Project Documentation

Store Manager: Keep Track of Inventory

1. Introduction

- **Project Title:** Store Manager: Keep Track of Inventory
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2. Project Overview

Store Manager is a simple yet powerful inventory management system designed to help businesses of all sizes effectively manage their stock, track inventory levels, generate reports, and avoid losses due to overstocking or stockouts. Whether for retail stores, warehouses, restaurants, or small shops, Store Manager provides real-time visibility and control over inventory operations.

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2. Objectives

- 🛒 **Real-time inventory tracking**
- 📊 **Generate accurate inventory and sales reports**
- 🔔 **Low-stock alerts and notifications**
- 📦 **Efficient stock-in and stock-out management**
- 👥 **Multi-user roles with permissions (admin, staff, viewer)**
- 📱 **Mobile and web accessibility**

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3. Key Features

✅ a. Dashboard

- Real-time overview of inventory levels
- Quick stats: Low-stock items, Total stock value, Top-selling items
- Recent activity log (e.g., stock added/removed)

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b. Stock Management

Stock-In

- Add new inventory or restock existing items
- Assign supplier, cost price, quantity, and category
- Batch and expiry date tracking (optional)

Stock-Out

- Remove stock due to sales, transfers, or write-offs
- Track reasons for stock-out (e.g., sale, damage, theft)

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c. Product Catalog

- Add, edit, or delete product details (SKU, name, category, barcode, pricing)
- Group products by category or tags
- Barcode generation and scanning support

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d. Inventory Tracking

- Track item quantity across multiple locations (if applicable)
- Monitor stock movement history (in/out logs)
- Real-time stock level updates

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e. Alerts & Notifications

- Low-stock threshold alerts
- Expiry date alerts for perishable goods
- Auto-email or in-app notifications

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f. User Roles & Permissions

- **Admin**: Full access to all modules
- **Staff**: Access to stock in/out, view reports, limited settings
- **Viewer**: Read-only access to dashboard and reports

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g. Reports & Analytics

- Daily/weekly/monthly inventory reports
- Stock valuation reports
- Product movement and audit reports
- Export to PDF, Excel, or CSV

🔍 h. Search & Filtering

- Instant product search by SKU, name, or category
- Advanced filters: quantity, category, date range, supplier

3. Architecture

- **Frontend:** React.js with Bootstrap and Material UI
- **Backend:** Node.js and Express.js managing server logic and API endpoints
- **Database:** MongoDB stores user data, project information, applications, and chat messages

4. Setup Instructions

- **Prerequisites:**
  - Node.js
  - MongoDB

- Git
- React.js
- Express.js – Mongoose – Visual Studio Code

- **Installation Steps:**

```
# Clone the repository git clone

# Install client dependencies cd
client npm install

# Install server dependencies cd
../server npm install
```

5. Folder Structure

```
SB-Works/
|-- client/                    # React frontend
     |_components/
      L___pages/
|___server/                    # Node.js backend
     |__routes/
        |___models/
          |___controllers/
```

