

Canteen Management System

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Abstract - The conventional approach used in canteens has many shortcomings, and the way that they are currently run wastes a lot of time.

In a canteen, everything is done by hand. The manual process of taking cash, computing credit, and keeping credit records is no longer an effective way to run a business.

A canteen management app is suggested as a solution to this issue; it will be an online platform where users can place orders from their institution's office canteen without actually going inside the canteen.

Key Words: Food, Ordering, Menu, Recipes, Android App

1. INTRODUCTION

A canteen facility is an additional service that businesses offer to their employees. Many workers in an organisation rely on canteen services because they lack the means or access to prepare their own food. Manual procedures cannot manage a canteen in organisations with a large employee base. To manage a sizable organisational workforce, they need a centralised canteen management system that encourages effective operations. Our canteen management system offers a welcoming User Interface, menu design, billing features, and many other features for numerous food outlets.

2. Literature Survey

2.1 Real-time process management system in a restaurant by sharing food order information

Restaurant POS systems were created to eliminate the processes involved in handing off customer orders from the service staff to the kitchen staff. Order data is stored and managed by table by the POS system. A small order-entry device, which the server uses to input information when they receive an order, transmits that information to the POS terminal. Following that, the POS terminal sends the data to the kitchen, where each order is printed on a printer by table. The kitchen staff members check a few sheets before beginning to prepare. When they're done, they give a server the dishes and sheets.

However, to increase efficiency, kitchen staff members frequently count the number of similar dishes regardless of tables and prepare them all at once in real restaurants. The preparation procedures are still based on their prior knowledge.

In this way, information presentation issues are presented by traditional POS systems. Additionally, they are unable to support the temporal management of the preparation and servicing processes.

We extended POS systems used in restaurants to create a new system for the reasons mentioned above. It focuses particularly on the management of services' real-time process. The system's concept and features are then introduced.

2.1 Content-Based Filtering Algorithm for Mobile Recipe Application

The collaborative filtering algorithm uses the preferences of other users with similar interests to predict another user's interest. Unlike content-based filtering, collaborative filtering can recommend an item by combining the opinions of other like-minded individuals without understanding what the item is about. For example, person X likes to watch movie A, movie B and movie C, while other users like to watch movie A, movie B, movie C and movie D. As such, the system will recommend movie D to this person X because of the interest and taste in movies that they share. Through this technique, users can discover new items that are within their interest but were previously unknown. The opinions of users can be obtained explicitly and implicitly through the rating given by users, which can be used to further improve the technique. Such systems exist for online food store recommendation as was, where users are aggregated based on group labels as well as their purchasing habits.

3. Existing System

The current system is based on cash and paper. Due to the requirement that the customer pay the exact amount and wait for the change, the transaction and process take a long time.

If there is no change on hand at the time, a coupon is given, which must be presented at the register when making the next purchase.

The current canteen management system is inefficient, time consuming and is prone to mistakes.

Lots of time is wasted using the traditional way canteens are being operated. Everything is done manually like taking cash, calculation, record keeping of credit which in today's daytime is an inefficient way to operate business.

4. Proposed System

This device is usually high quality for fending off spending time ready with inside the queue via way of means of posting orders without delay to the kitchen immediately and additionally via way of means of scheduling orders beforehand of time. It saves time and additionally the method coping with is easy. The proposed Canteen Management System is an adept answer for chaos at university canteens. Highlights of cloud as an instance auto-scaling, load adjusting and pay as you go enhance the running of the device and to a point resolve the motivation in the back of the proposed device.

4.1 Overview

The proposed app works in the following manner

- The user has to first register itself on the application.
- The admin updates the user's wallet based on the amount that the user pays.
- There is a minimum amount that has to be present in the wallet so that the user account is active.
- Every time a user is using the app, he has to login.
- Once logged in/registered the user will be taken to the app home page.
- The home page will have different options such as Beverages, Snacks, Veg and Non veg main course.
- The home page will also have the option to view the cart, history and also change the user's information.
- Once food items are clicked on, they will be directly added to the cart where you can buy all the items at the end together.

- If the amount of cash in your online wallet is less than your total order amount, the order wont be placed.
- If the wallet has sufficient amount the order is placed and user is notified.

