e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:06/Issue:11/November-2024 Impact Factor- 8.187 www.irjmets.com

MESSWALA WEB BASED APPLICATION

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ABSTRACT

We have noticed that numerous canteens, mess halls, and cafeterias in various institutions—such as educational facilities, IT sectors, and factories—are experiencing significant crowds during peak hours. This results in lengthy lines at both the billing and delivery areas, ultimately causing wasted time and human errors in accounting. To address this issue, we propose a solution: online food ordering at the specific café through our web application. In our application, any registered user can view and place their food orders in advance of their break time, complete with online payment options. The user can choose a specific time slot for food delivery. This will reduce time spent in queues, minimize food shortages, and decrease human errors in accounting.

Keywords: Ordering Food, Automating The Mess, Pay Online, Php, Bootstrap.

I. INTRODUCTION

The existing method of ordering food during peak times is time-consuming due to overcrowding in canteens and cafeterias at colleges and educational institutions. Nearly all canteens depend on paper records, cash, and manual calculations, which are inefficient for business operations and pose a considerable risk of errors. To tackle this problem, we aim to develop a web application that will enable us to manage all canteen orders online, from placing orders to receiving them through a secure payment system. This application is primarily designed to save time by reducing the duration spent waiting in lines, minimizing human errors in accounting by sending orders directly to the canteen, allowing for advance orders, and providing an online payment option.

Currently, the college canteen operates on a system where students must pay for their meals and then wait in line for their food. However, the challenge arises because all students on campus have the same break time, resulting in a rush to the cafeteria that creates difficulties for both the canteen staff and the students. Given the limited time, some students end up wasting or not consuming their food. This is where the canteen management system comes into play; it streamlines the process, allowing students to order their food in advance via their phones from the website. Users must first enter their email addresses before they can place an order from the electronic menu. The website will notify the kitchen staff immediately when a user places an order so they can begin preparing it. Ultimately, the Canteen Management System will help simplify this entire cumbersome process by transforming traditional methods of operation.

II. RELATED WORKS

- Android-based mobile application for a canteen automation system – A proposed canteen management system utilizes Android phones and a barcode system for product scanning. It effectively reduces the workload of waitstaff, but it falls short in terms of payment options, as online transactions were not available to users, presenting a significant limitation, with only cash on delivery offered.
- IRJET-Canteen Management Android Application Using E-Wallet – An Android application for canteen management was developed specifically for college cafeterias. It provides two payment methods: one via e-wallet and the other as cash on delivery, but does not support UPI or instant debit/credit card transactions for purchasing products.
- Online Canteen System – A proposed online canteen system allows users to order food through an electronic menu. Online payment options are available for purchasing items; however, manual handling of paperwork for billing and order details remains necessary.
- Automated Canteen Management System – An automated canteen management system was implemented using similar methods. While it assists users in making orders, it struggles to process these orders to the canteen merchant. Additionally, the online transaction functionality is inefficient and does not provide a user-friendly interface.

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- Canteen Automation System with Payment Gateway – An automated canteen system via a web platform was proposed, allowing users to place orders online that are communicated to the administrator. However, it suffers from inefficiencies and quality issues in processing online transactions. The database functions well but encounters challenges in transaction processing.
- Online Menu Order – This paper discusses an outdated canteen management system that employed an old technique. The users were relying on an obsolete portal based on outdated framework tools, and updates to more current frameworks were not provided.
- Google Survey – A survey was conducted on campus, asking students to choose between the existing canteen and our online e-canteen. The results favored the e-canteen management system, with over 73% of respondents agreeing that the system should be implemented in real-time scenarios to save time and ensure secure payments. The same survey was administered to canteen merchants, who expressed their readiness to adopt this method, recognizing its potential benefits for transitioning to digital ordering, payments, and order tracking.
- Web-Based E-Wallet Canteen Management – The objective of the Canteen Management System is to automate the traditional manual processes for improved efficiency within organizations. This system utilizes web-based software and Radio Frequency Identification (RFID) technology, making it accessible from anywhere via the internet. It offers error-free accounting, lower development costs, security, reliability, and faster service for managing operations.

III. PROPOSED SYSTEM

To address the limitations of the existing system, we introduced an online canteen management system that enables customers to order food via the internet and make secure payments through our web application, allowing them to receive their meals at their chosen time. The proposed system includes key modules such as Admin (Shop Owner) and Customers (Students, Faculty, and Visitors), along with a Payment API and Database.

The goal is to develop a college cafeteria website with an intuitive user interface, menu layout, and additional features that the canteen management system can utilize to oversee various food outlets. By implementing such a system, the kitchen and the entire canteen can function as efficiently and quickly as possible.

