

COLLEGE CODE : 1128

COLLEGE NAME : TJS Engineering College

DEPARTMENT : CSE

STUDENT NM-ID : aut23cse84

aut23cse86

aut23cse83

aut23cse89

aut23cse63

ROLL NO : 112823104084

112823104083

112823104089

112823104086

112823104063

DATE : 14 – 05 - 2025

TECHNOLOGY-PROJECT NAME : Phase 5: Project Demonstration & Documentation

Title: Supply Chain Management System

SUBMITTED BY,

(Team-6)

G. Udhaya Moorthi

V. Vijayaraghava

Yeswanth. E

V.M. Thulasi Narayanan

A.Prasath Kumar

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## **Phase 5: Project Demonstration & Documentation**

**Title: Supply Chain Management System**

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Abstract:

The Intelligent Supply Chain Management System project aims to transform logistics and inventory operations through the use of artificial intelligence, real-time tracking, and Enterprise Resource Planning (ERP) integration. In this final phase, the system incorporates smart forecasting algorithms, IoT-enabled inventory monitoring, and secure data management to optimize supply chain processes. This document presents a comprehensive report of the project's completion, including system demonstration, technical documentation, performance metrics, source code, and testing outcomes. Designed to handle large-scale logistical networks, the system ensures efficient resource utilization, reduces delays, and enhances supply chain visibility.

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## 1. Project Demonstration

### Overview:

The Intelligent Supply Chain Management System will be demonstrated to stakeholders, showcasing its automation features, real-time inventory tracking, and AI-driven demand forecasting.

### Demonstration Details:

**System Walkthrough:** A live walkthrough of the platform, highlighting dashboard features, supplier-buyer interaction, and logistics status updates.

**AI Forecasting:** Demonstration of the system's AI capabilities to predict inventory needs and optimize procurement schedules.

IoT Integration: Real-time data from warehouse sensors (e.g., stock levels, temperature, shipment tracking) will be displayed.

Performance Metrics: Highlights include inventory turnover rate, order accuracy, and system scalability under varying user loads.

Security & Privacy: Data encryption and access control features will be demonstrated to secure sensitive business data.

Outcome:

Stakeholders will observe the system's ability to streamline supply chain operations, improve forecasting, and support real-time decision-making.

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## 2. Project Documentation

Overview:

A complete set of documents for the Supply Chain Management System is provided, covering system architecture, algorithms, user and admin guides, and performance evaluations.

Documentation Sections:

System Architecture: Diagrams covering AI modules, ERP and IoT interfaces, and end-user workflows.

Code Documentation: Annotated code for AI models, ERP connectors, and inventory management functions.

User Guide: Instructions for supply managers, vendors, and procurement officers on using the system.

Administrator Guide: Guidance for managing users, maintaining the system, and overseeing analytics dashboards.

Testing Reports: Detailed evaluations of system response time, data accuracy, and failover handling.

Outcome:

The system is fully documented, ensuring smooth deployment, operation, and future scalability.

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### 3. Feedback and Final Adjustments

Overview:

Stakeholder and user feedback will guide final refinements of the system before deployment.

Steps:

Feedback Collection: Feedback will be gathered through forms and interviews after the demonstration.

Refinement: System improvements will be based on real-world usability, data accuracy, and feature completeness.

Final Testing: Final testing will confirm system stability, performance, and readiness for broader deployment.

Outcome:

The system will be fine-tuned for full operational use, meeting stakeholder expectations and business needs.

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#### 4. Final Project Report Submission

Overview:

The final report summarizes the development process, system capabilities, challenges faced, and project outcomes.

Report Sections:

Executive Summary: High-level project goals and success highlights.

Phase Breakdown: Details of design, development, AI training, testing, and IoT implementation.

Challenges & Solutions: Analysis of issues like stock mismanagement and resolution strategies.

Outcomes: A review of benefits including improved efficiency, reduced wastage, and enhanced tracking.

Outcome:

A professional report demonstrating the complete system journey will be submitted for academic and operational review.

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## 5. Project Handover and Future Works

Overview:

Final system delivery and discussion of future development pathways.

Handover Details:

Next Steps: Plans for scaling the system, adding predictive analytics for dynamic pricing, and integrating blockchain for traceability.

Outcome:

The project will be handed over with clear future directions and maintenance recommendations.

Code :

```
<!DOCTYPE html>

<html>

<head>

<title>

Supply Chain Dashboard

</title>

</head>

<body>

<h1>

Inventory Overview

</h1>

<ul>

<li>

Item_A – Stock: 150 / Threshold: 100

</li>

<li>

Item_B – Stock: 80 / Threshold: 50

</li>

</ul>
```



```
<h2>
Forecasted Demand
</h2>
<ul>
<li>
Item_A: 170
</li>
<li>
Item_B: 95
</li>
</ul>
</body>
</html>
```

Output :

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# Inventory Overview

- item\_A - Stock: 150 / Threshold: 100
- item\_B - Stock: 80 / Threshold: 50

## Forecasted Demand

- item\_A: 170
  - item\_B: 95
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