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Automated Canteen Ordering System using Android

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Abstract: Time is the biggest asset of today's generation. Patience is not common now a days and people hardly have anytime to wait. In such scenarios, making people to sit idle for waiters so that their order may be taken and serviced is not an appropriate task. Many potential customers have a short recess and lunch duration; their limited leisure time cannot be wasted in undesired waiting task. This application named "Automated ordering System" allows the user to directly order their food online without going through the trouble of calling the waiter repeatedly. The only pre-requisite is the presence of an android application with the name C-canteen in their mobile phones. Comparing with the manual ordering system where a lot of paper work is involved in keeping records and maintaining files, this software is free from such time taking, risky and tedious tasks as there is an inbuilt data base system for keeping all the records. The users have to simply register online, go through the e-menu card and order their desired food item without any trouble.

Keywords: Automated System, Food Ordering, Android, Canteen.

I. INTRODUCTION

Gone are those days when getting things done via internet was a matter of superiority. Being digital has become a need now. It has been rightly said that one should always go step by step with time and technology. This is because once you are left behind in the race of technological advancements, coming back on the track and gaining the same momentum is too tough. Be it any organization, now is the time when you cannot go forward without using technology as it may put your survival in danger. The proposed application C-canteen serves both the purposes- Technology utilization and time saving. It is an example of advancement in technology as it works on android operating system. In addition to that, it saves time and reduces efforts of the concerned people.

In an organization working on automated system, Customer satisfaction and simplified ordering process are two most important factors that need to be handled carefully. The proposed system fulfils both these causes and it is applicable to any online food industry. Upon logging in, the user is welcomed by an exceptional and up-to-date e-menu. A wide range of food items along with their price tags is visible on the main page. Users can add special recommendations for their food preparation, a notification in their mobile phones pop-up once their food is ready to be serviced. In addition to this, a detailed review of the order is always available for user giving them anytime visual confirmation. Canteen management also feels less burdened since they are free from manually doing everything which the automated system is performing and as a result, they become more focused towards providing better services and facilities.

II. PROBLEM STATEMENT

The most common problem of the manual system of canteen is that, the efficiency of the management along with customer satisfaction could not be fulfilled. As when the management tries to increase the efficiency then customer satisfaction is not fulfilled and when customer satisfaction is fulfilled then the efficiency is slowed down, resulting in unhappy customers. Customers have to wait in long queues, for placing order and they have to also wait for their order to be ready on the counters.

Another problem that is faced in canteen is the verbal communication between the cashier and the customer. Many times it happens customer or cashier have problem in understanding what the other individual is saying, mostly during the busy hours of canteen. And during these busing hours, the noise and crowd is too much, that miscommunication is common, which resulting in wrong order or errors in bill.

One more problem faced by the customer is food customization. Many at times it happens that a customer wants to give some direction regarding their food or they are allergic to some ingredients, which is often forgotten or is miscommunicated to the chef, resulting in unsatisfied customers. One bigger problem for canteen is updating their menu.

Most of the canteen want to introduce new dishes and items on their menus. However, as most of the canteens have their menu either attached to the wall or on pamphlet which is very difficult to update frequently. Resulting, the customer is not able to know about the new items and sale of such dishes or item is low. The canteen manger also might want change prices of the specific dishes, for which they either need to change the whole menu or overwrite on menu chart, after which the menu is not readable clearly to the customers.

III. PROPOSED WORK

The objective is to develop a system where both the customer and the canteen management can achieve their target on a single platform. Automated Canteen System is the system where customers can order their food and receive it, with a much faster service than the traditional system. It also offers a fully computerized and automatic billing system, which reduces the employee error. The system is also extremely easy to use as it involves the use of android device, which is the most popular operating system. The system will have all the features for the customers, such as registration, easy order through menu, bill generation and payment, update order, direction to the chef, and feedback important for the canteen.

