

Employee & Work Order Management System

Project Synopsis

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Department & Semester: CSE & 8th

Internship Title: Employee & Work Order Management System

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1. Project Title

Employee & Work Order Management System

2. Project Overview

The Employee & Work Order Management System is a full-stack web application developed as part of the JIEF Internship Project. The system streamlines organizational operations by enabling admins, managers, and employees to efficiently manage work orders, assignments, and materials in real-time.

3. Objectives

- Automate employee and work order management using a centralized ERP system.
- Implement role-based access control for secure functionality.
- Integrate real-time communication using Socket.io.
- Provide an easy-to-use web interface for managing employees and work orders.

4. Key Features

Admin: Manage employees, departments, and global work orders.

Manager: Assign employees, update status, manage materials.

Employee: View and update assigned tasks, receive real-time notifications.

5. System Architecture

Frontend: React (Vite) + Tailwind CSS

Backend: Node.js + Express.js

Database: MongoDB (Mongoose)

Real-time: Socket.io

Authentication: JWT

6. Workflow Summary

1. Admin creates users and departments.
2. Admin assigns work orders to Managers.
3. Managers assign employees.
4. Employees update work status.
5. All users receive real-time updates.

7. Technology Stack

Frontend: React, Tailwind CSS, DaisyUI

Backend: Node.js, Express.js

Database: MongoDB

Real-time: Socket.io

Authentication: JWT

Hosting: Render.com

8. Modules

- Authentication Module
- Department Module
- Employee Module
- Work Order Module
- Notification Module

9. Results and Benefits

- Simplified management of employee and work order tasks.
- Real-time collaboration and tracking.
- Reduced manual errors and improved transparency.

10. Future Enhancements

- AI-based workload prediction.
- Analytics dashboard.
- Mobile application.
- Advanced role-based UI access control.

11. Conclusion

The Employee & Work Order Management System demonstrates a scalable ERP solution that bridges communication gaps between administration and workforce. It automates workflow assignments and ensures smooth management with real-time tracking and modern web technologies.