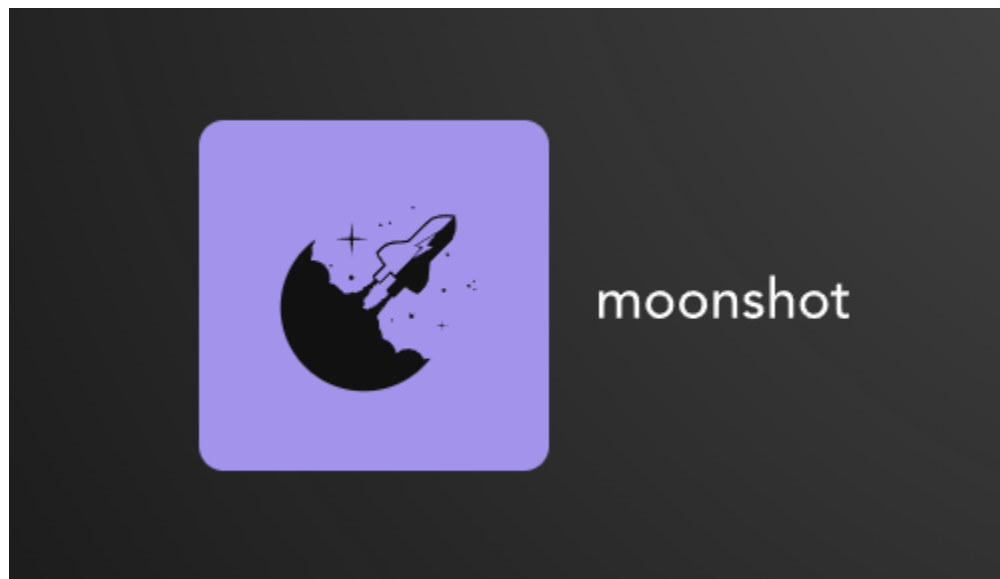


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**Food Connect, Inc.**

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**Project Moonshot**  
**Software Requirements Specification**  
**For Electronic Restaurant Order and Delivery System**



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Version 1.0

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## Revision History

Date	Version	Description	Author
3/26/2022	0.95	Worked on and completed use-case diagram and section 3 of the report (3.1, 3.2)	Minh Le
3/27/2022	0.96	Worked on and completed introduction, purpose, and scope (1, 1.1, 1.2)	Tea Nurcellari
3/27/2022	0.97	Worked on and completed the use-case model survey along with group mate and supporting information (2.1, 4).	Khanh Huang
3/27/2022	0.98	Worked on and completed use-case model survey and assumptions and dependencies (2.1, 2.2)	Vinuk Ranaweera
3/27/2022	0.99	Worked on and completed definitions, acronyms, abbreviations, references, and overview (1.3, 1.4, 1.5)	Yauheni Patapau
3/29/2022	1.0	Reviewed and completed all parts of the report	Entire group

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# Software Requirements Specification

## 1. Introduction

Prior to the digital age, you would need to call a restaurant on the phone to place a delivery order. Consumers would be greeted by restaurant staff over the phone, but they would not know if their order was placed correctly, if there were going to be any delays with their order, when it would arrive, etc. A web-page that would allow consumers to electronically order their meals would greatly eliminate these issues as well as many others. This is because consumers will be able to view the menu online, place their order, be alerted of any delays with their order, be informed of any changes to their order, be given an estimated time of arrival for their order (all via the web-page), etc. This online restaurant order and delivery system would greatly relieve stress from consumers as well as restaurants when it comes to dealing with deliveries.

This is why we have chosen to create a restaurant order and delivery system that will allow customers to order food online. To move forward with the design of our webpage we must include a Software Requirements Specification (SRS) which provides an outline of the design for the electronic restaurant order and delivery system our group is going to create. It is imperative to include this document in order to present all the information and expectation to prevent any misunderstanding between the software developers and customers. As you continue to read this document you will see we have included our purpose, scope, definitions, acronyms, abbreviations, and references for our restaurant order and delivery system project.

