An Advance Food Ordering System Using QR Code

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Abstract: ***Crop prediction plays a crucial role in modern agriculture by helping farmers make informed decisions about what crops to plant, ensuring optimal yields, and reducing resource wastage. This study explores the application of machine learning algorithms, specifically Random Forest, Decision Tree, and Passive-Aggressive algorithms, for predicting the best-suited crop based on various environmental and soil parameters. The input features considered for prediction include temperature, humidity, pH, rainfall, and soil nutrients (Nitrogen, Phosphorus, Potassium), while the output is the recommended crop name. A dataset consisting of these parameters was used to train and evaluate the models. The performance of each algorithm was compared based on their accuracy in correctly predicting the appropriate crop. Results indicate that machine learning models, especially Random Forest, show promising results in crop prediction by effectively utilizing environmental and soil data to provide accurate recommendations. This approach offers a scalable solution for precision agriculture, helping farmers optimize crop selection, improve productivity, and manage resources more efficiently.***

Keywords: Crop Prediction, Machine Learning, Rainfall, temperature, Humidity.

I. INTRODUCTION

Food ordering are very important service for a restaurant. This is a service that offered by a waiter to a customer who came to the restaurant. There are some problems that maybe to face by using the traditional food ordering. Problems that occur are misunderstanding between the waiter and the customer when taking the order. Besides, the customer needs to wait for a moment for a waiter to come to take the order. The current systems are using the traditional way which using a piece of paper and menu paper to take an order from the customers. Therefore, Food Ordering System using QR Code technology is a real time ordering system to manage the order process for the restaurant. Therefore, the food ordering system using QR Code technology is an alternative to solve that problem. The systems use smartphone as a platform because nowadays smartphone is a necessary for everyone. The customers need to scan the QR Code on the menu paper that provided by the restaurant. By using this system also, the customer can confirm the ordered item. Besides, the staff of the restaurant also can manage the menu and view order list.

1.1 Objective of the project:

Ordering food directly has never been easier for your customers. Our all in one QR Menu solution can be upgraded to enable online food delivery via your website or social media handles. Our backend CRM allows you to take care of special requests for your customers Perfect for quick service restaurant, kiosk / kiosks, takeout or food delivery via ordering website. Start selling your food online, get food orders, accept mobile payment, your restaurant online. Your restaurant menu can be displayed on kisoks as well. We make it easier to take payments. Quick service restaurants can use My Menu as a sale solution for delivery via third party delivery and can be interfaced with restaurant POS systems. There is no need for the customer to download a mobile app. Our menu app can also be used as a basic mobile pos.Our QR Ordering solution integrates with any POS system / POS systems / restaurant point of sale systems. Same is used by guests on their mobile device to start online ordering - mobile ordering. We accept payments - credit cards / card payments via our built-in credit card processing. Mobile devices now have a built-in qr code scanner making this online menu ordering solution an ideal online food ordering system. Our ordering platform allows self ordering for retailers, restaurateurs, to enable mobile payments and have integrations with restaurant pos / POS software / retail POS. Business owners from the restaurant industry

can run direct promotions seamlessly via our online ordering system for your restaurant. Our management system has a user friendly interface which allows you to create a QR code image which can be easily read by any QR code reader. Our in-build QR code generator provides unique QR codes. Being a cloud based solution is very easy to customize and manage your online menu. Merchant can list on multiple marketplaces but manage the online order via our management software. We provide management tools for customer management, sales reports to analyze sales data. Although there are multiple QR code generators in the market, very few work with every QR Code reader, QR scanner / scanners, QR reader, or other scanning devices such as barcode scanner.

