A PROJECT REPORT ON

Delight Kitchen

Restaurant Management System

SUBMITTED IN PARTIAL

FULFILMENT OF

PG DIPLOMA IN ADVANCED COMPUTING (PG-DAC)

UNDER THE GUIDANCE OF

Mr. Suleman Saudagar

PRESENTED BY

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AT

CENTER FOR DEVELOPMENT OF ADVANCED COMPUTING C-DAC, PUNE

ABSTRACT

This project is a web-based restaurant management system for a specific restaurant. The project objective is to deliver restaurant management applications into web platforms.

This project is an attempt to provide the advantages of using restaurant management applications to a specific restaurant in the real world which intends to manage their restaurant functionality online via using an application. It helps in reducing human effort by maintaining the workflow of a restaurant in online mode, where each staff person working in the restaurant could do their job role efficiently. This system can be implemented to specific restaurants which wish to operate their restaurant functionalities in the online mode via application (specific to particular restaurant).

If the restaurant is using an online system to manage its functionalities then much of human efforts will be reduced and efficient services will be made available to the visited restaurant. If a visiting customer is well satisfied with the service, positive feedback will be given by his side as a result the rating of a restaurant will increase and in future more and more customers will pay a visit.

ACKNOWLEDGEMENT

The project "Delight Kitchen" was a great learning experience for usand we are submitting this work to Advanced Computing Training School (C-DAC ACTS, Pune).

We are very glad to mention the name of Mr. Suleman Saudagar for his valuable guidance to work on this project.

We are highly grateful to Ms. Risha P. R., Manager of ACTS Training Centre, CDAC, for her guidance and support whenever necessary during the course of ourjourney to acquire PG-Diploma in Advanced Computing (PG-DAC) through CDAC ACTS, Pune.

Our heartfelt thanks go to Dr.Priyanka Ranade (Course Coordinator, PG-DAC)who gave us all the required support and kind coordination to provide all the necessities to complete the project and throughout the course up to the last day of the course.

We would like to express our sincere gratitude towards Mrs. Madhura Anturkar, our faculty for J2EE, who was always there for us. Her guidance and support helped us overcome various obstacles and intricacies during the course of our project work. Without her tremendous support, guidance, and efforts, this project would not have been possible.

From:

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1. Introduction

This project is a web-based restaurant management system for a specific existing restaurant. It presents a detailed explanation of the objectives, features, user interface and application of Restaurant Management System(RMS) in real life. It will also describe how the system will perform and under which it must operate. The Restaurant Management System allows the restaurant's staff along with manager to log in the application where they all can track their work and services that need to be delivered to the visited customer according to their respective job roles. This project attempts to provide the advantages of online restaurant management by reducing human effort and time.

Document Purpose

The aim of this document is to explain the functionality of the project developed for Restaurant Management System(RMS). This document provides the flow about how the services are being managed and provided to a customer in an efficient manner whenever he makes a visit to a restaurant.

Problem Statement

95% of restaurant operators view the ability to improve guest satisfaction and the quality of the guest experience as one of the biggest benefits one can expect to gain with the right restaurant management. 89% of restaurant operators cite the need to drive increased operational efficiency, including increasing staff productivity and reducing inventory waste, as a key success factor. Hence this application is proposed to overcome the inefficiency of existing restaurant so that manager could be able to manage the workflow and their operations in a better manner.

Product Scope

This system will help to manage the restaurant business systematically. In this management system, we have designed a web application that can be used by the Manager along with the staff of that restaurant to manage the food orders given by the customers, so that the manager of that restaurant can monitor and ensure the smooth conduct of the whole system.

This will lead to serving food faster and ultimately a better kitchen place to revisit it again. In addition to this, the system is capable of hiring different job roles required for a restaurant, the required information about staff will be saved in the system which can be only accessed by the system admin.

Aim & Objectives

Specific goals are: -

- To produce a web-based system that allows the admin to manage whole restaurant functionalities efficiently.
- To ease different staff member to service their respective work and functionalities.
- The main aim of this web application is to reduce human efforts and time by providing multiple features in an online mode that so restaurant owner can run their business smoothly.

2. Overall Description

Product Perspective

Users and Characteristics

In our application we have mainly 4 users, which are the staff members working in that particular restaurants having specific job role.

- There are various role in a restaurant
    - **Manager**
    - **Chef**
    - **Cashier**
    - **Waiter**

- Functionalities of different roles:
    - Manager
        - ➢ Add/Manage food Category(availability)
        - ➢ Add/Manage food items under available Category
        - ➢ Add/Manage Tables
        - ➢ Add/Manage Staffs
        - ➢ Add/Manage Orders
        - ➢ Billing of Orders
        - ➢ Can change his profiles details
    - Chef
        - ➢ Add/Manage food Category(availability)
        - ➢ Add/Manage food items under available Category
        - ➢ Manage Orders
        - ➢ Can change his profiles details

- Cashier

  - ➢ Billing of Orders
  - ➢ Can view history of previous orders
  - ➢ Can change his profiles details

- Waiter

  - ➢ Add/Manage Orders
  - ➢ Can change his profiles details

Operating Environment

❖ Server Side

Processor: Intel® Xeon® processor 3500 series

HDD: Minimum 500GB Disk Space

RAM: Minimum 2GB

OS: Windows 8.1, Linux 6

Database: MySql

❖ Client Side (minimum requirement)

Processor: Intel Dual Core

HDD: Minimum 250GB Disk Space

RAM: Minimum 2GB

OS: Windows 10, Linux

Design and Implementation Constraints

- The application will use Ajax, JavaScript, jQuery and css as main web technologies.
- HTTP and FTP protocols are used as communication protocols. FTP is used to upload the web application in live domain and the client can access it via HTTP protocol.
- Several types of validations make this web application a secured one and SQL Injections can also be prevented.
- Since Restaurant Management system is a web-based application, internet connection must be established.
- The Society Management System will be used on PCs and will function via internet or intranet in any web browser.

3. Specific Requirement

External Interface Requirements

❖ User Interfaces

- All the users will see the same page when they enter in this website. This page asks the users a username and a password.
- After being authenticated by correct username and password, user will be redirect to their corresponding profile where they can do various activities.
- The user interface will be simple and consistence, using terminology commonly understood by intended users of the system. The system will have simple interface, consistence with standard interface, to eliminate need for user training of infrequent users.

❖ Hardware Interfaces

- No extra hardware interfaces are needed.
- The system will use the standard hardware and data communication resources.
- This includes, but not limited to, general network connection at the server/hosting site, network server and network management tools.

❖ Application Interfaces

OS : Windows 7, Linux

Web Browser :

The system is a web-based application; clients need a modern web browser such as Mozilla Firebox, Internet Explorer, Opera, and Chrome. The computer must have an Internet connection in order to be able to access the system.

Communications Interfaces

- This system uses communication resources which includes but not limited to, HTTP protocol for communication with the web browser and web server and TCP/IP network protocol with HTTP protocol.
- This application will communicate with the database that holds all the booking information. Users can contact with server side through HTTP protocol by means of a function that is called HTTP Service. This function allows the application to use the data retrieved by server to fulfill the request fired by the user.

