Lab Report-02

Course Code:	Course Title:
CSE 416	Web Engineering Lab

Lab Report Details	
Lab Perform Date	: 26/05/2025
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Submitted To	Submitted By
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Experiment No: 02

Experiment Name: Styling and Layout Techniques for Web Pages Using CSS.

Objective:

To apply modern CSS styling and layout techniques to create a responsive, well-structured, and visually appealing coffee shop web page. This includes the use of Flexbox, Grid layout, typography, colors, responsive design, and hover effects.

Overview of CSS Styling and Layout Techniques:

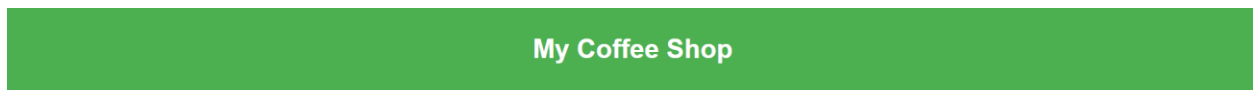| No.	Feature Name	Description	Key CSS Properties / Techniques
1	Header Styling	Styles the header with background color, text alignment, and padding.	background-color, text-align
2	Navigation Bar	Creates a horizontal navigation bar with hover effects.	display: flex: hover
3	CSS Grid Layout	Arranges the main content and sidebar using CSS Grid.	display: grid, grid-template-columns
4	Coffee Card Styling	Design product cards with padding, border-radius, and shadow.	padding, border-radius, box-shadow
5	Responsive Design	Adjusts the layout for smaller screens.	@media queries
6	Hover Animations	Adds a smooth zoom-in effect on coffee cards and images.	transform, transition

1. Header Styling

Description:
Applied background color, padding, and text alignment to make the header visually attractive.

CSS Snippet:

```css
11   header {
12       background-color: ■#4CAF50;
13       color: ■white;
14       padding: 1rem;
15       text-align: center;
16   }
```

Screenshot:

My Coffee Shop
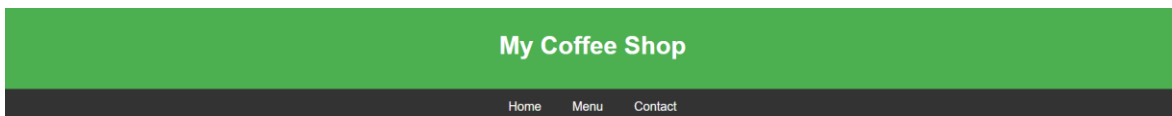
2. Navigation Bar

Description:

Created a horizontal navigation bar with centered links and hover color change.

CSS Snippet:

```css
17   nav {
18       background-color: ■#333;
19       display: flex;
20       justify-content: center;
21       flex-wrap: wrap;
22   }
23   nav a {
24       color: ■white;
25       padding: 14px 20px;
26       text-decoration: none;
27   }
28   nav a:hover {
29       background-color: ■#575757;
30   }
```

Screenshot:

My Coffee Shop

Home   Menu   Contact

3. CSS Grid Layout for Main Section
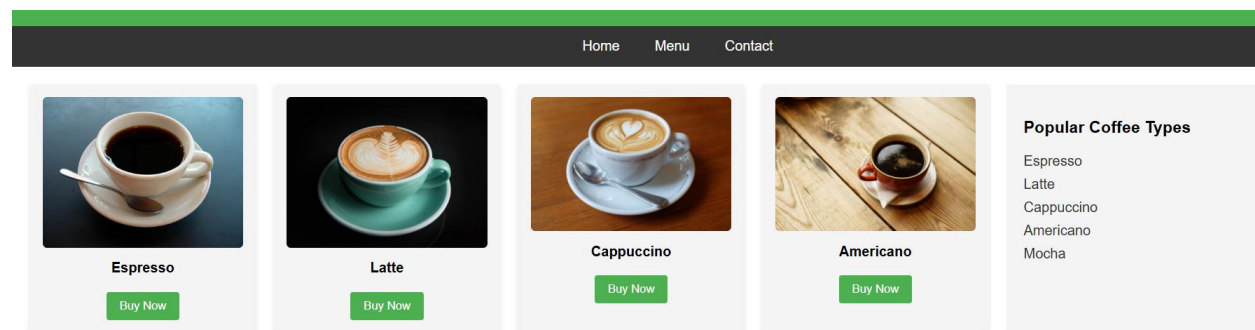
Description:
Used CSS Grid to arrange main content and sidebar in two columns.

CSS Snippet:

```css
31    main {
32        display: grid;
33        grid-template-columns: 3fr 1fr; /* Reduced sidebar width */
34        gap: 20px;
35        padding: 20px;
36    }
```

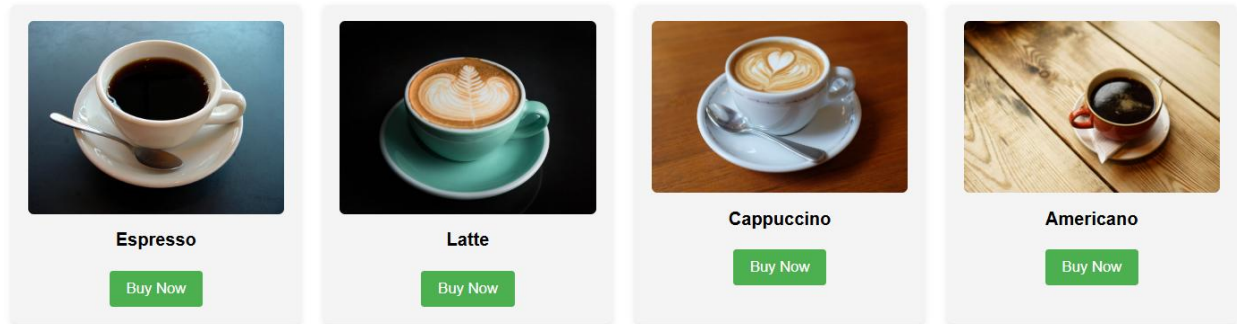**Screenshot:**

4. Coffee Card Styling

Description:

Designed coffee item cards with padding, rounded corners, and drop shadow for a modern look.

