

STOCK MAINTENANCE SYSTEM

PROBLEM STATEMENT :

The retail industry faces a challenge in managing inventory levels and ensuring stock availability. The current system of manual tracking of stock levels is not only time-consuming but also prone to errors. This creates issues like overstocks, stockouts, and missed sales opportunities, which affect the business's profitability. To overcome these issues, a stock maintenance system is needed that can automate the inventory management process and provide real-time information on stock levels, reorder points, and lead times. The system should also be able to track the movement of stock items, manage purchase orders, and generate reports on sales and inventory levels. The system should integrate with the point-of-sale system and accounting software to ensure accurate and up-to-date records. The business wants to improve the efficiency of the inventory management process and reduce the risk of stockouts and overstocks. The system should be user-friendly and accessible to all staff members who need to access it.

Implementing a stock maintenance system is critical for the business as it will help in reducing costs, improving customer satisfaction, and increasing sales. The system will allow the business to accurately track inventory levels and ensure that stock is available when customers want to buy it. By avoiding stockouts and overstocks, the business can increase revenue, reduce storage costs, and improve profitability. The system will also provide insights into inventory trends and demand patterns, allowing the business to make informed decisions about stock ordering and pricing. The system will save time and effort for staff members who are currently involved in manual tracking of inventory levels. By automating the process, they can focus on other tasks that require human intervention. The system will be a valuable asset to the business, enabling it to streamline operations and achieve greater efficiency.

Software Requirement Specification(SRS)

1. Introduction :

- 1.1. Purpose of this Document:** The SRS document outlines the necessary features and functionalities that the stock maintenance system should possess, such as the ability to add and manage products, track stock levels, receive stock alerts, generate stock reports, and more. Additionally, the document outlines any design constraints and performance requirements that may impact the system's development.
- 1.2. Scope of this document :** The scope of the document for a stock maintenance system includes defining the functional and non-functional requirements of the software application. The document aims to provide a clear understanding of the scope of the project, the expected outcome, and the limitations of the system.
- 1.3. Overview :** The stock maintenance system is a software application designed for managing inventory levels and stock availability in a retail business. The system will automate the inventory management process and provide real-time information on stock levels, reorder points, and lead times. The system will also track the movement of stock items, manage purchase orders, and generate reports on sales and inventory levels. The system will integrate with the point-of-sale system and accounting software to ensure accurate and up-to-date records.

2. General description :

A stock maintenance system is a software application designed to manage inventory levels and stock availability in a retail business. The system automates the inventory management process and provides real-time information on stock levels, reorder points, and lead times. It also tracks the movement of stock items, manages purchase orders, and generates reports on sales and inventory levels. The system integrates with the point-of-sale system and accounting software to ensure accurate and up-to-date records.

The stock maintenance system helps businesses to streamline their inventory management processes and reduce costs associated with stockouts and overstocking. With this system, businesses can optimize their inventory levels, minimize stockouts, and ensure that the right products are always available at the right time. The system also helps businesses to reduce the risk of losses due to theft, spoilage, or obsolescence, by enabling them to track the movement of stock items and generate reports on inventory levels. Overall, the stock maintenance system is an essential tool for businesses that want to improve their inventory management processes and ensure that they always have the right products available to meet customer demand.

3. Functional Requirements :

- 3.1. **Inventory Management:** The system will allow the user to add, update and delete stock items. The user can also view the current stock level, reorder point, and lead time for each stock item. The system will generate automatic notifications when stock levels reach the reorder point.
- 3.2. **Purchase Order Management:** The system will allow the user to create and manage purchase orders for stock items. The user can also track the status of purchase orders and receive notifications when they are received.
- 3.3. **Reporting:** The system will generate reports on sales and inventory levels. The user can also view historical data on stock levels and sales.
- 3.4. **Integration:** The system will integrate with the point-of-sale system and accounting software to ensure accurate and up-to-date records.

