```
// 1. Counter application using closure
function createCounter() {
  let count = 0;
  return function() {
    count++;
    console.log(`Button clicked ${count} times`);
  };
}

const counter = createCounter();
// Call counter() whenever the button is clicked to increment the count

// 2. Destructuring an object representing a customer order
const order = {
  orderId: "123456",
  productName: "Laptop",
  quantity: 2,
};

const { orderId, productName, quantity } = order;
console.log(`Order ID: ${orderId}, Product: ${productName}, Quantity: ${quantity}`);

// 3. Implementing a cart feature using JavaScript closure
function shoppingCart() {
  const cartItems = [];

  return {
    getCartItems: function() {
      return cartItems;
    },
    addItem: function(product) {
```

```
    const existingProduct = cartItems.find(item => item.id === product.id);
    if (existingProduct) {
      existingProduct.quantity += 1;
    } else {
      cartItems.push({ ...product, quantity: 1 });
    }
  }
 };
}

const cart = shoppingCart();
console.log("Cart Items:", cart.getCartItems()); // OUTPUT: Cart Items: []

// 4. Adding products to the cart using closure
const product1 = { id: 1, name: "Product 1", price: 10 };
const product2 = { id: 2, name: "Product 2", price: 20 };

cart.addItem(product1);
cart.addItem(product1);
cart.addItem(product2);

console.log("Cart Items:", cart.getCartItems());
// OUTPUT:
// Cart Items:
// [ { id: 1, name: 'Product 1', price: 10, quantity: 2 },
//   { id: 2, name: 'Product 2', price: 20, quantity: 1 } ]]
5)
// Assuming `cartItems` is an array of items in the cart
function removeItemFromCart(productId) {
  cartItems = cartItems.filter(item => item.id !== productId);
}
```

6) function createPlaylist(playlistName) {

```
  const songs = [];
  return {
    addSong: (songName, artist) => songs.push({ songName, artist }),
    listSongs: () => console.log(songs)
  };
}
```

```
const myPlaylist = createPlaylist("My Favorites");
myPlaylist.addSong("Song 1", "Artist 1");
myPlaylist.addSong("Song 2", "Artist 2");
myPlaylist.listSongs(); // Output: [ { songName: 'Song 1', artist: 'Artist 1' }, { songName: 'Song 2', artist: 'Artist 2' } ]
```