
Software Requirements Specification

for

Farm Fresh

Version 1.0

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1. Introduction

1.1 Purpose

This SRS describes the functional and nonfunctional requirements for release 1.0 of the application Farm Fresh. This document is intended to be used by the members of the project team that will implement and verify the correct functioning of the system. It will also act as a reference for the other stakeholders of the system namely the sellers, customers, investors and others. Unless otherwise noted, all requirements specified here are high priority and committed for release 1.0.

1.2 Document Conventions

Font used is Times New Roman, Font Size is 12.

1.3 Intended Audience and Reading Suggestions

This report has been written in English and any reader having basic understanding of the language is qualified to be able to understand this report.

1.4 Product Scope

Farm Fresh will permit customers to order fruits, vegetables and groceries from the local vendors using an online platform and would allow deliveries to specified address locations. A detailed project description is available in the Scope Document. The section in that document titled “Scope of Initial and Subsequent Releases” lists the features that are scheduled for full or partial implementation in this release.

2. Overall Description

2.1 Product Perspective

The Online Vegetable Ordering System is an upgrade of the regular ordering system. It connects customers with local grocery shops and vegetable vendors, thus effectively cutting out middlemen and keeping the cost to a minimum and affordable rate at the same time giving back the market to those local vendors who had previously lost their markets to centralized grocery systems. Existing online vegetable ordering sites often have higher prices than the local vendor in our neighbourhood. This system delivers vegetables to the customers directly from these vendors instead of setting up our own supply and making the process costlier.

2.2 Product Functions

- The customer will login/sign up as applicable
- The customer will choose the vegetables he wants and add them to cart
- Then he will place the order along with the desired payment method
- A delivery executive will be assigned
- The vegetables will be picked up from a local grocery shop/vendor and delivered to the customer at a convenient time of the customer's choosing.

2.3 User Classes and Characteristics

Customer

The main user of the vegetable ordering system. The customer creates an account and logs in. he or she selects whatever vegetable they wish to buy. After adding to cart the customer proceeds to checkout where they select a payment method and suitable time slot for delivery and make the final payment. The customer receives confirmation and then updates regarding their order and its delivery from the system.

Delivery executive

The delivery executive receives the order details from the system. He picks up the order from the local vendor and delivers it to the customer within the time slot requested by the customer. The executive confirms the order delivery after delivering.

Vendors and Grocery stores

The vendors and grocery stores that have partnered with Farm Fresh receive the order details and prepare the order. They confirm the order once more with the delivery executive and then hand it over for delivery.

Inventory system

A system is created to keep inventory of the vegetables available with each vendor. It gets updated with the cost and amount of the vegetables available regularly. The vendors can update it with their current stock giving the customers a precise account of all available vegetables.

2.4 Operating Environment

Operating system	Android 5.0 or higher(API level 21 or higher)
Database	MS SQL 4+
Language	PHP 5+
Web Server	Linux server

2.5 Design and Implementation Constraints

Developers will have to compile a list of vendors in each area.

The vegetables being sold have to be checked and must clear the FDAI regulations and standards.

The vendors available to sell to the customer depend on the area of residence of the customer.

Coupons and discount codes can be applied only in case of online payment options and not on cash on delivery.

The system has to be updated regularly by the developers.

2.6 User Documentation

First time users will be assisted through each step by an online assistant. For further queries and complaints the customer can reach out to the Customer Support section.

3. External Interface Requirements

3.1 User Interfaces

- UI-1: The System screen displays shall conform to the Process Impact Internet Application User Interface Standard, Version 2.0 [4].
- UI-2: The system shall provide a help link from each displayed HTML page to explain how to use that page.
- UI-3: The Web pages shall permit complete navigation and item selection using the keyboard alone, in addition to using mouse and keyboard combinations.

3.2 Hardware Interfaces

No hardware interfaces have been identified.

3.3 Software Interfaces

- SI-1: Inventory System
 - SI-1.1: The Farm Fresh System shall transmit the quantities of items ordered to the Inventory System through a programmatic interface.
 - SI-1.2: The Farm Fresh System shall poll the Inventory System to determine whether a requested item is available.
 - SI-1.3: When the Inventory System notifies the Farm Fresh System that a specific item is no longer available, the Farm Fresh System shall remove that item from the menu for the current date.
- SI-2: Operating System: Windows (7 or above)/Android 5.0 or higher.
- SI-3: Web Browser: IE 10 or above, Mozilla FF 31 and above or Google Chrome
- SI-4: Drivers: Java Run-time Environment

3.4 Communication Interfaces

- CI-1: The System shall send a message to the Customer to confirm acceptance of an order, price, and delivery instructions.
- CI-2: The System shall send a message to the Customer to report any problems with the order or delivery after the order is accepted.

