# CHAPTER 1

# INTRODUCTION TO CATERING MANAGEMENT SYSTEM

## 1.1 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 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. 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. Catering management involves several key functions, such as menu planning, staff management, budgeting, and ensuring quality control, all of which are crucial for delivering an excellent dining experience.

## 1.2 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 towards, 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

## 1.3 EXPECTED OUTCOMES

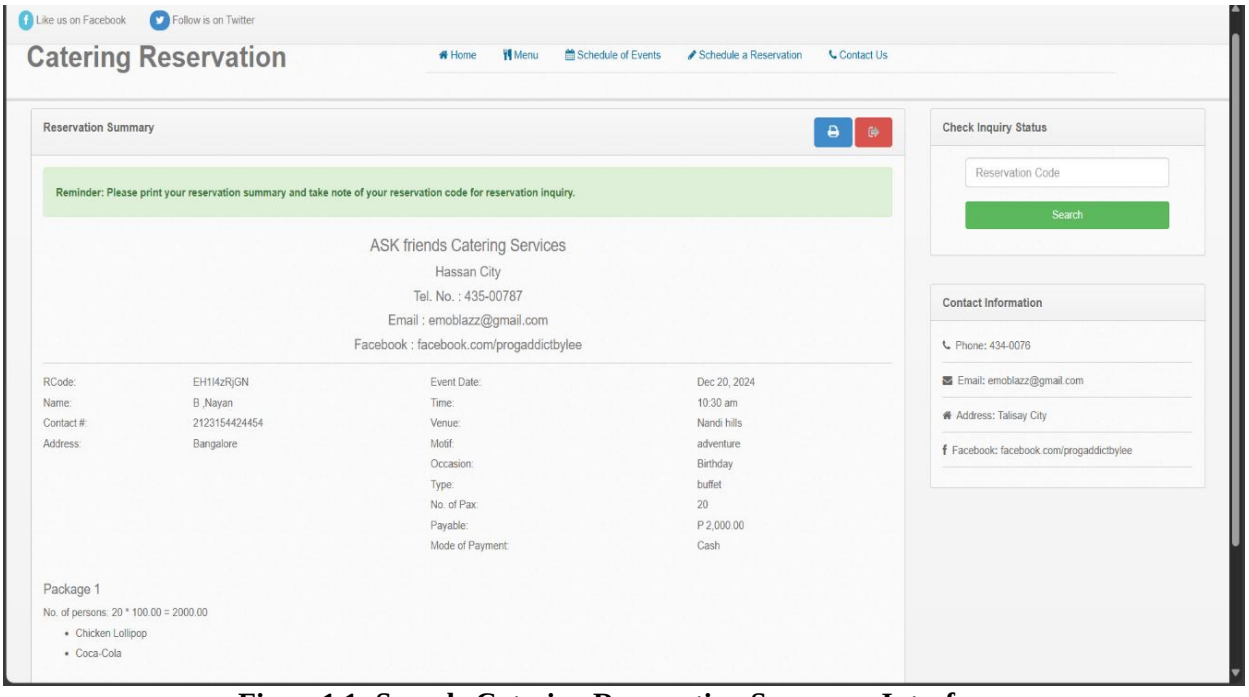



**Figure1.1: Sample Catering Reservation Summary Interface**

# CHAPTER 2

## LITERATURE SURVEY

| SI.NO | AUTHORS | DESCRIPTIVE | INFERENCE |
|---|---|---|---|
| **1** | M. Z. H. Noor, A. A, A, Rahman, M. F. Saaid, M. S. A. M. Ali, M. Zolkapli [2012] | The authors focused on optimizing catering management systems and methodologies. | The study highlights the importance of resource optimization and operational efficiency in catering management. |
| **2** | Lei Zhoui, Aichuan Wang, Yongxiang Zhang, Suodong Sun [2015] | Explored technological advancements in catering management and their impact on operational efficiency. | The study suggests that modern technologies can improve scalability and enhance user experience in catering services. |
| **3** | Karan Kaushal, Khushboo Yadav, Vidhu Vaibhav, Chakshu Sharma, Love Gupta, Tanu Tripathy [2016] | Highlighted sustainable practices in catering management, such as reducing food waste and adopting eco-friendly solutions. | The study emphasizes the significance of sustainability as a critical factor in catering operations. |
| **4** | V. Swapna, M. Firdouse Ali Khan [2012] | Proposed a digital ordering system for restaurants to enhance service accuracy and minimize errors. | The study demonstrates the effectiveness of digital systems in improving operational processes within catering management. |
| **5** | N. A. Samsudin, et al. [2011] | Introduce a wireless food ordering system that incorporates real-time customer feedback. | The study highlights the importance of real-time feedback in enhancing service quality and customer satisfaction. |

# CHAPTER 3

# SYSTEM ANALYSIS AND DESIGN

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.

