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REVIEW 3

DATE: 30-04-2025

AUTOMATING INVENTORY MANAGEMENT

NMNT ID : NMNTSTD5122016

Team Name : SKP IT Riders

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GUIDE

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ABSTRACT

The Inventory Management Automation System is designed to simplify warehouse operations by allowing real-time stock tracking, automating order processing and forecasting demand. This system reduces human error, improves efficiency and ensures optimal inventory control through QR code scanning and automated alerts. Built with Django and deployed on Render, it features a user-friendly dashboard for warehouse users and administrators to monitor stock levels, manage orders and analyze reports.

Introduction

Current Challenges

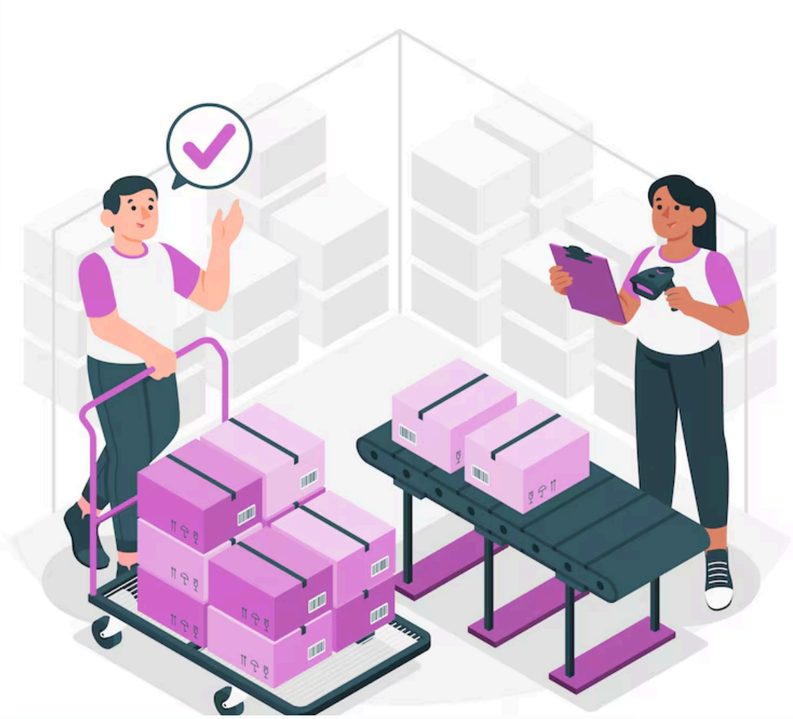
Many small warehouses still manage their inventory manually, which often leads to mistakes, delays and confusion.

Benefits

It is easy to use and helps save time, reduce errors and make warehouse work more efficient.

Our Solution

This project solves those problems by introducing an automated system using a website. The system tracks inventory with QR codes, manages orders, sends real-time alerts and shows useful reports to the admin and staff.



