Digital Menu Card For Restaurant

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Abstract - *The advancement in data and communication technology has greatly influenced the business transactions. In earlier days, food industry has lagged behind alternative industries in adopting new technology. But speedy advances in technology and heightened expectations of customers and have forced the food industry to bring automation within the method. Nowadays, the adoption of wireless technology and emergence of mobile devices has crystal rectifier to automation within the food industry. The business and services in restaurants are often improved with the mixture of wireless and mobile technologies. The competition in restaurants with regard to business has redoubled with the advancements in food ordering techniques. In this paper, an automatic food ordering system is proposed which is able to keep track of user orders and have implemented some data mining techniques for analyzing the data with respect to future perspective. The implementation of proposed application uses java and android as the front end and at the backend MySQL database is used.*

1. INTRODUCTION

The basic compilation in the food service industry is that diners are not actualizing competence that would consequence from improved utilization of technology in their daily operations. The earlier food ordering system was entirely a hand-operated process which involved waiters, pen and paper. The waiter had to take down pattern from habitué, take these patterns to kitchen, refurbish them in records and produce bill. Even though this setup is plain it may associate personal glitch in taking down the orders. There are many argumentations leading to the annoyance including being banqueted late in terms of order taking by the waiter and serve luncheon. To overcome this circumspection in hand-operated system, multi-palpable restaurant management system is prospective in this paper to imbrue food ordering process.

The food restaurant with automated food ordering system will be equipped with a user-friendly touch screen, display screen in the kitchen, and software for completing the process at the backend. For this integral there will be a system bureaucrat who will have the immunity to enter the menu with their current rampant prices.

The system admin can enter anytime in the system by a secured system password to innovation of the cuisine contents by enumerating or expunge an item or changing its price. Now when the customer enters the restaurant, customer will place his order with the aid of the contact to the screen using the visceral graphical user interface, right from the selection of menu items, confirming the order and viewing offers. The customer will select from the food options according to his choice and the system will display the payment amount customer has to make once finished with the order.

2. LITERATURE SURVEY

Here an appliance of assimilation of hotel management systems by web services mechanization is presented. Digital Hotel Management assimilates lots of structure of hotel industry such as Ordering System Kitchen Order Ticket (KOT), Billing System, Customer Relationship Management system (CRM) together. This assimilated elucidate can enumerate or expand hotel software system in any size of hotel chains environment. This structure increases quality and speed of service. This structure also surge aallurement of place for large range of customers. Enforcing this structure gives a tariff-efficient contingency to give your clients a personalized service experience where they are in control choosing what they want, howbeit they want it – from dining to ordering to payment and feedback.

The proposal nonce in-depth on the specialized operation of the Wireless Ordering System (WOS) including systems architecture, function, constraint and endorsements. It is believed that with the increase in adopting of handheld device e.g. PDAs in restaurants, omnipresent application will become a significant tool for restaurants to improve the management facet by exploiting PDAs to counterpart food ordering could escalate adequate for restaurants and caterers by preserving time, curtail personal errors and by providing higher aspect customer service. With the consolidation of simple design and promptly available turn up communications technologies, it can be wrapped u that this system is an alluring solution for the affability industry.

3. PROPOSED SYSTEM

In this system customer orders the food by using android based touchpad. Figure shows the system architecture, which cover three main areas of the restaurant: the serving area, the restaurant owner's working desk (cashier table), and the kitchen. Customer first orders the food from the touchpad looking at various combination of food which is further carried to the kitchen for fulfilling the order and the same is passed for billing at each customer's tablet.
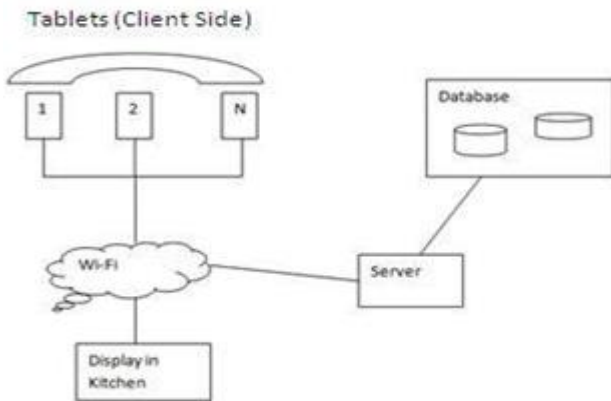
Figure 1: Proposed System Architecture

