

DINE AND DONATE

J.M.M.Vyshnavi¹, B.Venu gopal², K.Vasavi³, M.B.N.Priyanka⁴, M.Anand kumar⁵,
D.Siva Venkata Sai⁶, P.Ujwala Sai⁷

¹CST, Sri Vasavi Engineering College(A), Pedatadepalli, Tadepalligudem-534101

²CST, Sri Vasavi Engineering College(A), Pedatadepalli, Tadepalligudem-534101

³CST, Sri Vasavi Engineering College(A), Pedatadepalli, Tadepalligudem-534101

⁴CST, Sri Vasavi Engineering College(A), Pedatadepalli, Tadepalligudem-534101

⁵CST, Sri Vasavi Engineering College(A), Pedatadepalli, Tadepalligudem-534101

⁶CST, Sri Vasavi Engineering College(A), Pedatadepalli, Tadepalligudem-534101

⁷Associate Professor, Department of CSE, Sri Vasavi Engineering College(A), Pedatadepalli, Tadepalligudem-534101

Abstract - Dine and Donate is a real-time ordering service to manage the order process for a restaurant. This modern ordering system i.e., our proposed application results in minimizing waiting time, which makes it easier for the customers. With smartphones, customers can scan the QR code which has been set on the table, can open the menu on their smartphone and can order food. Upon ordering, the notification will be delivered to the kitchen and the cashier along with the table number, and food will be sent to the particular table. Therefore, this application was developed to provide an ordering system using mobile and tablets for customers in order to increase the hotel productivity. It helps you to streamline your operations to meet customer expectations. It is fast and efficient time management system for customers as well as the hotel management. Our project introduces a unique philanthropic element by integrating a donation feature. Customers can effortlessly contribute to charitable organizations, local charities, or community initiatives, directly through the platform.

Key Words: QR Code ,Digital Menu ,Scan and Order, Fast Service, Donation Features, Time Mangament.

1.INTRODUCTION

Welcome to the future of dining convenience-dine and donate. Gone are the days of waiting in long lines or struggling to catch a server's attention. With our system, you have the power to explore our entire menu at your own pace, customized to your preferences. It includes ordering the food in a smart way as well as donating the food to charities, organizations, etc.

In this modern ordering system, customers leverage the convenience of their smartphones to engage seamlessly with the restaurant's menu and place orders effortlessly. By simply scanning the QR code placed on their table, patrons gain instant access to a user-friendly digital menu.

Upon placing an order, a swift notification is dispatched to both the kitchen staff and the cashier, complete with the corresponding table number. This streamlined communication ensures that the ordered food is promptly prepared and efficiently delivered to the designated table. The result is a dining experience characterized by speed, precision, and customer-centric service.

In today's world, mankind is moving towards automation to increase the efficiency of their work. But our system is not just about convenience; it's about creating a personalized journey.

With the "Smart Menu with Donation Feature", you cannot only enjoy delicious food but also have the chance to support charitable causes directly from your dining table.

2.LITERATURE SURVEY

The system consists of a mobile app for guests and a web-grounded platform for eatery directors. The mobile app allows guests to browse menus, place orders, and make payments directly from their smartphones. Foody also includes features to help caffs manage their operations more efficiently. The web-grounded platform is used by eatery directors to manage orders. Foody is designed to ameliorate the client experience and help caffs operate more efficiently by using technology to streamline the ordering process and give precious perceptivity into client.[1]

This comprehensive review discusses the automation trends in restaurant management, including menu ordering systems, inventory management, and customer service. It highlights the importance of automation in enhancing operational efficiency and improving the overall dining experience.[2]

This study presents a comparative analysis of various digital menu systems used in the hospitality industry. It discusses the benefits and drawbacks of different

approaches to digital menus, shedding light on the challenges and opportunities in this field.[3]

This paper focuses on wireless communication technologies, like NRF modules, in the context of restaurant automation. It discusses how these technologies can improve order transmission and enhance the efficiency of food delivery.[4]

This research examines the integration of microcontrollers, such as the PIC microcontroller, into restaurant management systems. It explores how microcontrollers can control and monitor various aspects of restaurant operations.[5]

The proposed "Smart Menu Ordering System in Restaurant," as presented by Umap, aligns with a growing body of literature addressing advancements in restaurant automation and menu ordering systems.[6]

