

Canteen Ordering System with Daily Update of Calorie Consumption Report using Cloud Computing

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ABSTRACT

In Traditional Canteen Ordering System, Customers face many problems like lost account details, less security, problems with manual working etc. The objective of the Canteen order website is to overcome the disadvantages of traditional ordering system. It provides Calorie consumption report of customer, more flexibility, and reliability. This paper provides an overview of new techniques used in Canteen Ordering System such as Cloud Computing.

Keywords : Web Browser, Cloud Computing, Payment mode, Calorie Report, Frequent order, Diet Plan.

I. INTRODUCTION

Easy Canteen Ordering System can increase the efficiency of daily business transaction perform in canteen by computerizing the entire current system? With this new system many of existing business process such as total calculation of amount, Orders taking is done with user id of system. This not only saves the time, but also it is error free provided given the correct input. This system provides user Id and password for secure access from server side. It provides Calorie report to the customer with respect to their daily orders. User can give order for more than one day such as two day or five day. For fast access, it sets priority of food item in the order list and provide to the customer as per their convenience. It also provides frequent order list to customer with their daily calorie report as per their daily order.

II. METHODS AND MATERIAL

A. Literature Survey

We studied the following IEEE paper.

1. **IN-Time Billing process for canteen managemet system[1].**

Publication

Held on June 13, 2015 inSV college of engineering ,Tirupati

Author: 1.B Muniraja 2.J.Rajanikanth

Technology

Micro controller, Power supply,Matrix Keypad,RFID Reader,PIR Sensor,Real Time clock,2*16 LCD display

Advantages

- Measures the passage of time to maintain a calendar and clock.
- Ultra low power design to support battery powered systems.
- Provides seconds,minutes,hours,
- Day of month, month,year,day of week,and day of year

Disadvantages

- This system is costly because the use of ultra-low power designs.
- Data is stored in local database

2. **Automated food ordering system with real-time customer feedback [2].**

Publication

International Journal

of Advanced Research in Computer Science and Software Engineering Research Paper (www.ijarcsse.com),
Issued 2,February 2013.

Author: 1.Shweta Shashikant Tanpure 2.Priyanka Shidankar

3.Madhura M.Joshi

Technology

AOS-RTF,

Andoid 2.2.3 Gingerbread,MySQL

Advantages

- It combines wireless technology and android mobile OS to automate food ordering process.
- It eliminate or at least minimize the flaws in conventional system by Automating the Food Ordering System in restaurants.

Disadvantages

- It implements real-time feedback between restaurant owner and customer about order status.
- Requires more security because of wireless technology.
- There is no authentication service is provided.

3. Digital Ordering System for Restaurant Using Android[3].

International Journal of Scientific and Research Publications ,Issue 4, April 2013

Author: 1.Ashutosh Bhargave, 2.Niranjan Jadhav , 3.Apurva Joshi, 4.Prachi Oke, 5.Prof. Mr. S.R. Lathe

Technology

Android version 2.2.3,Java Se 6 programming language, Eclipse Indigo, JSP/SERVLET, SQLite

Advantages

- Wastage of paper is avoided as our implementation is working just on tablet and does not need any paper work e.g. for taking the order, we are not using papers.
- Also, our menu card would be digitalized.
- A customer going into restaurant does not has to wait for the waiters to take the order. As soon as he occupies a seat, he would order whatever he needs.
- As soon as the order is ready, it would be notified to the customer .So, there would not be any issue Of late delivery in spite of the food being ready.

Disadvantages

Tablets would cost us more as they are more costly the simple paper; hence it would cost us more.

Common Problem with Manual Working

This section concludes the common problems which are occurring with using manual manner as seen in many of the cases in the current system. Since many of the processes are completely done through manual mean, therefore it exhibits the common problem of manual works. First, manual workings are less sufficient. For example, processes such as staff retrieval or payment are slow and time-consuming. Second, manual workings tend to generate incorrect outputs due to mistakes done by human, especially mathematical calculation. Besides, manual system is having difficulty in generating useful reports such as monthly report or order by restaurant report which are helpful and essential in decision making. More importantly, most of the critical information such as order and sales are kept in physical document and the consequence will be severe to have lost these valuable information [4].

