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MOBILE BASED ONLINE RESTAURANT RESERVATION SYSTEM

K.C. Tharun[1], P. Sathish Kumar[2], T. Shahul Hameed[3], G. Preethi[4]

[1-3]Students, Department of IT, PSG Polytechnic College, Coimbatore, India
[4]Lecturer, Department of IT, PSG Polytechnic College, Coimbatore, India

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Abstract - *All the restaurants presently run a manual reservation system and as customers are desirous to find a handy application for reservation of tables or any other services to avoid physical walking to the hotel or contacting by call or reserving through a middle man. Current research was aimed to design a client/server application for table reservation and online booking system. Mobile Based Online Restaurant Reservation System (MORRS) that can effectively improve their restaurant table reservation system in order to provide direct access of every user to the management. It has given the benefits of effective booking corridor or to hold their accessible table with holding up through an android application. The concept of mobile based online reservation system using android application, is that can be used by customer to choose their desired table, at their desired time and No. of seats. This proposed system to provide service facility to restaurant and also to the customer. Main objective is to provide ordering and reservation service to the customer.*

Key Words: Android, Mobile Application, Table Reservation, Food Order, pay online, Table's picture, Secured transaction

1. INTRODUCTION

Restaurant is a place where people pay to sit and eat meals that are cooked and served on the premises. In traditional restaurant system orders are taken by a waiter and they bring the food when it is ready. After eating the food customers will pay the bill. This system relies on large numbers of manpower to handle customer reservation, inquiry about them, ordering food, placing order on table, reminding dishes of customer. Therefore, how to effectively improve the service quality for customers by using advanced technologies has received much attention in recent years. "Intelligent Restaurant" it's all about getting all of your different touch-points working together-connected, sharing information, personalizing experiences and speeding processes.

It helps us to avoid from waiting for food and confusion on selecting a table on that time. For better accessibility online payment is available. The administrator can keep track of the details of booking tables and foods. Some people consider it a pain to go the restaurant because of sheer amount of time required to find a good table sometimes. Our system aims to redefine this structure by bringing everything to customer. With the mobile based online restaurant reservation system, you can create a customized booking process, let people book a table through our android application.

2. LITERATURE SURVEY

(i) Title: RESTARUANT TABLE RESERVATION SYSYTEM USING ANDRIOD MOBILE APPLICATION(RTRSMA)
Author: Shaziariaz, Amnanisar.
Year: 2018
Description:
The Key of paper was to allow the management administration and employees of restaurant to grip the customers to place their orders and to find free tables. According to their required No. of seats. RTRSMA app will enable the user to access and manage the arrangement of the tables and foods. The general objective of RTRSMA was to build up reservation system for table reservations to assist worker's with solving basic issue with menu reservation system.

(ii) Title: DESIGN AND IMPLEMENT AN ONLINE RESTAURANT RESERVATION SYSTEM
Author: Acheampong Samuel
Year: 2018
Description:
As stated earlier, customers basically order food or reserve tables by means of their PCs, mobile devices as well as other portable devices such as tablets. Customers order food using computers via browsers like Mozilla Firefox or via custom apps. This basically is the main trend with regards to food ordering and table reservation in the restaurant industry. In spite of consumer demand, restaurants' use of technology remains in its infancy hence, the use of technology in the restaurant industry is expected to gain dominance and recognition in the future.

(iii) Title: DIGITAL TABLE BOOKING AND FOOD ORDERING SYSTEM USING ANDROID APPLICATION
Author: Surabhi Thakar, Prajakta Kulkarni, Rasika Thorat.
Year: 2014
Description:
In This paper, some form of static menu is utilized to convey the available food and beverage choices to customers. Said menus are generally photo based and hence impose restrictions on the textual real estate available and the ability a restaurateur has to update them. This application specifies the requirements for a restaurant digital menu and ordering replacement strategy to alleviate the problems associated with the current archaic method. Three related concepts are encompassed by the general scope of the Restaurant Menu and Ordering System. The first pertains to the replacement of photo menus using an electronic format, the second relates and the third surrounds the process of transferring said electronic orders to the kitchen for preparation. It should be noted that while the suggested strategy incorporates the use of various hardware components, the primary focus of the presented SRS relates to the constituent software elements. The following are the features which can be a part of the proposed system: Ordering, Waiting, Billing, Table Reservation, Home Delivery, KOT, and Advertisement.

