VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangam", Belgavi-590014

DBMS Mini Project Report on

"CATERING MANAGEMENT SYSTEM"

Submitted to

Visvesvaraya Technological University

In the partial fulfilment of requirements for the award of degree

Bachelor of Engineering

In

INFORMATION SCIENCE AND ENGINEERING

Submitted By

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CERTIFICATE

Certified that the **DBMS Mini Project** entitled **"CATERING MANAGEMENT SYSTEM"** is carried out by Ms.TANUSHREE N [4RA21IS050] and Ms.VEDALAKSHMI T P [4RA20IS056] respectively, a bonafide students of **RAJEEV INSTITUTE OF TECHNOLOGY**, Hassan in partial fulfilment for the award of **BACHELOR OF ENGINEERING** in **INFORMATION SCIENCE AND ENGINEERING** of the Visvesvaraya Technological University, Belagavi during the year 2023-2024. The DBMS mini project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said Degree**.**

Ms. SINDHU JAIN A M	**Dr. ARJUN B C**	**Dr. MAHESH P K**
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DECLARATION

We **TANUSHREE N, VEDALAKSHMI T P** bearing USN **4RA21IS050, 4RA21IS056** students of 5th Sem B.E in **Information Science and Engineering**, **Rajeev Institute of Technology, Hassan**, hereby declare that the work being presented in the dissertation entitled "**CATERING MANAGEMENT SYSTEM** " has been carried out by us under the supervision of guide **Ms. Sindhu Jain A M**, Assistant Professor, Information Science and Engineering, **Rajeev Institute of Technology, Hassan**, as partial fulfilment of requirement for the award of B.E Degree of **Bachelor of Engineering in Information Science and Engineering at Visvesvaraya Technological University, Belagavi** is and authentic record of my own carried out by us during the academic year 2023-2024.

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The satisfaction and euphoria that accompany the successful of any task would be incomplete without the mention of the people who made it possible, whose constant guidance and encouragement crowned our efforts with success.

We would like to profoundly thank our **Management of Rajeev Institute of Technology** & our President **Dr. Rachana Rajeev** for providing such a healthy environment.

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ABSTARCT

The Catering Management System is built on a robust and scalable relational database model, ensuring data integrity and efficient query performance. The system offers a user-friendly interface accessible to both caterers and clients, promoting seamless communication and collaboration. The system focuses on facilitating various aspects of catering management, including order processing, menu customization, inventory management, customer management, and reporting. By implementing the Catering Management System, catering businesses can enhance their operational efficiency, improve client satisfaction, and gain valuable insights into their business processes. This mini-project addresses the unique challenges faced by catering businesses and contributes to their growth and success in a competitive market

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INTRODUCTION

Catering management system is a software application that needs a person to take an order from the customers. This system relies on large numbers of manpower to handle customer reservation, inquiry, ordering food, placing order, reminding dishes. This typical method is kind of wasting of time and energy when there are a lot of customers at that time. Moreover, it may be causing a misunderstanding between the customer and the `person taking the order. However, if there are too many waiters to be hired, it may be waste of resource during nonpeak hour. It also will give an extra-work to the cashier to record all the transaction. There are some early efforts have been made to replace this manual ordering process. However, this system is only replacing paper and pen used by the waiter to take an order. This system requires the customer to make an order through their web-based application. Therefore, the research has been done to develop a system which will give a lot more benefit to both catering owner and customers. The software will improve all the lack from the previous systems. Customer can directly place an orderfrom the system and misunderstanding between customers and waiters can be reduced to minimum. Moreover, it also will improve the data collection since order make by the customer is directly sent to the database. It will reduce time waiting by the customer and catering owner can reduce the expenses on manpower.

The purpose of the Catering Management System is to generate bills and item details to the customer. This system generates a report which will be having details of daily transaction. It maintains the database and also allows adding new employee details and salary calculation of the employee.

The clear understanding of the catering management and its functionality will allow for the correct software to be developed for the end user and will be used for the development of the future stages of the project.

The software to be developed deals with creating a catering management system which will automate the major catering operations such as generating customer order details, billing and keeping track of records of daily transaction.

OBJECTIVES OF THE PROJECT

- Control catering budget & contract: food, beverages & snacks
- Choose & order ingredients.
- Develop Recipes, menu's taking into consideration dietetic advice, patients age, culture, religion & medical condition.
- Prepare food to Quality approved standards
- Deliver food to 'tvards, patients & staff restaurants
- Serve food to patients at ward level (Nurses/ Hostesses)
- Provide snacks
- Maintain & supervise food hygiene at all times.
- Consider development of patient restaurants or other novel food delivery / outlets.
- Control cost & monitor waste
- Audit &develop service delivery

CHAPTER 3

LITERATURE SURVEY

The uniqueness of our system is that the user can order minimum three days in advance. The user will have to pay the cheque when the order is delivered to the user/customer i.e. (COD). As MR. Bill Gates once said “Your most unhappy customers are your greatest source of learning.” we have a feedback page where the user can give their reviews on our service or the food. The can also give us suggestions to improve our service. This is about The Development of Self-service Catering Ordering System. The manual/old type of catering ordering system relies on a lot of manpower to handle all the process from taking order from customers, placing order. Therefore, this system/ software is developed to reduce the number of manpower in orderjing task and at the same time reduce the monthly cost for the Catering. Customer/user can place their order through the system and directly stored to the database. The system/software is designed using Microsoft Visual Studio 2008 and Microsoft Office Access 2007 to give a better solution for the manual/old system.This presents an automatic checkout and healthy dietcatering system based on loT (Internet of things) technique. By utilizing a new type dishware which embedded RFID tag, the system can mark the diet with IS014443A air protocol and bind it to the consumer. The automatic checkout feature, it can save labor costs for the catering company and cut down the customers/users' waiting time to improve the service quality. And to the customer/user, by the utilization of simulated annealing algorithm, the system can provide consumer with healthy dietary guidance and the explicit dinner records for customers to manage daily diet.

CHAPTER 4

SYSTEM ANALYSIS

A system is an orderly group of interdependent components linked together according to a plan to achieve specific objective. Its main characteristics are organization, interaction, interdependence, integration and a central objective.

System analysis and design are the application of the system approach to problem solving generally using computer. To reconstruct a system that analyst must consider its elements output and inputs, processors, controls feedback and environment. Analysis is a detailed study of the various operations performed by a system and their relationships within and outside of system. One aspect of analysis is defining the boundaries of the system and determining whether or not a candidate system should consider.

3.1 EXISTING SYSTEM

Existing system needs large number of people to handle customer reservations and also takes more time. Sometimes it may leads to conflicts between the customer and the person taking the order.

DISADVANTAGES:

- System relies on large numbers of manpower to handle customer reservation, inquiry, ordering food, placing order, reminding dishes.
- This typical method is kind of wasting of time and energy when there are a lot of customers at that time.
- Moreover, it may be causing a misunderstanding between the customer and the person taking the order.
- However, if there are too many waiters to be hired, it may be waste of resource during This nonpeak hour.
- It also will give an extra-work to the cashier to record all the transaction.
- There are some early efforts have been made to replace this manual ordering process.

- However, this system is only replacing paper and pen used by the waiter to take an order.

