body>

<div class="contact-form">

<h3>Contact Us</h3>

<form>

<input type="text" placeholder="Name" required>

<input type="email" placeholder="Email" required>

<textarea placeholder="Message" required></textarea>

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

</form>

</div>

</body>

</html>

**Exercise 8: Registration Form with Sticky Positioning**

Create a registration form with a navigation bar that sticks to the top as you scroll down.

**Task:**

1. Create a form with fields for username, email, and password.
2. Add a navigation bar that sticks to the top of the viewport when the user scrolls down.

**Example Code:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Sticky Registration Form</title>

<style>

body {

margin: 0;

padding: 0;

font-family: Arial, sans-serif;

}

.navbar {

background-color: #333;

color: white;

padding: 15px;

text-align: center;

position: sticky;

top: 0;

z-index: 1000;

}

.form-container {

margin-top: 20px;

padding: 20px;

}

.form-container input {

width: 100%;

padding: 10px;

margin: 10px 0;

}

</style>

</head>

<body>

<div class="navbar">Sticky Navigation Bar</div>

<div class="form-container">

<form>

<input type="text" placeholder="Username" required>

<input type="email" placeholder="Email" required>

<input type="password" placeholder="Password" required>

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

</form>

</div>

<div style="height: 1000px; background-color: #f0f0f0;">Scroll to test sticky navbar</div>

</body>

</html>

**Exercise 9: Feedback Form with Z-Index**

Create a feedback form that overlaps a background image using position: absolute and z-index.

**Task:**

1. Create a feedback form that appears over an image.
2. Use z-index to make the form appear on top of the image.

**Example Code:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Feedback Form with Z-Index</title>

<style>

.background {

position: relative;

background-image: url('https://via.placeholder.com/1200x600');

background-size: cover;

width: 100%;

height: 600px;

}

.feedback-form {

position: absolute;

top: 50%;

left: 50%;

transform: translate(-50%, -50%);

z-index: 10;

background-color: rgba(255, 255, 255, 0.8);

padding: 20px;

width: 300px;

box-shadow: 0 4px 8px rgba(0, 0, 0, 0.2);

}

.feedback-form input, .feedback-form textarea {

width: 100%;

padding: 10px;

margin: 10px 0;

}

</style>

</head>

<body>

<div class="background">

<div class="feedback-form">

<h3>Feedback</h3>

<form>

<input type="text" placeholder="Name" required>

<input type="email" placeholder="Email" required>

<textarea placeholder="Your Feedback" required></textarea>

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

</form>

</div>

</div>

</body>

</html>

**Exercise 10: Sidebar Form with Absolute and Relative Positioning**

Create a sidebar with a form that slides out using position: absolute inside a relative container.

**Task:**

1. Create a sidebar that slides out from the left.
2. Use position: relative for the container and position: absolute for the sidebar.

**Example Code:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Sliding Sidebar Form</title>

<style>

body {

margin: 0;

font-family: Arial, sans-serif;

}

.container {

position: relative;

height: 100vh;

background-color: #f0f0f0;

}

.sidebar {

position: absolute;

left: -300px;

top: 0;

width: 300px;

height: 100%;

background-color: #333;

color: white;

padding: 20px;

transition: left 0.3s ease;

}

.container:hover .sidebar {

left: 0;

}

.sidebar input, .sidebar textarea {

width: 100%;

padding: 10px;

margin: 10px 0;

background-color: #444;

color: white;

border: none;

}

</style>

</head>

<body>

<div class="container">

<div class="sidebar">

<h3>Sidebar Form</h3>

<form>

<input type="text" placeholder="Name" required>

<input type="email" placeholder="Email" required>

<textarea placeholder="Message" required></textarea>

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

</form>

</div>

</div>

</body>

</html>

**Exercise 11: Multi-Step Form with Sticky Progress Bar**

**Task:**

1. Create a multi-step form with fields spread across three steps (e.g., personal information, contact details, and account setup).
2. Use CSS checkboxes to move between the form steps.
3. Add a sticky progress bar at the top of the form to show the user's progress.

