Software Requirements Specification

for

<Online Restaurant Food delivery >

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

The purpose of this document is to provide a detailed specification of the requirements for the development of an Online Food Delivery application using React.js and ASP.NET Core. It outlines the functionalities, features, and constraints of the system to be developed.

1.2 Document Conventions

- Terms in bold indicate key concepts or entities.
- Requirements are numbered for easy reference.
- UI refers to User Interface.

1.3 Intended Audience and Reading Suggestions

This document is intended for developers, designers, project managers, and stakeholders involved in the development and deployment of the Online Food Delivery project. Readers are suggested to review the document in its entirety to understand the system's requirements thoroughly.

1.4 Project Scope

The project aims to develop a comprehensive online platform for food ordering and delivery. It includes customer-facing interfaces for browsing restaurants and placing orders, restaurant interfaces for managing menus and orders, delivery interfaces for managing deliveries, and an administrative interface for system management.

1.5 References

- List any relevant documents, websites, or resources used for gathering requirements and designing the system.

2. Overall Description

2.1 Product Perspective

The Online Food Delivery system will function as a standalone application accessible through web browsers. It will interact with external systems such as payment gateways, mapping services, and notification services.

2.2 Product Features

The key features of the system include:

- User registration and authentication
- Browsing restaurants and menus
- Placing orders and making payments
- Restaurant management of menus and orders
- Delivery management for assigning and tracking deliveries
- Administrative functionalities for system configuration and monitoring

2.3 User Classes and Characteristics

The system will have three main user roles:

1. Customers: Users who browse restaurants, place orders, and make payments.

2. Restaurants: Users who manage their menus, receive orders, and update order statuses.

3. Delivery Personnel: Users responsible for delivering orders to customers.

2.4 Operating Environment

The system will be deployed on web servers running ASP.NET Core and will be accessible through modern web browsers such as Chrome, Firefox, and Safari.

2.5 Design and Implementation Constraints

- The frontend will be developed using React.js, while the backend will be implemented using ASP.NET Core.

- The system should be responsive and compatible with various screen sizes and devices.

- Security measures such as encryption, authentication, and authorization must be implemented to protect user data and transactions.

2.6 User Documentation

Comprehensive user documentation will be provided, including user guides and FAQs, to assist users in utilizing the system effectively.

2.7 Assumptions and Dependencies

- Dependencies include external services for payment processing, mapping, and notifications.

- The system assumes a stable internet connection for seamless operation.

3. System Features

3.1 System Feature 1: User Registration and Authentication

- Users should be able to register an account with the system.
- Users should be able to log in securely with their credentials.
- Passwords should be securely hashed and stored in the database.

3.2. System Feature 2: Restaurant and Menu Management

- Restaurant owners should be able to register their restaurants.
- Restaurants should be able to manage their menus, including adding, updating, and removing items.
- Menus should display item details including name, description, price, and availability.

3.3. System Feature 3: Order Placement and Tracking

- Users should be able to browse restaurants and menus.
- Users should be able to add items to their cart and place orders.
- Users should be able to track the status of their orders in real-time.

3.4. System Feature 4: Payment Processing

- Users should be able to make payments securely using various payment methods.

- Payment details should be securely processed and stored.

- Restaurant owners should receive notifications of successful payments and orders.

3.5. System Feature 5: Order Management for Restaurants

- Restaurant owners should be able to view and manage incoming orders.

- They should be able to update order statuses (e.g., accepted, preparing, completed).

- Restaurant owners should be able to mark orders as complete and ready for delivery.

4. External Interface Requirements

4.1 User Interfaces

- The user interfaces will be intuitive, responsive, and accessible across devices.
- Screens will be designed for ease of use and efficient navigation.

4.2 Hardware Interfaces

- The system will interact with standard hardware components such as webcams and printers for certain functionalities (e.g., scanning QR codes, printing receipts).

4.3 Software Interfaces

- The system will integrate with external software services for payment processing, mapping, and notifications.

4.4 Communications Interfaces

- The system will utilize secure communication protocols (e.g., HTTPS) for data transmission between client and server.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- The system should respond promptly to user interactions, with minimal latency.
- It should handle concurrent user requests efficiently, without significant degradation in performance.

5.2 Safety Requirements

- Measures will be implemented to ensure the safety of user data, including encryption of sensitive information and adherence to data protection regulations.

