



Online Cafeteria Management System

A Report for the Evaluation 3 of Project 1

Submitted by

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BONAFIDE CERTIFICATE

Certified that this project report “Online Cafeteria Management System” is the bonafide work of “Akash Sharma” who carried out the project work under my supervision.

SIGNATURE

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Abstract

We aim at easing up the food ordering process, thereby introducing the Online Cafeteria Management System. It is an initiative to provide convenience to both associates and vendors. The employees can easily browse through the list of vendors and order food of their choices. The vendors can easily register in our portal and provide food services to our associates. We maintain and upgrade this system to enhance food experience of our employees. The project online cafeteria system helps the users to book their food earlier. The users have to book their food on the e-menu card. As soon as they book their food the order will be sent to the chef for preparing it. The present cafeteria management system is not online and thus, there is a problem of waiting in the queue. Also, due to issues sometimes the card payment causes a problem. The items on the menu are out of stock sometimes, but the employee doesn't know about it which wastes time and sometimes create a confusion as well. Also the present system consists of the manual system that involves the paper work of the billing system and maintaining the files too. In the proposed system the payment is online and the e-menu will be available for the user. The users will have the username and the password through which they can book. This project will help in demonstrating the route from adapting materials to developing an online environment. This brings all necessities in one place that benefits both the user and the canteen owner smartly.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF STUDY

The online cafeteria management system is one of the latest services most institution in the world are adopting. With this method, food in cafeterias is ordered online. This is made possible through the use of electronic payment system.

Customers pay with their credit cards, although credit card customers can be served even before they make payment either through cash or cheque. So, the system designed in this project will enable customers go online and place order for their food. Due to the great increase in the awareness of internet and the technologies associated with it, several opportunities are coming up on the web. So many businesses and companies now venture into their business with ease because of the internet. One of such business that the internet introduced is an online cafeteria management system. It is possible for anybody to order any goods via the internet and have the goods delivered at his/her doorsteps. But while trying to discuss the transfer method of the goods and services, attention is focused on the payment mode. In other words, how possible is it to pay for goods and services via the internet? This then leads to the discussion of the economic consequences of digital cash. What are the implementations from the view point of economic? Since the world is fast becoming a global village, the necessary tool for this process is communication of which telecommunication is a key player. A major breakthrough is the wireless 2 telephone system which comes in either fixed wireless telephone lines or the Global System of Mobile communication (GSM). What I propose is an

online ordering system designed for use in college cafeterias, but just as applicable in any food delivery industry. The main advantage of this system is that it greatly simplifies the ordering process for both the customer and the restaurant. The system also greatly lightens the load on the vendor's end, as the entire process of taking orders is automated. Once an order is placed on the webpage that will be designed, it is placed into the database and then retrieved, in pretty much real-time, by a desktop application on the vendor's end. The greatest advantage of this system is its flexibility.

1.2 STATEMENT OF PROBLEM

The present cafeteria management system is not online and thus, there is a problem of waiting in the queue. Also, due to issues sometimes the card payment causes a problem. The items on the menu are out of stock sometimes, but the employee doesn't know about it which wastes time and sometimes create a confusion as well.

1.3 OBJECTIVES OF STUDY

This study lays out a framework for a new system to be developed and brought to the market for maximum use and to create an avenue through the web where users can log on to our server and make a selection of whatever food they like and subsequently pay via the internet. The following are the objectives this would bring:

- This will provide a user friendly environment between the vendor and employee thus increasing the efficiency of the food ordering system.
- Utilize manpower efficiently in cafeterias to reduce operational cost and increase productivity.

- Increase customer's convenience in cafeterias by providing a digital menu card with pictures and videos.
- It will also help for easy retrieval of orders made by the customers.

1.4 SCOPE OF STUDY

In-scope of this project are:

- Study the effects of new system on order processing time,
- Study the effects of new system on waiting time for customers,
- Understand the restaurant load at peak times,
- A better user interface design to give high customer QoE,
- Keeping the menu management system up-to-date and
- Managing waiters by a restaurant admin.

1.5 SIGNIFICANCE OF STUDY

In view of the rapid development of computer technology in almost all the fields of operation and its use in relation to information management, it has become important to look into the development of online cafeteria management system for canteens to meet up with demands of the customers. Therefore, the food ordering system will help customers and management to:

- Add available foods in their shops.
- Reduce the workload in the present system.
- Reduce time wasted in data processing.

1.6 LIMITATIONS

Due to time constraints, the software that is developed covers only few aspect of food ordering and payments.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

An ordering system is referred to as a set of detail methods that is being used in handling the ordering process. Food ordering can be computerized or done manually. Those helps the customer to order their food themselves is known as the customer self-ordering system. The customer self-ordering system can be defined as a computerized system that is being used by customers to place their own orders in the cafeteria and allow the orders to be tracked, in order to prepare and deliver the food.

2.2 METHODOLOGY AND SYSTEM ANALYSIS

2.2.1 RESEARCH METHODOLOGY

Research methodology has many research dimensions and methods. The scope of research methodology is wider than research method. This is mainly adopted by the researcher in undertaking this research. Methodology is the underlying principles and rules that govern a system method, on the other hand it is a systematic procedure for a set of activities. Thus, from these definitions a methodology encompasses the methods used within a study. A waterfall model under the software development life cycle (SDLC) is the methodology used to produce the online food ordering system and the customer self ordering system. It is used by system developers to produce or alter information systems or software. It divides the development process into several stages or processes. After the completion of one stage, it will logically move to another stage. Sometimes moving back to the previous stage is necessary due to failure that occurs in current stage. System design methods are a discipline within

the software development industry which seeks to provide a framework for activity and the capture, storage, transformation and dissemination of information so as to enable the economic development of computer systems that are fit for purpose.

2.2.2 METHODS OF DATA COLLECTION

Although there are various methods of data collection, the researcher chose the two main sources of data collection in carrying out their study. They are:

- Primary source
- Secondary source

The primary source refers to the sources of collecting original data in which the researcher make use of empirical approach such as personal interview. The secondary sources of data for this kind of project cannot be over emphasized. The secondary data were obtained by the researcher from magazines, journals, newspapers and library source.

2.2.2.1 ORAL INTERVIEW

The interview method of data collection can be defined as a systematic way of collecting data or information from a respondent through asking questions directly from the respondent and also collecting information with the aim of facilitating understanding. The oral interview was done between the researcher and the management of staff of my school's cafeteria. Reliable facts were gotten based on the questions posed to the staff by the researcher which helped me in starting the work and also helped in the area of solution presentation of the new design.

2.2.2.2 STUDY OF MANUALS

Manuals and report based on cafeteria services were obtained and studied and a lot of information concerning the system to be produced was obtained.

2.2.2.3 EVALUATION OF FORMS

Some forms that are necessary and available were accessed. These includes the cafeteria menu, fast food order form, payment receipts etc. These forms helped in the design of the new system.

2.2.3 ANALYSIS OF EXISTING SYSTEM

Throughout the system analysis, an in-depth, study of end-user information is conducted, for producing functional requirement of the proposed system. Data about the existing ordering system is collected through several fact-finding techniques such as website visit and document review, at the beginning of this stage. The data collected facilities information required during detailed analysis. A study on the current system is performed based on the collected data. As a result, user requirement of the proposed system are determined. At the end of this stage, requirement specification is produced as deliverable.

2.2.4 THE EXISTING SYSTEM

The present cafeteria management system is not online and paper based. The payment and process takes a lot of time as the customer has to pay the exact amount and wait for the change. If the change is not available at the time, a coupon is provided which should be shown at the counter at the next purchase. The cafeteria executive has to store this record in the registers for totalling and verification purpose. The cash at the end of the day have to be kept safe.

Other system include billing process through smart card which only deals with the payments. RFID card provides a cashless based system but the method of recharge is through cash.

2..2.5 THE PROBLEMS WITH EXISTING SYSTEM

Due to manual means being employed, it is very difficult to satisfy the wants and needs of the customers. Most of the problems include:

- The items on the menu are out of stock sometimes, but the employee doesn't know about it which wastes time and sometimes create a confusion as well.
- Since the existing system is also paper based it has a big disadvantage of data integrity, calculations have to be done manually and the data can be easily manipulated or lost.
- There are chances of long queues just for recharging the card.
- Major drawback in such system is that the balance is stored in the card itself. If there is any damage or loss of card, restricted time limit in which the card can be used.

These are the major problems facing the existing system and would be corrected with the help of the proposed system.

2.2.6 OBJECTIVES OF THE PROPOSED SYSTEM

The proposed system is developed to manage ordering activities in fast food restaurant. It helps to record customer submitted orders. The system should cover the following functions in order to support the restaurant's business process for achieving the objectives:

1. To allow the customer to make order, view order and make changes before submitting their order and allow them make the payment.
2. To provide interface that allows promotion and menu.

3. To provide interface that shows customers' orders detail to front-end and kitchen staffs for delivering customers' orders.
4. Tools that generate reports that can be used for decision making.
5. A tool that allows the management to modify the food information such as price, add a new menu and many others as well as tools for managing user, system menu and promotion records.

2.2.7 JUSTIFICATION FOR THE NEW SYSTEM.

It is the purpose of the new system to address all the problems plaguing the present system. This system will do the analysing and storing of information either automatically or interactively. It will make use of PHP-MYSQL. This will be like this: a report is generated conforming to particular information needed by the management via the monitor. This will require the input of necessary data and record of fast food ordering and delivery and then a report is generated. The proposed system will also have some other features such as:

1. Accuracy in handling of data.
2. The volume of paper work will be greatly reduced.
3. Fast rate of operation as in making the ordered food available and delivered on time.
4. Flexibility (i.e. it can be accessed at any time).
5. Easy way to back up or duplicating data in CD's in case of data loss.
6. Better storage and faster retrieval system.

7. Errors in the reports will be greatly minimized.

2.3 SYSTEM DESIGN, IMPLEMENTATION AND TESTING

2.3.1 DESIGN STANDARD

The system is designed with several interaction cues on each web page that makes up the web application. These cues are well-defined such as to make several functionality that the application exposes to collect, process and output data. Access to these functionalities is made possible by the well designed user interface which embodies several technologies. The application is built in a modular form where these functionalities are built into modules. Some of the modules are as follows:

1. Admin.php
2. Upload.php
3. Archives.php
4. Welcome.php
5. Themes.php

2.3.2 OUTPUT SPECIFICATION

The system is designed in such a way that it efficiently provides output to the user promptly and in a well organized manner. The format for the several output are make available on the output web pages. Output can be relayed using the following page modules:

1. HomePage.jsp: This display output information for the home page of the cafeteria.
2. Contact_us.jsp: This displays output information for the query form.
3. About_us.jsp: This displays output information that talks about the cafeteria.

2.3.3 INPUT SPECIFICATION

The system is designed to accept several input details efficiently through input forms and user clicks. The data captured through the user keystrokes and clicks are received by specific modules on the system and relayed to the back-end of the system for processing. Input is collected using the following page modules:

1. Index.php: This is used to capture preliminary user navigation information and preference information which gives the system a method of personalizing the page for the user on the next visit.
2. Admn_login.php: This is used to capture information about the administrative personnel who controls content and display on the system.

2.3.4 MAIN MENU DESIGN

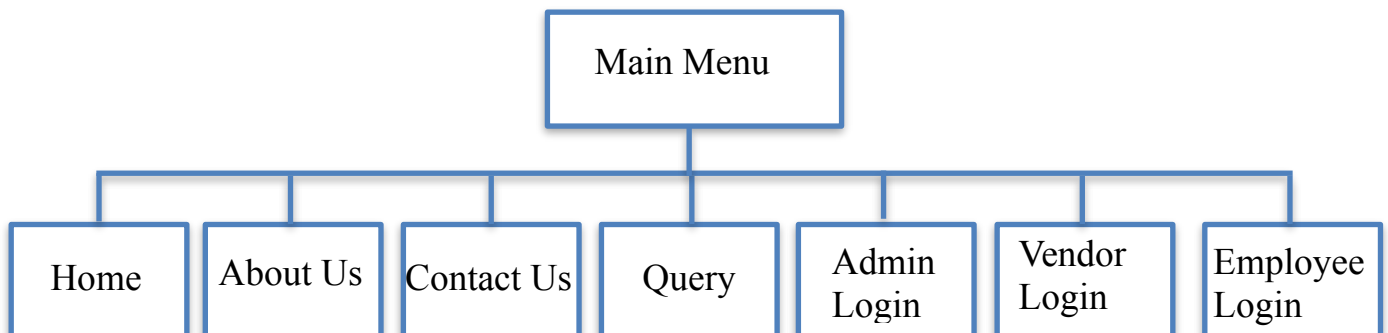


Fig1: Main Menu Design

2.3.5 USECASE DIAGRAM

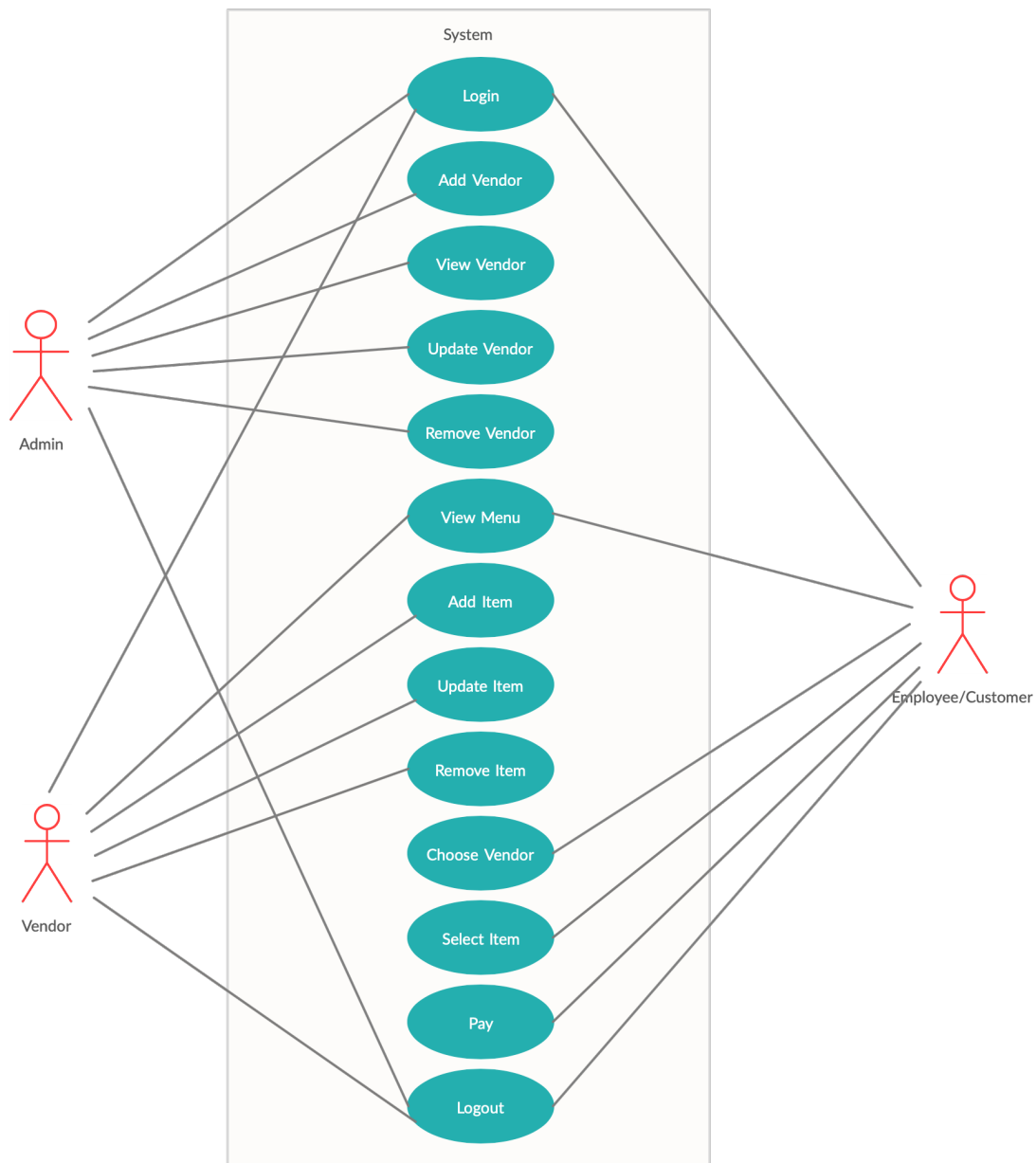


Fig2: UseCase Diagram

2.3.6 DATAFLOW DIAGRAM

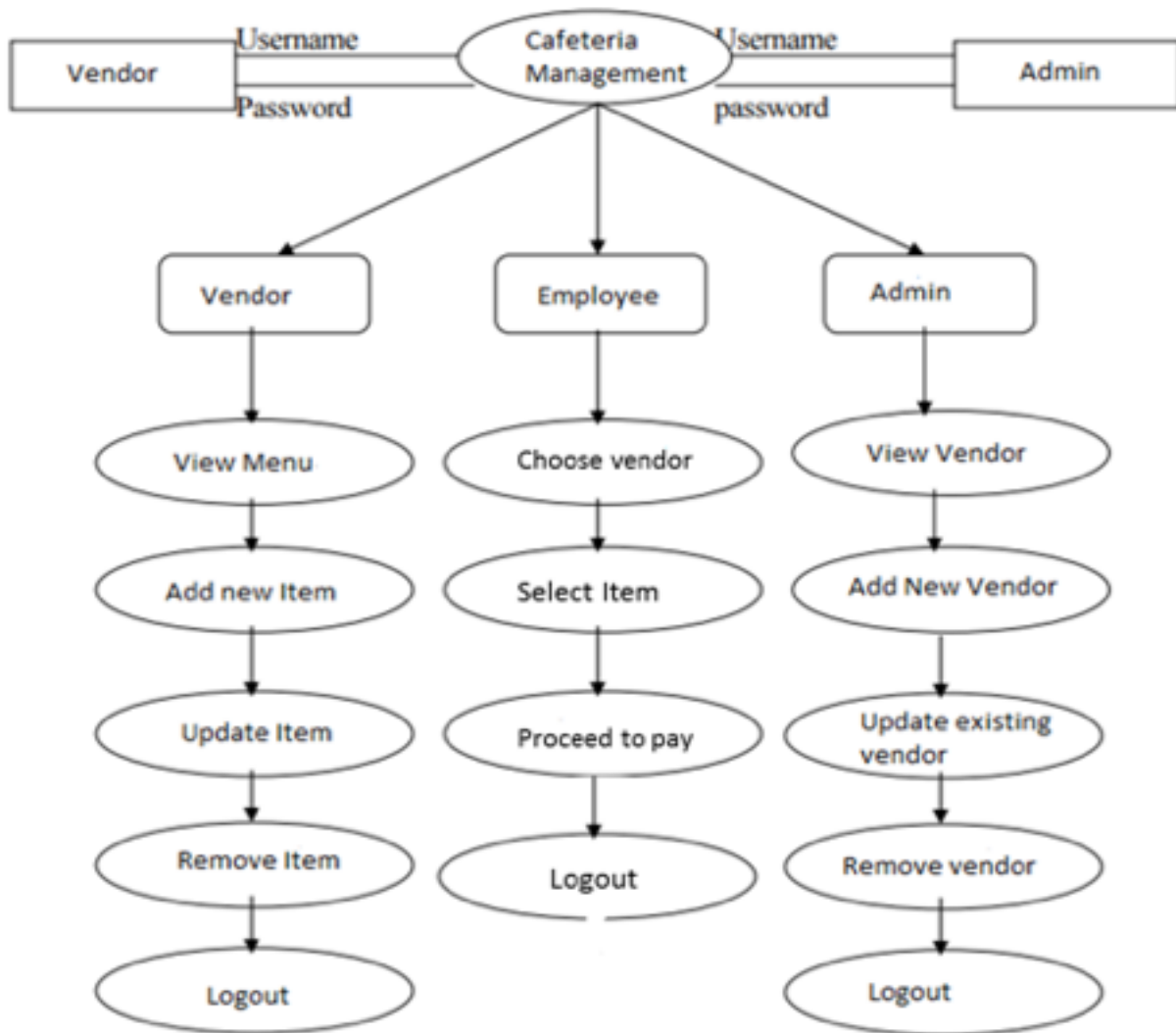


Fig3: Dataflow Diagram

2.3.7 FLOWCHART

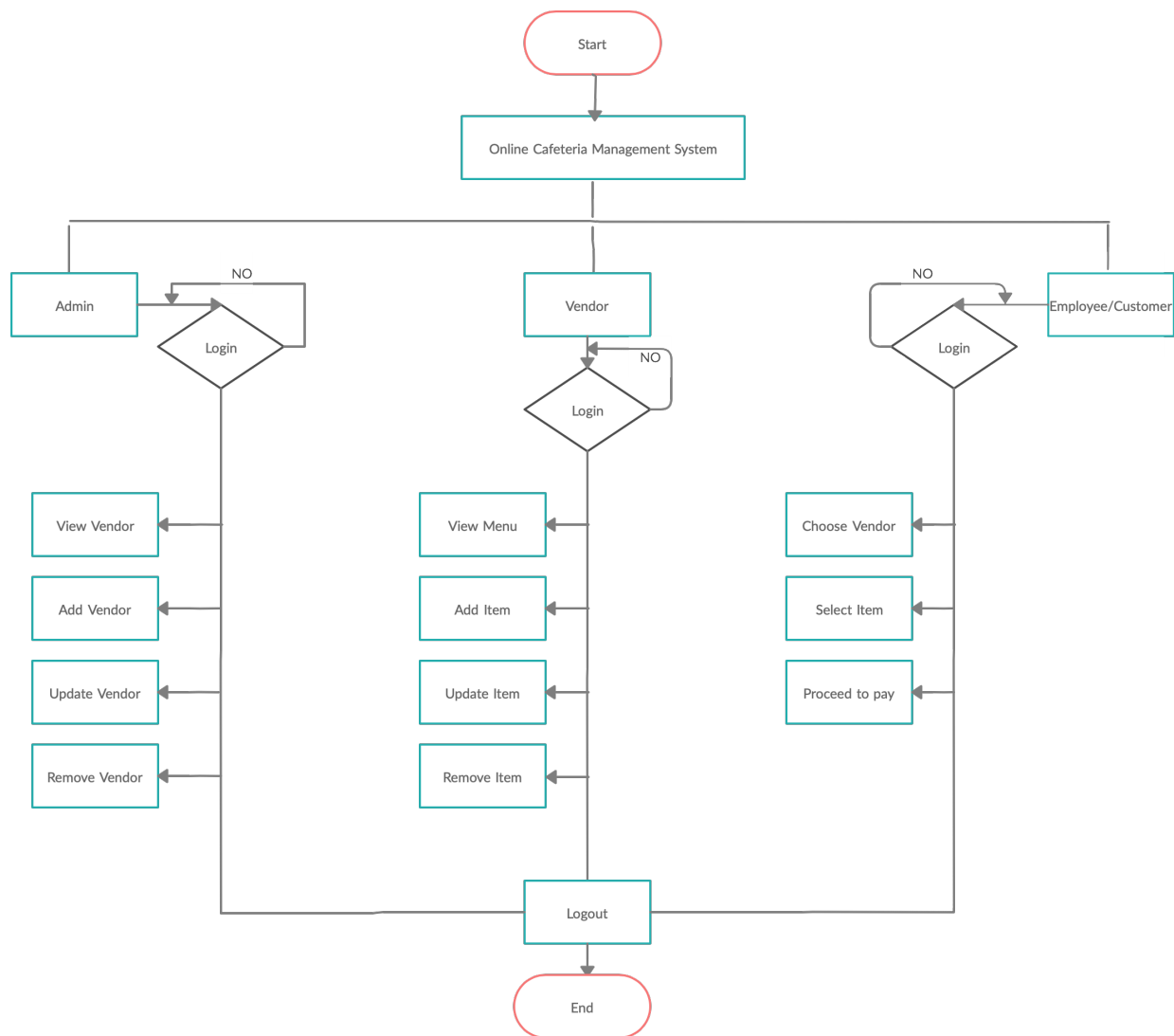


Fig4: Flowchart

2.3.8 TECHNOLOGIES USED

- HTML
- CSS
- JSP
- DATABASE

2.3.9 SYSTEM REQUIREMENT

Computer system is made up of units that are put together to work as one in order to achieve a common goal. The requirements for the implementation of the new system are:

- The Hardware
- The Software

2.3.9.1 Software Requirement

For the effective implementation of the new system, the following software has to be installed on the computer

- Windows Xp, Windows 7 or Vista or MacOS
- NetbeansIDE
- MySql
- Java JDK

2.3.9.2 Hardware Requirements

- RAM40
- Keyboard
- Intel Pentium
- Mouse

CHAPTER 3

CONCLUSION

3.1 SUMMARY

At the end of this project work, I was able to design and develop software that can successfully handle online cafeteria and product order for cafeterias and other canteens. In the process of the design, first hand information on fast food businesses was obtained. This work also will serve as a stepping-stone for people who wish to research more on this topic.

Other benefits are:

1. Provision of facility for handling text electronically using powerful and sophisticated word processors to produce elegant and error free documents.
2. In addition to storing the organization's operational data on disk backing storage, other forms of data used by the organization could also benefit from storage on such medium.
3. With the installed software, product ordering and delivery was made easier.

The systematic approaches used during each phase of the software development provides a clear road map that would be of immense help to anyone carrying out research work in this area.

3.2 CONCLUSION

The development of online food ordering system involved many phases. The approach used is a top-down one concentrating on what first, then how and moving to successive levels of details. The first phase started with a detailed study of the problems and prospects of ordering in a cafeteria. In the course of this study, many problems were discovered to have hindered the effectiveness of the existing manual

system. These problems, information needs and activities were documented and later used as the basis for system design, which immediately followed the first phase. The design phase was concerned primarily with the specification of the system elements in manner that best met the needs. During this phase, strict adherence was made on proven software engineering principles and practices. To implement this design, a computer program was then written and tested in NeatbeansID. It is hoped that effective implementation of this software product would eliminate many problems discovered during systems investigation.

5.3 RECOMMENDATIONS

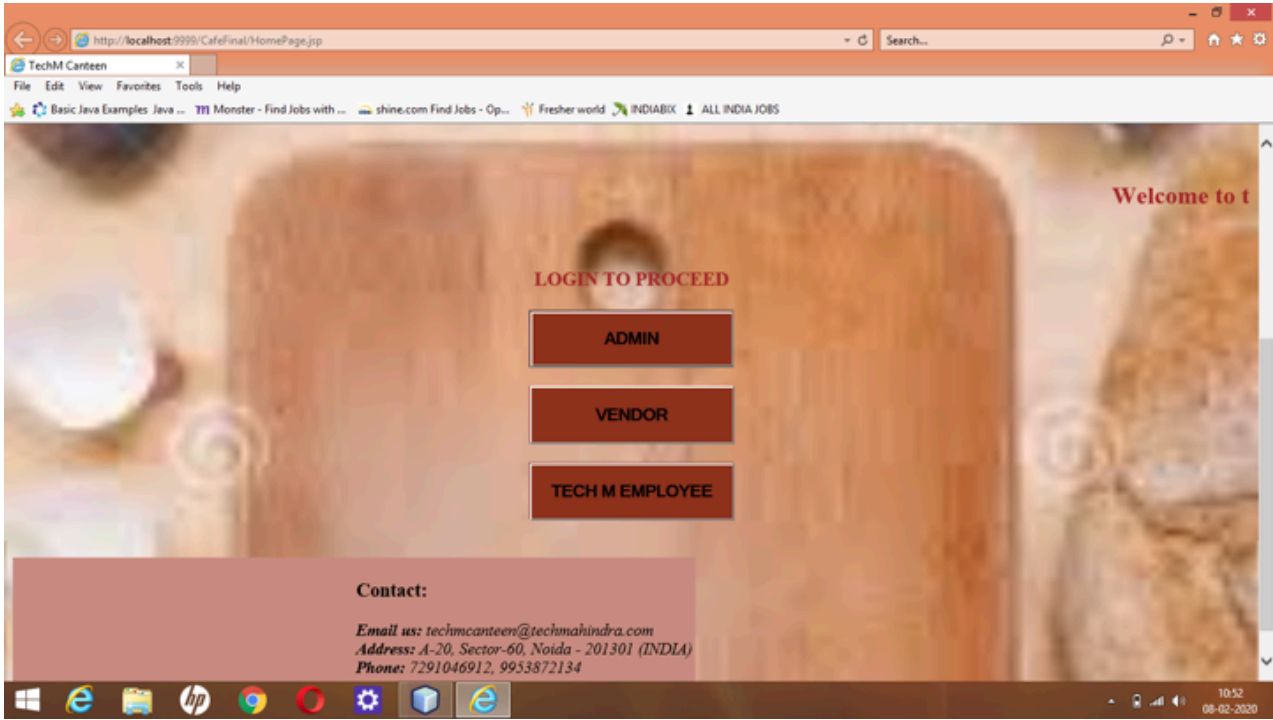
It is known that for any meaningful computer based information management to be integrated into any organization, proper training and orientation has to be given both to the staff and management. Proper training should be given to the data entry staff on how to handle the computer hardware especially during backup processes. In particular, electronic storage media are usually sensitive to change in temperature or pressure and as such, data can be lost very easily. The staff should also be highlighted on the need and advantage of the system and how it will equally assist them in their various field of work. They should also be informed of the cost of maintaining this new system so that they will handle it with all carefulness. Training materials should not be presented in formal way but with procedures like policies and form etc, they should be circulated to the personnel. This will at the end generate appreciation and needed interest to operate the system.

5.4 Future Scope

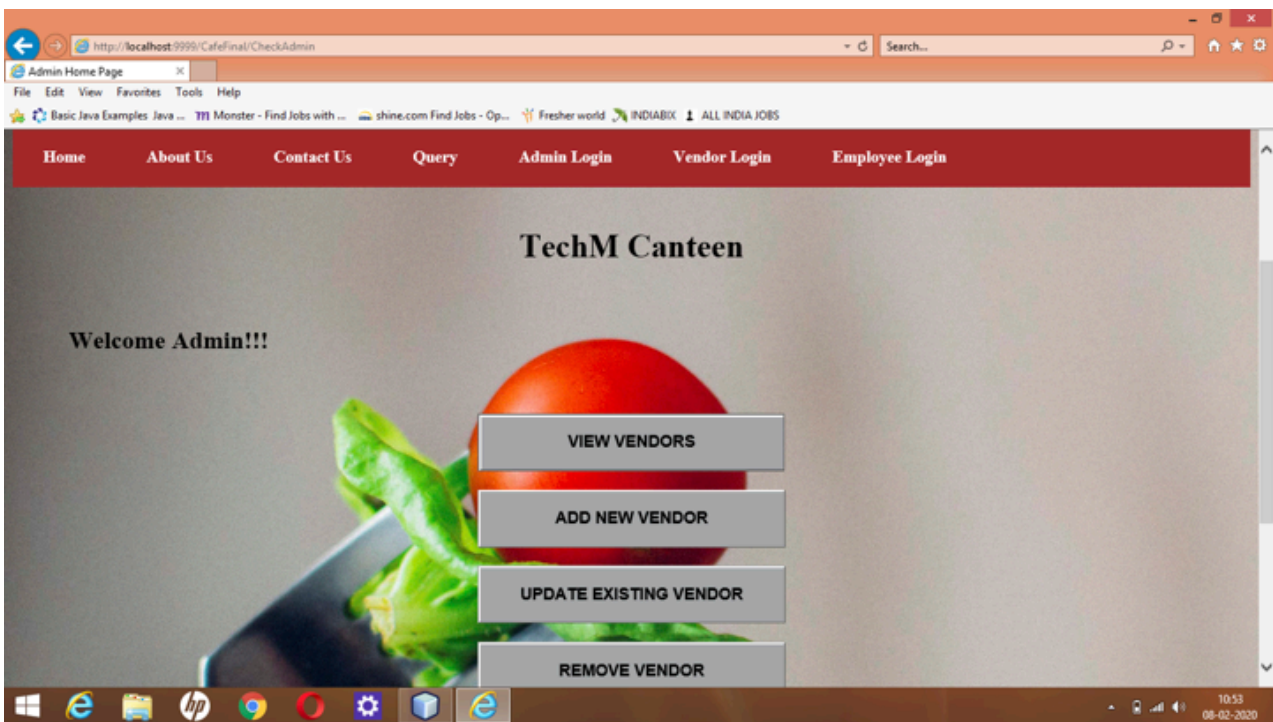
The future enhancement would

- Modify the software to be used in restaurants and other places other than cafes.
- Allow the customers to search for food restaurants and cafes nearby.
- Allow customers to customize food orders and reservation system.
- Allow to save payment details for future use.
- Allow to process an order as a Guest.
- Integrate with in store touch screen devices like iPad.

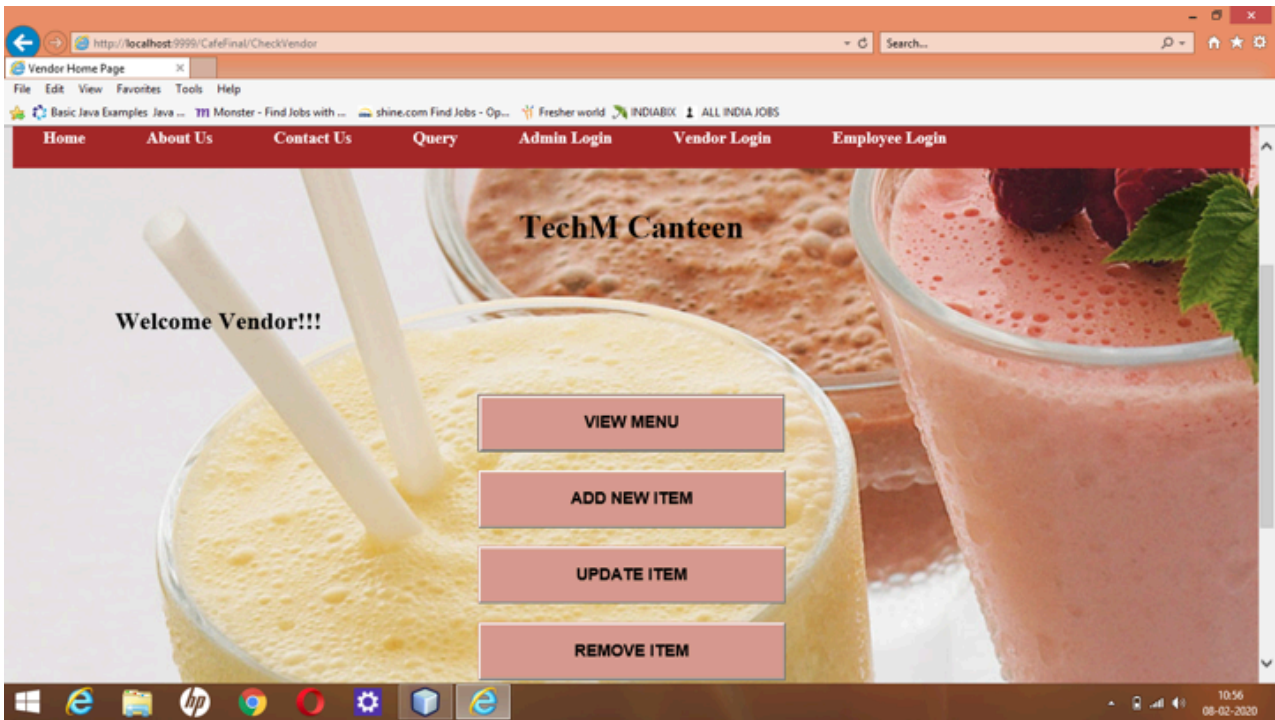
APPENDICES



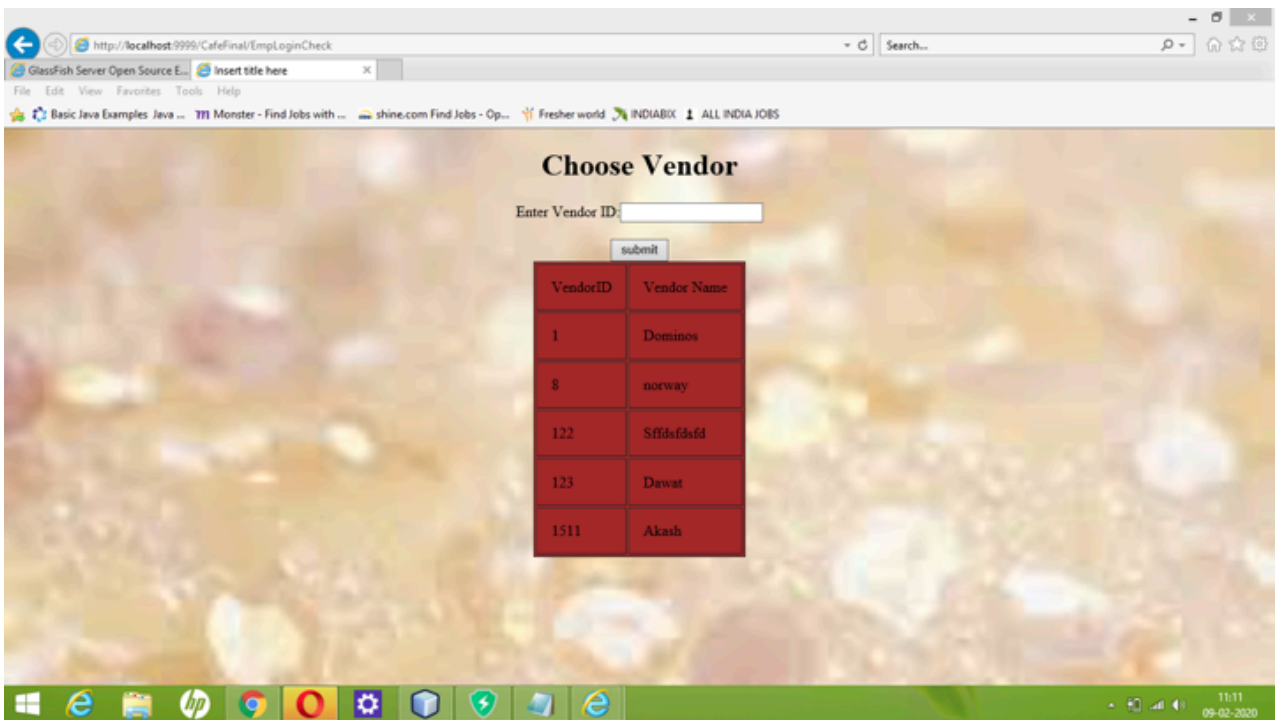
Appendix1: Home



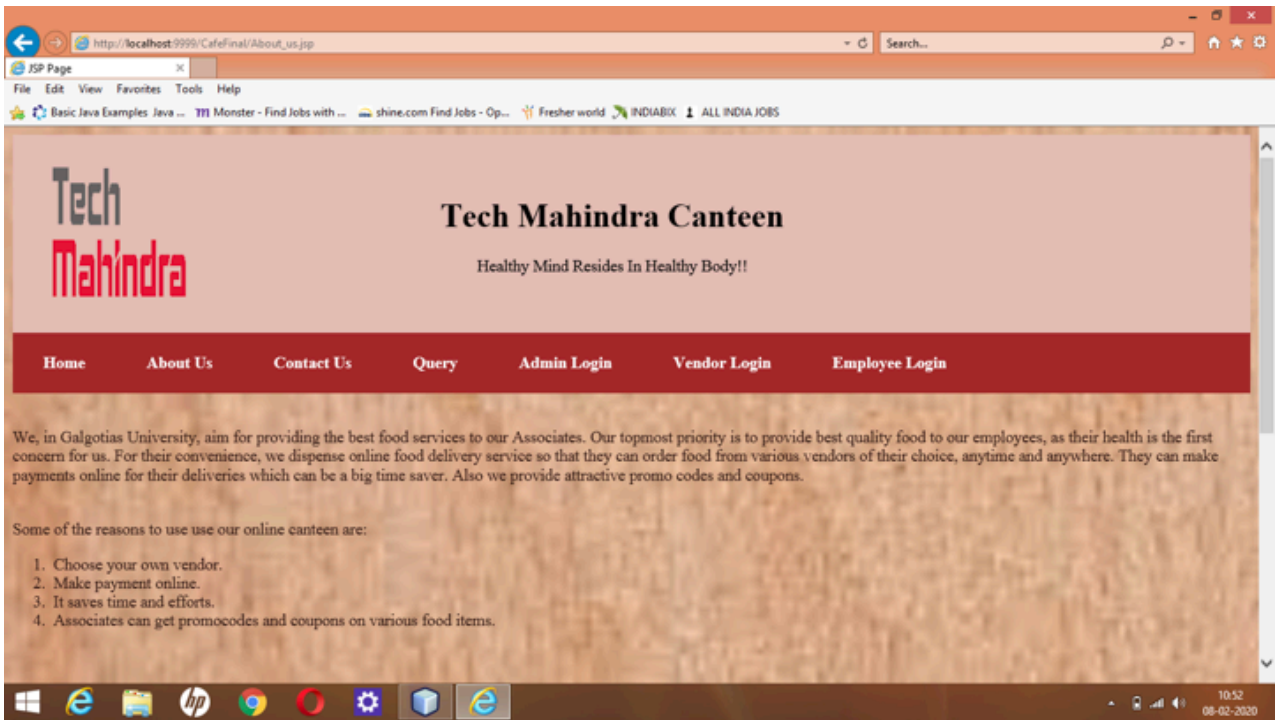
Appendix2: Admin Login



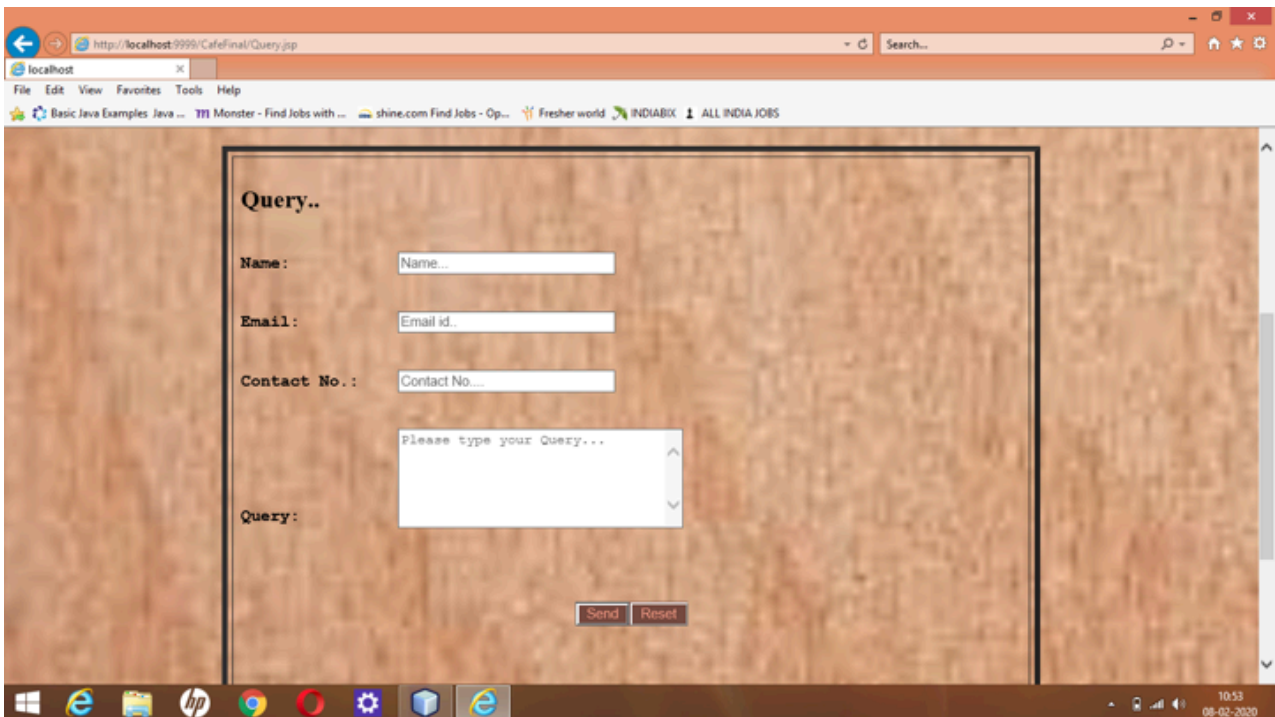
Appendix3: Vendor Login



Appendix4: Employee Login



Appendix5: About Us



Appendix6: Query

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