

Lesson 6 Demo 2

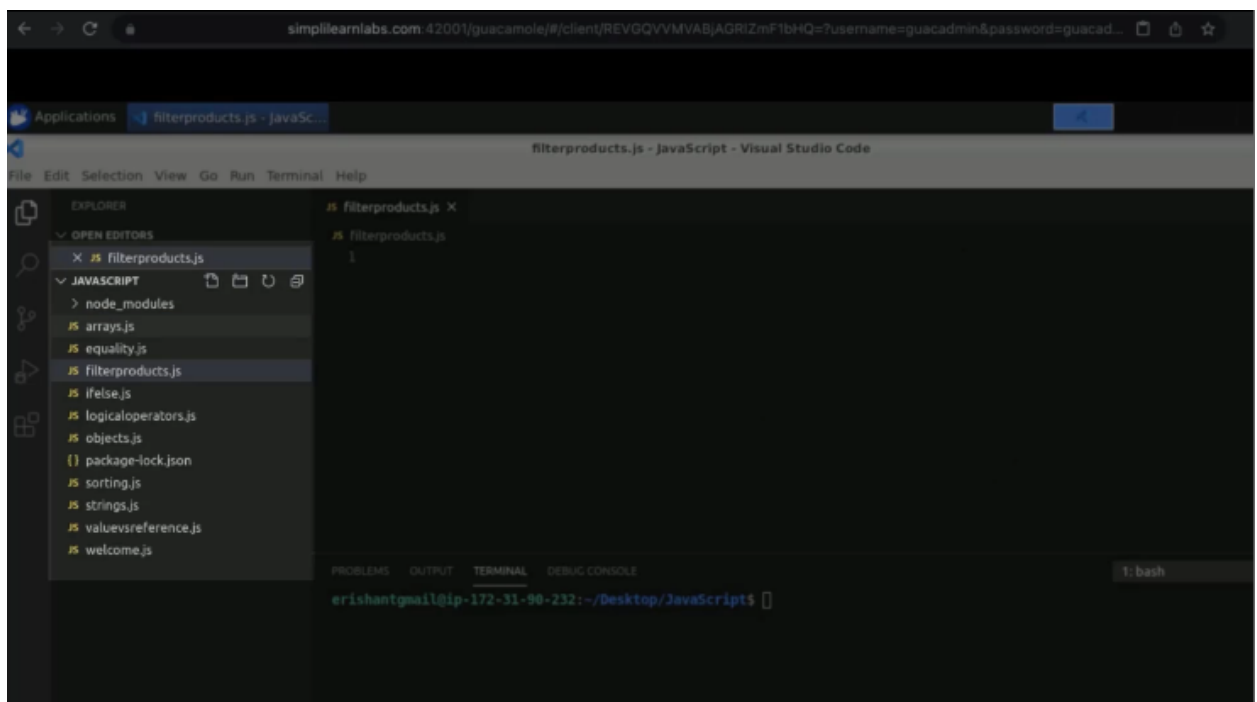
Creating Function to Filter the Product List

Objective: To create a function to filter the product list

Prerequisites: None

Steps to perform:

1. Create a file named 'filterproducts.js'.



2. Copy the code from the previous snippet 'sorting.js'.

```

21 // ...
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     return product2.price - product1.price;
33 }
34
35
36 products.sort(sortOnPrice);

```

3. Bring that code to the filter section.

```

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     return product2.price - product1.price;
33 }
34
35
36 products.sort(sortOnPrice);
37
38 printArray(products);

```

4. Execute the program.

The screenshot shows the Visual Studio Code editor with the file `filterproducts.js` open. The file contains the following JavaScript code:

```

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
31  printArray(products);

```

The terminal at the bottom shows the command `node filterproducts.js` being executed, resulting in the following output:

```

{ name: 'Adidas Alphabounce', price: 5000 }
{ name: 'Sandisk USB', price: 300 }
{ name: 'Adidas Ultraboot', price: 8000 }
{ name: 'Samsung LED TV', price: 50000 }
{ name: 'Cadbury 5 Star', price: 10 }

