

RESTAURANT MANAGEMENT SYSTEM

Project submitted to the
SRM University – AP, Andhra Pradesh
for the partial fulfillment of the requirements to award the degree of
Bachelor of Technology
In
Computer Science and Engineering
School of Engineering and Sciences

Submitted by
K Yaswanth (AP21110010533)
Ch Nagasai (AP21110010558)
N Akash (AP21110010553)
A Revanth (AP21110010556)



Under the Guidance of
Ravi Kanth Kumar

SRM University–AP
Neerukonda, Mangalagiri, Guntur
Andhra Pradesh – 522 240
May,2024

ACKNOWLEDGEMENT

I extend my heartfelt gratitude to the dedicated faculty and staff members of the institute who played a pivotal role in the successful completion of this training work. Their unwavering guidance and continuous efforts have been invaluable.

Specifically, I would like to express my appreciation to Asst. Prof. Ravi kanth Kumar, whose cooperation and guidance significantly contributed to our progress. I am also thankful to the lab assistant for their unwavering support throughout the project.

Furthermore, I recognize the crucial role played by our H.O.D, sir. His encouragement and provision of necessary facilities within the department were instrumental in our achievements.

Lastly, I owe a debt of gratitude to my parents. Their constant support and encouragement made this journey possible.

And, I express my thanks to the divine force that guided me through this transformative experience.

Table of concepts

Abstract	5
Introduction	5
Purpose	6
Available Features	6
About Restaurant pos system php project	7
Admin panel	7
Product management	7
Place orders	7
Payments and receipts	8
Staff panel	8
System Requirements	9
DFD levels-0,1,2	10
Usecase diagram	11
Class diagram	12
ER diagram	13
Customer side interface	14to17
Admin side interface.....	17 to 23
Future work.....	24
Conclusion.....	24
References	25

Abstract

The Restaurant Management System (RMS) software engineering project presents a comprehensive solution tailored to the intricate needs of modern eateries. With a primary focus on enhancing operational efficiency and customer satisfaction, the RMS encompasses a range of functionalities crucial to restaurant management. These include order processing, inventory management, table reservations, staff scheduling, menu updates, billing, and analytics. By employing agile methodologies and adhering to software engineering best practices, the project aims to deliver a robust, scalable, and user-friendly system. The RMS not only streamlines day-to-day operations but also provides valuable insights through data analytics, enabling informed decision-making for restaurant owners. Through seamless integration with various platforms and intuitive interfaces, it enhances both the front-end experience for customers and the back-end management for restaurant staff. Ultimately, the RMS project signifies a transformative step in the culinary industry, bridging the gap between traditional practices and modern technological advancements to elevate the standards of restaurant management.

Introduction

The Restaurant Management System project is a pivotal endeavor in the realm of software engineering, poised to revolutionize how restaurants operate in the modern world. Its primary objective is to create a comprehensive digital solution that optimizes various aspects of restaurant management, spanning from order processing and inventory control to customer relationship management and staff scheduling. By leveraging advanced technologies and adhering to industry best practices, the system aims to streamline operations, enhance efficiency, and elevate the overall dining experience for both customers and restaurant staff. Through intuitive user interfaces and real-time analytics, it will empower restaurant owners to make data-driven decisions, improve productivity, and cultivate lasting customer relationships. Moreover, by embracing automation and digitization, the project endeavors to reduce operational costs, minimize errors, and ensure the long-term sustainability and profitability of restaurant businesses. Ultimately, the Restaurant Management System project signifies a convergence of technological innovation and culinary excellence, poised to set new standards for restaurant management in the digital era.

Purpose

The purpose of the Restaurant Management System software engineering project is to address the complex and dynamic needs of the modern culinary industry. By developing a comprehensive digital solution, this project seeks to optimize various facets of restaurant operations, ranging from order management to inventory control and customer relationship management. The overarching goal is to enhance efficiency, streamline processes, and ultimately elevate the overall dining experience for both patrons and restaurant staff. Through meticulous planning, rigorous analysis, and the application of cutting-edge technologies, the system aims to provide restaurateurs with the tools they need to thrive in today's competitive landscape. By offering real-time insights, seamless integration across multiple channels, and intuitive user interfaces, the Restaurant Management System will empower restaurant owners to make informed decisions, increase productivity, and foster long-term customer loyalty. Additionally, by fostering automation and digitization, the project aims to reduce operational costs and minimize errors, further contributing to the sustainability and profitability of restaurant businesses. Ultimately, the Restaurant Management System project embodies the fusion of technological innovation and culinary excellence, aiming to redefine the standards of restaurant management in the digital age.

Available Features:

- Admin Panel
- Staff Panel
- Customer Panel
- Customer Management
- Staff Management
- Product Management
- Place Food Orders
- Cancel Orders
- Payments
- Print Receipts
- Order and Payment Reports
- View Total Sales
- Update Profile
- Check Recent Payments – Customer
- Make Orders – Customer
- View Total Expenses – Customer

About Restaurant POS System PHP Project

In particular, this Restaurant POS System Project in PHP focuses mainly on managing transaction records within the restaurant. To be more precise, the system helps to keep track of product sales. Also, the system displays all the available food items and sales reports. In addition, the system allows adding up customers too. Evidently, this project contains an admin panel with a customer and staff panel. In an overview of this web application, a customer can simply register into the system and use its features. The customers can view food items, make orders, and payments. Additionally, the customers can view their personal expenses too. In fact, the expenses section gets counted only after successful payment. With it, the system also allows the customers to select payment types; cash or payment. Besides, customers can update their profiles too.

Admin Panel

An administrator has full control over the system. He/she can manage customers, food items, orders, and so on. Here, each and every section has its own respective details such as name, and other important details. Here, an admin can add customer records directly by filling up the required forms. During the customer registration, an admin has to provide details such as name, contact number, and set up login credentials. With it, the administrator can also manage staff members for the system. For adding staff members, the user has to provide names and set up login credentials. Here, each and every staff member will have their own unique staff id. Which is automatically created by the system during the registration process. Still, the user can make changes to them. Talking about the access control of the staff members, he/she cannot perform any create functions. Rest, he/she can manage transactions and more.

Product Management

When it comes to projects such as the Point of Sale system, it is a must that it should contain a section to cover up products. And there is one. For this restaurant point of sale system project, the administrator can manage products easily. Not just with ease, but also it helps to cover up all the important and required information for the system. Which is directly connected to the sales section. In order to add product items, the admin has to provide a number of records. It includes the name of the food with price, description, and image. Here, each and every food item will have their own unique product code which is automatically created by the system while inserting a new record. Besides, the administrator can update and delete food items. But in terms of staff members, he/she can only update the records as per their access level.

Place Orders

Moreover, an admin, as well as a staff member, can take food orders for the customers. Under the orders section, the system lists out all the available food items with their

respective images, name, and prices. In order to place food orders, an admin has to select any of the available food items from the wide range. After selecting and placing food orders, the user has to select the customer's name from the list and enter the quantity. By proceeding into the next step, the record is set to "not paid" by default. Which can later be updated as paid from the payment section. The main point here is that the system clearly denotes the order's status if the payment has not been done. In fact, the recent list of orders with their respective status can be seen clearly from the admin and staff's dashboard.

Payments and Receipts

On one hand, the user can make payments for all the pending orders. The payment section contains the list of orders which can be canceled by the administrator before completing an order's payment. In order to proceed with payment, the user just has to select the payment method. The payment method consists of cash and PayPal. Each transaction contains a unique payment code which is obviously generated by the system. And also, it can be entered manually by the system user. The total sales report gets updated only after a successful payment transaction. With this, the administrator can have a clear view of total earnings. After completion of the payment process, the user can now view their receipts too. All the receipts are stored under the receipts section. The receipt contains all their respective order details and code. Besides, the administrator can view total successful orders and payment reports.

Staff Panel

On the other hand, most of the staff's access throughout the system has already been explained earlier. Unlike customers, the staff members cannot register themselves from the system. An administrator can only add new staff members and manage their login credentials. Just like the administrator's dashboard, the staff's dashboard also contains all the same record overview information. The differences are only with the access level or let's say control over the records. The administrator can take and make changes throughout every record, whereas the staff members can only view, update, and take orders. Not just it, the staff members are also responsible for the payment transactions and customer management. In short, the staff members kind of work as a cashier or something like that to be fair enough. Besides, the staff members can also print out receipts for each order and view their reports.