## 3.1 EXISISTING SYSTEM

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

**DISADVANTAGES:**

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

## 3.2 PROPOSED SYSTEM

The proposed Catering Management System aims to streamline operations by integrating key functionalities such as real-time order tracking, customized menu creation, efficient inventory management, and automated billing, ultimately enhancing operational efficiency, improving client satisfaction, and supporting data-driven decision-making

Proposed system has 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 interwire 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:

4.1.1 Processor : Intel core i3

4.1.2 RAM : 8GB(minimum)

4.1.3 Hard disk :1TB

4.1.4 Input device : Mouse and Keyboard

4.1.5 Output device : Monitor

## 4.2 Software Requirement:

4.2.1 Front End : PHP

4.2.2 Back End : MySQL

4.2.3 Operating System : Windows 10

4.2.4 Browser : Google chrome

# CHAPTER 5:

## SYSTEM ARCHITECTURE


**Figure 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 user clicks 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 wants, 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 check out, he can click the view cart option where he will be redirected to the Cart Page.

After checking all the details, he can proceed to checkout where his order will be confirmed and SMS will be sent 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.

## 5.1 Admin Module

If the admin has already register, he can Sign In 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 the admin 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 list along 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.

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 also made About us page where the guest can read about the Company's policy or details like address, 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 given Mail-id.