5.3 Security Requirements

- The system will implement robust authentication mechanisms to verify user identities.
- Authorization controls will restrict access to sensitive functionalities based on user roles and permissions.

5.4 Software Quality Attributes

- The system will undergo rigorous testing to ensure reliability, usability, and maintainability.

6. Other Requirements

6.1 Performance Requirements

- Response Time: The system should respond to user actions (e.g., browsing menus, placing orders) within 2 seconds under normal load conditions.

- Scalability: The system should be able to handle a minimum of 1000 concurrent users without significant degradation in performance.

- Database Performance: Database queries should execute within 500 milliseconds to ensure quick retrieval of information.

6.2 Security Requirements

- Data Encryption: All sensitive data, including user credentials and payment information, should be encrypted during transmission and storage.

- Authentication: Secure authentication mechanisms should be employed, such as multi-factor authentication or OAuth, to prevent unauthorized access to user accounts.

- Authorization: Access to system functionalities should be restricted based on user roles (customer, restaurant owner) to prevent unauthorized actions.

- Secure Payment Processing: Payment processing should comply with industry standards (e.g., PCI DSS) to ensure the security of financial transactions.

6.3 Reliability Requirements

- Uptime: The system should strive for at least 99.9% uptime, with scheduled maintenance communicated to users in advance.

- Data Integrity: Measures should be in place to ensure the integrity of user data, including regular backups and disaster recovery plans.

- Order Accuracy: Orders placed by customers should be accurately recorded and transmitted to restaurants without errors.

6.4 Compatibility Requirements

- Cross-Browser Compatibility: The web application should be compatible with the latest versions of popular web browsers (Chrome, Firefox, Safari, Edge).

- Mobile Compatibility: Mobile applications should be developed for both iOS and Android platforms to cater to a wider user base.

- API Compatibility: APIs used for integrations (e.g., payment gateways, mapping services) should be compatible with the system's requirements and standards.

6.5 Regulatory Requirements

- Privacy Regulations: The system should comply with relevant data protection regulations (e.g., GDPR, CCPA) to safeguard user privacy and data rights.

- Food Safety Regulations: Restaurants using the platform should adhere to local food safety regulations and standards in food preparation and handling.

6.6 Usability Requirements

- Accessibility: The user interface should be accessible to users with disabilities, following WCAG guidelines for web accessibility.

- User Training: The system should be intuitive and easy to use, requiring minimal training for both customers and restaurant owners.

- Feedback Mechanisms: Users should have the ability to provide feedback on their experience with the system, including ratings and reviews for restaurants and delivery services.

6.7 Maintenance and Support Requirements

- Maintenance Schedule: Regular maintenance windows should be scheduled outside of peak usage hours to minimize disruption to users.

- Technical Support: A support team should be available to address user inquiries, issues, and technical problems promptly.

- Software Updates: The system should receive regular updates and patches to address security vulnerabilities and improve functionality.

6.8 Performance Metrics and Monitoring

- Monitoring Tools: Monitoring tools should be implemented to track system performance, including server uptime, response times, and error rates.

- Performance Metrics: Key performance indicators (KPIs) should be defined and monitored to assess the system's performance and identify areas for improvement.

6.9 Documentation Requirements

- User Documentation: Comprehensive user documentation should be provided, including user guides and FAQs, to assist users in navigating the system.

- Developer Documentation: Technical documentation should be available for developers, including API documentation and system architecture diagrams.

Appendix A: Glossary

- User: Refers to individuals who interact with the system, including customers and restaurant owners.

- Authentication: The process of verifying the identity of users to grant access to the system.

- Authorization: Determining what actions users are allowed to perform based on their roles and permissions.

- Menu: A list of food items offered by a restaurant for ordering.

- Order: A request made by a user to purchase one or more food items from a restaurant.

- Payment Gateway: A service that processes payment transactions securely between customers and merchants.

- API: Application Programming Interface, a set of rules and protocols for building and interacting with software applications.

- PCI DSS: Payment Card Industry Data Security Standard, a set of security standards designed to ensure the secure handling of credit card information.
- GDPR: General Data Protection Regulation, a regulation in EU law on data protection and privacy for all individuals within the European Union and the European Economic Area.