CSS Snippet:

```css
42    .coffee-card {
43        background: #f4f4f4;
44        padding: 15px;
45        border-radius: 5px;
46        text-align: center;
47        box-shadow: 0 2px 5px rgba(0,0,0,0.1);
48    }
```

Screenshot:

5. Responsive Design (Media Queries)
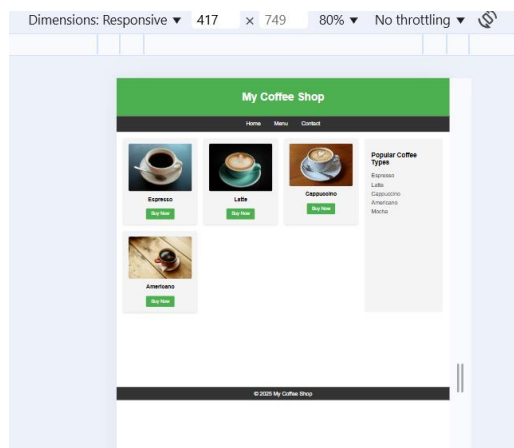
Description:
Ensured the page adapts to smaller devices by changing layout to single column.

CSS Snippet:

```
 95     @media (max-width: 768px) {
 96         main {
 97             grid-template-columns: 1fr;
 98         }
 99         nav {
100             flex-direction: column;
101         }
102     }
```
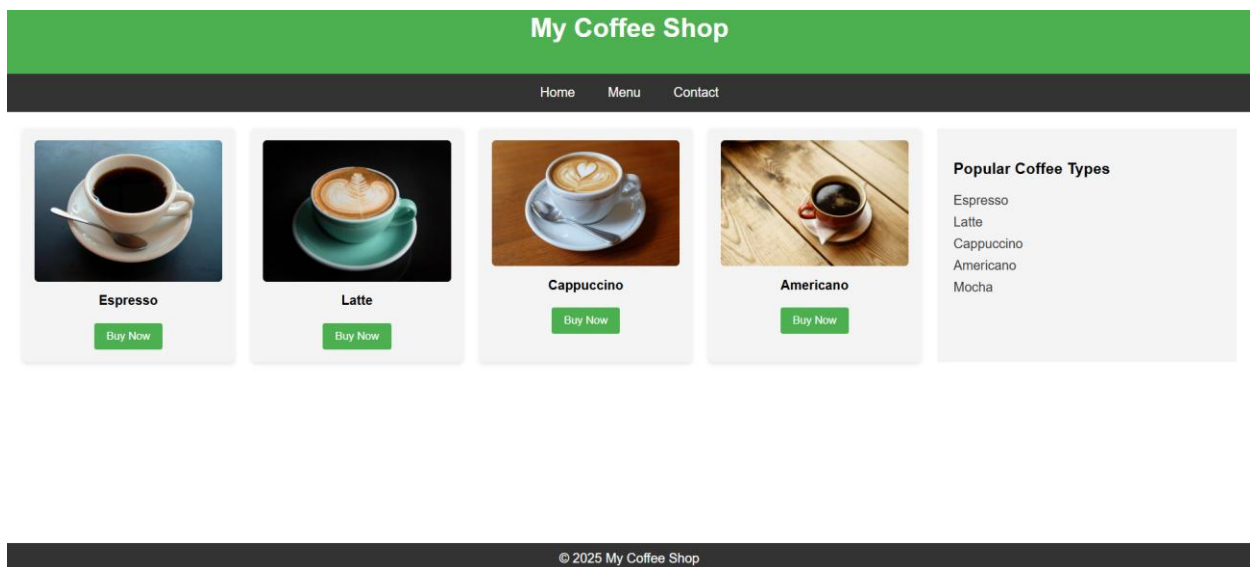
Screenshot:

6. Hover Animations

Description:

Added a smooth zoom-in effect when hovering over coffee cards and images.

CSS Snippet:

```css
 95    .coffee-card:hover {
 96      transform: scale(1.05);
 97      transition: transform 0.3s;
 98    }
 99    .coffee-card img:hover {
100      transform: scale(1.1);
101      transition: transform 0.3s;
102    }
103
```

Final Output:

Outcome:

CSS styling and layout techniques such as Grid, Flexbox, and media queries allow developers to create attractive and responsive web pages. Hover animations and proper typography enhance usability and design aesthetics.

Conclusion:

By using CSS selectors, layout properties, and responsive techniques like Flexbox, Grid, and Media Queries, we created a well-structured and visually appealing webpage. The design adapts to different screen sizes, ensuring accessibility and user-friendliness across devices.

References:

https://developer.mozilla.org/en-US/docs/Web/CSS

https://www.w3schools.com/css/

https://css-tricks.com/snippets/css/a-guide-to-flexbox/