## 5.2 FLOW CHART

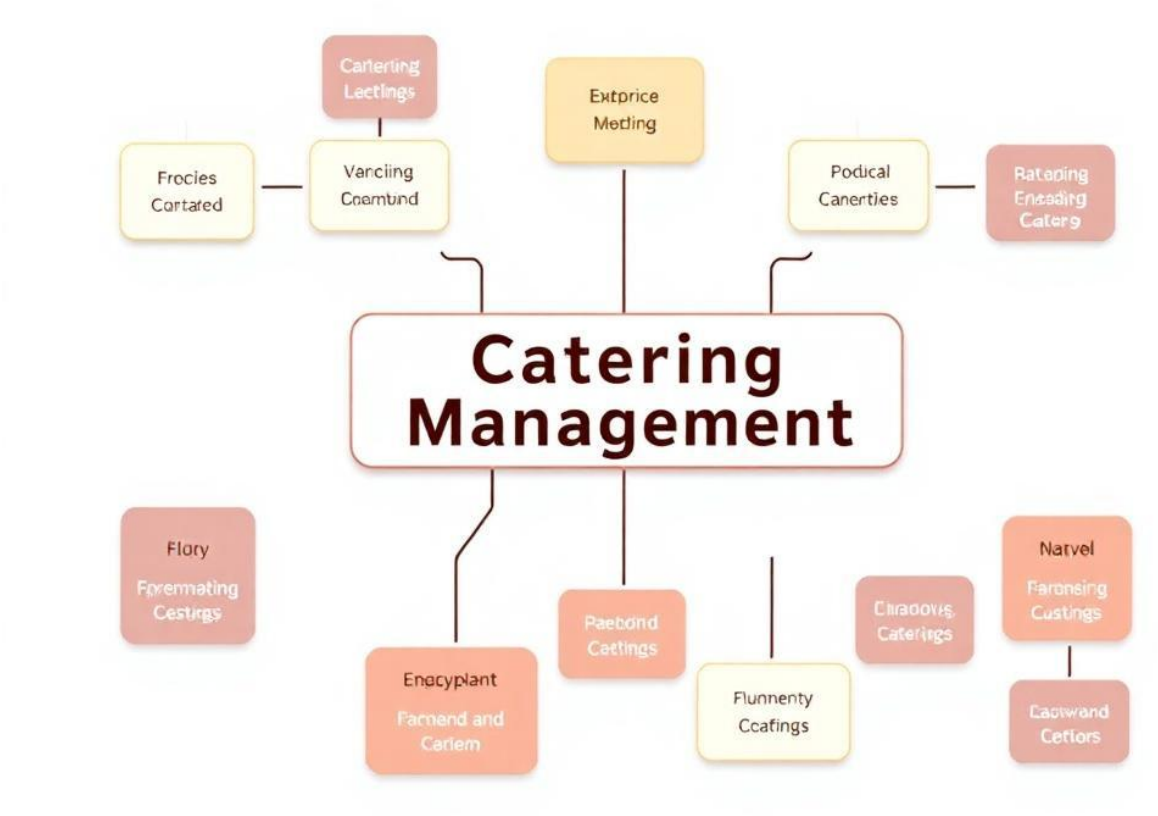



**Figure 5.2: Flow Diagram of Catering Management**

# CHAPTER 6

# TESTING

## 6.1 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 combinations of 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.

## 6.2 Non-Function 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

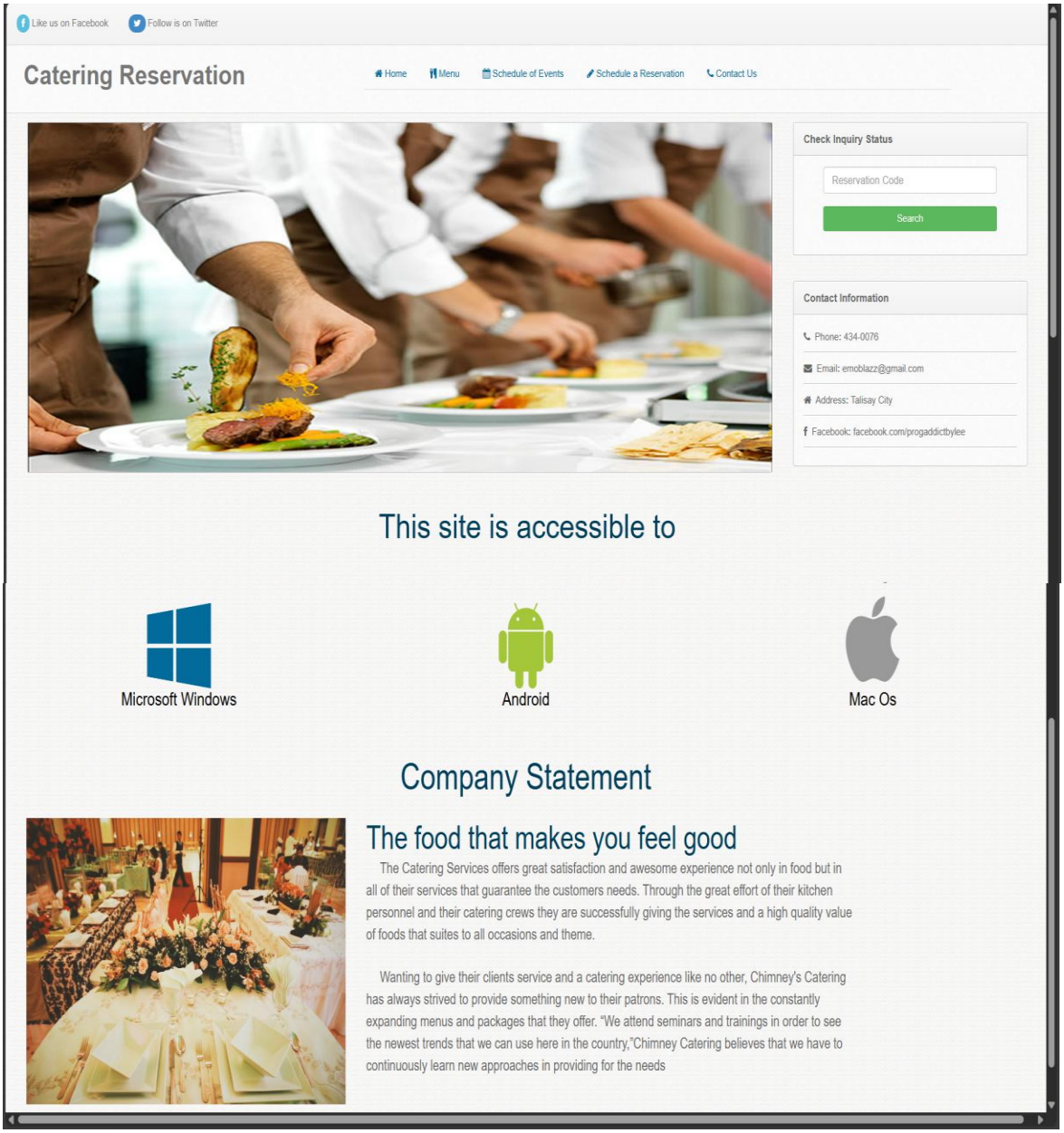
This testing is used to verify that the software is capable of performing a failure operation for a specified period of time in a specified environment. Reliability testing in software assures that product is fault free and is reliable for its intended purpose.

