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Food finder- Mobile food ordering application

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ABSTRACT

The purpose of this project is to develop an online "Food Finder" application. It is an online food ordering system that enable the customer to place their order at any time and any place. The reason to develop the system is due to the issues facing by the food industry. Some issues are such as peak hour-long queue issues, sometimes due to wrong order was written by waiter, increase of taking away foods than visitors, speed major requisite of food preparation, limited promotion and advertising on current strategy, and quality control of food management issues. This application will contain different types of food varieties available for the user to buy through online. The system also allows to quickly and easily managing online menu which customers can browse and also predict how much is spend on food, and use to place orders with just a few clicks. Restaurant owner / employees accept these orders through online an easy to track / dispatch orders for efficient delivery of food. Therefore, besides that, it provides a user-friendly food searching menus and also calculates the exact price of that selecting food items from menus before they place final order.

Keywords: Restaurant System, Online Food Order, E-Food, Android application.

1. 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.

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 at providing and 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 a 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").

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.

Many businesses have jumped into the online marketplace and have claimed their slice of the digital pie. In fact, if a business isn't allowing customers to access its products with a few clicks of the mouse, it's definitely missing out on a large audience. This is precisely the reason why the majority of businesses have integrated e-commerce and m-commerce websites into their business models.

A. Problem Definition

The challenges encountered by the existing system serve as a major drawback to the realization of efficiency and customer satisfaction. The experience of ordering in most fast food restaurants is not pleasant for the customers. Customers will have to make long queues before placing their orders especially during peak hours and then the ordering staff will record customer orders. Having placed their order, the customer must then wait near the counter until their order is ready for collection.

The other problem in the food service industry is that restaurants are not realizing the efficiencies that would result from the better application of technology in their daily operations. The fast food business in a very competitive business and one way to stand out from competitors is through improving the business process where business process automation can assist business improvement. The other problem with the current system is that the customers are not able to see the ingredients of the meals before they place their order and also they only have to pay for an order online.

B. General objectives

- To increase efficiency and improve services provided to the customers through better application of technology in daily operations.
- To be able to stand out from competitors in the food service industry.

2. LITERATURE SURVEY

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 are 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.

The reason to develop the system is due to the issues facing the food ordering problem. These issues are such as peak hour-long queue issues, increase of take away food than visitors, speed major requisite of food preparation, limited promotion and advertising on current strategy, and quality control of food management issues. Therefore, this system enhances the speed and standardization of taking the order from the customer and displays it to the staff in the kitchen accordingly.

Besides that, it provides a user-friendly application interface and effective advertising medium to the new product of the online restaurant system to the customer with cheaper cost. Furthermore, it also extends and delivers customer satisfactions especially to the hectic customer or reaching the customer who are constrained of transport to be in food restaurant. At the same time, it boosts up online food marketing to share and food delivery by online restaurant system and increase online uses of the application.

A. Weaknesses of the current system

- The inconvenience of a customer needs to have a physical copy of the menu.
- Time-consuming.
- Lack of visual confirmation that the order was placed correctly.
- The necessity for a restaurant to have an employee answering the phone and taking orders Difficulty in tracking customers past history.
- Requires internet connection and also the user must be computer literate.
- The set back of the system is that the customers targeted are adults with access to computer systems while the minors might have to go physically to the restaurant to purchase the food that they want or order food the food with the help of an adult.

- Manual work and consumes large volumes of data.
- Lack of data security.

3. SYSTEM ARCHITECTURE

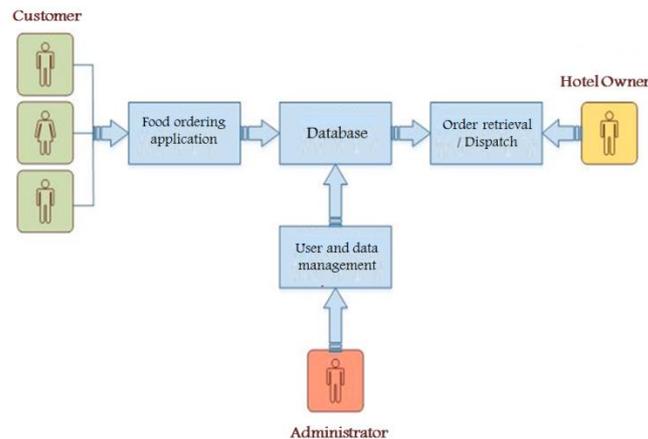


Figure 3.1: Food ordering application structure

A. Customer Module:

This module provides the functionality for customers to place their order and supply necessary details. Users of the system, namely restaurant customers, must be provided the following functionality:

- Create an account.
- Manage their account.
- Log in to the system.
- Navigate the restaurant's food menu.
- Select an item from the menu.
- Add an item to their current order.
- Review their current order.
- Remove an item/remove all items from their current order.
- Provide payment details.
- Place an order.
- Receive confirmation order through SMS notification.
- View order placed.
- It Allows the user to access various offers available on the food item.

