Research Project entitled

" Catering Management System"

Submitted to,

Savitribai Phule Pune University, Pune

Shardabai Pawar Mahila Art's , Commerce and Science College , Shardanagar .

Towards the partial fulfilment for the degree

In

BACHALORS OF SCIENCE

IN COMPUTER SCIENCE

Submitted By,

Rajpure Sayali ,Bhingare Ankita

Guide

Mr.Sadakale Harshad (m.sc.(comp.sci.))

Assistant Professor

Department of Computer Science.

Shardabai Pawar Mahila Art's , Commerce and Science College , Shardanagar , Baramati , Dist.Pune , Maharashtra , India.

CERTIFICATE

This is, to certify that the work incorporated in project entitled **" Catering Management System".** Submitted by **Rajpure Sayali, Bhingare Ankita** was carried out by the candidates under my supervision in the Department of Computer Science, Shardabai Pawar Arts, Commerce and Science, Baramati-413102 Dist- Pune for the degree of B.Sc.(Computer Science).

Place–Baramati. Guide: Mr. Sadakale Harshad.

Date– Head of Department

Internal Examiner *External Examiner*

DECLARATION

I hereby declare that the work incorporated in project entitled -**" Catering Management System."**has not been submitted in part or full me for any degree of diploma of any other University or institute.

Place–Shardanagar.

Rajpure Sayali

Bhingare Ankita

Date-

ACKNOWLEDGEMENTS

It gives me a great pleasure to express my heartiest gratitude towards my research guide Mr. Sadakale Harshad for providing necessary guidance and taking interest in the project work and ensuring at each stage that the targets are achieved as per schedule, played a major role in checking out the project outline and for stimulating encouragement throughout the period of this work.

I express my gratitude to Principal Dr. S. V. Mahamuni, and Prof. P. More Head, Department of Computer Science, Shardabai Pawar Art's , Commerce and Science, Baramati for giving laboratory and other facilities in the tenure of work.

I am also thankful to my teachers ***Prof. Tushar Bhosale Sir*** *for their guidance for their kind co-operation and help.*

INDEX

1.Problem Definition:

Many caterers store all of their data manually. They have a large number of customers so they need the help of some features so that they can store & maintain records accurately. Catering management systems are developed to streamline and optimize the operations of catering businesses.

Here are some reasons why they are developed :

- Efficiency: Catering management systems help improve efficiency by automating various tasks such as order taking, menu planning, ingredient inventory management, and scheduling.
- Accuracy: This leads to more accurate order fulfillment and reduces the risk of overbooking or running out of ingredients.
- Cost Reduction: Streamlining operations through a catering management system can help reduce overhead costs associated with manual processes, such as labor costs .
- Customer Satisfaction: A well-designed catering management system can enhance the customer experience by providing easy online ordering, customization options, and timely delivery.
- Insightful Analytics: Many catering management systems come with analytics and reporting features that provide valuable insights into sales trends, customer preferences, and inventory usage.
- Scalability: As catering businesses grow, they need scalable solutions to manage their increasing volume of orders and operations
- Regulatory Compliance: In industries like food service, there are often regulations and standards that must be adhered to regarding food safety, labeling, and allergen information. Catering management systems can help ensure compliance with these regulations by providing tools for accurate record-keeping and traceability.

- Competitive Advantage: Implementing a catering management system can give businesses a competitive edge by enabling them to offer faster service, higher quality, and more personalized experiences compared to competitors still relying on manual processes.

In summary, catering management systems are developed to help catering businesses operate more efficiently, reduce costs, improve customer satisfaction, and stay competitive in a rapidly evolving industry. This allows catering businesses to handle more orders and serve more customers without increasing their administrative workload

..

2.Scope of the System:

A catering management system encompasses various functionalities aimed at streamlining and optimizing catering operations for businesses. Here's a breakdown of its scope:

- Menu Management: The system should allow caterers to create, update, and manage menus efficiently. This includes categorizing items, setting prices, and managing inventory.
- Order Management: Caterers should be able to receive, process, and track orders seamlessly. This involves capturing order details, managing order statuses (e.g., pending, confirmed, delivered), and scheduling deliveries.
- Customer Management: The system should enable caterers to maintain a database of customers, including contact information, preferences, order history, and special requests.
- Event Management: Catering often involves serving events such as weddings, corporate gatherings, and parties. The system should support event planning, including scheduling, coordination with clients, and managing event details such as guest count, venue, and dietary requirements.
- Inventory Management: Effective inventory management is crucial for catering businesses to ensure they have the necessary ingredients and supplies on hand. The system should facilitate inventory tracking, replenishment, and reporting to prevent stockouts and wastage.

3.Need of the System:

A catering management system serves several needs in the catering industry, including:

- Efficient Operations: Catering involves managing numerous tasks such as menu planning, order management, staff scheduling, and inventory control. A management system streamlines these processes, making operations more efficient and reducing the likelihood of errors.
- Order Management: Keeping track of orders, including details like menu preferences, dietary restrictions, and delivery logistics, can be complex. A management system helps organize and track orders from initial inquiry to final delivery, ensuring accuracy and timely service.
- Menu Customization: Caterers often need to tailor menus to meet clients' specific preferences and dietary requirements. A management system enables easy customization of menus and helps caterers manage inventory to ensure they can fulfill special requests.
- Resource Planning: Efficiently managing resources such as staff, equipment, and ingredients is crucial for successful catering operations. A management system provides tools for scheduling staff, tracking equipment availability, and managing inventory levels, optimizing resource utilization.
- Client Management: Building and maintaining strong relationships with clients is essential for repeat business in the catering industry. A management system facilitates client communication, tracks past orders and preferences, and helps caterers provide personalized service.
- Financial Management: Tracking expenses, generating invoices, and managing payments are integral parts of running a catering business. A management system automates these financial tasks, providing accurate financial records and helping caterers track profitability.

- Reporting and Analytics: Analyzing data on sales, customer preferences, and operational performance can provide valuable insights for catering businesses. A management system generates reports and analytics to help caterers identify trends, optimize their offerings, and make data-driven decisions.

In summary, a catering management system addresses the diverse needs of catering businesses by streamlining operations, improving customer service, and facilitating efficient resource management and financial control.

4. Proposed System:

The proposed system is providing :

1. Digital Marketplace Development.
2. Logistics and Delivery Optimization.
3. Direct Support for Customer.
4. Health and Well-being.

5.System Requirement:

- **Hardware Requirements :**
  - RAM : 512 MB
  - HARD DISK :4 GB
  - PROCESSOR : PENTIUM III
  - PRINTER : ANY TYPE

- **Software Requirement:**
  - FRONT END:HTML, CSS,Bootstrap.
  - BACK END:PHP.
  - SERVER: APACHE TOMCAT.
  - TOOLS USED:- Xampp.

6.Fact Finding Techniques:

In order to study this system, we need to find the facts. Facts are expressed in quantitative form which can be termed as data. Success of any requirement investigation availability of accurate and reliable data. The specific methods used for collecting data are listed below.We have used four fact finding techniques in the process of the system analysis.

- Record View.
- Observation.

Record View:

Records provide a brief idea or valuable information about the system with its organization and operation techniques. The record reviews the examined results as well as the valuable information about the user recorded information which gradually lead to the smooth transitioning in making the database.

Observations:

A special attention was paid to the handling transactions, manipulation of documents and handling records and queries of the existing system to finding the way to function apart from ideas and desires.

7.Feasibility Study

Depending on the results of the initial investigation the survey is now expanded to a more detailed feasibility study.

"FEASIBILITY STUDY" is a test of system proposal according to its workability, impact of the organization, ability to meet needs and effective use of the resources. It focuses on these major questions:

1.What are the user's demonstrable needs and how does a candidate system meet them?

2. What resources are available for given candidate system?

3. What are the likely impacts of the candidate system on the organization?

4. Whether it is worth to solve the problem? During feasibility analysis for this project, following primary areas of interest are to be considered. Investigation and generating ideas about a new system does this.

Steps in feasibility analysis eight steps involved in the feasibility analysis are:

- Form a project team and appoint a project leader.
- Prepare system flowcharts.
- Enumerate potential proposed system.
- Define and identify characteristics of proposed system.

- Determine and evaluate performance and cost effective of each proposed system.
- Weight system performance and cost data.
- Select the best-proposed system.
- Prepare and report final project directive to management.

Feasibility study is the procedure to identify, describe the evaluate candidate system and select the best possible action for the job. The initial investigation culminated in a proposal summarized the thinking of the analyst, was presented to the user for review. The proposal initiated a feasible study to describe and evaluate the best system to choose in terms of economical, technical and behavioural constraints. The terms constraints involved in feasibility analysis are

- Technical
- Economical
- Operational
- Behavioural

7.1. TECHNICAL FEASIBILITY:-

- A study of resource availability that may affect the ability to achieve an acceptable system. This evaluation determines whether the technology needed for the proposed system is available or not.

- Can the work for the project be done with current equipment existing software technology & available personal?
- Can the system be upgraded if developed?
- If new technology is needed then what can be developed? This is concerned with specifying equipment and software that will successfully satisfy the user requirement. The technical needs of the system may include:

Front-end and back-end selection

An important issue for the development of a project is the selection of suitable front-end and back-end. When we decided to develop the project we went through an extensive study to determine the most suitable platform that suits the needs of the organization as well as helps in development of the project. The aspects of our study included the following factors.

Front-End selection

1. It must have a graphical user interface that assists employees that are not from IT background.

2. Scalability and extensibility.

3. Flexibility.

4. Robustness.

5. According to the organization requirement and the culture.

6. Must provide excellent reporting features with good printing support.

7. Platform independent.

8. Easy to debug and maintain.

9. Event driven programming facility.

10. Front-end must support some popular back end like MS Access. According to the above stated features we selected Java 1.6 as the front-end for developing our project.

Back-End Selection

1. Multiple user support.

2. Efficient data handling.

3. Provide inherent features for security.

4. Efficient data retrieval and maintenance.

5. Stored procedures.

6. Popularity.

7. Operating System compatible.

8. Easy to install.

9. Various drivers must be available.

10. Easy to implant with the Front-end.

According to above stated features we selected MS-Access as the backend. The technical feasibility is frequently the most difficult area encountered at this stage. It is essential that the process of analysis and definition be conducted in parallel with an assessment to technical feasibility. It centres on the existing computer system (hardware, software etc.) and to what extent it can support the proposed system.

7.2. Economic Feasibility:

Economic justification is generally the "Bottom Line" consideration for most systems. Economic justification includes abroad range of concerns that includes cost benefit analysis. In this we weight the cost and the benefits associated with the candidate system And if it suits the basic purpose of the organization i.e. profit making, the project is making to the analysis and design phase. The financial and the economic questions during the preliminary investigation are verified to estimate the following:

- The cost to conduct a full system investigation.
- The cost of hardware and software for the class of application being considered.
- The benefits in the form of reduced cost.
- The proposed system will give the minute information, as a result the performance is improved which in turn may be expected to provide increased profits.