Figure 2: Working of Proposed System

Following are the major system functionalities in the proposed system-

1. Tablet on Table

There will be a tablet on each table. This will grant the customers to peruse the food items as many times as they wish. Customer can view the suggestions for a particular menu item generated by the system. Customer can enter his/her details during bill payment. This helps the Restaurant owner to analyze the service and can notify the customer regarding different offers through messages or emails.

2. Suggestions for Customer

The diner admin can post various consolidations of menu items on tablet. This will help the client to place the best order and escalate sales.

3. Attractive Presentation

The Menu is organized in an attractive way. There are images of every food item which will make the view of customers clearer about how the food will look like after delivery. There is an attractive use of various themes and color schemes.

4. Modifiable Menu

The menu can be modified by the Admin manager. Admin manager can add, update, and delete menu items.

5. Market basket analysis for a restaurant.

Generating frequent item sets from the previous placed orders and suggesting their combinations to customers, this knowledge can also be used for promoting the other non-frequent items.

6. Customer relationship management

Based on the classification in k-means appropriate text messages are sent to customers offering them attractive discounts and other suitable deals.
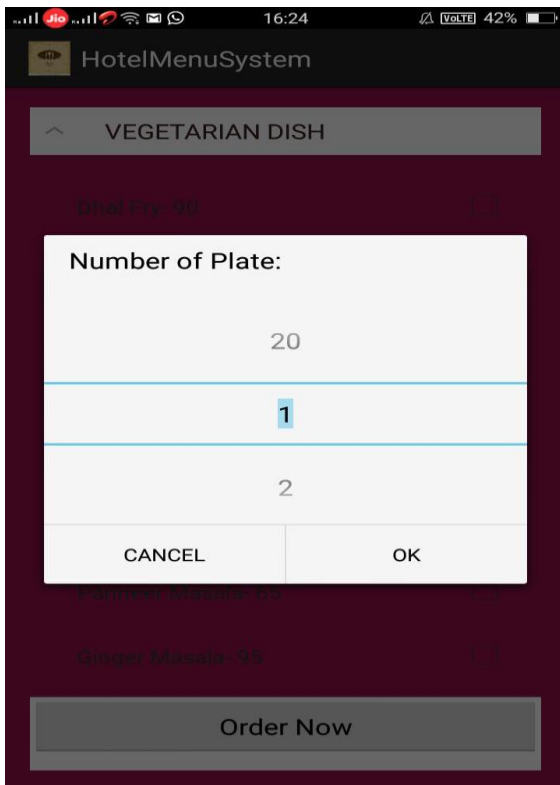
4. SYSTEM RESULT

The proposed system has two web operation and an android operation. One web operation will be a Admin module which will be used by the restaurant admin to maintain the cuisine card of the diner and bill generation. This module will be connected to the android application running on the tablet. The admin module will use different data digging techniques like apriori and k-means for inquiry purpose. Second web operation will be used by the customers who wish to order food online. The bill payment of ordered food will be handled through cash on delivery basis. Lastly the proposed system will have an android application which will be running on tablets kept in cafeteria. The customers can view menu card through the application and can place order accordingly. The customer will get recommendations on the application and can request for the bill also.