4. System Design

Activity Diagram

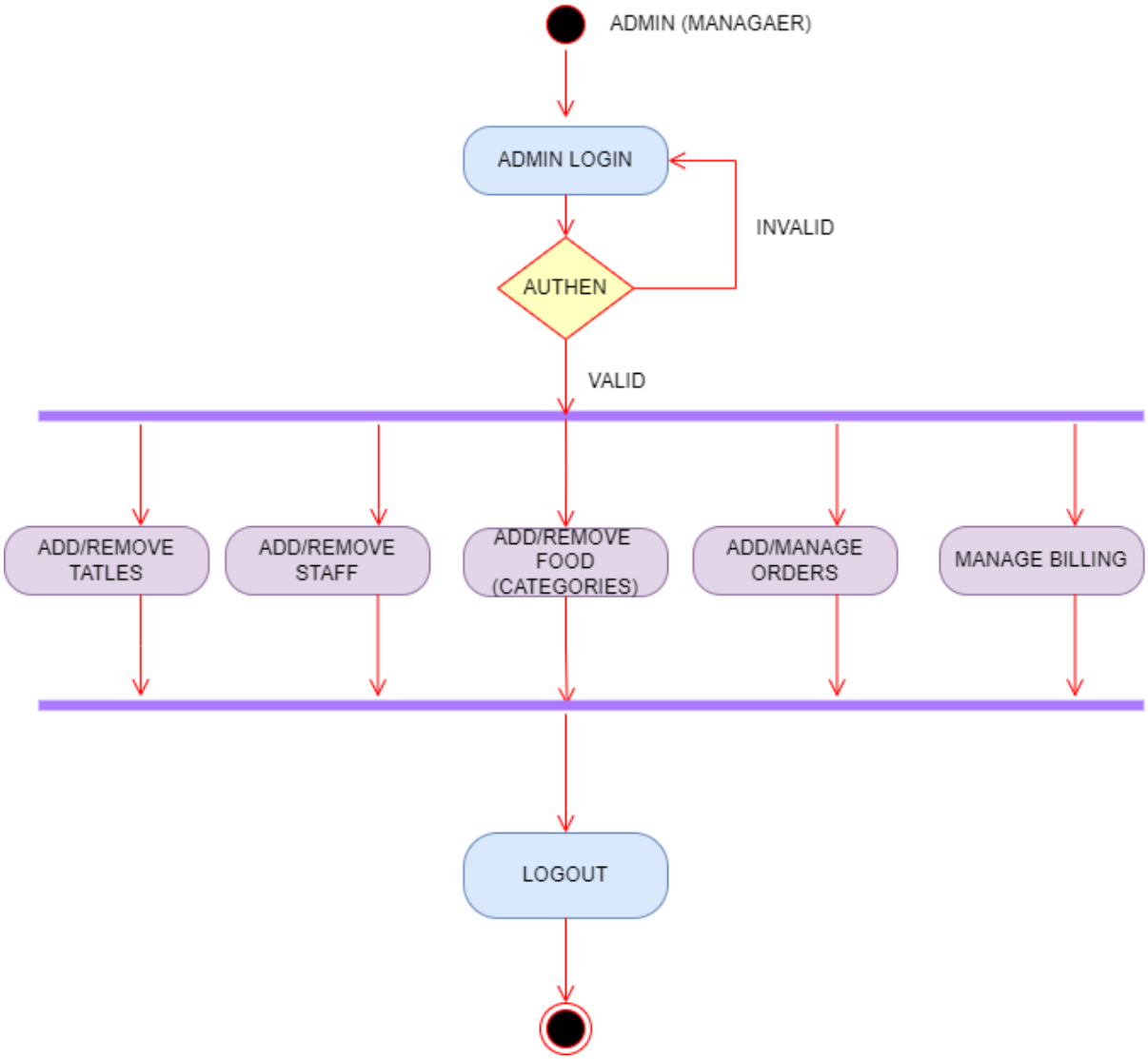


Figure 1.1: Admin Activity Diagram

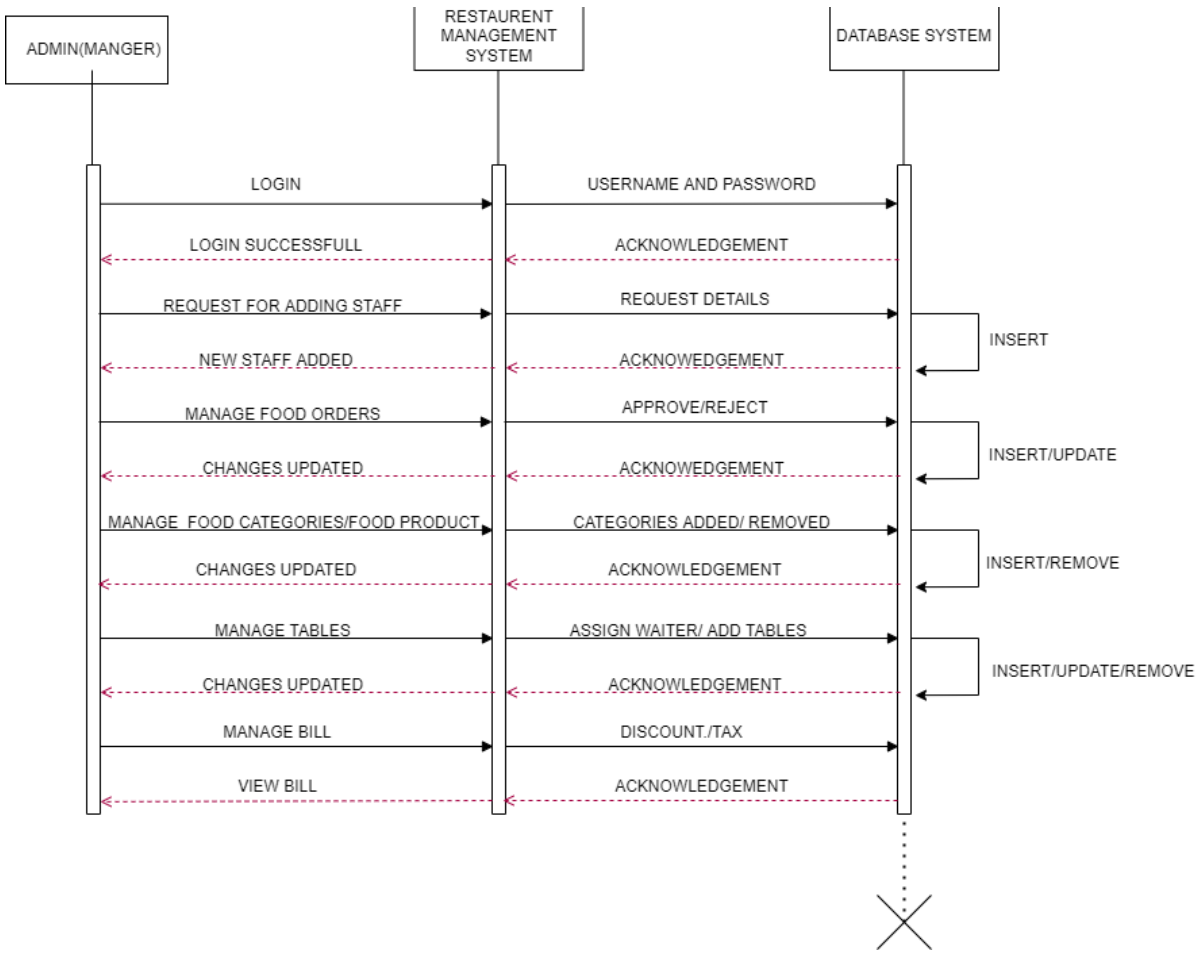


Figure 1.2: Admin Sequence Diagram

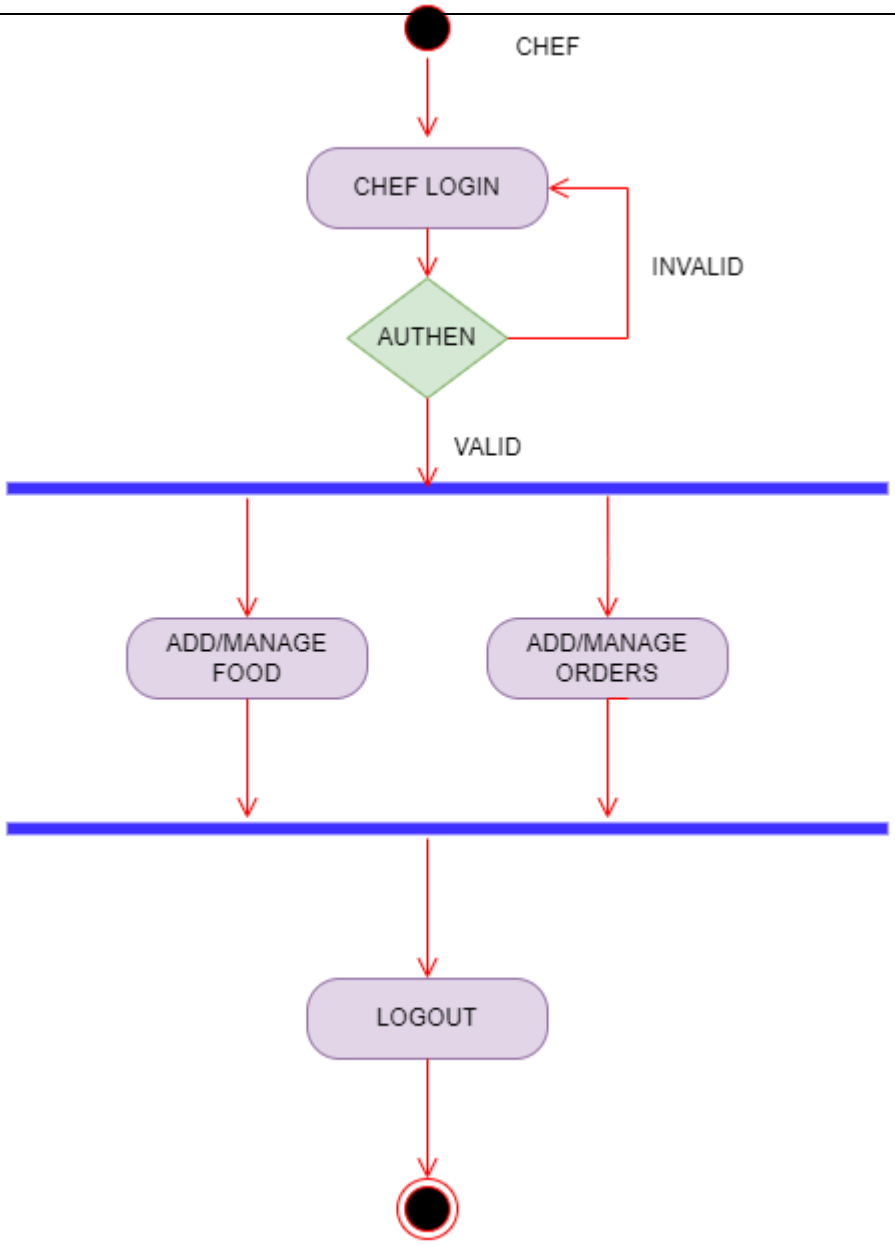


Figure 2.1: Chef Activity Diagram

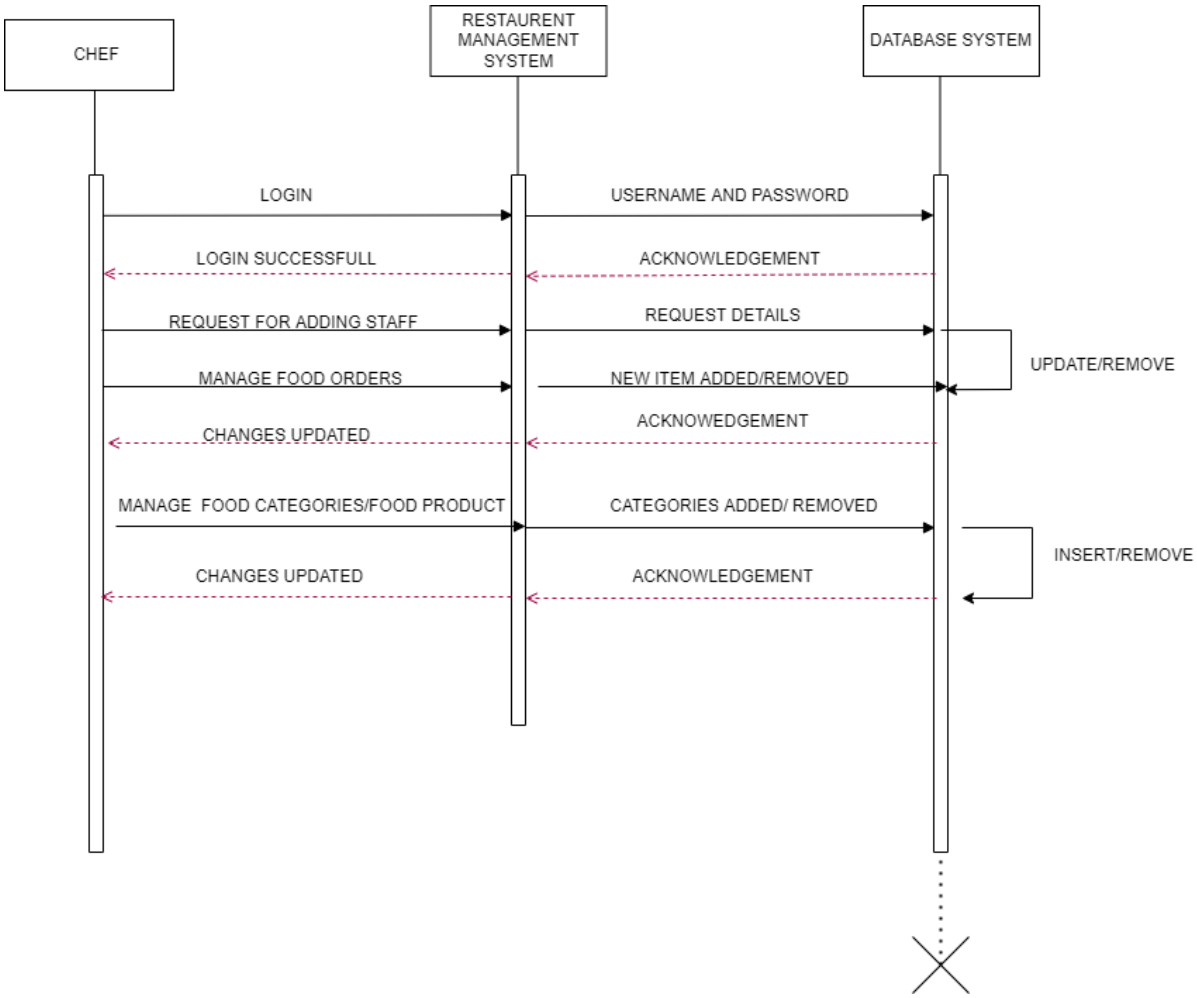


Figure 2.2: Chef Sequence Diagram

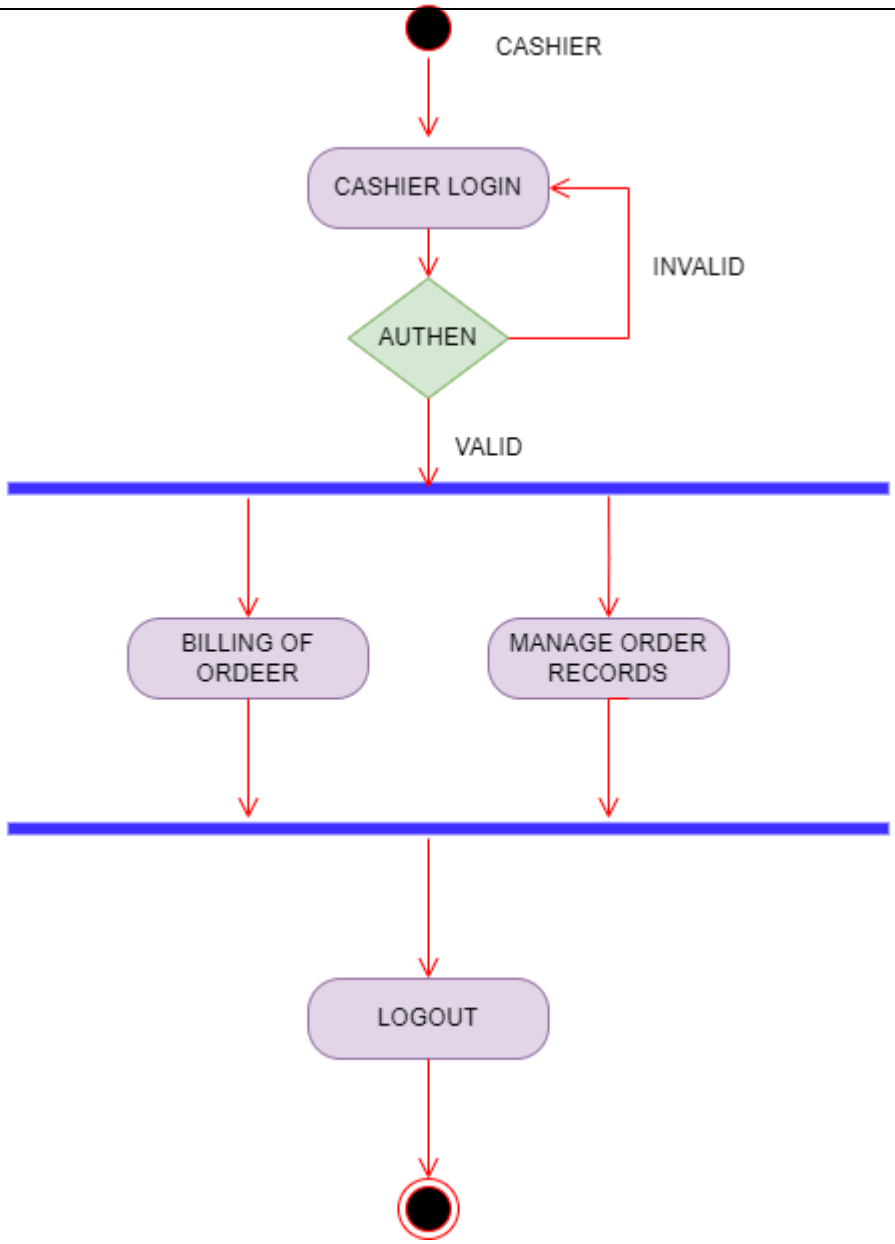


Figure 3: Cashier Activity Diagram

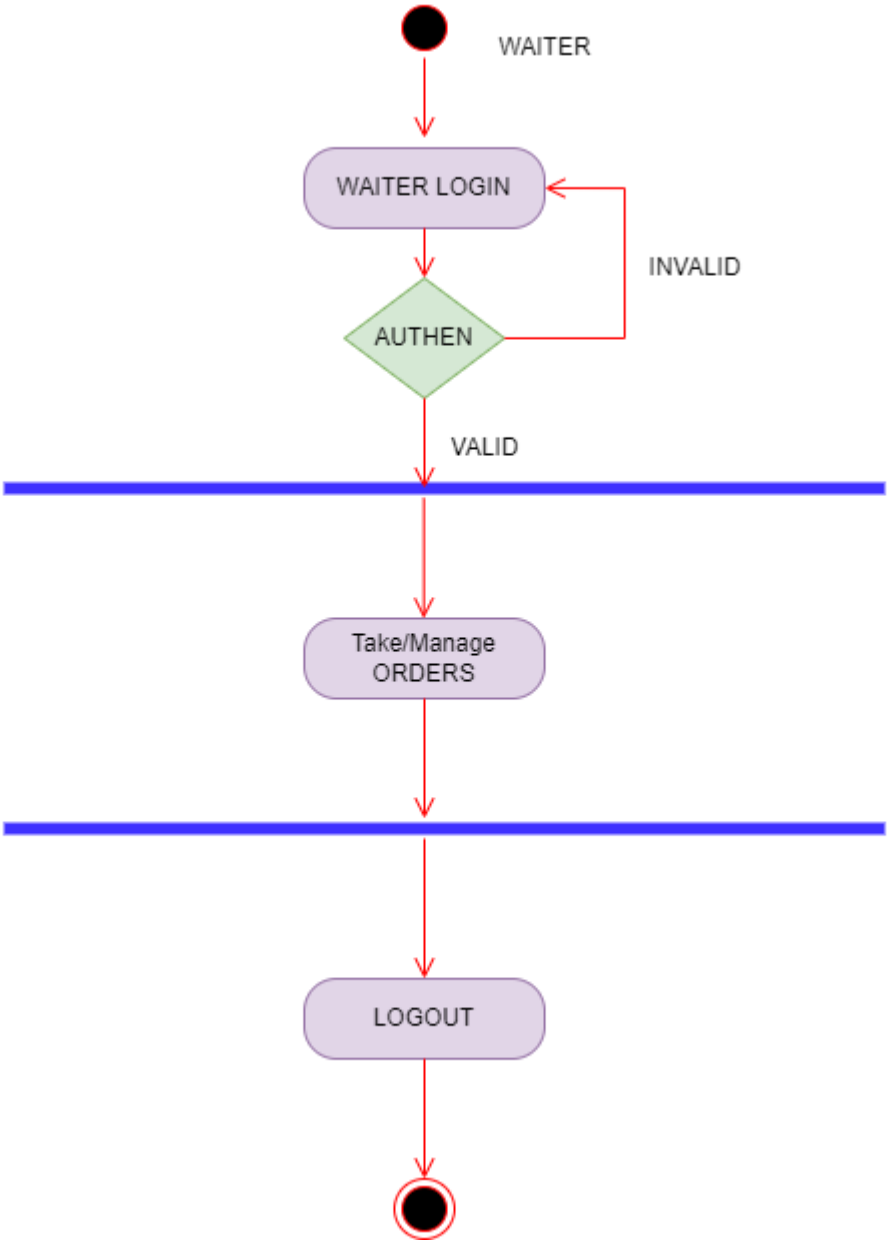


Figure 4: Waiter Activity Diagram

Data Flow Diagram

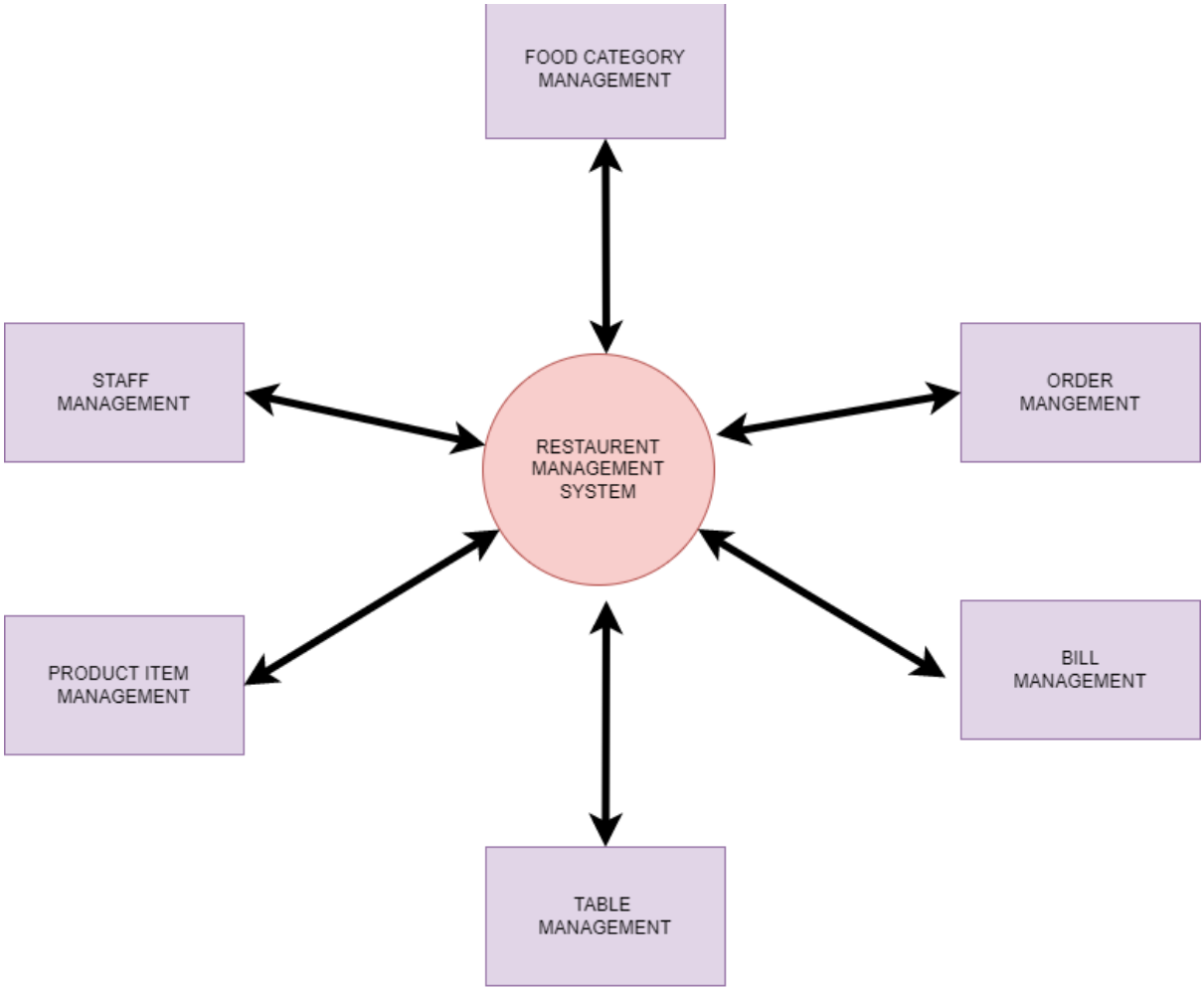


Figure 5: Level 0 Data Flow Diagram

ERD Flow Diagram

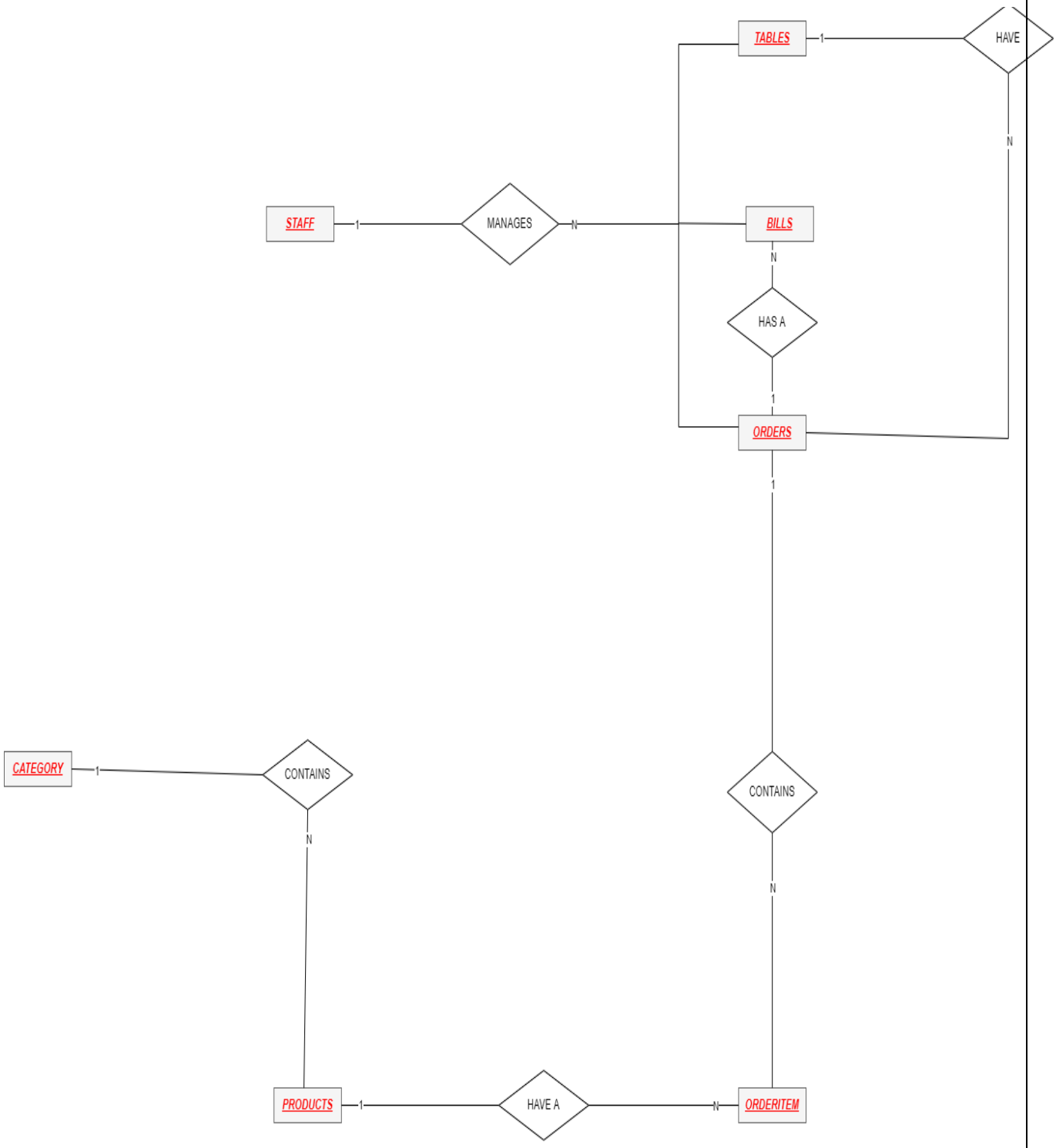


Figure 6: ER Data Flow Diagram

Use Case Diagram

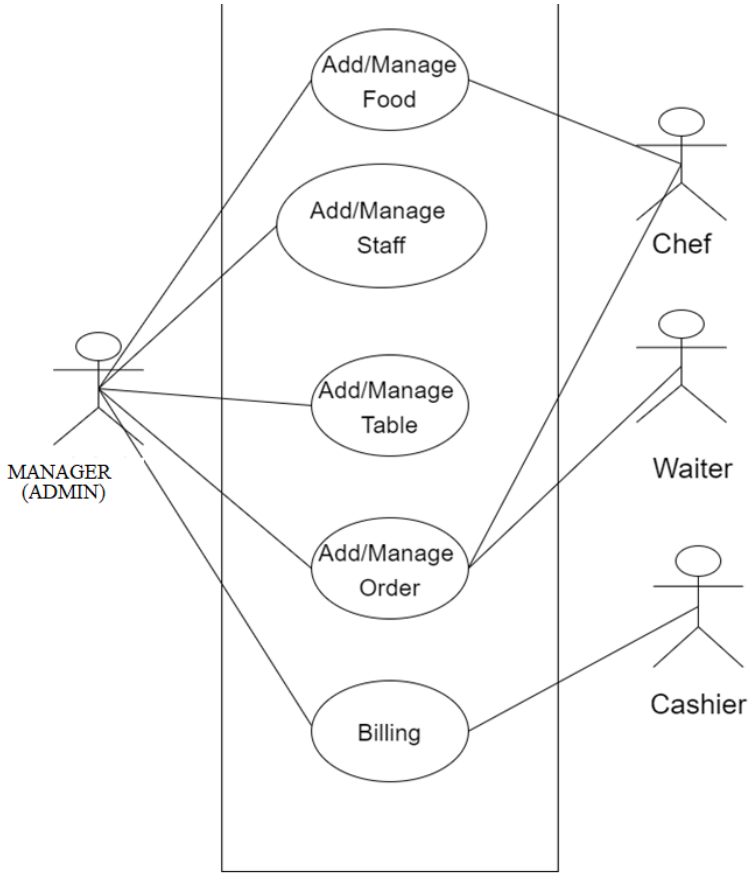


Figure 7: Use Case Diagram

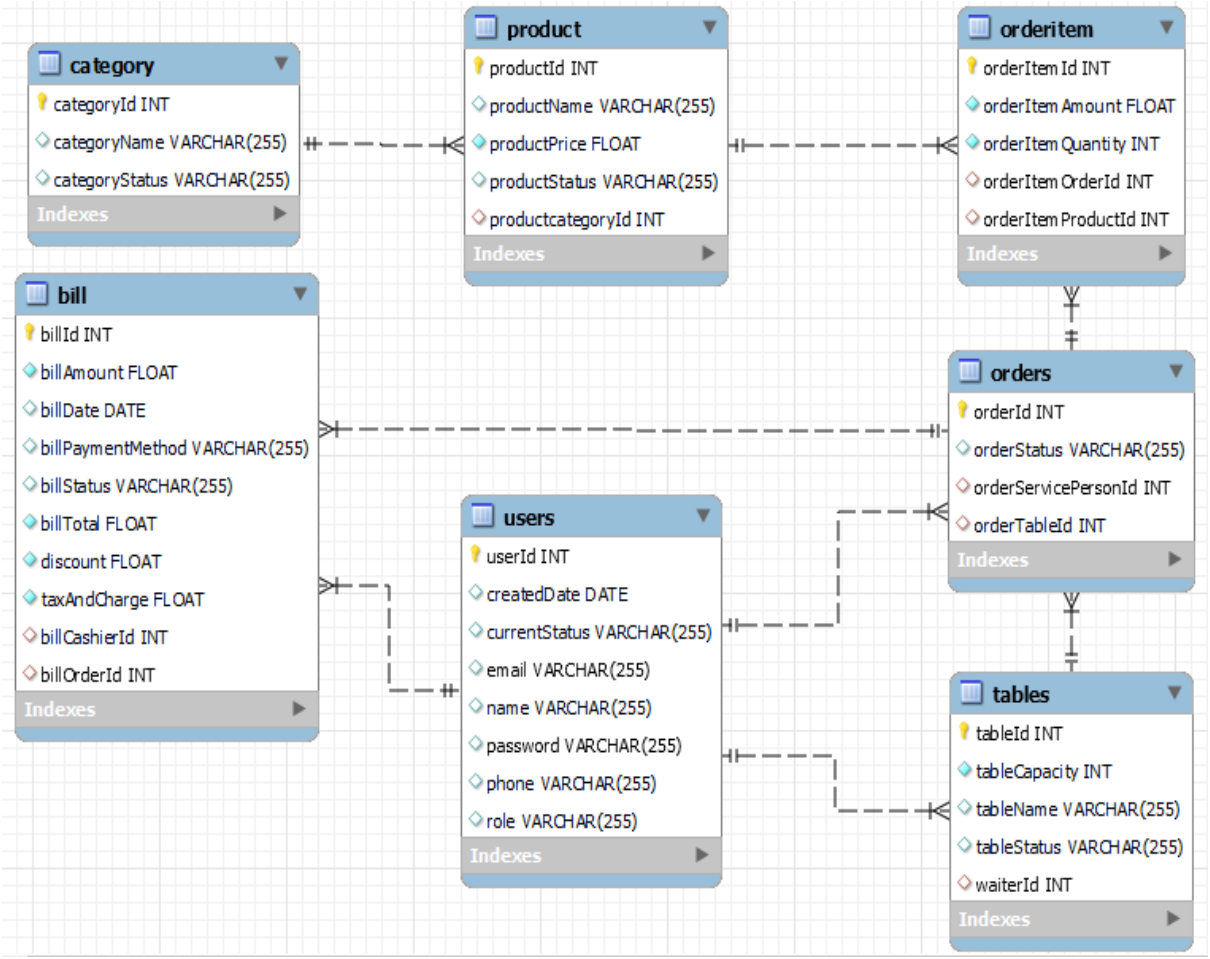


Figure 8: ER Diagram

5. Table Structure

Bill:

Field	Type	Null	Key	Default	Extra
billId	int	NO	PRI	NULL	auto_increment
billAmount	float	NO		NULL	
billDate	date	YES		NULL	
billPaymentMethod	varchar(255)	YES		NULL	
billStatus	varchar(255)	YES		NULL	
billTotal	float	NO		NULL	
discount	float	NO		NULL	
taxAndCharge	float	NO		NULL	
billCashierId	int	YES	MUL	NULL	
billOrderId	int	YES	MUL	NULL	

Category:

Field	Type	Null	Key	Default	Extra
categoryId	int	NO	PRI	NULL	auto_increment
