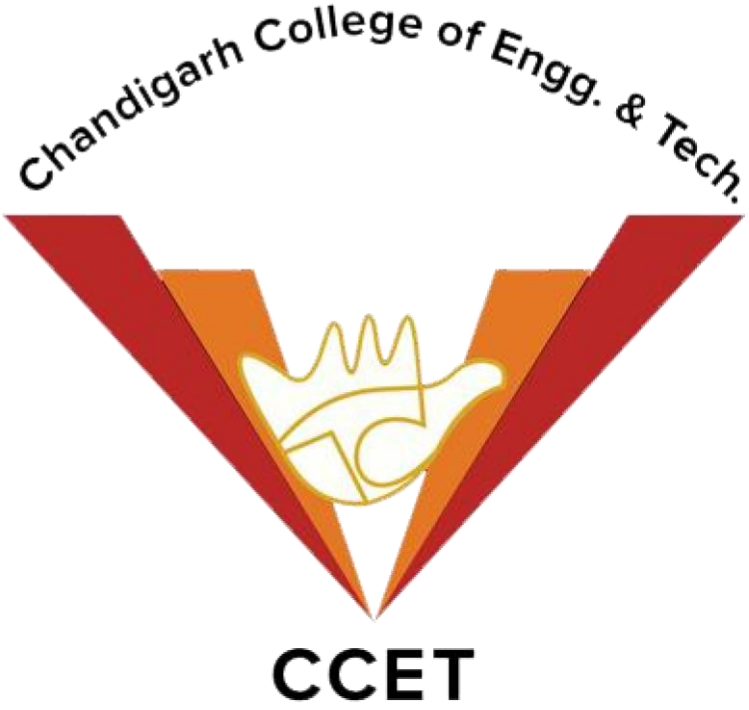
MAJOR PROJECT SYNOPSIS
Restaurant POS and Website



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1. Introduction

1.1 Purpose

The **Restaurant POS and Website** project is designed to enhance the interaction between customers and restaurant staff through an integrated system. The system streamlines various processes such as reservations, order placements, payments, and staff management. The main objective is to improve efficiency, reduce errors, and provide a seamless experience for both customers and staff.

1.2 Scope

The project consists of two major components:

- **Customer Side:** Includes account registration, reservations, and loyalty programs.
- **Staff Side:** Manages order processing, payments, sales analytics, and inventory management.
- **Admin Panel:** Allows restaurant administrators to manage menu items, staff, and system configurations.

1.3 Technologies Used

- **Backend:** PHP 7.4
- **Database:** MySQL
- **Frontend:** HTML5, CSS3, JavaScript
- **Server Environment:** XAMPP

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2. System Overview

2.1 Project Structure

The project is divided into three main components:

1. **Customer Side (customerSide Folder)**
    - Register an account ○ Make reservations
    - View loyalty points
2. **Staff Side (adminSide Folder)**
    - Take orders and send them to the kitchen ○ Process payments ○ Manage CRUD operations (Create, Read, Update, Delete) ○ View sales reports
3. **Admin Panel** ○ Manage menu items ○ Manage staff accounts and permissions

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3. Functional Requirements

3.1 Customer Side

3.1.1 Registration and Profile Management

- Customers register via register.php, providing basic details.
- Profile points are tracked as part of a loyalty program.

3.1.2 Reservation System

- Customers can select a date, time, seating preference, and number of people.
- Reservations are saved in the database and notify staff via the admin panel.

3.2 Staff Side

3.2.1 Staff Authentication

- Staff log in via stafflogin.php using a unique ID and password.
- Secure authentication ensures authorized access.

3.2.2 Order Processing

- Orders are placed via order.php.
- Orders are sent to the kitchen panel for preparation.
- Staff can edit or cancel orders before processing.

3.2.3 Payment Processing

- Payments can be made via cash or card using payment.php.
- Receipts are generated with order details and payment method.

3.3 Admin Panel

3.3.1 Manage Orders and Menu

- Admins can add, update, or delete menu items in menu.php.

3.3.2 Staff Management

- Admins can add, edit, or remove staff accounts.

3.3.3 Reports & Analytics

- salespanel.php: Displays sales trends using graphs.
- statisticspanel.php: Shows order frequency and customer preferences.

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4. Database Design

4.1 Database Structure (restaurantDB)

The database consists of the following tables:

- **Customers** (Customer ID, Name, Email, Password, Points)
- **Orders** (Order ID, Customer ID, Items, Total Amount, Status)
- **Payments** (Payment ID, Order ID, Method, Amount, Timestamp)
- **Staff** (Staff ID, Name, Role, Credentials)
- **Reservations** (Reservation ID, Customer ID, Date, Time, Guests)

4.2 Security Features

- Password hashing for customer and staff authentication.
- Input validation and sanitization to prevent SQL injection and XSS attacks.
- Prepared SQL statements to enhance database security.

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5. System Implementation & Deployment

5.1 Setup Instructions

1. Install XAMPP and start Apache & MySQL.
2. Import restaurantDB.sql into MySQL.
3. Configure database credentials in config.php.
4. Launch the project in NetBeans or any compatible IDE.

5.2 Example Accounts for Testing

Pre-configured accounts are available for testing:

- **Customer Test Account:** Email: test@customer.com, Password: test123
- **Staff Test Account:** ID: staff001, Password: staffpass

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6. User Interface & Responsiveness

- The system is optimized for both desktop and mobile devices.
- UI is designed for ease of use, with clear navigation and accessibility.

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7. Error Handling & Logging

- Errors are displayed as user-friendly messages.
- Invalid logins and payment failures trigger alerts and logs for security analysis.

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8. Future Enhancements

- Integration with third-party payment gateways (PayPal, Stripe).
- AI-based order recommendations.
- Mobile application for real-time order tracking.
- Multi-language support for a broader audience.

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9. Conclusion

The **Restaurant POS and Website** project is a fully functional and scalable solution aimed at modernizing restaurant management. It optimizes customer experience, improves staff efficiency, and provides insightful analytics for better decision-making. By integrating advanced features and secure data handling, this system enhances the overall operational workflow of any restaurant.