# CHAPTER 7

# RESULT AND ANALYSIS

## HOME PAGE:

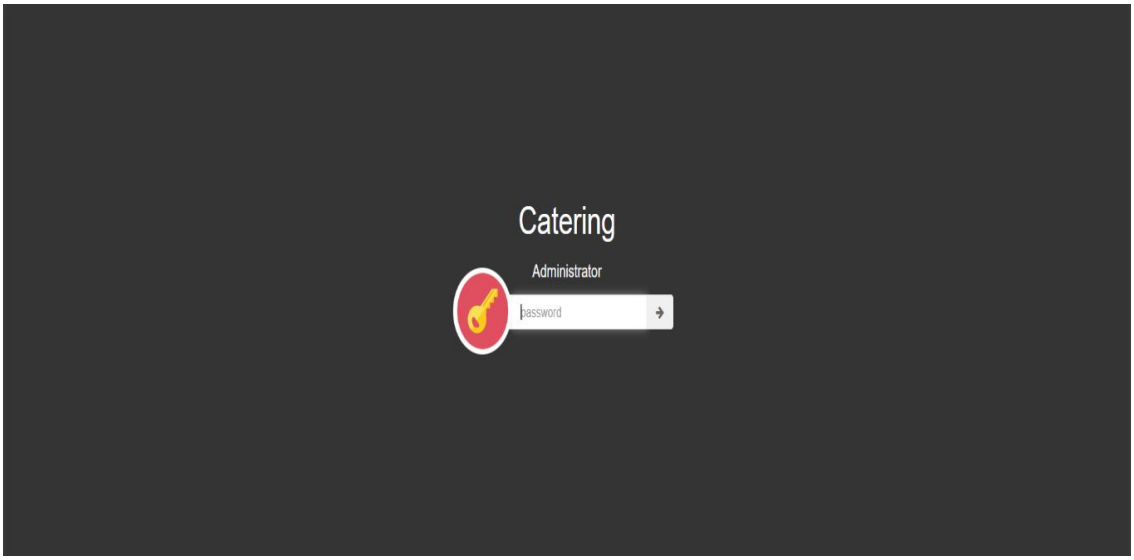
The below figure shows the home of catering management system where customers can make their reservations.




**Snapshot 7.1: Home Page**

## ADMIN LOGIN:

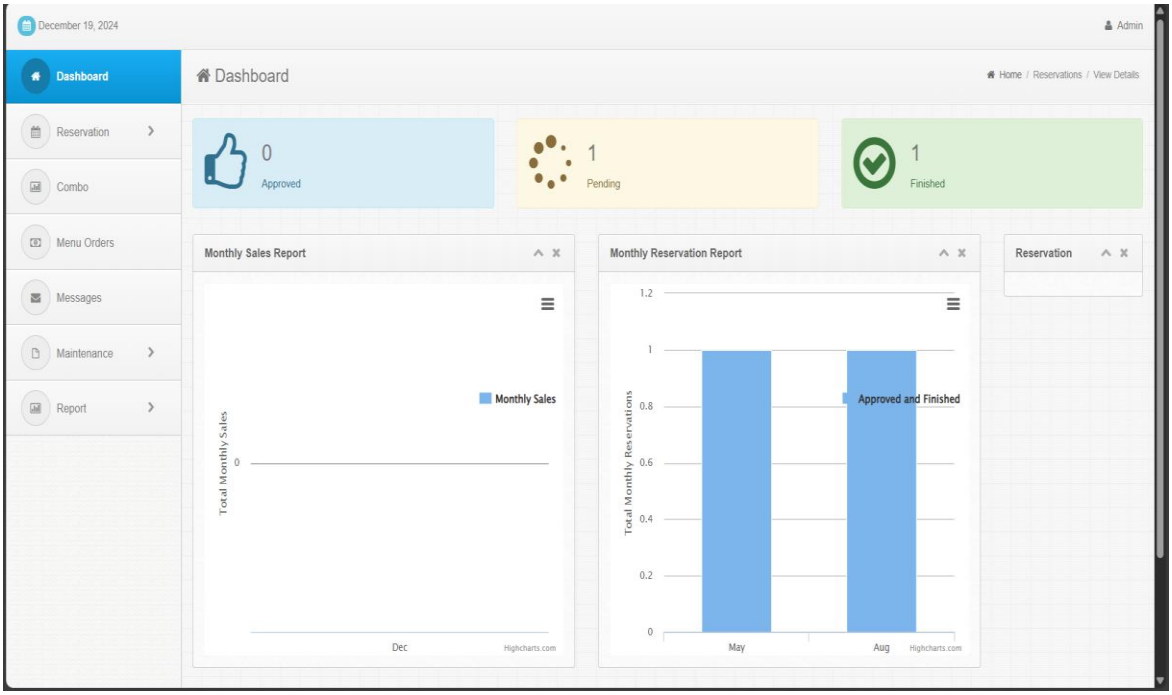
The below figure is the admin login page. Where only Admins can access it.




