

Software Requirement Specification(SRS)

1.Introduction:

- 1.1. **Purpose of this Document:** **Purpose of this Document:** The purpose of this document is to define the requirements for the development of a stock maintenance system. The system will be designed to enable the efficient management of inventory and stock levels for a retail store. The system will be developed to be user-friendly, efficient, and scalable
- 1.2. **Scope of this document** – The stock maintenance system will enable users to:
 - Track inventory levels
 - Place and track orders for stock
 - Monitor stock levels and receive alerts when stock levels are low
 - Record stock movement and stock taking
 - Generate reports on stock levels, stock movement, and stock taking
- 1.3. **Overview** – The software requirements specification document outlines the purpose, scope, and functional and non-functional requirements of a stock maintenance system for a retail store. It includes user management, stock management, reporting, and integration with existing inventory management systems. The document also covers assumptions and constraints, as well as a glossary of terms.

2.General description:A stock maintenance system is a software application used to manage inventory and stock levels for a business. The system typically enables users to track inventory levels, place and track orders for stock, monitor stock levels and receive alerts when stock levels are low, record stock movement and stock taking, and generate reports on stock levels, stock movement, and stock taking. The purpose of a stock maintenance system is to improve the efficiency and accuracy of inventory management, enabling businesses to make informed decisions about their stock levels and reduce the risk of stockouts or excess inventory.

3.Functional Requirements:

- **User Management:**The system shall have user management functionality, including the ability to create, modify, and delete users. Users shall have specific permissions based on their roles.
- **Stock Management:**The system shall enable the tracking of inventory levels and the placement of orders for stock. The system shall provide the ability to monitor stock levels and receive alerts when stock levels are low. The system shall enable the recording of stock movement and stock taking.
- **Reporting:**The system shall provide reporting functionality, including the ability to generate reports on stock levels, stock movement, and stock taking.
- **Integration:**The system shall be developed to integrate with existing inventory management systems, including the ability to import and export data.

4.Interface Requirements:The interface requirements for a stock maintenance system typically include the following:

- **User-friendly interface:** The system should be designed with a clean and intuitive user interface, making it easy for users to navigate and perform tasks.
- **Responsive design:** The interface should be responsive, meaning it can adapt to different screen sizes and device types, such as desktops, tablets, and smartphones.
- **Access control:** The system should provide user authentication and access control, ensuring that only authorized users can access the system and perform certain actions.
- **Notifications and alerts:** The system should provide notifications and alerts to users when stock levels are low, orders have been placed, or other relevant events occur.
- **Search and filter functionality:** The system should provide the ability to search and filter stock data, making it easy for users to find specific items or view stock levels by location, department, or other criteria.
- **Reporting functionality:** The system should provide reporting functionality, enabling users to generate reports on stock levels, stock movement, and stock taking.

- Integration with other systems: The system should be designed to integrate with other inventory management systems, such as point of sale systems, accounting software, or supply chain management systems.

Overall, the interface of a stock maintenance system should be designed to be user-friendly, efficient, and scalable, enabling users to manage inventory and stock levels with ease and accuracy.

5.Performance Requirements: The performance requirements for a stock maintenance system typically include the following:

- Response time: The system should respond to user requests quickly and efficiently, ensuring that users can perform tasks without experiencing delays or downtime.
- Scalability: The system should be designed to handle a large volume of data and user traffic, enabling it to scale up or down as needed to accommodate changes in inventory levels or business growth.
- Reliability: The system should be reliable, ensuring that data is stored and processed accurately and consistently without any errors or data loss.
- Availability: The system should be available to users at all times, with minimal downtime or maintenance required.
- Security: The system should be secure, protecting sensitive data from unauthorized access or cyber threats.
- Backup and recovery: The system should provide backup and recovery functionality, ensuring that data can be restored in the event of a system failure or data loss.
- Compatibility: The system should be compatible with different devices, operating systems, and web browsers, ensuring that users can access and use the system from a variety of devices and platforms.

Overall, the performance requirements for a stock maintenance system should ensure that the system is fast, reliable, secure, and scalable, enabling users to manage inventory and stock levels efficiently and effectively.

6.Design Constraints:The design constraints for a stock maintenance system may include the following:

- Technology constraints: The system may need to be designed using specific technologies or programming languages that are required by the business or existing infrastructure.

- **Hardware constraints:** The system may need to run on specific hardware or devices, such as servers or mobile devices, and must be optimized to work within the limitations of the hardware.
- **Data constraints:** The system may need to conform to specific data standards or structures, such as a specific database management system or data format.
- **Regulatory constraints:** The system may need to comply with specific industry regulations or legal requirements, such as data privacy laws or inventory tracking regulations.
- **Time constraints:** The system may need to be developed and deployed within a specific timeframe, such as to meet a business deadline or seasonal demand.
- **Budget constraints:** The system may need to be designed and developed within a specific budget, which may limit the available resources or technologies that can be used.
- **User constraints:** The system may need to be designed to accommodate specific user needs or limitations, such as accessibility requirements for users with disabilities.

Overall, the design constraints for a stock maintenance system may vary depending on the specific business needs, regulatory requirements, or technical limitations that need to be addressed.

7.Non-Functional Attributes:The non-functional attributes for a stock maintenance system:

- **Usability:** The system should be designed to be user-friendly and intuitive, with clear and concise instructions and minimal training required for users to navigate the system.
- **Reliability:** The system should be reliable, with minimal downtime or errors that may cause data loss or corruption.

- **Security:** The system should be secure, with appropriate access controls, authentication, and data encryption to protect sensitive information from unauthorized access or cyber threats.
- **Scalability:** The system should be designed to scale up or down as needed to accommodate changes in inventory levels, user traffic, or business growth.
- **Performance:** The system should be fast and responsive, with quick response times and efficient data processing that can handle large volumes of data and user requests.
- **Maintainability:** The system should be easy to maintain and update, with clear and concise documentation and support for software updates and bug fixes.
- **Interoperability:** The system should be able to integrate with other systems, such as point of sale systems, accounting software, or supply chain management systems, to enable seamless data sharing and workflow automation.

Overall, the non-functional attributes of a stock maintenance system should ensure that the system is reliable, secure, scalable, and efficient, enabling users to manage inventory and stock levels with ease and accuracy.

8.Preliminary Schedule and Budget:The preliminary schedule and budget for developing a stock maintenance system will depend on various factors such as the scope of the project, the required functionalities, and the level of complexity. Here is a sample preliminary schedule and budget:

1. **Requirements Gathering (2 weeks)** - This phase involves meeting with stakeholders to gather requirements, identify use cases, and define project scope.
2. **Design and Planning (4 weeks)** - In this phase, the design and architecture of the system are created. The technical team will also work on a detailed project plan with timelines and milestones.
3. **Development (12 weeks)** - This phase involves actual coding and development of the system, followed by testing and debugging.
4. **Deployment (2 weeks)** - This phase involves finalizing the system and deploying it to the production environment.

5. Training and Support (4 weeks) - This phase involves training users on how to use the system and providing support as needed.

The total duration of the project is 24 weeks or 6 months.

Budget breakdown:

1. Salaries and Wages: \$250,000
2. Hardware and Software: \$50,000
3. Overhead costs: \$100,000
4. Contingency: \$50,000

Total budget: \$450,000

Note that this is just a sample schedule and budget, and the actual timeline and budget for developing a stock maintenance system may vary depending on specific project requirements, team size, and other factors.