EXPERIMENT 5 AIM:

Design and implement a Dynamic Product Filter with Dropdown using JavaScript DOM Manipulation

TASK DESCRIPTION:

Create a web application that allows users to dynamically filter a list of products based on categories using a dropdown menu. The filtering should happen instantly without reloading the page, leveraging JavaScript DOM manipulation.

CODE:

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Dynamic Product Filter</title>
  <style>    body {
fontfamily: Arial, sans-serif;
margin: 40px;
backgroundcolor: #f0f2f5;
color: #333;      }

    .container {        max-width:
500px;            margin:  auto;
background: #fff;      padding: 20px;
border-radius: 8px;       box-shadow:
0 0 10px rgba(0,0,0,0.1);
    }     h2 {        text-
align: center;      color:
#ff6f61;
    }      label {      font-
weight: bold;
    }
```

```css
    select {          padding:
8px;          font-size: 15px;
margin: 10px 0 20px 0;
width: 100%;
borderradius: 5px;
border: 1px solid #ccc;
outline: none;
    }        select:focus {        border-color:
#ff6f61;        box-shadow: 0 0 5px
rgba(255,111,97,0.5);
    }        ul {
padding: 0;        }
li {        margin:
8px 0;        list-
style: none;
padding: 10px;
background:
#f5f5f5;
border-radius: 5px;
transition: 0.3s;
    }        li:hover {
background: #ffefeb;
    }
  </style>
</head>
<body>
  <div class="container">
    <h2>Product List</h2>
    <label for="filterDropdown">Filter by Category: </label>
    <select id="filterDropdown"></select>
    <ul id="productList"></ul>
  </div>

  <script>    const
products = [
    { name: "Running Shoes", category: "Shoes" },
    { name: "Basketball Shoes", category: "Shoes" },
```

```
      { name: "Polo Shirt", category: "Shirts" },
      { name: "T-shirt", category: "Shirts" },
      { name: "Smartphone", category: "Gadgets" },
      { name: "Bluetooth Speaker", category: "Gadgets" },
    ];                                    const     dropdown      =
document.getElementById("filterDropdown");      const productList
=  document.getElementById("productList");            const
categories = ["All", ...new Set(products.map(p =>
p.category))];       categories.forEach(cat => {          const
option = document.createElement("option");        option.value =
cat;        option.textContent = cat;
dropdown.appendChild(option);        });         function
displayProducts(filteredProducts) {        productList.innerHTML
= "";          if (filteredProducts.length === 0) {
productList.innerHTML = "<li>No products found.</li>";
return;
      }          filteredProducts.forEach(product => {         const
li = document.createElement("li");          li.textContent =
`${product.name} (${product.category})`;
productList.appendChild(li);
      });
    }         dropdown.addEventListener("change",
function() {       const selectedCategory =
dropdown.value;         if (selectedCategory ===
"All") {         displayProducts(products);
      } else {
        const filtered = products.filter(p => p.category ===
selectedCategory);
        displayProducts(filtered);
      }
});
    displayProducts(products);
  </script>
</body>
</html>
```

CODE O/P :

Product List

Filter by Category:

All ⌄

Running Shoes (Shoes)

Basketball Shoes (Shoes)

Polo Shirt (Shirts)

T-shirt (Shirts)

Smartphone (Gadgets)

Bluetooth Speaker (Gadgets)

Product List

Filter by Category:

Gadgets	⌄

Smartphone (Gadgets)

Bluetooth Speaker (Gadgets)