



CANTEEN AUTOMATION SYSTEM USING ANDRIOD

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Abstract: This paper is about a technology that provides quick ordering system inside the canteen unlike the traditional canteen ordering system where customers face many problems like lost account details, less security, problems with manual working etc. The purpose of the Canteen Automation website is to overcome the disadvantages of traditional ordering system. It enables the end users to register online, read and choose the food from e-menu card and order food online by just choosing the food that the user want to have using android application. The results after selecting the food from the E-menu card will directly get displayed on the screen near the Chef who is going to cook the food for you. The application is the combination of Android as well as Web Application Basically the project describes how to manage for good performance and better services for the clients.

Index Terms - Management system, Android, Connectivity, Dynamic Database, Computer application, WiFi .

I. INTRODUCTION

Nowadays importance is given to the wireless technology and automation system. Computers have become part of the life for accessing almost any kind of information. Life now is full of indispensable technological advancement and in this technological age it is very hard for any organization to survive without utilizing technology. The World Wide Web contributes enormously to the creation of an ever-increasing global information database. It could also be used as a system to share information within an enterprise.

Many canteen have chosen to concentrate on fast preparation and speedy delivery of orders rather than offering a rich dining experience. All of these delivery orders were placed to the waiters or over the mobile, but there are many drawbacks to this system, including the inconvenience of the customer needing to have a physical copy of the menu, lack of a visual confirmation that the request was placed correctly, and the necessity for the canteen to have an employee answering the phone and taking orders. What, we propose is a Canteen Automation System, which is a way of ordering foods online applicable in any food delivery industry. The advantage of this system is that it incredibly improves the ordering procedure for both the customer and the canteen. The customers are given with an interesting menu, complete with all available options and dynamically adjusting prices based on the selected options. After selection, the item is then added to their order list, which the customer can review the details of at any time before looking at it.

This gives quick visual confirmation of what was chosen and guarantees that items in the order are, in fact, what was intended.

This system also greatly lightens the load on the canteen's end, as the entire process of taking orders is automated. Once an order is placed on the webpage, it is entered into the database and then retrieved, in pretty much real-time, by a desktop application on the canteen's end. Within this application, all items in the order are displayed, along with their corresponding options and delivery details, in a concise and easy to read manner. This allows canteen employees to quickly go through the orders as they are placed and produce the necessary items with minimal delay and confusion.

II. LITERATURE REVIEW

Lavina Mall and Nihal Shaikh have developed automation process by using Radio Frequency Identification (RFID) card, an RFID card reader, a tablet and hosting the application on cloud. This automation process when applied on an integral part of the working people i.e. “canteen” helps reduce the service time, eliminates queues, there is no burden to provide the exact change to the staff for the order; to name a few benefits on the canteen’s customer side and on the other hand it provides a reliable way of storing records and keeping the money safe as mostly the payments are made online via virtual money; benefits for the canteen owner.[1]

Monik Shah and Shalin Shah have developed end users to register online, read and select the food from e-menu card and order food online by just selecting the food that the user want to have using android application. The results after selecting the food from the E-menu card will directly appear in the screen near the Chef who is going to cook the food for you. The system is the combination of Android as well as Web Application.[2]

Rohith and Swathi N Rao have developed billing system to the customer and also keeps update of the current status of billing for the customer’s benefit. The ordered information is displayed on the display in the kitchen through Wi-Fi for faster servicing without any delay. The servicing is done by the restaurant personnel. Once the payment is done by the customer, the ordered data will be stored in separate database and the customer’s internet access privilege will be cancelled.[3]

Kalyani Dahake have developed a system informing the waiter about the availability of a dish. If a certain dish was not available then waiter was able to ask for changes or even cancel a customer’s order. After serving the order, bill was generated at the cash counter as per customer order. The management had full authority to access all details of the customer which are fed into the system.[4]

III. OBJECTIVE

1. Efficiency Improvement

This framework can expand the proficiency of day by day business transactions performed in the canteen by automating the whole current system. With this new online system, considerable number of existing business processes such as total calculation, orders taking are done with the guide of this. This can save ample time without any error in the system.