1. Customers won't have to endure long wait times.
2. It minimizes human errors in accounting.
3. It does not include convenience fees, GST, or similar charges.
4. Offers encrypted and easy online payments.
5. All information can be accessed with ease.
6. The application is highly user-friendly.
7. Maintaining a secure database on the server will be efficient and reliable.
8. The E-Cafe system is designed for easy maintenance.
9. This system is applicable to all institutional cafeterias and similar establishments.

IV. OBJECTIVES

The primary aim of the canteen management system project is to manage information related to the canteen, college students, and food items with prices across various campus stores. The objective is to develop a web application software that reduces the manual effort required to oversee the canteen, students, customers, and food products, among other tasks.

This project aims to provide administrative personnel and various shop managers with access to sorting and searching functionalities based on different criteria, such as campus stores, consumers, food items, and orders. One of the key objectives is to edit, add, and update records, ensuring effective resource management of canteen data.

All fields within the project, including those for customer registration and login, will be validated to prevent the entry of invalid values.

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V. DATABASE

The database was created in SQL data format using XAMPP phpMyAdmin. The database is essential to our project as it holds customer information, including usernames and passwords, personal details, meal order information, admin details, menu information, and payment data.

VI. METHODOLOGY

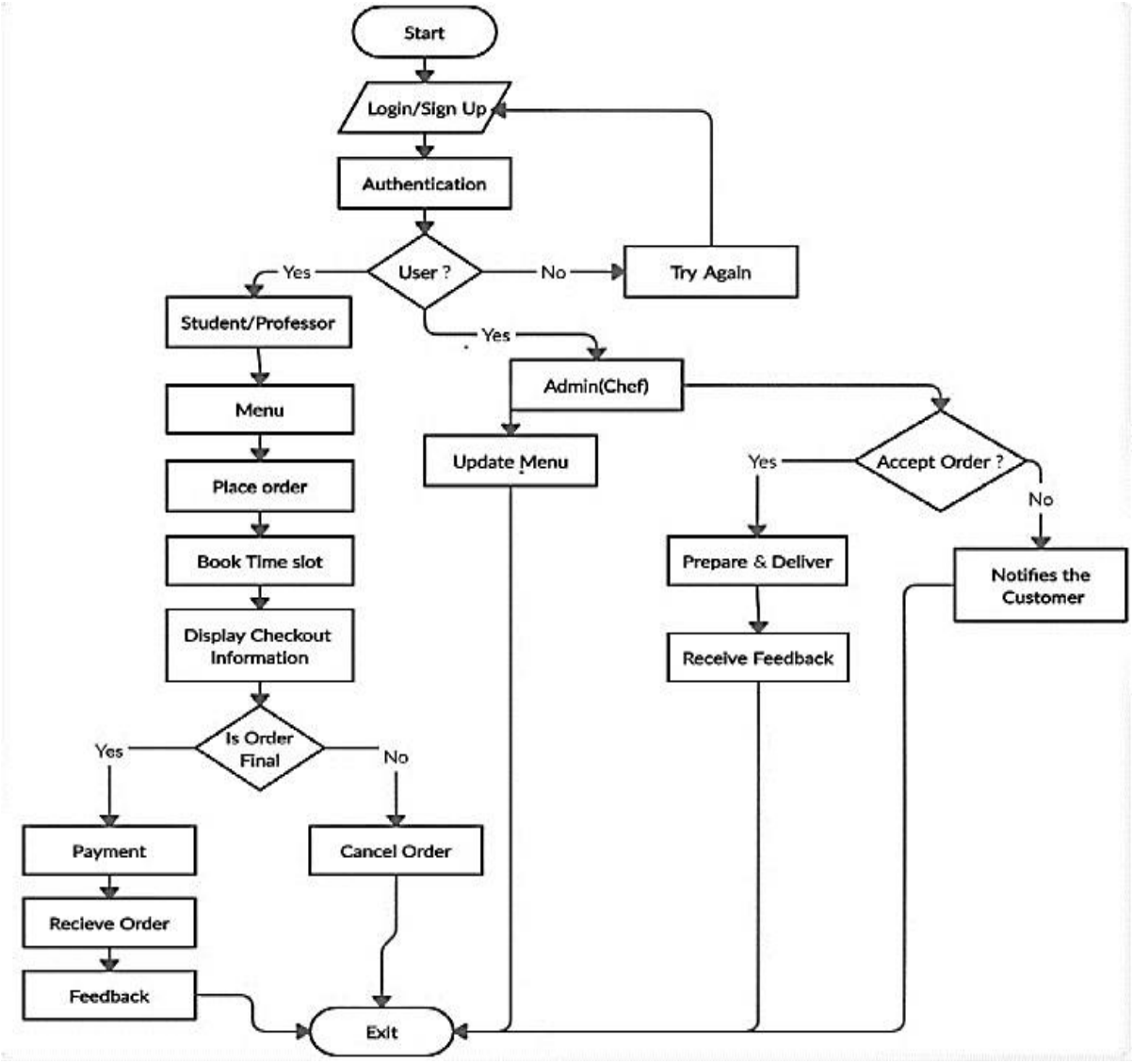

FIG .1: Process Flow Diagram

VII. CONCLUSION

The benefit of this approach is that it is not impacted by the size of the canteen. It addresses the challenges associated with traditional canteen management systems and supports scalable and sustainable growth for the business. This system can be implemented for both small and large-scale canteen operations in various sectors, including educational institutions like colleges, IT industries, and factories.

