

A PROJECT REPORT ON

RESTAURANT MANAGEMENT SYSTEM

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CERTIFICATE

This is to certify that the project report entitled

“RESTAURANT MANAGEMENT SYSTEM”

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(Prof. Anuradha V. Yenikar)
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Mohommed Husain: _____

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Aditya Jamdade: _____

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ABSTRACT

Title:– RESTAURANT MANAGEMENT SYSTEM

Problem Description:-

As restaurants reopen, a major concern for them is limiting the spread of the Corona virus through surfaces, such as physical menus. This is harmful for our health that's why we are Switching to contactless options like QR Code menus is the next normal for restaurants of all sizes. In a restaurant's traditional way of ordering meals, customers first browse through the menu of the restaurant and then wait for a waiter to come and take orders. This procedure can be slow during busy hours and can reduce customer satisfaction. It is therefore susceptible to errors made by humans. Automated systems can be used to automate procedures by eliminating errors made by humans, reducing paper waste, and making ordering processes more time- and cost-effective. There have been numerous attempts to automate the ordering process in restaurants in recent years.

The method we propose in this paper is accessing the QR code for the ordering of the food in the restaurant. 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. This method ensures time and customer satisfaction with Restaurant. Also, we know in today's world where social distancing is so necessary because of the pandemic, and the implementation cost is less.

Keywords – QR code based Automation System, Smart Dining.

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INTRODUCTION

The advancement in technology has greatly influenced business transactions. The adoption of digital technology has led to automation in the hospitality industry. Businesses in the hospitality industry such as restaurants can be improved with the help of digital systems. The competition in the restaurant business has increased with the advancements in food ordering techniques. This project aims to automate the food ordering and billing process in the restaurant as well as to improve the dining experience of customers. Here we discuss the design & implementation of the Smart Dining ordering system in real-time with customer's feedback for restaurants. The system on the user's table will have all the details of his account as well as the menu. The order details from the customer's table are updated and subsequently sent to the kitchen. The restaurant owner can manage the menu modifications easily. QR scan code provides fast access to any type of digital media, with no text bound interface getting in the way. Faster input can mean better service. Touch screens and QR scan codes are practical in automation which has become even simpler with the advancement in technology.

