RAMAIAH
Institute of Technology

Stock Management System

Department of Master of Computer Applications

in partial fulfilment of the course

MCAE11, Full Stack Web Development

by

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under the guidance of

Sushitha S
Assistant Professor

Department of Master of Computer Applications

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CERTIFICATE

This is to certify that the project work entitled **"STOCK MANAGEMENT SYSTEM"** is carried out by

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students of **2nd Semester**, MCA, Ramaiah Institute of Technology, Bangalore, in partial fulfilment of the course **MCAE11, Full Stack Web Development**, during the year 2022-2023.

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1)

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Abstract

A Stock Management System is a critical component of modern businesses that deal with physical goods. It is designed to efficiently track, organize, and manage an organization's inventory, ensuring seamless operations, reducing costs, and improving customer satisfaction. This abstract provides an overview of the key features and benefits of a Stock Management System. The Stock Management System is a comprehensive web application developed using React.js and Node.js. This system provides an efficient solution for managing stock control services, including login, orders, dashboard, categories, product supplies and other services. The user-friendly interface allows customers to create accounts, log in, request services by filling out forms, and view service details. The system utilizes MySQL for secure data storage and retrieval. This application streamlines the stock management service process, ensuring seamless user experience and effective service management.

Introduction

A Stock Management System is a comprehensive software solution designed to streamline and optimize the handling of a company's inventory. This introduction provides a detailed overview of what a Stock Management System entails, why it is essential, and the benefits it offers to businesses of all types and sizes.

A Stock Management System, often referred to as an Inventory Management System, is a sophisticated software tool tailored to manage all aspects of a company's inventory, from procurement and storage to distribution and monitoring. It acts as a central hub where businesses can efficiently track, control, and analyze their product stock.

Effective stock management is crucial for multiple reasons. It ensures that an organization has the right products available at the right time, preventing stockouts and customer dissatisfaction. Simultaneously, it prevents overstocking, which can tie up capital and lead to unnecessary storage expenses. Moreover, accurate stock management is essential for precise financial reporting, affecting critical factors like cost of goods sold (COGS), revenue recognition, and overall profitability.

The implementation of a Stock Management System provides a multitude of advantages. These encompass the reduction of operational costs by optimizing stock levels, the enhancement of operational efficiency through automation and data-driven decision-making, and the improvement of customer satisfaction by consistently meeting market demand. Furthermore, the ability to precisely track and value stock simplifies financial reporting, making it easier to comply with tax regulations and other financial requirements.

Technology

Project Technologies:

1. **React.js**
2. **Node.js**
3. **Express.js**
4. **MySQL**

React.js:

React.js is a powerful JavaScript library for building user interfaces. In your pest control service website, React.js is utilized for creating interactive and dynamic user interfaces. With its component-based architecture, React allows you to build reusable UI components, ensuring a consistent look and feel across your web application. It enables seamless navigation, form handling, and real-time updates, providing users with a smooth and responsive experience. React.js also facilitates efficient state management, enhancing the overall performance of your application.

Node.js:

Node.js is a server-side JavaScript runtime environment that empowers your web application with a scalable and non-blocking I/O. In your project, Node.js is employed to handle the server-side operations. It facilitates asynchronous event-driven architecture, enabling efficient handling of multiple concurrent connections. Node.js is particularly useful for building fast and scalable network applications, making it an ideal choice for managing user requests, authentication, and data processing in your pest control service website.

Express.js:

Express.js is a Node.js web application framework that simplifies API building, HTTP request handling, and middleware implementation. It enhances web server functionality, aids in routing, handling requests, and implementing authentication and logging components, making it an essential part of backend architecture.

MySQL:

MySQL is an open-source database management system used for pest control services, providing a reliable, structured backend for user account information, service requests, quotations, and invoices, with security features to protect sensitive user information and ensure data integrity.