categoryName	varchar(255)	YES		NULL	
categoryStatus	varchar(255)	YES		NULL	

OrderItem:

Field	Type	Null	Key	Default	Extra
orderItemId	int	NO	PRI	NULL	auto_increment
orderItemAmount	float	NO		NULL	
orderItemQuantity	int	NO		NULL	
orderItemOrderId	int	YES	MUL	NULL	
orderItemProductId	int	YES	MUL	NULL	

Orders:

Field	Type	Null	Key	Default	Extra
orderId	int	NO	PRI	NULL	auto_increment
orderStatus	varchar(255)	YES		NULL	
orderServicePersonId	int	YES	MUL	NULL	
orderTableId	int	YES	MUL	NULL	

Product:

Field	Type	Null	Key	Default	Extra
productId	int	NO	PRI	NULL	auto_increment
productName	varchar(255)	YES		NULL	
productPrice	float	NO		NULL	
productStatus	varchar(255)	YES		NULL	
productcategoryId	int	YES	MUL	NULL	

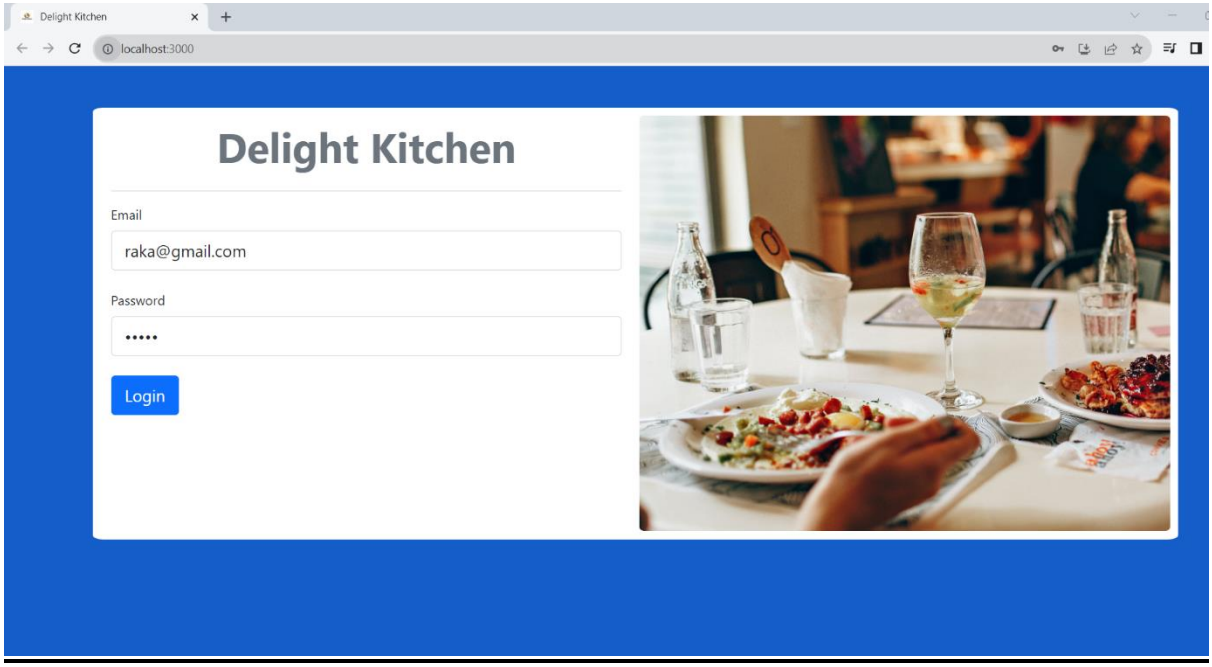
Tables:

Field	Type	Null	Key	Default	Extra
tableId	int	NO	PRI	NULL	auto_increment
tableCapacity	int	NO		NULL	
tableName	varchar(255)	YES		NULL	
tableStatus	varchar(255)	YES		NULL	
waiterId	int	YES	MUL	NULL	

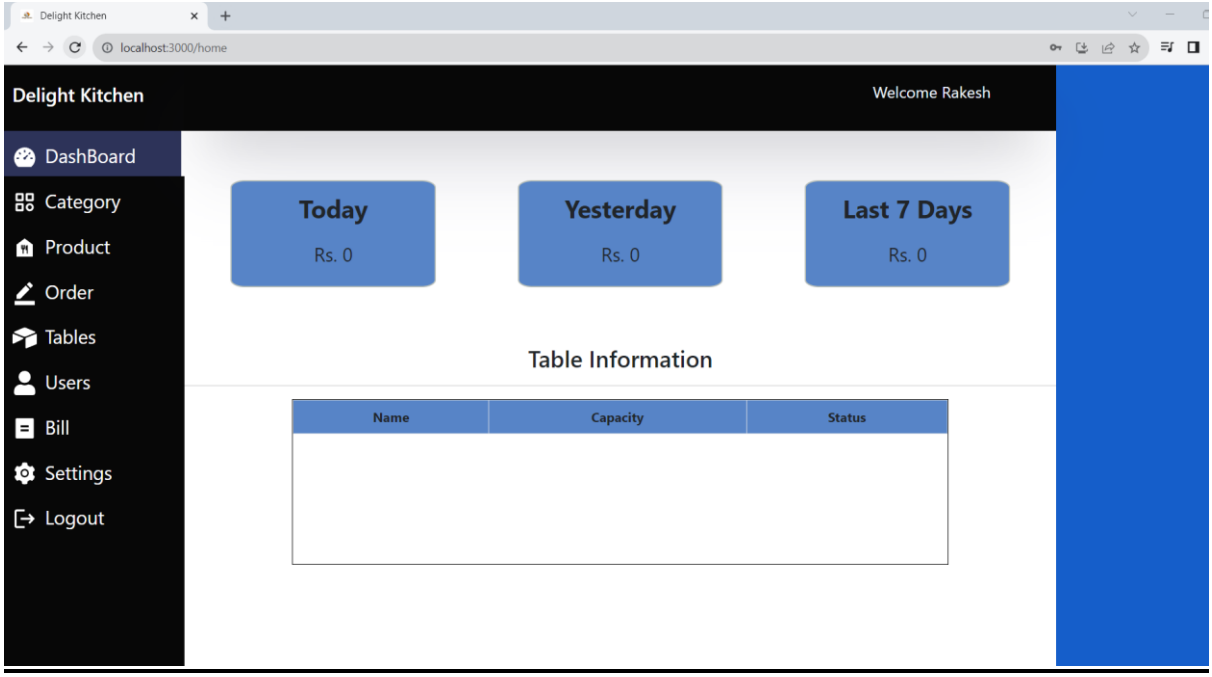
Users:

Field	Type	Null	Key	Default	Extra
userId	int	NO	PRI	NULL	auto_increment
createdDate	date	YES		NULL	
currentStatus	varchar(255)	YES		NULL	
email	varchar(255)	YES		NULL	
name	varchar(255)	YES		NULL	
password	varchar(255)	YES		NULL	
phone	varchar(255)	YES		NULL	
role	varchar(255)	YES		NULL	

