International Journal of Advanced Technology in Engineering and Science
Vol. No.4, Issue No. 10, October 2016
www.ijates.com
ijates
ISSN 2348 - 7550

MOBILE APPLICATION FOR COLLEGE CANTEEN

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ABSTRACT

A mobile app is a computer program designed to run on mobile devices such as smartphones and tablet computers. Most such devices are sold with several apps included as pre-installed software, such as a web browser, email client etc. This mobile app will provide convenience for the customers. It overcomes the disadvantages of the traditional queuing system. In traditional system the customer has to wait in a queue for his order to get processed. The traditional approach of canteen management is keeping a register of issue and usage, calculating monthly consumption of each employee and deducts the same from their salary, no prior information of the required amount of food, searching for loose change when there is a long queue. NFC ordering has a number of benefits as well. These include reduced wait times for patrons, easier transactions, enhanced customer analytics and the ability to make real-time decisions regarding seating, staffing and specials. In this application, an id and password is provided to each user. With a menu online you can easily track the orders, maintain customer's database and improve your food delivery service. This system allows the user to select the desired food items from the displayed menu. The user orders the food items, pays for it and receives an order id. The user details maintained are confidential. This online system enhances the speed and standardization of taking the order from the customer. It provides a better communication platform. The user's details are noted electronically. The mobile app will be set up with a menu online and the customers easily place the order via the app.

Keywords—Canteenmanagement,Communication Platform,Mobile App, Real-Time Decisions.

I. INTRODUCTION

Today we are living in an age where our thinking is not possible without Smartphone's or electronic gadgets. Mobile apps allow customers to have all your information at their fingertips. They offer a much different user experience as well. App platforms have evolved and significantly and costs have plummeted. There's no need to get an application programmed from scratch anymore. College Wi-Fi also is available freely. Traditionally in a canteen we stand in a queue and place our order. It keeps a register of issue and usage, calculating monthly consumption of each employee and deducts the same from their salary, no prior information of the required amount of food, searching for loose change when there is a long queue. There is a lot of inconvenience caused.

II. CWOS-RTF

The Customizable Wireless Food Ordering System with Real-time Customer Feedback (CWOS-RTF) enables restaurant owners to build the system in wireless environment and update menu presentations .Smart phone has been integrated in the CWOS-RTF implementation to facilitate real-time communication between restaurant owners and customers. The above figure shows a setting up of the system that allows access to the server via

Internet access. It provides the flexibility for the customers to make order prior to their arrival to the restaurant[1].

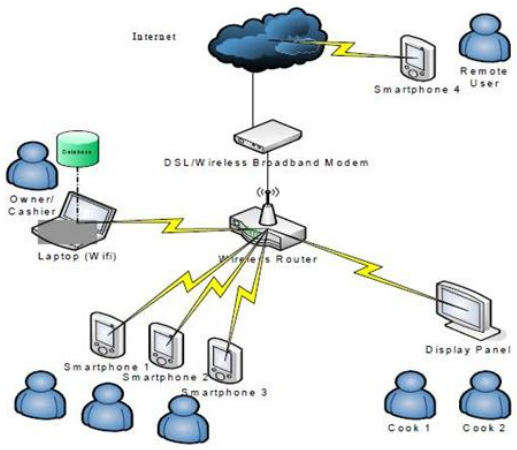


Fig1. The system architecture of CWOS-RTF [1]

2.1 MEMS

Multi-touchable E-restaurant Management System (MEMS) aims to improve the dining table service. The MEMS consists of the multi-touchable interactive menu that allows customers to view and order food on top of the dining table by using their fingers and the orders will be transmitted directly
to the restaurant's server in real-time. The MEMS allows different staff personnel to access the centralized server to perform daily works digitally in a systematic workflow [2].