Literature Survey

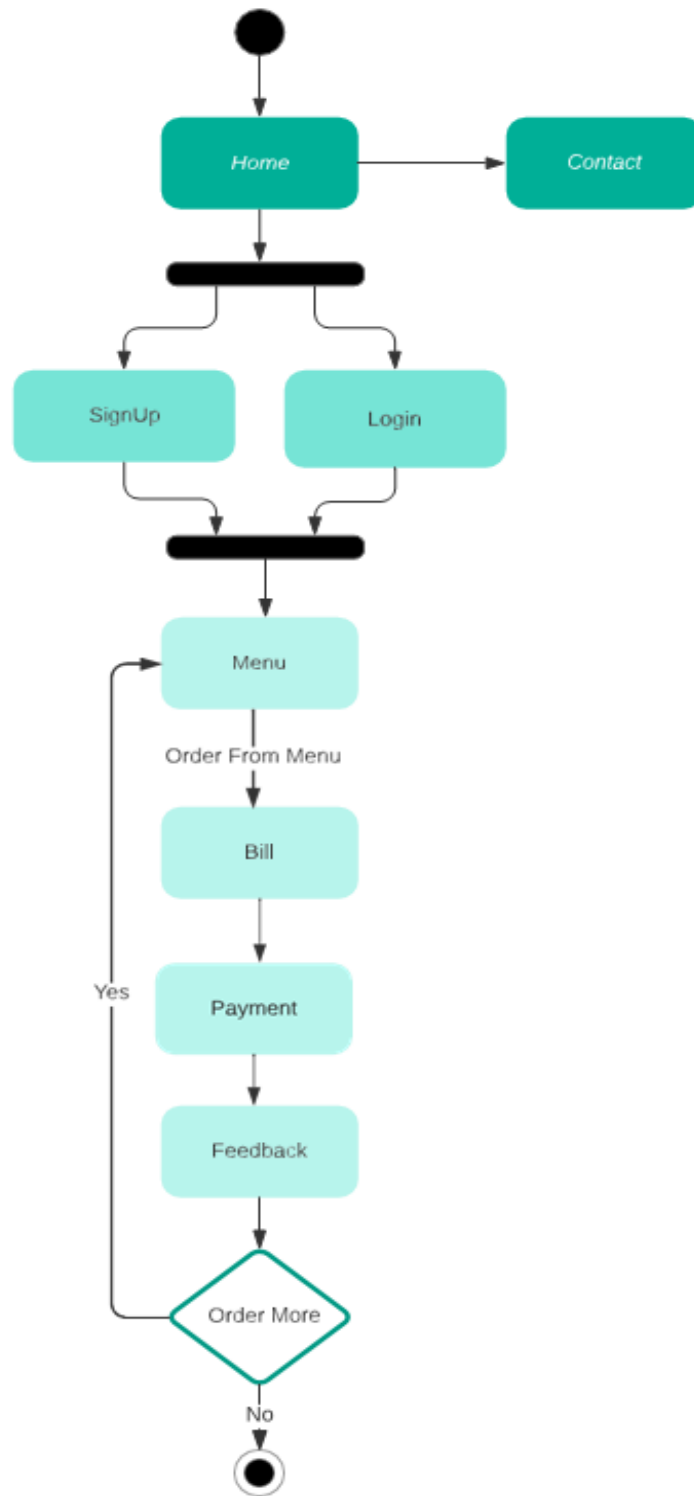
Sr. No	Title	Author	Year	Aim/Objective	Methodology	Conclusion
1	Food Hub A Model for Ordering In Restaurant Based On Qr Code Without Presence Of A Waiter At The Table	Deepak Kumar, Kotra Chaithanya	May 2018	Hotel Food Ordering System Using QR Code Technology	Javascript, CSS	QR code is not a new concept. The QR code system was invented by Denso Company based in Japan in 1994. The main objective of this project was the permission for high speed scan . QR code is a matrix barcode which is readable by smartphones and mobile cameras. Most purchased phones in America are along with a free software for reading QR code which is installed by default. QR code can be used in trade-related activities including pre-orders, sales, and postal sales for transactions by mobile phones. For instance, a QR code can be used in commercials, coupons or promotional materials

						via taking pictures and decoding by shared smartphones.
2	Application on order management system in Restaurants	Paresh. R. Bora, Eshan Gupta	2012	To use Tablets so that waiters need not leave the table to process the order and can spend more time with customers.	-	The wireless ordering system has regressed progressively and revolutionised the restaurant business industry and other fields. This system is convenient, easy and effective thereby improving the restaurant staff's work performance besides providing quality of service and customer satisfaction. This system has addressed many hindrances in the food ordering process and management of restaurants by lessening the time of customer and management for ordering of food and cost for the pen and papers. This system provides pleasure to customers for making orders and management can improve their management.

3	Table booking and Restaurant management system using android application	Naveen Kumar, B. Sai Varun UG Student	2020	The main objective of this project is to give the restaurant management a software that is easy to manage the customers.	Android Technology	To conclude that this restaurant management android application is implemented to reduce the manual process for both customer and management of the restaurant and to make the work look professional. The manual systems which were used in the past do not serve the customer in the best possible way and the data can be edited but the new proposed application will have correct records of data and have no authority to edit or manipulate the data.
4	The Application of Wireless Food Ordering System	Khairunnisa K., Ayob J., Mohd. Helmy A. Wahab	Sept 2009	To design and develop a wireless food ordering system in the restaurant. To help restaurant waiters easily see the handwriting of the taken order by using an Internet application.	PHP, JavaScript, MS Access 2003, VisualBasic	The project has achieved its objectives. The project has provided a client/server application for a food ordering system and was successfully built using Visual Basic 6.0 software. It provides a more convenient and accurate method for staff in the restaurant since orders are transferred to server in the kitchen immediately and displayed to the chefs for further process. In view of time saving, less time consuming by waiting and transferring order by staff in the restaurant.

