Project Documentation

STORE MANAGER – KEEP TRACK OF INVENTORY

1.Introduction

System Name: Store Manager – Keep Track of Inventory

- **Objective:** Store Manager is designed to help businesses efficiently manage stock and reduce challenges such as overstocking, understocking, and manual record errors.
- **Functionality:** Provides real-time updates for inventory. Simplifies product management, sales, and purchase tracking. Automatically generates accurate sales records.
- **Benefits:** Minimizes manual errors. Improves decision-making through detailed reporting. Enhances planning and forecasting for store operations.

Team Details:

- **Team ID: NM2025TMID41827**
- **Team Leader: THARUN ADHITHYAA N (adhithyaatharun@gmail.com)**
- **Team Members and Their Roles:**
- **THARUN ADHITHYAA N– Lead (Frontend & State Management)**
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- **SIVANESH S – Testing & Record Management (sivaneshsasi007@gmail.com)**

2.Project Overview

Purpose: Store Manager simplifies inventory management for all business sizes—from local shops to large retailers—by giving clear insights into stock levels, purchases, and sales.

Key Features:

1. Inventory Management
2. Stock Updates
3. Cart System
4. Checkout at Cart
5. Add New Products
6. Depleting Stock Alerts
7. Search Functionality
8. Sale Records

3.Architecture

- **Frontend:** React.js with TailwindCSS (responsive & user-friendly)
- **Backend:** Node.js + Express.js (API and server-side logic)
- **Database:** JSON files (storing inventory, sales, and users)
- **Authentication:** JWT for secure login and role-based access

4.Setup Instructions

Prerequisites:

Node.js,Git, React.js, Visual Studio Code

Steps:

```
# Clone repository
git clone <https://github.com/tharunadhithyaa/Tharunadhithyaa-inventory.git>
# Install client dependencies
cd client
npm install
# Install server dependencies
cd ../server
npm install
# Run frontend
cd client
npm start
# Run backend
cd ../server
npm start
```

Access application at: http://localhost:3000

5.Folder Structure

```
Client/
├── node_modules/
├── public/
├── src/
│   ├── components/
│   │   ├── Cart/
│   │   │   ├── Cart.jsx
│   │   │   └── CartItem.jsx
│   │   ├── Inventory/
│   │   │   ├── Inventory.jsx
│   │   │   └── Product.jsx
│   │   ├── Product/
│   │   │   ├── Product.jsx
│   │   │   ├── ProductCatalog.jsx
│   │   │   └── ProductList.jsx
│   │   ├── Sales/
│   │   │   ├── Sales.jsx
│   │   │   ├── SaleRecord.jsx
│   │   │   └── AddProduct.jsx
│   │   ├── NavBar.jsx
│   │
│   ├── context/
│   ├── hooks/
│   ├── pages/
│   ├── App.js
│   ├── App.css
│   ├── App.test.js
│   ├── index.js
│   ├── index.css
│   ├── Layout.jsx
│   ├── logo.svg
│   ├── reportWebVitals.js
│   └── setupTests.js
│
├── .gitignore
├── package.json
├── package-lock.json
├── README.md
└── tailwind.config.js
```

6.Running the Application

Store Manager can be run locally with **Node.js** and **React.js.**

Prerequisites:

- Node.js (LTS)
- Git

Steps:

1.Clone repo:

- git **clone** <https://github.com/tharunadhithyaa/Tharunadhithyaa-inventory.git>
- **cd** Store_Manager

2.Install dependencies:

- **cd** client && npm install
- **cd** ../server && npm install

3.Start backend:

- **cd** server && npm start

4.Start frontend:

- **cd** client && npm start

Access:

- Frontend → http://localhost:3000
- Backend API → http://localhost:5000

7.API Documentation

Inventory:

-POST /api/inventory/add – Add item
-GET /api/inventory/:id – Fetch item by ID
-PUT /api/inventory/update/:id – Update item
-DELETE /api/inventory/remove/:id – Remove item

Sales:

-POST /api/sales/create – Create sales record

Reports:

-GET /api/reports/summary – Fetch performance summary

8.Authentication

- Uses JWT for secure login.
- Middleware validates tokens on every protected route.
- Ensures role-based access for admins and staff.

9.User Interface

- **Dashboard:** Displays stock levels and low-stock alerts.
- **Inventory Page:** Manage product details (price, stock, tags).
- **Sales & Purchases:** Record and review transactions.
- **Reports Page:** Charts and analytics for sales performance.
- **Admin Panel:** Manage roles and system settings.