Result

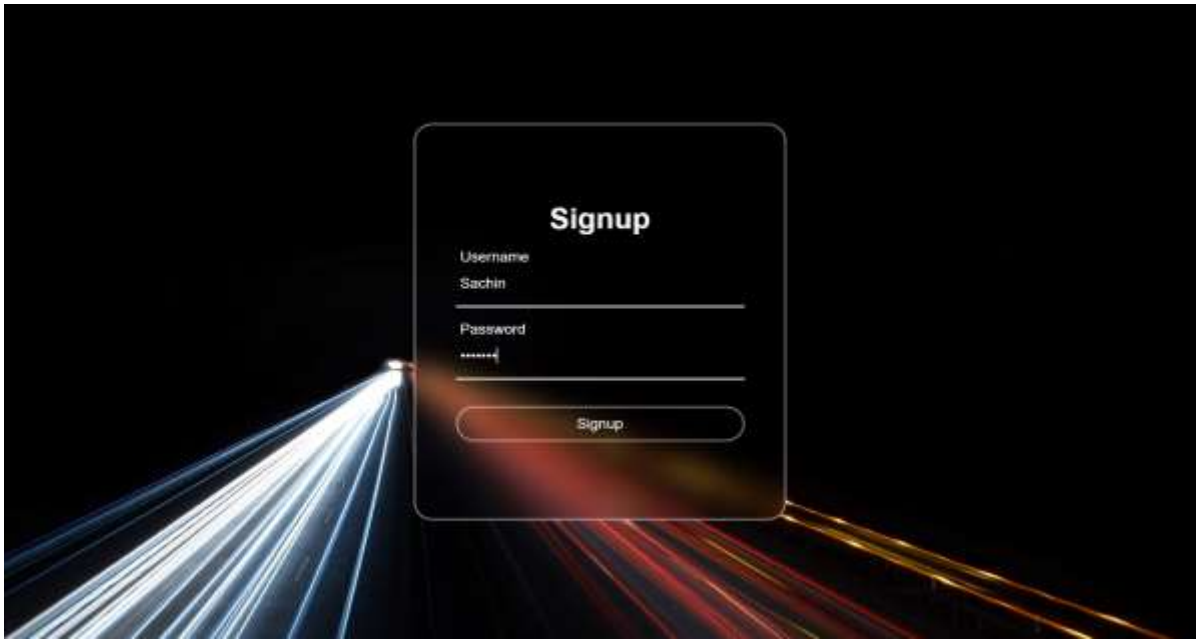

Fig.1

A "Sign-up" page is a fundamental element of any web application or platform that requires user accounts. Its purpose is to allow new users to create an account and gain access to the application's features and services. The Sign-up page usually features a prominent title or header, such as "Create Your Account" or "Sign Up." This title serves as a clear indication to visitors that they are about to begin the registration process. The central component of the Sign-up page is a form that includes various fields for users to input their information.