Zhang, Liu, and Huang conduct a comprehensive survey of smart technologies in restaurant management, covering areas such as ordering systems, table management, and customer service. The study offers insights into the broader context of smart solutions in the hospitality industry.[7]

Gupta and Sharma explore the integration of Business Intelligence (BI) in restaurant operations, emphasizing the role of BI in data analytics, decision-making, and enhancing overall efficiency. The Foody system's utilization of Business Intelligence aligns with this trend.[8]

3.EXISTING SYSTEM

If orders are not accurately prepared according to customer requests, it can lead to food waste. When customers make specific dietary requests or modifications to their orders, miscommunication or errors in the kitchen can result in food waste if a dish is prepared incorrectly and needs to be discarded.

Food Waste: Many restaurants and food establishments may have excess food that goes to waste at the end of the day.

This leads to not only economic losses for businesses but also contributes to food waste, which is a global concern.

Lack of coordination: Coordinating the donation of excess food from restaurants to food banks or shelters can be challenging. There may not be an efficient system in place to match food surpluses with the needs of those who are hungry.

Logistical Challenges: Coordinating the pickup, transportation, and distribution of donated food can be logistically challenging. Ensuring that the food reaches those in need in a timely and safe manner is crucial.

4.PROPOSED SYSTEM

Through the Food Donation module, **we can reduce the waste of food by donating to the needy.** Users can play characters to save food waste and help the needy. Easy to use and user friendly. Keep track of the leftover food from restaurants or any events.

By donating food, we're feeding people, not landfills, supporting local communities, and saving all the resources that went into producing that food from going to waste.

Supporting Charitable Causes: Dine and Donate initiatives provide financial support to various charitable organizations, helping them carry out their missions and make a positive impact on the community.

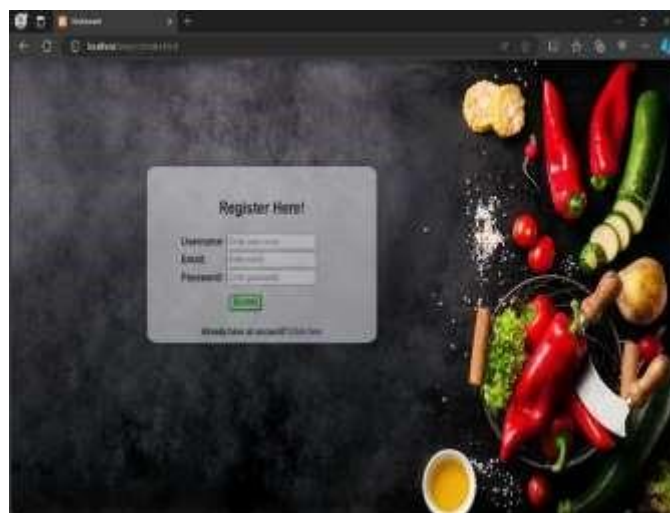
Raising Awareness: Dine and donate events can raise awareness about important social and environmental issues, educating the public about the work of specific charities or causes.

Feel-Good Factor: Both donors and participants often experience a sense of fulfillment and satisfaction, knowing they are making a positive impact.

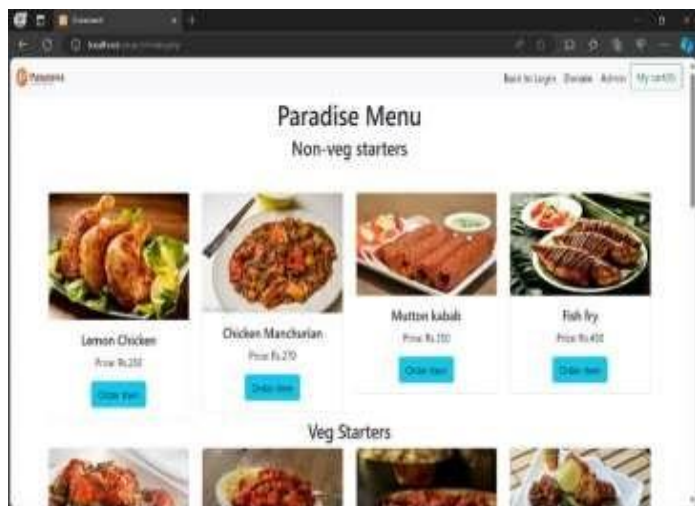
Business Promotion: For restaurants and businesses, participating in such events can be a form of marketing and social responsibility, attracting customers who want to support a cause.

