### **Key Areas for Performance Testing:**

1. **Homepage Load Time**
   * *Why?* The homepage is the first point of interaction for users and should load quickly to prevent drop-offs.
   * *Test Scenario:* Measure page load time with different levels of concurrent users (e.g., 10, 50, 100, 500, 1000 users).
   * *Parameters:*
     + Response time
     + Time to first byte (TTFB)
     + Largest contentful paint (LCP)
2. **Product Search and Filtering Performance**
   * *Why?* Search functionality is heavily used, and slow responses can frustrate users.
   * *Test Scenario:* Simulate multiple users performing searches simultaneously (e.g., 50, 100, 1000 users searching for different products).
   * *Parameters:*
     + Search response time
     + Filter application speed
3. **Product Page Load Time**
   * *Why?* Product detail pages contain high-resolution images, descriptions, and reviews, which can impact performance.
   * *Test Scenario:* Measure page load time for product details under different load conditions.
   * *Parameters:*
     + Image rendering time
     + API call latency for retrieving product data
     + Page load time at 100, 500, and 1,000 concurrent users
4. **Shopping Cart and Checkout Performance**
   * *Why?* A slow or unresponsive checkout process can lead to abandoned carts.
   * *Test Scenario:* Simulate users adding items to the cart, proceeding to checkout, and completing payments under various loads.
   * *Parameters:*
     + Time taken to add a product to the cart
     + Checkout process completion time
     + Payment gateway response time