CHRIST
(DEEMED TO BE UNIVERSITY)
BANGALORE · INDIA

Restro - an E menu Web App

BY GROUP 2

Chandana B R (1947212)

Shalu Kumari (1947259)

Under the guidance of

Dr. Ramesh Chandra Poonia

Restro - an E-menu Web App project report submitted in partial fulfillment of the requirements of 5th semester MCA, CHRIST (Deemed to be University)

November - 2021

CHRIST
(DEEMED TO BE UNIVERSITY)
BANGALORE · INDIA

CERTIFICATE

This is to certify that the report titled Restro - an E Menu Web App is a bonafide record of work done by Chandana B R (1947212) and Shalu Kumari (1947259) of CHRIST (Deemed to be University), Bangalore, in partial fulfillment of the requirements of 5th Semester Master of Computer Application during the year 2021.

Head of the Department **Project Guide**

Prof. Joy Paulose Dr. Ramesh Chandra Poonia

Valued-by:

1 . Name : Shalu Kumari

Register Number : 1947259

Examination Centre : CHRIST (Deemed to be University)

2 . Date of Exam : 12/11/2021

ACKNOWLEDGEMENTS

Our project “Restro - an E- Menu Web App” has come into fruition only because of the support and guidance of a lot of people. First and foremost, we would like to thank the almighty for keeping us fit both physically and mentally, especially during trying times like this. The past few months have tested our endurance on many levels and we’re grateful for all the lessons that we have learned. We would also like to express our gratitude towards Prof. Joy Paulose, HOD, Computer Science Department, for giving us the opportunity to propose the idea of this project and successfully completing it. We sincerely thank our project guide, Dr. Ramesh Chandra Poonia, for helping us with the project by giving timely suggestions and encouragement. All of our queries were answered without any hesitation or reluctance. We are also thankful to the Teaching and Non-Teaching Faculty of the Computer Science Department for their invaluable feedback and encouragement. We convey our sincere gratitude to our family members and our friends who directly or indirectly helped us in the successful completion of this project.

ABSTRACT

Restro - an E-Menu Web App is a type of Web Application that is primarily used in the food delivery industry. This system will enable hotels and restaurants to expand their business by lowering labour costs. Users can also quickly and easily manage an online menu, which customers can browse and use to place orders with a few clicks.

A menu is one of the most important communication, marketing, and selling tools in the food and beverage industry. Technological advancements and an increasingly competitive environment are driving food and beverage companies to innovate and differentiate.

The introduction of digital menus is one of the best examples of this. There are two types of digital menus: touchscreen and non-touchscreen. But, as we all know, the pandemic is in full swing, and people are afraid to touch or come into contact with anything, so everything is going touchless, and a non-touch screen is the best option for the current situation. We can use QR codes so they can scan them and I can see the menu of the specific restaurant; they can also use the provided link.

LIST OF TABLES

LIST OF FIGURES

Table of Contents

1. INTRODUCTION

The time from order registration to delivery is one of the most significant issues in many restaurants that rely on customer orders, product preparation, and delivery to customers. Reducing this time will enhance customer satisfaction and, as a result, business. This means that when the diner has settled at the table, the waiter presents a product list and returns a few minutes later to take the order. If the customer is unsure, the waiter must return after a certain amount of time to get the order (some restaurants leave the ordering to the customers, which is inconvenient for them). The customer must wait according to the appropriate time for order preparation after receiving the order and transferring it to the catering staff. In terms of management, order preparation time is critical because it is directly tied to customer happiness. The waiter delivers the order to the customer's table after it has been prepared. Following the meal, the consumer goes to the fund to pay the bill, bringing the business cycle to a close. By removing several stages of traditional ordering, the processing method of ordering in restaurants promotes efficiency and saves energy and time by using QR codes instead of waiters at the table. As we've all experienced, if a café or restaurant wishes to make changes to the menu, they must either create a new menu or overlap with the new item or pricing. Thus, to overcome this problem, our web application will have e-Menu so that we can change whenever needed. They can pre-order, which saves them time because they will not have to wait. It will have payment functionality, you can pay through UPI, credit/debit card, and cash as well.

1.1 Purpose

The main purpose of this project is to design a user-friendly system that will surely satisfy the guest service and to develop a system using QR code to avoid any mistake happening while ordering the food and paying the bill by the guests and provide a system to pre order and home delivery seamlessly.

1.2 Scope

The scope of this project divided into 6:

- Admin: will be able to manage all the restaurants who are registered.
- Guest - Customer/User Guest able to check the food that is available in the restaurant. Guests scan the QR code on the table to order the Food.
- Staff - Staff serves the food to the table ordered by the guests. Staff can update status and be able to know whether the guests have received their order or not.
- chef - chefs will be able to prepare food which was ordered by the guests on priority basis (in order, preorder, home delivery)
- delivery agent: will be able to collect order from the restaurant
- merchants- Hotel/Restaurants/Cafe/Stall owners can add new menu, delete menu, and update the food menu merchants can view the report and status orders that have been updated from staff, delivery agent and chef.

1.3 Overview

The menu is one of the most important communication, promoting and selling tools of a food and beverage business. Technological advances and an increasingly competitive environment are driving food and beverage businesses to advance and administrate differentiation. One of the best examples of this is the introduction of digital menus. Digital menus are two types, one is touchscreen and another one is non touch screen. But here we are using non touchscreen as we all know the pandemic is going on and people are afraid to touch or come in contact, so everything is going touchless and non-touch screen is the best option for the current scenario. We can use QR code so that they can scan, and I can see the menu of the particular restaurant, they can use the given link too.

2. System Analysis

From above description, we conclude that restro e-menu app is one of the good options as it is touchless, it saves our time, easy to use no need to wait for long and long time, it's totally based on how you are using our app. It is providing three kinds of ordering options, preordering, post ordering and home delivery which will be beneficial for the customer. Their preferences matter to us.

2.1. Existing System

2.2. Proposed System

The product "restro e-menu Web app" helps users in many ways like it is touchless, easy to order. It's a totally independent product. It works as a third party which helps to create a bridge or a connection between the customer and the restaurant digitally. When we try to change the traditional menus then it looks messy, and we are supposed to overlap, or we need to create a new menu which is expensive. So, when we are using a digital menu then no need to spend money on printing the new menus. Thus, it saves our money. As before we talked about the three option to order,0 pre order, in-restaurant and home delivery, when we are going for pre order then you can order from home and you can provide the time when you will reach the restaurant so that we will prepare your food based on your preference, so that u won’t waste your time on waiting and you can just come and eat the delicious dishes which we ordered from your home. Thus, it saves your time too. We will suggest which dishes are the best one based on reviews given from the customers which have experience from that restaurant.

When a user visits our website, they will find information about it, how to contact us and support for this website. Users (merchants, chefs, staff, and delivery agents) will have a login and registration from the main home page.

Fig. 2.2 Features of Product

- **In-app ordering**

  You can place orders through the app as it is having the menu of the registered Restaurants.

- **Table reservation**

  As it has a way of ordering that is post order, they can place the order and are able to select the table and based on their given duration their table will be reserved.

- **Online menu**

  It has a menu option so they can select the menu item from that and place the order.

- **Home delivery**

  Through this application you can place an order for home delivery 2 tu an based on your details, it will show the calculated amount of time to complete and deliver your order at your doorstep.

- **Multiple payment modes**

Customers can pay the amount in multiple modes of payment such as in-cash or UPI etc.

- **Push notifications**

  They will get notified for review, or offer, or completion of order.

- **Loyalty program**

  It's a fully trustable product as it is not asking any details about you till you are choosing home delivery. Even in home delivery, the data is fully safe on the database.

- **Referral schemes**

  They can refer to our product and will get some referral points which can be used in future order.

- **Real time order tracking**

  Customers can track their order from this and will get to know about the time to get his/her order at his/her doorstep.

- **Customer reviews**

  Customers can give the reviews based on their many experiences of that restaurant and our app.

- **Chatbot support**

  Customers can use customer support for any queries or any issue they are getting while using the product.

2.3. Software Tools Used

- Operating System: Any OS
- Database: MySQL
- Front End: HTML, CSS, Bootstrap.