4. Interface Requirements :

- 4.1. **User Interface:** The user interface of the stock maintenance system should be easy to use and navigate. It should have clear and concise labels and buttons that are easily recognizable to the user. The user interface should also be customizable, allowing users to modify the layout to suit their preferences.
- 4.2. **Point-of-Sale Integration:** The stock maintenance system should integrate seamlessly with the point-of-sale system. This integration will ensure that the inventory levels are updated in real-time when a sale is made. It should also ensure that the stock levels are adjusted automatically when a return is processed.
- 4.3. **Accounting Software Integration:** The stock maintenance system should also integrate with the accounting software. This integration will ensure that the inventory levels and costs are accurately reflected in the accounting records. It should also ensure that the system generates accurate reports on sales and inventory levels.
- 4.4. **Reporting:** The system should have a reporting module that allows users to generate reports on sales and inventory levels. The reports should be customizable, allowing users to select the data that they want to include. The system should also provide users with the ability to export reports in a variety of formats, including Excel, PDF, and CSV.
- 4.5. **Mobile Compatibility:** The system should be compatible with mobile devices to allow users to access it from anywhere. The system should have a responsive design that adjusts to different screen sizes and resolutions. It should also have a mobile app that users can download from the app store.

5. Performance Requirements :

- 5.1. **Speed:** The stock maintenance system should be able to handle large amounts of data and perform operations quickly. It should be able to retrieve information from the database and display it on the user interface in a matter of seconds. The system should also be able to process transactions quickly to ensure that the inventory levels are updated in real-time.
- 5.2. **Scalability:** The system should be scalable and able to handle an increasing number of users and transactions. As the business grows, the system should be able to accommodate more data and transactions without affecting performance.
- 5.3. **Reliability:** The stock maintenance system should be reliable and available at all times. The system should be able to handle unexpected events such as power outages, hardware failures, and network issues without losing data or causing data corruption.
- 5.4. **Security:** The system should have robust security features to prevent unauthorized access to the system and protect sensitive data. It should use encryption to secure data in transit and at rest. The system should also have access controls to ensure that only authorized users have access to the system.
- 5.5. **Compatibility:** The system should be compatible with different hardware and software configurations to ensure that it can be used in different environments. It should work with different operating systems, browsers, and mobile devices.
- 5.6. **Data Integrity:** The stock maintenance system should maintain the integrity of data by ensuring that data is accurate, consistent, and up-to-date. The system should also have backup and recovery mechanisms in place to protect data in case of data loss or corruption.

6. Design Constraints :

- 6.1. **Hardware Requirements:** The stock maintenance system should be designed to work on a variety of hardware platforms, including desktops, laptops, and mobile devices. The system should also be able to work with different operating systems and browsers.
- 6.2. **Integration:** The stock maintenance system should be designed to integrate with other systems such as point-of-sale systems and accounting software. The system should be able to exchange data with these systems to ensure that inventory levels and costs are accurate.
- 6.3. **Security:** The system should be designed with robust security features to protect against unauthorized access and data breaches. It should use encryption to secure

data in transit and at rest. The system should also have access controls to ensure that only authorized users have access to the system.

- 6.4. Usability:** The stock maintenance system should be designed with usability in mind. The user interface should be intuitive, easy to use, and customizable. The system should also provide users with clear and concise feedback to ensure that they understand the system's operations.
- 6.5. Scalability:** The system should be designed to accommodate future growth and increasing data volumes. The system should be scalable and able to handle an increasing number of users and transactions.
- 6.6. Maintenance:** The system should be designed to be easily maintainable. The system should be modular to allow for easy updates and changes. The system should also be designed to be compatible with future updates to hardware and software.

7. Non-Functional Attributes :

- 7.1. Performance:** The system should be able to handle a large volume of stock items and transactions without affecting system performance.
- 7.2. Usability:** The system should be user-friendly and accessible to all staff members who need to access it.
- 7.3. Security:** The system should ensure the confidentiality and integrity of data. User authentication and access control mechanisms should be implemented to prevent unauthorized access to the system.

8. Preliminary Schedule and Budget :

8.1. Preliminary Schedule:

- Requirements Gathering: 2 weeks
- System Design: 4 weeks
- Development: 12 weeks
- Testing and Quality Assurance: 4 weeks
- Deployment: 2 weeks
- User Training and Documentation: 1 week
- Total Time: 25 weeks

8.2. Preliminary Budget:

- Salaries and Wages: ₹5,00,000
- Hardware and Software: ₹50,000
- Testing and Quality Assurance: ₹25,000
- User Training and Documentation: ₹10,000
- Contingency (10% of total budget): ₹58,500
- Total Budget: ₹6,43,500