

A  
PROJECT REPORT ON

## **Restaurant Management System**

SUBMITTED IN  
PARTIAL FULFILLMENT OF

**DIPLOMA IN MOBLIE COMPUTING (PG-DMC)**



BY

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AT

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PUNE**

**SUNBEAM INSTITUTE OF INFORMATION TECHNOLOGY,  
PUNE.**



**CERTIFICATE**

This is to certify that the project

**Restaurant Management System**

Has been submitted by

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In partial fulfillment of the requirement for the Course of **PG Diploma in Mobile Computing (PG-DMC AUG 2023)** as prescribed by The **CDAC ACTS, PUNE.**

Place: Pune

Date: 07-Sep-2023

**Manjusha Nikam**

**Project Guide**

## **ACKNOWLEDGEMENT**

*I would like to express my gratitudes towards my mentor Manjusha Nikam Mam as well as our Director Nitin Khudale Sir who gave us the golden opportunity to do this technical project on the topic of Restaurant Management System, besides that anyone can easily order the food at the restaurant and I came to know about so many new technologies and for that I feel so greateful to them.*

## **ABSTRACT**

The main objective of Restaurant management system is Designed and Developed Android app and Web app for Restaurant Management which is used for the customers who Visits the restaurant will easily order the food by Android application and simply visit on website of His Dinning table. For this We manage the Customer's login and password in the My-SQL Database system which is developed by separate Tables for restaurant's Staff, Customers, Order by Using My-SQL, Overall Design of Web app is Developed by using React Library and Android Programming (Basically Java). Server side for both applications, Developed by Using Node JS. We Overcome the part of restaurant's waiter here because customer can order the food from his phone which will fetch by Admin and he will proceed directly. which is much Descent and Less Time-Consuming Process. A well defined Menu card is displayed on application so it is more easy to handle and User-friendly App. Anybody can easily use for ordering the food. In future We can use QR-Scanner and Waiter's UI page

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# **INTRODUCTION**

The main objective of this project is to design a Restaurant management system for Running a Restaurant business efficiently. The system should be as flexible as possible so that it can be used for different restaurant. The most important functions includes Menulist, rate and Availability of Dishes, discount, service management, and payment processing. The Restaurant Management System is a web-based application that allows the hotel manager to handle all Restaurant activities online. Interactive GUI and the ability to manage tables booking make this system very flexible and convenient. The manager is a very busy person and does not have the time to sit and manage the entire activities manually on paper. This application gives him the power and flexibility to manage the entire system from a single online system. Restaurant management project provides table booking, staff management and other necessary Restaurant management features. The system allows the manager to post available Menu list Daywise in the system. Customers can view and order Food. The system is hence useful for both customers and managers to portable manage the Restaurant activities.

# **Product Overview and Summary**

Our Restaurant Management System (RMS) is like a smart helper for restaurants. It's made up of two parts: an app you can use on your phone or computer. This makes it easy for everyone to order food the way they like. We made this system to make ordering food faster and easier for both customers and restaurant staff. We used modern technology like MySQL, React, Java, and Node.js to make it work smoothly.

**Easy Ordering:** You can use our system on your phone or computer. This means you can order food from anywhere, anytime.

**Safe Login:** We keep your login details safe in a special database. This keeps your information private and secure.

**Simple Menu:** Ordering food is easy because our menu is clear and simple to understand.

**No Waiting:** When you order, your request goes straight to the boss. This means you don't have to wait for a waiter to take your order.

**Future Improvements:** We're always looking to make things better. In the future, we might add features like scanning QR codes or making a special page for waiters.

## **Scope**

The system focuses on improving the dining experience for customers by providing convenient ways to place orders via

mobile devices or computers. This feature caters to the increasing preference for digital interaction and offers flexibility to

customers in choosing their preferred ordering platform.

By streamlining the order management process, RMS reduces the reliance on manual intervention, minimizing errors, and

improving service efficiency. The direct transmission of orders to the admin helps in faster processing and reduces

wait times for customers.

Restaurant Management System encompasses improving customer experience, enhancing operational efficiency, ensuring

data security, scalability, accommodating future enhancements, potential integrations, and adaptability to different