- CCPA: California Consumer Privacy Act, a state statute intended to enhance privacy rights and consumer protection for residents of California, United States.

- WCAG: Web Content Accessibility Guidelines, a set of guidelines for making web content more accessible to people with disabilities.

Appendix B: Analysis Models

- System Architecture Diagram: A visual representation of the components and interactions within the system, including servers, databases, APIs, and user interfaces.

- Data Flow Diagram: Illustrates the flow of data within the system, showing how information moves between various components and processes.

- Use Case Diagram: Represents interactions between actors (users) and the system, depicting various use cases and their relationships.

- Entity-Relationship Diagram (ERD): A visual representation of the database structure, showing the relationships between different entities (such as users, restaurants, orders) and their attributes.

Appendix C: Issues List

- Issue #1: Potential scalability concerns during peak usage hours.

- Issue #2: Unclear requirements for user authentication and authorization.

- Issue #3: Integration challenges with third-party payment gateways.

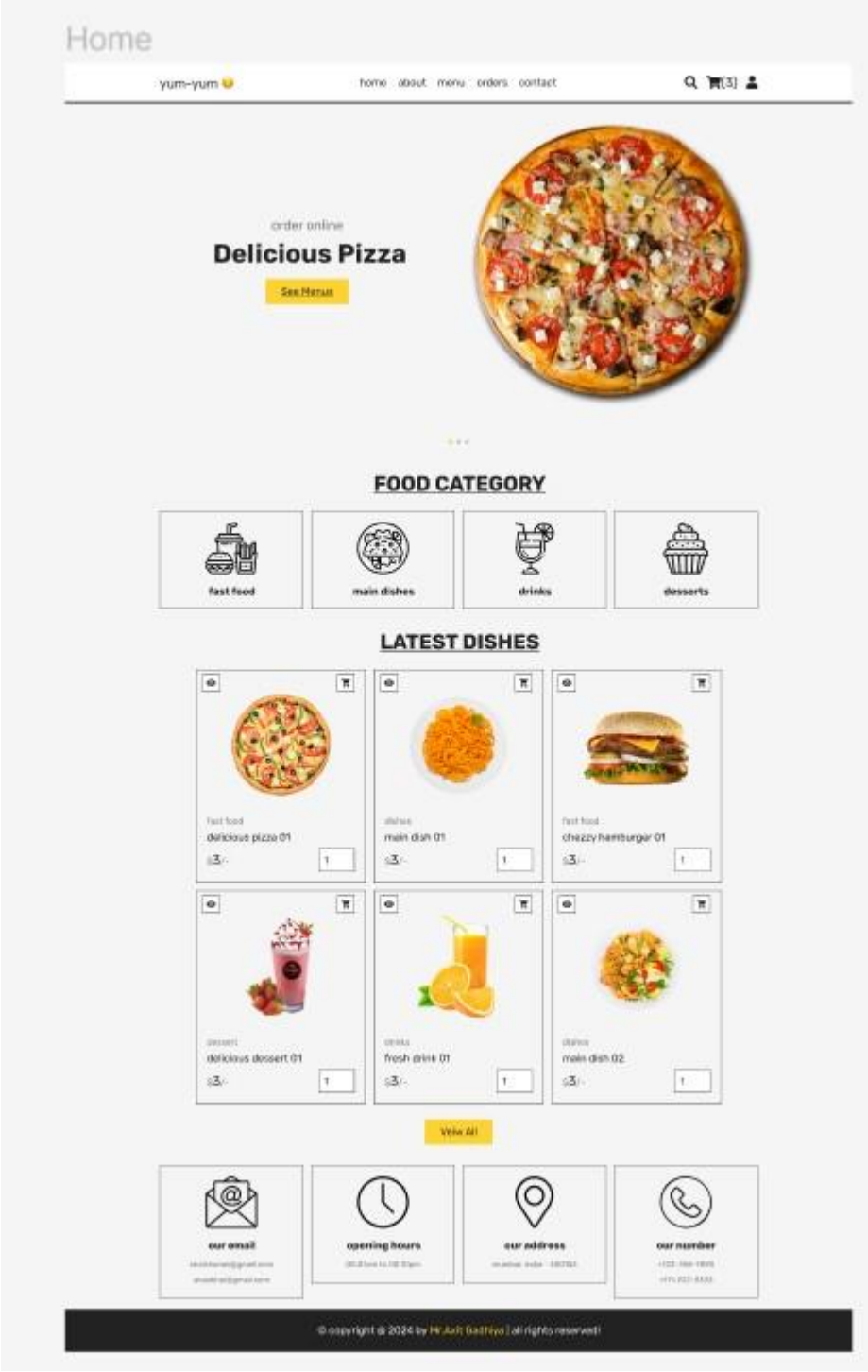
- Issue #4: Accessibility issues with the user interface for visually impaired users

- Issue #5: Concerns about data privacy and compliance with GDPR and CCPA regulations.