3. EXISTING SYSTEM

In this existing system, it was a web-based application and paper based. The menus which are accessible on the restaurant is paper based. The request which has taken by the server is on paper based and the bill created finally is also on paper based. There is a lot wastage of paper and time. The bills may confuse of others. Sometimes given order is missed to tell to the chef. There is no view of table's size and seating. The waiter who is taking the food order may miss the items.

4. PROPOSED SYSTEM

The new proposed system consists of missing features of the existing system. The "Date & Time" select option. You can select your table with the view of the table. And also, payment option with Two options: 1. Pay on online, 2. Pay on restaurant. You can select your required number. Of seats and Tables. It supports on android platform. You can change the bookings or can also cancel the order.

5. WORKING PRINCIPAL

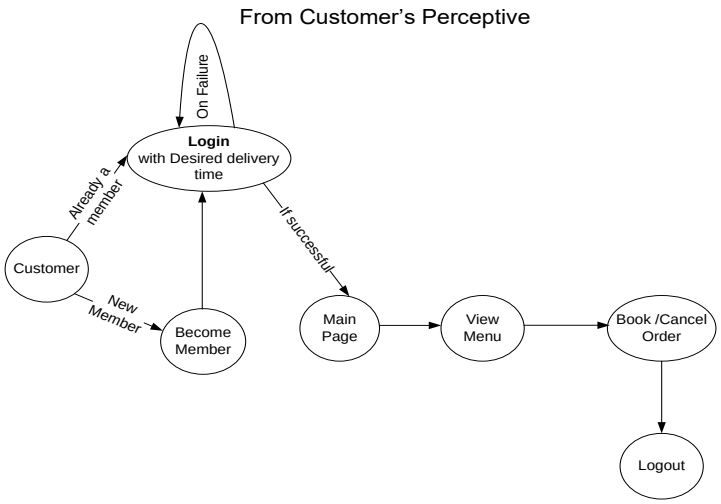

Fig.5.1: Dataflow Diagram of the Restaurant reservation systems

This system consists of Android application that can be used by employees in a restaurant to handle the clients, their orders and can help them easily find free tables or place orders.

Customer: -

New user or customer on our system, first they need to sign up by using their phone number. They need to create new username and password for login purpose. If they already signed up, they can use their existing login credentials. If given password or username is wrong, it comes back again, to the login page to re-enter correctly.

Customer Ordering: -

After login the main page, is which contains list of restaurants to select the restaurant. After selecting restaurant, view of the menu is shown to order the food. Then they are given a choice to choose the table, and there is a table view in multiple angles. They need to select date and time for dine-in, to the restaurant. At the end, is the payment it is available on both, cash at restaurant and also on online payment.

Target Area: - This system will be placed on customer's, android phone as an application.

Management of The Restaurant: -

A person is from the restaurant side, who will manage the reservation. This type of user will also do maintenance and control the application of this system. The person assigned from the restaurant side, takes up the responsibility to a new customer, new waiter, new menu into database, and etc.

Target Area: -This system will be placed at restaurant.