restaurant settings

## **User Classes and Characteristics:**

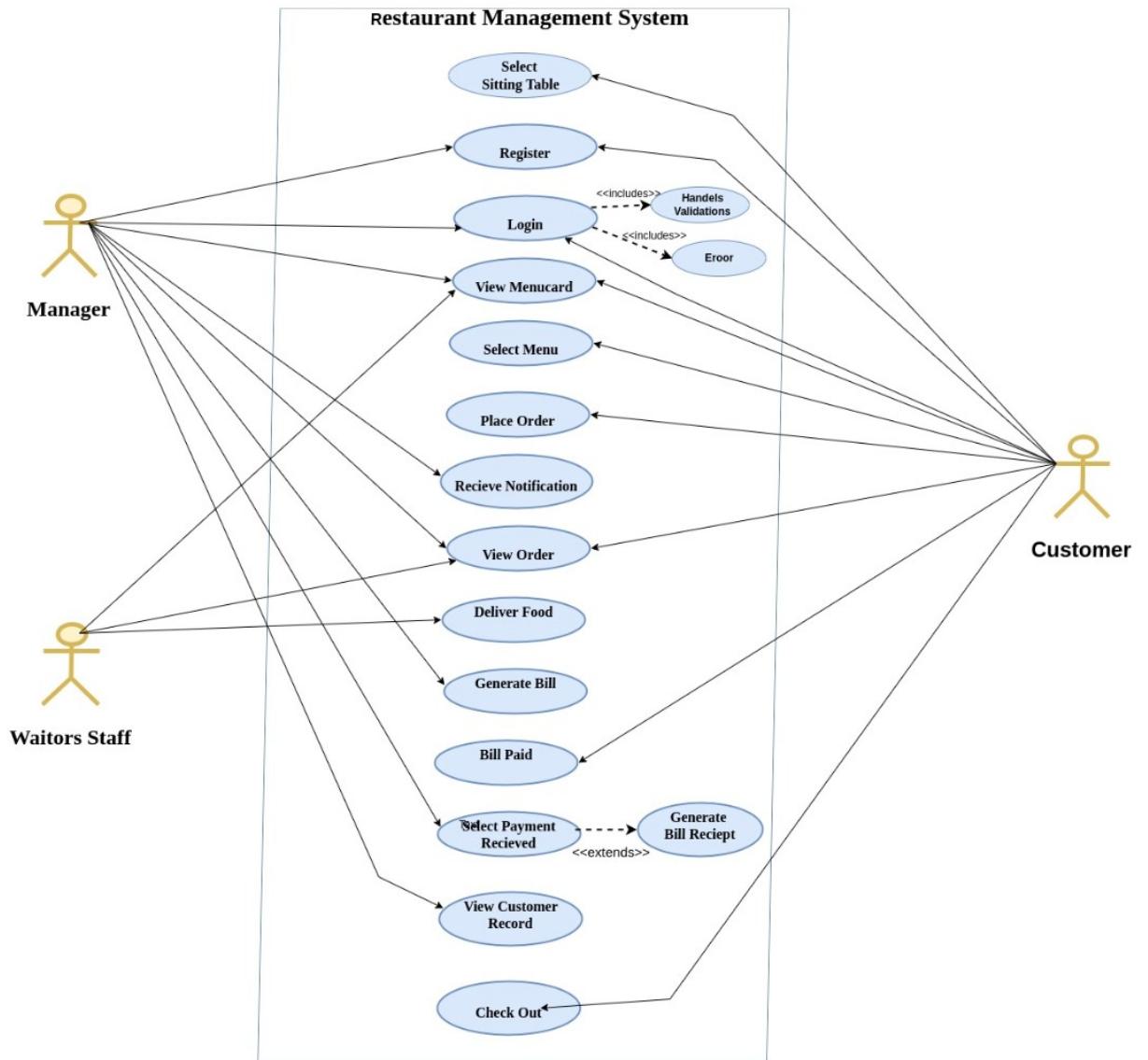
### **Customers:**

**Characteristics:** Customers are individuals or groups visiting the restaurant to dine-in or place take-out orders. They may vary in age, technological proficiency, and preferences regarding food ordering.

**Behaviors:** Customers interact with the RMS through the Android or web application to browse the menu, place orders, provide feedback, and make payments. They expect a user-friendly interface, easy navigation, and secure transactions.

# Functional Requirements

Use Case for Customer and Admin:



# **Non - Functional Requirements**

## **Usability Requirement**

Customers of the web Restaurant management system, namely Restaurant customers , must be provided the following functionality:

- SignIn.
- SignUp.
- Forgot Password(In case user forgot the password).
- Food choices(Veg,Non-veg)
- Food Menu Card.
- Ordered Food Details.
- Payment Functionality.
- Add Food

The Restaurant Management System must be easy to use for both customers and restaurant staff. This means that the app and website should have clear menus and buttons so that customers can quickly find what they want to order and pay for it without any confusion. The system should work well on different devices like phones and computers, adjusting automatically to fit the screen. It's important that people with disabilities can also use the system easily, so features like screen readers and big buttons should be included. If there's a mistake, like entering the wrong order or payment information, the system should show a clear message explaining what went wrong and how to fix it. Overall, the system should be user-friendly, making it easy for everyone to order food and manage restaurant operations smoothly.

