

Digital Restaurant System

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ABSTRACT

Smart Restaurant Management System is a new generation of restaurant management software. It is a complete solution, beginning with taking orders from customers, & ending with billing & tax reports. In this, a system will be implemented where order will be taken from an application installed in Restaurant tablet and the order will be displayed in kitchen, Manager Board, & Waiters list. This System is used to reduce human labor low power consumption no need of person to take order Manually. As we have seen in many restaurant such as Heaven Pizza & Café, Burger king, Cafe Coffee Day but it is partially implemented. The menu will be displayed on Screen with the help of Android Tablet. Customer can place the order through the Tablet which will be of their choice. The chef in the kitchen will take order through kitchen log in & Notify to the waiter So that waiter can pick up order from kitchen and Deliver order to the Customer. Simultaneously Manager will generate Bill According to Orders Received From Customer.

Keyword : - Smart Restaurant, PDA, Customer, Order.

1. INTRODUCTION

Smart Restaurant System is a upgraded Software of Digital restaurant management System. This system will provide solution of taking orders online from customer and generating E-bills Through this software. The UI of system is optimized for high speed input of a customer order and to prevention of common mistakes made by customer. Payments can be accepted by various methods like cash, credit cards etc. There are detailed set of reports for manager that shows a complete picture of restaurant operations, Consumption, most active employees, payment methods, and automatic tax calculations. We are making the only restaurant management software that Provides a true end-to-end solution, all built in house. The main goal is to attract the customers and it adds efficiency of maintaining records of ordering and billing system. This will reduce human labor. May be waiter can make a mistake while taking orders from the customers. And chances of errors are more.

The system administrator will have the system rights to add or change the food items, or can change the price of food items anytime. Customers order the food according to their choice and the payment amount will be displayed on the screen. So, payment can be made by cash, credit card order bit card. Customer will not need to wait for the waiter to take the orders. It can directly be ordered without wasting of the time. Once customers have their food, one or two waiters will be allocated according to their requirement which will clean the table. This system provides some additional features by making the overall process and management much easier compare to the convention a l ordering systems.

1.1 LITERATURE SURVEY

a. RICHARD H.WIGGINS "PERSONAL DIGITAL ASSISTANT" (PDAS)

Personal Digital Assistant is handheld wireless device that are easy to handle and portable. There are some PDA based systems like WOS and I-Menu. This system allows customers and waiters to order using android device. When a customer or waiter orders food using device, the details of order are sent to the server from the android device. The single device is used for many customers. This system is better than traditional pen and paper system but it has limitations also. PDA based system may cause problems for waiters during the peak hours because it will require more number of PDAs to attend and waiters to serve every customer. Customers cant give feedback using

system. Manager needs to have technical knowledge to update or change information. PDAs are consist of only text information and are not user friendly.

b. ROGER PALMER, PHD “KIOSK SYSTEM”

KIOSK consists of a screen that contains the menu list. It is advanced system which contains images, the textual information and prices about the menu items. KIOSK screen is installed at the restaurants counter. When customer visits the restaurant he has to check the menu list on the screen installed at counter. Then customer selects menu items to be ordered. Payment is done through the system by various payment options. Customer's order list with the order number is sent to the kitchen. When the order is ready the order number is displayed on the screen at the counter. The customer receives his order. This system also has limitations too. If the restaurant is in its peak time then this system ends up in forming a big queue for the KIOSK screen because of this customer feels inconvenience and waste of time.

c. ZEITHAML & BITNER, 2003“COMPUTER BASED FOOD ORDERING”

In this computer-based food ordering system, when the customer comes to the restaurant, he has to tell the order to the cashier and make the payment. The cashier generates a bill with an order number printed on the bill. Then the customer has to wait at the table while an order is being prepared. When the cashier receives payment and order then the cashier sends a notification to the kitchen about ordered food. When items that the customer ordered are ready then the waiter serves the order to the customer waiting at the table. This system has limitations also when at peak hours the number of customers increases it will be difficult for the cashier to take orders and notify them to the kitchen, because of this there will be a queue of customers at the counter this will cause inconvenience to the customers. To overcome the above problems an automated touch-based digital smart system is proposed to manage the overall food ordering and serving process. The goal is to save the time of customers by providing facilities like a vacancy list at reception, digital food ordering, instant billing, and service which will result in customer satisfaction and that will increase profit the restaurants. This automated system saves time, reduces human errors, reduces manpower, and gives customer satisfaction, thus beneficial for both restaurant and customer. It gives a fine dining experience to the customer. This system increases the efficiency, accuracy, and cost-effectiveness of restaurants.