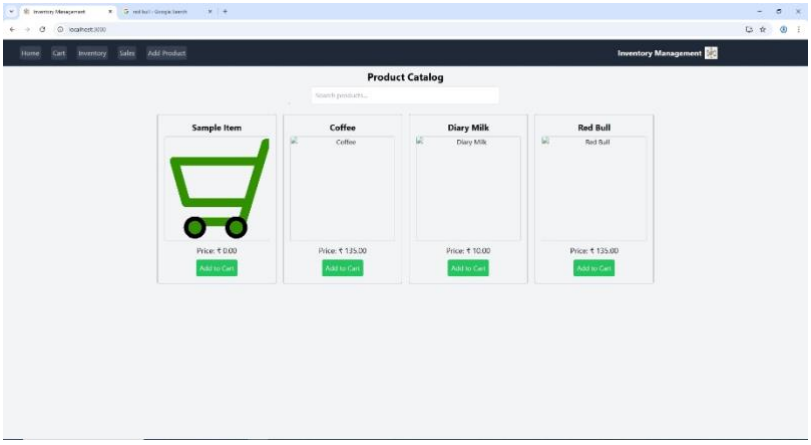
10.Testing

- **Manual Testing:** For milestone verification.
- **API Testing:** Postman used for backend validation.
- **Frontend Testing:** Chrome Developer Tools.
- **Unit Testing:** For route validation (Jest).

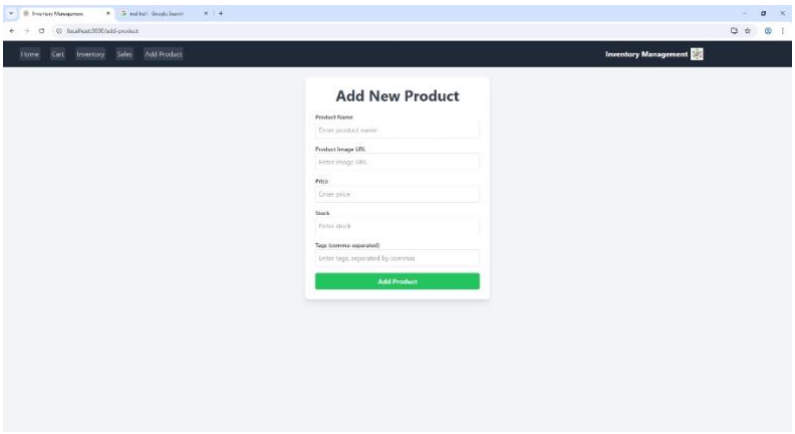
11.Screenshots or Demo

- The screenshots and demo highlight how the Store Manager system manages products, sales, and inventory effectively.

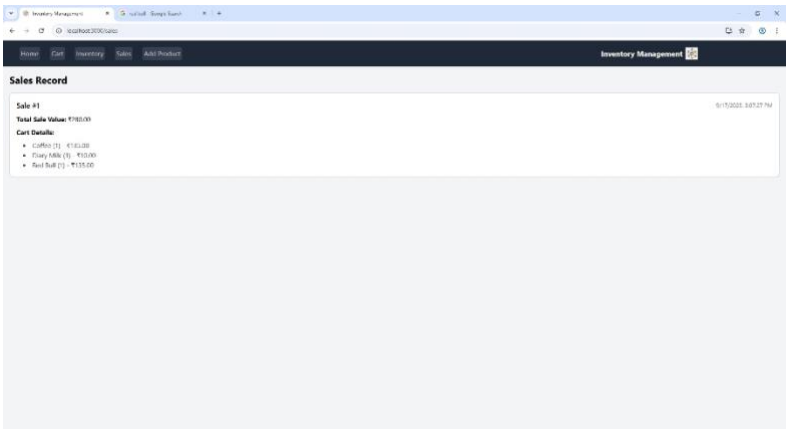
1. Product Catalog Page:



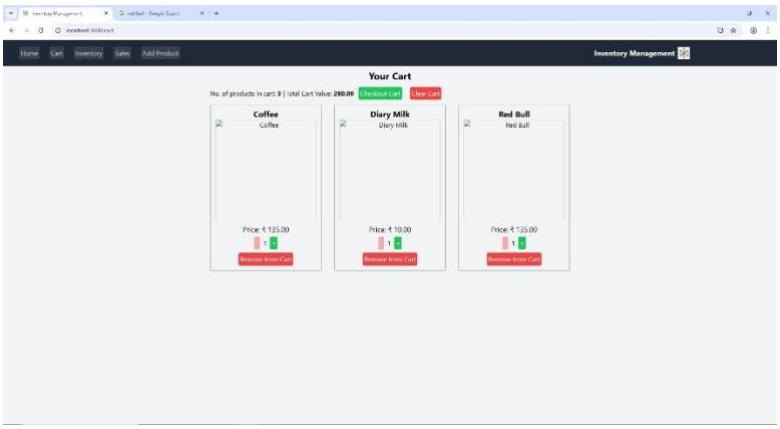
2.Add New Product Form:



3.Sales Record Page:



4.Shopping Cart Page:



12.Known Issues

- Limited input error handling.
- Reports only offer basic analytics.

- Currently web-only (no mobile version).

13.Future Enhancements

- Advanced predictive analytics for demand forecasting.
- Mobile application (Android & iOS).
- ERP/Accounting integration.
- AI-based stock recommendations.
- Multi-language support.