Software Requirement Specification for Inventory System

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Problem Statement: Inventory System

Technical Components

Tech Stack

Frontend	HTML,CSS,JS
Backend	Django(Python)
Database	MySql, PostgresSql
API	RESTFul API
Deployment	None

TIMELINE OF THE PROJECT :

STAGES	STAGE DESCRIPTION	DEADLINE	STATUS
STAGE 1	Planning and Requirement Gathering	02.05.2024	Completed
STAGE 2	Design and Prototyping		In Progress
STAGE 3	Database Design		Not Started
STAGE 4	Backend Development		Not Started
STAGE 5	Integration and Testing		Not Started

1. PROBLEM STATEMENT:

In real world, many of the organizations face the problem in the Inventory Management. Few of them are listed below:

- Inaccurate and inconsistent inventory tracking processes, leading to errors and inefficiencies.
- Lack of visibility and control over warehouse operations, space utilization, and order management, resulting in stockouts or overselling.
- Difficulty managing complex supply chains, changing customer demand, and specialized inventory requirements.
- Limited expertise, inefficient processes, inadequate software solutions, and poor cross-functional collaboration, hindering scalability and optimization.

2.INTRODUCTION:

2.1. Purpose:

The main purpose of the Inventory Management System is to remove the manual tracking of each and every product in the Inventory and automate the incoming and outgoing of each and every product and revenue generated by those products in the Inventory. This document will define the requirements for an Inventory Management System. This system will help businesses keep track of their inventory levels, manage stock movements, and ensure accurate inventory records.

2.2. Scope of the Project:

The Inventory Management System will provide a automated way of managing various categories of stocks in the Inventory, their purchase history, sales history and their status. It also paves way to segregate the various stocks and store it in Inventory with their exact location. The system will cover the following features:

- Product Information Management
- Inventory tracking and stock level monitoring
- Purchasing and Procurement Processes
- Order fulfilment and sales Integration
- Inventory adjustments and stock transfers
- Reporting and analytics for inventory data
- Alert system on insufficient of Stocks

3.OVERALL DESCRIPTION:

3.1 Product Perspective:

An Inventory system that would take care of the data of the stock level in the Inventory is required in Industries in order to track their sales. It would offer a centralised platform for inventory management among various sales channels and warehouses.

3.2 Product Features:

The below mentioned are the features of the a Inventory Management Software:

- **Product Catalog Management:** Ability to create, update, and manage product information, including SKUs, descriptions, pricing, and categories.
- **Stock Level Monitoring:** Continuous monitoring of stock levels for every product and warehouse.
- **Purchase Order Management:** Managing, creating, monitoring, and overseeing purchase orders for inventory replenishment.
- **Sales Order Management:** Helps to note the sales of each and every stock in the inventory which helps in knowing exact amount of Availability of the stocks
- **Inventory Transfers and Adjustments:** The ability to move goods between warehouses and modify stock levels in response to theft, damage, or other issues.
- **Reporting and Analytics:** Extensive reporting features, such as low stock warnings, sales reports, and stock level reports.
- **Stock Alerts:** Alerts sent to the admin on insufficiency or low stock which help them to fill the stocks for Sales

3.3 User Classes and Characteristics:

- **Administrator:** Most probably admins register the Organisation while registering the profile, they have the access to the Revenue and Analytics Portal
- **Users:** Users are most probably Inventory Sales Personel ,Purchase Manager , Inventory Manager who manage up Purchasing , Sales in the Inventory

3.4 Operating Environment:

Modern web browsers will be able to access the web-based system.
To use and access the programme, you will need a reliable internet connection.

4. FUNCTIONAL REQUIREMENTS:

4.1 Inventory Management:

- **Add Product:** By entering information such as the product's name, description, SKU, category, and starting stock level, users can add a new item to the inventory.
- **Update Product:** Users have the ability to modify stock levels and product details.
- **Delete Product:** Users have the option to take a product out of stock.
- **Product Search:** Customers have the option to look up products by category, SKU, or name.
- **View Inventory:** Customers can see a list of every product in the inventory, along with the amount of stock that is currently available.

4.2 Order Processing:

- **Purchase Order Creation:** In order to restore inventory levels, users can initiate purchase orders.
- **Process Sales Order:** When processing sales orders, users have the option to adjust stock levels as necessary.
- **Create Invoice:** After a sales order is fulfilled, users can create an invoice.