- Back End: JSON
- Code Editor: Any editor is fine, but preferably Sublime.
- Browser: Chrome or Firefox or Internet Explorer or Microsoft Edge

2.4. Product Functions

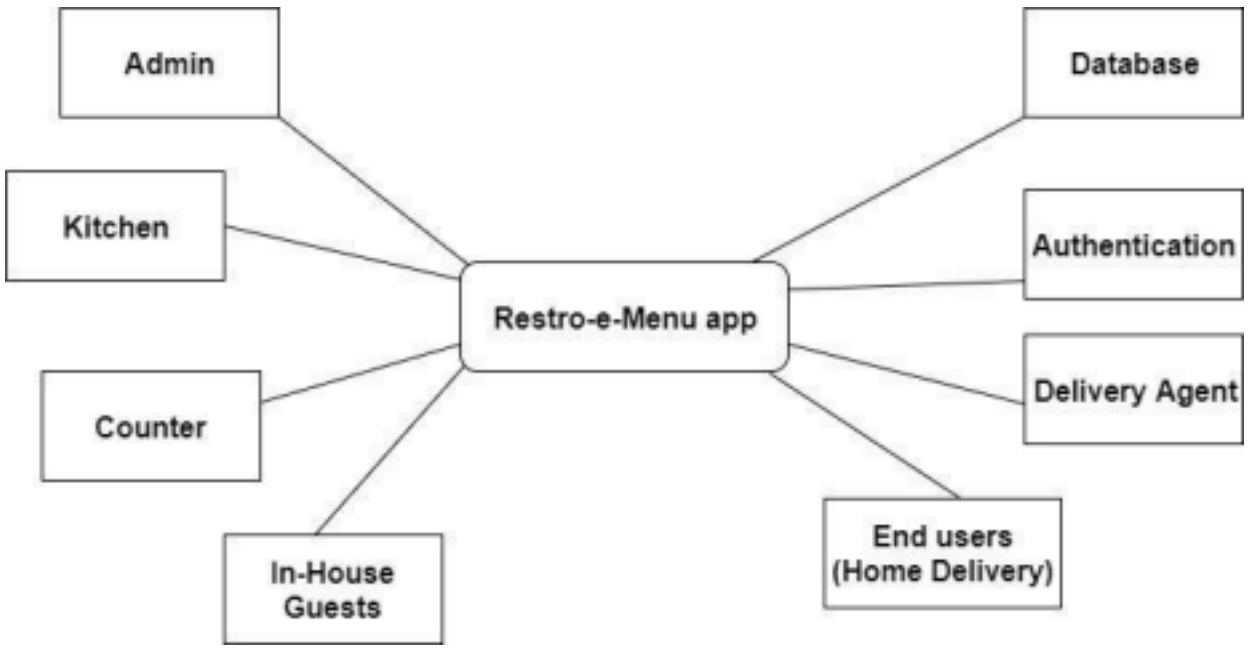


Fig. 2.4 Product functions

2.5. User Characteristics

2.5.1. Admin

Admin will have all the details from restaurant to delivery agent, to order, and to payment. Admin will be able to check all the profiles that have been registered from the product and all the kitchen details like order and everything then it will have the details of in-house guests, aur end-users' delivery agents and who will be using the product. It has the menus of different restaurants too.

2.5.2. Kitchen

In this section, they will have the details about order, that is order ID table number item name quantity and duration etc.

2.5.3. Restaurant Counter

Restaurant counter will have to login or sign up then a dashboard will open. He can go to fetch the details about orders, PG order list, reports, users and so on. Your user refers to the role they are playing i.e., chef or billing counter or waiter or delivery agent.

2.5.4. In-Home Guests

They can login or sign up to the product and a dashboard will appear, they can set their profile, they can select the item from the menu and how they want to pay the order are given the payment gateways and in cash.

2.5.5. End Users

End users mean who wants to get home delivery. They will also have the same feature like in home guests but that will be the additional feature to track the order.

2.5.6. Delivery Agent

In this, those agents can login or sign up and we'll get a dashboard where they can add their profile. They will get the information about the order they have to deliver, and they can go for customer support.

2.6. Constraints

- Using this system is simple and intuitive. A user familiar with basic browser navigation skills should be able to understand all functionality provided by the system.
- The system should work on most home desktop and laptop computers which support JavaScript and HTML5
- The system will be intended to run on Firefox 4 and above, Google Chrome 10 and above and Internet Explorer 8 and above.
- The system is limited by its operating server in terms of the maximum number of users it

can support at a given time.

2.7. Assumption and Dependencies

Certain assumptions that are made in this system is that the user is available with an active internet connection, and the GPS so that they can easily get the information regarding the restaurants and they can set it manually.

3. SYSTEM REQUIREMENTS

3.1 System Model

System modeling is the process of developing abstract models of a system, with each model presenting a different view or perspective of that system. System modeling has now come to mean representing a system using some kind of graphical notation, which is now almost always based on notations in the Unified Modeling Language (UML). System modelling helps the analyst to understand the functionality of the system and models are used to communicate with customers

3.2 Functional Requirements

This is a necessary task, action or activity that was accomplished. The proposed system was able to do the following:

- The system will provide the details about the menu of the restaurant and users can place the order from it.
- They can order in three different ways: in-house guest, home delivery and post order.
- There is no need to remember the email or password. They just must enter your mobile number and an OTP; they will get in that number. They just must paste it in that.
- They can see which table is reserved so that they can select the other one.
- They can pay the amount because Aakash or any payment gateways

- It will suggest the dishes which have good reviews so that it will be easier for the new ones who have no clue which are good, and which are not. This information will be helpful for them.

3.3 Hardware Requirements

- Processor Intel COre i3 8th gen and up or AMD Ryzen 3 3100 and up
- Processor Speed : 1.5 to 3.40 GIL
- RAM : 4 GB and more

4. DESIGN SPECIFICATIONS

4.1. Architectural Design

4.2. Data Flow Design

A data flow diagram (DFD) maps out the flow of information for any process or system. It uses defined symbols like rectangles, circles and arrows, plus short text labels, to show data inputs, outputs, storage points and the routes between each destination.

DFD Level 0 is also called a Context Diagram. It's a basic overview of the whole system or process being analyzed or modeled. It's designed to be an at-a-glance view, showing the system as a single high-level process, with its relationship to external entities. It should be easily understood by a wide audience, including stakeholders, business analysts, data analysts and developers.

DFD Level 1 provides a more detailed breakout of pieces of the Context Level Diagram. You will highlight the main functions carried out by the system, as you break down the high-level process of the Context Diagram into its sub processes.

DFD Level 2 then goes one step deeper into parts of Level 1. It may require more text to reach the necessary level of detail about the system's functioning