4.1.1 Login/Signup

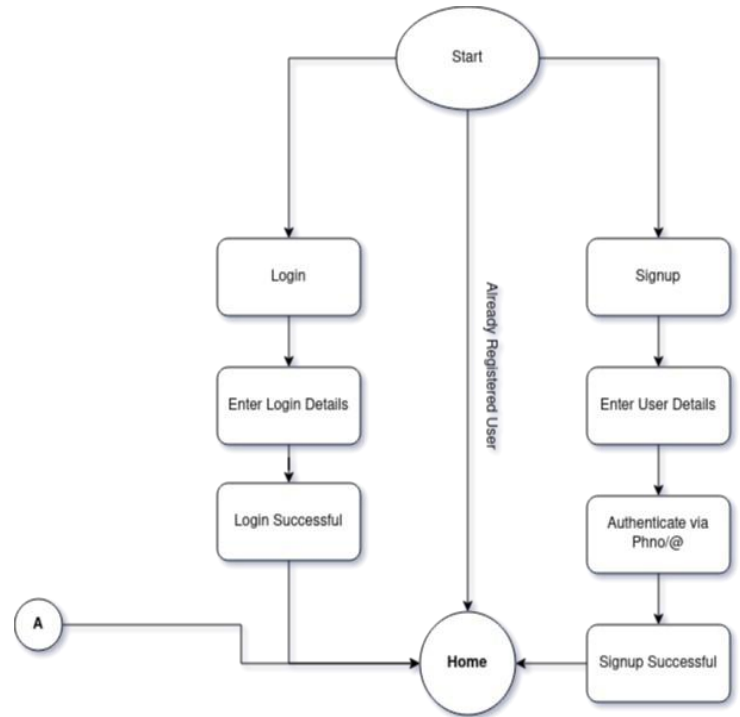


Fig 1 Login/Signup

At the start of the app if the user is new he will have to register by signing up on the application. If the user has already been registered he will have to log in to the application. Once this is done the user will be directed to the home page.

4.1.2 Order Placement

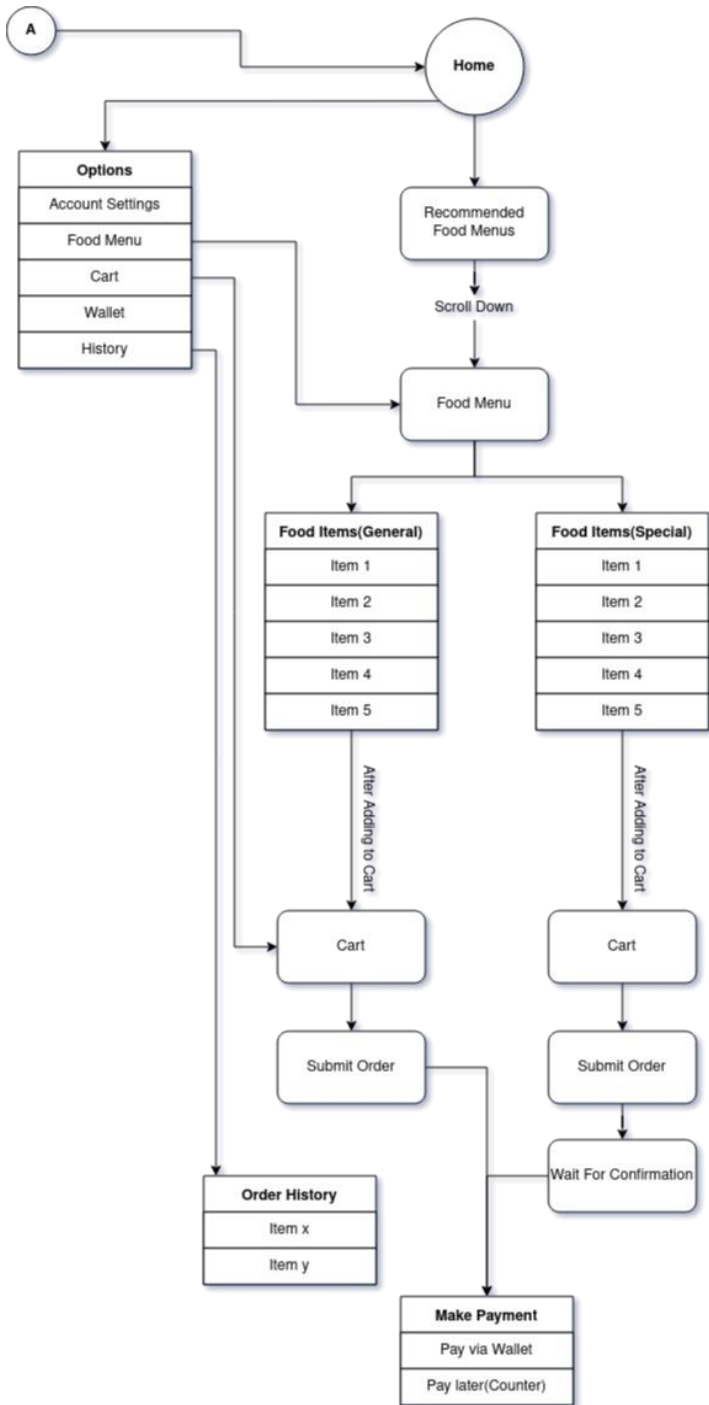


Fig 2 Order Placement

With this app, when the user logs in he will be redirected to the home page where he will be able to select from different categories of menu. From the menu user will select food items which he wants from the menu. After the selection of food items the user is directly taken to the cart, where user will be able to see all the food items ordered, total amount to be paid. Once

the user places its order, he'll then receive a confirmation if the order is accepted and the timer will start which shows a approximately how much time it will take for the fooditems ordered to be ready.