1.2 PROBLEM STATEMENT

Many restaurants manage their business by manual especially take customer ordering. Today, restaurant waiter takes the customer ordering by manual system with using paper. This is problem for restaurant waiter the probability lost and duplicates customer information. Additionally, it would affect to reputation restaurant in operate management of ordering

2. PROPOSED WORK

2.1 Proposed Detailed Methodology of Solving the Identified Problem with Action Plan

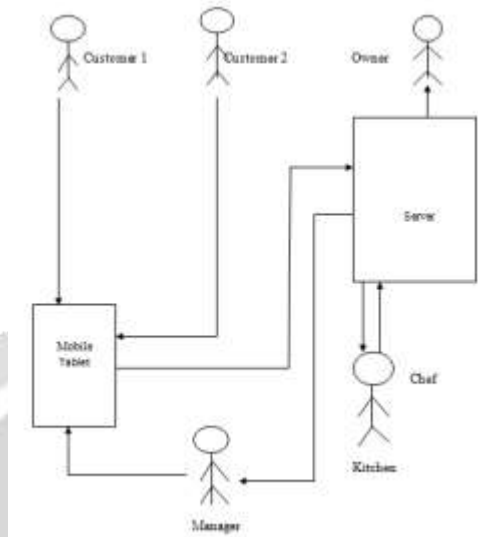


Fig. Architecture Diagram

2.1 Module Description

1. USER MODULE

User module is for end customer module This module of the application is user interface/user experience of customer. This module provides the customer the flexibility ordering food at any time on table. The user interface of the system is easy to understandable because of this feature new customer can order food without any difficulty. There will be devices at every table for the customers to browse and order food on table.

Dream café

Your Cart				
Sr. No.	Product Name	Quantity	Price	Action
1.	Cheese Blast San	- 1 +	Rs.120.0	Remove
2.	Burger	- 2 +	Rs.70.0	Remove
Total			Rs.190.0	

Empty Cart
Continue Shopping
Proceed To

2. CHEF MODULE

The main aim of this module is to manage all the details of food items being served at the restaurant. So that customers can see all menu items and these menu items can be updated or changed by admin or manager. Also the

module manages the order details the food items ordered on which table with table number and other details, where that food item has to be served.

3. MANAGER MODULE:

The main purpose of this module is to provide all functionality related to ensuring orderliness. Therefore every verification order will be handled by the administrator and the customer will be able to see the verification of the order. Tracks all the information and details of the verification order. The administrator can only edit and update the verification order record.

Apple Pie	Black Forest	Brownie	Burger
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Cheese Sandwich	Chicken Sandwich	Chocolate Milkshake	Chocolate Truffle
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Coffee	Frankie	French Fries	Fruit Sandwich
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Item	Quality	Price
French Fries	2	Rs.150.96
Chocolate Milkshake	2	Rs.226.40
Black Forest	1	Rs.56.60
Apple Pie	1	Rs.47.16
Taxes	-	Rs.28.86

4. OWNER MODULE:

The main purpose of developing this module is to manage customer payments online or in cash on delivery. Managers will manage all funds in the delivery record. According to the customer's wishes, the customer can pay his bills. Administrator manages all payment records of all customers.

Items	Price	Total Bil
Apple Pie ,Burger	Rs.98.50, Rs.85.20	Rs.183.70
2 Pizza (with Extra Cheese)	Rs.300.10	Rs.600.20
Sandwich	Rs.50.35	Rs.50.35

3. CONCLUSIONS

In this digital world each and each field is undergoing a dramatic change thanks to Information technology. Human labor are often reduced. we've presented digitally food ordering system. System is effective and convenient. Food ordering application is presented with features of Wireless ordering system. The application has the good GUI which will bring more attention to the purchasers. With private login system, customers can view and make order and receive updates in real-time from the device itself.

4. REFERENCES

- [1] Prof. N. M. Yawale, Prof. N. V. Pardakhe, Prof. M. A. Deshmukh, Prof. N. A. Deshmukh, "Online Restaurant Management System", "IAETSD Journal For Advanced Research In Applied Sciences".
- [2] Akash Patil, Rinkesh Kalani, Bhavesh Patil, Sachin Shinde, Prof. S. M. Shedole, "Smart Restaurant System Using Android", "International Journal of Technical Research & Applications, Vol.5 Issue.3, May-June 2017".
- [3] Adithya R., Abhishek Singh, Salma Pathan, Vaishnav Kanade, "Online Food Ordering System", "International Journal of Computer Applications Vol.180 Issue.6, Dec2017".
- [4] 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(IJARSCST 2015), Vol.3 Issue.1(JanMar,2015)".
- [5] Ashwini Bankar, Mamta Mahajan, "Design of Intelligent Restaurant with a Touch Screen Based Menu Ordering System", "IOSR Journal of Electrical and Electronics Engineering (IOSR-JEEE), Vol.10 Issue.3, May-June 2015".
- [6] Tuhin Ghosh, Shubham Bhoir, Prashant Patel, Nikhil Mehta, Amruta Mhatre, "Smart Restaurant", "International Journal of Industrial Electronics and Electrical Engineering, Vol.3 Issue.11, Nov-2015".
- [7] R.V.Patil, Aniruddha Kale, Dineshkumar Pawar, Tejas Patil, "Wireless Customizable Food Recommendation System Using Apriori & K-Means Algorithm", "IJLTEMAS Vol.5 Issue.4, April-2016".
- [8] Shiny.J.S, Ashok Kumar.M, Nanthagopal.V, Raguram.R, "Automation of Restaurant (Ordering, Serving, Billing)", "International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, Vol.6 Issue.3, March-2017".
- [9] Kshitiz Rathore, Monica Chhabi, Prakash Raghuvanshi, Prof. J.S.Morbale, "Smart Restaurant Food Menu System", "JETIR, Vol.5 Issue.5, May-2018".
- [10] Sadiq Basha.G, Shanthi.A, Madumitha.P, "Wireless Menu Ordering System For Restaurant", "International Journal of Innovative Research in Science, Engineering & Technology, Vol.4 Issue.12, Dec-2015".