

***COMSATS UNIVERSITY ISLAMABAD ATTOCK
CAMPUS***



(ASSIGNMENT 01)

NAME :

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REG NO:

(SP22-BSE-033)

SUBMITTED TO:

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SUBJECT:

Mobile Application Development

DATE:

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Shopping Cart

Introduction:

*This assignment is on creating a basic shopping cart using javascript
The cart allows user to add items , removes them , update quantities
and calculate the total cost of all items in the cart.*

Code Explanation:

*I organized the code into multiple functions to handle various
operation relation to cart.*

Each item in the cart is represented by an object containing its

- *Name*
- *Price*
- *Quantity*

```
function addItemToCart(itemName, itemPrice, quantity) { //taking 3 parameters name, price, and quantity of the item
    let item = {
        name: itemName, // the name of the item to be added
        price: itemPrice, // the price per unit of the item
        quantity: quantity, // the number of units of the item being added
    };
    shoppingCart.push(item); // the created item object is pushed into the shopping cart array
    console.log(`${itemName} added to cart.`); // message is logged to the console indicating that the item has been successfully added to the cart
}
```

Functions :

*functions are provided to add remove and update items in the
cart*

- **Add items:**

```
// now i will use fuction to add items to the shopping cart

function addItemToCart(itemName, itemPrice, quantity) { //taking 3 parameters name, price, and quantity of the item
    let item = {
        name: itemName, // the name of the item to be added
        price: itemPrice, // the price per unit of the item
        quantity: quantity, // the number of units of the item being added
    };
    shoppingCart.push(item); // the created item object is pushed into the shopping cart array
    console.log(`${itemName} added to cart.`); // message is logged to the console indicating that the item has been successfully added to the cart
}
```

```

64 //Example
65
66 addItemToCart('Apple',1.5, 3);      //adding 3 apples  each apple price 1.5$
67 addItemToCart('Banana',0.5, 6);      //adding 6 banana  each banana price is 0.5$
68 addItemToCart('mango',1.2, 6);      //adding 6 mango  each mango price is 1.2$
69 addItemToCart('pineapple',2, 3);     //adding 3 pineapple  each pineapple price is 2$
70 addItemToCart('shampoo',5, 2);       //adding 2 shampoo  each shampoo price is 5$
71 addItemToCart('soap',3, 4);          //adding 4 soap  each soap price is 3$
72 addItemToCart('watch',8, 2);         //adding 2 watch  each watch price is 8$
73 addItemToCart('mobile case',10, 1);  //adding 1 mobile case  each mobile case price is 10$
74 displayCart();                       //Display cart and total
75

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

```

@hammad033-a → /workspaces/MAD (main) $ node Assignment-1/index.js
Appleadded to cart.
Bananaadded to cart.
mangoadded to cart.
pineappleadded to cart.
shampooadded to cart.
soapadded to cart.
watchadded to cart.
mobile caseadded to cart.

```

• *Remove an item:*

```

//will use function to remove an item from the shopping cart by name

```

```

function removeItemFromCart(itemName) {                                // its takes one parameter itemName name of the item will remove
    shoppingCart = shoppingCart.filter(item => item.name !== itemName); //filter() method to create a new array that only contains items
    console.log(`${itemName} removed from the cart.`);                 // new array back to shopping cart variable the specific item will removed from the cart
}

```

```

78
79 removeItemFromCart('Banana');      // remove banana from the cart
80 removeItemFromCart('soap');        // remove soap from the cart
81 removeItemFromCart('pineapple');   // remove pineapple from the cart
82 displayCart();                     // display final and total
83
84
85
86
87
88
89
90

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

```

@hammad033-a → /workspaces/MAD (main) $ node Assignment-1/index.js
Banana removed from the cart.
soap removed from the cart.
pineapple removed from the cart.
Shopping Cart:

```

- *Update item quantity:*

```
// fuction that update the quantity of item in the cart

function updateItemQuantity(itemName, newQuantity) { // two parameters item name and quantity
  shoppingCart.forEach(item => { // it iterates over the shoppingcart array using forEach
    if (item.name === itemName){ // if the name of the item matches the provided item name
      item.quantity = newQuantity;
      console.log(`Quantity of ${itemName} updated to ${newQuantity}.`); // the quantity of that item will update to the value. of new Quantity
    }
  });
}
```

```
76 updateItemQuantity('Apple',5); //updating the quantity of apple to 5
77 updateItemQuantity('watch',4); //updating the quantity of watch to 4
78 updateItemQuantity('shampoo',5); //updating the quantity of shampoo to 5
79 displayCart(); // display updated cart and total
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

```
Quantity of Apple updated to 5.
Quantity of watch updated to 4.
Quantity of shampoo updated to 5.
Shopping Cart:
```

- *Total cost of item in cart*

The total cost is calculated by iterating throughout the cart items and + up the price and quantity

```
//now the fuction to calculate the total cost of items in the cart

function calculateTotalCost() {
  let total = 0; // it initialize a total variable with a value of 0
  shoppingCart.forEach(item =>{ //the function iterates over the shopping cart array using for each
    total += item.price * item.quantity; // for each item it multiply the price of the item by its quantity and add the result to total
  });
  return total; // after iterating throughout all the items it return the fnal value of total
}
```

- *Display the item in Cart*

```
// now using the last funtion to display the items in the cart

function displayCart() {
  console.log("Shopping Cart:"); // it starts by logging " shopping cart " to the console
  shoppingCart.forEach(item =>{ // then it iterates over the shopping cart array using for each
    console.log(`${item.name} - ${item.price} x ${item.quantity}`); // and log each item name price and quantity
  });
  console.log(`Total Cost: ${calculateTotalCost()}`); // after listing all item it calls the calculate totalcost function to compute the total cost
}
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  COMMENTS
● @hammad033-a → /workspaces/MAD (main) $ node Assignment-1/index.js
Appleadded to cart.
Bananaadded to cart.
pineappleadded to cart.
shampooadded to cart.
soapadded to cart.
watchadded to cart.
Shopping Cart:
Apple - $1.5 x 3
Banana - $0.5 x 6
pineapple - $2 x 3
shampoo - $5 x 2
soap - $3 x 4
watch - $8 x 2
Total Cost: $51.5
Quantity of Apple updated to 5.
Quantity of watch updated to 4.
Quantity of shampoo updated to 5.
Shopping Cart:
Apple - $1.5 x 5
Banana - $0.5 x 6
pineapple - $2 x 3
shampoo - $5 x 5
soap - $3 x 4
watch - $8 x 4
Total Cost: $85.5
Banana removed from the cart.
soap removed from the cart.
pineapple removed from the cart.
Shopping Cart:
Apple - $1.5 x 5
shampoo - $5 x 5
watch - $8 x 4
Total Cost: $64.5
○ @hammad033-a → /workspaces/MAD (main) $ █
```

- **Conclusion**

Throughout this assignment I learned how to implement a simple shopping cart using JavaScript. I explore how to use function to manipulate arrays and object and how to calculate totals. The main challenge I faced were ensuring items update were correctly reflected and handling item removal.