Software Requirement Specification

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Project title	Inventory System

PROBLEM STATEMENT :

Businesses often face challenges with traditional inventory management methods, leading to inefficiencies and errors. To address these, a comprehensive web-based Inventory Management System is needed which streamlines inventory management by automating tasks, providing real-time updates, and generating detailed reports. It enhances decision-making, prevents stock issues with timely alerts, and improves operational efficiency. Users benefit from quick access to information, easy communication, and scalable solutions, all within a user-friendly interface.

FEATURES OF THIS PROJECT :

1. User Management:

- Users should be able to register, log in, and manage their accounts.

-User roles and permissions (e.g., admin, manager, staff) should be defined to control access to different features.

2. Purchase Entry Portal:

Add New Purchases: Users can input new purchase orders, including supplier details, product information, quantity, and cost.

Edit/Update Purchases: Users can modify purchase entries if needed.

View Purchase History: Users can view a history of all purchase transactions with filters for date, supplier, or product.

3. Sales Entry Portal:

Add New Sales: Users can input new sales transactions, including customer details, product information, quantity, and price.

Edit/Update Sales: Users can modify sales entries if needed.

View Sales History: Users can view a history of all sales transactions with filters for date, customer, or product.

4. Stock Availability Monitoring:

Real-time Stock Updates: The system should automatically update stock levels based on purchase and sales entries.

Stock Summary: Users can view the current stock status, including available quantities for each product.

Low Stock Alerts: The system should generate alerts when stock levels fall below a predefined threshold.

5. Reporting System:

Consolidated Reports: Generate overall reports summarizing purchases, sales, and stock levels.

Time-based Reports: Generate reports for specific time periods (daily, weekly, monthly, yearly).

Customizable Reports: Allow users to filter and generate reports based on specific criteria (e.g., product category, supplier, customer).

6. Automated Reminders:

Stock Reorder Reminders: The system should automatically notify users when it's time to reorder stock.

Critical Stock Alerts: Notify users when stock levels are critically low.

Custom Reminders: Allow users to set up custom reminders for specific inventory-related tasks.

7. Report Sharing:

WhatsApp Integration: Automatically send reports to stakeholders via WhatsApp.

Messaging Services Integration: Provide options to share reports through SMS or other messaging platforms.

Scheduled Report Sharing: Users can schedule reports to be automatically sent at predefined intervals.

8. Search and Filter:

Inventory Search: Users can search for specific products in the inventory by name, category,

9. Notifications:

In-app Notifications: Notify users of important events (e.g., low stock, new orders) within the application.

Email Notifications: Send email alerts for critical notifications.

10. Security & Access Control:

Authentication: Implement secure login and session management.

Role-based Access Control: Restrict access to features based on user roles (e.g., only admins can delete entries).

SCOPE OF PROJECT:

1.Simplifies Inventory Management:

- Automates tracking and updating of inventory.

- Provides real-time stock data for informed decision-making.

2. Enhances Decision-Making:

- Generates detailed, customizable reports.

- Offers insights into sales, purchases, and stock trends.

3. Prevents Stock-Related Issues:

- Sends low stock alerts and automated reorder reminders.

- Helps maintain optimal inventory levels.

4. Improves Operational Efficiency:

- Streamlines purchase and sales entry processes.

- Provides quick access to centralized inventory information.

5. User-Friendly Interface:

- Designed for ease of use with minimal training.

TECHNOLOGY STACK :

Front End	Angular (JS framework)
Backend	Express.js, Node.js
Data Base	MongoDB
API	REST Ful API / GraphQL APIs

SYSTEM DESIGN:

Database Design: Define MongoDB collections and schemas for storing data (inventory, purchases, sales, reports).

Frontend Design: Creating wireframes and design Angular components for user

interfaces.Build UI components, forms, and dashboards; integrate with APIs.

Backend Design: Architect the Express.js backend and design APIs to handle data flow between frontend and database (mongoDB).

FLOW CHART :