**User-Side Responsibilities**

**Functional Requirements:**

1. **Account and Profile Management**
   * Users can register with email, password, and phone, with optional social media login.
   * Users can log in securely with email and password, with optional multi-factor authentication.
   * Users can update personal details, manage addresses, and view order history.
2. **Product Interaction**
   * Products display titles, descriptions, images, prices, stock quantities, and categories.
   * Users can search for products with autocomplete and filter by price, brand, rating, etc.
   * Users can submit and view reviews and ratings on product pages.
3. **Shopping Cart and Checkout**
   * Users can add, remove, and adjust items in the shopping cart.
   * The checkout process allows address selection, payment method choice, and order review.
   * Secure integration with Stripe payment gateway to handle payments, supporting multiple payment methods.
4. **Order Management**
   * Users can track their orders through stages like Processing, Shipped, and Delivered.
   * Users can initiate and track return or refund requests.
   * Past orders are displayed with product details, order date, and payment information.
5. **Customer Support**
   * FAQ section addresses common issues and provides assistance.
   * Users can access live chat or submit tickets for help.
6. **Engagement and Promotions**
   * Users can apply discounts and coupons at checkout.
   * Automated emails are sent for promotions, abandoned carts, and product recommendations.
   * Recommendations display personalized suggestions based on browsing and purchase history.

**Non-Functional Requirements:**

1. **Usability**
   * The interface is user-friendly, responsive, and consistent across mobile and desktop.
   * Clear error messages guide users during login, checkout, or other issues.
2. **Performance**
   * Pages and actions, like search or add-to-cart, load in under 2 seconds.
3. **Accessibility**
   * The platform is compatible with screen readers, high contrast modes, and keyboard navigation.

**System-Side Responsibilities**

**Functional Requirements:**

1. **Scalability and Performance**
   * The system handles high concurrent users and traffic spikes without performance degradation.
   * Real-time updates maintain accurate product stock and inventory levels.
2. **Security and Data Protection**
   * Sensitive data like passwords and payment details is encrypted.
   * Role-based permissions control access to data and features by user roles (admin, seller, customer).
3. **Reliability and Uptime**
   * 99.9% uptime ensures uninterrupted shopping and order processing.
4. **Compliance and Policies**
   * The system complies with GDPR, CCPA, and data protection standards.
   * Product listing policies ensure compliance with legal and regulatory requirements.

**Non-Functional Requirements:**

1. **Scalability**
   * Elastic infrastructure adapts to handle increasing traffic and user growth.
2. **Security**
   * Personal and payment data is encrypted at rest and in transit following industry standards.
   * Fraud detection mechanisms monitor and prevent unauthorized activities.
3. **Maintainability**
   * The system’s architecture is modular, enabling easier updates and feature additions.
4. **Compliance and Governance**
   * Designed to meet data privacy standards, adapting to future regulatory changes.