

## Lesson 06 Demo 01

### Creating a Function to Sort the Product List Based on Price

**Objective:** To demonstrate how to sort a list of products based on their prices using a custom function in JavaScript

**Tools Required:** Visual Studio Code and Node.js

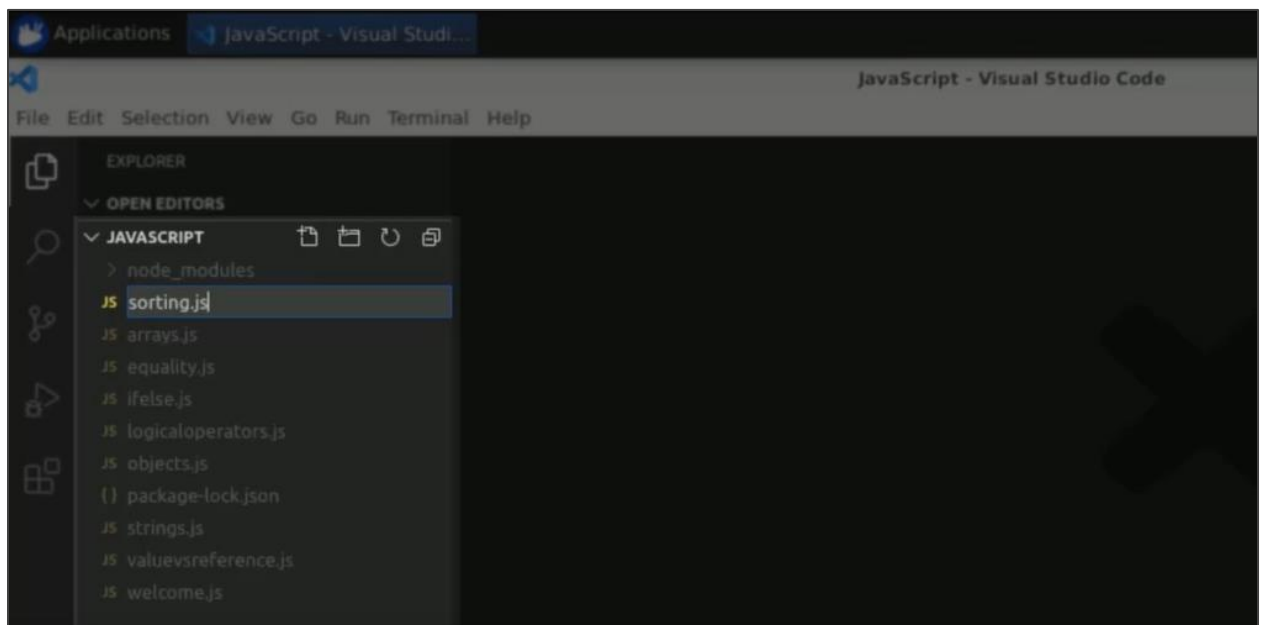
**Prerequisites:** None

#### Steps to be followed:

1. Declare and populate the products array
2. Define a function to sort the products array

#### Step 1: Declare and populate the products array

- 1.1 Open Visual Studio Code and create a new JavaScript file named **sorting.js**



- 1.2 Declare a variable named **products** and assign it an empty array []. Add the product objects to the **products** array

```
JS sorting.js •
JS sorting.js > [?] products
1  let products = []
2      {
3          name: 'Adidas Alphabounce',
4          price: 5000
5      },
6      {
7          name: 'Sandisk USB',
8          price: 300
9      },
10     {
11         name: 'Adidas Alphabounce',
12         price: 5000
13     },
14 ]
```

- 1.3 Create a function named **printArray** to display product details on the console using an enhanced for loop. Run the program

```
JS sorting.js x
JS sorting.js > printArray
19     name: 'Cadbury 5 Star',
20     price: 10
21   },
22 ]
23
24 function printArray(array){
25   for(let item of array){
26     console.log(item);
27   }
28 }
29
30 printArray(products);
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
{ name: 'Samsung LED TV', price: 50000 },
{ name: 'Cadbury 5 Star', price: 10 }
]
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node sorting.js
{ name: 'Adidas Alphabounce', price: 5000 }
{ name: 'Sandisk USB', price: 300 }
{ name: 'Adidas Ultraboost', price: 8000 }
{ name: 'Samsung LED TV', price: 50000 }
{ name: 'Cadbury 5 Star', price: 10 }
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$
```

## Step 2: Define a function to sort the products array

- 2.1 Declare a function named **sortByPrice** that takes two product objects and calculates the price difference between them. Return the price difference from the function

```
JS sorting.js X
JS sorting.js > ...
22   ]
23
24   function printArray(array){
25       for(let item of array){
26           console.log(item);
27       }
28   }
29
30   function sortByPrice(product1, product2){
31       return product1.price - product2.price;
32   }
```

- 2.2 Call the **printArray** function again to display the sorted list of products objects

```
JS sorting.js > ...
22   ]
23
24   function printArray(array){
25       for(let item of array){
26           console.log(item);
27       }
28   }
29
30   function sortByPrice(product1, product2){
31       return product1.price - product2.price;
32   }
33
34   products.sort(sortByPrice);
35
36   printArray(products);
```

```
JS sorting.js X
JS sorting.js > ...
22   ]
23
24   function printArray(array){
25       for(let item of array){
26           console.log(item);
27       }
28   }
29
30   function sortOnPrice(product1, product2){
31       return product1.price - product2.price;
32   }
33
34   products.sort(sortOnPrice);
35
36   printArray(products);
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```
{ name: 'Adidas Ultraboost', price: 8000 }
{ name: 'Samsung LED TV', price: 50000 }
{ name: 'Cadbury 5 Star', price: 10 }
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node sorting.js
{ name: 'Cadbury 5 Star', price: 10 }
{ name: 'Sandisk USB', price: 300 }
{ name: 'Adidas Alphabounce', price: 5000 }
{ name: 'Adidas Ultraboost', price: 8000 }
{ name: 'Samsung LED TV', price: 50000 }
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$
```

By following these steps, you have successfully demonstrated how to sort a list of products based on their prices using a custom function in JavaScript, enhancing your ability to manage and organize data effectively in your applications.