### **Reliability Requirements:**

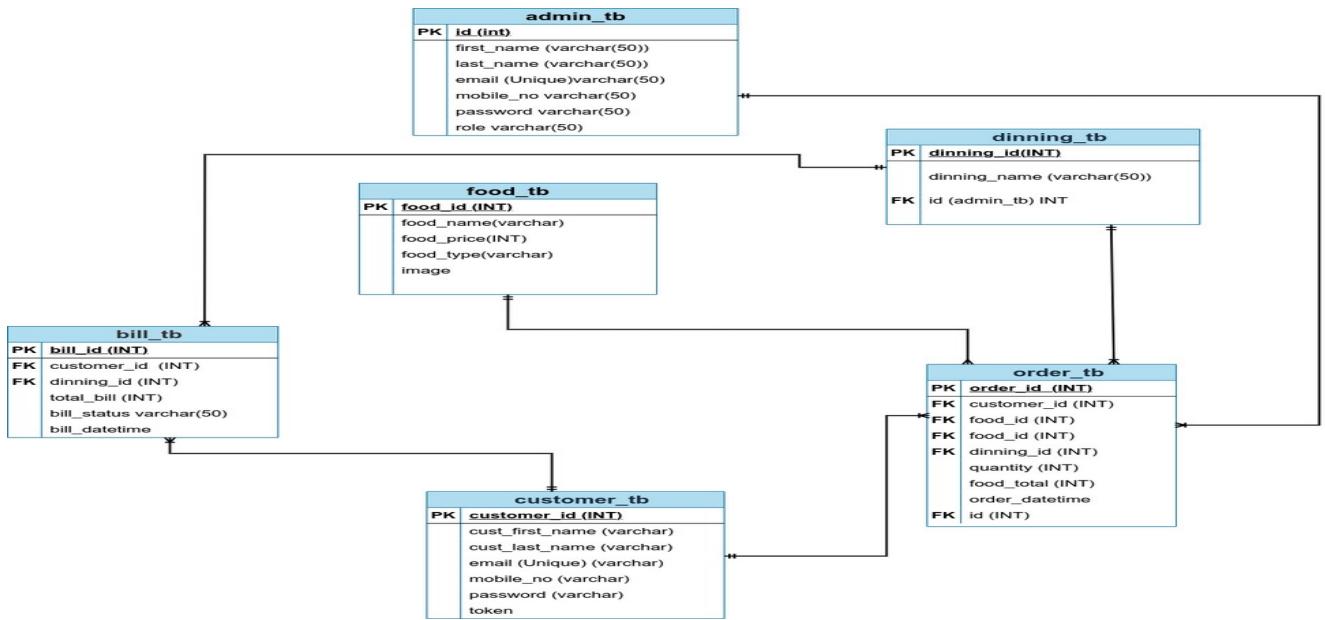
Reliability is crucial for the Restaurant Management System, ensuring consistent performance in handling orders, payments, and other critical tasks without errors or interruptions. The system must operate smoothly, free from crashes or disruptions, to provide uninterrupted service for customers and restaurant staff alike. Data integrity is paramount, requiring accurate capture, storage, and management of all information to prevent loss or corruption. Effective error handling is essential, promptly detecting and addressing issues while providing users with appropriate feedback. Security measures must be robust, safeguarding sensitive data through encryption, secure authentication, and regular updates to mitigate vulnerabilities. Regular backups and disaster recovery mechanisms ensure data can be restored in case of failure, maintaining continuity of operations. Scalability is key for accommodating growth and increased usage, while continuous monitoring and maintenance activities, such as software updates and performance monitoring, are vital to ensure optimal reliability over time, instilling confidence in users and stakeholders.

### **Portability Requirements**

Restaurant Management System ensure that the system can be easily deployed and accessed across various platforms and environments. This includes compatibility with different operating systems such as Android, iOS, Windows, and macOS, allowing users to access the system from their preferred devices. The system should also be designed to work seamlessly on different screen sizes and resolutions, ensuring a consistent user experience across smartphones, tablets, and computers. Additionally, the ability to access the system through web browsers as well as dedicated mobile apps enhances its portability, enabling users to interact with the system conveniently from any location. Overall, meeting these portability requirements ensures that the Restaurant Management System is flexible and accessible, catering to the diverse needs of its users.

## Data Model

To efficiently manage restaurant operations and customer interactions, we've opted for a MySQL database, widely supported and versatile for our needs. Our database consists of several tables tailored to different aspects of the system. The primary tables include those for customer data, staff management, menu items, orders, and billing information. Each table is designed to store specific information related to its respective domain, ensuring organized data management and retrieval. For instance, the customer table stores details such as names, contact information, and login credentials, facilitating personalized service and customer engagement. Similarly, the staff table maintains records of restaurant personnel, their roles, and contact information, aiding in staff management and coordination. The menu table lists all available food items, including their names, prices, and categories, enabling efficient order processing and menu customization. The orders table tracks customer orders, including details such as the items ordered, quantities, and timestamps, facilitating order fulfillment and tracking. Finally, the billing table records transaction information, including bill IDs, customer IDs, total amounts, and payment statuses, ensuring accurate financial management and reporting. This structured approach to database design ensures seamless integration with our restaurant management system, enabling effective data storage, retrieval, and analysis for enhanced operational efficiency and customer satisfaction.

