

ims

Functional requirements doc

Version 1.0.0

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1 Introduction

1.1 Purpose

This document outlines the functional requirements for the Inventory Management System (IMS). The purpose of this document is to provide a detailed description of the system's functionalities and how they will meet the business needs of managing inventory efficiently.

1.2 Scope

The scope of the system includes tracking, managing, and controlling inventory levels, automating reorder processes, generating reports, and integrating with other business systems like sales, accounting, and purchasing.

2 System Overview

The inventory system will:

- Track stock levels in real-time.
- Manage inflow and outflow of goods.
- Automate reorder points and generate purchase orders.
- Provide detailed reports on inventory, sales, and suppliers.

3 Functional Requirements

3.1 Ordering management

ID	Requirement Description	Priority	Comments
Fr-01	The system shall allow manual entry and management of purchase orders.	High	
Fr-02	The system must allow users to record an order when it arrives, capturing all relevant details such as supplier, date, and delivery method.	High	
Fr-03	The system must allow users to record and associate products with a specific order. Each product must include quantity, price per unit, and total cost.	High	
Fr-04	The system must allow users to assign and update the status of an order. The available statuses must include: Pending , Completed , and Failed .	High	
Fr-05	If an order is in a Pending state, the system must provide a mechanism to update the order once it is either completed or failed.	High	
Fr-06	If today's date is greater than the expected order date, the system must provide a mechanism to alert on unmet orders.	High	
Fr-07	The system must allow users to record and update the total price of an order, which is the sum of the prices of all items in the order.	High	

Fr-08	The system must allow users to record and update the image receipts of an order	High	
Fr-09	The system must provide users with the ability to mark an order as Failed , capturing failure reasons (e.g., damaged goods, incorrect shipment) and adjusting inventory if necessary.	High	
Fr-010	The system must provide users with the ability to record all damaged goods of an order as, capturing damage reasons (e.g., damaged goods, incorrect shipment) and adjusting inventory if necessary.	High	
Fr-011	The system should enable order amendments (e.g., changes in quantity, delivery dates, or status).		

3.2 Inventory management and Tracking

Fr-012	The system should allow users to CRUD all products that are of a certain order	High	
Fr-013	The system must allow users to add, edit, and delete inventory items.	High	
Fr-014	The system must provide real-time updates to stock levels based on transactions (inflow/outflow).	High	
Fr-015	The system must allow users to categorize inventory items by type, location, or supplier.	High	
Fr-016	The system must track inventory by batch or lot numbers for traceability.	Low	
Fr-017	The system must support barcode scanning for item identification and updating stock levels.	Low	
Fr-018	The system must allow manual stock adjustments to account for damaged, lost, or returned goods.	High	

3.3 Stock Inflow and Outflow Management

Fr-019	The system must allow users to log and track incoming stock from suppliers.		
Fr-020	The system must allow users to record and track outgoing stock for customer orders.		
Fr-021	The system must manage returns and adjust inventory accordingly.		
Fr-022	The system must generate invoices and delivery notes for outgoing goods.	low	
Fr-023	The system must support multiple methods of stock valuation (FIFO, LIFO, Weighted Average).		

3.4 Re-Ordering and stock Alerts

Fr-024	The system must provide alerts when stock levels reach reorder points.	High	
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Fr-025	The system must automatically generate purchase orders when stock reaches a predefined threshold.	High	
Fr-026	The system must allow users to configure reorder points per item.	High	
Fr-027	The system must maintain a database of suppliers for reordering purposes.	High	

3.5 Reporting and Analytics

Fr-028	The system must generate reports on inventory levels, including current stock, stock movements, and stock aging.	High	
Fr-029	The system must generate sales reports, including product performance and turnover rates.	High	
Fr-030	The system must allow users to export reports in various formats (CSV, PDF, Excel).	High	
Fr-031	The system must provide real-time dashboard views of inventory metrics.	High	
Fr-032			

3.6 Supplier and Purchase management

Fr-033	The system must allow users to manage supplier information, including contact details, past transactions, and product prices.	High	
Fr-034	The system must generate purchase orders and send them directly to suppliers via email.	low	
Fr-035	The system must track and log all purchase orders and their fulfillment status.	High	