2. Sales Improvement

This new application can bring noteworthy benefits for canteen as it can upgrade the efficiency effectiveness of the day by day business forms, generate helpful reports which user Id in decision making, and so on. The present business procedure can be accelerate and done precisely by upgrading it. Thus, more organisations can be supported at one time and a immediate rise in canteen sales could be anticipated

3. Business Expansion

A modernized framework is the basis of any enormous business as it can suit numerous of business a large company has. With this application canteen business can be expanded furthermore as it can adapt with gradually increasing business transaction in future by speed up daily business process and also achieve higher throughput of business transaction. Additionally, this system can be design in such a way that it is adaptable to cater the owner future growth.

IV. METHODOLOGY



Fig 1. Overview

The system comprises of 3 major modules and their sub modules as follows:

3.1 Admin

- **Login:** Admin need to login using valid login credentials to access the system.
- **Add Canteen:** Admin will add a canteen with details like Management Name, Handler, Mobile, No. of Workers and Address.
- **View/Edit/Delete Canteen:** Added canteens can be manageable by the admin.
- **Add Students:** System allows admin to register new students with their details and create a valid login id and password and share with the student.
- **View/Edit/Delete Students:** Admin can manage all the added students by viewing, editing and deleting a student.
- **Add Balance:** A registered student can Load their wallet by paying cash to admin, which will be added to their wallet account.
- **Withdraw:** Check student's account and withdraw amount) & Same for canteen

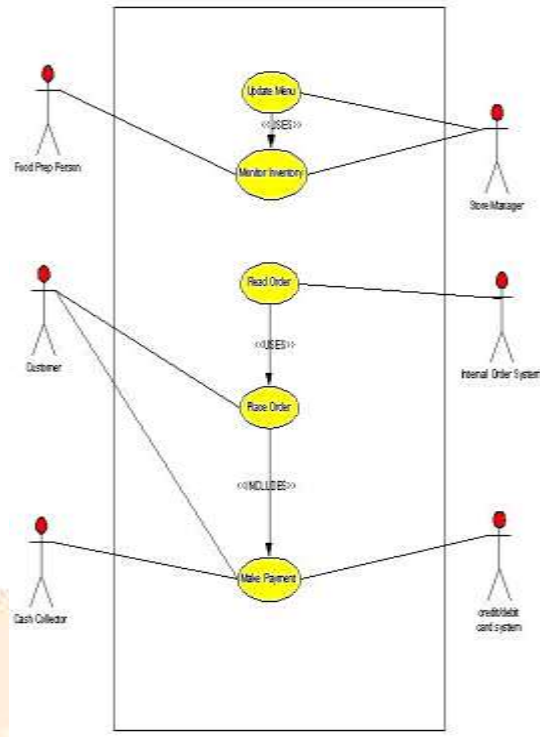
3.2 Canteen

- a. **Login:** Canteen person need to login using valid login credentials to access the system.
- b. **Add Items:** A canteen person can add new food items by specifying details like Food name, Items description, cost, time to get ready, etc.
- c. **View/Edit/Delete/Enable Items:** All the added food items will be manageable by the canteen person and if the item is not available in the canteen then it gives an option to disable the food Item.
- d. **View New Orders:** Can view all the orders received from the registered students.
- e. **Update Status:** Can update the order details.
- f. **View Transactions:** Can view all the transactions by selecting the date range and search all the transactions.
- g. **Add Balance:** A canteen person can add balance into student's wallet, which will be paid via cash by the student.
- h. **Withdraw:** Only student can withdraw whenever required.