4. System Features

4.1 Ordering Item

Use case name : Ordering System

Actors : Customer, Ordering System

Description : A Customer accesses the Farm Fresh Ordering System from the corporate intranet or from home, optionally views the list of fruits and vegetables available for a specific date, selects items, and places an order to be delivered to a specified location within a specified 30 minute time window.

Preconditions :

1. Customer is logged into the System.
2. Customer is registered for item payments.

Post conditions :

1. Order is stored in the System with a status of “accepted”.
2. Inventory of available items is updated to reflect items in this order.
3. Remaining delivery capacity for the requested time window is updated to reflect this delivery request.

System flow :

1. Customer asks to view items for a specified date.
2. System displays of available items.
3. Customer selects one or more items.
4. Customer indicates that order is complete.
5. System displays ordered items, individual prices, and total price, including any taxes and delivery charge.
6. Customer confirms order or requests to modify order (back to step 3).
7. System displays available delivery times for the delivery date.
8. Customer selects a delivery time and specifies the delivery location.
9. Customer specifies payment method.
10. System confirms acceptance of the order.
11. System sends Customer message confirming order details, price, and delivery instructions.
12. System stores order in database, sends message to notify the seller, sends item information to Inventory System, and updates available delivery times.

Requirements :

1. Customer shall be able to cancel the order at any time prior to confirming the order.
2. Customer shall be able to view all items he ordered within the previous six months and repeat one of those orders as the new order, provided that all items are available on the menu for the requested delivery date. (Priority = medium)

4.2 Payment System

Use case name : Payment System

Actors : Customer, Payment System

Description : The customers who use the Farm Fresh System and have items delivered must be registered for payment options. For cashless purchases made through the system, the Farm Fresh System will provide the customers with different payment options for the purchase made.

Preconditions : Customer is logged into the Farm Fresh System.

Post Condition: Payment is successfully done.

System Flow :

1. Customer requests to register for Payment System.
2. System invokes Authenticate User's Identity use case.
3. System verifies customer's mobile number.
4. System provides customer with different payment options.
5. Customer enters his payment details into the payment system.
6. For further verification, the system will provide the customer with One Time Password.
7. The system will ask the customer to pay the specified amount.
8. The system will provide customer with payment confirmation page.

Requirements:

1. The customer should be able to go for another payment option if the current option fails to work.
2. User authentication is performed as per corporate standards for medium-security applications.

4.3 Login System

Use case name : Login System

Actors : Customer, Seller, Administrator

Description : Used to gain access to any part of the system. Buyer uses it to access menu and order products. Seller needs to be logged in to receive and process orders.

Preconditions : User must be registered to the Farm Fresh database.

Post Condition: User is logged in to the system.

System Flow :

i. For Unregistered Users:

1. User enters Email Id or Mobile Number.
2. User enters new password.
3. User confirms password.
4. User authenticates by entering the OTP sent on the mobile number/email.
5. User is successfully registered.

ii. For Registered Users:

1. User enters registered Email Id or Mobile Number.
2. User enters password.
3. User is logged in to the system

Requirements:

- 1) Alternative method for login if user forgets password
- 2) Two factor authentication if the customer needs.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

- PE-1: The system shall accommodate 40000 users during the peak usage time window of (8:00 to 10:00)am and (5:00 to 7:00) pm local time, with an estimated average session duration of 15 minutes.
- PE-2: All In-App Pages and Receipts generated by the system shall be fully download-able in no more than 10 seconds over a 40 KB/s modem connection.
- PE-3: Responses to queries shall take no longer than 5 seconds to load onto the screen after the user submits the query.
- PE-4: The system shall display confirmation messages to users within 5 seconds after the user submits information to the system.

5.2 Safety Requirements

No safety requirements have been identified.