4.3 Reporting:

- **Inventory Status Report:** Users are able to create a report that displays stock levels and product data in addition to the current inventory status.
- **Sales Report:** Users are able to create reports on revenue, top-selling products, and overall sales performance.
- **Purchase History:** Information about previous purchase orders is available for users to see.

4.4 Stock Level Tracking:

- Inventory levels for every product and warehouse location are tracked in real time.
- Multiple measuring units (e.g., pieces, cases, pallets) are supported.
- Alerts about low stock levels will be sent by email, SMS, or in-app notifications to the specified recipients (such as the purchasing manager or inventory manager).
- Users will be able to customise the low stock alert system's frequency and delivery options.

5. NON-FUNCTIONAL REQUIREMENTS:

5.1 Performance Requirements:

- Reasonable response times should be provided by the system for routine tasks (such as product searches, stock level changes, and report generation).
- Large numbers of concurrent users and transactions ought to be supported by the system without noticeably degrading performance.
- Scalability is required to handle growing user loads and data quantities in the system.

5.2 Security Requirements:

- To prevent unauthorised users from accessing sensitive information and features, the system should have access control methods in place.
- Mechanisms for user permission and authentication should be in place to guarantee the privacy and integrity of data.
- Sensitive information, such passwords and financial information, should be transmitted and stored using data encryption.
- To guard against data loss, disaster recovery plans and routine backups should be put in place.

5.3 Usability and User Interface Requirements:

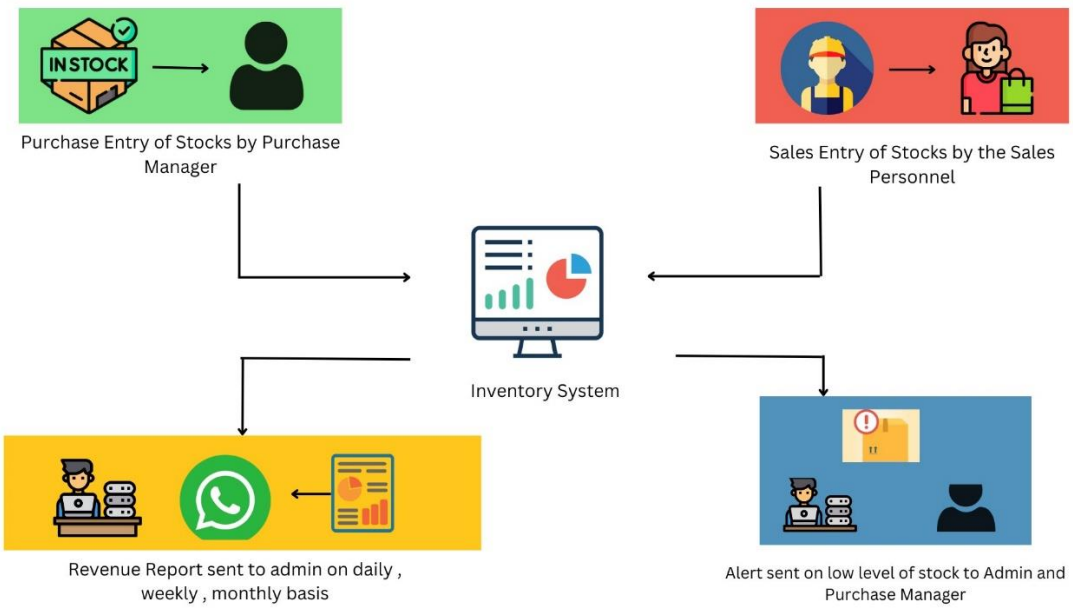
- Across all modules and functionalities, the user interface should be simple to use, intuitive, and uniform.
- To stop improper data entering, the system should offer concise error alerts and validation feedback.
- Sufficient help files, training materials, and user manuals ought to be supplied.

5.4 Reliability and Availability Requirements:

- With little scheduled downtime for maintenance or upgrades, the system should maintain a high uptime and be accessible around-the-clock.
- The system must be resilient to mistakes and be able to bounce back from malfunctions with grace.
- It is imperative to provide suitable redundancy and failover solutions in order to guarantee business continuity.

6. SYSTEM MODEL :

USE CASE MODEL OF INVENTORY SYSTEM



SEQUENCE MODEL OF INVENTORY SYSTEM