Store Manager: Keep Track of Inventory

Team Details:

Team ID : NM2025TMID40071

Project Title: Store Manager: Keep Track of Inventory

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Objective:

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.

The system will allow users to:

- 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.

Platform & Technology Used :

The project is developed as a web-based application to ensure accessibility and ease of use across devices with a modern browser. The following technologies and platforms are used:

- **React:** A powerful JavaScript library for building interactive and component-based user interfaces. It provides efficient rendering and state management for the inventory system.
- **HTML5:** Used for structuring the web pages and defining the content of the application.
- **CSS3:** Utilized for styling and designing a responsive, user-friendly, and visually appealing interface.
- **JavaScript (ES6+):** The core programming language used for implementing business logic, interactivity, and communication between components.
- **Git:** A version control system used for managing code, tracking changes, and maintaining project versions effectively.

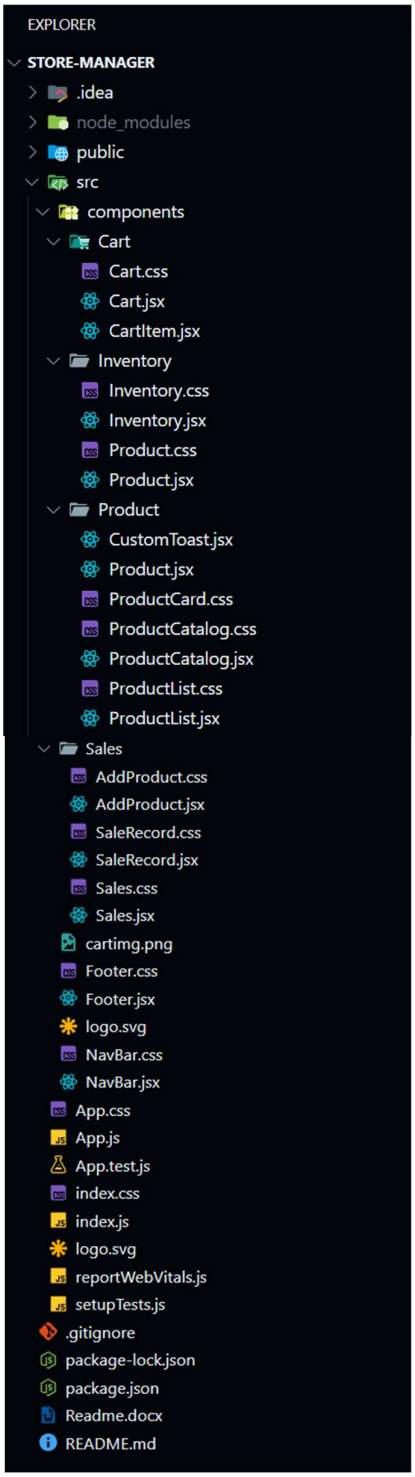
Implementation / Process:

The implementation of the Inventory Management System follows a structured process to ensure smooth handling of products, sales, and stock updates. The workflow can be summarized as follows:

