

## Cafeteria Food Ordering System using QR Code

Archana Nikose<sup>1</sup>, Aayush Hatwar<sup>2</sup>, Akshata Nikose<sup>2</sup>, Dhananjay Adikane<sup>2</sup>, Khushi Gaharwar<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of Computer Science and Engineering, Priyadarshini Bhagwati College of Engineering Nagpur, Maharashtra, India

<sup>2</sup>B.E Student, Department of Computer Science and Engineering, Priyadarshini Bhagwati College of Engineering, Nagpur, Maharashtra, India

---

### ARTICLE INFO

#### Article History:

Accepted: 05 March 2023

Published: 27 March 2023

---

#### Publication Issue

Volume 10, Issue 2

March-April-2023

#### Page Number

157-163

---

### ABSTRACT

Cafeteria Food Ordering System Using QR Code Technology is a real time ordering system to manage the order process for cafeteria. This system helps customer to order without having to wait for the waiters to serve them. The cafeteria system is currently using traditional way which is took order system by using paper, cause the order missing and not manage properly to record the orders of customer. The current hand written ordering system brings inconvenience to both staffs and customer as it requires a lot of manual work and time. They don't have a proper ordering system to support and make the ordering process smoothly in the cafeteria. Nowadays, smartphone and tablet have widely used in our day to day life. By having this cafeteria food ordering system using QR Code, the time of placing order has reduced. Our proposed system is Cafeteria Food Ordering using QR Code that enables ease for the customers. Actually ordering is generating the QR code to increase the cafeteria productivity, whereas the tablet is used to scan the code and the order is send to the kitchen. By using this system, customer just captures QR Code on the table in each table cafeteria for ordering food. After placing an order, the admin can accept the order and it will be send through to the kitchen. People can easily scan the QR code by their smartphone which is on the cafeteria table. This new ways of ordering will ultimately save time for the waiter to take up orders and this system improves the method of taking the order from customer. In addition, owner cafeteria can add or manage their food menus and can saw the status updated from staff has delivery the order's to the customer.

Keywords: Multi-Keyword Ranked Search, Security, Cipher text Search, Privacy preserving.

## I. INTRODUCTION

Cafeteria Food Ordering System using QR Code is a web-based system will help cafeteria to manage and controls their cafeteria. Web-based ordering system is generating the QR Code which provides a link. The customer need to scan the code placed at the table in the cafeteria, and the customer can choose the menu then automatically the order will be send to the kitchen. There are various facilities provided so that the users will get service effectively. This system helps the cafeteria to do all functionalities more accurately and faster way. All they have to do is just scroll the web page of menu and tap to place an order. The current system is using traditional way which is paper menu and using paper sheets to record the orders of customer. Processing method of ordering in cafeteria increases efficiency and reduces human energy and time based. With a little help of QR code, it will ease the cafeteria workers to take food orders rather than use the traditional system. Hence, one of the advantages of the cafeteria food ordering system with QR code is customer satisfaction. All the processing method of ordering in cafeteria increases efficiency and reduces energy and time based on QR code without the need to the presence of waiter at the table by eliminating some stages of traditional ordering. All the menu information will be save in the database and admin can manage the menu items easily at any time or anywhere.

## II. PROBLEM STATEMENT

As mentioned previously, the existing system still using the traditional way which is the paper menu and waiters require to record down orders information from customer by handwriting. All the orders will be written on the paper sheets by the admin and it will send to the kitchen. The traditional ordering system brings inconvenience to both staffs and customer as it requires a lot of manual work. The manual work done by the staffs will cause some human errors such as the probability of paper lost is high and the kitchen's can

misinterpret the handwriting of order. Sometimes, when the staffs write in hurry will make the handwriting difficult to understand. All these human errors will cause the customer dissatisfaction towards the cafeteria and gives the bad experience. Hence, the cafeteria will always receive complaint from customer which are not satisfied with the services as they always receive the wrong order or not receive the order after a very long time. Besides, the paper sheets easily lost. Further more, the manual system is a waste of time and energy, this is because they need to go to the cafe to make an order write down manually and wait for the order to be submitted. Customer does not know the time for preparation for the food. Therefore, this cafeteria ordering system is designed and developed to help the cafe to have a better management. By having this cafeteria food ordering system using QR code, the time of placing order has reduced. The customer does not need to wait to be served when they eat in the cafe. The customer will be more satisfied at this ordering system. One of the problems that faced by cafeteria that using traditional food ordering system is the difficulties to update the new menu. Paper menu can't be changed once printed. The management can't easily update the new menu or the price on the paper menu. If they want to change the menu, they have to reprint again. This traditional system will increase the cost and wastage of paper. In addition to that, paper menu of the cafeteria will damage from time to time.