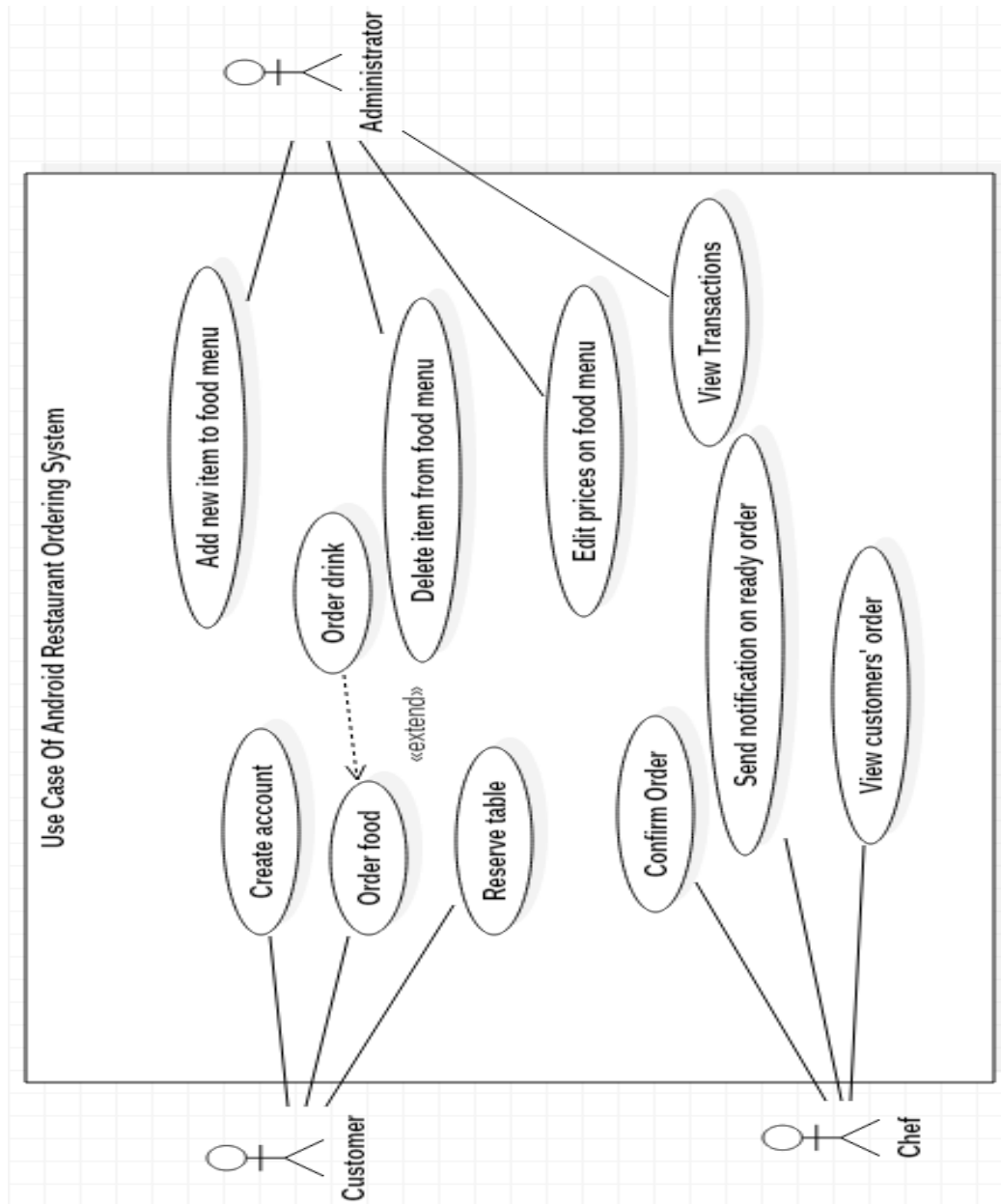
5.	QR Code Bases Smart Dining System.	Syed Rameez C R, Sreerag M	May 2020	The objectives of our project "QR code-based Smart Dining System" is to increase the customer's dining experience by fastening the existing restaurant services and to simplify the ordering and bill payment systems to minimise the workload of the restaurant and hotel owners.	Javascript, MySQL, PHP	In a restaurant's traditional way of ordering meals, customers first browse through the menu of the restaurant and then wait for a waiter to come and take orders. This procedure can be slow during busy hours and can reduce customer satisfaction. It is therefore susceptible to errors made by humans. Automated systems can be used to automate procedures by eliminating errors made by humans, reducing paper waste, and making ordering processes more time and cost-effectiveness.
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SYSTEM OVERVIEW

