



# **Daffodil** *International* **University**

**Department of CIS**

**TITLE OF THE PROJECT**

**Food Zone**

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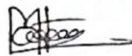
This Project titled "Food Zone", Submitted by Farjana Akter, ID No: 181-16-248 to the Department of Computing & Information Systems, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computing & Information Systems and approved as to its style and contents. The presentation has been held on- 19-07-2023.

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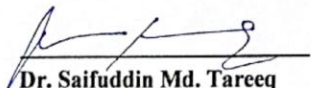
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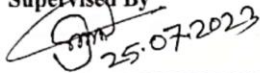
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## Declaration

I hereby declare that; this project has been done by me under supervision of **Mr. Abdullah Bin Kasem Bhuiyan, Lecturer** department of Computing and Information System (CIS) of Daffodil International University. I am also declaring that this project or any part of there has never been submitted anywhere else for the award of any educational degree like, B.Sc., M.Sc., Diploma or other qualifications.

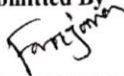
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## Abstract

I have created web-based system for all the food lover of Bangladesh. This system is for both consumer and food seller. This system is mainly build for the office going people who don't get the proper lunch due to many reasons. This system is also build for our house wife's or other people who loved to cook at home or anywhere. But this cooking is their passion not profession. I want to convert this passion into profession.

By using system any people can enjoy their food with very low price compare to restaurant food. At a time they can taste the verity of foods too. On the other hand women's at our home also can earn extra money by selling their home made food and be financially solvent. Not the women anyone who is passionate to cooking also earns money by cooking.

The Home Made Food (Food Zone) Project industry plays a vital role in providing delectable culinary experiences for various events, ranging from corporate gatherings to social celebrations. This project aims to explore innovative approaches and strategies to enhance Home Made Food (Food Zone) Project services, ensuring an unforgettable gastronomic journey for clients and guests.

This study focuses on three key areas. First, it investigates emerging trends and preferences in the catering industry, including the growing demand for diverse cuisines, personalized menus, and dietary considerations such as vegan, gluten-free, and organic options. By understanding these trends, caterers can tailor their services to meet the evolving needs and desires of their clients.

Second, this project explores the implementation of state-of-the-art technology in Home Made Food (Food Zone) Project operations. From online platforms for streamlined booking and menu selection to innovative cooking techniques and equipment, technological advancements can revolutionize the way catering services are delivered. The project delves into the benefits of integrating digital solutions, automation, and smart appliances to enhance efficiency, quality, and customer satisfaction.

Finally, the project emphasizes the significance of sustainable practices in the Home Made Food (Food Zone) Project industry. With increasing environmental concerns, it is essential for caterers

to adopt eco-friendly approaches, including sourcing local and seasonal ingredients, reducing food waste, and implementing responsible packaging solutions. The study investigates sustainable practices and provides recommendations for caterers to minimize their environmental footprint while maintaining exceptional culinary experiences.

### **Dedication**

I would like to dedicate this project to my father. I could not stand a moment without the support and inspiration of my father. With his foresight, I have been able to traverse so many paths today.

### **Acknowledgement**

Alhamdulillah!

I am giving thousands of thanks in the court of Allah Almighty. By the grace of Almighty Allah, I am going to complete my bachelor's degree in Computing and Information Systems (CIS) from Daffodil International University through this report.

The way my parents and family have shown me support, courage and empathy in my long education life is the reason for my achievement today. I will be grateful to them for the rest of my life. Without their sincere support I will not be able to complete this project successfully.

I would like to express my special thanks and appreciation to my Project Supervisor Abdullah Bin Kasem Bhuiyan Sir. I am really grateful to for his kind support and foresight during the course that helped me to complete this project successfully. I was able to successfully complete my project under his supervision. I would not have been able to complete this project without his help.

Finally, I would like to thank my entire faculty at Daffodil International University, my dearest friends and well-wishers who have supported me and given me courage and inspiration. I am eternally grateful to all of you.

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## Chapter 1 - Introduction

### 1.1 Introduction

My project name is on food zone. This is a homemade food website. I make this project for people who can cook at home, especially women who want to earn some money at home, where they can use their cooking skills and earn some money for themselves. This system is mainly designed for office goers who do not get a proper lunch due to various reasons. Hence, most of the time they eat very expensive, unhealthy food, which they usually cannot afford. On the other hand this website is also very useful for the general customer who wants to taste different type of cooking as well as safe hygienic food. There are plenty of restaurants' who make food unhygienic and use toxic material for cooking. Their food is also not that tasty. Considering all these issue I make this website for both customer and home cooks. In this website any people can give his home made food to their customer.

In the fast-paced and bustling world we live in today, Home Made Food (Fode Zone) Project services have become increasingly popular and essential for a wide range of events and occasions. From corporate gatherings to weddings, parties, and social functions, the demand for professional and reliable Home Made Food (Food Zone) Project services continues to grow. To meet this demand and ensure seamless operations, it is imperative for catering businesses to leverage technology and streamline their processes. This project aims to develop a comprehensive that will enhance efficiency, improve customer experience, and drive the success of catering businesses. The Home Made Food (Food Zone) Project System is designed to automate and simplify various aspects of catering operations, starting from the initial inquiry and quotation stage to menu customization, order management, and delivery coordination. By implementing this system, catering businesses can optimize their workflows, reduce manual errors, and provide a seamless experience for both customers and internal staff.

### 1.2 Document Contents in Project Document

The following chapters will be covered in this publication or documentation to chronicle the project's progress.

#### **Chapter 1: Introduction**

A brief introduction to the suggested project and system.

#### **Chapter 2: Initial Phase**

This chapter covers the preliminary research findings for the proposed system, such as the major goals and objectives, issue area, possible solutions, and project history.

### **Chapter 3: Literature Review**

The issue domain, solutions, evaluation of current solutions, and ultimately suggestion are all discussed in detail in this chapter.

### **Chapter 4: Methodology**

The importance of employing methodology, many methods that may be employed, and the preferred methodology and its application will all be explored in this section.

### **Chapter 5: Planning**

This chapter covers project plans such as project plans, test plans, risk and change management, and so on.

### **Chapter 6: Feasibility**

This is where you'll find the full feasibility study report and cost-benefit analysis.

### **Chapter 7: Foundation**

This chapter will contain information on the issue area identification, general need list, proposed technologies, and reasons.

### **Chapter 8: Exploration**

It includes basic UML diagrams and a need list for both the existing and new systems, as well as a prototype.

### **Chapter 9: Engineering**

This chapter contains the proposed system's logical and behavioral models.

### **Chapter 10: Deployment**

Here, we'll talk about coding samples and how to split down a development challenge based on development priority.

### **Chapter 11: Testing**

This chapter includes a number of test ideas and outcomes.

### **Chapter 12: Implementation**

This section covers the implementation strategy, training model, and other related topics.

### **Chapter 13: Critical Appraisal and Evaluation**

The review of the initial objectives that were reached and those that were not met in great detail.

### **Chapter 14: Lessons Learned**

The learning's and obstacles encountered during the project are mostly included in the pre-project-closing evaluation.

### **Chapter 15: Conclusion**

Here you will find a summary of the project, as well as its goals, successes, and lessons learned.

## **Chapter 2 – Initial Study**

### **2.1 Project Proposal**

The Homemade Food Website Project aims to create an online platform where passionate home cooks and food enthusiasts can share their culinary creations with others. The website will serve as a hub for users to post and discover a wide range of homemade recipes, fostering a community of like-minded people who appreciate cooking and want to explore different cuisines.

### **Background Study**

The concept of homemade food website arose from the growing popularity of home cooking and the growing interest in different cuisines among people worldwide. With the advent of technology and social media, home cooks and food enthusiasts are eager to share their culinary creations with a wider audience. This background study aims to explore the context and rationale behind the proposed project and to understand the potential impacts and benefits to its users and the culinary community.

The background study establishes the relevance and importance of the Homemade Food Website project. With the growing interest in homemade cooking, the desire for different recipes and the need for a community-based platform, this project is poised to make a significant impact on the culinary landscape.

By empowering home cooks, promoting culinary diversity and fostering a vibrant community, the Homemade Food website will become a valuable resource for food enthusiasts, enriching their cooking experience and inspiring them to explore new flavors and cuisines.

### **Description of the proposed system**

The Homemade Food Website is an online platform designed to facilitate the sharing of homemade recipes, foster a community of home cooks and food enthusiasts, and inspire culinary creativity. The system has a variety of features and functionalities that cater to both recipe creators and users looking for new and exciting homemade recipes.

Homemade Food Website System provides an interactive and user-friendly platform for home cooks and food enthusiasts to share and discover homemade recipes from diverse cuisines. By fostering a sense of community, inspiring culinary creativity, and promoting homemade cooking, the platform aims to become a destination for anyone interested in cooking and exploring the world of homemade food.

### **Prioritized Features according to MoSCoW**

MoSCoW is a prioritization technique that categorizes features into four categories: Must-have, Should-have, Could-have, and Won't have. Here are the prioritized features for the Home Made Food (Fode Zone) Project System project:



| Serial No. | Requirement for Food Zone  | Priority of Food Zone |
|------------|--|-----------------------|
| 1.         | Provide an online platform for customers to view the menu options.   | Must-have             |
| 2.         | Enable customers to place orders for catering services online.   | Must-have             |
| 3.         | Track and manage the delivery process, including order dispatch and tracking.  | Must-have             |
| 4.         | Allow customers to make secure online payments for their catering orders.  | Must-have             |
| 5.         | Support the ability for customers to specify any dietary restrictions or preferences.  | Must-have             |
| 6.         | Offer customers the ability to customize their orders based on specific requirements.  | Should-have           |
| 7.         | Provide suggestions or recommendations to customers based on their preferences or previous orders.                                 | Should-have           |
| 8.         | Allow customers to track the status of their catering orders.  | Should-have           |
| 9.         | Enable customers to leave reviews and ratings for the catering services provided.  | Should-have           |
| 10.        | Implement a loyalty program to reward frequent customers with discounts or special offers.   | Could-have            |
| 10.        | Allow customers to schedule catering orders directly into their calendars.   | Could-have            |
| 11.        | Provide social media integration to enable customers to share their catering experiences.  | Could-have            |
| 12.        | While related to catering, this feature goes beyond the core functionality of the system and is not included in the current scope. | Won't-have            |
| 13.        | IoT Integration This feature is typically more relevant to internal operations rather than customer-facing functionality.          | Won't-have            |

*Table 1: Prioritized Features*

## Exploration & Engineering

The Homemade Food Website Project aims to create a user-friendly online platform that connects home-based cooks with food enthusiasts, allowing them to showcase and sell

homemade dishes. The platform will provide a space for talented chefs to share their culinary creations and provide users with a convenient way to discover and order delicious homemade food in their local area.

- Users can sign up and create accounts to access website features
- Secure authentication mechanisms will be implemented to protect user data and privacy.
- Home cooks can create profiles to showcase their culinary skills, including details on their specialties, location and prices.
- Cooks can list their homemade dishes with attractive pictures, descriptions and prices.
- They can manage their inventory, update availability and deactivate items if needed.
- Users can search for home-cooked meals based on cuisine, location, dish name or cook's name.
- Advanced filtering options will be available to help users find specific foods or discover new ones
- Users can add food to their cart and order for pickup or delivery.
- An easy-to-use checkout process will be implemented, ensuring a seamless user experience.
- Users can provide reviews and ratings for the food they order, helping others make informed decisions.
- Chefs can respond to reviews and engage with their customers to build a loyal user base.

The Homemade Food Website Project aims to revolutionize the way homemade food is experienced and enjoyed. By providing a user-friendly platform for home cooks to share their culinary talents and connecting them with food enthusiasts, the website will foster a thriving community of home-cooked food lovers. Throughout the exploration and engineering process, careful consideration will be given to ensuring a secure, efficient and enjoyable user experience for all participants.

### **Iterative development – Timeboxing**

The Homemade Food Website Project aims to create an online platform that connects home-based cooks with food enthusiasts, so that they can showcase and sell their homemade food. To

ensure project success and timely delivery, an iterative development approach with timeboxing will be adopted.

Iterative development involves breaking the project down into smaller, manageable iterations or increments. Each iteration focuses on delivering a working and tested subset of features that can be built upon in subsequent iterations. This approach allows for flexibility and continuous improvement based on feedback received during each iteration.

Timeboxing is a project management technique in which specific time frames, often referred to as "sprints" or "timeboxes", are assigned to each iteration. These timeboxes are typically short, typically one to four weeks, to maintain focus, meet deadlines, and manage opportunities effectively.

By adopting an iterative development approach with timeboxing, the Homemade Food website project will ensure continuous progress, frequent feedback and timely delivery. The project will evolve based on user needs and change requirements, keeping a well-managed timeline. Regular reviews and retrospectives will provide insights for informed decision-making throughout the development process, ultimately leading to a successful and user-friendly homemade food platform.

Iterative development entails breaking down work into parts and predicting time for each chunk. The feasibility and foundation phase of the project will consume 15-20% of the entire time, the actual development will consume 50-60% of the total time, and the documentation will consume 10-15% of the total time. The project will last three months and will require 280-320 hours of work. The project is broken into seven parts of 20-40 hours each. I'm going to estimate the time-box using the "t-shirt" method. Story points will be assigned based on t-shirt sizes XS, S, M, L, and XL. Larger sizes will necessitate more effort and time than lesser sizes.

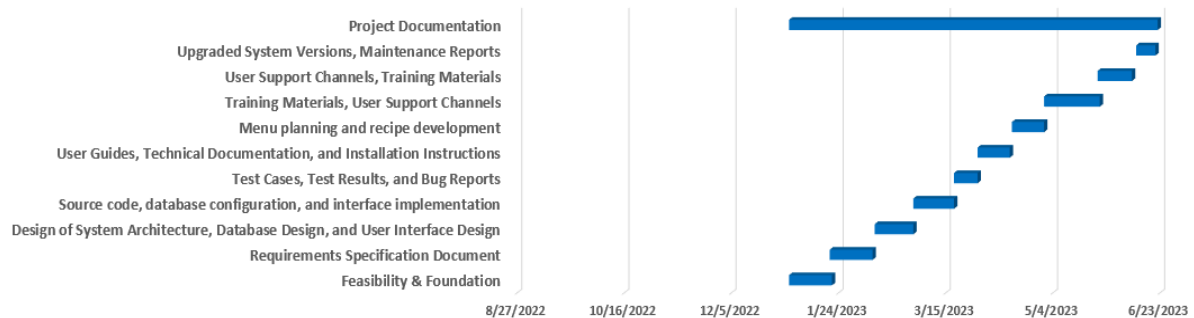
## **Time Boxing**

### **Time Boxing**

| Timebox | Start Date | Start Date | Duration | Tasks/Deliverables         |
|---------|------------|------------|----------|----------------------------|
| TB1     | 01/01/2023 | 01/20/2023 | 20       | Foundation and feasibility |

|      |            |            |     |   |
|------|------------|------------|-----|---|
| TB2  | 01/20/2023 | 02/10/2023 | 20  | Specification of Requirements   |
| TB3  | 02/10/2023 | 02/28/2023 | 18  | Design of System Architecture, Database Design, and User Interface Design |
| TB4  | 02/28/2023 | 03/19/2023 | 19  | Source code, database configuration, and interface implementation         |
| TB5  | 03/19/2023 | 03/30/2023 | 11  | Test Cases, Test Results, and Bug Reports                                 |
| TB6  | 03/30/2023 | 04/15/2023 | 15  | User Guides, Technical Documentation, and Installation Instructions       |
| TB7  | 04/15/2023 | 04/30/2023 | 15  | Menu planning and recipe development                                      |
| TB8  | 04/30/2023 | 05/25/2023 | 26  | Training Materials, User Support Channels                                 |
| TB9  | 05/25/2023 | 06/12/2023 | 17  | User Support Channels, Training Materials                                 |
| TB10 | 06/12/2023 | 06/20/2023 | 8   | Upgraded System Versions, Maintenance Reports                             |
| TB11 | 01/01/2023 | 06/20/2023 | 169 | Project Documentation   |

**Table 2: Time box estimation**



**Figure 1: Gantt Chart of the Proposed Timebox Estimation**

## 2.2 Background of the project

Basically this website is made for office going people who cannot bring lunch from their home due to various reasons. So, most of the time they eat unhealthy food at very high prices, which they usually cannot afford. Because of this, many working people cannot eat what they like for lunch. I think this is a real problem and my website is probably the best solution for this problem. On the other hand, there are thousands of women who spend their time gossiping or idealizing. If they can cook for his family of 4 hopefully he can cook for 2 more at minimal cost. And if he can sell this extra food from his home then he will gradually become financially independent.

Customers can also enjoy homemade food at much lower prices than restaurants and stay safe, healthy. My goal is to make our women more financially secure and our working people healthy.

### 2.3 Problem Areas

The main problem of this website or this project is operational activities. Now I describe these problems:

For my project we need to deliver food on time to our customer. So we need a skilled staff for our main high quality service. But it is not easy at all. If we consider Dhaka city alone, there is heavy traffic, delivery area is huge so it will be difficult to maintain good service.

### 2.4 Possible Solutions

I am still working on it to find an optimal solution for these huge operational tasks. Primarily food can be delivered by food services such as Pathao, or Food Panda. But it is risky for my business purposes. I can be my client and home chef in the long run. For the security of the business I have to build an effective delivery team and arrange logistic support for the team. It will be possible if my idea runs successfully and can make a social impact with this idea

## Chapter 3 – Literature Review

The literature review for the Homemade Food Website project aims to explore existing research, studies, and articles related to online food platforms, homemade food markets, user behavior, and technology trends. By conducting a thorough review of the relevant literature, we can gain valuable insights and inform the development of an effective and successful homemade food website.

### 3.1 Discussion on the Problem Domain

**Customer Management:** The catering system should provide features to manage customer information, including contact details, dietary preferences, allergies, and event history. It should also allow customers to place orders, make special requests, and track their orders.

**Menu Management:** The system should support menu creation and management, including the ability to add, update, and remove menu items. It should provide options for categorizing items, defining pricing, and setting availability based on the event date.

**Order Management:** Efficient order management is crucial. The system should enable customers to place orders online, specify quantities, select menu items, and customize their orders. The catering staff should have a clear view of incoming orders, their status, and any special instructions.

**Event Planning:** The system should offer tools to assist with event planning, such as venue management, event scheduling, and capacity tracking. It should allow users to specify event details, including date, time, location, and expected number of guests.

**Dietary Restrictions and Allergies:** The system should consider dietary restrictions and allergies of customers while managing menus and taking orders. It should provide options for customers to specify their preferences and any special dietary needs.

### 3.2 Discussion on the Problem Solution:

- **Customer Management Solution:** Develop a customer management module that allows catering staff to store and retrieve customer information easily. This module should include features such as a customer database, order history tracking, and the ability to handle special requests and dietary preferences.
- **Menu Management Solution:** Create a menu management system that enables catering staff to create and update menus effortlessly. This system should include features such as menu item categorization, pricing management, availability settings, and the ability to showcase menu items with appealing visuals.
- **Order Management Solution:** Implement an order management system that streamlines the ordering process. This system should allow customers to place orders online, provide customization options, and track the status of their orders. Catering staff should have a dashboard to view and manage incoming orders, update order status, and communicate with customers.
- **Event Planning Solution:** Develop an event planning module that assists with managing multiple events simultaneously. This module should include features such as event

scheduling, venue management, capacity tracking, and the ability to allocate resources based on event requirements.

- **Dietary Restrictions and Allergies Solution:** Incorporate a dietary restrictions and allergies management component into the system. This module should allow customers to specify their dietary preferences and allergies during the ordering process. Catering staff should be alerted to any special requirements, ensuring that they can accommodate individual needs while preparing the food.
- **Safety and security**  
Because the system will be holding private data, including personal data, data security should be a top focus for the solution. The system should have high-security measures as well as role-based data access restrictions.
- **Trust**  
The most serious issue that these systems confront is their dependability. Users should be able to see through the entire system. The government policy should integrate in order to acquire the trust of the users.

### 3.3 Comparison among the leading solutions

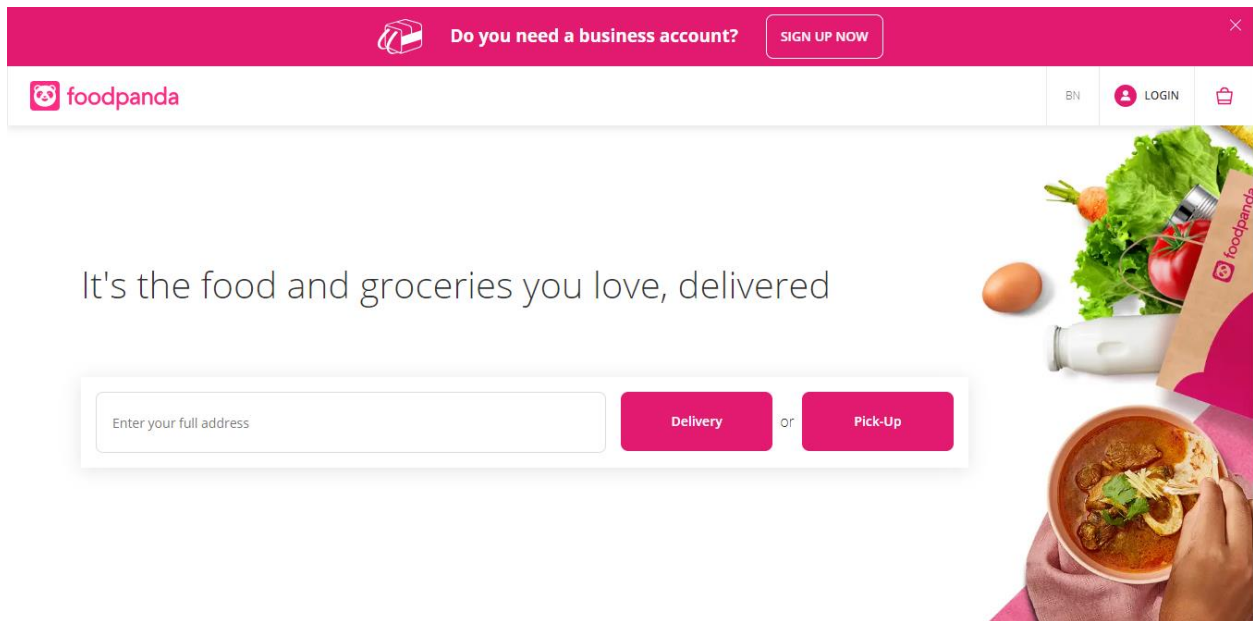
While I don't have access to real-time information about the latest solutions for Home Made Food (Fode Zone) Project systems, I can provide a general comparison of features and considerations that are often relevant when evaluating leading solutions. Here are some factors to consider when comparing different Home Made Food (Fode Zone) Project system solutions:

- <https://www.foodpanda.com.bd/>(Bangladesh)
- <https://www.deshcatering.com/> (Bangladesh)
- <https://alphacateringservices.com/>

### **Food Panda**

An online meal ordering firm or brand is called Foodpanda. Delivery Hero is the owner of this online food and shopping delivery service. It has its main office in Berlin, Germany, and collaborates with 20 brands in close to 50 nations on four continents. German delivery king Foodpanda Group was purchased by the Foodpanda Group in December 2016 and is now run by them. Outside of China, Foodpanda is presently Asia's largest platform for food and grocery

delivery.



*Figure 2: Overview of Food Panda*

### Best Features

- The system should allow caterers to create and manage menus, including the ability to add, update, and delete menu items. It should also support customization options, such as dietary restrictions or ingredient substitutions.
- The system should enable customers to place orders online or through other channels. It should allow caterers to view and manage orders, track their status, and send notifications to customers about order updates.
- The system should provide features to manage catering events, such as scheduling, venue management, seating arrangements, and equipment rental. It should allow caterers to handle both single and recurring events and provide event-specific details to staff members.

### Limitations

- The system's performance may be affected by the hardware and internet connectivity of the devices used to access it. Slow or unreliable internet connections can result in delays or disruptions in service.



- The system should be designed to handle a growing number of users, orders, and events. Scalability challenges may arise if the system's architecture and infrastructure are not appropriately planned and implemented.
- Users' identities are not verified.