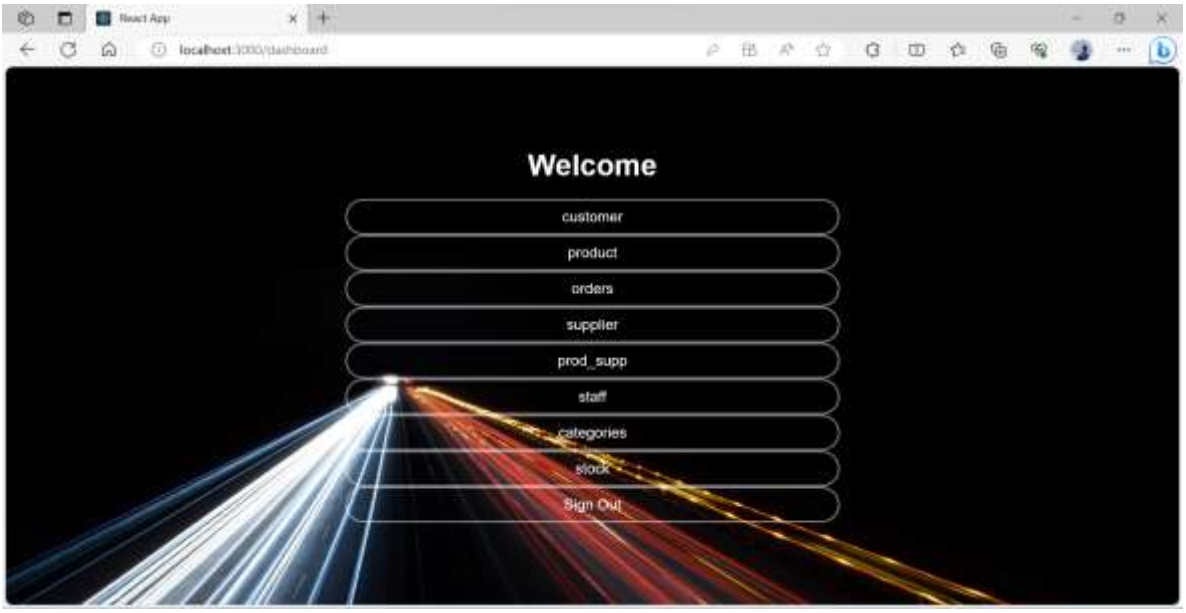

Fig.2

This React component, named "DashBoard," serves as the user interface for the application's dashboard page. It's responsible for rendering a collection of clickable buttons that provide users with easy access to different parts of the application. The component utilizes the "useNavigate" hook from the "react-router-dom" library to handle client-side navigation. When a user clicks one of the buttons, the "buttonClickHandler" function is triggered. This function extracts the text content of the clicked button to determine the user's intent, and then it uses the "navigate" function to direct the user to the corresponding route based on the button's text. This allows for efficient and responsive navigation throughout the application. The navigation buttons, there's a "Sign Out" button at the bottom. When this button is clicked, the "redirTo" function is called, leading to a route that likely handles the user's logout, effectively ending their session and redirecting them to a designated landing page or login screen.

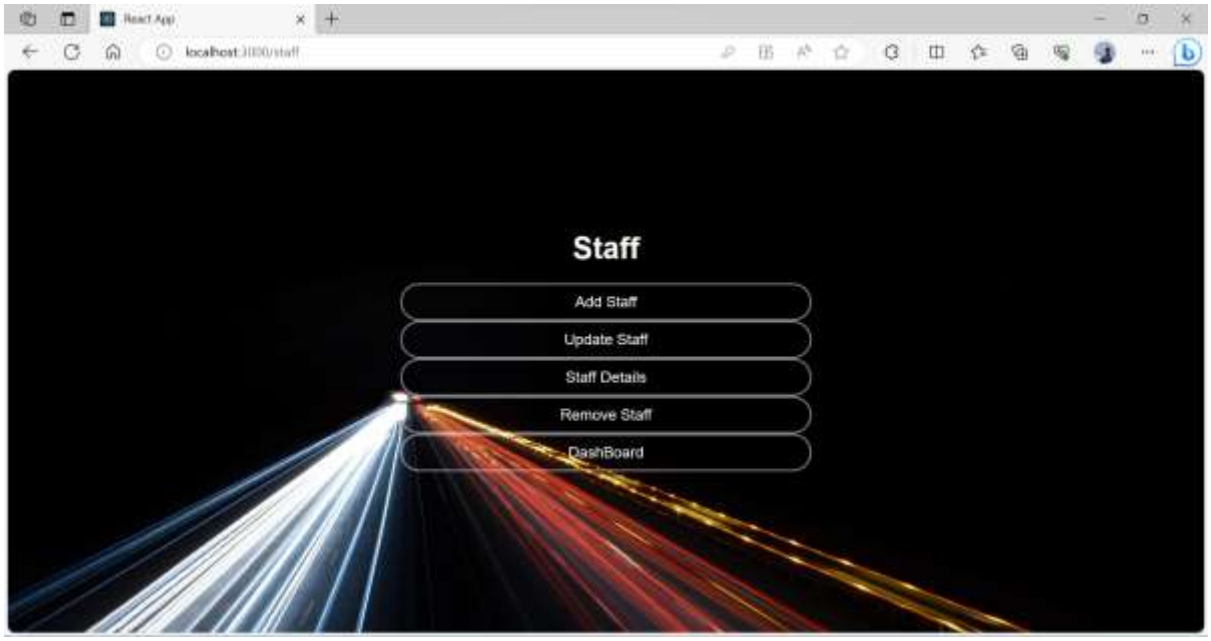

Fig.3

This component serves as a user interface for handling staff-related operations, such as adding, updating, viewing details, and removing staff members. The React component is responsible for rendering a user interface that facilitates various staff-related actions

Add Staff: Navigates the user to a route where they can add a new staff member to the system.

