



**University Institute of Engineering**  
**Department of Computer Science & Engineering**

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**Semester:** 5TH

## **Full-Stack Project Report**

### **Project Name**

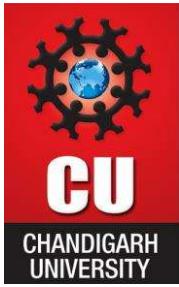
*LocalMart — Online Grocery & Local Store Platform*

### **Reference Website Link**

<https://local.market/>

### **Project Description**

LocalMart is a full-stack web application that connects customers with local grocery stores. Customers can browse categories, search products, add items to cart, and place orders. Store owners can manage inventory, add or update products, and view orders. The system uses a React + Vite frontend and a Spring Boot backend exposing REST APIs. For development the project includes an embedded H2 database; production can use MySQL or PostgreSQL.



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### Problem Statement

Many local shoppers want a quick, reliable way to order groceries from nearby stores. Existing platforms can be slow for small vendors, expensive to maintain, or lack visibility for local stores. LocalMart aims to provide an efficient, low-overhead platform where local stores can list products and customers can order quickly, with simple inventory management for vendors and a clean shopping experience for customers.

### Tech Stack

- Frontend: React (Vite), React Router, axios (frontend HTTP client).
- Backend: Java, Spring Boot (Maven), Spring Data JPA, Spring Web (REST controllers).
- Database: H2 (development embedded DB file included). Can be switched to MySQL/PostgreSQL in production.
- Build tools: Maven (backend), npm/yarn + Vite (frontend)

### High-Level Design

1. **Frontend (Angular/React):**
  - Patient dashboard: book appointments, view prescriptions, payment history.
  - Doctor dashboard: manage availability, conduct consultations, view patient records.
  - Admin dashboard: doctor verification and system monitoring.
2. **Backend (Spring Boot / ASP.NET Core):**
  - Handles authentication, authorization, and API services.
  - Appointment scheduling logic.
  - Payment gateway integration.
  - Secure storage of medical data.
3. **Database (MySQL / PostgreSQL):**
  - Stores user profiles, doctor credentials, appointment records, prescriptions, and payment logs.
4. **Real-Time Communication (Node.js + WebSockets):**
  - Signaling server to establish WebRTC connections.



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- Ensures low-latency video consultations.

### Future Scope

- Integrate real payment gateway (Stripe/PayPal) for checkout.
- Add real-time order tracking (WebSocket or polling).
- Add push notifications for order updates.
- Multi-vendor onboarding flow with verification.
- Recommendation engine for personalized product suggestions.
- Mobile app (React Native / Flutter) or PWA support.