6. Running the Application

- **Frontend:**

```
cd client
npm start
```

- **Backend:**

```
cd server npm
start
```

- **Access:** Visit http://localhost:3000

7. API Documentation

- **User:**
  - /api/user/register
  - /api/user/login
- **Projects:**

- /api/projects/create
- /api/projects/:id • **Applications:** /api/apply

- **Chats:**
  - /api/chat/send
  - /api/chat/:userId

8. Authentication

- JWT-based authentication for secure login
- Middleware protects private routes

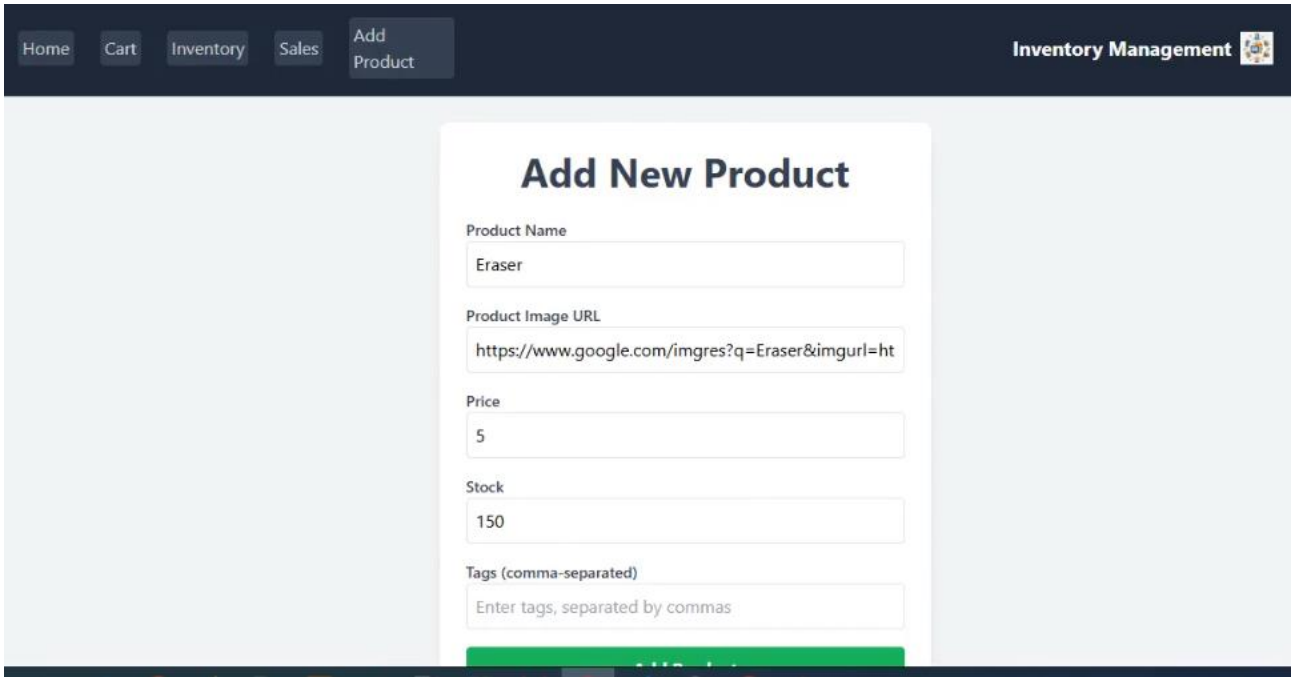
9. User Interface

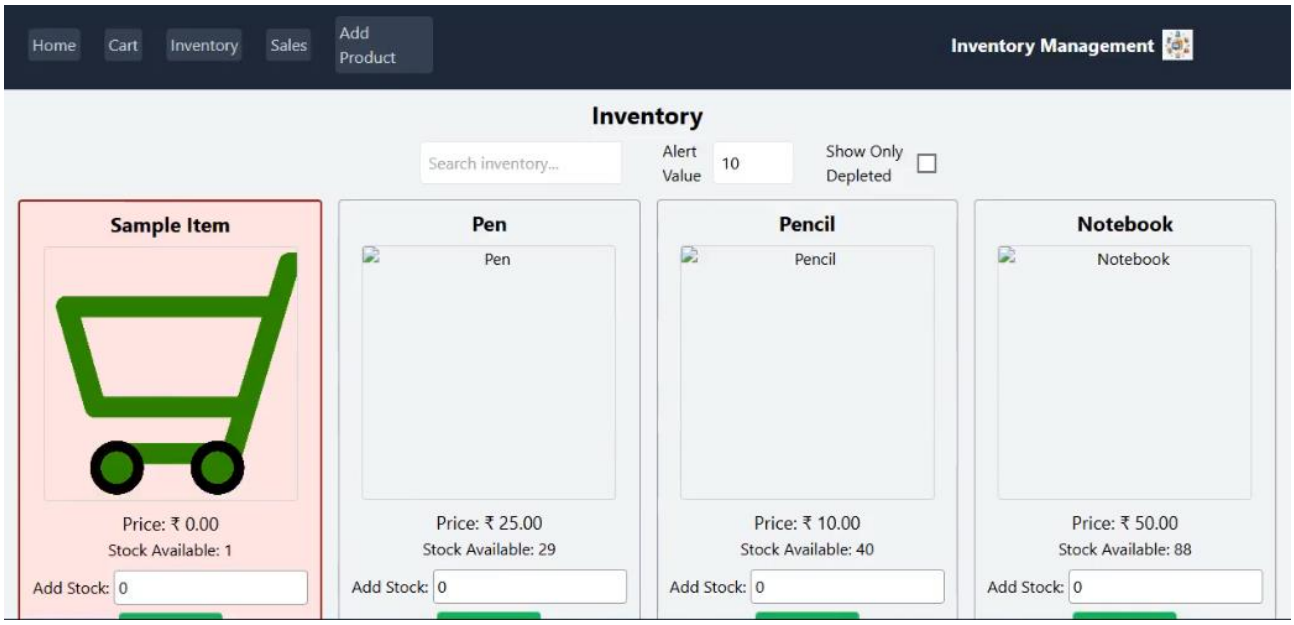
- Landing Page
- Freelancer Dashboard
- Admin Panel
- Project Details Page