Based on those problems, by implementing an electronic and efficient ordering service can avoid those problems happen. Hence, I proposed to develop an cafeteria food ordering system using QR code to solve the problems and waiting period of time. By using the proposed system, the cafe productivity for customer satisfaction can be improved.

## III. LITERATURE SURVEY

1] Kirti Bhandge, Tejas Shinde, Dheeraj Ingale, Neeraj Solanki, Reshma Totare,"A Proposed System for Touchpad

Based “Food Ordering System Using Android Application”, International Journal of Advanced Research in Computer Science Technology (IJARCST 2015).

In [1] an automated food ordering system is proposed which will keep track of users and others smartly.

Basically, they implemented a food ordering system for different types of restaurants in which user will make order or make custom food buy one click on only. By means of Android application for tablet PCs the system was implemented the frontend was developed using Java, Android and the back in my SQL database was used.

[2]. Varsha Chavan, Priya Jadhav, Snehal Korade, Priyanka Teli, Implementing Customizable “Online Food Ordering System Using Web Based Application”, International Journal of Innovative Science, Engineering Technology (IJSET) 2015. In [2] customer using a smartphone is considered as a basic assumption for the system. When the customer approaches the restaurant, the saved order can be confirmed by touching the smartphone. The list of selected pre-ordered items shall be shown on the kitchen screen, and when confirmed, order slip shall be printed for the order processing. Foster the solution provides an easy and convenient way to sell at preorder transaction from customers.

[3]. Resham Shinde, Priyanka Thakare, Neha Dhomne, Sushmita Sarkar, Design and Implementation of “Digital dining in Restaurants using Android”, International Journal of Advance Research in Computer Science and Management Studies 2014. In [3] there was an attempt to design and implement digital dining in restaurants using Android technology. This system was the basic dynamic database utility system which touches all information from a centralized database. For this application improved the accuracy and efficiency of restaurants as well as human errors. Earlier drawbacks of automated food ordering systems were overcome by this system and it requires a one-time investment for gadgets.

[4]. Patel Krishna, Patel Palak, Raj Nirali, Patel Lalit, “Automated Food Ordering System” International Journal of Engineering Research and Development (IJERD) 2015

In Paper [4], the research work aims to automate the food ordering process in restaurant and also improve the dining experience of customers. Design implementation of food ordering system for restaurants were discuss in this paper order details are updated in the central database. The restaurant owner can manage the menu modifications easily.

#### IV. SYSTEM OVERVIEW

The system architecture is worried for the system, by creating a simple framework. In this system, it defines all the frame of the project which describes the function of the structure in detail and the main aim behind this project is to plan a proper solution for the problem identified by the file. The figure 1 shows, the framework diagram of the application. This framework diagram describe about overview of the system work. Framework diagram gave us a better understanding of how the system will work. Firstly, customer that need to scan the QR code on the table of the room with their phone. They can view the menu page as soon as they have finished scan. Secondly, the menu view and they can choose the meal they want and then click to submit an order. The order they have made will be sent to the kitchen and will be view the customer order has been received. The kitchen will prepare the customer order. Lastly, the staff will be served the meal to the customer table.



Figure 1: Framework Diagram

The system architecture is based on the many steps that take place after the customer arrives at the cafeteria. It consists of 8 steps, including customer interaction and the rest of the cafeteria operations. Architecture mainly has 3 sections, "customer", "manager / admin", "kitchen". The below 8 steps are based on these 3 Sections.