### **Desh Catering:**



*Figure 3: Overview of Deshi Catering*

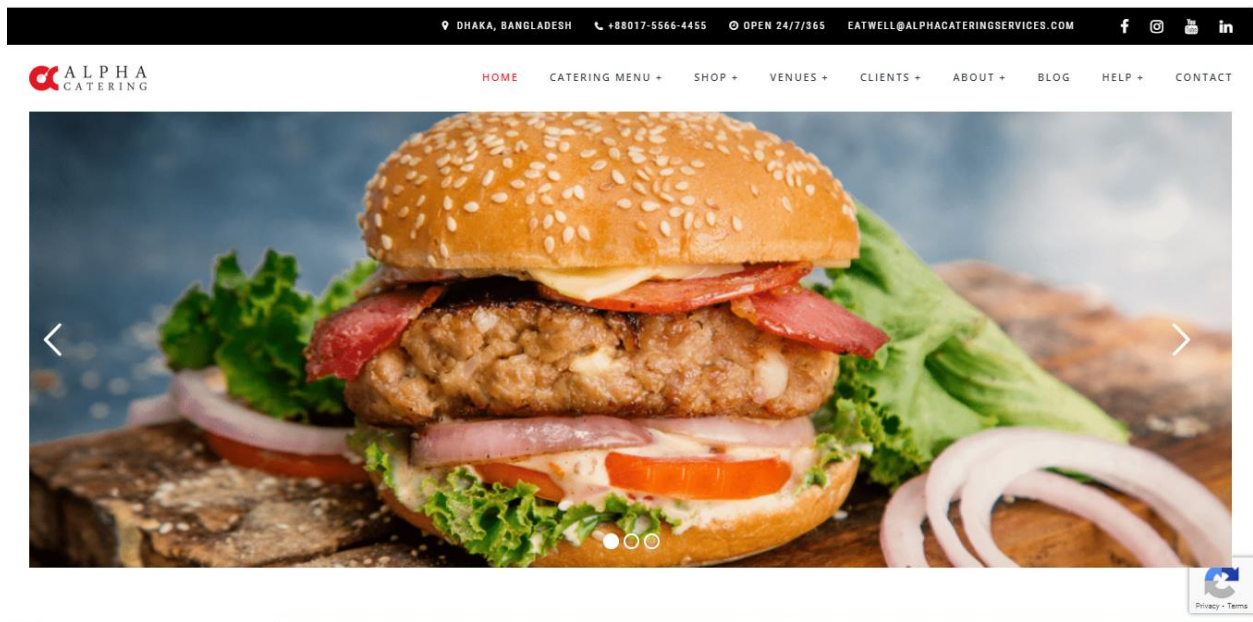
### **Best Features**

- The system should include inventory tracking functionalities to manage ingredient quantities, stock levels, and expiration dates. It should provide alerts for low inventory and generate purchase orders for restocking.
- The system should allow caterers to manage their staff, including employee scheduling, task assignments, and time tracking. It should provide features for staff communication, such as shift reminders or event updates.
- The system should store customer data, including contact information, preferences, and order history. It should provide tools for customer communication, such as email notifications, marketing campaigns, and feedback collection.

## Limitations

- No private request options.
- Create user restrictions.

## Alpha Catering Services



*Figure 4: Overview of Alpha Catering Service*

## Best Features

- There is a list of information of the Home Made Food (Fode Zone) Project.
- The system should generate invoices for customers and provide billing functionalities, including payment processing, tracking outstanding balances, and generating financial reports.
- The system should offer reporting capabilities to track key performance indicators (KPIs) like sales, revenue, and customer satisfaction. It should provide insights through data visualization and assist in making data-driven decisions.

## Limitations

- Not user friendly.
- No real-time searching options.

### 3.4 Recommended Approach

- Conduct thorough market research to understand the demand for homemade food services in the target region.
- Identify competitors and analyze their strengths and weaknesses to identify opportunities and gaps in the market.
- Gather insights into user preferences, pain points, and expectations through surveys and interviews.
- Adopt an iterative development approach with the Agile methodology, allowing for flexibility and continuous improvement.
- Divide the project into sprints with defined goals for each iteration, focusing on delivering functional increments at the end of each sprint.
- Implement a robust cook verification process to ensure that home cooks meet the necessary food safety and hygiene standards.
- Provide guidelines and resources on safe food handling practices for cooks.
- Implement a secure user registration and authentication system to protect user data and privacy.
- Offer social media login options for user convenience.
- Develop a seamless ordering process with a shopping cart and checkout functionality.
- Integrate secure payment gateways to facilitate smooth and secure transactions

## Chapter 4 – Methodology

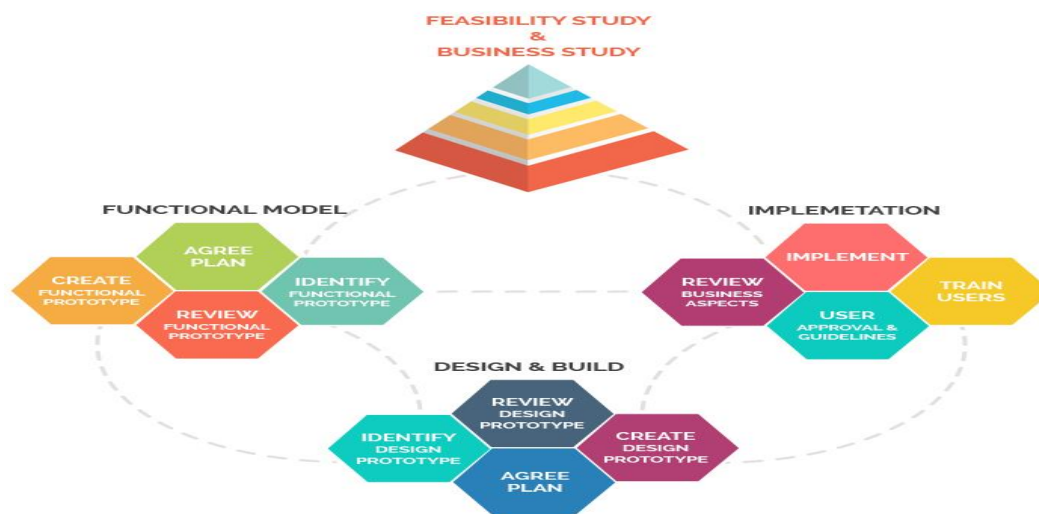
For a successful project and efficient project management, the software team that works for the best of the project picks the software development approach. A set of concepts, techniques, and processes employed by professionals in a particular business is known as a project management methodology. The top techniques need distinct outputs, processes, and even the creation of project management software, in addition to being structured differently. (Asana, 2021). Methodology Description refers to a detailed explanation of the methods and procedures used in a research study or project. It outlines the steps taken to collect data, analyze information, and draw conclusions.

#### 4.1 What to Use

A method for system design, organization, and development in software development is known as software methodology. Software development techniques are essential to the process of creating software. A few examples of software development approaches include the waterfall model, prototype model, agile software development, fast application development, dynamic systems development model, spiral model, and collaborative application development. Both the Dynamic System Development Method (DSDM) and the SSADM Waterfall Methodologies are important for my project. Below, I'll outline the advantages and disadvantages of three strategies:

#### Dynamic System Development Method (DSDM)

The Dynamic Systems Development Technique (DSDM) is an Agile methodology that takes into account every stage of the project life cycle. The DSDM strategy places a strong emphasis on project alignment with organizational strategic goals. A DSDM project's goal is to fulfill business requirements while also producing tangible business advantages. DSDM double-checks that a project's advantages are obvious, the solution is workable, and solid foundations are in place before moving forward. Due to its flexibility and adaptability, DSDM is able to respond to shifting business demands. It offers the required project management and governance systems at the same time. (Study.com, 2020)



*Figure 5:DSDM Methodology*

## Benefits of DSDM

- It offers an approach that is not dependent on a particular method and is adaptable in terms of requirement development.
- Budgets and deadlines must be rigorously followed.
- Stakeholders are involved in the development process.
- Because testing is so important, it is assumed that every project team will include at least one tester.
- Since it was built from the bottom up by business professionals, business value has been identified and is anticipated to be the delivery's top priority.
- Has a special method for figuring out if each repetition is necessary.
- Establishes early on among project participants that not all requirements will be satisfied in the final output. **(Ltd), 2021)**
- Be flexible and responsive right away.
- End users are accessible to developers.

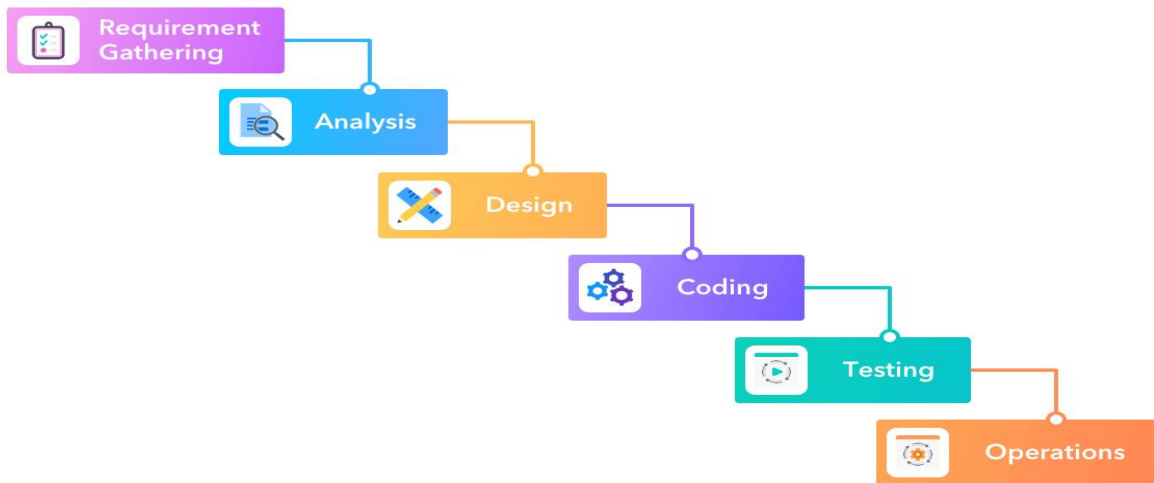
## Drawbacks of DSDM

- It involves the progressive accumulation of wants.
- Concentrating on RAD can decrease the robustness of the code; it requires total dedication to the DSDM process; significant user involvement; a skilled development team in both the business and technical areas; and it.
- This is most certainly the survey's most significant initiative. **(Ltd), 2021)**
- If the client is dishonest and unsure of the project's ultimate outcome, the project may be completely wrecked.
- DSDM discourages developer originality.

## Waterfall Model or Structured System Analysis and Design Method (SSADM)

The Waterfall technique, commonly referred to as the Waterfall model, is a method of sequential development where each stage of a project—such as analysis, design, programming, and testing—is completed before moving on to the next. A project's linear flow from start to finish is

emphasized by the waterfall technique of project management. This front-loaded strategy is frequently used by engineers, and it is based on careful planning, good documentation, and consistent execution. (Anon., 2021).



*Figure 6: Waterfall methodology*

### **Benefits of Waterfall**

- By spotting design flaws in the analysis and design phases, developers may avoid creating bad code in the implementation step.
- The project's overall cost and schedule may be precisely estimated after the criteria have been specified.
- New developers won't have any trouble catching up on a current project because the requirements document should contain all they need to know.
- Progress tracking utilizing an organized method is made easier because milestones are clearly defined.
- Customers sometimes forget to add additional needs to projects, which causes production delays.

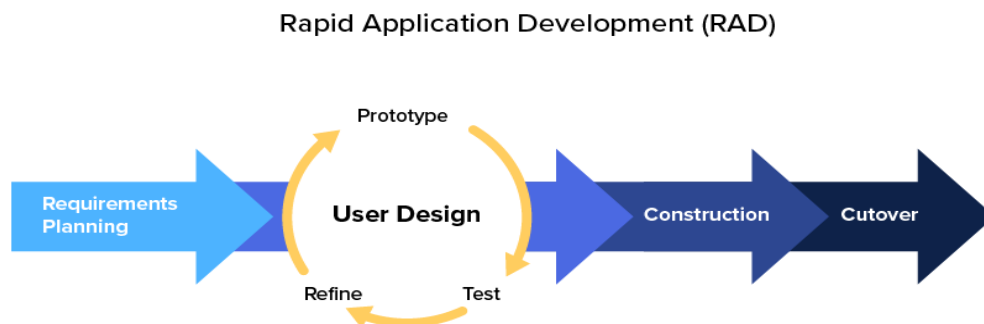
### **Drawbacks of Waterfall**

- Compared to an iterative plan, such as the Agile approach, utilizing this historical technique may result in lengthier project completion times.

- Clients frequently don't have a clear idea of what they want up front, which results in demands for modifications and new features later in the process, when they are more challenging to implement.
- When one stage of a process is delayed, the other phases of the process are likewise delayed;
- Clients are not permitted to assist in the design and implementation phases.

## Rapid Application Development

The Rapid Application Development (RAD) paradigm places a strong emphasis on iteration and experimentation with little (if any) advance preparation. In general, a RAD approach to software development places more of a focus on development and prototyping than it does on planning. In contrast to the waterfall paradigm, which places an emphasis on careful specification and preparation, the RAD approach places an emphasis on continually evolving demands as the development process moves forward. (Anon., 2021)



*Figure 7:Rapid Application Development methodology*

### Benefits of RAD

- It is versatile and adjustable, and it is helpful when you need to lower the project's total risk.
- It is flexible and open to change.
- Deliverables may be transported with ease using intermediary programs, high-level abstractions, and scripts.

- Manual coding has decreased as a result of code generators and reuse, and prototyping increases the possibility that there will be less errors in nature.(**Martin, 2021**)

### **Drawbacks of RAD**

- Effective collaboration is necessary.
- I struggle to work in big groups.
- Highly qualified developers are needed.
- Systems that can be modularized over the course of the product's life cycle are the only ones that can be designed using rapid application development.(**Martin, 2021**)

### **Choosing Methodology**

However, the waterfall approach has occasionally been used in farm management systems. The DSDM approach will be the best option and the best answer for the farm management system project since it consistently delivers product and project quality on schedule and is fairly adaptable for deployment in any company or organization. Clients may modify their requirements throughout the development process if they feel it is important for their project.

#### **4.2 Why to Use Methodology**

The system must adhere to a methodology to meet the criteria within the allotted time and financial limits. By adhering to its established procedures, a methodology helps the project achieve its main goals. While selecting the appropriate approach for this kind of academic assignment could be challenging, doing so will greatly speed up completion and the delivery of findings.

#### **4.3 (Food Zone) Sections of Methodology**

The development team is required to follow a few DSDM approach tenets. These are listed below:



## Project's first phase

The first project concept, as well as the timeline, budget, and essential needs, are generated in this part.

## Phase of a Feasibility Study

This stage offers support for the project budget, business case, and technological solutions for business strategy. This stage offers support for the project budget, business case, and technological solutions for business strategy.

## Phase of Gathering Requirements

In this area, a variety of methodologies are utilized to pinpoint both functional and non-functional project demands.

## Phase of Analysis and Prioritization of Requirements

The obtained demands are assessed and prioritized in this stage using a prioritization method like MoSCoW.

Using MoSCow prioritization: MoSCoW has produced a prioritizing tool to aid in the development of the system. The following are a few of the parts:

### Has to be:

In order for the system to be useful to the users, it is crucial to identify the major functions that the system must do in this section.

### Must have:

This section assists in the identification of important criteria and the development of a key that is advantageous to everybody.

### Might Have:

The demands that are unimportant and have no impact on the system are helped to identify in this section.

Won't Have: This component of the system helps to identify demands that are not necessary for this system to function.

Engineering Phase of the Exploration and Engineering Phase Engineering includes iterative testing, system increments, system design, and ensuring that user requirements are met in accordance with system criteria.

Exploration: This phase helps determine the system's functional and non-functional needs using MoSCoW prioritization.

The primary iterative component of the process was used to iteratively review the requirements and create the solution.

In the post-project phase, the system's ultimate planned solution is developed and the predicted benefit of the project is determined.

#### Analyze Phase

In this step, the developed deliverables are tested with users, and if revisions are necessary, they are sent back to the initial phase.

#### 4.4 Implementation Plans

The project is almost finished, and advanced applications are now accessible for use. Make the new system usable if there are issues with this identification and solution. The release criteria, configuration, and planning are decided in this section. If everything is in order, the new system is subsequently put into operation's.

## Chapter 5 – Planning

### 5.1 Project Plan

The planning procedure for project completion is shown in this section. In essence, the project is divided into numerous discrete sections, and if everything goes as planned, the job will be completed within a specific amount of time.

#### 5.1.1 Work Breakdown Structure

In order to complete the project within the allotted time limit and more effectively and efficiently, this step comprises breaking it down into smaller jobs. We can estimate time and task

using this framework. The project can be more difficult to complete without this framework. As a result, the proposed structure in the WBC has been broken down into categories and subcategories, as seen in the chart below:

| No. | Task Name                       | Start      | Finish     | Duration |
|-----|---------------------------------|------------|------------|----------|
| 1.  | Introduction                    | 01/01/2023 | 01/15/2023 | 15       |
| 2.  | Initial Study                   | 01/15/2023 | 01/28/2023 | 13       |
| 3.  | Literature Review               | 01/28/2023 | 02/05/2023 | 8        |
| 4.  | Methodology                     | 02/05/2023 | 02/15/2023 | 10       |
| 5.  | Planning                        | 02/15/2023 | 02/27/2023 | 12       |
| 6.  | Feasibility Study               | 02/27/2023 | 03/15/2023 | 16       |
| 7.  | Foundation                      | 03/15/2023 | 03/22/2023 | 7        |
| 8.  | Exploration & Engineering       | 03/22/2023 | 04/20/2023 | 28       |
| 9.  | Deployment                      | 04/20/2023 | 05/10/2023 | 20       |
| 10. | Testing                         | 05/10/2023 | 05/20/2023 | 10       |
| 11. | Implementation                  | 05/20/2023 | 05/25/2023 | 5        |
| 12. | Critical Appraisal & Evaluation | 05/25/2023 | 06/05/2023 | 10       |
| 13. | Lessons Learned                 | 06/05/2023 | 06/10/2023 | 5        |
| 14. | Conclusion                      | 06/10/2023 | 06/17/2023 | 7        |

|     |       |            |            |     |
|-----|-------|------------|------------|-----|
| 15. | Total | 01/01/2023 | 06/19/2023 | 169 |
|-----|-------|------------|------------|-----|

*Figure 8: Food Zone Work Breakdown Structure of the*

### 5.1.2 Food Zone Resource Allocation

All assets and resources are allocated and managed to guarantee that the planned project is carried out in a timely and effective manner. Resource allocation is one of the most important project planning considerations. There is no team because this is an academic project, thus I will take on different roles at different periods. To meet the pre-scheduled work delivery date, the following resource allocation will be applied to the Food Zone Home Made Food (Fode Zone) Project project.

| Task                      | Duration | Resource                     |
|---------------------------|----------|------------------------------|
| Introduction              | 15       | Analyst, User                |
| Initial Study             | 13       | Analyst                      |
| Literature Review         | 8        | Analyst                      |
| Methodology               | 10       | Analyst, User                |
| Planning                  | 12       | Analyst, Team Leader         |
| Feasibility Study         | 16       | Analyst, User                |
| Foundation                | 7        | Analyst, Designer, Developer |
| Exploration & Engineering | 28       | Analyst, Designer, Developer |
| Deployment                | 20       | Designer, Developer          |
| Testing                   | 10       | Developer, Tester, User      |

|                                 |    |                                      |
|---------------------------------|----|--------------------------------------|
| Implementation                  | 5  | Analyst, Developer, User             |
| Critical Appraisal & Evaluation | 10 | Analyst                              |
| Lessons Learned                 | 5  | Analyst, Designer, Developer, Tester |
| Conclusion                      | 9  | Analyst                              |

*Table 3: Food Zone Resource allocation list*

### 5.1.3 Time Boxing

The segmentation of tasks into time boxes in order to complete the goals before the deadline is an important component of the DSDM project planning. In this section, all jobs are arranged into timeboxes that have a predetermined length. The iterative approach specifies a time limit for completing these tasks.

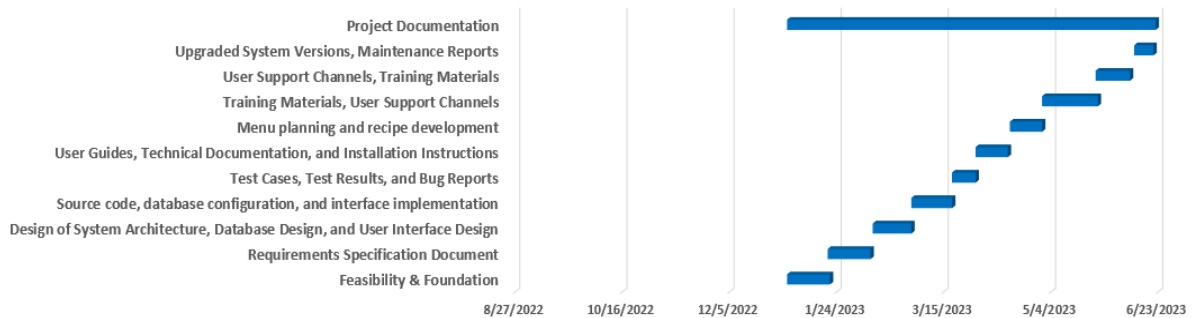
| Time Box | Task Name                 | Duration | Resource                     |
|----------|---------------------------|----------|------------------------------|
| TB1      | Introduction              | 15       | Analyst, User                |
| TB1      | Initial Study             | 13       | Analyst                      |
| TB1      | Literature Review         | 8        | Analyst                      |
| TB2      | Methodology               | 10       | Analyst, User                |
| TB2      | Planning                  | 12       | Analyst, Team Leader         |
| TB2      | Feasibility Study         | 16       | Analyst, User                |
| TB3      | Foundation                | 7        | Analyst, Designer, Developer |
| TB4      | Exploration & Engineering | 28       | Analyst, Designer, Developer |

|     |                                 |    |                                      |
|-----|---------------------------------|----|--------------------------------------|
| TB5 | Deployment                      | 20 | Designer, Developer                  |
| TB5 | Testing                         | 10 | Developer, Tester, User              |
| TB6 | Implementation                  | 5  | Analyst, Developer, User             |
| TB7 | Critical Appraisal & Evaluation | 10 | Analyst                              |
| TB7 | Lessons Learned                 | 5  | Analyst, Designer, Developer, Tester |
| TB8 | Conclusion                      | 9  | Analyst                              |

**Table 4: Food Zone List of the Time Boxes**

#### 5.1.4 Gantt Chart of Food Zone Working

A Gantt Chart is a graphical depiction of the project activity schedule. It displays the length as a progress bar from the start to the completion date, rather than in days. A Gantt chart for the Home Made Food (Food Zone) is shown below:



**Figure 9: Food Zone Project File cycle Gantt Chart**

#### 5.2 Test Plan

A test plan is a detailed document that outlines the testing methodology, goals, schedule, expectations, deadlines, and resources needed to complete a project. Consider it a guide for doing the tests required to make sure the program is operational, with test managers in charge. The test strategy was created in response to differences between the supplied input and the

anticipated output of the system. During the software development process, testing, which included verification and validation, was carried out.

