28/8

Stock Maintenance System

Problem Statement -

Design and implement a Stock Maintenance System to efficiently manage inventory levels, track stock inflow and outflow, prevent shortages or overstock situations, and generate real-time reports to support informed decision-making.

SRS Document -

1. Introduction

1.1 Purpose

The purpose of this document is to define the requirements for designing and implementing a Stock Maintenance System. This System will automate inventory management tasks such as adding, updating, and tracking stock levels to improve efficiency and accuracy.

1.2 Scope

The Stock Maintenance System enables organizations to maintain a real-time record of available stock, supplies and issued items. It will support stock updates, report generation and notifications for low-stock levels.

1.3 Overview

The system will consist of modules for stock entry, issue management, stock updates, search and reporting. It will ensure data accuracy, minimalize manual errors

and provide user friendly graphical interface.

2. General Description

The stock Maintenance System will allow authorized users to record and modify stock information, automatically adjust inventory which when items are added or issued, search stock items by name, code or category and Generate inventory status reports and low - stock alerts.

3. Functional Requirements

FR1 Stock Management : Add new stock items with details like name, code, quantity, supplier.

FR 2 User authentication : provides authentication functionality for secure login and maintenance of information.

FR 3 Supplier Management : Generate alerts when stocks levels fall below predefined thresholds. Maintain supplier details details and link them with stocks items.

FR 4. Reporting : Generate accurate reports for stock levels purchase history and consumption trends. Export reports in PDF or Excel formats.

4. Interface Requirements

1. User Interface : Intuitive and user-friendly

for store managers and staff.

2. Application Interface : Integration with payment gateways for supplies payments. Integration with barcode scanners for easy stock updates.

5. Performance Requirements
   - The system should respond to user actions within 2 seconds.
   - Handle a minimum of 500 concurrent transactions during peak hours.
   - Ensure data consistency and accuracy across all modules.

6. Design Constraints
   - The system should be compatible with standard business hardware (computers, printers, barcode scanners, POS terminals).
   - Utilize a relational database management system for data storage.
   - The system should support programming languages compatible with web technologies (eg. Java Python, PHP)

7. Non-Functional Requirements

7.1 Security: Implement robust authentication and authorization mechanisms to protect sensitive data.

7.2 Reliability: Ensure high availability and fault tolerance

to minimize system downtime.

7.3 Maintainability: The system shall use modular code design to facilitate future enhancements & maintenance.

7.4 Usability: The system shall have a user friendly interface with clear navigation

8. Preliminary Schedule and Budget

8.1 Schedule

Phase	Timeline
Requirements Analysis	2 weeks
UI/UX	3 weeks
Development	10 weeks
Testing	4 weeks.

8.2 Budget

Estimated → $38,000