Smart Restaurant

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Abstract— Smart restaurant is an android application which provides the online ordering facility to the customer with the real-time tracking feature. We are living in an era where every work is done smartly and everyone prefers smart process over any other conventional process. Using the smart devices we are making restaurants smart in all aspects. In most of the restaurant's food ordering from the table, takeaways, and home delivery everything is done manually. The system covers the order process of a restaurant which including customer's interaction with waiter and delivery boy through the android application and desktop based software. The smart restaurant provides a unique feature as the customer can order from home and can track their order till it reaches to their home, customers are aware about their orders which give them full satisfaction. The system will maintain all the logs and records in the database. Also, a e-menu will be provided replacing the paper menu. By making an efficient system we are trying to increase customer satisfaction.

Key words: Online Food Ordering, E-Menu, Smart Restaurant, Real-Time Tracking, Android Application

I. INTRODUCTION

Nowadays, restaurants need to impress the customers for their survival in the smart city. Customers are attracted toward smart work where there is no need to wait for long hours to get their orders and also customer satisfaction is important for survival. In Manual food ordering system it's difficult to maintain all orders coming from tables, takeaways, and home delivery and maintaining this all together is a hectic work. Especially, during peak hours conditions get worse which results in long hour waiting and human errors which make customers discontent.

Food delivery done in manual restaurants make the customers uninterested as they have to wait for a long time and they are unaware of their order status. Customers order food through call and sometimes the order is too late that the customer loose patience. Also, in peak hours it becomes difficult for the restaurant's staff to identify which order is to be delivered or which to be served on the table, this confusion leads to wrong delivery for wrong customer. All this problem which are faced by the manual food ordering system is solved by the smart restaurant as once the customer order the food from the Smartphone until he gets the delivery. Customer can know the status of their order, as well as he can track his order and know it's current location. Also, the restaurant will maintain all the records in the database through a web-based system. The smart restaurant will allow the customer to choose their desired food by their own through their Smartphone or tab. A e-menu will be provided to them which will have different types of food. For each food items, its picture, name, cost and how much quantity need to be added in the cart will be shown. Operations done by the customers are view menu, order food, confirm order and payment. This system will provide a huge satisfaction to the customer as well as reduce the hectic work of the restaurants.

II. OBJECTIVES

- To order food from anywhere in the city.
- To maintain logs of order placed.
- To track the order from order placed by user to its delivery.
- To maintain e-menu.

III. LITERATURE SURVEY

"Smart restaurant system using Android "- This paper describes how the smart restaurants work using android application. How they work and their flow of overall process..This work is done by Android applications. They have discussed about food ordering done in the table using android phones or tabs. [1]

"Survey of Digital Food Ordering System Based on Android System for Restaurants"- It describes how mobile menu should look like and what kind of details should be shown with the food name. Different modules like admin, kitchen, and the user is discussed and how they work together is described. When we compare the traditional system with that of the smart restaurant there are numerous advantages of using an android device for ordering rather than going manually. This application is user-friendly; the customers just need to install the app and then log in to continue further for ordering [2].

"Smart restaurant"- The smart restaurant is an idea where a restaurant working is web based from reservation of table to storing log details. It provides with the real-time customer feedback. Attractive interface leads the customers to take more interest in the system It's all about using technology for the ordering purpose and eliminating the manual work .[3]

The main aim is to automate the menu in restaurants by providing a dynamic menu in the Android phone which provides a user-friendly environment. The customers can self-order food from phone. The menu will be displayed automatically in the customer mobile application using wireless. Here, restaurant is providing a dynamic menu. There will be lot many details about the food along with pictures [4]

" Digital Smart System for Restaurants Using Wireless Technology"- In early days many different approaches were developed over traditional pen and paper method such like Personal Digital Assistant, KIOSK system, computer-based food ordering, etc., to manage the food ordering process. These systems are attractive, user-friendly and are useful. Various systems are used to make the food ordering system digital such as Personal Digital Assistant (PDAs) [5][6].