5.EXPERIMENTAL RESULT

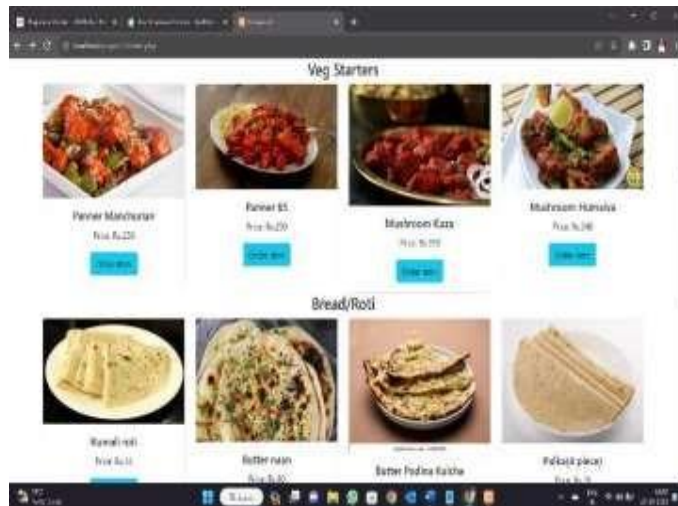
Login Module : After scanning the Quick Response (QR) code, the user logs into the website. The login module is a way of providing authentication for users. The users should enter their username, email, and password to login. The new users have to register first to login.



Menu Module : After logging in, the menu page will appear, and the items in the restaurant will appear accordingly as vegetarian starters, non-vegetarian starters, vegetarian items, and non-vegetarian items. After choosing the items and clicking on the order button, the items will be added to the cart.

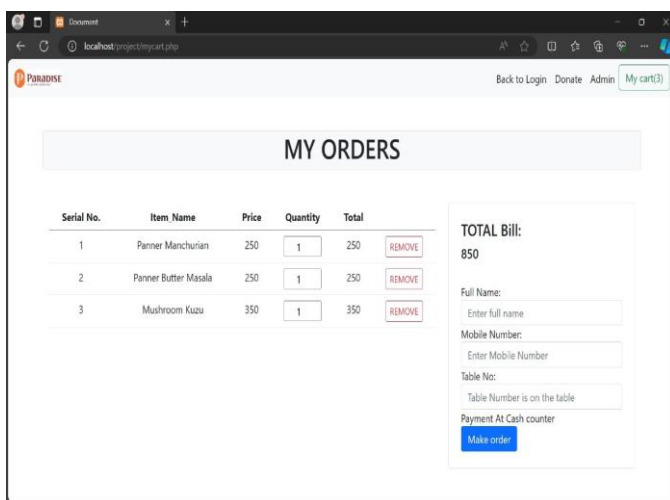
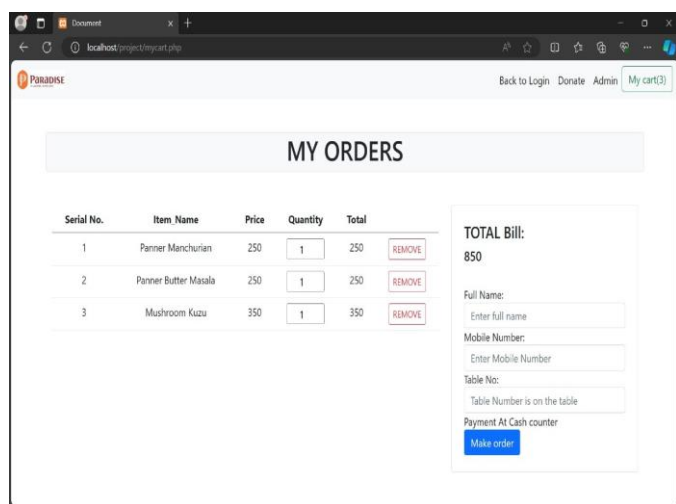


Food products are available in multiple variations, including bread and Roti. The different food products are displayed in the photo below.