```

5. Define a function as filter by price.

The screenshot shows the Visual Studio Code editor with the file `filterproducts.js` open. The file now includes a new function `filterByPrice()` at the end:

```

30  function filterByPrice(){
31
32  }
33
34

```

The terminal at the bottom shows the command `node filterproducts.js` being executed, resulting in the same output as before:

```

{ name: 'Adidas Alphabounce', price: 5000 }
{ name: 'Sandisk USB', price: 300 }
{ name: 'Adidas Ultraboot', price: 8000 }
{ name: 'Samsung LED TV', price: 50000 }
{ name: 'Cadbury 5 Star', price: 10 }

```

6. Pass a return function.

```

filterproducts.js - JavaScript - Visual Studio Code

EXPLORER
  filterproducts.js
  node_modules
  arrays.js
  equality.js
  filterproducts.js
  ifelse.js
  logicaloperators.js
  objects.js
  package-lock.json
  sorting.js
  strings.js
  valuesreference.js
  welcome.js

filterproducts.js
  20   price: 10
  21   },
  22   ]
  23
  24   function printArray(array){
  25     for(let item of array){
  26       console.log(item);
  27     }
  28   }
  29
  30   function filterByPrice(product){
  31     return (product.price > 3000);
  32   }
  33
  34

TERMINAL
  1: bash
  erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node filterproducts.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$

```

7. Pass a filter by price as an input, and execute the code.

```

filterproducts.js - JavaScript - Visual Studio Code

EXPLORER
  filterproducts.js
  node_modules
  arrays.js
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  ifelse.js
  logicaloperators.js
  objects.js
  package-lock.json
  sorting.js
  strings.js
  valuesreference.js
  welcome.js

filterproducts.js
  25   for(let item of array){
  26     console.log(item);
  27   }
  28   }
  29
  30   function filterByPrice(product){
  31     return (product.price > 3000);
  32   }
  33
  34   products.filter(filterByPrice);
  35
  36   printArray(products);

TERMINAL
  1: bash
  { 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 filterproducts.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$

```

8. Write the result statement and introduce one log statement.

```

filterproducts.js - JavaScript - Visual Studio Code

Selection View Go Run Terminal Help

EXPLORER
filterproducts.js x
OPEN EDITORS
filterproducts.js
JAVASCRIPT
node_modules
arrays.js
equality.js
filterproducts.js
ifelse.js
logicaloperators.js
objects.js
package-lock.json
sorting.js
strings.js
valuesreference.js
welcome.js

filterproducts.js
25   for(let item of array){
26     console.log(item);
27   }
28 }
29
30 function filterByPrice(product){
31   return (product.price > 3000);
32 }
33
34 let result = products.filter(filterByPrice);
35
36 printArray(products);
37 console.log("-----");
38 printArray(result);

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
1: bash
{ name: 'Adidas Ultraboot', price: 8000 }
{ name: 'Samsung LED TV', price: 50000 }
{ name: 'Cadbury 5 Star', price: 10 }
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node filterproducts.js
{ name: 'Adidas Alphabounce', price: 5000 }
{ name: 'Sandisk USB', price: 300 }
{ name: 'Adidas Ultraboot', price: 8000 }
{ name: 'Samsung LED TV', price: 50000 }
{ name: 'Cadbury 5 Star', price: 10 }
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

9. Run the code.

