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Online Restaurant Management System

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A Project Submitted in Partial Fulfillment of the Requirements for the

Degree of Bachelor of Science in Computer Science & Engineering

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DECLARATION

We, hereby, declare that the work presented in this Project is the outcome of the investigation performed by me under the supervision of Tanveer Ahmed, Lecturer, Department of Computer Science and Engineering, Stamford University Bangladesh.

We also declare that no part of this Project and thereof has been or is being submitted elsewhere for the award of any degree or Diploma.

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Md.Imtiaz Ahmed

Candidates

ABSTRACT

The Online Restaurant Management System provides convenience for the customers. It overcomes the disadvantages of the traditional queuing system. This system increases the takeaway of foods than visitors. Therefore, this 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. This System set up menu online and the customers easily places the order with a simple mouse click. By using the food menu online anyone can easily track the orders, maintain customer's database and improve food delivery service. This system allows the user to select the desired food items from the displayed menu. The user orders the food items. The payment can be made online or pay-on-delivery system. The user's details are maintained confidential because it maintains a separate account for each user.

ACKNOWLEDGEMENTS

First of all we are thankful to Almighty Allah for his blessings for the successful completion of our project. The pleasure that accompanies the flourishing achievement of any task would be shortened without the mention of people whose continual cooperation made it possible, whose constant guidance and encouragement crown all efforts with success

We would like to express our gratitude to our respected Chairman Dr. Kamruddin Nur. We are grateful to our honorable supervisor Tanveer Ahmed, Lecturer, Department of Computer Science and Engineering for the guidance, inspiration and constructive suggestions that helpful us in the preparation of this project. Although he was always loaded with several other activities, he gave us more than enough time in this work. He not only gave us time but also proper guidance and valuable advice whenever we faced with some difficulties. His comments and guidance helped us in preparing my project report.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

In today's age of fast food and take-out, many restaurants have chosen to focus on quick preparation and speedy delivery of orders rather than offering a rich dining experience. Until very recently, all of these delivery orders were placed over the phone, but there are many disadvantages to this system, including the inconvenience of the customer needing to have a physical copy of the menu, lack of a visual confirmation that the order was placed correctly, and the necessity for the restaurant to have an employee answering the phone and taking orders.

What I propose is an online ordering system, which is a technique of ordering foods online applicable in any food delivery industry. The main advantage of my system is that it greatly simplifies the ordering process for both the customer and the restaurant. When the customer visits the ordering webpage, they are presented with an interactive and up-to-date menu, complete with all available options and dynamically adjusting prices based on the selected options. After making a selection, the item is then added to their order, which the customer can review the details of at any time before checking out. This provides instant visual confirmation of what was selected and ensures that items in the order are, in fact, what was intended.

This system also greatly lightens the load on the restaurant's end, as the entire process of taking orders is automated. Once an order is placed on the webpage, it is entered into the database and then retrieved, in pretty much real-time, by a desktop application on the restaurant's end. Within this application, all items in the order are displayed, along with their corresponding options and delivery details, in a concise and easy to read manner. This allows restaurant employees to quickly go through the orders as they are placed and produce the necessary items with minimal delay and confusion.

1.2 Project Overview

This project works is aimed for developing an efficient food ordering system that can be used in the food & beverage **(F&B)** industry which can help the restaurants to quickly and easily

manage daily operational task as well as improve the dining experience of customers. It is believed that still have a lot of restaurants are using the traditional method for food ordering processes. By using the traditional method, it arise a lot of human error while the restaurant's employees deal with large amount of customers, this issue will did a great impact to the restaurant in terms of profitability. Thus, this project is to propose a suitable food ordering system for F&B industry to solve the problem that mentioned above. The system will become an important tools use for restaurant to improve the management aspect by utilizing computerized system to coordinate each and every food ordering transaction instead of traditional method. In addition, it can also provide efficiency for the restaurant by reducing time consuming, minimize human errors and providing good quality customer service. In terms of the integrity and availability of the system provided, it can be concluded that this system is a suitable solution for the F&B industry.

1.3 Problem statement

The challenges encountered by the existing system serve as a major drawback to the realization of efficiency and customer satisfaction. The experience of ordering in most fast food restaurants is not pleasant for the customers. Customers will have to make long queues before placing their orders especially during peak hours and then the ordering staff will record customer orders. Having placed their order, the customer must then wait near the counter until their order is ready for collection. The other problem in the food service industry is that restaurants are not realizing the efficiencies that would result from better application of technology in their daily operations. Fast food business in a very competitive business and one way to stand out from competitors is through improving the business process where business process automation can assist business improvement. The other problem with the current system is that the customers are not able to see the ingredients of the meals before they place their order and also they only have to pay for an order online.

1.4 Objectives

1.4.1 General objectives

- To increase efficiency and improve services provided to the customers through better application of technology in daily operations.
- To be able to stand out from competitors in the food service industry

1.4.2 Specific objectives

- To enable customers to order custom meals that aren't in the menu
- To enable customers to have a visual confirmation that the order was placed correctly
- To enable customers to know food ingredients before ordering
- To reduce restaurant's food wastage
- To ensure correct placement of orders through visual confirmation
- Improve efficiency of restaurant's staff
- Eliminate paper work and increase level of accuracy
- Increase speed of service, sales volume and customer satisfaction

1.5 Project Aim

It's main aim is to simplify and improve the efficiency of the ordering process for both customer and restaurant, minimize manual data entry and ensure data accuracy and security during order placement process. Customers will also be able to view product menus and there ingredients and be able to have a visual confirmation that the order was place correctly.

1.6 Functional Requirement

1.6.1 HTML

It is used to generate web page. HyperText Markup Language (HTML) is the predominant markup language for web pages. It provides a means to describe the structure of text-based information in a document-by denoting certain text as heading, paragraphs, lists and so on.

1.6.2 JavaScript

JavaScript is a high-level, dynamic, untyped and interpreted programming language. It has been standardized in the ECMA Script language specification. It is used for checking user information before sending to JavaScript. It is a scripting language most often used for client-side web development. JavaScript is prototype-based with first-class functions, making it a multi-paradigm language, supporting object-oriented, imperative and functional programming style.

1.6.3 PHP

PHP is a server-side scripting language designed primarily for web development but also used as a general-purpose programming language. PHP code may be embedded into HTML or HTML5 markup, or it can be used in combination with various web template systems, web content management systems and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server software combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page. PHP code may also be executed with a command-line interface (CLI) and can be used to implement standalone graphical applications.

1.6.4 MySQL

MySQL is an open source relational database management system (RDBMS). MySQL is a central component of the “LAMP” open-source web application software stack. LAMP is an acronym for “Linux, Apache, MySQL, and Perl/PHP/Python". User may use the included command line tools or use Mysql “front end”, desktop software and web applications that create and manage Mysql database, built database structures, back up data, inspect status and work.

CHAPTER 2

LITERATURE REVIEW

2.1 Wireless Food Ordering System

In the pass decades, the rapid growing of network and wireless technology did a great impact for how people communicate with each and other remotely. At the same time, this technology also leads different kind industries to change their entire management aspect. Food & beverages (**F&B**) industry is one of the industries in the market that apply these technologies into their business processes that assist them to be much more convenience and efficient.

From the message above, Wireless Food Ordering System is a system that integrated both concept of intranet and wireless technology (Khairunnisa, K. and Ayob, J., 2009). This system provide user to access the data, information and services from a remote server, which enable user to access the central databases distributed across the restaurant network. Most of the handheld devices have implemented and support wireless technology and thus mobile devices is an ideal hardware device that use to support this system in order to allow user remote access to the database for data retrieval.

The system requires the user to build an intranet network within the restaurant and there will be a central database server resides in the network and the client can perform data retrieval by using the mobile devices such as PDA (Personal Digital Assistant) connect to the wireless access point.

Wireless food ordering system is a solution that can help the restaurant to expedite their customer services as well as management aspect. After the system has been implemented in the restaurant, the flow food ordering process will be changed to computerize. Waiters have to take orders by choose the food that wish to order from the menu on the mobile devices as the input and the data will be send to the central database, after that the computer reside in kitchen will retrieve the data from the central database and display on the computer screen. After the food is being cooked, the employee in kitchen can confirm the food order and update to the database. This will signal the waiter mobile device to acknowledge the waiter the food is ready to serve the food to respective customers.

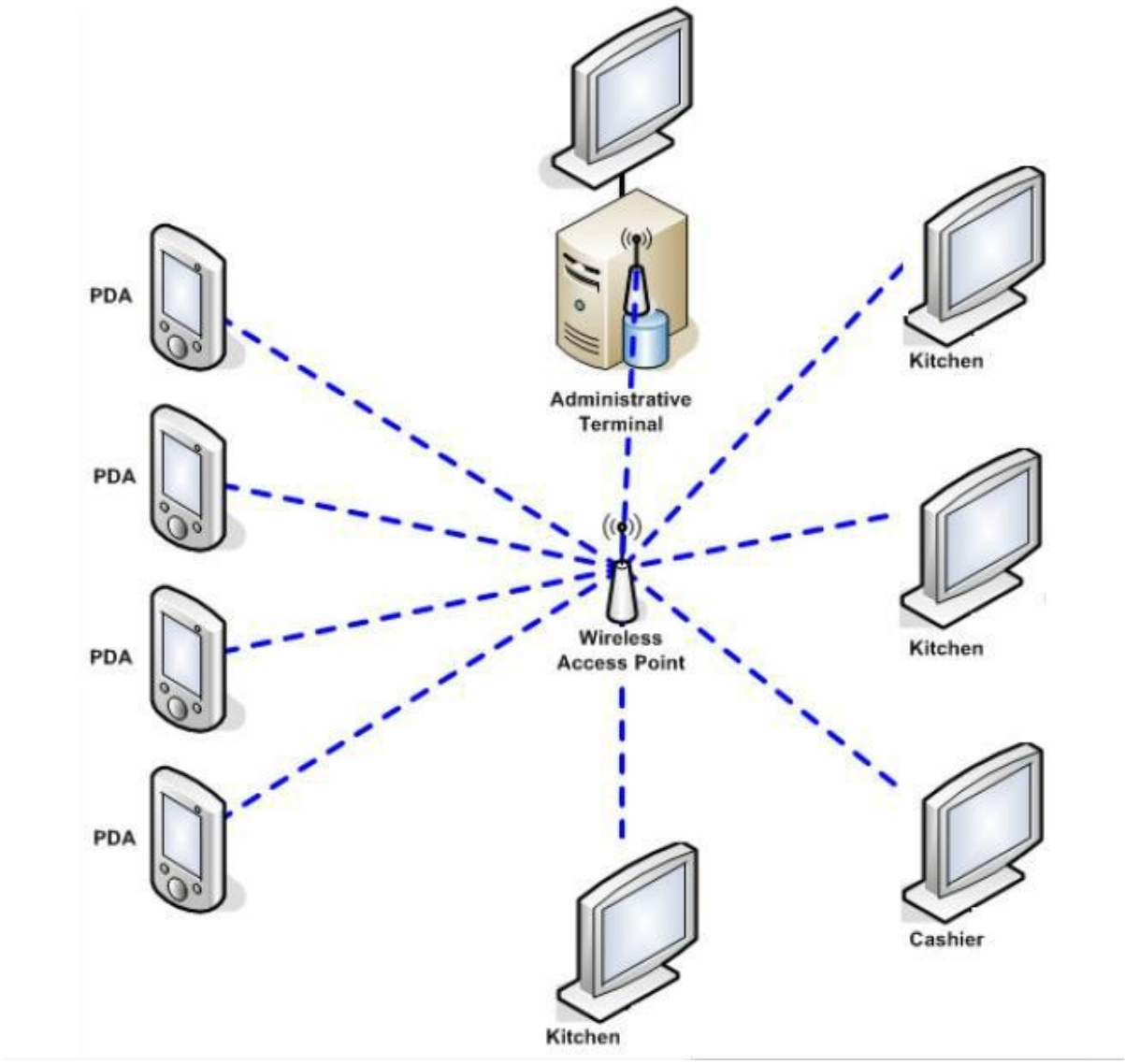


Figure 2.1 - Logical Wireless Diagram

2.1.1 Strength

The system eliminates the need for a waiter to take order with pen and paper. Moreover, the waiter only needs to carry the mobile devices for the entire operational hour to perform food order process instead of using pen and paper. While using pen and paper to take order, it bring a lot of troublesome such as the waiter busying in replenish the order paper that they

carrying. Other than that, this system also can help in terms of environmentally friendly by reducing the usage of paper.

2.1.2 Weaknesses and Limitations

The limitation would be all the client devices are connected via the wireless access point in order to let client perform data retrieval from the central database. Unfortunately, there might be a problem in wireless signal coverage is not strong enough to cover the whole restaurant area and thus cause the waiter's mobile device disconnect from the server.

2.2 Online Ordering System

In our generation era, computer has become a key component to our daily life because of the advancement technology of World Wide Web that becomes an internet that allow each and every user connected with theirs' computer for information sharing throughout the whole world. The World Wide Web did a great contribution to a lot of enterprise which use this mechanism for information sharing within the enterprise and also outside the enterprise.

From the benefit of World Wide Web, a lot of fast food industry applies a system known as Online Ordering System to assist their business processes. Online Ordering System is a technique that allow customer to order their favorite food online via the internet by using a web browser that installed in their respective computer or smart phone. Implementing this system can help fast food industry to solve the problem that they face while using the traditional food ordering processes.

The system greatly simplifies the food ordering process for both customer and restaurant compare to the past.. Customers access to the website and choose the food that they prefer from the online menu display then customers have to choose whether the food is delivered to them or it will be packaged for pick up and the payment method will be upon delivered or pick up and lastly it will show all the order details to the customer for double checking and confirmation.

Once customers have place an order via the internet, the data will send to the restaurant database and place in a queue in real-time. In addition, the data will be display on the computer screen along with the corresponding option. It allow restaurant employee easily manage the orders sequentially, produce the necessary item with a minimal delay and help reduce human error.

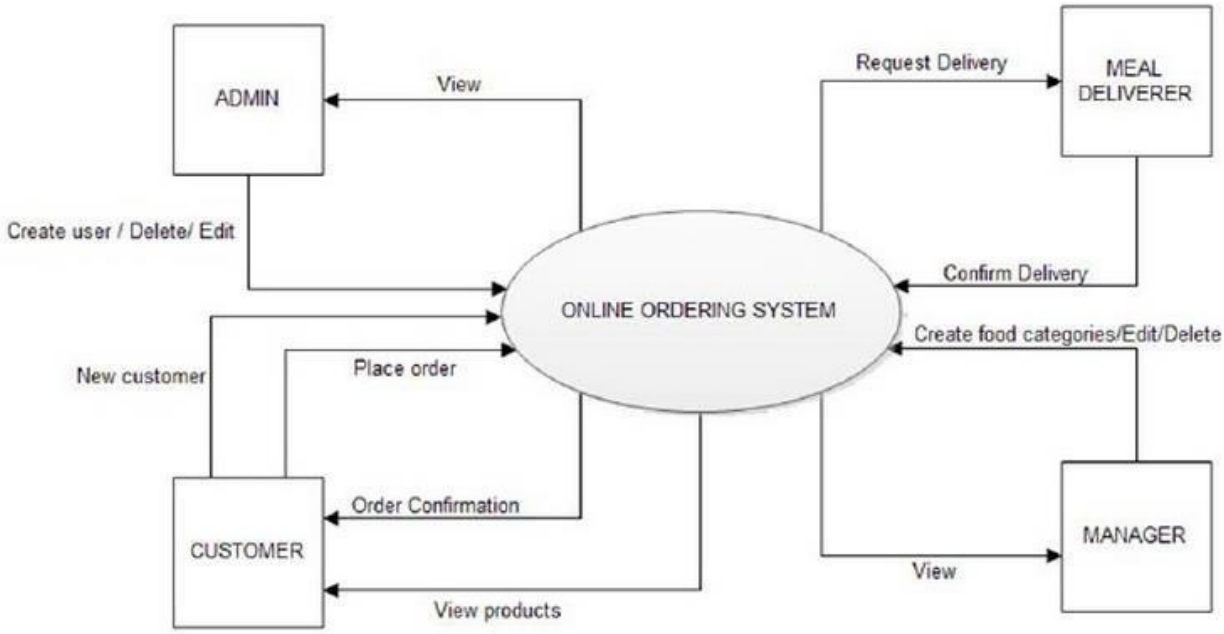


Figure 2.2 - Context Level Data Flow Diagram of Online Order

2.2.1 Strength

The system is very suitable for fast food industry due to it provides ability for customer to place order anywhere and everywhere and also minimized the time require during the order processes. Customers do not need to physically go to the restaurant for food ordering instead of just using their mobile device to place an order via the internet and when the customer reach the restaurant they can directly have their meal without waiting for the queue. Meanwhile, it help the fast food restaurant to have a better customer services because the most important factor that fast food industry concern about is quickness therefore the restaurant should serve their customer without any delay.

2.2.2 Weaknesses and Limitations

The main weaknesses of the system will be internet connection depended. The system will not be operating without the internet connection. Because customer have to place order via the internet as a medium and the data send to the restaurant database for further process, the customer will not be able to access the web service if no internet connection available. Furthermore, if the Internet Service Provider (ISP) is under maintenance it will did a great impact to the restaurant that relies on the online order system for their business.

2.3 Electronic Menu Card for Restaurants

This order system overcome the drawback of traditional paper based order system, it change everything from paper based into computerized. First of all, the system will be programmed with the food availability from the respective restaurant and display on touch screen devices that have been setup in each of the tables within the restaurant. In addition, the touch screen device will have a very attractive Graphic User Interface (GUI) that displays the food menu for customer to make their choices and enable customer to place an order by touching the particular food image that display on the device screen.

Next, when the customer placed an order, the food order will be send to the kitchen and the chef can prepare for the food. This system eliminates the issue from traditional paper based system that the waiter has to manually deliver the order to kitchen. Other than that, the system provide a sub-module that enable restaurant owner to update the food details, food price and etc. It was very convenience compare to the traditional paper based system, because paper based system require the restaurant owner to dispose all old food menu cards and re-print the latest food menu card to serve their customers.

Last but not lease, the system was fully rely on the gadgets and the gadgets doesn't need leave or vacation and thus it can work efficiently 24 hours per day and 7 days per week. Therefore, it can reduce the excess manpower need in the restaurant business by reducing the number of the employee within the restaurant.

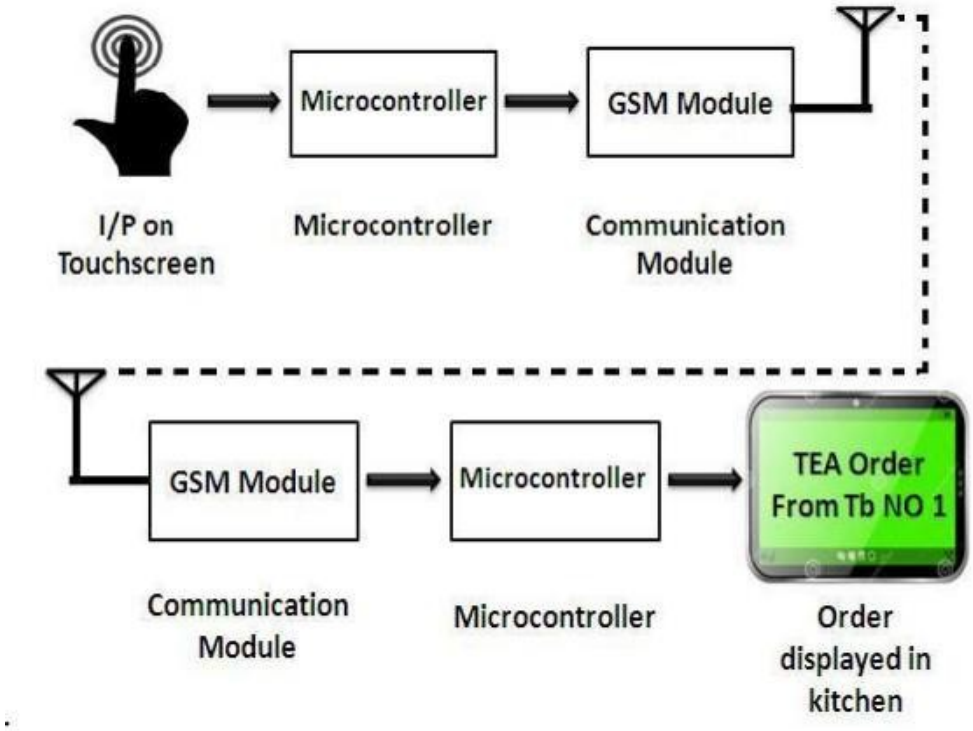


Figure 2.3 - Entire Process Flow of Electronic Menu Card System

2.3.1 Strength

This system will help in reducing the number of employee that need in the restaurants hence it will directly help in considerably reducing the long-term cost of restaurant management. Second, the system also helps reducing the manual customer services activities and thus eliminating the human error and human mistakes.

2.3.2 Weaknesses and Limitations

Although this system provide a lot of ideal solution that can help a restaurant to solve the problem that they encountered in their working hour, but it need the restaurant owner to invest a huge amount of money in these systems. For many restaurant owners, they might not take risk to investing a huge amount of money into this system.

CHAPTER 3

METHODOLOGY

3.1 Proposed Methodology

The software methodology that chosen to develop this system is Throwaway Prototyping. Throwaway Prototyping Model is especially useful when the project needs are vaguely and poorly laid out. It functions by providing proof that something can indeed be done in terms of systems and strategies. Throwaway Prototyping Model is used for certain projects and will eventually be discarded after the project has been completed. It is also known as Close-Ended Prototyping. Throwaway Prototyping Model is implemented through the creation of prototypes and thereafter gathering feedback from end users to check if they find it good or not. This is valuable to get a better understanding of the actual needs of customers before a product or service is developed and delivered. The reason to choose Throwaway Prototyping to develop this system is due to it can develop a new system in a short time compare with other software methodology. Other than that, user might not clearly understand what they really require in the system. Therefore, Throwaway Prototyping is where the objective to develop the system rapidly and to understand the user's requirements and hence develop a better requirements definition for the system. The prototype concentrates on experimenting with the user requirements that are poorly understood.

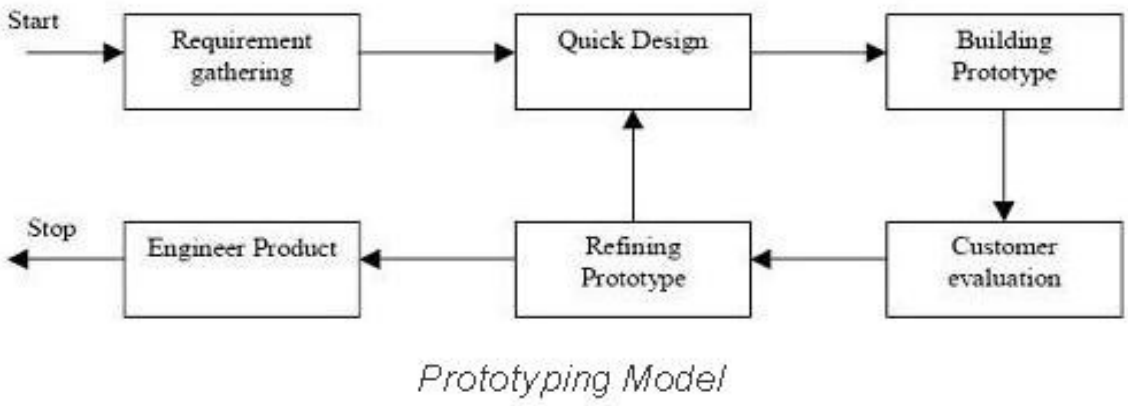


Figure 3.1 - Prototyping model

3.1.1 Advantages of Prototype model:

- Users are actively involved in the development
- Since in this methodology a working model of the system is provided, the users get a better understanding of the system being developed.
- Errors can be detected much earlier.
- Quicker user feedback is available leading to better solutions.
- Missing functionality can be identified easily.

3.1.2 Disadvantages of Prototype model:

- Leads to implementing and then repairing way of building systems.
- Practically, this methodology may increase the complexity of the system as scope of the system may expand beyond original plans.
- Incomplete application may cause application not to be used as the full system was designed
- Incomplete or inadequate problem analysis.

3.1.3 When to use Prototype model:

- Prototype model should be used when the desired system needs to have a lot of interaction with the end users.
- Typically, online systems, web interfaces have a very high amount of interaction with end users, are best suited for Prototype model. It might take a while for a system to be built that allows ease of use and needs minimal training for the end user.
- Prototyping ensures that the end users constantly work with the system and provide a feedback which is incorporated in the prototype to result in a useable system. They are excellent for designing good human computer interface systems.

3.2 System Analysis

In system analysis phase, interview will carry out with potential user of the propose solution to gather and collect useful information for the propose system. Next, system requirement such as user requirement, software and hardware requirement will be generated and based on the system requirement, project scope and objective is defined.

3.3 Functional Requirements

3.3.1 Order Management

- The system shall let the user to place an order for their consumers.
- The system shall prompt and ask user to verify the order that have been placed.
- The system shall allow user to add in extra remark regarding the order.
- The system shall allow user to void the order that mistakenly placed or exceptional case occur.

3.3.2 Reporting Management

- The system shall generate a report that based on the time period that customize by user.
- The system shall retrieve related information from the database and generate the report to user.

3.3.3 Menu Management

- The system shall only allow management level user to edit the menu card information by having an authorization login checking.
- The system shall allow user to update their restaurant menu card information.
- The system shall save the updated menu card information to the database.

3.3.4 Billing Management

- The system shall retrieve data that needed and arrange in a meaningful structure then print for user as a reference.
- The system shall let user to choose the payment channel that they wish to use.

3.3.5 Goods and Services Tax Management

- The system shall calculate the total amount of money that need to submit to government at the end of the month.

3.3.6 Order Queue Module

- The system will update the queue display whenever a new order is placed.
- The system will merge the amount identical food that needs to be prepared and display on the screen.

3.4 Non Functional Requirements

3.4.1 Operational Requirements

- The system should operate in Window platform environment.
- The system should prompt user to make a backup at the end of the operational day.

3.4.2 Performance Requirements

- The system should let user to place an order in a short period of time.
- The system should complete perform the billing process in a short period of time.

3.4.3 Security Requirements

- The system should validate the username and password in order to login and make changes to the system.
- The system should request the current password of the user in order to let them change to a new password.

3.4.4 Usability Requirement

- The system should have an easy understand graphic user interface that deal with the user.
- The system should let user easy to understand the functionality of each modules.

3.5 Hardware & Software Requirements

3.5.1 Software Requirements

Operating System	:	Windows7/8
User Interface	:	HTML,CSS
Client-side Scripting	:	Javascript
Scripting Language	:	PHP
Database	:	My SQL

3.5.2 Hardware Requirements

Processor	:	Pentium IV
Ram	:	512 or more
Hard Disk	:	40 GB or more

In this project, a computer with sufficient processing power is needed. The computer is requiring for the developer to have project development such as coding for the mobile application, database creation and modification. For the complete system to work, several hardware requirements must be met. First, it require an android based Smartphone in needed to deploy the software application and this Smartphone is require to connect to the wireless access point to perform request and respond processes that access to the database. Next, database is a must for the entire system to store and retrieve the necessary data. Furthermore, a laptop or desktop is required to host the database and manipulate the entire system.

3.6 Activity Diagram

3.6.1 Activity Diagram for Place Order using Mobile

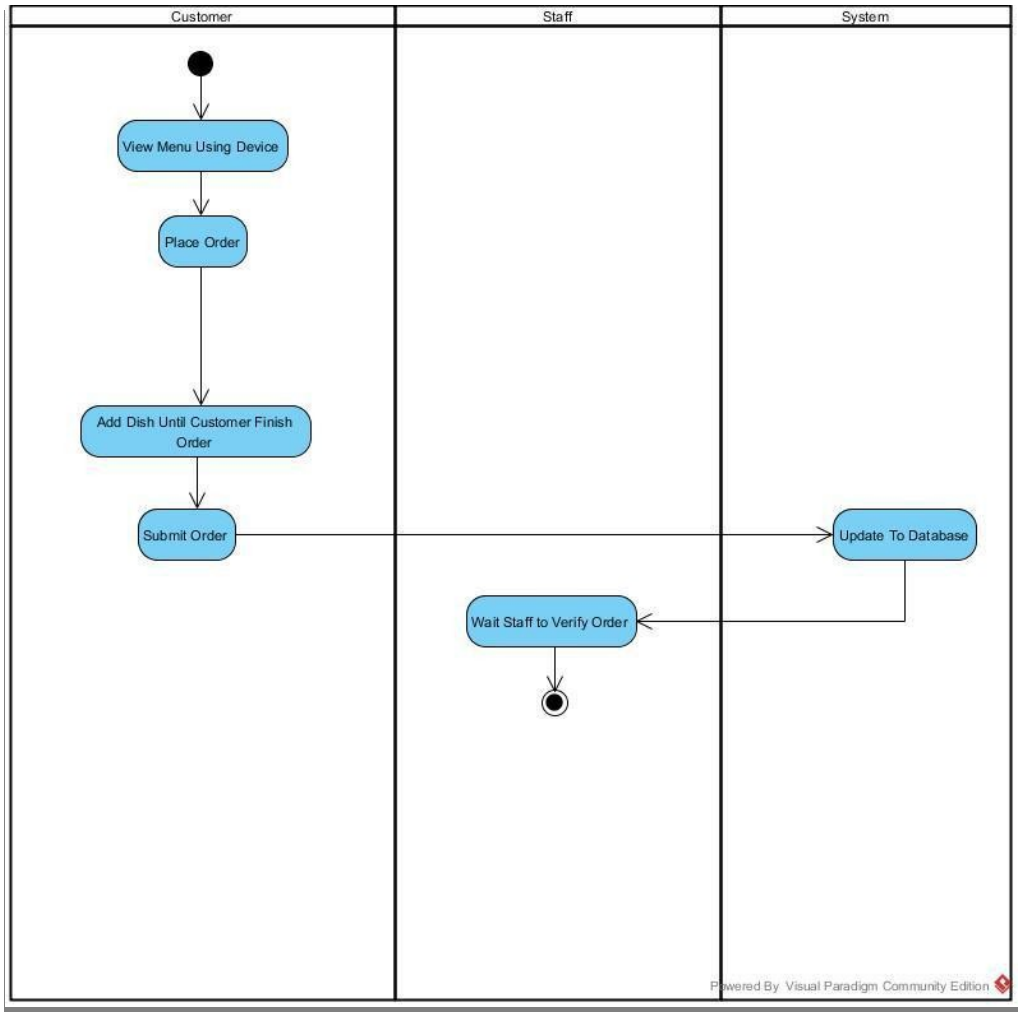


Figure 3.2 - Activity Diagram for Place Order using Mobile Phone

3.6.2 Activity Diagram for Generate Report

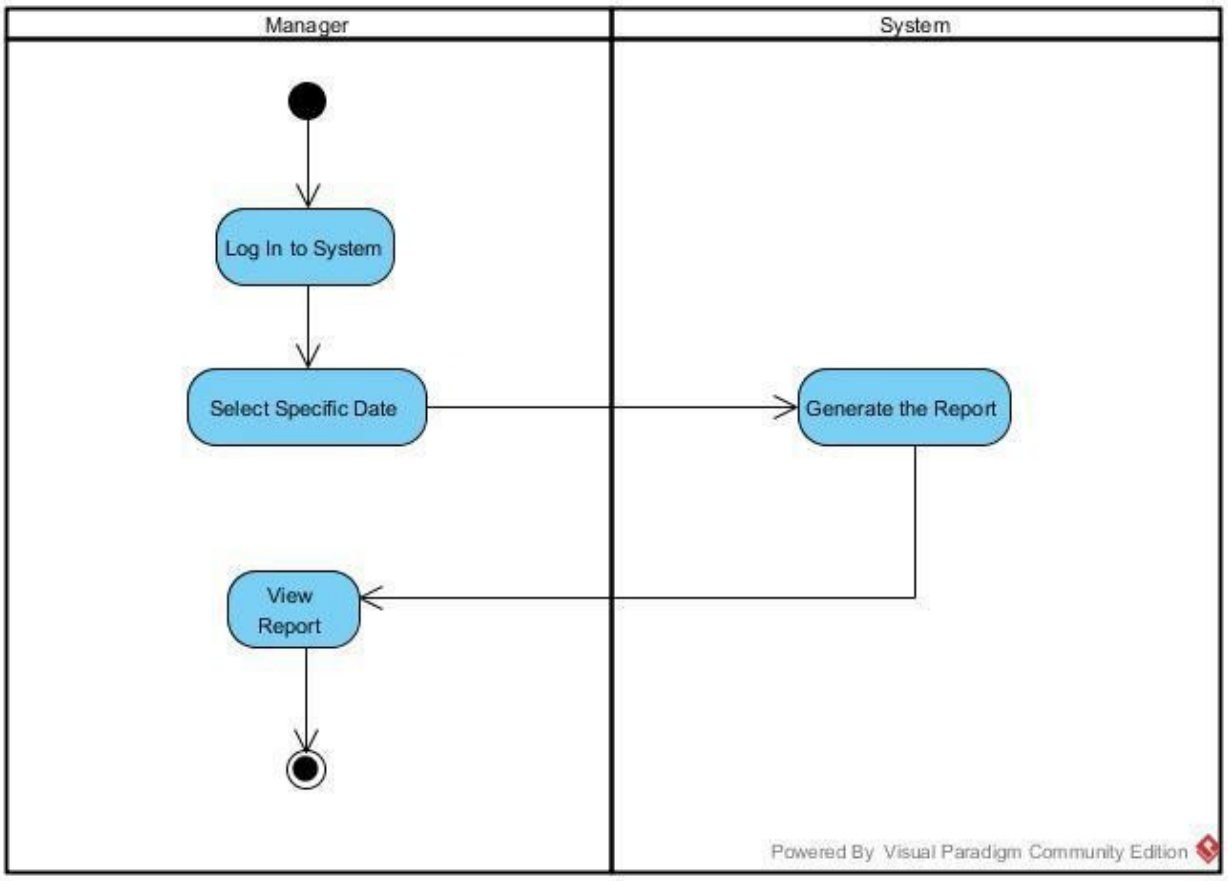


Figure 3.3 - Activity Diagram for Generate Report

3.6.3 Activity Diagram for Update Menu Info

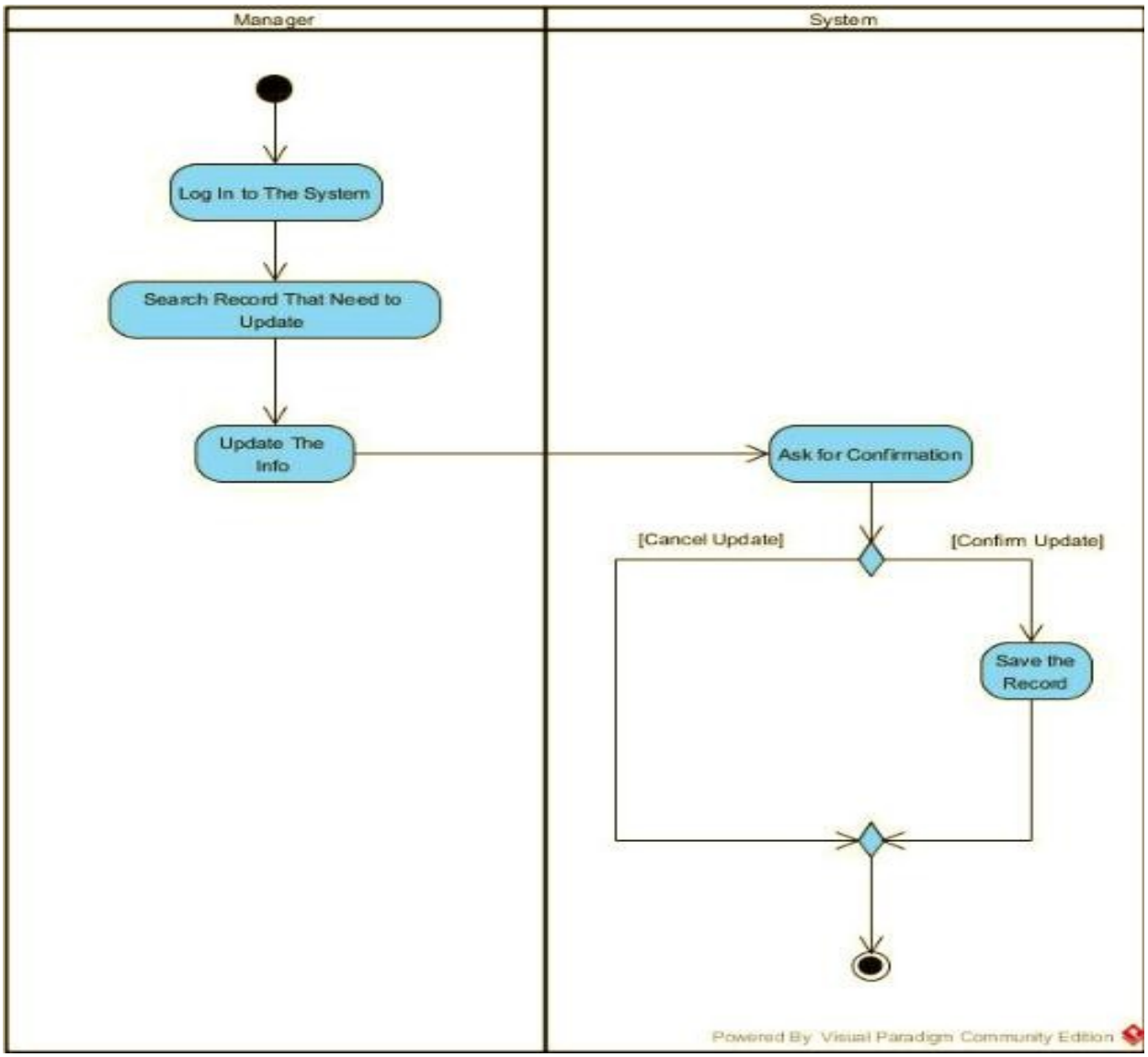


Figure 3.4 - Activity Diagram for Update Menu Info.

3.6.4 Activity Diagram for Validate Order

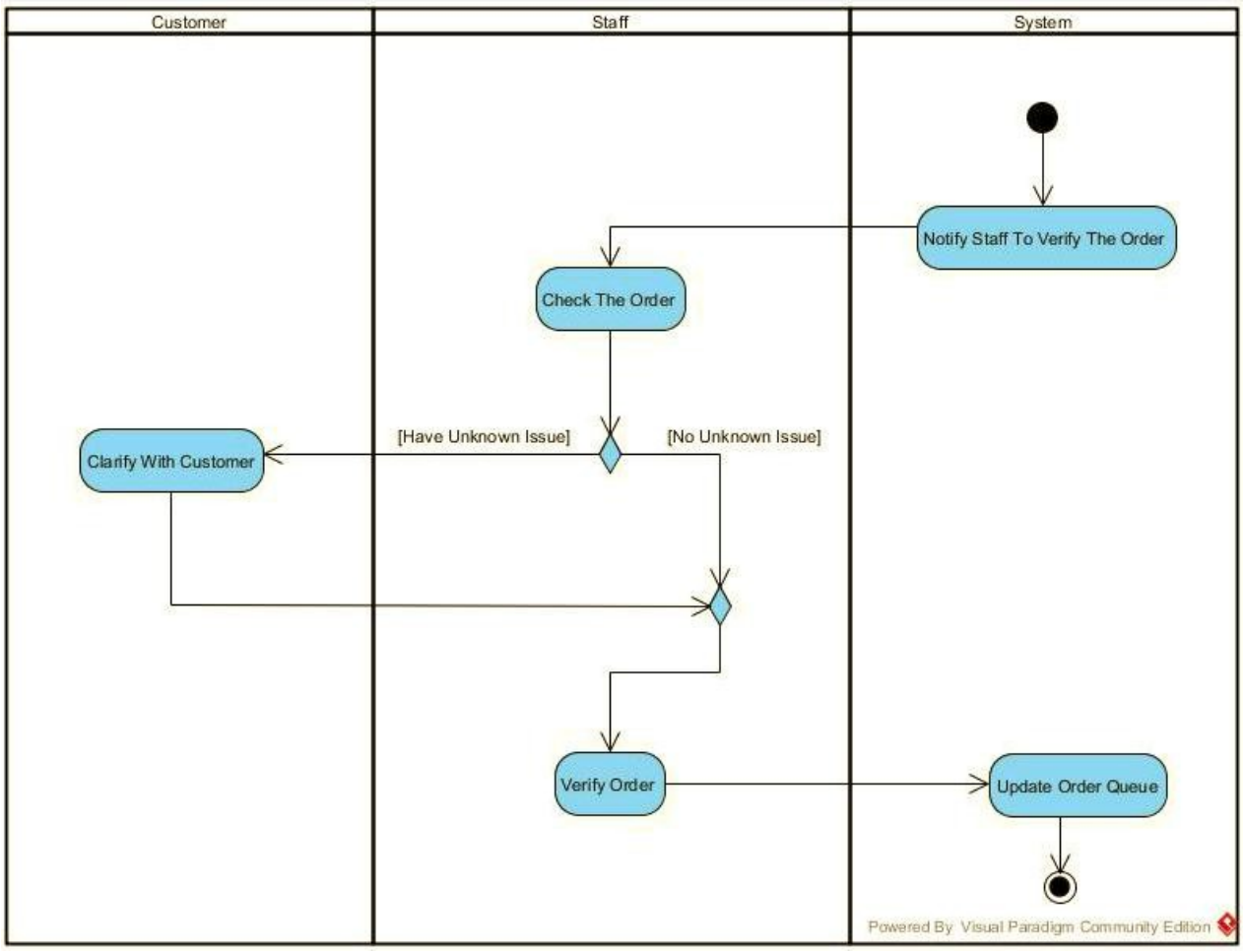


Figure 3.5 - Activity Diagram for Validate Order

3.6.5 Activity Diagram for Make Payment

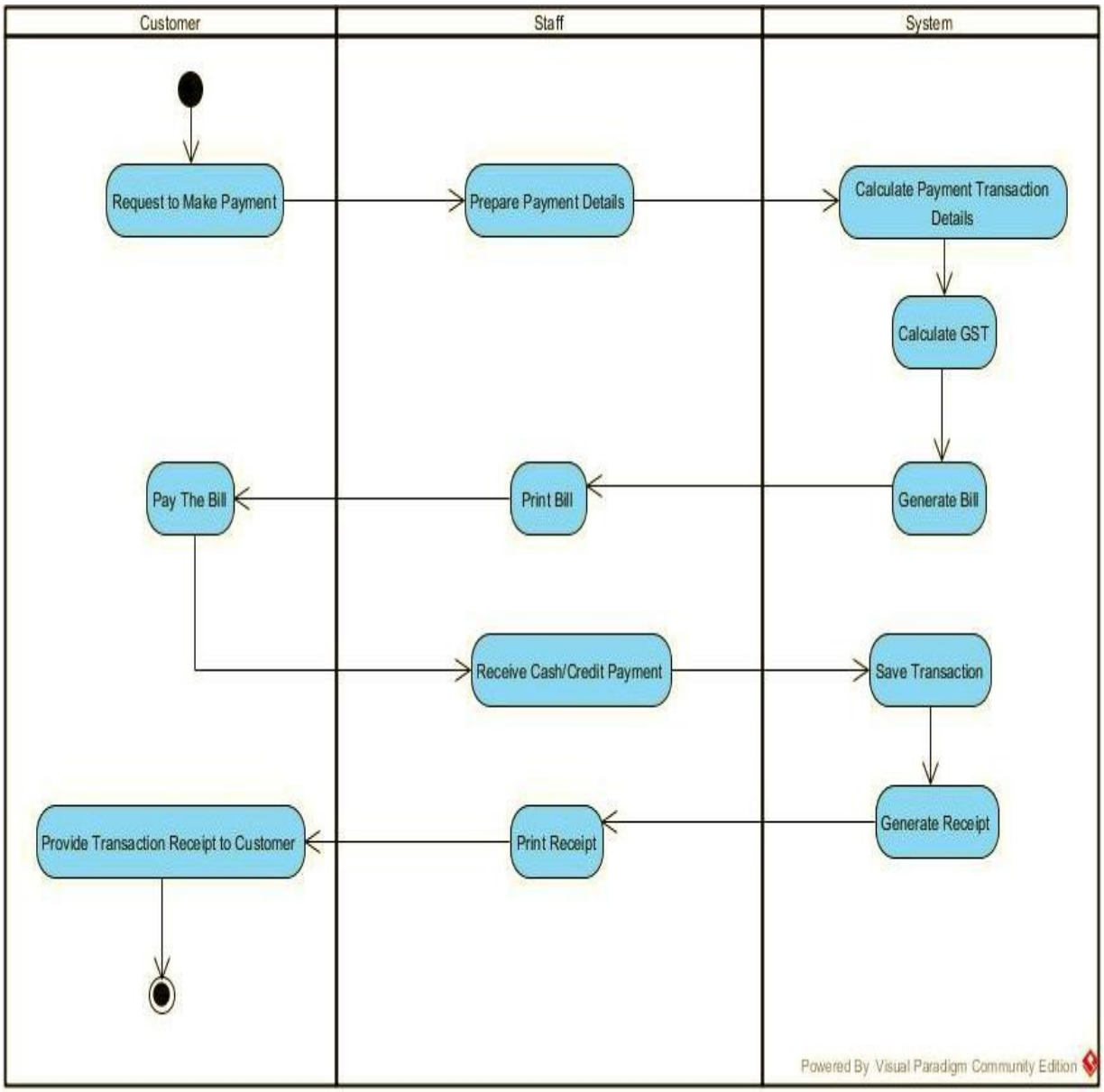


Figure 3.6 - Activity Diagram for Make Payment

CHAPTER 4

USER AND ADMIN INTERFACE

4.1 ADMIN AREA:

4.1.1 Admin Login:

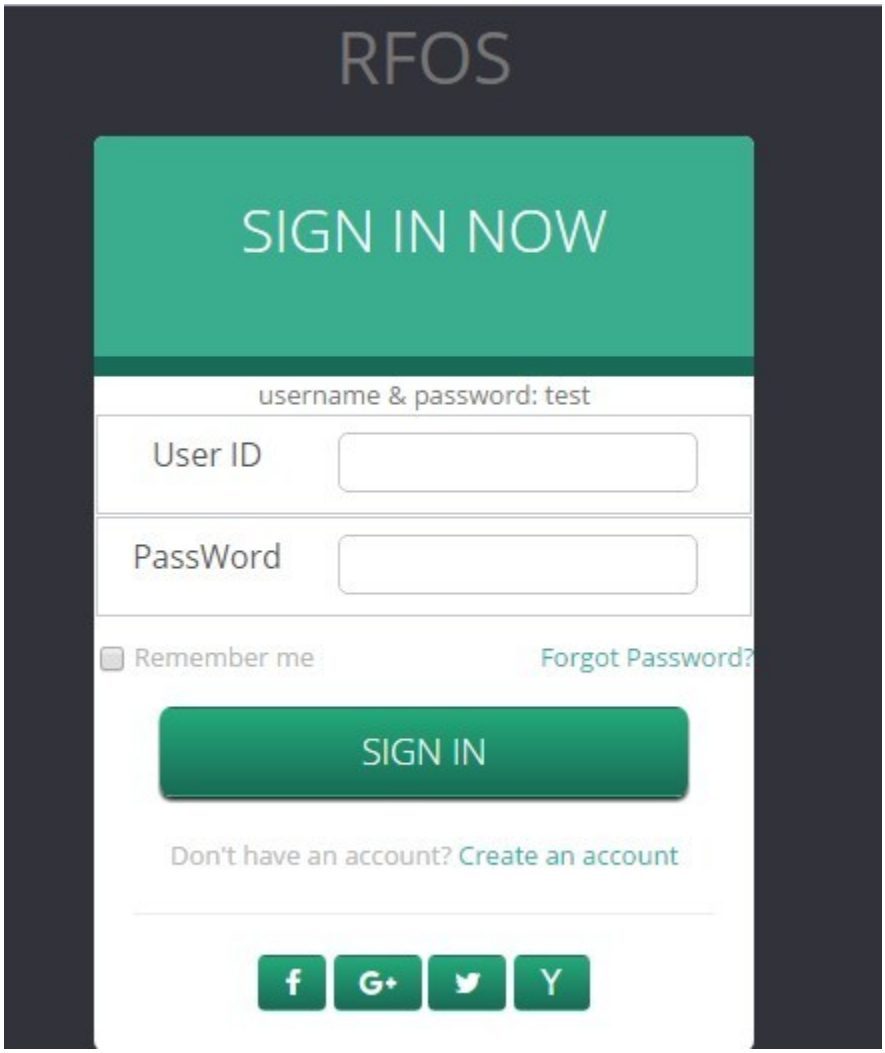


Figure 4.1 - Login Page for Admin

This is the login page for administrators. If an admin inserts correct Email and Password, admin index page will appear.

4.1.2 Admin Index:

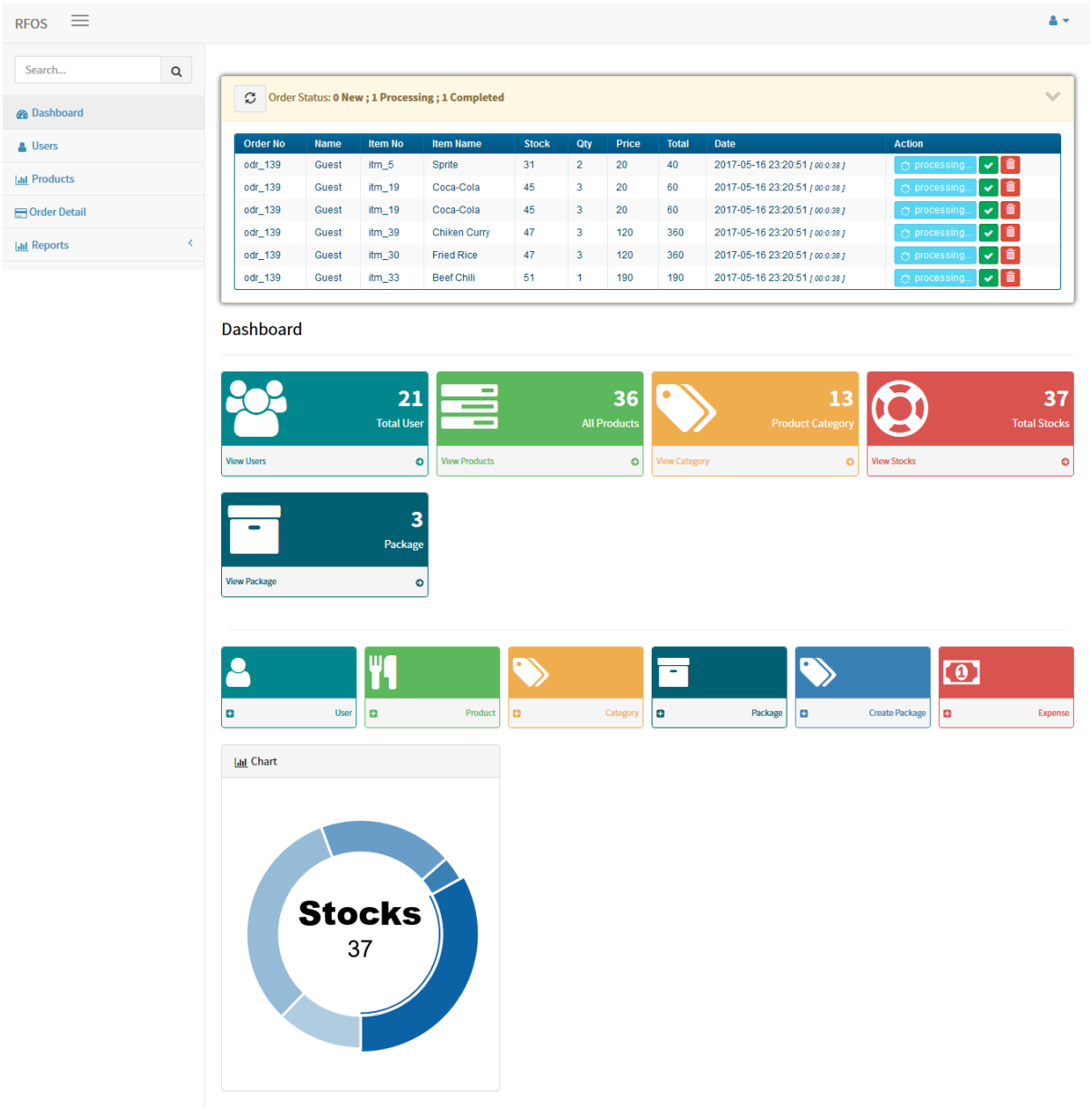


Figure 4.2 - Admin index

This is the index page for admins where the admin can see the total number of customers, products, brands and categories at a glance. Besides, the admin can go to any page from this page. For example, if the admin wants to insert a new product, he can do so by clicking “Insert new product”.

4.1.3 Insert New Category:

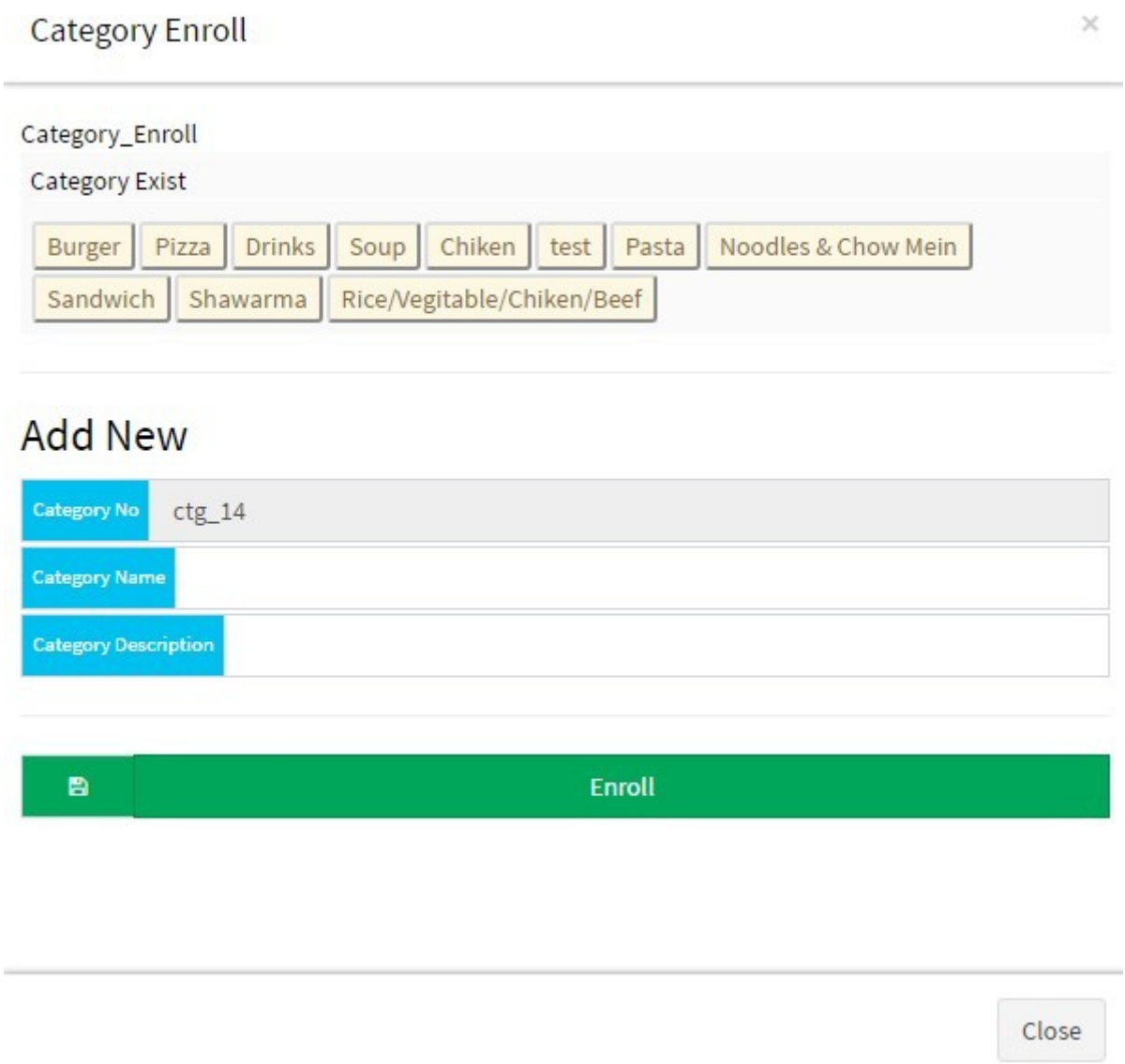


Figure 4.3 - Insert Category

From this page an admin can insert a new category. Insert new brand page is similar as this page.

4.1.4 View all category:

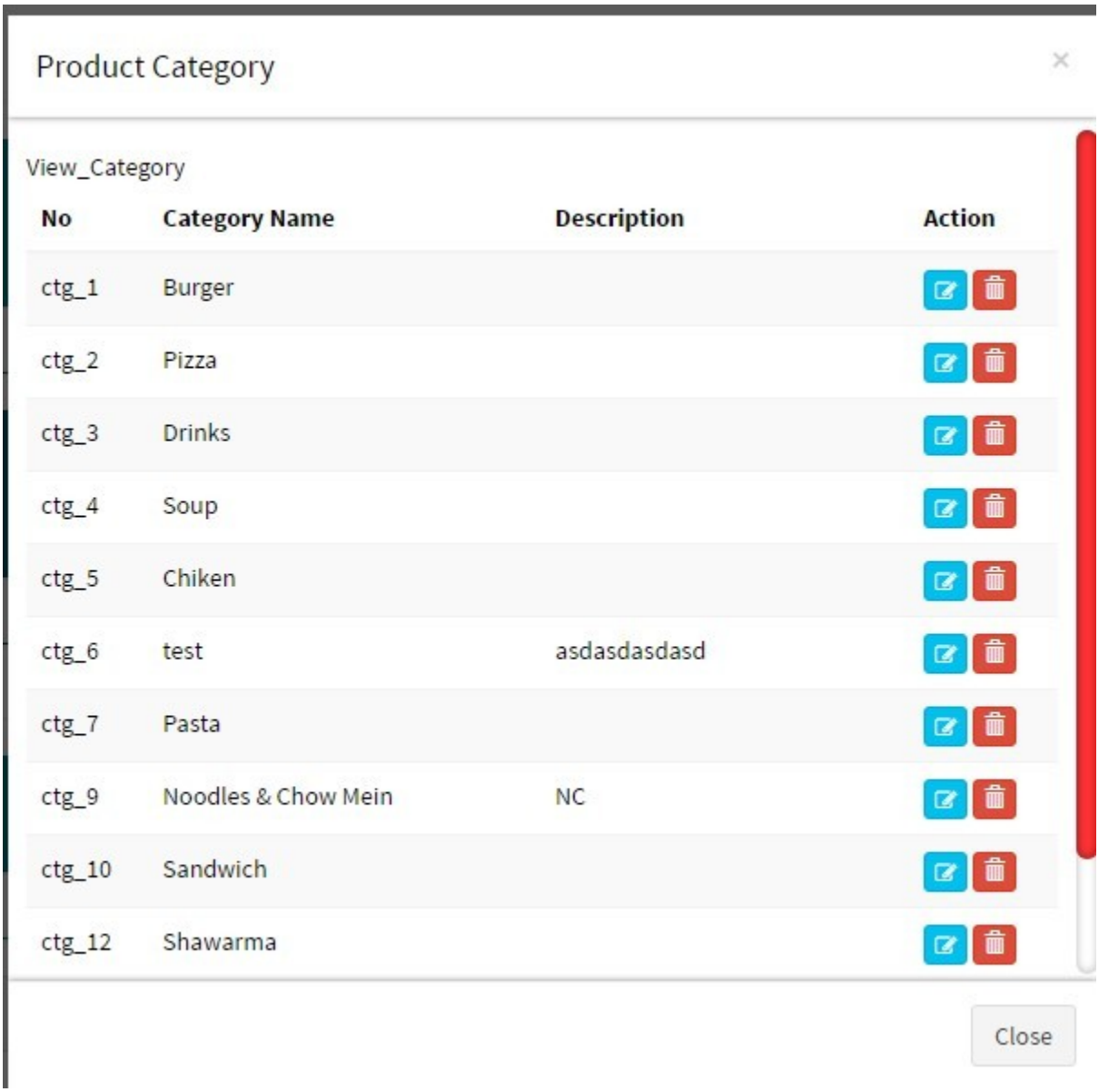


Figure 4.4 - View Category

In this page admin can see the list of all categories. If he wants, he can either delete a category or edit the name of a category. View all brands is same as this page.

4.1.5 Insert New Product:

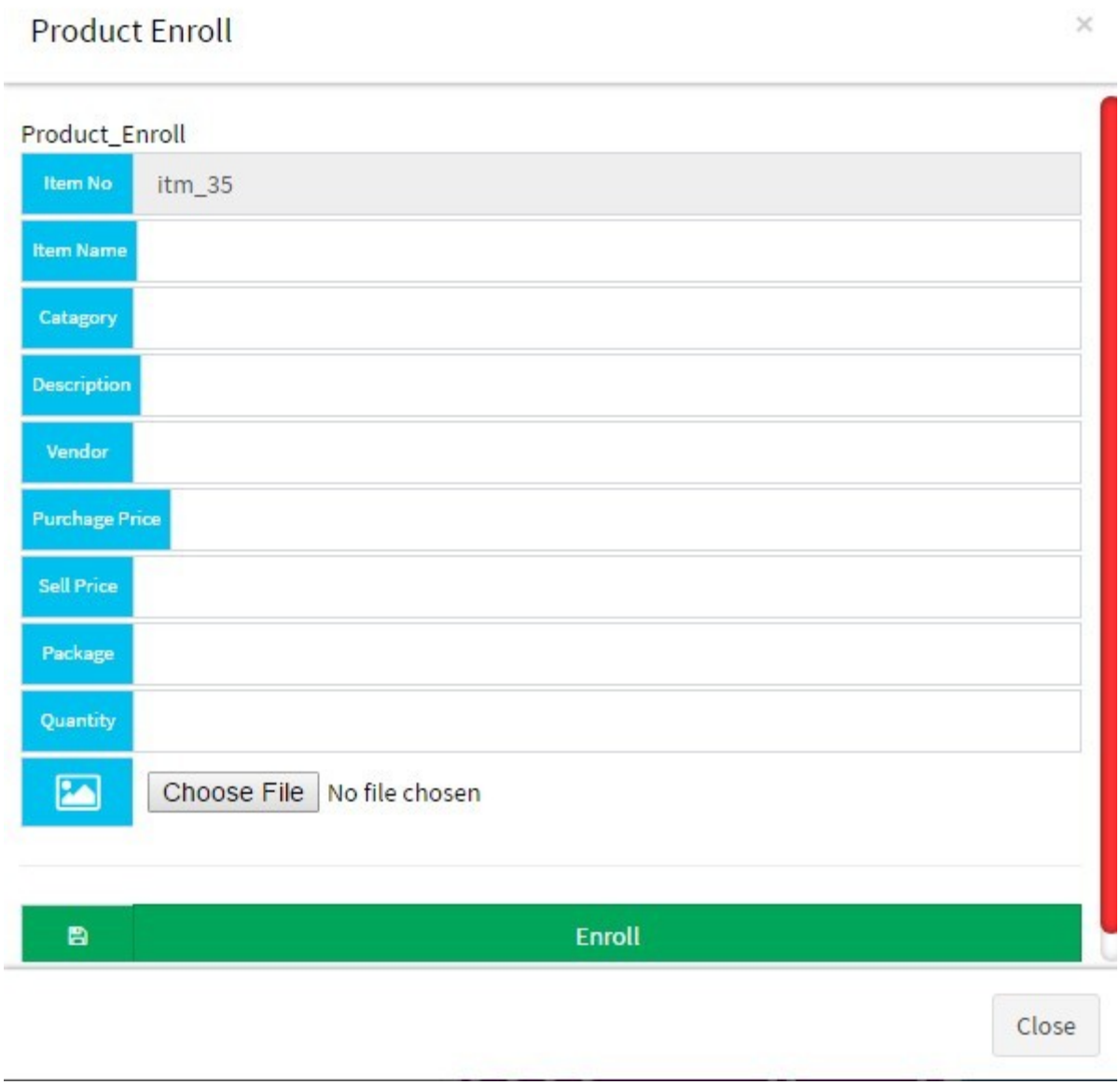


Figure 4.5 - Insert New Product

In this page, an admin can insert a new product.

4.1.6 View All Products:

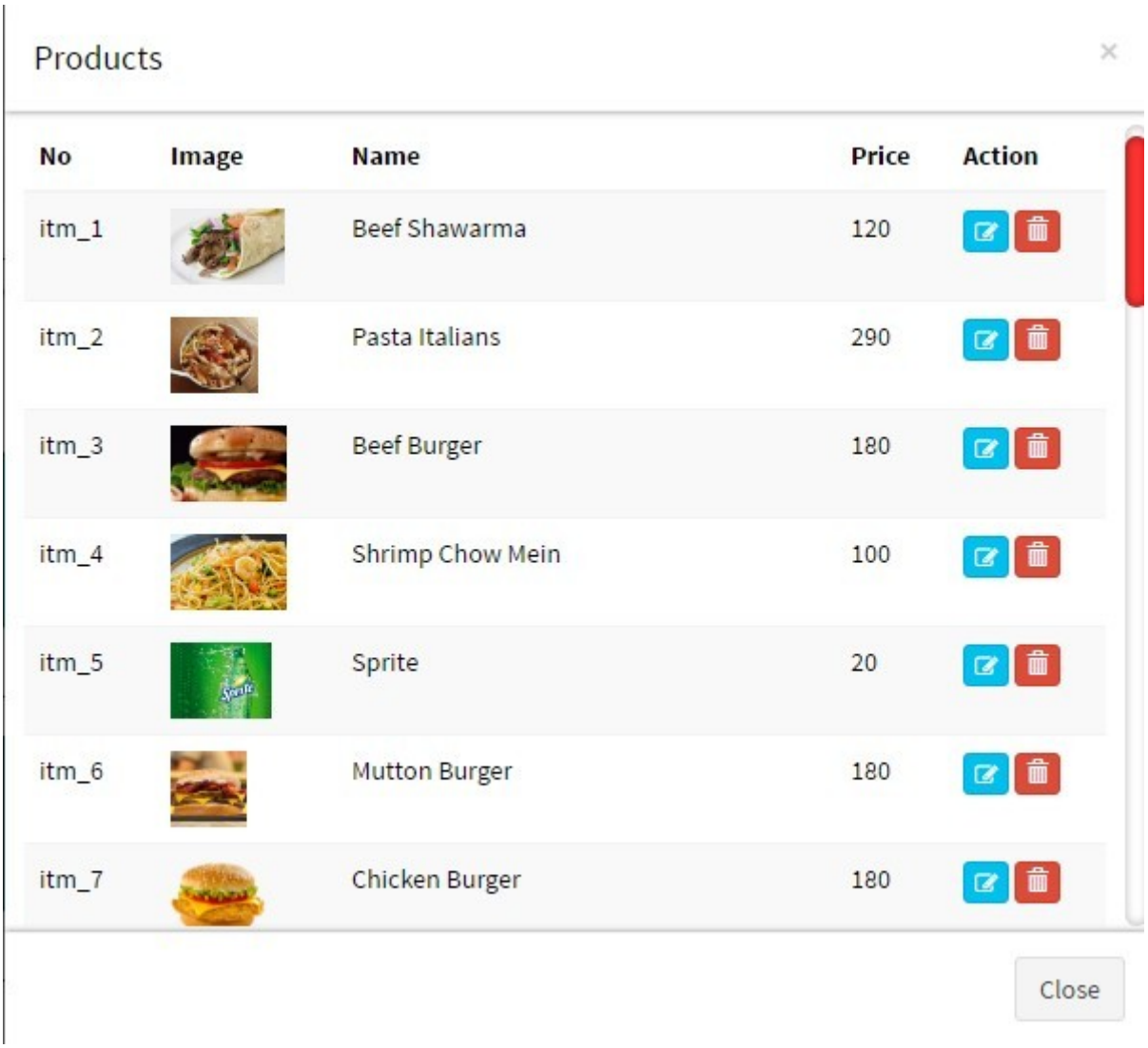


Figure 4.6 - View All Products

In this page, an admin can see all the product lists where he can delete a product or edit a product.

4.1.7 Food Details:

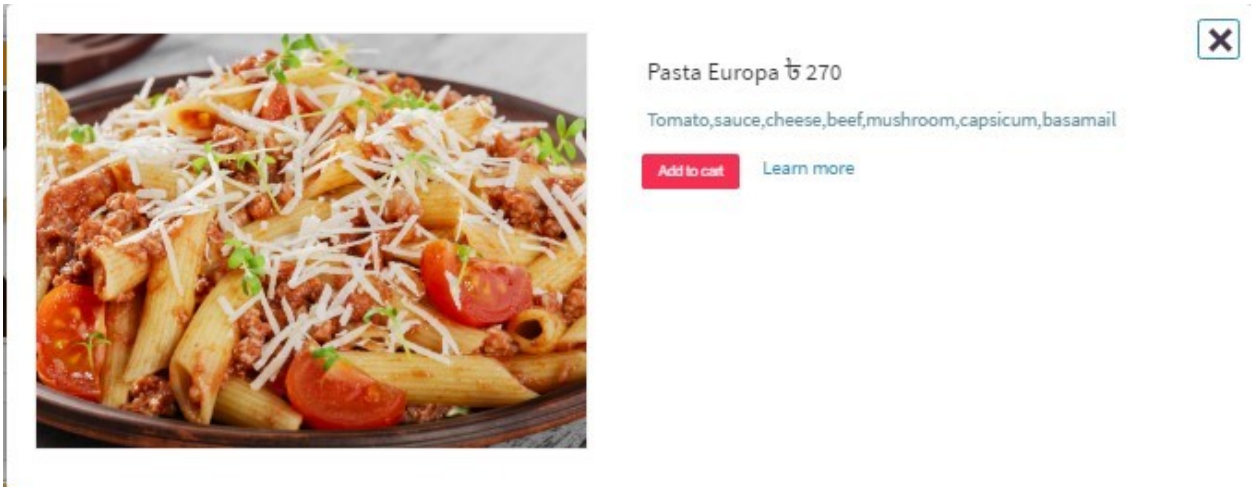


Figure 4.7 - Food details

After clicking a food image a pop up window will come where food ingredient and price will be mentioned. Here clicking add to cart option the food will be added to cart.

4.1.8 Package:

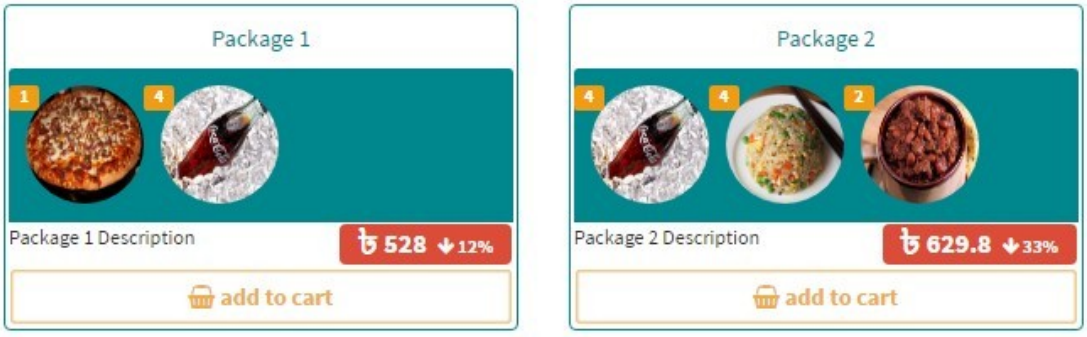


Figure 4.8 - Package

In this section there are some food packages where varieties of foods are included. And customer can add to this to their food chart.

4.1.9 Stock Details:

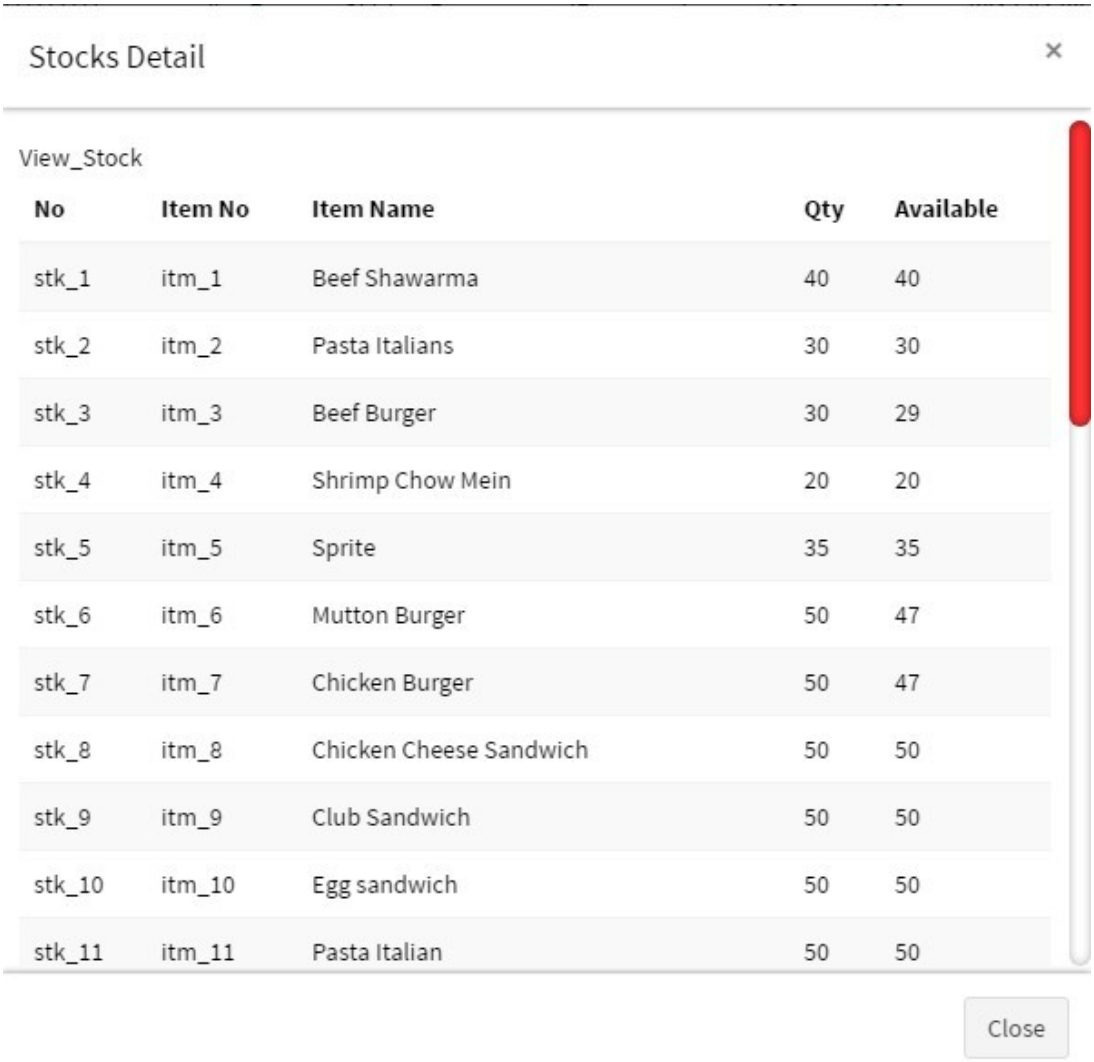


Figure 4.9 - Stock details

In this page the admin can show how many quantity of food is in stock and how many is now available.

4.1.10 User List:

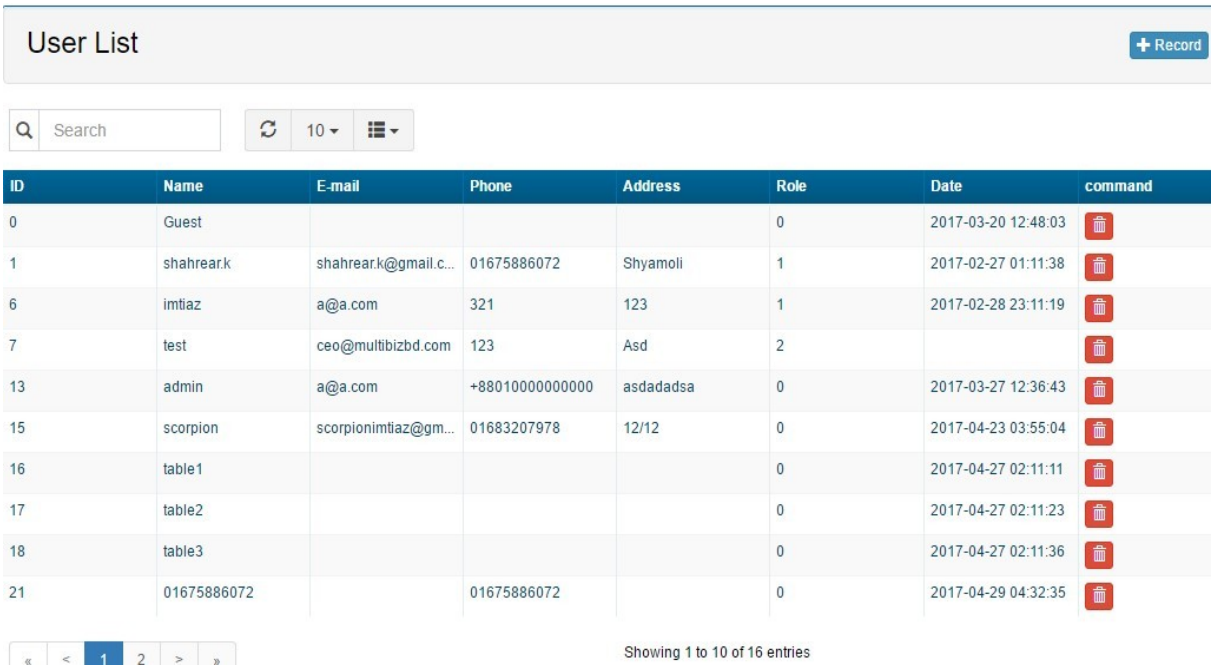
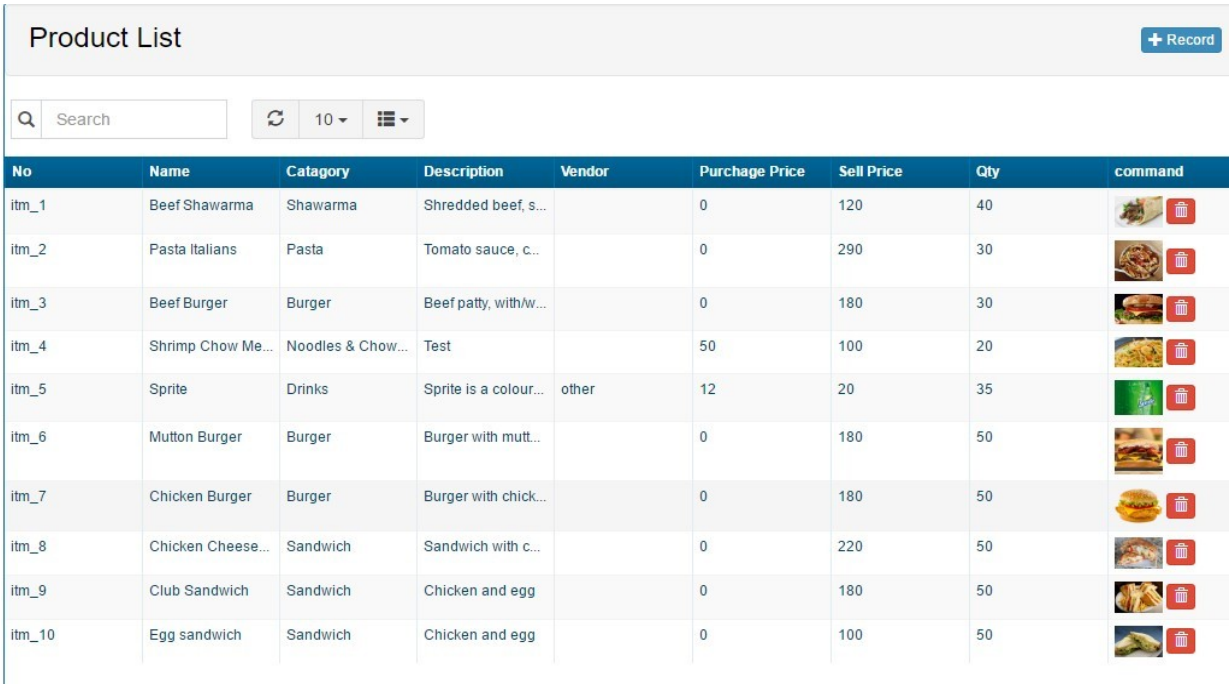


Figure 4.10 - User list

In this page, the admin can see the total register user id.

4.1.11 Product List:



No	Name	Catagory	Description	Vendor	Purchage Price	Sell Price	Qty	command
itm_1	Beef Shawarma	Shawarma	Shredded beef, s...		0	120	40	
itm_2	Pasta Italians	Pasta	Tomato sauce, c...		0	290	30	
itm_3	Beef Burger	Burger	Beef patty, with/w...		0	180	30	
itm_4	Shrimp Chow Me...	Noodles & Chow...	Test		50	100	20	
itm_5	Sprite	Drinks	Sprite is a colour...	other	12	20	35	
itm_6	Mutton Burger	Burger	Burger with mutt...		0	180	50	
itm_7	Chicken Burger	Burger	Burger with chick...		0	180	50	
itm_8	Chicken Cheese...	Sandwich	Sandwich with c...		0	220	50	
itm_9	Club Sandwich	Sandwich	Chicken and egg		0	180	50	
itm_10	Egg sandwich	Sandwich	Chicken and egg		0	100	50	

Figure 4.11 - Product List

In this page, admin can see the product details and can delete any product.

4.1.12 Order List:

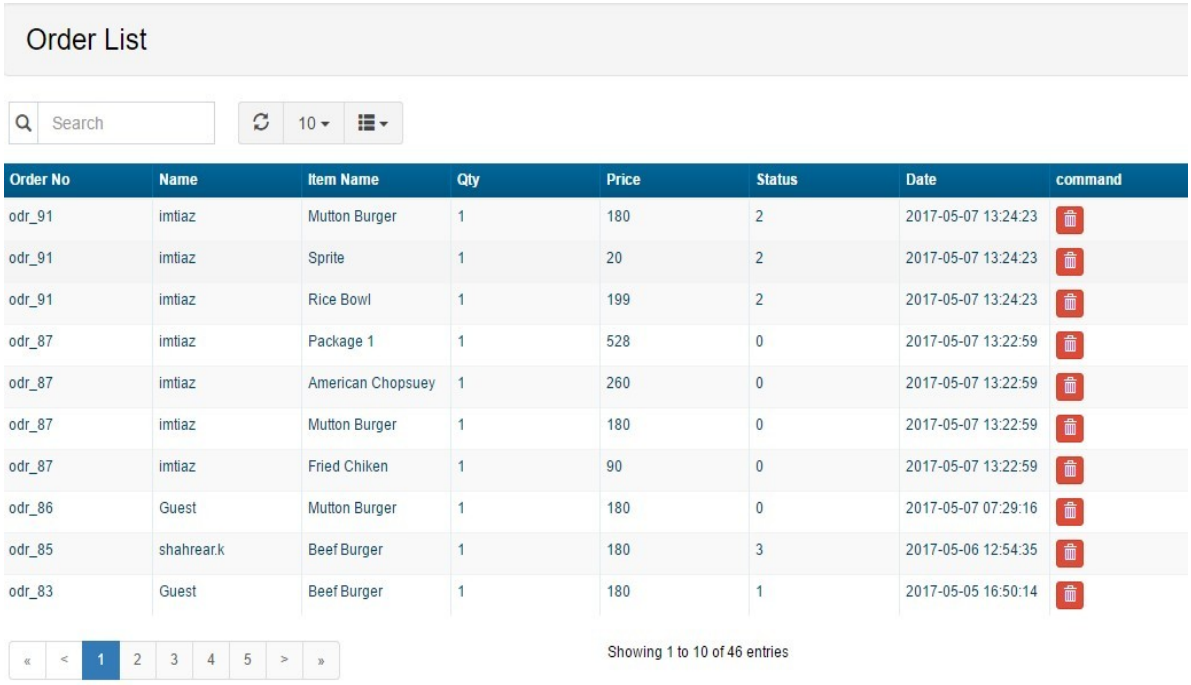


Figure 4.12 - Order list

In this page admin can see the customer orders.

4.1.13 Invoice list:

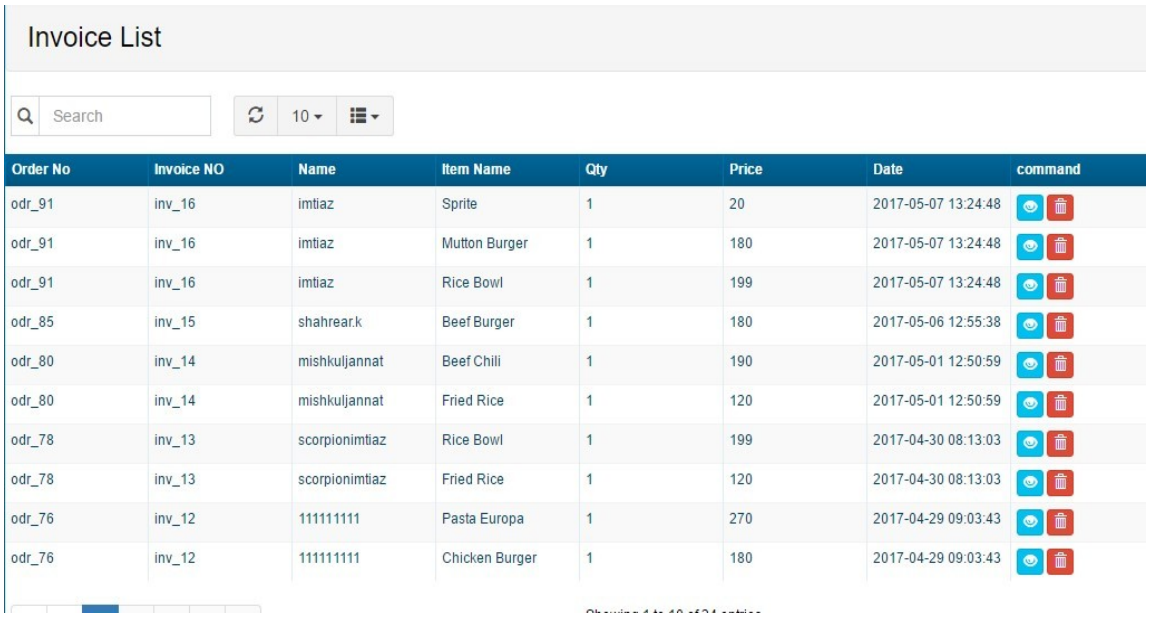


Figure 4.13 Invoice list

In this page admin can see the invoice list of customers order food.

4.1.14 Total Earn and Expense:

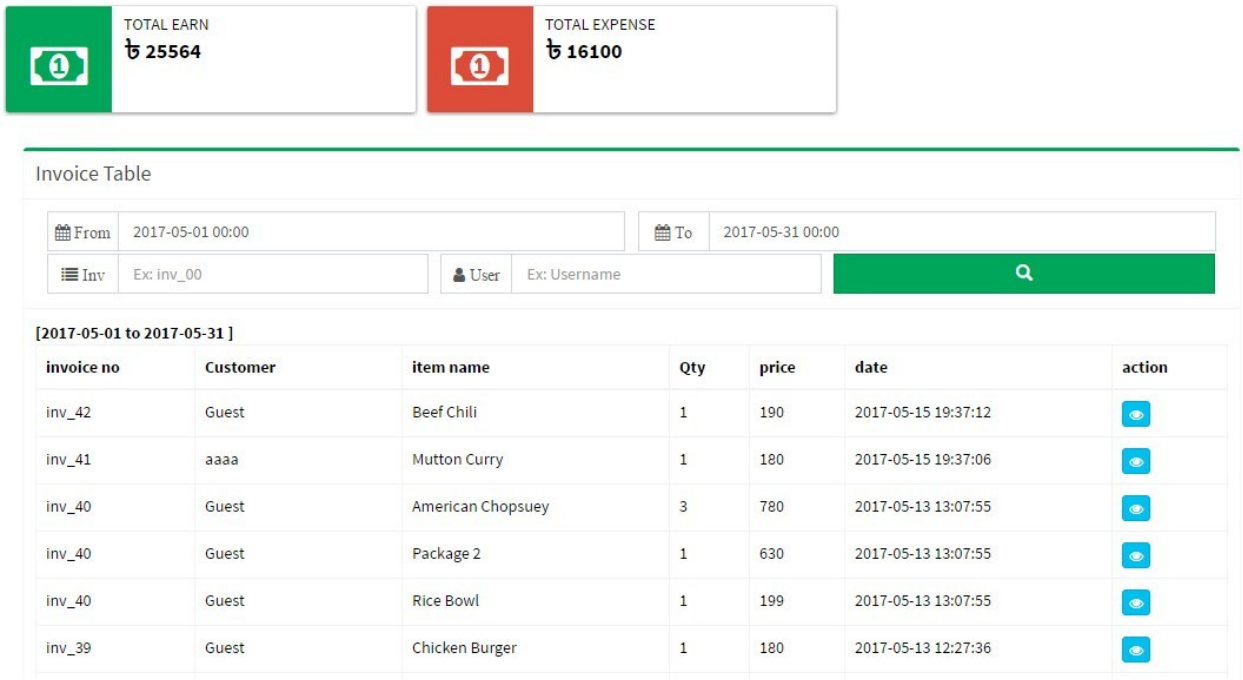


Figure 4.16 - Total earn and expense list

In this page admin can see the total earn and expense in a exact time and also can search by invoice id and username.

4.2 CUSTOMER AREA:

4.2.1 Login:

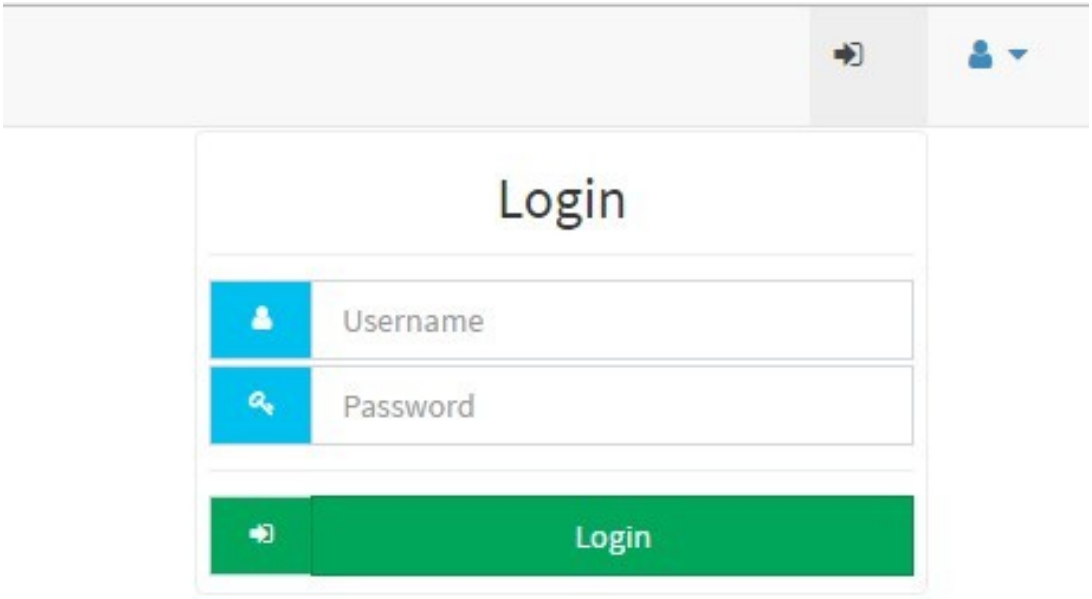


Figure 4.9 - Customer Login

In this page register user can log in.

4.2.2 User Registration:

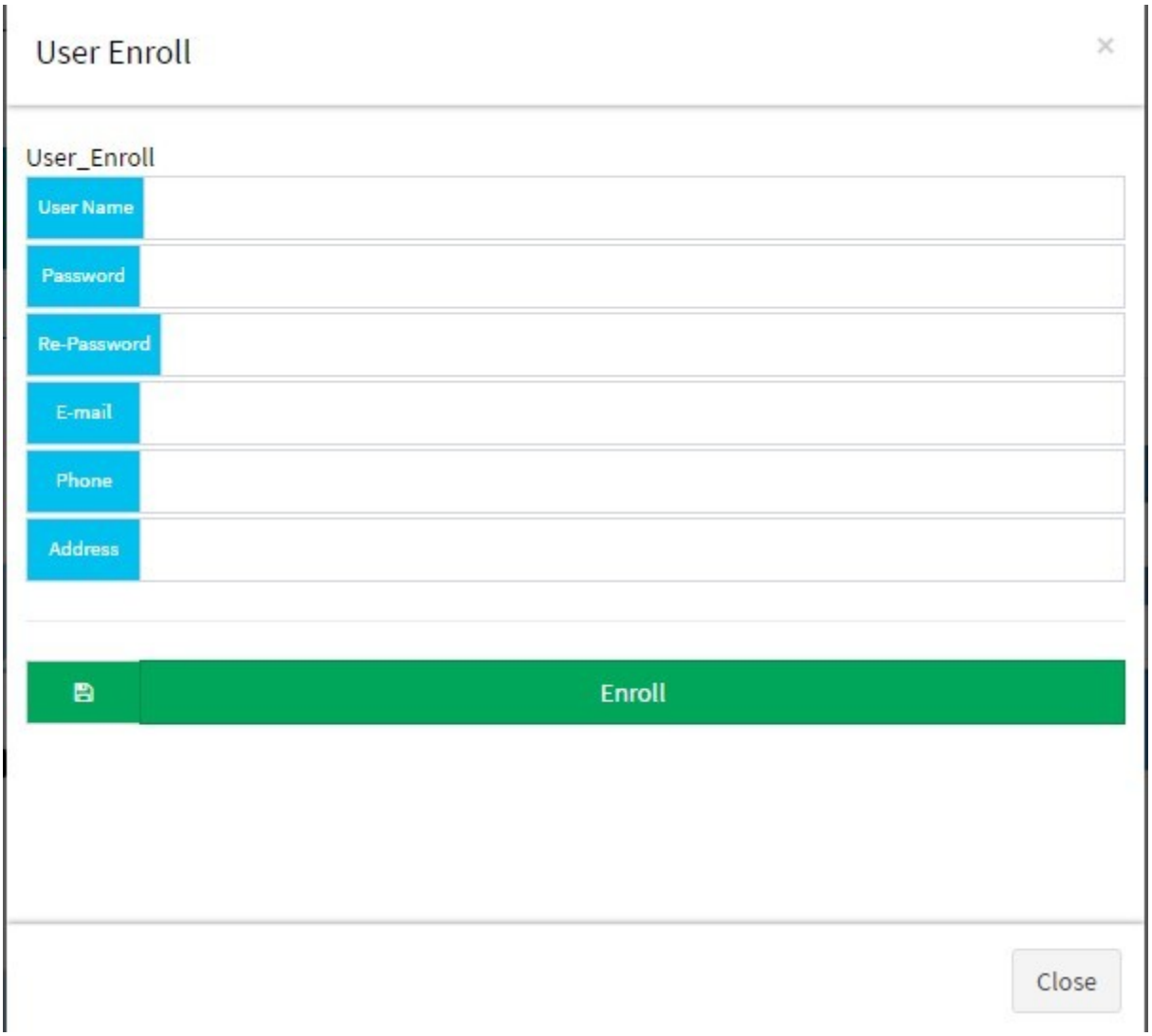


Figure 4.10 - User Registration

In this page user can register by giving their information.

4.2.3 Home Page:

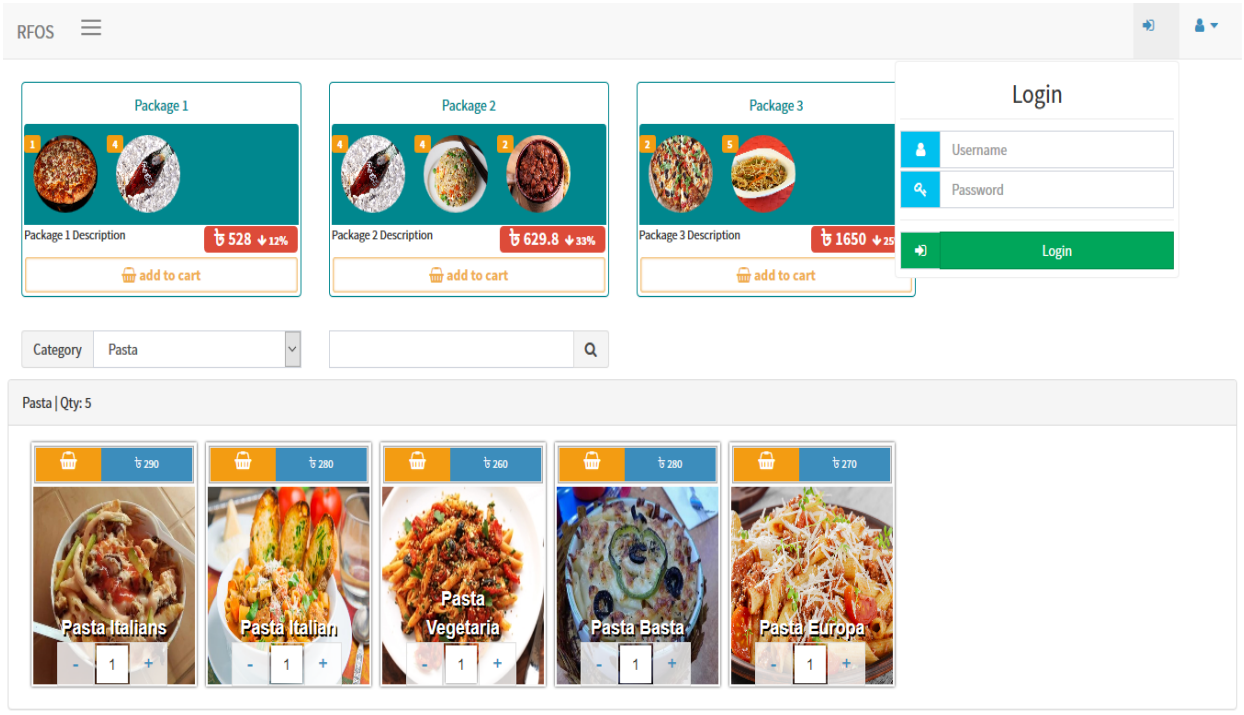


Figure 4.11 - Home page

This is the home page of our website, where a customer can find his desired food. He/she can search any food by using the search box or he can use the advance search option. He can also search product by category.

4.2.4 Cart Page:

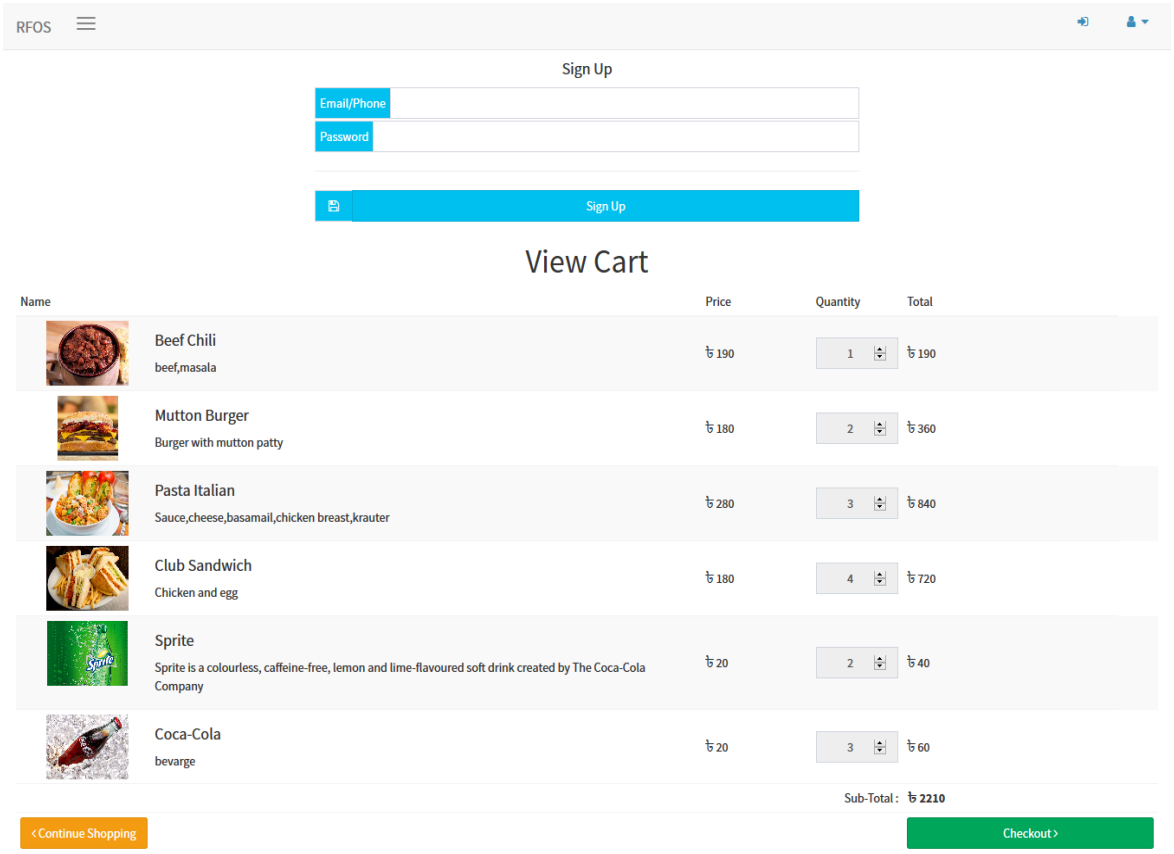


Figure 4.12 - Cart Page

In this page a customer can see the product list which he ordered. He can also edit the quantity of the products or he can remove the unwanted product.

4.2.5 Sales invoice:

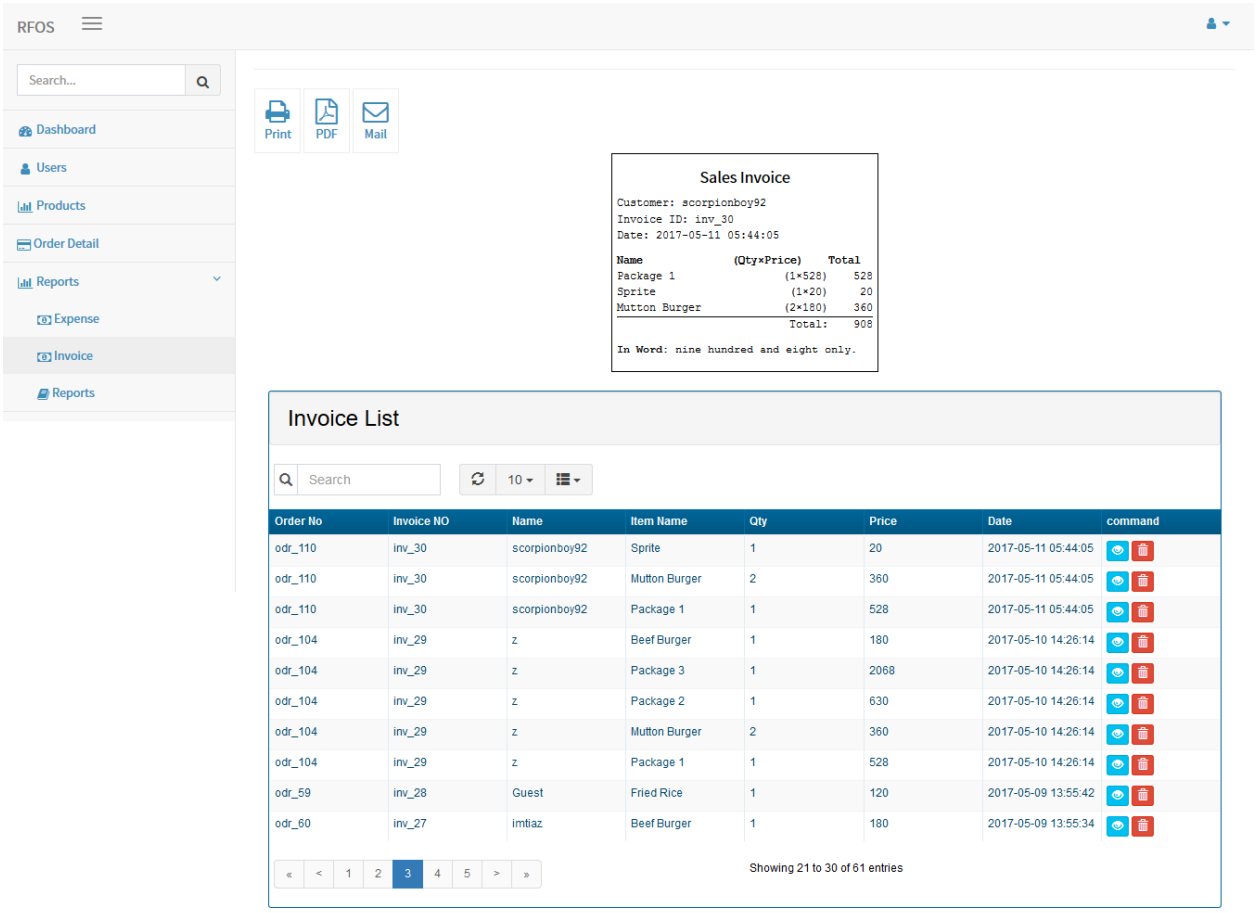


Figure 4.13 - Sales invoice

In this page the bill of the customers total food item will be shown in sales invoice menu and this invoice will be sent to the user mail id.

CHAPTER 5

SYSTEM DESIGN AND IMPLEMENTATION

5.1 IMPLEMENTATION ENVIRONMENT

An Online food order system is online based web-store it can be accessed by any number of users at a time. Different customers from different device can purchase the same products from the site simultaneously. They can place order, view orders, update orders at the same time. There is no constraint for the number of user accessing the application. But updating on the admin side is allowed only the administrator has the right to do it. It has fantastic user interface design and it's so user friendly that any unknown user can easily use it without any complexity.

5.2 MODULES SPECIFICATION

Major modules of these projects are :

- Customer Tools
- Easy Navigation and Silent Features
- Administrative Control Center
- Product Management
- Shipping and Packing
- Payment Gateway

The modules which are currently covered are:

Customer Tools - This module deals with all the customer side controls. The customer can log in to their account by providing the Email and Password. The customer can update their billing/shipping address, their personal information, change passwords, view all the orders, view order status, post / comment into the forum, send feedback to the administrator etc. In short, the customer gets the complete freedom of managing his own account without any interference by anyone.

Easy Navigation And Silent Features - This module consists of the all the navigational features, which makes shopping very easy and efficient for the customer. The customer can browse any product according to its category / brand.

The customer is free to select any product of his choice from these categories / brands. Clicking the name of any product opens a new page, which shows the detailed description that product. The user can add that product to the cart using the "Add to cart" button. The search capability allows the user to search exactly what they desire. The user can search directly through the categories / brands or by entering the keywords.

Administrative Control Center - All the admin related controls are presented in this module. The web-based Administration Area allows the admin to configure every aspect of the e-store.

The admin can view and process the orders online. He can also edit all aspects of an order after it has been placed. He can also edit the products, brands, categories. He can also view the total customers. He can check the messages which is sent by the unregistered customers. In fact, he has total control over each and every functionality of the system.

Product Management - This module manages all the facilities featuring the products. It allows the admin to create a whole new category / brands of products with descriptions, price, keywords and images. New products along with their descriptions and images can be added very easily into it.

Payment Gateways - Once the customer completes shopping and checks out, the controls are transferred to the payment module. All the payment related functions are handled by this module. It offers different modes of payment and the customer can select anyone preferable to him. But in this project only one payment option is available (Cash on Delivery)

5.3 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 such as AJAX (Asynchronous JavaScript and XML) to process data. The application is built in a modular form where these functionalities are built into modules. Some of the modules are as follows:

1. Cart_update.php
2. index.php
3. Modal.php
4. Connect.php

5.4 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. Product_list.php: This display output information for the list of food delicacies which are currently available
2. Search_result.php: This displays output information for the order report
3. Aboutus.php: This displays output information that talks about the ordering outfit.

5.5 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.

5.6 DATABASE SPECIFICATION

The database system used to implement the back-end of the system is MySQL. Access to the system was made possible by a graphical interface (phpMyadmin) with an ISAM engine. The database name is krispy and the structure of the data tables in the database are as follows:

1. User
2. Category
3. Invoice
4. Stocks
5. Items
6. Create package
7. Order
8. Package

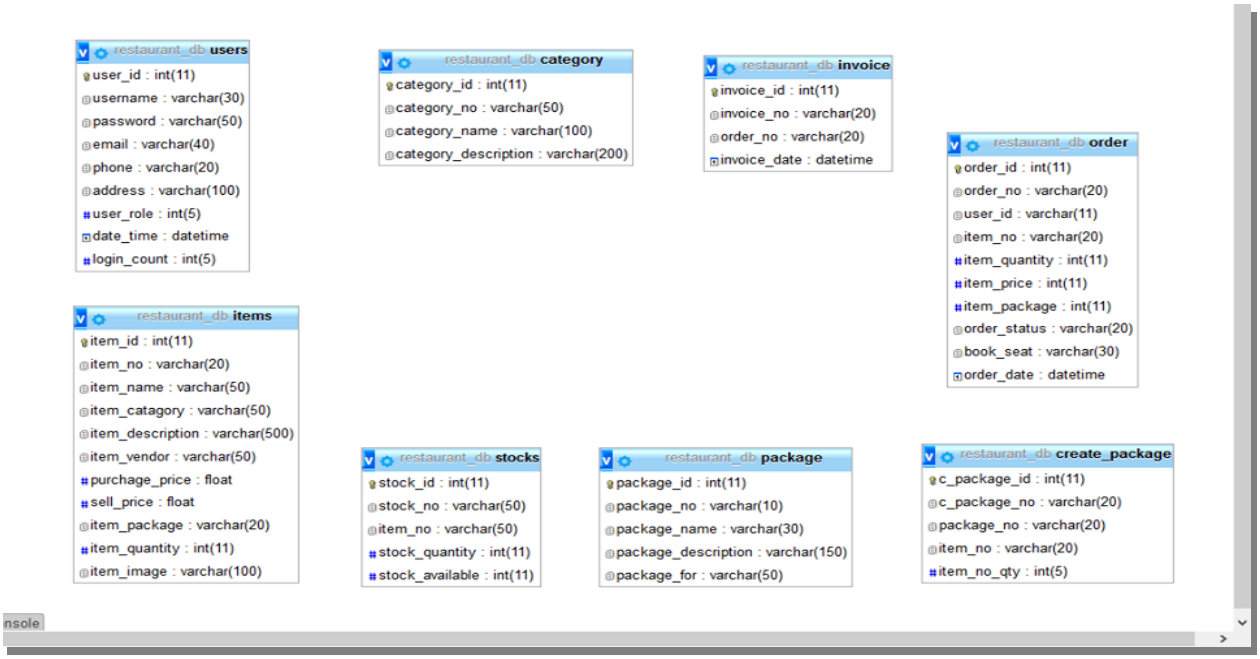


Figure 5.1 - Database Table List

5.7 TESTING

Testing is the process carried out on website to detect the differences between its behavior and the desired behavior as stipulated by the requirements specifications.

Testing is advantageous in several ways. Firstly, the defects found help in the process of making the website reliable. Secondly, even if the defects found are not corrected, testing gives an idea as to how reliable the website is. Thirdly, over time, the record of defects found reveals the most common kinds of defects, which can be used for developing appropriate preventive measures such as training, proper design and reviewing

5.8 TESTING PLAN

The testing sub-process includes the following activities in a phase dependent manner:

- Create Test Plans.
- Create Test Specifications
- Review Test Plans and Test Specifications.
- Conduct tests according to the Test Specifications, and log the defects.
- Fix defects, if any.

When defects are fixed continue from activity.

5.9 TESTING METHODS

Here are few of the basic testing techniques for web application testing:

- Functionality Testing
- Usability testing
- Interface testing
- Compatibility testing

- Performance testing
- Security testing

Functionality Testing - The below are some of the checks that are performed but not limited to the below list:

- Verify there is no dead page or invalid redirects.
- First check all the validations on each field.
- Wrong inputs to perform negative testing
- Verify the workflow of the system.
- Verify the data integrity.

Usability Testing - To verify how the website is easy to use with

- Test the navigation and controls.
- Content checking.
- Check for user intuition.

Interface Testing - This checks if the web server and website server interface, website server and database server interface have proper interaction or not. This test ensures that the users do not see any error messages.

Compatibility Testing - Compatibility testing is performed based on the context of the application.

- Browser compatibility
- Operating system compatibility
- Compatible to various devices like notebook, mobile, etc

Performance Testing - Performed to verify the server response time and throughput under various load conditions.

- **Load testing** - It is the simplest form of testing conducted to understand the behavior of the system under a specific load. Load testing will result in

measuring important business critical transactions and load on the database, application server, etc. are also monitored.

- **Stress Testing -** It is performed to find the upper limit capacity of the system and also to determine how the system performs if the current load goes well above the expected maximum.
- **Soak Testing -** Soak testing also known as endurance testing, is performed to determine the system parameters under continuous expected load. During soak tests the parameters such as memory utilization is monitored to detect memory leaks or other performance issues. The main aim is to discover the system's performance under sustained use.
- **Spike Testing -** Spike testing is performed by increasing the number of users suddenly by a very large amount and measuring the performance of the system. The main aim is to determine whether the system will be able to sustain the work load.

Security Testing - This checks the security of the website. For security purposes, internal pages should not open if you are not logged into the website. Other statistics should not be seen even if the user is logged in.

After completing the entire website testing, a live testing is necessary for web sites. Then upload the site and complete testing should be done. These days, websites are accessed from different kinds of devices like desktops, PDAs, iPhones, etc. It is very important to check whether the web application is compatible to these devices.

CHAPTER 6

SUMMARY, COMCLUSION AND FUTURE PLAN

6.1 SUMMARY

At the end of this project work, I was able to design and develop software that can successfully handle online food ordering and product order for Restaurent_db Foods. 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.

6.2 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 Resturent Foods. 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 organization's business 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 php Myadmin environment.

It is hoped that effective implementation of this software product would eliminate many problems discovered during systems investigation

6.3 FUTURE PLAN

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

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