**Example Code:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>CSS-Only Multi-Step Form</title>

<style>

body {

font-family: Arial, sans-serif;

margin: 0;

padding: 0;

background-color: #f4f4f4;

}

.progress-bar {

position: sticky;

top: 0;

background-color: #ddd;

padding: 10px;

display: flex;

justify-content: space-around;

}

.progress-bar div {

width: 33%;

height: 5px;

background-color: lightgray;

transition: background-color 0.3s;

}

#step1:checked ~ .progress-bar div:nth-child(1),

#step2:checked ~ .progress-bar div:nth-child(2),

#step3:checked ~ .progress-bar div:nth-child(3) {

background-color: green;

}

.form-container {

max-width: 600px;

margin: 50px auto;

padding: 20px;

background-color: white;

box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);

position: relative;

}

/\* Form steps \*/

.step {

display: none;

}

#step1:checked ~ .form-container .step:nth-child(1),

#step2:checked ~ .form-container .step:nth-child(2),

#step3:checked ~ .form-container .step:nth-child(3) {

display: block;

}

/\* Navigation buttons \*/

.step-nav {

margin-top: 20px;

display: flex;

justify-content: space-between;

}

.step-nav label {

padding: 10px 20px;

background-color: #333;

color: white;

border-radius: 5px;

text-decoration: none;

cursor: pointer;

}

.step-nav label[for="step1"],

#step3:checked ~ .form-container .step-nav label[for="step3"] {

visibility: hidden;

}

/\* Hidden inputs for step management \*/

input[type="radio"] {

display: none;

}

</style>

</head>

<body>

<input type="radio" id="step1" name="step" checked>

<input type="radio" id="step2" name="step">

<input type="radio" id="step3" name="step">

<div class="progress-bar">

<div></div>

<div></div>

<div></div>

</div>

<div class="form-container">

<form>

<!-- Step 1: Personal Information -->

<div class="step">

<h2>Step 1: Personal Information</h2>

<input type="text" placeholder="First Name" required><br>

<input type="text" placeholder="Last Name" required><br>

</div>

<!-- Step 2: Contact Information -->

<div class="step">

<h2>Step 2: Contact Information</h2>

<input type="email" placeholder="Email" required><br>

<input type="tel" placeholder="Phone Number" required><br>

</div>

<!-- Step 3: Account Setup -->

<div class="step">

<h2>Step 3: Account Setup</h2>

<input type="text" placeholder="Username" required><br>

<input type="password" placeholder="Password" required><br>

</div>

<!-- Navigation -->

<div class="step-nav">

<label for="step1">Previous</label>

<label for="step2">Next</label>

</div>

</form>

</div>

<input type="radio" id="step3" name="step">

</body>

</html>

**Explanation:**

1. **Progress Bar**: Uses position: sticky to stay at the top of the page as you scroll down. It changes color based on which step is selected by manipulating the background color of the div elements based on the checked radio input.
2. **Form Steps**: Each step (.step) is shown or hidden based on which radio button (#step1, #step2, #step3) is checked. The :checked pseudo-class is used to control which part of the form is displayed.
3. **Navigation**: There are "Previous" and "Next" buttons in the form navigation, implemented as <label> elements that correspond to each step's respective radio input. The buttons allow users to navigate between form steps.

**Exercise 12: Complex Multi-Step Form with Sidebar Navigation**

**Task:**

1. Create a multi-step form with fields spread across four steps (personal info, address, contact details, and account setup).
2. Implement a fixed sidebar navigation that highlights the current step and provides step-based navigation.
3. Use CSS position properties for sticky elements (progress bar) and floating labels for form fields.

