

## A Review Paper on Online Restaurant Management System

**Prof. N. M. Yawale<sup>#1</sup>, Prof. N. V. Pardakhe<sup>#2</sup>, Prof. M. A. Deshmukh<sup>#3</sup>,  
Prof. N. A. Deshmukh<sup>#4</sup>**

Department of Computer Science & Engg, SGBAU, Amravati. (Maharashtra (INDIA)).  
[1nupoory1@gmail.com](mailto:nupoory1@gmail.com), [2nvpardakhe@mitra.ac.in](mailto:nvpardakhe@mitra.ac.in), [3madeshmukh@mitra.ac.in](mailto:madeshmukh@mitra.ac.in), [4nadeshmukh@mitra.ac.in](mailto:nadeshmukh@mitra.ac.in)

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**Abstract--** The system is implemented to reduce the manual work and enhances the accuracy of work in a restaurant. This system manages and maintains the record of customers and their order online. This Android App has been made in a user friendly interface. So that Customer can add and delete the food items easily. The menu card of different restaurant consists of various food varieties available in the restaurant. Through the place ordering menu, the customer can simply click and order the food. The messaging module tells the supplier to supply the particular food. Also tracking module track the order. The billing system prepares the bill according to the delivered food. This system entirely reduces the unnecessary time. Every order is associated with an individual seat at the table, and orders are built one customer at a time, just like on paper, but with greater accuracy. Items can also easily be shared by the whole table, moved or modified, and noted and the cost can be calculated in real time.

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**Keywords—**Restaurant Management, Recommendation, Tablet, Menu, Intelligent, Android application.

### I. INTRODUCTION

Over the years, technology has tremendously revolutionized the restaurant industry. Much of the innovation has been with point-of-sale (POS) operations. There is a famous saying that “People eat with their eyes”. The e-Menu provides additional information about menu items and drinks than a traditional paper menu. The simplicity and ease of access of a menu are the main things that facilitate ordering food in a restaurant.

The service goes quicker. Restaurants can build their e-reputation and customer community in live. The restaurant menu has evolved from its humble beginnings on carte chalkboards and imageless print to today’s detailed, colorful displays. With the emergence of digital tablets and user-friendly touch screen technology menus can move to a whole new surface. With this electronic menu, orders can be taken correctly the first time. There is no need to run back and forth to a distant terminal, because the terminal is always with the server. Every order is associated with an individual seat at the table, and orders are built one customer at a time, just like on paper, but with greater accuracy. Items can also easily be shared by the whole table, moved or modified, and noted and the cost can be calculated in real time. The Recommendation algorithm suggests dishes to the patrons based on previous orders. It makes it easier for the customer to build his/her order and also view the most popular dishes. Moreover, various dimension filters can be used according to individual preferences e.g. Price, taste, quantity, etc

### II. OBJECTIVES

- To develop android application for restaurant ordering system and provides facility to update the menu.
- To develop a software at kitchen and cashier to receive order from server.
- To establish network for kitchen, cashier and android device and print the bill at customer side.
- Customer should be able to enter the feedback about the service and the food served by e-restaurant android application.

### III. EXISTING SYSTEM

The current system is paper based. Papers are used in restaurants for displaying the traditional menu cards, writing down the orders of customers, storing the records of customers. The disadvantages of paper based system are that papers can get easily damaged by stain marks; they can be lost due to fire or accidents or can get lost in general. Hence, time and money is wasted.

As traditional menu cards are paper based, any changes that need to be made in the menu will require reprinting of the entire menu card, leading to wastage. For small changes, reprinting the entire menu card is impossible. Changes in the menu card cannot be made dynamically. It is inefficient to access a particular record from the stack of papers. This system is time consuming. One has to call a waiter number of times till he notices it, and wait for him to arrive at their table to take their order. Also the waiter can misinterpret the customer's order since he is writing the order on paper, and the case of serving a wrong dish is possible.

- For placing any orders customers have to visit hotels or restaurants to know about food items and then place order and pay. In this method time and manual work is required.
- While placing an order over the phone, customer lacks the physical copy of the menu item, lack of visual confirmation that the order was placed correctly.
- Every restaurant needs certain employees to take the order over phone or in-person, to offer a rich dining experience and process the payment. In today's market, labor rates are increasing day by day making it difficult to find employees when needed.

### IV. PROPOSED SYSTEM

A Tablet menu completely revolutionizes the patron's dining experience. Existing programs provide an app that restaurants can use to feed their menus into iOS & Android based tablets and make it easier for the diners to flip, swipe & tap through the menu. We aim in providing an advanced menu display using android mobile phones at restaurants with a tablet menu that would recommend dishes based on a recommendation algorithm. In addition to this we run the app on an Android based tablet and not on an iOS based tablet which is more expensive alternative. We use a cloud based server for storing the database which makes it inexpensive and also secured. Developers of similar applications maintain that customers who seat at tables outfitted with tablets spend about 10% more than those at other tables ("people buy more when they can do so instantly, without waiting for service"). Proposed system consists of following modules.

#### 4.1. MODULES

- **Module 1:** Login Module  
In login module the customer and restaurants login will be taken while they already registered on the application. Every manager/user will have login id and password to login to the application.
- **Module 2:** Registration Module  
This module is displayed to the visitors if they need to perform some order placements, and new registration for restaurants who wants to do business with us on our online restaurant management application.
- **Module 3:** Add/Update/remove Menu  
This module is for admin. Admin have rights to insert, update (modify) and delete the data in database as per his/her necessary requirements.