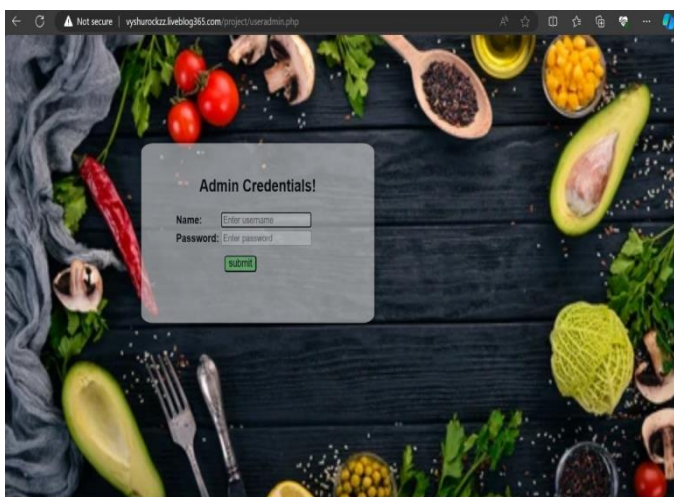
Cart Module: The cart module contains the food items ordered by the users, and the details of the user along with the table number are taken. The user can review the chosen food items along with the quantity of items, followed by the price. The user can remove the items from the cart as well.

It is same as the above image and we have to click on order button.

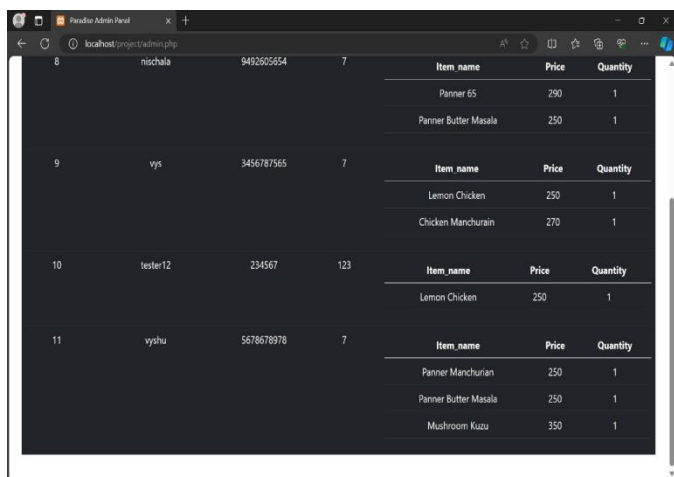


Order Module : Upon reviewing the items added to the cart on the cart page, the user has to enter the corresponding details like name, mobile number, and table number, and click on the order button. By clicking it, the order is taken and confirmed through an acknowledgement message.

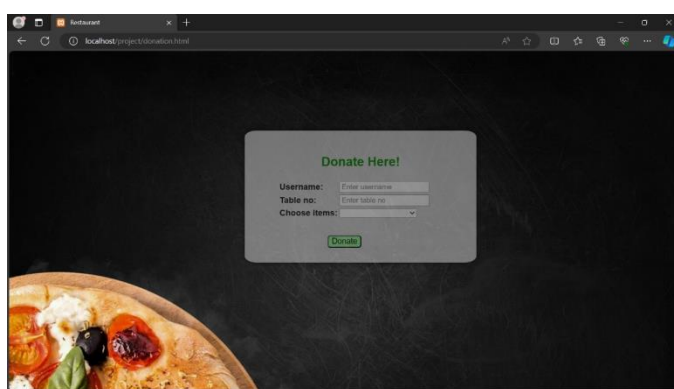
Admin Module : Upon The module is developed for the admin, who can see all the orders from different users. The orders of users are displayed along with the table number.



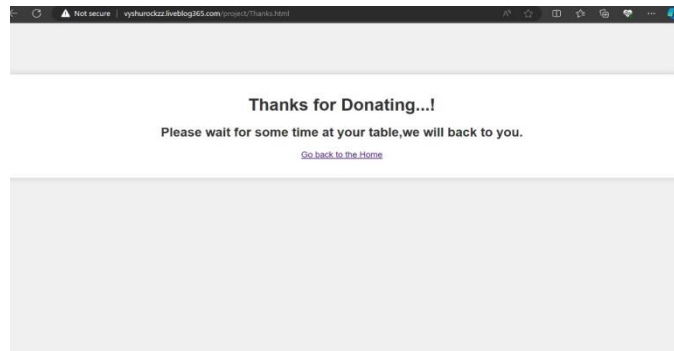
After entering the admin credentials, we can see the admin module.



