EXP-2.2

Build a Dynamic Product Filter with Dropdown using JavaScript DOM Manipulation:

```html
<!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;
    background: #f4f4f4;
    padding: 20px;
    max-width: 600px;
    margin: auto;
  }

  h2 {
    text-align: center;
    color: #333;
    margin-bottom: 20px;
  }

  select {
    width: 100%;
    padding: 10px;
    font-size: 16px;
    border-radius: 5px;
    border: 1px solid #ccc;
    margin-bottom: 20px;
    cursor: pointer;
  }

  .product-list {
    list-style: none;
    padding: 0;
  }
```

```
    .product-item {
      background: white;
      padding: 15px;
      margin-bottom: 10px;
      border-radius: 8px;
      box-shadow: 0 2px 5px rgba(0,0,0,0.1);
      transition: background-color 0.3s ease;
    }

    .product-item:hover {
      background-color: #e6f7ff;
    }

    .product-name {
      font-weight: bold;
      font-size: 18px;
      margin-bottom: 5px;
    }

    .product-category {
      font-size: 14px;
      color: #666;
    }
  </style>
</head>
<body>

  <h2>Dynamic Product Filter</h2>

  <select id="categoryFilter">
    <option value="all">All Categories</option>
  </select>

  <ul id="productList" class="product-list"></ul>

  <script>
    // Sample product data
    const products = [
      { id: 1, name: "Wireless Mouse", category: "Electronics" },
      { id: 2, name: "Bluetooth Headphones", category: "Electronics" },
```

```javascript
    { id: 3, name: "Coffee Mug", category: "Kitchen" },
    { id: 4, name: "Desk Lamp", category: "Furniture" },
    { id: 5, name: "Gaming Chair", category: "Furniture" },
    { id: 6, name: "Stainless Steel Knife Set", category: "Kitchen" },
    { id: 7, name: "Smartphone", category: "Electronics" },
    { id: 8, name: "Cookbook", category: "Books" },
    { id: 9, name: "Office Desk", category: "Furniture" },
    { id: 10, name: "Novel - Fiction", category: "Books" }
];

// DOM elements
const categoryFilter = document.getElementById('categoryFilter');