Future Work

Mobile-Friendly Version
Create a responsive design for smartphones and tablets

AI/ML Integration
Improve demand prediction using artificial intelligence

Advanced Notifications
Send order and stock alerts via SMS or WhatsApp

Security Improvements
Add login activity tracking for admin and staff

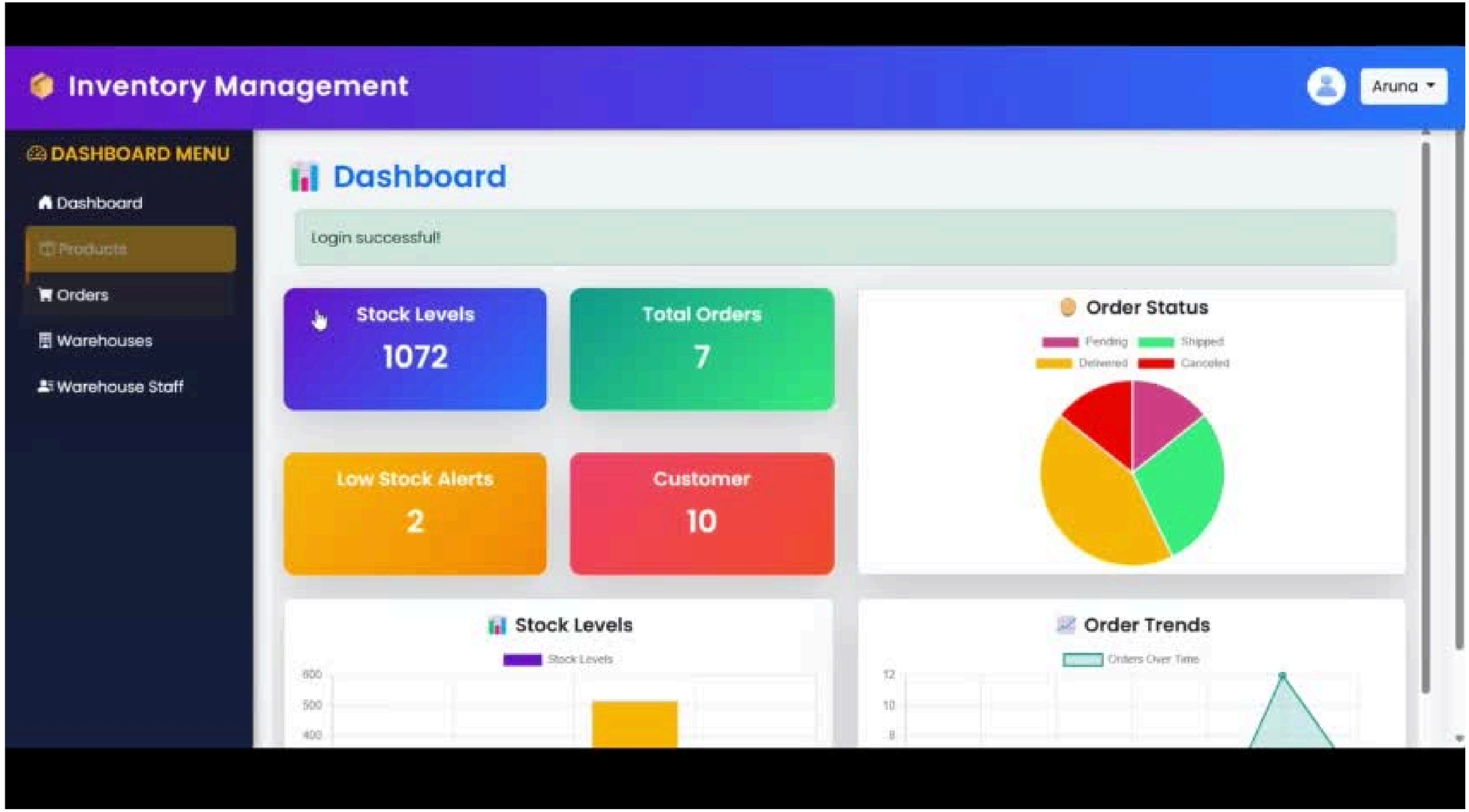
Documentation

Project Title:	Automating Inventory Management for Small Warehouses
Platform:	Django-based Web Application
Language:	Python
Database:	MySQL
Frontend:	HTML, CSS, JavaScript
Frameworks:	Django, Bootstrap
Tools Used:	QR Code Scanner, MySQL Workbench, Render (Deployment)

Modules Covered

- User Authentication & Role Management
- Warehouse Staff Dashboard
- Product & Inventory Management
- QR Code-Based Stock Tracking
- Order Placement & Status Management
- Real-Time Alerts and Notifications
- Admin Dashboard with Analytics
- Demand Forecasting Module
- Project Deployment and Testing

Project Demonstration Automating Inventory Management



Summary

Zeroth Review

- Introduced the project title and its relevance.
- Defined the problem and shared a clear abstract.
- Provided an initial literature review showing the need for small warehouse solutions.

First Review

- Explained the system methodology and modules.
- Shared the tech stack: Django, MySQL, HTML/CSS.
- Presented the system architecture and UML diagrams.

Second Review

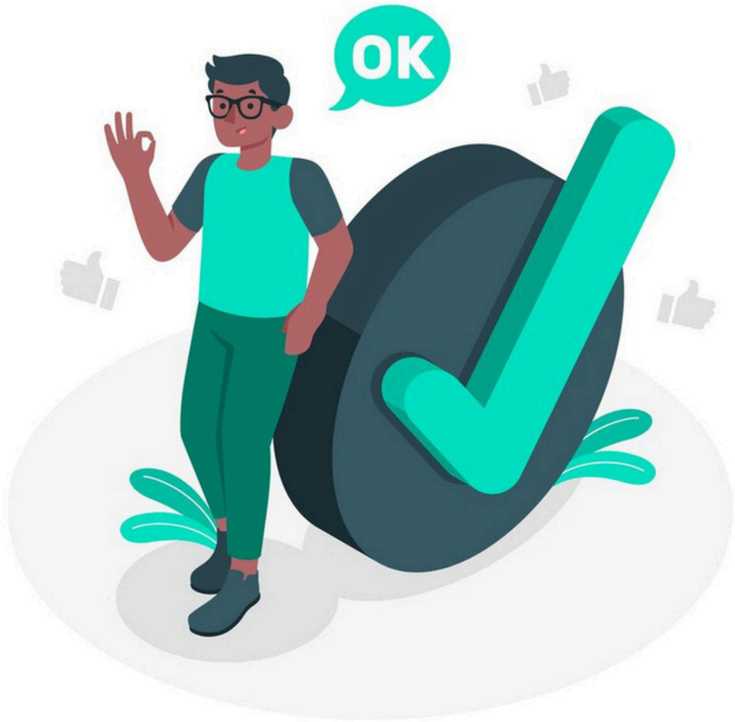
- Completed module integration and testing.
- Demonstrated QR code scanning and real-time stock updates.
- Showed working dashboards for staff and admin users.

Third Review

- Conclusion
- Future Work
- Documentation
- Presentation

CONCLUSION

The developed system offers a smart, efficient solution for managing small warehouse operations. It automates inventory tracking using QR codes, streamlines order fulfillment and delivers real-time stock updates with instant alerts. With integrated demand forecasting, it enhances accuracy, decision-making and operational efficiency while reducing manual workload.




THANK
YOU


Warehouse logistics