In addition to it, the customers can also view their recent orders and recent payments from the customer's dashboard. Last but not least, a clean and simple dashboard is presented with various color combinations for a greater user experience while using this Online Restaurant POS System Project in PHP MySQL. For its UI elements, a free open-source CSS framework; Bootstrap is on board with some Vanilla CSS too. Presenting a new Restaurant Point of Sale System Project in PHP MySQL which includes an admin panel with a customer and staff panel. That too contains all the essential features to follow up and is a knowledgeable resource for learning purposes.

System Requirements

External Interface Requirements

User Interface : The system should have a user-friendly, web-based interface accessible through modern web browsers like Google Chrome, Mozilla Firefox , Microsoft Edge or Safari. The interface should be responsive to various screen sizes and devices.

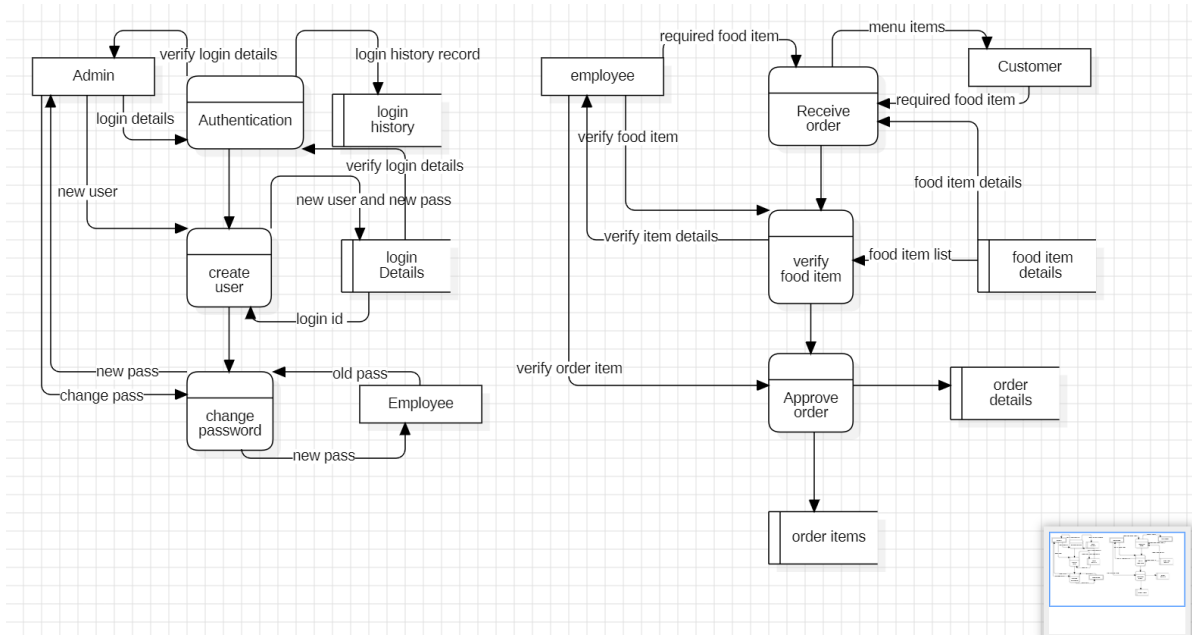
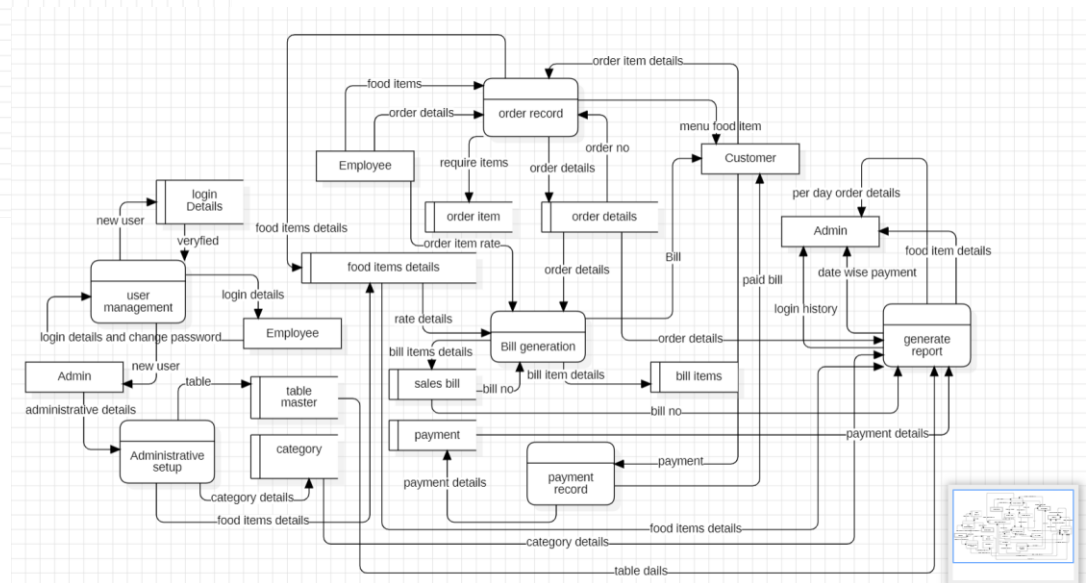
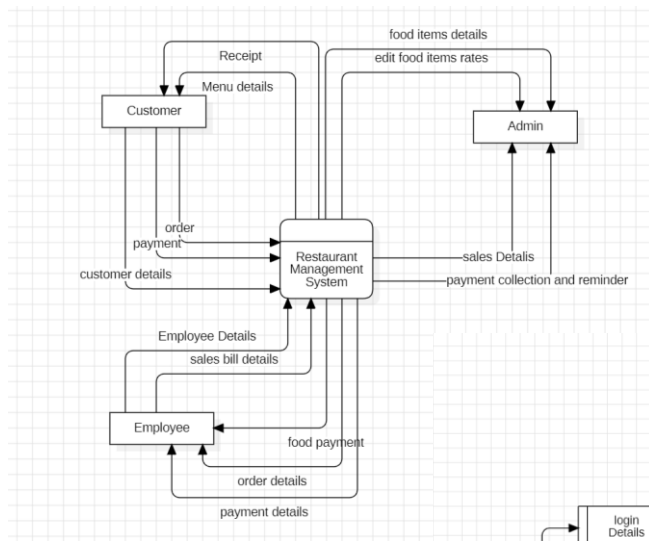
Hardware Requirements

- Processor: Intel core i5 or equivalent AMD processor (or higher) for optimal performance.
- RAM: Minimum 4GB RAM, Recommended 8GB RAM for better performance.
- Sufficient space for installing the web server, database server and application files.