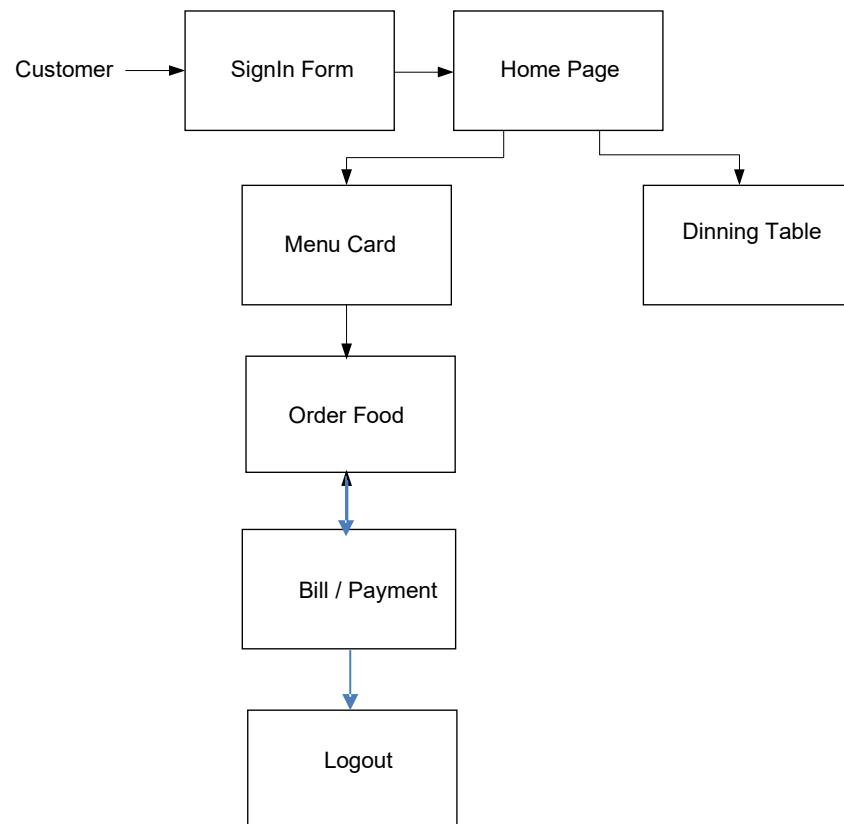


- 1) Login Form: The login form serves as the gateway for users to access the system. Customers, staff, and administrators input their credentials (such as username and password) to authenticate their identity. Upon successful validation, they gain access to their respective interfaces tailored to their roles within the system.
- 2) Home Page: The home page is the central hub of the system, providing users with an overview of available functionalities and options. It may include shortcuts to key features such as placing orders, viewing menus, managing reservations, or accessing account settings. The home page aims to streamline user navigation and enhance user experience by presenting relevant information at a glance.
- 3) Menu Card Page: The menu card page displays the list of food items available in the restaurant along with their respective prices and descriptions. Customers can browse through the menu, filter items based on categories (e.g., appetizers, main course, beverages), and view additional details such as dietary information or special offers. This page serves as a virtual representation of the restaurant's menu, enabling customers to make informed decisions when placing orders.
- 4) Add Cart Page: The add cart page allows customers to compile their orders by selecting desired food items from the menu and specifying quantities. As customers browse through the menu card, they can add items to their cart with a single click. The add cart page displays the selected items, quantities, and total order value, providing customers with a summary of their selections before proceeding to checkout.
- 5) Dining Table: The dining table component represents physical tables within the restaurant where customers are seated and served. In the context of the system, the dining table feature enables staff to assign orders to specific tables, track table occupancy, and manage dining reservations. It facilitates efficient order routing and ensures timely service delivery by associating orders with designated dining areas.
- 6) Admin Page: The admin page serves as the administrative dashboard for restaurant management staff. Admins have access to a range of functionalities such as menu management, staff scheduling, order tracking, and financial reporting. They can monitor restaurant operations in real-time, address customer inquiries, and oversee staff performance. The admin page empowers administrators to maintain control and make informed decisions to optimize restaurant efficiency and profitability.

7) Order Details: The order details page provides comprehensive information about individual orders placed by customers. It includes details such as order ID, items ordered, quantities, order status, and timestamps. Staff can use this page to track the progress of orders, update order statuses (e.g., preparing, ready for pickup), and communicate order updates to customers.

The order details page facilitates efficient order management and enhances communication between staff and customers.

8) Bill Page: The bill page generates and displays bills for completed orders, summarizing the total cost of items ordered and any additional charges (e.g., taxes, service fees). Customers can review their bills before making payment, while staff can use the bill page to print physical copies for customers or process electronic payments. The bill page streamlines the billing process, ensures accuracy in financial transactions, and provides customers with transparent pricing information.



## **Client Side Screenshots!**

## Home Page

The image shows a close-up of a light-colored wooden cutting board with a prominent grain. Scattered across the board are various fresh ingredients: several small, round yellow cherry tomatoes; a whole red onion with its purple skin partially peeled; a bunch of fresh green basil leaves; a few small red chili peppers; and a wooden spoon resting on the board. A small pile of white sea salt is also visible. The overall aesthetic is rustic and suggests a focus on fresh, homemade cooking.

The banner image is a close-up photograph of a light-colored wooden cutting board. On the board, there are several pieces of food: a red bell pepper cut into thin slices, a yellow squash cut in half, and some white onion pieces. The board shows signs of frequent use with many scratches and a worn surface.

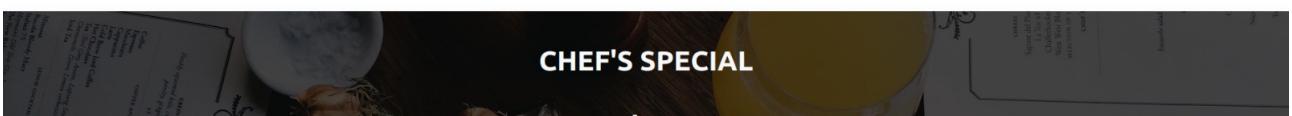


## ABOUT US

Welcome to Carnival Restaurant, where passion for food meets exceptional service. Nestled in the heart of Pune, our restaurant brings together a rich tapestry of flavors, crafted with care and dedication to culinary excellence. With a heritage rooted in 2023, we take pride in offering a dining experience that transcends mere sustenance, inviting our guests to embark on a journey of gastronomic delight.

We believe that every dish tells a story. Our talented team of chefs, hailing from diverse culinary backgrounds, meticulously curates each menu item, sourcing the finest ingredients to create dishes that are both innovative and comforting. Whether you're craving classic comfort food or adventurous flavors from around the globe, our menu caters to every palate, ensuring a memorable dining experience for all.

More About Us



Carnival Restaurant

**CHEF'S SPECIAL**

**CUSTOMER'S FAVORITES**

**Veg Food**

- Veg Thali INR 100
- Veg Pulav INR 110
- Puri Bhaji INR 80

**Non Veg Food**

- Fish Fry INR 550
- Butter Chicken INR 350
- Mutton Thali INR 320

[Our Veg & Non Veg Menu](#)

## IMAGE GALLERY

Carnival Restaurant

**IMAGE GALLERY**

## Sign in



Carnival Restaurant

HOME ABOUT CONTACT SIGN IN REGISTER

# Registration

First Name

Last Name

Email  abc@test.com

Mobile  0000000000

Password  XXXXXXXX

Confirm Password  XXXXXXXX

Already got an account? [Login here](#)

[Register](#)

Sign Up

Carnival Restaurant

HOME ABOUT CONTACT SIGN IN REGISTER

# Customer Login

Email  abc@test.com

Password  XXXXXXXX

Don't have an account? [Register here](#)

Forgot Password [Click here](#)

[Login](#)

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# Forgot Password

Email

abc@test.com

Enter New Password

Confirm Password

Change Password

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Please Select the Dining Table as per your Wish and Enjoy Your Meal!

