

Store Manager: Keep Track of Inventory

Introduction

Project Title: Store Manager: Keep Track of Inventory

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Project Overview:

Purpose:

The objective of this project is to design and develop a comprehensive **Inventory Management System** that enables efficient tracking, updating, and management of stock in a store. The system aims to simplify day-to-day inventory operations by providing real-time stock updates, automated alerts for low stock, and streamlined sales management through cart and checkout features.

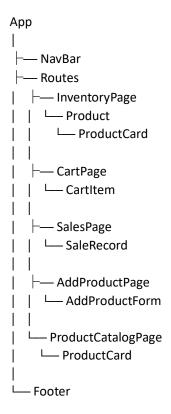
Features:

- Maintain accurate inventory records with seamless updates on sales and new stock additions.
- Facilitate quick and efficient sales through a cart and checkout mechanism while ensuring inventory consistency.
- Add and manage new products with essential details like name, image, price, stock, and tags.
- Provide alerts for depleting stock levels to support timely replenishment.
- Enable easy search and retrieval of products from the inventory and product catalog.
- Keep a record of all sales with details such as sale value, products sold, and date/time for accountability and reporting.

This project ultimately seeks to enhance **efficiency**, **accuracy**, **and visibility** in inventory and sales management, reducing manual effort and minimizing the risk of stockouts or overstocking.

Architecture

Component Structure:



State Management:

- Using React Context API to manage global states:
 - products: Array of current inventory items.
 - **cartitems:** Items added to cart.
 - salesHistory: List of sales records.
- Methods exposed:
 - addProduct(productObject)
 - removeProduct(productId)
 - addToCart(productId)
 - removeFromCart(productId)
 - recordSale(cartItems)

Routing:

- Implemented using react-router-dom:
 - ❖ /inventory Inventory management page.
 - ❖ /cart Shopping cart view.
 - **❖** /sales Sales history page.
 - **❖ /add-product** Add new product page.
 - /catalog Product catalog for customers.

Setup Instructions

Prerequisites:

- Node.js (>= v14)
- npm (comes with Node.js)

Installation Steps:

1) Clone the Repository

>>git clone https://github.com/coderkarthikkrishnan/store-manager.git

>>cd Storemanager

2) Install Dependencies

Before running the app, install all required packages:

>>npm install

3) Required Packages

Make sure the following packages are installed:

>>npm install react-router-dom react-toastify

(If already installed, you can skip this step.)

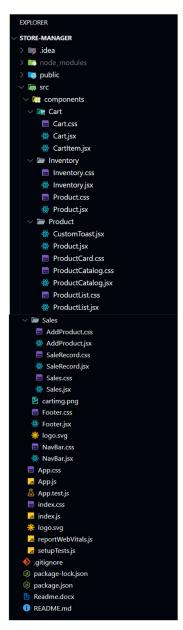
4) Start the Development Server

Run the app locally:

>>npm start

This will start the app at http://localhost:3000/

Project structure:



Component Documentation

Key Components

NavBar.jsx

Provides site navigation links to Inventory, Cart, Sales, Add Product, and Product Catalog.

Inventory.jsx

Displays list of inventory products using Product.jsx and ProductCard.jsx.

Cart.jsx

Displays the user's shopping cart. Uses CartItem.jsx for individual cart items.

Sales.jsx

Shows all recorded sales using SaleRecord.jsx.

AddProduct.jsx

Form allowing new product addition to inventory.

• ProductCatalog.jsx

Displays catalog of products available to browse.

Reusable Components

ProductCard.jsx

Displays product details (name, image, price, stock) with Add to Cart button.

CartItem.jsx

Displays individual cart item info with options to increase quantity or remove.

CustomToast.jsx

Provides custom toast notifications on actions like adding to cart or submitting form.

State Management

Global State

- Managed using React Context API:
 Stores products, cartItems, and salesHistory.
- State Flow Example:
 - ➤ Adding a new product → updates products.
 - ➤ Adding an item to cart → updates cartItems.
 - ➤ Recording a sale → updates salesHistory.

Local State

• Used for forms in components such as AddProduct.jsx:

```
const [productName, setProductName] = useState(");
const [productPrice, setProductPrice] = useState(");
const [stockQuantity, setStockQuantity] = useState(");
```

User Interface

- Inventory Page
- Product catlog page
- cart Page
- Sales History
- ❖ Add Product Form

Styling

CSS Libraries/Frameworks:

Pure CSS with modular CSS files for each component (e.g., ProductCard.css, Cart.css).