3.7 User Management and Security

Fr-036	The system must provide role-based access control to restrict users' access to certain features based on their role (e.g., admin, warehouse staff, sales team).	High	
Fr-037	The system must track and log all user activities for auditing purposes.	High	
Fr-038	The system must encrypt sensitive data such as supplier information, stock valuations, and user credentials.	High	
Fr-039	The System should allow the Admin to Create and Manage user accounts	low	

3.8 Integration with Other Systems

Fr-040	The system must integrate with sales systems (e.g., Point of Sale) to automatically update stock levels based on sales transactions.	low	
Fr-041	The system must integrate with accounting systems to update financial records based on stock levels and purchase orders.	Low	

Fr-042	The system must provide APIs to facilitate integration with external systems such as e-commerce platforms.	High	
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3.9 Category

Fr-043	The systems should provide mechanisms to add categorization of each product		
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3.10 Payment management

Fr-044	The system should track all payments to suppliers		
Fr-045	The system should track all customer payments		
Fr-046	The system should allow user to View outstanding supplier/customer payments		

3.11 Notifications and Alerts

Fr-047	The system should send Notifications for critical events such as low stock levels, failed orders, or overdue payments.		
Fr-048	The System notifications should be configured by the Admin based on roles		

3.12 Viewing

Fr-049	The system must allow users to view all sales records, including details such as sale date, products sold, quantities, total price, and customer information.		
Fr-050	The system must allow users to view the entire inventory list, including product name, SKU, current stock level, warehouse location, and supplier details.		
Fr-051	The system must provide filtering and search functionality for viewing sales records (e.g., by date range, product, customer, or sales representative).		
Fr-052	The system must provide filtering and search functionality for viewing inventory lists (e.g., by product category, stock levels, or warehouse location).		
Fr-053	The system must allow users to view pending, completed, and failed orders, along with their associated statuses and product details.		
Fr-054	The system must generate a summary view of current stock levels, including total value of inventory, stock turnover rates, and upcoming stock reorders.		
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Fr-056	The system must allow users to view complete order history, including purchase orders from suppliers and sales orders from customers.		
Fr-057	The system must store and display any amendments made to orders (e.g., changes in quantity, delivery dates, or status).		

3.13 Inventory Auditing And Stock Reconciliation

Fr-058	The system must allow users to perform periodic inventory audits and compare system records with physical stock levels.	medium	
Fr-059	The system must provide a mechanism to reconcile stock discrepancies identified during audits, and update records accordingly.	medium	

3.14 Inventory Forecasting

Fr-060	The system must provide demand forecasting by analyzing past sales trends and predicting future inventory needs.	low	
Fr-061	The system must recommend reorder quantities based on forecasted demand and current stock levels.	low	

3.15 Supplier Performance Tracking

Fr-062	The system must track supplier performance, including delivery times, quality of goods, and adherence to contract terms.		
Fr-063	The system must generate supplier performance reports to evaluate and compare suppliers.		

3.16 Customer Relationship Management (CRM)

Fr-064	The system must store customer information, including contact details, order history, and preferences.	medium	
Fr-065	The system must allow users to track customer interactions (e.g., support requests, feedback) to improve customer relations.	medium	
Fr-066	The system must allow users to manage customer returns, adjusting stock levels and generating refund or credit notes.		
Fr-067	The system must track reasons for returns (e.g., defective goods, customer dissatisfaction) and maintain a log for future analysis.		
Fr-068			

4 Assumptions And Constraints

- The system will be deployed on a cloud-based infrastructure.
- Users will have access to mobile devices
- Integration with third-party systems (e.g., accounting software) will require appropriate APIs.
- The project must be completed within the given budget and timeline constraints

5 Acceptance Criteria

- The system should allow users to manage inventory items and stock levels efficiently.

- The system must alert users to reorder stock when levels fall below a predefined threshold.
- Reports should be generated accurately, providing insights into inventory, sales, and supplier performance.
- The system must successfully integrate with existing accounting and sales systems.
- All functional requirements must pass user acceptance testing before the system is deployed.