4.2.1 Level 0

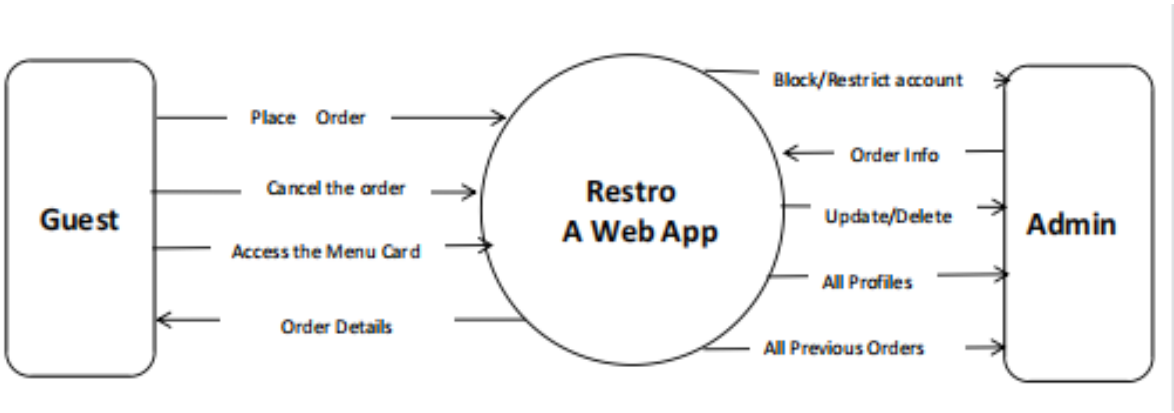


Fig. 4.2.1 Data Flow Diagram Level 0

4.2.2 Level 1

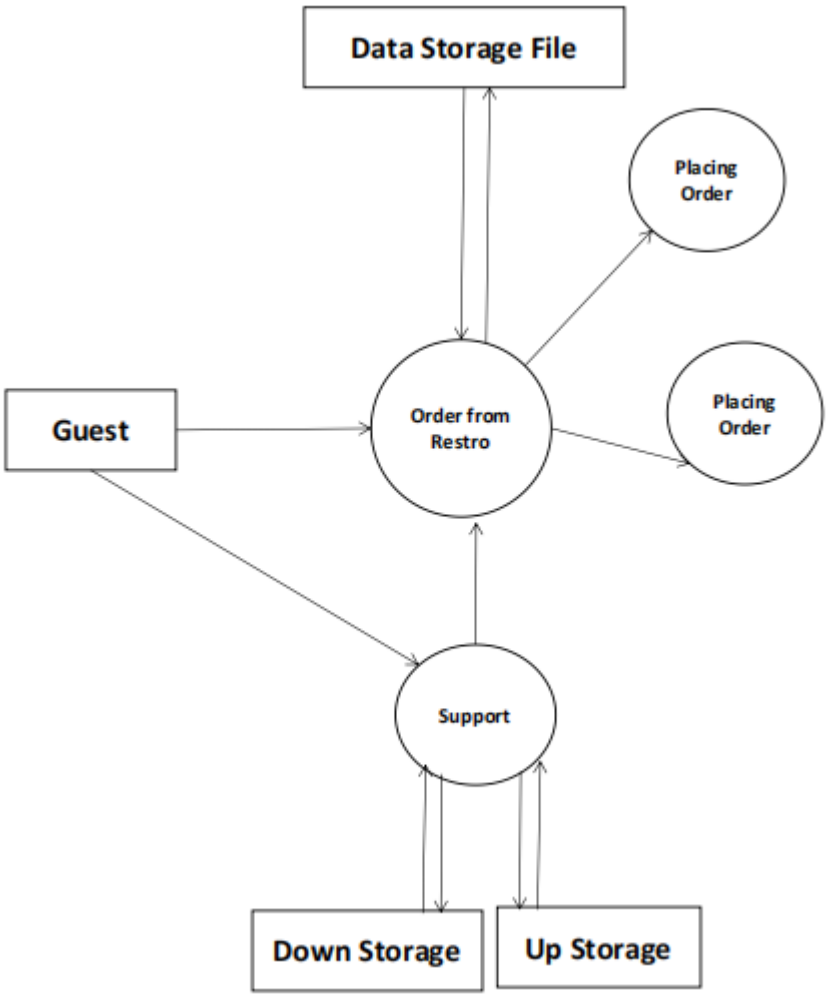


Fig. 4.2.2 Data Flow Diagram Level 1

4.2.3 Level 2

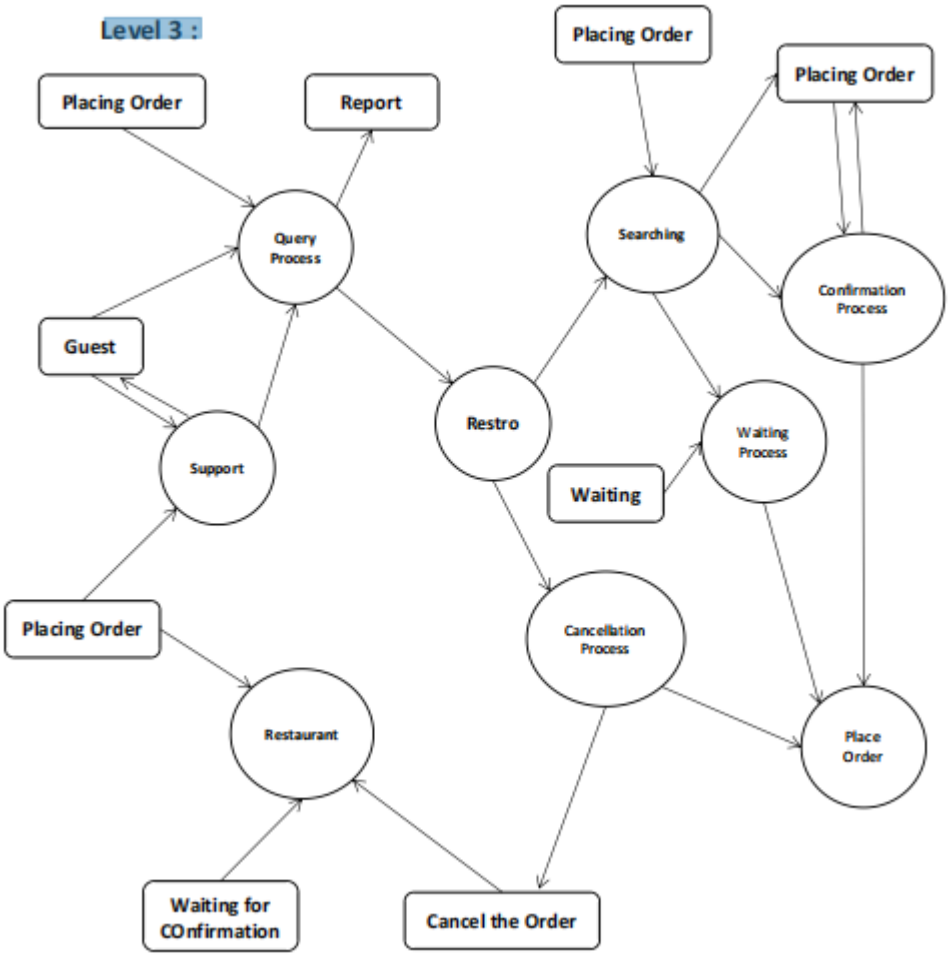


Fig. 4.2.3 Data Flow Diagram Level 2

4.3. Class Diagram

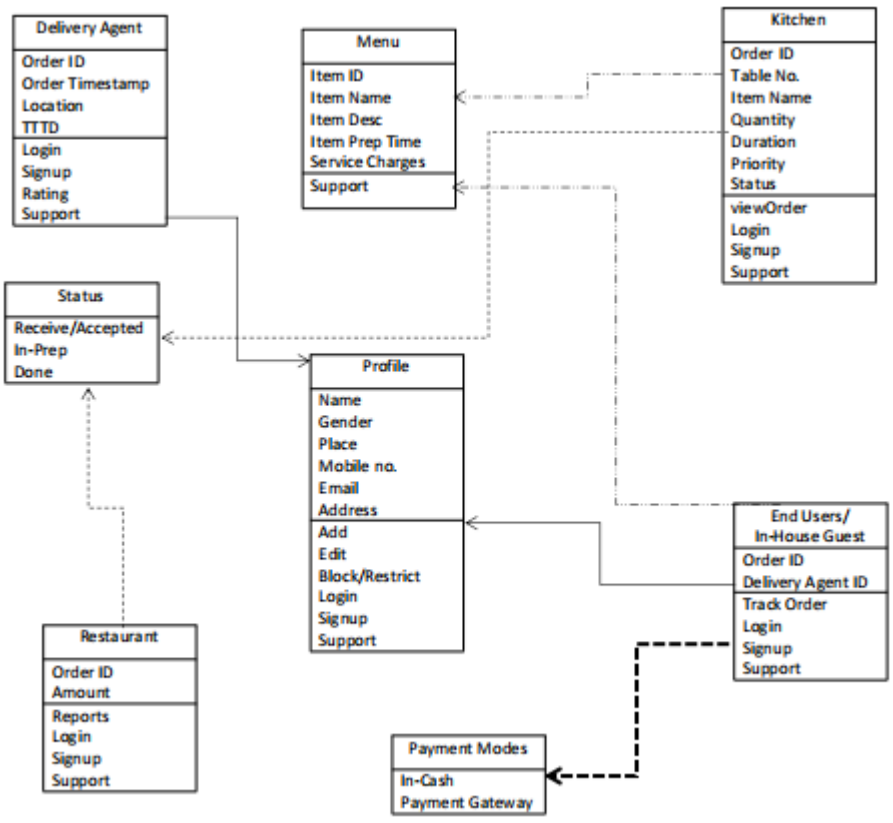


Fig. 4.3 Class Diagram

Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application.

Class diagram describes the attributes and operations of a class and also the constraints imposed on the system. The class diagrams are widely used in the modeling of object oriented systems because they are the only UML diagrams, which can be mapped directly with object-oriented languages.

Class diagram shows a collection of classes, interfaces, associations, collaborations, and constraints. It is also known as a structural diagram.

The purpose of the class diagram can be summarized as −

- Analysis and design of the static view of an application.
- Describe responsibilities of a system.
- Base for component and deployment diagrams.
- Forward and reverse engineering

4.4. State Diagram

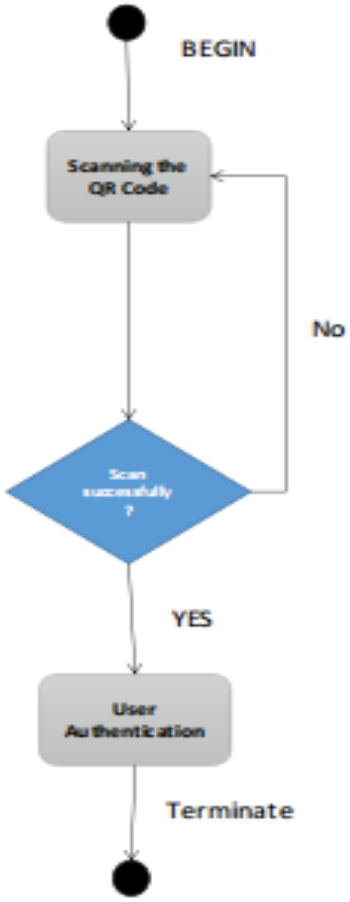


Fig. 4.4 State Diagram

A state diagram is the graphical representation of a state machine and one of the 14 UML diagram types for software and systems. State diagrams show a behavioral model consisting of states, state transitions and actions. UML state diagrams are based on the concept of state diagrams by David Harel. State diagrams depict the permitted

states and transitions as well as the events that affect these transitions.

State diagrams are commonly used in the area of embedded systems. State diagrams help to visualize the entire life cycle of objects and thus help to provide a better understanding of state-based systems. An example of such a state-based system is a cash machine:

Upon activation either the state *ready* or the state *malfunction* could be reached. As soon as the debit card is inserted it is verified. Depending on the result of the verification the pin number is requested or the process is aborted. Other possible states are account query or availability check etc.

