

Assignment # 01:

➤ Code:

// Shopping Cart Class

```
class ShoppingCart {
```

```
  constructor() {
```

```
    this.cart = []; // Initialize an empty cart
```

```
  }
```

// Add Items to the Cart

```
addItem = (productId, productName, quantity, price) => {
```

```
  const product = { productId, productName, quantity, price };
```

```
  this.cart.push(product); // Add product to the cart
```

```
};
```

// Remove Item from the Cart

```
removeItem = (productId) => {
```

```
  this.cart = this.cart.filter(product => product.productId !== productId); // Filter out the item
```

```
};
```

// Update Item Quantity

```
updateQuantity = (productId, newQuantity) => {
```

```
  this.cart = this.cart.map(product =>
```

```
    product.productId === productId ? { ...product, quantity: newQuantity } : product
```

```
  ); // Update quantity using map
```

```
};
```

// Calculate Total Cost

```
calculateTotalCost = () => {  
    return this.cart.reduce((total, product) => total + (product.price * product.quantity), 0); //  
    Use reduce to calculate total  
};  
  
// Display Cart Summary  
displayCartSummary = () => {  
    const summary = this.cart  
        .filter(product => product.quantity > 0) // Filter out zero quantity items  
        .map(product => ({  
            name: product.productName,  
            quantity: product.quantity,  
            total: product.price * product.quantity  
        }));  
  
    summary.forEach(item => {  
        console.log(`${item.name} - Quantity: ${item.quantity}, Total: $$${item.total.toFixed(2)}`);  
    });  
};  
  
// Apply Discount Code  
applyDiscount = (discountCode) => {  
    const discounts = { "SAVE10": 0.10, "SAVE20": 0.20 }; // Sample discount codes  
    const discount = discounts[discountCode] || 0; // Get discount or 0 if not found  
    const totalCost = this.calculateTotalCost();  
    return totalCost - (totalCost * discount); // Calculate discounted total  
};
```

```
}
```

```
// Example Usage
```

```
const cart = new ShoppingCart();
```

```
cart.addItem(1, "Laptop", 1, 999.99);
```

```
cart.addItem(2, "Mouse", 2, 25.99);
```

```
cart.addItem(3, "Keyboard", 0, 45.50); // Zero quantity item
```

```
cart.addItem(4, "Printer", 3, 20.80);
```

```
cart.addItem(5, "HardDisk", 1, 70.80);
```

```
cart.addItem(6, "Ram", 9, 11.0);
```

```
console.log("Cart Summary Before Updates:");
```

```
cart.displayCartSummary(); // Display current cart summary
```

```
cart.updateQuantity(3, 1); // Update quantity for the keyboard
```

```
cart.removeItem(2); // Remove the mouse
```

```
cart.removeItem(4);
```

```
console.log("\nCart Summary After Updates:");
```

```
cart.displayCartSummary(); // Display updated cart summary
```

```
const totalCost = cart.calculateTotalCost();
```

```
console.log(`\nTotal Cost: $${totalCost.toFixed(2)}`);
```

```
const discountedTotal = cart.applyDiscount("SAVE10");
```

```
console.log(`Discounted Total: $${discountedTotal.toFixed(2)}`);
```