

**Online Bakery Ordering System  
Software Requirements Specification  
For Web and Mobile Application**

**Version <1.0>**

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## Revision History

Date	Version	Description	Author
03/26/24	1.0	Create Software Requirements Specification (Phase I Report)	Diego Betances, Lina Prroj, Prachee Sarkar, Urmi Devi

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# Software Requirements Specification

## 1. Introduction

The introduction sets the stage for the entire Software Requirements Specification (SRS), providing a comprehensive overview of the document's contents and objectives. This section outlines the purpose, scope, definitions, acronyms, abbreviations, references, and an overview of the SRS structure.

### 1.1 Purpose

The purpose of this Software is to develop a system where diner orders are computerized. We aim to not only develop the ordering system by itself but also alongside the delivery system for the diner. With this system the diner will be able to display a menu to customers so that they can order from the digital menu, and where the orders can be stored for a delivery person to view, and deliver the specified order by the customer. The system will be built using Python as the programming language as it is easy to use and understand in comparison to other languages, leading to an easier time making changes. In this system there are 3 groups, the store, customers, and surfers, who each have their own constraints. The store will consist of chefs, importers, delivery drivers, and the manager. The next group are the customers, who have to be registered. The customers can browse, rate, and purchase from the store. Customers as well can start discussions about the store and its employees on the system. There is also a subsection of VIP customers, who gain extra perks. Lastly the surfers, or unregistered customers, can only browse the menu and ratings. The Software will require a GUI to display the menu to customers and surfers. The GUI will display differently depending on the status of the user. Ratings and complaints will factor into workers' salaries and positions. So, the complaints must be kept track of. Customers will have 3 choices to choose from when ordering food. They can eat at the store, take-out, or have it delivered. In addition, customer behavior will need to be tracked as well as they can receive warnings that affect their status. People wrongly accusing others will be given a warning as well. Lastly, our version of this system will include an outside role of the Health Inspector who will be able to fire any position, including the manager, with one warning and provide a grade that determines if a store can continue operating or must be shut down.

### 1.2 Scope

The Diner Software will allow customers to order easily on a digital menu, and keep track of customers and their status, while also allowing people to rate the dishes and complain about employees. It will also keep track of these complaints in order for demotions, promotions, and firings to take place. It will not automatically fire people, or demote them, that is up to the management to review complaints and take the appropriate action. All of its features will not be available to everyone, you must be a registered customer with the store in order to access most of the features. Surfers will be limited until they become registered customers.

This software will benefit the store in various ways. First, the promotion and demotion system will lead to workers trying harder as their jobs lie in the hands of the customers, with 2 warnings you will decrease your salary, so it pushes workers to maintain good quality or strive to be better. In addition, the system cannot be abused by customers because they can also receive warnings. Customers who wrongly accuse workers will be punished and given a warning, where 2 warnings will lead to deregistration. Lastly, the VIP system will prove to be more lucrative for the store considering it gives access to special features. The special dishes will encourage adventurous customers to spend more, and the 10% discount will make customers return more frequently.

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The system requires at least 2 chefs, 2 delivery drivers, 2 importers, and a manager in order to be effective. Not meeting these requirements will lead to a failure in the system.

### 1.3 Definitions, Acronyms, and Abbreviations

**Chefs:** Cooks who work for the store that decide the menus. Can be demoted if they have received 2 confirmed complaints, but can also be promoted if they have received 2 complements. In the case that the chef has been demoted twice, they will be fired

**Delivery Driver:** Person who works for the store as a delivery driver. Can receive compliments and complaints from customers. Similar punishments and rewards as the chef position

**Food Importers:** Person who works for the store as a food importer, providing food to the store. Can also receive complaints from the chef, leading to demotion or a firing.

**Manager:** Person in charge of the store. They are to deal with complaints, challenges to complaints, the other workers in the store, and registered customers.

**Customers:** People who are registered as a customer with the store. Can complain about chefs, delivery workers, other customers, and a specific food. They can also rate food on the menu. In addition, they can receive warnings, 2 warnings lead to being removed as a customer.