4.5. Use Case Diagram

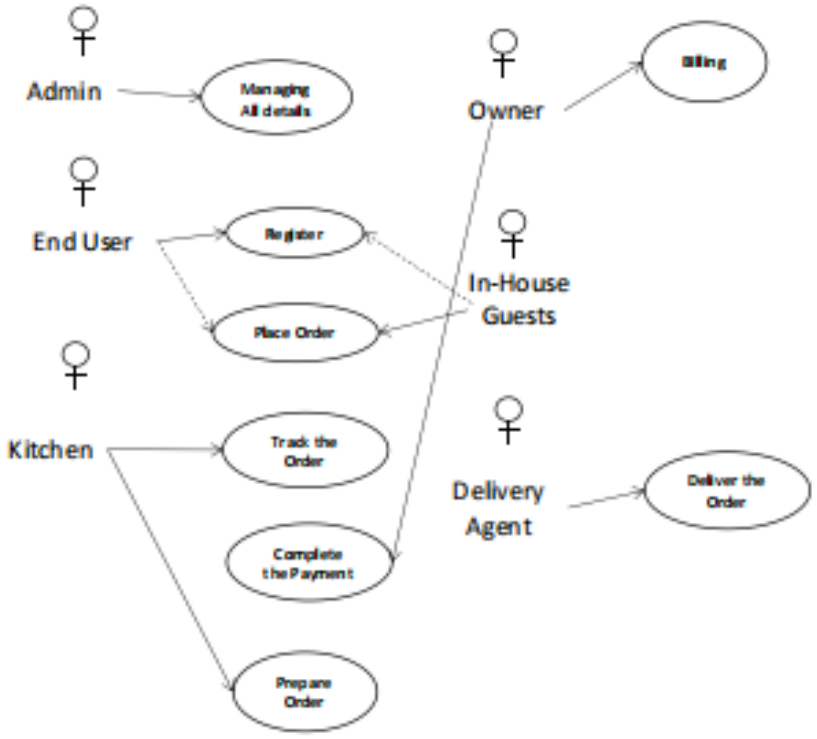


Fig. 4.3 Use Case Diagram

In the Unified Modeling Language (UML), a use case diagram can summarize the details of your system's users (also known as actors) and their interactions with the system. To build one, you'll use a set of specialized symbols and connectors. An effective use case diagram can help your team discuss and represent:

- Scenarios in which your system or application interacts with people, organizations, or external systems
- Goals that your system or application helps those entities (known as actors) achieve
- The scope of your system

UML use case diagrams are ideal for:

- Representing the goals of system-user interactions
- Defining and organizing functional requirements in a system
- Specifying the context and requirements of a system
- Modeling the basic flow of events in a use case

4.7. Application Dependencies

The system will have access to be able to segregate the waste materials from the dustbin and it will display its user interface on the website or on mobile application. As the requirements currently stand, having a website available to user interaction is a dependency for the system to be able to effectively operate. A final assumption is that the ultrasonic sensor data can be sent as a stream of data and interpreted as such. If not, then the potential latency would mean that the data coming from the sensors may not be accurate in real time.

4.8. Application Services

The main service of the smart dustbin includes keeping track of the level of the garbage in that trash bin. And when the waste in the bin reaches a certain level, an application alerts the

users. The main aim of the project is to help the users to save time by segregating waste at the source. All wet waste goes to one bin while the dry waste goes to the other bin. This drastically reduces the time taken for waste segregation and recycling. It also aims at having control on the level of waste generated by providing alerts at the right time.

4.9. Application Flow and Interaction

The main function of the smart dustbin application is that it keeps track of the level of the garbage in that trash bin. And when the waste in the bin reaches a certain level, an application alerts the users. The aim of the project is to help the users to save time by segregating waste at the source. It also aims at having control on the level of waste generated by providing alerts at the right time.

5. IMPLEMENTATION

5.1 Source Code

In the external interface, only we need to provide an input dataset of the store, in which you want to find out the forecasting/analysis/comparison.

3.2 Functional Requirements

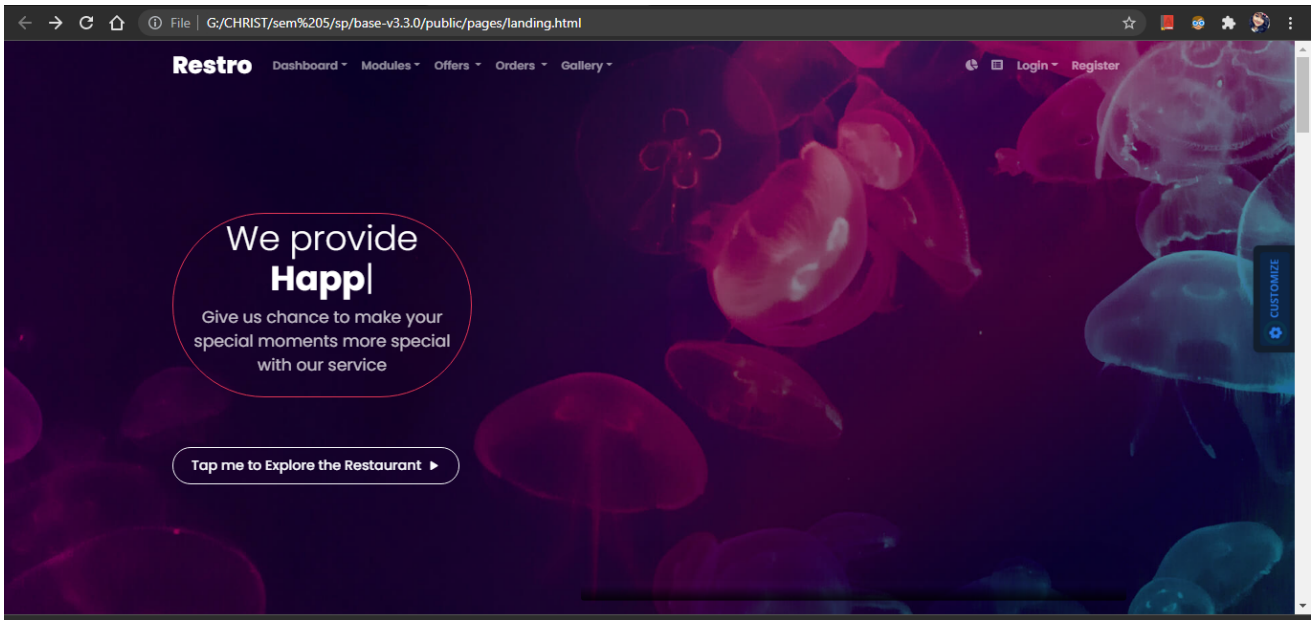
- The system will provide the details about the menu of the restaurant and users can place the order from it.
- They can order in three different ways: in-house guest, home delivery and post order.
- There is no need to remember the email or password. They just must enter your mobile number and an OTP; they will get in that number. They just must paste it in that.
- They can see which table is reserved so that they can select the other one.
- They can pay the amount because Aakash or any payment gateways
- It will suggest the dishes which have good reviews so that it will be easier for the new ones who have no clue which are good, and which are not. This information will be

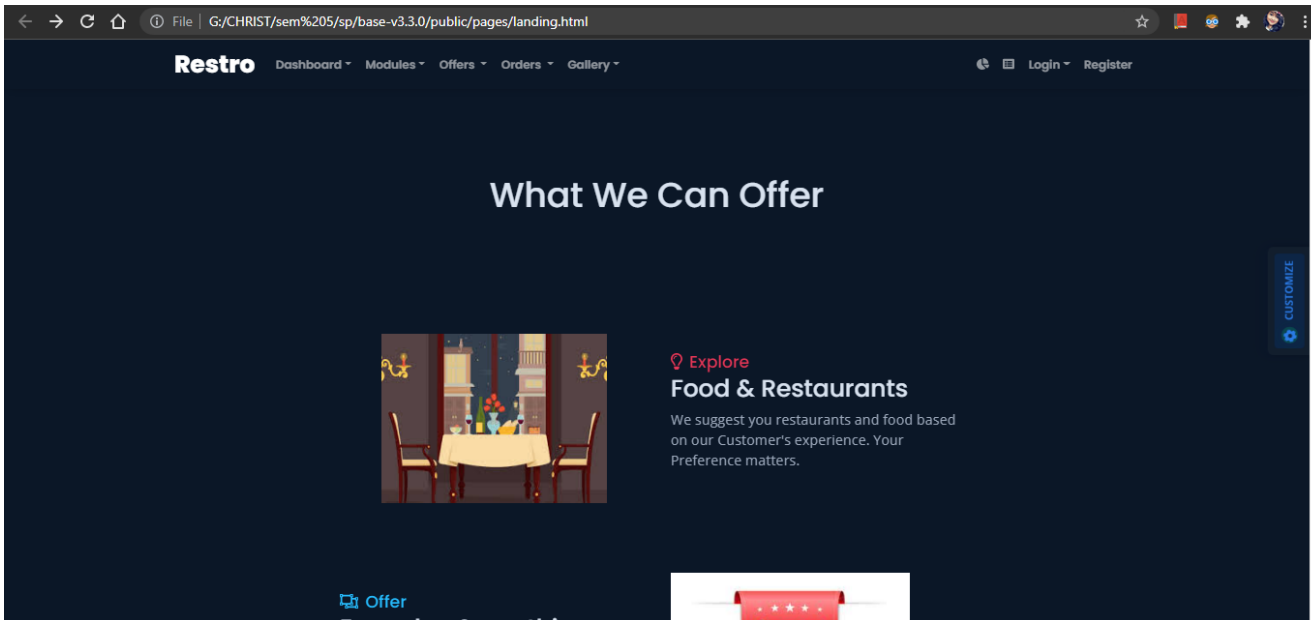
helpful for them.