7.3. Operational Feasibility:

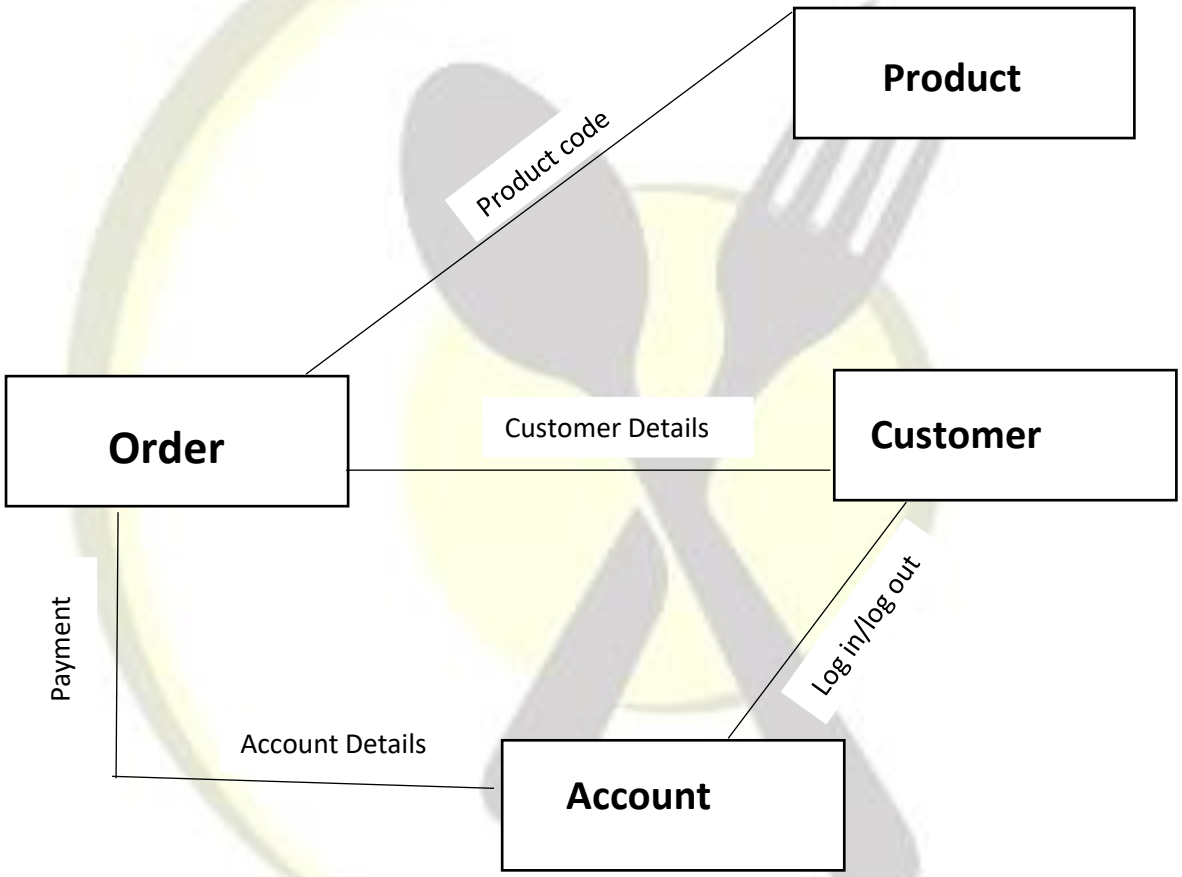
It is mainly related to human organizations and political aspects. The points to be considered are:

- What changes will be brought with the system?
- What organization structures are disturbed?
- What new skills will be required?

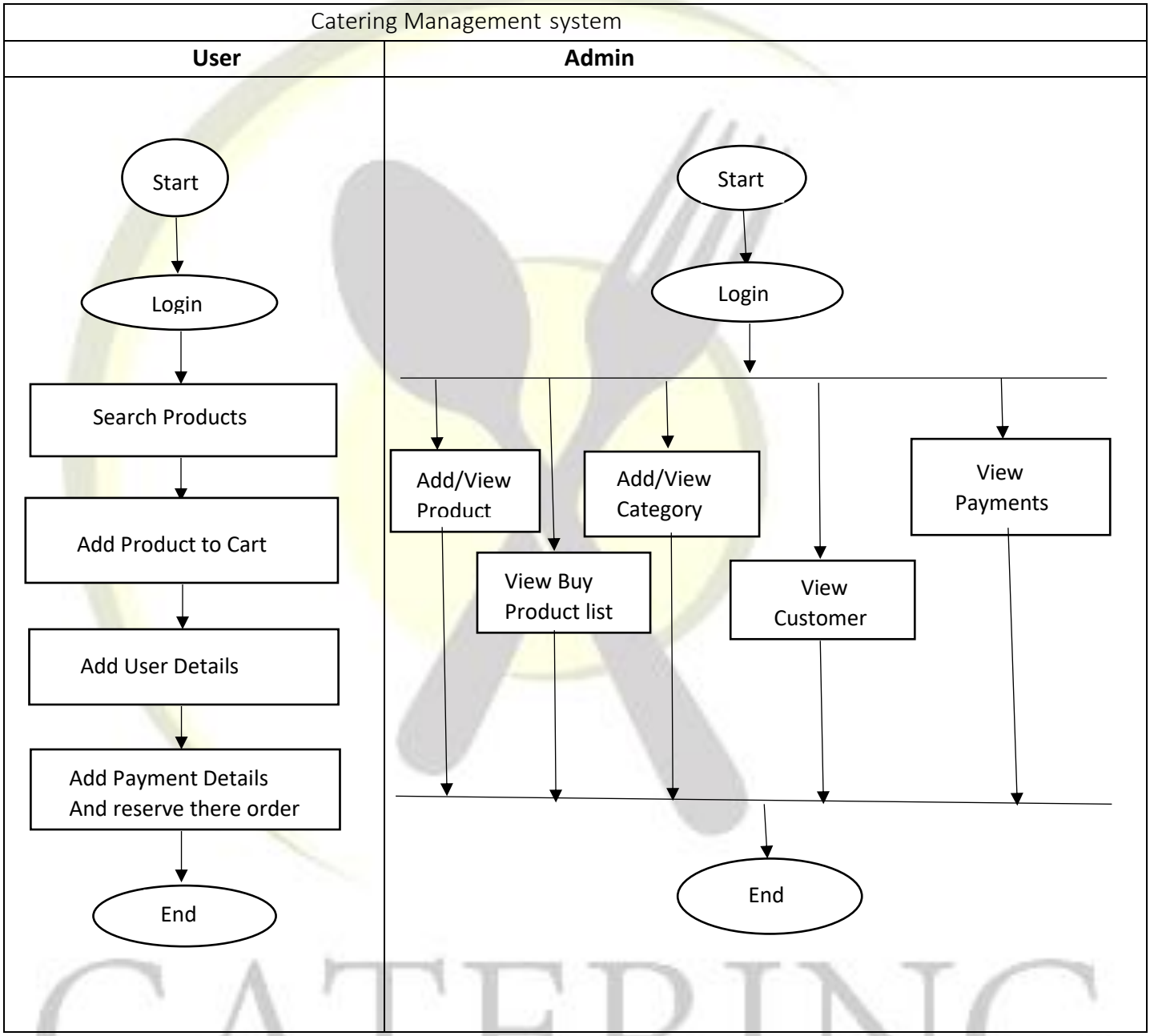
Do the existing staff members have these skills? If not, can they be trained in due course of time? The system is operationally feasible as it very easy for the End-users to operate it. It only needs basic information about Windows platform.

