

# Canteen Automation System

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**Abstract-** *The key objective of this project is to utilise computer software to automate the manual operation of a college canteen. With the help of the proposed approach, the canteen will find it easier to handle the sizable, disorganised throng. Users may use digital means to place orders. Customers will be happy with this programme after using it because it is very user-friendly and time-saving. The traditional method, which maintains numerous files and manuals, includes paperwork. That all of these delivery orders were placed over the phone to the waiter until very recently creates the issue of the consumer having a physical copy of the menu and not having a visible confirmation that the order was submitted correctly. The goal of the application is to reduce the time it takes to place a food order, reduce the amount of paperwork, reduce wait times at the payment counter when bills need to be settled, collect customer feedback to improve food quality, make online payments easier, and make it easier for the canteen's admin to add or remove items from the website.*

**Keywords-** Canteen Automation , Computer Application , Food order

## I. INTRODUCTION

With computers, almost all kinds of information is now able to accessed. With the rapid growth of technology in the twenty-first century, it is becoming harder for any company to exist in this day and age without utilizing these technology. The World Wide Web contributes a significant part in the development of a world wide information database that keeps growing. It might also be applied as a way for information to be shared within a company.

The manual system utilized in canteens has problems with efficiency and customer satisfaction. In most canteens, ordering is a frustrating experience for both customers and the canteen management. Customers must wait in long queues to place an order and then wait in line once more to pick up their meals from the food counter. Furthermore, there are a few issues with the conventional (non-automated) way that canteens take orders for meals. These issues include the requirement to continue operating their canteen efficiently on

a daily basis, to maintain the calibre of the food they offer, and to attend to the numerous customers who use it.

By automating the order-taking processes, this system additionally reduces the workload at the canteen. The canteen administrator can access the order in real time by retrieving it from the database as a customer places it through the application. Within this program, every product in the order is shown in an easy-to-read format, along with the choices that relate to each item. This helps canteen workers to quickly go through the orders and prepared in minimal delay and uncertainty.

## II. LITERATURE REVIEW

### 1. Canteen Management System Using E-Wallet

The system in this article has the ability to take orders over the counter, via an online application, and to display them on kitchen monitors. The web application would employ JSP for the backend and HTML5, JavaScript, Boot Strap, and two other languages for the frontend. The implementation of suitable security measures is necessary to thwart attacks that exploit the 2048-bit El-Gamal encryption technique. We're going to build a web application so that orders can be placed in advance. Orders placed through Enhance will be assigned an ORDER ID, which will be utilized to expedite delivery of the order to the serving counter. At the counter, payments can be done using cash or an e-wallet.

### 2. Cashless Canteen Management System

The ultimate goal of the cashless canteen management system isto automate the manual, traditional system that is currently in place with the help of computerized equipment along with fully functional computer applications. Finding a means to eliminate this waiting period is a thing that both teachers and students are engaged in doing. Implementing a software configuration which enables the order to be projected directly onto the cafeteria monitor after it has been placed might be one method to address the problem. Because the server needs time to complete earlier orders before collecting anew receipt and setting it up in the cafeteria,

this will cut down on the amount of time patrons spend at the payment counter. By making payments via the internet possible, you can also reduce the amount of time lost waiting for change. The management of canteen, product, and sales information is the primary goal of the Cashless Canteen Management System project.

### 3. Canteen Automation System

A lot of people spend their time these days visiting the canteen and waiting for the waiter to take their order. Many customers visit the canteen during their breaks and lunch intervals so they have enough time to eat and return to their respective jobs or institutions. According to this system, they can request food whenever they want and save time by not having to continuously calling the waiter. For manual processes, such as maintaining track of various files and instructions, paperwork is necessary. It is dangerous and laborious to keep important information in the files and manuals. The project outlines the steps involved from material adaptation to developing an online environment, and it includes the framework which demonstrates the way to apply network technology gradually as skills and confidence grows. With this Canteen Automation System, customers may order food online by simply picking their desired meal using an Android application, register online, then read and select from an e-menu card. When you choose a dish from E-menu card, results will be show up on the screen next to the chef who will prepare it for you. The system is a hybrid of web applications and Android.

### III. OBJECTIVE

- To place food order rapidly.
- To make it convenient for customer and canteen person who have limited time.
- Reduces paper work.
- Reducing the time spent at the payment counter and in food counter.
- Billing mistakes can be encountered.
- Online payment option availability.
- Reviews from the customer improves the standard of food.
- Easy update or deletion of product by canteen(admin).
- Understanding the happening through dashboards.

