Software Requirements Specification (SRS)  
Customer Management System for a Restaurant

1. Introduction
   1. Purpose  
      The Customer Management System (CMS) is designed to enhance customer experience and loyalty at the restaurant by managing customer data, tracking orders, applying discounts on special occasions, and improving engagement through notifications. The system ensures secure data storage and efficient discount management to prevent misuse.
   2. Scope

The system will allow the restaurant to:

* + - Maintain a comprehensive customer database including names, contact details, birthdays, and special occasions.
    - Log customer orders, including items ordered, date/time, and total bill amount.
    - Apply a 50% discount on the total bill for registered customers on their birthday or other designated special occasions.
    - Ensure that the discount is applied only once per special occasion and validate transactions in real time to prevent misuse.
    - Generate reports on customer orders and applied discounts.
    - Send email or SMS notifications to customers about their upcoming special-day discounts.
  1. Definitions, Acronyms, and Abbreviations

CMS – Customer Management System  
Registered Customer – A customer whose details are stored in the system  
Order Log – A record of all transactions made by customers  
Special Occasion – A birthday or other custom date specified by the customer

* 1. References  
     IEEE 830-1998 – Standard for Software Requirements Specifications  
     Industry standards for data privacy and security compliance

1. Overall Description
   1. Product Perspective
   2. Product Features
   3. Scope

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2. Overall Description  
2.1 Product Perspective

The CMS is a standalone or cloud-based application that integrates with the restaurant’s existing Point of Sale (POS) system to manage customer relationships efficiently.

2.2 Product Features  
- Customer Registration & Management – Add, update, and delete customer profiles.  
- Order Logging – Store details of every order placed.  
- Special Occasion Discounts – Automatically apply a 50% discount for customers on designated occasions, ensuring it is only used once.  
- Real-time Validation – Prevents misuse of discount features.  
- Reporting – Generates reports on customer orders and applied discounts.  
- Notification System – Sends email or SMS reminders about upcoming special-day discounts.  
2.3 User Characteristics  
Restaurant Staff – Will use the system for registering customers, processing orders, and applying discounts.  
Restaurant Management – Will analyze customer data for business decisions.  
2.4 Constraints  
- Discounts should only apply to registered customers on valid special occasions.  
- The system should be GDPR-compliant for handling customer data securely.  
- It must process discount applications in real-time.  
- SMS/email notifications should be sent 24 hours before a customer’s special occasion.  
3. Specific Requirements  
3.1 Functional Requirements  
3.1.1 Customer Registration & Management  
- The system shall allow restaurant staff to register new customers by entering name, contact information, birthday, and special occasions.  
- The system shall allow staff to edit and delete customer details.  
  
3.1.2 Order Logging  
- The system shall log every order placed by customers, recording items ordered, date and time, and total bill amount.  
  
3.1.3 Special Occasion Discounts  
- The system shall check if the current date matches a registered customer’s special occasion and apply a 50% discount.  
- The system shall ensure that each customer can only use the discount \*\*once per special occasion\*\*.  
- Real-time validation shall be implemented to prevent duplicate discount claims.  
  
3.1.4 Reporting & Analytics  
- The system shall generate reports on customer spending patterns and discount usage.  
  
3.1.5 Notification System  
- The system shall send \*\*email or SMS reminders\*\* to customers about their upcoming special-day discounts \*\*24 hours in advance\*\*.  
3.2 Non-Functional Requirements  
- Performance: The system must handle 100+ concurrent users without slowdowns.  
- Security: Customer data shall be encrypted and only accessible by authorized staff.  
- Usability: The system interface should be simple and user-friendly for restaurant staff.  
- Availability: The system should be available 24/7 with 99.9% uptime.  
- Maintainability: The system should support future updates for adding new features.  
4. External Interface Requirements  
4.1 User Interface  
- A dashboard displaying customer details, order history, and discounts.  
- Forms for customer registration and order logging.  
  
4.2 Hardware Interfaces  
- Compatible Devices: PCs, tablets, and POS systems.  
  
4.3 Software Interfaces  
- Database: MySQL / PostgreSQL for customer and order storage.  
- POS Integration: API-based integration with restaurant billing software.  
- SMS & Email API: Integration with third-party SMS/email services for notifications.  
5. Future Enhancements  
- Mobile App: A customer-facing app for viewing order history and offers.  
- Loyalty Program: Implement a point-based rewards system.  
- AI-based Recommendations: Suggest dishes based on past orders.  
6. Approval & Sign-Off  
Name  
Role  
Signature  
  
Restaurant Manager  
Project Sponsor