Project Proposal

AharConnect

Section - 15

Group Number - 6

Group Members

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AharConnect

AharConnect is an integrated platform designed to streamline restaurant operations and enhance customer dining experiences. The name "Ahar" (meaning "meal" in Bengali) represents our mission to connect all aspects of the restaurant ecosystem—from management to customer service—into one cohesive solution.

Project Rationale

Background

- Restaurants struggle with managing orders, reservations, expenses, and inventory separately
- Customers face difficulties finding reliable food options, event-hosting restaurants, and delivery services
- The restaurant industry needs a unified platform that connects businesses and customers
- Current solutions are fragmented, requiring restaurants to use multiple systems

Scope

- **Target Audience**: Restaurants and customers looking for an integrated dining and management solution
- **Users**:
    - Restaurants: Small to medium-sized establishments seeking operational efficiency
    - Clients: Food service consumers in urban and suburban areas
- **Usage Benefits**:
    - Restaurants can manage multiple services through a single platform
    - Clients can explore restaurants, book tables, order food, and manage dining expenses
- **Estimated Size**: The platform aims to serve hundreds of restaurants and thousands of users in its initial phase

Project Objectives

1. Develop a centralized platform for restaurants to manage their operations efficiently
2. Provide customers with an intuitive interface for ordering food and booking restaurants
3. Integrate expense tracking and inventory management functionalities
4. Create a seamless connection between restaurants and clients
5. Reduce operational costs for restaurants through better resource management

Cost and Benefit

Project Cost

- **Total Estimated Work Hours**: 450 hours
    - Planning & Research: 50 hours
    - Design & Prototyping: 100 hours
    - Development: 200 hours
    - Testing & Debugging: 70 hours
    - Deployment & Documentation: 30 hours

Project Benefits

- **For Restaurants**:
    - Streamlined management of orders, expenses, and inventory
    - Increased visibility to potential customers
    - Reduced operational costs through better resource management
- **For Clients**:
    - A unified platform for dining, event booking, and food delivery
    - Simplified process for finding and ordering from restaurants
    - Better communication with restaurants for personalized service
- **For the Market**:
    - Increased operational efficiency in the food service industry
    - Enhanced dining experiences leading to customer satisfaction

Project Approach

- **Technology Stack**:
    - Frontend: React.js, Tailwind CSS
    - Backend: Node.js, Express.js
    - Database: MongoDB
    - Authentication: JWT-based authentication
    - Hosting: AWS
- **Potential Risks**:
    - User adoption resistance from restaurants accustomed to traditional methods
    - Integration challenges with existing restaurant systems
    - Ensuring consistent user experience across different devices
    - Data security and privacy concerns
    - Scaling challenges during peak usage hours

Requirements

Requirement 1

As a restaurant owner, I want to manage my menu and orders efficiently.

Feature 1: The system will provide a dashboard for adding, editing, and organizing menu items

Feature 2: The system will display incoming orders in real-time with status tracking

Feature 3: The system will allow setting menu availability based on inventory

Feature 4: The system will generate reports on popular items and order patterns

Requirement 2

As a restaurant manager, I want to handle reservations and event bookings.

Feature 1: The system will manage table reservations with customizable time slots

Feature 2: The system will provide calendar views of upcoming reservations and events

Feature 3: The system will send automated confirmations to customers

Feature 4: The system will allow customized event packages with pricing options

Requirement 3

As a customer, I want to browse different restaurants and order food online.

Feature 1: The system will enable location-based restaurant discovery

Feature 2: The system will display interactive menus with filtering options

Feature 3: The system will provide a seamless checkout process with multiple payment options

Feature 4: The system will track order status from preparation to delivery

Requirement 4

As a customer, I want to book restaurants for events and receive confirmation.

Feature 1: The system will show available event spaces with capacity information

Feature 2: The system will allow customers to select event packages and customize requirements

Feature 3: The system will provide booking confirmation with all event details

Feature 4: The system will enable communication with the restaurant for special requests

Requirement 5

As a restaurant owner, I want to track my expenses and inventory.

Feature 1: The system will record inventory levels and alert when items are low

Feature 2: The system will track daily, weekly, and monthly expenses

Feature 3: The system will generate financial reports for business analysis

Feature 4: The system will predict inventory needs based on order history

Conclusion

AharConnect aims to transform restaurant operations by integrating management, ordering, reservations, and inventory tracking into a single platform. This solution addresses the fragmented nature of current restaurant technology while providing customers with a seamless dining experience. With reasonable development time and resource requirements, AharConnect offers a feasible solution to enhance restaurant-client interactions and streamline food service operations.