### 5.2.1 Food Zone Testing Against the Time Boxes

To determine a fixed and maximum unit of time for a certain segment, the time box approach was utilized. Time constraints are being examined.

|                               |                     |                  |                     |
|-------------------------------|---------------------|------------------|---------------------|
| User Name for testing purpose | Example for testing | Role for testing | Example for testing |
| ID of the Time Box            |                     |                  |                     |
| Content of the Time Box       |                     |                  |                     |

| Type of test        | Steps for testing | Expected outcome | Actual outcomes | Comment |
|---------------------|-------------------|------------------|-----------------|---------|
| Unit testing        |                   |                  |                 |         |
| Integration testing |                   |                  |                 |         |
| System testing      |                   |                  |                 |         |
| Acceptance testing  |                   |                  |                 |         |
| Security testing    |                   |                  |                 |         |
| Usability testing   |                   |                  |                 |         |
| Reliability testing |                   |                  |                 |         |

*Figure 10: Food Zone Sample of Testing Against the Timebox*

### 5.2.2 Required Test

Although there are many testing modules available, functional and non-functional testing are the two most used types of system testing:

#### **Functional Testing:**

- **Unit Testing:** The suitability of individual software units, such as collections of computer program modules, use processes, and operational procedures, for use in unit testing is examined. It is a testing technique where the developer examines each module separately to look for faults. It is related to how well-functioning each module is. **(GeeksforGeeks, 2019).**
- **Integration Testing:** Integral testing is the process of examining how two software modules or components interact with one another. Its main goal is to determine whether the interface is functioning properly. Integrity testing is performed to find flaws in the communication between integrated units. After each module has through unit testing, integration testing is carried out.**(GeeksforGeeks, 2018)**
- **System Testing:** System testing is a kind of software testing that examines an entire integrated system to see if it satisfies the necessary standards. System testing uses components that pass integration testing as input. To identify any discrepancies between the connected components, integration testing is conducted. System testing looks for issues with both individual parts and the entire system. A component or system's observable behavior during testing is the result of system testing. **(GeeksforGeeks, 2019)**
- **Acceptance Testing:**It is a type of formal testing that is done in accordance with user demands, requirements, and business procedures to see if a system satisfies the acceptance criteria and to give users, customers, or other authorized organizations the option to accept the system or not. **(GeeksforGeeks, 2019)**

#### **Non-Functional Testing:**

- **Security Testing:**Both web application security testing and external security testing are done. It protects against internal and external risks, including SQL injections, by confirming unauthorized users or access.



➤ Usability Testing: The main advantage of usability testing is that it enables designers to identify usability issues with a design as early as possible, enabling them to be resolved before the design is accepted or mass produced. As a result, usability testing is frequently conducted on prototypes rather than finished goods, with varying degrees of realism depending on the stage of production. **(GeeksforGeeks, 2019)**

Reliability Testing: Users are able to interact with it directly during this trial. It ensures the system will operate dependably. It assesses and confirms the many failures of a system.

### 5.2.3 Test Case of Food Zone

The test case included the test case number, test type, test description, and test methods.

|                         |                  |                |         |  |
|-------------------------|------------------|----------------|---------|--|
| No. of Test Case        |                  |                |         |  |
| Type of Test            |                  |                |         |  |
| Description of the test |                  |                |         |  |
| Steps of testing        | Expected outcome | Actual outcome | Comment |  |
|                         |                  |                |         |  |

*Table 5: Sample Test case*

### 5.2.4 User Acceptance Test Plan

The testing segment's ultimate phase is user acceptability. It refers to and evaluates the user-involved tester's performance.

|                         |  |  |  |  |
|-------------------------|--|--|--|--|
| No. of Test Case        |  |  |  |  |
| Type of Test            |  |  |  |  |
| Description of the test |  |  |  |  |
| Preparation for testing |  |  |  |  |
| Name of the User        |  |  |  |  |

|                    |                  |                |         |
|--------------------|------------------|----------------|---------|
| Assume the role of |                  |                |         |
| Steps of testing   | Expected outcome | Actual outcome | Comment |
|                    |                  |                |         |

**Table 6: Food Zone User Acceptance Test Plan**

### 5.3 Risk Management of Food Zone

For the project to be tracked and its goals and objectives to be accomplished, risk management is the process of recognizing, assessing, and responding to any risks that may occur during the project development life cycle. The project's schedule, budget, and results may all be considered project risks. There are several varieties of risk management.

- Risk identification,
- Risk assessment,
- Risk mitigation strategy
- Steps taken to address potential hazards

#### 5.3.1 Risk Identification

One of the most important sections and tasks in risk management planning is risk identification. The first stage in risk identification is to make sure that risks that might arise and have an impact on the project are recognized and recorded, as well as to recognize and create a document that describes characteristics and their attributes. Several risk identification criteria will be justified as a result of this research, and they are as follows:

- Identification of prospective risks and their recording
- Actual reasons were taken into account in the formulation of identified hazards
- Future repercussions and effects; and the risk's influence.

Analyzing possible hazards and keeping track of the project's dangers, as described below, in more detail

| Types of dangers                                   | Causes   | Consequences & Impact              |
|--|--|------------------------------------|
| Technology (System failures, hardware or software) | Inadequate infrastructure, insufficient testing, lack of | ➤ Downtime, data loss, compromised |

|   |   |   |
|---|---|---|
| malfunctions, or compatibility issues.)   | technical expertise.  | customer orders or payments.<br>➤ Delays in order processing, customer dissatisfaction, financial losses.   |
| Data Security (Unauthorized access, data breaches, or loss of sensitive information.) | Weak system security, improper data handling practices, cyber attacks.                    | ➤ Compromised customer data, legal and regulatory penalties, reputational damage.<br>➤ Loss of customer trust, legal liabilities, business disruptions.         |
| Operational(Inadequate staff training, staffing shortages, or miscommunication.)      | Insufficient employee training, poor coordination, inadequate contingency planning.       | ➤ Errors in order fulfillment, delays in delivery, customer dissatisfaction.<br>➤ Negative customer reviews, loss of business opportunities, decreased revenue. |
| System Technical Problem<br>➤ Hardware  | ➤ A lack of necessary speed<br>➤ Due to a deficiency in fundamental performance or a lack | ➤ The product delivery attempt can go wrong.  |

|                             |   |  |
|-----------------------------|---|--|
|                             | of the required setup.  |  |
| Project Backup for Security | ➤ The project does not have a backup on GitHub or any similar service.                          | ➤ Cost repercussions The entire project is abandoned.        |
| Failure of the Network      | ➤ Internet connectivity is necessary for several integrated api and email management functions. | ➤ Emails to the Customer, Staff, and chef are not permitted. |

*Table 7: Risk Identification of Food Zone Table*

### 5.3.2 Risk Assessment of Food Zone

Risk assessment involves with quantitative or qualitative value of risks included threats of a project

| Type of risks   | Likelihood | Impact | Restore time |
|---|------------|--------|--------------|
| Technology (System failures, hardware or software malfunctions, or compatibility issues.) | 5          | 6      | 8            |
| Data Security (Unauthorized access, data breaches, or loss of sensitive information.)     | 5          | 5      | 5            |
| Operational(Inadequate  | 6          | 6      | 6            |

|   |   |   |   |
|---|---|---|---|
| staff training, staffing shortages, or miscommunication.) |   |   |   |
| System Technical Problem<br>➤ Hardware                    | 4 | 5 | 5 |
| Project Backup for Security                               | 5 | 6 | 4 |
| Failure of the Network                                    | 4 | 4 | 8 |

*Table 8: Risk Assessment of Food Zone*

### 5.3.3 Risk Precaution / Action Plan

A risk action plan was developed following risk identification and assessment. There are many different types of precautionary measures that may be performed.

- To handle current problems as well as possible threats;
- To prevent risks that have already occurred and those that could in the future;
- To reduce risks that have already occurred and those that might in the future.

| Type of risks                                     | Action  | Taking Action  | Action Required   |
|---|---|--|---|
| Technical (System failures or technical glitches) | Regular system testing and quality assurance. | Implement a robust technology infrastructure, including regular software updates, security measures, and backup systems, to mitigate technical | Implement a comprehensive testing strategy, including unit testing, integration testing, and user acceptance testing, to identify and resolve technical |

|  |   |  |  |
|--|---|--|--|
|  |   | risks.   | issues before deployment.  |
| Operational<br>(Inefficient processes or lack of coordination) | Streamline operational workflows and improve communication channels | Establish standard operating procedures (SOPs) for food preparation, quality control, and delivery logistics to minimize operational risks.                                  | Conduct process mapping and optimization exercises to identify bottlenecks, implement standard operating procedures (SOPs), and facilitate effective communication among team members. |
| Security (Data breaches or unauthorized access)                | Implement robust security measures and protocols                    | Conduct regular financial assessments and budget reviews to manage financial risks effectively. Implement cost control measures and consider establishing financial buffers. | Utilize encryption techniques, enforce strict access controls, regularly update and patch software, conduct security audits, and provide ongoing security training to staff members.   |
| System Technical Problem<br><br>➤ Hardware                     |   |  |  |
| Project Backup for   | To back up our/my   | Actively participating   | Regularly update   |

|                        |  |                                  |                                  |
|------------------------|--|----------------------------------|----------------------------------|
| Security               | project, you may use any cloud service, like GitHub.         | developer                        |                                  |
| Failure of the Network | To effectively communicate with network service specialists. | Actively participating developer | On pace to complete the project. |

**Table 9: Food Zone Risk Precaution**

#### 5.3.4 Steps Taken for Possible Risks of Food Zone

After identifying and evaluating the potential risks, the responsible person takes the appropriate actions. These are listed below:

| Type of risks | Description   | Likelihood | Impact | Taking Step  |
|---------------|---|------------|--------|--|
| Technical     | System failures, software bugs, or compatibility issues.                        | Rare       | High   | Conduct thorough testing at each stage of development, implement version control, engage in code reviews, and have a contingency plan in place for quick troubleshooting and resolution. |
| Operational   | Inefficient processes, lack of coordination, or inadequate resource allocation. | Likely     | High   | Streamline operational workflows, implement standard operating   |

|  |  |          |        |  |
|--|--|----------|--------|--|
|  |  |          |        | procedures (SOPs), enhance communication channels among team members, and ensure proper resource planning and allocation.  |
| Security                               | Data breaches, unauthorized access, or system vulnerabilities.       | Unlikely | High   | Implement robust security measures, including encryption, access controls, regular security audits, staff training on data protection, and compliance with relevant regulations (e.g., GDPR, PCI DSS). |
| System Technical Problem<br>➤ Hardware | It's conceivable for our/my hardware to malfunction or stop working. | Frequent | Medium | Backup is guaranteed, along with ongoing maintenance and supervision.  |
| Project Backup for Security            | Project files should all be backed up (using Git hub).               | Rare     | High   | Safely keeping an eye on the project file.   |



|                        |  |          |     |   |
|------------------------|--|----------|-----|---|
| Failure of the Network | failure of the internet or a connection issue. | Frequent | Low | High-bandwidth access has been granted and the proxy server has been established. |
|------------------------|--|----------|-----|---|

*Table 10: Risk dealing steps for Food Zone*

## 5.4 Change Management

### 5.4.1 Factors that Might Cause Change

Several factors can lead to changes for a homemade food website project. These factors can be internal or external and can affect different aspects of the project. Here are some key reasons:

- **Customer Feedback:** Feedback from users and customers visiting the website can lead to conversions. It can reveal usability issues, feature requests, or areas for improvement, prompting the need for updates and changes.
- **Market Trends:** Market trends and changes in consumer preferences for home-cooked meals, web design or user experience can affect project direction. Staying up-to-date with the latest trends ensures that the website remains relevant and competitive.
- **Technological Advances:** Advances in web technology, programming languages, or content management systems may require changes to keep the website technically current and compatible with different devices and browsers.
- **Competitor Analysis:** Monitoring competitors' websites can provide insight into their strengths and weaknesses, inspiring potential changes to gain a competitive edge or differentiate a homemade food website.
- **Regulatory requirements:** Changes in laws and regulations related to food safety, data privacy, or website accessibility may force the project to adapt to remain compliant.

### 5.4.2 DSDM Welcome Change of Food Zone

The project requirements should determine how the project development life cycle should be modified. Due to these factors, we should select a strategy based on the needs of the system that can handle a variety of difficulties. As a consequence, "DSDM" is among the approaches that are applicable, reliable, and simple to use. In this system, the development time is maintained and modified using this method.

DSDM (Dynamic Systems Development Method) is an agile project management framework that emphasizes collaboration, flexibility, and delivering business value. DSDM promotes the principle of "Welcome Change" to ensure that projects can adapt to evolving requirements and customer needs. Applying the principle of "Welcome Change" to a Home Made Food (Fode Zone) Project system project can involve the following:

**Embrace Stakeholder Involvement:** Actively engage key stakeholders, including customers, chefs, event planners, and delivery personnel, throughout the project. Encourage their input and feedback to incorporate their changing needs and preferences.

**Flexible Requirements Management:** Adopt an iterative and incremental approach to requirements gathering, analysis, and prioritization. Regularly review and update requirements as new information becomes available or customer expectations change. Use techniques such as MoSCoW (Must have, should have, Could have, Won't have) prioritization to guide decision-making.

**Iterative Development:** Break the project into manageable iterations or timeboxes, each focused on delivering specific functionality or features. By working in short cycles, it allows for frequent feedback, enabling adjustments and changes to be incorporated quickly.

#### 5.4.3 Considering Business Priority

In order to realize the stated objective and vision for the company, changes have been investigated. As a result, we must give top attention to changes in functionality and requirements that will significantly benefit consumers.

Priorities were as follows:

| Topical Area                     | Priority Level |
|----------------------------------|----------------|
| Delivering Segments              | 6              |
| Functional requirements          | 8              |
| Non-Functional requirements      | 6              |
| Segments for ratings and reviews | 5              |

|                                |   |
|--------------------------------|---|
| Segments for security handling | 8 |
|--------------------------------|---|

#### 5.4.4 Change Workshop

A change workshop for a Home Made Food (Fode Zone) Project system project can be a collaborative session involving key stakeholders, project team members, and subject matter experts. The purpose of the workshop is to identify, evaluate, and plan for changes that may arise during the project. Here's a suggested approach for conducting a change workshop:

**Define the Objectives:** Clearly establish the objectives of the change workshop. This may include identifying potential changes, assessing their impact, prioritizing them, and planning for their implementation.

**Identify Change Requests:** Gather change requests from stakeholders, including customers, project team members, and other relevant parties. These change requests may be related to requirements, functionalities, processes, or any other aspect of the Home Made Food (Fode Zone) Project system.

**Assess Change Impact:** Evaluate the impact of each change request on various project parameters, such as scope, schedule, budget, resources, and risks. Consider both the immediate and long-term consequences of implementing the changes.

#### 5.4.5 Changes that are Allowed

Depending on the change's priority level, changes must be approved. Several factors, such as resource availability, cost, scheduling, delivery quality, and risk, made accepting adjustments important. As one component of this system is developed, we must allow priority-based modifications.

#### 5.4.6 Key Decision Taker of Change

Change-makers will receive advice from a range of subject-matter experts. In this project, separate decision-makers for changes were included.

- System Developer,

- System Tester
- System Requirements Analyst

The developer may change the pertinent code, and the analyst can change the functional requirement as needed.

## 5.5 Quality Management

Implementing effective quality management practices in a Home Made Food (Fode Zone) Project system project is essential to ensure that the delivered solution meets the desired standards and customer expectations. Here are some key steps and considerations for quality management in a Home Made Food (Fode Zone) Project system project:

**Define Quality Objectives:** Clearly define the quality objectives and criteria for the Home Made Food (Fode Zone) Project system project. Identify the quality standards, customer requirements, and industry best practices that need to be met.

**Develop a Quality Management Plan:** Create a comprehensive quality management plan that outlines the strategies, processes, and activities to ensure quality throughout the project. This plan should include quality assurance, quality control, and continuous improvement measures.

**Quality Assurance:** Establish processes and activities to prevent quality issues before they occur. This includes conducting regular reviews, inspections, and audits to identify potential problems, adherence to standards, and compliance with regulations.

**Quality Control:** Implement processes and techniques to monitor and verify the quality of deliverables. This involves conducting tests, inspections, and measurements to ensure that the Home Made Food (Fode Zone) Project system meets the specified requirements and quality standards.

### 5.5.1 Rules Applied to Maintain Quality

To maintain quality in a Home Made Food (Fode Zone) Project system project, it is important to establish and adhere to certain rules and practices. Here are some rules that can be applied to maintain quality:

**Adhere to Food Safety Standards:** Strictly follow food safety guidelines and regulations to ensure proper handling, storage, preparation, and serving of food. This includes maintaining proper hygiene practices, ensuring the use of fresh ingredients, and preventing cross-contamination.

**Use High-Quality Ingredients:** Source and use high-quality ingredients that meet quality standards and are fresh, safe, and suitable for the intended purpose. Regularly assess and monitor the quality of ingredients from suppliers.

**Standardize Recipes and Processes:** Develop standardized recipes and processes for food preparation, cooking techniques, portion sizes, and plating. This helps ensure consistency in taste, presentation, and quality across different events or orders.

**Implement Quality Control Checks:** Conduct regular quality control checks at various stages of the catering process, such as ingredient inspection, cooking processes, and final presentation. Inspect food for taste, texture, temperature, and visual appeal.

**Train and Educate Staff:** Provide comprehensive training and education to all staff members involved in food preparation, handling, and service. Ensure they have the necessary knowledge and skills to maintain quality standards, follow recipes, and adhere to food safety protocols.

#### 5.5.2 DSDM Standard Quality Measures

**Quality of solution:** The quality of the solution is ensured by anticipating business demands and tracking user expectations. To finish this technique, two forms of Priority were used.

- MoScow
- Time Boxing

Both of these tactics have been finished, and the timeline has been met.

Depending on the aim organization, the process's quality is ensured. to ensure high quality

Two ways have been created and implemented as a result of these procedures.

- CMMI
- DSDM

### 5.5.3 Quality Plan and Measuring Meter

A quality plan outlines the strategies, activities, and metrics that will be used to ensure and measure quality in a Home Made Food (Fode Zone) Project system project. Here's an example of a quality plan and some key measuring meters for a Home Made Food (Fode Zone) Project system project:

- Ensure food safety and compliance with relevant regulations.
- Deliver high-quality and visually appealing food.
- Provide excellent customer service and satisfaction.
- Maintain consistency in taste, presentation, and portion sizes.

## Chapter 6 – Feasibility

### 6.1 All Possible Types of Feasibility Food Zone

The proposed Food Zone has proper validation and verification for user inputs, a very easy and smooth navigation system, a location-based searching option, and an easy request option, all of which make the system much easier and effortless to use. Usability, ease-of-use, and required functionalities are important to operational feasibility. With the right credentials, administrators, chefs, customers, and staff may access their portal easily and do their tasks.

#### **Technical Feasibility:**

Technical feasibility for a Home Made Food (Fode Zone) Project system project refers to assessing whether the proposed system can be successfully developed, implemented, and operated using the available technology and resources. Here are some factors to consider when evaluating the technical feasibility of a Home Made Food (Fode Zone) Project system project:

**System Requirements:** Review the requirements of the Home Made Food (Fode Zone) Project system, including functionalities, performance expectations, integration needs, and scalability requirements. Assess whether the proposed technology and infrastructure can meet these requirements effectively.

**Technology Assessment:** Evaluate the availability and suitability of technology solutions that can support the Home Made Food (Fode Zone) Project system. Consider factors such as hardware,

software, networking capabilities, data storage, security measures, and compatibility with existing systems.

**Infrastructure and Resources:** Assess the availability of necessary infrastructure and resources required for the Home Made Food (Fode Zone) Project system. This includes hardware resources (servers, computers, POS systems), network infrastructure, internet connectivity, and IT support.

**Development Tools and Expertise:** Evaluate the availability of appropriate development tools, programming languages, and frameworks that can be used to build the Home Made Food (Fode Zone) Project system. Assess the technical expertise and skills of the development team to ensure they are capable of implementing the required functionalities.

**Data Management and Integration:** Analyze data management requirements, including data storage, retrieval, backup, and security. Consider whether the proposed system can integrate with other existing systems such as CRM, inventory management, or payment gateways.

So, clearly in this project perspectives the technical aspects are given below:

**Hardware:**

- HP laptop (Configuration)
- Wi-fi Router(Tp-link)

**Software:**

- Microsoft office(MS)
- Microsoft Excel
- Google chrome browser
- Windows 10 Pro (operating system)
- VS Code
- Brackets

**Database:**

- MySQL

### Technology:

Design Slide:

- Html
- CSS
- Java Script
- Bootstrap

### Server Side:

- Python
- Django

### Economic Feasibility:

Economic feasibility assesses the financial viability and profitability of a Home Made Food (Fode Zone) Project system project. It involves evaluating the potential costs, benefits, and returns associated with the project

- Web based application cost:

The whole program and data are stored on a remote server, which can be accessed through the Internet from anywhere at any time.

| Equipment   | Cost per unit | Cost     |
|---|---------------|----------|
| VPN enabled extranet network                      | ₹2000 per/m   | ₹2,000   |
| LaptopAcer (core i5, 2.50-271 GHz processor, 8 GB | ₹ 85,000      | ₹ 85,000 |



|                             |               |            |
|-----------------------------|---------------|------------|
| DDR4 RAM, 1 TB HDD)         |               |            |
| Web, File and Email servers | ₹17,000 per/m | ₹17,000    |
| Total                       |               | ₹ 1,04,000 |

➤ Desktop Application cost:

| Equipment   | Cost per unit     | Cost       |
|---|-------------------|------------|
| LaptopAcer (core i5, 2.50-271 GHz processor, 8 GB DDR4 RAM, 1 TB HDD) | ₹ 85,000          | ₹ 85,000   |
| Web, File and Email servers   | ₹17,000 per month | ₹17,000    |
| Total   |                   | ₹ 1,02,000 |

You will require a domain name and hosting company in order for the system to function. Because the system must continually find solutions to problems and keep track of where the items are in order to fulfill problem solver and delivery search requirements. A web application will be created for the remainder of the system.

### **Food Zone Market Research Analysis Based on the Feasibility Factors:**

Market research analysis plays a crucial role in assessing the feasibility factors of a Home Made Food (Fode Zone) Project system project. It helps gather insights and data about the target market, customer preferences, competition, and growth potential. Based on the feasibility factors discussed earlier, here's an overview of the market research analysis and its relevance:

#### **Market Size and Growth Potential:**

Determine the size of the target market by analyzing population demographics, geographical reach, and customer segments.

Assess the growth potential of the catering industry, considering factors such as market trends, economic indicators, and consumer spending patterns.

Identify any specific niche markets or customer segments that can be targeted for specialized catering services.

#### Competition Analysis:

Identify existing competitors in the catering industry, ranging from large catering companies to local vendors.

Analyze their offerings, pricing strategies, target markets, and competitive advantages.

Assess the market share and positioning of each competitor to understand the level of competition in the market.

#### Customer Preferences and Trends:

Conduct surveys, interviews, and focus groups to gather insights into customer preferences, expectations, and demands.

Identify popular food choices, dietary preferences, event types, and service requirements.

Understand emerging trends in the catering industry, such as demand for sustainable food options, healthy alternatives, or customized menus.

### 6.2 Cost Benefit Analysis for Agriculture Management

The determination of the earnings and expenditure assumptions is the main objective of a cost-benefit analysis. The benefit is calculated by comparing the total cost and earnings. An evaluation of costs and benefits for this project is as follows:

#### Total cost:

| Serial No. | Equipment | First Year | Second Year | Third Year | Fourth Year | Five Year | Total      |
|------------|-----------|------------|-------------|------------|-------------|-----------|------------|
| 1          | Web       | ₹ 1,04,000 | -           | -          | -           | -         | ₹ 1,04,000 |

|   |                                   |            |          |          |          |          |            |
|---|-----------------------------------|------------|----------|----------|----------|----------|------------|
|   | based application cost            |            |          |          |          |          |            |
| 2 | Desktop Application cost          | ₹ 1,02,000 | -        | -        | -        | -        | ₹ 1,02,000 |
| 3 | The cost of a domain plus hosting | ₹25,000    | ₹25,000  | ₹25,000  | ₹25,000  | ₹25,000  | ₹ 125,000  |
| 4 | Expenses for Employees            | ₹40,000    | ₹40,000  | ₹40,000  | ₹40,000  | ₹40,000  | ₹2,00,000  |
| 5 | Other Cost                        | ₹20,000    | ₹20,000  | ₹20,000  | ₹20,000  | ₹20,000  | ₹1,00,000  |
| 6 | Total Cost                        | ₹291,000   | ₹ 85,000 | ₹ 85,000 | ₹ 85,000 | ₹ 85,000 | ₹ 631,000  |

*Table 11: Total Cost Estimation for the project Food Zone*

**Total Earning:**

| SL No. | Earn Sector   | First Year | Second Year | Third Year | Fourth Year | Five Year | Total      |
|--------|---------------|------------|-------------|------------|-------------|-----------|------------|
| 1      | Govt. Tax one | ₹1,50,000  | ₹1,80,000   | ₹2,10,000  | ₹2,40,000   | ₹2,70,000 | ₹1,050,000 |
| 2      | Govt. Tax two | ₹2,00,000  | ₹2,10,000   | ₹2,40,000  | ₹2,60,000   | ₹3,00,000 | ₹1,210,000 |
|        | Total         | ₹3,50,000  | ₹3,90,000   | ₹4,50,000  | ₹5,00,000   | ₹5,70,000 | ₹2,260,000 |

**Table 12: Earning estimation for the project Food Zone****Total Revenue of project:**

| SL No. | Sectors              | First Year | Second Year | Third Year | Fourth Year | Five Year | Total      |
|--------|----------------------|------------|-------------|------------|-------------|-----------|------------|
| 1      | Total Earning        | ₹3,50,000  | ₹3,90,000   | ₹4,50,000  | ₹5,00,000   | ₹5,70,000 | ₹2,260,000 |
| 2      | Total Equipment Cost | ₹4,02,000  | ₹80,000     | ₹80,000    | ₹80,000     | ₹80,000   | ₹7,22,000  |
|        | Total Revenue        | ₹4,02,000  | ₹3,10,000   | ₹3,70,000  | ₹4,20,000   | ₹4,90,000 | ₹1,538,000 |

**Table 13: Food Zone Estimated Revenue on a Five-year scale**

Therefore, it is clear that by promoting this strategy, the government would be able to earn a sizable number of takes each year from different Customer food ordering and chef preparing. The revenue will increase annually. As a consequence, both the government and the general people will gain from this endeavor.

### 6.3 Explain DSDM Good or Bad for this Project

This is an academic project that I am submitting in Bangladesh's modern Home Made Food (Fode Zone) Project industry. The project must be completed in a short period of time while including all fundamental abilities. Because the project may need to accept changes during development, it should be produced iteratively. DSDM, which enforces strict rules and limits, ensures the iterative development process. It guarantees that the assignment is performed on time. It also ensures that users are involved throughout the duration of the project. As a result, it is clear that Food Zone is the most effective Home made food (Food Zone) system strategy to employ.

## Chapter 7 – Foundation

### 7.1 The Problem Area Identification

The best method to improve any project is to identify the problem. And since they will be the ones utilizing the system the most, the user may manage that element. As a consequence, we have learned from the user that there are specific sections that seem to be a problem, as follows:

#### 7.1.1 Interview

If you want to acquire information, figure out what the problem is, or figure out what the aim is, an interview is the ideal solution. The genuine remedy might be precepted by locating the problem. As a result, for the proposed system, several questions from the user have been established to participate in the following interviews:

1. Staff:

- What experience do you have in the food service industry, particularly in catering or event management?
- How do you handle high-pressure situations and manage multiple tasks simultaneously?
- Can you describe a time when you encountered a challenging customer or situation and how you resolved it?
- How do you prioritize and manage your time to ensure efficient service delivery?
- Are you familiar with food safety regulations and hygiene practices? How do you ensure compliance in your work?

2. For Chef:

- What is your experience in menu planning and recipe development for catering events?
- How do you adapt menus to accommodate dietary restrictions and preferences?
- Can you describe a time when you had to handle a large-scale catering event and ensure timely food preparation and delivery?
- How do you maintain food quality and presentation consistency across different events?
- Are you familiar with inventory management and ingredient sourcing practices? How do you ensure the availability of fresh ingredients for catering orders?

3. For Customer:

- Have you worked with catering services before? What qualities do you look for in a catering service?
- How do you communicate your preferences and requirements to catering staff or chefs?
- Can you share an experience where you received exceptional customer service from a catering provider? What made it stand out?
- What factors are important to you when evaluating the quality of food and service provided by a catering company?
- How do you handle changes or adjustments to your catering orders, such as guest count modifications or menu alterations?

### 7.1.2 Observations

As a technique and instrument, observation, commonly referred to as job shadowing, is used in the PMBOK's Collect Requirements method. The process of gathering requirements identifies and records the demands of the project's stakeholders in respect to those needs. This tactic includes observing people while they work. (**Pmimidnebraska.org, 2021**)

Observations are also useful for gathering user needs and determining the true problem. Observation tactics are mostly used to go to the workplace and figure out how to accept the users. The following are the major factors to consider:

- Homemade food has gained popularity due to its perceived freshness, quality, and personalized touch.
- The website caters to both sellers (home cooks) and buyers (customers) with various preferences and dietary requirements.
- The platform showcases a wide range of regional and cultural cuisines, adding to its appeal.
- The project must address legal requirements and food safety regulations for home-based food businesses.
- Efficient delivery and packaging solutions are vital to ensure food reaches customers fresh and on time.

- Implementing secure payment gateways is critical to ensure customers' financial information is protected.
- A responsive and reliable customer support system is essential for addressing inquiries and resolving issues.

### 7.1.3 Questionnaires

For project managers to make good decisions, information gathering is essential. Information may be gathered from different types of people using a variety of techniques. Project managers frequently employ observation, focus groups, guided lectures, and benchmarking.. (**knowledge, 2016**)

One of the best ways to acquire information and ask users and other stakeholders questions is through questionnaires. A user will be presented with a series of questions, some of which may be MCQs or brief inquiries. The questions below are offered as a result:

| <b>Identification of Problems Questions</b> |   |            |  |
|---|---|------------|--|
| <b>Name</b>                                 |   | <b>Age</b> |  |
| <b>General User</b>                         | Staff   | Problem    |  |
| <b>Question-one</b>                         | What experience do you have in the food service industry, particularly in catering or event management?   |            |  |
| <b>Answer</b>                               |   |            |  |
| <b>Question-two</b>                         | How do you handle high-pressure situations and manage multiple tasks simultaneously?                      |            |  |
| <b>Answer</b>                               |   |            |  |
| <b>Question-three</b>                       | Can you describe a time when you encountered a challenging customer or situation and how you resolved it? |            |  |
| <b>Answer</b>                               |   |            |  |

|                      |  |
|----------------------|--|
| <b>Question-four</b> | How do you prioritize and manage your time to ensure efficient service delivery? |
| <b>Answer</b>        |  |

| <b>Identification of Problems Questions</b> |  |            |  |
|---|--|------------|--|
| <b>Name</b>                                 |  | <b>Age</b> |  |
| <b>General User</b>                         | Chef   | Cooking    |  |
| <b>Question-one</b>                         | What is your experience in menu planning and recipe development for catering events?   |            |  |
| <b>Answer</b>                               |  |            |  |
| <b>Question-two</b>                         | How do you adapt menus to accommodate dietary restrictions and preferences?  |            |  |
| <b>Answer</b>                               |  |            |  |
| <b>Question-three</b>                       | Can you describe a time when you had to handle a large-scale catering event and ensure timely food preparation and delivery? |            |  |
| <b>Answer</b>                               |  |            |  |

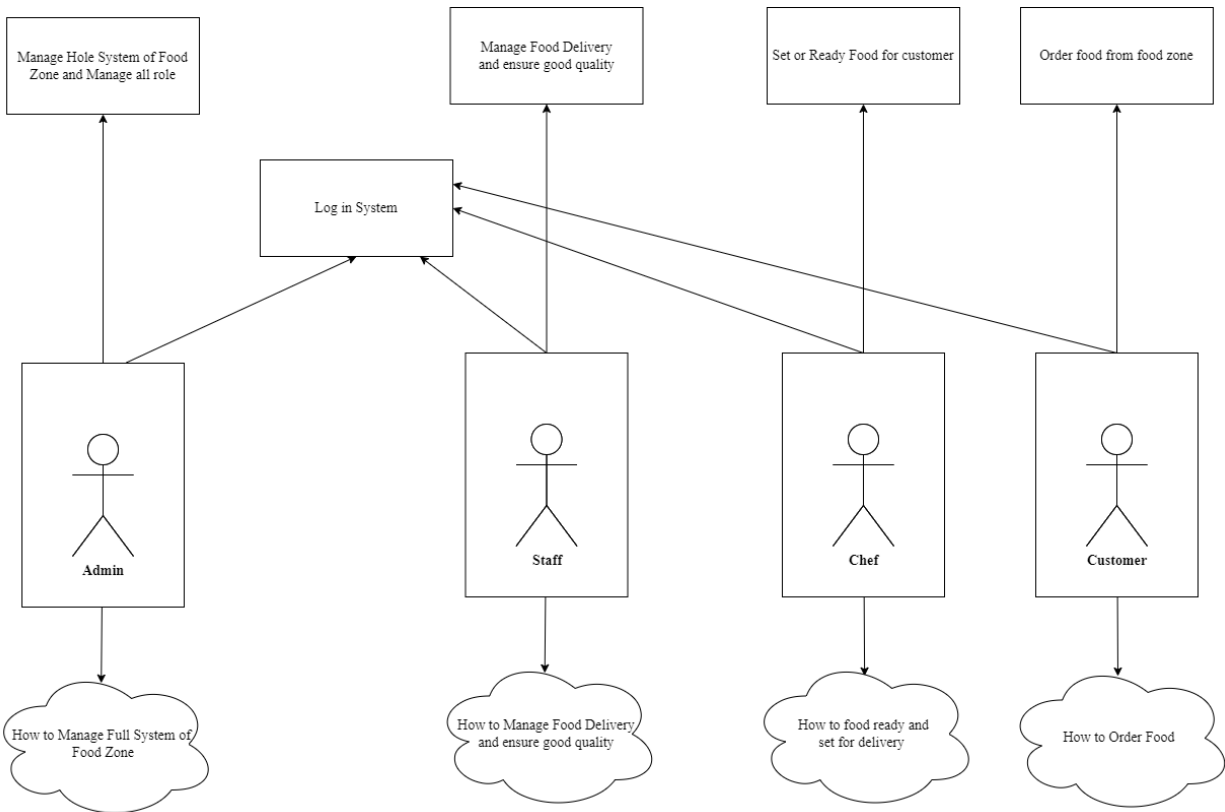
| <b>Identification of Problems Questions</b> |  |            |  |
|---|--|------------|--|
| <b>Name</b>                                 |  | <b>Age</b> |  |
| <b>General User</b>                         | Customer   | Order      |  |
| <b>Question-one</b>                         | Have you worked with catering services before? What qualities do you look for in a catering service? |            |  |



|                       |   |
|-----------------------|---|
| <b>Answer</b>         |   |
| <b>Question-two</b>   | How do you communicate your preferences and requirements to catering staff or chefs?  |
| <b>Answer</b>         |   |
| <b>Question-three</b> | Can you share an experience where you received exceptional customer service from a catering provider? What made it stand out? |
| <b>Answer</b>         |   |
| <b>Question-four</b>  | What factors are important to you when evaluating the quality of food and service provided by a catering company?             |
| <b>Answer</b>         |   |

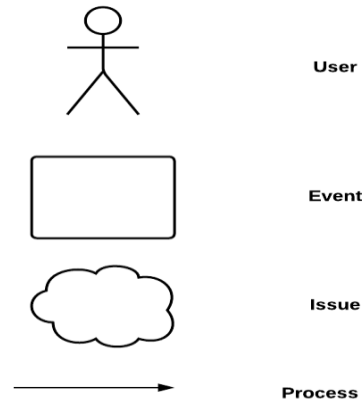
## 7.2 Rich Picture

A top-down or aerial view of user activity on a system is called a rich picture. It also illustrates the difficulties that conflict with business and communication practices. The Food Zone is described in more depth below:



*Figure 11: Rich Picture of the Food Zone*

**Food Zone The legends of rich picture**



*Figure 12: Food Zone Legends of the rich picture*

### **Key actors**

In the Food Zone system, there are five different sorts of actors.

- Admin
- Chef
- Customer
- Staff

The picture shows that admin can monitor and manage every process and manage conflicts.

### **7.3 Specific Problem Area Identification**

Using information gathering techniques, a range of problems are found during the problem area identification phase. A detailed picture illustrates the Food Zone's whole system processes. I was able to pinpoint several particular problems by looking at them, including:

- Ensuring that home cooks adhere to food safety regulations and obtaining necessary permits and certifications for selling homemade food.
- Maintaining consistent quality standards across different home cooks and their offerings.
- Establishing trust between buyers and sellers through user verification and reviews.
- Efficiently managing delivery logistics to ensure timely and safe delivery of homemade food products.

- Implementing secure payment gateways to protect users' financial information during transactions.
- Developing guidelines for recipe standardization to ensure consistency and accuracy in cooking.
- Designing an effective categorization and search system to help users find specific recipes and products.
- Setting up a responsive and reliable customer support system to address inquiries and resolve issues promptly.

#### 7.4 Possible Solutions

The following are the recommended remedies to the highlighted issues:

- Require home cooks to undergo food safety training and obtain relevant certifications before selling on the platform.
- Implement a verification process to ensure that home cooks meet the necessary legal requirements.
- Set up a review and rating system for buyers to provide feedback on the quality of the food they receive.
- Conduct periodic inspections of home cooks' kitchens to ensure adherence to quality standards.
- Partner with reliable delivery services to ensure efficient and timely delivery of homemade food products.
- Offer delivery tracking features for customers to monitor their orders.
- Introduce a user verification process that includes identity verification and reviews from previous customers.
- Highlight verified home cooks with a special badge on their profiles.
- Provide guidelines and templates for home cooks to follow to ensure consistency in recipe presentation.
- Allow users to share variations of recipes while still adhering to essential guidelines.
- Provide multiple channels for customer support, such as live chat, email, and phone support.
- Train customer support representatives to handle inquiries and resolve issues effectively.

## 7.5 Overall Requirement List

The following is the final list of requirements:

### **Functional Requirement**

- Allow users to create accounts and log in securely.
- Implement password management and account recovery mechanisms.
- Provide different user roles and permissions (customer, staff, admin).
- Enable the creation and management of menus, including food items, descriptions, pricing, and categorization.
- Allow for customization options, such as accommodating dietary restrictions or special requests.
- Support menu scheduling for different events or time periods.
- Enable customers to browse menus, select food items, and place orders.
- Provide real-time availability of food items and notification for out-of-stock items.
- Allow customers to specify order details, such as portion sizes, delivery preferences, and event specifications.
- Integrate secure online payment methods, such as credit card or digital wallet options.
- Generate invoices or receipts for orders, including detailed breakdowns of costs and applicable taxes.
- Support order cancellation and refund processes, if necessary.

### **Non-functional Requirements**

- The system should have a user-friendly interface, with intuitive navigation and clear instructions.
- It should support multi-device compatibility (desktop, mobile, tablets) for easy access by users.
- The system should provide efficient search and filtering capabilities to help users find desired menus and options quickly.
- The system should have fast response times and minimal loading delays to ensure a smooth user experience.
- It should handle high user loads during peak periods without degradation in performance.

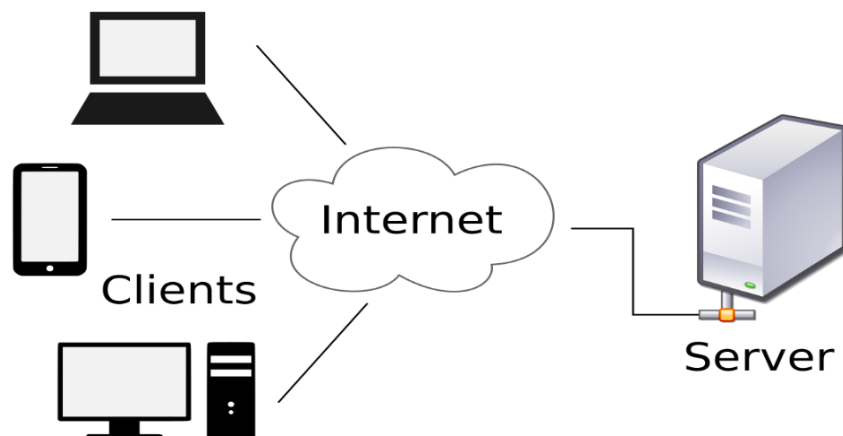
- The system should have scalability to accommodate future growth and increased demand.
- The system should implement robust security measures to protect sensitive user information, including personal data and payment details.
- It should ensure secure transmission of data through encryption protocols.
- Access controls and user permissions should be implemented to safeguard data and system functionality.

### 7.6 Technology to be implemented

Diverse technology options can be used to implement the proposed system. In order to succeed, it is essential to choose the right technology. Alternatives consist of:

#### Client-Server Application Technology

Client-server computing is an idea in computer science where clients and servers run separately but are connected via a computer network. Any client instance can contact an online server and await a response. (ApacheBooster, 2020)



*Figure 13: Client Server Application Model (Wikimedia.org, 2019)*

The following are the basic features of a client-server application:

- The application has to be physically installed.
- Both the client and server software must be maintained current.

- Users must purchase the pricey application.
- It is not always accessible and is not portable.

## Web Application

In contrast to computer-based software applications that run locally on the device's operating system (OS), web applications (or web apps) are application software that operate on a web server. The user must use a web browser with an active network connection to access web apps..(contributors, 2021)



*Figure 14: Web Application*

Main features of a web-based application are-

- The cloud is accessible online via a web browser and does not require installation.
- It is also reasonably priced.
- Accessible at all times and from anywhere.

### 7.7 Recommendation and Justification

Implementing a Home Made Food (Fode Zone) Project system project is highly recommended to enhance operational efficiency, customer experience, and profitability in the catering business.

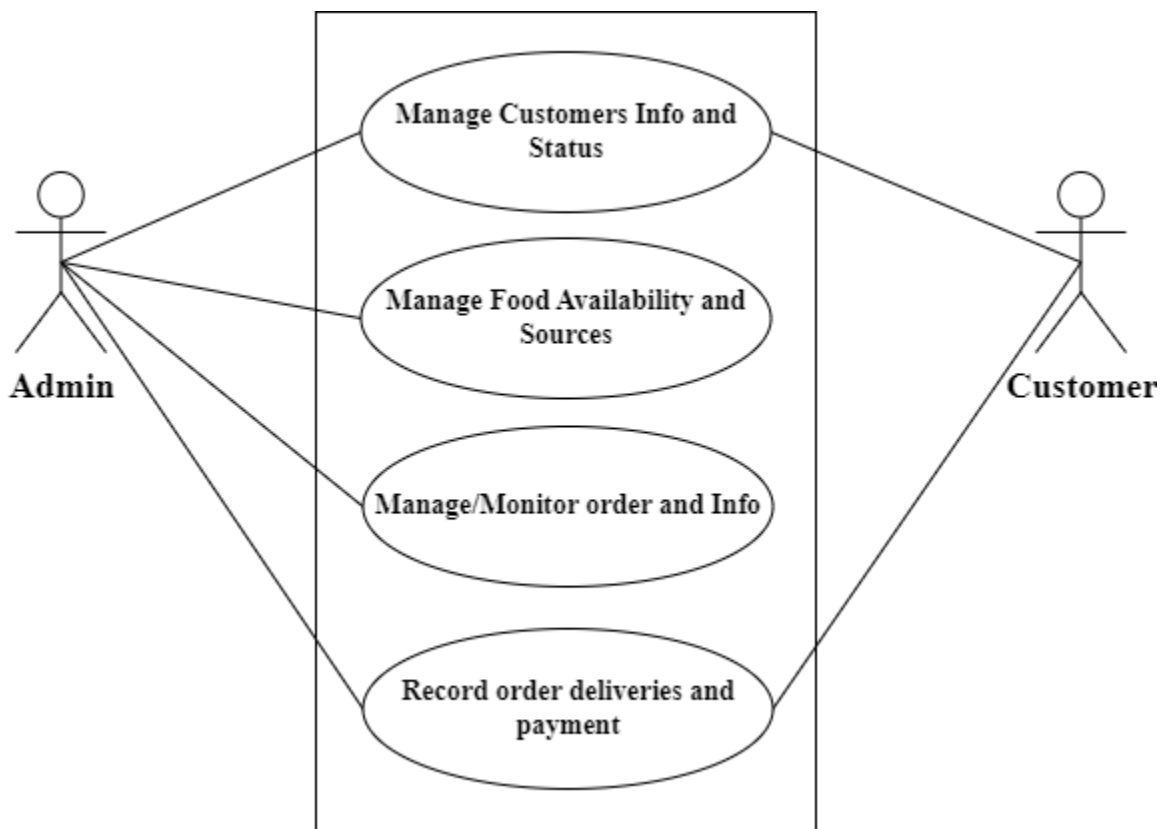
A Home Made Food (Fode Zone) Project system automates and streamlines various aspects of the catering process, including menu management, order placement, delivery logistics, and event coordination. This improves efficiency, reduces manual errors, and minimizes operational bottlenecks.

A Home Made Food (Fode Zone) Project system provides customers with an intuitive platform to browse menus, customize orders, and communicate their preferences. It streamlines the ordering process, ensures accurate order fulfillment, and facilitates prompt customer support. This enhances overall customer experience and satisfaction.

## Chapter 8 – Exploration

### 8.1 Home Made Food (Fode Zone) Project Sector Old System Use Case

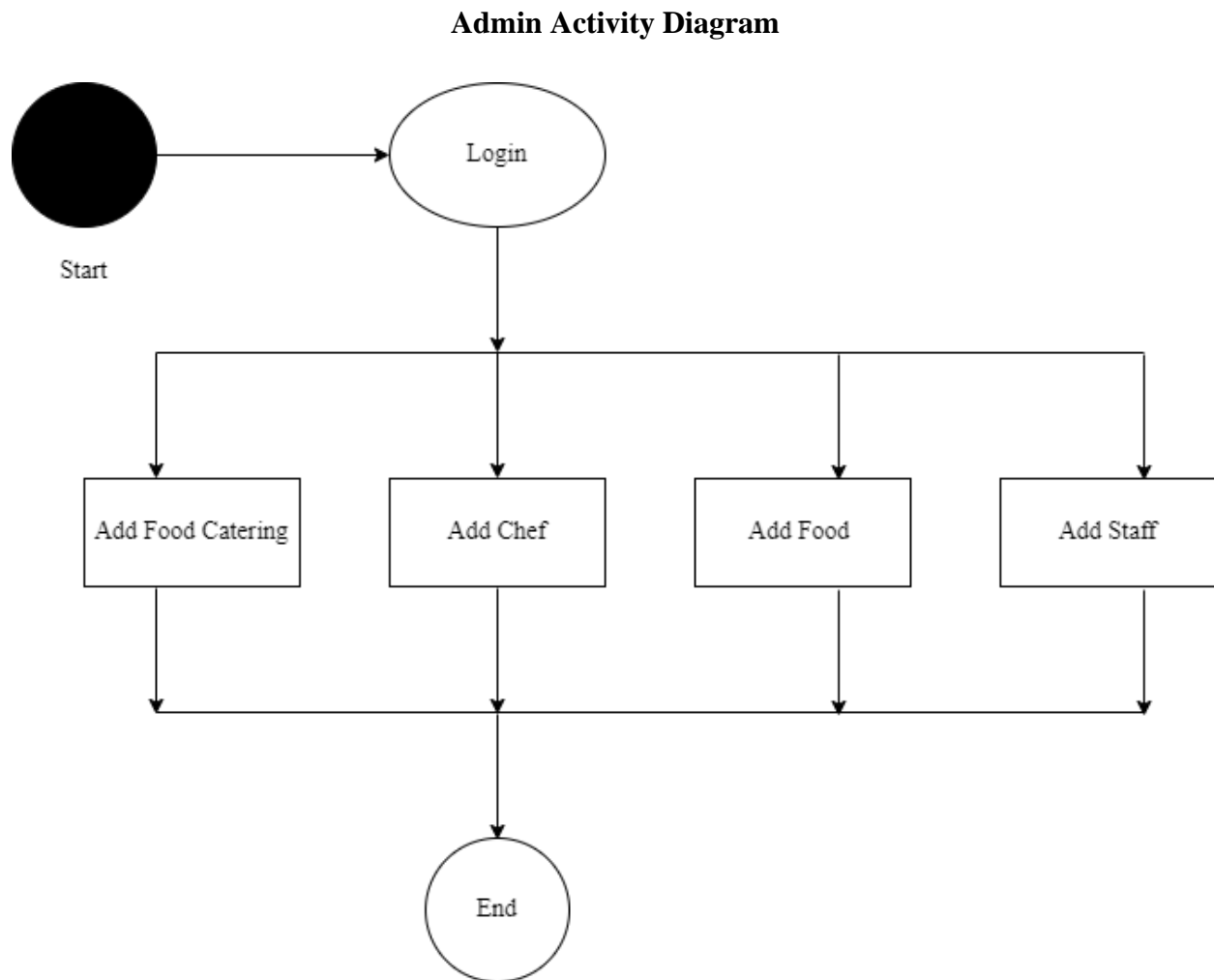
The flow of a system's business processes is depicted in a use case diagram.



