Lab Report-03

Course Code:	Course Title:
CSE 416	Web Engineering Lab

Lab Report Details	
Lab Perform Date	: 02/06/2025
Report Submission Date	: 09/06/2025

Submitted To	Submitted By
Ms. Nishat Sadaf Lira Lecturer Department of CSE Daffodil International University.	Name : Munna Biswas SID : 221-15-5261 Section : 61-J2 Daffodil International University

Experiment No: 03

Experiment Name: Interactive Web Page Development Using JavaScript.

Objective:

To enhance a web page with interactive JavaScript features, including event handling, DOM manipulation, dynamic content updates, and user interface improvements, making the page responsive to user actions.

JavaScript Operations Performed:

No.	Feature Name	Description	Key Methods/Functions Used
1	Live Clock Display	Shows the current time in the header and updates every second.	setInterval(), Date()
2	Buy Now Button with Cart	Increments cart count and shows an alert when an item is purchased.	onclick, innerText
3	Search Filter	Filters coffee items dynamically based on search input.	keyup, querySelectorAll
4	Dark Mode Toggle	Switches between light and dark themes for the website.	classList.toggle()

Code Snippets and Outcomes:

1. Live Clock Display

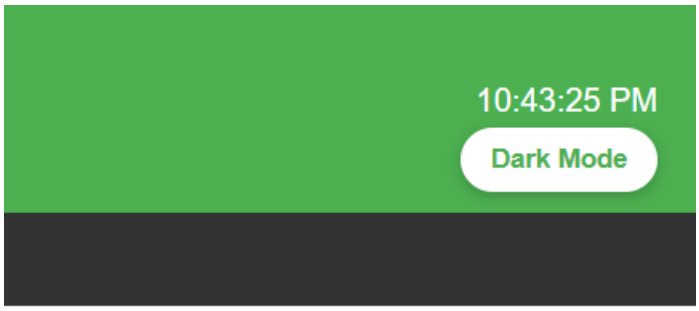
Description:

Displays the current time in the header and updates every second.

Code Snippet:

```
224        // Live Clock
225        function updateClock() {
226            let now = new Date();
227            document.getElementById("clock").innerHTML = now.toLocaleTimeString();
228        }
229        setInterval(updateClock, 1000);
230        updateClock();
```

Screenshot:



2. Buy Now Button with Cart Counter

Description:

Each "Buy Now" button adds an item to the cart and updates the counter in the header.

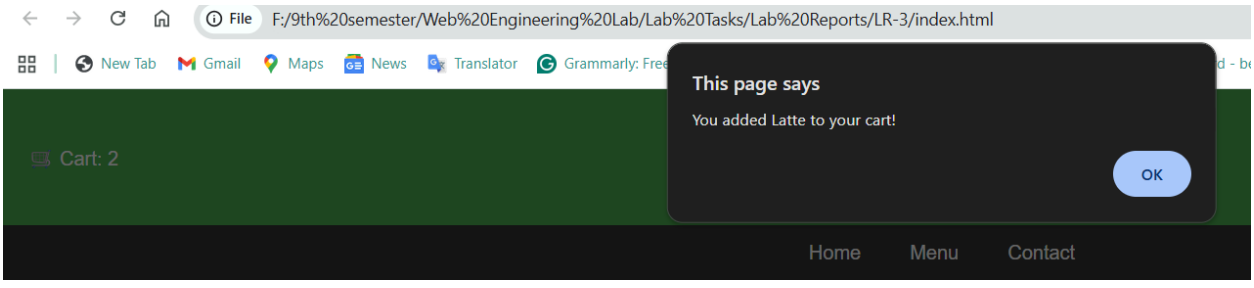
Code Snippet:

```
let cartCount = 0;

// Buy Coffee Function
function buyCoffee(coffeeName) {
    cartCount++;
    document.getElementById("cartCount").innerText = cartCount;
    alert("You added " + coffeeName + " to your cart!");
}

```

Screenshot:



3. Search Filter for Coffee Menu

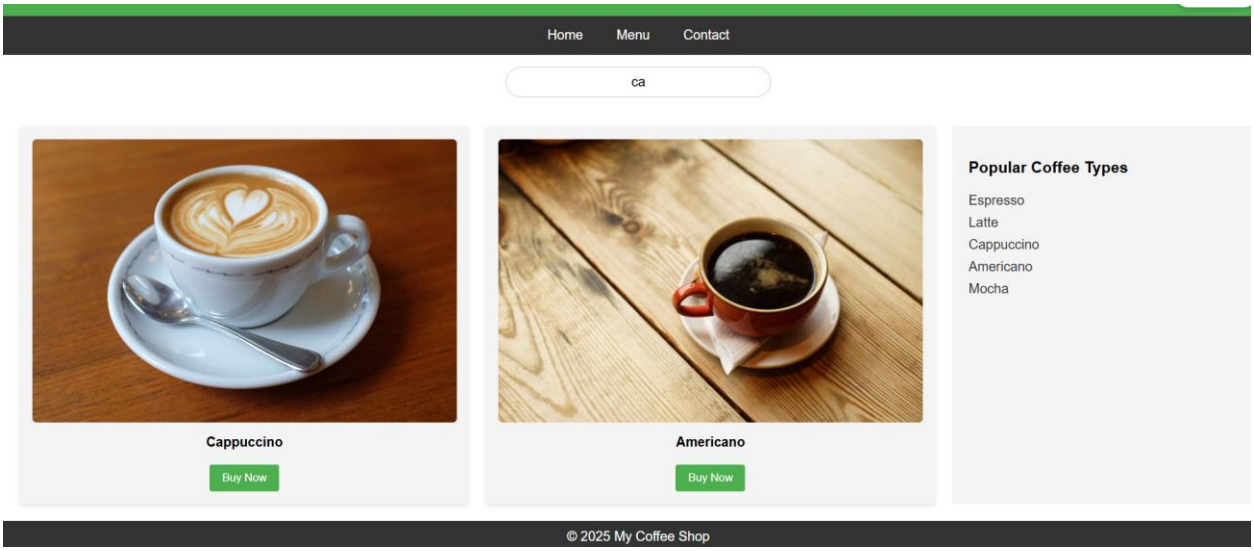
Description:

Filters coffee items dynamically based on user input in the search bar.

Code Snippet:

```
// Search Filter
document.getElementById("searchBar").addEventListener("keyup", function() {
    let filter = this.value.toLowerCase();
    let cards = document.querySelectorAll(".coffee-card");
    cards.forEach(card => {
        let coffeeName = card.querySelector("h4").innerText.toLowerCase();
        card.style.display = coffeeName.includes(filter) ? "block" : "none";
    });
});
```

Screenshot:



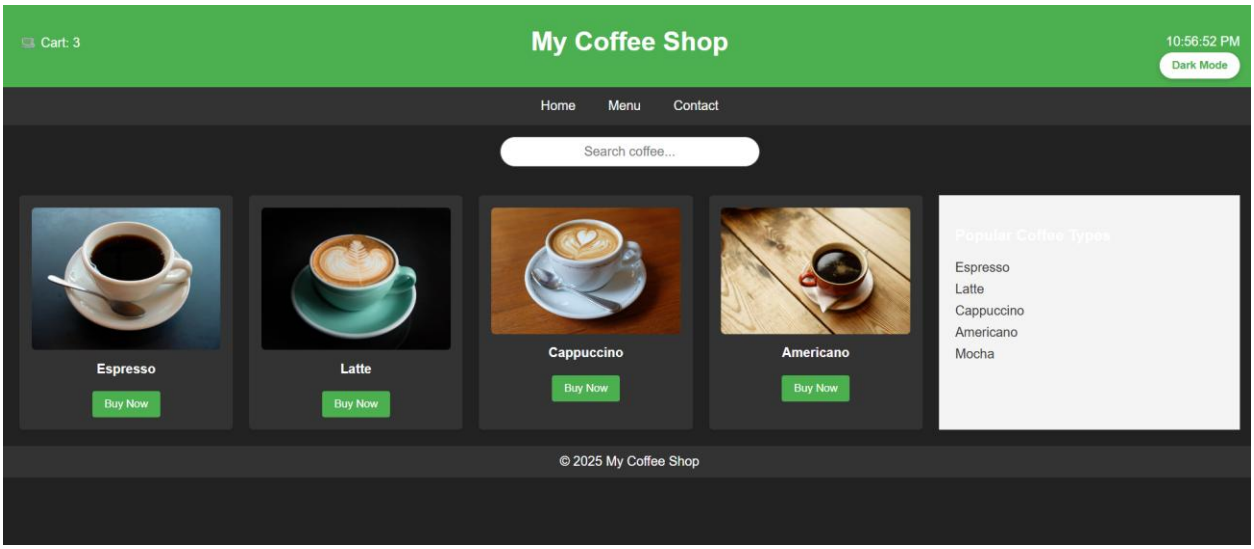
4. Dark Mode Toggle

Description:
Toggles the entire website's theme between light and dark mode when the user clicks a button.

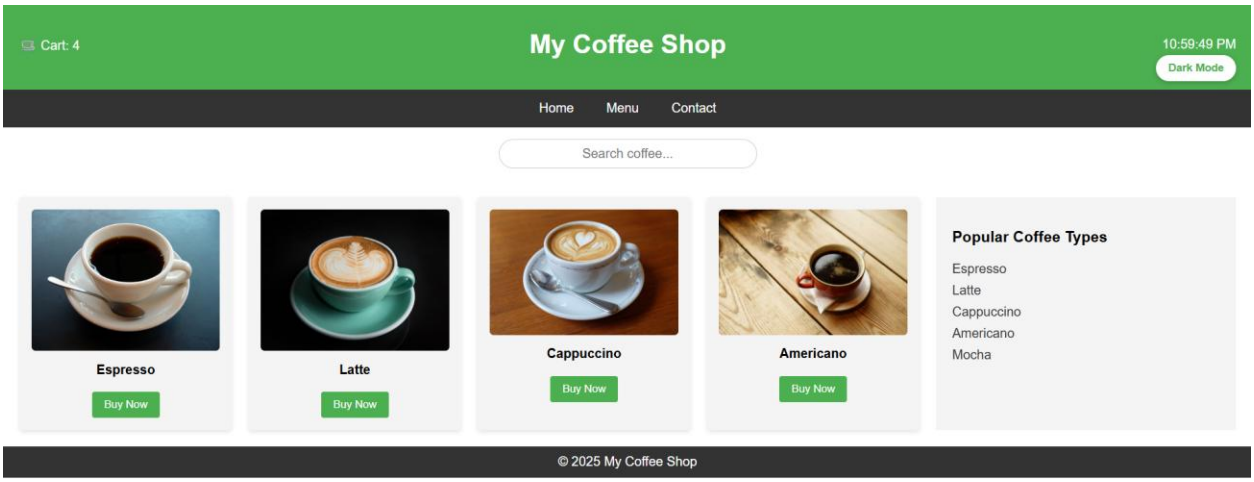
Code Snippet:

```
// Dark Mode Toggle
function toggleDarkMode() {
    document.body.classList.toggle("dark-mode");
}
```

Screenshot:



Final Output:



Outcome:

By implementing these features, the coffee shop website became interactive and user-friendly. JavaScript enabled real-time updates, search filtering, theme switching, and engaging hover animations, improving both functionality and user experience.

Conclusion:

JavaScript allows web pages to respond dynamically to user interactions, making them engaging and practical. Features such as live clocks, search filtering, dark mode, and event-driven actions contribute to better usability and modern web design.

References:

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

https://www.w3schools.com/js/

https://javascript.info/