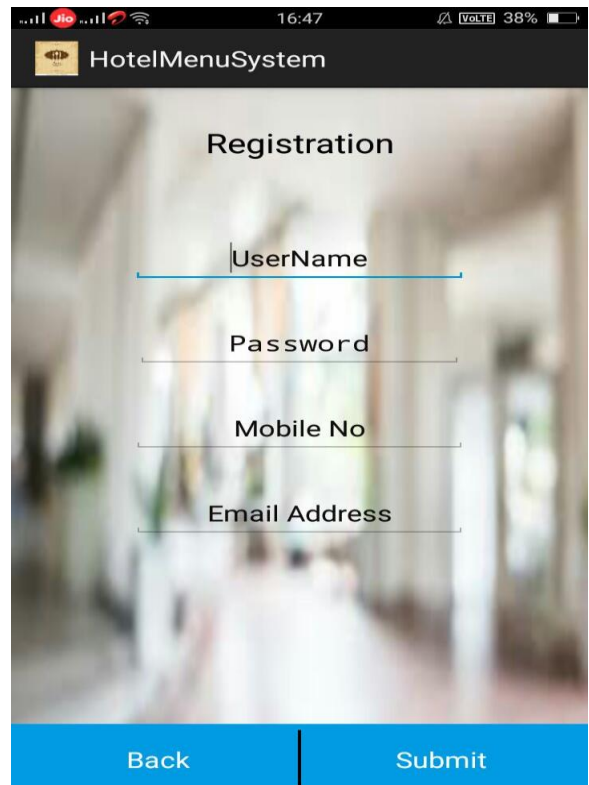Some screenshots of system has been shown below.

1] Screenshot showing the subcategories in vegetarian menu on android application.
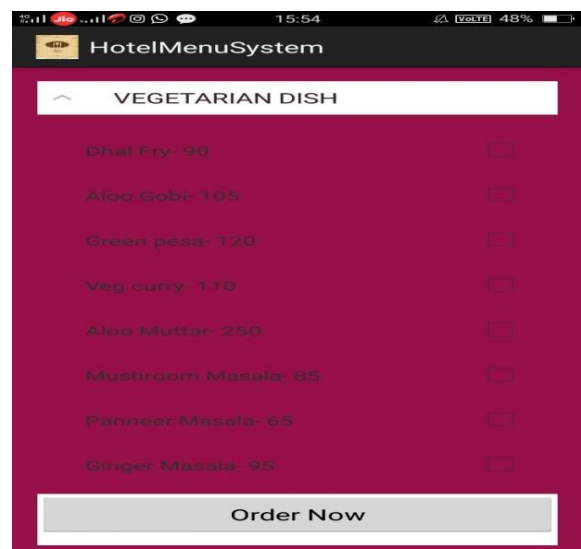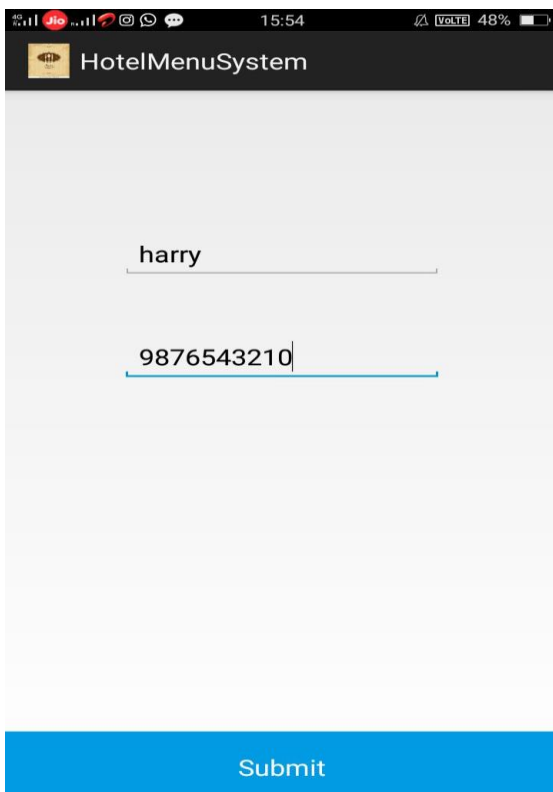
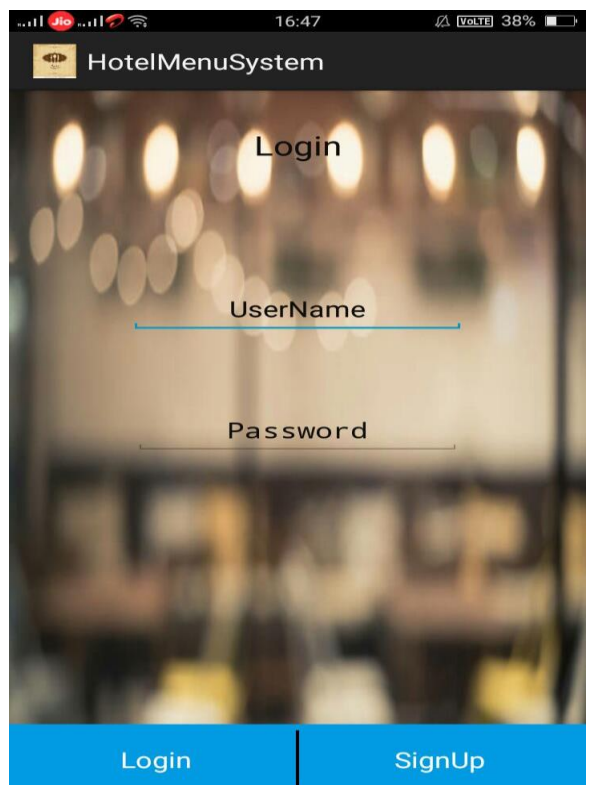**2] Screenshot showing the functionality of "Add to order list" on android side**.