Canteen Ordering

When taking an order for staff or customer, the order taking canteen staff might miscalculate the total of order. Besides, the staff also needs to remember whom,whose orders belong to otherwise there will be confusion .

In addition, since the canteen order payment is done through coupon , so there is chance that the staff might forget to issue coupon or the customer might lose their coupons on their way to make payment .

Canteen Order Payment

Although there are many counters available in canteen, but during peak hour , the queue for payment can be long and cashiers will be occupied serving customer. Hence, increase the opportunity for cashier to make errors. Besides, cashiers need to ensure that there is a enough change for numerous transactions in one day.

B. Objective

1. Efficiency Improvement

This system can increase the efficiency of daily business transactions performed in the canteen by computerizing the entire current system. With this new online system, many of the existing business processes such as total calculation, orders taking are done with the aid of this. This not only can save time, but it is also error-free provided given the correct input.

2. Sales Improvement

This new system can bring greater profit for canteen as it can enhance the efficiency of the daily business processes, generate useful reports which user Id in decision making, and so on. The current business processes can be speed up and done accurately by upgrading it. Thus, more businesses can be supported at one time and a direct rise in canteen sales could be anticipated.

3. Business Expansion

A computerized system is the basis of any large business as it can accommodate numerous of business a large company has. With this system Canteen business can be expanded exponentially since it can cope with gradually increased business transaction in future by speed up daily business process and also achieve higher throughput of business transaction. In addition this system can be design in such a way that it scalable to cater the owner future growth.

III. RESULTS AND DISCUSSION

PROPOSED SYSTEM

A. Cloud Computing

To overcome the drawbacks of traditional system and to provide the customer efficient canteen ordering system , we propose this system using the Cloud Computing technique. Cloud Computing provides us means of accessing the applications as utilities over the internet. It allows us to create, configure and customize the applications online. Cloud Computing refers to manipulating configuring and accessing the hardware

and software resources remotely. It offers online data storage, infrastructure and application. Cloud computing offers platform independency, as the software is not required to be installed locally on the PC. Hence, the cloud computing is making our business applications Mobile and collaborative [5,6].

B. Algorithms

1. Algorithm for setting the priority of food items

STEP 1: Start
STEP 2: Create array 'a' of size 10
STEP 3: Give input 'x'
STEP 4: for(i=0; i<=4 ; i++)
 a[i] = x print sequence = i i++
STEP 5: do{
 switch(sequence)
 case 0 :count++
 case 1:count++
 case 2:count++
 case 3:count++
 case 4:count++
 }while(i=4)

2. Algorithm for setting the priority of food items

STEP 1:START
STEP 2: Customer order any entity say "input"
STEP 3 :Extract quantity of protein, carbohydrates, fats getting from entity "input" from master
STEP 4: Initialize p=0, c=0, f=0
STEP 5:Applying algebraic sum on quantity of proteins,
$$N$$

i.e $\sum_{i=0} (p,pi)$
STEP 6:Applying algebraic sum on quantity of carbohydrates,
$$n$$

i.e $\sum (c,cj)$
$$j=1$$

STEP 7: Applying algebraic sum on quantity of fats,
$$n$$

i.e $\sum_{k=1} (f,fk)$
STEP 8: P= 4 * pi
STEP 9:C =4* cj

STEP 10: F=9* fk
STEP 11: Print P, C, F
STEP 12: Stop

C. Modules

1. Canteen Order Management Module

User Requirement

In this module, users are able to order their food and cancel their order if necessary.

System Requirement

1.1 Add Order

Input: Customer provides his order information to the order taking staff who will then enter it into the system. Validation check will be performed on inputted data to ensure the accuracy of the data. An error message will be prompted if there is any incorrect input data.

Process: System will calculate the total amount for the order and then put the order in a queue.

Output: A new order is finished added.

1.2 Order Sequencing

Process: For a newly added order, system will dequeue it based on first come first serve basis into a queue which will be cooked by the chef after all of the orders in front of it have been served.

Output: The new order is added to the queue.

1.3 Delete Order

Input: Search order process will be initiated first.

Process: Staff can now delete the selected record by clicking the provided delete button. A confirmation window will be prompted to ask for user's final decision.

Output: The selected record is deleted from the system with a successful message indicate its removal.

1.4 Total Calculation:

Process: System will retrieve the piece of a food for a particular order item in an order and multiply it with the quantity ordered for this order item in this order. The total is then added with the order item in this order. This process continues until all the order items in an order are covered.

Output: The total amount of this order is displayed on the right field by the system.

1.5 Add Payment:

Input: Canteen management inputs the payment information which will be validated into the system. If these information are proved to be false, an error message will be printed to ask user to re-input.

Process: These information inputted are storing into the system.

Output: When the addition is done, system will display a dialog to the user which contains the summary of the action.

1.6 Post Payment

Input: System will advance the search process first.

Process: User can now choose to post this payment by clicking the pay button provided. Before the actual posting, system will display a dialog to get user's affirmation.

Output: A window will be shown to notify the user that the record is posted and cannot be altered or erased from the future.

2. Customer Maintenance module:

User Requirement

This module stores and maintains the customer details such as name, phone number etc. which can be used as reference for contacting the customer.

2.1 Add Customer:

Input: Customer information is being entered into the system. A validation check will be performed on it before the actual storing the data. If there is any error found during data validation, an error message will be printed.

Process: New customer information will be stored into the system.

Output: System will display a dialog to inform the user that the new customer information is being successfully stored.

2.2 Edit Customer:

Input: Customer information where the user wishes to delete will be searched first.

Process: User can now edit the fields which he would like to modify. Other unchangeable fields are showed as read-only. A meaningful message will be printed to correct the user if he makes a mistake in changing the fields.

Output: System will stored the modified record and a window will pop out after the storing is complete.

2.3 Delete Customer:

Input: The desired record will be searched first.

Process: By clicking the delete button, a dialog will pop out to ask for user's confirmation.

Output: System will delete the record from it and display a message after its removal.

3. Order Maintenance module

User Requirement

This module keeps track the catering order of the customer such as make order, changing order and cancel order.

System Requirement

3.1 Add Order:

Input: User will enter the order information into the system and before storing the data, a validation check will be carried out and if the inputted data is incorrect, a dialog will be prompted to warn the user.

Process: A new order record is storing into the system.

Output: System will display a message after the record is correctly saved into the system.

3.2 Edit Order:

Input: System will search for the record which a user wants to edit.

Process: User can now start to modify the order but its unchanging fields are left intact. An error message will be printed to alert the user if he makes an inappropriate change.

Output: System will update this record and display a dialog after the update is finished.

3.3 Complete Order:

Input: The order which will be completed is searched first.

Process: User can now complete the order by selecting the "completed" status from the combo box and save the record.

Output: A window will be prompted to notify the user that the order is marked "completed" and cannot be modified and removed anymore.

3.4 Cancel Order:

Input: Record which the user wishes to remove will be searched first.

Process: When the record is found, user can cancel this record by selecting the cancel status.

Output: The order is cancelled and a message will be printed as the summary of this process execution.

3.5 Total Calculation:

Process: System will calculate the total amount of an order based on the predefined algorithm. That includes order item and its quantity, service charge, etc.

Output: Once the total amount of an order is calculated, it will be displayed in the corresponding field.

3.6 Add Payment:

Input: Payment details are entered into the system it will be validated to ensure accuracy. If the inputs are faulty, system will print a dialog on monitor to grab user attention to the error.

Process: System will create a new record to hold the new payment.

Output: New payment is stored with a successful message print to the user.

3.7 Post Payment:

Input: System will search the payment a user wants to post.

Process: User will click the button to post this payment and a dialog will be displayed to get user's affirmation.

Output: Payment is considered posted and henceforth cannot be amended and erased from system.

IV. CONCLUSION

It will overcome the issues related to traditional Canteen management system and provides scalable and reliable Canteen Ordering. Also generates calorie report which is helpful to customer to know daily intake of calorie. It provides frequent ordering list for fast ordering. And all data will be stored on cloud.

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