*Figure 15: Old Use Case Diagram*



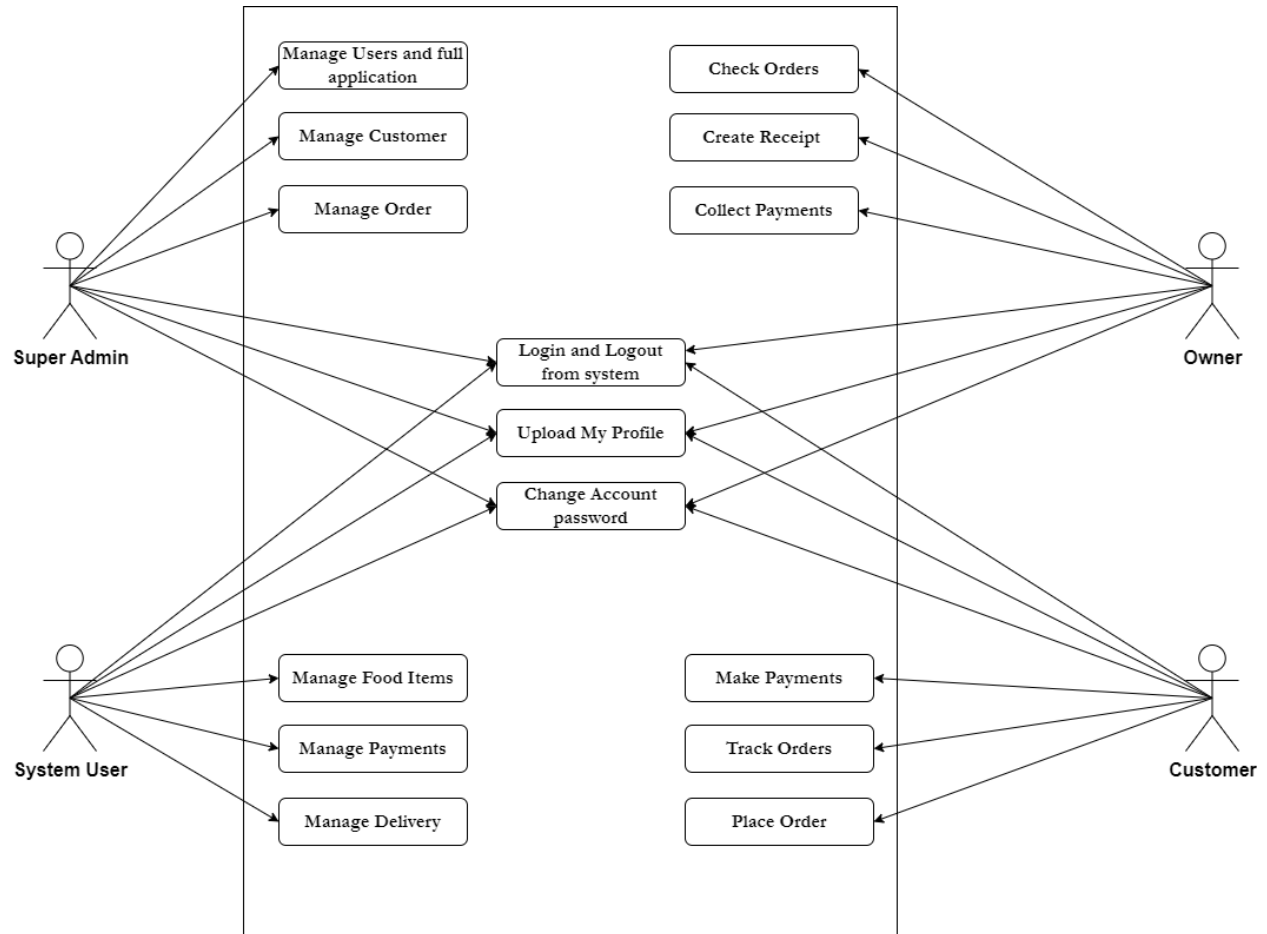
## 8.2 Activity Diagram



*Figure 16:Admin Activity Diagram of Food Zone*

### 8.3 Full System Use Case

The following is a use case diagram for the proposed Food Zone:

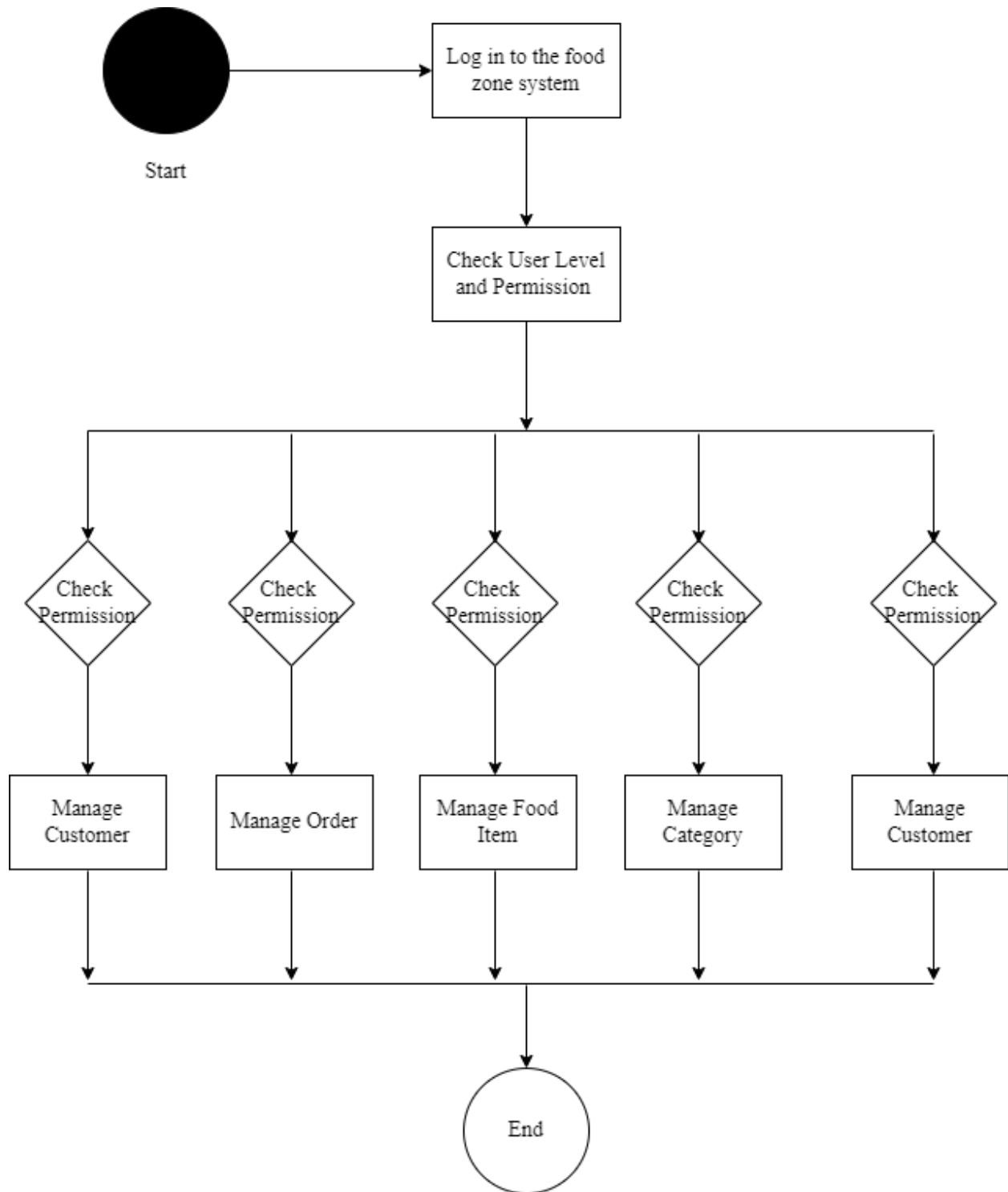


*Figure 17: Use Case of the Propose Food Zone System*

#### 8.4 Full System Activity Diagram

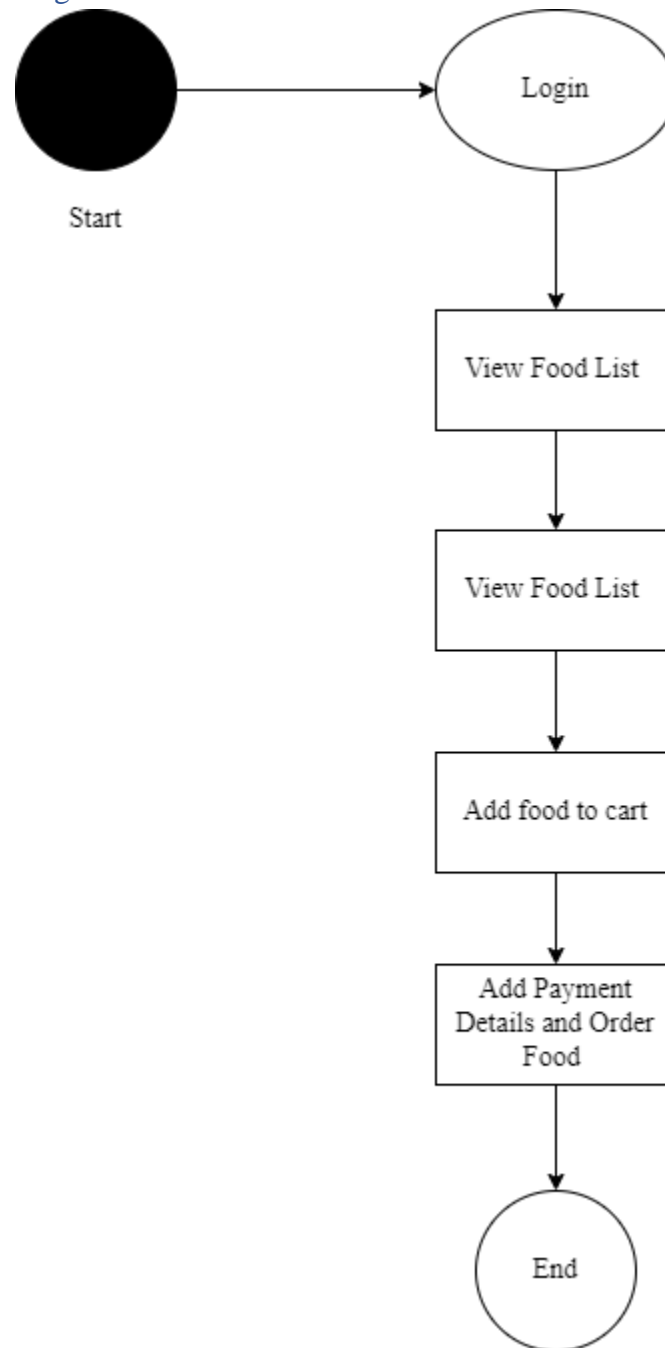
There are a variety of users in the planned Food Zone system, each with their unique workflow.

The activity diagrams for various work processes are shown below.



*Figure 18: Full System Activity Diagram Food Zone System*

## 8.5 Customer Activity Diagram



*Figure 19: Customer Activity Diagram Food Zone System*

### 8.5 Catalogue of Requirements

A requirement catalogue is a list that contains all of the identified needs for a project in the agriculture management system. Now I'll enter the identified needs into the requirement catalog using the usual format.

#### Delivery requirement catalogue

| Source   | Sing Off         | Priority         | Requirement |
|--|------------------|------------------|-------------|
| Delivery   | Staff            | Must Have        | M-01        |
| <b>Functional Requirement</b>  |                  |                  |             |
| <b>Staff requirement catalogue:</b>  |                  |                  |             |
| Order Placement: Customers should be able to place delivery orders through various channels, such as a mobile app, website, or phone, with an intuitive and user-friendly interface. |                  |                  |             |
| Non-functional requirement   |                  |                  |             |
| Description  | Target Value     | Acceptance Value | Comment     |
| Delivery (per/day)   | 12000 (per/day.) | 9500             |             |

*Table 14: Requirement Catalogue for Delivery*

#### Registration and login requirement catalogue

| Source  | Sing Off  | Priority  | Requirement |
|---|-----------|-----------|-------------|
| Admin   | All Users | Must Have | M-02        |
| <b>Functional Requirement</b>   |           |           |             |
| <b>Registration and login requirement catalogue:</b>  |           |           |             |
| All users of the system are required to register before logging in. Nobody can undertake an action without the proper authentication. |           |           |             |

| Non-functional requirement                   |                  |                  |         |
|--|------------------|------------------|---------|
| Description                                  | Target Value     | Acceptance Value | Comment |
| Registration and login requirement (Per/day) | 10000 (per/day.) | 7500             |         |

*Table 15: Requirement Catalogue for Login & Registration*

### Food Ready requirement catalogue

| Source   | Sing Off       | Priority         | Requirement |
|--|----------------|------------------|-------------|
| Food Ready   | Chef           | Must Have        | M-03        |
| <b>Functional Requirement</b>  |                |                  |             |
| <b>Chef requirement catalogue:</b>   |                |                  |             |
| The "Food Zone" system should provide a diverse menu with various options, including different cuisines, dietary preferences (e.g., vegetarian, vegan, gluten-free), and portion sizes to cater to a wide range of customer preferences. |                |                  |             |
| Non-functional requirement   |                |                  |             |
| Description  | Target Value   | Acceptance Value | Comment     |
| Food Ready (per/day)   | 5000(per/day.) | 3500             |             |

*Table 16: Requirement Catalogue for Chef*

### Order requirement catalogue

| Source                        | Sing Off | Priority  | Requirement |
|-------------------------------|----------|-----------|-------------|
| Order                         | Customer | Must Have | M-04        |
| <b>Functional Requirement</b> |          |           |             |

| <b>Customer requirement catalogue:</b>   |                |                  |         |
|--|----------------|------------------|---------|
| Customers should be able to place orders through multiple channels, including online, mobile, or in-person, with a seamless and user-friendly interface. |                |                  |         |
| Non-functional requirement   |                |                  |         |
| Description  | Target Value   | Acceptance Value | Comment |
| Order(per/day)   | 3000(per/day.) | 2000             |         |

*Table 17: Requirement Catalogue for Customer*

### User manage requirement catalogue

| Source  | Sing Off       | Priority         | Requirement |
|---|----------------|------------------|-------------|
| User Manage   | Admin          | Must Have        | M-05        |
| <b>Functional Requirement</b>   |                |                  |             |
| <b>Admin requirement catalogue:</b>   |                |                  |             |
| The system should support defining and assigning different user roles with specific permissions and access levels, allowing administrators to manage and control user privileges. |                |                  |             |
| Non-functional requirement  |                |                  |             |
| Description   | Target Value   | Acceptance Value | Comment     |
| User Manage(per day)  | 1000(per day.) | 500              |             |

*Table 18: Requirement Catalogue for User Manage*



### 8.6 Prioritized Requirements List (PRL)

To create a priority list of recognized requirements, I used the MoSCoW prioritizing approach. The Agriculture Management System's priority requirements are shown below.

#### Must Have requirements-

| SL | Requirement   | Priority  |
|----|---|-----------|
| 1. | Provide an online platform for customers to view the menu options.                    | Must-have |
| 2. | Enable customers to place orders for catering services online.                        | Must-have |
| 3. | Track and manage the delivery process, including order dispatch and tracking.         | Must-have |
| 4. | Allow customers to make secure online payments for their catering orders.             | Must-have |
| 5. | Support the ability for customers to specify any dietary restrictions or preferences. | Must-have |

#### Should Have Requirements-

| SL | Requirement  | Priority    |
|----|--|-------------|
| 1. | Offer customers the ability to customize their orders based on specific requirements.              | Should-have |
| 2. | Provide suggestions or recommendations to customers based on their preferences or previous orders. | Should-have |
| 3. | Allow customers to track the status of their catering  | Should-have |

|    |   |             |
|----|---|-------------|
|    | orders.   |             |
| 4. | Enable customers to leave reviews and ratings for the catering services provided. | Should-have |

**Could Have Requirements-**

| <b>SL</b> | <b>Requirement</b>   | <b>Priority</b> |
|-----------|--|-----------------|
| 1.        | Implement a loyalty program to reward frequent customers with discounts or special offers. | Could-have      |
| 2.        | Allow customers to schedule catering orders directly into their calendars.                 | Could-have      |
| 3.        | Provide social media integration to enable customers to share their catering experiences.  | Could-have      |

## 8.7 Staff Registration

**Staff Registration Form:**

**Username\*** ⓘ  
 \_\_\_\_\_  
 This field is required.  
 Required. 150 characters or fewer. Letters, digits and @/./+/-/\_ only.

**First name\*** ⓘ  
 \_\_\_\_\_  
 This field is required.

**Last name\*** ⓘ  
 \_\_\_\_\_  
 This field is required.

**Email\*** ⓘ  
 \_\_\_\_\_  
 This field is required.

**Password\*** ⓘ  
 \_\_\_\_\_  
 This field is required.  
 Your password can't be too similar to your other personal

**Address**  
 \_\_\_\_\_

**National id no\*** ⓘ  
 \_\_\_\_\_  
 This field is required.

**Phone\*** ⓘ  
 \_\_\_\_\_  
 This field is required.

**Image**  
 No file chosen

**National id**  
 No file chosen

**Figure 20: Staff Registration**

# Book A Table

## Book Your Table For Private Dinners & Happy Hours

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus nec pretium mi. Curabitur facilisis ornare velit non vulputate. Aliquam metus tortor, auctor id gravida condimentum, viverra quis sem.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus nec pretium mi. Curabitur facilisis ornare velit non vulputate. Aliquam metus tortor, auctor id gravida condimentum, viverra quis sem. Curabitur non nisl nec nisi scelerisque maximus. Aenean consectetur convallis porttitor. Aliquam interdum at lacus non blandit.

**Name**  
your name \_\_\_\_\_

**Mobile**  
your mobile \_\_\_\_\_

**Email**  
your email \_\_\_\_\_

**Time**                      **Date**  
booking time              booking date

**Materialize Select**  
number of Guest ▼

**Materialize Select**  
Restaurant Location ▼

**Materialize Multiple Select**  
Choose food menu ▼

**Figure 21: Order Book**

Select user to change

Action:   0 of 23 selected

| <input type="checkbox"/> | USERNAME      | EMAIL ADDRESS       | FIRST NAME | LAST NAME | STAFF STATUS |
|--------------------------|---------------|---------------------|------------|-----------|--------------|
| <input type="checkbox"/> | Farzana440    |                     |            |           | ✖            |
| <input type="checkbox"/> | JohnMechaie10 | neel123@gmail.com   | John       | Mechaie   | ✖            |
| <input type="checkbox"/> | Puja340       | puja340@gmail.com   | Puja deb   | nath      | ✖            |
| <input type="checkbox"/> | Rahat23       | asd@gmail.com       | rahat      | hossoin   | ✖            |
| <input type="checkbox"/> | Rahim340      | rahim123@gmail.com  | Rahim      | Mia       | ✖            |
| <input type="checkbox"/> | Sumona009     | sumona234@gmail.com | Khatun     | sumona    | ✖            |

**FILTER**

By staff status:

By superuser status:

By active:

By groups:

Figure 22:Admin Site

## FOOD SHOP

ALL PRODUCTS

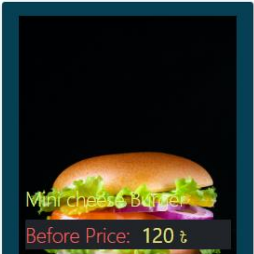
BURGERS

SNACKS

BEVERAGES

LUNCH

BREAKFAST



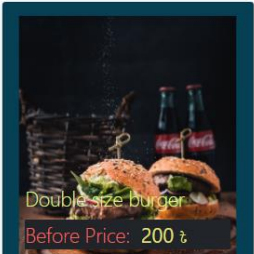
Mini cheese Burger

Before Price: 120 ₺

Discount: 5%

Discount Price: 114.0 ₺

Stock: 86 piece




Double size burger

Before Price: 200 ₺

Discount: 5%

Discount Price: 190.0 ₺

Stock: 95 piece



King size Burger

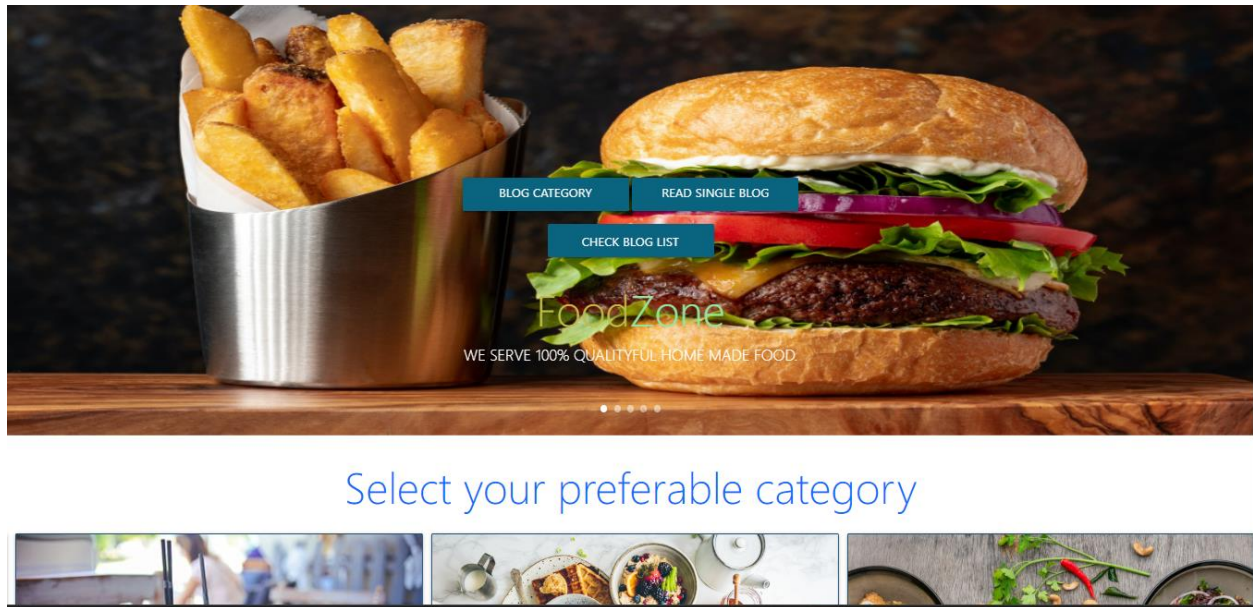
Before Price: 300 ₺

Discount: 5%

Discount Price: 285.0 ₺

Stock: 97 piece

Figure 23:Advance Search



*Figure 24:Blog*

The image shows a checkout form titled 'Checkout Form:' with a close button (X) in the top right corner. The form contains three input fields: 'Address' (with the placeholder text 'Address'), 'Email' (with the placeholder text 'xyz@email.com'), and 'Phone' (with the placeholder text '017-00000000'). A green 'CHECKOUT' button is located at the bottom right of the form.

*Figure 25:Checkout*

## Chapter 9 – Engineering

### 9.1 Approach New System Modules:

In my project, the Food Zone new system, there are several components. Following that, some of the fundamental components, as well as the working procedure of my project Food Zone, are detailed below.