5.3 Security Requirements

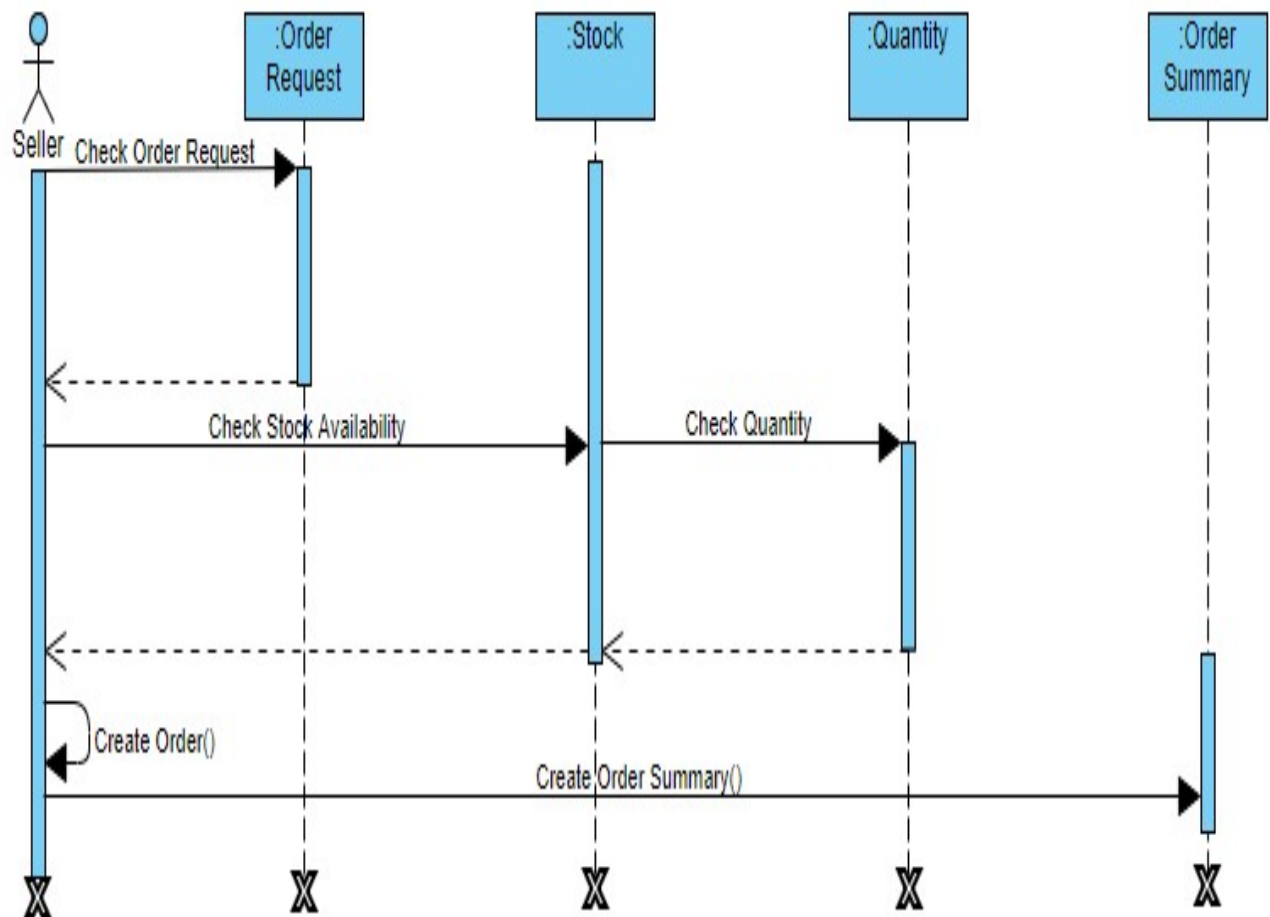
- SE-1: All network transactions that involve financial information or personally identifiable information shall be encrypted under 128 bit AES encryption.
- SE-2: Users shall be required to log in to the Farm Fresh application for all operations except viewing a items.
- SE-3: Patrons shall log in according to the restricted computer system access.
- SE-4: The system shall permit only Farm Fresh vendors who are on the list of authorized Menu Managers to create or edit menus.
- SE-5: The system shall permit Patrons to view only their own previously placed orders, not orders placed by other Patrons.

