Experiment 5

Name: Siddhant Mehta

UID: 23BIS70162

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.

Task Description

Create a web page that displays a list of products (for example, shoes, shirts, or gadgets). Above the product list, include a dropdown menu with filter options such as "All", "Category 1", "Category 2", etc. When the user selects an option from the dropdown, the product list should update immediately to show only the items that match the selected category. If "All" is selected, all products should be displayed. The filtering and display changes must happen dynamically using JavaScript without reloading the page.

Input Screenshots:

```
!id || !name || !price || !category)
alert("Please fill all fields!");
<!DOCTYPE html>
<html lang="en":
    <meta charset="UTF-8">
<meta name="viewport" conten
<title>Product Lists</title>
                                       content="width=device-width, initial-scale=1.0"
                                                                                                                                                                       let product = { id, name, price, category };
                                                                                                                                                                      products.push(product);
                                                                                                                                                                      if (!categories.has(category)) {
    <input type="number" id="productid" placeholder="Enter Product ID"><br/>cinput type="number" id="productname" placeholder="Enter Product Name"><br/>cinput type="number" id="productname" placeholder="Enter Product Price"><br/>cinput type="number" id="productprice" placeholder="Enter Product Price"><br/>cinput type="number" id="productcategory" placeholder="Enter Product Category"><br/>cinput type="number" id="productcategory" placeholder="Enter Product Category">
                                                                                                                                                                              categories.add(category);
                                                                                                                                                                               let option = document.createElement('option');
                                                                                                                                                                              option.value = category;
option.text = category;
document.getElementById('categoryDropdown').appendChild(option);
    <input type="button" value="Add Product" onclick="addproductlist()"><br>><br>>
    <label for="categoryOropdown"><b>Filter By Category</b></label><br/>cselect id="categoryOropdown" onchange="filterbycategory()">
<option value="all">--- All Categories ---</option>
                                                                                                                                                                      displayproducts(products);
                                                                                                                                                                       document.getElementById('productid').value='
                                                                                                                                                                      document.getElementById('productname').value=""
document.getElementById('productprice').value=""
                                                                                                                                                                       document.getElementById('productcategory').value=
                       Name
/th>
                                                                                                                                                                function displayproducts(list){
                                                                                                                                                                       const tbody = document.getElementById("producttablebody");
tbody.innerHTML = "";
            let row = `
     ${p.id}</rr>
                                                                                                                                                                                     ${p.name}
    let products = [];
let categories = ne
                                                                                                                                                                                     ${p.category}
         nction addproductlist(){
  let id = document.getElementById('productid').value;
                                                                                                                                                                               tbody.innerHTML += row;
           let name = document.getElementById('productname').value;
let price = document.getElementById('productprice').value;
let category = document.getElementById('productcategory').value
```

```
function filterbycategory(){

function filterbycategory(){

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function filterbycategory(){

let selected = document.getElementById('categoryDropdown').value;

if(selected === "all"){

displayproducts(products);

} else {

let filtered = products.filter(p => p.category === selected);

displayproducts(filtered);

function filterbycategory(){

displayproducts(products);

function filterbycategory(){

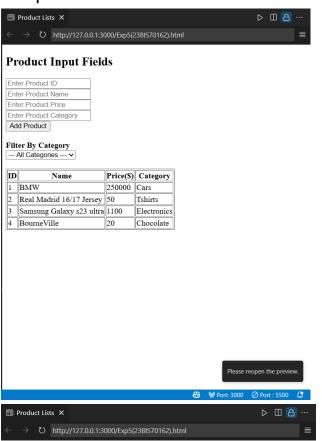
displayproducts(filtered);

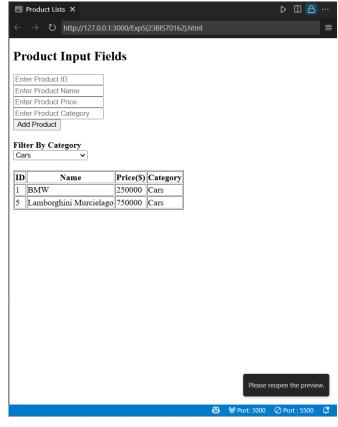
function filterbycategory(){

displayproducts(filterbycategory(){

displaypr
```

Output Screenshots:





Product Input Fields



Filter By Category
Tshirts