We are always here to Serve you!!

Select Your Dining Table ▾

Table 1  
Table 2  
Table 3

[View Menu Card](#)

localhost:3000/dining#



Please Select the Dining Table as per your Wish and Enjoy Your Meal!

We are always here to Serve you!!

Select Your Dining Table ▾

[View Menu Card](#)

## Menu Card

Carnival Restaurant

CONTACT ABOUT MENU CART (0) ORDER LOGOUT

# Menu Card

**VEG MENU**



**Idli-Sambhar**  
Price: ₹30  
Type: veg

**Gobi-manchurian**  
Price: ₹40  
Type: veg



**Chicken Handi**  
Price: ₹250  
Type: nonveg

**Chicken Fry**  
Price: ₹150  
Type: nonveg

**NON VEG MENU**



**Misal Pav**  
Price: ₹60  
Type: veg



**Veg Thali**  
Price: ₹100  
Type: veg



**Butter Chicken**  
Price: ₹350  
Type: nonveg



**Chicken Kabaab**  
Price: ₹150  
Type: nonveg

Carnival Restaurant

CONTACT ABOUT MENU CART (2) ORDER LOGOUT



**Puri Bhaji**  
Price: ₹80  
Type: veg

**Veg Thali**  
Price: ₹100  
Type: veg

**Butter Chicken**  
Price: ₹350  
Type: nonveg

**Chicken Lollipop**  
Price: ₹250  
Type: nonveg



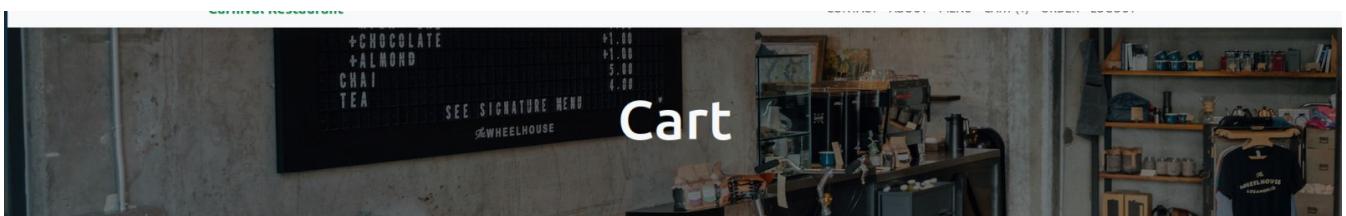
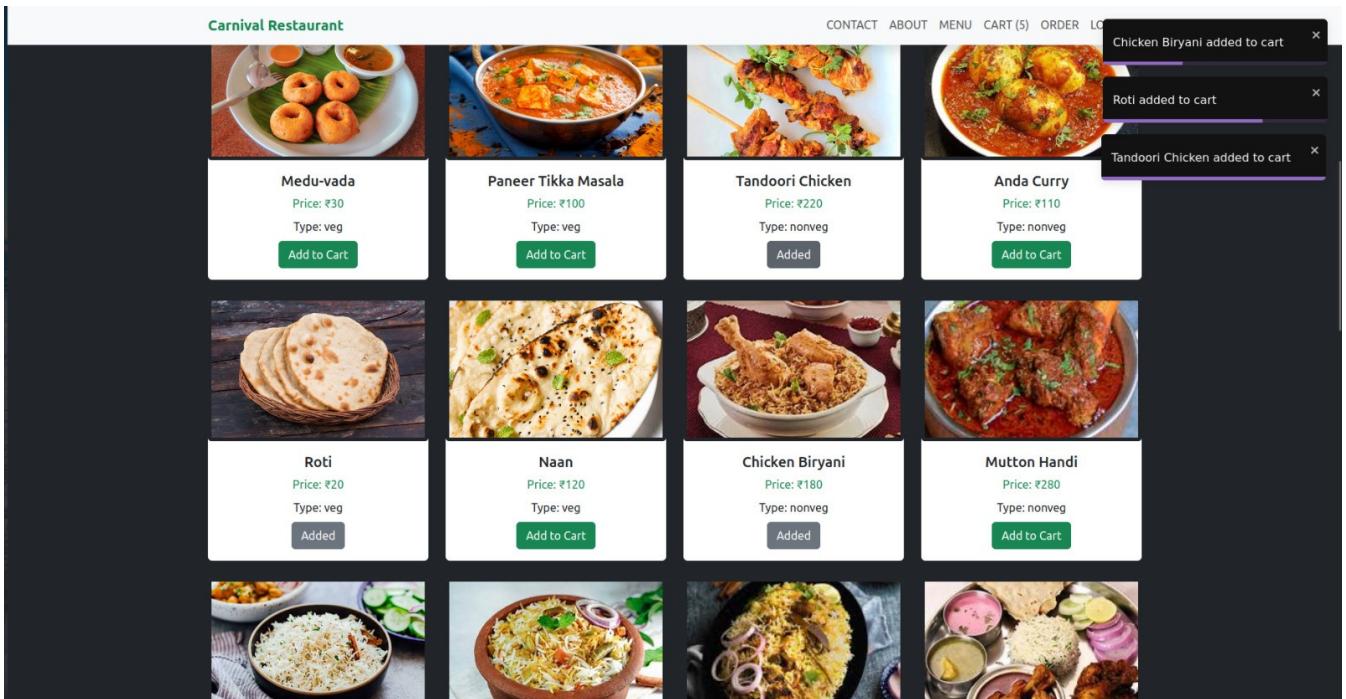
**Misal Pav**  
Price: ₹60  
Type: veg