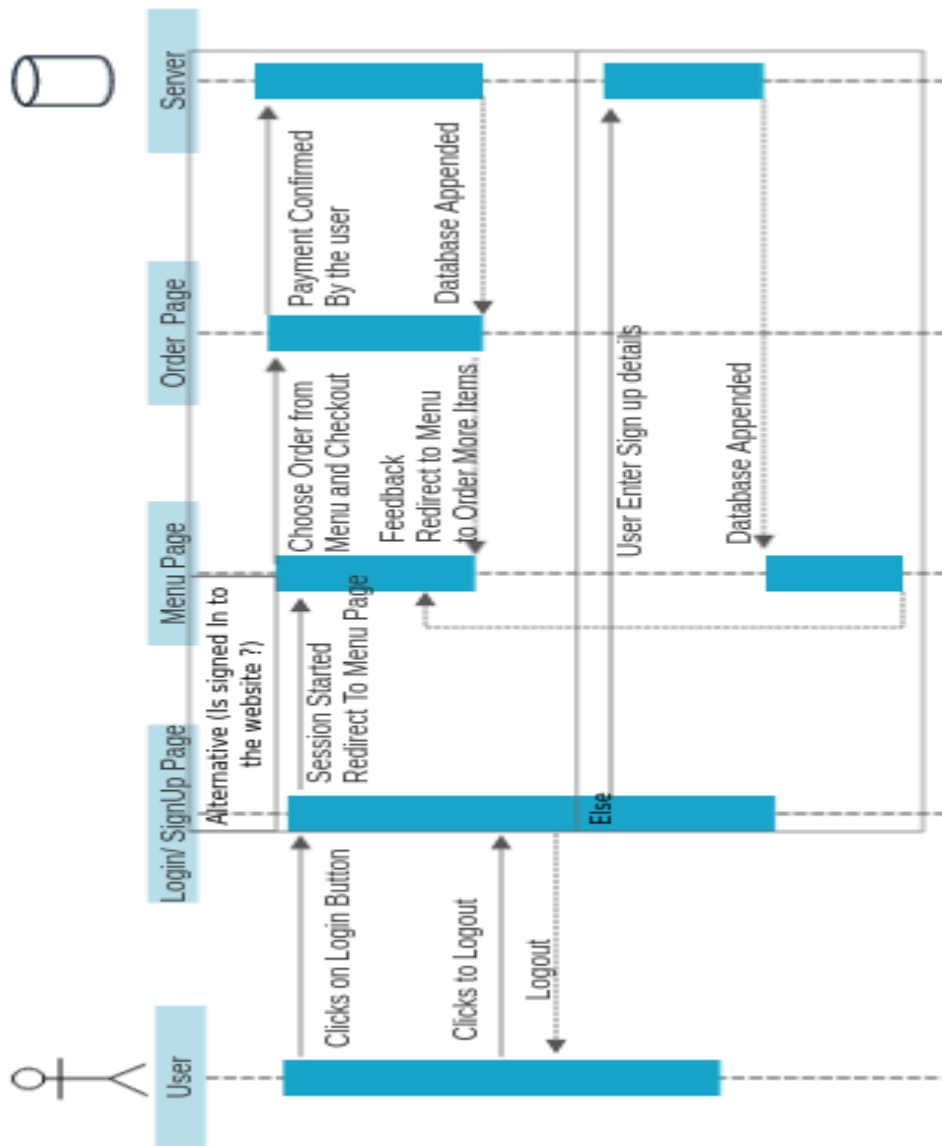


UML Diagram

1. Use Case Diagram:

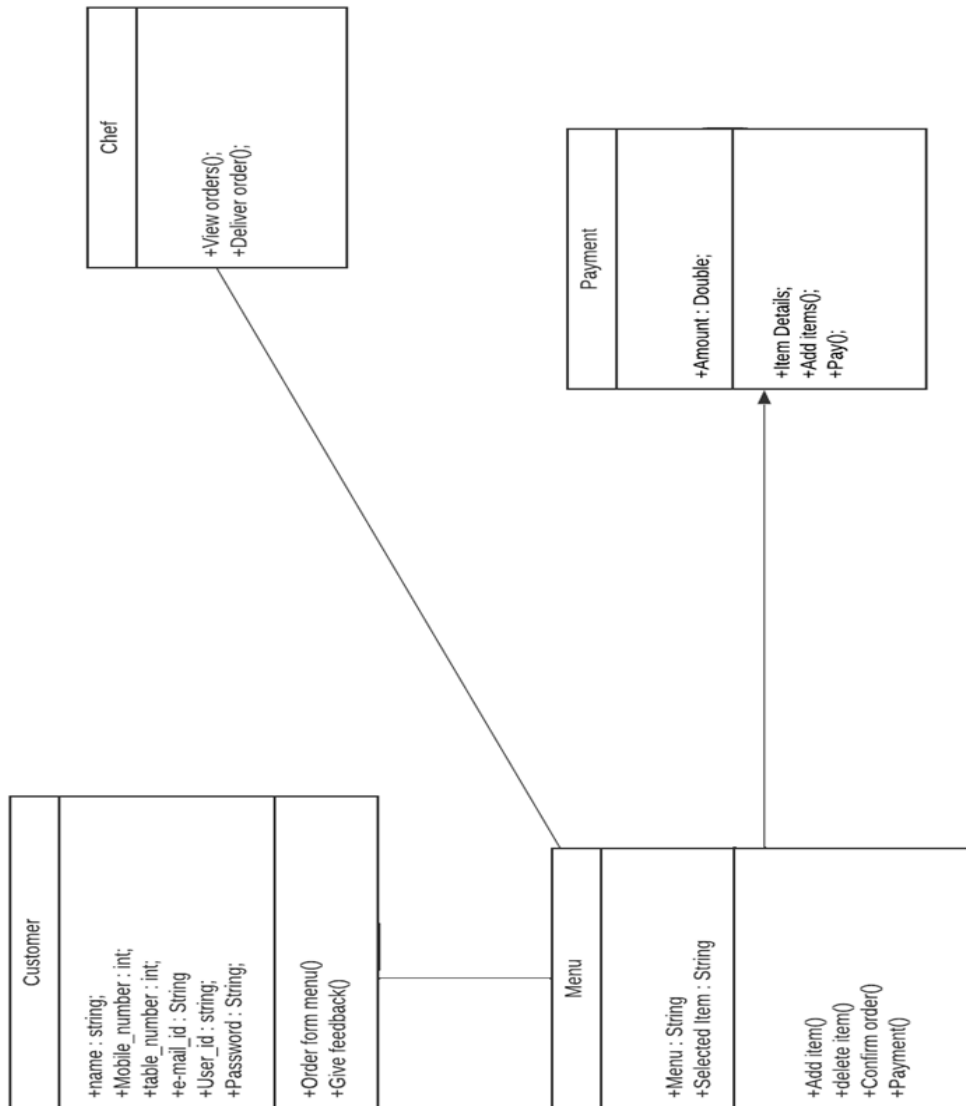


2.Sequence Diagram

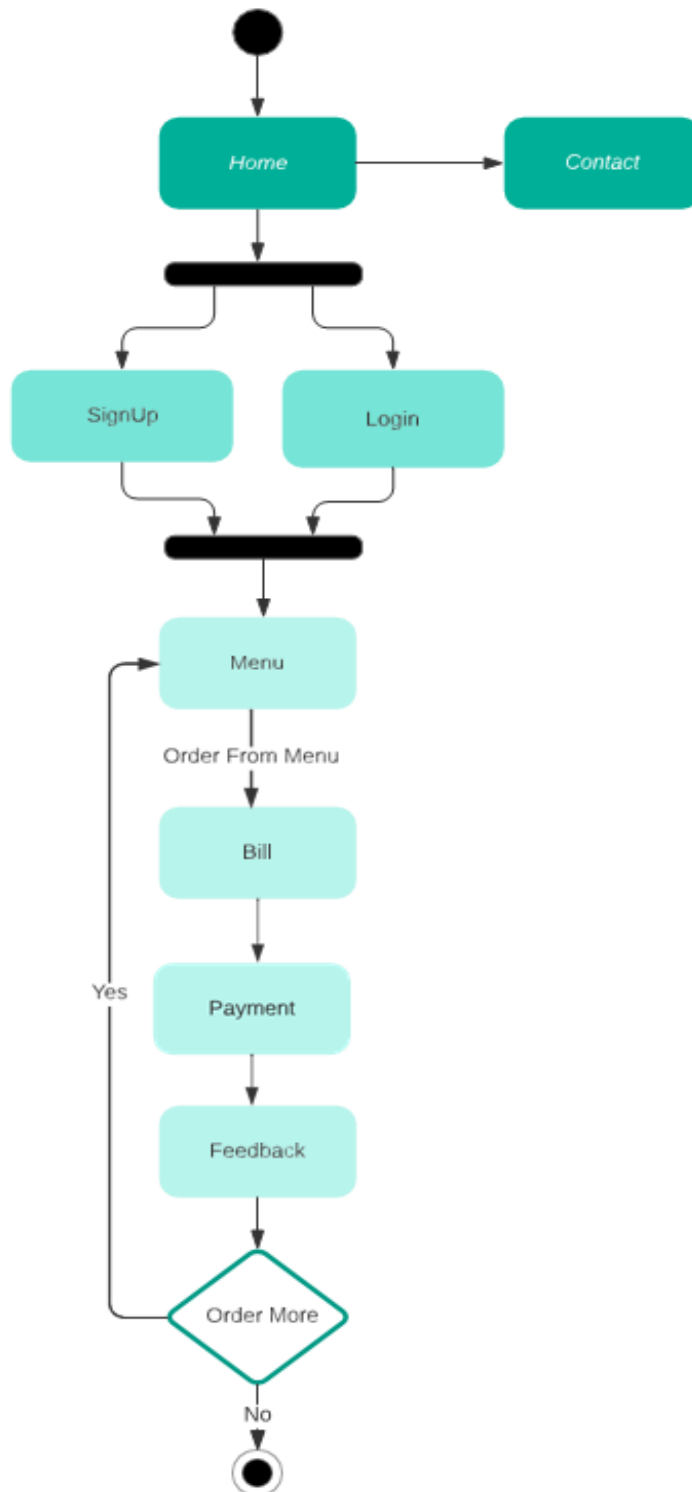


3.Class Diagram:

prajwalnesh | 10/01/2022



4.Activity Diagram:



IMPLEMENTATION DETAILS

For the Restaurant Management System, we are developing a user friendly website, Therefore we are using the following web development technologies -

Front-End -

1. HTML: A standard markup language used to create web user interfaces.
2. CSS: A style sheet language used to set the style for the HTML elements.
3. Tailwind: a wind blowing in the direction of travel of a vehicle or aircraft; a wind blowing from behind.
4. React Js: It is a free and open-source front-end JavaScript library for building user interfaces based on UI components.