### 1.1 Purpose

The purpose of this document is to describe the external behavior of the application as well as its non-functional requirements, design constraints, and other factors required to provide a complete description of requirements for this particular software project.

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## 1.2 Scope

Project goals: Design a restaurant order and delivery system that allows:

- Registered customers to check their balance, add money, order food/cancel requests, write complaints/compliments, rate meals/purchase, withdraw money/close accounts.
- Delivery persons to write compliments/complaints, rate their experience with customers.
- Non registered visitors to open an account (register), view food menu, view or add ratings on purchases
- Managers to make adjustments to employee payroll, terminate employees, view ratings, bidding on orders, assign delivery orders, review store ratings, view delivery history.

Deadline: 05/24/2022

## 1.3 Definitions, Acronyms, and Abbreviations

### *1.3.1 Definitions*

*None*

### *1.3.2 Acronyms*

*SRS    Software Requirements Specification*

*GUI    Graphical User Interface*

*VIP    Very Important Person*

### *1.3.3 Abbreviations*

*e.g.    for example; for the sake of example; such as*

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## 1.4 References

Wei, Jie Wei. “Electronic Restaurant Order and Delivery System, Spring 2022.”

## 1.5 Overview

The remainder of the SRS document includes the following:

- An overall description of the general factors that affect the product and background for its requirements
- Use-Case Model that is applicable for electronic restaurant order and delivery system
- Project-related assumptions and dependencies, e.g., description of any key technical feasibilities, subsystems, or component availability
- All software specific requirements to a level of detail sufficient to enable designers to design a system to satisfy those requirements and testers to test that the system satisfies those requirements
- Description of Use-Case Model
- Supplementary Specifications capture requirements that are not included in the use cases
- The supporting information makes the SRS easier to use. It includes a table of contents, index, appendices.

## 2. Overall Description

The purpose of this section is to create a use case model that consists of all actors and use cases. The actors represent the type of users that can interact with the application and the use cases represent the actions the users can perform in the application. Brief descriptions of all use cases and actors are included along with applicable diagrams and relationships.

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## 2.1 Use-Case Model Survey

Actors:

- Chef
  - Independently decides the menus and makes the dish
- Delivery Person
  - Delivers food to customer if delivery is chosen during the transaction
- Manager
  - Hire/fire/raise/cut pay for chef(s) and delivery people
  - Processes customer registrations
  - Handles customer compliments/complaints
- Registered Customer
  - Order/vote on food and delivery standards
  - Can file complaints to chef
  - Can start/participate in discussions relating to chefs/dishes/delivery people
  - *VIP*:
    - Has all advantages of a registered customer
    - If no complaints, they receive special discount on their orders and a free delivery for every three orders they purchase
    - Have access to special dishes that cannot be purchased by regular customers
    - Compliments/complaints are twice as important
- Visitors
  - Can browse the menus and ratings only
  - Can apply to be a registered customer by purchasing items

Use cases:

- Browse/Search Items
  - All users can view the dishes on the menu along with their description and price
  - For registered customers/VIPs, they will have a unique top 3 listing dishes based on the history of their prior choices when they login
  - For visitors, the top 3 most popular dishes will appear on the page
  - VIPs are able to view special items not accessible to visitors or registered customers
- User Registration
  - Visitors can sign up to be a registered customer with a unique username/email, password, and phone number

