4. Stock Maintainance System.

Problem Statement:

Design and implement a Stock Maintainance System that enables organizations to efficiently track, manage and update inventory in real time. Inaccurate inventory data, the challenge of managing stock across multiple location and the risk of overstocking or understocking leads to a necessity of the Stock Maintainance System.

1 Introduction:

1.1 Purpose of the document:

Purpose of this document is to outline the requirements and specifications for the development of Stock Maintainance System. It will provide a clear understanding of Project objectives, goals and scope.

1.2 Scope of the document: This document defines the overall working and main objective of the Stock maintainance System. It includes features such as Stock tracking, updating, vendor managment

1.3 Overview:

The System is designed to help organizations efficiently track their inventory and Stock levels. It will provide functionalities like product entry, updating Stock quantities, Purchase and Sales tracking

2. General Description:

The Stock maintainance System will serve, business, warehouse and retail shops by enabling accurate and real time stock tracking. It will reduce manual record keeping. Improve operational efficiency.

3 Functional Requirements:

3.1 Stock entry & tracking:

- Add new stock items with details
- Update stock quantities in real time
- Track incoming and outgoing stocks

3.2 Vendor & Supplier Management:

- Maintain vendor details for purchases
- Map vendors to Specific Stock items

3.3 ~~At~~ Reporting

- Generate monthly, and annual inventory reports
- Track most sold and least sold items

3.4 Audit & Security:

- Maintain logs of stock updates & user activ
- Role based accey
- Prevent unauthorized changes to critical data

4- Interface Requirements:

4.1 User Interface:
- Simple dashboards for staff
- Admin dashboards for reports & Analytics

4.2 Integration Interface:
- Integration with sales system for auto stock deduction

5 Performance Requirements:

5.1 Response time: The system should update and display the stock records within 1-2 seconds.

5.2 Scalability: Support at least 10,000 stock items and 1000 concurrent users.

6 Design Constraints:

6.1 Hardware Limitations: The system should work on desktop, Laptop and mobile phones.

6.2 Software dependencies:
- Relational database (MYSQL)
- Middleware using java

7 Non Functional Requirements:

7.1 Security: Implement role based access, secure authentication

7.2 Reliability: Ensure 99.9% uptime

7.3 Scalability: Support expansion for large warehouse and chain business

7.4 Portability: work across mobile, desktop and web

7.5 Usability: Simple interface for warehouse staff and managers.

8 Preliminary Schedule and Budget:

- Estimation time 5-7 months
- Budget estimation $150,000