

Bakery Inventory Management System - Detailed Requirements and Roadmap

1. Functional Requirements

1.1 User Management & Authentication

- Role-based access control (Admin, Cashier, Manager, Accountant, etc.).
- Secure login and authentication using JWT.
- User registration and password management.
- Multi-user support with permission settings.

1.2 Inventory Management

- **Product Management:** Add, edit, delete bakery items (bread, cakes, pastries, etc.).
- **Stock Management:** Track stock levels with alerts for low stock.
- **Supplier Management:** Manage suppliers and incoming raw materials.
- **Purchase Orders:** Create and track purchase orders.
- **Batch & Expiry Management:** Track product batches and expiry dates.

1.3 Bill Generation & Invoicing

- **POS System:** Generate bills using POS-style interface.
- **Discounts & Offers:** Apply manual and automated discounts.
- **Tax Calculation:** GST/VAT computation and inclusion in invoices.
- **Multiple Payment Methods:** Cash, card, UPI, digital wallets.

- **Receipt Generation:** Printable and digital receipts.

1.4 Sales & Analytics

- **Sales Dashboard:** Real-time sales insights and trends.
- **Customer Purchase History:** Track customer orders.
- **Product Performance:** Identify best-selling and low-demand items.
- **Revenue Tracking:** Analyze daily, weekly, and monthly sales.

1.5 Referral System

- Customers can refer others via referral codes.
- Discount or cashback system for successful referrals.
- Admin dashboard to manage referral programs.

1.6 Subscription Management (Monthly/Yearly)

- Different plans for bakeries (Basic, Premium, Enterprise).
- Auto-renewal feature for subscriptions.
- Payment gateway integration for subscriptions.
- Alerts for renewal and payment due dates.

1.7 Bakery Profile & Settings

- Manage bakery details (name, address, contact, logo, etc.).
- Define working hours and holiday schedules.
- Customize billing and invoice templates.
- Social media and online presence linking.

1.8 Additional Features

- **CRM Integration:** Manage customer relationships and loyalty programs.
 - **Multi-Terminal Billing:** Support multiple POS devices.
 - **Central Kitchen Module:** Manage central production and distribution.
 - **Unlimited User Rights:** Grant controlled access to multiple employees.
 - **Payment Collection App:** Dedicated app for collecting payments.
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2. Technology Stack

Frontend: React.js

Backend: Spring Boot

Database: MySQL

- Tables for users, products, sales, inventory, subscriptions, and referrals