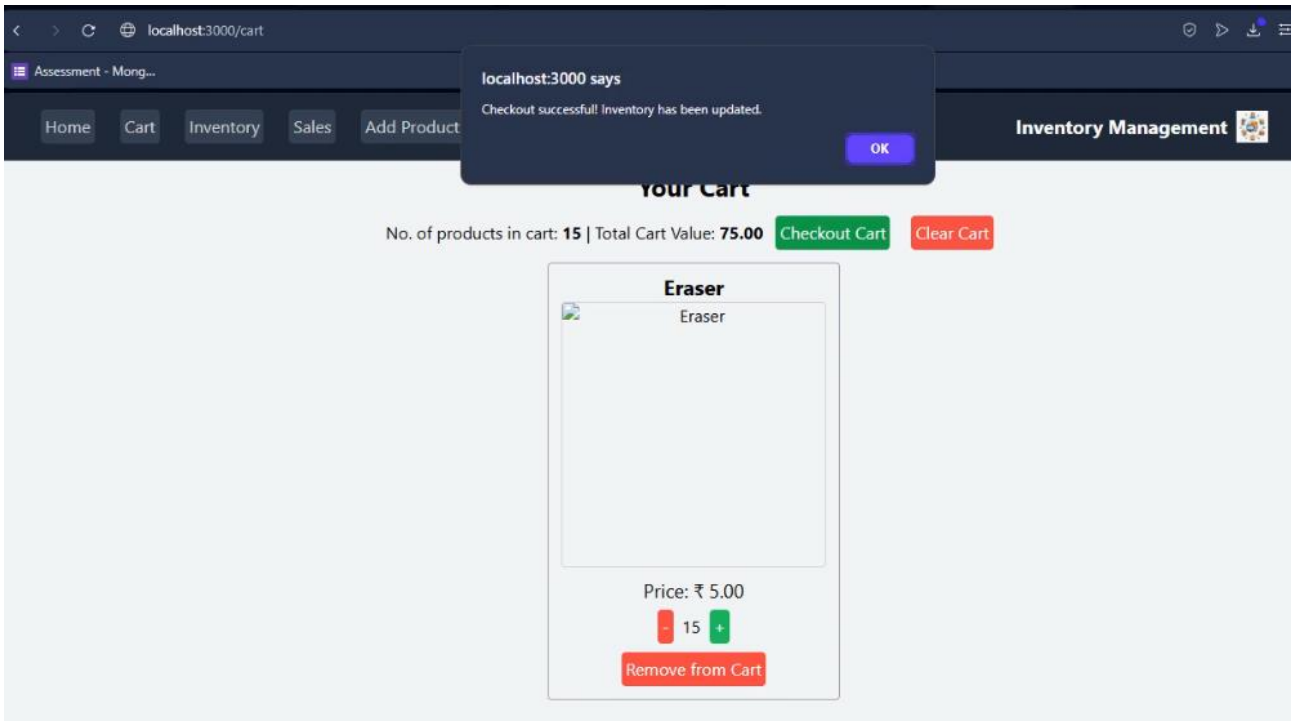
10. Testing

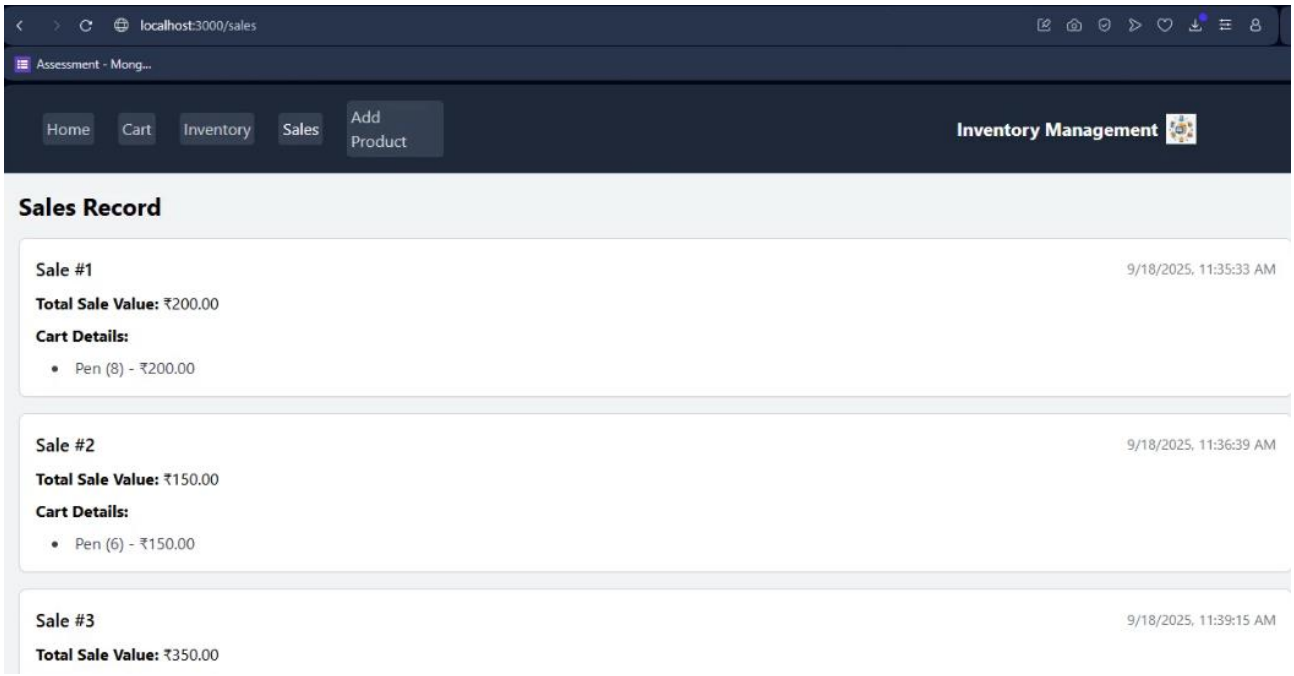
- Manual testing during milestones
- Tools: Postman, Chrome Dev Tools

