

Exercise 1: Styling a Basic Webpage

****Task:**** Create a basic webpage with a header, main content, and footer. Style it using CSS to apply background colors, font styles, and padding.

****Solution:****

```
```html
<!DOCTYPE html>
<html>
<head>
 <style>
 body {
 font-family: Arial, sans-serif;
 }
 header, footer {
 background-color: #4CAF50;
 color: white;
 text-align: center;
 padding: 10px;
 }
 main {
 padding: 20px;
 background-color: #f9f9f9;
 }
 </style>
</head>
<body>
 <header>
```

```
<h1>My Website</h1>
</header>
<main>
 <p>Welcome to my website. Here is some content.</p>
</main>
<footer>
 <p>Footer Information</p>
</footer>
</body>
</html>
'''
```

### ### Exercise 2: Using Advanced Selectors

**\*\*Task:\*\*** Style a list of items with different colors for odd and even items using nth-child selectors.

**\*\*Solution:\*\***

```
'''html
<!DOCTYPE html>
<html>
<head>
 <style>
 ul li:nth-child(odd) {
 background-color: #eee;
 }
 ul li:nth-child(even) {
 background-color: #ccc;
```

```
 }
 </style>
</head>
<body>

 Item 1
 Item 2
 Item 3
 Item 4
 Item 5

</body>
</html>
```
```

Exercise 3: Media Queries for Responsive Design

****Task:**** Create a responsive layout that changes the background color of the main content area based on the screen width.

****Solution:****

```
`html
<!DOCTYPE html>
<html>
<head>
  <style>
    main {
      padding: 20px;
```

```

    }
    @media (max-width: 600px) {
        main {
            background-color: lightblue;
        }
    }
    @media (min-width: 601px) {
        main {
            background-color: lightgreen;
        }
    }
</style>
</head>
<body>
    <main>
        <p>Resize the browser window to see the background color
change.</p>
    </main>
</body>
</html>
`

```

Exercise 4: Flexbox Layout

****Task:**** Create a flexbox layout with a header, main content, and sidebar.

****Solution:****

```

`html

```

```
<!DOCTYPE html>
<html>
<head>
  <style>
    .container {
      display: flex;
    }
    header, main, aside {
      padding: 20px;
      margin: 10px;
    }
    header {
      background-color: #4CAF50;
      color: white;
    }
    main {
      flex: 2;
      background-color: #f1f1f1;
    }
    aside {
      flex: 1;
      background-color: #ccc;
    }
  </style>
</head>
<body>
  <header>
```

```
<h1>Flexbox Layout</h1>
</header>
<div class="container">
  <main>
    <p>Main Content</p>
  </main>
  <aside>
    <p>Sidebar</p>
  </aside>
</div>
</body>
</html>
...

```

Exercise 5: Using Google Fonts

Task: Use Google Fonts to style the text on a webpage.

Solution:

```
``html
<!DOCTYPE html>
<html>
<head>
  <link
href="https://fonts.googleapis.com/css2?family=Roboto:wght@400;700&display=swap" rel="stylesheet">
  <style>
    body {
      font-family: 'Roboto', sans-serif;
    }
  </style>

```

```

    }
    h1 {
        font-weight: 700;
    }
    p {
        font-weight: 400;
    }
</style>
</head>
<body>
    <h1>Google Fonts Example</h1>
    <p>This is a paragraph styled with the Roboto font.</p>
</body>
</html>
`

```

Exercise 6: CSS Transitions

****Task:**** Create a button that changes its background color smoothly when hovered over.

****Solution:****

```

`html
<!DOCTYPE html>
<html>
<head>
    <style>
        .btn {

```

```

        background-color: #4CAF50;
        color: white;
        padding: 10px 20px;
        border: none;
        transition: background-color 0.5s;
    }
    .btn:hover {
        background-color: #45a049;
    }
</style>
</head>
<body>
    <button class="btn">Hover Me</button>
</body>
</html>
'''

```

Exercise 7: Keyframe Animations

****Task:**** Create a bouncing ball animation using CSS keyframes.

****Solution:****

```

'''html
<!DOCTYPE html>
<html>
<head>
    <style>
        @keyframes bounce {

```



```
    0%, 100% {
        transform: translateY(0);
    }
    50% {
        transform: translateY(-100px);
    }
}

.ball {
    width: 50px;
    height: 50px;
    background-color: red;
    border-radius: 50%;
    position: absolute;
    top: 50%;
    left: 50%;
    margin-top: -25px;
    margin-left: -25px;
    animation: bounce 2s infinite;
}

</style>
</head>
<body>
    <div class="ball"></div>
</body>
</html>
...
```

Exercise 8: CSS Variables

****Task:**** Use CSS variables to define and use theme colors in a webpage.

****Solution:****

```
``html
<!DOCTYPE html>
<html>
<head>
  <style>
    :root {
      --primary-color: #4CAF50;
      --secondary-color: #f1f1f1;
    }
    body {
      background-color: var(--secondary-color);
      color: var(--primary-color);
    }
    header {
      background-color: var(--primary-color);
      color: white;
      padding: 10px;
      text-align: center;
    }
  </style>
</head>
<body>
  <header>
```

```
<h1>CSS Variables</h1>
</header>
<p>This is a paragraph using CSS variables for theme colors.</p>
</body>
</html>
``
```

Exercise 9: CSS Grid Layout

****Task:**** Create a simple grid layout with three columns and two rows.

****Solution:****

```
``html
<!DOCTYPE html>
<html>
<head>
  <style>
    .grid-container {
      display: grid;
      grid-template-columns: 1fr 1fr 1fr;
      gap: 10px;
    }
    .grid-item {
      background-color: #4CAF50;
      color: white;
      padding: 20px;
      text-align: center;
    }
  </style>
</head>
<body>
  <div class="grid-container">
    <div class="grid-item">Item 1</div>
    <div class="grid-item">Item 2</div>
    <div class="grid-item">Item 3</div>
    <div class="grid-item">Item 4</div>
    <div class="grid-item">Item 5</div>
    <div class="grid-item">Item 6</div>
  </div>
</body>
</html>
``
```

```
</style>
</head>
<body>
  <div class="grid-container">
    <div class="grid-item">1</div>
    <div class="grid-item">2</div>
    <div class="grid-item">3</div>
    <div class="grid-item">4</div>
    <div class="grid-item">5</div>
    <div class="grid-item">6</div>
  </div>
</body>
</html>
...

```

Exercise 10: BEM Methodology

****Task:**** Create a simple webpage and use the BEM methodology to style it.

****Solution:****

```
``html
<!DOCTYPE html>
<html>
<head>
  <style>
    .header__title {
      font-size: 24px;
    }
  </style>

```

```
        color: #333;
    }
    .button--primary {
        background-color: #4CAF50;
        color: white;
        padding: 10px 20px;
        border: none;
    }
    .button--secondary {
        background-color: #ccc;
        color: #333;
        padding: 10px 20px;
        border: none;
    }
}
</style>
</head>
<body>
    <header>
        <h1 class="header_title">BEM Methodology</h1>
    </header>
    <button class="button--primary">Primary Button</button>
    <button class="button--secondary">Secondary Button</button>
</body>
</html>
```