Assignment 1 - Shopping Cart Implementation

(CLO-2: Illustrate the concepts of Java Scripting for mobile applications.)

Submission Guidelines:

Deadline: 26 sept. 2024

(https://www.youtube.com/watch?v=8Dd7KRpKeaE&t=1140s) For github desktop tutorial

Submission Requirements:

Code Implementation:

Implement the code for the assignment in a single JavaScript file.

Ensure the code is well-documented with comments explaining the logic and functionality of each function.

Report:

Prepare a PDF report (Registration_Number.pdf) that includes:

Title Page: Assignment title, your name, enrollment number, and date.

Introduction: Briefly describe the objective of the assignment and the operations implemented.

Code Explanation: Explain the logic behind each function implemented in your code.

Screenshots: Include screenshots of the program output demonstrating the working of each operation.

Conclusion: Reflect on what you learned through this assignment and any challenges faced.

GitHub Submission:

Navigate to your existing course repository on GitHub.

Inside this repository, create a new folder named Assignment 1.

Add the following files to this folder:

Your code file

Your report in PDF format

Final Submission:

Once all files are uploaded, verify the contents of the Assignment 1 folder on GitHub.

Share the link to the Assignment 1 folder with the Class Representative (CR) for collection.

Task:

Develop a JavaScript-based mobile shopping cart feature that uses ES6 arrow functions, array methods (map, filter, reduce), and object manipulation to manage items in a shopping cart. The application should:

1. **Add Items to the Cart:**
    - Create a function to add products to the cart using the push method.
    - Each product should be an object containing at least the following properties: productId, productName, quantity, and price.
2. **Remove and Update Items:**
    - Implement a function to remove items from the cart using the splice method by product ID.
    - Implement another function to update the quantity of items in the cart using array methods like map or find.
3. **Calculate Total Cost:**
    - Using reduce, create a function that calculates the total price of the items in the cart, taking into account the quantity of each item.
4. **Display Cart Summary:**
    - Develop a feature that generates a summary of the cart using map and displays each product's name, quantity, and total price for that product.
    - Additionally, include a function to filter out items with zero quantity from the cart.
5. **Bonus (Optional):**
    - Add a feature that allows applying a discount code to the total price.
    - Use arrow functions extensively and ensure code readability by commenting key parts.