11. Screenshots or Demo






localhost:3000/cart
Assessment - Mong...
localhost:3000 says
Checkout successful! Inventory has been updated.
OK
Home
Cart
Inventory
Sales
Add Product
Inventory Management
Your Cart
No. of products in cart: 15 | Total Cart Value: 75.00
Checkout Cart
Clear Cart
Eraser
Eraser
Price: ₹ 5.00
- 15 +
Remove from Cart


localhost:3000/sales
Assessment - Mong...
Home
Cart
Inventory
Sales
Add Product
Inventory Management
Sales Record
Sale #1
9/18/2025, 11:35:33 AM
Total Sale Value: ₹200.00
Cart Details:
Pen (8) - ₹200.00
Sale #2
9/18/2025, 11:36:39 AM
Total Sale Value: ₹150.00
Cart Details:
Pen (6) - ₹150.00
Sale #3
9/18/2025, 11:39:15 AM
Total Sale Value: ₹350.00

12. Known Issues

13. Future Enhancements

1. Multi-Location Inventory Management

- **Description**: Enable tracking of inventory across multiple store locations or warehouses.
- **Features**:
  - Stock transfers between locations
  - Location-specific inventory reports
  - Separate low-stock alerts per location
- **Benefit**: Ideal for franchises or businesses with multiple outlets. Enhances centralized control and local visibility.

📲 2. Offline Mode with Auto Sync

- **Description**: Allow users to use the app without an internet connection, with data syncing automatically once the connection is restored.
- **Benefit**: Crucial for remote warehouses or retail areas with unreliable connectivity.

📦 3. Supplier Management Module

- **Description**: Track suppliers and their performance.
- **Features**:
  - Supplier profiles with contact details
  - Purchase order history
  - Lead time and reliability tracking
- **Benefit**: Helps build stronger supplier relationships and make informed reordering decisions.

📜 4. Purchase Order (PO) System

- **Description**: Enable creation, tracking, and approval of purchase orders within the app.
- **Features**:
  - PO generation from low-stock alerts
  - Approval workflows
  - Email POs directly to suppliers
- **Benefit**: Streamlines procurement and reduces manual effort in reordering inventory.

🧾 5. Invoicing & Billing Integration

- **Description**: Generate invoices for stock-outs related to sales, returns, or transfers.
- **Features**:
  - Sales invoice generation
  - Tax and discount calculation
  - Print or email invoices
- **Benefit**: Bridges the gap between inventory tracking and point-of-sale or billing systems.

📉 6. Demand Forecasting (AI-Powered)

- **Description**: Use AI/ML models to forecast future inventory needs based on sales trends, seasonality, and product lifecycle.
- **Benefit**: Helps businesses reduce overstocking and stockouts, making purchasing decisions more data-driven.

🧠 7. Smart Alerts & Recommendations

- **Description**: Intelligent notifications based on usage trends, such as:
  - "Product X selling faster than usual"
  - "You're likely to run out of Product Y in 3 days"
- **Benefit**: Proactive insights improve decision-making and responsiveness.

📷 8. Image Recognition for Product Scanning

- **Description**: Use the phone camera to identify products visually (AI-based object recognition), not just via barcodes.
- **Benefit**: Simplifies product identification in busy retail environments or where barcode labels are missing.

👨‍👩‍👧 9. Customer Profiles & History (Optional CRM Lite)

- **Description**: Track customers who frequently purchase certain items (if tied with a POS system).
- **Benefit**: Useful for loyalty programs, targeted promotions, and customer service improvements.

🛒 10. POS (Point of Sale) Integration

- **Description**: Seamlessly connect with POS systems to auto-update inventory after sales.
- **Benefit**: Eliminates manual stock-out entries and ensures real-time inventory updates