**VIP Customers:** People who are also registered customers with the store, but at a higher level. Gain access to a 10% discount for regular items, and also special dishes are displayed on their menus. Their compliments and complaints count twice as much as a regular customer.

**Registered Customers:** People who have registered for an account with the system and can login using their unique username and password

**Surfers:** People who are unregistered with the store. They can browse the menus that registered customers see, and also view the ratings, but may not make a purchase until they become a registered customer.

**Promotion:** Raise in salary.

**Demotion:** Decrease in salary.

**Health Inspector:** Not associated with the store, can fire any worker at the store with just one warning. The inspector will also apply a grade, A-D, to the store that will affect the store's status depending on the grade.

### 1.4 References

1. **Python Documentation**, March 26 2024, Python Software Foundation, [The Python Language Reference](#)
2. **GitHub Documentation**, March 26 2024, GitHub Inc., [GitHub Docs](#)
3. **MySQL Documentation**, March 26 2024, Oracle Corporation, [MySQL Documentation](#)

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## 1.5 Overview

**Introduction:** This section provides an overarching introduction to the SRS, encapsulating its purpose, scope, key definitions, and the rationale behind the development of the software. Building upon the information provided in Section 1.1, the purpose of the SRS is to delineate the requirements for developing a computerized diner ordering and delivery system. It outlines the key stakeholders, system functionalities, and design constraints essential for understanding the subsequent sections.

**Overall Description:** Here, the document delves into the general factors influencing the product and its requirements. It covers essential aspects such as the product's perspective, functions, user characteristics, constraints, assumptions, dependencies, and requirement subsets. Referencing Section 2, the overall description provides insights into the system's user groups (store, customers, and surfers) and their respective roles and interactions. It also acknowledges the assumptions and dependencies crucial for the system's feasibility and successful implementation.

**Specific Requirements:** This section constitutes the core of the SRS, containing detailed software requirements necessary for designers to develop the system and testers to verify its compliance. It is further divided into two subsections:

**Use-Case Reports:** These reports, as outlined in Section 3.1, capture specific requirements through use-case modeling. Drawing from the use-case model survey, detailed use cases for each subsystem (e.g., customers, chefs, delivery drivers) outline their interactions with the system and define functional requirements.

**Supplementary Requirements:** Here, additional requirements that are not covered by use cases are addressed. These requirements ensure comprehensive coverage of all aspects of the software, including non-functional requirements, design constraints, and any other factors necessary for a complete description of the software. Referencing Section 3.2, supplementary specifications provide further detail on specific requirements relevant to the subsystem or feature being described.

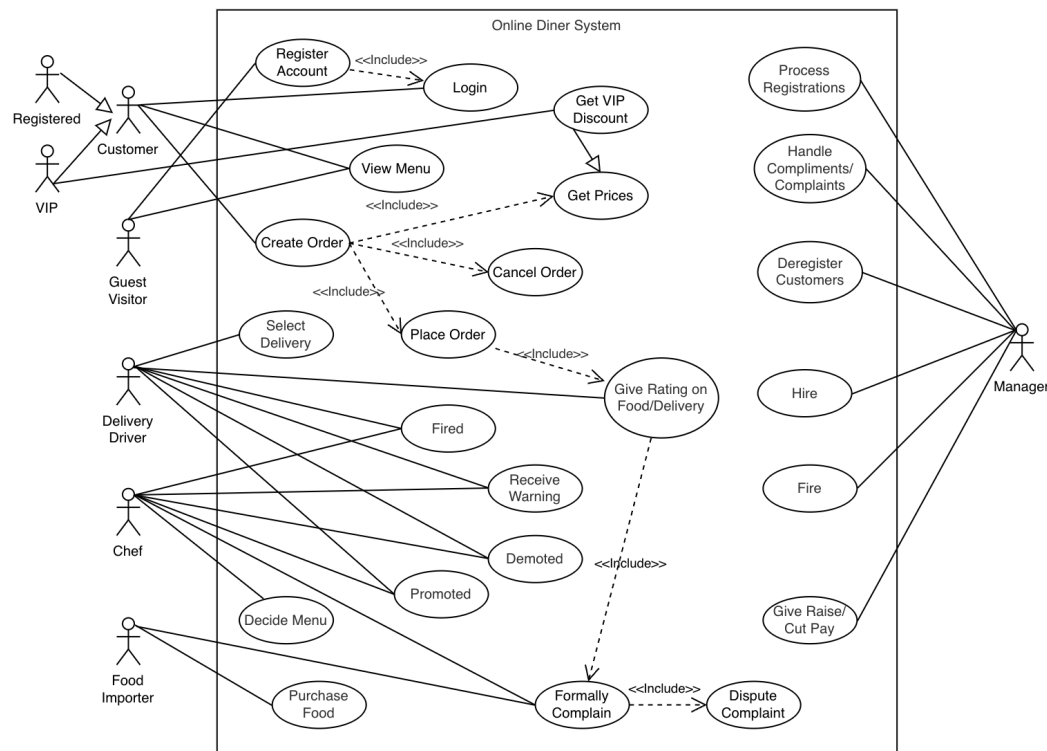
**Supporting Information:** This section includes supporting materials such as indexes and appendices, which aid in understanding and using the SRS. Appendices may contain use-case storyboards, user-interface prototypes, or other relevant documentation that provides additional context or clarification. This aligns with Section 4, acknowledging the importance of supporting information to enhance the usability and comprehensibility of the SRS.