From the home menu user can also check out his/her order history and check the wallet balance and update other account details.

4.1.3 Admin Side

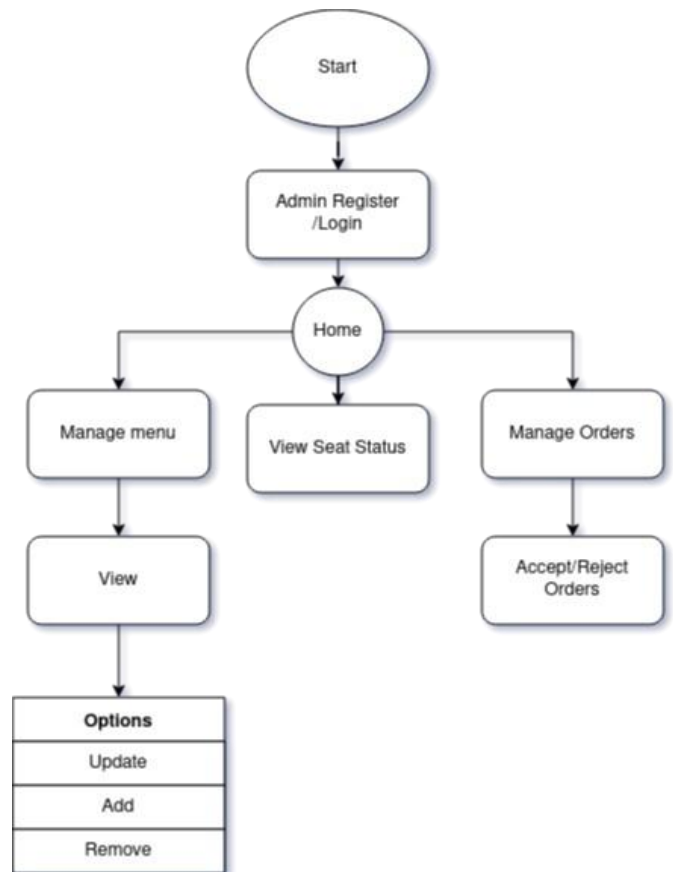


Fig 3 Admin Side

The admin once registered will have mainly three features that is

- Managing menu where the admin side will be able to add, delete, or update the items present in menu.
- Admin will be able to check the status of the seats which are available in the canteen.
- Once the user places an order the admin will have privilege of accepting or rejecting the orders.

4.1.4 Timer

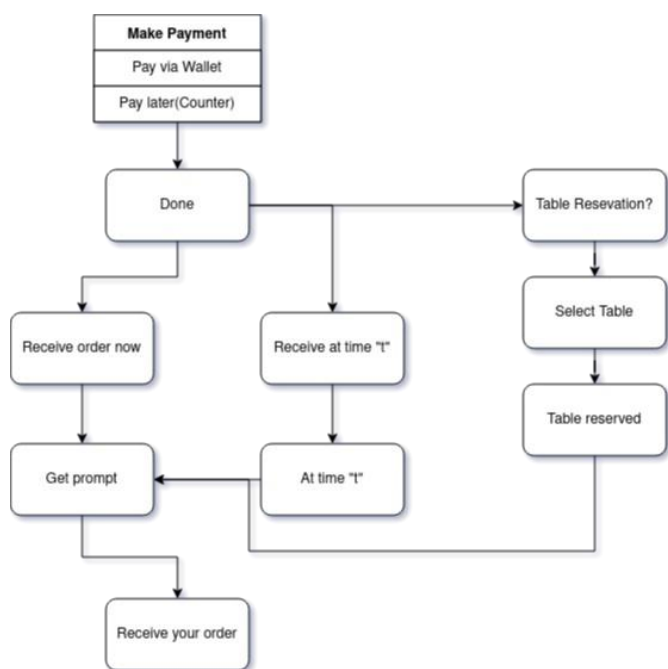


Fig 4 Timer

Once the user places an order and makes the payment, user will get the approximate time of the order that is placed.

From here the user can select the seat if available. Once the timer is over user will receive the order.

5. Conclusion

This application is efficient in maintaining customer's details and can easily perform operations on customer's records and also works to handle the information of the products available in a canteen. It also saves a lot of time and reduces the chances of any error that were possible with the earlier system. This application also reduces the work load of the canteens.

6. REFERENCES

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