**Snapshot 7.2: Admin Login Page**

## ADMIN PAGE:

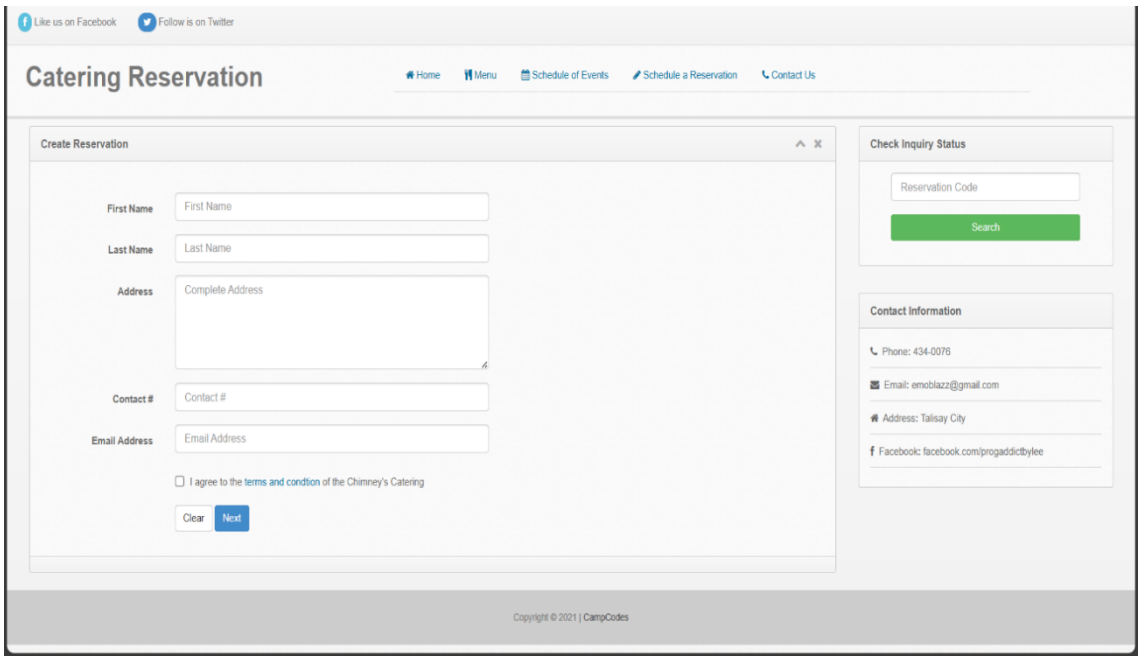
The below figure shows the Admin Dashboard page.




