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Android Based E- Wallet Canteen Billing System

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ABSTRACT

According to the Mobile Payment Forum, mobile payments are the transactions with a monetary value that is conducted through a mobile telecommunications network through diverse mobile user's devices, such as cellular telephones, smart phones or PDAs, and mobile terminals. Mobile payment is a transfer of funds in return for goods or services in which a mobile device is functionally involved in executing and confirming payment. The payer can be standing at a POS or be interacting with a merchant. Mobile payment systems enable customers to purchase and pay for goods or services via mobile phones. Here, each mobile phone is used as the personal payment tool in connection with the sales. Payments can take place far away from both the recipient and the wallet of the payer. This paper gives an overview of mobile payments to the canteen owner of the specific college to which the main customers are the students and the staff members of that particular college.

All types of the transactions in the college canteen are only through the cash payments and the credit system supported by the owner. But the major drawback of this system is that the students has to carry the cash with them for all time to avail the facility of the college canteen. To avoid this, we are going to develop a system which is a prepaid system and helps to both i.e. canteen owner and his all customers. The virtual cash is available in the wallet of every customer and he/she will use this cash for billing of the canteen. For that he/she has to recharge his/her account by advanced payment to the canteen owner. Through this app any person who is interested in availing the facility of the canteen can easily use this application without borrowing any cash with him/her.

INTRODUCTION

1.1 Project description

Traditional canteens are based on pen-paper records, cash, manual calculations and manual record keeping of credits which in today's time in an inefficient way to operate a business. We aim to accomplish this task by creating a web application for managing the canteen menu and orders. The proposed application is mainly beneficial for reducing the time wasted waiting in the queue by sending the orders directly to the kitchen, placing orders in advance & by providing a prepaid wallet facility which saves time spent in tendering change. We offer quality solutions to students in the form of Canteen Management software, which can be used in many large- or small-scale canteens.

1.2 Problem statement

Initially by observing the existent working and billing system it is decided that to create a system based on android which simplifies the billing system of the canteen.

1.3 Scope

First activity in app development Project Planning is the determination of the app development Project Scope. Function & Performance allocated to app development during system Engineering should be assessed to establish a Project Scope that is understandable and unambiguous. App development Project Scope describes function, performance, constraints, interfaces & reliabilities. Functions describe in the statement of scope are evaluated. Performance considerations encompass processing and response time requirements. Constraints identify limits placed on the app development by external

hardware, available memory or other existing systems. Our aim is to develop user friendly & secure system. It provides powerful mechanisms for solving difficulties of cash handling. It will be easy to use our application. Our app fulfills all requirements of the user. Using our app students can be free up of handling the pocket money with them for all the time also canteen owner can get all money as prepaid amount in his hand and will be free up from the credit policy according to his requirement, within time.

1.4 Objective

Our objective is to build a mobile application which will help the canteen owner and all the beneficiaries availing the facility of the college canteen.

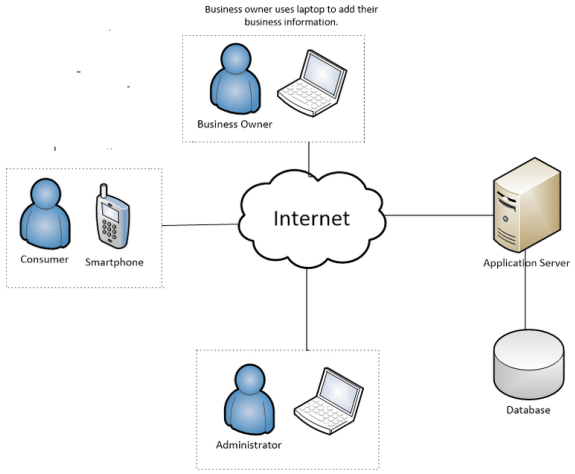
EXISTING SYSTEM

The current system of the canteen management is not computerized. Because of this existed system there are many problems faced by students and canteen management team. The problems are stated as follows:

1. In college canteen, lot of time is wasted in queues for paying bill at bill counter.
2. Some time it is not possible for the canteen management team to take immediate cash of orders on time because of the crowd, as a result of this recess time gets over and students may miss the particular lecture or practical or they will be late for their lectures or practical.
3. Also there are some problems regarding to payment system such as no change available.