The system has the following users-

A. Customer Login

- 1) Menu Item
- 2) Cart
- 3) Update
- 4) Bill Payment
- 5) Order Details
- 6) Profile

B. Admin Login

- 1) Manage Menu
- 2) Manage Chef
- 3) Total Earnings
- 4) View Orders

C. Manager Login

- 1) View Orders
- 2) Update Order
- 3) Generate Bill

IV. SYSTEM ARCHITECTURE

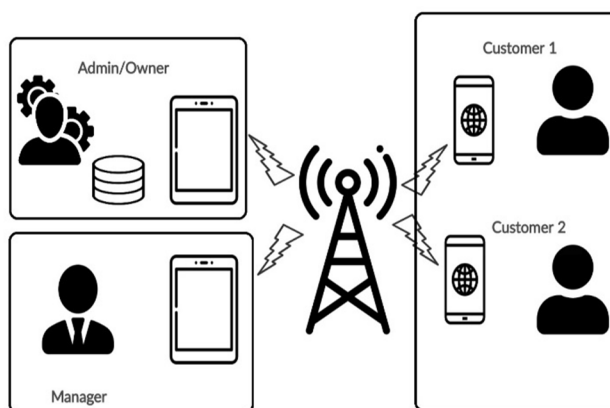


Fig-1

V. HARDWARE REQUIREMENTS

- A. Hard Drive: 20 GB.
- B. Memory: 4GB RAM or more.
- C. Computer with i3 or above processor.
- D. Android based Smartphone.
- E. Internet Connectivity.

VI. SOFTWARE REQUIREMENTS

- A. Android Studio 3.2 or above.
- B. Xampp Server.
- C. Android 4.4. or higher.
- D. Operating System: Windows 7 and above.

VII. ER DIAGRAM OF SYSTEM

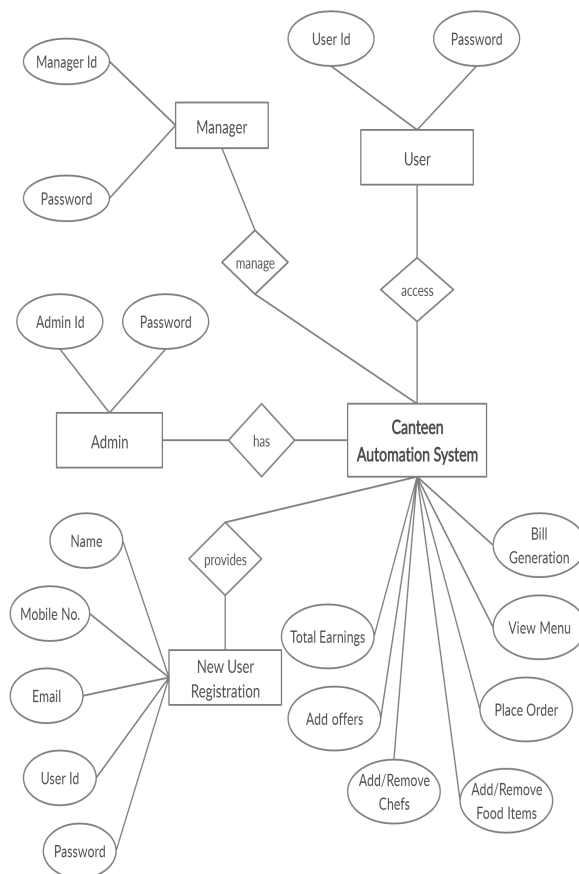


Fig-2

VIII. ADVANTAGES

- A. Complete automated system for online food ordering
- B. Simplified Ordering process and great customer satisfaction
- C. Anytime availability of receipts and reports
- D. Simple and effective interfaces like Admin panel, customer panel and payment gateway
- E. Integrated facility to provide special recommendations regarding food preparation
- F. Created using android hence easy accessibility.

IX. DISADVANTAGES

- A. An active internet connection is required.
- B. Smartphone with android operating system is required.

X. APPLICATION

The system can be used in canteen of school, colleges and offices. It can also be used in restaurants, cafeteria, etc.

XI. FEATURES

- 1) *Easy to Use*: The web application has been designed in simplest possible way and as a result, it will provide friendly approach to its users.
- 2) *Greater Reach and Easy Accessibility*: It is developed on emerging trend of Android OS based devices, hence easily accessible.
- 3) *Efficient Customer And Order Management*: With everything becoming online and data getting stored on database, the whole management work is handled efficiently.
- 4) Visually appealing interface

XII. CONCLUSION

Technology is the backbone of 21st century and businesses cannot afford to stay behind in its advancements. The wide range of emerging technologies has forced people to adopt new methods and leave back the conventional way of doing business. The proposed ordering system is a live example of technical innovations.

Automated Canteen Ordering system is a successful approach in eliminating the hurdles faced in manual ordering system. Customers always prefer to have better quality food and services that too in quick duration of time. Food quality however depends on the hands of the cook but the remaining two things are satisfied by this application. In order to ensure easy accessibility and mass reach, it has been programmed using android operating system. It is best expected that effective use of this application will wipe out numerous issues faced earlier.

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