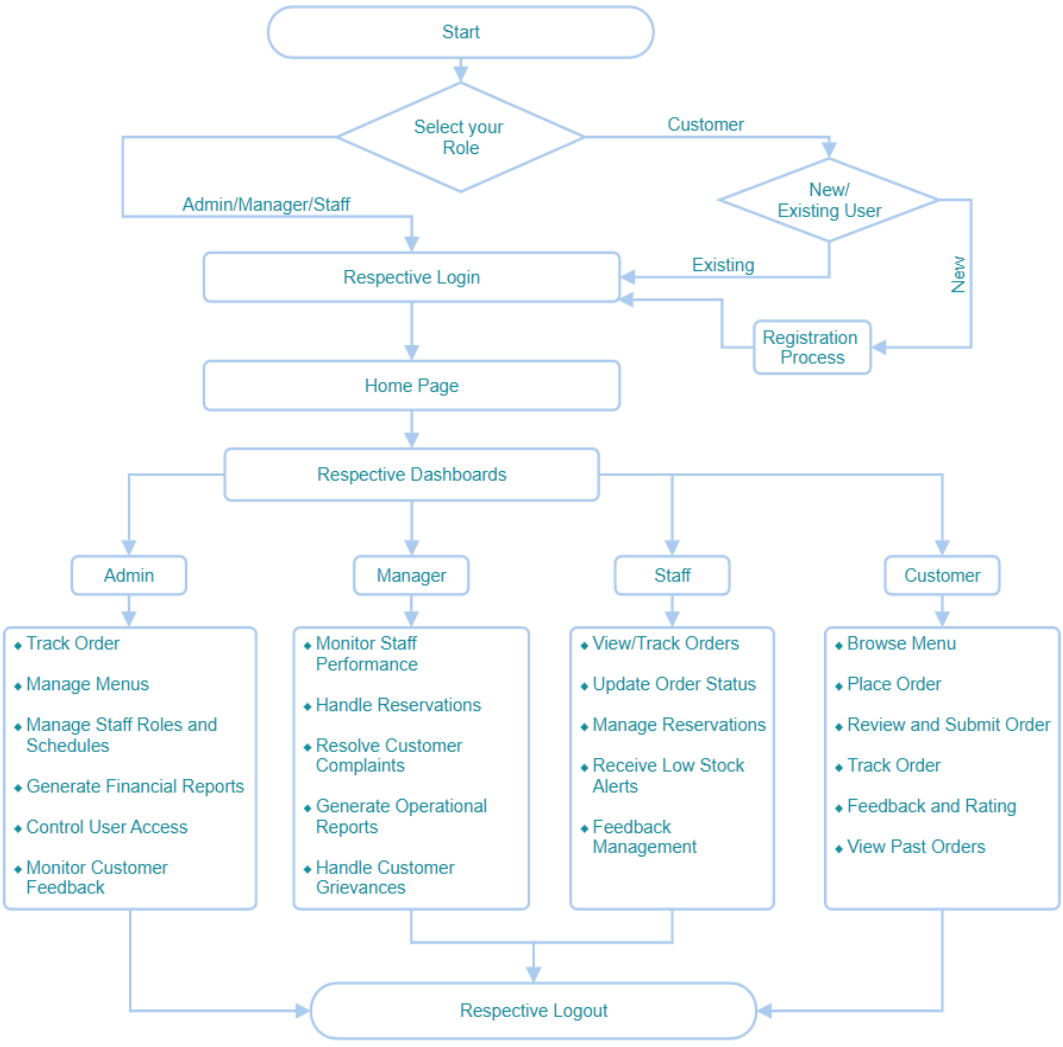
A Project Report on Restaurant Management System

Title: RestoConnect – *Seamless Dining, Effortless Management*

Abstract:

RestoConnect is a multi-restaurant management system designed to provide a centralized platform for efficiently managing and digitalizing the management. It offers an easy solution for menu management, customer feedback, reservation handling, and staff tracking across multiple locations. Built using the JS stack, RestoConnect ensures secure and easy connectivity between the front-end and back-end, delivering a reliable solution for modern restaurants.

FlowChart:



Features:

Website Admin Features: Maintain the overall functionality of the system with minimal workload. Manage user accounts, ensure smooth operation, and resolve system-level issues such as bugs. Monitor high-level statistics and performance analytics of the website.

Owner/Manager Features (Role-Based): He can watch statistics of his restaurants and has full access in it. Monitor staff performance and resolve customer concerns. Handle table reservations and can generate reports on location based and overall. Owners have additional access to financial reports, revenue analytics, and staff role management. Managers focus on operational coordination without access to sensitive financial data.

Customer Features: Customers can Browse menus and can provide orders on locations of their choice. View and reorder past orders. they can Make reservations with location, date, and time preferences. Users can provide feedback.

Staff Features: they can Update and order status and manage table assignments. They receive alerts for low stock and updates in inventory. They can also Interact with customers for order updates and gather feedback.

Forms:

Registration and Login Form:
Separate forms for Website Admin, Owners/Managers, and Staff for secure access. Customers can register if new or log in to their accounts.

Order Form (Customer):
This form lets customers place orders by selecting an item, quantity, and adding any special requests. After filling it out, they submit the form to send the order details to the back-end.

Reservation Form (Customer):
With this form restaurant and staff can know the date, time and number of arrival of guests so they can arrange . after submitted details are stored in database through backend.