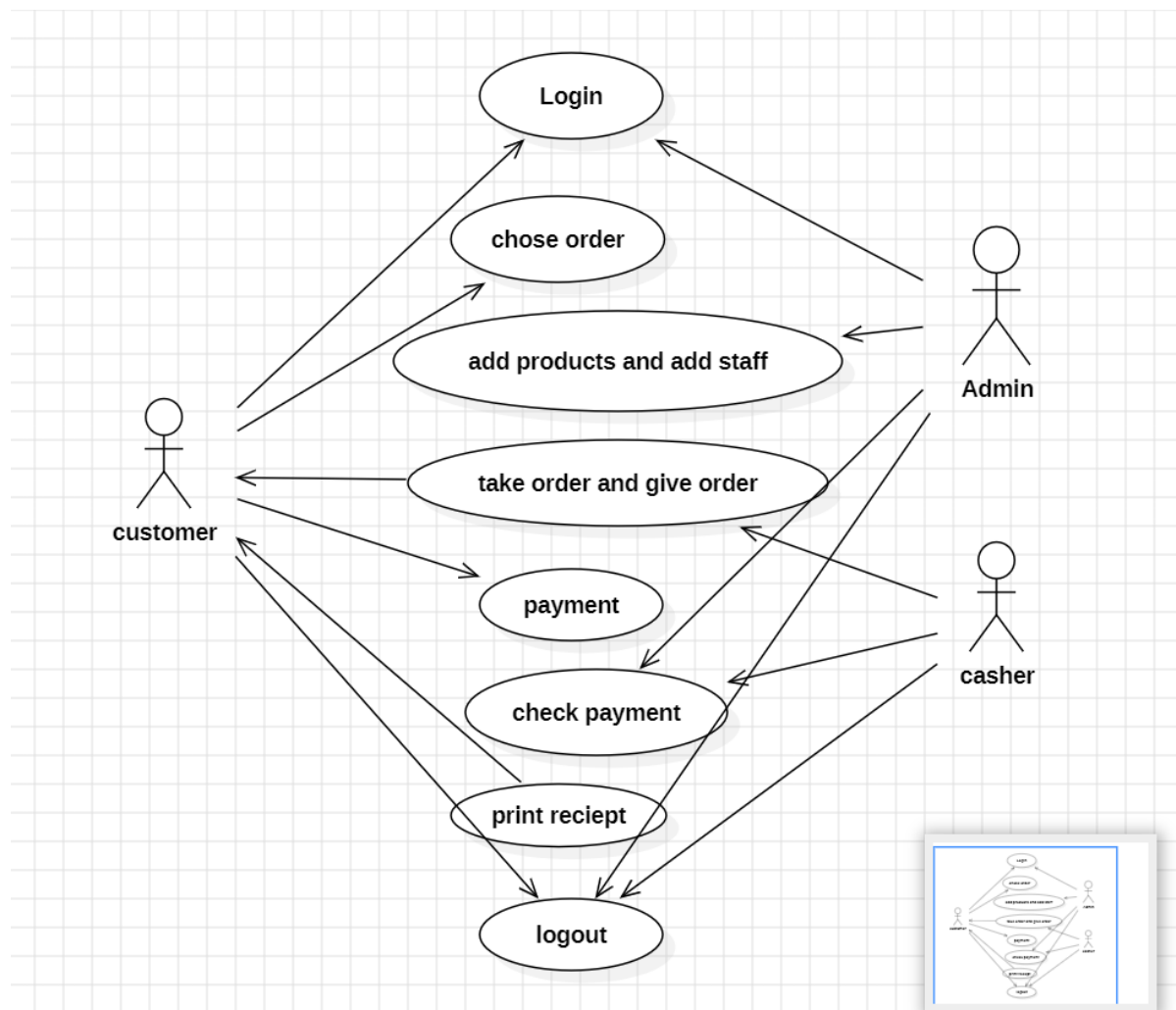
Software Requirements

- Operating system: The system should be compatible with major operating systems including Windows, macOS and Linux.
- Web Server: XAMPP server or any other compatible web server software should be installed and configured to host the web-based application.
- Database Management System: MySQL or SQLite should be available for storing and managing data.
- Programming Language and Framework: The system is developed using PHP programming language with suitable framework such as CodeIgniter.
- Development Tools: Database Management tools like phpMyAdmin are required for database administration and query execution.