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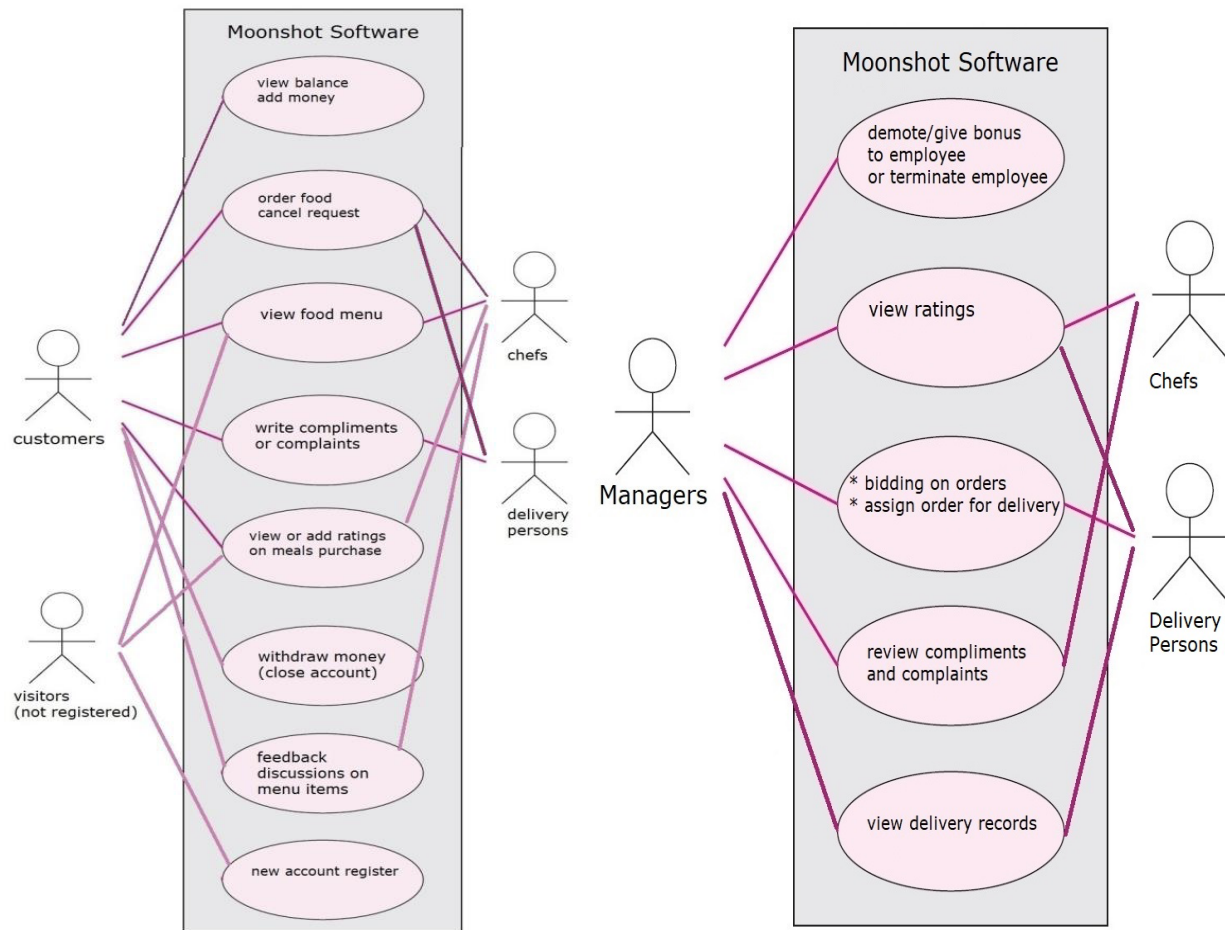
- Upon registration, user must deposit money into account (at least \$5)
- A registered customer becomes a VIP if he/she spends more than \$100 or buys 5 orders
- Registered customers/VIPs will login with their associated username/email and password
- Manage Accounts
  - The manager handles all system management pertaining to warnings and promotions/demotions
  - For every registered customer/VIP who is banned from the system or chooses to quit the system, the manager must clear the deposit and close the account
  - Any banned customer is on the blacklist of the restaurant (not visible to customers) and cannot register any more
- Item Registration
  - Chefs can register their dish/menu into the system along with applicable pictures and descriptions
- Purchase Items
  - Visitors will have to be registered customers in order to purchase items
  - Items can be chosen to be picked up at store or by restaurant delivery
  - For registered customers/VIPs, if the price of the order is greater than deposited money in the account, the order is rejected and the user will get one warning
  - If VIP has no complaints, they receive 5% discount on ordinary orders and 1 free delivery for every 3 orders
  - Complete transactions will be recorded, which will also determine
- Rating Users
  - Registered customers/VIPs can vote on food and delivery standards individually (1 star being the worst and 5 stars being the best) and start/participate in discussion forums
  - A chef whose dishes received consistently low ratings ( $< 2$ ) or delivery person with consistently low ratings ( $< 2$ ) will be demoted
  - A chef whose dishes received consistently high ratings ( $> 4$ ) or delivery person with consistently high ratings ( $> 4$ ) will be promoted
- File Complaints/Compliments
  - If choosing pickup, registered customers/VIPs can only compliment/complain about the food to the chef
  - Registered customers/VIPs can file compliments/complaints to chefs, delivery people, or other customers that do not behave in discussion forums
  - All complaints/compliments are to be handled by the manager
  - For chefs and delivery people, one compliment can be used to cancel one complaint
  - Chefs and delivery people with 3 complaints will be demoted



