

Problem Statement: Building an E-Commerce Platform

Overview:

In today's digital era, e-commerce platforms have become an integral part of our lives, providing users with a convenient way to shop for a wide range of products from the comfort of their homes. Your task is to develop a robust e-commerce platform that allows users to browse products, add items to their cart, place orders, and manage their accounts.

Project Objectives:

- Design and implement a secure user authentication system to allow users to create accounts and log in securely.
- Develop a database schema to store information about users, products, orders, and addresses.
- Create RESTful API endpoints to handle CRUD operations for users, products, orders, and addresses.
- Implement features such as browsing products, adding items to the cart, and placing orders.
- Ensure proper validation and error handling mechanisms are in place to enhance the platform's reliability and usability.
- Utilize Spring Boot and Postman for development and testing purposes.

Key Features:

User Management: Allow users to register, log in, update their profiles, and manage their accounts.

Product Catalog: Provide a comprehensive catalog of products, including details such as name, description, price, and availability.

Shopping Cart: Enable users to add products to their cart, adjust quantities, and proceed to checkout.

Order Processing: Facilitate the placement and processing of orders, including order confirmation and tracking.

Address Management: Allow users to add, edit, and delete shipping addresses for their orders.

Expected Deliverables:

- Fully functional e-commerce platform with RESTful API endpoints.
- Postman collection containing requests for testing the API endpoints.
- Documentation detailing the project's architecture, API endpoints, and usage instructions.
- Presentation showcasing the project's features, development process, and challenges faced.

Constraints:

- Use Spring Boot for backend development.
- Utilize Postman for API testing.
- Ensure adherence to best practices in software development, including code readability, modularity, and documentation.
- The project timeline should be within the allocated timeframe for completion.

Success Criteria:

- The platform should be user-friendly, reliable, and secure.
- All core functionalities should be implemented and tested successfully.
- The project should demonstrate your understanding of Spring Boot, RESTful API development, and database management.

Potential Extensions:

- Implement additional features such as product reviews, recommendations, and promotions.
- Enhance the platform's performance and scalability to handle a large number of users and transactions.
- Integrate third-party services for payment processing and order fulfillment.