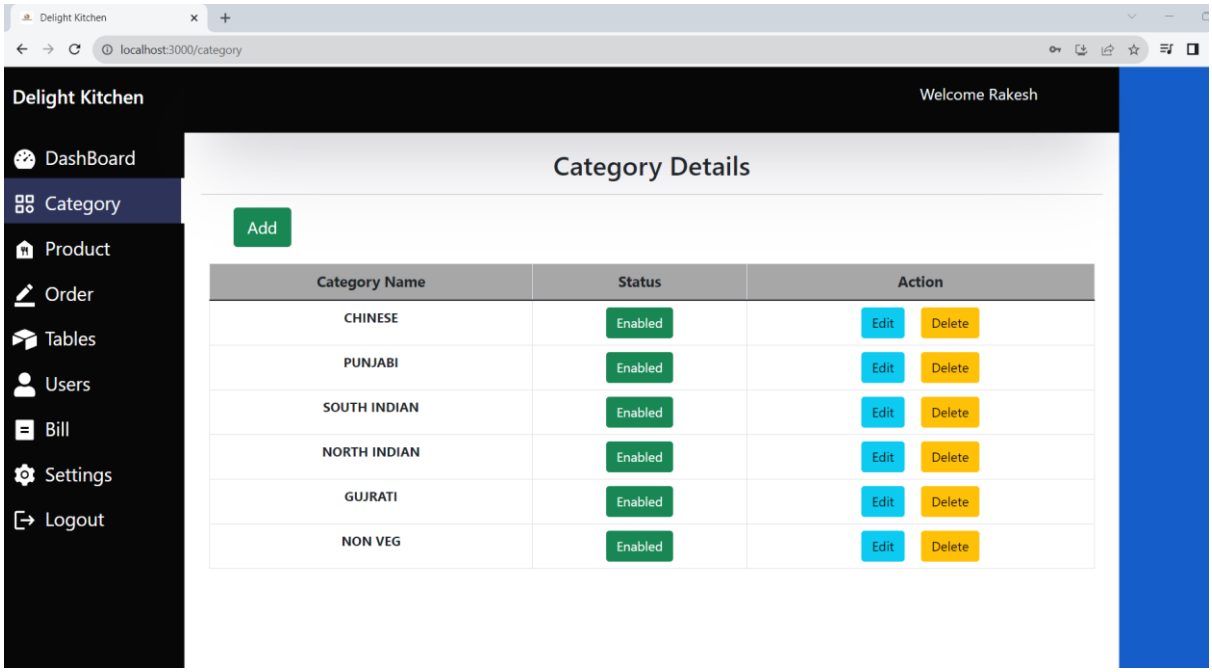
LOGIN SECTION FOR MANAGER



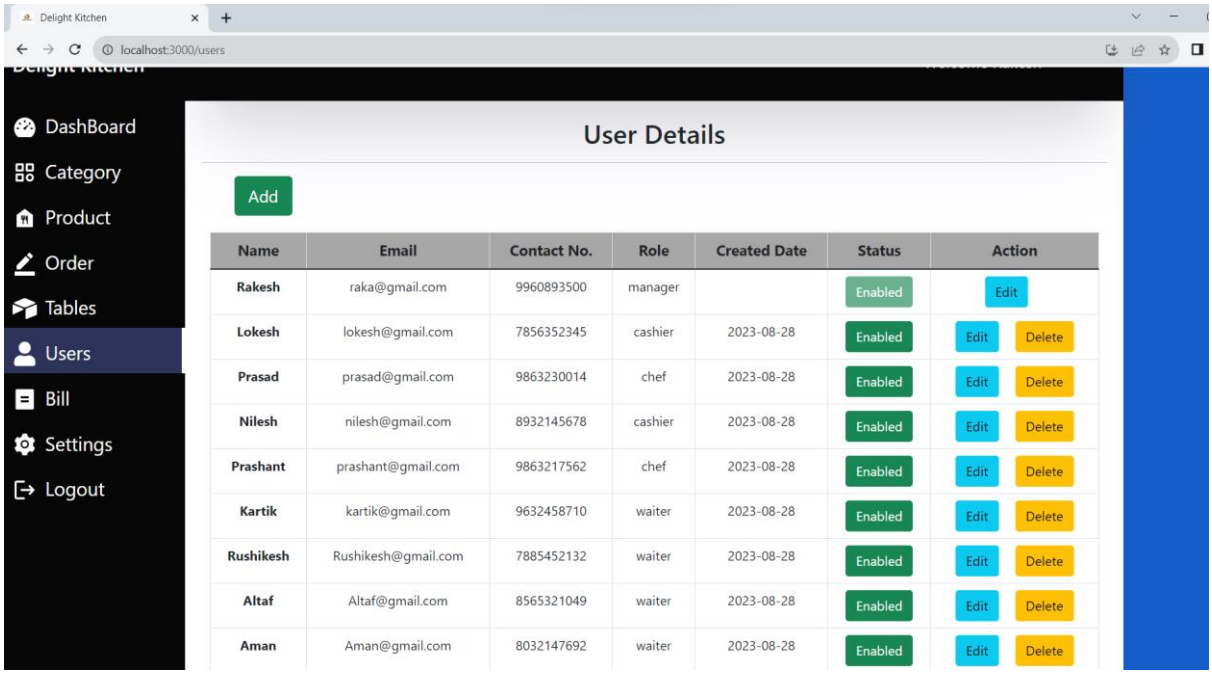
DASHBOARD OF MANAGER



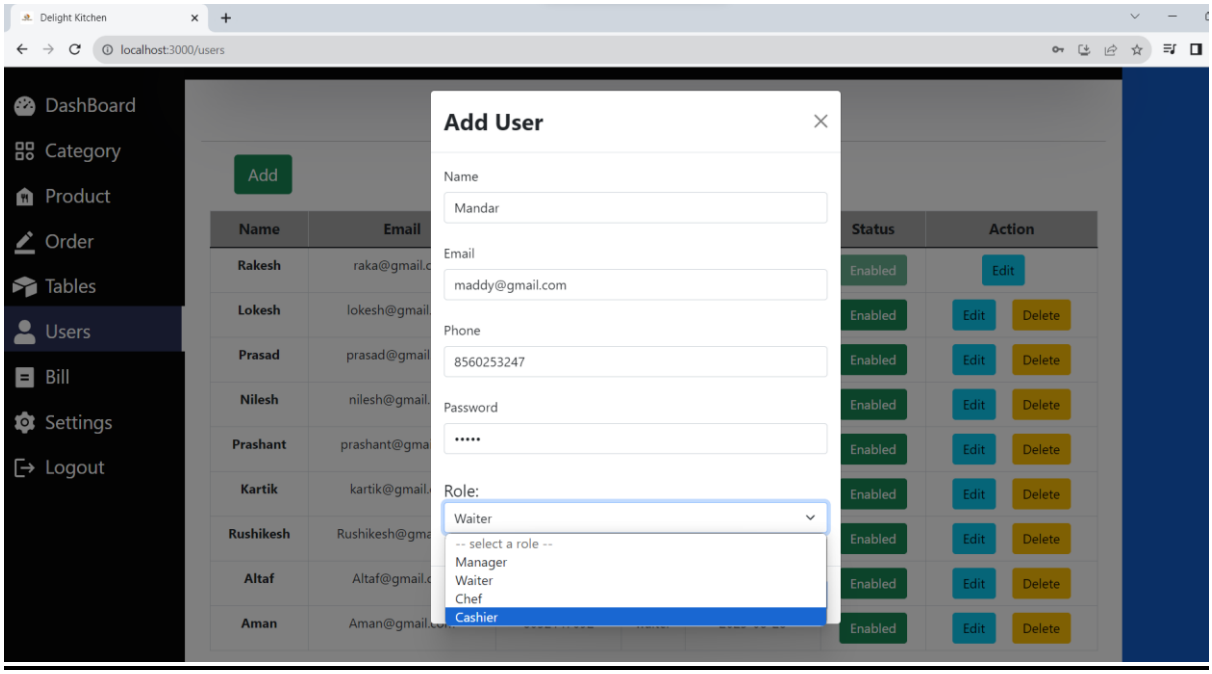
SCREEN OF MANAGER(RAKESH) OF HUNGRY FOODS RESTAURANT



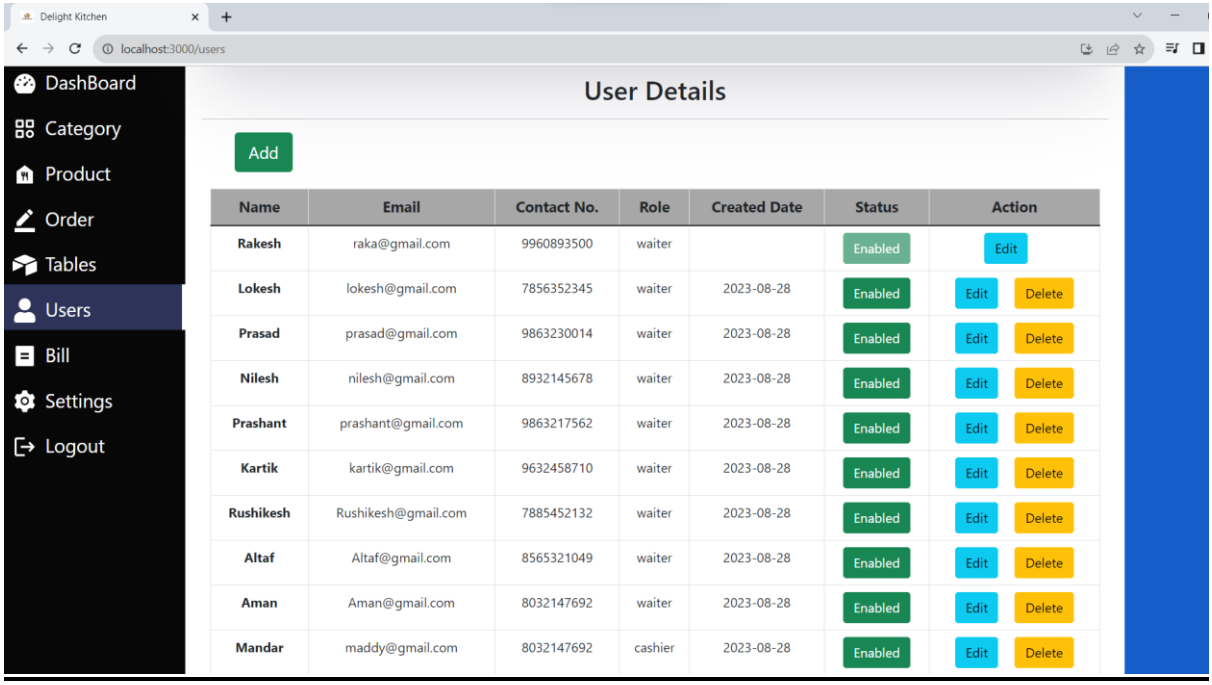
STAFF OF RESTAURANT(USERS) WHO CAN ACCESS THE APPLICATION



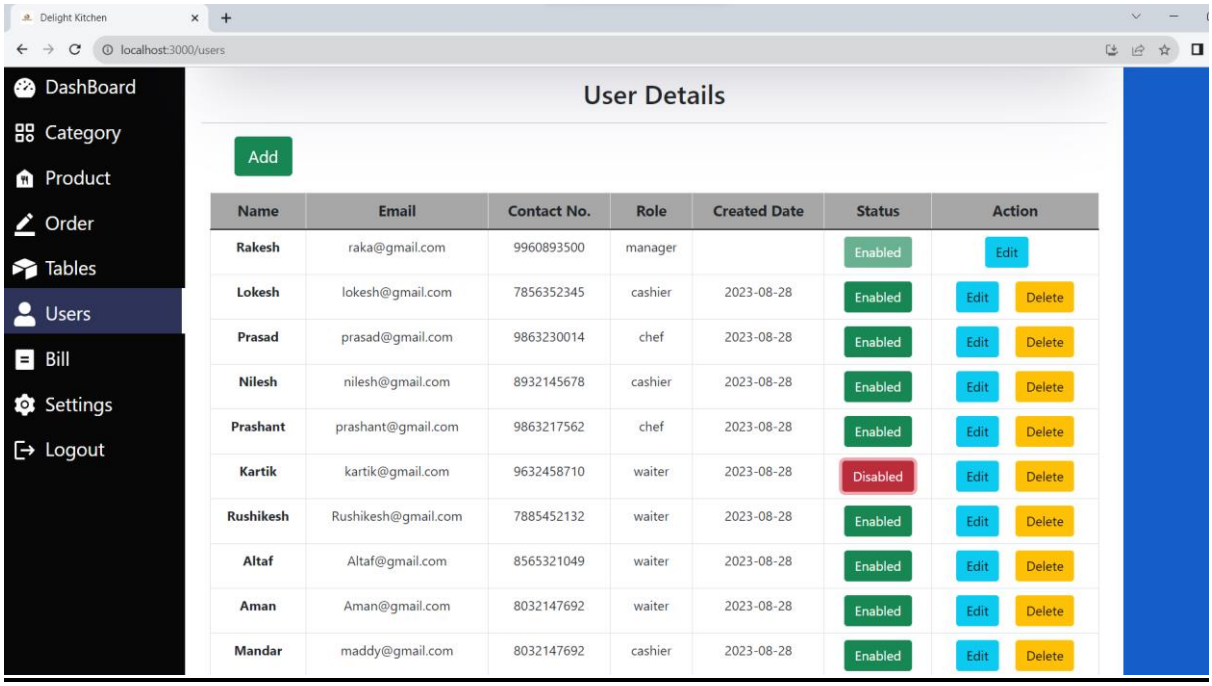
ADDITION OF NEW STAFF MEMBER(CASHIER) BY MANAGER



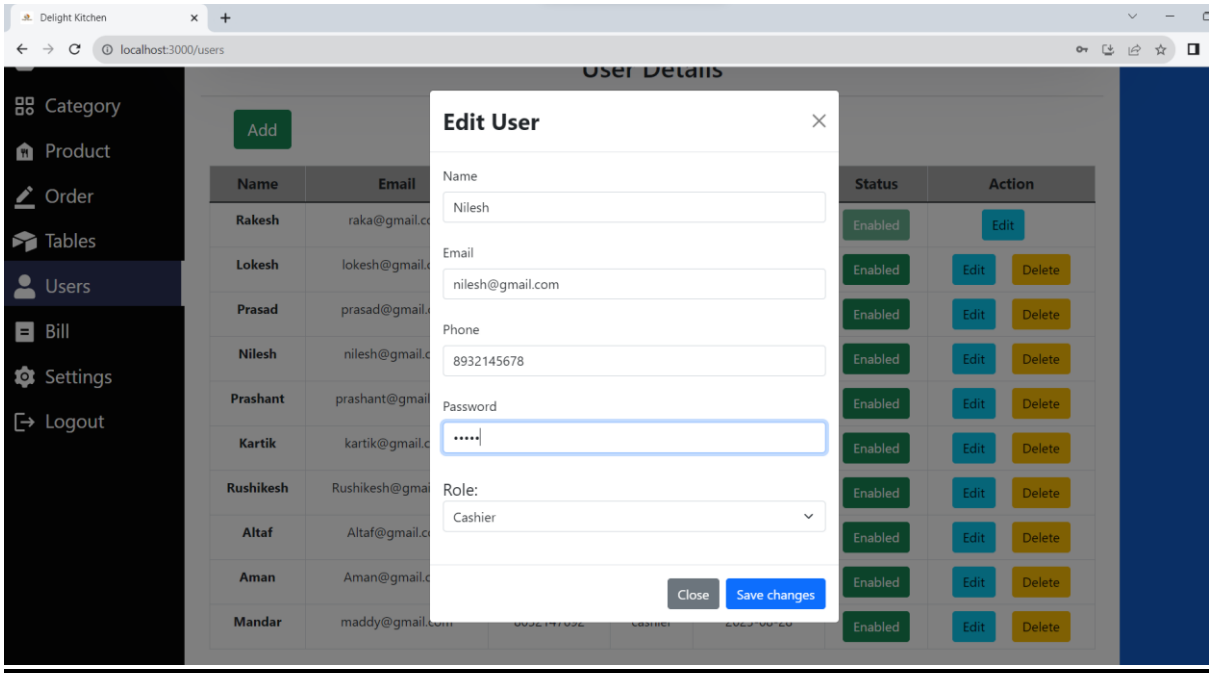
ADDED STAFF MEMBER (CASHIER) DISPLAYED UNDER USER



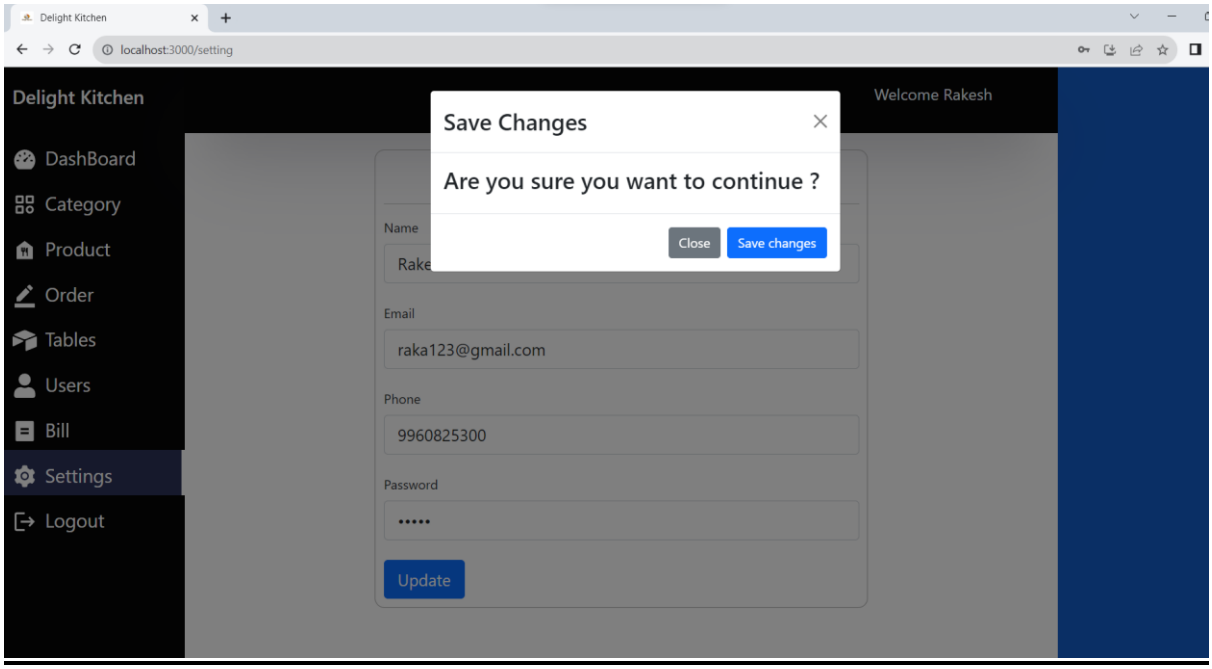
MANAGER CAN TEMPERORY DISABLED/ENABLED STAFF