IV. PROPOSED WORK

The smart restaurant system consists of smart methodology for online food ordering which mainly focuses on the overall tracking of the food ordered. The flow and working of the system are as follow:

A. Flow of the system

There are separate login sections for customer and admin. Each section verifies the user and checks whether the user is authenticated or not. Every new user needs to register first before ordering the order, else than have the right for only getting an overview of the application. After login, each user will jump to their respective profiles where they have various tabs of their responsibilities.

The customer is the one who is going to place the order from home. The special user-friendly interface will be provided to the user for placing the order as well as to view the rest of the details. The major feature that will be provided to the customer will be real-time tracking of the placed order.

The admin is the one who is the top priority. Only the admin has the right to make the changes in the system. He has been provided with the different functionalities such as checking logs, creating accounts, updating menu etc.

After performing their tasks the users need to log out of the system for the security purpose.

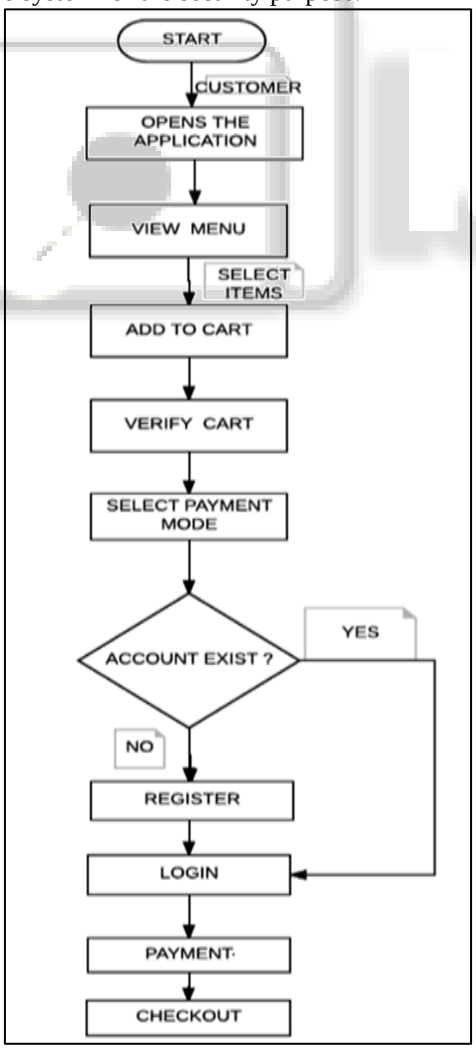

Fig. 1: the flow of a smart restaurant

B. Functional Modules

The whole system is divided into the four modules. They order Module, kitchen Module, admin Module and delivery Module.

1) Order module:

The order module will be used by the customers for placing their orders from the place of their choice. There will be a user-friendly environment provided to the customer for placing their order.

This module involves various features such as dynamic menu, real-time tracking facility etc.

Customer will be provided with fix duration for the delivery of the order.

2) Kitchen module:

The kitchen module will only consist of the portal through which the chef will get an idea about which is the recently placed order and which order he has to made, accordingly he will make the changes in the portal.

3) Admin module:

The admin module can be operated only by admin. Admin is the person who is responsible for making the changes in the system. The admin will be provided with the various functionalities such as creating accounts, checking logs, updating menu, etc. Any changes in the system can only be done if the admin permit.

4) Delivery module:

The delivery module involves the user interface for delivery boys through which they are going to receive the exact location for delivering the order.

The constraint applied to this module is that the delivery boy will be registered to the system only by admin, customers and admin will be able to track the delivery boys for real-time status of the order.

V. CONCLUSION

Smart Restaurants are providing us with many unique features as compared to the manual restaurants. It will remove the long waiting time and makes the overall food delivery system efficient. In future, this can be applied in the restaurant table where each table will have a tab and whole ordering will be done through it and also pre-table booking service can be done.

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