E-Commerce Website Requirements

1. Functional Requirements

1.1 User Registration and Authentication:

- Users can register, log in, and recover passwords securely.

- User roles include customers and administrators.

1.2 Product Catalog:

- Products are displayed with name, description, price, and images.

- Organized into categories and subcategories.

- Search functionality with filters like price range, category, and ratings.

1.3 Shopping Cart:

- Users can add, remove, and update items in their shopping cart.

- Cart summary includes total cost and item details.

1.4 Checkout Process:

- Secure collection of shipping and billing information.

- Integration with secure payment gateways (Stripe, PayPal).

- Confirmation page on successful checkout.

1.5 Order Management:

- Users can track orders and view their order history.

- Admins can update order statuses and manage orders.

1.6 Reviews and Ratings:

- Users can leave reviews and ratings for purchased products.

- Reviews and ratings are displayed on the product pages.

1.7 Admin Dashboard:

- Admins can add, update, and delete products, categories, and subcategories.

- Manage orders and user accounts.

2. Non-Functional Requirements

2.1 Performance:

- Fast load times with optimized queries and caching mechanisms.

- Ability to handle high traffic with scalable infrastructure.

2.2 Security:

- Secure password storage using encryption techniques (e.g., bcrypt).

- Data encryption for sensitive information like payment details.

- PCI-DSS compliance for secure payment transactions.

2.3 Scalability:

- Scalable architecture to support future growth and traffic spikes.

- Use of cloud services (AWS, Google Cloud) for elastic scaling.

2.4 Usability:

- User-friendly interface for both customers and administrators.

- Responsive design to ensure usability across devices (desktop, mobile, tablet).