3.2 PROPOSED SYSTEM

Proposed system have some solutions to the above problems. Through this system the customers can directly order whatever they want through the browser and it also reduces the waiting time of the customers for their order delivery.

ADVANTAGES:

- This system requires the customer to make an order through their web-based application.
- Therefore, the research has been done to develop a system which will give a lot more benefit to both catering owner and customers.
- The software will improve all the lack from the previous systems.
- Customer can directly place an order from the system and misunderstanding between customers and waiters can be reduced to minimum.
- Moreover, it also will improve the data collection since order make by the customer is directly sent to the database.
- It will reduce time waiting by the customer and catering owner can reduce the expenses on manpower.

CHAPTER 4

SYSTEM REQUIREMENT SPECIFICATIONS

A System Requirements specification is finished depiction of the conduct of structure to be made. It interwise a strategy of utilization cases that portray every one of the join endeavors the client will have with the product. In spite of utilization cases, the SRS in like way contains nonfunctional necessities.

Non practical prerequisites are essential which drive destinations on the format or execution, occurrence, capability tuning necessities, quality norms, or of course of action requirements prerequisites analysis in systems illustrating and programming building, fuses those attempts that go into picking the necessities or conditions to meet for another or changed thing making note of potentially clashing essentials of the differing assistants for occurrence, recipients or clients prerequisites examination

4.1 Hardware Requirements

- Processor : Intel core i3
- RAM : 8GB (minimum)
- Hard disk : 1TB
- Input device : Mouse and Keyboard
- Output device : Monitor

4.2 Software Requirement:

- Front End : PHP
- Back End : MySQL
- Operating System : Windows 10
- Browser : Google chrome

CHAPTER 5:

5.1 SYSTEM ARCHITECTURE

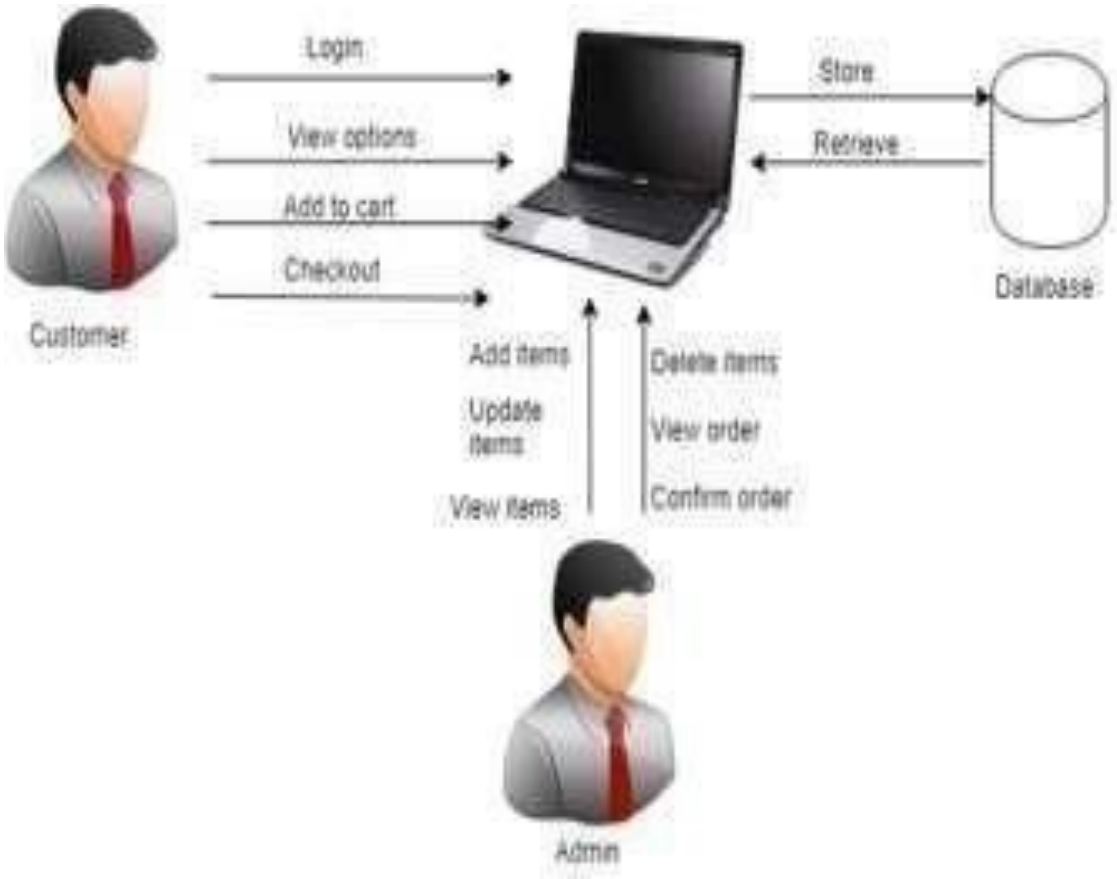


Fig 5.1: SYSTEM ARCHITECTURE

Database: It will contain all the details of registered users, all the categories of food items, items details like:-Item Id, Item Name, Item Price, Item Quantity. Then order details that has been placed by the user will be displayed to Admin.

The admin will able to view the session ID, registered user id, date of order, time of order, item name, item price, item quantity, whether the order is according to per plate or per kg, item image and order status i.e. whether the order is delivered or in the queue to be delivered. The Cart Details will also be stored in the database once the userclick on Add to Cart to see the menu. In which the menu will contain different categories of food. In which he can select different food items according to his requirement.

Menu page will contain different categories that includes Veg, Non-Veg, Jain, Deserts etc. If user want to view veg items he can select the veg category in which he can view all the veg items that are included in the veg category. Similarly, for Non-veg and Jain. When user click on the item he want,to order he will be able to see two options i.e. Per Plate OR Per Kg (Price of both will be specified along with the option). The user can also increase or decrease the item's quantity and the price will change dynamically according to the quantity. After selecting the quantity, the user will click on add to cart. When user want to checkout he can click the view cart option where he will be redirected to the Cart Page. In the Cart he can confirm his order by checking the order details and can also update the cart by removing the items he doesn't want. After checking all the details, he can proceed to checkout where his order will be confirmed and SMS will be send to the registered mobile number along with email on the registered email-id. The payment will be Cash On Delivery Once user will logout he will be redirected to Home page and will be in Guest Mode.

Admin Module: If the admin has already register he can SignIn directly by entering his registered email id and password; if not then he will be redirected to the register page from where he can register himself and view all the order details. Once theadmin has login in to the system he can view various options like Add item, View item,

Update Item, Confirm Order, View Order Status, etc. When the user enters in the Add Item page he can add items by entering the item type i.e. whether it veg, non veg, etc. and item's name and price. Then in the view item page the admin can see all the item listalong with their details i.e. price, name, where he can update the price of the items or delete or add new items in the list. And in the View Order Page he can view all the orders that has been placed by the customer, in this page the admin will be able to see the order details like at what time the order was placed, and when is the delivery date, along with that the admin can view the order status in which he can make a glance of which orders are pending to be delivered. When the admin has finished by checking all the orders or updating items he can logout out of the system by clicking on logout button. We have alsomade About us page where the guest can read about the Company's policy or details likeaddress, phone number, email-id, etc. There is a Contact us page (feedback page) where the user can complaint, give feedbacks, or ask about any query by mailing us on the givenMail-id.