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- Accused chefs and delivery people can dispute their complaint and the manager ultimately decides whether to dismiss the complaint or let the warning stay
- Issue Warnings
  - Registered customers having 3 warnings are de-registered
  - VIPs having 2 warnings are demoted to registered customers (warnings are cleared)
  - Warnings display on the page when the registered customer/VIP logs in
  - A delivery person who didn't deliver any in the past 5 orders will automatically receive one warning
- Promotion/Demotion
  - Chefs and delivery people who get a promotion receive a bonus to their salary
  - Chefs and delivery people who receive a demotion get less salary
  - A chef or a delivery person with two demotions is fired
- Bidding
  - Each delivery people will bid to choose an order to deliver (the first person to win will choose whichever order to deliver and the last person delivers the remaining order)
  - The manager assigns the order from bidding results
  - Generally, the first person is expected to deliver the lowest priced order; however, if he/she chooses to deliver an order higher than the lowest priced, the manager must write a memo in the system

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## 2.2 Assumptions and Dependencies

The following assumptions and dependencies need to be made according to the SRS:

- The user has all the platforms and libraries required to open and access the application.
- Currency is in USD.
- Web application will be running on a local host.
- Registered customers' personal information will be protected and secured.
- Ratings apply to all users (registered customers, VIPs, chefs, delivery people) and affect their status whether they are promoted/demoted or de-registered from the system.

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### 3. Specific Requirements

The target audience of this software product are consumers ordering food online and restaurants selling food. Customers have two choices to obtain food: pickup or home delivery. Software product has several features to enhance ordering food experience.

One such feature is a rating system to identify bad actors using the software product. For example, bad customers will be banned, awful chefs will be demoted or fired, terrible delivery people with several complaints will be terminated from employment.

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### 3.1 Use-Case Reports

View Account Balance Available fund to purchase meal Options to add more money into account
Step-by-step description  Request money info from account database Request purchase history from account database

View Food Menu Menu items display
Step-by-step description  Display meals available from chef Item popularity ranking and ratings for items Calculate fund available for purchase (including items in shopping basket) When fund is not sufficient, display warning message

Order food / cancel request List items for purchase and display account balance Options to edit quantity or return to shopping mode
Step-by-step description  Choose pickup or home delivery option Confirm purchase Calculate purchase total and subtract it from current balance Update new balance If new balance is negative, cancel order immediately Send warning message to customer  If order is successful, display option to cancel within one minute time frame.  In case of inventory shortage, chef will cancel order.  Delivery persons will bid on existing orders for delivery to customers.