8.Diagram

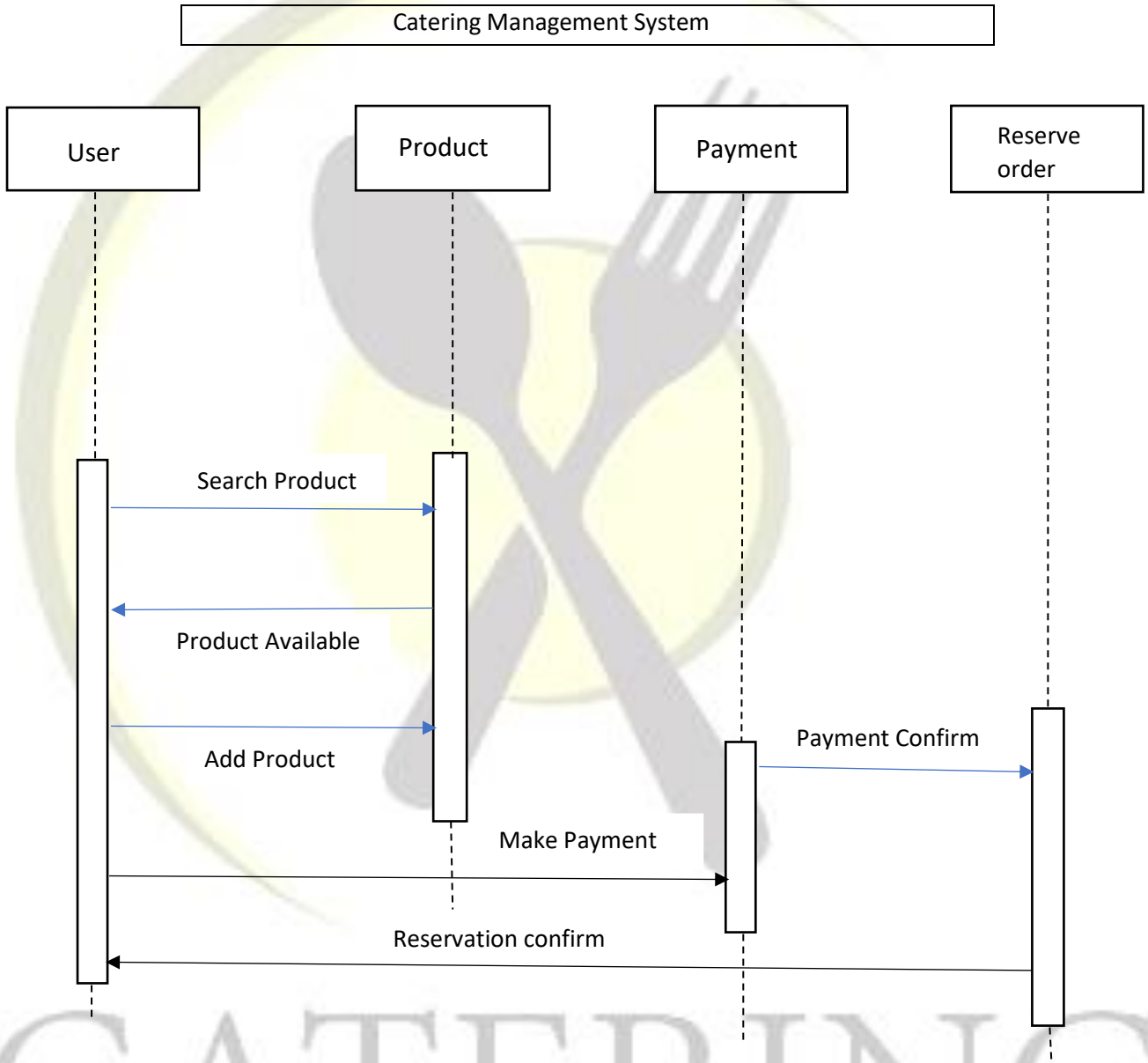
Component Diagram



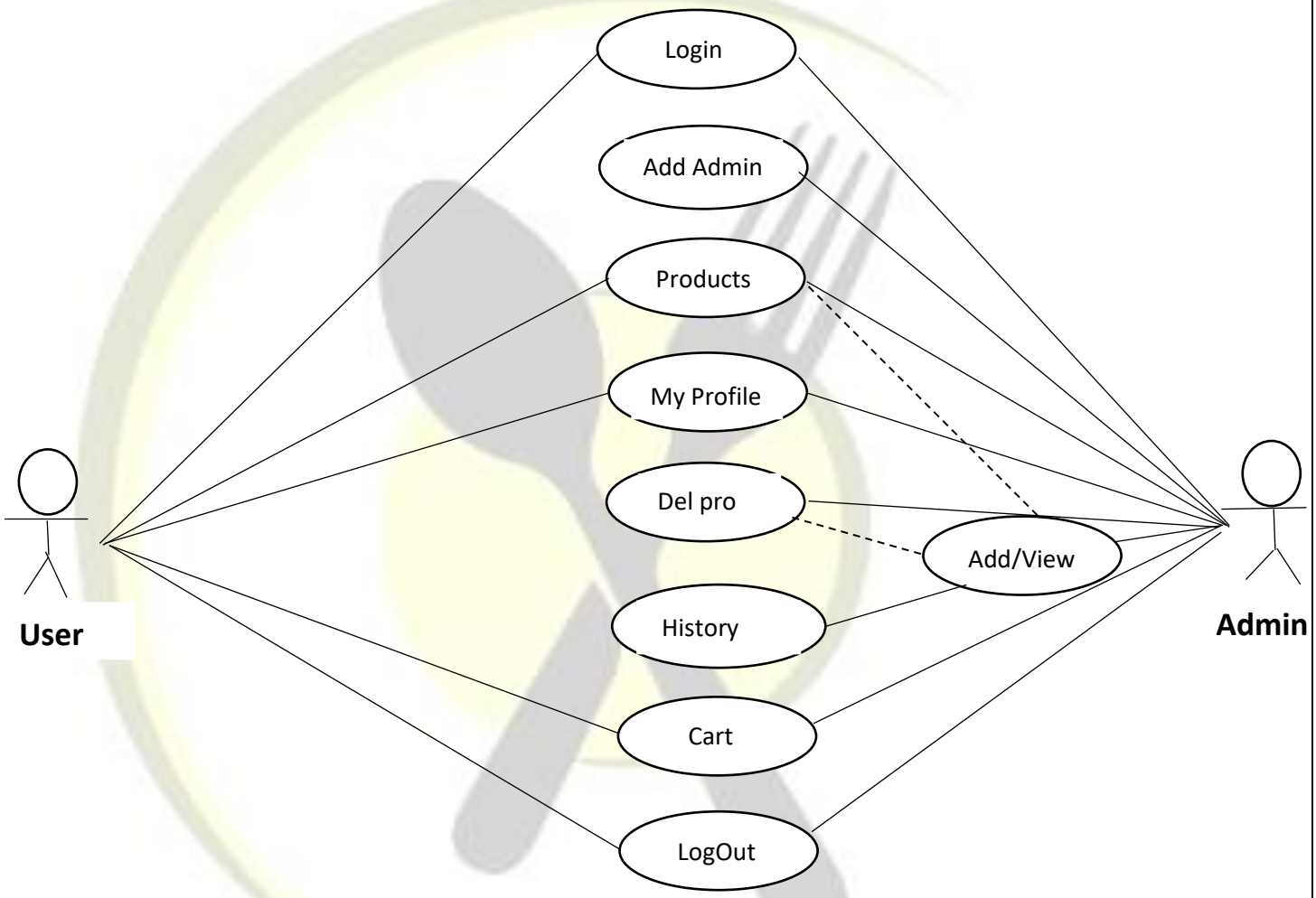
Activity Diagram



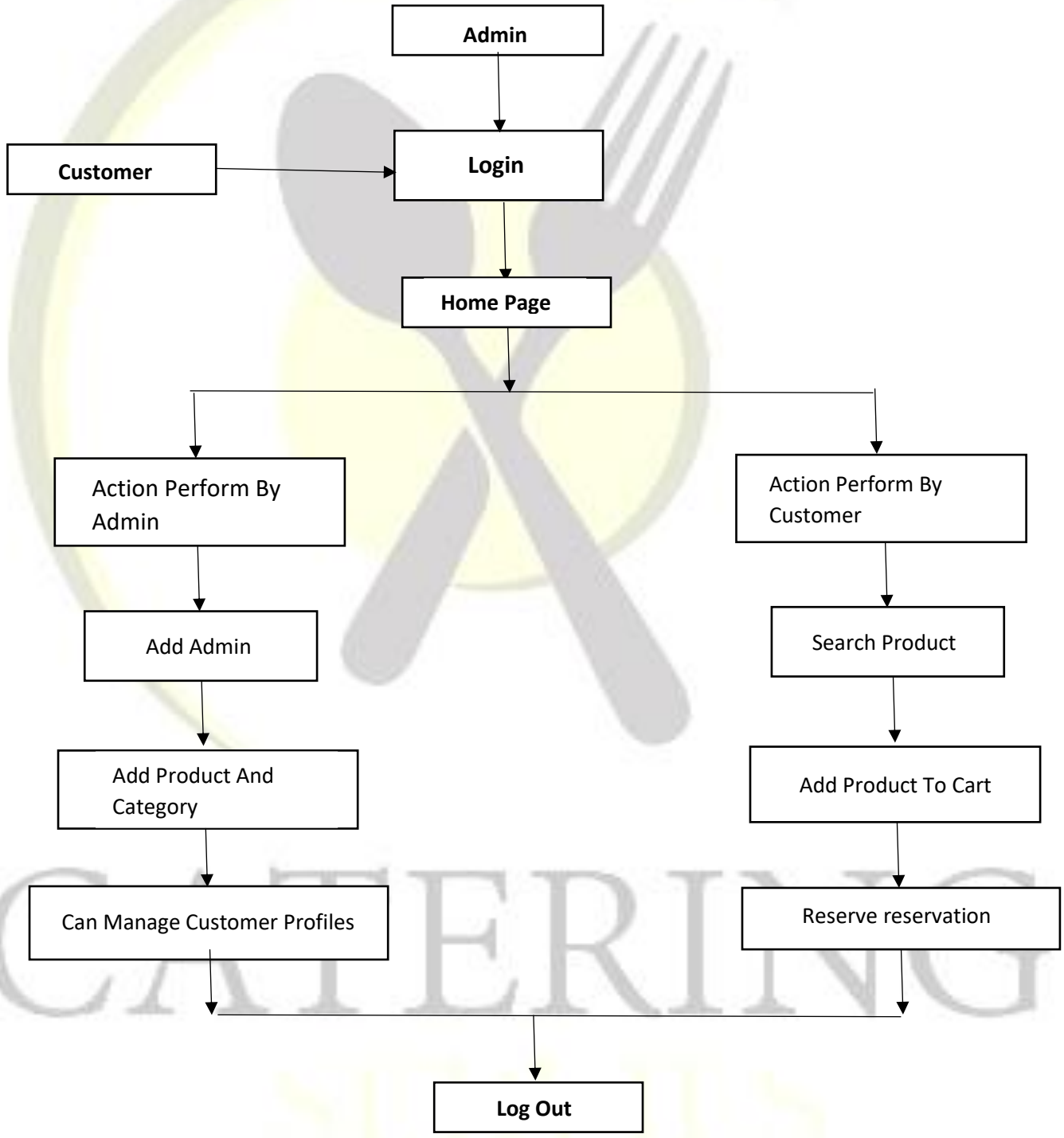
Sequence Diagram



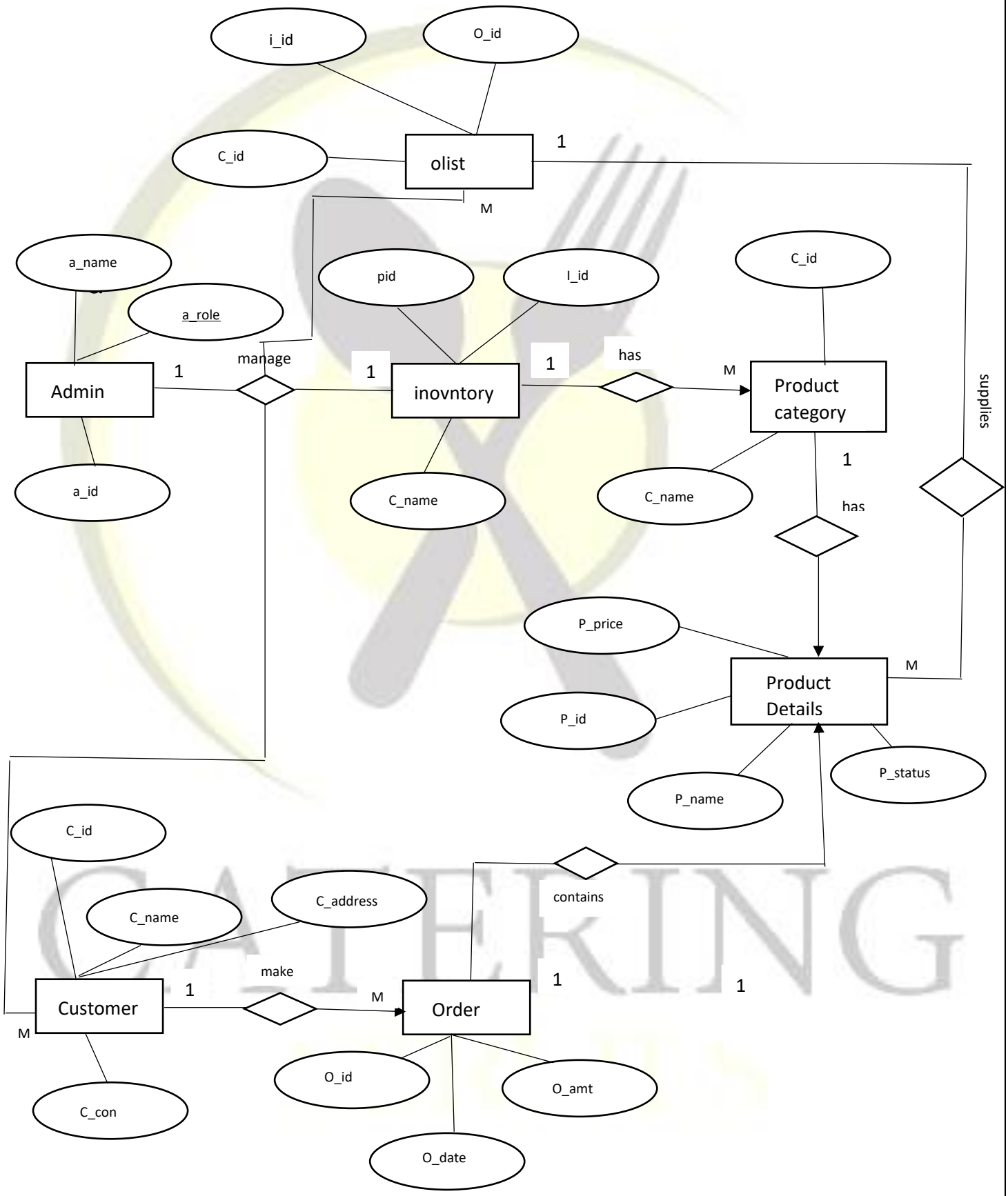
Use Case Diagram



DFD
(Data Flow Diagram)