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## 2. Overall Description

This section outlines the overview of the Use-Case Model for our diner ordering system. The model outlines the functionalities of the system and how users interact within the system. This section also provides assumptions and dependencies on which the viability of the diner ordering software is based

### 2.1 Use-Case Model Survey



The system contains 3 groups of users:

1. Store: chefs, delivery drivers, food importers, and the store manager
2. Customers: registered and VIP
3. Guest visitors/surfers

### 2.2 Assumptions and Dependencies

1. The ordering system will only use USD as its currency and will not accept any other currency
2. The operation of the ordering system depends on the hours of operation of the store; the delivery option ends 30 minutes before closing time.
3. The operation of the ordering system depends on changes to the menu made by the chef

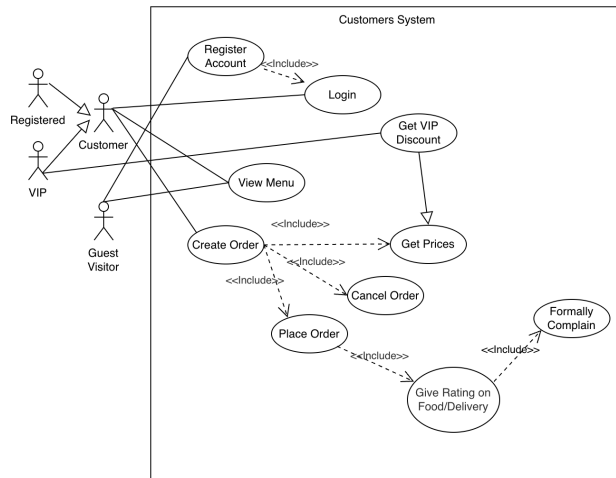
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### 3. Specific Requirements

This section details the different functionalities of the overall system and explains how each section or user interacts with the system.

#### 3.1 Use-Case Reports

##### 3.1.1 Customers System



Use-Case: Register Account

Description: Visitor can create an account to become a registered customer and order from the menu.

Use-Case: Login

Description: Customer is prompted to login using username and password.

Use-Case: View Menu

Description: Customer or visitor can view the menu to choose food to order.

Use-Case: Create Order

Description: Customer can choose food from the menu and add to cart.

Use-Case: Get Prices

Description: Presents prices for total order depending on customer status (registered or VIP)

Use-Case: Get VIP Discount

Description: VIP customers will receive a 10% discount on their order

Use-Case: Cancel Order

Description: Once order is created, customer can delete or remove the order

Use-Case: Place Order

Description: Once order is created, customer can confirm order for delivery

Use-Case: Give Rating on Food/Delivery

Description: Upon receiving the order, customer can rate the food and delivery from a scale of 1 to 5 stars

