**Part 2: Test Case Design**

Functional Test Cases:

1. **User Registration:**
   * Positive scenarios: Valid user registration with all required fields.
   * Negative scenarios: Invalid inputs, duplicate registrations.
2. **Product Search:**
   * Positive scenarios: Successful search for products.
   * Negative scenarios: Non-existent products, invalid search queries.
3. **Adding Items to Cart:**
   * Positive scenarios: Adding items to the cart and verifying the cart content.
   * Negative scenarios: Adding items that exceed available stock.
4. **Checkout Process:**
   * Positive scenarios: Successful order placement with valid payment.
   * Negative scenarios: Failed payment, incomplete checkout.
5. **Order Management:**
   * Positive scenarios: Viewing order history, tracking shipments.
   * Negative scenarios: Canceling an order, viewing non-existent orders.

Edge and Boundary Test Cases:

1. **User Registration:**
   * Test long usernames and passwords.
   * Test with special characters in username and password.
2. **Product Search:**
   * Test with an empty search query.
   * Test with excessively long search queries.
3. **Adding Items to Cart:**
   * Test adding the maximum number of items to the cart.
   * Test adding items when the cart is already full.