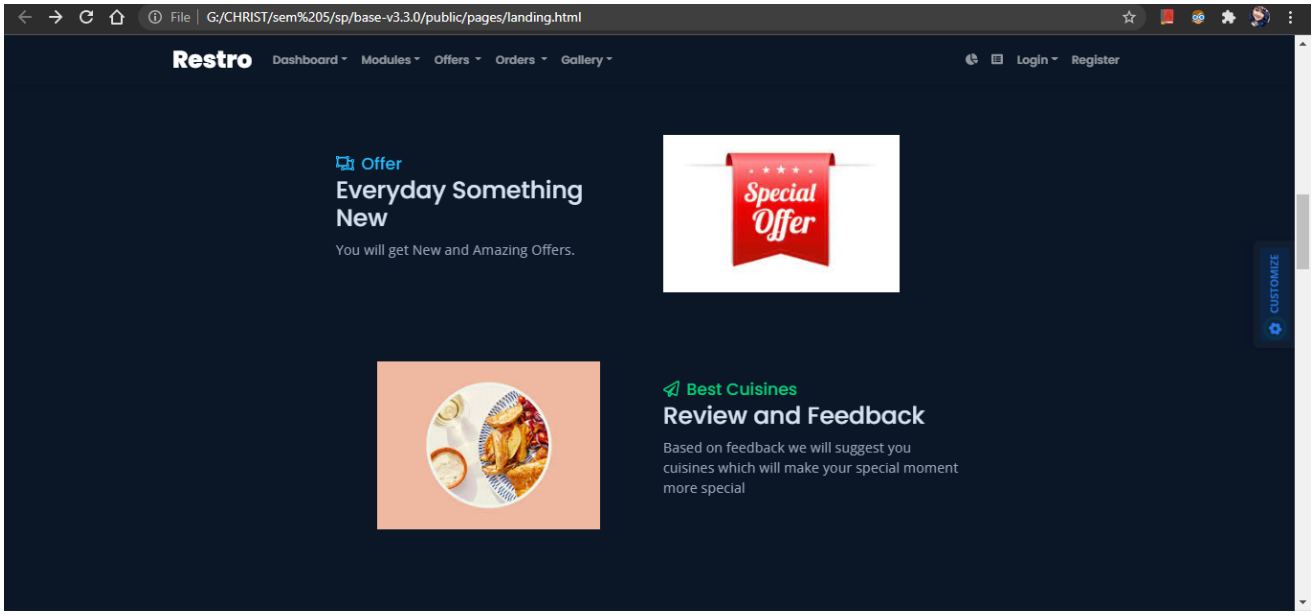
3.3 Hardware Requirements

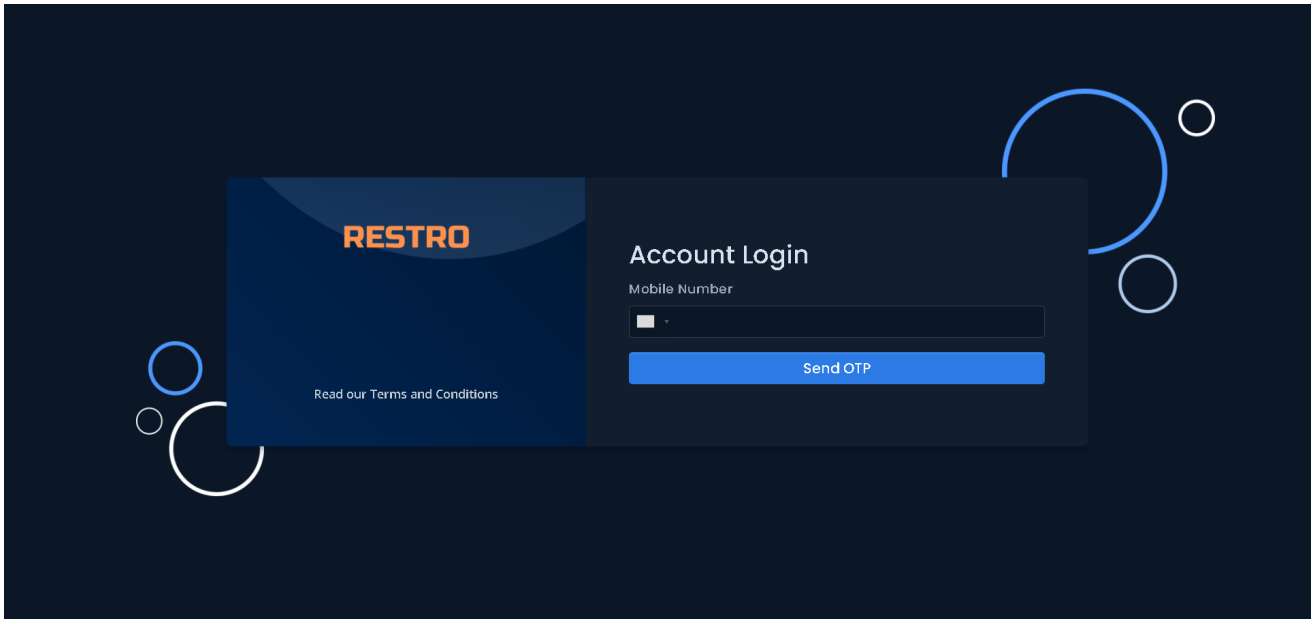
- Processor Intel COre i3 8th gen and up or AMD Ryzen 3 3100 and up
- Processor Speed : 1.5 to 3.40 GIL
- RAM : 4 GB and more