Our fully functional website allows users to save time and place their food orders at their convenience without waiting in long queues, receiving their meals at the desired time. This also helps minimize human errors in accounting. In this way, we ensure social distancing and reduce crowds in the canteen, which is essential in the current context.

VIII. REFERENCES

[1] Delaney, T., Wyse, R., Yoong, S.L., Sutherland, R., Wiggers, J., Ball, K., Campbell, K., Rissel, C., Lecathelinais, C. and Wolfenden, L., 2017. Cluster randomized controlled trial of a consumer behavior intervention to improve healthy food purchases from online canteens. The American Journal of Clinical Nutrition, 106(5), pp.1311-1320.

[2] Mhalgi, S., Marne, P., Kulkarni, M., Kapure, S. and Shekapure, S., 2019. Cloud based android app for college canteen management system. IJRAR-International Journal of Research and Analytical Reviews (IJRAR), 6(1), pp.969-972.

[3] Kale, R.B., Balwade, R.K. and Gawai, V.B., Online Food Ordering System for College Canteen. SAMRIDDHI: A Journal of Physical Sciences, Engineering and Technology, 12(SUP 2), pp.64-68

[4] Fegade, R., Nandge, G., Patil, P., Gaikwad, T. and Bastawade, P.P., 2019. Canteen Management Android Application Using E-Wallet. International Research Journal of Engineering and Technology (IRJET), 6(3), pp.6624-6628

[5] V. K. G. Kalaiselvi, D. P. Rani, H. P, D. P and R. U, "Modern Dine-In," 2021 4th International Conference on Computing and Communications Technologies (ICCCT), 2021, pp. 367-369, doi: 10.1109/ICCCT53315.2021.9711855.

[6] Gowthami, M.A., Banupriya, M.T. and Vadivukkarasi, M.E., 2020. Mobile application for canteen automation system using android. International Journal of Advanced Research in Computer Engineering & Technology (IJARCET), 9(3).

[7] Fonggo, F., Beng, J.T. and Arisandi, D., 2020, December. Web-Based Canteen Payment and Ordering System. In IOP Conference Series: Materials Science and Engineering (Vol. 1007, No. 1, p. 012159). IOP Publishing.

[8] Wang, Y.H., Lee, C.H. and Trappey, A.J., 2017. Service design blueprint approach incorporating TRIZ and service QFD for a meal ordering system: A case study. Computers & Industrial Engineering, 107, pp.388-400.

[9] S. Samundeswari, R. Sanath, S. Anbazhagan., Gesture and Motion Based Crew Management System In An irport. Turkish Online Journal of Qualitative Inquiry (TOJQI) Volume 6, July 2021: 6152- 6162

[10] Jagtap, D., Kokate, A., Gupta, N., Raysingh, S. and Pathak, M., 2016. Canteen Ordering System with Daily Update of Calorie Consumption Report using Cloud Computing.

[11] Hasanuddin, Z.B., Niswar, M., Fadhila, A. and Wardana, M.A., 2020, March. e-Canteen for the Smart Campus Application. In Future of Information and Communication Conference (pp. 842-854). Springer, Cham.

[12] KB G.Manimala, S.Roselin, G.Rajalakshmi., 2019. Health line Management System using Android Application.

[13] Narendra kumar, T. and Pillai, A.S., 2017, July. Smart connected campus. In 2017 International Conference on Intelligent Computing, Instrumentation and Control Technologies (ICICICT) (pp. 1591-1596). IEEE.

[14] Kavitha, V., Shanmugapriya, P., Aisshwaryapriya, A.S. and Harini, M., 2018. Service-based collaborative framework for smart gardening. International Journal of Engineering & Technology, 7(2.33),pp.588-590.

[15] Lee, M.H., 2020. Campus Canteen Ordering System Used of E-Wallet Management (Doctoral dissertation, Tunku Abdul Rahman University College).

[16] Bhandari, P., Cota, L., Crasto, S., D'Costa, A. and Guide, g.t., 2016. Mobile application for college canteen. St. Francis institute of Techology.