**Example Code:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Complex Multi-Step Form with Sidebar</title>

<style>

body {

font-family: Arial, sans-serif;

margin: 0;

padding: 0;

background-color: #f4f4f4;

}

/\* General Styles \*/

.container {

display: flex;

max-width: 1200px;

margin: 50px auto;

}

/\* Sidebar Navigation \*/

.sidebar {

position: sticky;

top: 20px;

width: 200px;

background-color: #333;

color: white;

padding: 20px;

height: 200px;

}

.sidebar-nav {

list-style: none;

padding: 0;

}

.sidebar-nav li {

margin-bottom: 20px;

}

.sidebar-nav li a {

color: white;

text-decoration: none;

}

.sidebar-nav li a.active {

font-weight: bold;

color: #ff5722;

}

/\* Form Section \*/

.form-container {

flex: 1;

padding: 20px;

background-color: white;

box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);

margin-left: 20px;

}

.step {

display: none;

}

#step1:checked ~ .form-container .step:nth-child(1),

#step2:checked ~ .form-container .step:nth-child(2),

#step3:checked ~ .form-container .step:nth-child(3),

#step4:checked ~ .form-container .step:nth-child(4) {

display: block;

}

/\* Floating Labels \*/

.form-group {

position: relative;

margin-bottom: 20px;

}

.form-group input,

.form-group textarea {

width: 100%;

padding: 10px;

font-size: 16px;

border: 1px solid #ccc;

border-radius: 4px;

}

.form-group label {

position: absolute;

top: 10px;

left: 10px;

color: #aaa;

font-size: 16px;

transition: all 0.2s;

}

.form-group input:focus + label,

.form-group input:not(:placeholder-shown) + label,

.form-group textarea:focus + label,

.form-group textarea:not(:placeholder-shown) + label {

top: -20px;

left: 10px;

font-size: 12px;

color: #333;

}

/\* Navigation Buttons \*/

.step-nav {

margin-top: 30px;

display: flex;

justify-content: space-between;

}

.step-nav label {

padding: 10px 20px;

background-color: #333;

color: white;

border-radius: 5px;

text-decoration: none;

cursor: pointer;

}

/\* Hidden Radio Buttons for Step Control \*/

input[type="radio"] {

display: none;