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Write Compliments/Complaints
<p>Step-by-step description</p> <p>Customers/delivery persons can add feedback on recent purchase on food delivery experience</p>

<p>Ratings On Recent Food Purchase</p> <p>Time limit of one week on recent purchase</p>
<p>Step-by-step description</p> <p>Customer can add/edit/view ratings (not feedback) on recent food purchase in the past week.</p> <p>Ratings range 1 star (awful) ... 5 stars (excellent)</p> <p>Chefs or Managers can view ratings.</p>

Withdraw Funds
<p>Step-by-step description</p> <p>Confirm mailing address for refund check Reducing balance to zero has option to close account immediately</p> <p>Account having zero balance for more than 60 days would be closed</p>

Feedback Discussions On Menu Items
<p>Step-by-step description</p> <p>Customers have option to write feedback on menu items after purchasing</p> <p>Time limit on this action is 1 week from purchase</p>

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#### New Account Register

##### Step-by-step description

Lookup phone # and email address on blocking list before proceeding  
 Send text message to phone # with verification code  
 Required customer add money (minimum \$5)

#### Promote/Demote Employees

##### Step-by-step description

Compute rating value for individual chef to determine bonus  
 If rating is below threshold, Manager can demote or terminate chef employment

Compute rating value for individual delivery person  
 If rating is below threshold, Manager can terminate delivery persons

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View Ratings
<p>Step-by-step description</p> <p>Tally ratings input from customers</p> <p>Chefs with ratings below 2 will be demoted</p> <p>Chefs with 3 complaints will have salary reduction (demoted)</p> <p>Chefs with ratings above 4 will have bonus</p> <p>Chefs with 3 compliments will have bonus</p> <p>Delivery persons with ratings below 2 will have salary reduction (demoted status)</p> <p>Drivers with 3 complaints will be demoted</p> <p>Drivers with ratings above 4 will have bonus</p> <p>Drivers with 3 compliments will have bonus</p> <p>Demote twice will result in employment termination</p> <p>Managers, chefs, and delivery persons can view this info, but editing is not allowed</p>

Bidding On Orders
<p>Step-by-step description</p> <p>Sort bidding price from delivery persons</p> <p>Sort value from low to high</p> <p>Managers assign low price to orders, but can override system with notes to justify action</p> <p>Sort delivery job from drivers. Persons with zero assignment from recent 5 orders will receive warning.</p>

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#### Review Compliments and Complaints

##### Step-by-step description

Manager review and decide on outcome of delivery job from customers. Driver can dispute complaint. If complaint has no merit, then issue warning to customer.

Manager review and decide on outcome of complaints about customers from delivery persons. Customers can dispute complaint. If complaint has no merit, then issue warning to driver.

#### View Delivery Records

##### Step-by-step description

Both managers and delivery persons can view delivery records

If delivery persons does not have job assignment from recent 5 orders will receive warnings



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## 3.2 Supplementary Requirements

Non-functional requirements:

- Menu items are up to date. Items not available because of food supply shortage should have different font color to indicate unavailability.
- Multiple screen displays should have consistent interface layout to enhance usability.
- Menu has less text and to use large font size for ease-of-reading.
- Menu items should have several images for good appetizing visuals to promote more sales.
- Food cart should indicate quantity on the same screen display.
- One click on repeat orders for favorite purchases.
- Database query should generate results expediently to have positive food ordering experience.
- Slow software performance could lead to a negative customer experience resulting in less orders in the future. Hungry customers could quickly become unhappy.

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## 4. Supporting Information

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## Appendix A: Glossary

**Software Requirements Specification (SRS)** The software requirements document specification is a written statement of what the software will interact when embedded in hardware or when connected with other software.

**Very Important Person (VIP)** A person of great influence, importance or with special privileges.

**Use cases** A task analysis technique often used in software engineering. For each module of a system, common tasks are written up with the prerequisites for each task, the steps to take for the user and the system, and the changes that will be true after the task is completed. Use cases are especially useful for making sure that common tasks are supported by the system, that they are relatively straightforward, and that the system architecture reflects the task structure.

**User class** A group of users for a system who have similar characteristics and requirements for the system

**User interface** A user interface is what you have to learn to operate a machine. For example, the graphical user interfaces (GUIs) -- windows, icons, and pop-up menus have become standard on personal computers.

**Graphical User Interfaces (GUIs)** Form of user interface that allows users to interact with electronics. A graphics-based system that uses icons, menus, pointer(mouse) to manage interaction with the system.