3] Screenshot of android application where details of the customer

4] Screenshot showing the functionality of " Registration details of chef"

5] Screenshot of android application- details of chef

5. FUTURE WORK

In future, work can be done on providing an embedded alarm whenever the order has done. The system can be further extended to register and link multiple restaurants to enhance the dining experience of customers. The module of stock maintenance and raw material management can tallied to the current system to ease the work of diner admin.

6. CONCLUSION

This system is customizable system therefore it can be customized for the various types of restaurant. Online payment system for debit & credit card is added in this system. The implementation of such type of proposed automated system will minimize the number of employees at the back of the counter. Also, the system will help to reduce the cost of labor. As there are lots of orders at the restaurants, there is possibility of human errors during calculations or taking orders. By using this system, such type of errors can be eliminated and controlled up to some level. The proposed system would lure customers and also adds to the adaptability of maintaining food orders at different tables in the restaurant. Another advantage of the automated food ordering system is that the system will be available 24x7, by the virtue of tappliance is not going to take any sick or vacation leave. The proposed system will have an admin module which will help the restaurant owner to get the required analysis.

7. REFERENCES:

1)Varsha Chavan, Priya Jadhav, SnehalKorade, Priyanka Teli Prof. Mr. R. B. Anpat "Implementing Digital Restaurant and Inter-Restaurant Navigation Using Smart Phone", in International Journal of Computer Science and Mobile Computing, Volume 4,Issue 2 February 2015.

2)Ashutosh Bhargave, Niranjan Jadhav, Apurva Joshi, Prachi Oke, Prof. Mr. S. R Lahane Department of Computer Engineering, GES's RHSCOE, "Digital Ordering System for Restaurant Using Android", in International Journal of Scientific and Research Publications, Volume 3, Issue 4, April 2013.

3) Kirti Bhandge, Tejas Shinde, Dheeraj Ingale, Neeraj Solanki, Reshma Totare, "A Proposed System for Touchpad Based Food Ordering System Using Android application", in International Journal of Advanced Research in Computer Science & Technology (IJARCST 2015), Vol. 3, Issue 1 (Jan. - Mar. 2015).

4) Prof V. B. Dhore, Surabhi Thakar1 , Prajakta Kulkarni2 , Rasika Thorat3 Department of Computer Engineering, "Digital Table Booking and Food Ordering System Using Android Application" in International Journal of Emerging Engineering Research and Technology Volume 2, Issue 7, October 2014