}

</style>

</head>

<body>

<input type="radio" id="step1" name="step" checked>

<input type="radio" id="step2" name="step">

<input type="radio" id="step3" name="step">

<input type="radio" id="step4" name="step">

<div class="container">

<!-- Sidebar Navigation -->

<div class="sidebar">

<h3>Steps</h3>

<ul class="sidebar-nav">

<li><a href="#step1" class="active">1. Personal Info</a></li>

<li><a href="#step2">2. Address</a></li>

<li><a href="#step3">3. Contact Info</a></li>

<li><a href="#step4">4. Account Setup</a></li>

</ul>

</div>

<!-- Form Section -->

<div class="form-container">

<form>

<!-- Step 1: Personal Information -->

<div class="step">

<h2>Step 1: Personal Information</h2>

<div class="form-group">

<input type="text" id="firstName" placeholder=" " required>

<label for="firstName">First Name</label>

</div>

<div class="form-group">

<input type="text" id="lastName" placeholder=" " required>

<label for="lastName">Last Name</label>

</div>

</div>

<!-- Step 2: Address -->

<div class="step">

<h2>Step 2: Address</h2>

<div class="form-group">

<input type="text" id="streetAddress" placeholder=" " required>

<label for="streetAddress">Street Address</label>

</div>

<div class="form-group">

<input type="text" id="city" placeholder=" " required>

<label for="city">City</label>

</div>

</div>

<!-- Step 3: Contact Information -->

<div class="step">

<h2>Step 3: Contact Information</h2>

<div class="form-group">

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

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

</div>

<div class="form-group">

<input type="tel" id="phone" placeholder=" " required>

<label for="phone">Phone</label>

</div>

</div>

<!-- Step 4: Account Setup -->

<div class="step">

<h2>Step 4: Account Setup</h2>

<div class="form-group">

<input type="text" id="username" placeholder=" " required>

<label for="username">Username</label>

</div>

<div class="form-group">

<input type="password" id="password" placeholder=" " required>

<label for="password">Password</label>

</div>

</div>

<!-- Navigation Buttons -->

<div class="step-nav">

<label for="step1">Previous</label>

<label for="step2">Next</label>

</div>

</form>

</div>

</div>

</body>

</html>

**Explanation:**

1. **Sidebar Navigation**: The sidebar (.sidebar) is fixed using position: sticky to stay visible as you scroll. It contains step links that are styled to indicate the active step.
2. **Form Layout**: The form steps are hidden using CSS, and each step is shown based on the :checked state of radio inputs (#step1, #step2, etc.). This method avoids JavaScript by using radio buttons to switch between form sections.
3. **Floating Labels**: The form fields use floating labels. When the user focuses on the input field or the field is filled, the label moves to a smaller position above the input field. This effect is achieved with the :focus + label and :not(:placeholder-shown) selectors.
4. **Responsiveness**: The form and sidebar are flexible and adjust to different screen sizes. The sidebar remains sticky to the side while the form takes up the main content area.

**Exercise 13: Product Catalog Multi-Step Form**

**Task:**

1. Build a large multi-step form to manage product information (details, pricing, images, inventory, shipping).
2. Include a sidebar navigation to switch between the steps.
3. Ensure the form is responsive and includes floating labels, a sticky sidebar, and advanced positioning techniques.

**Example Code:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Complex Product Catalog Form</title>

<style>

body {

font-family: Arial, sans-serif;

background-color: #f9f9f9;

margin: 0;

padding: 0;

}

/\* Container and layout \*/

.container {

display: flex;

max-width: 1400px;

margin: 50px auto;

}

/\* Sidebar \*/

.sidebar {

position: sticky;

top: 20px;

width: 250px;

background-color: #333;

padding: 30px;

color: white;

}

.sidebar h3 {

margin-bottom: 20px;

}

.sidebar-nav {

list-style-type: none;

padding: 0;

}

.sidebar-nav li {

margin-bottom: 15px;

}

.sidebar-nav li a {

color: white;

text-decoration: none;

padding: 10px;

display: block;

background-color: #444;

border-radius: 5px;

}

.sidebar-nav li a.active {

background-color: #ff5722;

}

/\* Form Container \*/

.form-container {

flex-grow: 1;

background-color: white;

padding: 30px;

margin-left: 30px;

box-shadow: 0 4px 10px rgba(0, 0, 0, 0.1);

}

.step {

display: none;

}

/\* Showing steps based on checked radio input \*/

#step1:checked ~ .form-container .step:nth-child(1),

#step2:checked ~ .form-container .step:nth-child(2),

#step3:checked ~ .form-container .step:nth-child(3),

#step4:checked ~ .form-container .step:nth-child(4),

#step5:checked ~ .form-container .step:nth-child(5) {

display: block;

}

/\* Floating labels for input fields \*/

.form-group {

position: relative;

margin-bottom: 25px;

}

.form-group input,

.form-group textarea {

width: 100%;

padding: 10px;

font-size: 16px;

border: 1px solid #ccc;

border-radius: 4px;

}

.form-group label {

position: absolute;

top: 10px;

left: 10px;

color: #aaa;

font-size: 16px;

transition: all 0.2s ease-in-out;

}

.form-group input:focus + label,

.form-group input:not(:placeholder-shown) + label,

.form-group textarea:focus + label,

.form-group textarea:not(:placeholder-shown) + label {

top: -18px;

left: 10px;

font-size: 12px;

color: #333;

}

/\* Button styles \*/

.step-nav {

display: flex;

justify-content: space-between;

margin-top: 20px;

}

.step-nav label {

padding: 10px 20px;

background-color: #333;

color: white;

border-radius: 5px;

cursor: pointer;

}

input[type="radio"] {

display: none;