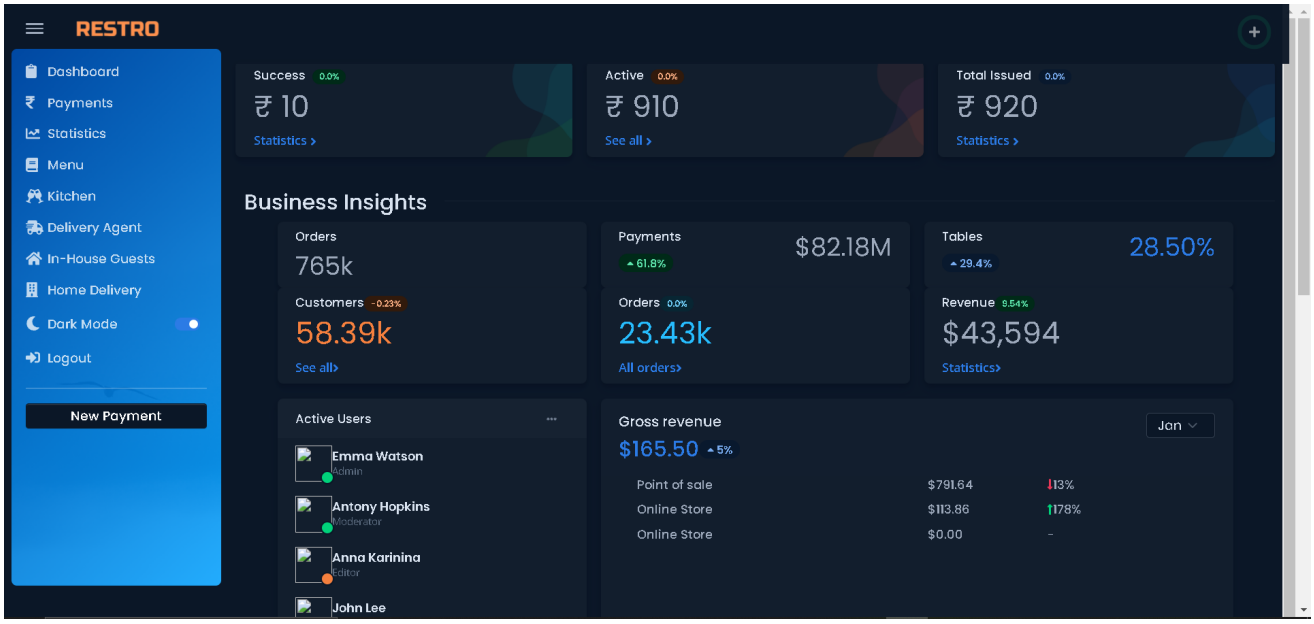
6. APPLICATION PREVIEW

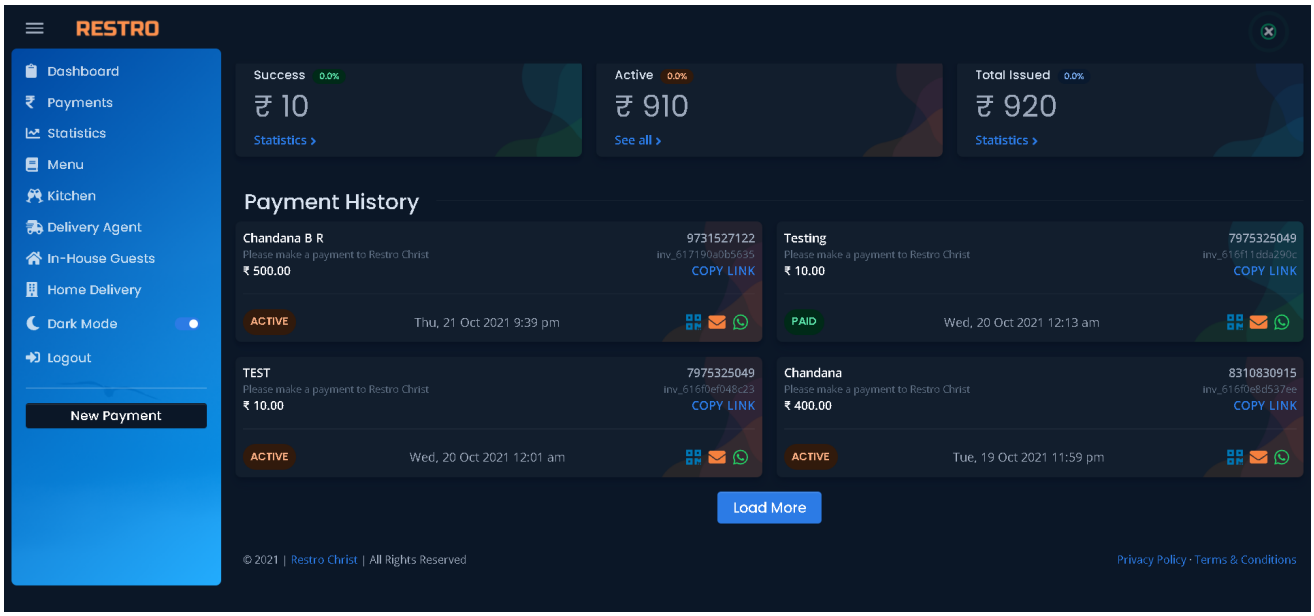


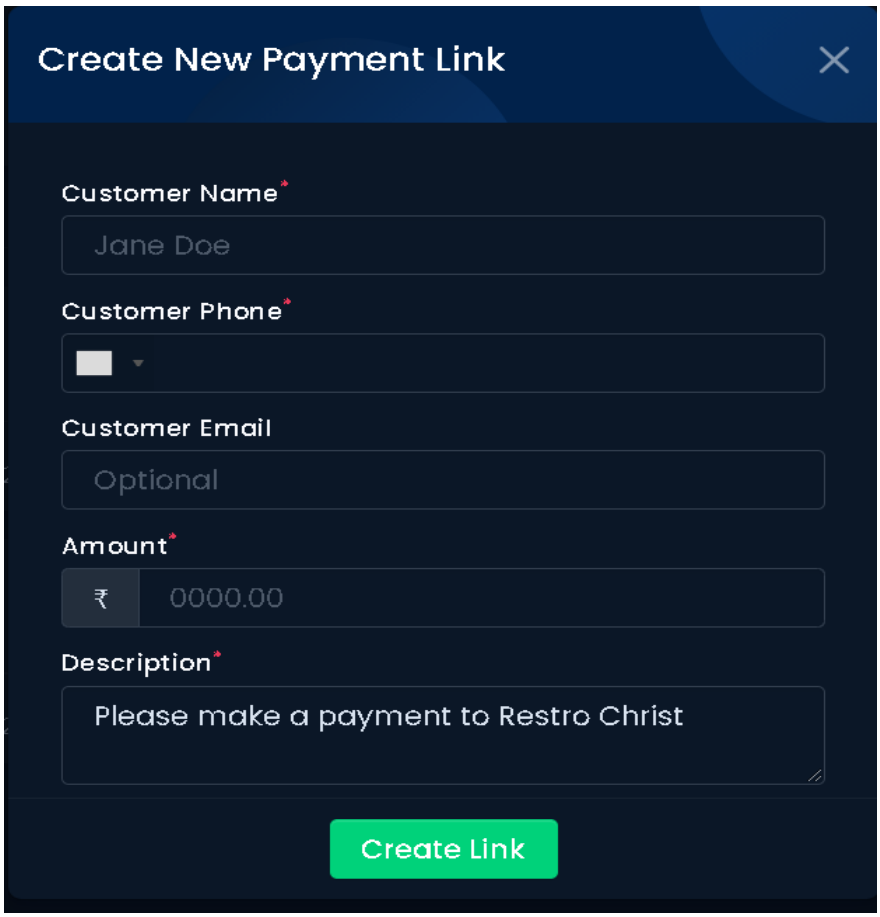


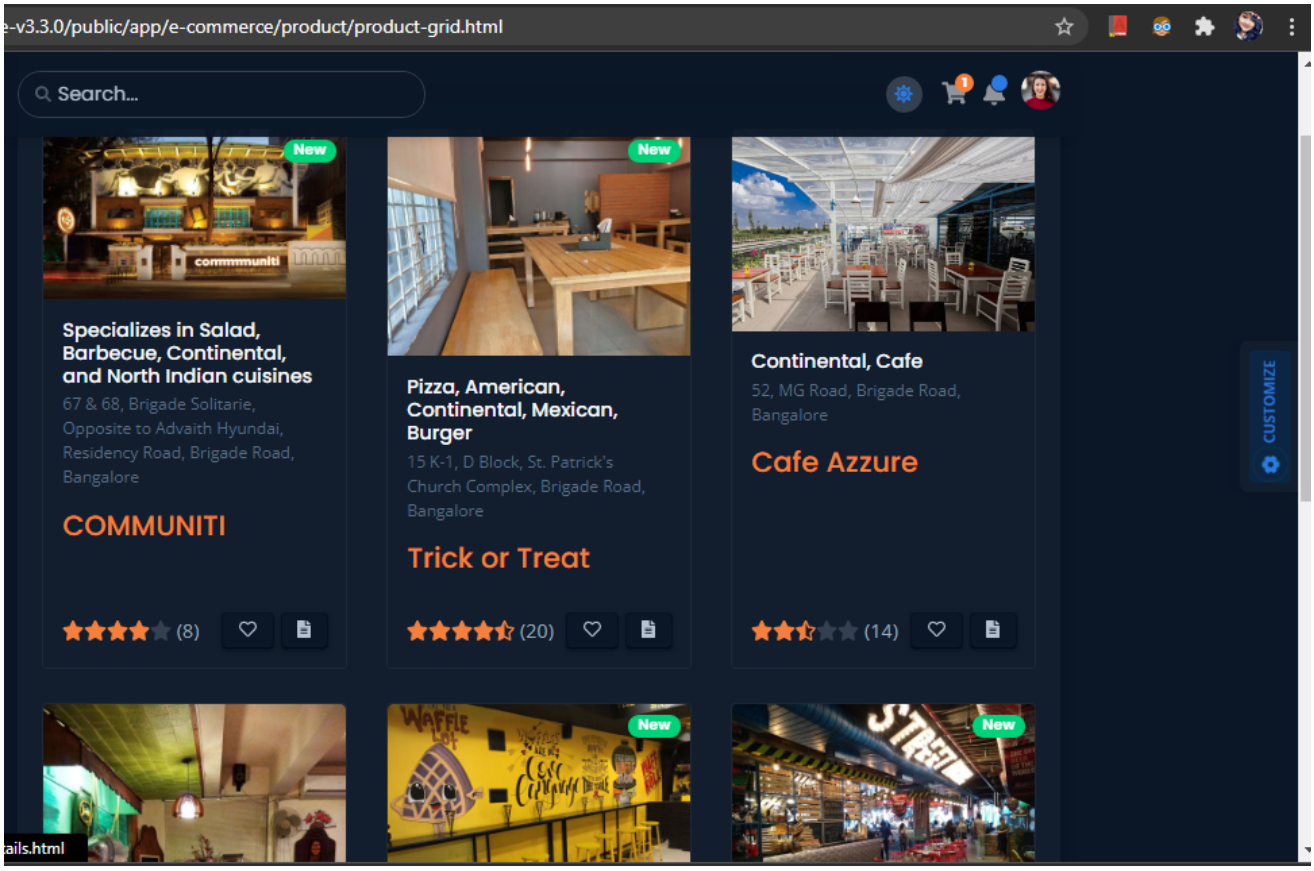

File G:/CHRIST/sem%205/sp/base-v3.3.0/public/pages/landing.html
Restro
Dashboard
Modules
Offers
Orders
Gallery
Login
Register
Offer
Everyday Something New
You will get New and Amazing Offers.
Special Offer
CUSTOMIZE
Best Cuisines
Review and Feedback
Based on feedback we will suggest you cuisines which will make your special moment more special

