

TECHNICAL DOCUMENTATION

Introduction

Pharmacy Conseil is an online platform that allows customers to purchase medicines and other healthcare products conveniently from the comfort of their homes. This technical documentation provides an overview of the architecture, implementation details, libraries/frameworks used, and other technical aspects of the system. It serves as a reference for developers and administrators to understand the system's technical foundation and functionality.

Architecture

The system follows a client-server architecture with a React.js-based frontend and a Spring Boot-based backend.

Frontend (React.js)

The frontend is built using React.js, a popular JavaScript library for building user interfaces. It provides a responsive and intuitive interface for customers to browse and purchase products.

Key Features:

1. **Product Catalog:** Display a comprehensive list of available medicines and healthcare products, with filtering and search functionality.
2. **Shopping Cart:** Allow users to add products to a virtual shopping cart and manage the cart contents before checkout.
3. **Checkout Process:** Implement a secure checkout process, including payment integration with popular payment gateways.
4. **User Authentication:** Enable user registration, login, and account management functionalities.
5. **Order History:** Allow users to view their order history and track the status of their orders.

Backend (Spring Boot)

The backend is built using Spring Boot, a popular Java framework for developing robust and scalable applications.

Key Features:

1. **RESTful API:** Expose a RESTful API for handling CRUD operations on category, products, orders, and user data.
2. **Database Integration:** Integrate with a relational database (PostgreSQL) for storing product, order, and user data.

3. **Authentication and Authorization:** Implement authentication and authorization mechanisms using JSON Web Tokens (JWT), Spring Security.
4. **Order Management:** Handle order processing, including order validation, inventory management, and order fulfillment.
5. **Notification System:** Implement a notification system to send order status updates and other relevant notifications to customers via email notifications.
6. **Admin Panel:** Develop an admin panel for managing products, orders, and user accounts.

Technologies and Tools

Frontend:

- React.js
- React Router
- Redux (for state management)
- Axios (for HTTP requests)
- Bootstrap (for styling)

Backend:

- Java 21
- Spring Boot
- Spring Data JPA (for database integration)
- Spring Security (for authentication and authorization)
- JSON Web Tokens (JWT) (for authentication)
- MySQL or PostgreSQL (for data storage)

Development

1. **Local Development:** Both the frontend and backend can be developed and tested locally using their respective development servers.
2. **Version Control:** Use a version control system like Git for managing the codebase and collaborating with team members.

Conclusion

This technical documentation outlines the key components, features, and technologies involved in building the Pharmacy Conseil online medicine store system using Spring Boot and React.js. It provides a high-level overview of the system architecture, frontend and backend functionalities, and development considerations.

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