**Snapshot 7.3: Admin Page**

## CUSTOMER PAGE:

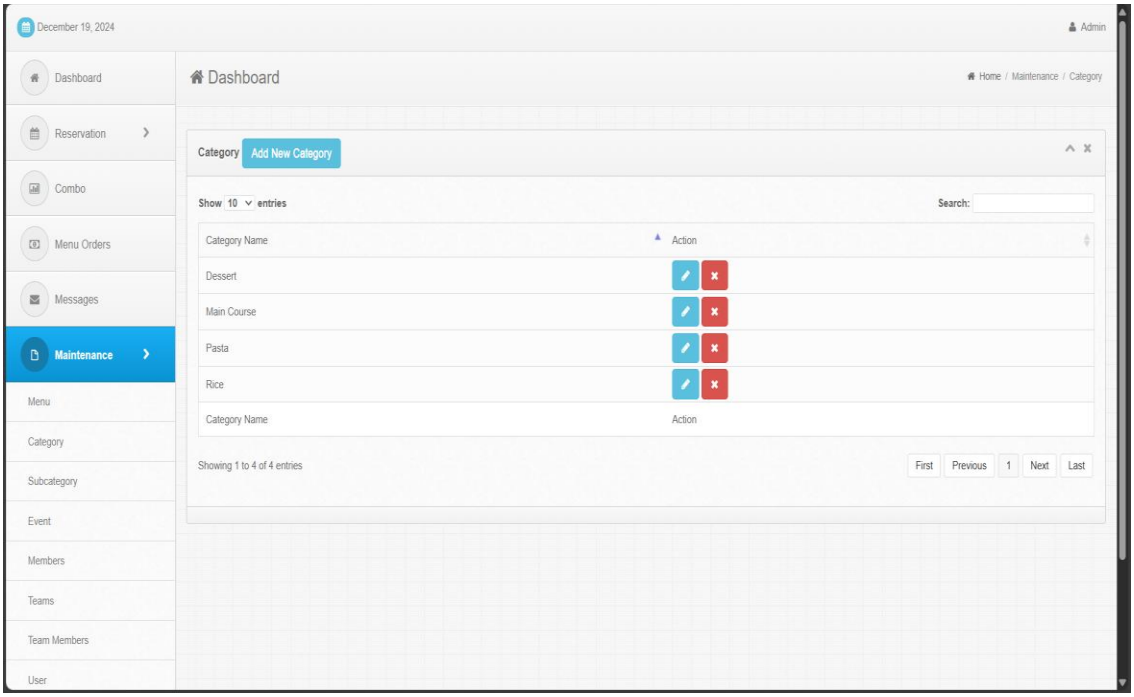
The below figure shows Customer page which allows customers to make reservations.




**Snapshot 7.4: Customer Page**

## CATEGORY PAGE:

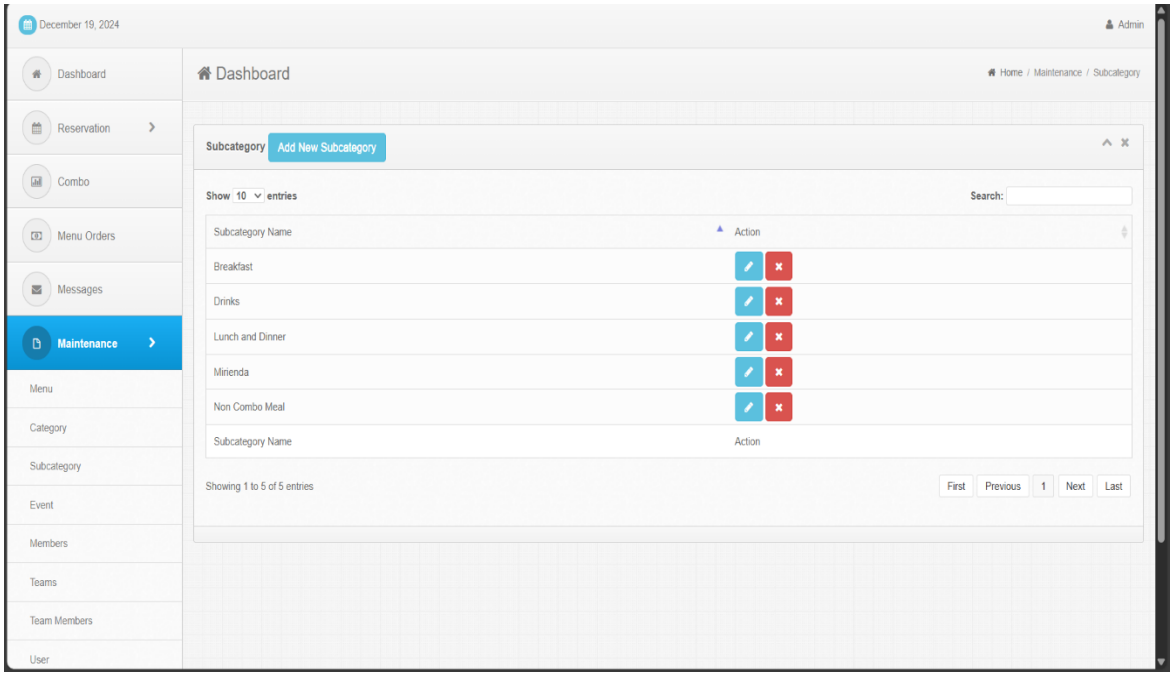
The below figure shows the Category page. Category page contains the different categories of food