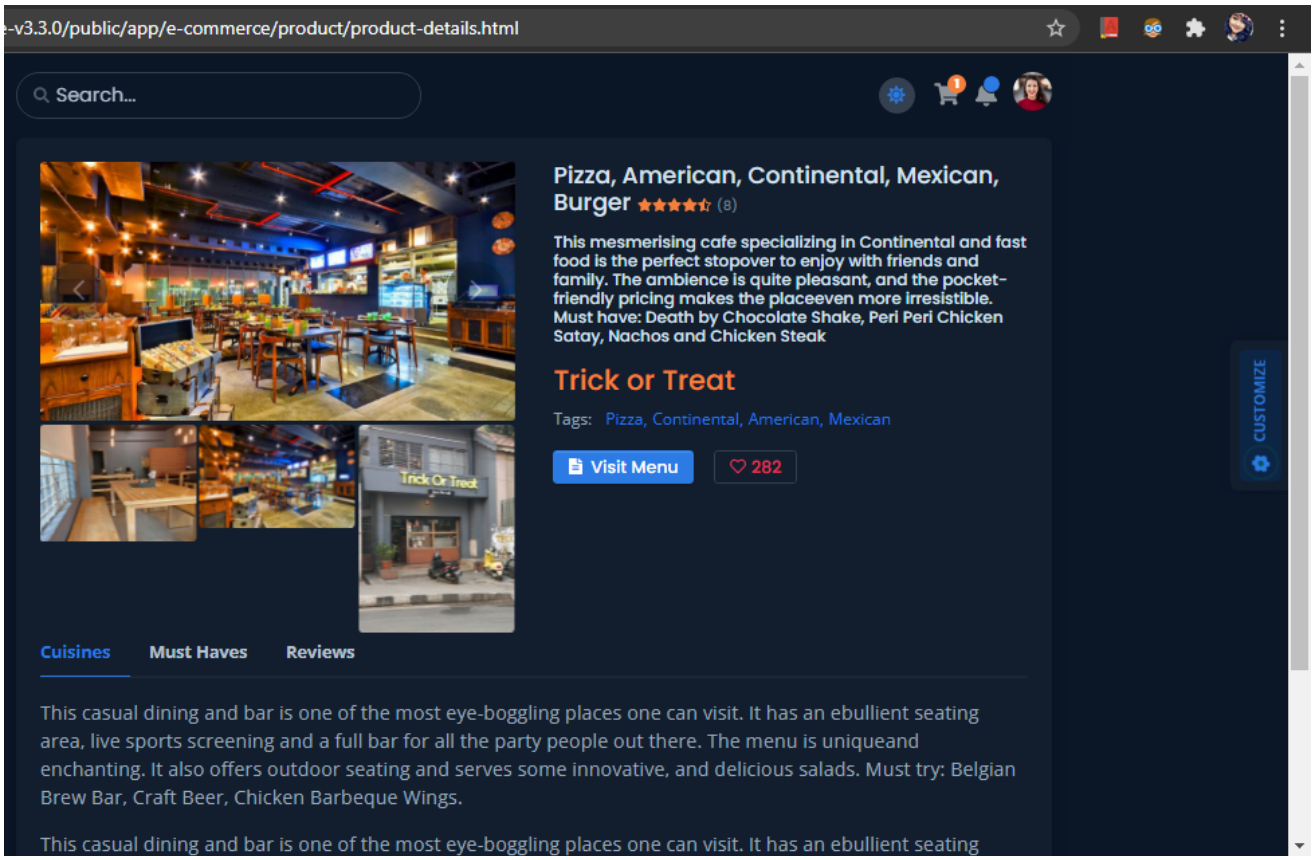

RESTRO
Read our Terms and Conditions
Account Login
Mobile Number
Send OTP

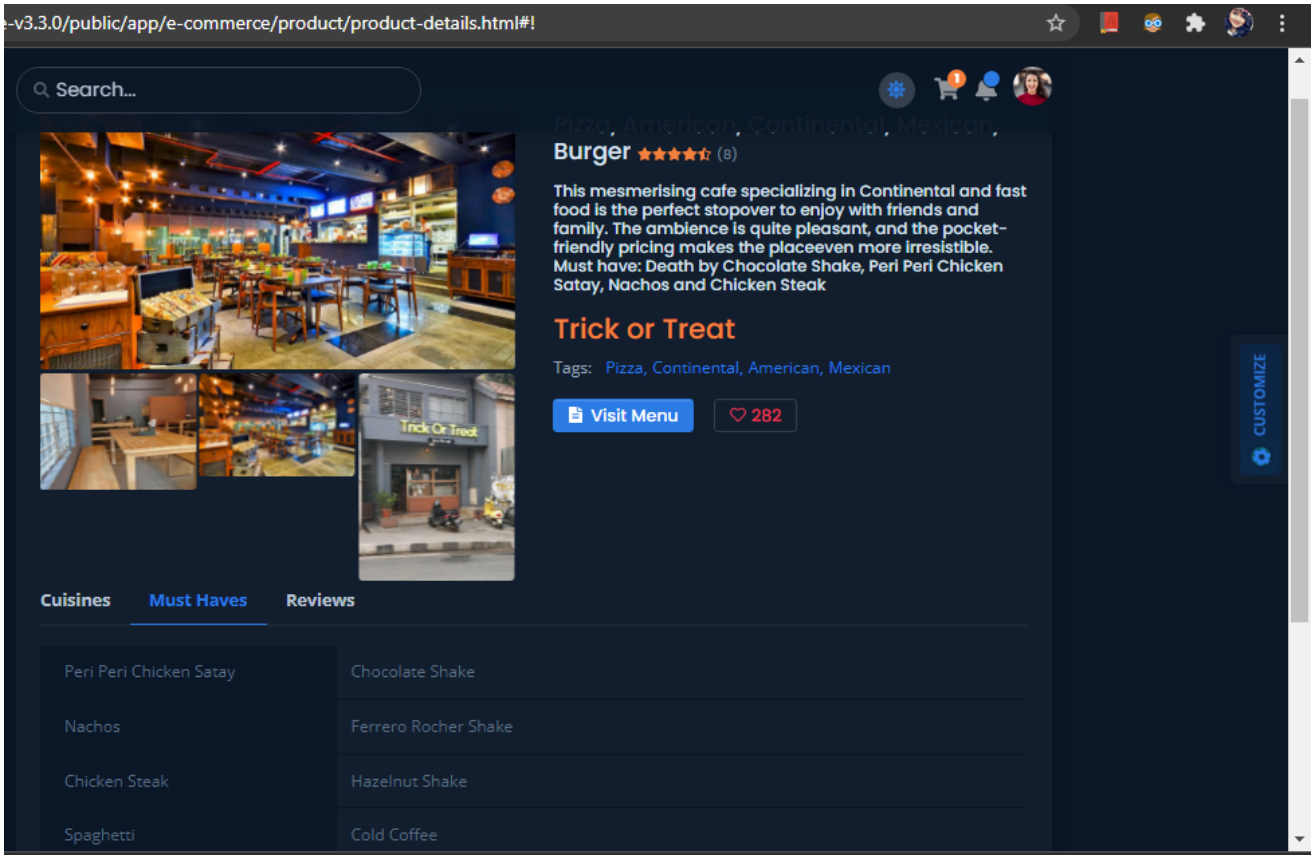

RESTRO
Dashboard
Payments
Statistics
Menu
Kitchen
Delivery Agent
In-House Guests
Home Delivery
Dark Mode
Logout
New Payment
Success 0.0%
₹ 10
Statistics ›
Active 0.0%
₹ 910
See all ›
Total Issued 0.0%
₹ 920
Statistics ›
Business Insights
Orders
765k
Payments
61.8%
$82.18M
Tables
29.4%
28.50%
Customers -0.23%
58.39k
See all›
Orders 0.0%
23.43k
All orders›
Revenue 9.54%
$43,594
Statistics›
Active Users
Emma Watson
Admin
Antony Hopkins
Moderator
Anna Karinina
Editor
John Lee
Gross revenue
Jan
$165.50 5%
Point of sale $791.64 13%
Online Store $113.86 178%
Online Store $0.00 -

