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 {       font-
family: Arial, sans-serif;
margin: 40px;      background-
color: #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%;        border-
radius: 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)