Date / /
Page 15

28/8/25

STOCK MAINTENANCE SYSTEM

1. Develop a problem statement

Problem Statement

Tracking stock levels, suppliers, and purchase orders manually leads to inconsistencies and delays. A digital Stock Maintenance System is required to ensure real-time inventory management and accurate forecasting.

2. Develop a IEEE Standard SRS Document

Software Requirement Specification

1. Introduction

1.1 Purpose

The purpose of this document is to describe the requirements and specifications for the Stock Maintenance System. It aims to clarify project objectives, scope and deliverables.

1.2 Scope

This document defines the functionality, ~~time and~~ timeline and cost of the Stock Maintenance System.

1.3 Overview

The Stock Maintenance System is a solution for managing inventory levels, purchase orders, supplier details and stock reports in real time.

2. General description

The system will cater to businesses and warehouses offering inventory management, demand forecasting and transaction records.

Date / /
Page 16

3. Functional Requirements

3.1 Inventory Tracking

Maintain details of stock items with quantities and update stock levels after purchases and sales

3.2 Supplier Management

Store supplier information and purchase records, and track outstanding orders and payments.

3.3 Order Management

Generate purchase-orders for low-stock items, track deliveries and receipts.

3.4 Reporting

Generate stock reports, turnover analysis and forecasting.

4. Interface Requirements

4.1 User Interface

Simple dashboard for staff and administrators accessible via web and desktop systems.

4.2 Integration Interfaces

Integration with Point-of-Sale systems, including support for barcode/RFID-based tracking

5. Performance Requirements

5.1 Response Time

The system shall make real-time stock updates within 2 seconds.

5.2 Scalability

The system should handle 50,000 stock items at a time.

5.3 Data Integrity
Ensure consistency of stock data across transactions

6. Design Constraints
6.1 Hardware limitations
The system should operate on warehouse computers and Radio-Frequency Identification (RFID)/barcode scanners.
6.2 Software Dependencies
The system should use relational databases such as MySQL, and have implementation in Java or Python with Spring/Django.

7. Non-Functional Attributes
7.1 Security
The system shall secure supplies and transaction records.
7.2 Reliability
The system shall have a fault tolerant design with backup.
7.3 Scalability
The system should be able to expand to include more warehouses.
7.4 Portability
The system must be accessible on multiple platforms.
7.5 Usability
The system shall have an intuitive interface for warehouse staff.
7.6 Reusability
The system shall have a modular system for adding analytics features.

7.7 Compatibility

The system should be compatible with multiple browsers.

7.8 Data Integrity

The system must have accurate and consistent stock records.

8. Preliminary Schedule and Budget

The Stock Maintenance System is estimated to take 5 months with a budget of $ 20,000, including planning, development and deployment.