Name: Sourav Shailesh Toshniwal
Class: TY CSE-8 AIEC-1
Batch: A
Roll no: 2213047
Serial no: 6

Assignment 6

Question:

Write a Javascript to create shopping applications which adds the books in cart, updates the existing books, delete the book and display the same. Create proper UI for the same.

Theory:

1. HTML and CSS for User Interface:
   - HTML: Create the structure of your shopping application, including product listings, cart display, and buttons for adding, updating, and deleting items.
   - CSS: Style your application for a visually appealing user interface, including layouts, fonts, colors, and responsive design.

2. JavaScript for Functionality:
   - Data Structure: Use data structures (e.g., arrays, objects) to store information about books, such as title, price, quantity, and unique identifiers.
   - Adding Books: Implement a function to add books to the cart. This function should update the cart's content and display.
   - Updating Books: Allow users to update the quantity or other details of books already in the cart.
   - Deleting Books: Provide the option to remove books from the cart.
   - Cart Total: Calculate and display the total price of items in the cart.
   - Event Handling: Use event listeners to capture user interactions (e.g., button clicks) and trigger the appropriate functions.
   - DOM Manipulation: Modify the Document Object Model (DOM) to update the UI in response to user actions.

Code:

```
<!DOCTYPE html>
<html lang="en">
```

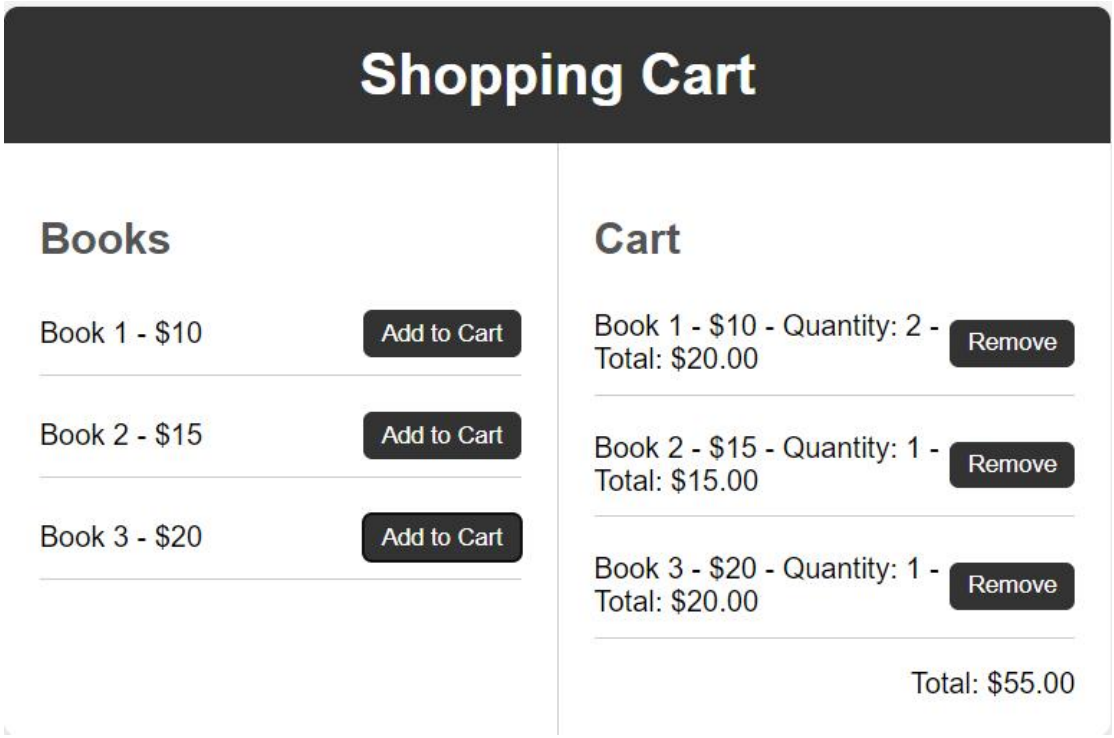
```
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Shopping Cart</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 0;
            padding: 0;
            background-color: #f4f4f4;
            display: flex;
            justify-content: center;
            align-items: center;
            height: 100vh;
        }

        .container {
            background-color: #fff;
            box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);
            border-radius: 8px;
            overflow: hidden;
        }
        h1 {
            background-color: #333;
            color: #fff;
            padding: 20px;
            margin: 0;
            text-align: center;
        }
        .content {
            display: flex;
        }
        .books {
            flex: 1;
            padding: 20px;
            border-right: 1px solid #ccc;
        }
        .cart {
            flex: 1;
            padding: 20px;
        }
        h2 {
            color: #555;
            margin-bottom: 10px;
        }
        ul {
            list-style: none;
            padding: 0;
        }
        li {
            margin-bottom: 10px;
            display: flex;
            justify-content: space-between;
            align-items: center;
            border-bottom: 1px solid #ccc;
            padding: 10px 0;
        }
        button {
            background-color: #333;
            color: #fff;
```

```
            border: none;
            padding: 5px 10px;
            cursor: pointer;
            border-radius: 5px;
        }
        button:hover {
            background-color: #555;
        }
        .total {
            text-align: right;
            margin-top: 10px;
        }
    </style>
</head>
<body>
    <div class="container">
        <h1>Shopping Cart</h1>
        <div class="content">
            <div class="books">
                <h2>Books</h2>
                <ul id="book-list">
                </ul>
            </div>
            <div class="cart">
