

## 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:**

```
<!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;
    }
  </style>
</head>
<body>
  <div class="container">
    <h2>Dynamic Product Filter</h2>
    <div class="form">
      <div class="row">
        <div class="col">
          <input type="text" value="Search" />
        </div>
        <div class="col">
          <input type="button" value="Filter" />
        </div>
      </div>
      <div class="row">
        <div class="col">
          <input type="text" value="Price Range" />
        </div>
        <div class="col">
          <input type="button" value="Filter" />
        </div>
      </div>
      <div class="row">
        <div class="col">
          <input type="text" value="Category" />
        </div>
        <div class="col">
          <input type="button" value="Filter" />
        </div>
      </div>
    </div>
    <div class="products">
      <div class="row">
        <div class="col">
          <div class="product">
            <div class="img">
              <img alt="Product Image" />
            </div>
            <div class="info">
              <div class="name">Product Name</div>
              <div class="price">Price</div>
            </div>
          </div>
          <div class="product">
            <div class="img">
              <img alt="Product Image" />
            </div>
            <div class="info">
              <div class="name">Product Name</div>
              <div class="price">Price</div>
            </div>
          </div>
          <div class="product">
            <div class="img">
              <img alt="Product Image" />
            </div>
            <div class="info">
              <div class="name">Product Name</div>
              <div class="price">Price</div>
            </div>
          </div>
        </div>
        <div class="col">
          <div class="product">
            <div class="img">
              <img alt="Product Image" />
            </div>
            <div class="info">
              <div class="name">Product Name</div>
              <div class="price">Price</div>
            </div>
          </div>
          <div class="product">
            <div class="img">
              <img alt="Product Image" />
            </div>
            <div class="info">
              <div class="name">Product Name</div>
              <div class="price">Price</div>
            </div>
          </div>
          <div class="product">
            <div class="img">
              <img alt="Product Image" />
            </div>
            <div class="info">
              <div class="name">Product Name</div>
              <div class="price">Price</div>
            </div>
          </div>
        </div>
      </div>
    </div>
  </div>
</body>
</html>
```

Name: Rudraksh UID: 23BIS70156

```
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: Rudraksh UID: 23BIS70156

```
{ 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>
```

**Name: Rudraksh UID: 23BIS70156**

**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)

**Name: Rudraksh UID: 23BIS70156**

## Product List

**Filter by Category:**

Gadgets



Smartphone (Gadgets)

Bluetooth Speaker (Gadgets)