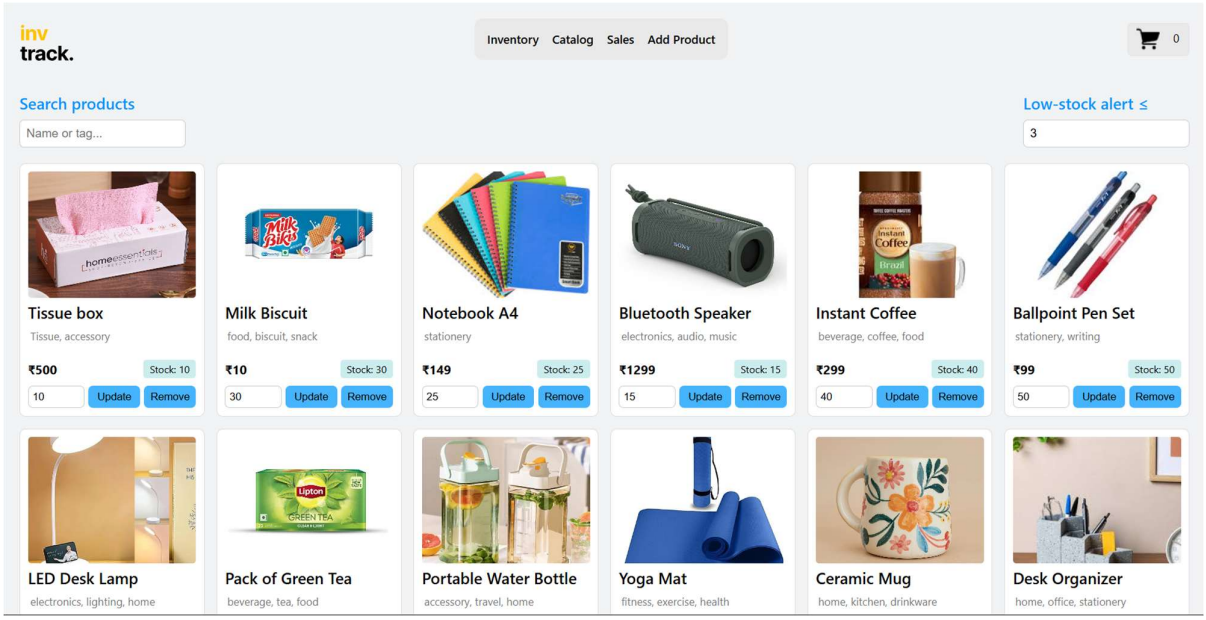
1. **Adding Products to Inventory**
    - ❖ New products can be added by entering details such as product name, image URL, price, stock quantity, and tags.
    - ❖ Products are then displayed in the product catalog and inventory list.
2. **Stock Management**
    - ❖ The system maintains real-time stock levels.
    - ❖ When new stock is added, quantities are updated in the inventory.
    - ❖ On the sale of products, stock is automatically deducted.
3. **Cart Management**
    - ❖ Users can add products to the cart along with their desired quantity.
    - ❖ The cart allows multiple products to be selected for a single sale.
4. **Checkout Process**
    - ❖ On checkout, the system clears the cart, updates the inventory, and creates a new sale record.
    - ❖ Each sale record contains the product details, total sale value, and the date/time of purchase.
5. **Stock Alerts**
    - ❖ Products with stock levels falling below a defined threshold are highlighted with a red background.
    - ❖ Alerts help users take timely action to restock and avoid stockouts.
6. **Search Functionality**
    - ❖ Users can search for products in both the catalog and inventory by name or tags.
    - ❖ This improves efficiency in locating and managing products.
7. **Sale Records**
    - ❖ The system maintains a history of all sales.
    - ❖ Records can be reviewed to analyze sales trends and inventory turnover.

Output / Result:

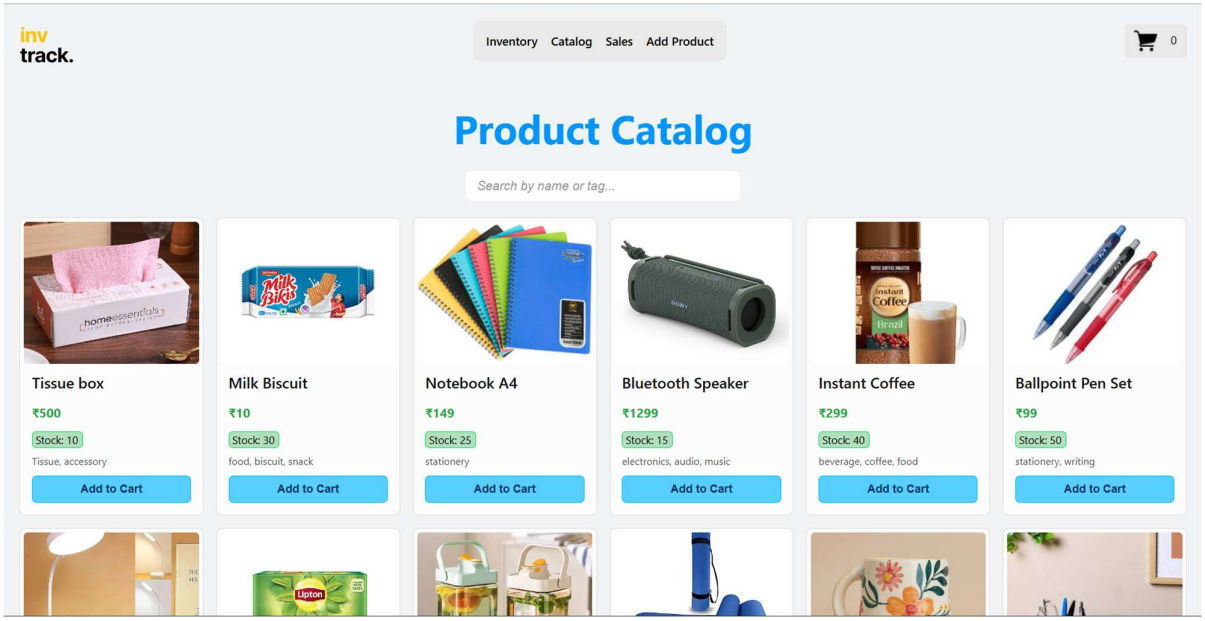
Project structure:



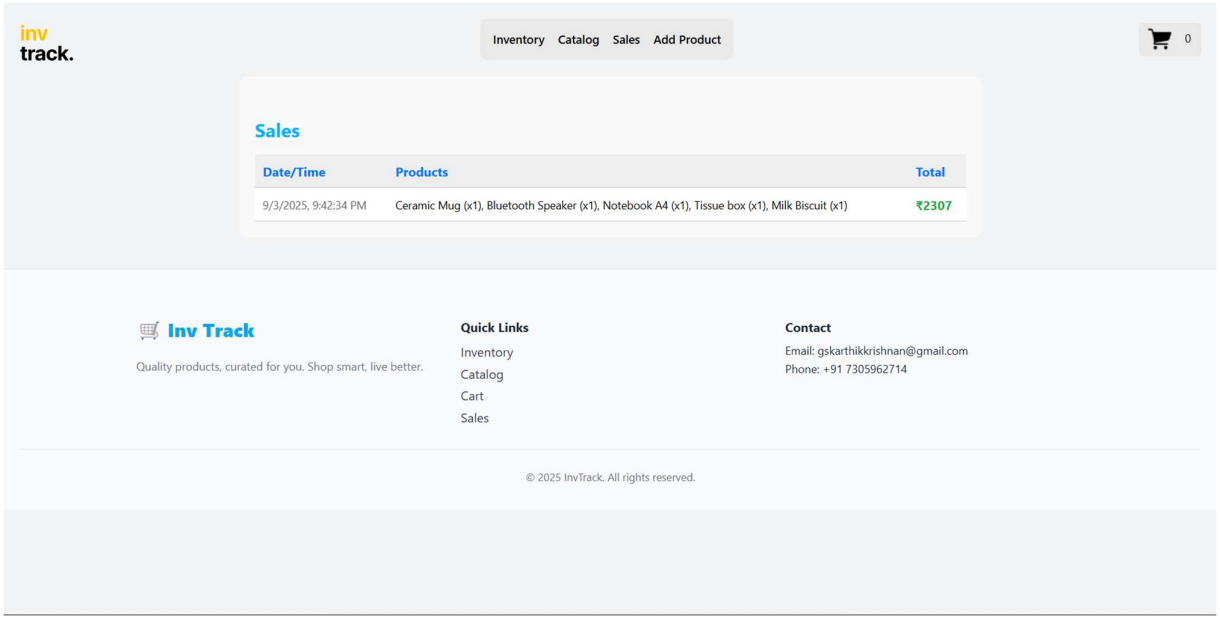
Inventory:



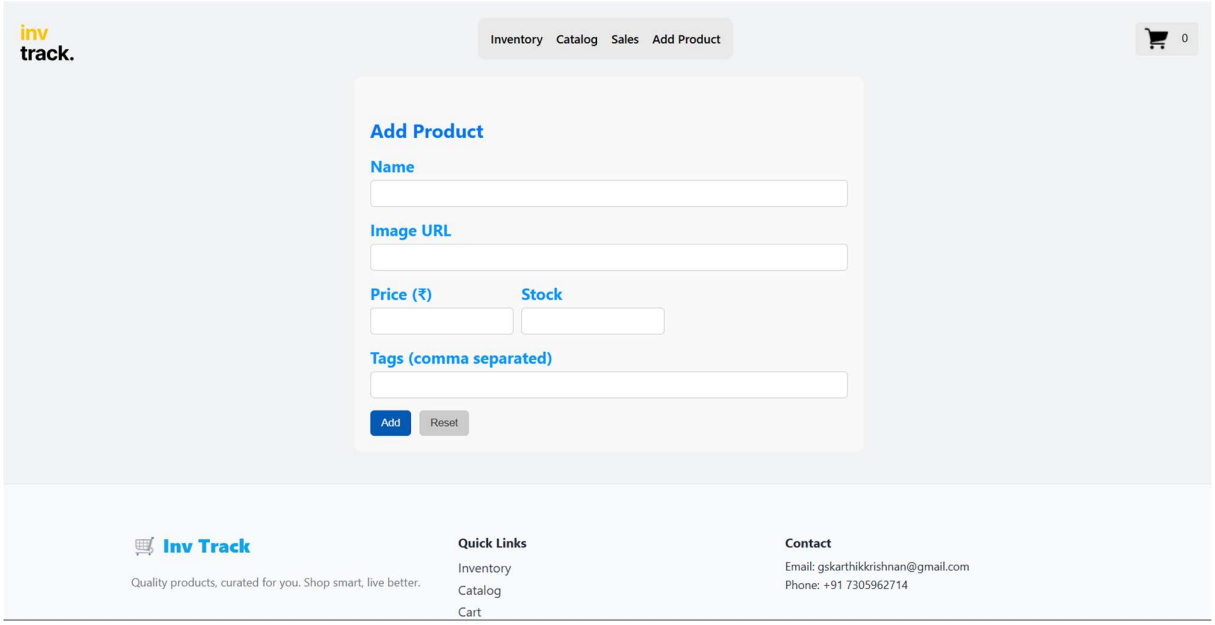
Product Catalog:



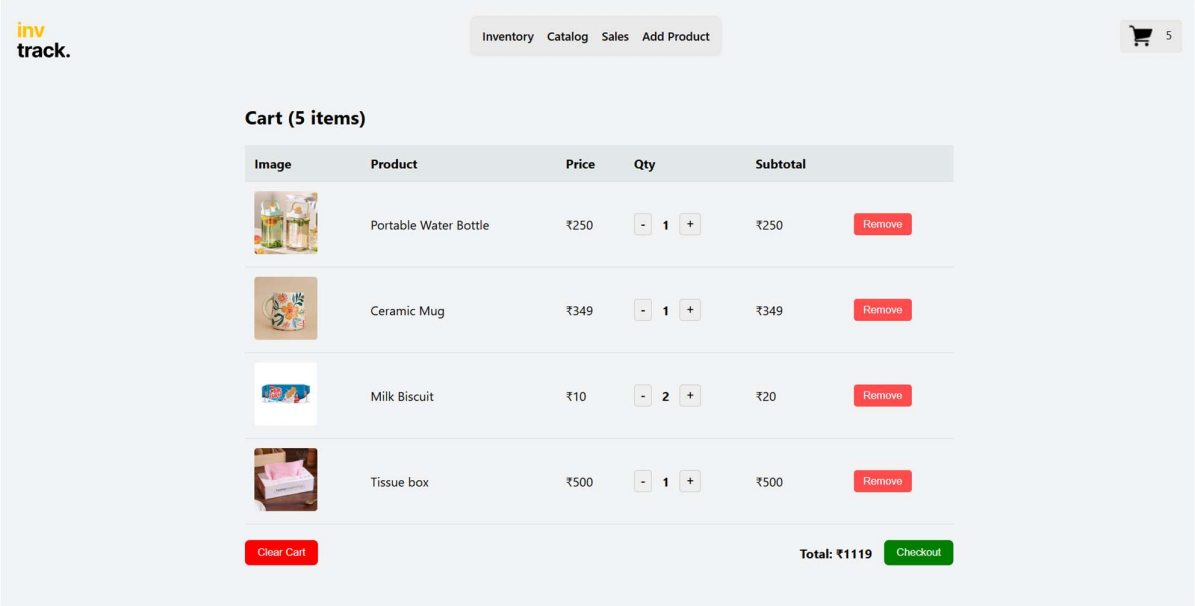
Sales Record:



Add Products:



Cart:



The system meets its objective by ensuring efficient inventory tracking, real-time updates, and accurate sales records, reducing manual errors and improving store management.