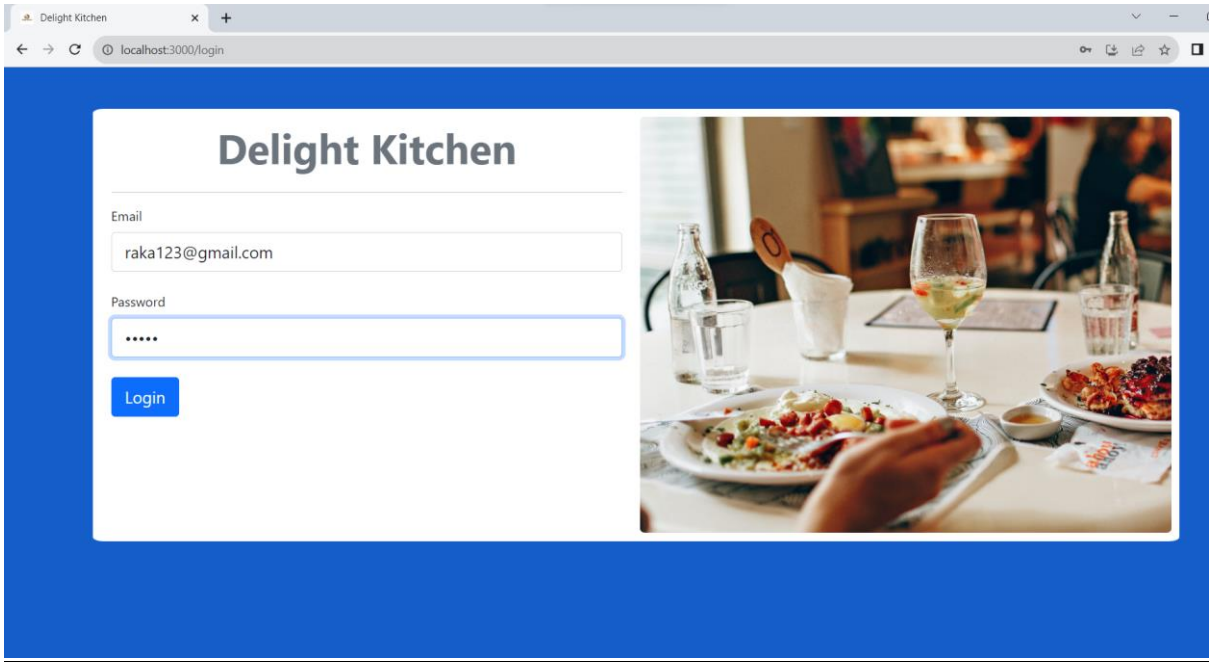
DETAILS OF STAFF (CASHIER) UPDATED AND DELETED BY MANAGER



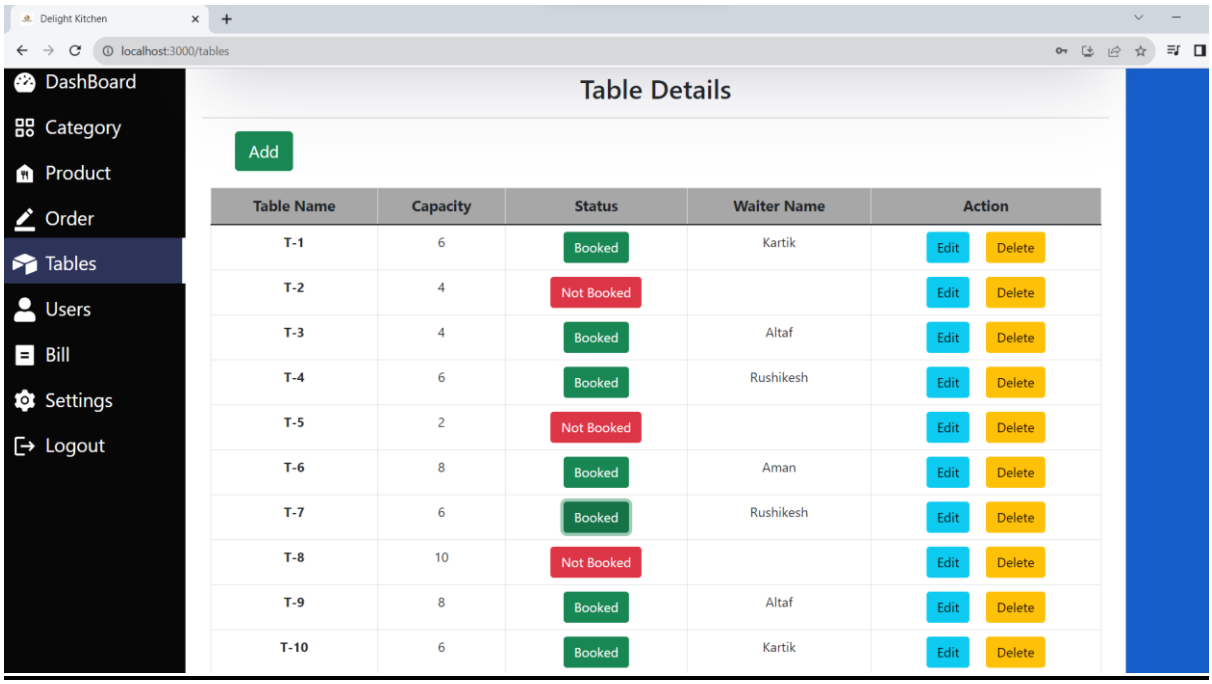
MANAGER CAN UPDATE HIS PASSWORD OR DETAILS FROM SETTINGS SECTION



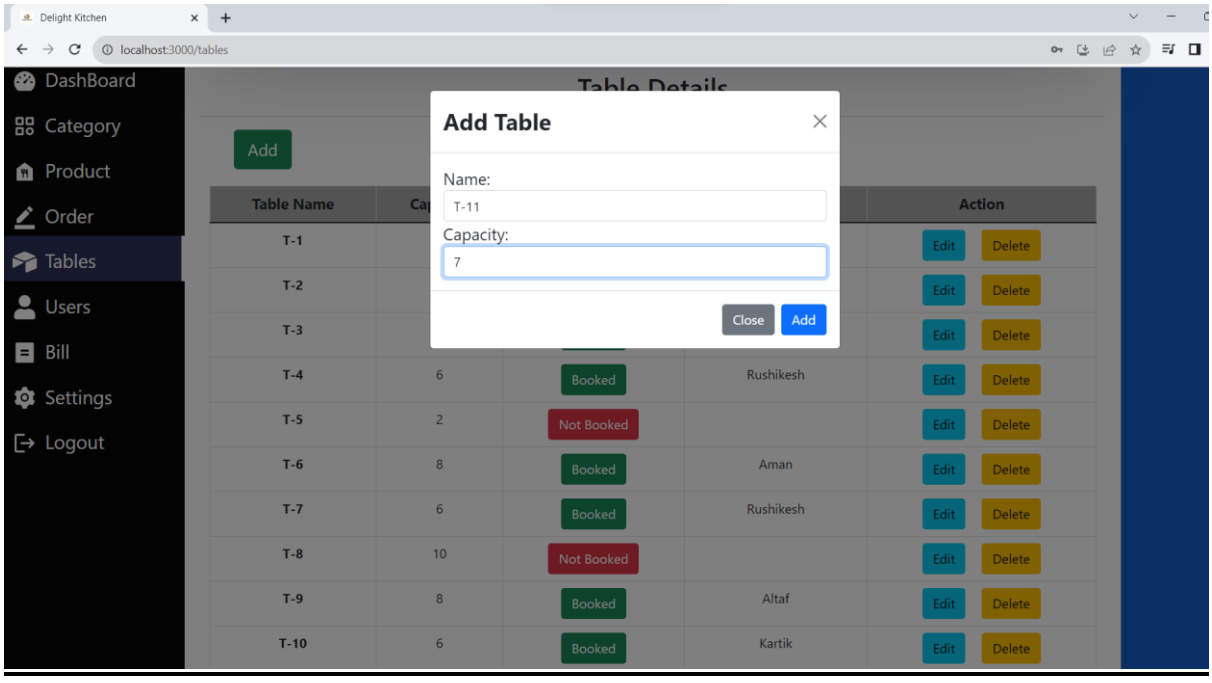
NOW ENTERED NEW CREDENTIAL TO LOG IN AS MANAGER



TABLES SECTION WHERE MANAGER CAN ASSIGN TABLES TO WAITERS



ADDING NEW TABLES WITH CAPACITY BY MANAGER



NEW TABLE T-11 ADDED BY MANAGER WHICH IS YET TO BE ASSIGN TO WAITER

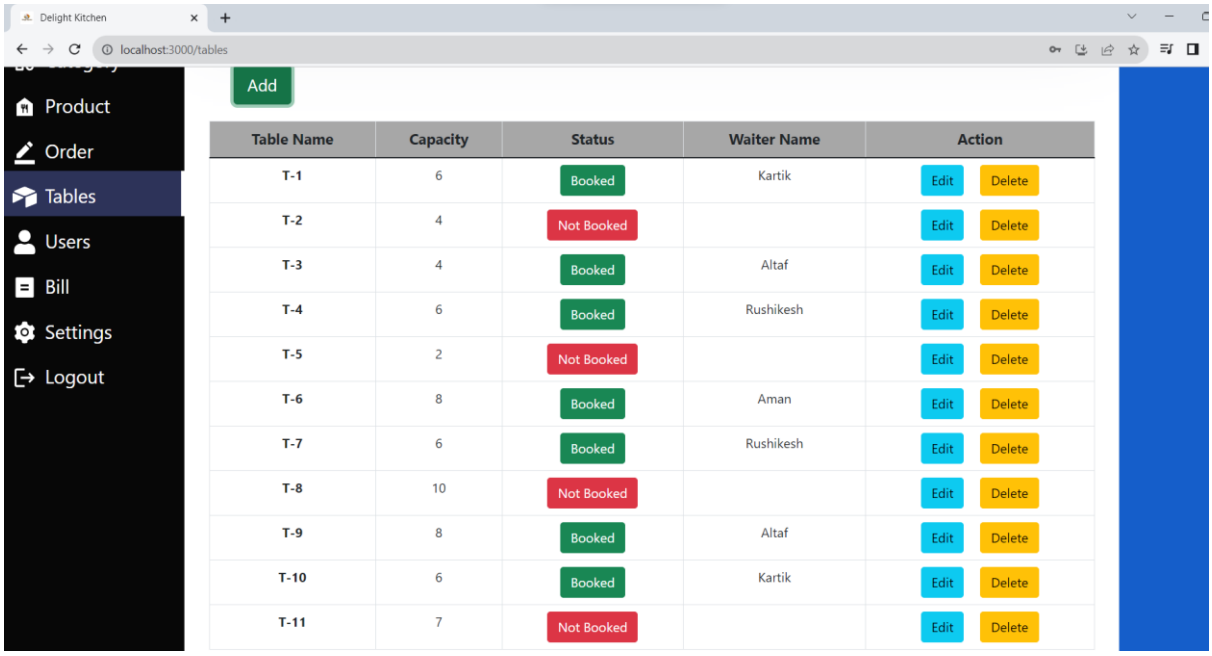
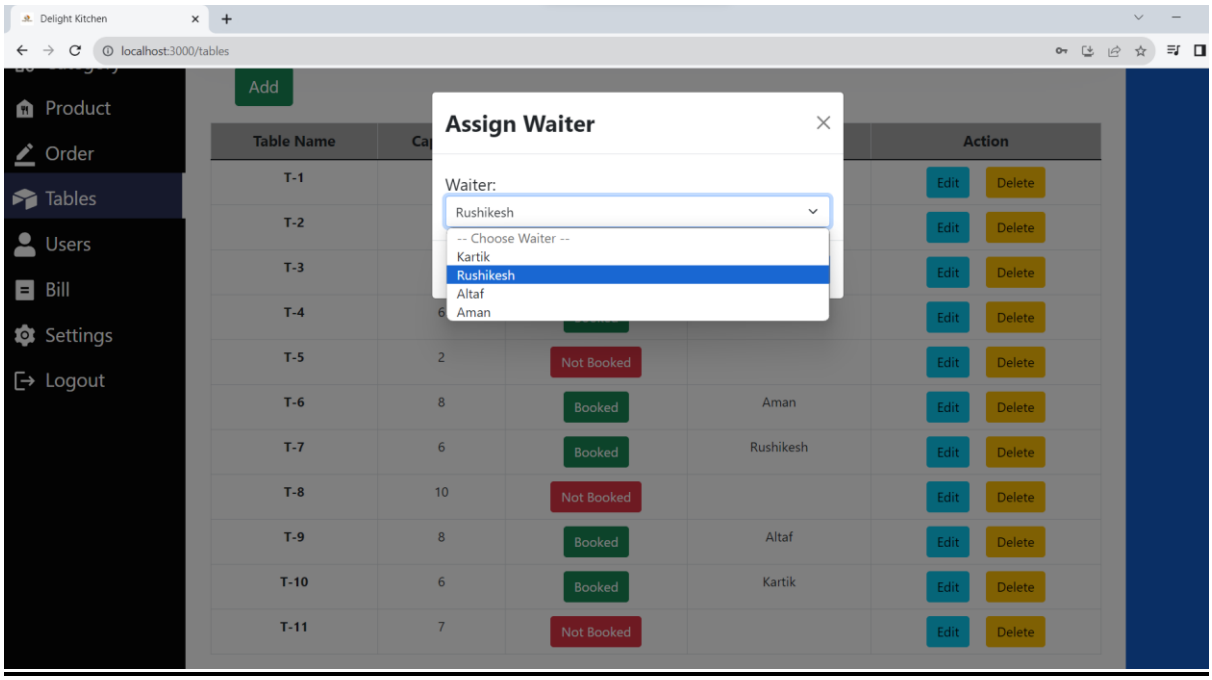
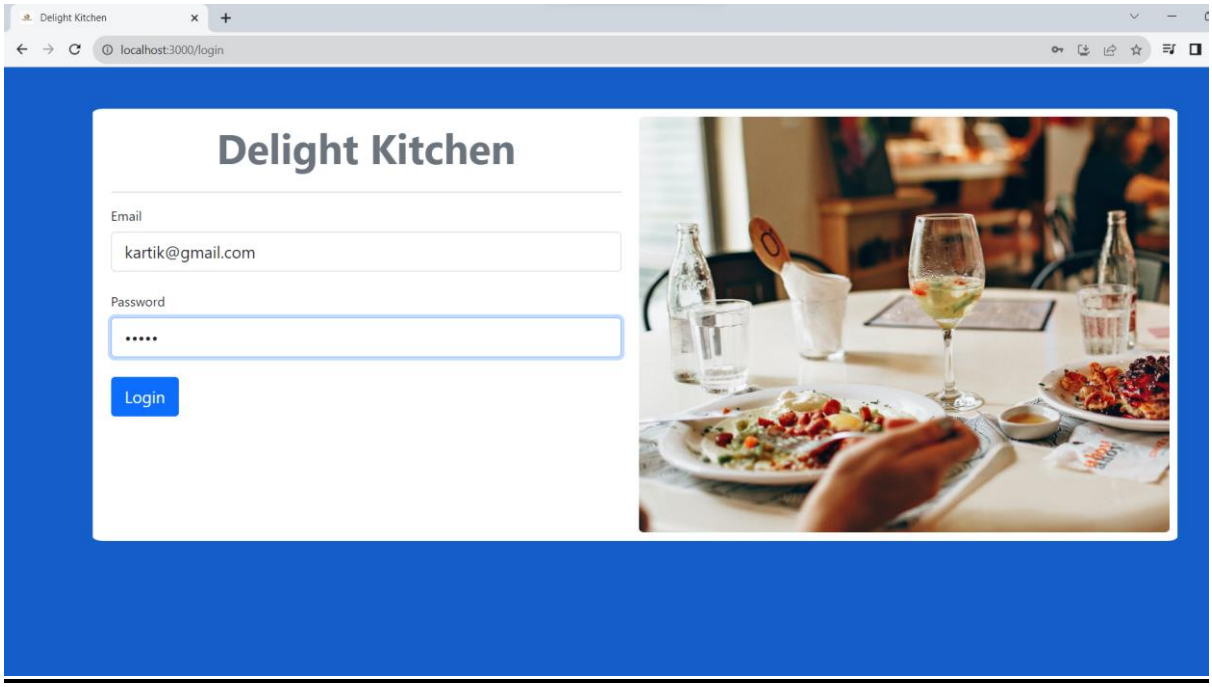


