Assignment Online E-commerce System

Task:

Design an Online E-commerce System for a retail company that sells clothing, shoes, and accessories. The system should allow customers to browse products, add items to their cart, check out securely, and track their orders. Additionally, the system should enable the company to manage inventory, process orders, and generate sales reports.

Requirements:

1. Customer-facing features:

* User registration and login
* Product browsing and search
* Product categories and filters
* Product details and images
* Shopping cart and checkout
* Payment processing
* Order tracking and history
* Customer support chat or ticketing system
* Reviews and ratings

1. Admin-facing features:

* Product management (add, edit, delete products)
* Inventory management
* Order management (view, edit, cancel orders)
* Sales report generation
* Customer support ticket management

1. Non-functional requirements:

* High availability and reliability
* Scalability to handle increasing traffic and user growth
* Security for user data and payment transactions
* Fast page load times and response times
* Easy-to-use and intuitive user interface

Deliverables:

1. System architecture diagram
2. Detailed description of each component and its functionality
3. User interface mockups or prototypes
4. Database schema and sample data
5. Code implementation of core features
6. Performance testing results and optimization recommendations
7. Security analysis and measures taken to ensure secure transactions

Note: Students should focus on designing the architecture and core features of the system, rather than implementing the entire system. Students should also include any assumptions made and justifications for their design choices.