Staff Role Form (Owner): Owners can add or update staff details, roles, and schedules for specific locations. The changes and updates done by Owner can be saved in database with the help of backend.

Users:

Website Admin:
Minimal workload focused on maintaining system stability and user account management. Monitor Restaurants analytics and resolve high-level issues.

Owner/Manager:
Role-based functionality for operational and administrative tasks. Owners manage financial reports, staff roles, and high-level analytics. Managers supervise daily operations at specific

restaurants. Handle customer complaints and ensure smooth table reservations. Generate reports and monitor staff performance.

Customer:
Customers can browse the menu, place orders, make reservations, view order history, and reorder items. They can rate meals and provide feedback about food and service.

Staff (Chef and Waiter):
Chef:
Chefs prepare meals, update order statuses, and manage kitchen operations. They monitor inventory levels to ensure availability.
Waiter:
Waiters take customer orders, update statuses, communicate with the kitchen, manage reservations, and ensure customers are satisfied with their meals and service.

Pages:

1. **Home Page (General)**:
   The central landing page provides access to the Website Admin, Owner/Manager, Customer, and Staff dashboards. It includes a **Select Restaurant Page** where users can choose a specific restaurant location before accessing any features.
2. **Admin Dashboard**:
   This page combines the Admin Profile with system monitoring, user account management, and System Alerts for critical issues. Admins can also access high-level analytics to monitor the performance and stability of the system.
3. **Owner/Manager Home Page**:
   The **Owner/Manager Home Page** allows Owners and Managers to select their restaurant location and quickly navigate to operational tools. Owners have access to financial analytics, staff management, and Reports, while Managers focus on day-to-day operations and customer service.
4. **Owner/Manager Dashboard**:
   The Owner/Manager Dashboard includes detailed operational management for Owners and Managers, with access to financial reports and staff performance. Managers can handle reservations, orders, and customer grievances.
5. **Customer Dashboard**:
   Customers can browse the menu, place orders, make reservations, view past orders, and update personal details through this page. It also allows customers to track their reservation history and review their preferences.
6. **Staff Home Page**:
   The **Staff Home Page** provides a simpler interface for staff members to view their tasks for the day, such as orders and table assignments. Staff can select their restaurant location and quickly access their individual responsibilities.
7. **Staff Dashboard**:
   The Staff Dashboard lets staff members manage orders, table assignments, and inventory levels. It includes an **Inventory Management** section to track stock and update inventory needs as required.
8. **Registration Page**:
   The Registration Page is for new customers to create an account and navigate to the login page. This ensures secure account creation and easy access to platform features.
9. **Login Pages**:
   The Login Pages provide secure login for different roles, including Admin, Owner/Manager, Customer, and Staff. Each page restricts access to the relevant features based on the user's role.
10. **Order and Reservation Page**:
    Customers can place orders and make reservations, specifying details such as location, date,

and time. These forms are processed in real-time by the backend, ensuring seamless integration.

11. **Feedback Page**:
    The Feedback Page allows customers to rate meals and provide service feedback to improve quality. It helps gather insights for improving the customer experience.
12. **Menu Management Page**:
    Admins and Owners can manage the menu by adding, updating, or removing items and setting prices. This ensures the menu reflects current offerings and promotions.
13. **Payment and Billing Page**:
    The Payment and Billing Page enables customers to view their bill and proceed with payment. It ensures secure payment processing for a smooth checkout experience.

Contribution of Each Member:

Nitin Vempati will lead the back-end development of the project, focusing on integrating Node.js, Express, and MongoDB. He is responsible for developing **Customer Dashboard page** and **Admin Dashboard page.** Additionally, he contributes 20% to front-end integration to ensure smooth functionality between the user interface and the back-end.

Sofiya Tentu will focus on back-end development, particularly managing the implementation of the **Owner/Manager Home Page** and **Owner/Manager Dashboard Page**. She ensures these features are efficiently designed for managing personal information and that they function seamlessly within the system.

Giresh Velaga is dedicated to front-end development, designing and implementing the core dashboards for various user roles. His responsibilities include creating **Home Page (with Select Restaurant Page)**, **Order and Reservation Page**, **Menu Management Page, Staff Dashboard Page.** He ensures that these interfaces are visually appealing, user-friendly, and functionally robust.

Deekshith Kumar is tasked with front-end development, focusing on creating secure and responsive user access pages. He is responsible for developing **Registration Page, Login Pages** and **Payment and Billing Page**. His contributions ensure a seamless onboarding and login experience for all user roles.

Nagaraju Thokala contributes to both front-end design and information collection. His primary responsibility is developing the **Staff home page** and **Feedback Page**, enabling customers to provide valuable feedback on their dining experiences. Additionally, he will handle collecting information such as project requirements and gathering other necessary resources to ensure the project's success.

Project Timeline:

For the **First Review**, our team will complete the front-end design using HTML, CSS, and JavaScript for the Admin, Owner/Manager, Customer, and Staff dashboards. We will implement basic back-end functionality using Node.js, Express, and an in-memory database. We will ensure that forms for orders, reservations, and staff roles are validated and working.

For the **Final Review**, our team will ensure the project is fully functional with a persistent database (e.g., MongoDB). We will have all core features, including menu management, order placement, reservations, and feedback, fully implemented, and the front-end will be integrated with the back-end.