Naan Mudhalvan Project Report

Project Title: Store Manager - Keep Track of Inventory

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Team Size: 4

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Purpose: Naan Mudhalvan Project

# Abstract

The Store Manager project is designed to keep track of inventory efficiently. It provides a simple interface for managing stock levels, tracking incoming and outgoing items, and ensuring that the right products are available when needed. This system reduces manual effort, prevents stockouts, and improves overall business efficiency.

# Introduction

Inventory management is a critical aspect of running any business that deals with goods. The Store Manager application is built to automate inventory tracking, allowing users to add, update, and monitor products in real time. This system eliminates human error, saves time, and provides accurate insights into stock availability.

# Project Overview

Purpose: To provide an efficient system for tracking and managing store inventory.

Key Features:

• Add, update, and delete inventory items

• Real-time stock tracking

• Notifications for low stock levels

• Admin dashboard for complete control

# System Architecture

Frontend: React.js with Bootstrap and Material UI

Backend: Node.js and Express.js

Database: MongoDB for storing inventory and user data

# Technologies Used

• React.js

• Node.js & Express.js

• MongoDB

• Bootstrap & Material UI

• Visual Studio Code

# Implementation

Setup Instructions:

1. Install Node.js, MongoDB, and Git

2. Clone the repository

3. Install frontend dependencies using npm install in client folder

4. Install backend dependencies using npm install in server folder

5. Run frontend using npm start in client folder

6. Run backend using npm start in server folder

# Folder Structure

Store-Manager/

|-- client/ # React frontend

| |-- components/

| |-- pages/

|-- server/ # Node.js backend

| |-- routes/

| |-- models/

| |-- controllers/

# Running the Application

Frontend: cd client → npm start

Backend: cd server → npm start

Access: http://localhost:3000

# API Documentation

User: /api/user/register, /api/user/login

Inventory: /api/inventory/create, /api/inventory/:id

Orders: /api/orders/create, /api/orders/:id

# Authentication

JWT-based authentication is implemented to secure login and protect routes.

# User Interface

The system includes:

• Landing Page

• Admin Dashboard

• Inventory Management Page

• Reports and Analytics

# Testing

Manual and automated testing methods were used to ensure system stability. Tools used include Postman and Chrome Dev Tools.

# Future Enhancements

• Mobile app integration

• Barcode/QR code scanning for inventory updates

• Cloud hosting for global access

# Conclusion

The Store Manager project successfully provides an easy-to-use system for managing store inventory. It simplifies the process of stock management, reduces human errors, and increases business efficiency. With future improvements, it has the potential to become a complete business management tool.