

LAB 1 – STOCK MAINTENANCE SYSTEM

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AIM - To write the Problem Statement and Software Requirements Specification (SRS) for Stock Maintenance System.

Problem Statement:

Traditional stock maintenance systems can be time-consuming and prone to errors. Therefore, there is a need for an efficient and reliable stock maintenance system that can streamline the inventory management process and ensure optimal stock levels. The goal of this project is to design and implement a stock maintenance system that can automate stock tracking, reduce manual efforts, and improve accuracy in managing stock levels. This system should be able to manage the entire stock lifecycle from ordering to receiving, storing, and selling products. It should also provide real-time visibility into stock levels and generate alerts when inventory levels fall below a predefined threshold. The system should be easy to use, scalable, and flexible enough to accommodate changing business requirements.

Software Requirement Specification (SRS)

1 Introduction:

1.1 Purpose:

The purpose of this document is to provide a detailed description of the Stock Maintenance System. The document will explain the functional and non-functional requirements of the software system to be developed.

1.2 Scope:

The scope of a stock maintenance system is to automate and streamline the inventory management process, providing efficient and accurate tracking of stock levels, movements, and availability and to optimize stock management processes, minimize the risk of stockouts, and maximize operational efficiency, providing a competitive advantage to businesses in the market. The development time for the system is estimated to be ten months, and the budget for the project is \$495,000.

1.3 Overview:

A stock maintenance system is an essential tool for businesses that need to manage their inventory efficiently and effectively. It is a software application that helps organizations keep track of their stock levels, movements, and availability. The system is designed to streamline the entire inventory management process, from ordering to receiving, storing, and selling products.

2 General Description:

A stock maintenance system is a software application that helps businesses manage their inventory efficiently and effectively. It is designed to automate and streamline the inventory management process, providing real-time visibility into stock levels, movements, and availability. The system typically covers the entire stock lifecycle, from ordering to receiving, storing, and selling products.

The system provides a comprehensive view of the stock location, allowing businesses to manage their stock across multiple warehouses and locations. It can facilitate stock transfer between different locations, ensuring that the business has the right stock in the right place at the right time.

Sales management is another key feature of the stock maintenance system. The system can manage sales transactions, track sales history, and provide insight into customer buying patterns and preferences. This information can help businesses optimize their product offerings and pricing strategies to maximize sales and revenue.

The stock maintenance system can also generate alerts and notifications when inventory levels fall below a predefined threshold, reducing the risk of stockouts and ensuring that the business can meet customer demand. Reporting is another essential feature of the system, providing detailed reports on stock levels, sales, and inventory performance, enabling users to make data-driven decisions.

3 Functional Requirements:

Here are the functional requirements of a Stock Maintenance System:

- Inventory Management - The system should be able to manage the entire inventory lifecycle, from stock ordering to receiving, storing, and selling products.
- Stock Tracking - The system should provide real-time visibility into stock levels and movements, such as incoming and outgoing stock, sales, and returns.
- Stock Replenishment - The system should generate alerts and notifications when stock levels fall below a predefined threshold, prompting the user to reorder the required items.
- Stock Storage - The system should provide a comprehensive view of the stock location, providing information on the available stock in each location and facilitating stock transfer between different locations.
- Sales Management - The system should be able to manage sales transactions, track sales history, and provide insight into customer buying patterns and preferences.
- Reporting - The system should generate detailed reports on stock levels, sales, and inventory performance, providing users with valuable insights into business operations and enabling them to make data-driven decisions.

4 Interface Requirements:

Here are the interface requirements of a Stock Maintenance System:

- User-Friendly Interface - The system should have a user-friendly interface that is easy to navigate and use, even for non-technical users.
- Responsive Design - The system should be designed to be responsive to different screen sizes and resolutions, ensuring that it is accessible on desktops, laptops, tablets, and mobile devices.
- Search and Filter - The system should provide a search and filter function that allows users to find specific stock items quickly and easily.
- Barcode Scanner Support - The system should support barcode scanner integration, enabling users to scan and update stock information quickly and accurately.

5 Performance Requirements:

Here are the performance requirements of a Stock Maintenance System:

- Response Time - The system should respond quickly to user input, with minimal delays in loading or processing data.
- Scalability - The system should be able to handle a large volume of data and users without performance degradation.
- Reliability - The system should be reliable, with minimal downtime or system errors.
- Availability - The system should be available to users 24/7, with minimal maintenance or downtime.
- Speed - The system should be fast, allowing users to perform tasks quickly and efficiently.

6 Design Constraints

Here are the design constraints of a Stock Maintenance System:

- Budget - The system design should consider the budget constraints of the organization, ensuring that it is cost-effective.
- Data Security - The system design should ensure that data is secure, with appropriate measures in place to prevent unauthorized access or data breaches.
- Scalability - The system design should be scalable, allowing for future growth and changes in business requirements.
- User Experience - The system design should consider the user experience, ensuring that the interface is user-friendly and easy to navigate.

7 Non-Functional Requirements:

Here are the non-functional requirements of a Stock Maintenance System:

- Usability - The system should be easy to use, with an intuitive and user-friendly interface that requires minimal training.
- Security - The system should be secure, with robust measures in place to protect against unauthorized access, data breaches, and other security threats.
- Compatibility - The system should be compatible with other business applications and systems, enabling seamless data exchange.
- Accessibility - The system should be accessible to users with disabilities, with appropriate features in place to support accessibility.
- Internationalization - The system should be designed with internationalization in mind, able to support multiple languages, currencies, and other regional requirements.
- Data Integrity - The system should maintain the integrity of data, ensuring that it is accurate and up-to-date, with appropriate measures in place to prevent data loss or corruption.

8 Preliminary Schedule and Budget:

Schedule:

Project planning and requirements gathering: 2 weeks

System design and architecture: 4 weeks

System development and testing: 12 weeks

System deployment and user acceptance testing: 4 weeks

Training and system documentation: 2 weeks

Final system deployment and launch: 2 weeks

Total project duration: 26 weeks (6 months)

Budget:

Project planning and requirements gathering: \$10,000

System design and architecture: \$20,000

System development and testing: \$100,000

System deployment and user acceptance testing: \$20,000

Training and system documentation: \$10,000

Final system deployment and launch: \$10,000

Contingency reserve (10% of total budget): \$17,000

Total project budget: \$187,000