**Chicken Kabaab**  
Price: ₹150  
Type: nonveg

**View Cart**

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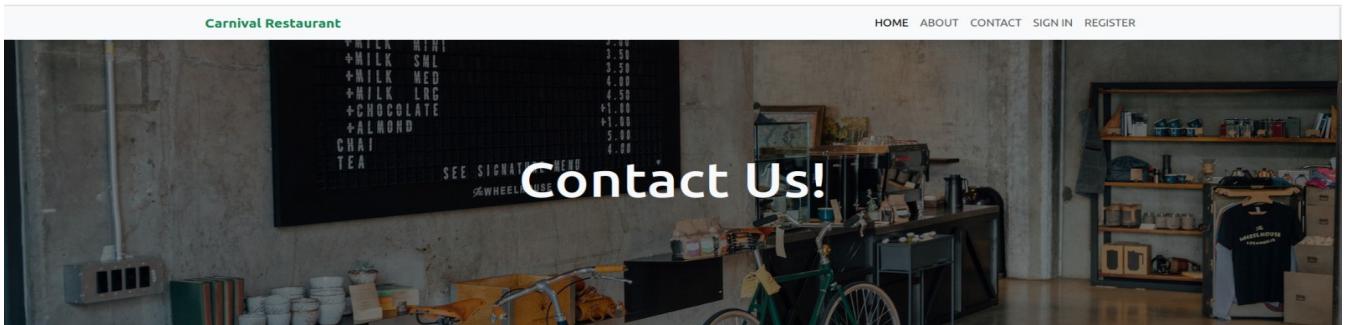
No	Image	Name	Price	Quantity	Total	Action
1		Masala Dosa	60	2	120	<span>-</span> <span>+</span>
2		Fish Fry	550	1	550	<span>-</span> <span>+</span>

Total Amount 670

**Place Order**

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## Contact Us!



### WHERE TO FIND US?

Carnival Restaurant, Near Sunbeam Infotech IT Park, Hinjawadi Phase 2, Pune



### Carnival Restaurant

HOME ABOUT CONTACT SIGN IN REGISTER

## RESTAURANT TEAM

"Hello! I'm Shruti from Pune."  
Contact: +91 7030363130  
Email: shrutivs0819@gmail.com



Shruti Sawant

"Hello! I'm Payal from Latur."  
Contact: +91 75583 41108  
Email: payal@gmail.com



Payal Deshmane

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Tejaswini Patil

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Email: swapnali@gmail.com



Swapnali Mahajan

# About Us!

Carnival Restaurant

HOME ABOUT CONTACT SIGN IN REGISTER

## About Us!

Indian Food is just not about the food – it's about the people. Our warm and welcoming atmosphere, paired with attentive service, creates a sense of community where guests feel like family. From the moment you step through our doors, you'll be greeted with a smile and treated to an unforgettable dining experience, where every detail is thoughtfully considered to exceed your expectations. Join us at Carnival and discover why we're more than just a restaurant – we're a destination for food lovers, a place where culinary passion meets unparalleled hospitality. Whether you're celebrating a special occasion or simply craving a delicious meal, we look forward to welcoming you into our culinary family.

**After Lot Of struggle These Beauties Became Owner Of This Restaurant!!**



Carnival Restaurant

HOME ABOUT CONTACT SIGN IN REGISTER

"Hello! I'm Shruti from Pune."  
Contact: +91 7030363130  
Email: shrutivs0819@gmail.com

**Shruti Sawant**

"Hello! I'm Payal from Latur."  
Contact: +91 75583 41108  
Email: payal@gmail.com

**Payal Deshmukh**

"Hello! I'm Kalyani from Nagpur."  
Contact: +91 92845 22492  
Email: kalyani@gmail.com

**Kalyani Ramteke**

"Hello! I'm Tejaswini from Sangli."  
Contact: +91 94228 45429  
Email: tejaswini@gmail.com

