1. Introduction to CSS Layout

Exercise 1 — Box Model Practice

Goal: Style the card using the box model.
Hint: Use → `width`, `padding`, `margin`, `border`, `background-color`

HTML:

- `<div class="card">`
- `  <h2>Welcome</h2>`
- `  <p>This is a simple card component.</p>`
- `</div>`

Exercise 2 — Inline vs Block

Goal: Turn menu items into horizontal blocks.
Hint: Use → `display: inline-block`, `padding`, `margin`

HTML:

- `<div class="menu">`
- `  <p>Home</p>`
- `  <p>About</p>`
- `  <p>Contact</p>`
- `</div>`

2. Positioning Elements

Exercise 3 — Absolute Position Badge

Goal: Position a badge on the top-right of an icon.
Hint: Use →

- For container: `position: relative`

- For badge: `position: absolute`, `top`, `right`, `background-color`, `border-radius`

HTML:

- `<div class="icon">`
- `  <img src="https://via.placeholder.com/80" />`
- `  <span class="badge">5</span>`
- `</div>`

Exercise 4 — Sticky Header

Goal: Make header stick on scroll.
Hint: Use → `position: sticky`, `top`, `background-color`, `padding`

HTML:

- `<header class="header">`
- `  <h1>My Website</h1>`
- `</header>`
- `<p>Lots of content here...</p>`
- `<p>Keep scrolling...</p>`
- `<p>More scrolling...</p>`

3. Layout with Display & Position

Exercise 5 — Hide/Show Elements

Goal: Hide one element (but keep space), remove the other completely.
Hint:

- `.one` should use → `visibility: hidden`

- `.two` should use → `display: none`

HTML:

- `<p class="one">This text should be invisible but still take space.</p>`
- `<p class="two">This text should disappear entirely.</p>`

Exercise 6 — Inline-block Gallery

Goal: Make boxes appear in a row.
Hint: Use → `display: inline-block`, `width`, `height`, `margin`, `background-color`

HTML:

- `<div class="box"></div>`
- `<div class="box"></div>`
- `<div class="box"></div>`

4. Flexbox Layout

Exercise 7 — Center Content with Flexbox

Goal: Center text both horizontally and vertically.
 Hint: Use →

- `display: flex`

- `justify-content: center`

- `align-items: center`

- `height`

HTML:

- `<div class="container">`
- `   <p>Hello Flexbox</p>`
- `</div>`

Exercise 8 — Flexible Navigation Bar

Goal: Space nav items evenly.
Hint: Use →

- `display: flex`

- `justify-content: space-between`

- `padding`, `background-color`

HTML:

- `<nav class="nav">`
- `    <a>Home</a>`
- `    <a>Services</a>`
- `    <a>Contact</a>`
- `</nav>`

Exercise 9 — Flexbox Cards

Goal: Cards in a row with wrapping.
Hint: Use →

- `display: flex`

- `flex-wrap: wrap`

- `gap` or `margin`

- `width` on `.card`

HTML:

- `<div class="cards">`
- `  <div class="card">Card 1</div>`
- `  <div class="card">Card 2</div>`
- `  <div class="card">Card 3</div>`
- `</div>`

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5. CSS Grid

Exercise 10 — 3-Column Grid

Goal: Create 3 equal columns.
Hint: Use →

- `display: grid`

- `grid-template-columns: repeat(3, 1fr)`

- `gap`, `padding`, `border`

HTML:

- `<div class="grid">`
- `  <div class="item">1</div>`
- `  <div class="item">2</div>`
- `  <div class="item">3</div>`
- `  <div class="item">4</div>`
- `  <div class="item">5</div>`
- `  <div class="item">6</div>`
- `</div>`

Exercise 11 — Header/Sidebar/Main/Footer Layout

Goal: Build a full page grid layout.
 Hint: Use →

- `display: grid`

- `grid-template-areas`

- `grid-template-columns`

- `grid-template-rows`

HTML:

- `<div class="layout">`
- `  <header>Header</header>`
- `  <aside>Sidebar</aside>`
- `  <main>Main Content</main>`
- `  <footer>Footer</footer>`
- `</div>`

6. Responsive Design

Exercise 12 — Responsive Image

Goal: Make an image scale within its container.
Hint: Use →

- `max-width: 100%`

- `height: auto`

HTML:

- `<img class="responsive-img" src="https://via.placeholder.com/800">`

Exercise 13 — Mobile-first Columns

Goal: 1 column on mobile, 3 columns on desktop.
Hint: Use →

- `display: grid`

- `grid-template-columns`

- Media query: `@media (min-width: 768px)`

HTML:

- `<div class="container">`
- `<div class="box">A</div>`

- `<div class="box">B</div>`
- `<div class="box">C</div>`
- `</div>`

Exercise 14 — Responsive Navbar

Goal: Vertical on mobile → Horizontal on desktop.
 Hint:

- Mobile (default): `display: block`

- Desktop (600px+): `display: flex`, `justify-content`

HTML:

- `<nav class="nav">`
- `<a>Home</a>`
- `<a>About</a>`
- `<a>Contact</a>`
- `</nav>`