**System Requirements**

**Functional requirements for user interface:**

**1. User/Admin Registration:**

1.1 system shall allow user/admin log in or sing up.

1.2 system shall collect and store user information (name, mail, password).

1.3 system shall Provide account verification through email.

**2. Product Catalog:**

2.1 System shall display top selling products and product categories available and represent each product by its image, small description, and price.

2.2 System shall include product categories for easy navigation.

2.3 System shall implement a quick view option for products.

2.4 System shall include page that represent detailed description of the product.

**3. Offers:**

3.1 System shall allow users to view active offers on the homepage and product pages.

3.2 System should allow users access a dedicated section to explore all available offers.

3.3 System shall apply discount during checkout process.

**4. Shopping Cart:**

4.1 System shall allow users to view and edit (add, change number of pieces, delete) cart contents.

4.2 System should calculate and display the total price.

4.3 System shall provide a "Continue Shopping" and “Checkout” options.

**5. Product Search:**

5.1 System should enable a search bar with suggestions after at last two letters entered by the user.

5.2 The search suggestions shall be relevant an accurate.

5.3 System shall display all relevant products based on entered search terms.

**6. Filter and sort:**

6.1 System should allow users to sort products by price popularity.

6.2 System should provide filters for size,color, category.

**7. Checkout Process:**

7.1 System shall gather shipping information and payment method with availability of multiple options.

7.2 System shall provide order confirmation with unique ID.

**8. Order History:**

8.1 System shall allow users to view his/her orders include order details, status.

**9.User Messages:**

9.1 System should allow users to send messages to administrators.

**Functional requirements for admin interface:**

**1. Product Management:**

1.1 System shall allow admin to add, edit, remove products from the catalog.

1.1 System shall allow admin to set product details such as price,descriptions,and images.

1.3 System should allow admin to assign product to relevant categories.

**2. Order Management:**

2.1 System shall allow admin to view and confirm orders.

2.2 Update order status (processing, shipped, delivered).

**3. Inventory Management:**

3.1 System shall allow admin to track and manage inventory levels.

3.2 Receive alerts for low stock or out-of-stock products.

**4. Products Sales:**

4.1 System should display top-selling products.

**5. Discount and promotions:**

5.1 System shall allow admin to Create and manage discounts or promotional offers.

5.2 Set conditions for discounts.

**6. Report generation:**

6.1 Generate reports on sales, inventory, and customer behavior.

6.1 Export reports in common formats (e.g., CSV, PDF).

**7. User messages:**

7.1 Send user messages to admin and allow admin to response to them.

**Non-functional requirements for user and admin interface:**

**1. Performance:**

1.1Implement a robust caching strategy, including browser caching and server-side caching for dynamic content.

1.2 Continuously monitor server response times and optimize database queries for efficiency.

**2. Security:**

2.1 Implement role-based access control for admin users.

2.2 Implement secure payment transactions and protect user data.

2.3 Encrypt sensitive data both in transit and at rest.

2.4 Implement multi-factor authentication for enhanced user account security

**3. Scalability:**

**3.1** Design a modular and scalable architecture to accommodate future growth.

3.2Implement load balancing to distribute traffic efficiently.

3.3Regularly perform scalability testing to identify potential bottlenecks

**4. Reliability:** Set up monitoring tools for real-time performance and error tracking.

**5. Usability:**

5.1 Conduct user testing sessions to gather feedback for continuous improvement.

5.2 Ensure accessibility features to cater to users with diverse needs.

**6. Compatibility:**

6.1 Regularly update compatibility testing with the latest browser versions.

6.2 Utilize responsive design principles for seamless adaptation to various screen sizes.

6.3 Consider progressive enhancement to ensure core functionality across all browsers.

**7. Data Backup:**

7.1 Automate regular backups and securely store them in geographically diverse locations.

7.2 Implement version control mechanisms for data rollback if needed.

7.3 Periodically test data restoration processes to validate backup integrity.

**8. Compliance:**

8.1 Stay informed about evolving legal and regulatory requirements.

8.2 Regularly update privacy policies and terms of service to align with regulations.

8.3 Collaborate with legal experts to ensure ongoing compliance with data protection laws.