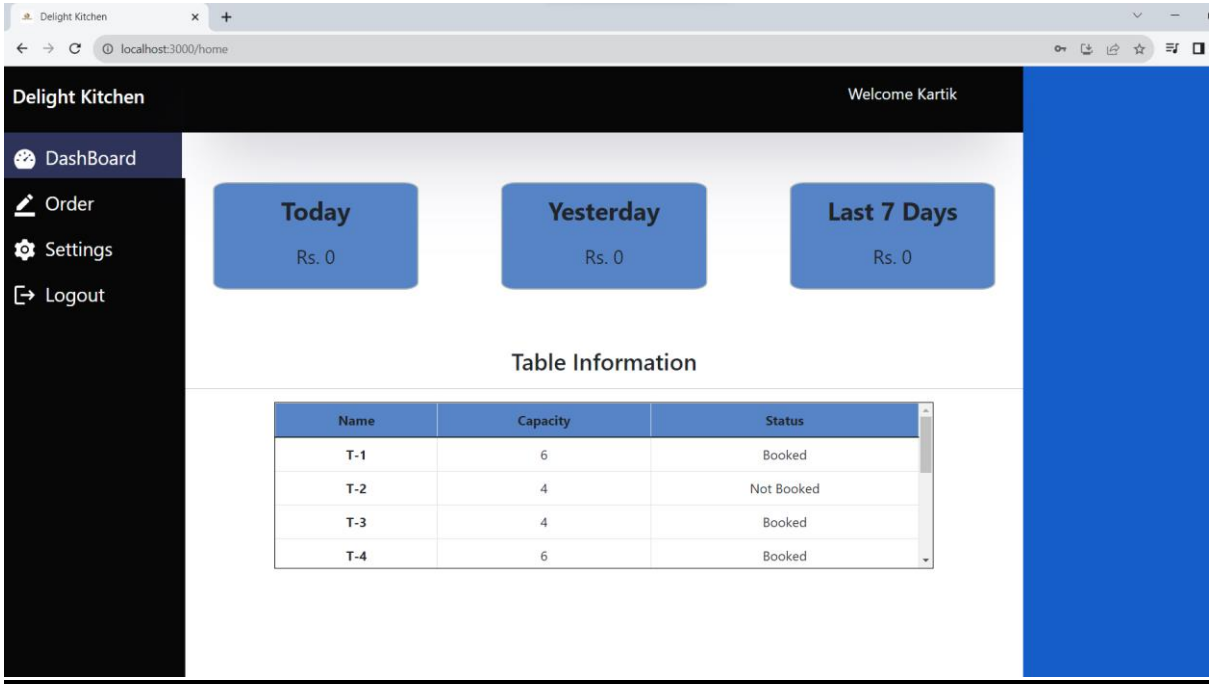
TABLE ASSIGNED BY MANAGER TO WAITER



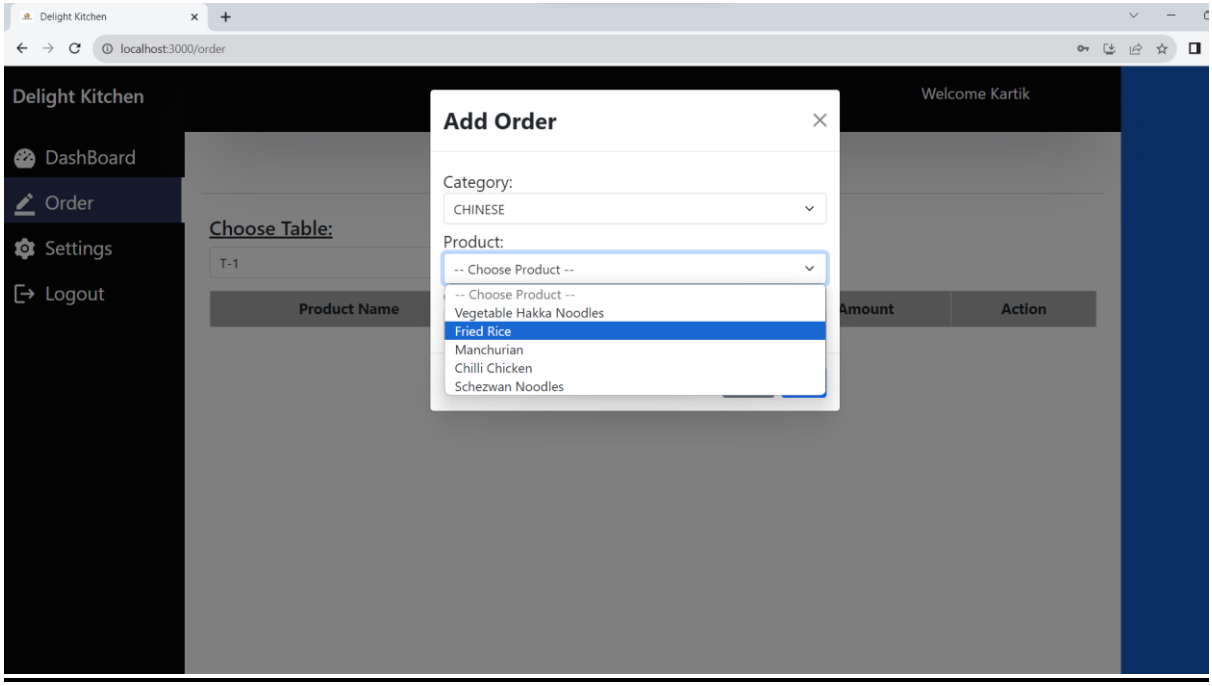
NOW LOGIN BY WAITER



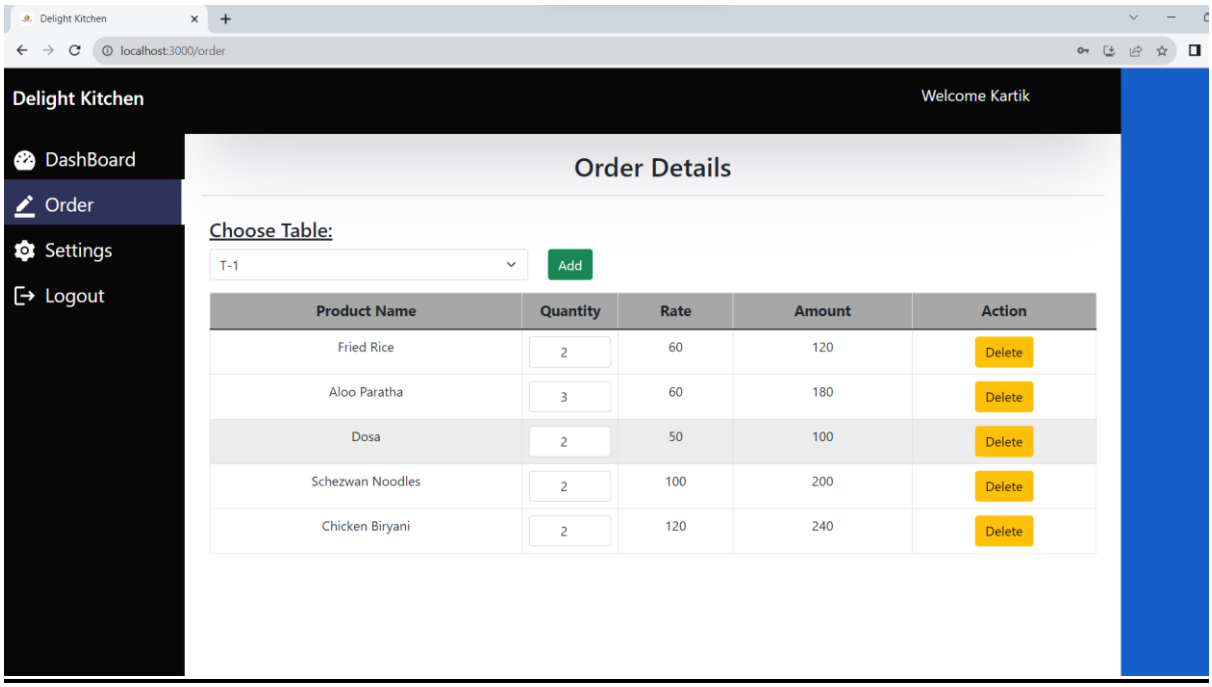
USER INTERFACE OF WAITER



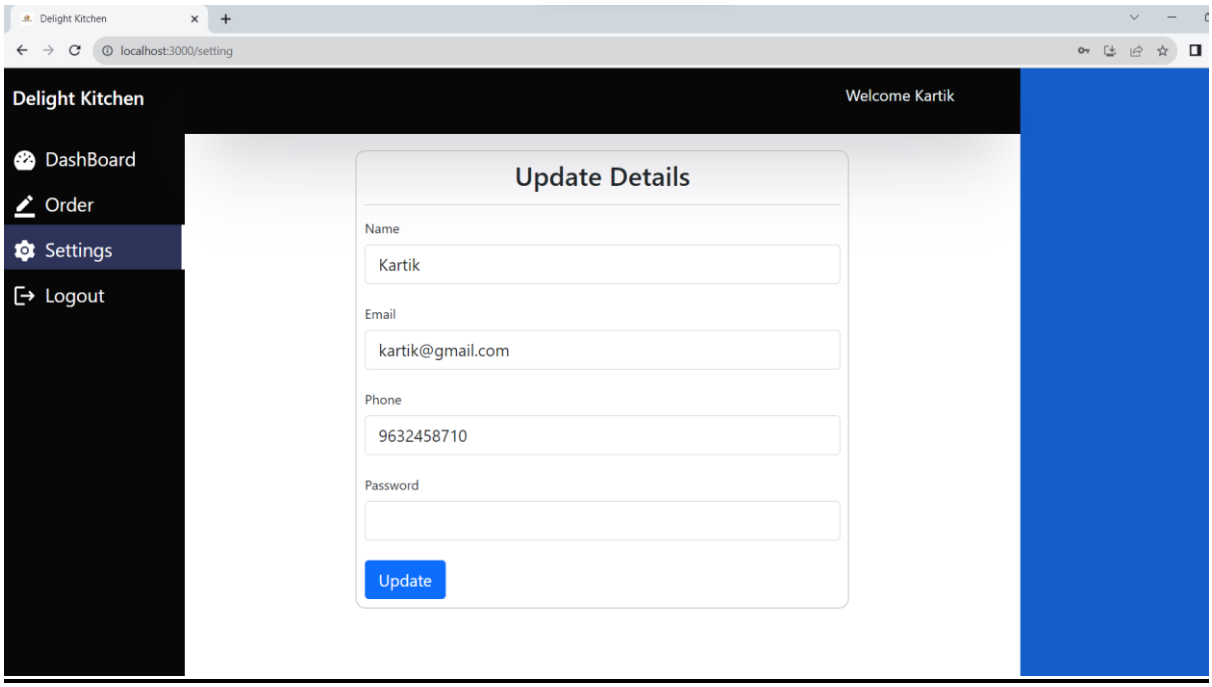
ORDER TAKING BY WAITER OF T-1 TABLE CUSTOMERS



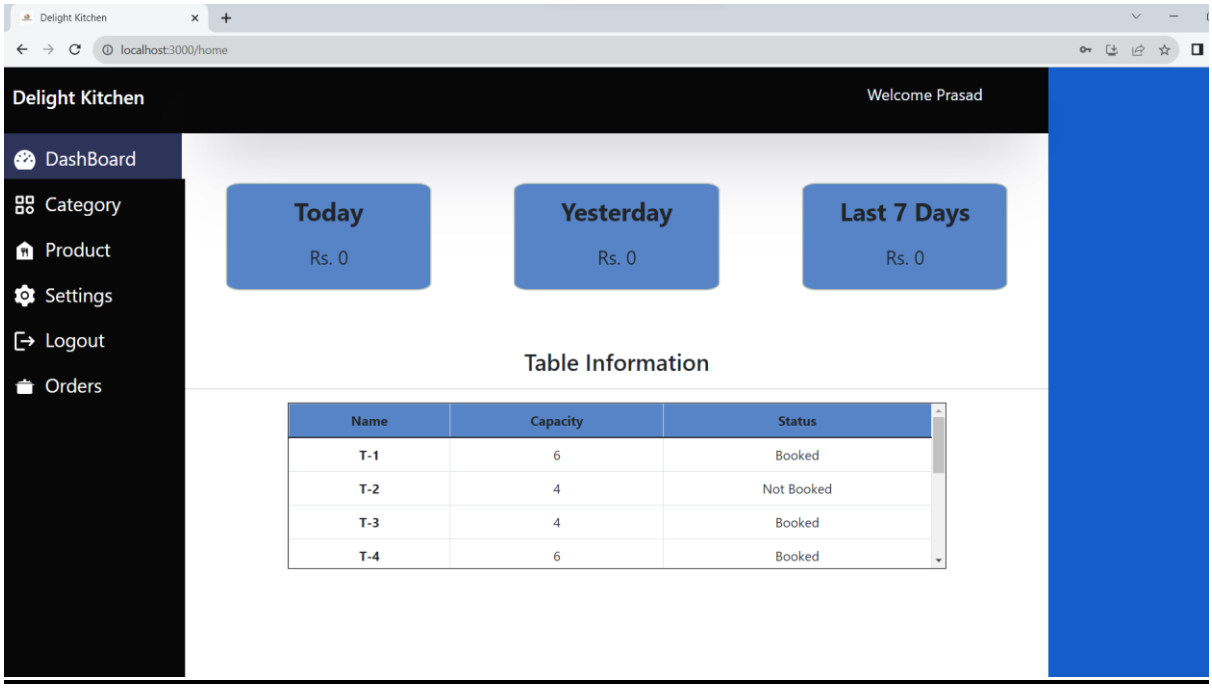
ORDERS TAKEN BY WAITEER FROM T-1 TABLE WHICH WILL BE HANDELED BY CHEF



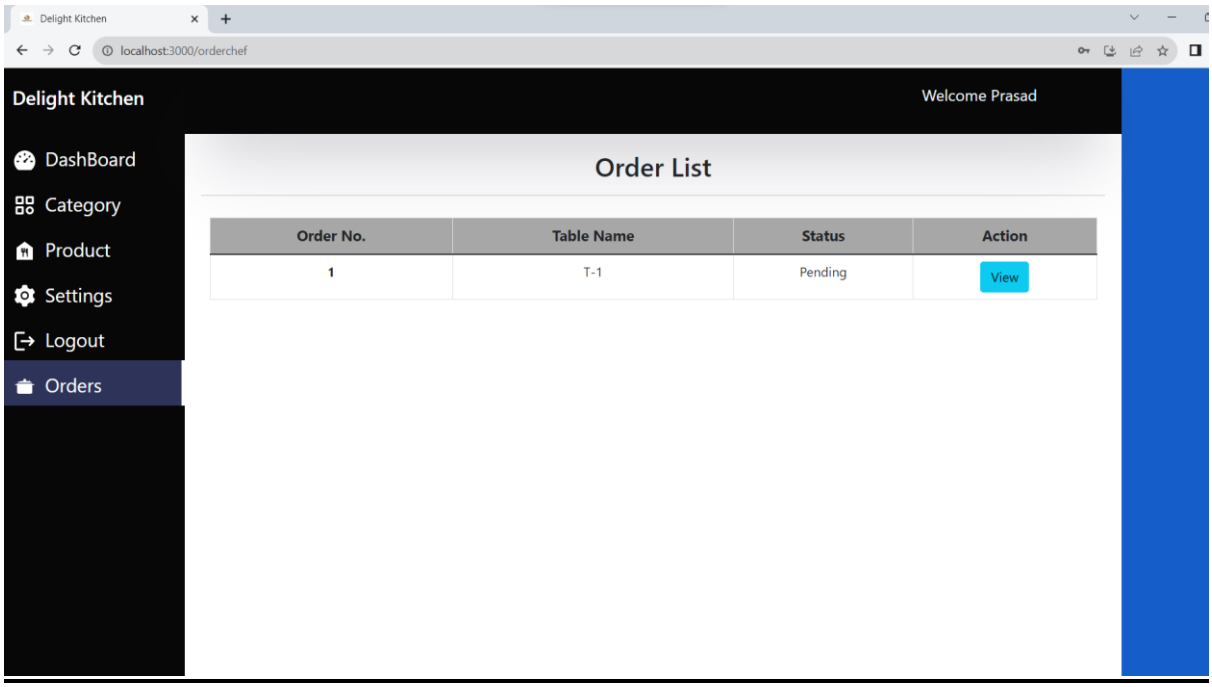
WAITER CAN CHANGE HIS PASSWORD , NAME OR USER ID FROM SETTING SECTION