}

</style>

</head>

<body>

<!-- Hidden inputs for step navigation -->

<input type="radio" id="step1" name="step" checked>

<input type="radio" id="step2" name="step">

<input type="radio" id="step3" name="step">

<input type="radio" id="step4" name="step">

<input type="radio" id="step5" name="step">

<div class="container">

<!-- Sidebar -->

<div class="sidebar">

<h3>Product Form Steps</h3>

<ul class="sidebar-nav">

<li><a href="#step1" class="active">1. Product Details</a></li>

<li><a href="#step2">2. Pricing</a></li>

<li><a href="#step3">3. Images</a></li>

<li><a href="#step4">4. Inventory</a></li>

<li><a href="#step5">5. Shipping</a></li>

</ul>

</div>

<!-- Form -->

<div class="form-container">

<form>

<!-- Step 1: Product Details -->

<div class="step">

<h2>Step 1: Product Details</h2>

<div class="form-group">

<input type="text" id="productName" placeholder=" " required>

<label for="productName">Product Name</label>

</div>

<div class="form-group">

<textarea id="productDescription" placeholder=" " rows="5" required></textarea>

<label for="productDescription">Product Description</label>

</div>

<div class="form-group">

<input type="text" id="productCategory" placeholder=" " required>

<label for="productCategory">Category</label>

</div>

</div>

<!-- Step 2: Pricing -->

<div class="step">

<h2>Step 2: Pricing</h2>

<div class="form-group">

<input type="text" id="productPrice" placeholder=" " required>

<label for="productPrice">Price</label>

</div>

<div class="form-group">

<input type="text" id="productDiscount" placeholder=" " required>

<label for="productDiscount">Discount</label>

</div>

</div>

<!-- Step 3: Images -->

<div class="step">

<h2>Step 3: Images</h2>

<div class="form-group">

<input type="text" id="productImageURL" placeholder=" " required>

<label for="productImageURL">Image URL</label>

</div>

<div class="form-group">

<input type="text" id="productThumbnailURL" placeholder=" " required>

<label for="productThumbnailURL">Thumbnail URL</label>

</div>

</div>

<!-- Step 4: Inventory -->

<div class="step">

<h2>Step 4: Inventory</h2>

<div class="form-group">

<input type="number" id="productStock" placeholder=" " required>

<label for="productStock">Stock Quantity</label>

</div>

<div class="form-group">

<input type="text" id="productSKU" placeholder=" " required>

<label for="productSKU">SKU</label>

</div>

</div>

<!-- Step 5: Shipping -->

<div class="step">

<h2>Step 5: Shipping</h2>

<div class="form-group">

<input type="text" id="productWeight" placeholder=" " required>

<label for="productWeight">Weight (kg)</label>

</div>

<div class="form-group">

<input type="text" id="productDimensions" placeholder=" " required>

<label for="productDimensions">Dimensions (LxWxH)</label>

</div>

</div>

<!-- Navigation Buttons -->

<div class="step-nav">

<label for="step1">Previous</label>

<label for="step2">Next</label>

</div>

</form>

</div>

</div>

</body>

</html>

**Explanation:**

1. **Sidebar Navigation**: The sidebar (.sidebar) is sticky and fixed in place as the user scrolls. It lists the steps for easy navigation, and the links highlight the active step based on the checked radio button.
2. **Multi-Step Form**: The form is broken into five steps (Product Details, Pricing, Images, Inventory, and Shipping). Each step is hidden unless its associated radio button is checked.
3. **Floating Labels**: The form uses floating labels that move above the input fields when the fields are focused or filled in. This improves the visual experience and helps users understand what data is expected in each input.
4. **CSS-Only Navigation**: The :checked pseudo-class is used for controlling form steps without JavaScript. Each form section is displayed when its corresponding radio button is checked.

**Exercise 14: Department and Employee Management Form**

**Task:**

1. Create a multi-step form for adding department details and employee information.
2. Include a sidebar to navigate between the sections: Department Details, Add Employee, Edit Employee, and Assign Employee.
3. Use advanced CSS techniques like floating labels, sticky positioning for the sidebar, and grid layout for the employee fields.
4. Ensure the form is responsive.