#### Module for logging in

| Serial No. | Action of User   | Serial No. | Action of System  |
|------------|--|------------|---|
| 1.         | The user provides their login credentials, such as a username and password or other authentication methods | 1.         | The system receives the login request from the user interface or login page..   |
| 2.         | After entering the credentials, the user submits the login request to initiate the authentication process. | 2.         | The system verifies the entered credentials against the stored user information, such as the username and password or authentication token. |

|    |  |    |  |
|----|--|----|--|
| 3. | The user's provided credentials are authenticated by the system to verify the user's identity. | 3. | If the entered credentials are valid, the system authenticates the user's identity and grants access to the requested functionality. |
|----|--|----|--|

*Table 19:Module for logging in*

### **Food Ready (Chef) Module.**

| <b>Serial No.</b> | <b>Action of Chef</b>   | <b>Serial No.</b> | <b>Action of System</b>   |
|-------------------|---|-------------------|---|
| 1.                | The chef creates new recipes by specifying the ingredients, quantities, cooking instructions, and any other relevant details.   | 1.                | The system allows chefs to create, edit, and store recipes in a centralized database, providing tools to specify ingredients, quantities, cooking instructions, and other recipe details.               |
| 2.                | The chef selects recipes from the available collection to create a menu for a specific period, considering factors such as variety, dietary requirements, and customer preferences. | 2.                | The system enables chefs to plan and manage menus, including the selection and arrangement of recipes, considering factors like dietary preferences, availability of ingredients, and customer demands. |

*Table 20:Food Ready Module*

### **Staff Registration Module**

| <b>Serial No.</b> | <b>Action of Staff Registration</b>   | <b>Serial No.</b> | <b>Action of System</b>   |
|-------------------|---|-------------------|---|
| 1.                | The staff member enters their personal information, such as name, contact details, address, and other relevant information required for | 1.                | The system validates the entered information to ensure completeness, accuracy, and conformity to specified formats or criteria. |

|    |  |    |  |
|----|--|----|--|
|    | registration.  |    |  |
| 2. | The staff member provides information related to their employment, including their position, department, start date, and any other relevant details specific to the organization's requirements. | 2. | The system creates a user account for the staff member based on the provided information, assigning a unique identifier or username. |

*Table 21: Staff Registration Module*

### Order Module.

| Serial No. | Action of Order   | Serial No. | Action of System   |
|------------|---|------------|--|
| 1.         | The customer browses available products or services, reviews their descriptions, prices, and other relevant details, and selects the desired items to add to their order. | 1.         | Product Catalog Management: The system manages the product catalog, including storing and updating product information such as descriptions, prices, and availability. |
| 2.         | The customer may have the option to customize their order, such as selecting specific options, quantities, or add-ons for each item.                                      | 2.         | The system processes the customer's order, including capturing the selected items, calculating the total cost, and generating an order confirmation.                   |

*Table 22: Order Module.*

### Delivery Module.

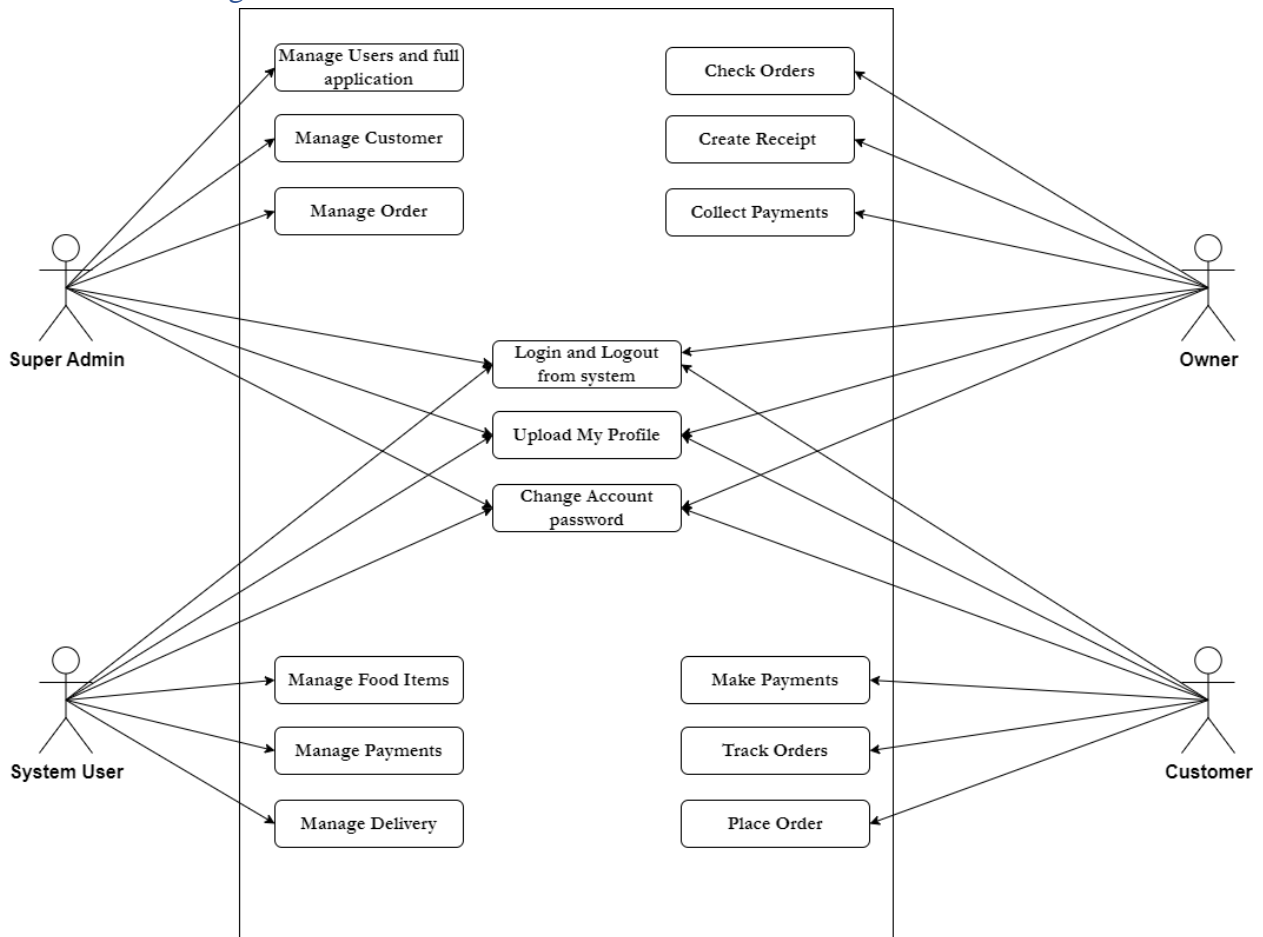
| Serial No. | Action of Delivery               | Serial No. | Action of System             |
|------------|----------------------------------|------------|------------------------------|
| 1.         | The customer selects the desired | 1.         | Order Processing: The system |



|    |   |    |  |
|----|---|----|--|
|    | products or services, adds them to the cart, and proceeds to checkout, indicating the delivery option.                          |    | processes the customer's delivery order, capturing the selected items, calculating the total cost, and generating an order confirmation.           |
| 2. | The customer provides the delivery address, contact information, and any specific instructions or preferences for the delivery. | 2. | The system assigns the delivery to available driver or delivery personnel, considering factors such as location, capacity, and delivery schedules. |

**Table 23:Delivery Module.**

9.2 Use Case Diagram of the Food Zone



**Figure 26:Food Zone Use Case**

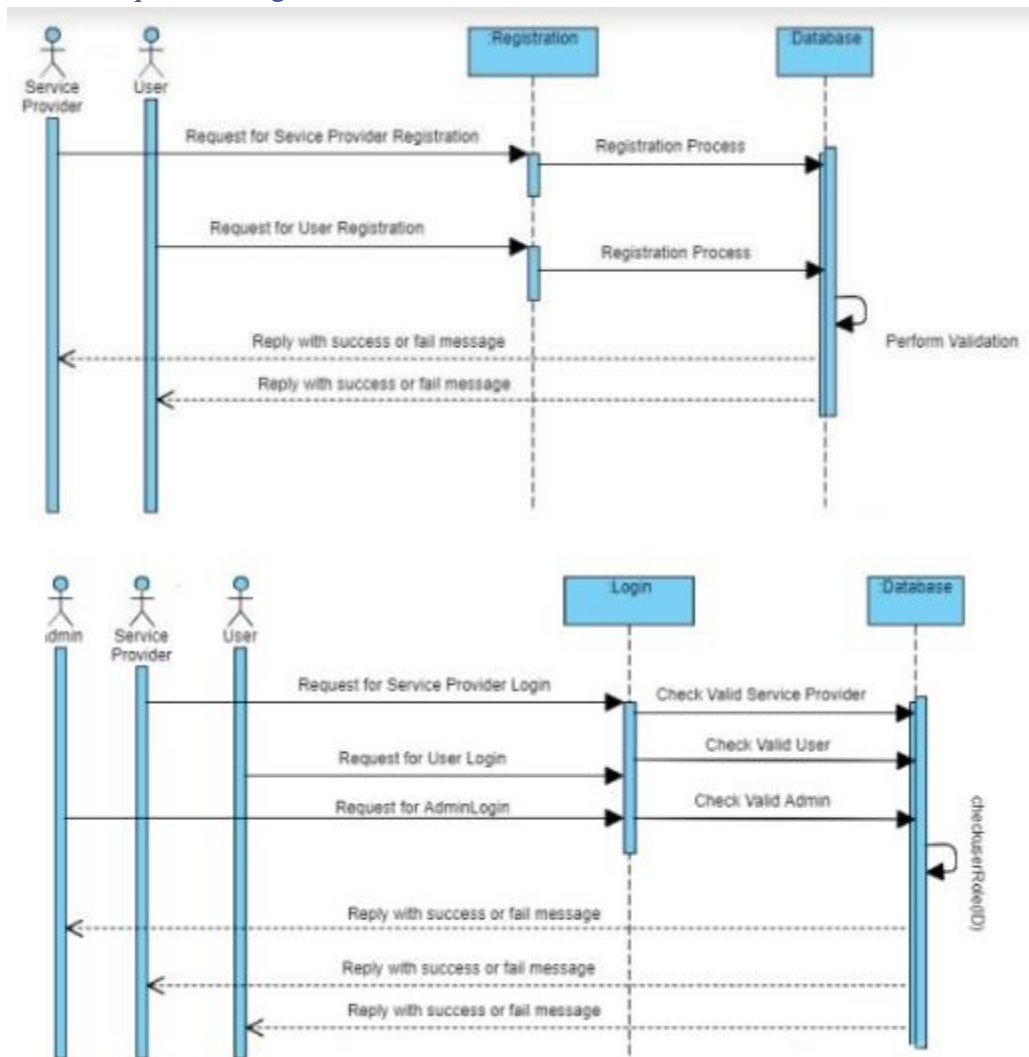
### 9.3 The Food Zone Class Diagram

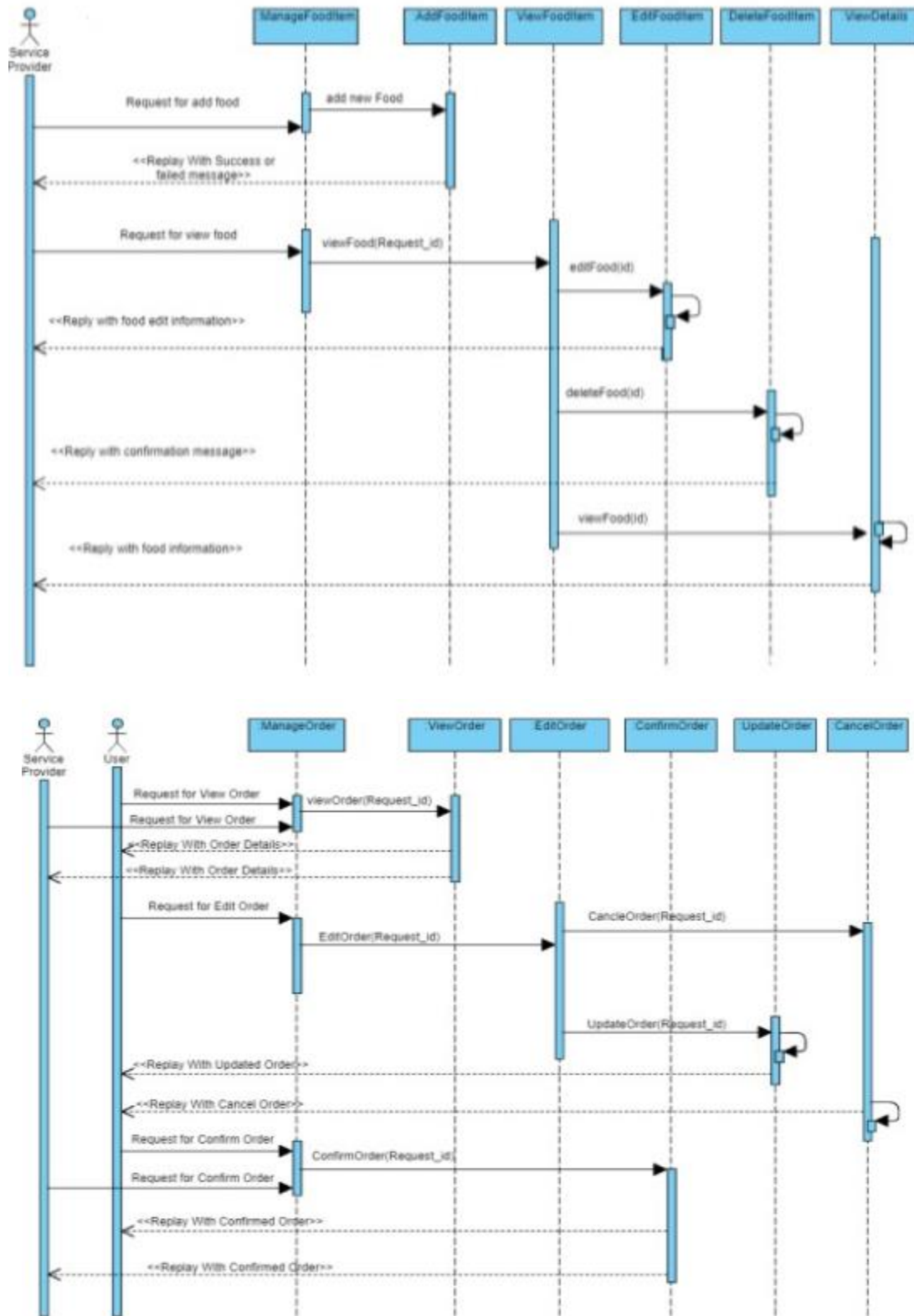
*Figure 27: Food Zone Class Diagram*

### 9.4 Entity Relationship Diagram

*Figure 28: Food Zone ERD*

## 9.5 Food Zone Sequence Diagram





*Figure 29: Food Zone Sequence Diagram*

## 9.6 The Food Zone component diagram

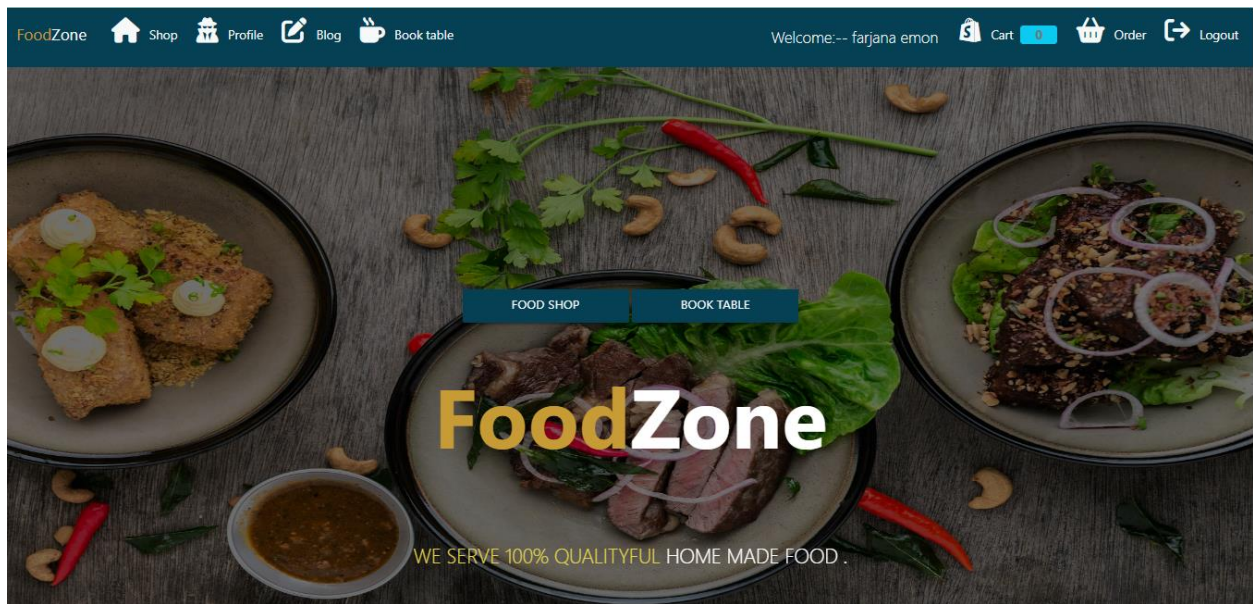
*Figure 30:Component Diagram of Food Zone*

## 9.7 Deployment Diagram of Food Zone

*Figure 31:Deployment Diagram of Food Zone*

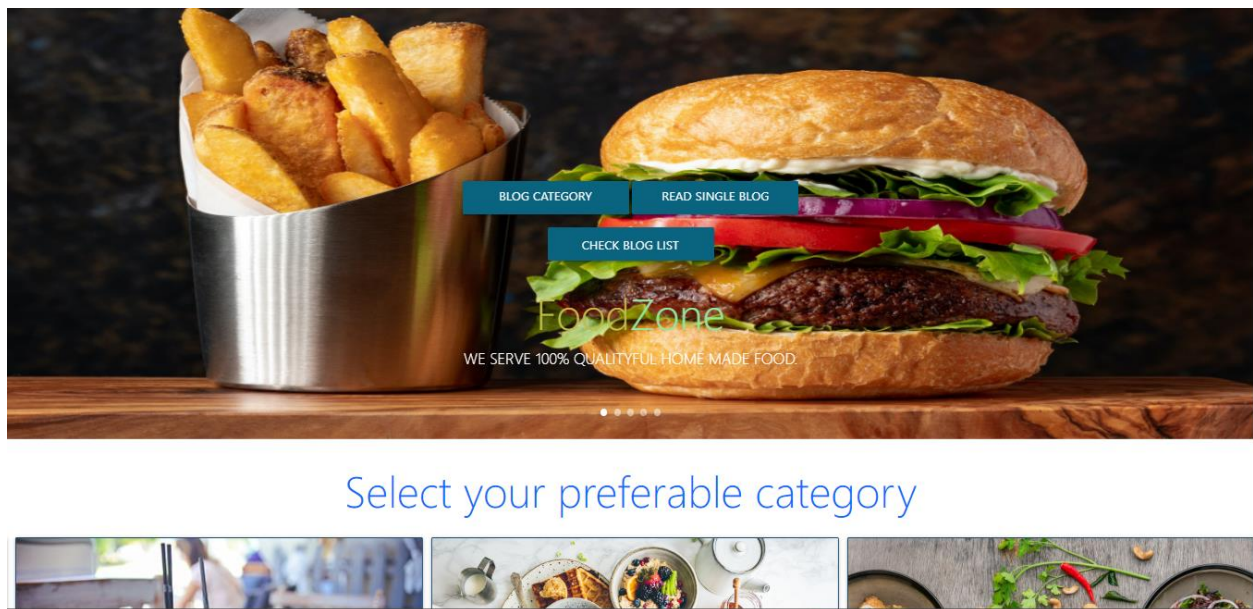
## 9.8 System Interface Design

### Home page Interface Design



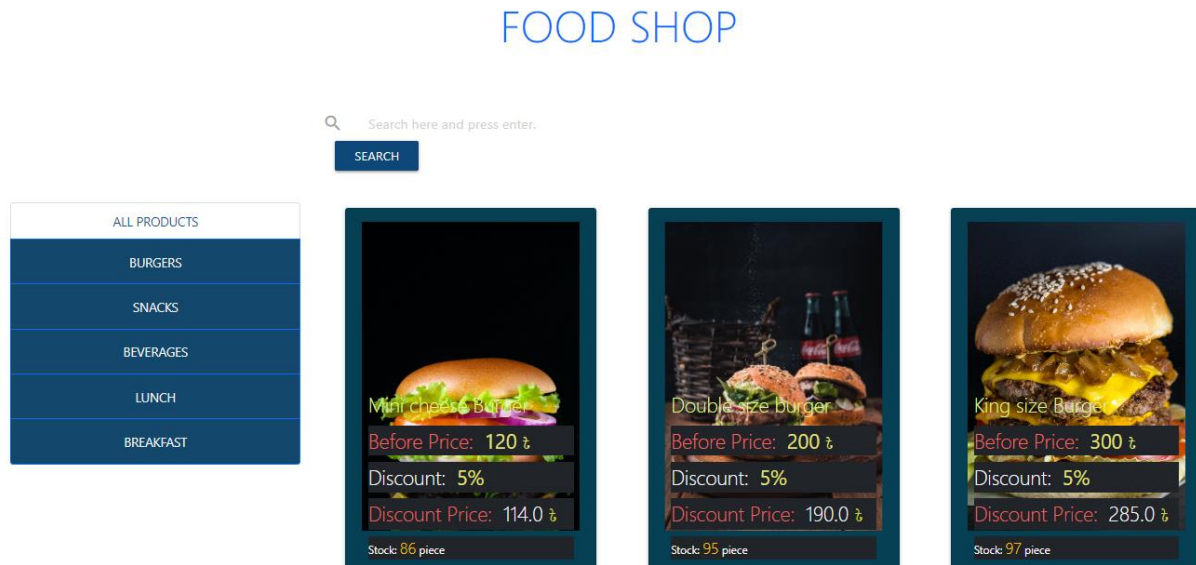
*Figure 32:Interface design home page*

### Blog Page interface



*Figure 33:Blog Page interface*

## Advance Search Page interface



*Figure 34: Advance Search Page interface*

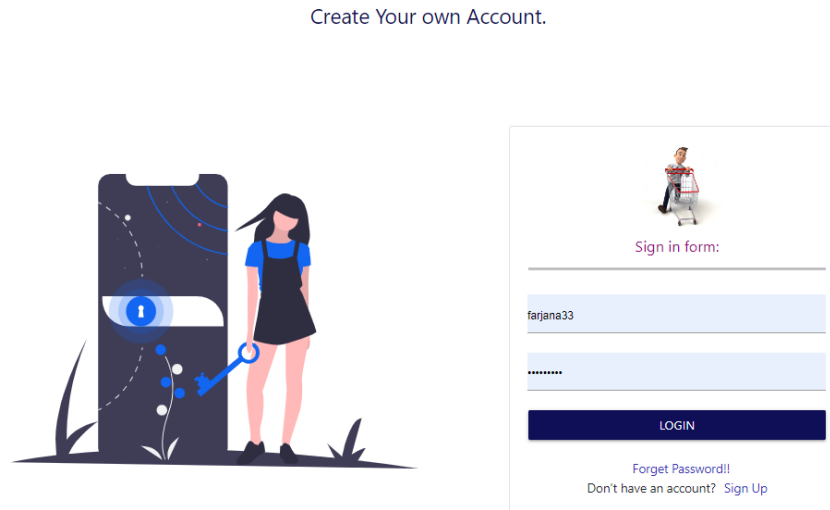
## Book Table Page interface

The screenshot shows a 'Book A Table' form interface. The form is titled 'Book Your Table For Private Dinners & Happy Hours' and includes a registration form with the following fields:

- Name: your name
- Mobile: your mobile
- Email: your email
- Time: booking time
- Date: booking date
- Multiple Select: number of Guest
- Multiple Select: Restaurant Location
- Multiple Multiple Select: Choose food menu