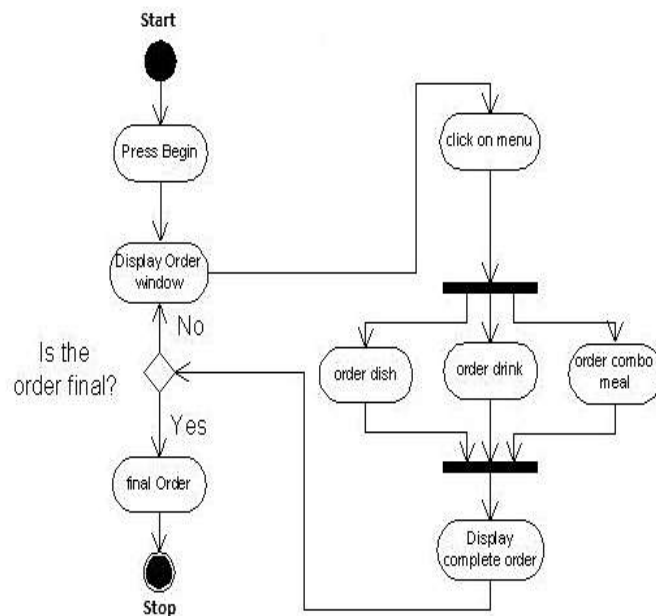
3.3 Student

- a. **Login:** Students need to login using valid login credentials provided by admin to access the system.
- b. **View Menu:** Students can order any food item from the menu.
- c. **Review & Place Order:** Before placing an order, a review of order will be displayed and then student can proceed to pay. If wallet has low balance, then a student cannot make rest of payment via card.
- d. **Generate QR Code for Order:** A QR code will be generated once the order is placed.
- e. **Add Balance:** Students can add balance to their wallet via card.
- f. **View Transactions:** A Student can view all their transactions done to place orders.

V. USE CASE DIAGRAM



VI. ACTIVITY DIAGRAM



VII. RESULTS AND DISCUSSION

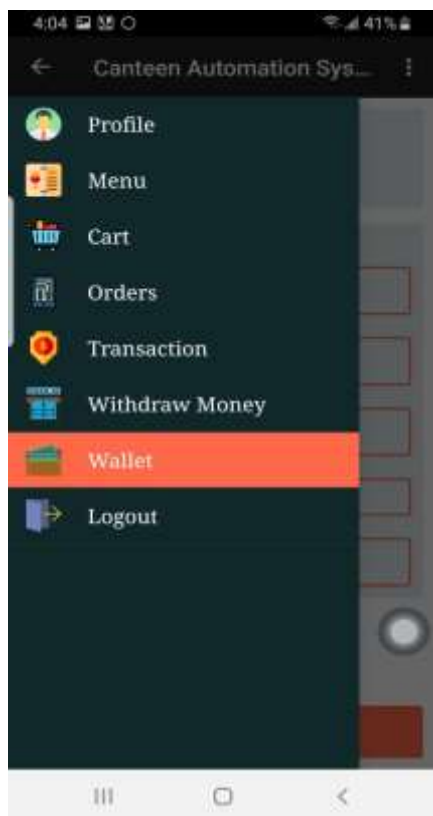


Fig 2. List of tasks



Fig 3. Wallet page displayed on mobile

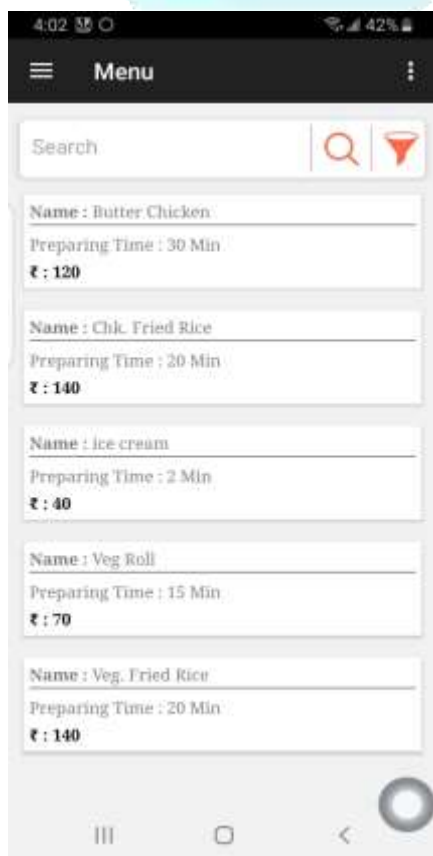


Fig 4. Menu page in mobile



Fig 5: Orders Page

V. ACKNOWLEDGMENT

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