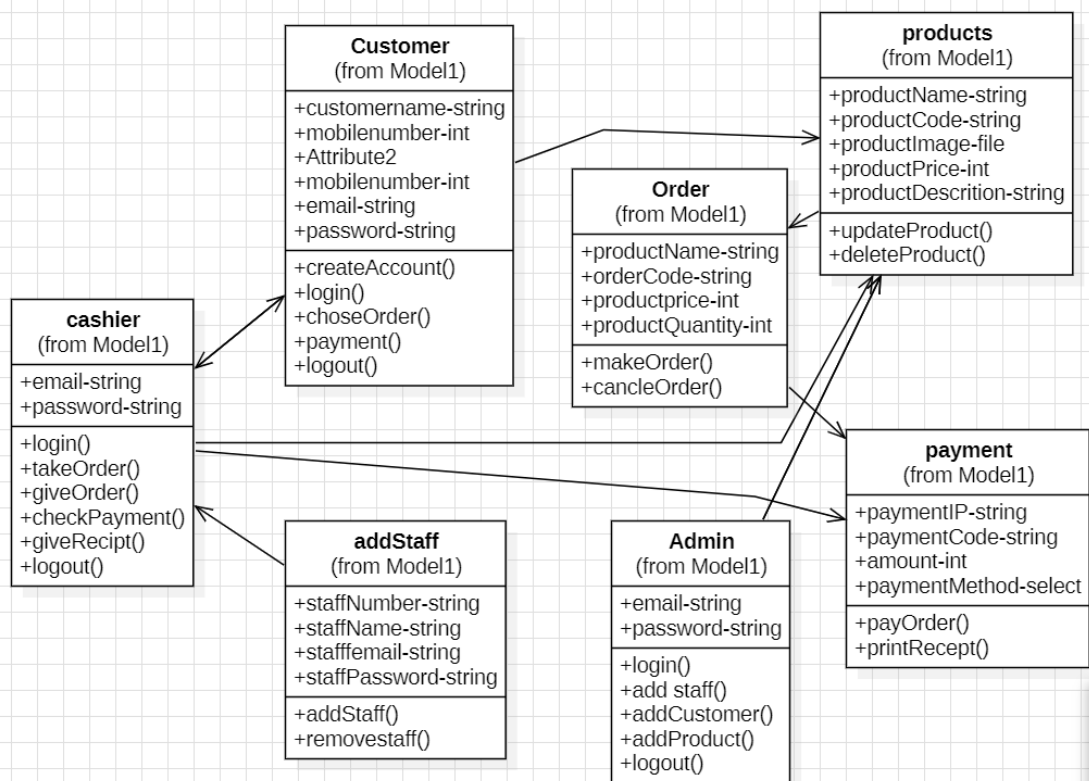
DATA FLOW DIAGRAMS LEVEL-0,1,2



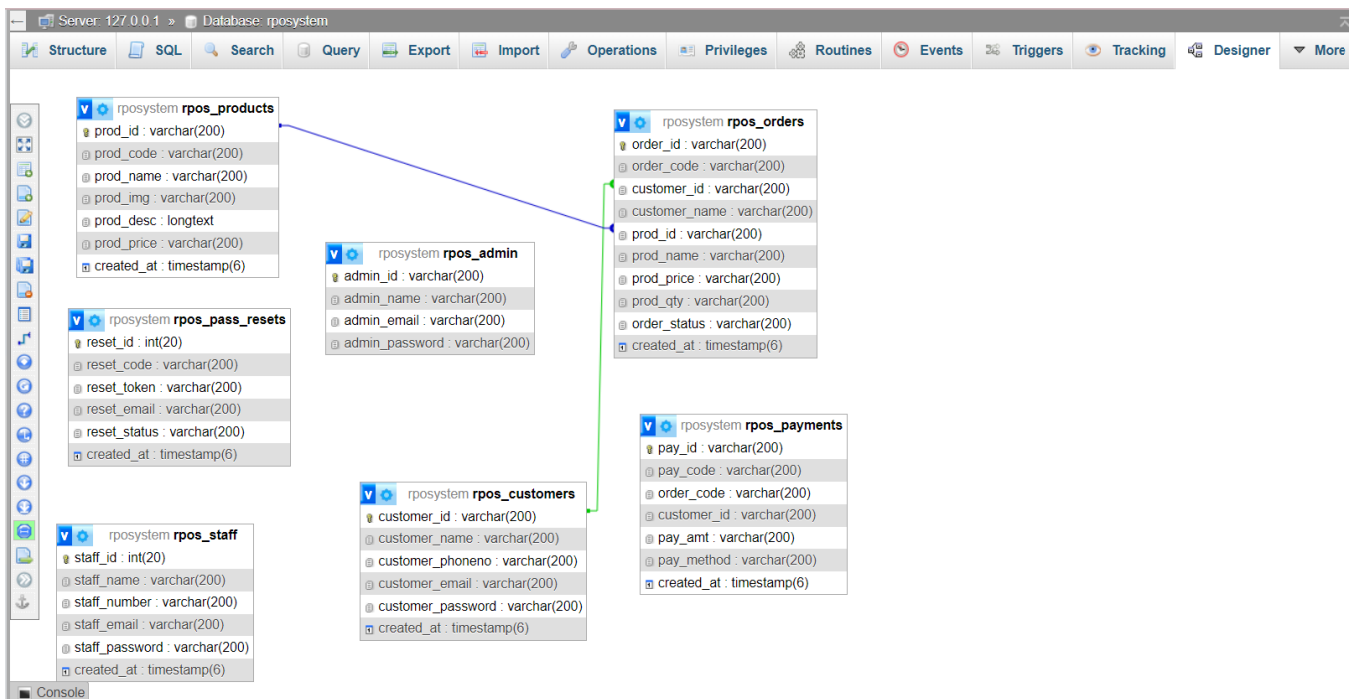
USE CASE DIAGRAM



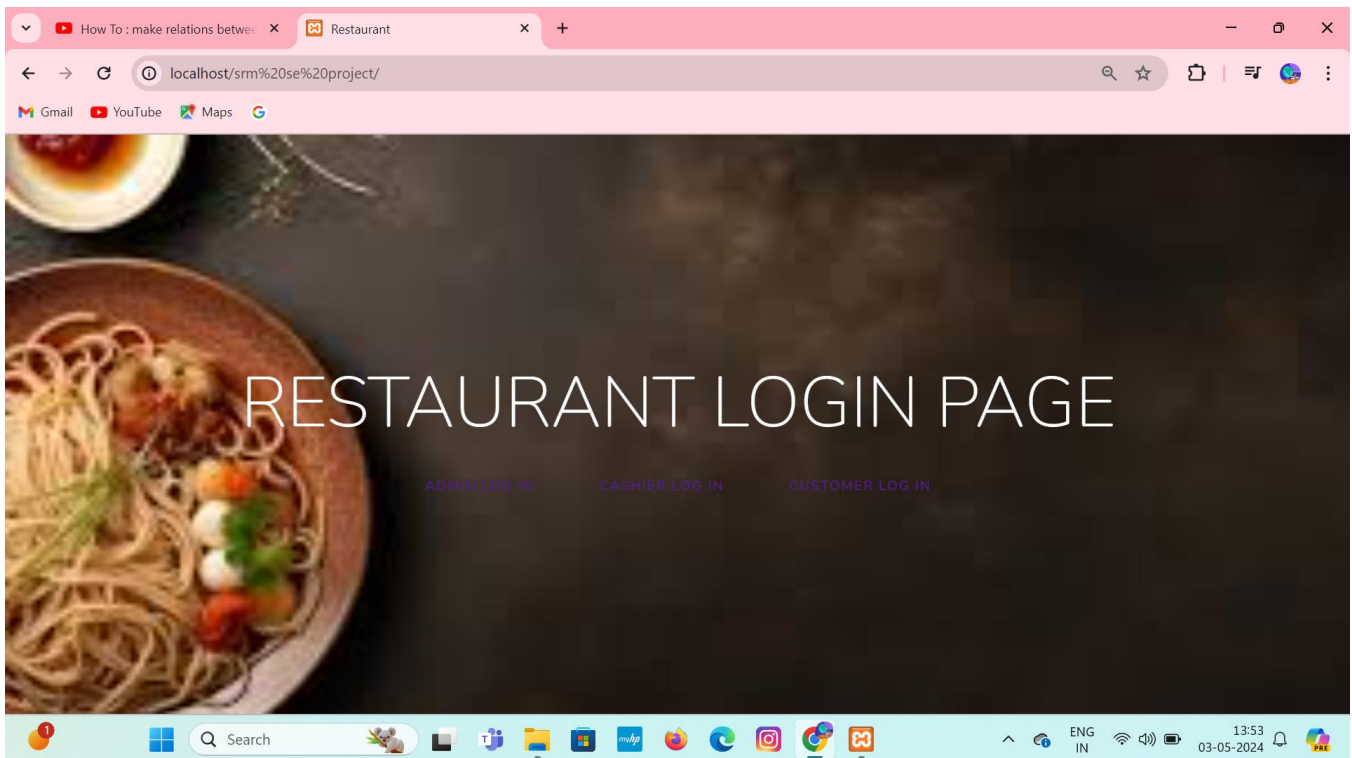
CLASS DIAGRAM



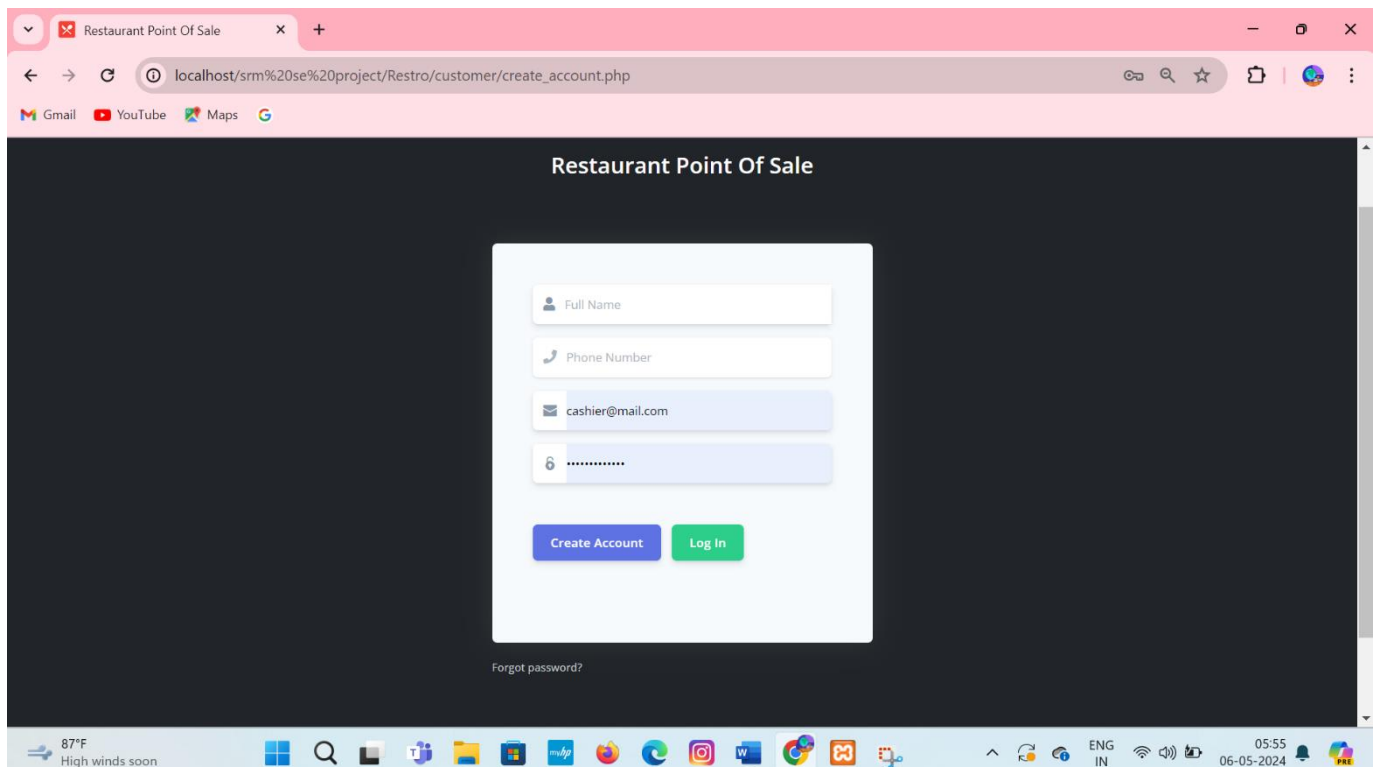
ER DIAGRAM



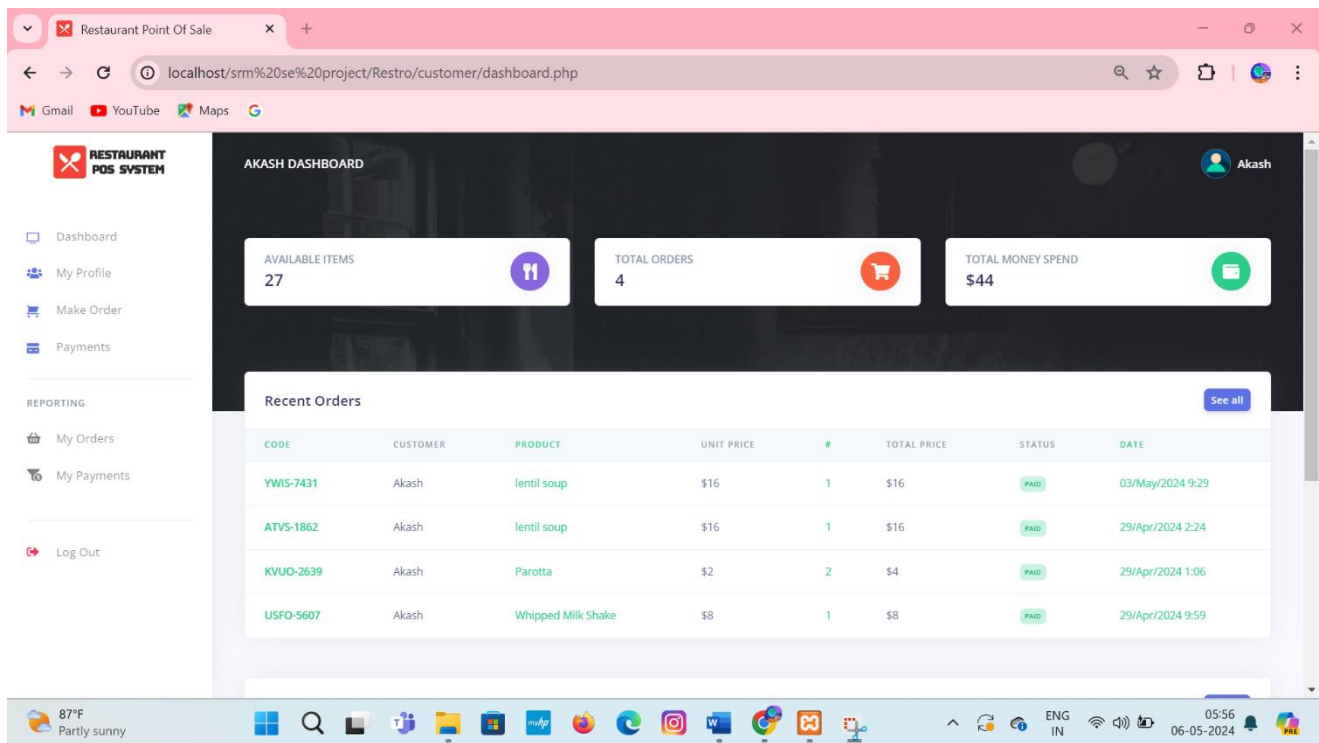
Customer side interface



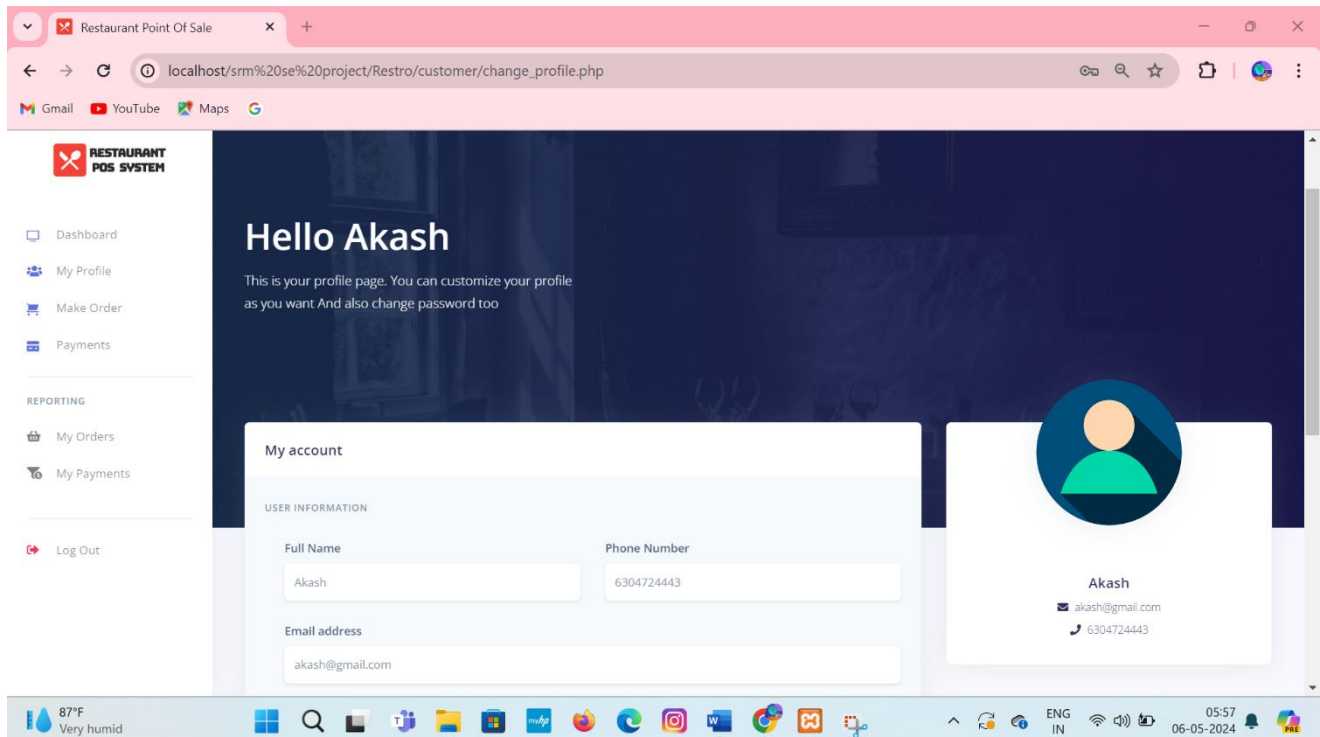
Login page



Create account



Customer dashboard



Profile page

Restaurant Point Of Sale








localhost/srm%20se%20project/Restro/customer/orders.php

RESTAURANT POS SYSTEM

Dashboard
My Profile
Make Order
Payments

REPORTING
My Orders
My Payments
Log Out

Select On Any Product To Make An Order

IMAGE	PRODUCT CODE	NAME	PRICE	ACTION
	PQFV-7049	Upma	20.00	Place Order
	EAHD-1980	idli	40.00	Place Order
	PEIW-4759	Parotta	50.00	Place Order
	YXLA-2603	Pesarattu (Green Gram Dosa)	30.00	Place Order
	FCWU-5762	Philly Cheesesteak	330.00	Place Order
	FKD-9703	lentil soup	16	Place Order
	AHRW-3894	Frappuccino	3	Place Order

87°F Very humid 05:57 06-05-2024

Items list

Restaurant Point Of Sale