5.2 ER DIAGRAM

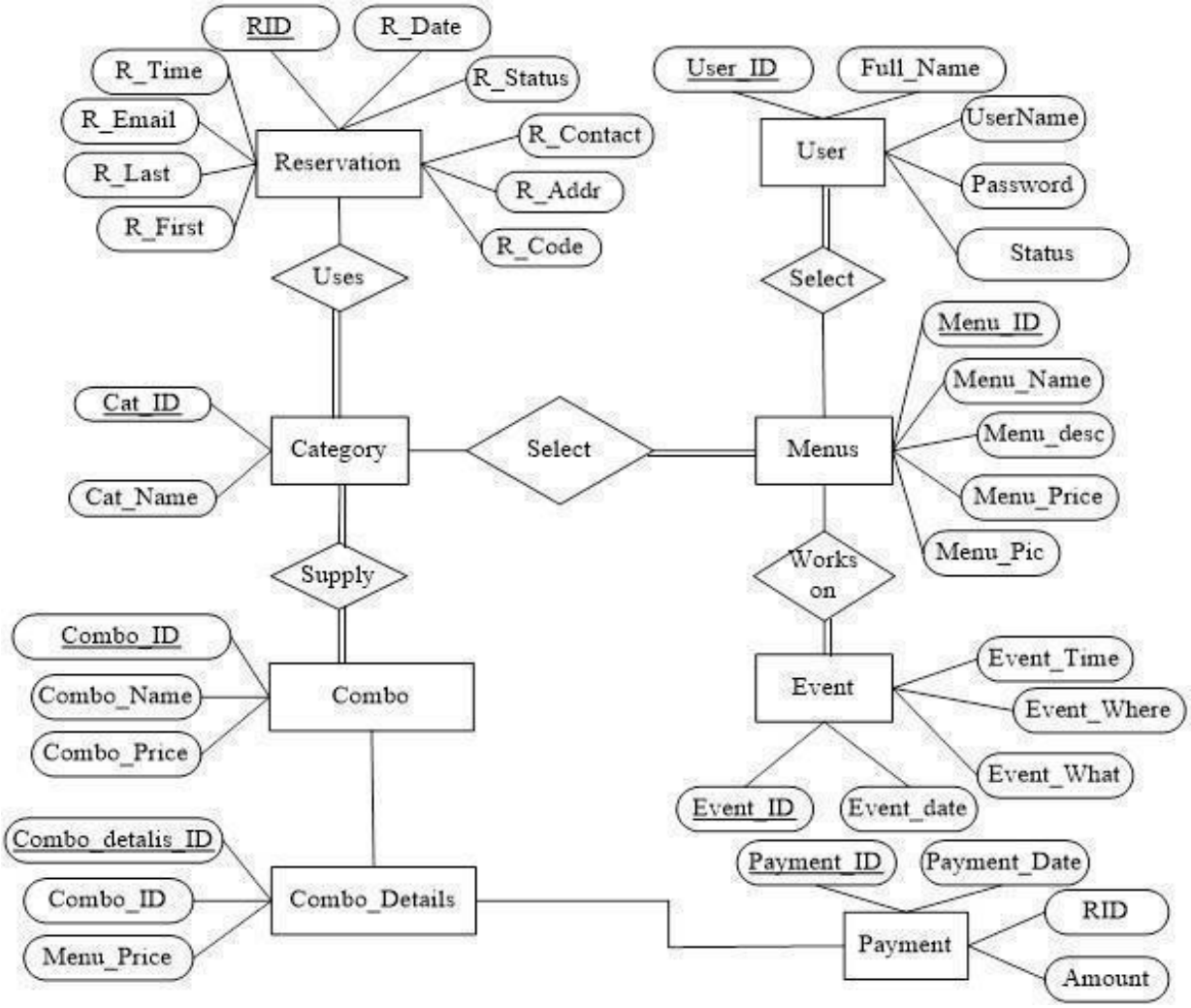


Fig 5.2: ER Diagram

The Fig 5.2 represents relational entity diagram with entities Reservation, Category, Combo, Combo_ Details, User, Menus, Event, Payment.

5.3 SCHEMA DIAGRAM

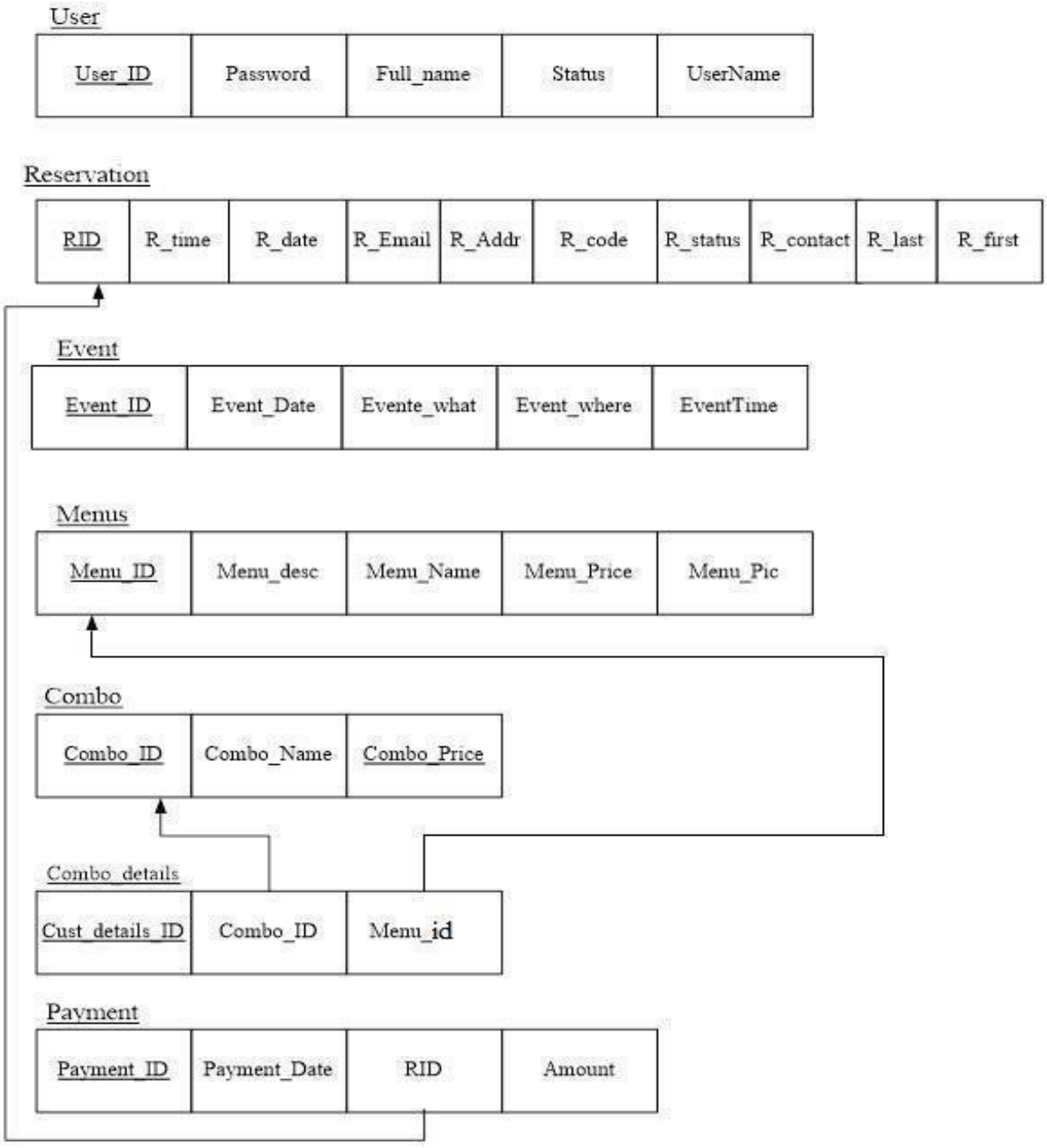


Fig. 5.3:Schema diagram

The Fig. 5.3 shows schema diagram, which shows the logical constraint, defines its entities and relationship among them.