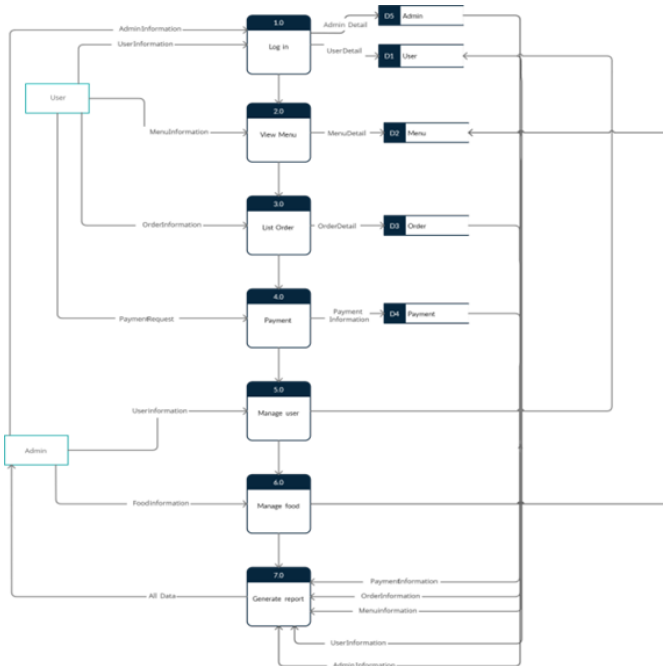


Figure 2: Overall flowchart of the system

1. Log in: The first step is to scan the QR code from the table in the Cafeteria with the customer using his smartphone. This step is carried by scanning the QR code and requesting access to the menu that is available in the cafeteria to the manager/admin section.

2. View Menu: This phase can be considered as a continuation of the first step. This step is to make the admin, menu accessible to the customer in response to the customer's request. As a result, the menu becomes visible to the customer and moves on to the next step.
3. List Order: This step is to order the customer's food according to his needs from the menu that was open before him. This order goes to the Admin section.
4. Order confirmation: This phase can be regarded as a continuation of the third stage. At this stage the confirmation response is what the customer ordered from the menu.
5. Payment: This is the final stage of the architecture. This step can be considered as the response of the eighth stage. At this end point the customer is paying the bill.
6. Manage user: At this point, the Admin can manage the user details.
7. Manage Food: This is the second last stage. At this stage, the Admin can update the food details and order status of the food which is preparing in the kitchen.
8. Generate Report: This is the final stage of the architecture. At this stage, the Admin generates a bill according to the customer's food order and gives it to the customer.

## V. RESULT AND DISCUSSION

Following are the results that one can extract from this system:

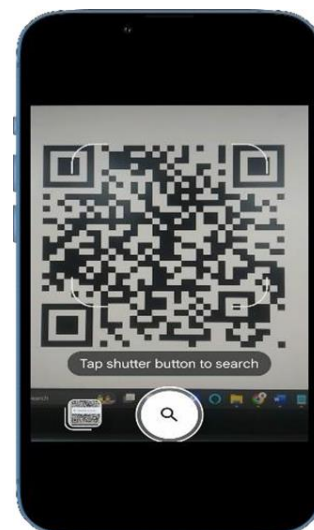


Figure 3: Scan QR code

To scan the QR code located on the table or stand using your smartphone camera. This will take you to the digital menu page.

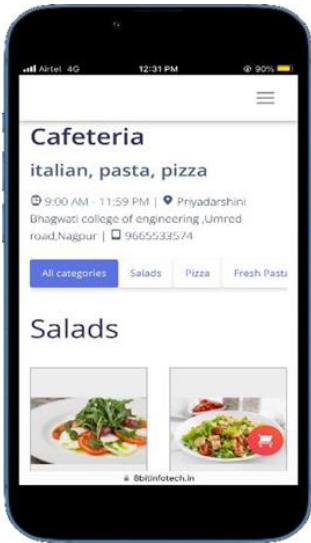


Figure 4: User Menu page

Once you have scanned the QR code, you will be taken to the Cafeteria digital menu page. Browse the menu find the items you want to order.

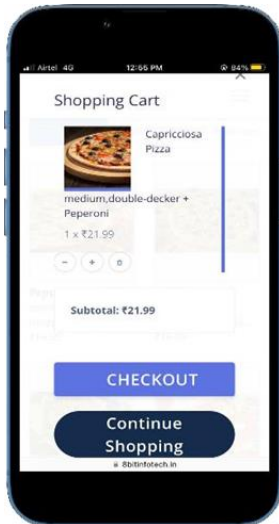


Figure 5: User Shopping Cart

After you have selected the items you want to order, add them to your cart. If you have any special requests, such as food allergies or preparation instructions, you can specify them at this time.