**Example Code:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Departments and Employees Form</title>

<style>

body {

font-family: Arial, sans-serif;

background-color: #f5f5f5;

margin: 0;

padding: 0;

}

/\* Main Container \*/

.container {

display: flex;

max-width: 1400px;

margin: 50px auto;

}

/\* Sidebar for navigation \*/

.sidebar {

position: sticky;

top: 20px;

width: 250px;

background-color: #333;

padding: 30px;

color: white;

}

.sidebar h3 {

margin-bottom: 20px;

}

.sidebar-nav {

list-style-type: none;

padding: 0;

}

.sidebar-nav li {

margin-bottom: 15px;

}

.sidebar-nav li a {

color: white;

text-decoration: none;

padding: 10px;

display: block;

background-color: #444;

border-radius: 5px;

}

.sidebar-nav li a.active {

background-color: #ff5722;

}

/\* Form Container \*/

.form-container {

flex-grow: 1;

background-color: white;

padding: 30px;

margin-left: 30px;

box-shadow: 0 4px 10px rgba(0, 0, 0, 0.1);

}

.step {

display: none;

}

/\* Show corresponding form step based on checked radio button \*/

#step1:checked ~ .form-container .step:nth-child(1),

#step2:checked ~ .form-container .step:nth-child(2),

#step3:checked ~ .form-container .step:nth-child(3),

#step4:checked ~ .form-container .step:nth-child(4) {

display: block;

}

/\* Form Field Styling \*/

.form-group {

position: relative;

margin-bottom: 25px;

}

.form-group input,

.form-group textarea {

width: 100%;

padding: 10px;

font-size: 16px;

border: 1px solid #ccc;

border-radius: 4px;

}

.form-group label {

position: absolute;

top: 10px;

left: 10px;

color: #aaa;

font-size: 16px;

transition: all 0.2s ease-in-out;

}

.form-group input:focus + label,

.form-group input:not(:placeholder-shown) + label,

.form-group textarea:focus + label,

.form-group textarea:not(:placeholder-shown) + label {

top: -18px;

left: 10px;

font-size: 12px;

color: #333;

}

/\* Grid layout for Employee fields \*/

.employee-grid {

display: grid;

grid-template-columns: repeat(2, 1fr);

gap: 20px;

}

/\* Navigation buttons \*/

.step-nav {

display: flex;

justify-content: space-between;

margin-top: 20px;

}

.step-nav label {

padding: 10px 20px;

background-color: #333;

color: white;

border-radius: 5px;

cursor: pointer;

}

input[type="radio"] {

display: none;