PROPOSED SYSTEM

To overcome the problems faced by existing system, we proposed a complete computerized canteen management system to order food online through android application so that the preparation of food may begin before the students reach to the canteen. The online ordering feature shall be available to users who are registered and logs in only and have a valid balance in their E-wallet. There are two modes of payment, E-wallet and Cash on delivery. Online orders can be paid only through E-wallet. Since the E-wallet is prepaid it needs to be recharged at the counter by paying cash to be able to use. Recharge function is available in administrator side who is the owner/cashier of the canteen. When user goes for billing option he can easily made payment by simply login to application and by putting the transaction password, “BILL PAID SUCCESSFULLY” shall be displayed on the user screen. When the billing is done its status is updated. When the status of the bill is updated to “COMPLETE” it goes off the screen. The system provides the recording function for every process of the billing in order to keep track of the blood stock accurately.



REQUIREMENTS

- **HARDWARE REQUIREMENT**

  Processor : Intel CORE i3

  RAM : 4 GB

  Hard Disk : 64 GB

- **SOFTWARE REQUIREMENT**

  Operating System: Microsoft Windows-7.

  Software Package: SDK and Android Studio, XML, MySQL, PHP

BASIC

The main aim of this project Canteen management system is to provide fast services to their college students, Staffs etc. Usually People have to go to canteen and order the foods and they have to wait in queue for a long time to pay the bills. But with the help of this you just have to follow a very simple process to pay your bill. And you need not to wait in the long queue. This application will provide the list of different menu list with different categories. User can select any item from canteen and can order for it by using wallet Payment. Wallet Recharging available with debit card details or admin can add amount in user's wallet. Users must register with valid details which will get login with canteen. Users also get recommendation for food items, Trending food items. Canteen Management system manages the all details of food items which contains name, description, image, price etc. Admin can update the menu available in the canteen. Customer can check their balance, order history and able to delete the order according to order status.

FEATURES OF PROPOSED SYSTEM

Customer does not have to wait in long queue.

1. This proposed system reduces the paper work.
2. Simple recharge of e-wallet.
3. Customer does not have to worry about food item.
4. It is easy to handle student/staff record for future.
5. This system saves the time.
6. Also very useful for students in exam period.
7. Information of the user stores permanently.
8. Reduces human error in accounting.
9. Services are provided quickly.
10. Does not contain online TAX, GST, etc.

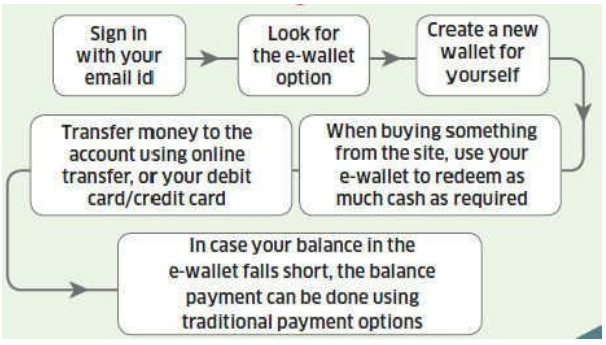
SYSTEM ARCHITECTURE

1. Admin- Canteen person need to login using valid login credentials in order to access the Application.

- Add / Manage Items- Can add new food items with details such as name, image, cost, description, etc. and also can manage added details.
- Add Wallet Balance- Canteen person can add balance in student's wallet.
- View / Update bills- Can view all the canteen bill payments received from the student.

2. User-

- Register- Student need to register first with basic registration details and need to create a valid login id and password.
- Login- Student need to login using their valid login credentials in order to access the application.
- View Items- All the food items will be displayed to the student at once with description and cost.
- Pay Bill- Single or multiple food item can be taken by the student and will pay the total bill by scanning the QR code. After paying bill the amount will be debited from the E-wallet.
- Refill Wallet- Student can refill their own wallet anytime.



DATABASE

The Database has been created in PHP Admin, in SQL format. The Database plays an important role in this project as it is responsible for registering customers details i.e. assigning the usernames and password i.e. their personal information. The Database is also responsible for sending OTP to the customers at the time of registration.

APPLICATIONS

1. College Canteen
2. Office Canteen

ADVANTAGES

- This paper discusses the crowded canteen issue and finally proposes a working solution for the same. It further discusses the importance of the payment using E-Wallet.

  - Our project provides easiest way of billing.
  - It does not require any cost.
  - Easy way to billing with a single click.

CONCLUSION

This paper discusses the crowded canteen issue and finally proposes a working solution for the same. It further discusses the importance of the payment using E-Wallet.

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