**Snapshot 7.4: Category Page**

## SUBCATEGORY PAGE:

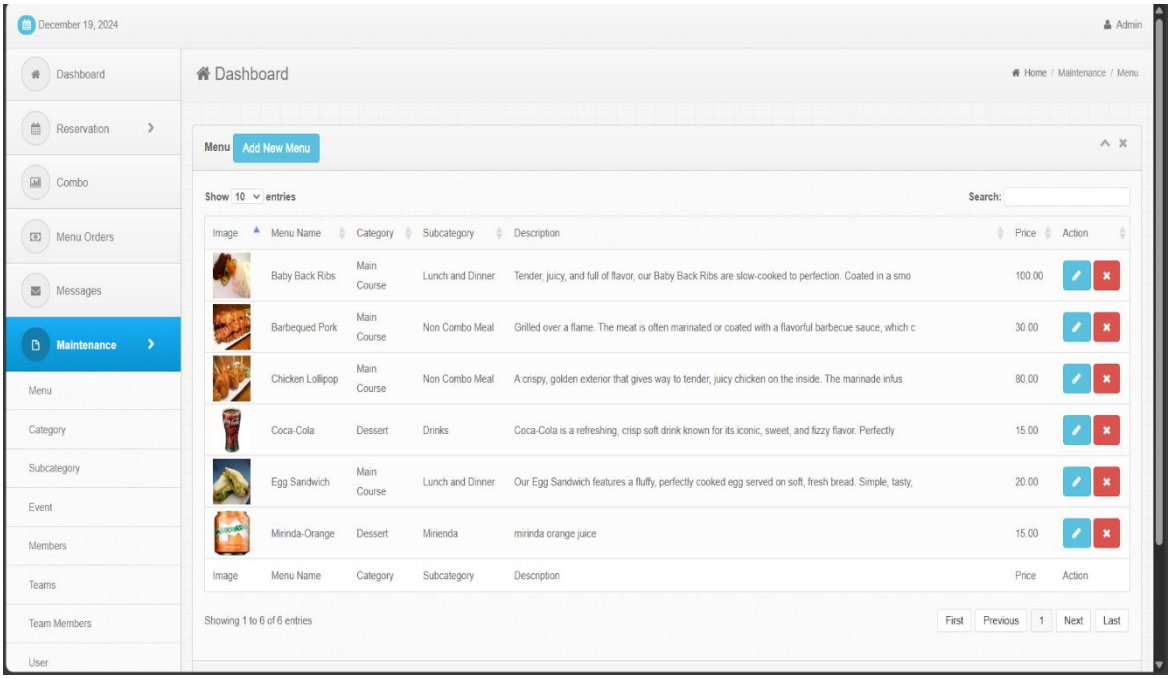
The below figure shows the Subcategory page. That contains various subcategories of food.