localhost/srm%20se%20project/Restro/customer/make_oder.php?prod_id=ec18c5a4f0&prod_name=Upma&prod_price=20.00

RESTAURANT POS SYSTEM

AKASH DASHBOARD

Dashboard
My Profile
Make Order
Payments

REPORTING
My Orders
My Payments
Log Out

Please Fill All Fields

Customer Name: Akash Order Code: IUMV-2153

Product Price (\$): 20.00 Product Quantity: 1

[Make Order](#)

© 2024 - 2024 - Developed By Desi Boys Restaurant

87°F Partly sunny 05:58 06-05-2024

Make order

Restaurant Point Of Sale

localhost/srm%20se%20project/Restro/customer/orders_reports.php

RESTAURANT POS SYSTEM

Dashboard

My Profile

Make Order

Payments

REPORTING

My Orders

My Payments

Log Out

AKASH DASHBOARD

Orders Records

CODE	CUSTOMER	PRODUCT	UNIT PRICE	#	TOTAL PRICE	STATUS	DATE
IUMV-2153	Akash	Upma	20.00	1	20	PAID	06/May/2024 5:59
YWIS-7431	Akash	lentil soup	16	1	16	PAID	03/May/2024 9:29
ATVS-1862	Akash	lentil soup	16	1	16	PAID	29/Apr/2024 2:24
KVUO-2639	Akash	Parotta	2	2	4	PAID	29/Apr/2024 1:06
USFO-5607	Akash	Whipped Milk Shake	8	1	8	PAID	29/Apr/2024 9:59