```

filterproducts.js - JavaScript - Visual Studio Code

Selection View Go Run Terminal Help

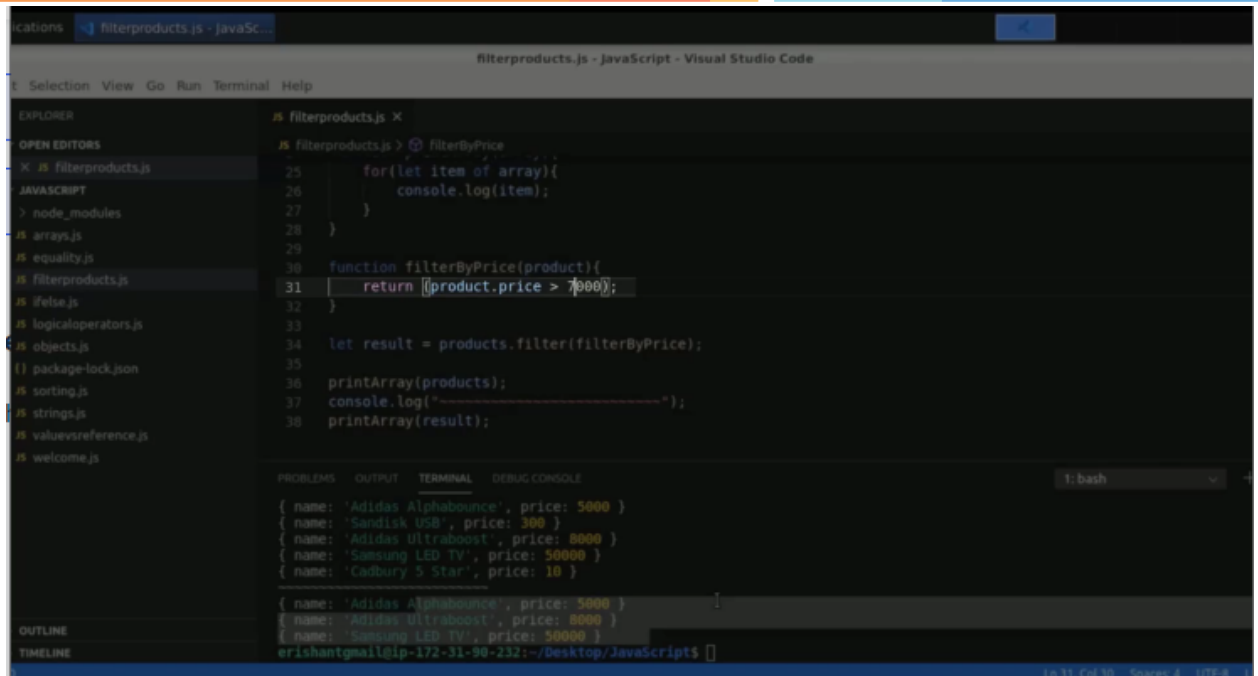
EXPLORER
filterproducts.js x
OPEN EDITORS
filterproducts.js
JAVASCRIPT
node_modules
arrays.js
equality.js
filterproducts.js
ifelse.js
logicaloperators.js
objects.js
package-lock.json
sorting.js
strings.js
valuesreference.js
welcome.js

filterproducts.js
25   for(let item of array){
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27   }
28 }
29
30 function filterByPrice(product){
31   return (product.price > 3000);
32 }
33
34 let result = products.filter(filterByPrice);
35
36 printArray(products);
37 console.log("-----");
38 printArray(result);

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
1: bash
{ name: 'Adidas Alphabounce', price: 5000 }
{ name: 'Sandisk USB', price: 300 }
{ name: 'Adidas Ultraboot', price: 8000 }
{ name: 'Samsung LED TV', price: 50000 }
{ name: 'Cadbury 5 Star', price: 10 }
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