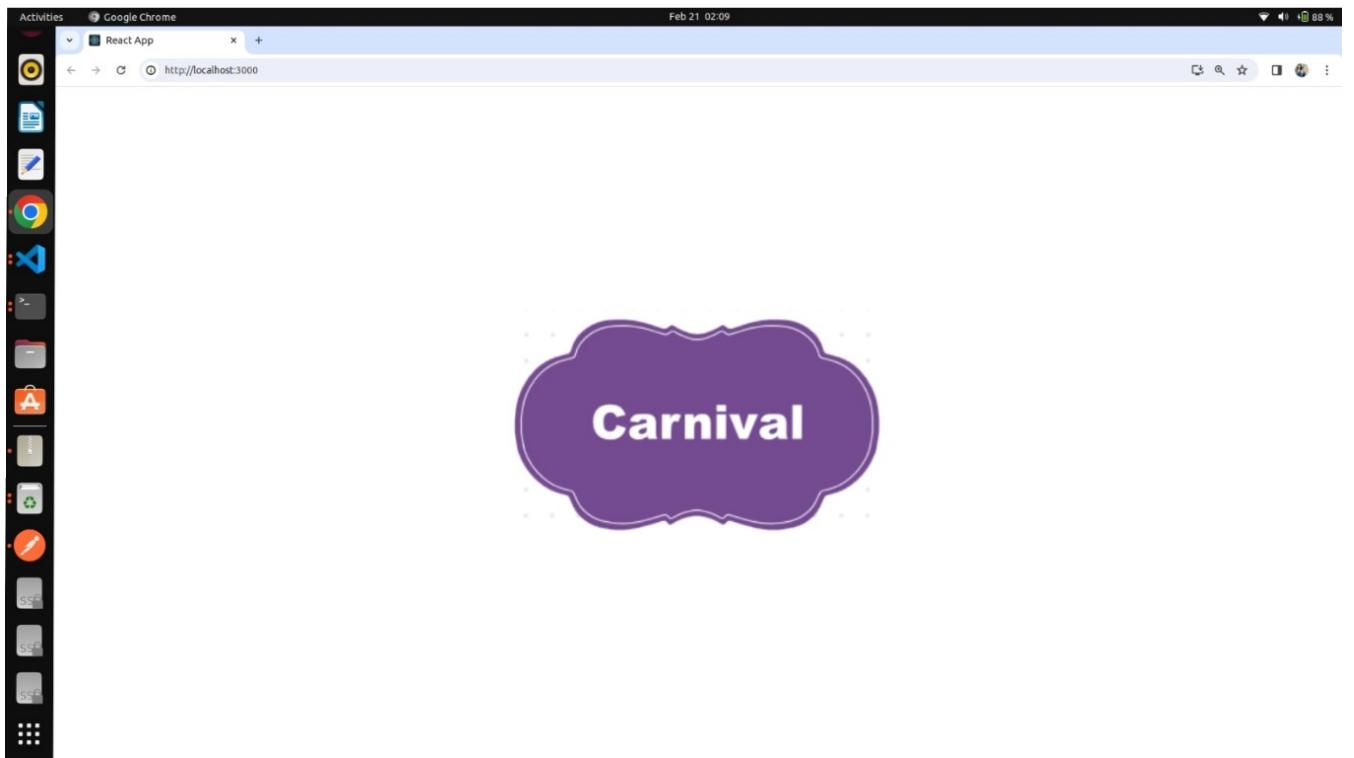
**Tejaswini Patil**

"Hello! I'm Swapnali From Nashik."  
Contact: +91 97675 05084  
Email: swapnali@gmail.com

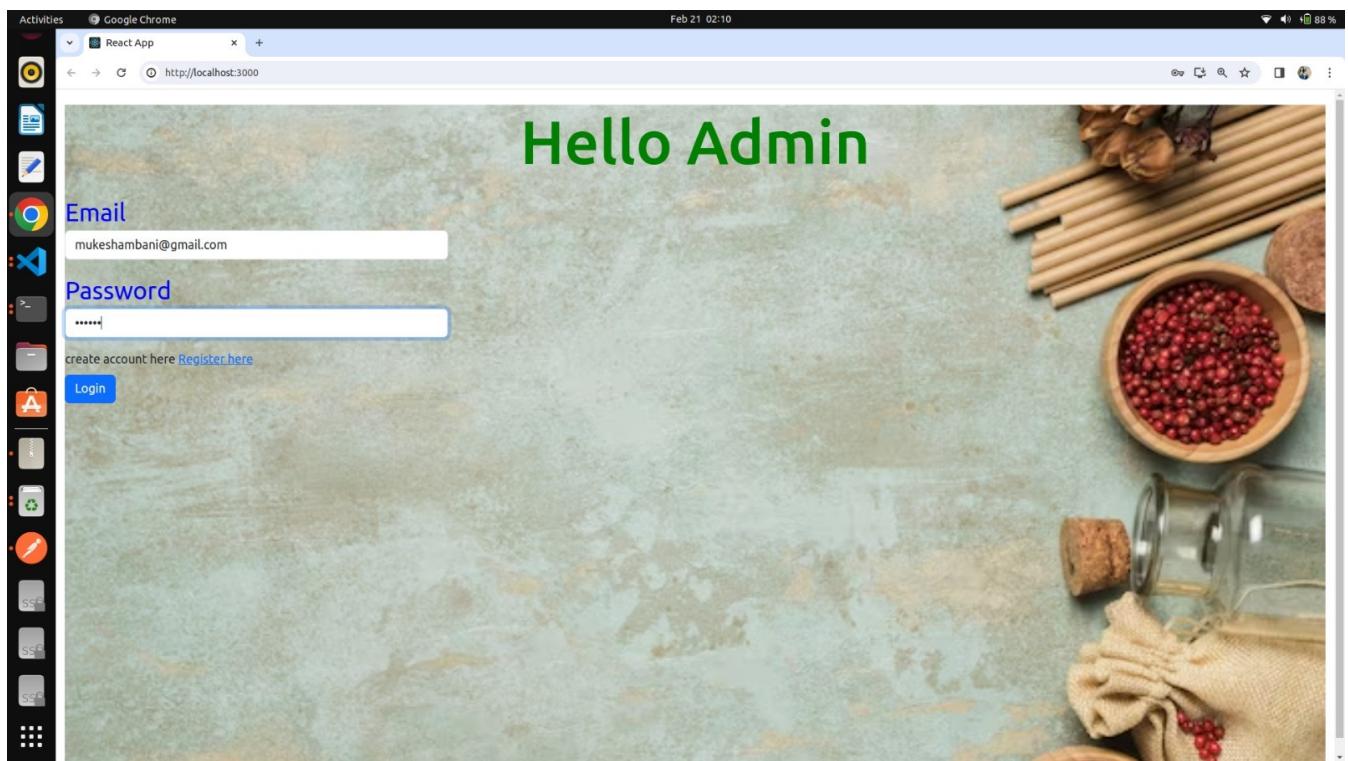
**Swapnali Mahajan**

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## Admin Side Screenshots!