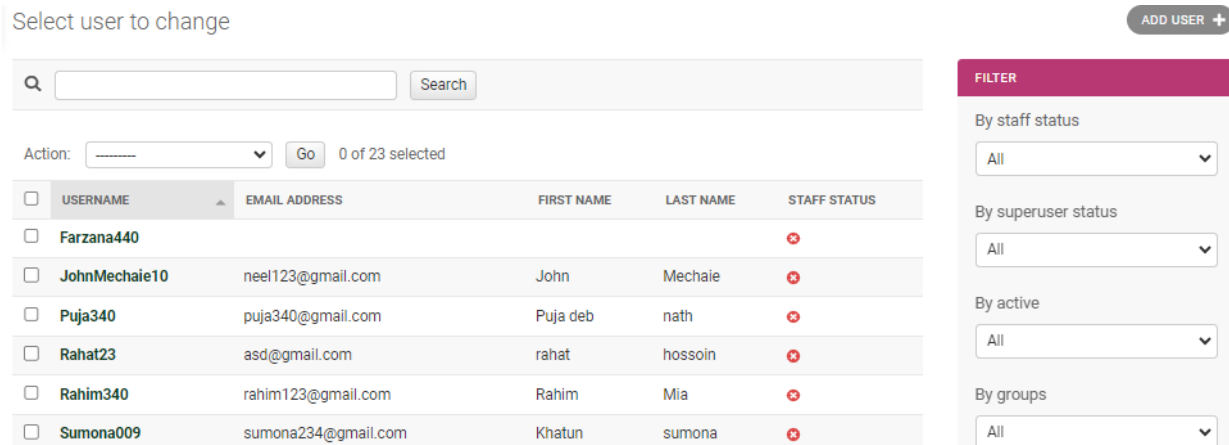
*Figure 35: Book Table Page interface*

## Profile Page interface



*Figure 36: Profile Page interface*

## Admin Site Page Interface



*Figure 37: Admin Site Page Interface*


## Order Details Page Interface



*Figure 38: Order Details Page Interface*



## Customer Page Interface



Customer Registration form:

User Name:

First Name:

Last Name:

Email:

Password:

Confirm Password:

[CREATE AN ACCOUNT](#)

*Figure 39: Customer Page Interface*

## Chapter 10 – Deployment

### 10.1 Core Module Coding Sample:

I employed HTML5, CSS, and JavaScript for the Food Zone's front-end development. Additionally, I used Python (Django) and MySQL as a database management system for back-end development. Here are a few of the most important part code illustrations.

```
#-----customer registration-----
def customer_reg(request):
    form = CustomerRegForm()
    if request.method == 'POST':
        form = CustomerRegForm(request.POST)
        if form.is_valid():
            #CustomerRegForm.is_Exist_email()
            user = form.save()
            user.save()
            group = Group.objects.get(name='Customer')
            user.groups.add(group)
            username = form.cleaned_data.get('username')
            messages.success(request, 'Account created successfully for '+ username )

            return redirect('login')

    context = {'form': form}
    return render(request, 'account/cus_reg.html', context)
```

*Figure 40:Customer Registration*

```

#-----login-----
def loginPage(request, template_name='account/login.html'):
    return_url = None
    if request.method == 'GET':
        return_url = request.GET.get('return_url')
    if request.method == 'POST':
        username = request.POST.get('username')
        password = request.POST.get('password')
        user = authenticate(request, username=username, password=password)
        if user is not None:
            login(request, user)

            # print("the user is : --> ",user.id)

            request.session['current_user_id'] = user.id
            request.session['current_username'] = user.username
            request.session['full_name'] = user.first_name
            request.session['last_name'] = user.last_name

            if return_url:
                return HttpResponseRedirect(return_url)
            else:
                return_url = None
                return redirect('home')
        else:
            messages.error(request, 'Username or password is incorrect')

    context = {}
    return render(request, template_name, context)

```

*Figure 41:Login*

```

#product detail code--
class ViewProduct(DetailView):
    queryset = Product.objects.all()
    products = Product.get_all_products()
    template_name = 'store/pro_details.html'
#--chef profile--
class ViewManufact(DetailView):

    queryset = User.objects.all().select_related('userprofile')
    # def get(self, request):
    #     users = User.objects.all().select_related('profile')
    #     return render(request, 'store/manufact_details.html', {'users': users})

    template_name = 'store/manufact_details.html'

    # def get_queryset(self):
    #     return UserProfile.objects.all()

```

*Figure 42:Product Details*

```

#---Searchbar-----
def searchbar(request):
    if request.method == 'GET':
        query = request.GET.get('search')
        if query:
            products = Product.objects.filter(name__icontains = query)
            return render(request, 'store/searchbar.html', {'products':products})
        else:
            print("NO information to show")
            return render(request, 'store/searchbar.html', {})

def book_table(request):
    if request.method == "POST":
        name = request.POST.get('name')
        phone = request.POST.get('phone')
        email = request.POST.get('email')
        time = request.POST.get('time')
        date = request.POST.get('date')
        guest = request.POST.get('guest')
        location = request.POST.get('location')
        menu = request.POST.get('menu')
        data = BookTable(name=name, mobile = phone, email = email, book_date = date, book_time = time,gu
        data.save()
        messages.success(request, 'Table has booked successfully for ->'+ name )
        return render(request,'table/book_table.html',)
    else:
        return render(request,'table/book_table.html',)

```

*Figure 43:Search bar and Book Table*

```

#--profile er code
def profile_view(request):
    user = request.session.get('current_user_id')
    data = UserProfile.get_info_of_user(user)
    #user = User.objects.filter(User, id = user)
    # print(data)
    context = {
        'data':data
    }

    return render(request, 'profile/profile.html',context)
#--profile settings or update code
def edit_profile(request):
    user = request.session.get('current_user_id')
    data = UserProfile.get_info_of_user(user)

    if request.method == 'POST':
        p_form = InfoUserProfileForm(request.POST, request.FILES,
            instance=request.user.userprofile,

        )

```

*Figure 44:Add to Cart*

```

    return render(request, 'profile/profile.html', context)
#--profile settings or update code
def edit_profile(request):
    user = request.session.get('current_user_id')
    data = UserProfile.get_info_of_user(user)

    if request.method == 'POST':
        p_form = InfoUserProfileForm(request.POST, request.FILES,
            instance=request.user.userprofile,

        )

        u_form = User_Form(request.POST,
            instance= request.user)

        if u_form.is_valid() and p_form.is_valid():
            user = u_form.save()
            #user.set_password(user.password1)
            user.save()
            group = Group.objects.get(name='Manufacturer')
            user.groups.add(group)

```

*Figure 45:Checkout*

## 10.2 Possible Problem Breakdown

When considering a Home Made Food (Fode Zone) Project system, there are several potential problem areas that can arise. Here's a breakdown of possible problem areas:

### **Menu Planning and Customization:**

- Lack of menu variety or options to cater to different dietary preferences and restrictions.
- Inadequate customization options for customers to personalize their orders.
- Difficulty in managing menu changes or substitutions.

### **Ingredient Sourcing and Inventory Management:**

- Challenges in sourcing high-quality and fresh ingredients from reliable suppliers.
- Inaccurate inventory tracking, leading to stock outs or overstocking of ingredients.

- Difficulty in managing perishable ingredients and minimizing food waste.

### **Food Preparation and Quality Control:**

- Inconsistent food quality due to variations in cooking techniques or lack of standardized recipes.
- Issues with portion control, leading to inconsistent serving sizes.
- Poor adherence to food safety and hygiene standards, resulting in potential health risks.

### **Delivery and Logistics:**

- Delays in delivery or incorrect order fulfillment.
- Difficulties in managing and optimizing delivery routes for efficient and timely service.
- Challenges in maintaining food quality and temperature during transportation.

### **Customer Service and Communication:**

- Inadequate communication channels for customers to place orders or inquire about catering services.
- Lack of responsive customer support for addressing inquiries, complaints, or special requests.
- Poor handling of customer feedback and difficulty in resolving customer issues effectively.

## **10.3 Prioritization while Developing the Solution**

We've already prioritized the criterion list in order to evaluate how well the system is working. Prioritizing development-phase tasks is crucial since random development might leave certain crucial skills untapped. The list of tasks for development that have been given priority is as follows:

- Ensure that all home cooks meet food safety standards and obtain necessary certifications to prioritize user safety and legal compliance.
- Implement a robust user verification process and rating system to build trust among users and ensure transparency in the community.

- Establish guidelines and feedback mechanisms to maintain consistent quality standards for homemade food products.
- Partner with reliable delivery services and offer tracking features to ensure timely and secure delivery of orders.
- Collaborate with trusted payment gateways to ensure secure and seamless financial transactions.
- Set up a responsive support system to address user inquiries and concerns promptly.

## Chapter 11 – Testing

### 11.1 Test Plan Acceptance

The creation of a successful software product requires testing. An analysis plan should be created during the testing phase. This agreement is between the user and the developer. The project's test plan will make sure that the testing requirements and acceptance standards are satisfied for the user. Internal and exterior testing come in two varieties.

#### **Functional Testing**

The three forms of functional testing are as follows:

#### **Unit Testing**

- Verify that menu items can be created, updated, and deleted successfully.
- Test the functionality to add and remove ingredients for each menu item.
- Ensure that menu items are displayed accurately on the customer-facing interface.
- Test the ability to create new orders with various combinations of menu items.
- Validate that order totals are calculated correctly based on item prices and quantities.
- Check that orders are stored and retrieved accurately from the database.

#### **Module Testing**

- Test the ability to create, update, and delete menu items.
- Verify that ingredients can be added or removed from menu items.
- Validate the display and organization of menu items in different categories or sections

## **Integration Testing**

- I'm going to use four different sorts of non-functional testing in this project:
- Test the integration between the order placement module and the inventory management module to ensure accurate inventory updates when orders are placed.
- Verify that inventory levels are correctly adjusted based on ordered items and quantities.
- Test scenarios where inventory is low or out of stock to ensure appropriate handling and notifications.

## **Non-functional Testing**

I'll use four sorts of non-functional testing in this project:

### **Acceptance Testing**

- Verify that the user interface is intuitive, user-friendly, and visually appealing.
- Test the responsiveness and compatibility of the user interface across different devices and screen sizes.
- Validate that the user interface adheres to accessibility guidelines and supports assistive technologies.

### **Security Testing**

- Test the strength of authentication mechanisms, including password policies, account lockouts, and password recovery processes.
- Verify that access controls are properly implemented, preventing unauthorized access to sensitive data or system functionalities.
- Test role-based access controls to ensure that users have appropriate permissions based on their assigned roles.

### **Accessibility Testing**

- Test the ability to navigate through the system using keyboard-only controls, without relying on mouse or touch interactions.



- Verify that all interactive elements, menus, and functionalities are accessible and operable using keyboard commands.

### Usability Testing

- Test the clarity and organization of the menu layout, ensuring that users can easily browse and locate desired items.
- Verify that the process of selecting menu items, customizing options, and adding them to the order is straightforward and intuitive.

### 11.2 Test Case

Following the completion of the test acceptance plan, test cases must be developed. The following are the test cases for the Food Zone system:

#### Unit test – test case:

|                                |                                     |                         |                       |
|--------------------------------|-------------------------------------|-------------------------|-----------------------|
| <b>Name of the test case</b>   | <b>Unit testing</b>                 |                         |                       |
| <b>Test Class</b>              |                                     |                         |                       |
| <b>Description of the test</b> |                                     |                         |                       |
| <b>Source of Data</b>          | <b>Steps in the Testing Process</b> | <b>Expected Outcome</b> | <b>Actual Outcome</b> |
|                                |                                     |                         |                       |

#### Module Test – test case:

|                              |                    |
|------------------------------|--------------------|
| <b>Name of the test case</b> | <b>Module Test</b> |
|------------------------------|--------------------|

|                                |                                     |                         |                       |
|--------------------------------|-------------------------------------|-------------------------|-----------------------|
| <b>Test Class</b>              |                                     |                         |                       |
| <b>Description of the test</b> |                                     |                         |                       |
| <b>Source of Data</b>          | <b>Steps in the Testing Process</b> | <b>Expected Outcome</b> | <b>Actual Outcome</b> |
|                                |                                     |                         |                       |

**Integration Testing – test case:**

|                                |                                     |                         |                       |
|--------------------------------|-------------------------------------|-------------------------|-----------------------|
| <b>Name of the test case</b>   | <b>Integration Testing</b>          |                         |                       |
| <b>Test Class</b>              |                                     |                         |                       |
| <b>Description of the test</b> |                                     |                         |                       |
| <b>Source of Data</b>          | <b>Steps in the Testing Process</b> | <b>Expected Outcome</b> | <b>Actual Outcome</b> |
|                                |                                     |                         |                       |

**11.3 Unit Testing**

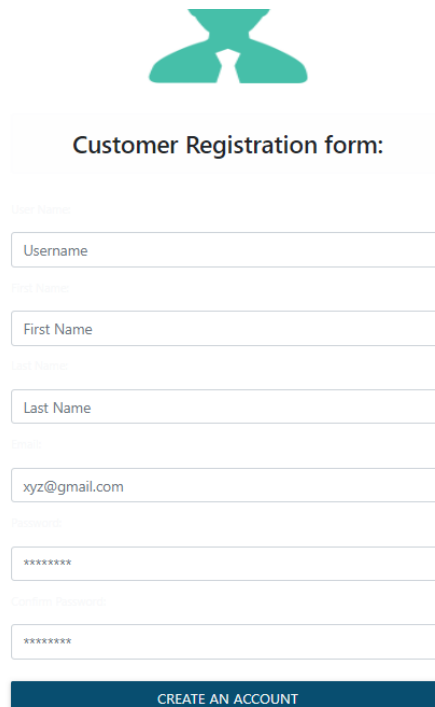
**Unit Test one**

## Test Case

|   |  |   |  |
|---|--|---|--|
| <b>Name of the test case</b>                  | <b>Unit testing</b>  |   |  |
| <b>Test Class</b>                             | MenuManagementTest   |   |  |
| <b>Description of the test</b>                | This test validates the functionality of the menu management module by verifying the creation of a new menu item, updating its details, and ensuring that the changes are reflected accurately.  |   |  |
| <b>Source of Data</b>                         | <b>Steps in the Testing Process</b>  | <b>Expected Outcome</b>   | <b>Actual Outcome</b>  |
| Test data for menu item creation and updates. | <ul style="list-style-type: none"> <li>• Create a new menu item with predefined attributes (name, description, price, ingredients).</li> <li>• Save the menu item in the system.</li> <li>• Retrieve the saved menu item and compare its attributes with the original values.</li> </ul> | The menu item should be successfully created, saved, and retrieved. The updated attributes should be reflected accurately after the update operation. | The menu item was created, saved, and retrieved successfully. The updated attributes were reflected accurately, confirming the proper functionality of the menu management module. |

*Figure 46:unit test one test case*

## Customer Registration



**Customer Registration form:**

User Name:

First Name:

Last Name:

Email:

Password:

Confirm Password:

**CREATE AN ACCOUNT**

*Figure 47:Unit test one result*

## Unit Test two

Test Case

|   |   |  |   |
|---|---|--|---|
| <b>Name of the test case</b>                      | <b>Unit testing</b>   |  |   |
| <b>Test Class</b>                                 | OrderProcessingTest   |  |   |
| <b>Description of the test</b>                    | This test verifies the functionality of the order processing module by testing the calculation of order totals based on selected menu items and quantities. |  |   |
| <b>Source of Data</b>                             | <b>Steps in the Testing Process</b>   | <b>Expected Outcome</b>  | <b>Actual Outcome</b>   |
| Test data for menu items, prices, and quantities. | <ul style="list-style-type: none"> <li>Create a new order with a predefined set of menu items and quantities.</li> </ul>                                    | The order total should be calculated correctly based on the prices and | The order total was calculated correctly for each combination of menu items and |

|  |   |   |   |
|--|---|---|---|
|  | <ul style="list-style-type: none"> <li>• Calculate the order total based on the prices and quantities of the selected menu items.</li> <li>• Compare the calculated order total with the expected order total. Warehouse &amp; Complain). All control by admin</li> </ul> | <p>quantities of the selected menu items.</p> | <p>quantities, matching the expected order totals. This confirms the proper functionality of the order processing module.</p> |
|--|---|---|---|

### Chef Registration

#### Chef Registration Form

**Username\***  
farjana303 ⓘ

This field is required.

Required. 150 characters or fewer. Letters, digits and @/./+/-/\_ only.

**First name\***  
farjana ⓘ

This field is required.

**Last name\***  
emon ⓘ

This field is required.

**Email\***  
farjanaemon7459@gmail.com

This field is required.

**Password\***  
..... ⓘ

This field is required.

Your password can't be too similar to your other personal information.

**Address**  
dhanmondi

**National id no\***  
12333535

This field is required.

**Phone\***  
01954781530

This field is required.

**Image**  
 No file chosen

**National id**  
 No file chosen

*Figure 48:Unit Test two*

**Unit Test three**

## Test Case

|   |  |   |  |
|---|--|---|--|
| <b>Name of the test case</b>  | <b>Unit test</b>   |   |  |
| <b>Test Class</b>   | UserManagementTest   |   |  |
| <b>Description of the test</b>  | This test validates the functionality of the user management module by testing the registration process and verifying that user profiles are correctly stored and retrieved.   |   |  |
| <b>Source of Data</b>   | <b>Steps in the Testing Process</b>  | <b>Expected Outcome</b>   | <b>Actual Outcome</b>  |
| Test data for user registration, including names, email addresses, and passwords. | <ul style="list-style-type: none"> <li>• Create a new user by providing valid registration details (name, email, password).</li> <li>• Save the user information in the system.</li> <li>• Retrieve the saved user profile and compare the attributes with the original values.</li> <li>• Update the user profile with new information (e.g., change the email address).</li> </ul> | The user should be successfully registered, their profile information should be saved accurately, and the updated profile information should be reflected correctly after the update operation. | The user was registered successfully, and their profile information was saved accurately. The updated profile information was reflected correctly after the update operation, confirming the proper functionality of the user management module. |

|  |  |  |  |
|--|--|--|--|
|  | <ul style="list-style-type: none"> <li>Save the updated user profile in the system.</li> </ul> |  |  |
|--|--|--|--|

### Staff Registration

#### Staff Registration Form:

**Username\***  
farjana304 ❗

This field is required.

Required. 150 characters or fewer. Letters, digits and @/./+/-/\_ only.

**First name\***  
farjana ❗

This field is required.

**Last name\***  
emon ❗

This field is required.

**Email\***  
farjanaemon7459@gmail.com

This field is required.

**Password\***  
..... ❗

This field is required.

Your password can't be too similar to your other personal information.

**Address**  
dhanmondi

**National id no\***  
12333535

This field is required.

**Phone\***  
01954781530

This field is required.

**Image**  
 No file chosen

**National id**  
 No file chosen

*Figure 49: Unit Test three*

### 11.4 Module Testing

#### Module Test one

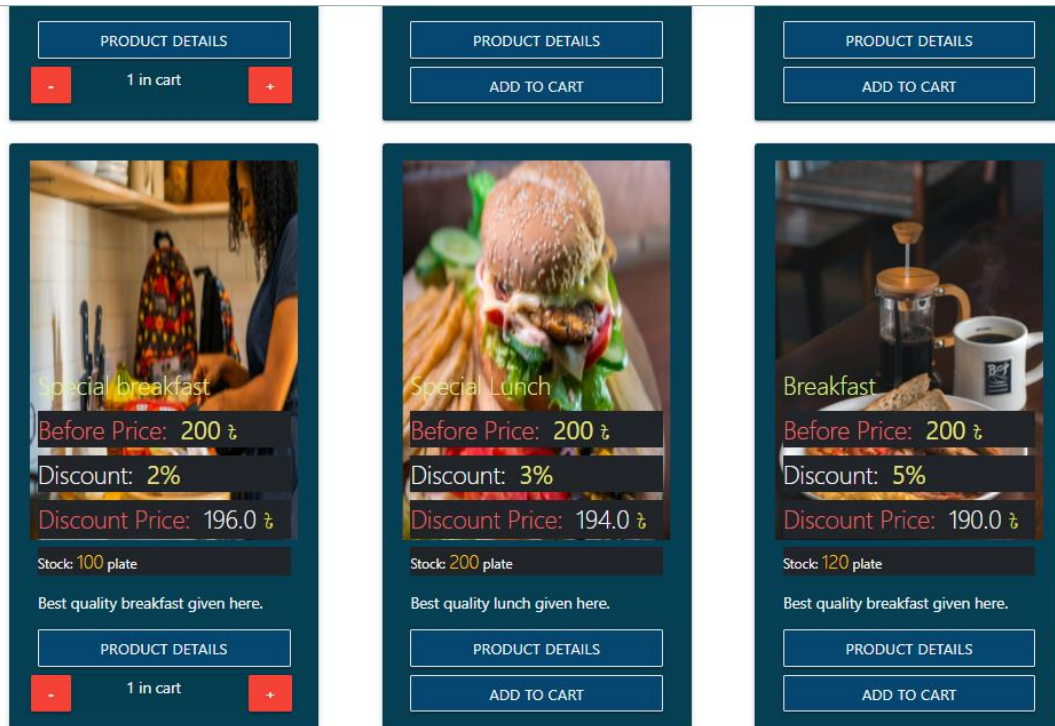
Test Case

| Name of the | Module Test |
|-------------|-------------|
|             |             |

|   |   |   |  |
|---|---|---|--|
| <b>test case</b>                                      |   |   |  |
| <b>Test Class</b>                                     | DeliveryModuleTest  |   |  |
| <b>Description of the test</b>                        | This test validates the functionality of the delivery module by testing the process of assigning a driver to a delivery order and ensuring that the assigned driver is accurately reflected.  |   |  |
| <b>Source of Data</b>                                 | <b>Steps in the Testing Process</b>   | <b>Expected Outcome</b>   | <b>Actual Outcome</b>  |
| Test data for delivery orders and driver information. | <ul style="list-style-type: none"> <li>• Create a delivery order with predefined details (order ID, customer address, delivery time).</li> <li>• Assign a driver to the delivery order.</li> <li>• Retrieve the assigned driver information for the delivery order.</li> <li>• Compare the assigned driver information with the expected driver information.</li> </ul> | The assigned driver for a delivery order should be accurately recorded and retrieved, matching the expected driver information. | The assigned driver for each delivery order was accurately recorded and retrieved, matching the expected driver information. This confirms the proper functionality of the delivery module in assigning and retrieving driver information. |

**Stock Available.**





*Figure 50:Module Test one*

## Module Test two


### Test Case

|                                      |   |   |                                       |
|--------------------------------------|---|---|---------------------------------------|
| <b>Name of the test case</b>         | <b>Module Test</b>  |   |                                       |
| <b>Test Class</b>                    | PaymentProcessingModuleTest   |   |                                       |
| <b>Description of the test</b>       | This test validates the functionality of the payment processing module by testing the successful processing of a payment and verifying that the payment details are correctly stored. |   |                                       |
| <b>Source of Data</b>                | <b>Steps in the Testing Process</b>   | <b>Expected Outcome</b>   | <b>Actual Outcome</b>                 |
| Test data for a payment transaction, | <ul style="list-style-type: none"> <li>Create a payment transaction with predefined details</li> </ul>  | A warning should be displayed if the input field includes invalid | The payment transaction was processed |

|   |   |  |  |
|---|---|--|--|
| <p>including payment method, amount, and customer information</p> | <p>(payment method, amount, customer information).</p> <ul style="list-style-type: none"> <li>• Process the payment transaction.</li> <li>• Retrieve the payment details for the processed transaction.</li> <li>• Compare the retrieved payment details with the expected payment details.</li> <li>• Repeat the test with different payment scenarios, such as different payment methods or varying amounts.</li> </ul> | <p>data. The payment transaction should be processed successfully, and the payment details should be accurately stored and retrievable, matching the expected payment details.</p> | <p>successfully, and the payment details were accurately stored and retrievable, matching the expected payment details. This confirms the proper functionality of the payment processing module.</p> |
|---|---|--|--|