- Issue #6: Lack of documentation for API endpoints and data formats.

- Issue #7: Performance bottlenecks identified in initial testing.

7. Ui design

6. 
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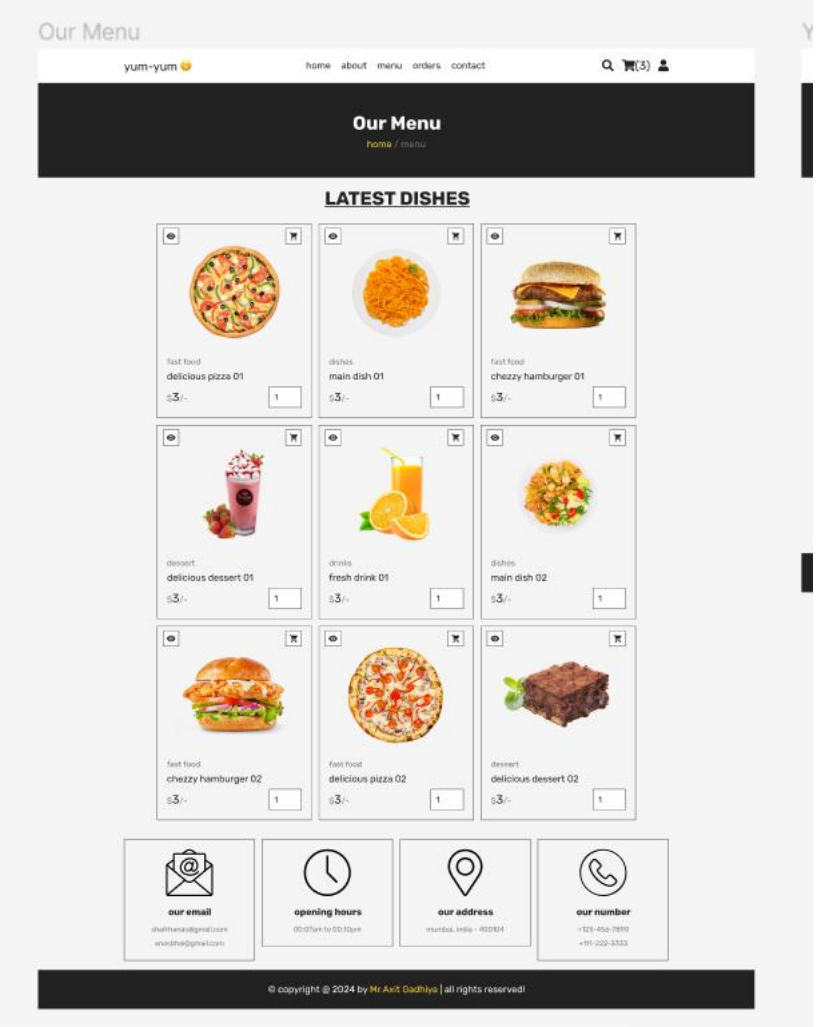
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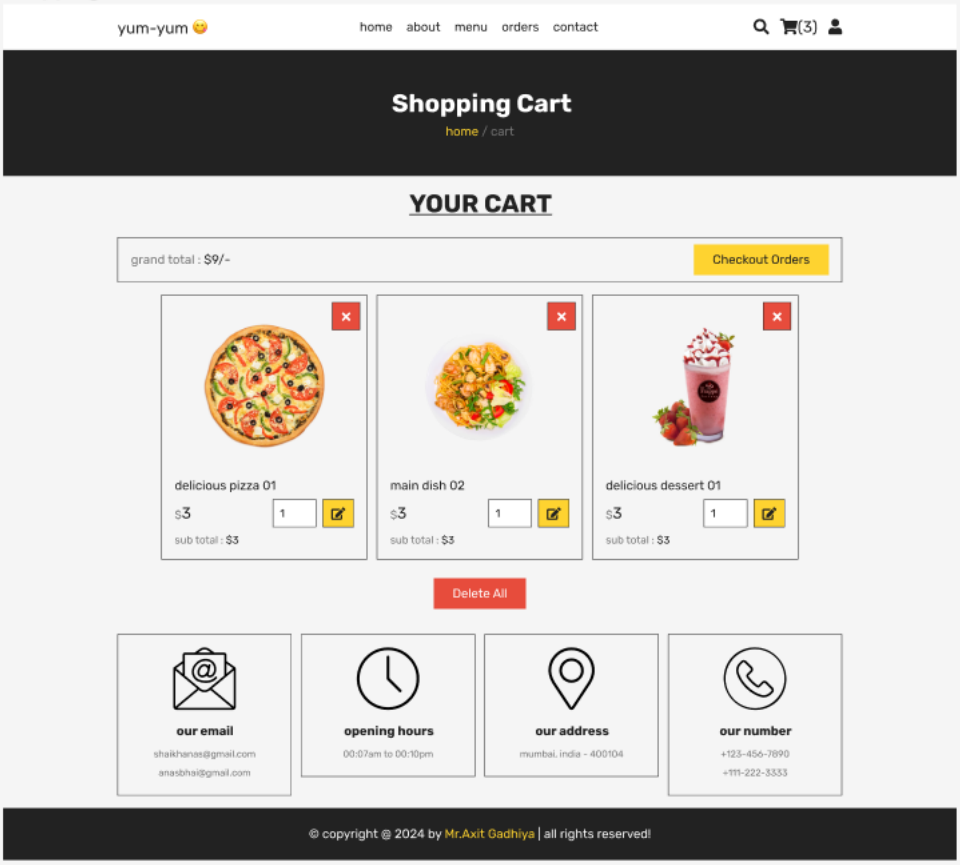