ER Diagram


i_id
O_id
C_id
olist
1
M
a_name
a_role
pid
I_id
C_id
manage
1
1
1
has
M
Admin
inovntory
Product category
supplies
a_id
C_name
C_name
1
has
P_price
M
Product Details
P_id
P_status
P_name
C_id
C_name
C_address
contains
make
1
1
1
M
M
Customer
Order
C_con
O_id
O_amt
O_date

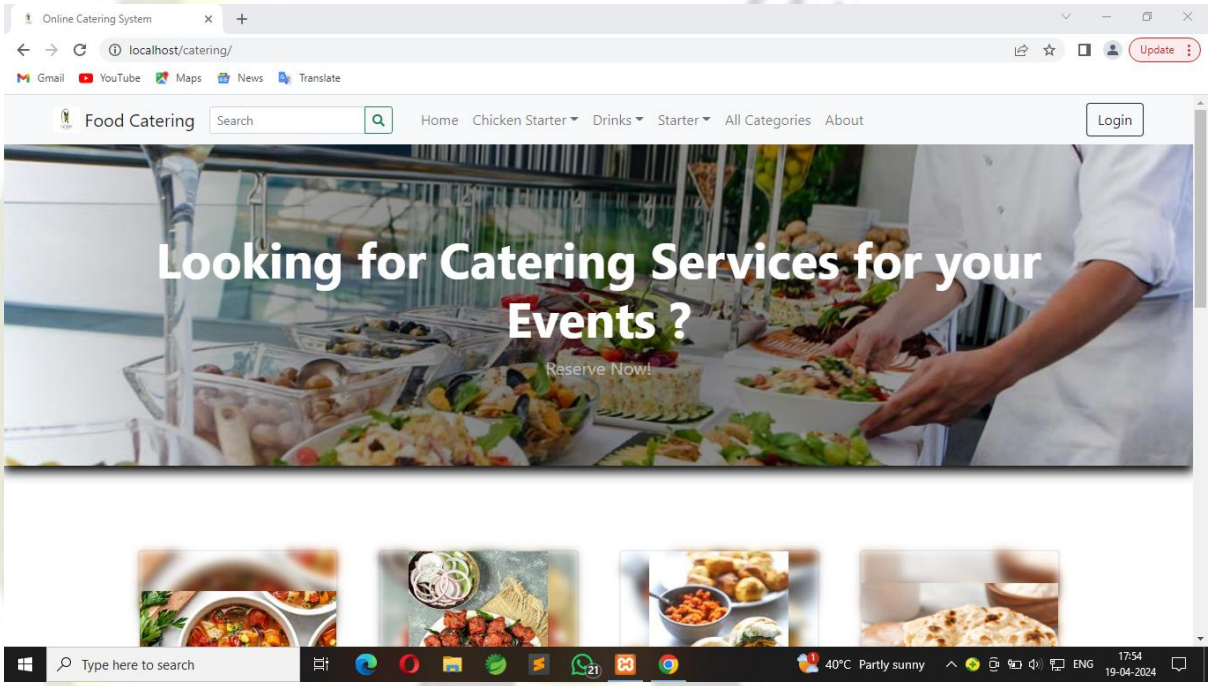
9.Data Dictionary:-

A data dictionary is a structured repository of data elements in the system. It stores the descriptions of all DFD data elements that is, details and definitions of data flows, data stores, and data stored in data stores, and the processes.

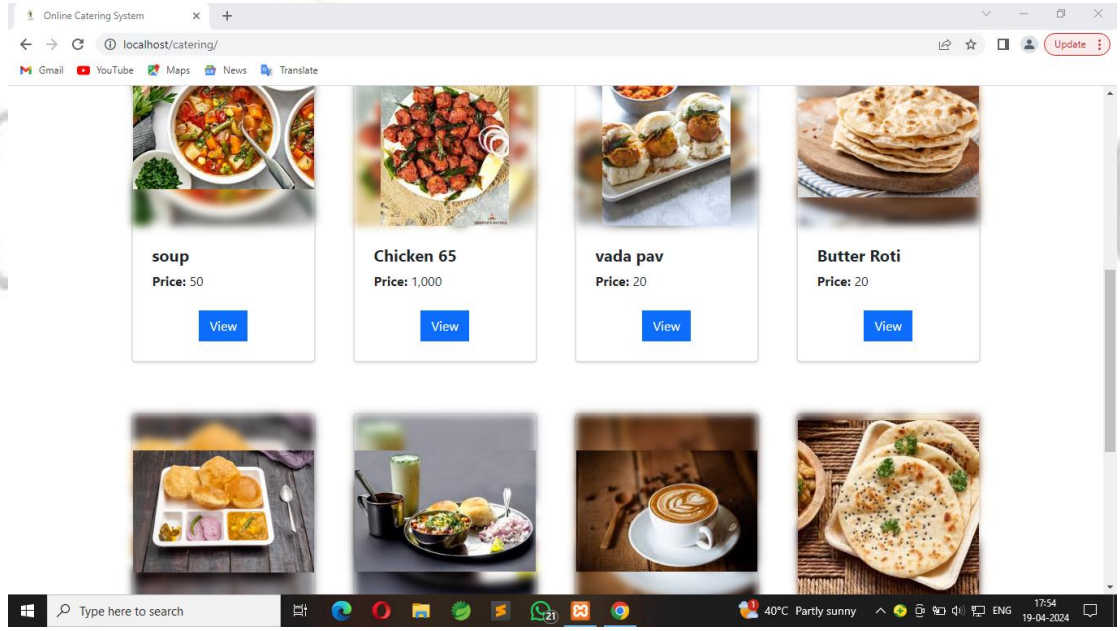
A data dictionary improves the communication between the analyst and the user. It plays an important role in building a database. Most DBMSs have a data dictionary as a standard feature.

