



**Assingment No 1**

**NAME : ADEEL KHAN**

**REG NO: SP22-BSE-047**

**SUBMITTED TO: MR. Muhammad Kamran**

```
let cart = [];
```

```
// Function to add items to the cart
```

```
const addItemToCart = (productId, productName, quantity, price) => {  
  cart.push({ productId, productName, quantity, price });  
  console.log(`${productName} added to the cart.`);  
};
```

```
// Function to remove an item by product ID
```

```
const removeItemFromCart = (productId) => {  
  const index = cart.findIndex(item => item.productId === productId);  
  if (index !== -1) {  
    const [removedItem] = cart.splice(index, 1);  
    console.log(`${removedItem.productName} removed from the cart.`);  
  } else {  
    console.log(`Item with ID ${productId} not found in the cart.`);  
  }  
};
```

```
// Function to update the quantity of an item
```

```
const updateItemQuantity = (productId, newQuantity) => {  
  const item = cart.find(product => product.productId === productId);  
  if (item) {  
    item.quantity = newQuantity;  
    console.log(`Quantity of ${item.productName} updated to ${newQuantity}.`);  
  } else {  
    console.log(`Item with ID ${productId} not found in the cart.`);  
  }  
}
```

```
};
```

```
// Function to calculate total cost of the cart
```

```
const calculateTotalCost = () => {  
  const totalCost = cart.reduce((total, { price, quantity }) => total + (price * quantity), 0);  
  console.log(Total Cost: $$${totalCost});  
  return totalCost;  
};
```

```
// Function to display the cart summary
```

```
const displayCartSummary = () => {  
  if (cart.length === 0) {  
    console.log("Cart is empty.");  
    return;  
  }  
}
```

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

```
cart.forEach(({ productName, quantity, price }) => {  
  const productTotal = price * quantity;  
  console.log(`${productName} - Quantity: ${quantity}, Total: $$${productTotal});  
});
```

```
};
```

```
// Function to filter out items with zero quantity
```

```
const filterOutZeroQuantityItems = () => {  
  cart = cart.filter(({ quantity }) => quantity > 0);  
  console.log("Items with zero quantity removed from the cart.");  
};
```

```
// Function to apply a discount code

const applyDiscount = (discountCode) => {
  const discount = discountCode === 'DISCOUNT10' ? 0.10 : 0;
  const totalCost = calculateTotalCost();
  const discountedTotal = totalCost * (1 - discount);
  console.log(Discounted Total (after applying ${discountCode}): $$${discountedTotal.toFixed(2)});
};
```

```
// Sample Usage
```

```
addItemToCart(1, 'Phone', 2, 300);
addItemToCart(2, 'Laptop', 1, 1000);
addItemToCart(3, 'Headphones', 3, 50);
displayCartSummary();
```

```
updateItemQuantity(1, 3);
displayCartSummary();
```

```
removeItemFromCart(2);
displayCartSummary();
```

```
filterOutZeroQuantityItems();
calculateTotalCost();
```

```
applyDiscount('DISCOUNT10');
```

### **out puts of the code:**

Phone added to the cart.

Laptop added to the cart.

Headphones added to the cart.

Cart Summary:

Phone - Quantity: 2, Total: \$600

Laptop - Quantity: 1, Total: \$1000

Headphones - Quantity: 3, Total: \$150

Quantity of Phone updated to 3.

Cart Summary:

Phone - Quantity: 3, Total: \$900

Laptop - Quantity: 1, Total: \$1000

Headphones - Quantity: 3, Total: \$150

Laptop removed from the cart.

Cart Summary:

Phone - Quantity: 3, Total: \$900

Headphones - Quantity: 3, Total: \$150

Items with zero quantity removed from the cart.

Total Cost: \$1050

Discounted Total (after applying DISCOUNT10): \$945.00