CHAPTER 6

IMPLEMENTATION

Table 6.1: User Table

Column name	Data type and size	Constraint	Description
User Id	int (11)	Primary key	It uniquely identifies theuser
Password	varchar (15)		User's password
Full Name	varchar (15)		User's full name
User Name	varchar (15)		Represent s user name
Status	varchar (10)		user's status

Table 6.2: Reservation Table

Column name	Datatype and size	Constraint	Description
RID	int (11)	Primary key	It uniquely identifies the reservation
R_time	time		reservation time
R date	date		reservation date
R_ email	varchar (50)		reservation email
R_ address	varchar (100)		reservation address
R_ code	varchar (10)		reservation code
R_ status	varchar (10)		reservation status
R_ contact	varchar (30)		reservation contact
R_ last	varchar (30)		reservation last name
R_ first	varchar (30)		reservation first name

Table 6.3: Event Table

Column name	Datatype and size	Constraint	Description
Event_id	int (11)	Primarykey	It uniquely identifies the event
Event_date	date		Represents event date
Event_what	varchar(500)		Represents event theme or motif
Event_where	varchar(100)		Represents event location
Event_ time	time		Represents event time

Table 6.4: Menus Table

Column name	Datatype and size	Constraint	Description
Menu_ id	int (11)	Primary key	It uniquely identifies the menus
Menu_ desc	varchar (100)		Menu description
Menu_name	varchar (50)		Menu item names
Menu_price	decimal (10,2)		Menu item price
Menu_pic	varchar(10)		Menu item picture

Table 6.5: Combo Table

Column name	Datatype and size	Constraint	Description
Combo_ id	int (11)	Primarykey	It uniquely identifies the combo
Combo_name	varchar(100)		combo name
Combo_price	decimal(10,2)		combo price

Table 6.6: Combo Details Table

Column name	Datatype and size	Constraint	Description
Combo_details_id	int (11)		It unique identifies the combo details
Combo_ id	int (11)	Foreign key	It refers combo_ id(combo)
Menu_ id	int (11)	Foreign key	It refers menu_ id(menus)

Table 6.7: Payment Table

Column name	Datatype and size	Constraint	Description
Payment_ id	int (11)	Primary key	It uniquely identifies the payment
Payment_ date	date		payment date
Rid	int (11)	Foreign key	It refers rid(reservation)
Amount	int (11)		payment amount

CHAPTER 7
TESTING

Testing is a dynamic technique of verification and validation. It involves executing an implementation of the software with test data and examining the outputs of the software and its operational behavior to check that it is performing as required.

The following statements serve as the objectives for testing:

- Testing is a process of executing a program with the intent of finding error
- A good test case is one that has a high probability of finding an as-yet undiscovered error.
- A successful test is one that uncovers as-yet undiscovered error.

Verification and validations are intended to show that a system confirms to its specification and that the system meets the expectations of the customer. Verification involves checking that the software confirms to its specification. We should check that the system meets its specified functional and non-functional requirements. Validation ensures that the system to itsspecification to showing that the software does what the customer expects as distinct from what has been specified.

The testing process should proceed in stages where testing is carried out incrementally in conjunction with system implementation. finally, the system is tested with the customer's data. The stages are as follows:

7.1 Types of Testing

There are many types of testing, each test type addresses a specific testing requirement.

Some of the testing types are listed below:

- Functional Testing

1. Unit Testing

2. Integration Testing

3. System Testing

• Non-Functional Testing

1. Security Testing

2. Performance Testing

3. Usability Testing

4. Reliability Testing

7.1.1 Functional Testing

Functional testing is a software testing process used within software development in which software is tested to ensure that it conforms with all requirements.

Unit Testing

This type of testing is performed by developers before the setup is handed over to the testing team to formally execute the test cases. Unit testing is performed by the respective developers on the individual units of source code assigned areas The developers use test data that is different from the test data of the quality assurance team.

The goal of unit testing is to isolate each part of the program and show that individual parts are correct in terms of requirements and functionality.

Integration Testing

Integration testing is defined as the testing of combined parts of an application to determine if they function correctly. Integration testing can be done in two ways:

- Bottom-up integration

This testing begins with unit testing, followed by tests of progressively higher-level combinationsof units called modules or builds.

- Top-down integration

In this testing, the highest - level modules are tested first and progressively, lower level modules are tested thereafter.

System Testing

System testing tests the system as a whole. Once all the components are integrated, the application as a whole is tested rigorously to see that it meets the specified Quality Standards.

This type of testing is performed by a specialized testing team.

System testing is important because of the following reasons:

- System testing is the first step in the Software Development Life Cycle, where the application is tested as a whole.
- The application is tested thoroughly to verify that it meets the functional and technical Specifications.
- The application is tested in an environment that is very close to the production environment where the application will be deployed.
- System testing enables us to test, verify, and validate both the business requirements as well as the application architecture.

7.1.2 Non-Functional Testing

Non-Functional testing is the testing of a software application or system for its nonfunctional requirements, the way a system operates, rather than specific behaviors of that system.

Security Testing

This testing is used where unauthorized attempts to operate the software, or parts of it, attempted it might also include attempts to obtain access the data, or harm the software installation or even the system software. As with all types of security determined will be able to obtain unauthorized access and the best that can be achieved is to make this process as difficult as possible.

Performance Testing

This testing is used where the performance requirements, if any, are checked. These may include the size of the software when installed, type amount of main memory and/or secondary storage it requires and the demands made of the operating when running with normal limits or the response time.

Usability Testing

The process of usability measurement was introduced in the previous chapter. Even if usability prototypes have been tested whilst the application was constructed, a validation test of the finished product will always be required.

Reliability Testing

This testing is used to verify that the software is capable of performing a failure operation

for a specified period of time in a specified environment. Reliability testing in software assures that product is fault free and is reliable for its intended purpose.

Chapter 8

RESULTS

HOME PAGE: The below figure shows the home of catering management system where customers can make their reservations.

