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Subject: MAD
Submitted to: UMER

Date:25/09/24

Assignment no 01

```javascript
// Shopping cart array

let cart = [];


// Function to add products to the cart

const addToCart = (productId, productName, quantity, price) => {

   cart.push({ productId, productName, quantity, price });

   console.log(`${productName} has been added to the cart.`);

};
```

```javascript
// Example usage:
addToCart(1, "Laptop", 1, 1000);
addToCart(2, "Phone", 2, 500);


// Function to remove an item from the cart
const removeFromCart = (productId) => {
  const index = cart.findIndex(item => item.productId === productId);
  if (index !== -1) {
    console.log(`${cart[index].productName} has been removed from the cart.`);
    cart.splice(index, 1);
  } else {
    console.log("Product not found in the cart.");
  }
};


// Function to update the quantity of an item
const updateQuantity = (productId, newQuantity) => {
  cart = cart.map(item =>
    item.productId === productId ? { ...item, quantity: newQuantity } : item
  );
```

```javascript
    console.log(`Quantity updated for product ID ${productId}.`);
};


// Example usage:
updateQuantity(1, 3);
removeFromCart(2);


// Function to calculate total price
const calculateTotalPrice = () => {
    const total = cart.reduce((sum, item) => sum + (item.price * item.quantity), 0);
    return total;
};


// Example usage:
console.log(`Total Price: $${calculateTotalPrice()}`);


// Function to display cart summary
const displayCartSummary = () => {
    const summary = cart.filter(item => item.quantity > 0)
            .map(item => `${item.productName}: ${item.quantity} x $${item.price} = $${item.quantity * item.price}`);
```

```javascript
    console.log("Cart Summary:");

    summary.forEach(item => console.log(item));

};


// Example usage:

displayCartSummary();


// Function to apply a discount code

const applyDiscount = (code) => {

    let discount = 0;

    if (code === "DISCOUNT10") {

        discount = 0.10; // 10% discount

    }

    const totalPrice = calculateTotalPrice();

    const discountedPrice = totalPrice - (totalPrice * discount);

    console.log(`Total after discount:
$${discountedPrice.toFixed(2)}`);

};


// Example usage:

applyDiscount("DISCOUNT10");
```

```javascript
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    console.log(`${productName} has been added to the cart.`);
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// Example usage:
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addToCart(2, "Phone", 2, 500);

// Function to remove an item from the cart
const removeFromCart = (productId) => {
    const index = cart.findIndex(item => item.productId === productId);
```

DEBUG CONSOLE

```
C:\Program Files\nodejs\node.exe .\script.js
Laptop has been added to the cart.
Phone has been added to the cart.
Quantity updated for product ID 1.
Phone has been removed from the cart.
Total Price: $3000
Cart Summary:
Laptop: 3 x $1000 = $3000
Total after discount: $2700.00
```

script.js:7
script.js:7
script.js:30
script.js:18
script.js:44
script.js:50
script.js:51
script.js:65