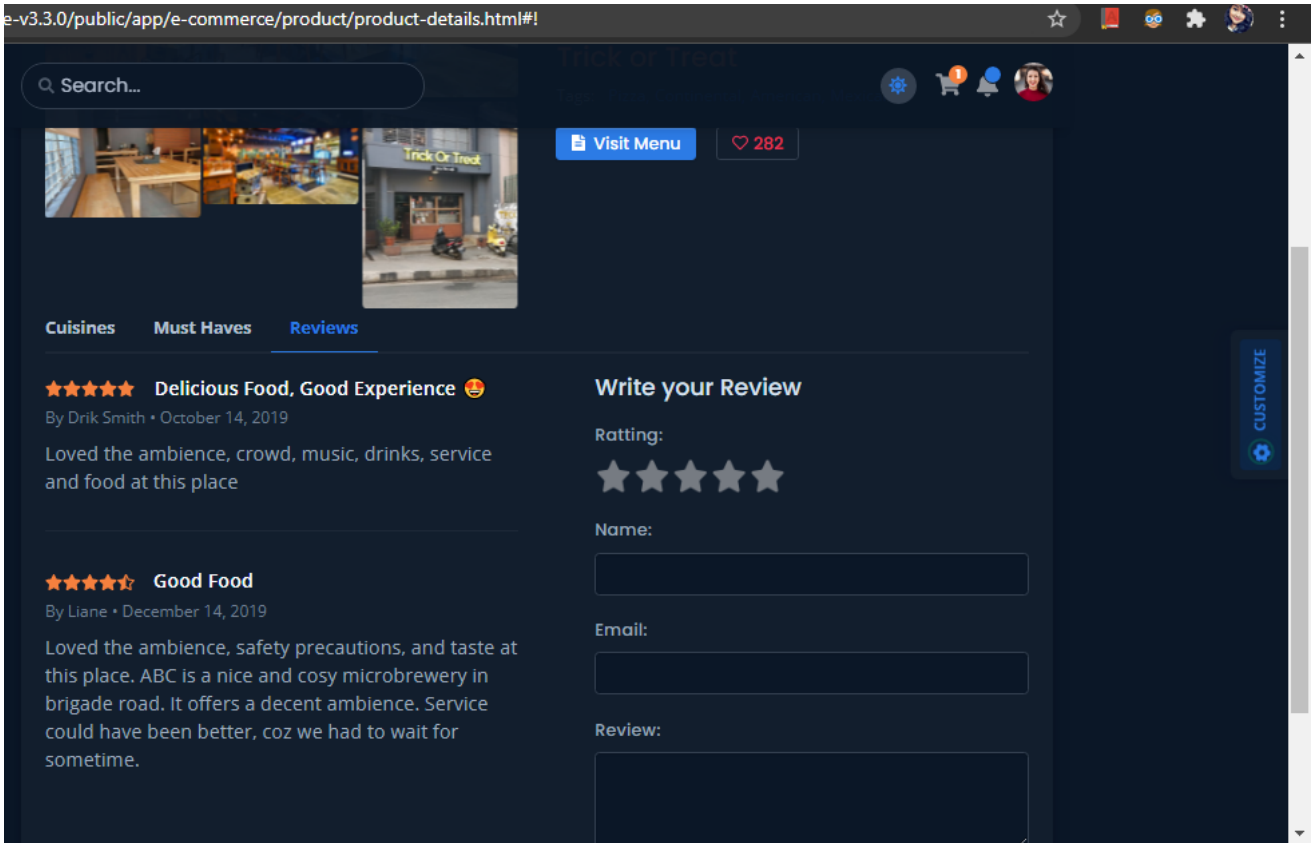

RESTRO
Dashboard
Payments
Statistics
Menu
Kitchen
Delivery Agent
In-House Guests
Home Delivery
Dark Mode
Logout
New Payment
Success 0.0%
₹ 10
Statistics ›
Active 0.0%
₹ 910
See all ›
Total Issued 0.0%
₹ 920
Statistics ›
Payment History
Chandana B R
Please make a payment to Restro Christ
₹ 500.00
9731527122
COPY LINK
ACTIVE
Thu, 21 Oct 2021 9:39 pm
Testing
Please make a payment to Restro Christ
₹ 10.00
7975325049
COPY LINK
PAID
Wed, 20 Oct 2021 12:13 am
TEST
Please make a payment to Restro Christ
₹ 10.00
7975325049
COPY LINK
ACTIVE
Wed, 20 Oct 2021 12:01 am
Chandana
Please make a payment to Restro Christ
₹ 400.00
8310830915
COPY LINK
ACTIVE
Tue, 19 Oct 2021 11:59 pm
Load More
© 2021 | Restro Christ | All Rights Reserved
Privacy Policy · Terms & Conditions


Create New Payment Link
Customer Name*
Jane Doe
Customer Phone*
Customer Email
Optional
Amount*
₹
0000.00
Description*
Please make a payment to Restro Christ
Create Link


-v3.3.0/public/app/e-commerce/product/product-grid.html
Search...
New
Specializes in Salad, Barbecue, Continental, and North Indian cuisines
67 & 68, Brigade Solitarie, Opposite to Advaith Hyundai, Residency Road, Brigade Road, Bangalore
COMMUNITI
(8)
New
Pizza, American, Continental, Mexican, Burger
15 K-1, D Block, St. Patrick's Church Complex, Brigade Road, Bangalore
Trick or Treat
(20)
Continental, Cafe
52, MG Road, Brigade Road, Bangalore
Cafe Azzure
(14)
CUSTOMIZE
New
New


-v3.3.0/public/app/e-commerce/product/product-details.html
Search...
Pizza, American, Continental, Mexican, Burger (8)
This mesmerising cafe specializing in Continental and fast food is the perfect stopover to enjoy with friends and family. The ambience is quite pleasant, and the pocket-friendly pricing makes the placeeven more irresistible. Must have: Death by Chocolate Shake, Peri Peri Chicken Satay, Nachos and Chicken Steak
Trick or Treat
Tags: Pizza, Continental, American, Mexican
Visit Menu
282
CUSTOMIZE
Cuisines
Must Haves
Reviews
This casual dining and bar is one of the most eye-boggling places one can visit. It has an ebullient seating area, live sports screening and a full bar for all the party people out there. The menu is uniqueand enchanting. It also offers outdoor seating and serves some innovative, and delicious salads. Must try: Belgian Brew Bar, Craft Beer, Chicken Barbeque Wings.
This casual dining and bar is one of the most eye-boggling places one can visit. It has an ebullient seating


-v3.3.0/public/app/e-commerce/product/product-details.html#!
Search...
Burger (8)
This mesmerising cafe specializing in Continental and fast food is the perfect stopover to enjoy with friends and family. The ambience is quite pleasant, and the pocket-friendly pricing makes the placeeven more irresistible. Must have: Death by Chocolate Shake, Peri Peri Chicken Satay, Nachos and Chicken Steak
Trick or Treat
Tags: Pizza, Continental, American, Mexican
Visit Menu
282
CUSTOMIZE
Cuisines
Must Haves
Reviews
Peri Peri Chicken Satay
Nachos
Chicken Steak
Spaghetti
Chocolate Shake
Ferrero Rocher Shake
Hazelnut Shake
Cold Coffee


e-v3.3.0/public/app/e-commerce/product/product-details.html#!
Search...
Visit Menu
282
Cuisines
Must Haves
Reviews
Delicious Food, Good Experience
By Drik Smith • October 14, 2019
Loved the ambience, crowd, music, drinks, service and food at this place
Good Food
By Liane • December 14, 2019
Loved the ambience, safety precautions, and taste at this place. ABC is a nice and cosy microbrewery in brigade road. It offers a decent ambience. Service could have been better, coz we had to wait for sometime.
Write your Review
Ratting:
Name:
Email:
Review:
CUSTOMIZE

7. RESULTS AND DISCUSSION

3.1 System Model

In the external interface, only we need to provide an input dataset of the store, in which you want to find out the forecasting/analysis/comparison.

3.2 Functional Requirements

- The system will provide the details about the menu of the restaurant and users can place the order from it.
- They can order in three different ways: in-house guest, home delivery and post order.
- There is no need to remember the email or password. They just must enter your mobile number and an OTP; they will get in that number. They just must paste it in that.
- They can see which table is reserved so that they can select the other one.
- They can pay the amount because Aakash or any payment gateways
- It will suggest the dishes which have good reviews so that it will be easier for the new ones who have no clue which are good, and which are not. This information will be helpful for them.

3.3 Hardware Requirements

- Processor Intel COre i3 8th gen and up or AMD Ryzen 3 3100 and up
- Processor Speed : 1.5 to 3.40 GIL
- RAM : 4 GB and more

8. CONCLUSION

- Our project “Restro - e-menu web app ” is to increase the customer's dining experience by fastening the existing restaurant service
- By using this, we will save time and make it easier for customers to place orders.
- It saves money as there is no need to change the menu anymore.

8.1 Advantages

In the external interface, only we need to provide an input dataset of the store, in which you want to find out the forecasting/analysis/comparison.

8.2 Limitations

- The system will provide the details about the menu of the restaurant and users can place the order from it.
- They can order in three different ways: in-house guest, home delivery and post order.
- There is no need to remember the email or password. They just must enter your mobile number and an OTP; they will get in that number. They just must paste it in that.
- They can see which table is reserved so that they can select the other one.
- They can pay the amount because Aakash or any payment gateways
- It will suggest the dishes which have good reviews so that it will be easier for the new ones who have no clue which are good, and which are not. This information will be helpful for them.

8.3 Future Enhancements

We can add more features as we save their records, like how often they come, what they normally order. On that basis, we can conclude, how many people can come next month, which also helps us while purchasing food in appropriate quantities.

9. REFERENCES

- https://www.ijser.org/researchpaper/IMPLEMENTION-OF-SMART RESTAURANT-WITH-E-MENU-CARD.pdf
- https://www.researchgate.net/publication/343512929_Designing_Electronic_Menu_Applications_for_Restaurant_Businesses
- https://www.technoarete.org/common_abstract/pdf/IJERCSE/v5/i5/Ext_34756.pdf
- http://umpir.ump.edu.my/id/eprint/27068/1/Food%20ordering%20system%20using%20QR.pdf