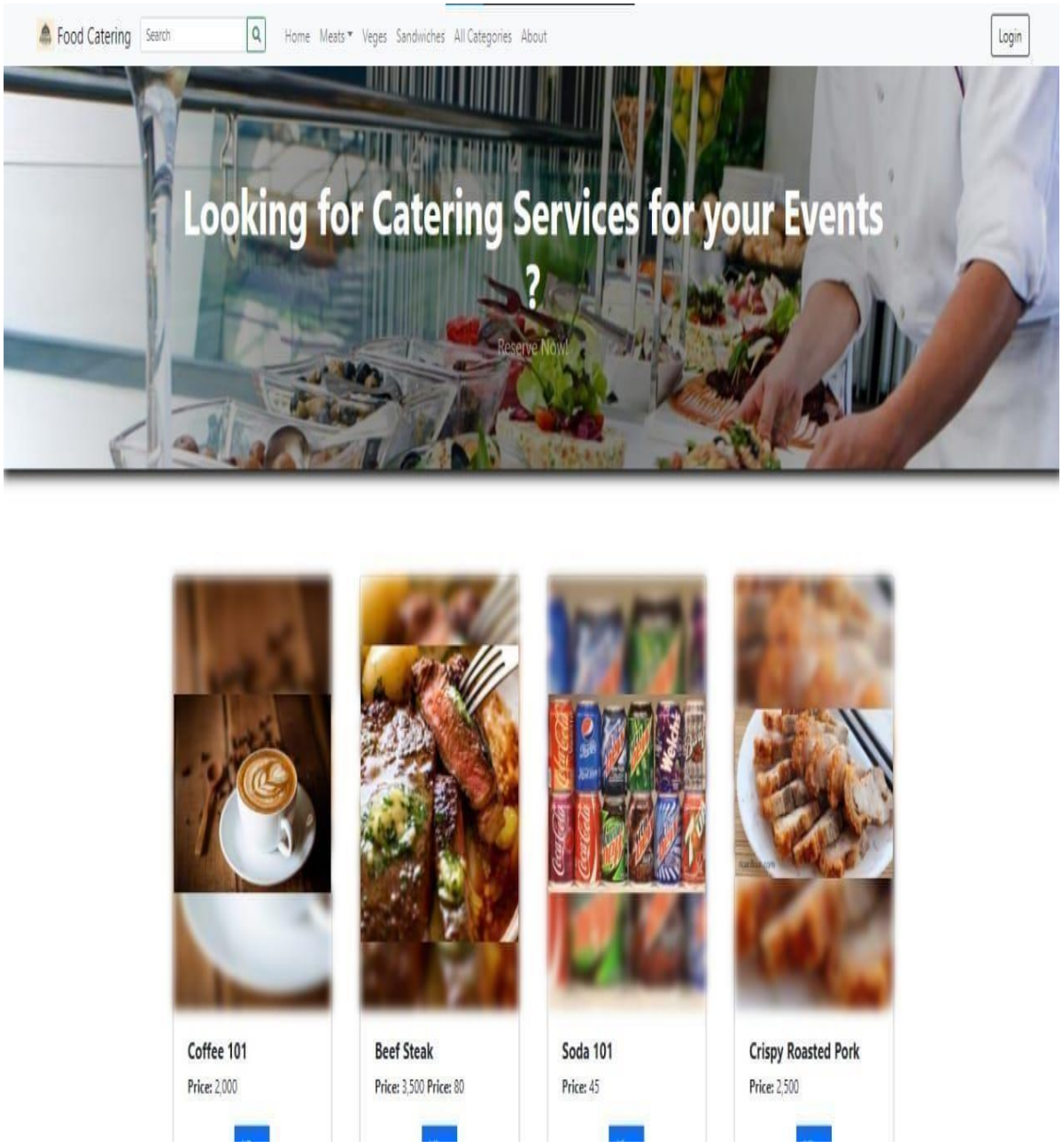


Fig 8.1 Home Page

ADMIN LOGIN: The below figure is the Admin login page. Where only Admins can access it.

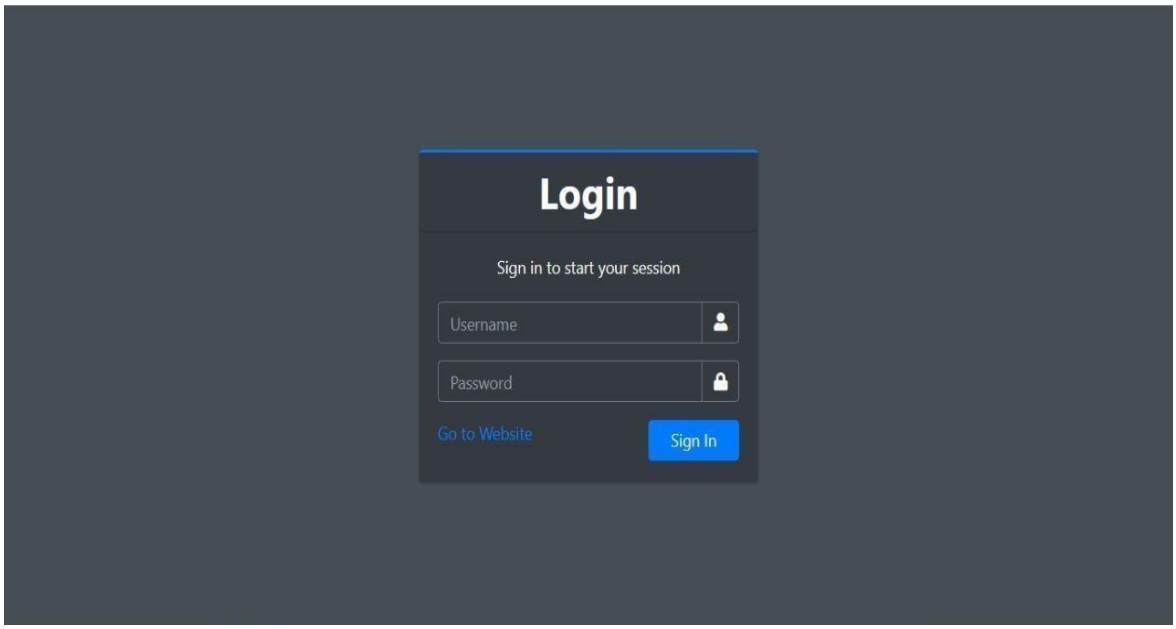


Fig 8.2 Admin Login Page

ADMIN PAGE: The below figure shows the Admin Dashboard page.

