

## **Experiment - 2.2**

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Subject - Full Stack

### **Title**

Dynamic Product Filter with Dropdown using JavaScript DOM Manipulation

### **Objective**

Build a web-based product list that can dynamically filter and display items based on the user's selection from a dropdown menu. This task helps you understand how to use JavaScript to manipulate the DOM, handle events, and update visible elements in real time.

### **Code Implementation :**

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
<meta charset="UTF-8" />
```

```
<meta name="viewport" content="width=device-width, initial-scale=1" />
```

```
<title>Dynamic Product Filter with Dropdown</title>
```

```
<style>
```

```
body {
```

```
    font-family: Arial, sans-serif;
```

```
    padding: 20px;
```

```
}
```

```
select {
```

```
    padding: 8px;
```

```
    font-size: 16px;

    margin-bottom: 20px;
}

.product-list {

    display: flex;

    flex-wrap: wrap;

    gap: 15px;
}

.product-item {

    border: 1px solid #ccc;

    padding: 15px;

    width: 150px;

    border-radius: 5px;

    text-align: center;
}

</style>

</head>

<body>

    <h1>Product List</h1>

    <label for="categoryFilter">Filter by category:</label>

    <select id="categoryFilter">

        <option value="all">All</option>
```

```
<option value="shoes">Shoes</option>
<option value="shirts">Shirts</option>
<option value="gadgets">Gadgets</option>
</select>
```

```
<div class="product-list" id="productList">
  <!-- Products will be rendered here -->
</div>
```

```
<script>
  // Sample product data
  const products = [
    { id: 1, name: "Running Shoes", category: "shoes" },
    { id: 2, name: "Leather Boots", category: "shoes" },
    { id: 3, name: "Casual Shirt", category: "shirts" },
    { id: 4, name: "Formal Shirt", category: "shirts" },
    { id: 5, name: "Smart Watch", category: "gadgets" },
    { id: 6, name: "Wireless Earbuds", category: "gadgets" }
  ];
```

```
const productListEl = document.getElementById("productList");
const filterSelectEl = document.getElementById("categoryFilter");
```

```
// Function to render products based on filter

function renderProducts(filter) {

  // Clear existing products

  productListEl.innerHTML = "";


  // Filter products based on selection

  const filteredProducts = filter === "all"

    ? products

    : products.filter(product => product.category === filter);


  // Render each product item

  filteredProducts.forEach(product => {

    const productEl = document.createElement("div");

    productEl.classList.add("product-item");

    productEl.textContent = product.name;

    productListEl.appendChild(productEl);

  });

}


// Initial render with all products

renderProducts("all");


// Event listener for dropdown change
```

```
filterSelectEl.addEventListener("change", (e) => {  
    renderProducts(e.target.value);  
});  
</script>  
</body>  
</html>
```

## Output

# Product List

Filter by category:

All



Running Shoes

Leather Boots

Casual Shirt

Formal Shirt

Smart Watch

Wireless Earbuds