6. COMPONENTS REQUIRED

A. Hardware Specifications

- Processor : Intel i5
- RAM : Min 6 GB
- Hard Disk : 500 GB

B. Software Specifications

- Operating system : Windows 10
- Technology Used : Android
- IDE : Android Studio
- Plug-in : ADT plug-in
- Tools used : Android SDK
- Program language : Java

7. OUTPUT

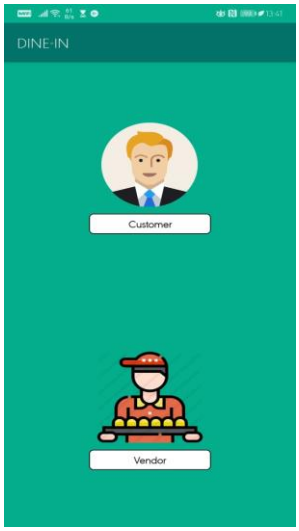

Fig 7.1 Login page UI

This is the login page of the application which contains login options for two admin of the restaurant and another one for the customer. [Fig 7.1]

Fig 7.2 Customer login page UI

This page is for the customer to select restaurant and book table. [Fig 7.2]

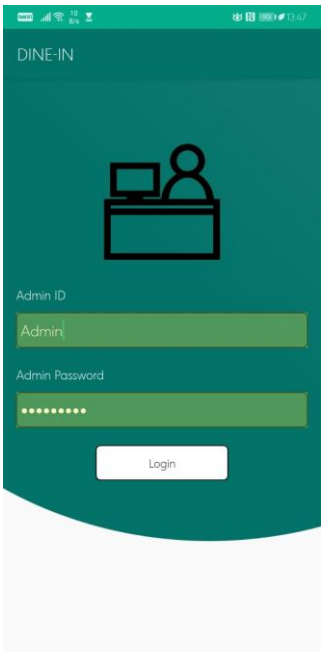

Fig 7.3 Admin login page UI

This page is for the restaurant admin to login for they use. [Fig 7.3]

Fig 7.4 Home page UI

This is the home page of our application for the customer. [Fig 7.4]

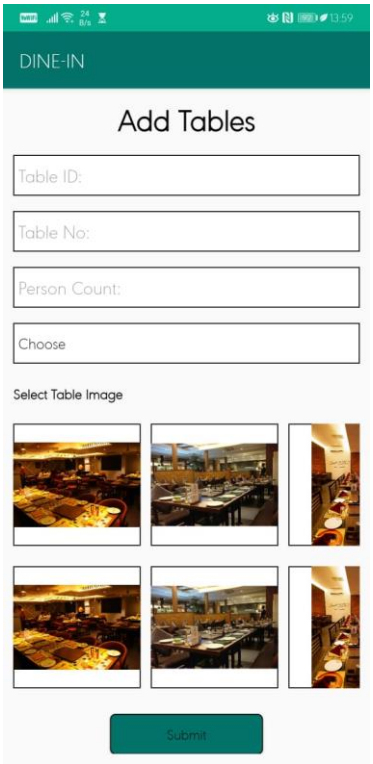

Fig 7.5 Home page UI

This is the home page of our application for the admin, in this section admin can edit & add photos of their tables. [Fig7.5]

8. APPLICATION

We created this application for restaurant reservation on online. In this pandemic situation it is very helpful to protect us from many ways. It contains view of table and seat. The list of restaurants and in each restaurant list of food are there then you can select the date and the time as your wish.

9. FUTURE SCOPE

In future we hope to develop more into this reservation system. This is because that we aspect that my system is not future promising to the user. We would like to develop a 360 Degree view of the table and an AR models of the Food items and also adding a reminder feature which reminds you through all your devices including Smart watches, Smart speakers like "Alexa". In future we will develop a software for windows and IOS.

10. CONCLUSION

Thus, we present an android application for food ordering and table reservation system with features of online, mobile based. This project will be benefit by both the customer and owner since it can be access by everyone through the android application which will save time for the customer. The owner can deal with a greater number of customer as it takes no longer time since the food will be served as soon as the customer arrives. This proposed system has the potential to attract customer, effective and easy thereby improving the performance of restaurant's ordering and billing. I also talked about changes I will like to make to the system in the future.

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