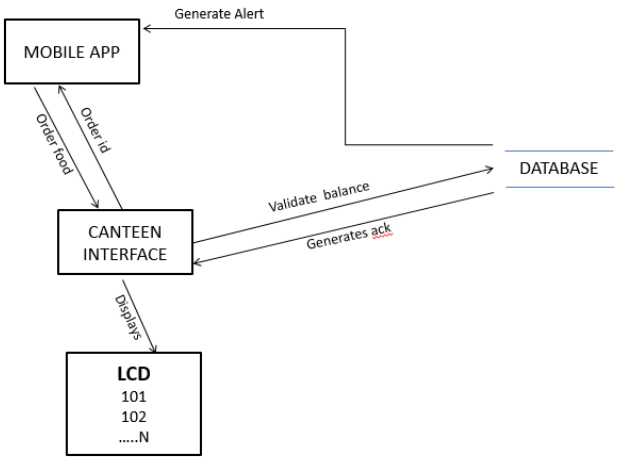
PDA

A personal digital assistant (PDA), also known as a handheld PC, or personal data assistant, is a mobile device that operates as a personal information manager. The term evolved from Personal Desktop Assistant which is a software term for an application that prompts the user with suggestions or provides quick reference to contacts and other lists. PDAs were largely discontinued in the early 2010s after the widespread adoption of highly capable smartphones, in particular those based on iOS and Android. [5]PDAs orhandhelds or palmtops have evolved over the years. The devices manage your personal information like contacts, appointments and to-do lists. These devices can also connect to the Internet, act as global positioning system (GPS) devices, and run multimediasoftware. Nowadays manufacturers have combined PDAs with cell phones, multimedia players and other electronic gadgetry. [4]

A PDA has an electronic visual display which enables it to include a web browser. All models also have audio capabilities enabling use as a portable media playerand mobile phones. Most PDAs can access the Internet, intranets or extranets via Wi-Fi or Wireless Wide Area Networks. Most PDAs usetouchscreen technology. The main purpose of a personal digital assistant (PDA) is to work like an electronic organizer or day planner that is portable, easy to use andalso capable of sharing information with your PC. [5]

The Palm TX [6]

III. PROPOSED SYSTEM



Architectural Design

This design provides a user friendly system that facilitates quick and efficient operations to cover large section of students and staff within a specified time thus to ensure simple operations with easy installation procedures, satisfied customer base and achieve reduction in wastage of food items. The usage of canteen by the students depends on many factors like centralized food distribution with swift and simplicity in operations. User logs in through the mobile app and browses the menu. User places an order via the app. Canteen interface validates the balance with the database. If the balance is low, then user is notified with a low balance alert. An acknowledgement is generated, if there is a sufficient balance in user's account. Canteen interface then provides the user with an order id. User can collect his food order as per the collection time provided by the user. After the order is ready, order id is flashed on the lcd screen.This design provides a user friendly system that facilitates quick and efficient operations to cover large section of students and staff within a specified time thus to ensure simple operations with easy installation procedures, satisfied customer base and achieve reduction in wastage of food items. The usage of canteen by the students depends on many factors like centralized food distribution with swift and simplicity in operations.

1. User logs in through the mobile app and browses the menu.
2. User places an order via the app
3. Canteen interface validates the balance with the database.
4. If the balance is low, then user is notified with a low balance alert.
5. An acknowledgement is generated, there is a sufficient balance in user's account.
6. Canteen interface then provides the user with an order id.
7. User can collect his food order as per the collection time provided by the user.
8. After the order is ready, order id is flashed on the lcd screen.

IV. RESULTS AND ANALYSIS

4.1 System Specifications

The system is designed using the JAVA programming language. We have used android technology (Android Studio) to design the user interface. The database is designed using SQLite. Wi-Fi (wireless Fidelity) is used to send information and retrieve data. We have used Android Lollipop as the working platform; the system is compatible with all higher versions of Android OS.