Update Staff: Redirects the user to a route for updating staff information.

Staff Details: Takes the user to a section where they can view detailed information about staff members.

Remove Staff: Leads the user to a route for removing staff members from the system.

Dashboard: Provides a direct link to the application's dashboard.

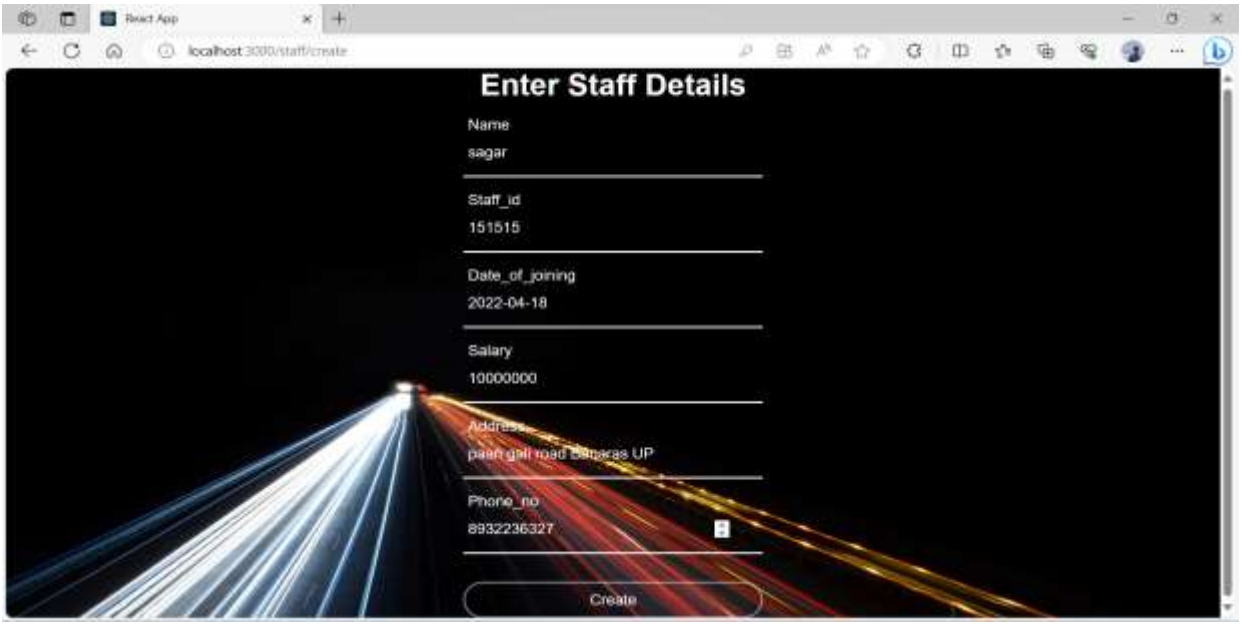

Fig.4

Here in this figure we create the staff details by entering the following details:

Name, Staff_id, Date of joining, Salary, Address, and Phone number

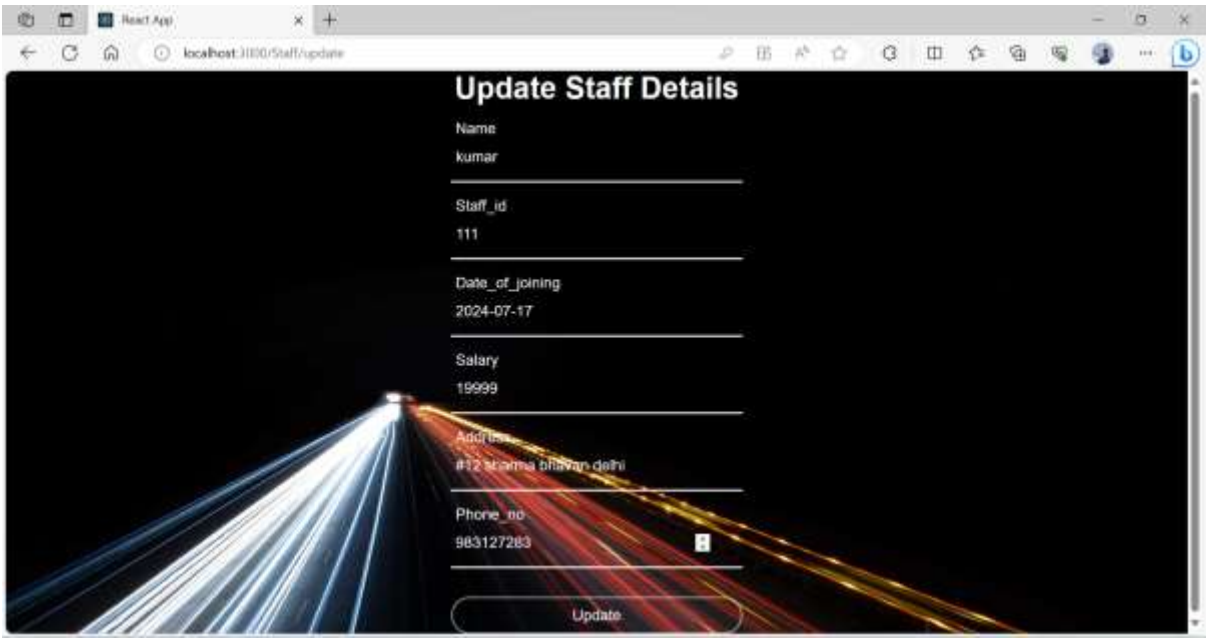

Fig.5

Here in this figure we update the staff details by entering the following details:

Name, Staff_id, Date of joining, Salary, Address, and Phone number.

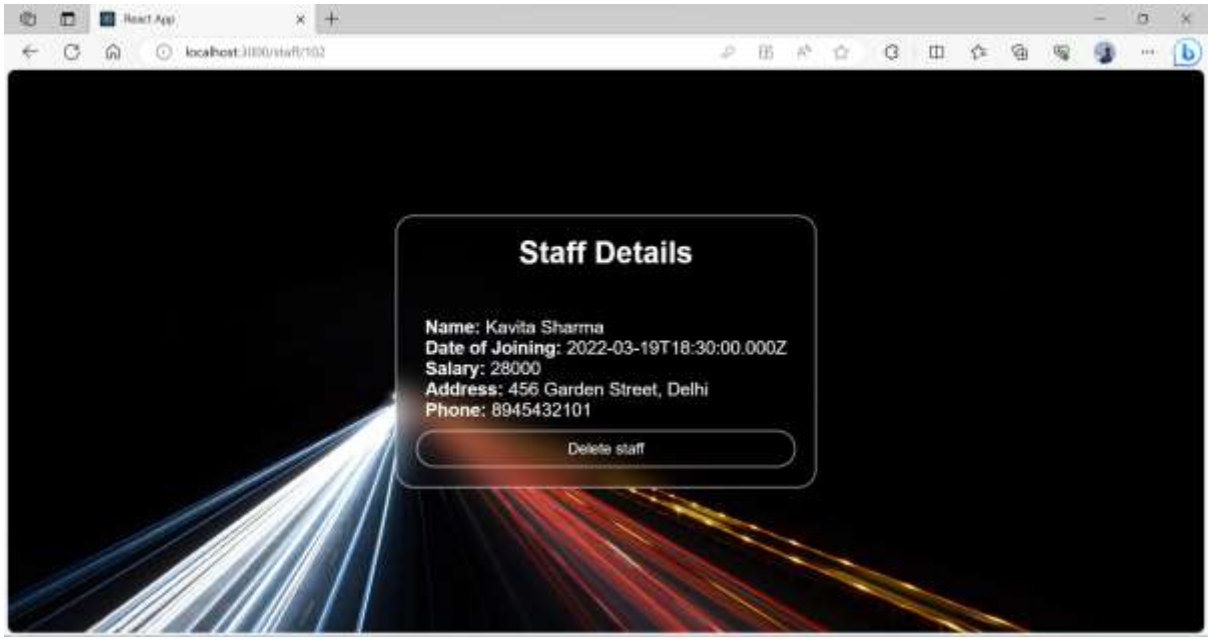

Fig.6

Staff Details: Here the details such as Staff ID, Name, Date of joining, Salary, Address, and More of a particular Staff are displayed.