II. LITEARTURE SURVEY

"Touch-based Digital Ordering System on Android'

Technology has entered almost every field in our life, but still its effect is not yet that evident in the food industry, especially the food serving outlets including restaurants, hotels. Even today, most of the restaurants in India follow the traditional pen and paper method to take orders from customers, which wastes a lot of time of both, the customer and the restaurant. This work aims to substitute the traditional pen and paper method by automating the food-ordering process in restaurant and thus improving the dining experience of the customer. This paper proposes an automated system that uses wireless communication, a centralized database, and an android application to place the order without even waiting for a waiter. The android application installed in the touch screen device, fitted at the table, contains all the menu details with pictures of each item. The ordered details are wirelessly sent to the chef and the cashier. The manager has his own android application that is used to update the menu that updates the central database, view and manage table wise customers' orders, and receive feedbacks from the customer. This system improves efficiency and accuracy for restaurants by saving time, eliminating human errors, getting customers feedback. As the system is automated, it becomes economical even from restaurants point of view, as it reduces manpower and it just requires one time investment in installing the devices at tables.

"Survey on intelligent food menu ordering system"

The increasing growth of wireless technology and mobile services in this era is creating a great impact on our life style. Some efforts have already been taken to carry the process of ordering in hotels by using hardware components like Avr16 Microcontroller, LCD display module and Zigbee module. The Existing system is fully dependent on hardware and it is very difficult to club all the components to make a system. In addition to that understanding and operating the system is very difficult for some users and this system is not going to manage the business model properly. In this field, touch screen based advanced menu display and ordering system concept is a new innovative idea

"Smart Ordering System via Bluetooth "

Conventional method that usually been used in restaurant is by taking the customer's orders and write it down on a piece of paper. Many ordering system have been proposed in order to undertake this issue. The project is proposed with the Bluetooth technology as the communication medium and Peripheral Interface Controller (PIC) as the hardware which implements faster ordering system. It consists of a keypad at customer's table as a remote control and monitor at kitchen or counter to display the ordering information systematically. The aim for this project is to build and design both hardware and software for the ordering and delivering system at restaurants by using keypad, display screen via Bluetooth communication. The project also targeted to receive information that works around 100m away with the specific location. Result shows that the hardware and software are successfully functional and able to be used as a smart ordering system. The project was able to solve the lack number of the worker, reduce the lateness and the error on ordering foods by the customers. For the future target, using touch screen display and compress the device to more compact device are recommended as the nowadays demand to interact young generation for using this system

"A customizable wireless food ordering system with realtime customer feedback"

The existence of wireless technology and the emergence of mobile devices enable a simple yet powerful infrastructure for business application. Some early efforts have been made to utilize both technologies in food ordering system implementations. However, the food ordering systems that have been proposed earlier exhibit limitations, primarily in cost effectiveness, allowing customizations and supporting real-time feedback to customers. In this paper, we discuss the design and implementation of a customizable wireless food ordering system with real-time customer feedback for a restaurant (CWOS-RTF). The CWOS-RTF enables restaurant owners to setup the system in wireless environment and update menu presentations easily. Smart phone has been integrated in the CWOS-RTF implementation to facilitate real-time communication between restaurant owners and customers. A preliminary testing suggests that the CWOS-RTF has the potential to eliminate the limitations of existing food ordering systems.

"'Automation in Restaurants: Ordering to Robots in Restaurant via Smart Ordering System"

The use of robots is going on increasing in today's world. Because of different robot applications, our daily life is becoming more and more efficient and easy day by day. In restaurants and hotels, the customers face a lot of difficulties due to overcrowding at peak hours, unavailability of waiters and due to manual order processing. These difficulties can be controlled by using a restaurant automation system used by waiter robots and smart food ordering system to order food and beverages. This paper demonstrates how to design an automated robot that works effectively in a restaurant via smart ordering system.

III. PROPOSED METHOD

Our mobile ordering system for restaurants and hospitality allows customers to simply scan a QR code, enter their table number, order from your menu and pay – all from their phone. GET STARTED. order at table This project designed for restaurant owners and customers/users where restaurants owners can signup with the application and then login and then execute

Advantage:

1. More Accuracy.

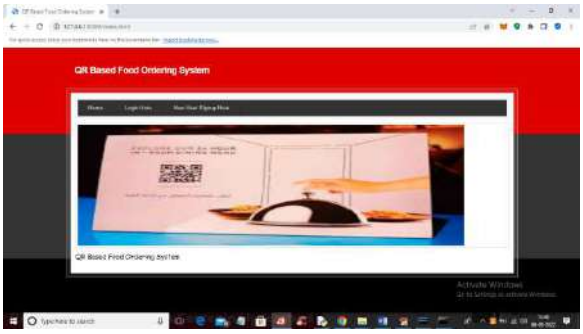
Modules Information:

To implement this project we have designed following module

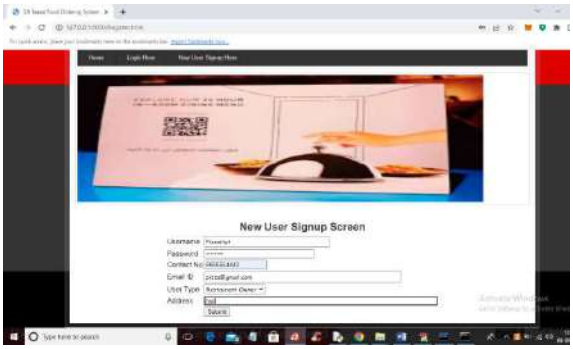
1. add chairs: by using this module owner can add chairs
2. create menu:: by using this module owner can add chairs
3. view menu: by using this module customer can see menu
4. view orders:: by using this module customer can fix the order
5. view restaurants:: by using this module customer can see the restaurants
6. scan QR codes:: by using this module customer can scan QR code for booking food
7. view bills:: by using this module customer can pay bill

IV. RESULTS

Now install MYSQL and give password as root and then copy content from 'DB.txt' file and paste in MYSQL console and then double click on 'run.bat' file to start DJANGO python server and then open browser and enter URL as 'http://127.0.0.1:8000/index.html' and press enter key to get below page



In above screen click on 'New User Signup Here' link to register restaurant owner or user

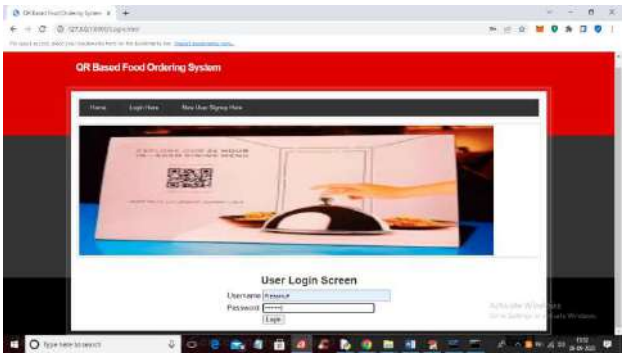


In above screen I am entering Restaurant owner details and then press button to complete signup process and get below output

In above screen in red colour text we got response as signup completed and now add normal customer like below screen

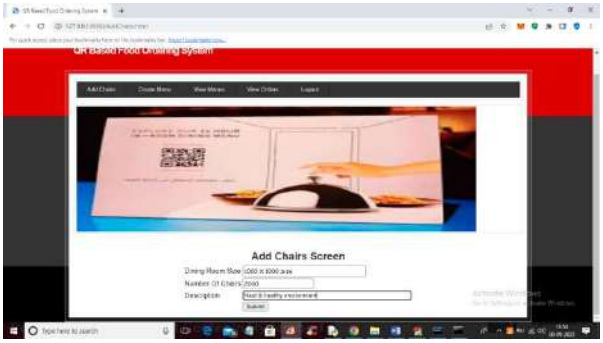
In above screen I am adding customer details and then press button to get below output

In above screen we can see customer details added and now click on 'Login Here' link to login restaurant owner