## Products Details

# PRODUCT'S DETAILS




## Mini cheese Burger

| Status | Price       | Stock Availability | Stcok Unit | Discount | current price | Chef's Name:  |
|--------|-------------|--------------------|------------|----------|---------------|---------------|
| Active | 120 ./piece | Available          | 85 piece   | 5%       | 114.0 %       | JohnMechaie10 |

PRODUCT DESCRIPTION:

Best one

CHEF PROFILE



*Figure 51:Module Test two*

### 11.5 Integration Testing

#### Integration Test one

Test Case

|                                |   |
|--------------------------------|---|
| <b>Name of the test case</b>   | <b>Integration Testing</b>  |
| <b>Test Class</b>              | MenuOrderIntegrationTest  |
| <b>Description of the test</b> | This test validates the integration between the menu management module and the order processing module by testing the creation of a new order with selected menu items and verifying that the order details are correctly synchronized. |

| <b>Source of Data</b>                       | <b>Steps in the Testing Process</b>   | <b>Expected Outcome</b>  | <b>Actual Outcome</b>  |
|---|---|--|--|
| Test data for menu items and order details. | <ul style="list-style-type: none"> <li>• Create a new menu item with predefined attributes (name, description, price).</li> <li>• Save the menu item in the system.</li> <li>• Retrieve the saved menu item and verify its attributes.</li> <li>• Create a new order with the saved menu item and additional order details (customer name, delivery address, quantity).</li> <li>• Save the order in the system.</li> </ul> | The menu item should be successfully created and saved, the order should be created with accurate details, and the menu item attributes should be correctly synchronized with the order. | The menu item was successfully created and saved. The order was created with accurate details, and the menu item attributes were correctly synchronized with the order. This confirms the proper integration between the menu management module and the order processing module. |

## Login system integration test

-- Your order has placed successfully ---Thank You for being with us.-- -----Note: Please! Chaeck your email as order confirmation... --



## CART ITEMS:

| Sno. | Image | Name | Price | Quantity      | Total      |
|------|-------|------|-------|---------------|------------|
|      |       |      |       | <b>Total:</b> | <b>0 ₹</b> |

CHECKOUT

*Figure 52: Integration Test one*

## Integration Test two

Test Case

|                                |   |                         |                       |
|--------------------------------|---|-------------------------|-----------------------|
| <b>Name of the test case</b>   | <b>Integration Testing</b>  |                         |                       |
| <b>Test Class</b>              | OrderPaymentIntegrationTest   |                         |                       |
| <b>Description of the test</b> | This test validates the integration between the order processing module and the payment processing module by testing the successful processing of a payment for a placed order. |                         |                       |
| <b>Source of Data</b>          | <b>Steps in the Testing Process</b>   | <b>Expected Outcome</b> | <b>Actual Outcome</b> |
| Test data for                  | <ul style="list-style-type: none"> <li>Create a new order with</li> </ul>   | The payment             | The payment           |

|   |   |  |  |
|---|---|--|--|
| <p>order details and payment transaction.</p> | <p>predefined details (customer name, delivery address, order items).</p> <ul style="list-style-type: none"> <li>• Save the order in the system.</li> <li>• Initiate a payment transaction with the order details and a test payment method.</li> <li>• Process the payment transaction.</li> <li>• Retrieve the payment status for the processed transaction.</li> </ul> | <p>transaction should be processed successfully, the payment status should indicate success, and the order status should be updated accordingly.</p> | <p>transaction was processed successfully, the payment status indicated success, and the order status was updated accordingly. This confirms the proper integration between the order processing module and the payment processing module.</p> |
|---|---|--|--|

### Complain answer input integration testing

The image shows a web form titled "Book A Table" for private dinners and happy hours. The form is set against a blue background with a yellow sidebar on the right. The form fields are as follows:

- Name:** your name
- Mobile:** your mobile
- Email:** your email
- Time:** booking time
- Date:** booking date
- Materials Select:** number of Guest
- Materials Select:** Restaurant Location
- Materials Multiple Select:** Choose food menu

Below the form, there are two paragraphs of placeholder text (Lorem ipsum) on the blue background.

**Figure 53: Integration Test two**

## 11.6 Acceptance Testing

### Acceptance Test one

Test Case

|  |   |   |  |
|--|---|---|--|
| <b>Name of the test case</b>                                       | <b>Acceptance Testing</b>   |   |  |
| <b>Test Class</b>  | OrderPlacementAcceptanceTest  |   |  |
| <b>Description of the test</b>                                     | This test validates the acceptance criteria for the order placement process by simulating the end-to-end flow of a customer placing an order and verifying that it is processed successfully.   |   |  |
| <b>Source of Data</b>  | <b>Steps in the Testing Process</b>   | <b>Expected Outcome</b>   | <b>Actual Outcome</b>  |
| Test data for customer information, menu items, and order details. | <ul style="list-style-type: none"> <li>• Access the Home Made Food (Fode Zone) Project system as a customer.</li> <li>• Browse the menu and select desired menu items.</li> <li>• Customize the menu items (if applicable) with specific preferences or options.</li> <li>• Proceed to the checkout process.</li> </ul> | The order should be placed successfully, the order details should match the expected values, and the order status should indicate successful placement. | The order was placed successfully, the order details matched the expected values, and the order status indicated successful placement. This confirms that the order placement process meets the acceptance criteria and the Home Made Food (Fode Zone) Project system is ready for use by customers. |

**Answer found acceptance testing**

-- Your order has placed successfully ---Thank You for being with us.-- -----Note: Please! Chaeck your email as order confirmation... --



## CART ITEMS:

| Sno. | Image | Name | Price | Quantity      | Total      |
|------|-------|------|-------|---------------|------------|
|      |       |      |       | <b>Total:</b> | <b>0 ₹</b> |

CHECKOUT

*Figure 54:Acceptance Test*

### 11.7 Security Testing

#### Security Test

Test Case

|                                    |   |   |   |
|------------------------------------|---|---|---|
| <b>Name of the test case</b>       | <b>Security Testing</b>   |   |   |
| <b>Test Class</b>                  | UserAuthenticationSecurityTest  |   |   |
| <b>Description of the test</b>     | This test validates the security of the user authentication process by testing the strength of passwords and ensuring proper handling of authentication attempts. |   |   |
| <b>Source of Data</b>              | <b>Steps in the Testing Process</b>   | <b>Expected Outcome</b>                             | <b>Actual Outcome</b>                                   |
| Test data for user credentials and | <ul style="list-style-type: none"> <li>Create a test user with a variety of passwords, including</li> </ul>   | The system should enforce strong password policies, | The system enforces strong password policies, accepting |



|                    |   |  |  |
|--------------------|---|--|--|
| password policies. | <p>strong passwords and weak passwords.</p> <ul style="list-style-type: none"> <li>• Attempt to authenticate with the test user using both correct and incorrect passwords.</li> <li>• Verify that strong passwords are accepted and allow successful authentication.</li> <li>• Verify that weak passwords are rejected and do not allow successful authentication.</li> </ul> | <p>allowing only strong passwords for user authentication. Weak passwords should be rejected, and failed authentication attempts should be handled securely, preventing unauthorized access.</p> | <p>only strong passwords for user authentication. Weak passwords are rejected, and failed authentication attempts are handled securely, preventing unauthorized access. This confirms the proper security measures in place for user authentication.</p> |
|--------------------|---|--|--|

## Chef Registration Form

|   |  |
|---|--|
| <p><b>Username*</b></p> <p>farjana303 <span style="float: right;">❗</span></p> <hr/> <p style="color: red; font-size: small;">This field is required.</p> <p style="font-size: x-small;">Required. 150 characters or fewer. Letters, digits and @/./+/-/_ only.</p> <p><b>First name*</b></p> <p>farjana <span style="float: right;">❗</span></p> <hr/> <p style="color: red; font-size: small;">This field is required.</p> <p><b>Last name*</b></p> <p>emon <span style="float: right;">❗</span></p> <hr/> <p style="color: red; font-size: small;">This field is required.</p> <p><b>Email*</b></p> <p>farjanaemon7459@gmail.com</p> <hr/> <p style="color: red; font-size: small;">This field is required.</p> <p><b>Password*</b></p> <p>..... <span style="float: right;">❗</span></p> <hr/> <p style="color: red; font-size: small;">This field is required.</p> <p style="font-size: x-small;">Your password can't be too similar to your other personal information.</p> | <p><b>Address</b></p> <p>dhanmondi</p> <hr/> <p><b>National id no*</b></p> <p>12333535</p> <hr/> <p style="color: red; font-size: small;">This field is required.</p> <p><b>Phone*</b></p> <p>01954781530</p> <hr/> <p style="color: red; font-size: small;">This field is required.</p> <p><b>Image</b></p> <p><input type="button" value="Choose File"/> No file chosen</p> <p><b>National id</b></p> <p><input type="button" value="Choose File"/> No file chosen</p> |
|---|--|

*Figure 55: Security Testing*

### 11.8 Accessibility Testing

#### Accessibility Test

Test Case

|                                |   |
|--------------------------------|---|
| <b>Name of the test case</b>   | <b>Accessibility Testing</b>  |
| <b>Test Class</b>              | KeyboardAccessibilityTest   |
| <b>Description of the test</b> | This test validates the keyboard accessibility of the Home Made Food (Fode Zone) Project system by testing the ability to navigate and interact with the system using keyboard commands only. |

| Source of Data  | Steps in the Testing Process  | Expected Outcome   | Actual Outcome   |
|---|---|--|--|
| Test data for keyboard commands and accessibility guidelines. | <ul style="list-style-type: none"> <li>• Access the Home Made Food (Fode Zone) Project system.</li> <li>• Begin navigating through the system using keyboard commands only (e.g., Tab, Enter, Arrow keys).</li> <li>• Verify that all interactive elements, such as buttons, links, and form fields, can be reached and activated using keyboard commands.</li> </ul> | The Home Made Food (Fode Zone) Project system should be fully accessible and operable using keyboard commands only. All interactive elements should be reachable and activatable, and the logical order of focus traversal should be maintained. | The Home Made Food (Fode Zone) Project system is fully accessible and operable using keyboard commands only. All interactive elements are reachable and activatable, and the logical order of focus traversal is maintained. This confirms that the Home Made Food (Fode Zone) Project system meets the accessibility requirements for keyboard accessibility. |

*Table 24: Accessibility Testing*

## Chapter 12 – Implementation

### 12.1 Training

Users must get training to become used to the newly developed system. When the system is completely operational, the team must ensure that the users or operators can handle tasks through the system. Here is a diagram that shows the training techniques.

| SL | User  | Training Scope   | Time Period | Comment  |
|----|---|--|-------------|--|
| 1  | The users who will be interacting with the Home Made Food (Fode Zone) Project system, including administrators, chefs, staff members, and customer support representatives. | <p>The training should cover various aspects related to the Home Made Food (Fode Zone) Project system, including:</p> <ul style="list-style-type: none"> <li>• System Overview: Provide an overview of the Home Made Food (Fode Zone) Project system, its functionalities, and how it supports the catering process.</li> <li>• User Roles and Permissions: Explain the different user roles and their respective permissions within the system, clarifying the responsibilities and access levels for each role.</li> </ul> | 4 Hours     | User training is essential to ensure that users understand how to effectively use the Home Made Food (Fode Zone) Project system, increasing their productivity and minimizing errors. It's important to design training programs that are tailored to the specific needs and skill levels of the users. Interactive and hands-on training sessions, supported by user manuals, documentation, or video tutorials, can enhance the learning experience. |

|  |  |  |  |  |
|--|--|--|--|--|
|  |  | <ul style="list-style-type: none"> <li>• System Navigation: Train users on how to navigate through the system's interface, including menus, options, and different screens.</li> </ul> |  |  |
|--|--|--|--|--|

*Table 25: User training*

## 12.2 Implementation Scheme

### **Big Bang**

Big Bang functions by instantly switching on the new system while shutting down the old one. This method is significantly quicker than the others since it starts using the new system right away when the test is finished. When transferring data from the old system, there is a chance that data may be lost and the new system will fail. It is carried out on a single location using local labor.

### 12.3 Scaling

No plans were made to take application scalability into account because this is a research study.

### 12.4 Load Balancing

The optimization of a system against the impact of its users is referred to as load balancing. The number of users hit reveals how many users are utilizing the system concurrently and how long it has been in operation. This is referred to as load balancing or load equalization. It allows the system to continue operating normally by distributing the demand over different servers. There are six different sorts of users and a large number of hits each day, thus a suitable load balancing solution has to be devised.

## **Chapter 13 – Critical Appraisal and Evaluation**

### 13.1 Objective could be met

In a Home Made Food (Fode Zone) Project system, several objectives can be met to ensure a successful implementation. Here are some common objectives:

- Offer a dedicated space for home cooks to showcase their culinary skills, providing them with an opportunity to turn their passion for cooking into a small business.

- Develop a user-friendly website where home cooks can list and sell their homemade food products directly to customers.
- Enable users to explore a wide variety of homemade food options, including regional cuisines, specialty dishes, and dietary preferences.
- Implement a robust system to verify home cooks' adherence to food safety regulations, ensuring that all listed food products meet the required standards.
- Partner with reliable delivery services to offer efficient and timely delivery options for homemade food products.
- Provide educational resources and guidelines to home cooks on food safety best practices.

### **Objective-1**

#### **Achievement rate and others**

The achievement rate of streamlining order management can vary based on the specific implementation and adoption of the Home Made Food (Fode Zone) Project system. It depends on factors such as the system's functionality, user training, and the integration of the system with other processes and systems. Here are some indicators to measure the achievement rate:

- Measure the time taken from order placement to order fulfillment. A streamlined process should reduce this time and improve efficiency.
- Measure the rate of order accuracy and minimize errors in order processing, such as incorrect items, quantities, or delivery details.

### **Objective-2**

#### **Achievement rate and others:**

The achievement rate of enhancing menu management can be assessed based on the effectiveness and efficiency of the menu-related processes in the Home Made Food (Fode Zone) Project system. Here are some factors to consider when evaluating the achievement rate:

- Measure the ease and speed of updating menus, including adding new menu items, modifying existing items, or removing items. A higher achievement rate would indicate that menu updates can be done quickly and accurately.
- Assess the ability to offer customizable options for menu items, such as portion sizes, dietary preferences, or special requests. A higher achievement rate would indicate a greater level of flexibility and customization available to customers.

### **Objective-3**

#### **Achievement rate and others:**

The achievement rate of improving inventory management can be measured based on the effectiveness and efficiency of inventory-related processes within the Home Made Food (Fode Zone) Project system. Here are some factors to consider when evaluating the achievement rate:

- Measure the accuracy of inventory tracking and management within the system. This can be assessed by comparing the system's recorded inventory levels with actual physical counts.
- Evaluate the system's ability to provide real-time updates on inventory levels based on incoming orders, usage, and restocking. A higher achievement rate would indicate timely and accurate updates to maintain inventory accuracy.

### **Objective-4**

#### **Achievement rate and others:**

The achievement rate of enhancing customer experience can be measured based on the satisfaction and engagement of customers when interacting with the Home Made Food (Fode Zone) Project system. Here are some factors to consider when evaluating the achievement rate:

- Assess the intuitiveness and ease of use of the system's interface. This includes factors such as navigation, menu layout, clarity of information, and overall user experience.
- Evaluate the system's responsiveness and compatibility with mobile devices. A higher achievement rate would indicate a seamless and optimized experience for customers using smart phones or tablets.

### 13.2 Objective that totally don't meet of touched

For the activities, practically the entire text is examined. There is just one target that hasn't been hit, though.

#### **The reasons why it could not be touch**

Lack of time to do the chores is the key explanation why the target has not been achieved. Due of the limited time constraint, it would be quite challenging. Another challenge is the need for an ongoing server that facilitates the job, which is also very challenging. The software cannot develop since it is unable to run without a live server.

#### **What could have been done?**

The time period needs to be rescheduled in order to speak with the highlights, adding extra time to the component's completion. It also needs to develop hybrid application development skills.

## **Chapter 14 Lessons Learned**

### 14.1 Pre-Project-Review-closing

The Pre-Project Review is an important step in the planning and preparation phase of a Home Made Food (Food Zone) Project system project. It provides an opportunity to assess the project's readiness, identify potential risks, and ensure alignment with the project objectives. Throughout the review process, various aspects of the project have been examined, including requirements, testing strategies, and training needs.

The review process involved analyzing the project's objectives, determining the achievement rates, and considering other relevant factors specific to each objective. It allowed for a comprehensive evaluation of the project's potential success, enabling stakeholders to make informed decisions and take necessary actions.

By conducting this Pre-Project Review, key insights and recommendations have been generated to guide the project's further development. The review highlighted the importance of streamlining order management, enhancing menu management, improving inventory management, and enhancing customer experience. It also emphasized the need to assess achievement rates, collect feedback, and continuously monitor progress to ensure the project's success.



### 14.2 What I have learnt

I changed a significant number of important structural building elements. I've learned how to work with a framework in many areas, including structure, organization, and databases. I've also made improvements in my project management and testing skills (black and white box, unit and acceptability, usability and accessibility), which will be useful in my future career. Additionally, it helps me refine my programming skills. I've learned how to use the multi-level authentication and authorization Django framework for Python, as well as the Haversine distance calculation method. I've been compelled by the project to gather a ton of fundamental knowledge that will be useful to me in the future.

### 14.3 The problems I have faced

Throughout the course of the project, I ran across a number of challenges. Since I employed the Agile DSDM approach, which ensures iterative development, I have to face and overcome difficulties iteratively. indicates that a problem that arises in one timebox is resolved by a separate problem that happens in a different timebox and task. Two of the more challenging tasks were extracting geographic coordinates and figuring out how far apart two sites are from one another. Another difficulty was implementing real-time feedback or a method of problem-solving. Using Django, I've also struggled to build multi-level authentication. The hardest problem to solve was keeping to the deadlines.

### 14.4 What Solution Occurred

I always looked for a solution whenever a problem was brought to my attention. I use email authentication on my project to decipher the coordinates. To build multi-auth, I used a custom authentication system that includes a controller and middleware. I put forth a lot of effort and strictly followed the deadline to finish on time.

## Chapter 15 – Conclusion

### 15.1 Summary of the Project

The Home Made Food (Food Zone) Project system project aims to develop and implement a comprehensive system that streamlines various aspects of the catering process. The project's objectives include improving order management, enhancing menu management, improving inventory management, and enhancing the overall customer experience.

The system will automate and optimize order processing, from placement to delivery, ensuring efficient and accurate order fulfillment. It will provide features such as online ordering, order tracking, and real-time updates.

Menu management will be enhanced by providing tools to easily update menus, offer customization options, and ensure clear and organized menu displays. Pricing management and integration with inventory will also be emphasized to enable efficient menu updates based on ingredient availability.

### 15.2 Goal of the project

The objective of the project was to develop a centralized system that would offer a quick, secure, and safe solution to Home Made Food (Food Zone) Project issues. The following are the project's main goals:

- Create an online platform that connects home cooks with customers seeking homemade food products.
- Encourage the appreciation and adoption of homemade food by providing a convenient and reliable platform for buying and selling.
- Empower home cooks to showcase their culinary talents and generate income from their passion for cooking.
- Provide customers with a wide range of homemade food options, including diverse regional cuisines and specialty dishes.
- Establish a system to verify the compliance of home cooks with food safety standards and maintain consistent quality across products.
- Stay responsive to market trends and user preferences to remain competitive and relevant.
- Provide educational resources on cooking techniques and nutrition to enhance culinary skills and awareness.

By achieving these goals, the Homemade Food Website project can contribute to the growth of homemade food businesses, enrich the culinary experiences of users, and create a vibrant community around homemade food.

### 15.3 Success of the Project

The success of the Home Made Food (Food Zone) Project system project can be measured based on several key factors. Here is a description of the success of the project:

- High user engagement and active participation from both home cooks and customers.
- Substantial user adoption and retention rates, indicating a growing and loyal user base.
- A significant number of successful transactions and steady growth in sales revenue.
- Positive user feedback, testimonials, and high ratings, demonstrating user satisfaction.
- Compliance with food safety regulations and consistent quality of homemade food products.
- A thriving and supportive community of users, fostering a sense of belonging and interaction.
- Positive return on investment (ROI) and sustainable revenue generation.
- Expansion of the platform's market reach to various regions or countries.
- Scalability and adaptability to handle increased traffic and user demands.
- Support and recognition of local home-based food businesses, contributing to their growth.

### 15.4 What I have done in the documentation

I have completed all the tasks that the documentation has required of me since it started. Among other things, I engaged in time boxing, numerous visuals, and analysis. Additionally, the text offers a variety of goals that are well handled. This report has all the data needed to complete the project.

### 15.5 Value of the Project

The value of the Home Made Food (Food Zone) Project lies in its ability to bring numerous benefits and improvements to the catering business. Here is a description of the value of the project:

- The project empowers home cooks by providing them with a platform to showcase their culinary skills and turn their passion for cooking into a source of income. It offers an opportunity for home-based food businesses to thrive and grow.

- The project prioritizes food safety and quality by verifying home cooks' compliance with food safety regulations. It ensures that customers receive safe and consistent homemade food products.
- The platform celebrates the richness of culinary traditions from different regions and cultures. It promotes cultural exchange through homemade food, allowing users to discover and appreciate diverse dishes and cooking techniques.

Overall, the Homemade Food Website project brings together culinary enthusiasts, supports local businesses, ensures food safety, promotes sustainable practices, and contributes to a dynamic online community. Its value lies in empowering home cooks, fostering culinary diversity, and creating a positive impact on both the food industry and society.

### 15.6 My Experience

I had to do a lot of research to put this system in place. I've worked on several offline and online research initiatives. The hardest task was fixing bugs. I was finally able to use my approach after overcoming all obstacles. I've developed a ton of experience during this project. I overcome a number of obstacles and gained significant experience. I gained great experience by learning how to manage a large project and complete all of its goals in a short period of time.

## Appendices:

Test Scripts:

User guide:

### 1. Food Order

**Brief Description:** The food order appendix provides a detailed overview of the process involved in placing and managing food orders through the Home Made Food (Food Zone) Project system. It outlines the steps, roles, and conditions necessary to successfully complete the order process.

**Actors:** Customers: Users who browse menus, customize menu items, place orders, and track order status. Staff Members: Responsible for order processing, coordination with chefs and

delivery personnel, and customer support.

**Preconditions:** Customers should have access to the Home Made Food (Food Zone) Project system through appropriate login credentials. Customers should be familiar with the menu options and customization features available.

**Basic Flow of Events:**

- Customers browse the available menus, either by category or by searching for specific items.
- Customers can view detailed information about each menu item, including descriptions, prices, and any available customization options.
- Customers can customize selected menu items based on their preferences, such as portion sizes, toppings, or dietary restrictions.

**Post-Conditions:** Customers successfully place their food orders and receive confirmation of their orders.

Staff members efficiently process and manage incoming orders, assigning them to appropriate chefs and coordinating with delivery personnel.

## 2. Food Delivery

**Brief Description:** The food delivery appendix provides a comprehensive overview of the food delivery process within the Home Made Food (Food Zone) Project system. It outlines the steps, roles, and conditions involved in ensuring the successful delivery of food orders to customers.

**Actors:** Delivery Personnel: Responsible for picking up orders from the catering establishment and delivering them to customers' specified locations. Staff Members: Involved in coordinating with delivery personnel, managing order statuses, and providing customer support.

**Preconditions:** Orders should be successfully processed and ready for delivery within the

Home Made Food (Food Zone) Project. Delivery personnel should have access to necessary delivery information, such as addresses, contact details, and order details. Staff members should have access to the order management system and be able to update order statuses and track delivery progress.

**Basic Flow of Events:**

- Chefs or kitchen staff prepare the menu items according to customer specifications.
- Once the order is prepared, it is marked as ready for delivery within the system.
- Staff members notify delivery personnel about the ready-to-deliver orders, providing necessary details.
- Staff members assign specific orders to available delivery personnel based on their proximity to the delivery location.
- Delivery personnel receive notification of the assigned orders, including order details and customer contact information.

**Post-Conditions:** Delivery personnel successfully pick up and deliver the orders to customers' specified locations. Customers receive their orders accurately and in a timely manner. Staff members effectively coordinate with delivery personnel, track delivery progress, and manage order statuses.

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