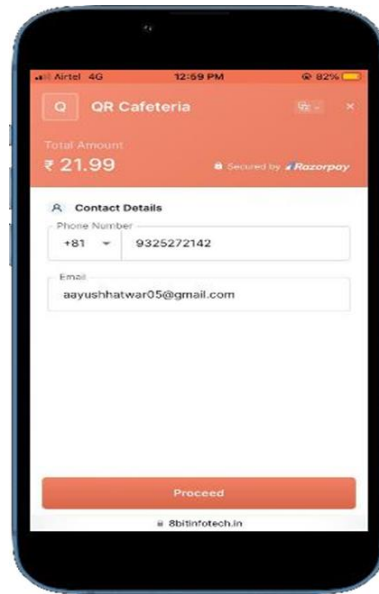


Figure 6: Payment Process

Once you have reviewed your order, proceed to checkout. At this point, you will need to select your preferred payment method. Depending on the cafeteria, you may be able to pay with cash, credit/debit card, or a mobile payment app such as Google Pay.

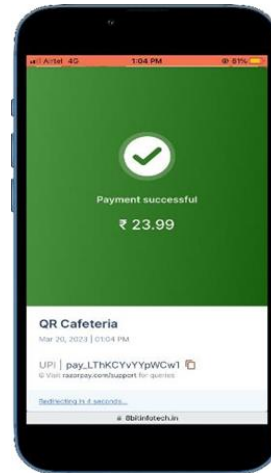


Figure 7: Payment Successful

After you have selected your preferred payment method, confirm your payment and submit your order. The cafeteria will receive your order and begin preparing your food.

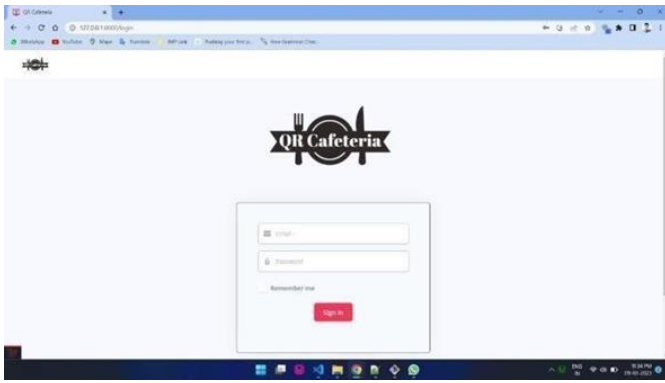


Figure 8: Admin Login page

The figure shows the admin login page where the admin can login to there admin page.

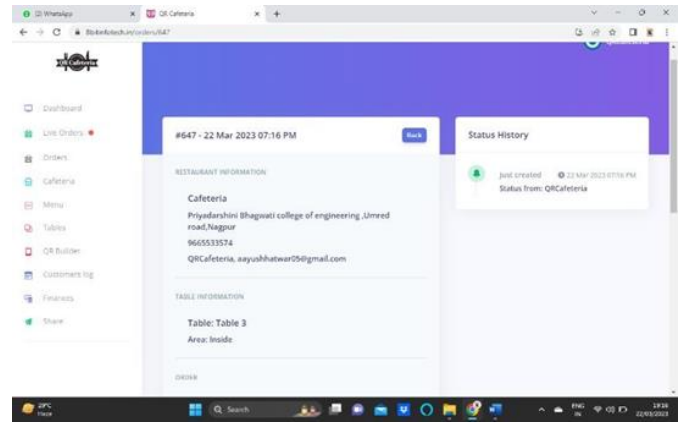


Figure 11: Live order

The above figure shows the live order of customer,

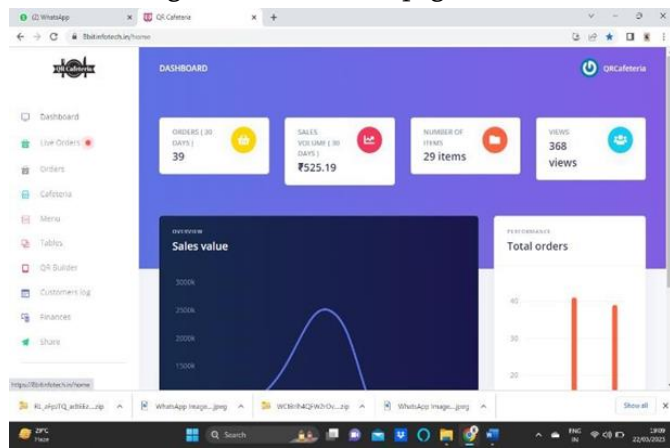


Figure 9: Admin Dashboard

In admin dashboard page , it shows the admin modules.