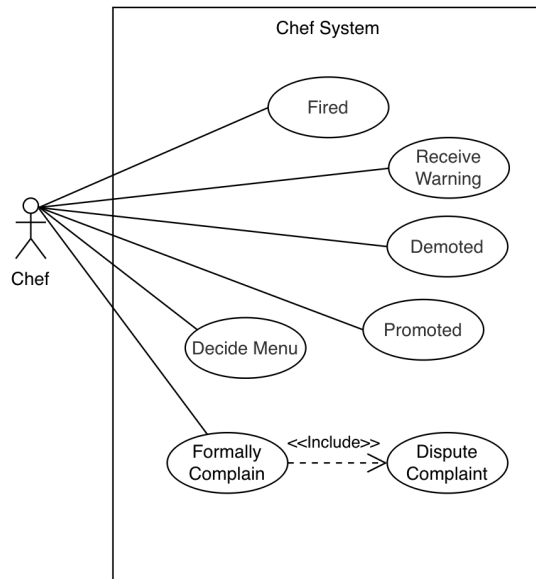


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Use-Case: Formally Complain

Description: Customer can issue complaint to the chef of the food they purchased and their delivery driver

### **3.1.2 Chefs System**



Use-Case: Decide Menu

Description: Chefs independently decide food items on the menu

Use-Case: Receive Warning

Description: Upon receiving a complaint from a customer, if the manager decides complaint is without merit, chef will receive one warning

Use-Case: Promoted

Description: If the chef's dishes receive high ratings from customers (2 compliments), the chef will receive a higher salary

Use-Case: Demoted

Description: If the chef's dishes receive consistently low ratings from customers (2 complaints), the chef will receive a lower salary

Use-Case: Fired

Description: If a chef is demotes twice, they will be fired

Use-Case: Formally Complain

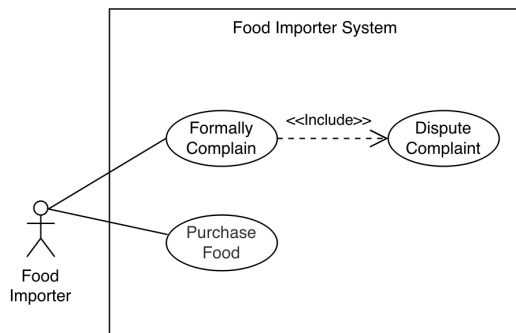
Description: Chef can issue a complaint to the food importer about food quality and fraud issues.

Use-Case: Dispute Complaint

Description: Chef can dispute any complaints from food importers. If the fraud complaint stands, the importer will be fired; if the quality complaint stands, the importer will be demoted. The chef will get a bonus. If the complaints are not true, the chef will be demoted.

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### 3.1.3 Food Importer System



**Use-Case:** Purchase Food

**Description:** Food importer handles food purchases from outside suppliers

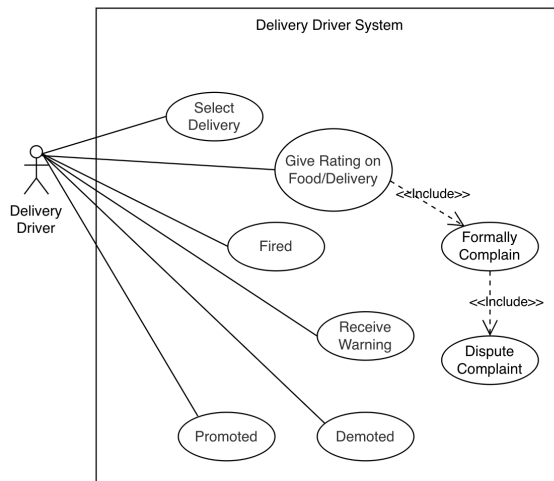
**Use-Case:** Formally Complain

**Description:** Food importer can issue a complaint to the chef about food quality and fraud issues.

**Use-Case:** Dispute Complaint

**Description:** Food importers can dispute any complaints from chefs. If the fraud complaint stands, the chef will be fired; if the quality complaint stands, the chef will be demoted. The importer will get a bonus. If the complaints are not true, the importer will be demoted.