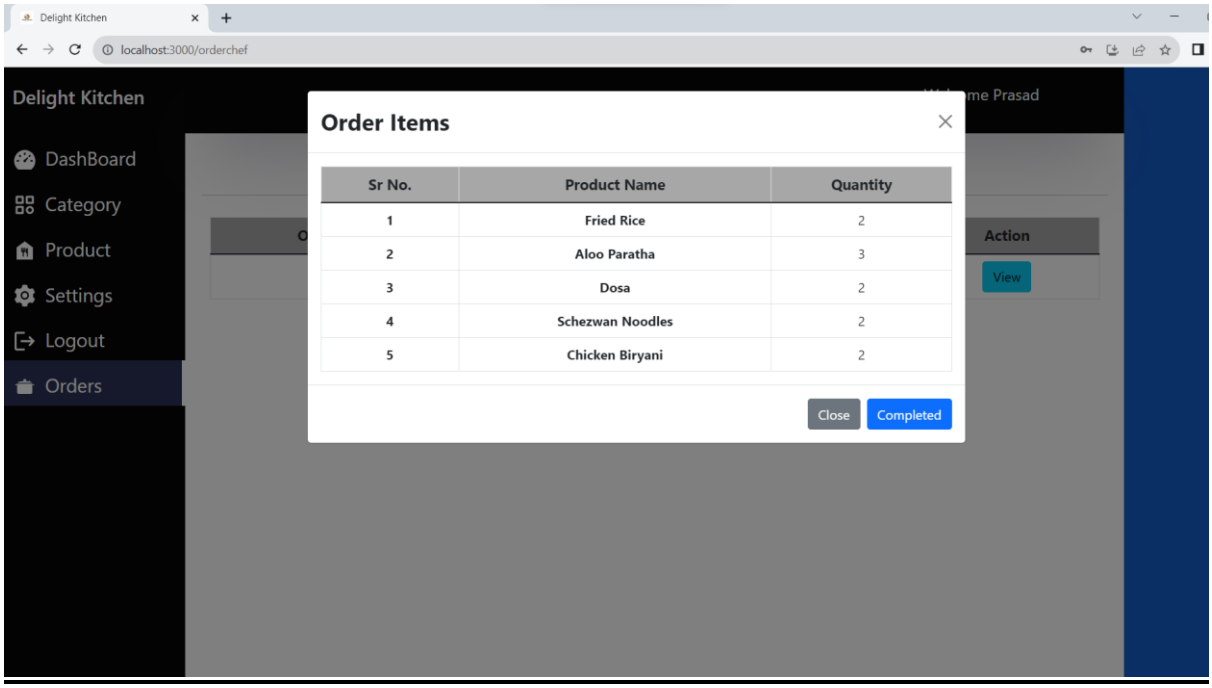
CHEF (PRASAD) LOGGED IN



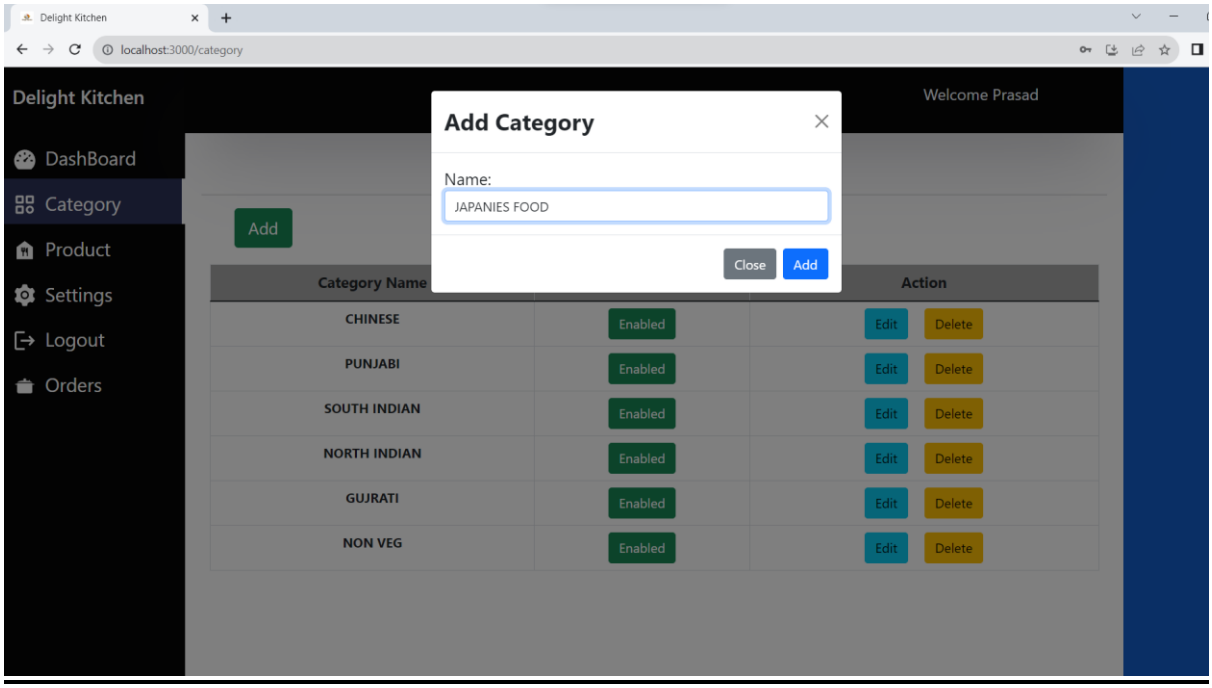
CHEF CAN SEE PENDING ORDER LIST



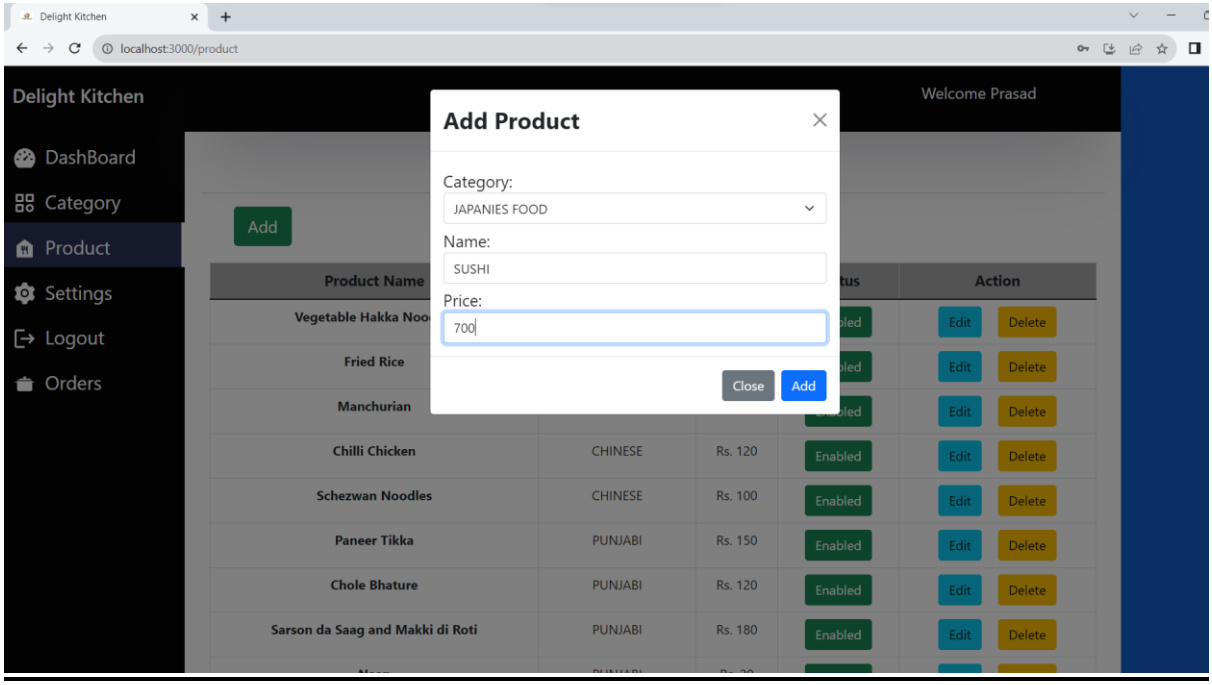
CHEF CAN MANAGE APPROVE/ COMPLETE ORDER



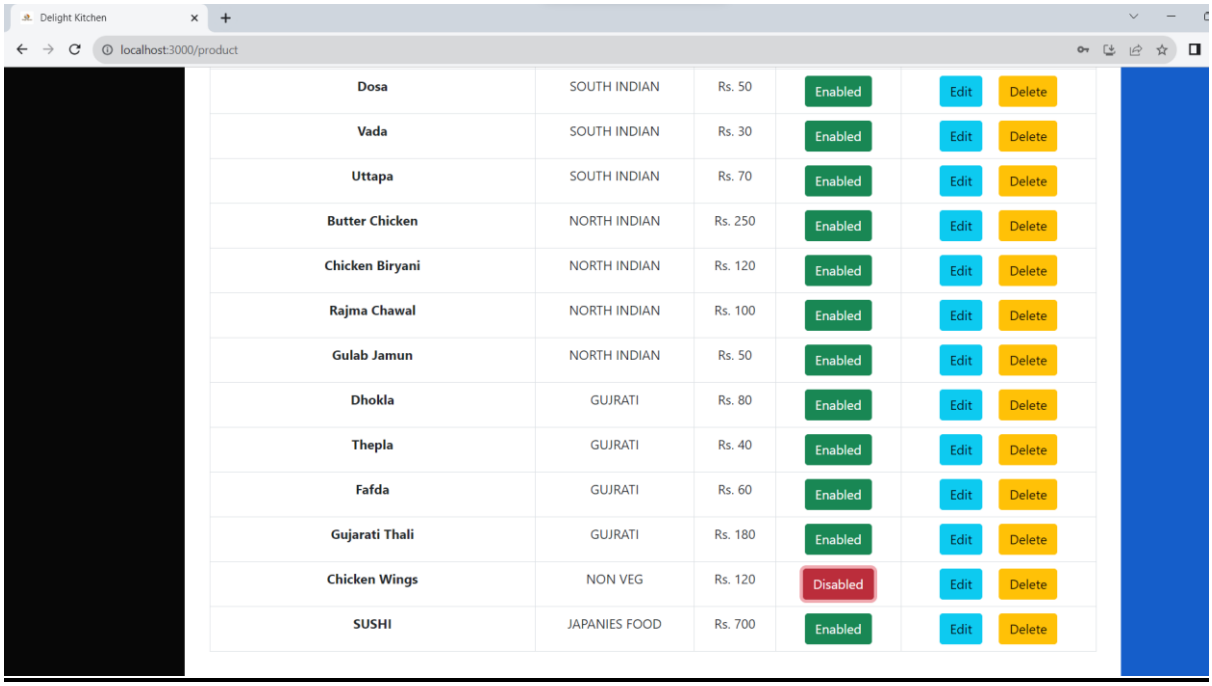
CHEF CAN ADD/DELETE/DISABLE/ENABLE /EDIT FOOD CATEGORIES



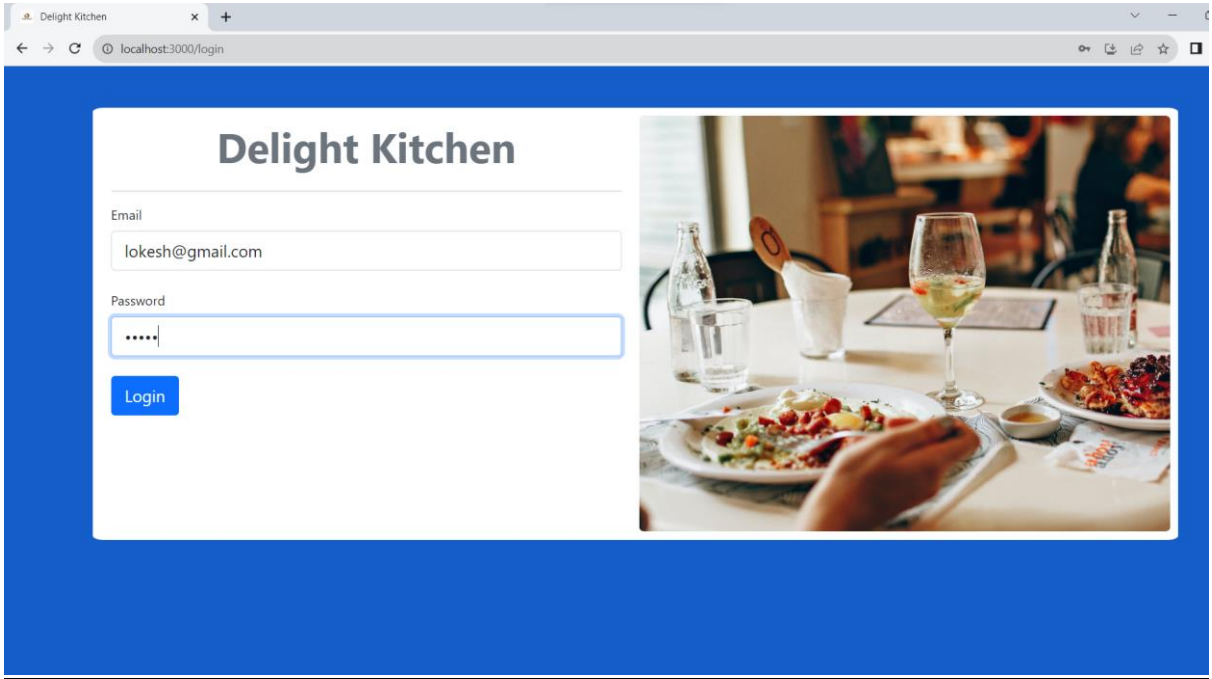
CHEF CAN ADD/DELETE FOOD PRODUCT



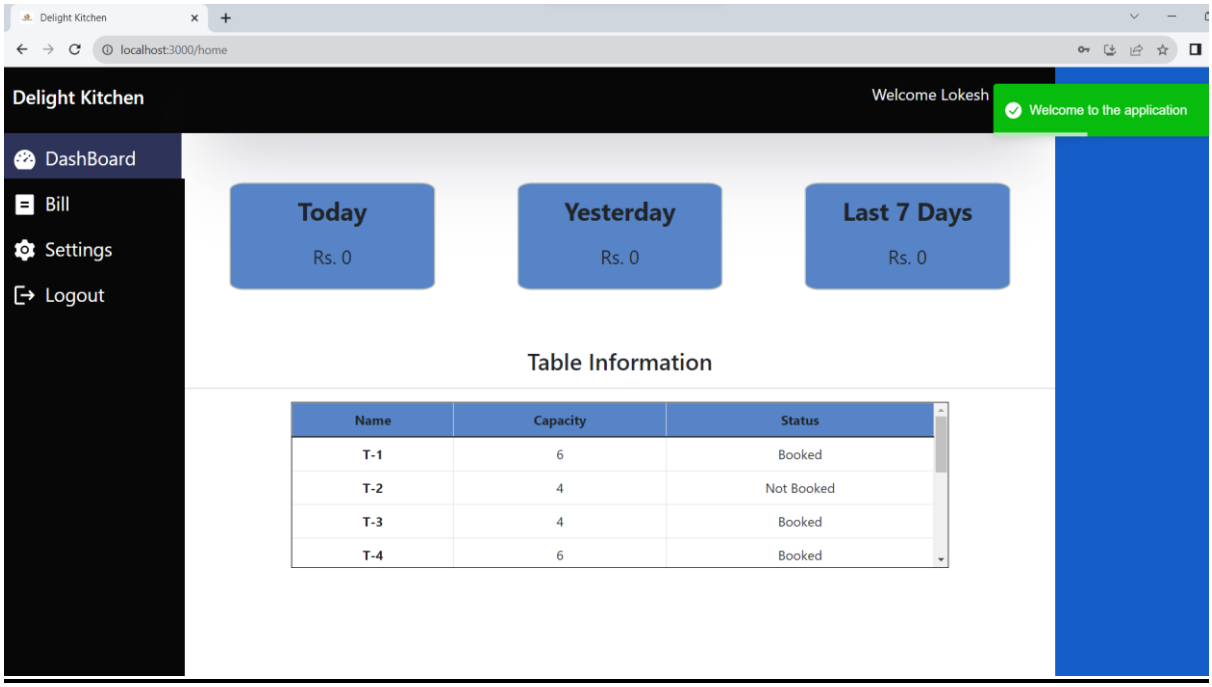
JAPANESE FOOD PRODUCT SUSHI ADDED BY CHEF
CHICKEN WINGS DISABLED BY CHEF DUE TO ANAVAILABILITY