### IV. TYPES OF USERS

#### A. Admin Login

- Take Orders

- Add / Remove products
- Update products
- Add / Remove Category
- Update Category
- Remove users
- View users
- View products
- View category
- View Payments List

#### B. User Login

- Menu items
- Place an order
- Online bill payments
- Choose category
- Search product

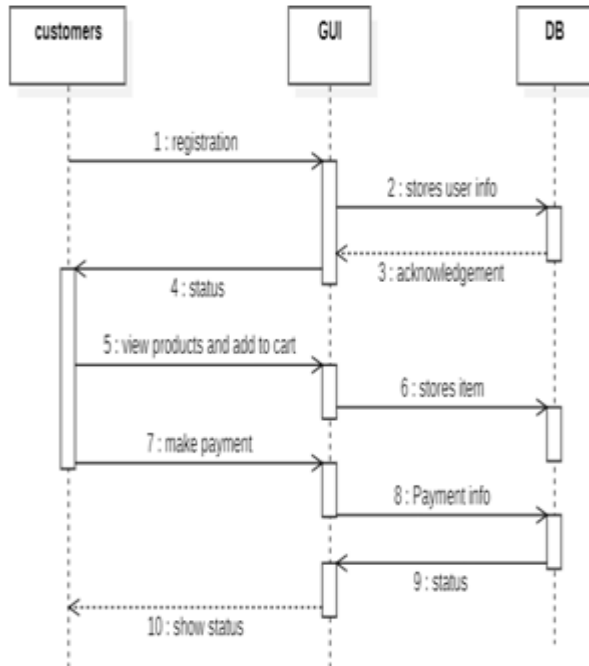
### V. SOFTWARE REQUIREMENT

- OS : window 7 and later
- Front End : HTML , CSS , JS , Bootstrap
- Scripting language : PHP
- Back End : MYSQL Server
- Web Server : XAMPP
- IDE : VS Code

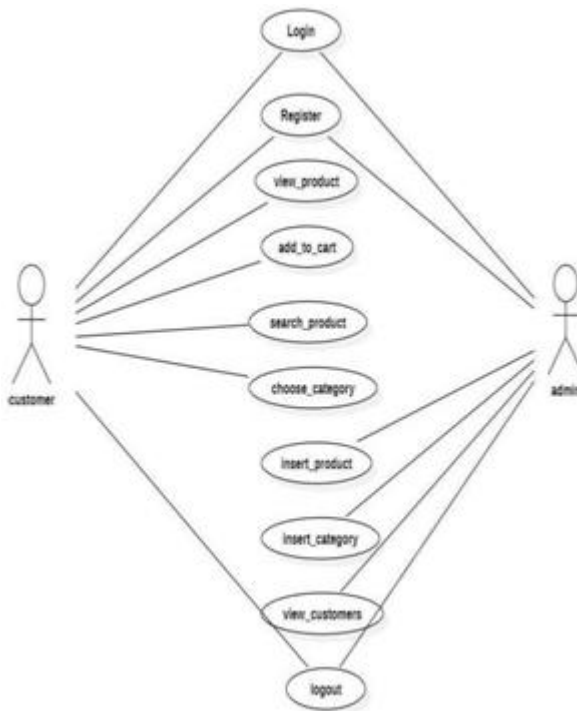
### VI. HARDWARE REQUIREMENT

- CPU Type : Intel Pentium 4 and later.
- RAM Size : 512 MB and above.
- Hard Disk : 40 GB and above.

**VII. SEQUENCE DIAGRAM**



**VIII. USE CASE DIAGRAM**



**IX. ADVANTAGES**

- Completely automated online food ordering in canteen.
- Orders can be placed through website.
- Through dashboard various details can be found.
- Individual admin and user login.

- Admin can make changes in the menu easily.
- User friendly application.
- Requirement of time is minimum.

**X. DISADVANTAGE**

- Requirement of proper internet connection.
- Requirement of System like desktop or laptop for ordering.
- Initial payment and maintenance charges .

**XI. APPLICATIONS**

This system can be used in college and school canteens , restaurants , cafeteria Etc.

**XII. FEATURES**

- **Easy Accessibility** : Record can be easily accessed , stored and other information respectively.
- **User Friendly** : The web application will be giving a user friendly approach for all users.
- **Efficient and Reliable** : It will be much more efficient to maintain a secure database on the server that is accessible to users as needed and incurs no maintenance costs than it would be to store all of the client data on a spreadsheet or in physical record books.
- **Easy Maintenance** : This canteen automation system is designed in easy way , thus the maintenance is also easy.

**XIII. CONCLUSION**

A number of stages went into developing the Canteen Automation system. The first stage commenced with an in-depth evaluation of the challenges as well as possibilities associated with ordering in Foods. Throughout the investigation, a number of flaws have been discovered to have compromised the effectiveness of the current manual approach. Following their documentation, these issues, requirements for information, and behaviors served as the foundation for the architecture of the system. Flexibility of the user interface for both admin and user was the primary goal of the design process. A software was created and tested in Visual Studio and XAMPP to implement the design.

Users of the program are not required to be highly educated to get the most out of it because of its user-friendly interface, which makes it uncomplicated to use. Because he can keep an eye on everything that is happening in his company, the administrator has more control over it. There is not anymore any need to mislead information regarding the quantity of food products that are frequently sold according to

the completely automated system. This paper addresses the issues of the institution canteen business and, in the end, offers a practical solution.

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