Donation Module: This module is used for customers to donate food items to charitable causes, organizations, etc.



Thank you for donating the food items. The given page will appear.



6. CONCLUSION

The integration of the donation feature elevates our system to a realm where technology meets philanthropy. By empowering our users to contribute effortlessly to charitable causes while enjoying their meals, we have sown the seeds of positive change within our community. Through their generosity, our users have become an integral part of initiatives that are making a real difference in the lives of others.

As we reflect on this journey, we are deeply moved by the kindness and social responsibility exhibited by our users. Together, we are fostering a spirit of giving and a culture where every meal ordered is a step toward a brighter, more compassionate world.

In the heart of our smart menu ordering system lies not just the efficiency of technology but also the warmth of humanity. We extend our sincere thanks to all who have embraced this vision. Your support fuels our commitment to innovation with purpose.

The donation feature in our system goes beyond convenience; it reflects our commitment to giving back to society. We firmly believe that businesses have a social responsibility, and we are proud to empower our users to be a part of this mission. By enabling seamless contributions to meaningful causes, we encourage our users to join us in making the world a better place.

As we move forward, our focus remains on enhancing the dining experience, incorporating user feedback, and expanding the scope of our charitable initiatives. We are dedicated to staying at the forefront of technology and culinary innovation, with a deep-seated commitment to both customer satisfaction and social responsibility.

We extend our sincere thanks to all our users, partners, and supporters who have been instrumental in this journey. Together, we are shaping a future where dining not only delights the palate but also warms.

7. ACKNOWLEDGEMENT

We are really grateful to P.Ujwala Sai, M.Tech Asst. Professor Department of Computer Science and Engineering, for all

of her help and assistance during the creation of this project. Her meticulous critiques insightful observations, and continuous encouragement have been crucial in helping to shape and bring our research to completion. In addition to helping our project succeed, her commitment to creating an atmosphere of academic rigor and creative thinking has given us a love for lifelong learning and discovery. We deeply appreciate her for her perseverance, awareness, and dedication, which have served as the cornerstones of our path.

We also extend our appreciation to Dr. D. Jaya Kumari and Dr.G.V.N.S.R.RatnaKara Rao for cooperation and encouragement.

Lastly, we acknowledge the unwavering support of our staff of the Department of Computer Science and

Engineering played a crucial role in facilitating our project work, and we thank them for their contributions.

REFERENCES

- [1] V. Liyanage, A. Ekanayake, H. Premasiri, P. Munasinghe and S. Thelijjagoda, "Foody - SmartRestaurant Management and Ordering System," 2018 IEEE Region 10 Humanitarian Technology Conference (R10-HTC), Malambe, Sri Lanka, 2018, pp. 1-6, doi: 10.1109/R10-HTC.2018.8629835.
- [2] L.Johnson, R.Smith, and M.Davis, " A Review of Automaton in Restaurant Management, " IEEE Transactions on Automation and control, vol.12, no. 4, pp.567580,2015.
- [3] P. Gupta and S. Sharma, " Digital Menu Systemsin Hospitality: A Comparative Analysis," IEEE International Conference on Information Systems, 2019, pp. 245-252.
- [4] A. Patel , N. Shah, and V. Joshi, " Wireless Communication Solutions for Restaurant Automation," IEEE Wireless Communications Magazine, vol. 24, no. 3, pp. 78-85, 2018.
- [5] G. Brown, " Integration of Microcontrollers in Restaurant Management Systems ," IEEE Transactions on Control Systems Technology, vol. 9, no. 2, pp. 123-135, 2016.
- [6] S. Umap, S. Surode, P. Kshirsagar, M. Binekar, and N. Nagpal, " Smart Menu Ordering System in Restaurant," International Journal of Scientific Research in Science and Technology, vol. 4, no. 7, pp. 207, 2018.
- [7] R. Zhang, X. Liu, and Y. Huang, "Smart Technologies in Restaurant Management: A Survey," IEEE Transactions on Systems, Man, and Cybernetics: Systems, vol. 19, no. 5, pp. 1203-1215, 2019.
- [8] S.Gupta and N. Sharma, "Integration of Business Intelligence in Restaurant Operations," IEEE International Conference on InformationSystems, 2017,pp. 234-241.