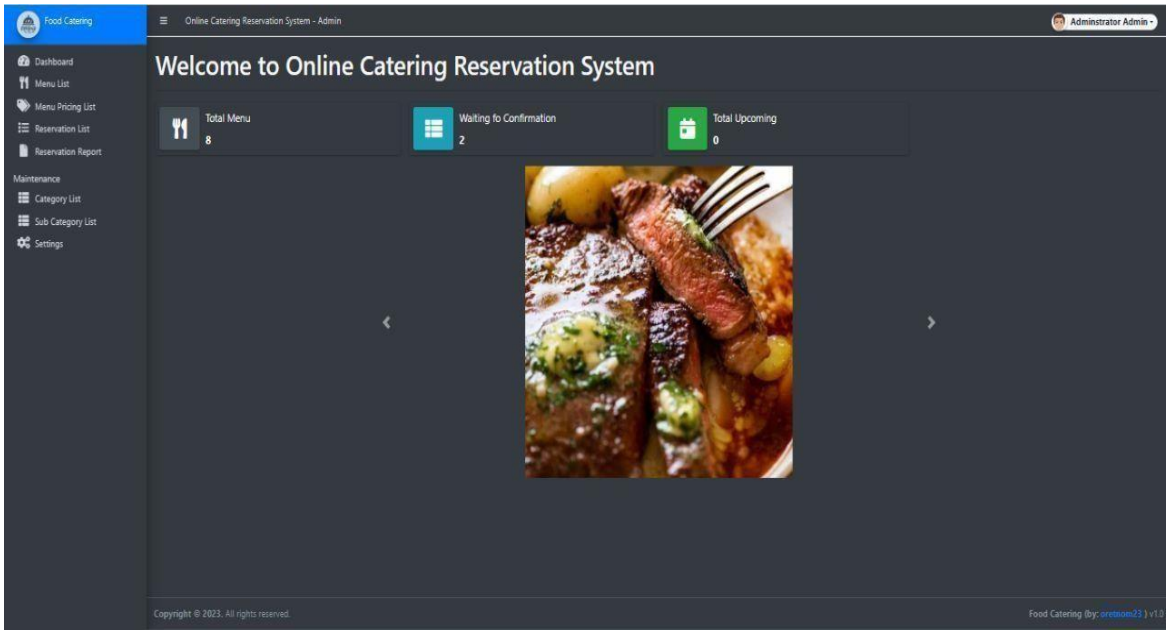


Fig 8.3 Admin Page

CUSTOMER PAGE: The below figure shows Customer page which allows customers to make reservations.

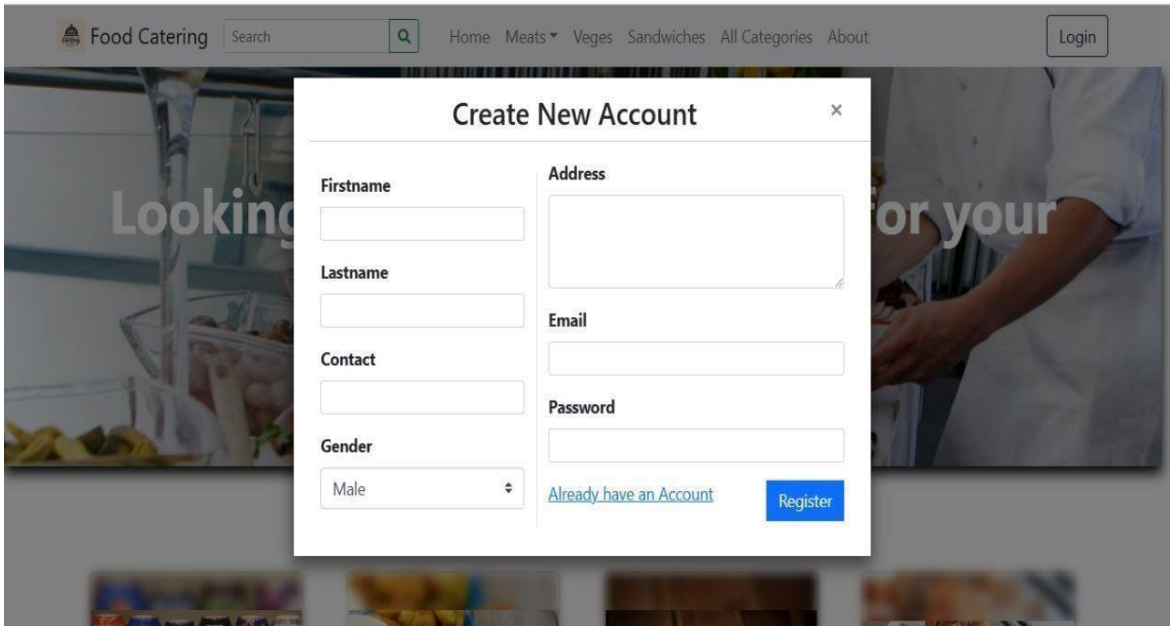


Fig 8.4 Customer Page

CATEGORY PAGE: The below figure shows the Category page. Category page contains the different categories of food.

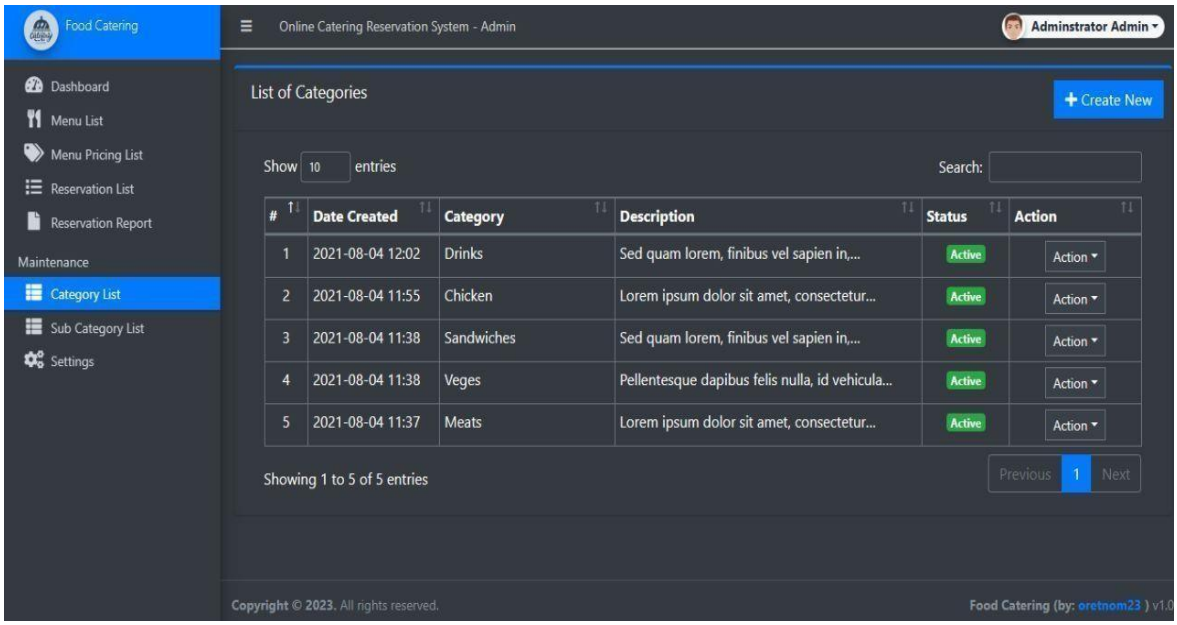


Fig 8.5 Category Page

SUBCATEGORY PAGE : The below figure shows the Subcategory page. That contains various subcategories of food.

