Lab 3

Stock Management System

problem statement:

To design and develop a stock maintenance system to automate all activities with little or no human interaction

SRS document

1) Introduction

1.1 purpose:

document specifies requirements for SMS which will manage inventory records, stock level & transactions to ensure efficient tracking & control of goods

1.2 Scope:

The system will handle product entry, stock updates, purchase/sales tracking, low-stock alerts & reporting. It reduces errors, improves efficiency & ensures real-time visibility of stock, Estimated development time is 5-6 months

1.3 overview:

This serves as centralized system for business to track product availability, manage inventory transactions & generate reports for decision making

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2) General description

- Users: Store manager, warehouse staffs, sales staff & admin
- User characteristics:
  - staff: require simple interface for stock entry
  - manager: Need real-time stock status & reports
  - admin: manage users, permission
- features: product cataloging, stock updates, sale/purchase, low-stock alter & reporting
- benefit: reduce stockout/overstocking, ensure accuracy, sales times & support business

3) Functional requirements:

- product catalog managment
- stock entry, update & adjustment
- low stock & expiry alerts
- sales & purchase transaction recording
- search & filtering for stock detail
- admin/user access managment

4) Interface requirements:

- UI
  - dashboard for managers/admins
  - data entry screen for warehouse/sales staff
- Software Interface: to database (MySQL), barcode/RFID integration & optional API with sales system
- Communication: local network or cloud access for remote warehouse

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5) performance requirements

- handles 500+ concurrent records / transactions
- response time < 3 secs for update & queries
- support large inventory db
- system uptime ≥ 99.5%

6) design constraints

- runs on window / Linux
- requires secure login & role based access
- Must support barcode scanning

7) Non functional attributes

- security
- reliability
- scalability
- portability
- usability
- data integrity

8) Preliminary schedule & budget

- schedule:
  - requirement analysis - 3w
  - design - 4w
  - development - 9w
  - testing - 4w
  - training - 2w
  - total - 22w
- Budget:
  - development - ₹27 lakh
  - Infrastructure - ₹6 lakh
  - Maintenance - ₹3 lakh