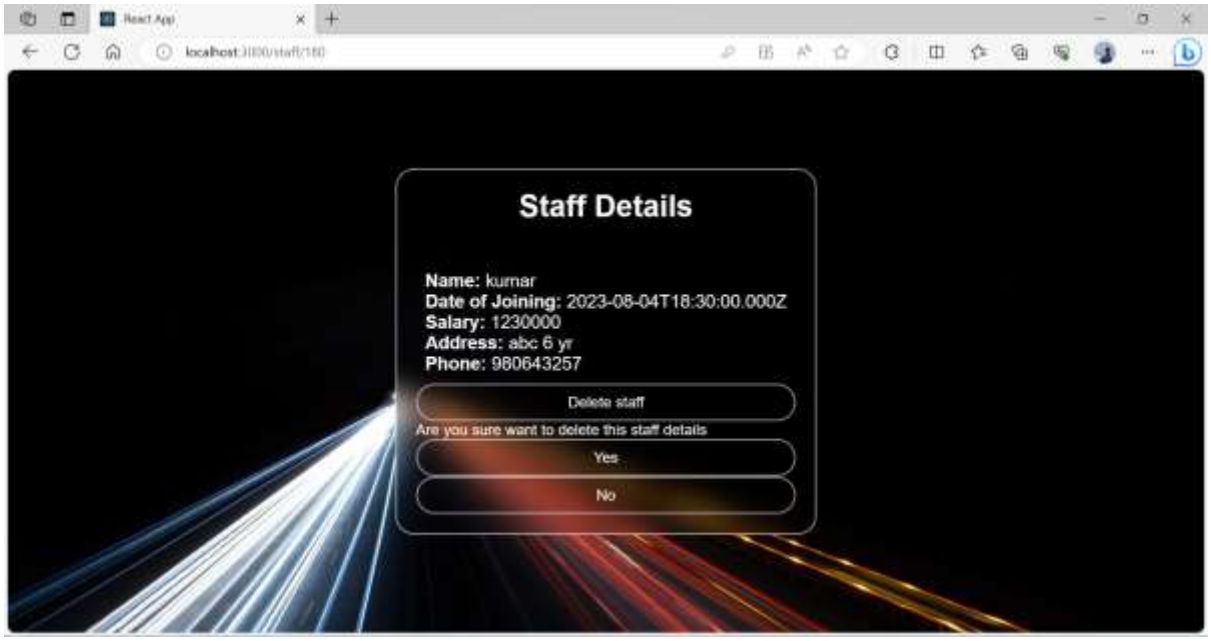

Fig.7

Staff Details: Here the Details of the staff and also staff delete functionality

Conclusion

The Stock Management System project offers a comprehensive solution to simplify and enhance the management of stores and similar retail businesses. This system provides an array of features that facilitate efficient inventory control, sales, customer management, and reporting. The project aims to streamline operations, improve customer service, and optimize business processes. The system enables store owners to efficiently manage their inventory, ensuring products are well-stocked and minimizing overstocking or understocking issues. The POS system simplifies the checkout process, making it quick and convenient for both customers and cashiers. It also tracks sales and generates receipts. The project includes a customer database, allowing store owners to track customer preferences, offer loyalty programs, and improve overall customer service. Suppliers and vendor information is easily accessible, helping businesses maintain positive relationships and negotiate better terms. The system offers reporting and analytics tools, providing insights into sales trends, product performance, and other key performance indicators. The frontend components are designed with a user-friendly interface, ensuring ease of use for both customers and staff. The system incorporates user authentication and authorization mechanisms to ensure the security of sensitive information and critical operations. The project can be customized and scaled to fit the specific requirements of different store sizes and configurations. The use of modern technologies, such as React for the frontend and Node.js for the backend, ensures a robust, maintainable, and responsive solution.