}

</style>

</head>

<body>

<!-- Hidden radio inputs for step navigation -->

<input type="radio" id="step1" name="step" checked>

<input type="radio" id="step2" name="step">

<input type="radio" id="step3" name="step">

<input type="radio" id="step4" name="step">

<div class="container">

<!-- Sidebar -->

<div class="sidebar">

<h3>Form Sections</h3>

<ul class="sidebar-nav">

<li><a href="#step1" class="active">1. Department Details</a></li>

<li><a href="#step2">2. Add Employee</a></li>

<li><a href="#step3">3. Edit Employee</a></li>

<li><a href="#step4">4. Assign Employee</a></li>

</ul>

</div>

<!-- Form -->

<div class="form-container">

<form>

<!-- Step 1: Department Details -->

<div class="step">

<h2>Step 1: Department Details</h2>

<div class="form-group">

<input type="text" id="deptName" placeholder=" " required>

<label for="deptName">Department Name</label>

</div>

<div class="form-group">

<textarea id="deptDescription" placeholder=" " rows="5" required></textarea>

<label for="deptDescription">Department Description</label>

</div>

</div>

<!-- Step 2: Add Employee -->

<div class="step">

<h2>Step 2: Add Employee</h2>

<div class="employee-grid">

<div class="form-group">

<input type="text" id="empFirstName" placeholder=" " required>

<label for="empFirstName">First Name</label>

</div>

<div class="form-group">

<input type="text" id="empLastName" placeholder=" " required>

<label for="empLastName">Last Name</label>

</div>

<div class="form-group">

<input type="text" id="empEmail" placeholder=" " required>

<label for="empEmail">Email</label>

</div>

<div class="form-group">

<input type="text" id="empPhone" placeholder=" " required>

<label for="empPhone">Phone</label>

</div>

</div>

</div>

<!-- Step 3: Edit Employee -->

<div class="step">

<h2>Step 3: Edit Employee</h2>

<div class="employee-grid">

<div class="form-group">

<input type="text" id="editEmpID" placeholder=" " required>

<label for="editEmpID">Employee ID</label>

</div>

<div class="form-group">

<input type="text" id="editEmpFirstName" placeholder=" " required>

<label for="editEmpFirstName">First Name</label>

</div>

<div class="form-group">

<input type="text" id="editEmpLastName" placeholder=" " required>

<label for="editEmpLastName">Last Name</label>

</div>

</div>

</div>

<!-- Step 4: Assign Employee -->

<div class="step">

<h2>Step 4: Assign Employee to Department</h2>

<div class="form-group">

<input type="text" id="assignEmpID" placeholder=" " required>

<label for="assignEmpID">Employee ID</label>

</div>

<div class="form-group">

<input type="text" id="assignDeptName" placeholder=" " required>

<label for="assignDeptName">Department Name</label>

</div>

</div>

<!-- Navigation Buttons -->

<div class="step-nav">

<label for="step1">Previous</label>

<label for="step2">Next</label>

</div>

</form>

</div>

</div>

</body>

</html>

**Key Features:**

1. **Department and Employee Sections**: The form includes sections for entering and editing department and employee details and assigning employees to departments.
2. **Sidebar Navigation**: Similar to previous examples, the sidebar allows for quick switching between form sections with sticky positioning.
3. **Responsive Grid Layout for Employees**: The employee-grid class uses CSS Grid to create a two-column layout for employee information.
4. **CSS-Only Navigation**: Radio buttons with the :checked pseudo-class control the visibility of form sections.
5. **Floating Labels**: Each input field has a floating label that rises when focused or filled.

**Exercise 15: Blog Post Management Form**

**Task:**

1. Create a multi-step form for managing blog posts.
2. Include sections for adding post details, assigning categories, adding tags, and previewing the post.
3. Implement a sidebar to navigate between sections.
4. Use grid layout for form fields and ensure responsive design.
5. Avoid using JavaScript.

**Example Code:**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Blog Post Management Form</title>

<style>

body {

font-family: Arial, sans-serif;

background-color: #f4f4f4;

margin: 0;

padding: 0;

}

/\* Main Container \*/

.container {

display: flex;

max-width: 1200px;

margin: 50px auto;

}

/\* Sidebar Styling \*/

.sidebar {

position: sticky;

top: 20px;

width: 250px;

background-color: #222;

padding: 20px;

color: #fff;

}

.sidebar h3 {

margin-bottom: 20px;

}

.sidebar ul {

list-style-type: none;

padding: 0;

}

.sidebar ul li {

margin-bottom: 15px;

}

.sidebar ul li a {

display: block;

padding: 10px;

background-color: #333;

color: #fff;

text-decoration: none;

border-radius: 5px;

}

.sidebar ul li a.active {

background-color: #ff9800;

}

/\* Form Container \*/

.form-container {

flex-grow: 1;

background-color: #fff;

padding: 20px;

margin-left: 30px;

box-shadow: 0 4px 10px rgba(0, 0, 0, 0.1);

}

.step {

display: none;

}

#step1:checked ~ .form-container .step:nth-child(1),

#step2:checked ~ .form-container .step:nth-child(2),

#step3:checked ~ .form-container .step:nth-child(3),

#step4:checked ~ .form-container .step:nth-child(4) {

display: block;

}

/\* Form Styling \*/

.form-group {

position: relative;

margin-bottom: 20px;

}

.form-group input,

.form-group textarea {

width: 100%;

padding: 10px;

font-size: 16px;

border: 1px solid #ccc;

border-radius: 4px;

}

.form-group label {

position: absolute;

top: 10px;

left: 10px;

color: #aaa;

font-size: 16px;

transition: 0.2s;

}

.form-group input:focus + label,

.form-group input:not(:placeholder-shown) + label,

.form-group textarea:focus + label,

.form-group textarea:not(:placeholder-shown) + label {

top: -20px;

left: 10px;

font-size: 12px;

color: #333;

