Hands-on Exercise Style and Layout a Website with CSS

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0.1 PART I: Individual Work

Exercise 1: Basic Styling

1. **Create a new HTML file and link a CSS file:**
   - Create a file named `styles.css`.
   - Link it in your HTML file (`index.html`):

```
<link rel="stylesheet" href="styles.css">
```

2. **Add a heading, paragraph, and an image:**
   - Add the following HTML to your `index.html`:

```
<section>
  <h1>Welcome to My E-commerce Store</h1>
  <p>Discover our range of products and shop online.</p>
  <img src="path/to/image.jpg" alt="Sample Image">
</section>
```

3. **Style the text and image using CSS properties:**
   - Add the following CSS to `styles.css`:

```css
h1 {
  color: #333;
  font-family: Arial, sans-serif;
  text-align: center;
}

p {
  color: #666;
  font-size: 16px;
  line-height: 1.5;
  text-align: center;
}

img {
  display: block;
  margin: 0 auto;
  max-width: 100%;
}
```

Exercise 2: Box Model

1. **Create a box with content, padding, border, and margin:**
   - Add the following HTML to your `index.html`:

```html
<div class="box">
  <p>This is a box with padding, border, and margin.</p>
</div>
```

2. **Experiment with different values for padding, border, and margin:**
   - Add the following CSS to `styles.css`:

```css
.box {
  padding: 20px;
  border: 2px solid #333;
  margin: 20px;
  background-color: #f9f9f9;
}
```

Exercise 3: Flexbox Layout

1. **Create a flex container with multiple items:**
   - Add the following HTML to your `index.html`:

```html
<div class="flex-container">
  <div class="flex-item">Item 1</div>
  <div class="flex-item">Item 2</div>
  <div class="flex-item">Item 3</div>
</div>
```

2. **Use flex properties to arrange the items in different ways:**
   - Add the following CSS to `styles.css`:

```css
.flex-container {
  display: flex;
  justify-content: space-around;
  align-items: center;
  padding: 20px;
  background-color: #e9e9e9;
}

.flex-item {
  padding: 20px;
  background-color: #ccc;
  border: 1px solid #333;
}
```

Exercise 4: Responsive Design

1. **Create a responsive layout using media queries:**
   - Add the following CSS to `styles.css`:

```css
@media (max-width: 600px) {
  .flex-container {
    flex-direction: column;
  }
}
```

2. **Test the layout on different screen sizes:**
   - Resize your browser window to see the layout change.

0.2 Additional Tips:

- **Validate Your CSS:**
  - Use a CSS validator to ensure your code is correct and standards-compliant.
  - W3C CSS Validation Service
- **Test Your Pages:**
  - Test your web pages in different browsers to ensure compatibility.
- **Keep Practicing:**

- **Experiment with different styles and layouts to improve your CSS skills.**

1 Part II: Using a Framework: Bootstrap

1.1 Exercise 5: Bootstrap Table

- **Objective:** Create a table with Bootstrap classes.
- **Instructions:**
  - Create a new HTML file and include Bootstrap via CDN.
  - Create a table and apply Bootstrap classes like `table`, `table-striped`, etc.

1.1.a Step 1: Setting Up Bootstrap

- **Include Bootstrap via CDN:**
  - Add the following `<link>` and `<script>` tags to the `<head>` section of your HTML file.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Bootstrap Table Exercise</title>
  <!-- Bootstrap CSS -->
             <link       href="https://cdn.jsdelivr.net/npm/bootstrap@5.2.
3/dist/css/bootstrap.min.css"      rel="stylesheet"      integrity="sha384-
rbsA2VBKQhggwzxH7pPCaAqO46MgnOM80zW1RWuH61DGLwZJEdK2Kadq2F9CUG65"
crossorigin="anonymous">
</head>
<body>
  <!-- Your content here -->

  <!-- Bootstrap JS and dependencies -->
      <script   src="https://cdn.jsdelivr.net/npm/bootstrap@5.2.3/dist/js/
bootstrap.bundle.min.js"                                    integrity="sha384-
kenU1KFdBIe4zVF0s0G1M5b4hcpxyD9F7jL+jjXkk+Q2h455rYXK/7HAuoJl+0I4"
crossorigin="anonymous"></script>
</body>
</html>
```

1.1.b Step 2: Creating a Basic Table

- **Create a basic table:**
  - Add the following HTML inside the `<body>` tag.

```
<div class="container mt-5">
  <h2>Basic Bootstrap Table</h2>
  <table class="table">
    <thead>
      <tr>
        <th>Header 1</th>
        <th>Header 2</th>
      </tr>
    </thead>
    <tbody>
      <tr>
        <td>Data 1</td>
        <td>Data 2</td>
      </tr>
      <tr>
        <td>Data 3</td>
        <td>Data 4</td>
      </tr>
    </tbody>
  </table>
</div>
```

1.1.c Step 3: Adding Table Styles

- **Enhance the table with Bootstrap classes:**
  - Modify the table to include `table-striped` and `table-bordered` classes.

```
<div class="container mt-5">
  <h2>Styled Bootstrap Table</h2>
  <table class="table table-striped table-bordered">
    <thead>
      <tr>
        <th>Header 1</th>
        <th>Header 2</th>
      </tr>
    </thead>
    <tbody>
      <tr>
        <td>Data 1</td>
        <td>Data 2</td>
      </tr>
      <tr>
        <td>Data 3</td>
        <td>Data 4</td>
```

```
      </tr>
    </tbody>
  </table>
</div>
```

1.1.d Step 4: Adding More Features

- **Add hover effect and responsive table:**
  - Modify the table to include `table-hover` and `table-responsive` classes.

```
<div class="container mt-5">
  <h2>Enhanced Bootstrap Table</h2>
  <div class="table-responsive">
    <table class="table table-striped table-bordered table-hover">
      <thead>
        <tr>
          <th>Header 1</th>
          <th>Header 2</th>
        </tr>
      </thead>
      <tbody>
        <tr>
          <td>Data 1</td>
          <td>Data 2</td>
        </tr>
        <tr>
          <td>Data 3</td>
          <td>Data 4</td>
        </tr>
      </tbody>
    </table>
  </div>
</div>
```

1.1.e Step 5: Adding Contextual Classes

- **Add contextual classes to rows:**
  - Modify the table to include `table-primary`, `table-secondary`, etc., for different row styles.

```
<div class="container mt-5">
  <h2>Contextual Bootstrap Table</h2>
  <div class="table-responsive">
    <table class="table table-striped table-bordered table-hover">
```

```
      <thead>
        <tr>
          <th>Header 1</th>
          <th>Header 2</th>
        </tr>
      </thead>
      <tbody>
        <tr class="table-primary">
          <td>Primary Data 1</td>
          <td>Primary Data 2</td>
        </tr>
        <tr class="table-secondary">
          <td>Secondary Data 1</td>
          <td>Secondary Data 2</td>
        </tr>
        <tr class="table-success">
          <td>Success Data 1</td>
          <td>Success Data 2</td>
        </tr>
        <tr class="table-danger">
          <td>Danger Data 1</td>
          <td>Danger Data 2</td>
        </tr>
      </tbody>
    </table>
  </div>
</div>
```

Look at the code snippet in the official Bootstrap web site and experiment them : https://getbootstrap.com/docs/5.3/examples/

2 PART II: Group Work

- Once you have completed Part I, reform groups and add style to your project with CSS and bootstrap Final Project and Review, mainly Part I.
- Each group member should contribute to different sections style or components of the website.