const productList = document.getElementById('productList');

// Function to get unique categories from products and populate dropdown
function populateCategories() {
  const categories = Array.from(new Set(products.map(p => p.category)));
  categories.forEach(category => {
    const option = document.createElement('option');
    option.value = category;
    option.textContent = category;
    categoryFilter.appendChild(option);
  });
}

// Function to display products based on selected category
function displayProducts(category) {
  productList.innerHTML = ''; // Clear existing products

  const filteredProducts = category === 'all'
    ? products
    : products.filter(p => p.category === category);

  if(filteredProducts.length === 0) {
    productList.innerHTML = '<li>No products found in this category.</li>';
    return;
  }

  filteredProducts.forEach(product => {
    const li = document.createElement('li');
```

```
        li.className = 'product-item';

        const name = document.createElement('div');
        name.className = 'product-name';
        name.textContent = product.name;

        const cat = document.createElement('div');
        cat.className = 'product-category';
        cat.textContent = `Category: ${product.category}`;

        li.appendChild(name);
        li.appendChild(cat);
        productList.appendChild(li);
      });
    }

    // Event listener for dropdown change
    categoryFilter.addEventListener('change', (event) => {
      displayProducts(event.target.value);
    });

    // Initial setup
    populateCategories();
    displayProducts('all');
  </script>
</body>
</html>
```
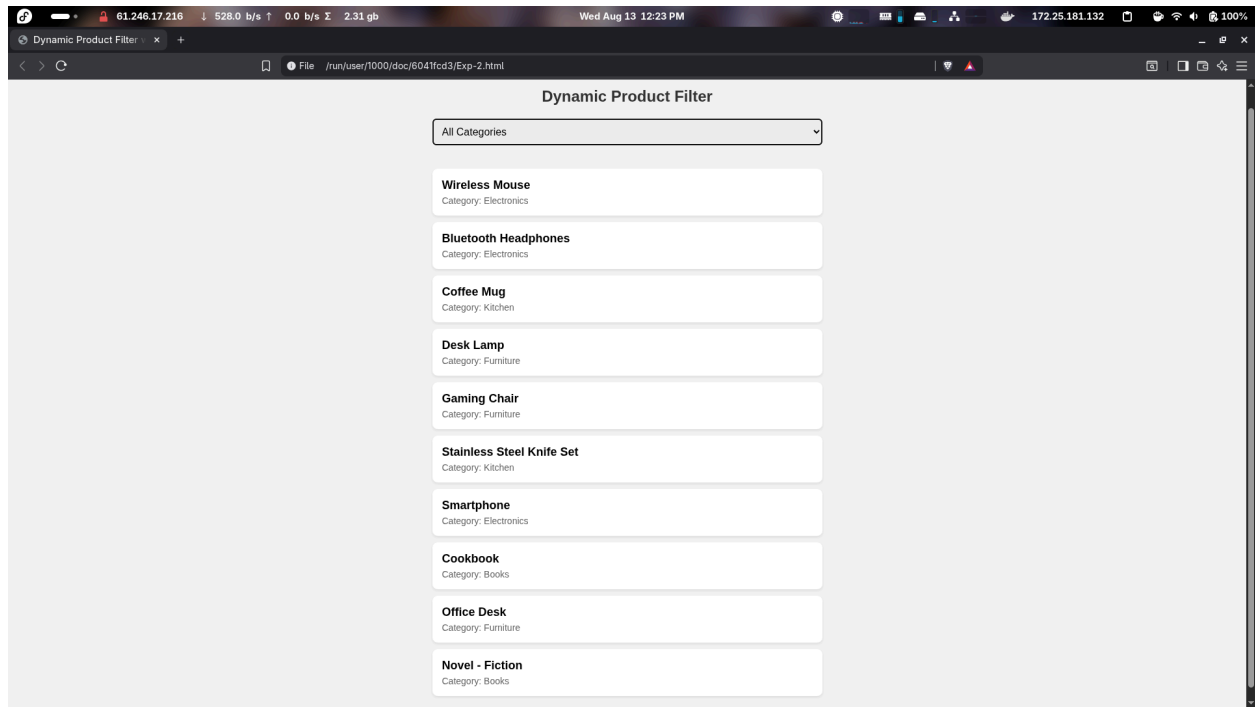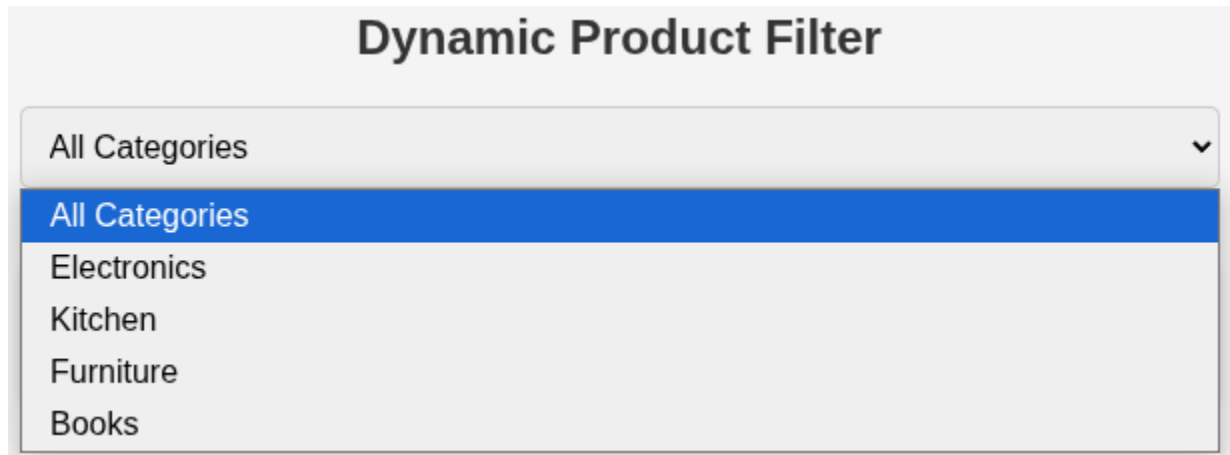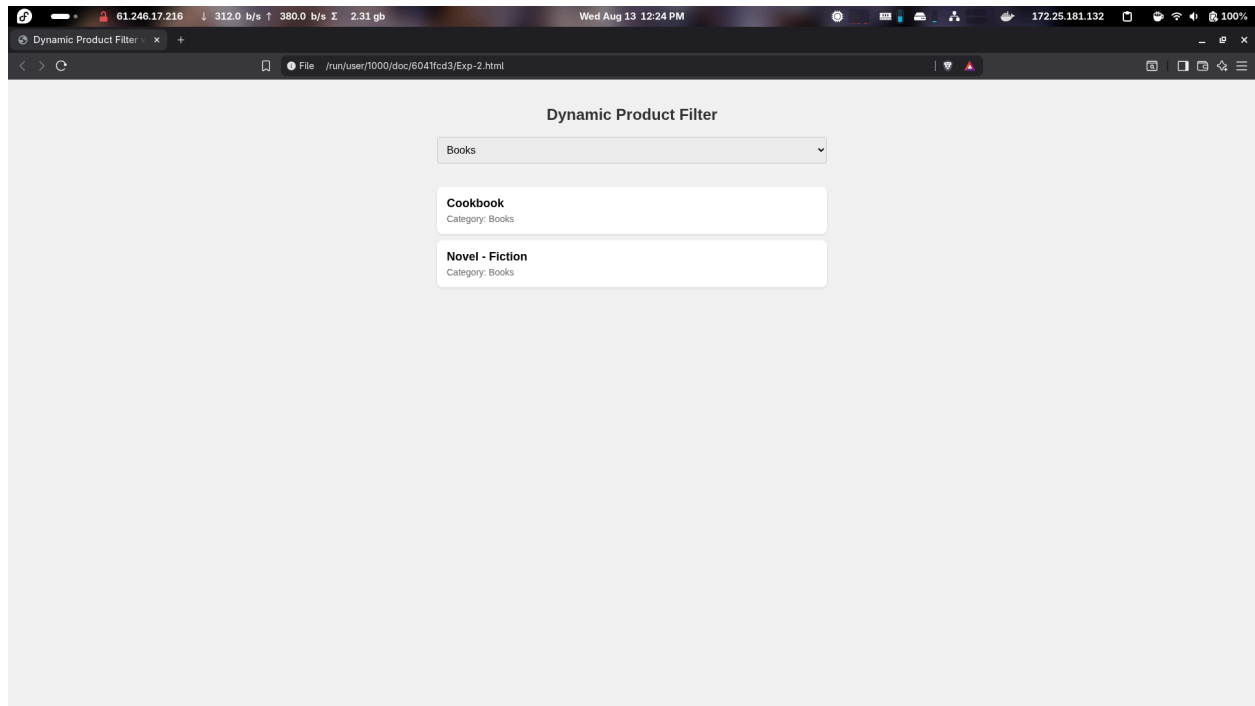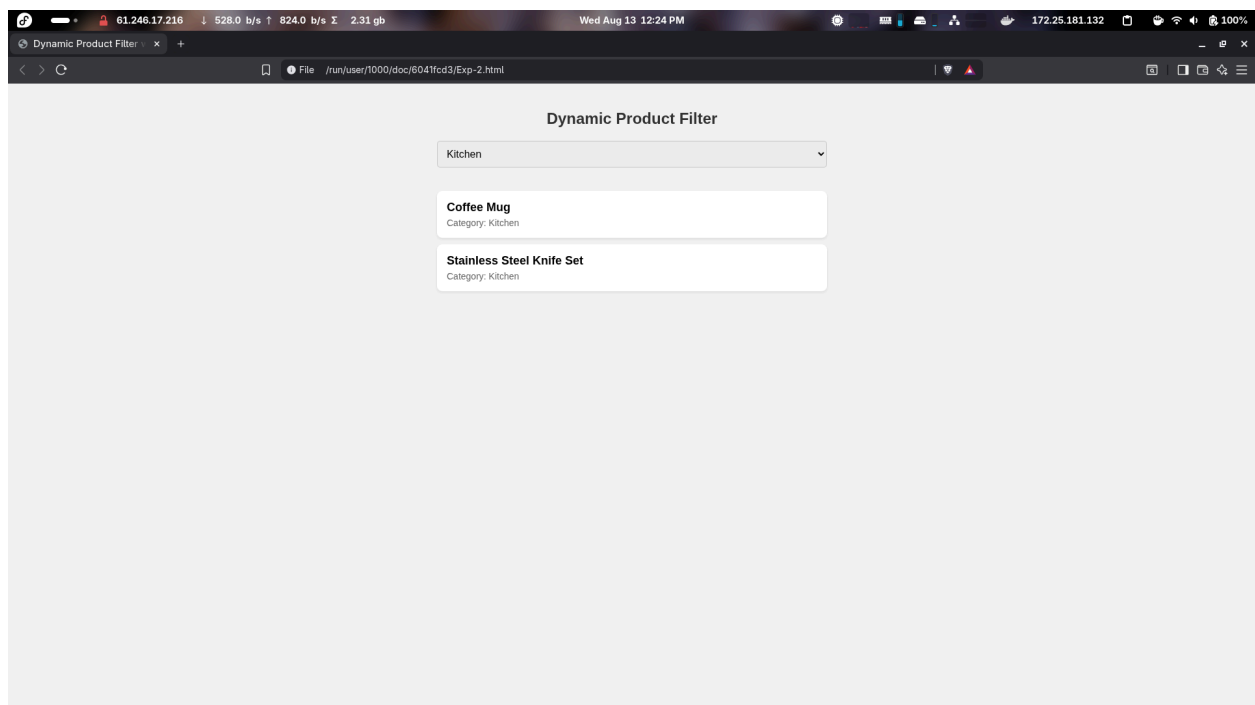
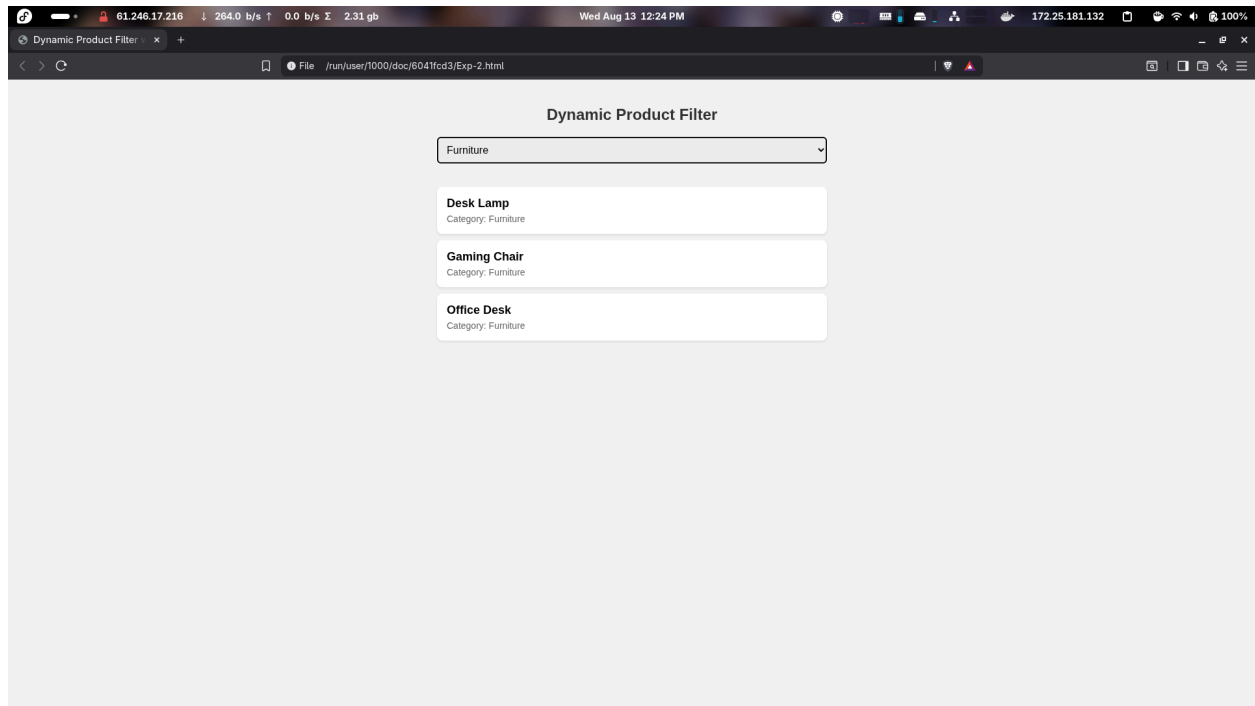# Task-2:

Basic Interface:

Drop-Down Filter Box:

Electronics Filter:

Kitchen Filter:

Furniture Filter:

Books Filter: