VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Belagavi-590018, Karnataka

A Mini Project Report on

"FOOD ORDERING SYSTEM"

Submitted in partial fulfillment for the award of the degree in

Bachelor of Engineering in Computer Science & Engineering

Submitted by

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VTU Affiliated AICTE Approved

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CERTIFICATE

This is to certify that the project work entitled **"FOOD ORDERING SYSTEM"** carried out by **SNEHAL KARKI [1BH19CS103]** and **SOUMYA J [1BH19CS104]** the Bona fide students of **Bangalore Technological Institute**, **Bangalore** in partial fulfillment for the award of **Bachelor of Engineering in Computer Science and Engineering** of **Visvesvaraya Technological University, Belgaum** during the year **2021-22**. Thus, it is certified that all corrections/suggestion indicated for Internal Assessment have been incorporated in the report. The mini-project report has been approved, as it satisfies the academic requirement in the respect of mini-project report prescribed for the said degree.

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DR. SOHAN KUMAR GUPTA

H.O.D, Department of CSE

External Viva

Name of the Examiners	Signature with date
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DECLARATION

We, the students of 5th semester **BE. COMPUTER SCIENCE AND ENGINEERING, BANGALORE TECHNOLOGICAL INSTITUTE, BANGALORE,** hereby declare the project work entitled "**FOOD ORDERING SYSTEM**" has been independently carried out by us at **BANGALORE TECHNOLOGICAL INSTITUTE, Bengaluru** and submitted in partial fulfillment of the requirements for the award of the degree in **Bachelor of Engineering in Computer Science & Engineering** of the **Visvesvaraya Technological University, Belagavi** during the academic year **2021-22**.

We also declare that, to the best of our knowledge and believe the work reported here does not form or part of any other dissertation on the basis of which a degree or award was conferred on an early occasion of this by any other students.

PLACE: BENGALURU

DATE:

SNEHAL KARKI	**1BH19CS103**	**……**
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ACKNOWLEDGEMENT

I would like to express my sincere thanks and appreciation to my supervisor, Mr. Murali G who has given me this bright opportunity to engage in Food Ordering System project. A million thanks to you. I also would like to thanks my friends for their support and encouragement. Finally, I must say thanks to my parents and my family for their love, support and continuous encouragement throughout the course.

ABSTRACT

This Restaurant Ordering System project is developed to transform the old and traditional system that mostly used by the restaurants to a new and more efficient ordering system. The traditional ordering system brings inconvenience to both staffs and customers as it requires a lot of manual work. The manual work done by the staffs will cause some human errors such as give the incorrect bill to the customers, ugly handwriting of the waiter, incorrect sequence of the order. All these human errors will cause the customer dissatisfaction towards the restaurant. Therefore, this restaurant ordering system is designed and developed to help the restaurant to have a better management. By having this ordering system, the time of placing order has reduced. The customers do not need to wait to be served when they eat in the restaurant. The customers will be more satisfy at this ordering system.

The methodology that used to develop this system is throwaway prototyping methodology. This methodology is chosen because the system will be developed in a shirt time compare to other methodologies. Throwaway prototyping methodology also allows the developer to listen to the feedback of the end user to keep on working on the development to match the requirements of the user.

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1.1 Problem Statement

Nowadays, many restaurants using traditional food ordering system to serve customers. In the traditional food ordering system, the staff write down the foods that the customer order. The paper will then pass to the kitchen and the chef will start to cook. This has caused few inconveniences. The staff might make some errors while writing down the order. Sometimes, when the staff write in hurry will make the handwriting difficult to understand. The staff might lose the order paper and customers might also receive incorrect bill.

One of the problem that faced by restaurants that using traditional ordering system is the customers do not know the time for preparation for the food. Some of the customers might have next schedule after their lunch or dinner. They need to know the time preparation so that they can plan their schedule wisely. Especially when there is a lot of customers, the customers might think their order has been forgotten if their food still not yet be served in a long time. It will be good if there is an estimated time to prepare the food shown to the customers.

Furthermore, some of the customers might want to change their food or cancel their food. The customers are only allowed to cancel their order if the chef not yet start cooking. If using the traditional food ordering system, the customers need to inform the staff, then the staff only inform to the chef. If there is a lot customer in the restaurants, the staff might forget to inform to the chef. The staff might also too late approach the chef and the customers are unable to cancel their order. This problem should be solved because it is inconvenient for the customers. It is much more convenient for customers if they can cancel their order themselves. They no need wait the staff to serve them and waste the time. A cancel button should be displayed so that the customers can cancel their order if the chef not yet start cooking.

Moreover, it is difficult to update the latest information to the customers. The availability of the dishes is according to the ingredients that bought every day. When there is lack of ingredients, the chef is unable to prepare some of the dishes. Therefore, it is difficult to inform every customer when they want to order. The staff might forget to inform the customers. As they have many things to do. If the customers already order and feel excited to

taste the dishes, but the staff inform them the dishes is unable to order due to lack of ingredients. This will cause the customer dissatisfaction towards the restaurant. The brand image of the restaurant will be affected.

1.2 Background and motivation

People like to dine in at restaurant for their meals nowadays. There are a lot reasons why people prefer eating out. One of the reasons is they lazy to cook after work. People will feel tired after more than 7 hours of work. Therefore, they do not have any energy to prepare their meals. In addition, university students have a lot of works to do, such as assignments, tutorials and take part in curriculum activities. It will be more convenient if they eat in restaurant compare to they cook themselves. As more and more people eat in the restaurant, the restaurant manager should make some changes to increase the speed of ordering.

Traditionally, the customers need to interact with the waiters to place order. The waiters write down the foods that the customer order. The paper will then pass to the kitchen and the chef will start to cook. The customers have faced a lot inconveniences with this traditional method. For example, waiting to get the food served, received incorrect bill and many more. All this inconvenience will cause the customers unsatisfied on the service of the restaurant.

The customers are demanding simplification tasks such as book movie tickets nowadays. Therefore, restaurant also should make changes. With the new changes, the customers can make their order through food ordering system. The customers do not need to wait to be served usually at the peak hours. After they order themselves using the ordering system, they just need to wait for the food.

In conclusion, this report is written to propose a restaurant ordering system. This system can help to improve the current ordering method. Furthermore, it also brings convenient to both restaurant and customers. After this project has done, this system will be very useful for many restaurants.

1.3 Objectives

By using this food ordering system, it is easier to know the time preparation of the food. The customers might have their own schedule after their lunch or dinner. Therefore, they need to know the preparation time of food in order to plan their schedule wisely. During the peak hours, when their food is not yet being served in a long time, they might think that their order has been forgotten. By having this feature in the system, the customers can know the estimated time preparation of the food. They can check the estimated preparation time anytime and know that their order will not be forgotten by the chef.

- To ensure the customers can cancel their order

The restaurant that using traditional method include many steps when customers wish to cancel their order. The customers need to inform the staff, then the staff will inform the chef. In this restaurant ordering system, the customers can cancel their order without interact with the staff. They can just click on the cancel button to cancel their order. The customers can cancel

2.1 Wireless Food Ordering System

Nowadays, internet is widely used in everywhere. People use internet to perform their tasks every day, such as chat with family and friends, communicate with colleagues, search information and many more. Internet is very convenient to the people as almost everything can be done by internet. The telecommunication and internet has growth rapidly. There are some industries starting to apply this technology into their business. This will help their business be more efficient.

The user can access to data and services from a remote server, which will allow the user to access the databases across the network or internet. Most of the handheld devices support this wireless technology because they allow the user to access the database to retrieve the data. People nowadays use mobile devices to work and access with data and information. It is because the mobile devices are cheap and small. PDA which is Personal Digital Assistant is the mobile device that suitable for business applications. They have the ability to access data and information from remote locations.

In this ordering system, the waiters take the orders from the customers by using the PDA. Then, the waiters will send the order to the kitchen via web-based wireless application. The order of the customers will be displayed on a computer screen in the kitchen. The kitchen staff will refresh the list when the food is ready to be served. The waiters will be informed through the PDA. Then, they will serve the food to the respective Delivery boy and Delivery boy deliver the food to the customers. This system will increase the efficiency of the services as the waiters do not need to take an order using paper anymore.

2.2 **Online Ordering System**

Internet is very famous and it plays a huge role in people's life nowadays. People not only use it for communication, they also use for education purpose, work purpose and many more. Many company start to sell their items online because people nowadays like to purchase items online. People also like to purchase items through internet as it brings a lot of convenience to people.

Restaurant industry also started to make use of internet to attract more customers. Some of the restaurant started to use online ordering system to let the customers to make their order. When the customers make the order through the internet, the data and information will send to the database of the restaurant. The order of the customers also will be displayed in the screen of the restaurant.

This online ordering system brings convenience to customers. The customers can choose the food they like through the internet. They can view the different menu and make their order through the website.

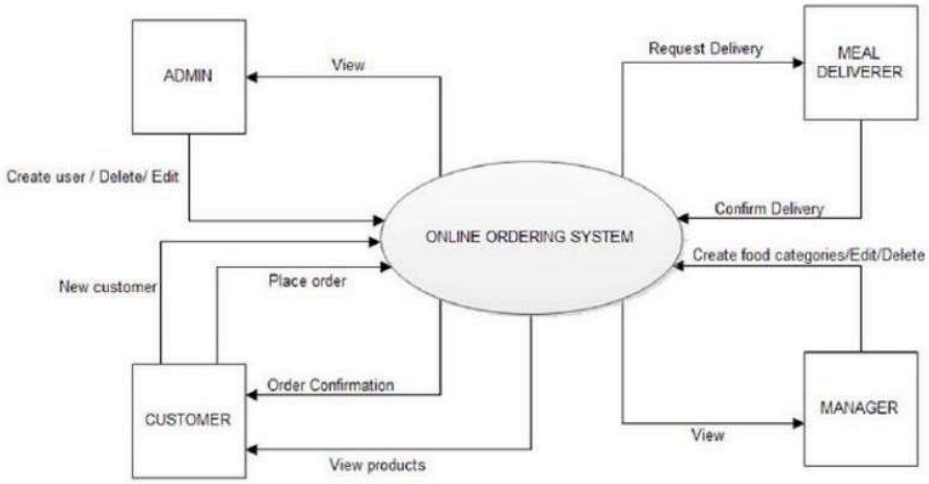


Fig :Online Food Ordering System Context Diagram

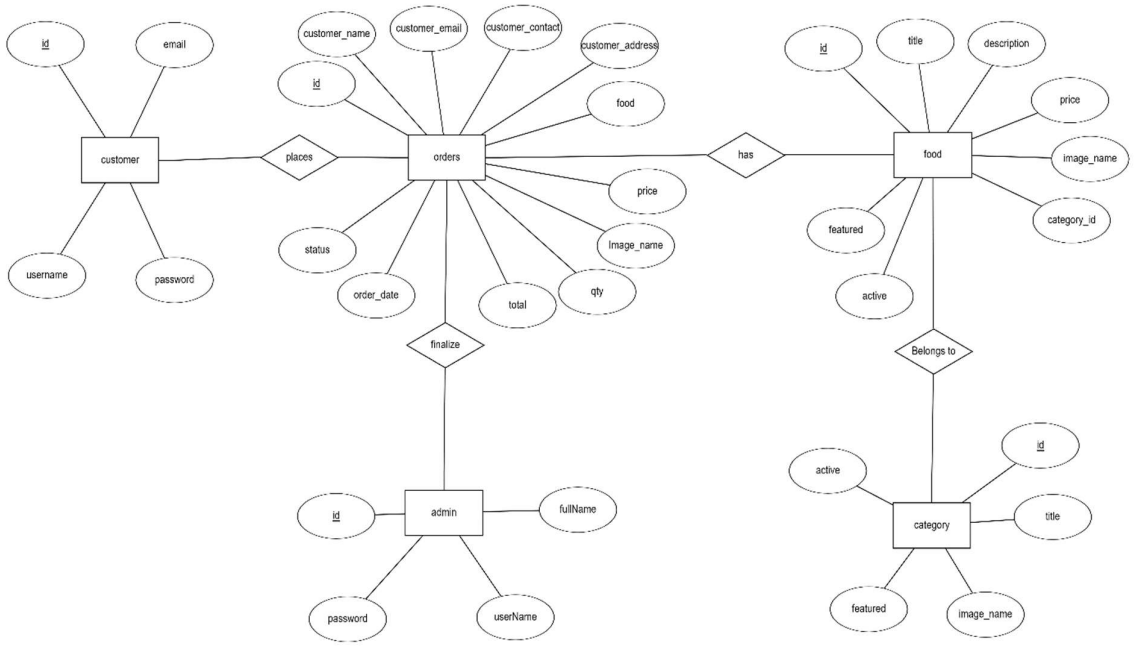


Fig :Entity Relationship Diagram for Online Food Ordering System

The strength of this system is it is flexibility. The customers can order the food anytime and wherever they are. The customers just need to access to the internet using mobile device or laptop to make their order. They do not need to waste their time to walk in to the restaurant to make their order. They also do not need to queue up in the restaurant. This has save the customer's time.

The limitation of this system is not all the people use internet. Some of the senior citizen do not know how to use internet. Therefore, they are unable to access to the internet to make their order. This system is unable to target all types of customers. Moreover, this system relies on internet. If there is no internet connection or the service provider is under maintenance, the customers are unable to access to the website. This will bring inconvenience to the customers.

The similarity of this system and proposed system is both of this systems using internet to let the customers place order. The difference of both of this system is online ordering system is used to make an order when you are lazy to eat in the restaurant. However, proposed system is used when the customers make their order themselves when they go into the restaurant.

3.1 Use Case Diagram

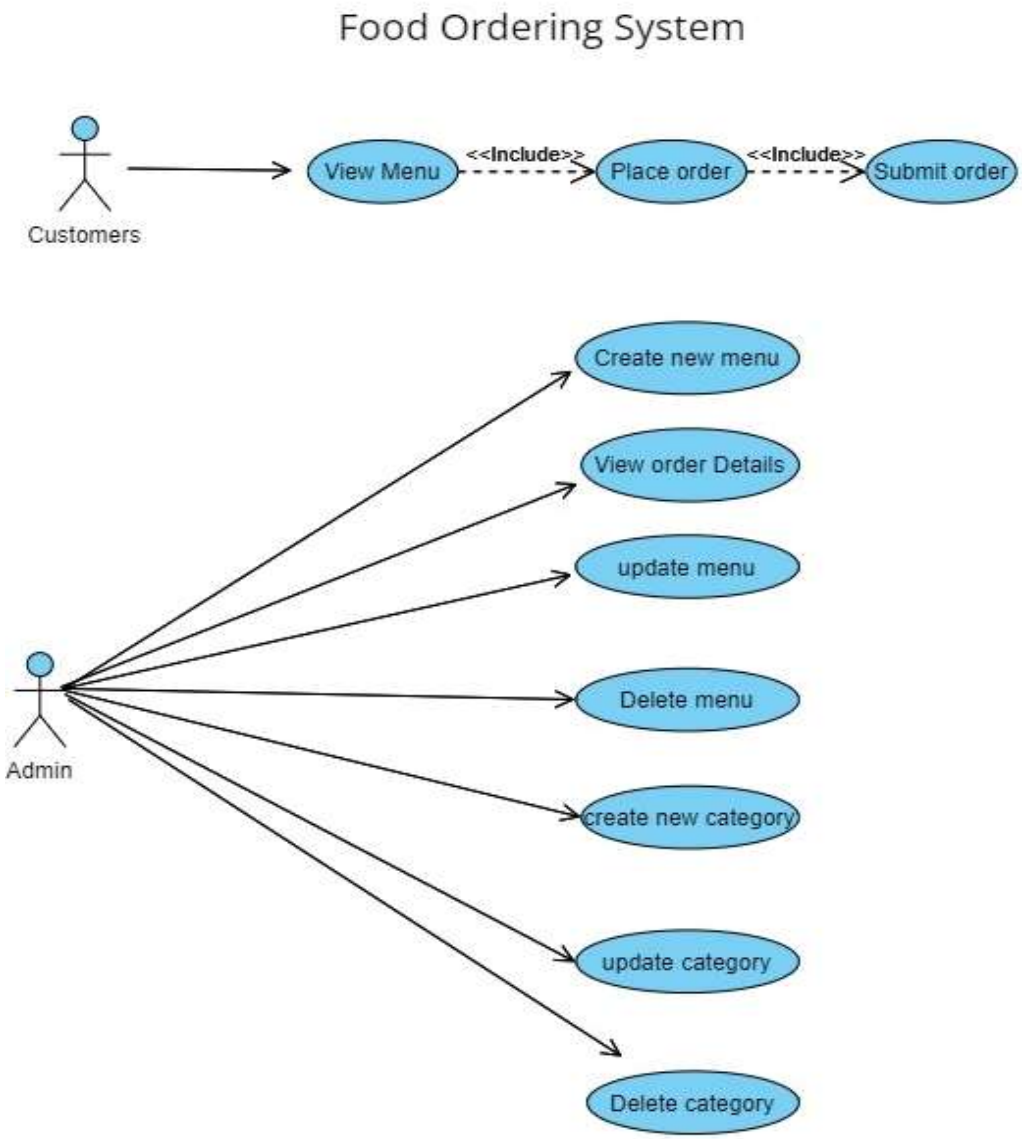


Figure 3-2 Use Case Diagram of Food Ordering System

The figure above shows the use case diagram of Food Ordering System. There are some functions provided by the system.

- Login
  Login function is needed to identify whether the user is staff or chef. Different roles can perform different tasks.

- View menu
  The customers can view the menu through this system. They can view the menu according to the category.

- Order food
  The customers can order the food after they view the menu. They need to enter the quantity of each dishes.

- View order details
  The staff and chef can view the full order details of the customers. The chef need to view to cook the dishes while the staff need to view the order details to serve the customers.

- Change order status
  The staff and the chef have the right to change the order status of the customers. If the food of the customers has started to prepare, the chef will change the status of the order. If all the food of the customers has been served, the staff will change the status of the order.

- Create new menu
  The staff can add new menu to the system. The staff can add the name, picture, price and the category of the food. After the staff inserted, the customers can view it through the menu page.

- Update new menu
  The staff can update any menu through the system. The staff can change the name, price, picture and the category of the food. The customers can view the new menu after the staff make the changes.

3.2 Activity Diagram

3.2.1 Place Order

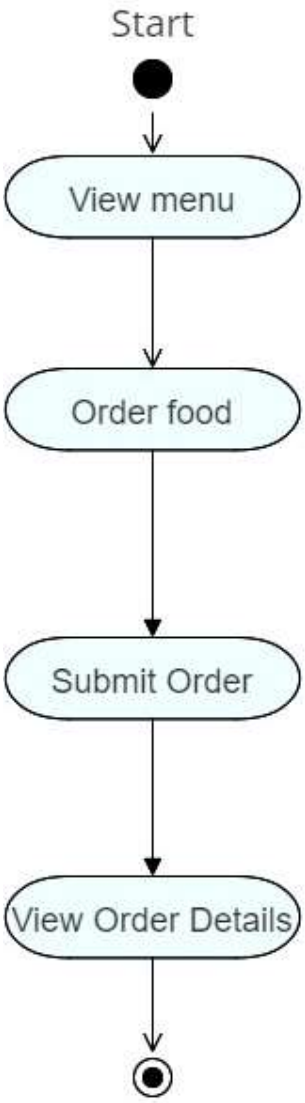


Figure 3-3 Activity Diagram for Customers to Place Order

The customers can view the menu through the device that prepared by the restaurant. After they made their decision, they can order the food through the device. the quantity of the food in order to order the food. After the customers press submit button, the staff and chef can view the order details of the customers.

3.2.2 Update Menu

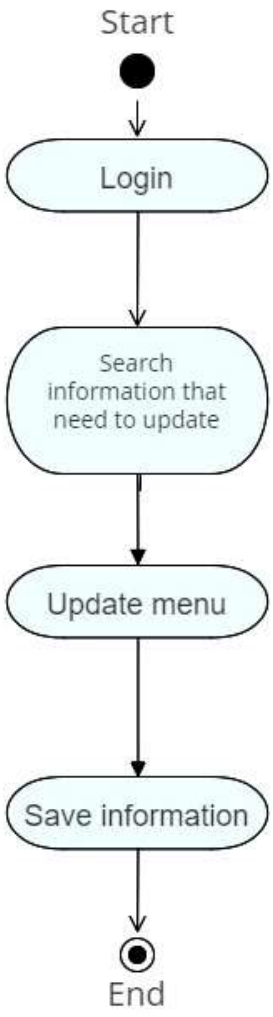


Figure 3-5 Activity Diagram for Staff to Update Menu

In order to update the menu, the staff must login to the system to perform the task. After the staff login to the system, they can view the menu at the products page. They firstly choose the record that need to update. Then, the staff can click the edit button to change the menu. They can change the name, price, picture and category of the food. If the staff confirm to make the changes, they can click update button to update the food details

3.2.3 Update Category

Figure 3-6 Activity Diagram for Staff to Update Category

The staff must login to the system in order to update the category details. After the staff login to the system, they can view the category details at the category page. The staff can click the update button of any record to change the details of the category. They can change the name of the category. If the staff confirm to make the changes, they can click update button to update the category details.

3.2.4 Delete Menu

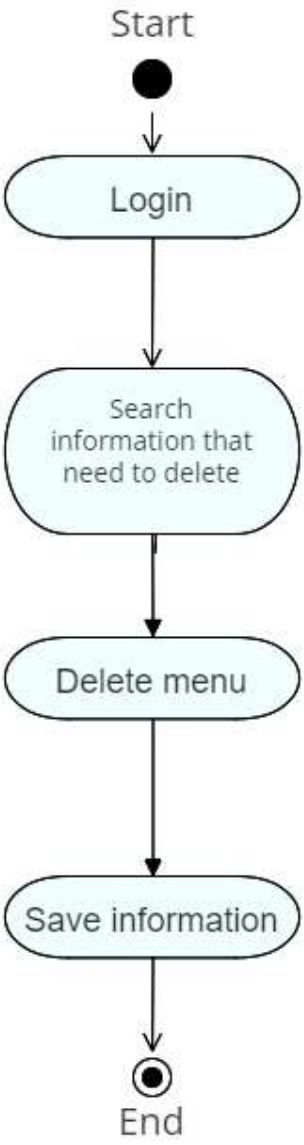


Figure 3-7 Activity Diagram for Staff to Delete Menu

In order to delete the menu, the staff must login to the system to perform the task. After the staff login to the system, they can view the menu at the products page. They firstly choose the record that need to delete. Then, the staff can click the delete button to delete the menu. If the staff confirm to delete the menu, they can click yes button to delete the menu.

3.2.5 Delete Category

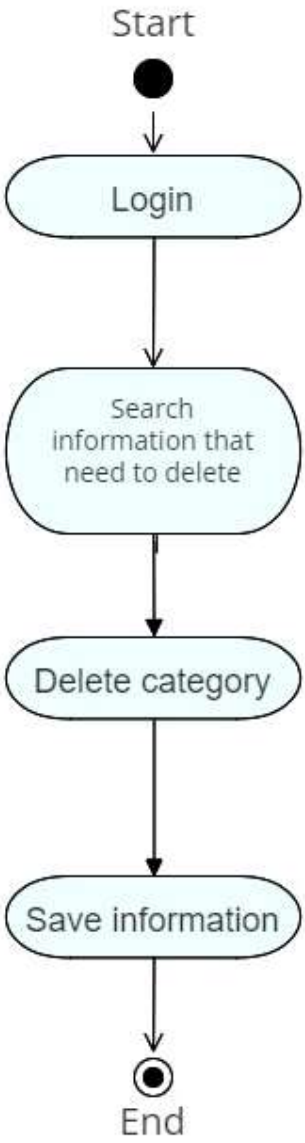


Figure 3-8 Activity Diagram for Staff to Delete Category

The staff must login to the system in order to delete the category details. After the staff login to the system, they can view the category details at the category page. The staff can click the delete button on the record that they wish to delete. If the staff confirm to make the changes, they can click yes button to delete the category details.

3.2.6 Create Menu

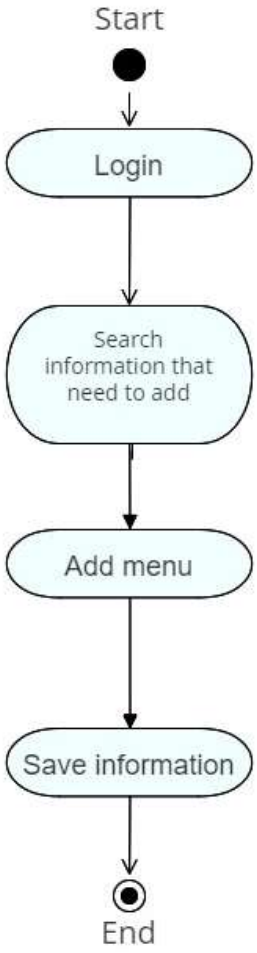


Figure 3-9 Activity Diagram for Staff to Create Menu

In order to create the menu, the staff must login to the system to perform the task. After the staff login to the system, they can view the menu at the food page. They can click on the add button to create new menu. Then, the staff can insert the name, price, picture and the category of the menu. If the staff confirm to add the new menu, they can click update button to add the menu.

3.2.7 Create Category

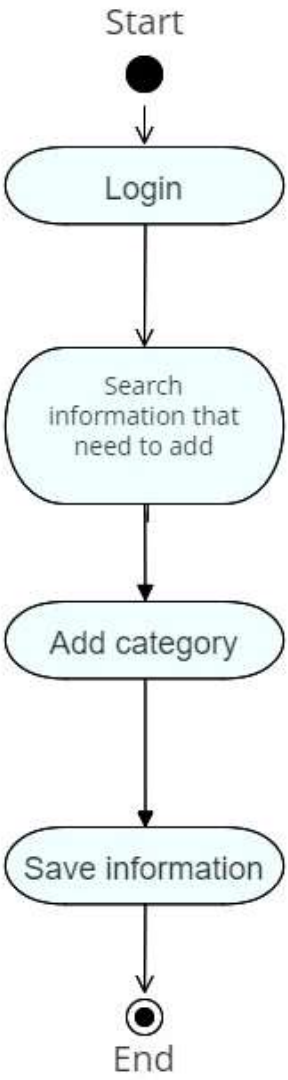


Figure 3-10 Activity Diagram for Staff to Create Category

The staff must login to the system in order to create the category details. After the staff login to the system, they can view the category details at the category page. The staff can click the add button to create new category. The staff only need to enter the name of the category. If the staff confirm to make the changes, they can click update button to add the new category details.

3.4 User Interface Design

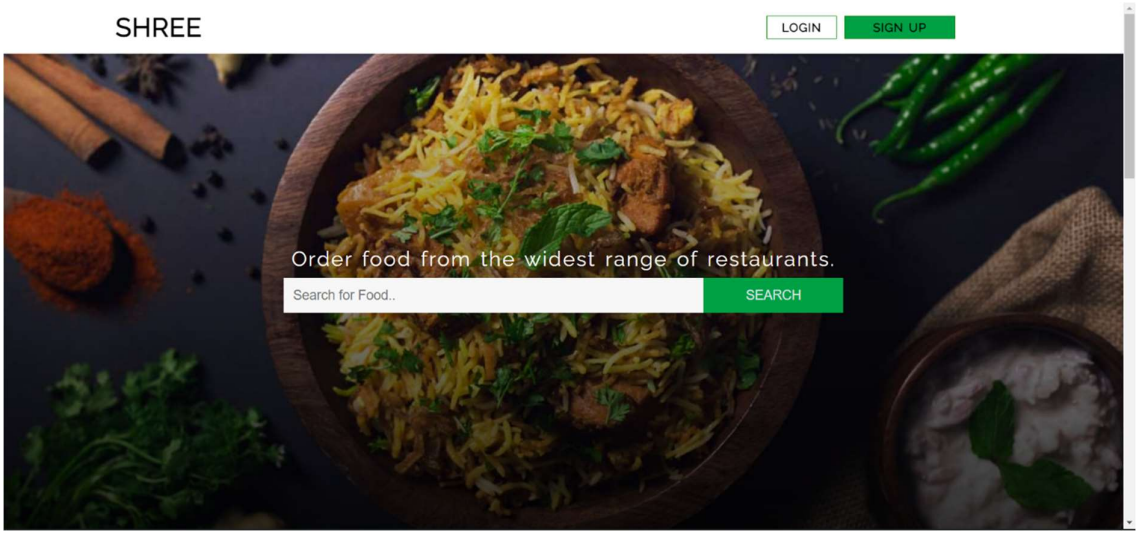
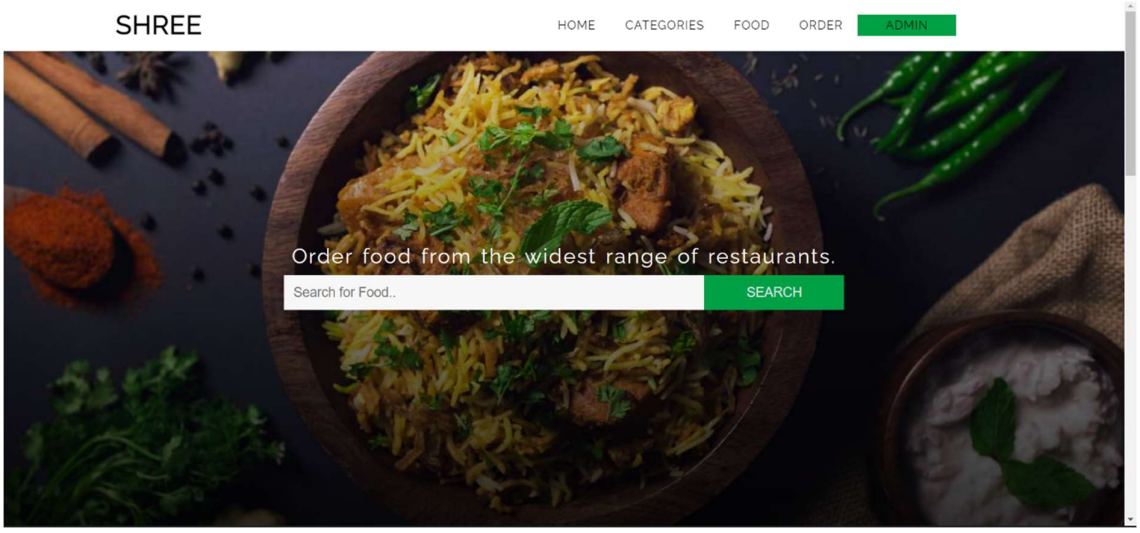


Figure 3-11 Home Page

This is the home page of the system. If the customer is already have account on this website then he or she can access the website by using login details but if the customer don't have any account then he or she can create the new account by clicking on the signup form.



Once the customer is login then they can easily able to use website all the links like categories, food & order able on the navbar. The customer can click the search button and able to search their favorite food.

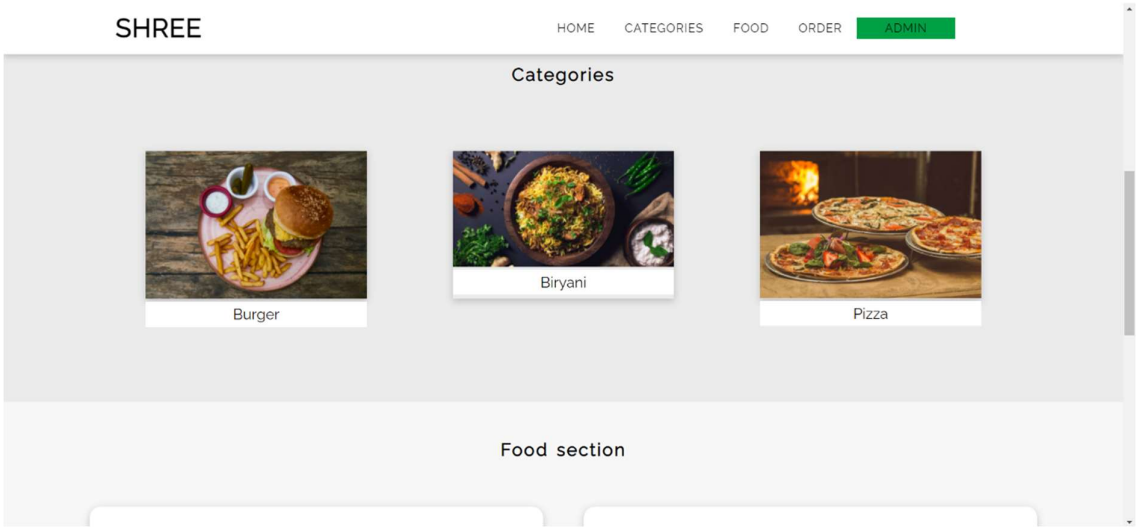


Figure 3-12 Categories or Featured section

This is the featured section where the different categories of the food are available.
If you click on this above biryani, burger or pizza photo .It will redirect customer to the page where the same category of the food available.

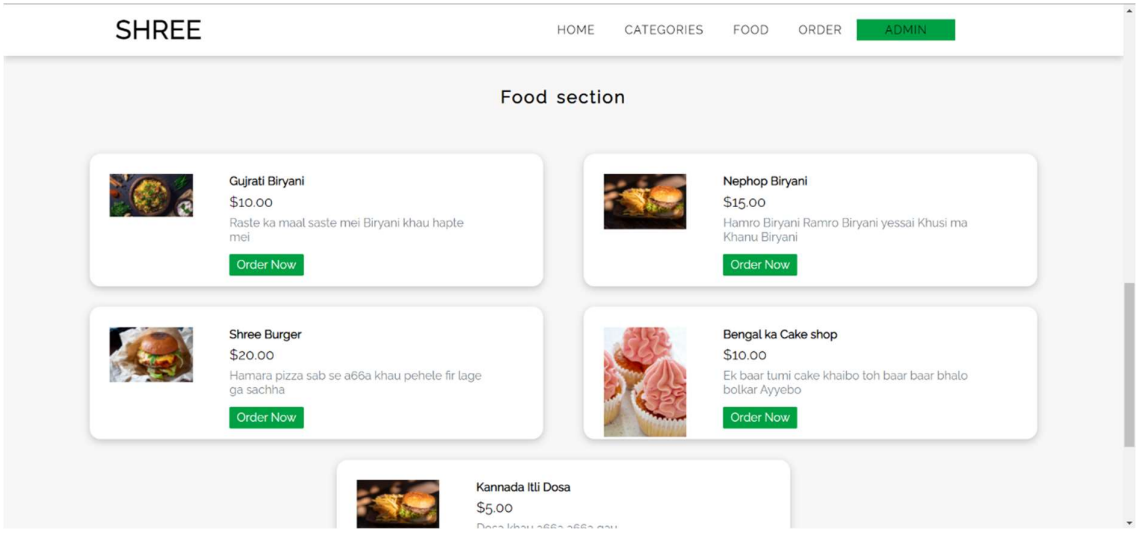


Figure 3-13 Food Section

This is the food section where you can view food and place the order.

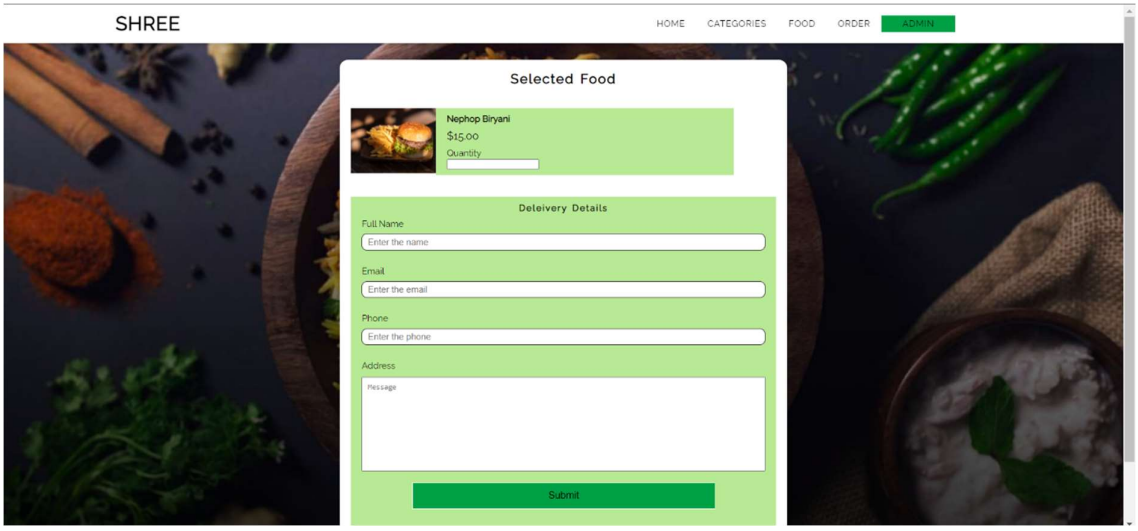


Figure 3-14 Order Page

Once the customer clicked on the order button website will redirect the customer to the order page. The above page is the order page of the system. It will show the category, name, picture and price of the food. The customers need to fill the form and click on the submit button to place the order.

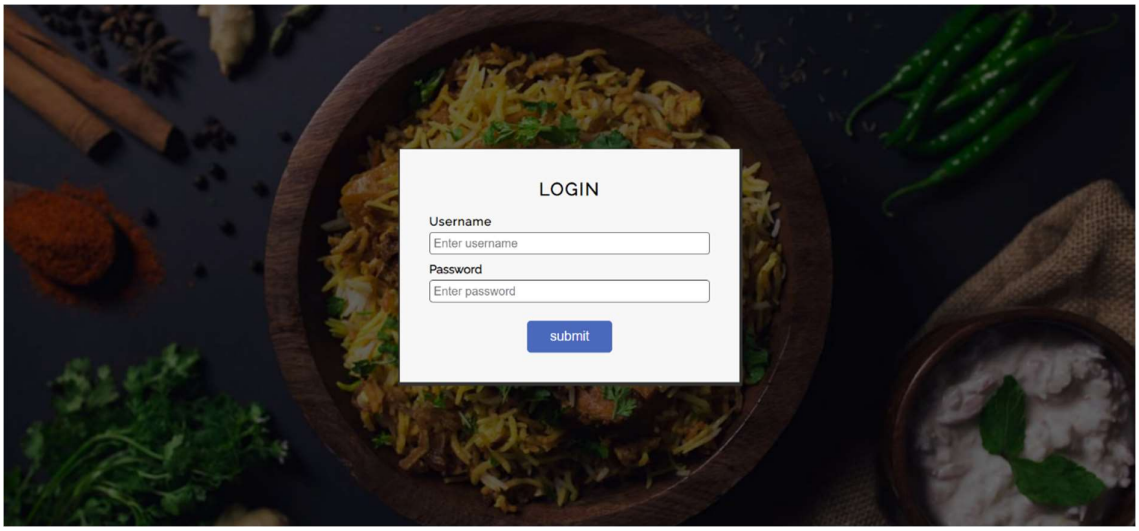


Figure 3-15 Admin Login Page

This is the admin login page for the staff to login. They are required to fill in the username and password.

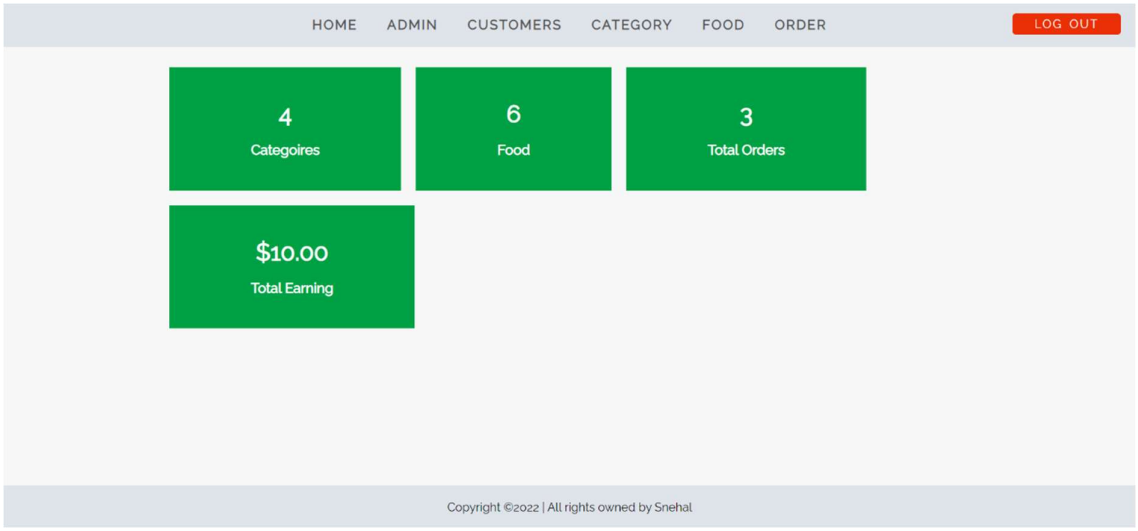


Figure 3-16 Dashboard

After the staff login to the system, they can view the dashboard of the food ordering system. The dashboard includes the total number of categories , food present in the database and also include how many orders are placed , how much income is generated.

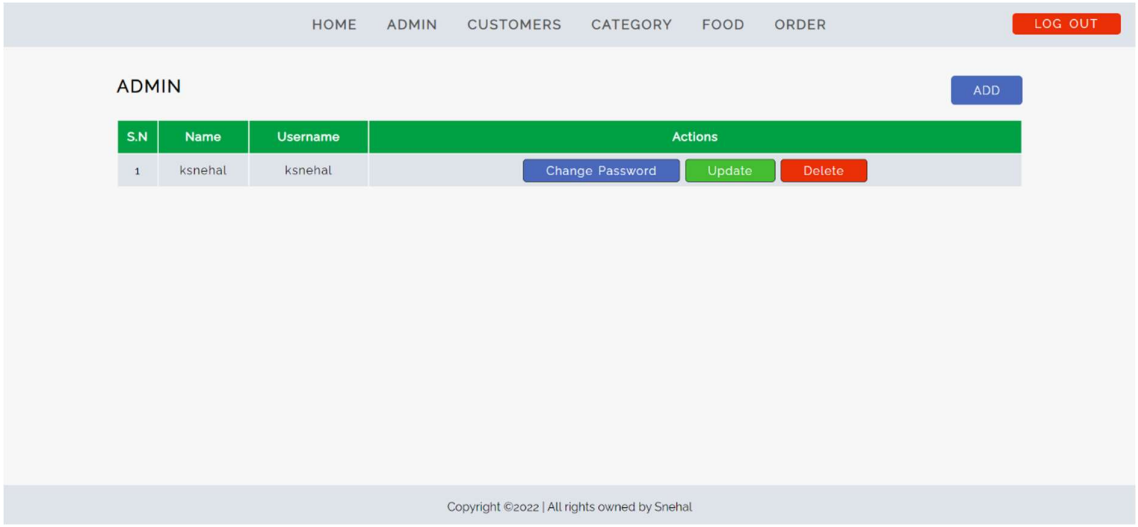


Fig: Admin Page

This is the admin page of the system and contains all the username and password of staff. In this page, the staff is able to update the username, password of the user and also able to delete

the users.

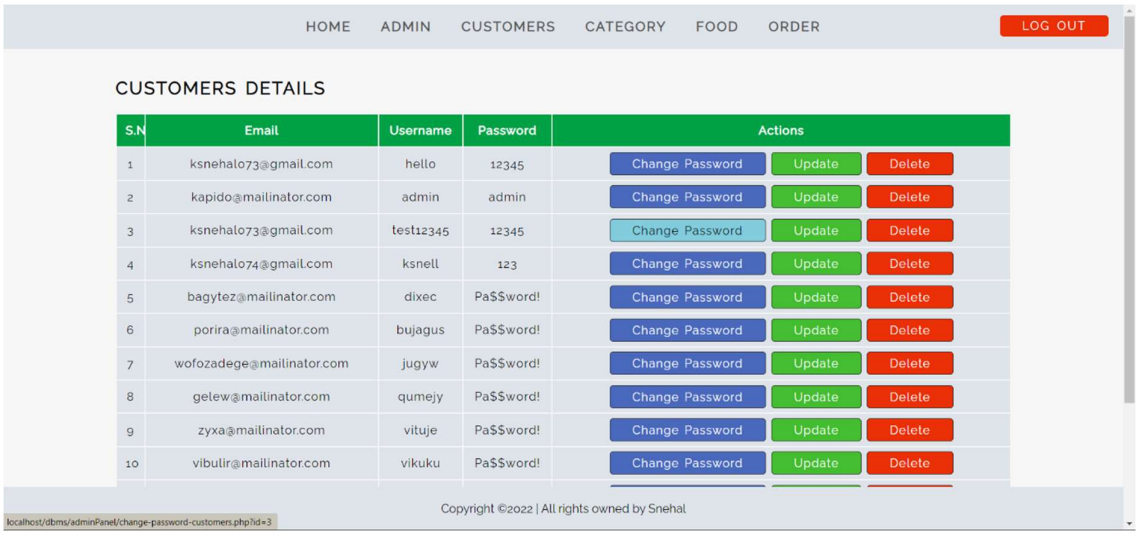


Fig: Customer Details

This is the customer page of the system and contains all the username and password of customer. In this page, the staff is able to update the username, password of the user and also able to delete the users.

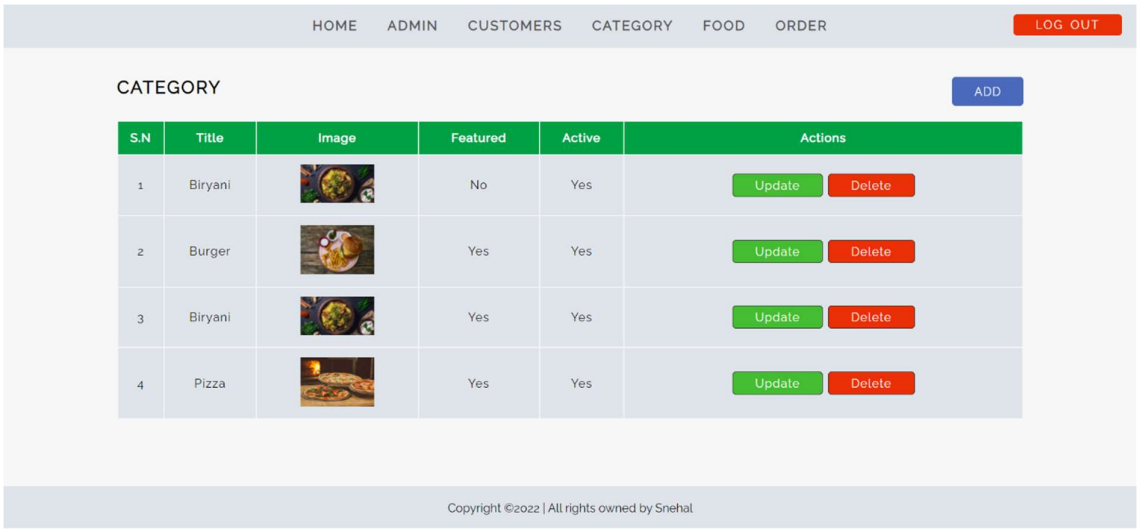


Fig: Category Crud

This is the Category page of the system. The staff can manage all the food in this page.
If the staff want to delete category, they can click on the delete button to perform the task.

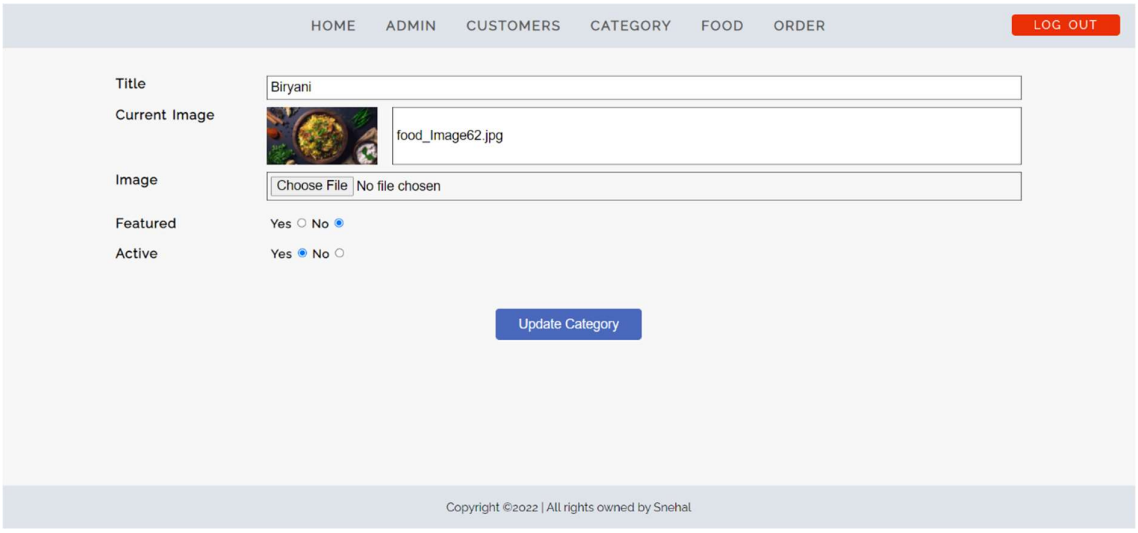


Fig: Update Category

If the staff wish to update the category details, they can click on the update button. Then, this page will be displayed. The staff can change the title, image, featured and active of the category. If the staff wish to make the changes, they can click on the update button.

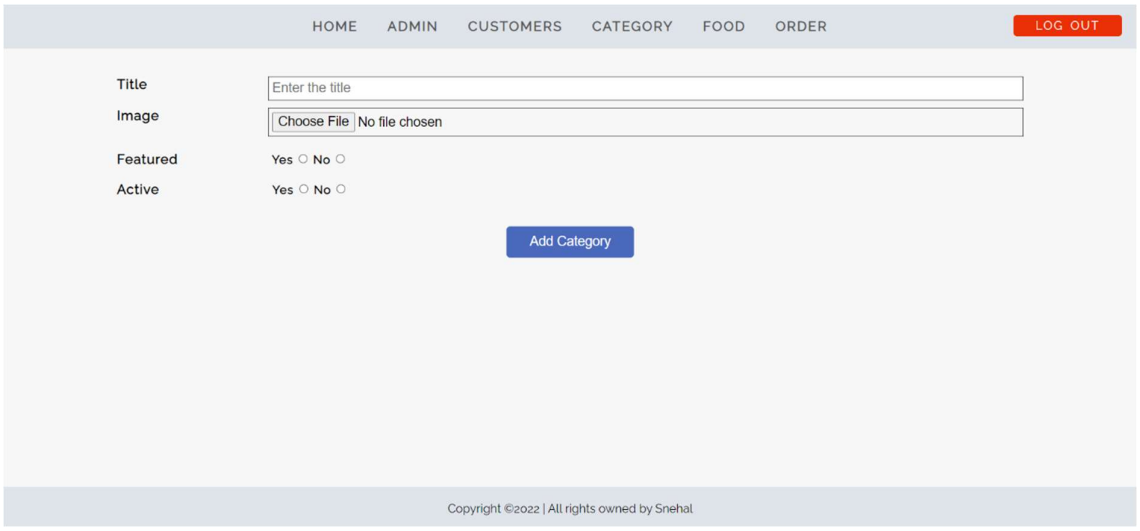


Fig : Add Category

If the staff want to add new category, they can click on the add button. They need to fill in the title, active, featured and image of the food. Then, they need to click Add Category button to add the food.

Fig: Food Crud

This is the Food page of the system. The staff can manage all the food in this page.
If the staff want to delete food, they can click on the delete button to perform the task.

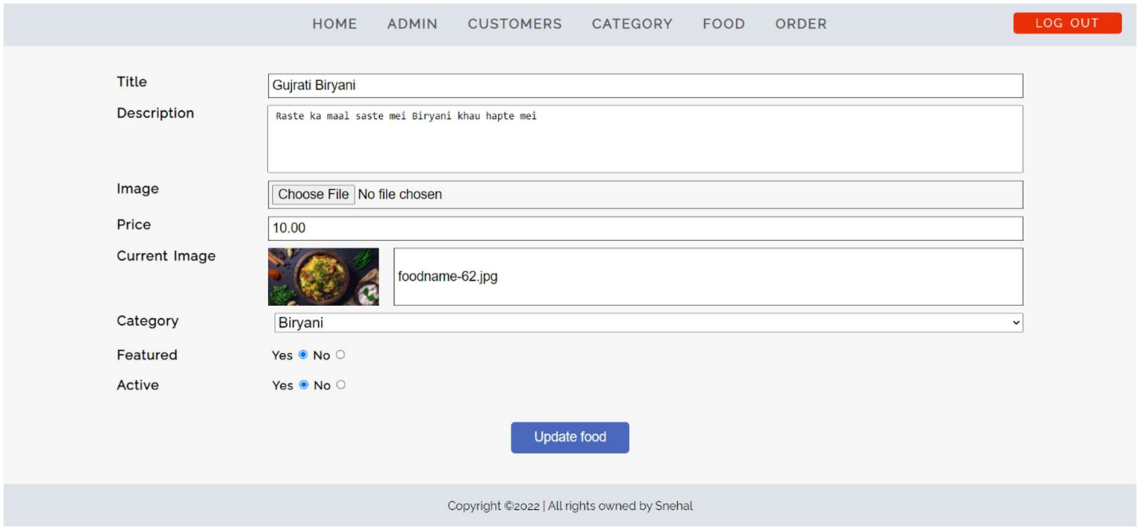


Fig: Update Food

If the staff wish to update the food details, they can click on the update button. Then, this page will be displayed. The staff can change the title, description, image, price, category, featured and active of the category. If the staff wish to make the changes, they can click on the update button.

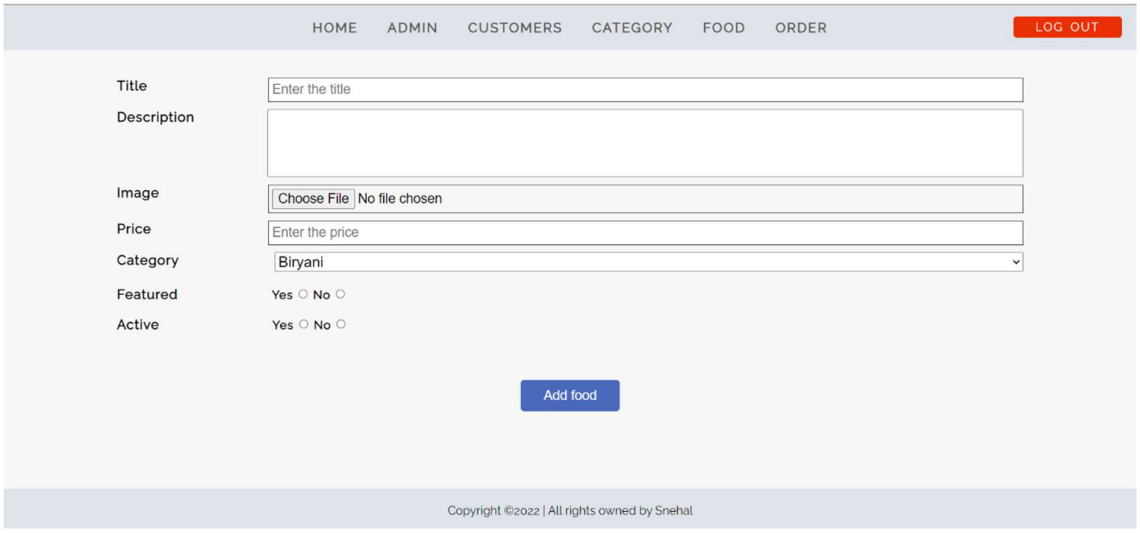


Fig: Add Food

If the staff want to add new food, they can click on the add button. They need to fill in the title, description, price, category, featured, active and image of the food. Then, they need to click Add Food button to add the food.

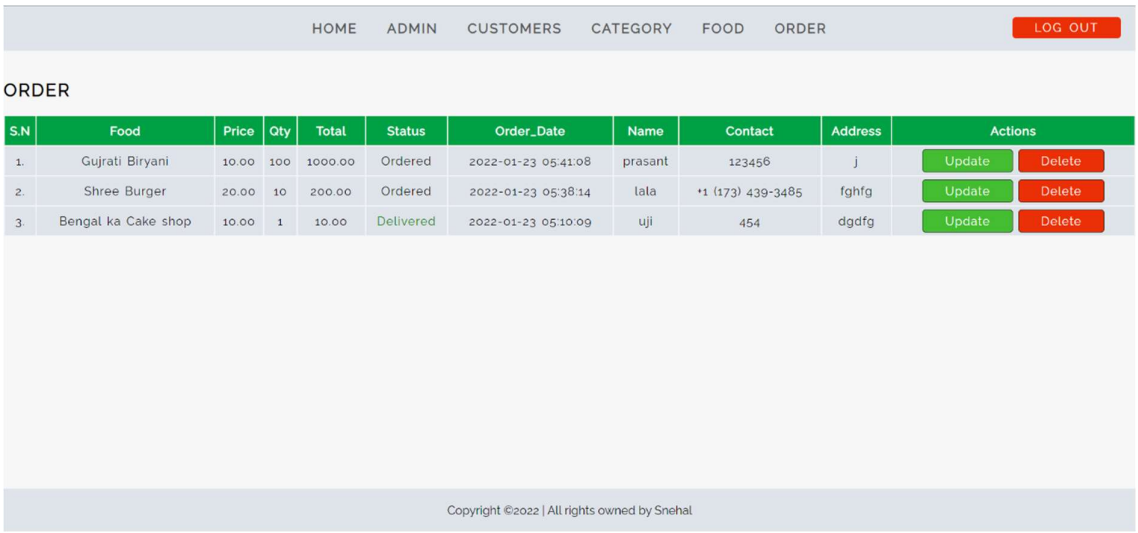


Fig: Order Page

This is the Order page of the system. The staff can manage all the order details in this page. If the staff want to update order details, they can click on the update button to perform the update task. If the staff want to delete food, they can click on the delete button to perform the

task.

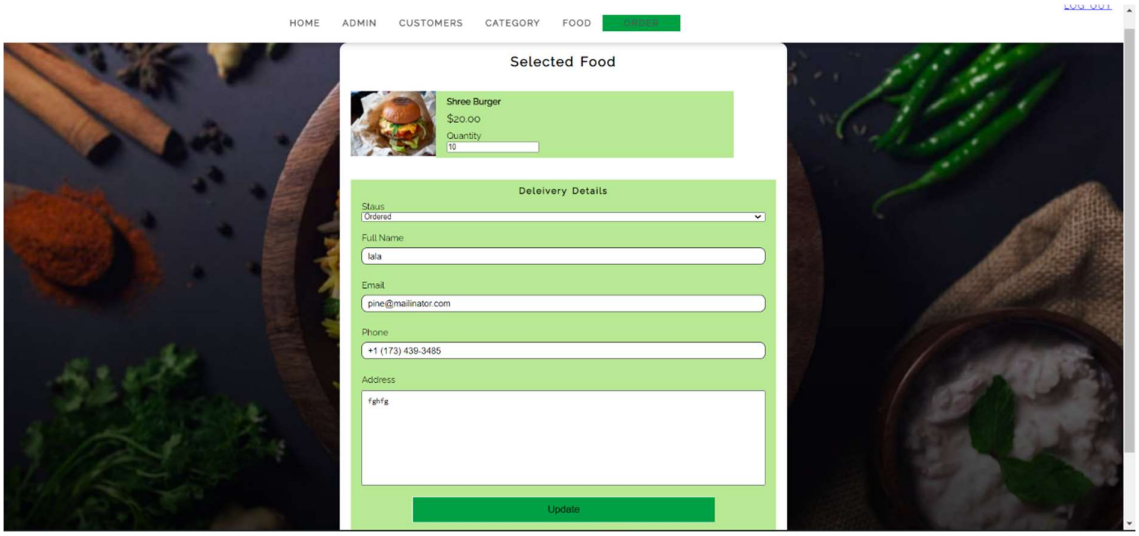


Fig: Update Order Page

In this Update page, the staff is able to change the Order Status whether the food is delivered ,ordered or cancelled and also able to change Full name, Email , Phone , Address.

4.2 Tools

- PHP, HTML, CSS
  These technologies are used to build the system. PHP and HTML are used to build the interface of the system and build the functionality of the system. CSS is used to define styles of the system.

- XAMMP
  XAMPP is a free and open-source cross-platform web server solution stack package. This software is used to connect to Apache and MySQL.

- phpMyAdmin
  phpMyAdmin is an open source and free administration tool for MySQL. This tool is used to insert the database.

- Visual Paradigm Community Edition
  Visual Paradigm Community Edition is a UML CASE Tool. This software is used to draw the use case diagram and activity diagram.

- Visual Studio Code
  VS code is a free and open-source text and source code editor. This software is used to code the system.

4.3 Requirement

- XAMMP Control Panel Version 3.3.0
- phpMyAdmin Version 8.0.12
- Laptop
  Operating System: Windows 10
  Processor: Intel(R) Core(TM) i5-5200U CPU @ 2.20GHz 2.19GHz

4.5 Implementation and Testing

The implementation of the system will be started after the end of the system design. The structure of the database will firstly build during development phase. Then, the server side and client side also built to allow the communication between customers and staff. During the testing phase, few test cases are carried out to test the system. This is to make sure the system is reliability.

Unit Testing 1: Login

Test Objective: To ensure the user able to login with valid name and password.

Input	Expected output	Actual output
Login by entering correct name and password.	The system let the user login.	The user login successfully.
Login by entering wrong password.	The system does not allow the user to login.	The user can't login to the system.
Login by does not enter any value.	The system does not allow the user to login.	The user can't login to the system.

Unit Testing 2: Add new menu

Test Objective: To ensure the staff able to add new menu into the system.

Input	Expected output	Actual output
Enter all the information of the food	The food information is stored into the database.	The food information is stored into the database and the user can view the food in the list.
Enter few information of food	The food information will not store into the database.	The system does not allow the user to add new food.

Click Save button without entering any information	The food information will not store into the database.	The system does not allow the user to add new food.

Unit Testing 3: Add new category

Test Objective: To ensure the staff able to add new category into the system.

Input	Expected output	Actual output
Enter the information of the category	The category information is stored into the database.	The category information is stored into the database and the user can view the category in the list.
Click Save button without entering any information	The category information is not store into the database.	The system does not allow the user to add new category.

Unit Testing 4: Order food

Test Objective: To ensure the customer able to order the food.

Input	Expected output	Actual output
Enter the information of the quantity	The order is processed successfully.	The customer is allowed to make the order.
Click Order button without entering any information	The order does not process successfully.	The customer is not allowed to make the order.

5.1 Conclusion

Nowadays, the innovation of technology brings a lot of convenience to the people. Many company use management systems to grow their business as it is efficient for both sellers and customers. The food and beverage industry also started to follow the trend to use management system for their business.

In conclusion, this system helps to increase the productivity and efficiency of the restaurant. It reduces the manual work of the staff. By having this ordering system, the customers can make their order through the system. Then, the order will pass to the kitchen. The chef will start to cook when they see the order of the customers. Everything is done by the system and the staff just need to pass the food delivery guy and delivery guy deliver to the customers and wait for the customers to make the payment.