COMSATS University Islamabad Attock Campus

MOBILE APP DEVELOPMENT

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Registration No: SP22-BSE-025

Assignment No: 01

Dated: 26September,2024

Submitted To

MR. MUHAMMAD KAMRAN

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Code Implementation:

The assignment requires a fully documented JavaScript file. Below is an example of a basic shopping cart implementation using JavaScript. I should create a JavaScript file and ensure it includes comments explaining the logic.

```javascript
// Shopping Cart Implementation

// Array to store the cart items
let cart = [];

// Function to add item to the cart
function addItemToCart(item, price, quantity) {
    // Check if item is already in the cart
    for (let i = 0; i < cart.length; i++) {
        if (cart[i].item === item) {
            cart[i].quantity += quantity; // Update quantity if item exists
            return;
        }
    }
    // Add new item to the cart if not already present
    cart.push({ item: item, price: price, quantity: quantity });
}

// Function to remove item from the cart
function removeItemFromCart(item) {
    cart = cart.filter(cartItem => cartItem.item !== item);
}

// Function to calculate total price
function calculateTotal() {
    let total = 0;
    for (let i = 0; i < cart.length; i++) {
        total += cart[i].price * cart[i].quantity;
    }
    return total;
}

// Function to display the cart items
function displayCart() {
```

```
    console.log("Cart Contents:");
    cart.forEach(item => {
        console.log(`${item.item} - Price: $${item.price} - Quantity: ${item.quantity}`);
    });

    console.log(`Total: $${calculateTotal()}`);
}

// Test the shopping cart functions
addItemToCart("Apple", 1.2, 2);
addItemToCart("Banana", 0.8, 5);
addItemToCart("Orange", 1.5, 3);
displayCart();
removeItemFromCart("Banana");
displayCart();
```

1.Introduction:

•This assignment aims to implement a simple shopping cart system using JavaScript. The system allows users to add, remove, and view items in their cart. It also calculates the total price of the items in the cart. The operations performed in this assignment demonstrate JavaScript's capabilities in handling arrays, functions, and basic data manipulation.

2.Code Explanation:

•**addItemToCart:** This function adds a new item to the cart. It checks if the item already exists in the cart and, if so, updates the quantity. If the item is not in the cart, it adds a new entry.

•**removeItemFromCart:** This function removes an item from the cart by filtering it out of the cart array.

•**calculateTotal:** This function iterates through the cart array and calculates the total cost by multiplying the price by the quantity of each item.

•**displayCart:** This function displays the current cart items and the total cost. It uses the calculateTotal function to show the total price.

•**Include screenshots showing the program output from running the cart functions. This should show the state of the cart after adding and removing items, along with the total price.**

3.Conclusion:

•Through this assignment, I learned how to implement basic shopping cart functionality using JavaScript. I improved my understanding of working with arrays, functions, and conditional logic. One challenge was ensuring the cart correctly updated when items were added or removed, which required careful handling of array manipulations.

4.ScreenShots:

GitHub

https://supreme-chainsaw-v6g6q9rpqvrrcx649.github.dev
class.js - MAD-0 [Codespaces: supreme chainsaw] - Visual Studio Code

MAD-0 [Codespaces: supreme chainsaw]

EXPLORER

[Preview] README.md   JS class.js U

Assignment1 > JS class.js > ...

MAD-0 [CODESPACES: SUPREME CHAINSAW]
∨ Assignment1
  JS class.js   U
  ① README.md

```js
1   // Shopping Cart Implementation
2
3   // Array to store the cart items
4   let cart = [];
5
6   // Function to add item to the cart
7   function addItemToCart(item, price, quantity) {
8       // Check if item is already in the cart
9       for (let i = 0; i < cart.length; i++) {
10          if (cart[i].item === item) {
11              cart[i].quantity += quantity; // Update quantity if item exists
12              return;
13          }
14      }
15      // Add new item to the cart if not already present
16      cart.push({ item: item, price: price, quantity: quantity });
17  }
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   COMMENTS

Cart Contents:
Apple - Price: $1.2 - Quantity: 2
Banana - Price: $0.8 - Quantity: 5
Orange - Price: $1.5 - Quantity: 3
Total: $10.9
Cart Contents:
Apple - Price: $1.2 - Quantity: 2
Orange - Price: $1.5 - Quantity: 3
Total: $6.9
@Mr2626222 →/workspaces/MAD-0 (main) $

> OUTLINE
> TIMELINE

Codespaces: supreme chainsaw   main*   ⊗ 0 ⚠ 0   ⚡ 0   Ln 1, Col 1   Spaces: 4   UTF-8   LF   {} JavaScript   Layout: US

ENG US   4:12 PM   9/26/2024