Results

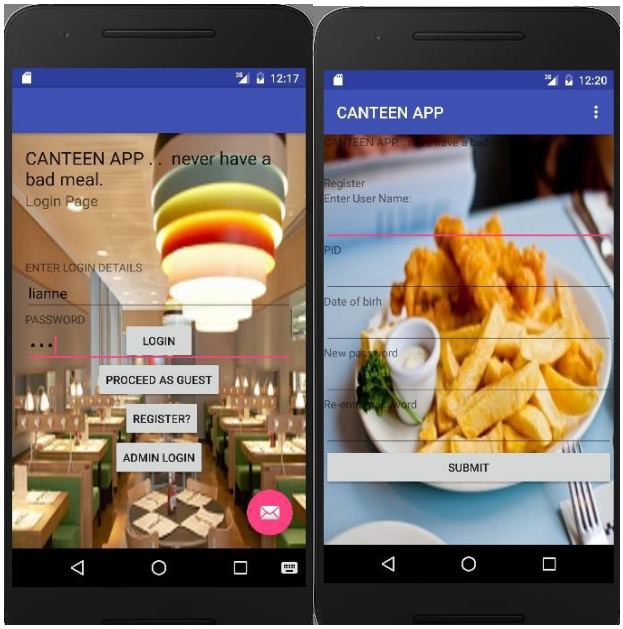


Fig3. Registration and Login

International Journal of Advanced Technology in Engineering and Science
Vol. No.4, Issue No. 10, October 2016
www.ijates.com
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ISSN 2348 - 7550

Fig4. View menu and place order

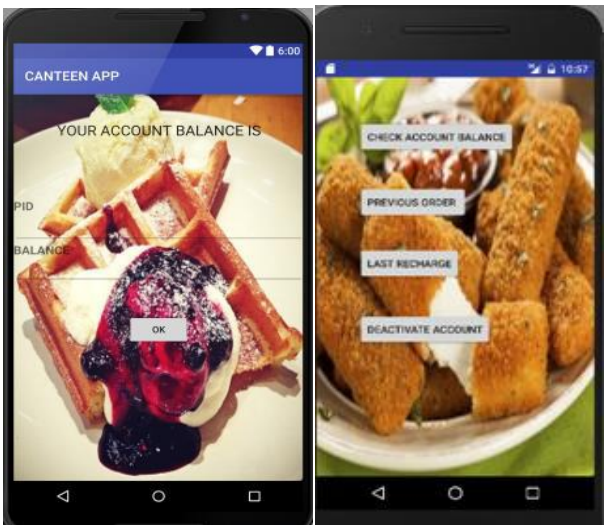

Fig5. Payment and Account

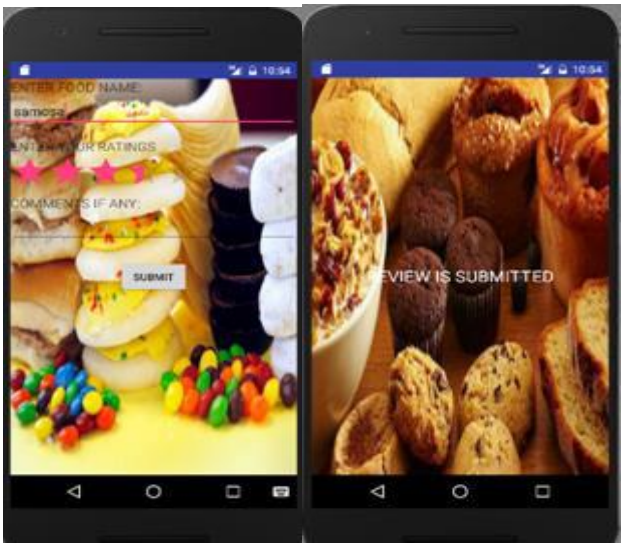

Fig6. Review Tab

Fig7. Admin Login Tab

v. CONCLUSION

Thus we have designed a system which eliminates the limitations of traditional food ordering system in canteens. Traditionally we stand in a queue, place our order and wait for the order to be ready. Using the application a student can place an order at any time and any place using college Wi-Fi in the campus. Thus it improves the quality of service through smart and innovative technology. This system can be used in restaurants, corporate canteens, etc. This system is convenient, effective and easy thereby improving the performance of canteen. It will also provide quality of service and customer satisfaction. This is a food ordering system for the canteen, made by combining Android and Wireless technology.

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https://en.wikipedia.org/wiki/Personal_digital_assistant#/media/File:PalmTX.jpg