## Sign in



## Sign Up



register

First Name

Last Name

Email

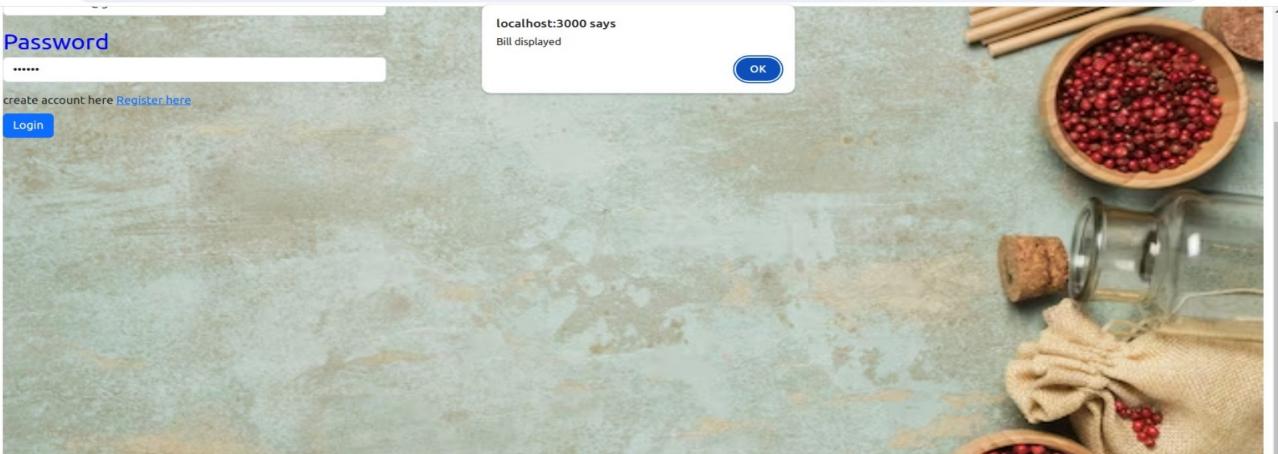
mobile no

Password

Role

Registration Complete [login here](#)

**register**



localhost:3000 says  
Bill displayed

**OK**

create account here [Register here](#)

**Login**

Dining Tables

Table 1

Table 2

Table 3

## Android Screenshots!!





9:09 PM | 10.2KB/s

5G+ VoNR VoLTE 100%

## Reset Password

Enter Your registered Email

Enter Your New Password

Confirm Password

Reset password

Back



9:10 PM | 5.5KB/s

5G+ 100%

# Sign Up

Enter Your FirstName

Enter Your LastName

Enter Your Email

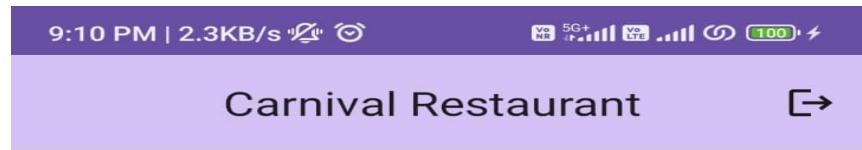
Enter Your MobileNo

Enter Password

Confirm Password

Register

Cancel



**Welcome To Carnival!**

**Please Choose any one of the  
Table According to your choice  
And Enjoy Your Meal...**

Table1

Table2

Table3

[View Menu List](#)



9:10 PM | 39.4KB/s 🔍 ⏹



## Carnival Restaurant



## Menu Card



## Idli Sambar

₹30

Add Cart



## Gobi-manchurian

₹40

Add Cart



## Medu-vada

₹30

Add Cart



3:31 PM | 0.1KB/s

5G+ VO LTE

100%

## Carnival Restaurant

### Added Food Menu Items!



Total

Proceed



Pav Bhaji

₹ 70

0

-

+



Gobi-manchurian

₹ 40

0

-

+



3:31 PM | 1.1KB/s

5G+ VS LTE

100%

## Carnival Restaurant

----Your Orders Details----



Name : Gobi-manchurian

Price : ₹ 40

Quantity: 0

Place Order

View



9:44 PM | 0.0KB/s



## Carnival Restaurant



Your Order has been placed..

Thank You Visit Again ...!!

Back



4:46 PM | 0.0KB/s



## Carnival Restaurant

----Your Orders Details----



Customer ID: 1

Customer Name: Rahul Patil

Customer Mobile No.: 7898364839

No.	Description	Amount	Quantity
1	Idali Sambar	50	2
2	Misal Pav	50	5
3	Medu Vada	60	2
4	Chicken Fry	250	3
5	Chicken Tandoori	200	1

**Total Bill : 650**

*Thank You Visit Again!!*



## **Conclusion:**

In conclusion, the Restaurant Management System is a smart way to make ordering food easier for customers and restaurant staff. It uses modern technology to create a simple and easy-to-use platform for placing orders. With features like QR-scanning and special interfaces for waiters in the future, the system can make dining out even better. Overall, it's a helpful tool for both customers and restaurants to make the food ordering process smoother and more efficient.

## **Future Work:**

In the future, we can make our Restaurant Management System even better by adding new features like suggesting menu items based on what customers like, making it easier to order and pay without touching anything, and using data to learn more about our customers and how our restaurant is doing. With features like QR-scanning and special interfaces for waiters in the future, the system can make dining out even better. Overall, it's a helpful tool for both customers and restaurants to make the food ordering process smoother and more efficient.

## **References:**

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