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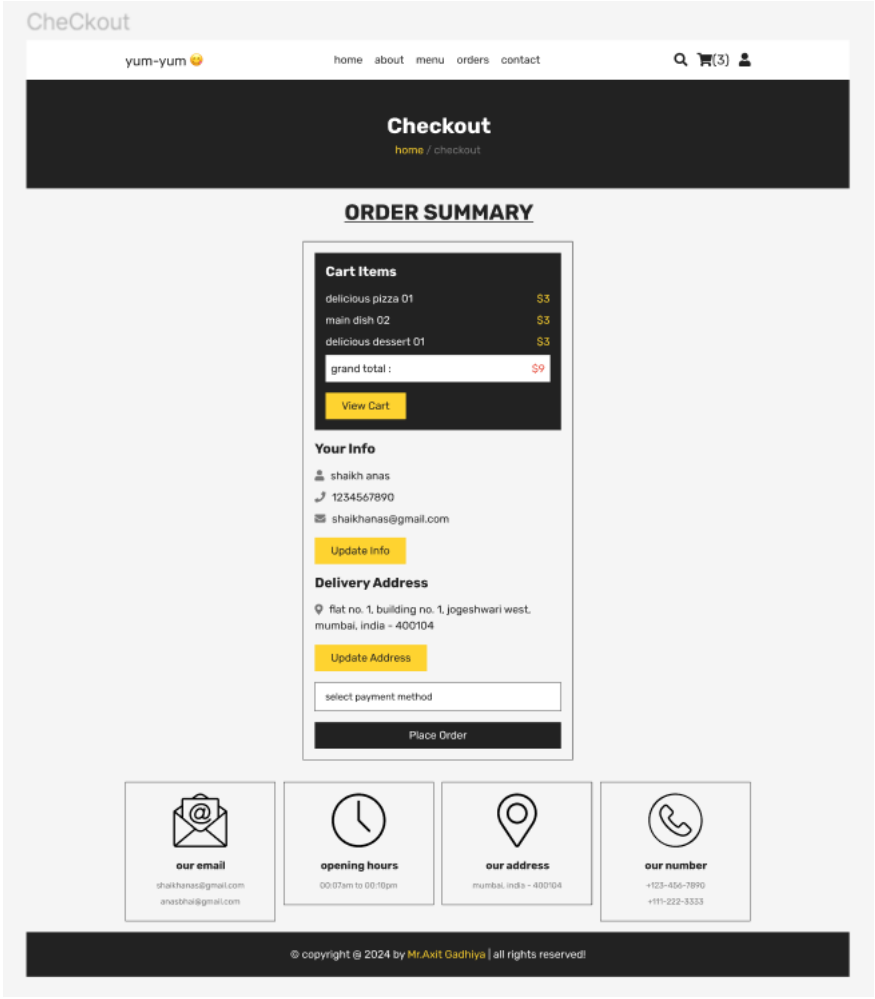
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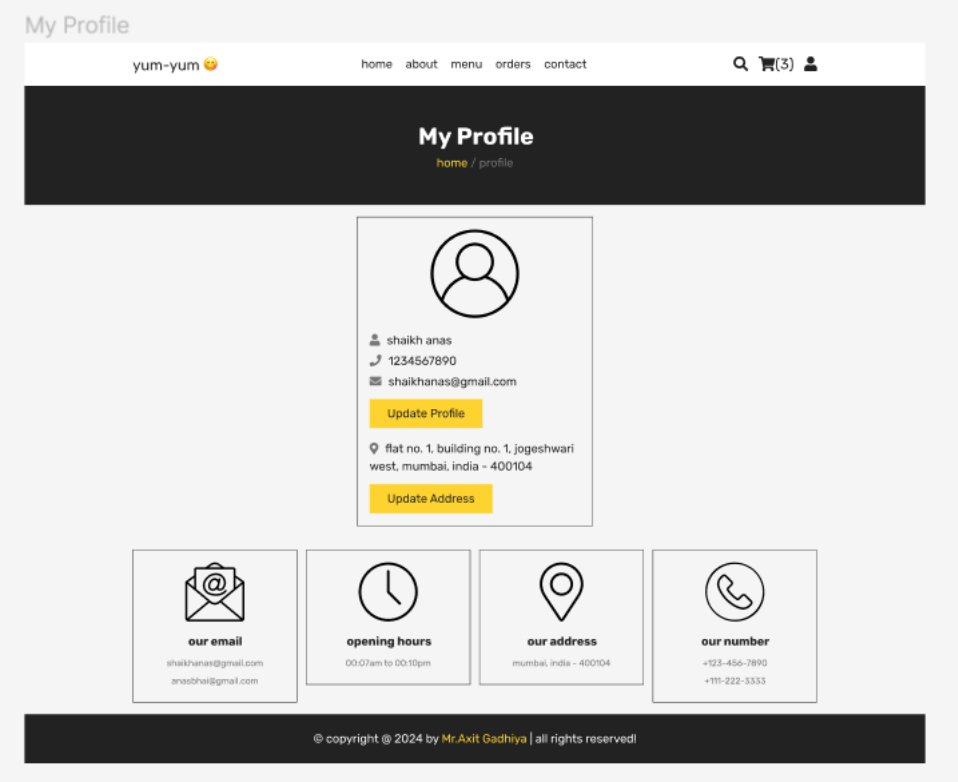
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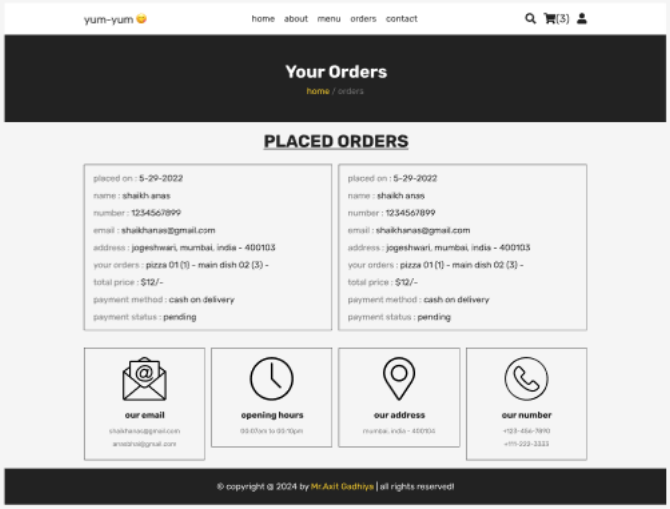

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enter your password

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state name

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Save Address

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shaikhanas@gmail.com

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confirm your new password

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