Back-End -

1. Node Js: Node.js is a server-side platform built on Google Chrome's JavaScript Engine (V8 Engine).
2. Express: Express is a minimal and flexible Node.js web application framework that provides a robust set of features for web and mobile applications.

ADVANTAGES OF PROJECT

1. The ordering process becomes easier

Traditionally, people had to make calls to place orders or drive to the restaurants for a take-out, then wait for the food to be prepared and delivered. Sometimes, placing an order on the phone means that there could be mistakes in order. Clearly, these aren't really the best solutions to order food from restaurants especially for people with busy lifestyles.

2. Efficient order management

An online ordering system for Restaurants helps enhance the customer-restaurant relationship by providing an end to end Customer Relationship Management (CRM) system. It provides a complete sales dashboard with information about new/active/canceled orders, lifetime sales details, etc.

3. Better customers data

Who are your regular customers? What do they like ordering from your

restaurant? Which food items are popular? Do they prefer ordering from a website or app? These and many other related questions can be answered using analytics and insights provided by a robust online ordering system for restaurants. This data is valuable since you can use it to send targeted promotions to your customers and entice them to keep coming back.

4. Greater reach

Your restaurant seating capacity may be 100-200 at a time, or even less, but with online ordering, you can reach thousands of people at a time, and cater to a much larger number without having to make any additional investment in staff or infrastructure.

5. Employee Satisfaction

Employees like to feel trusted, so an efficient way to offer them autonomy is to give them some control over managing their shifts. At the same time, employee scheduling software makes it easy for the team to swap shifts with suitable colleagues. On the other hand, you will set the parameters to find who is able to swap shifts. As well as, it improves that you are always fully staffed without exceeding the labor budget.

DRAWBACKS

As there are some advantages of the Restaurant Management System, there are some disadvantages as well. Some of the disadvantages are listed below.

1. The Menu is Limited.
2. Quality of food may not be that good as expected.
3. Food may get cold till the order is served.

FUTURE SCOPE

1. The Payment Gateway can be added.
2. Users will be able to Reserve a Table.

CONCLUSION

Restaurant Management System is a web based system that helps the restaurant business to perform activities efficiently and effectively. It helps managers to manage cash flow. Managers can see analytics information to analyze business growth. By using this system managers can manage order, employee schedules.

The Project being simple and flexible running successfully. The main advantage of the project is that its simplicity attracts a lot of users. It can be easily run by a novice user. The Restaurant Management System helps the Restaurant Manager to manage the Restaurant more effectively and efficiently by computerizing meal order, billing and inventory control. The system processes transactions and stores the resulting data. Reports will be generated from these data which help the manager to make appropriate business decisions for the restaurant. For example, knowing the number of customers for a particular time interval, the manager can decide whether more waiters and chel's are required. This project when implemented will remove all the security issues. Also, there will be a speedy and secured authentication procedure for the maintenance of records.


The fast growing use of the internet confirms the good future and scope of the proposed project.

Finally it has taught us a valuable lifelong lesson about the improvements and working and interacting in a group.

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4.5 ⭐

Garlic Naan
₹ 25


+ 1 -



4.2 ⭐

Paneer Tikka
₹ 170


+ 1 -



4.6 ⭐

Kadai Paneer
₹ 220


+ 1 -



4.3 ⭐

Butterchicken
₹ 270

ADD



4.2 ⭐

Dal Tadka sp
₹ 210

ADD

Total is ₹415 [Confirm Order](#)

Bill

Dish Name	Quantity	Price
Garlic Naan	4	100
Paneer Tikka	2	340
Kadai Paneer	1	220
Butterchicken	1	270
Dal Tadka sp	1	210

Total is ₹1140

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