10.OUTPUT SCREEN

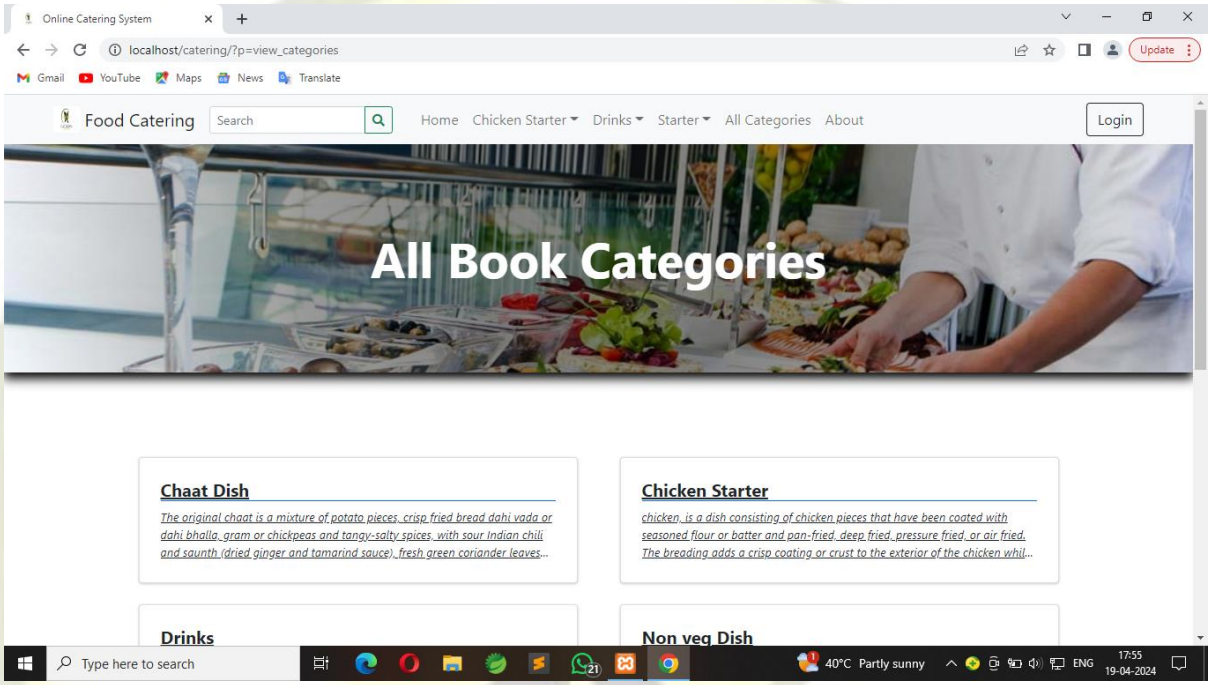
✓ Homepage screen



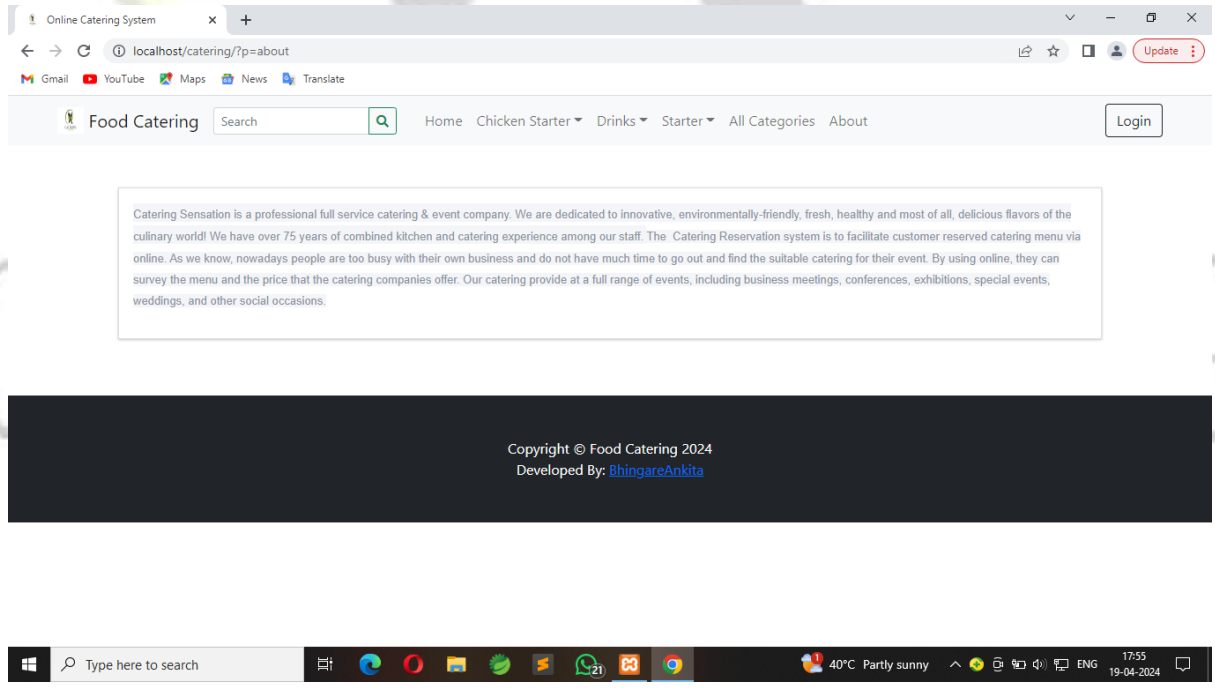
✓ Menu Screen



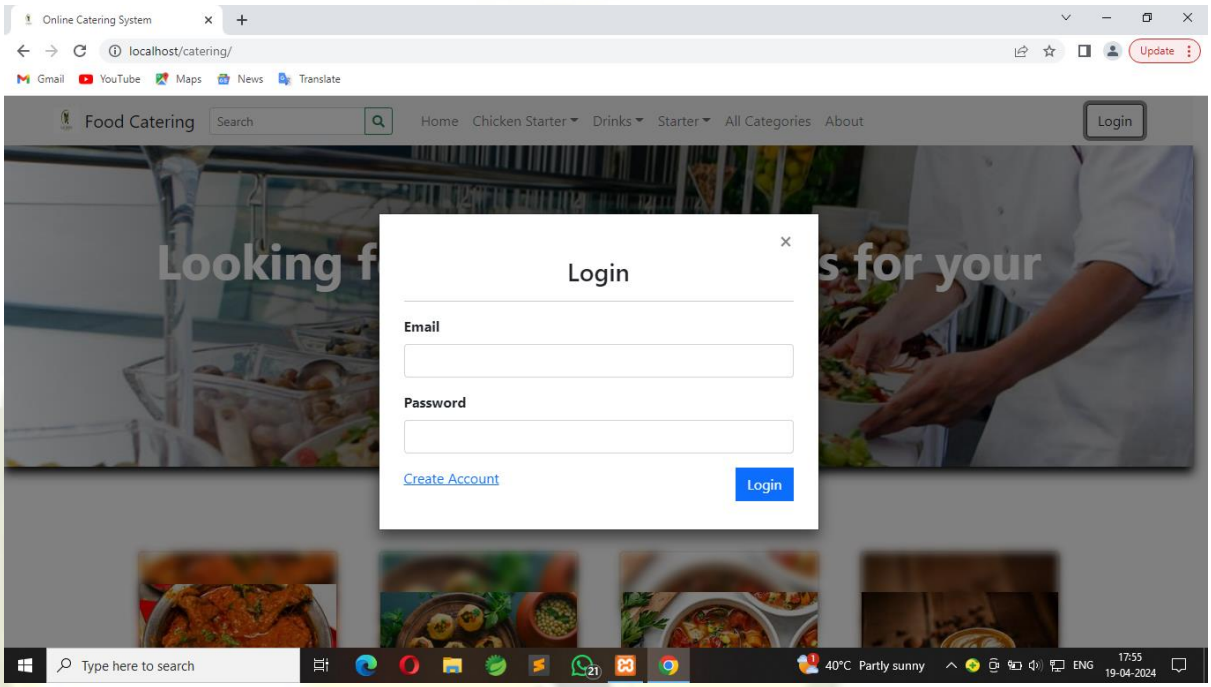
✓ Categories



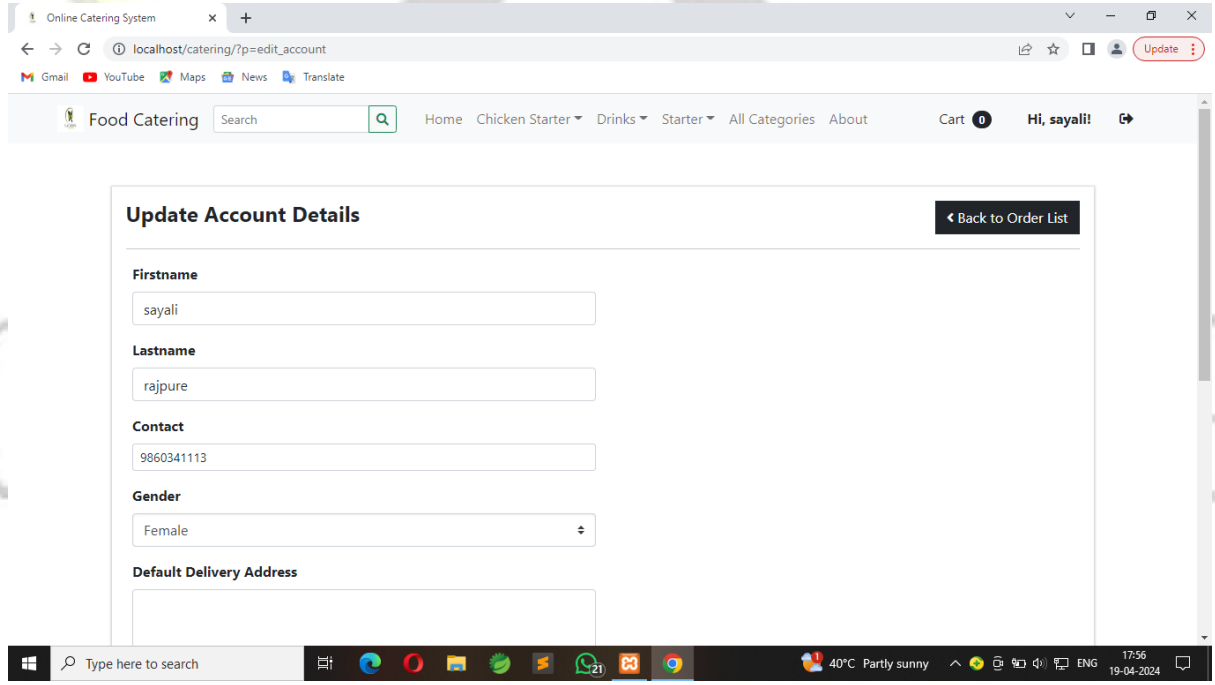
✓ About



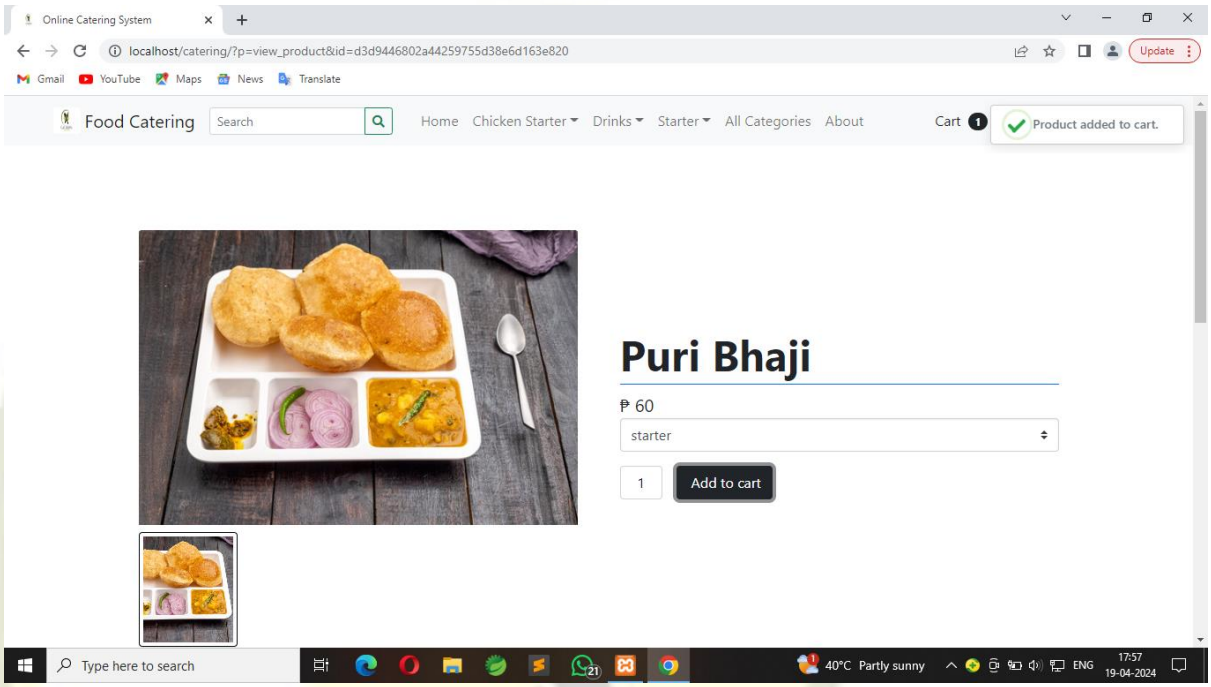
✓ Login page



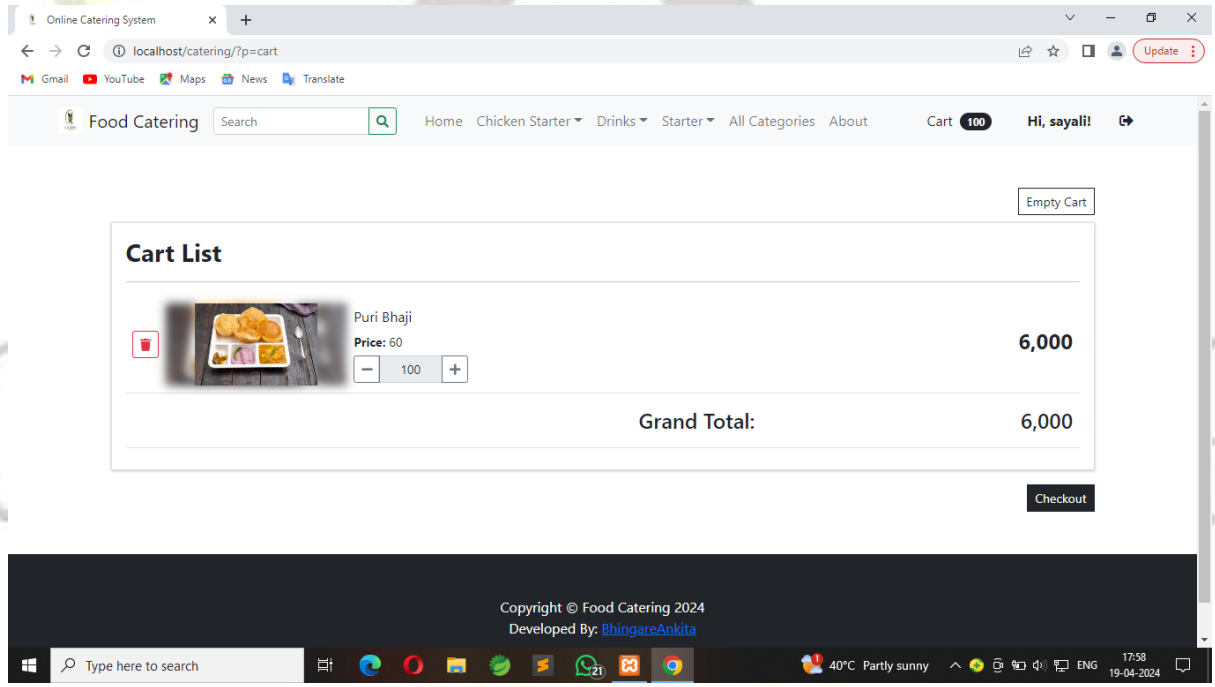
✓ Account details



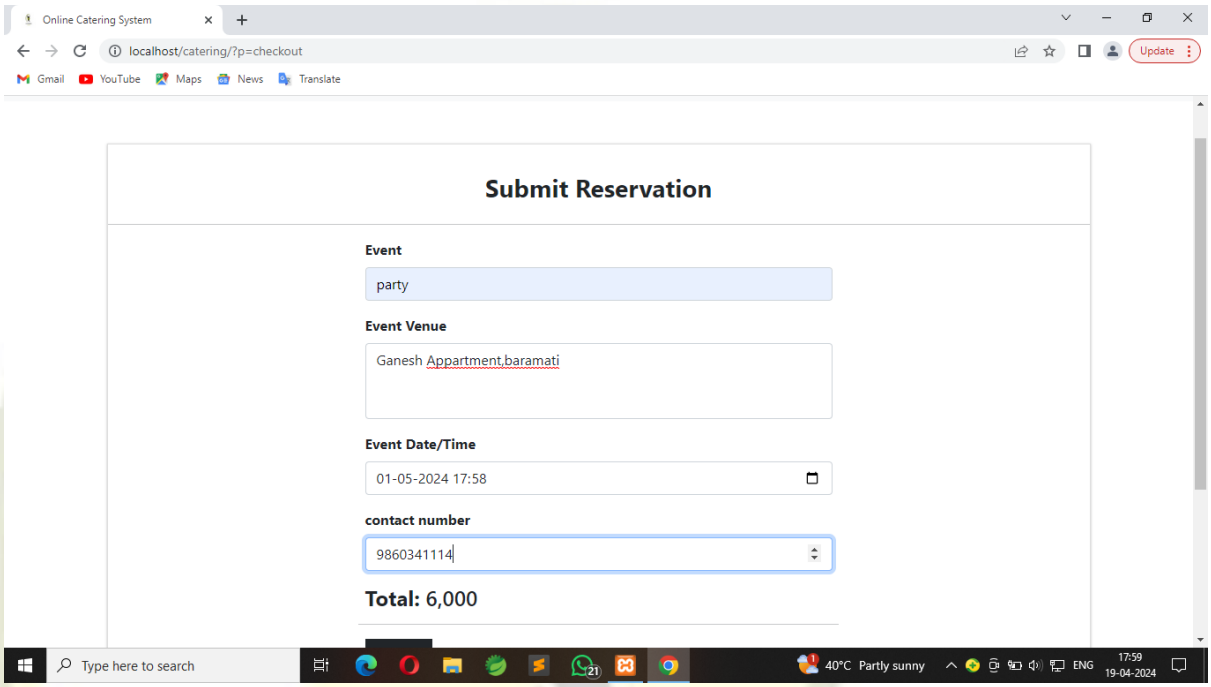
✓ Cart



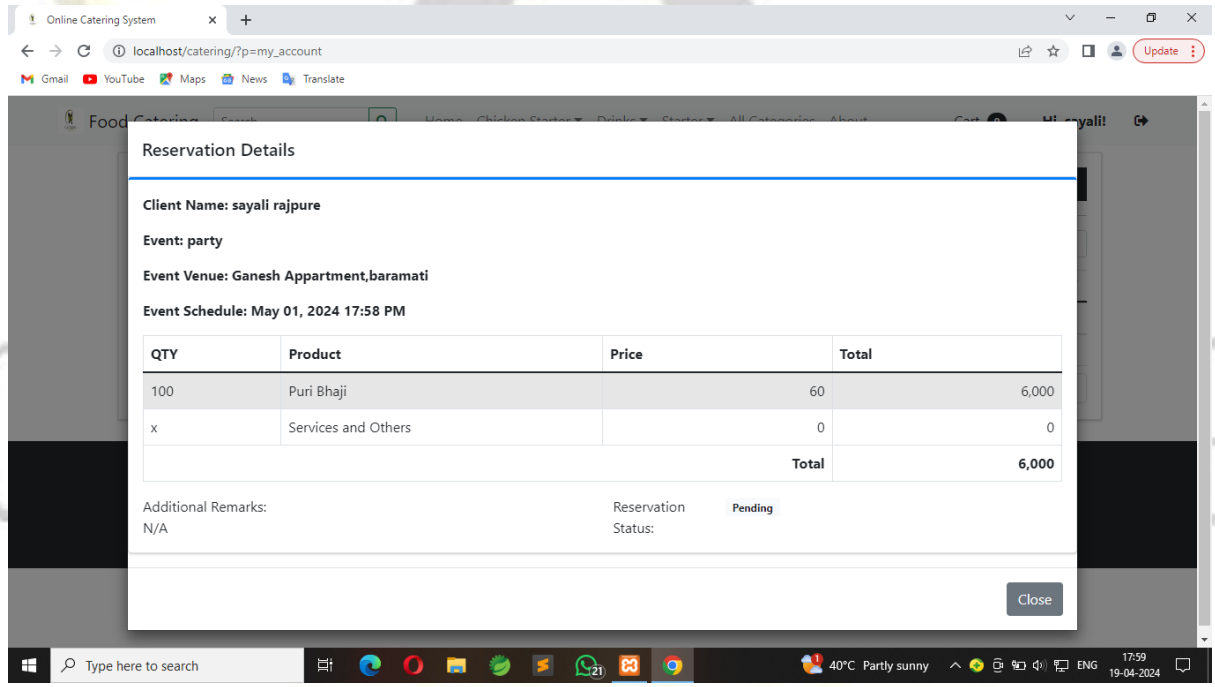
✓ Chechout



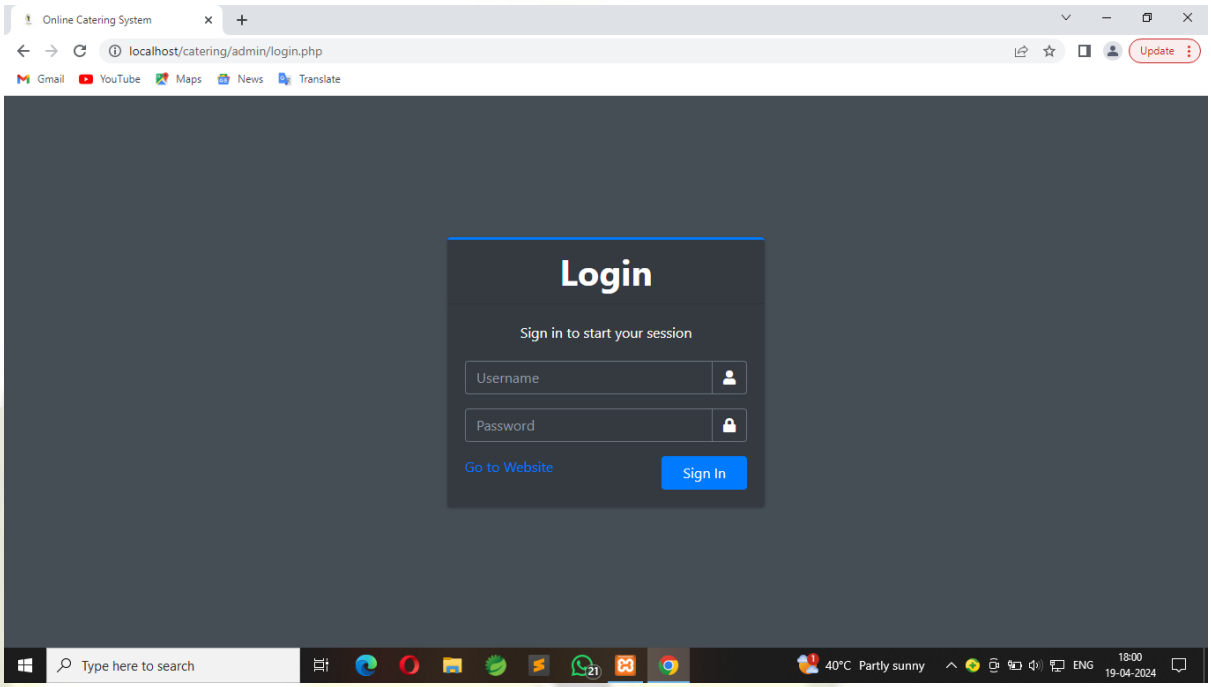
✓ Reservation page



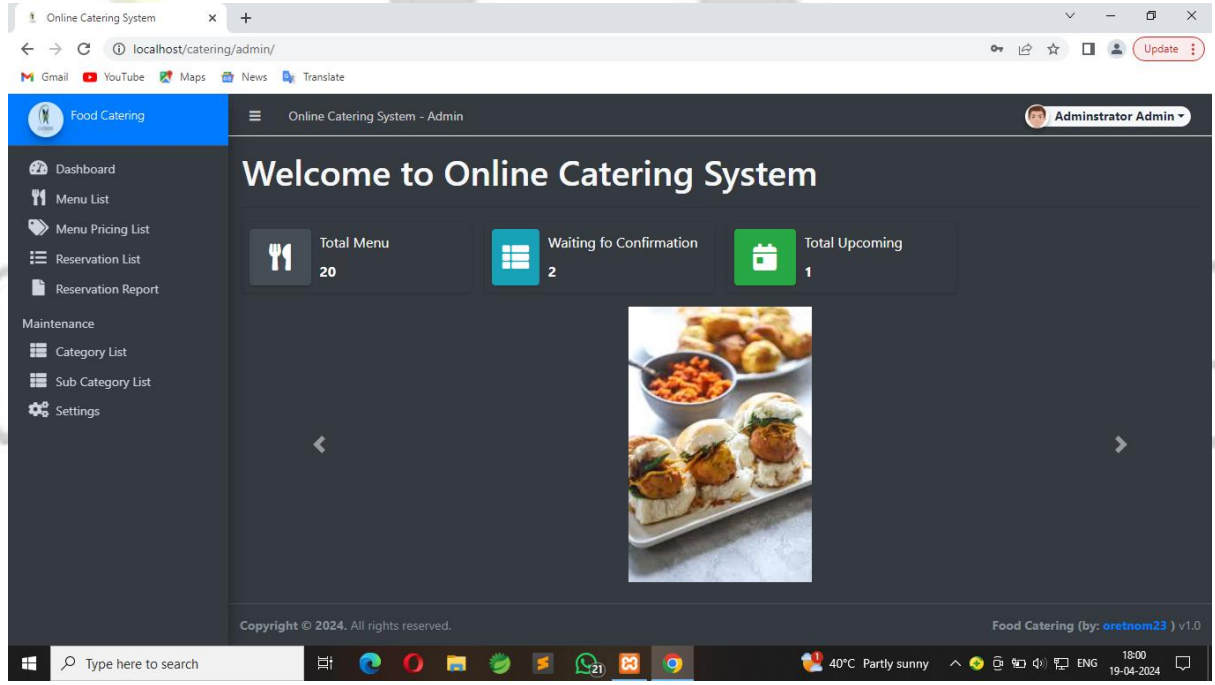
✓ Reservation Details



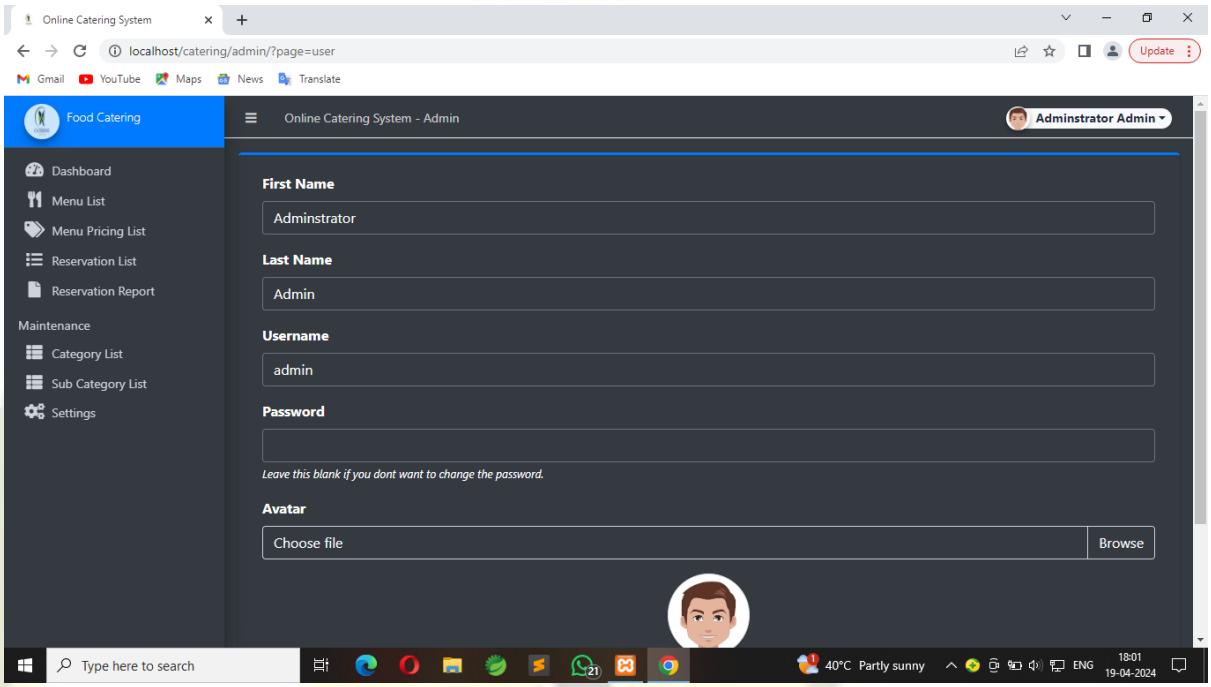
✓ Admin Login Page



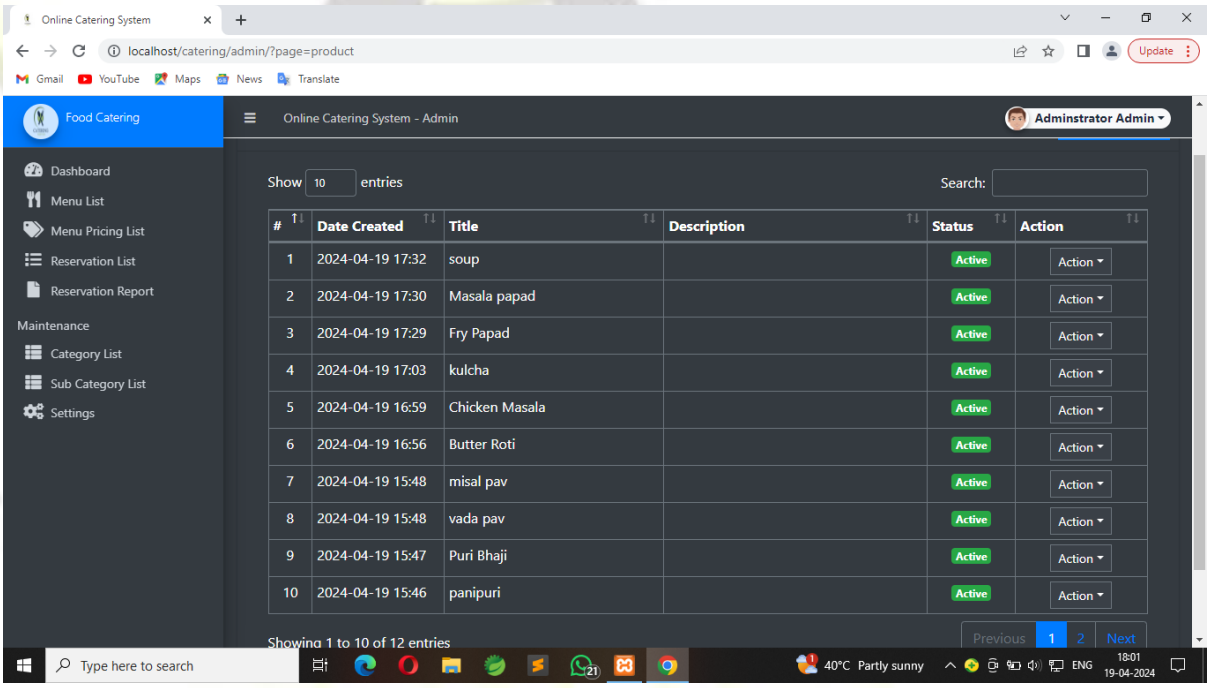
✓ DashBoard