**Snapshot 7.4: Subcategory Page**

## MENU PAGE:

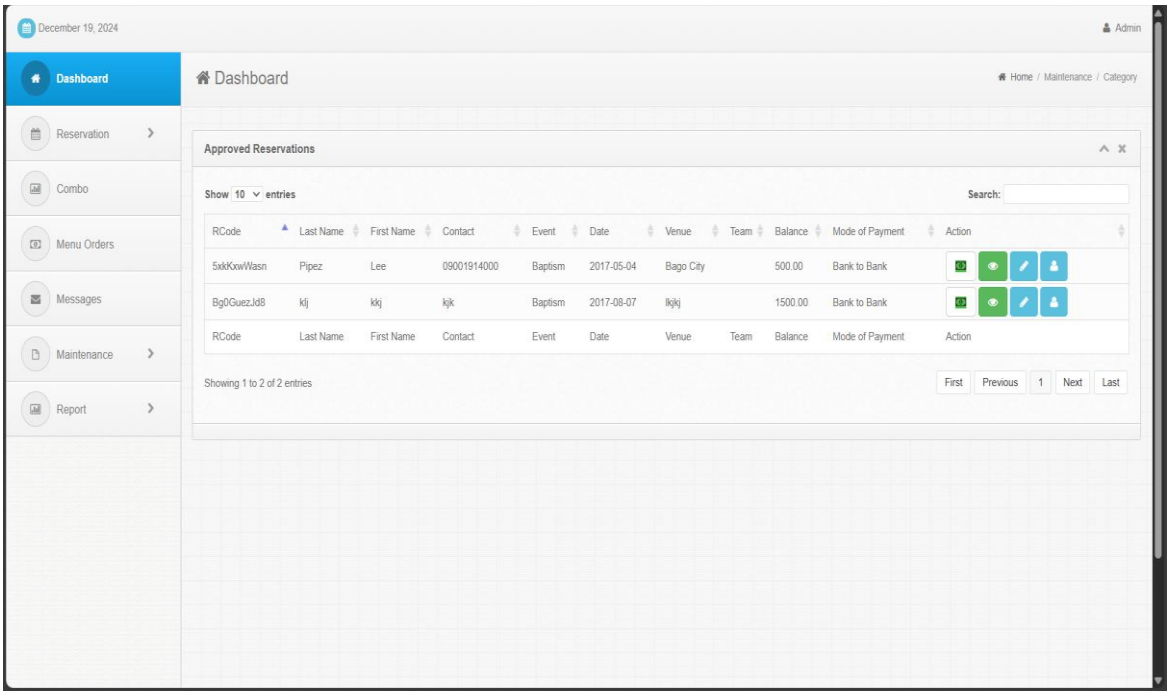
The below figure shows the menu page. Menu page shows the food items




**Snapshot 7.5: Menu Page**

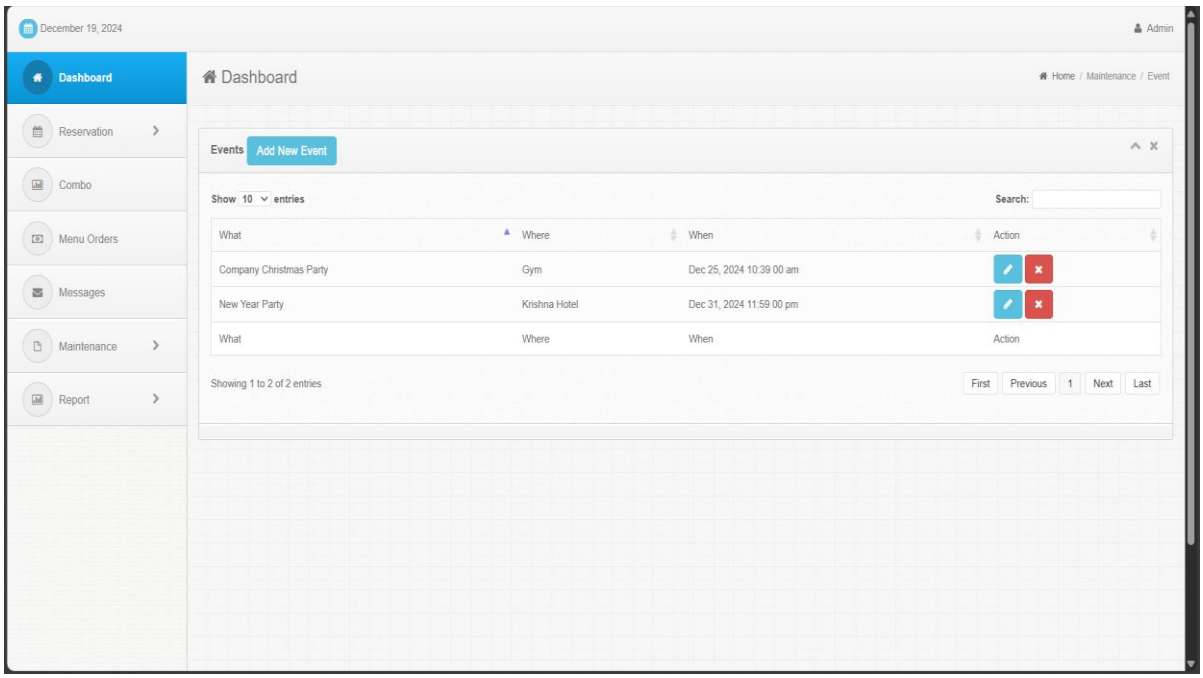
## APPROVED RESERVATION:

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




**Snapshot 7.6: Approved reservation events**

**EVENTS PAGE:** The below figure shows the Events page




**Snapshot 7.7: Events Page**

# CONCLUSION AND FUTURE ENHANCMENTS

- 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 labor, 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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