}

/\* Category and Tags grid \*/

.category-grid, .tags-grid {

display: grid;

grid-template-columns: repeat(2, 1fr);

gap: 20px;

}

/\* Post Preview \*/

.preview {

background-color: #f9f9f9;

padding: 20px;

border: 1px solid #ddd;

margin-top: 20px;

box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);

}

/\* Navigation Buttons \*/

.step-nav {

display: flex;

justify-content: space-between;

margin-top: 20px;

}

.step-nav label {

padding: 10px 20px;

background-color: #333;

color: white;

border-radius: 5px;

cursor: pointer;

}

input[type="radio"] {

display: none;

}

</style>

</head>

<body>

<!-- Hidden radio inputs for step navigation -->

<input type="radio" id="step1" name="step" checked>

<input type="radio" id="step2" name="step">

<input type="radio" id="step3" name="step">

<input type="radio" id="step4" name="step">

<div class="container">

<!-- Sidebar -->

<div class="sidebar">

<h3>Post Sections</h3>

<ul>

<li><a href="#step1" class="active">1. Post Details</a></li>

<li><a href="#step2">2. Categories</a></li>

<li><a href="#step3">3. Tags</a></li>

<li><a href="#step4">4. Preview Post</a></li>

</ul>

</div>

<!-- Form -->

<div class="form-container">

<form>

<!-- Step 1: Post Details -->

<div class="step">

<h2>Step 1: Post Details</h2>

<div class="form-group">

<input type="text" id="postTitle" placeholder=" " required>

<label for="postTitle">Post Title</label>

</div>

<div class="form-group">

<textarea id="postContent" placeholder=" " rows="10" required></textarea>

<label for="postContent">Post Content</label>

</div>

</div>

<!-- Step 2: Categories -->

<div class="step">

<h2>Step 2: Assign Categories</h2>

<div class="category-grid">

<div class="form-group">

<input type="checkbox" id="catTech">

<label for="catTech">Technology</label>

</div>

<div class="form-group">

<input type="checkbox" id="catLifestyle">

<label for="catLifestyle">Lifestyle</label>

</div>

<div class="form-group">

<input type="checkbox" id="catBusiness">

<label for="catBusiness">Business</label>

</div>

<div class="form-group">

<input type="checkbox" id="catEntertainment">

<label for="catEntertainment">Entertainment</label>

</div>

</div>

</div>

<!-- Step 3: Tags -->

<div class="step">

<h2>Step 3: Add Tags</h2>

<div class="tags-grid">

<div class="form-group">

<input type="checkbox" id="tagWebDev">

<label for="tagWebDev">Web Development</label>

</div>

<div class="form-group">

<input type="checkbox" id="tagAI">

<label for="tagAI">Artificial Intelligence</label>

</div>

<div class="form-group">

<input type="checkbox" id="tagHealth">

<label for="tagHealth">Health</label>

</div>

<div class="form-group">

<input type="checkbox" id="tagFinance">

<label for="tagFinance">Finance</label>

</div>

</div>

</div>

<!-- Step 4: Preview Post -->

<div class="step">

<h2>Step 4: Preview Post</h2>

<div class="preview">

<h3 id="previewTitle">Sample Post Title</h3>

<p id="previewContent">Sample post content goes here. This is just a preview of how the post will appear once published.</p>

</div>

</div>

<!-- Navigation Buttons -->

<div class="step-nav">

<label for="step1">Previous</label>

<label for="step2">Next</label>

</div>

</form>

</div>

</div>

</body>

</html>

**Key Features:**

1. **Post Details, Categories, Tags, and Preview Sections**: The form includes multiple sections where you can add the post details, select categories, choose tags, and preview the final content.
2. **Sticky Sidebar Navigation**: The sidebar allows the user to navigate between different steps in the post management process. The sidebar remains visible as you scroll, thanks to position: sticky.
3. **CSS-Only Navigation**: This multi-step form is powered purely by CSS using hidden radio buttons for navigation between sections.
4. **Responsive Grid Layout**: Both the category and tag selection sections are organized using a grid layout, making them easy to read and interact with.