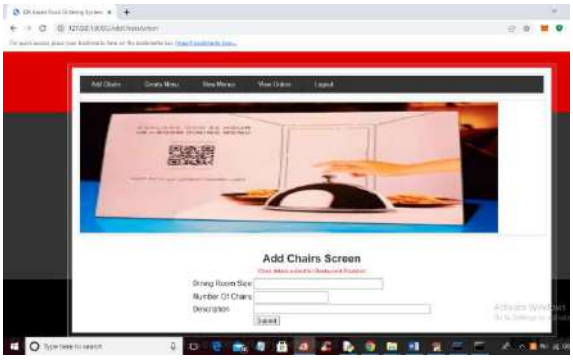


In above screen restaurant owner is login and after login will get below output

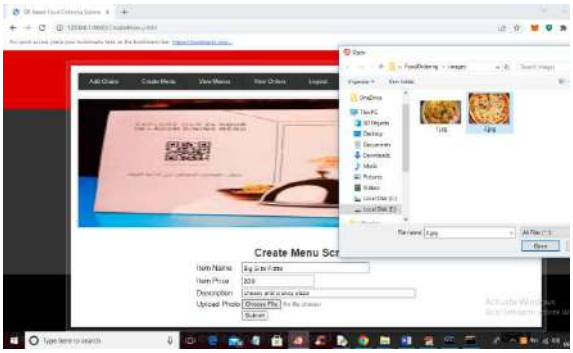
In above screen click on 'Add Chairs' link to add restaurant details



In above screen owner can add restaurant environment details and now press button to add details and get below output

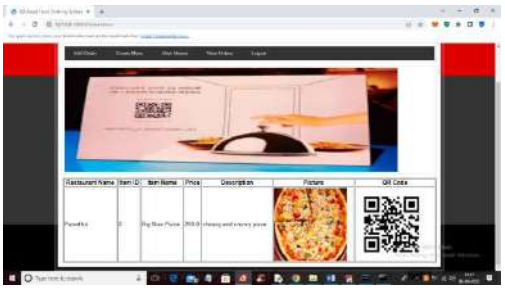


In above screen chairs details added and now click on 'Create Menu' link to add menu details



In above screen owner can add item menu details and then upload related image and then press button to get below output

In above screen in red colour text we can see item details added with ID 2 and now click on 'View Menus' link to view all menus added by owner

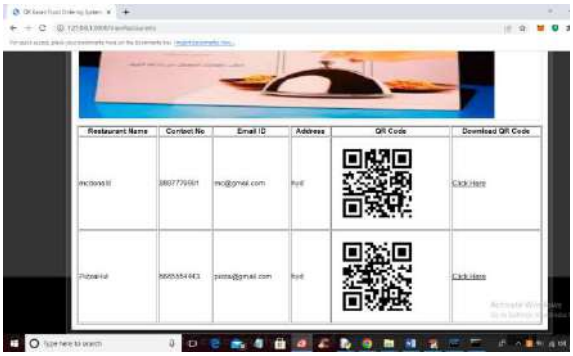


In above screen owner can view all menu details with QR code and now click on 'View Orders' link to view past orders came from customers

In above screen no orders are displaying and once customer booked any order then will get all order details in above screen. Now logout and login as 'customer' to get below output

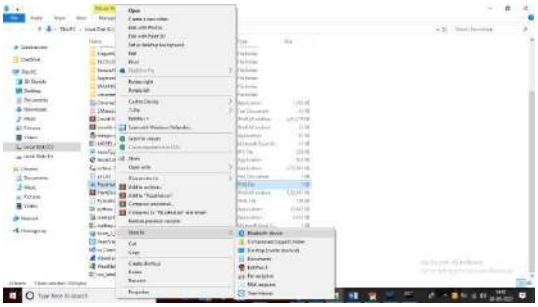
In above screen customer is login and after login will get below output

In above screen customer can click on 'View Restaurants' link to view all restaurants details like below screen



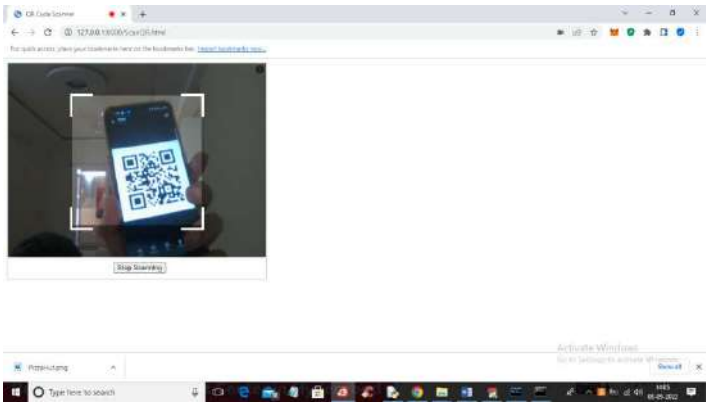
In above screen customer can view all restaurants details with QR code and now click on 'Click Here' on desired restaurant row to download QR code and then scan that QR code from their mobile like below screen

