

College Canteen Management System

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Abstract

The College Canteen Management System is designed to streamline the ordering process, inventory management, and payment handling within a college canteen. The system provides a digital platform where students can browse the menu, place orders, and make payments while the admin can track inventory and generate reports. This paper discusses the system's architecture, key features, and its impact on enhancing efficiency in canteen operations. By leveraging web technologies such as HTML, CSS, and SQL, the system ensures an organized and user-friendly experience for students.

Index Terms—Canteen Management, Online Ordering, Database Management.

I. INTRODUCTION

Traditional college canteen operations face several challenges, including manual order processing, inventory mismanagement, and cash handling inefficiencies. The College Canteen Management System is developed to digitize and automate these processes, reducing human errors and improving service delivery. The system enables students to place orders online, track order status, and make cashless payments, while administrators can manage stock, track sales, and generate analytical reports.

This paper presents the design, implementation, and benefits of the system, highlighting its role in improving efficiency and user experience in a college environment.

II. SYSTEM OVERVIEW

The College Canteen Management System is a web-based platform with the following components:

User Authentication: Ensures secure access through login credentials. Role-based access is provided for students, canteen staff, and administrators.

Menu Management: Admins can update food items, set prices, and manage stock availability.

Order Management: Students can browse the menu, add items to their cart, and place orders. Staff can view, prepare, and update order statuses.

Payment Processing: The system supports digital payments via wallets and UPI integration.

III. FEATURES & FUNCTIONALITIES

User Registration & Login – Users create accounts using their institutional email and login securely.

Menu Display & Search – Students can search for food items, filter by categories, and view images.

Ordering System – Users can add items to their cart, modify orders, and track status in real-time.

Digital Payment – Supports UPI, credit/debit card payments, and campus wallet integration.

Admin Dashboard – Provides inventory tracking, sales analytics, and order monitoring functionalities.

Feedback System – Users can rate meals and provide feedback on service quality.

IV. IMPLEMENTATION & TECHNOLOGIES

Frontend: The frontend is designed using HTML, CSS, and JavaScript to create a responsive and interactive interface.

Backend: The backend is built using SQL for database management, along with PHP or Python for server-side processing.

Database: MySQL is used to store user data, orders, menu items, and transaction records securely.

Security Measures: Role-based access control (RBAC) and data encryption ensure secure transactions and privacy.

V. BENEFITS OF THE SYSTEM

Efficiency & Speed: Reduces manual errors, speeds up order processing, and minimizes wait times.

Convenience: Students can order from anywhere on campus, avoiding long queues.

Inventory Optimization: Helps canteen staff track stock levels and prevent wastage.

Revenue Insights: Provides data-driven insights for better business decisions.

User Satisfaction: Enhances the overall canteen experience with easy-to-use digital services.

VI. FUTURE SCOPE & ENHANCEMENTS

AI-Powered Order Predictions: Uses past order data to suggest popular items and optimize inventory.

Mobile App Integration: A dedicated app for seamless ordering and notifications.

VII. ACKNOWLEDGMENT

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