

Product Requirements Document (PRD)

Hospital Point of Sale (POS) System

1. Product Overview

The Hospital POS System is a comprehensive web-based application designed to manage the operational and financial aspects of a hospital or medical facility. It integrates Point of Sale functions, inventory management, patient data, staff administration, and detailed financial accounting into a single, unified platform.

2. Objectives

- Streamline hospital sales and billing processes.
- Maintain accurate real-time inventory of medicines and medical supplies.
- Provide role-based access to ensure security and accountability.
- Generate detailed financial reports (P&L, Trial Balance) automatically.
- Simplify staff and supplier management.

3. Target Audience & Users

The system supports 7 distinct user roles:

- **Admin:** Full access to all modules and settings.
- **Inventory Manager:** Manages stock, suppliers, and purchase orders.
- **POS Clerk / Pharmacist:** Handles daily sales and prescriptions.
- **Accountant:** Manages ledgers, expenses, and financial reports.
- **Sales Manager:** Oversees sales performance and reporting.
- **Cashier:** Processes payments and basic sales.
- **Supervisor:** Oversees daily operations with higher privileges than clerks.

4. Technology Stack

- **Backend Framework:** Laravel 12.x
- **Authentication:** Laravel Sanctum (JWT)
- **Database:** MySQL / PostgreSQL
- **Frontend:** Tailwind CSS 4.0, Alpine.js 3.13

- **Visualization:** Chart.js 4.4
- **Security:** Role-Based Access Control (RBAC), CSRF protection, Bcrypt hashing.

5. Functional Requirements

5.1. Authentication & Security

- **Secure Login/Logout:** Staff access via username/password.
- **RBAC:** Middleware-enforced permissions for all routes.
- **Activity Logging:** Track critical actions by staff members.

5.2. Dashboard

- **Real-time Metrics:** Sales today, revenue, low stock counts.
- **Visual Analytics:** 7-day sales trend charts, payment method distribution.
- **Alerts:** Immediate visibility of low-stock items.

5.3. Inventory Management

- **Product CRUD:** Manage medicines and supplies with categorization.
- **Stock Control:** Real-time stock deductions upon sale; manual restocking.
- **Low Stock Alerts:** Color-coded warnings when items dip below thresholds.
- **Categories:** Organize products into efficient hierarchies.

5.4. Point of Sale (POS)

- **Cart System:** flexible shopping cart for medicines and services.
- **Patient/Customer Link:** Assign sales to Inpatient or Outpatient profiles.
- **Payment Methods:** Support for Cash, M-Pesa, Bank Transfer, and Cheque.
- **Document Generation:** Auto-generate Receipts, Invoices, and Delivery Notes.
- **VAT Calculation:** Automatic 16% VAT application where applicable.

5.5. Sales & Orders Management

- **Sales History:** Searchable history of all transactions.
- **Purchase Orders:** Create orders for suppliers; auto-update inventory on receipt.

- **Smart Suggestions:** Auto-suggest orders based on low-stock items.

5.6. Staff & Customer Management

- **Staff Profiles:** Manage employees, roles, and access credentials.
- **Customer/Patient Database:** Store contact info, patient type, and history.

5.7. Accounting & Expenses

- **Double-Entry Operations:** Automatic journal entries for sales and expenses.
- **Chart of Accounts:** Fully customizable financial hierarchy.
- **Expense Tracking:** Categorize and record facility expenses.
- **Reports:**
 - Trial Balance
 - Profit & Loss Statement (Income Statement)
 - Balance Sheet

5.8. Settings & Configuration

- **System Global Settings:** Currency, tax rates, invoice numbering formats.
- **Document Templates:** Customizable JSON-based templates for receipts/invoices.

6. Data Architecture

Key Entities include:

- Users (Staff)
- Inventory (Products)
- Sales & PosSales
- Customers (Patients)
- Suppliers
- PurchaseOrders
- JournalEntries & ChartOfAccounts

7. Future Roadmap

- PDF generation for offline access to invoices.
- Payroll module integration.
- Asset management module.
- Email notifications for low stock or daily reports.