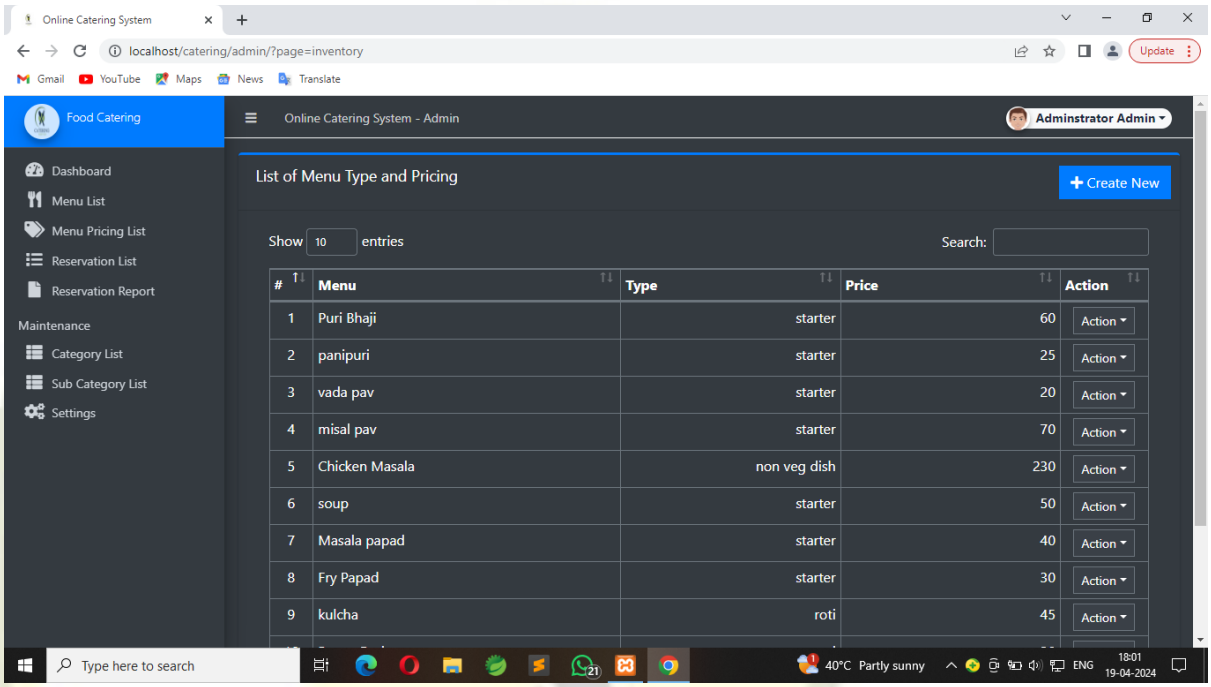
✓ Admin Details



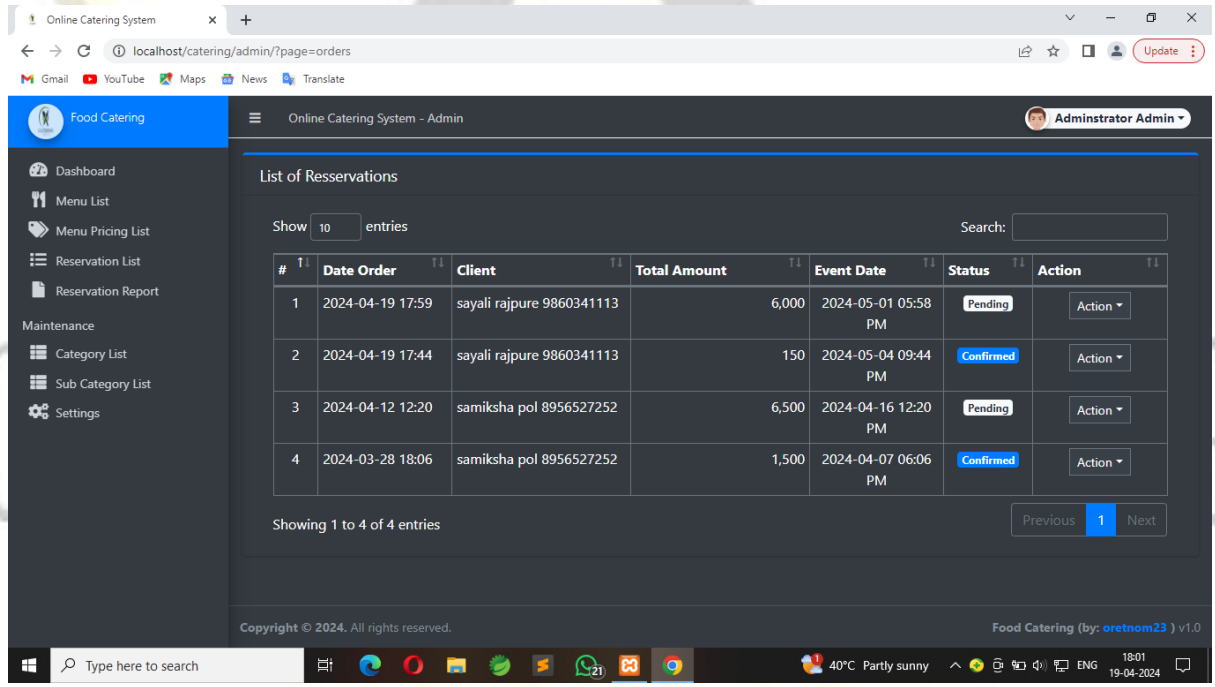
✓ Menu List



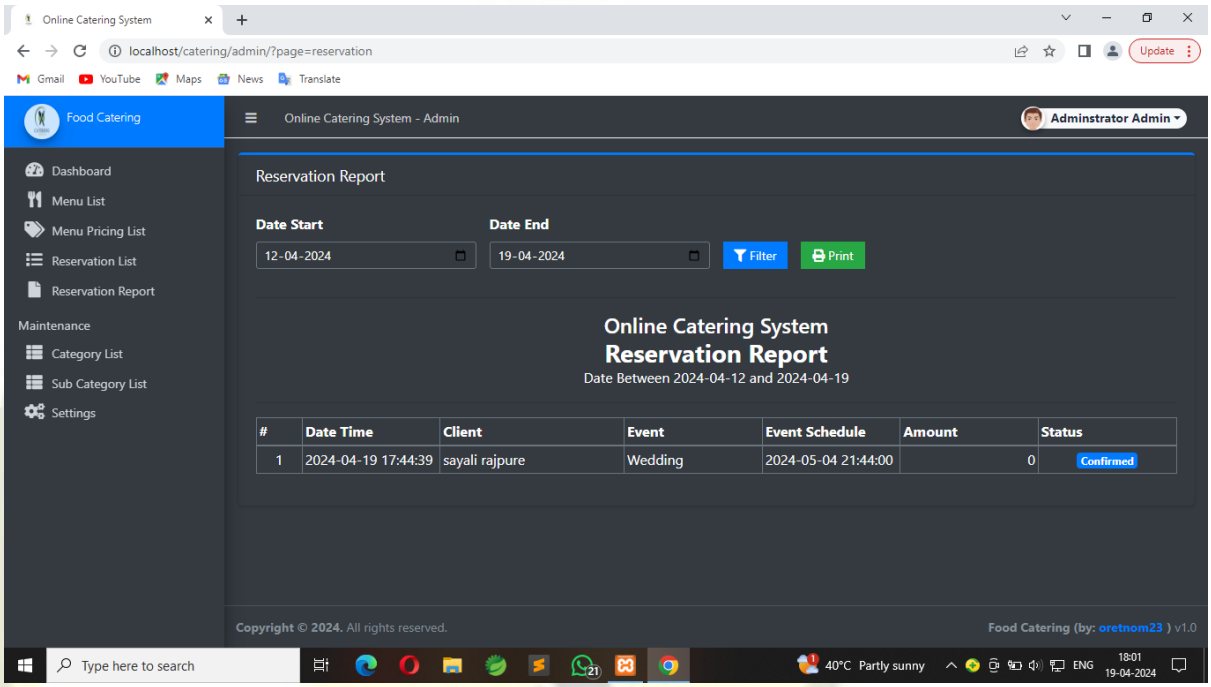
✓ Price List



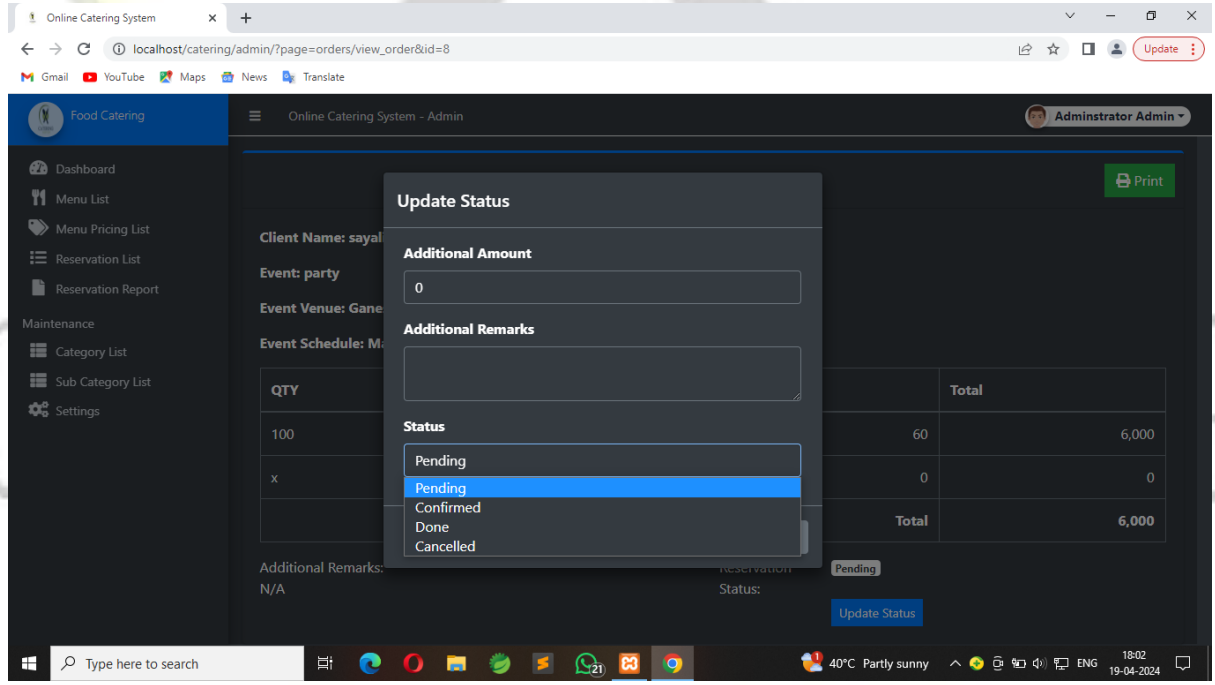
✓ Reservation List



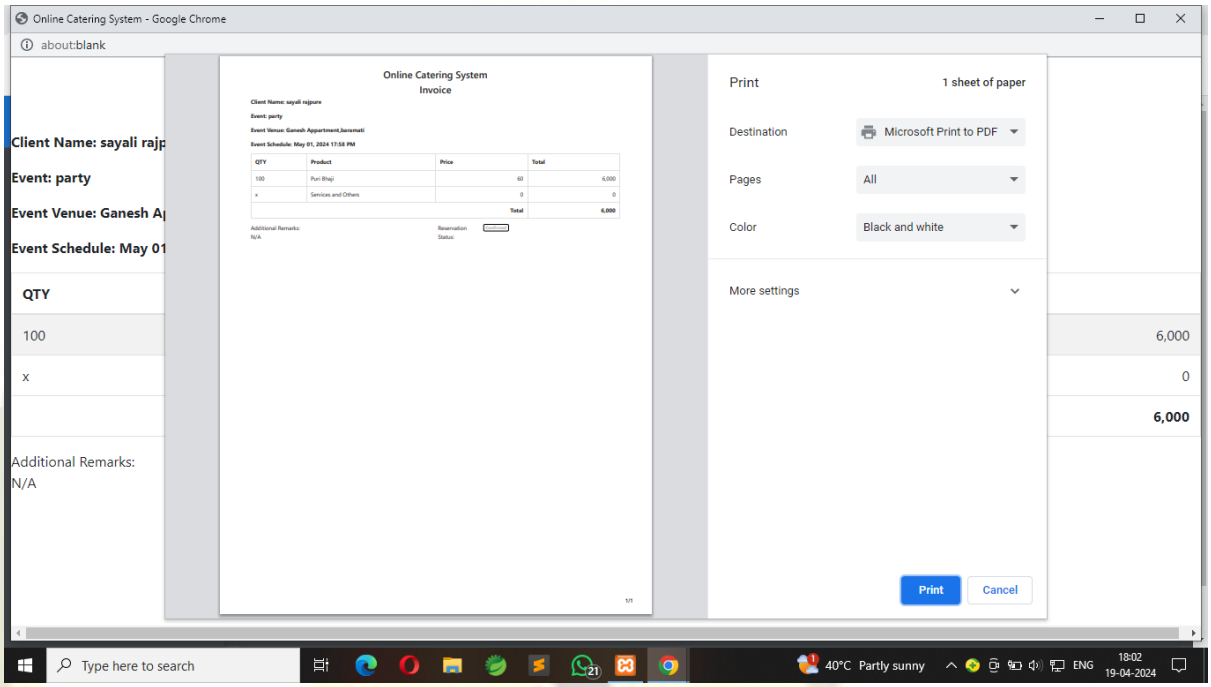
✓ Reservation Repot



✓ Status Update



✓ Invoice Print



11. TESTING

As the Catering Management System, there are various types of test methods we need to apply for the application test. In general practices, there are two types of test methodologies that need to be used for database testing.

☞ *Two Types Of Testing: -*

- Black Box Testing
- White Box Testing

12.FUTURE ENHANCEMENT:-

This software is a solution for the catering service generation problem manually. It's main scope is to save the time and efforts.

1. The data of faculty in the data base can further be used to maintain record of faculty's experience for particular customer.

2. Attribute Correctness of project will give more corrective approach toward generation of this timetable. This project will generate most corrective output with no errors.

3. The future enhancement that can be developed from the project is to generate the master timetable for the departments and to the entire college. This enhancement can be achieved my making further modifications keeping the approach and techniques used in this project

13.CONCLUSION:-

Separate timetable for the individual class, faculty and labs are generated automatically by this system.

Various slot combinations can be acquired so that another timetable is generated as of need.

The project reduces time consumption and he pain in framing the timetable manually.

The project is developed in such a way that, no slot clashes occur providing features to tailor the timetable as of wish.

The future enhancement that can be developed from the project is to generate the master timetable for the departments and to the entire college.

This enhancement can be achieved my making further modifications keeping the approach and techniques used for this project.

14. BIBLIOGRAPHY

- **Websites** -

  www.Google.com

  www.W3school.com

  www.stackoverflow.com