© 2024 - 2024 - Developed By Desi Boys

Restaurant

87°F Partly sunny06-05-202405:59

Customer pervious orders

Restaurant Point Of Sale

localhost/srm%20se%20project/Restro/customer/payments_reports.php

RESTAURANT POS SYSTEM

Dashboard

My Profile

Make Order

Payments

REPORTING

My Orders

My Payments

Log Out

AKASH DASHBOARD

Payment Reports

PAYMENT CODE	PAYMENT METHOD	ORDER CODE	AMOUNT PAID	DATE PAID
1234567890	Paypal	IUMV-2153	20	06/May/2024 5:59
qwertyuiop	Paypal	YWIS-7431	16	03/May/2024 9:29
asdfghjklw	Paypal	ATVS-1862	16	29/Apr/2024 2:24
qwertyurty	Cash	KVUO-2639	4	29/Apr/2024 1:06
qwertyyyyy	Cash	USFO-5607	8	29/Apr/2024 9:59

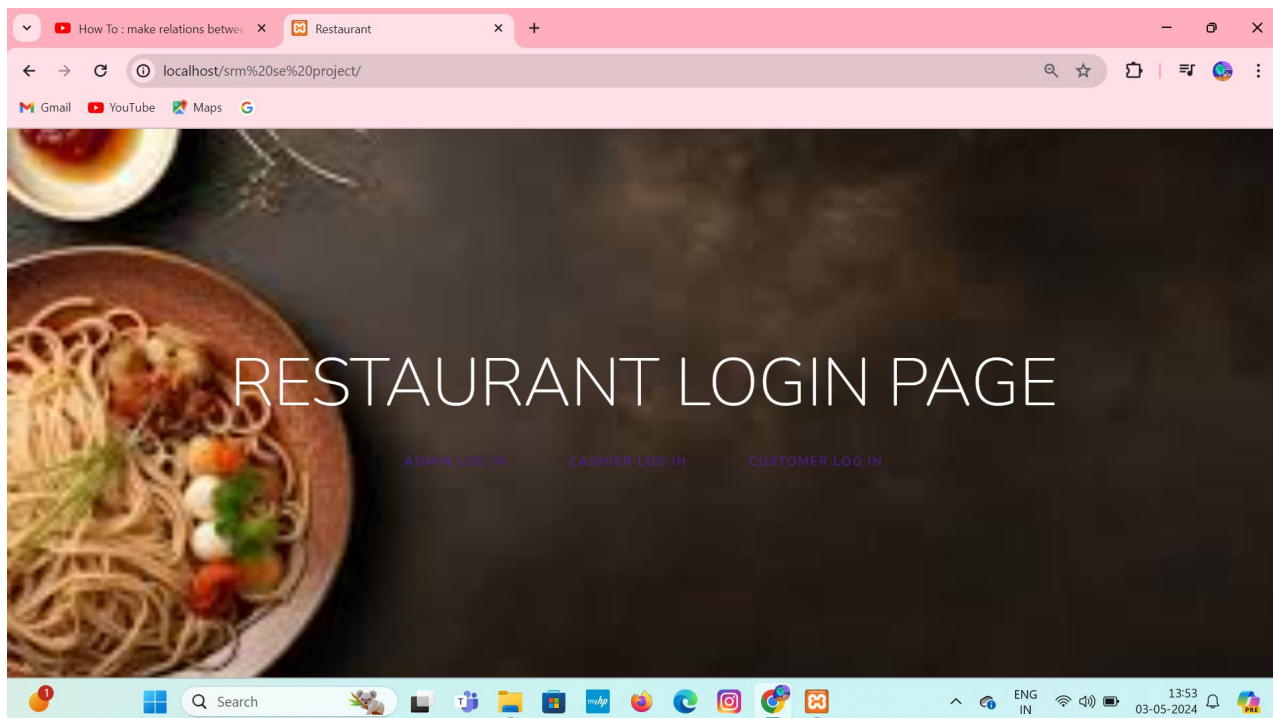
© 2024 - 2024 - Developed By Desi Boys

Restaurant

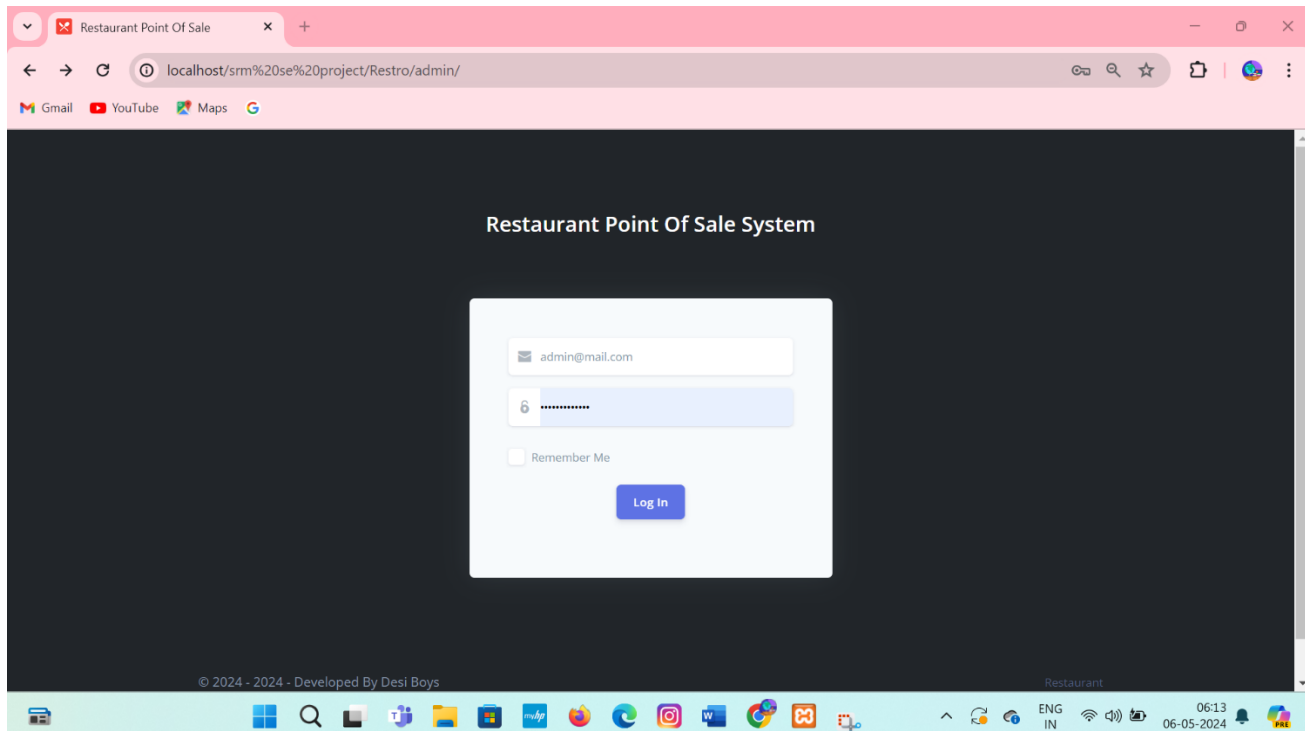
87°F Partly sunny06-05-202406:00

Customer pervious payments

ADMIN side interface



Login page



Login account

Restaurant Point Of Sale

localhost/srm%20se%20project/Restro/admin/dashboard.php

RESTAURANT POS SYSTEM

SYSTEM ADMIN DASHBOARD

System Admin

CUSTOMERS 6

PRODUCTS 27

ORDERS 13

SALES \$242

Recent Orders

CODE	CUSTOMER	PRODUCT	UNIT PRICE	QTY	TOTAL	STATUS	DATE
IUMV-2153	Akash	Upma	\$20.00	1	\$20	PAID	06/May/2024 5:59
YWIS-7431	Akash	lentil soup	\$16	1	\$16	PAID	03/May/2024 9:29
ATVS-1862	Akash	lentil soup	\$16	1	\$16	PAID	29/Apr/2024 2:24
TBPZ-8079	SASIDHAR	Chicken Nugget	\$5	1	\$5	PAID	29/Apr/2024 1:18
IFWY-2014	SASIDHAR	Reuben Sandwich	\$8	1	\$8	PAID	29/Apr/2024 1:18