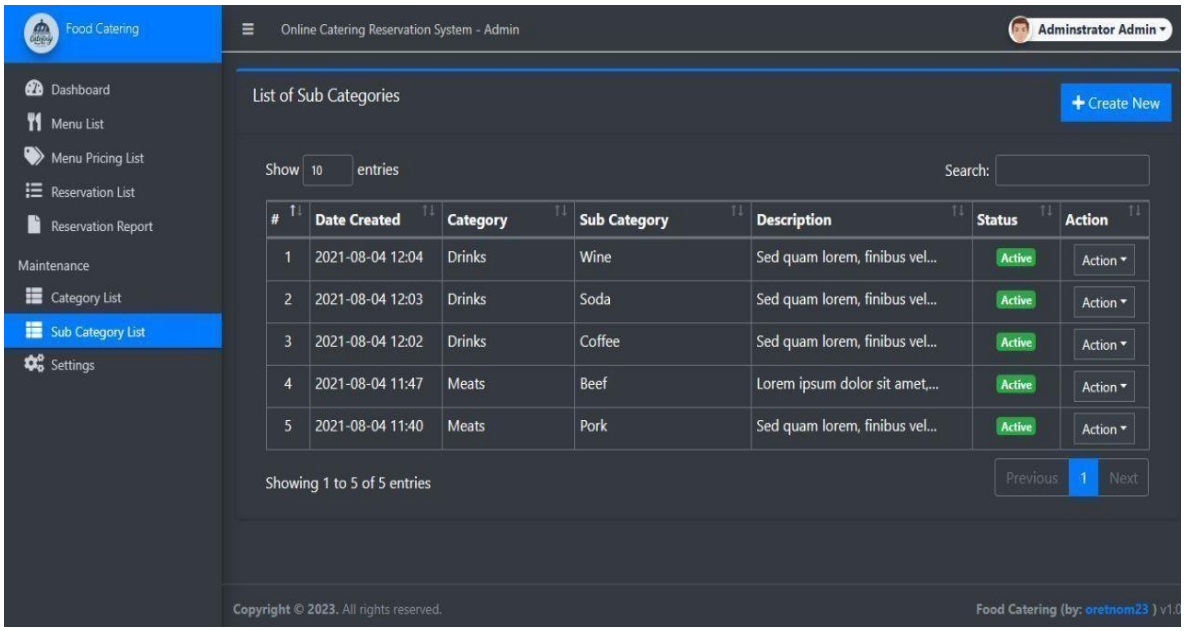


Fig8.6 Subcategory Page

MENU PAGE: The below figure shows the menu page. Menu page shows the food items.

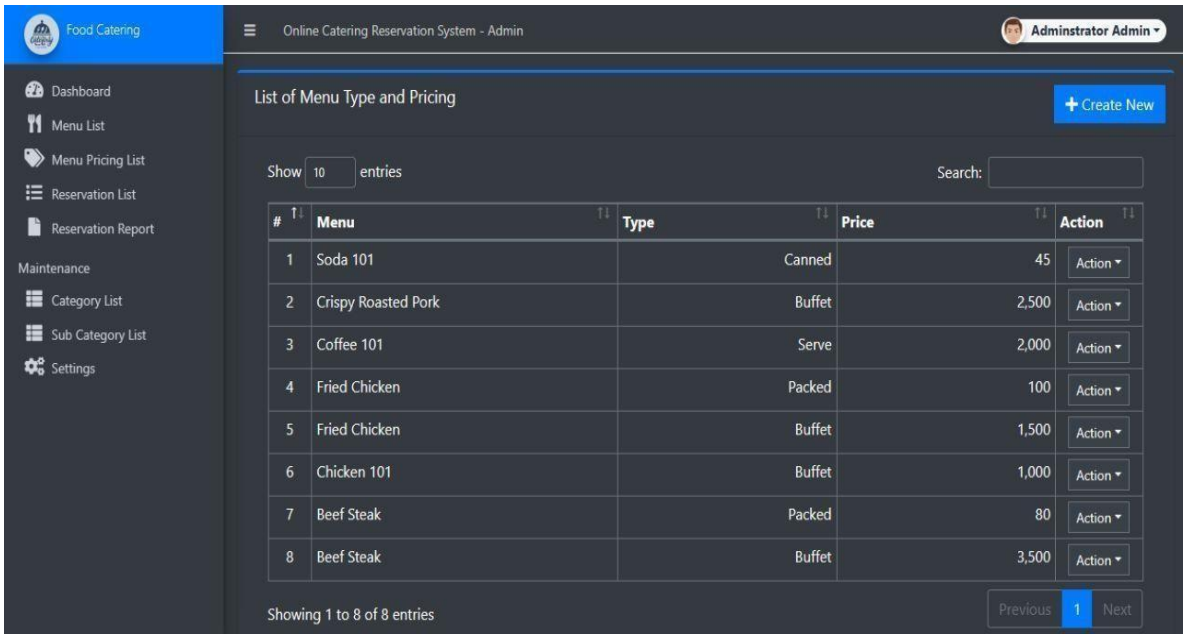


Fig8.7 Menu Page

APPROVED RESERVATION: The below figure shows the Approved reservations page. The reservations which are approved are shown here.