B. Administrator Module:

This module provides functionality for the power user to the Administrator only. It will not be available to any other users of the system like Restaurant Employees or Customer to change or access this data.

- Add/update/delete food category to/from the menu.
- Add /update/delete food item to/from the menu.
- Update price for a given food item.
- Update additional information (description, photo, etc.) for a given food item.
- Before customers can actually use this system, the functionality provided by this component will have to be configured first.

C. Hotel / Restaurant Owner Module :

This is the simplest module out of all 3 modules. It is designed to be used only by restaurant employees, and provides the following functions are:

- Retrieve new orders from the database.

- Display the orders in an easily readable, graphical way.

4. SYSTEM 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.3.1.1 shows a flow chart of the Food Finder android application. As shown in flowchart above, firstly the customer or visitor will open the application and searches for food item menus from the nearby available location of the customer.

The customer sees the categorized menu card on the android app. The selection of food items is done by a 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 a temporary purpose. If the customer wants to buy selected items then the condition will be checked whether customer login is done or not. If the login is not done then the application will force the customer to login first before ordering something.

For performing all activities in the project we will create one database consists of any particular local areas all restaurants listed along with their daily food items and costs. Once completing login task, the customer will place an order from his nearest searched local restaurants searched via the 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 the customer if not the whole process begins from start.

If condition satisfies then admin transmits data about the 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 to the customer's Android device.

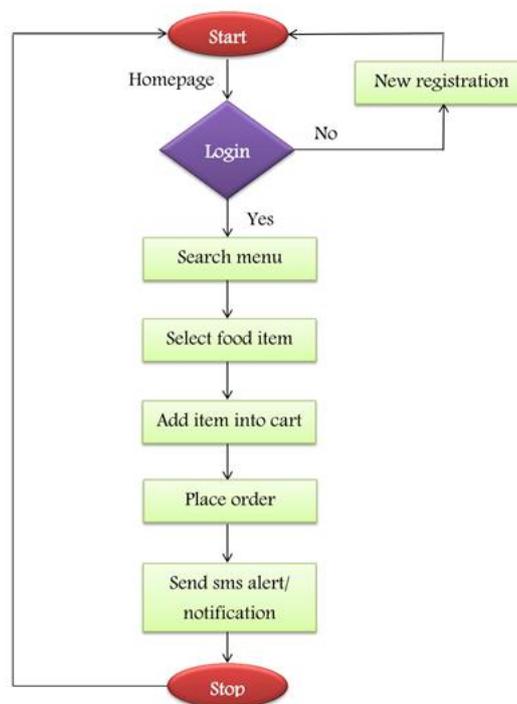


Fig. 4.1: Flowchart of Online food order Application.

If the login is not done then the application will force the customer to login first before ordering something. For performing all activities in the project we will create one database consist of any particular local areas all restaurants listed along with their daily food items and costs. Once completing login task, the customer will place an order from his nearest searched local restaurants searched via the server. After this, the verification of customer order will be done by making call given by customer at the time of login registration.

Firstly Administrator can register restaurant owner/manager to add, update new food menu. After successful verification restaurant owner/manager will check is the order is confirmed by the customer if not the whole process begins from start.

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 to the customer's Android device.

Development of computerized systems requires analysis of the process to be digitized in order to enable a correct system, a system that functions as required and to assist the potential users of the system understand the general functionality of the system. The analysis specifies the system's objectives and constraints to which designers have to comply. The purpose of doing analysis is to transform the system's major inputs into the structured specification.

5. FUTURE SCOPE

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 to 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.

Online food Finder Application is for a particular city, to place an order from home using the internet. Mention the preparation time for food delivery. Also, provide food delivery status.

6. CONCLUSION

Therefore, the need for online food ordering application is analyzed and its advantages over the traditional food ordering system in restaurants are studied. The proposed online restaurant system is time-saving and errors free as compared to the traditional system. The proposed system would attract customers and also adds the offers on food item so increase the restaurant market online also. The restaurant food ordering application can handle the 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 the smart android mobile phone. The idea of the advanced e-restaurant can also be extended for future using GPRS accessible module.

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