In above screen in browser status bar we can see QR code downloaded and now transfer that QR code to your mobile through Bluetooth like below screen

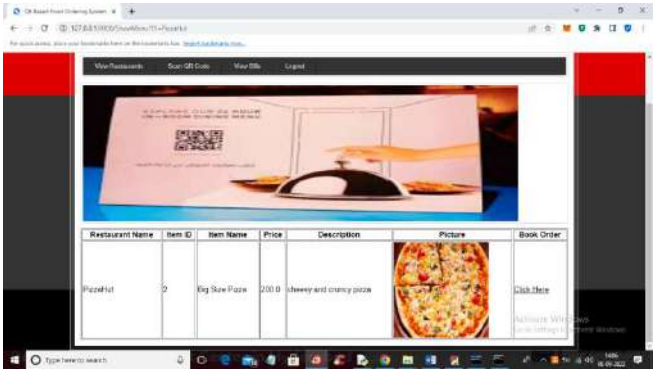


Using above screen I am sending QR code to mobile and now click on 'Scan QR Code' link to get below screen

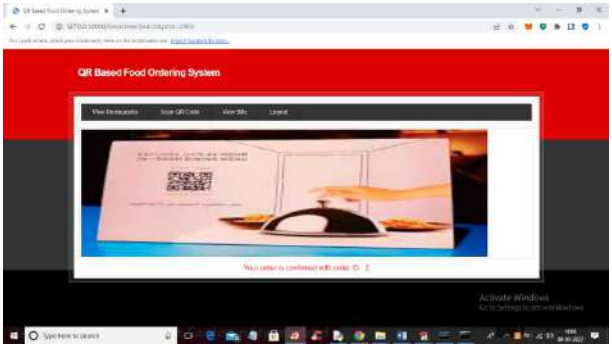
In above screen QR code reader is ready and now show QR code to get menu details like below screen



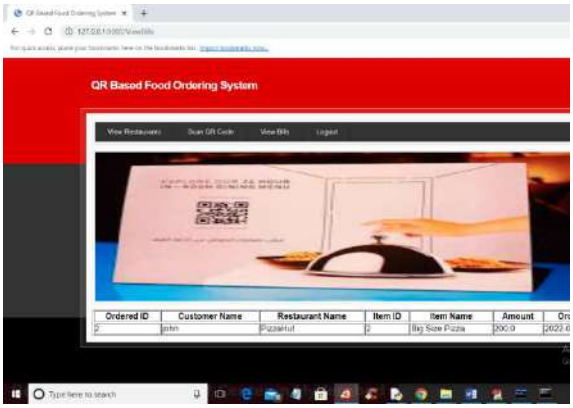
In above screen showing QR code from mobile and once code RECOGNIZED then will get below MENU details



In above screen customer got menu details and now click on 'Click Here' link to BOOK ORDER and get below output



In above screen in red colour text we can see order is confirmed with ordered ID 2 and now click on 'View Bills' to view bill details



In above screen customer can view his order and bill details.

Similarly you can add any number of restaurant owner, menus and customers and can SCAN QR code and make booking

V. CONCLUSION

The objectives of our project "QR code-based Smart Dining System" is to increase the customer's dining experience by fastening the existing restaurant services and to simplify the ordering and bill payment systems to minimize the workload of the restaurant and hotel owners.With smartphones, the customer can scan the QR code which is set on the table, and open the current menu to order the food. Upon ordering, the notification will be delivered to the kitchen and the cashier along with the table number. The current menu and offers will be updated on this menu. The Robot can deliver food. The presence of each component has been reasoned out and placed very carefully, thus contributing to the best and efficient working of the device. This system will help in reducing the waiting time of customers in the restaurant. It will also reduce the manual service given by waiters and serving staff, and also eliminating the humanmade mistakes.

9. REFERENCES:

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