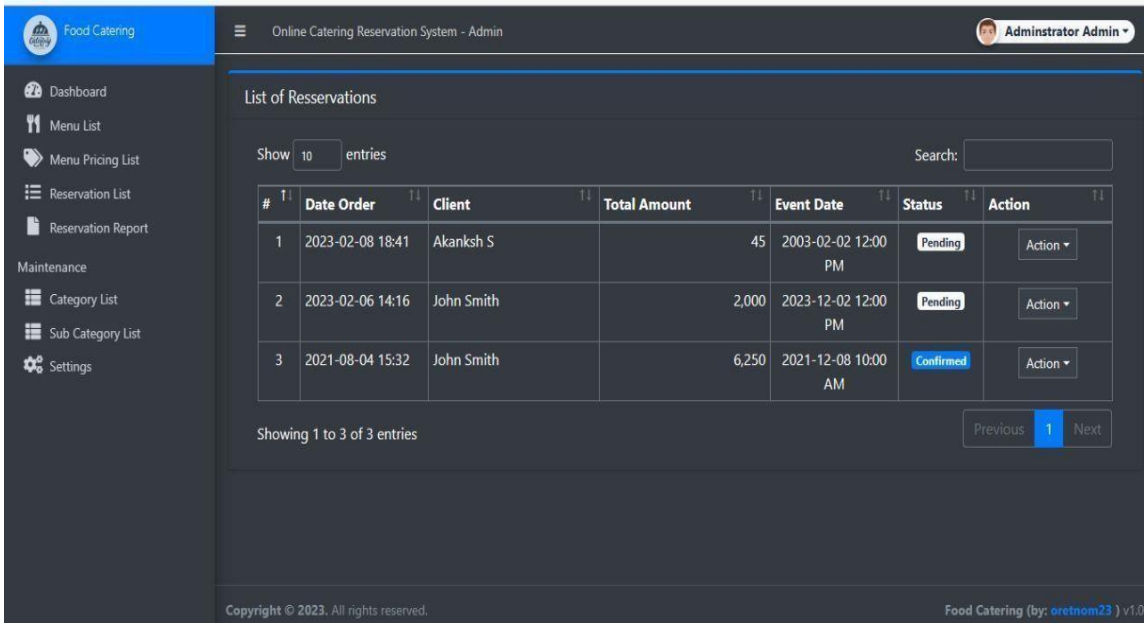


Fig 8.8 Approved Reservation

EVENTS PAGE: The below figure shows the Events page

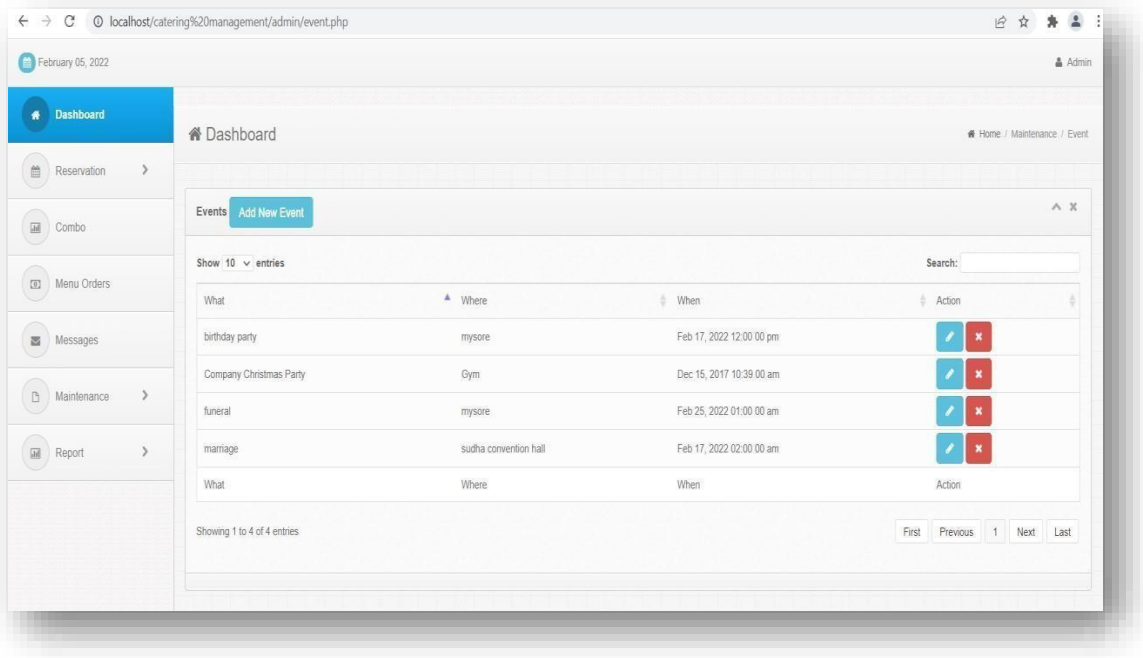
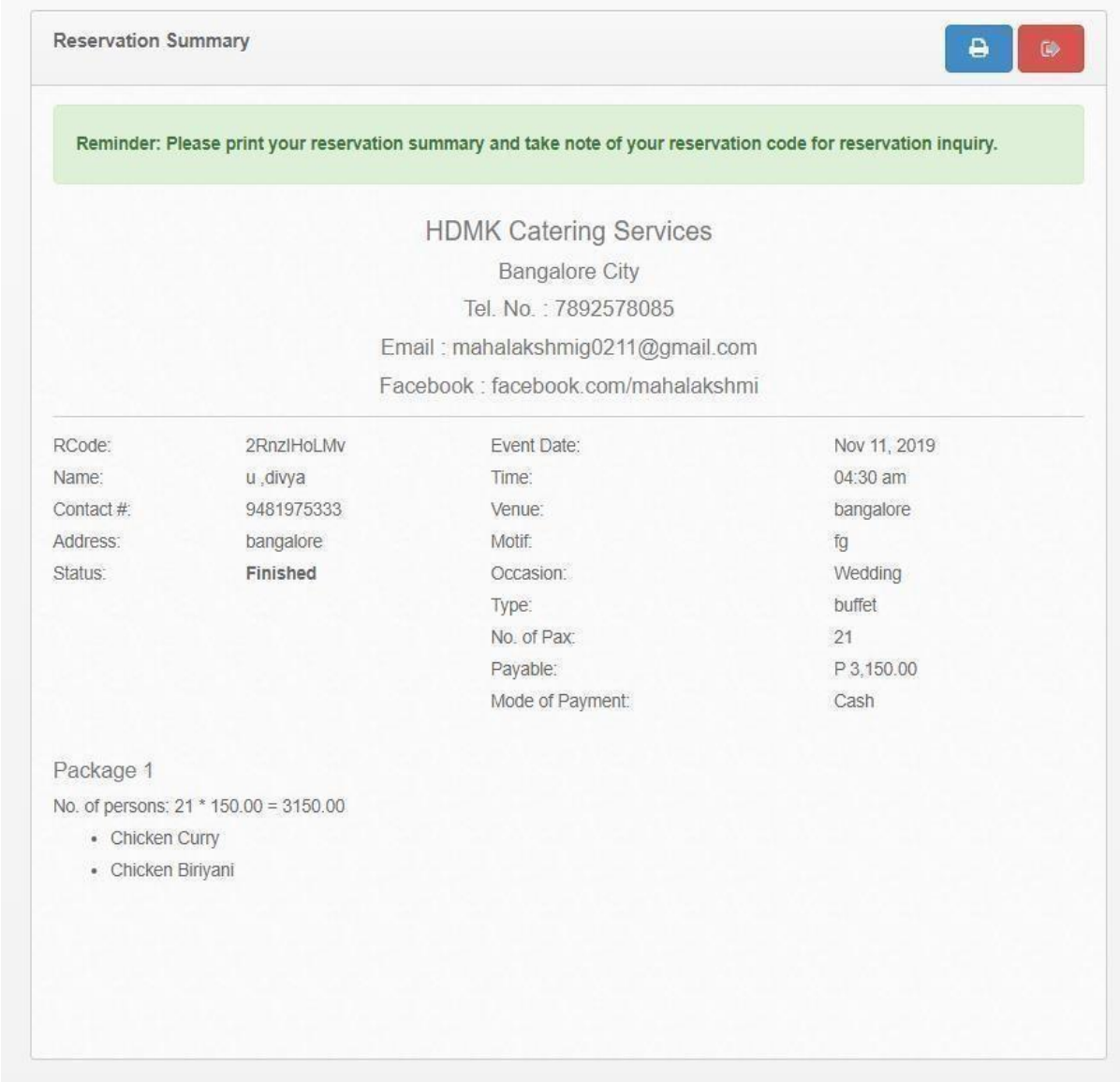


Fig 8.9 Events Page

RESERVATION STATUS PAGE:



The below figure shows the reservation status page.

Fig 8.10 Reservation Status Page

CONCLUSION

The system that has been presented is mainly used in largescale catering enterprise, such as wedding and parties. The system is committed to provide consumers with a healthy and dietary nutrition. As for catering enterprises, it provides an automatic ordering food and checkout to cut down costs of labour, and still can provide a transparent management, sold out meal statistics. So, the system can reduce the unsalable food to improve the catering enterprises profit. .

Implementing a catering management system can lead to significant improvements in operational efficiency, cost reduction, and increased customer satisfaction. By automating many manual tasks and providing real-time data and insights, catering managers can make informed decisions, reduce errors, and optimize their resources.

Additionally, a catering management system can help catering businesses stay competitive in a rapidly evolving market, where customer expectations and preferences are constantly changing. By providing a seamless customer experience and meeting the demands of diverse clientele, catering businesses can attract and retain customers, increase revenue, and expand their operations.

In conclusion, a catering management system is an essential tool for any catering business looking to streamline their operations, improve efficiency, and deliver exceptional customer service. Its benefits include improved productivity, increased profitability, and a competitive advantage in the market

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