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"Digital Table Booking and Pre-Food Ordering System Using Android Application"

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Abstract: *With increase in the use of mobile phones, there is also increase in the desire of people to access mobile internet to get various services from anywhere and everywhere. With there is an increase in restaurants and restaurant-goers which continuously demands better food services and hospitality. This research work aims to design and implement a remote food ordering system through which one can book table and place order for the same table from remote location. The proposed system also provides additional optional features for customer to order food from their home through the application to save their valuable time. The sole objective of the proposed system is to eliminate the wait time and fulfil better service and hospitality demand of the customer/user. It will not only help the customer but also help the restaurant to manage and serves customer easily. This system increases quality and speed of services. We have choose Android platform because it is most widely used today.*

Keywords:*Restaurants,Food,Android application,Book table.*

I. Introduction

Title:Long wait time for tables can turn the customers away or can create revulsion towards the restaurant, many of people even argue that the restaurant make them wait unnecessarily .

Our Application give a proper solution to the problem by allowing them to pre-book the table online. While it is appropriate to give customer a chance to look at the menu and decide their order, but it is not ideal if they feel like they are being ignored when the staff is too busy to attend them . This creates a dislike towards the restaurant.

Our proposed application will reduce the load of the staff to attend them by taking order online at the time of booking. A reservation is a promise between the diner and the restaurant.

Sometime customer show up late for their table and the restaurant cancel their reservation, the customer have to wait for another table to available even after they have reserved. Our Application will inform the restaurant if there is a change or delay in the reservation from the customer side.

II. Technologies Used

Android version 2.2.3 (Smart Phone) and Android version 2.2 – 4.0 for Tablets is required. Java SE 8 Programming Language is used to develop the software. Android Studio is used as a Rapid Application Development Tool (RAD) for coding the software. JSP/SERVLET is used for Remote Database Access from the main system of the restaurant.Razorpay payment gateway for accepting online payments.Google location API for searching nearby restaurants.SQLite is a light weight Database which is going to be used for database access from handheld device or the tablet.

III. Litearature Survey

Paper [1]:- Ashutosh Bhargave, Niranjan Jadhav, Apurva Joshi, Prachi Oke, Prof. Mr. S. R Lahane.Department of Computer Engineering, GES's RHSCOEThis paper includes an application of integration of hotel management systems by web services technology is presented. Digital Hotel Management integrates lots of systems of hotel industry such as Ordering System Kitchen Order Ticket (KOT), Billing System, Customer Relationship Management system (CRM) together. This integration solution can add or expand hotel software system in any size of hotel chains environment

Paper [2]:-Prof V. B. Dhore, Surabhi Thakar1, Prajakta Kulkarni2, Rasika Thorat3 Department of Computer Engineering, RMD Sinhgad School of Engg, Pune, India 1,2,3 Department of Computer Engineering, RMD Sinhgad School of Engg, Pune, India

This paper android application comprises of three different applications. The first application is implemented on customer's mobile device. Through this application, customer can search for restaurants based on a particular dish, vicinity, price, quality of food, or previous customers' reviews. After choosing a restaurant, customer can view a digital menu and select items by means of check boxes. After confirming the order, customer can proceed to payment. Customers can also book tables beforehand.

IV. Proposed System

The first application is implemented on customer's mobile device. Through this application, customer can search for restaurants based on a particular dish, vicinity, price, quality of food, or previous customers' reviews.

Our proposed system will help both the customer and the restaurant by allowing the customer to pre-book the table online. It will help the customer to have a comfortable and a pleasant experience. To pre-book the table customer have to login via application and have to select the restaurant. If a table is available at desire time of customer, the table will be booked at the restaurant side.

With the help of an animated 3D-view, customer can view the arrangement of tables in a restaurant. This provides customers with a very interactive experience with the application. Customers are given the facility to register themselves. Upon registering, the customer gets to have a profile of his own, with the help of which customer can record his previous transactions, and also provide feedback in the form of rating, and also personalize his account

V. System Architecture

The architecture covers the four main modules: the Customer or the Foodie, the Manager, the Aministrator and the Kitchen section. Conceptually this system is built using four main components: The android application on the smart phones.The server application on the restaurant-manager's laptop/tablet to customize keep track of customer records, table bookings and time required to reach.The central database for restaurant-owner to store updated menu information and order details.

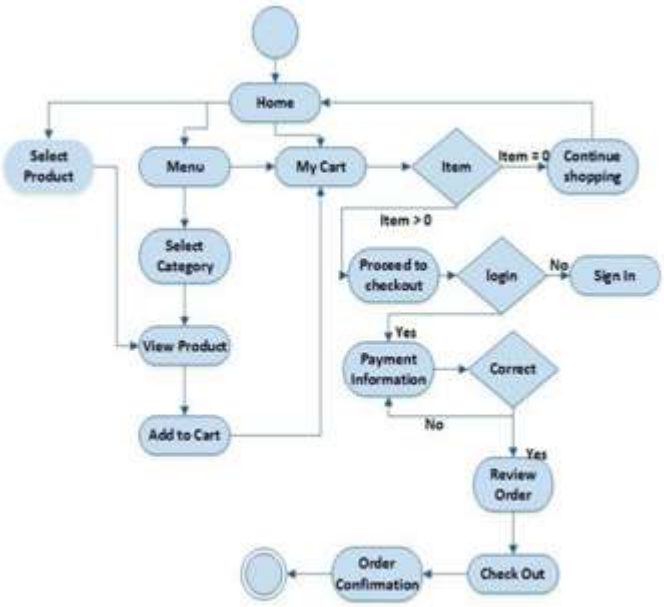

Figure: system Architecture

VI. Requirements Specification

3.1.Table Booking

The application will allow user to book a table of his choice in advance. This will allow the customersto browse the animated view of the restaurant they wish and book a table.

3.2. Customer Feedback

Customer can enter the feedback about the service and the food served. This helps the Restaurant owner to analyze the service and make necessary changes if needed. This also helps the Customer's to decide a particular food item with a positive feedback. Searching

3.3. Click-n-Add Menu

Customer can search a particular food item according to name, price, category etc. The customer just has to click on food item and it will be added to his list. This saves a lot of time of customer to order an item. Digital Table Booking and Food Ordering System Using Android Application International Journal of Emerging Engineering Research and Technology 78

3.4. Offers for Customer

The Restaurant owner can post various offers on tablet. This will help the customer as well as the restaurant owners.

3.5. Attractive Profile

There are images of every food item and restaurant location which will make the view of customers more clear about how the food will look like after delivery.

3.6. Time to Serve

The manager gets the approximate time customer will take to reach the restaurant. Food served as soon as customer arrives. Provides ease to customers.

3.7. Find Friends

The application allows to search friends in the vicinity to accompany customers. This encourages interaction and business of restaurants.

VII. System Evaluation

- Ability to search a restaurant.
- Reserving preferred table or a group of table depending on the number of people.
- Ability to pre-order food online at time of booking table.
- The customer can specify when a particular dish should arrive after they reach the restaurant.
- Ability to make online payment.
- Option to cancel the reservation.

VIII. Conclusion

The proposed system would attract customers and also adds to the efficiency of maintaining the restaurant's ordering and billing sections.

This Paper introduces a new system for restaurant as well as users to conveniently reserve table at preferable time over the cloud. Restaurant will be benefited by having proper time management. Moreover, customers could pre-order the food, which would save time for restaurant as they could have food prepared and customers would not have to wait at restaurant to select the food to order, which in turn allows the restaurant to accommodate more customers throughout the day.

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