- **Module 4: Account Management Module**  
There will be an account manager who will manage all the online order transaction and he/she will be responsible for issuing printed copy of customers payment receipts.
- **Module 5: Station Tracking Module**  
This module describes the current location of any particular area over the usage of internet connectivity and GPS. This module is useful to find the location of order placed and for estimated time delivery.
- **Module 6: Place Order Module**  
The activity is performed by customer itself whose registration is already done. Once the verification is done by application, the order gets confirmed and delivery will be given to the dedicated customers address.
- **Module 7: Carting Module**  
This is additional feature given to add the food items in customer's virtual basket just like pending orders or the orders which customer wants to do later. But, if the customer is first time visiting then he/she will unable to place order until he/she do registration to our application.
- **Module 8: Order Manage Module**  
In case, the customer come to know that the food or service of restaurant is not good and estimated delivery time is too much as expected then he/she can manage his/her orders under order manage module.
- **Module 9: Messaging Module**  
The private window for conversation between customer and customer executives will be given inside the application where they can ask about any kind of queries to the executives 24/7.
- **Module 10: Logout Module**  
The last module describes that after placing order or performing some actions on the application the customer will click logout profile.

## V. WORKING

Our main aim is to increase the efficiency of the food ordering and reduce human errors and provide high quality services to the customers of the restaurants. The application on the tablets must be able to communicate with the other devices. Fig.1 shows flow chart of the android application. As shown in flowchart below, firstly the customer or visitor will open the application and searches for food item menus from nearby available location of customer.

The customer sees the categorized menu card on the android app. The selection of food items is done by person if he/she visiting our application with or without login and registration module. At this stage, the registered and non-registered persons can add food items in their shopping kart for temporary purpose. If the customer wants to buy selected items then condition will be checked weather customer login is done or not. If login is not done then application will force customer to login first before ordering something.

For performing all activities in project we will create one database consists of all restaurants listed along with their daily food items and costs. Once completing login task, the customer will place order from his nearest searched local restaurants searched via server. After this the verification of customer order will be done by making call given by customer at the time of login registration. After successful verification admin will check is the order is confirmed by customer if not the whole process begins from start.

If condition satisfies then admin transmits data about order to the particular restaurant. At last the delivery boy will give delivery within estimated time to that customer. If there is a need for modification in the food menu, the admin modifies the menu. The menu gets changed in the database. The changed menu then gets updated on the customer's android device.

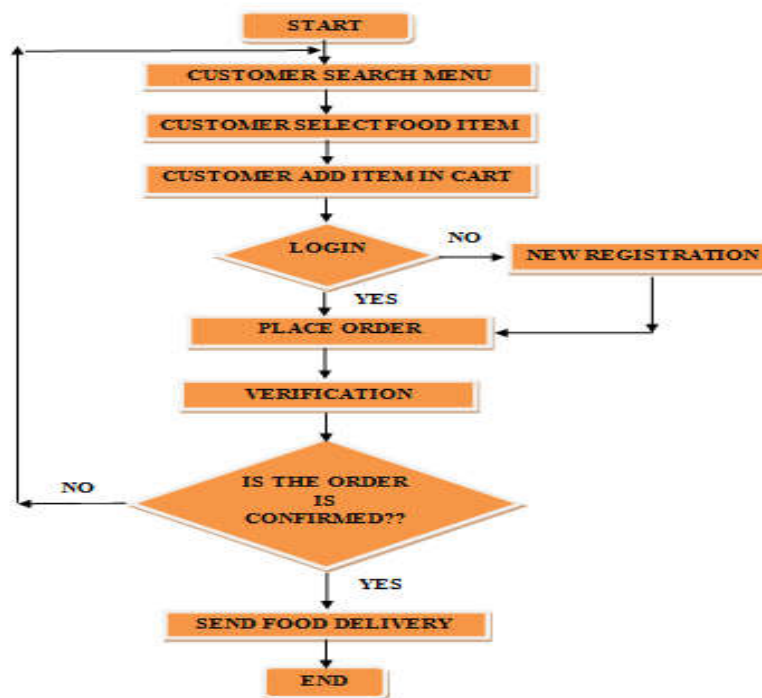


Fig. 5.1 : Flowchart of Online Restaurant Android Application.

## VI. ADVANTAGES

1. No misunderstandings and no frustrations.
2. Online food ordering will be opened 24/7.
3. Online menu is simpler and easy to operate by a user.
4. Number of users or customers increases.
5. It is Responsible for faster growth of your business over the internet.

## VII. CONCLUSION

Here the need for tablet food ordering is analyzed and its advantages over the traditional food ordering system in restaurants are studied. The proposed online restaurant management system is time saving and error free as compared to the traditional system. This system attracts customers and also adds the efficiency of maintaining the restaurant's ordering and billing. Hence it is the modern way to grow up the business using E-commerce. Here implementation of an advanced e-restaurant menu ordering system using smart android mobile phone. This system entirely reduces the unnecessary time. Every order is associated with an individual seat at the table, and orders are built one customer at a time, just like on paper, but with greater accuracy. Items can also easily be shared by the whole table, moved or modified, and noted and the cost can be calculated in real time. The idea of the advanced e-restaurant can also be extended for future using GPRS module. GPRS module can be used to monitor and request of the menu order from table will be directly sent to the predefined web link for process of even billing the items purchased.

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