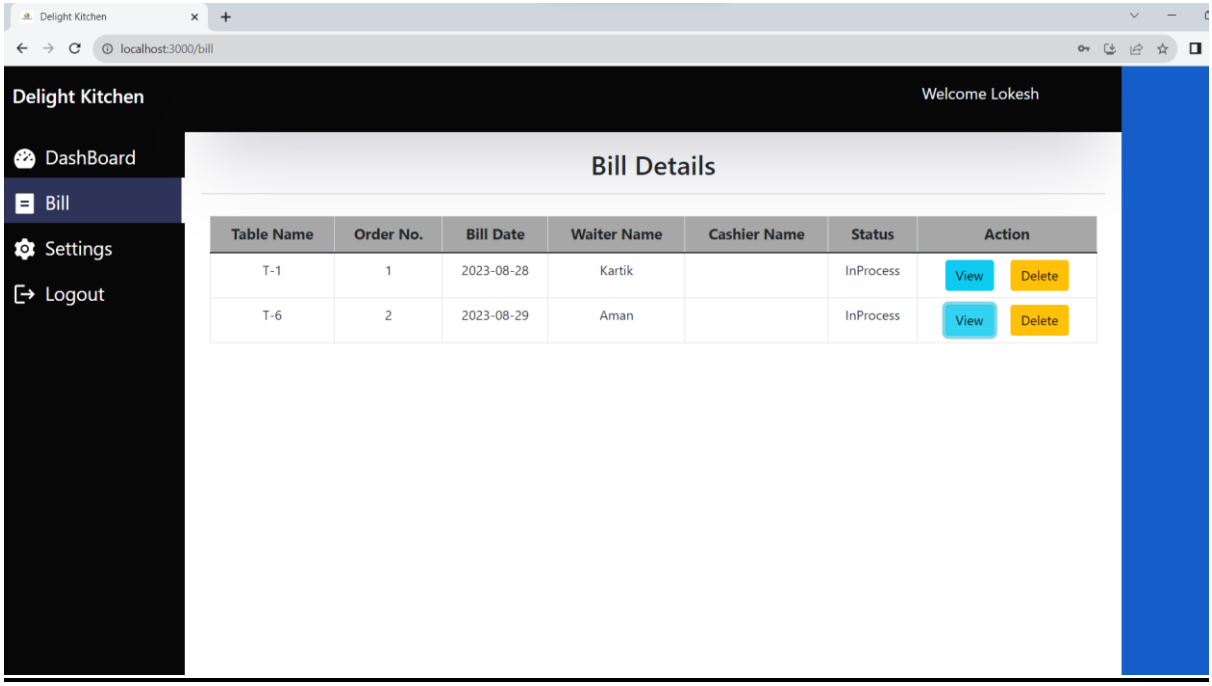
LOKESH CHOUDHARY LOG IN AS A CASHIER USING CREDIENTIAL



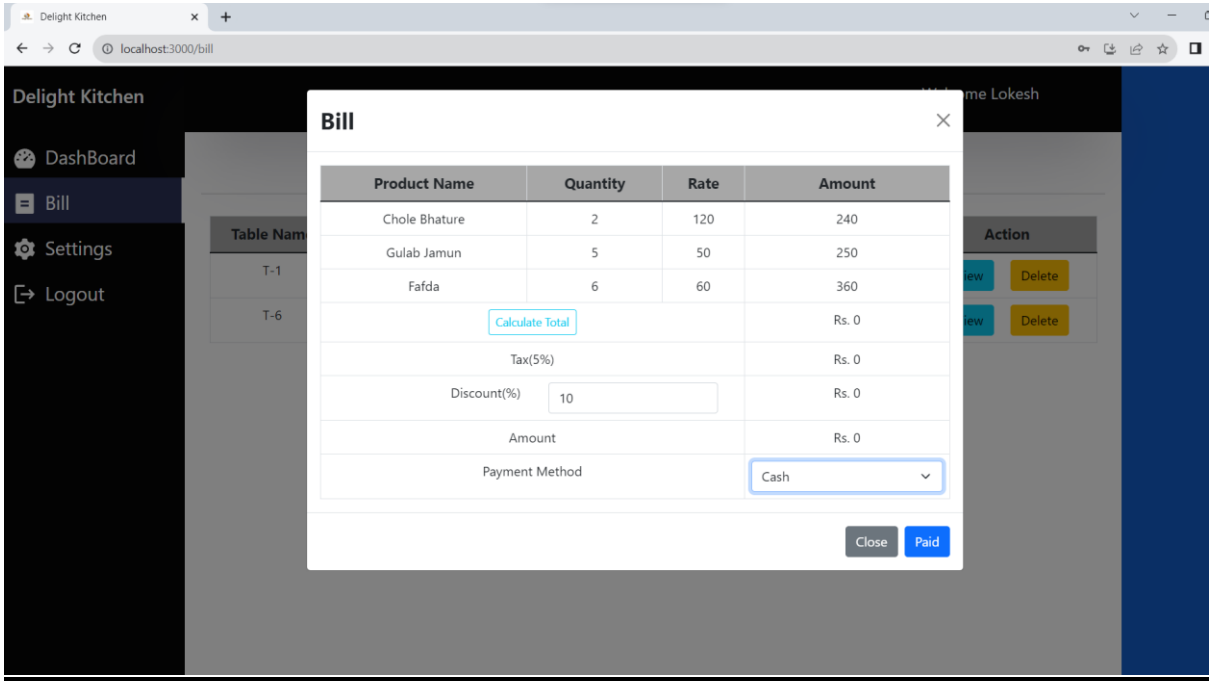
DASHBOARD OF CASHIER



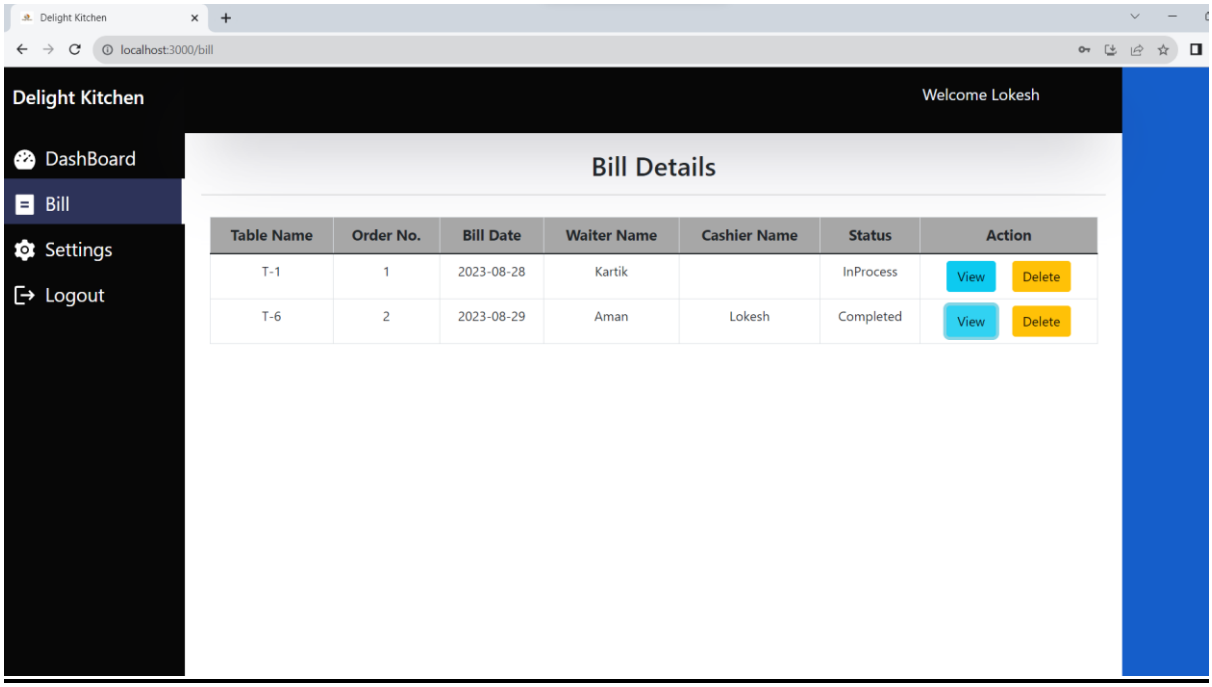
CAHIER CAN VIEW COMPLETED AND PENDING PAYMENT BILLS



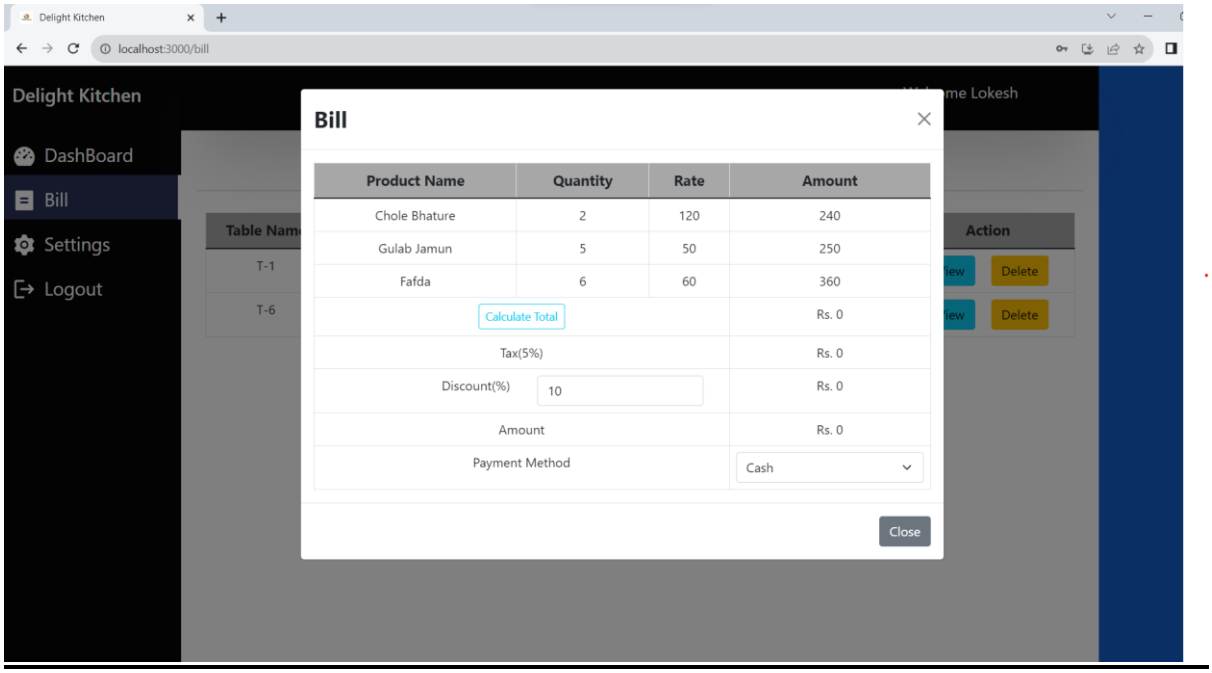
CAHIER CAN GENERATE BILLS WITH APPLY DISCOUNTS (if needed) AND TAXES



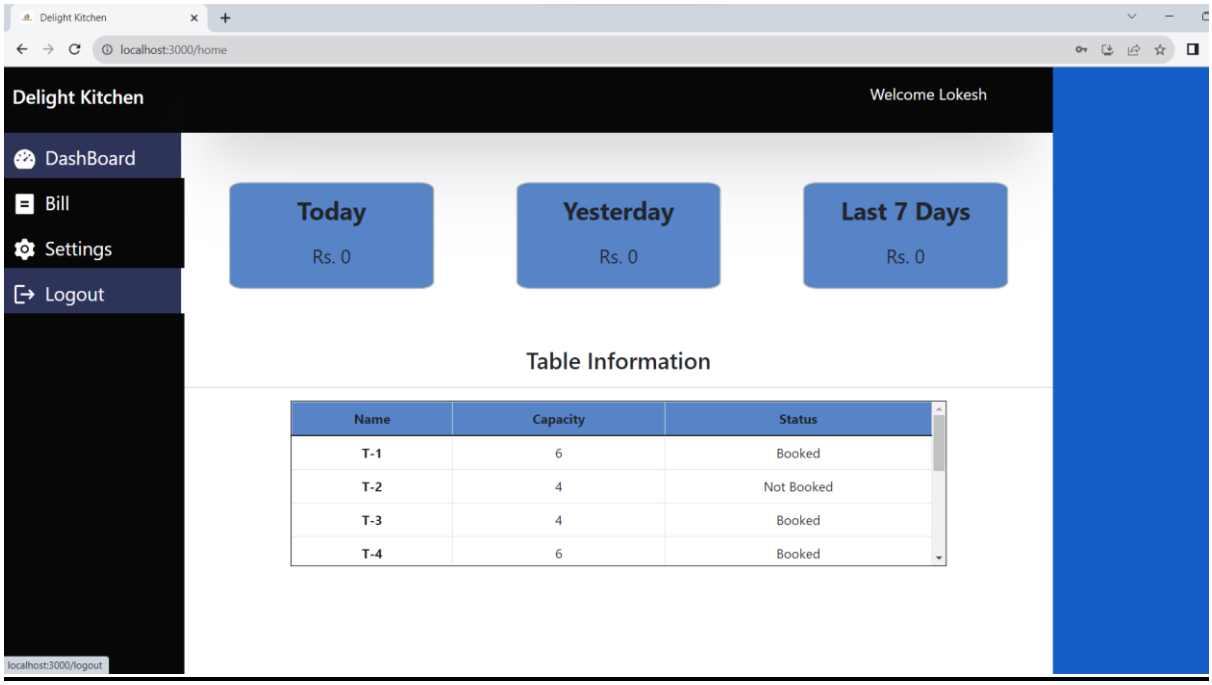
PAYMENT DONE AFTER ORDER IS COMPLETED



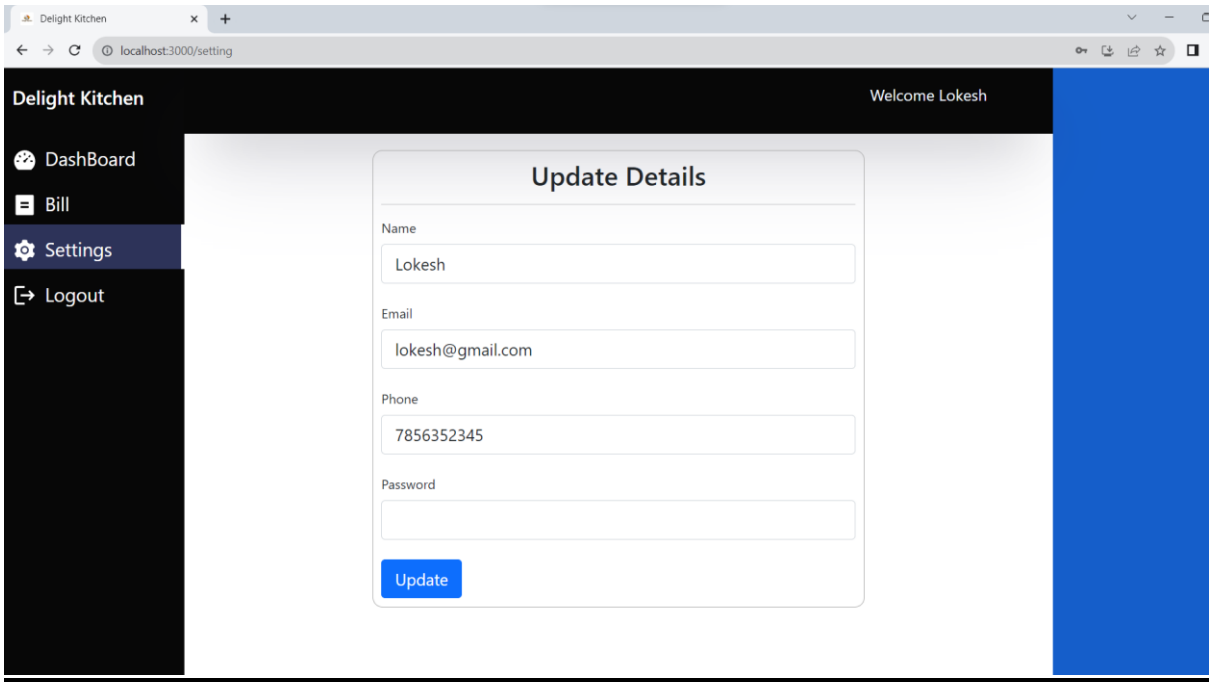
PAYMENT REFLECTED IN DASHBOARD AFTER PAYMENT IS DONE & DASHBOARD SHOWS TODAYS ALL ORDERS IN RS



ALL THE USERS(STAFF) CAN LOGOUT FROM APPLICATION FROM LOGOUT SECTION OF THEIR RESPECTIVELY UI



CAHIER CAN ALSO CHANGE HIS PASSWORD / NAME / USERID



6. Conclusion

Restaurant management system puts forth the actual working of a restaurant. Staff management, food item and category management, bill management, order management, table management, etc. similar to a restaurant are the key features of our project. Staff person having their job can access different functionalities of the application to service the visited customer effectively and additionally manager can there to monitor the workflow of the whole restaurant.

Future Scope

As the saying goes, necessity is the mother of invention, and nothing spurs innovation in technology for better restaurant management we are comes with this application which will improve the customer experience , there is no confusion due to large number of orders because of this application .

Now in future we can add some additionally feature in this application like cloud kitchen , different type of online payment method and like home delivery options like feature we can add in future, this single application can use by restaurant to restaurant management , online food ordering , employees payroll management like everything related to restaurant we can manage A to Z .

In futures we can improve better UI so the user experience also becomes smothering. 95% of restaurant operators view the ability to improve guest satisfaction and the quality of the guest experience as one of the biggest benefits one can expect to gain with the right restaurant management

This system will help to manage the restaurant business systematically. In this management system, we will provide a web application that can be used by the Manager along with the staff of that restaurant to manage the food orders given by the customers, so that the manager of that restaurant can monitor and ensure the smooth conduct of the whole system.
This will lead to serving food faster and ultimately a better kitchen place to revisit it again. In addition to this, the system is capable of hiring different job roles required for a restaurant, the required information about staff will be saved in the system which can be only accessed by the system admin.

7. References

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