Log Out

06-05-2024 06:14

Admin dashboard

Restaurant Point Of Sale

localhost/srm%20se%20project/Restro/admin/hrm.php

RESTAURANT POS SYSTEM

SYSTEM ADMIN DASHBOARD

System Admin

Add New Staff

STAFF NUMBER	NAME	EMAIL	ACTIONS
QELUY-9042	Cashier Trevor	cashier@mail.com	Delete Update
NAWX-6482	chef raju	chefraju@gmail.com	Delete Update

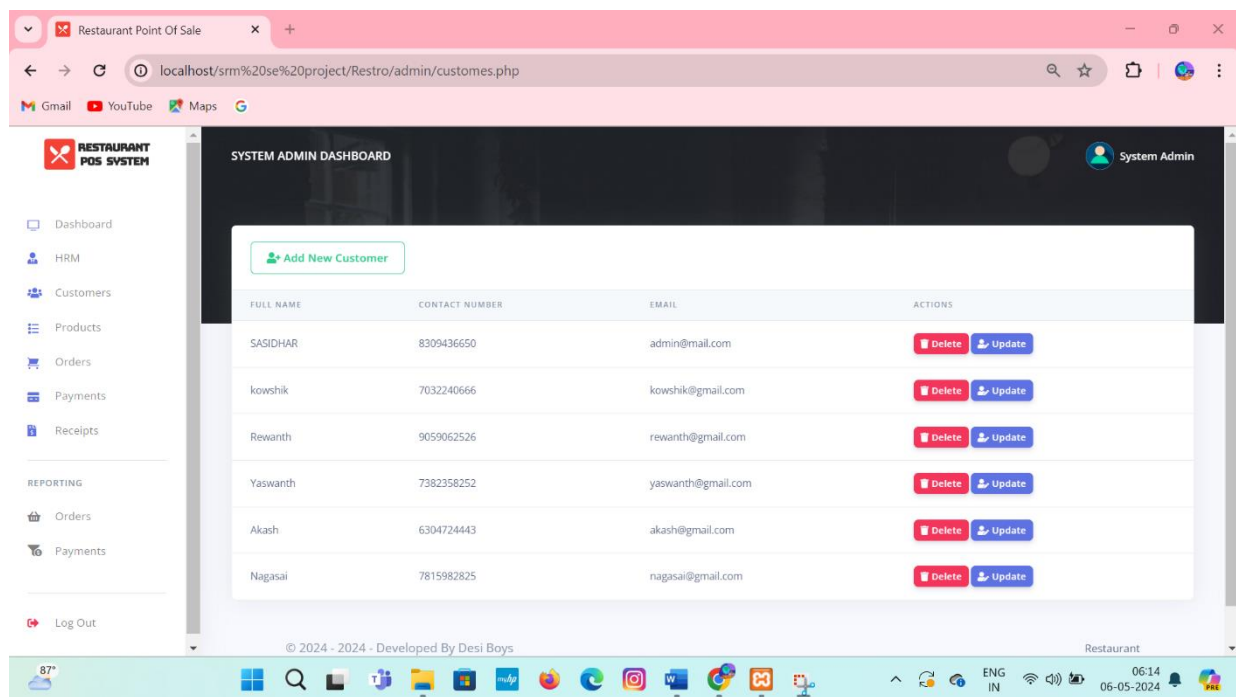
© 2024 - 2024 - Developed By Desi Boys

Restaurant

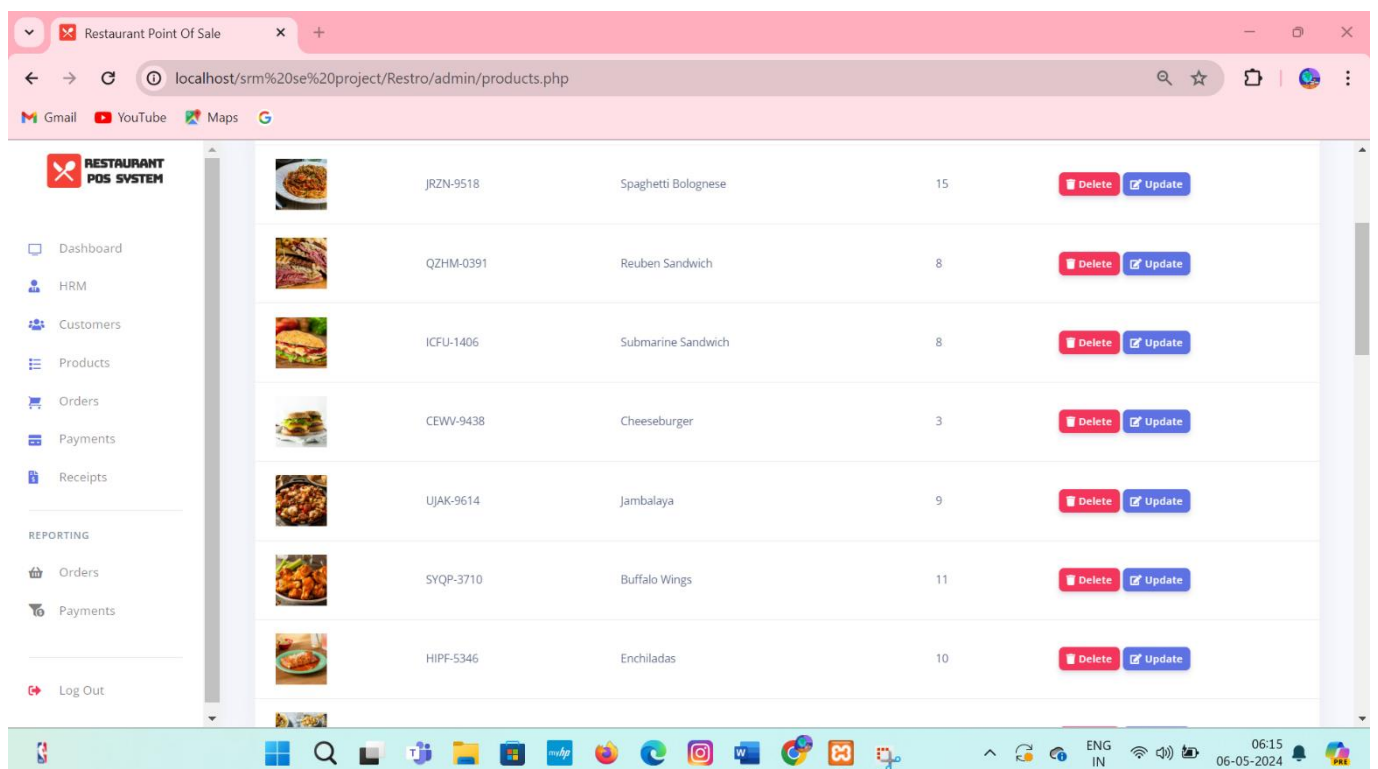
Log Out

06-05-2024 06:14

Empolyee list



Customer list



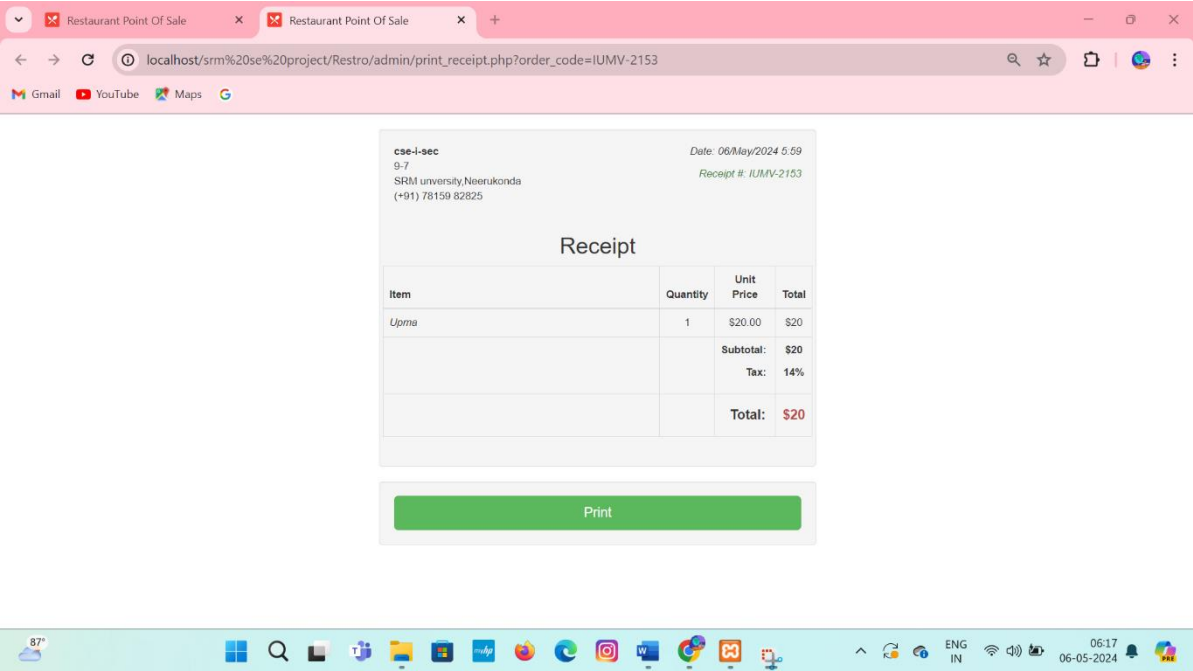
Products lists

Item Image	ID	Item Name	Quantity	Action
	JRZN-9518	Spaghetti Bolognese	15	Place Order
	QZHM-0391	Reuben Sandwich	8	Place Order
	ICFU-1406	Submarine Sandwich	8	Place Order
	CEWW-9438	Cheeseburger	3	Place Order
	UJAK-9614	Jambalaya	9	Place Order
	SYQP-3710	Buffalo Wings	11	Place Order
	HIPP-5346	Enchiladas	10	Place Order

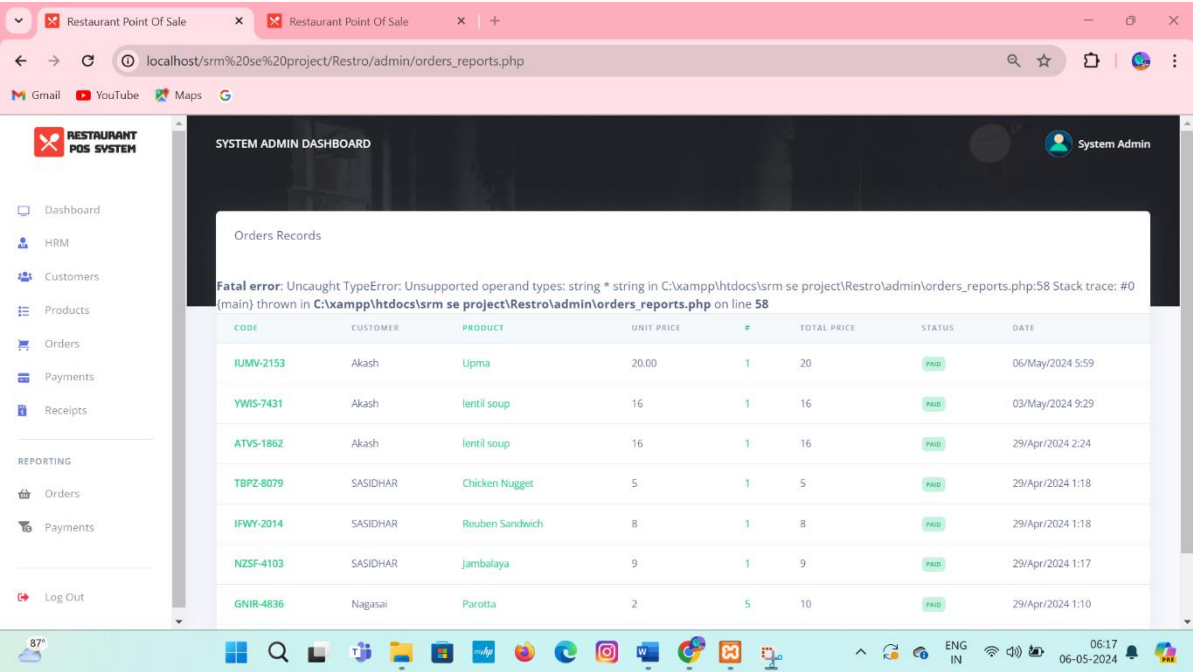
Order list

ID	Customer Name	Item Name	Price	Quantity	Total	Date	Action
IUMV-2153	Akash	Upma	20.00	1	20	06/May/2024 5:59	Print Receipt
YWIS-7431	Akash	lentil soup	16	1	16	03/May/2024 9:29	Print Receipt
ATVS-1862	Akash	lentil soup	16	1	16	29/Apr/2024 2:24	Print Receipt
TBPZ-8079	SASIDHAR	Chicken Nugget	5	1	5	29/Apr/2024 1:18	Print Receipt
IFWV-2014	SASIDHAR	Reuben Sandwich	8	1	8	29/Apr/2024 1:18	Print Receipt
NZSF-4103	SASIDHAR	Jambalaya	9	1	9	29/Apr/2024 1:17	Print Receipt
GNIR-4836	Nagasai	Parotta	2	5	10	29/Apr/2024 1:10	Print Receipt
KVUO-2639	Akash	Parotta	2	2	4	29/Apr/2024 1:06	Print Receipt
USFO-5607	Akash	Whipped Milk Shake	8	1	8	29/Apr/2024 9:59	Print Receipt
VQZA-3142	Nagasai	Corn Dogs	4	1	4	29/Apr/2024 9:11	Print Receipt
LYDW-2830	Nagasai	Frappuccino	3	1	3	29/Apr/2024 6:25	Print Receipt

Receipts list



Print receipt



Pervious orders

Restaurant Point Of Sale

localhost/srm%20se%20project/Restro/customer/payments_reports.php

RESTAURANT POS SYSTEM

Dashboard

My Profile

Make Order

Payments

REPORTING

My Orders

My Payments