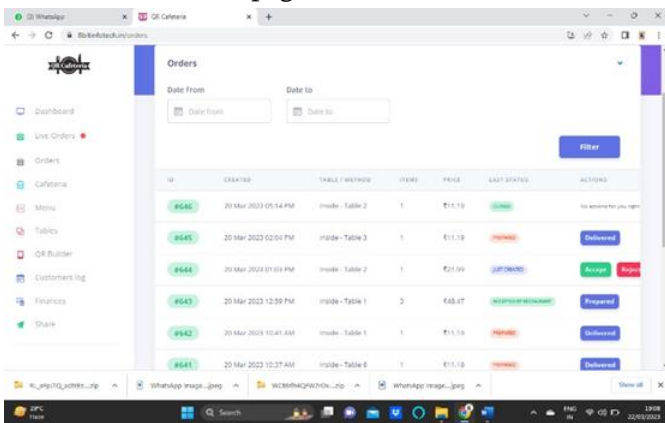


Figure 10:Admin order page

In this above figure, the admin can view the order and can accept or reject the order.

## VI. CONCLUSION

This project was a typically web site based. The aim of the project was to help the cafeteria owner to improve the efficiency of managing ,meanwhile, help the customer to purchase food in different platform easily, By now, the core function of this project has been implemented. The owner and employes in the cafeteria can manage food and handle order and so on. On the public page, customer can view information and purchase food. This system will help in reducing the waiting time of customer in the cafeteria. It will also reduce the manual service given by servicing staff, and also eliminating the human made mistakes. Also, the customer can order food from the website platform. Developing the web made it possible to learn and practice the whole process of website framework.

## VII. REFERENCES

- [1]. T. S. Baba tope, "Towards the digitalization of Restaurant Business Process for Food Ordering in Nigeria Private University: The Design Perspective. A Study of Awojide, Simon, I. M. Omogbhemhe, O. S.Awe, and Samuel Adegboyega University Edo State Nigeria," Int. J. Sci. Res. Publ., vol. 8, no. 5, pp.46–54, 2018.
- [2]. O. I. Mike and A. Simon, "Towards the Digitalization of Hotel Business in Nigeria:The

- Design perspective,” vol. 8, no. 2, pp. 1175–1178,2017.
- [3]. Adithya. R., A. Singh, S. Pathan, and V. Kanade, “Online Food Ordering System,” Int.J.Comput.Appl., vol. 180, no. 6, pp. 22–24, 2017.
- [4]. Varsha Chavan, Priya Jadhav, Snehal Korade, Priyanka Teli,Im
- [5]. Implementing Customizable Online Food Ordering System Using Web BasedApplication”, International Journal of Innovative Science, Engineering Technology (IJSET) 2015.
- [6]. Patel, Mayur kumar, "Online Food Order System for Restaurants" (2015). Technical Library. Paper 219
- [7]. Ashwini Bankar, Mamta Mahajan Touch-based Digital Ordering System on Android“, IOSR Journal of Electrical and Electronics Engineering (IOSR- JEEE)
- [8]. Sowndarya H K, Abhinaya R, Prathiba B Survey on intelligent food menu ordering system in International Research Journal of Engineering and Technology (IRJET)
- [9]. N. M. Z. Hashim, N. A. Ali, A. S. Jaafar , N.R. Mohamad, L. Salahuddin, N. A. Ishak Smart Ordering System via Bluetooth“ International Journal of ComputerTrends and Technology (IJCTT) – volume 4 Issue 7– Month 2013.

**Cite this article as :**

Archana Nikose, Aayush Hatwar, Akshata Nikose, Dhananjay Adikane, Khushi Gaharwar, "Cafeteria Food Ordering System using QR Code", International Journal of Scientific Research in Science, Engineering and Technology (IJSRSET), Online ISSN : 2394-4099, Print ISSN : 2395-1990, Volume 10 Issue 2, pp. 157-163, March-April 2023. Available at doi : <https://doi.org/10.32628/IJSRSET2310212>  
Journal URL : <https://ijsrset.com/IJSRSET2310212>