Lab Report-02

Web Engineering Lab

Course Code: CSE416

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1. Objective

The purpose of this lab experiment is to:

- Develop a responsive web page with a navigation bar, product display section, and footer.
- Apply CSS styling to improve visual appearance and user experience.
- Implement hover effects, animations, and responsive design techniques.
- Demonstrate practical use of HTML and CSS for layout creation.

2. Equipment and Software Used

Sl. No.	Equipment / Software	Description
1	Laptop / PC	Device used for coding, testing, and running the web application.
2	Visual Studio Code	Code editor for writing HTML and CSS code.
3	Google Chrome	Web browser for viewing and testing the webpage.
4	HTML5 & CSS3	Programming languages used for structuring and styling the web page.
5	Font Awesome	External icon library used for cart icon in the navbar.

3. Theory / Background

HTML (HyperText Markup Language) defines the structure of the web page, while CSS (Cascading Style Sheets) controls its visual presentation.

In this experiment, we:

- Created a navbar with search functionality and a cart icon.
- Designed a product section with multiple product cards.
- Added hover effects and animations to improve interactivity.
- Used Flexbox for layout arrangements.
- Implemented responsive design using media queries for different screen sizes.

4. Procedure

1. **Navbar Design**
    a. Added shop name, account link, search bar, and cart icon.
    b. Used Font Awesome for cart icon.
    c. Styled background color, spacing, and hover effects.
2. **Product Card Section**
    a. Displayed four product items with images, titles, and prices.
    b. Applied box-shadow and hover zoom effects for interactivity.
3. **Footer Section**
    a. Fixed footer position at the bottom of the page.
    b. Added background color, text styling, and shadow effect.
4. **Responsive Adjustments**
    a. Used @media queries for better display on mobile and tablet screens.

5. Code Implementation

HTML [View Full Code On GitHub]

```html
<!-- Navbar -->
<div class="navbar">
  <div class="shop">
    <h2>Shop With Me</h2>
  </div>
  <a href="#account">Account</a>
  <div class="src-var">
    <input type="text" placeholder="Type your item" />
    <button>Search</button>
  </div>
  <i class="fa-solid fa-cart-shopping"><sub>0</sub></i>
</div>
```

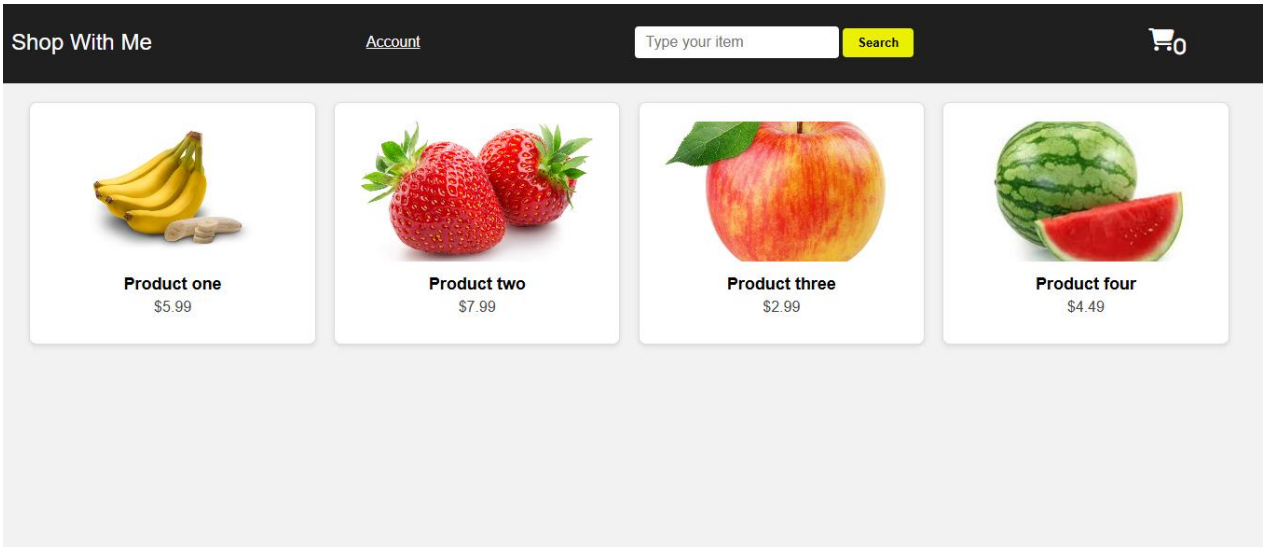
```html
<!-- Food Cart Section -->
<div class="cart-container">
  <div class="cart-item">
    <img src="https://www.dole.com/sites/default/files/styles/1024w768h-80/public/media/2025-01/banana-cavendish_0.png?itok=xIgYOIE_-9FKLRtCr" 
    <h3>Product one</h3>
    <p>$5.99</p>
  </div>
  <div class="cart-item">
    <img src="https://www.collinsdictionary.com/images/full/strawberry_227472010.jpg" alt="Pizza" />
    <h3>Product two</h3>
    <p>$7.99</p>
  </div>
  <div class="cart-item">
    <img src="https://cdn.mos.cms.futurecdn.net/38Moe9n3b72uVEf2Ti7KmV-1200-80.jpg" alt="Fries" />
    <h3>Product three</h3>
    <p>$2.99</p>
  </div>
  <div class="cart-item">
    <img src="https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQhTn9mIiFqW_tqIhD1fi5nLBV--vF1fGLrEQ&s" alt="Sandwich" />
    <h3>Product four</h3>
    <p>$4.49</p>
  </div>
</div>
```

6. Output / Observation

After running the code:

- The navbar appeared at the top with a shop name, account link, search bar, and animated cart icon.
- The product section displayed four product cards with hover scaling effects.
- The footer remained fixed at the bottom of the screen.
- The layout automatically adjusted for mobile and tablet screens.

Sample Output Screenshot:



7. Result

We successfully designed and implemented a CSS-styled, responsive web page with a navbar, product display section, and footer. Interactive effects and animations enhanced the user experience.

8. Conclusion

This experiment helped understand the integration of HTML structure and CSS styling to create visually appealing and responsive web pages. We learned how to apply hover effects, animations, flexbox layout, and media queries for better user interaction.

9. References

MDN Web Docs – https://developer.mozilla.org/en-US/docs/Web/CSS
W3Schools – https://www.w3schools.com/css/
Font Awesome – https://fontawesome.com