10. Change the product price to 7000.



```

filterproducts.js - JavaScript - Visual Studio Code
Selection View Go Run Terminal Help

EXPLORER
filterproducts.js
filterproducts.js
node_modules
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filterproducts.js
ifelse.js
logicaloperators.js
objects.js
package-lock.json
sorting.js
strings.js
valuesreference.js
welcome.js

filterproducts.js
25 for(let item of array){
26   console.log(item);
27 }
28
29
30 function filterByPrice(product){
31   return (product.price > 7000);
32 }
33
34 let result = products.filter(filterByPrice);
35
36 printArray(products);
37 console.log("-----");
38 printArray(result);

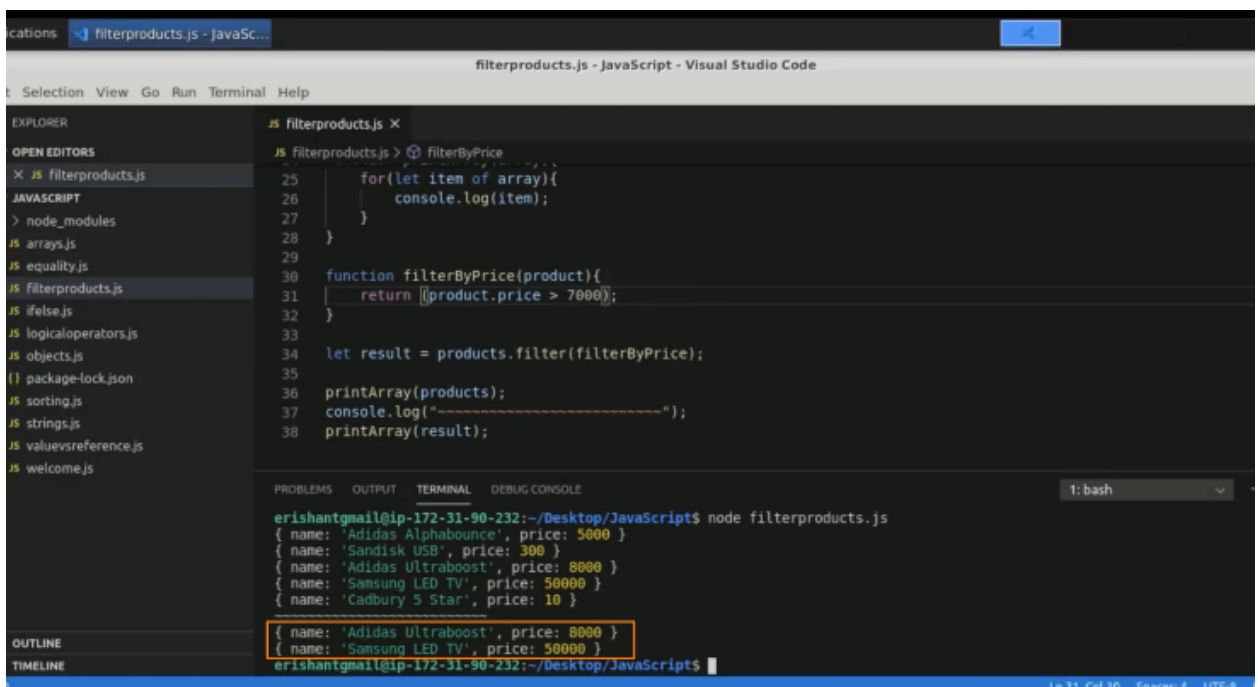
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
1: bash
{ name: 'Adidas Alphabounce', price: 5000 }
{ name: 'Sandisk USB', price: 300 }
{ name: 'Adidas Ultraboot', price: 8000 }
{ name: 'Samsung LED TV', price: 50000 }
{ name: 'Cadbury 5 Star', price: 10 }

{ name: 'Adidas Alphabounce', price: 5000 }
{ name: 'Adidas Ultraboot', price: 8000 }
{ name: 'Samsung LED TV', price: 50000 }

erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

11. Run the code.



```

filterproducts.js - JavaScript - Visual Studio Code
Selection View Go Run Terminal Help

EXPLORER
filterproducts.js
filterproducts.js
node_modules
arrays.js
equality.js
filterproducts.js
ifelse.js
logicaloperators.js
objects.js
package-lock.json
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strings.js
valuesreference.js
welcome.js

filterproducts.js
25 for(let item of array){
26   console.log(item);
27 }
28
29
30 function filterByPrice(product){
31   return (product.price > 7000);
32 }
33
34 let result = products.filter(filterByPrice);
35
36 printArray(products);
37 console.log("-----");
38 printArray(result);

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
1: bash
erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$ node filterproducts.js
{ name: 'Adidas Alphabounce', price: 5000 }
{ name: 'Sandisk USB', price: 300 }
{ name: 'Adidas Ultraboot', price: 8000 }
{ name: 'Samsung LED TV', price: 50000 }
{ name: 'Cadbury 5 Star', price: 10 }

{ name: 'Adidas Ultraboot', price: 8000 }
{ name: 'Samsung LED TV', price: 50000 }

erishantgmail@ip-172-31-90-232:~/Desktop/JavaScript$

```