### 3.1.4 Delivery Driver



**Use-Case:** Select Delivery

**Description:** Driver can choose which delivery order they want to be assigned to

**Use-Case:** Give Rating on Food/Delivery

**Description:** Upon delivering an order, the driver can rate the customer and give a complaint or compliment.

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Use-Case: Receive Warning

Description: Upon receiving a complaint about the delivery from a customer, if the manager decides the complaint is without merit, the driver will receive one warning.

Use-Case: Promoted

Description: If the driver's delivery receives high ratings from customers (2 compliments), the driver will receive a higher salary.

Use-Case: Demoted

Description: If the driver's delivery receives consistently low ratings from customers (2 complaints), the driver will receive a lower salary.

Use-Case: Fired

Description: If a driver is demoted twice, they will be fired.

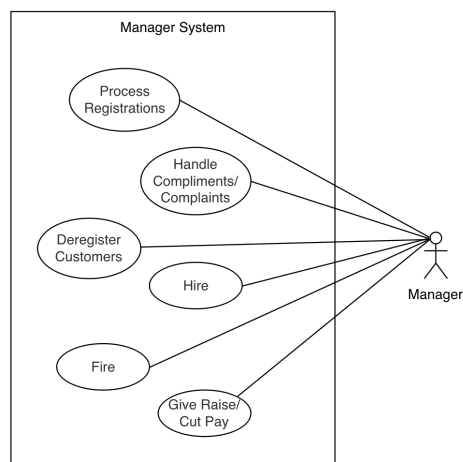
Use-Case: Formally Complain

Description: Driver can issue a complaint about the customer they delivered an order to.

Use-Case: Dispute Complaint

Description: Driver can dispute any complaint from the customer they delivered an order to.

### **3.1.5 Manager System**



Use-Case: Process Registrations

Description: Manager must approve/deny a visitor's registration for a new account

Use-Case: Handle Compliments/Complaints

Description: Manager receives customer feedback (complaints and compliments) and handles chef/driver accordingly. They can dismiss a complaint or convert it to a formal warning and inform the impacted party.

Use-Case: Deregister Customers

Description: Manager can deregister registered customers and demote VIPs to registered customer if the customer has two warnings

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Use-Case: Hire

Description: Manager can hire a new chef and/or delivery driver to work at the store

Use-Case: Fire

Description: Manager can fire a chef and/or delivery driver if they have been demoted twice

Use-Case: Give Raise/Cut Pay

Description: Manager can raise or lower salary of chef and/or delivery driver for every two complaints they receive

### 3.2 Supplementary Requirements

1. *System Security:* The system should implement strong encryption methods to ensure the security of user's personal information
2. *Order Tracking:* Customers and delivery drivers should be able to track the status of an order in real-time.
3. *Reporting & Analytics:* The system should provide reporting and analytics features for the manager to track sales, customer feedback, and the performance of chefs and delivery drivers.
4. *User Notifications:* The system should notify customers and delivery drivers via email or SMS about order confirmations, status updates, and other important notifications.
5. *Discussion Forum:* A discussion forum should be implemented where registered customers and others can start/participate in discussions about chefs, delivery drivers, and etc
6. *System Performance:* The system should be designed to handle a large number of users, orders, and transactions without performance degradation. It should be scalable to accommodate future growth in terms of user base and features.

## 4. Supporting Information

### Index:

1. Use-Case Index
  - A comprehensive list of all use-cases with references for quick navigation
2. Requirement Index
  - A detailed list of all functional and non-functional requirements with references for easy reference.
3. Glossary
  - Definitions of terms, acronyms, and abbreviations are used throughout the SRS to ensure clarity and understanding.

### Appendices:

1. Use-Case Storyboards
  - Visual representations or flow diagrams illustrating the user interaction
2. Prototypes
  - Design mock-ups or wireframes of the user interface to visually represent the system's look and feel.
3. Sample Reports
  - Examples of reports that will be generated by the system for the manager, such as sales reports, performance reports, etc.

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4. Use-Case Descriptions
  - Detailed descriptions and scenarios for each use-case to provide a deeper understanding of the system's functionality and interactions
5. Test Cases & Scenarios
  - Sample test cases and scenarios that will be used to validate and verify the system's functionality, performance, and security.