                <h2>Cart</h2>
                <ul id="cart-list">
                </ul>
                <div class="total">
                    Total: $<span id="cart-total">0.00</span>
                </div>
            </div>
        </div>
    </div>
    <script>
        const books = [
            { id: 1, title: 'Book 1', price: 10 },
            { id: 2, title: 'Book 2', price: 15 },
            { id: 3, title: 'Book 3', price: 20 },
        ];
        const cart = [];
        function displayBooks() {
            const bookList = document.getElementById('book-list');
            bookList.innerHTML = '';
            books.forEach(book => {
                const listItem = document.createElement('li');
                listItem.innerHTML = `${book.title} - $${book.price} <button
onclick="addToCart(${book.id})">Add to Cart</button>`;
                bookList.appendChild(listItem);
            });
        }
        function addToCart(bookId) {
            const book = books.find(b => b.id === bookId);
            if (book) {
                const existingCartItem = cart.find(item => item.id === bookId);
                if (existingCartItem) {
                    existingCartItem.quantity++;
                } else {
                    cart.push({ ...book, quantity: 1 });
                }
                displayCart();
```

```
            }
        }
        function displayCart() {
            const cartList = document.getElementById('cart-list');
            const cartTotalElement = document.getElementById('cart-total');
            cartList.innerHTML = '';
            let total = 0;
            cart.forEach(item => {
                const listItem = document.createElement('li');
                const itemTotal = item.price * item.quantity;
                total += itemTotal;
                listItem.innerHTML = `${item.title} - $${item.price} - Quantity:
${item.quantity} - Total: $${itemTotal.toFixed(2)} <button
onclick="removeFromCart(${item.id})">Remove</button>`;
                cartList.appendChild(listItem);
            });
            cartTotalElement.textContent = total.toFixed(2);
        }
        function removeFromCart(bookId) {
            const index = cart.findIndex(item => item.id === bookId);
            if (index !== -1) {
                if (cart[index].quantity > 1) {
                    cart[index].quantity--;
                } else {
                    cart.splice(index, 1);
                }
                displayCart();
            }
        }
        displayBooks();
        displayCart();
    </script>
</body>
</html>
```

Output:



Conclusion:

The successful implementation of this JavaScript shopping application with cart functionality represents a comprehensive demonstration of web development skills. By combining HTML for structuring the user interface, CSS for styling, and JavaScript for dynamic functionality, developers can create an interactive and user-friendly e-commerce platform. This implementation allows users to seamlessly add, update, and remove books from their cart, while providing real-time feedback and calculating the total cost. Additionally, considerations for local storage, user experience design, and potential security measures contribute to a robust and polished application. Overall, this project showcases the ability to build a functional and engaging online shopping experience, covering key aspects of web development from the front-end to user interaction and data management.