Log Out

AKASH DASHBOARD

Akash

Payment Reports

PAYMENT CODE	PAYMENT METHOD	ORDER CODE	AMOUNT PAID	DATE PAID
1234567890	Paypal	IUMV-2153	20	06/May/2024 5:59
qwertyuiop	Paypal	YWIS-7431	16	03/May/2024 9:29
asdfghjklw	Paypal	ATVS-1862	16	29/Apr/2024 2:24
qwertyurty	Cash	KVUO-2639	4	29/Apr/2024 1:06
qwertyyyyyy	Cash	USFO-5607	8	29/Apr/2024 9:59

© 2024 - 2024 - Developed By Desi Boys

Restaurant

Pervious payments

23

Future work

In future we can also customise item provided in the menu for example if we are going to order a chicken curry we instruct cook to prepare according to our health we decrease the masala,spices,salt and we can also increase them or make it medium We can also provide some points to our regular customer so that they can redeem when ever they want and can get a discount on the next visit

Conclusion

In conclusion, the restaurant management system represents a pivotal advancement in the hospitality industry. Through its comprehensive features, including order management, inventory control, and staff scheduling, the system revolutionizes the way restaurants operate. By automating routine tasks and providing real-time insights, it enables owners to optimize resources and enhance productivity. Moreover, the system's user-friendly interface fosters seamless integration into daily operations, ensuring a smooth transition for staff and management alike. With its ability to adapt to evolving needs and technologies, this software solution promises to remain a cornerstone of success for restaurants worldwide. In essence, it represents not just a tool, but a strategic asset that empowers businesses to thrive in the competitive dining landscape of the digital age.

References

<https://www.w3schools.com/html/default.asp>

<https://www.w3schools.com/css/default.asp>

<https://www.w3schools.com/js/default.asp>

https://www.w3schools.com/bootstrap/bootstrap_ver.asp

<https://www.w3schools.com/mysql/default.asp>

<https://www.w3schools.com/php/default.asp>