Theming:

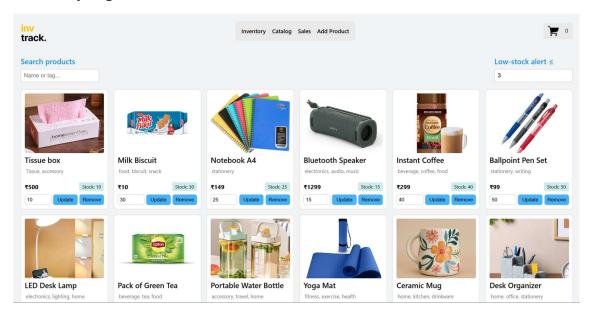
No external theming system; uses CSS variables for primary colors and fonts.

Testing

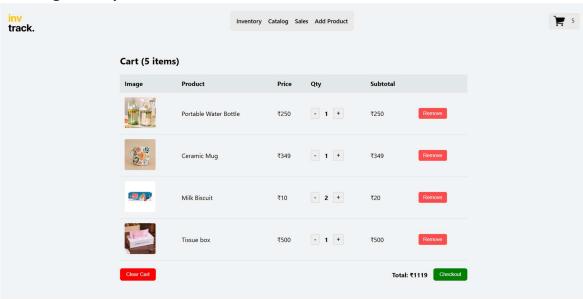
- Manual testing during milestones
- ❖ Tools: Postman, Chrome Dev Tools

Screenshots or Demo

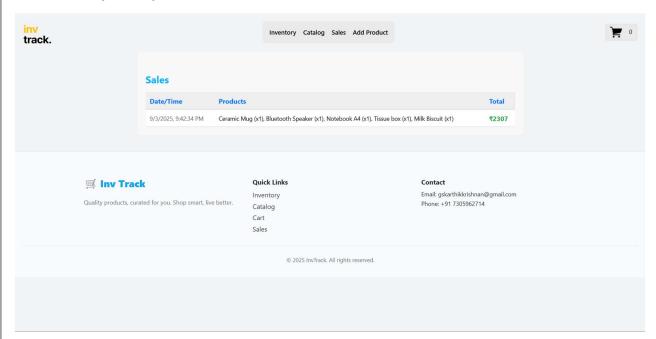
Inventory Page:



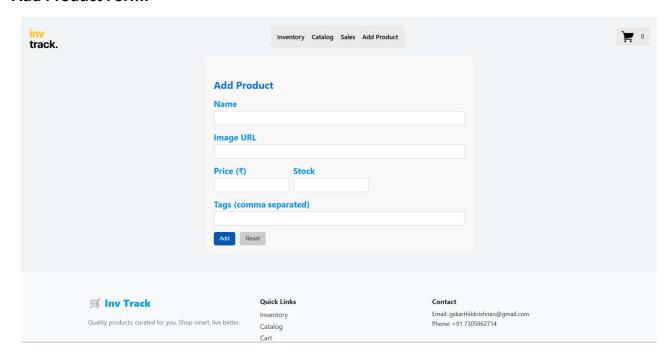
Cart Page Example:



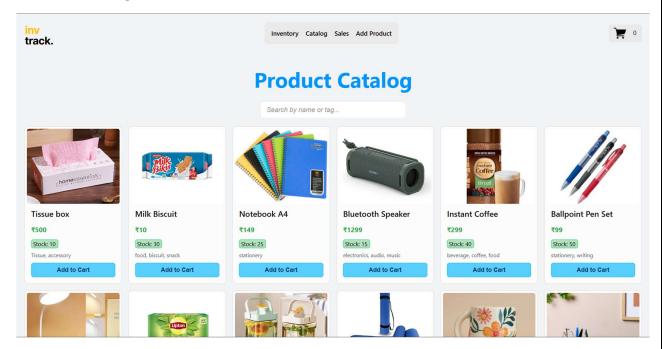
Sales History Example:



Add Product Form:



Product Catalog:



Known Issues

- Cart state resets on page refresh (needs localStorage persistence).
- No input validation on Add Product form.
- Missing error handling on API calls.
- No user authentication (admin vs customer).

Future Enhancements

- ✓ Persist cart state in localStorage or backend storage.
- ✓ Add input validation (Formik + Yup).
- ✓ Add role-based authentication.
- ✓ Implement proper error handling for API calls.