5.4 Software Quality Attributes

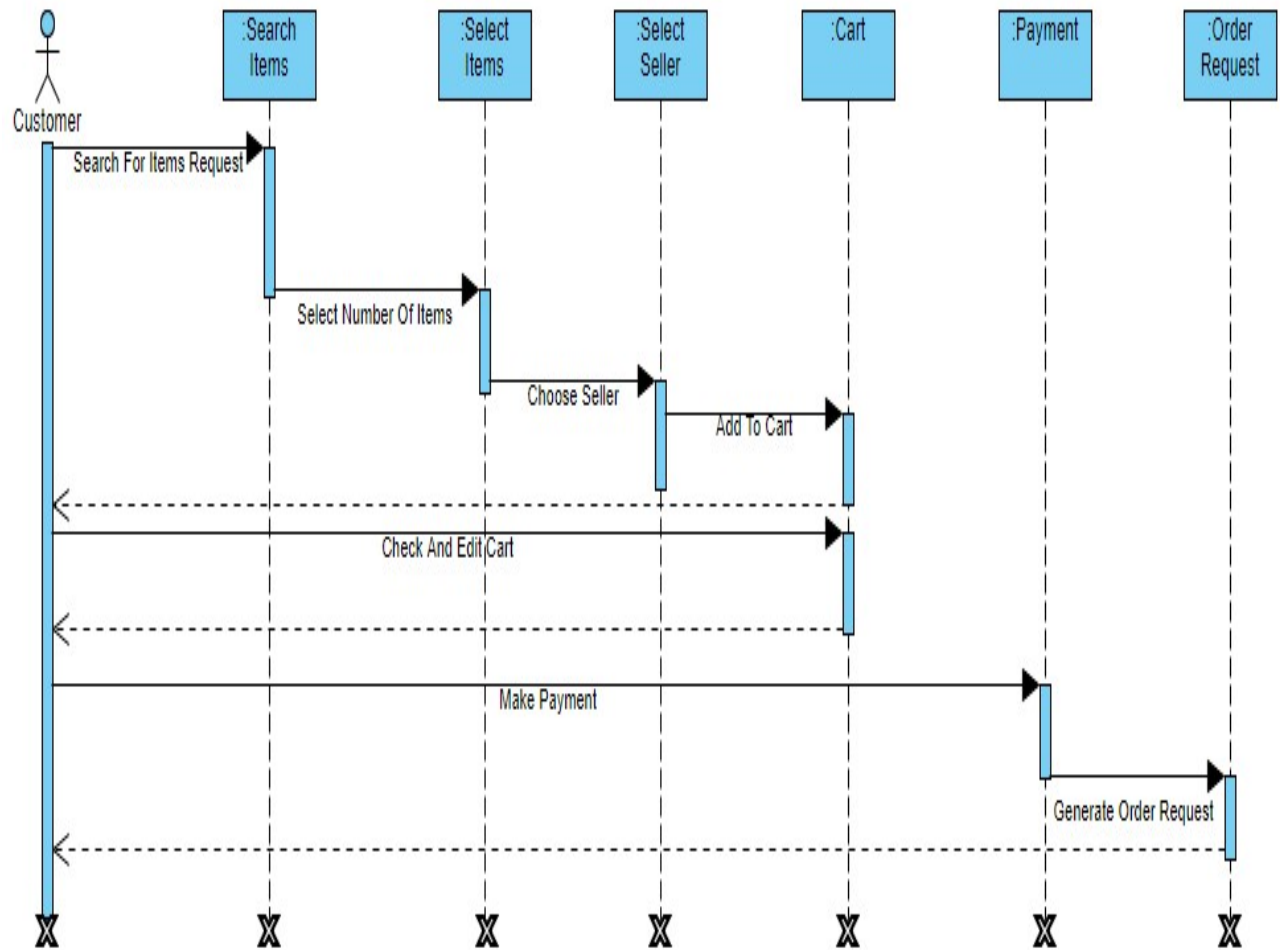
- Availability-1: The Farm Fresh shall be available to users on the corporate Intranet and to dial-in users 99.9% of the time between 5:00am and midnight local time and 95% of the time between midnight and 5:00am local time.
- Robustness-1: If the connection between the user and the system is broken prior to an order being either confirmed or canceled, the Farm Fresh shall enable the user to recover an incomplete order.

Appendix A: Analysis Models

Sequence Diagrams:

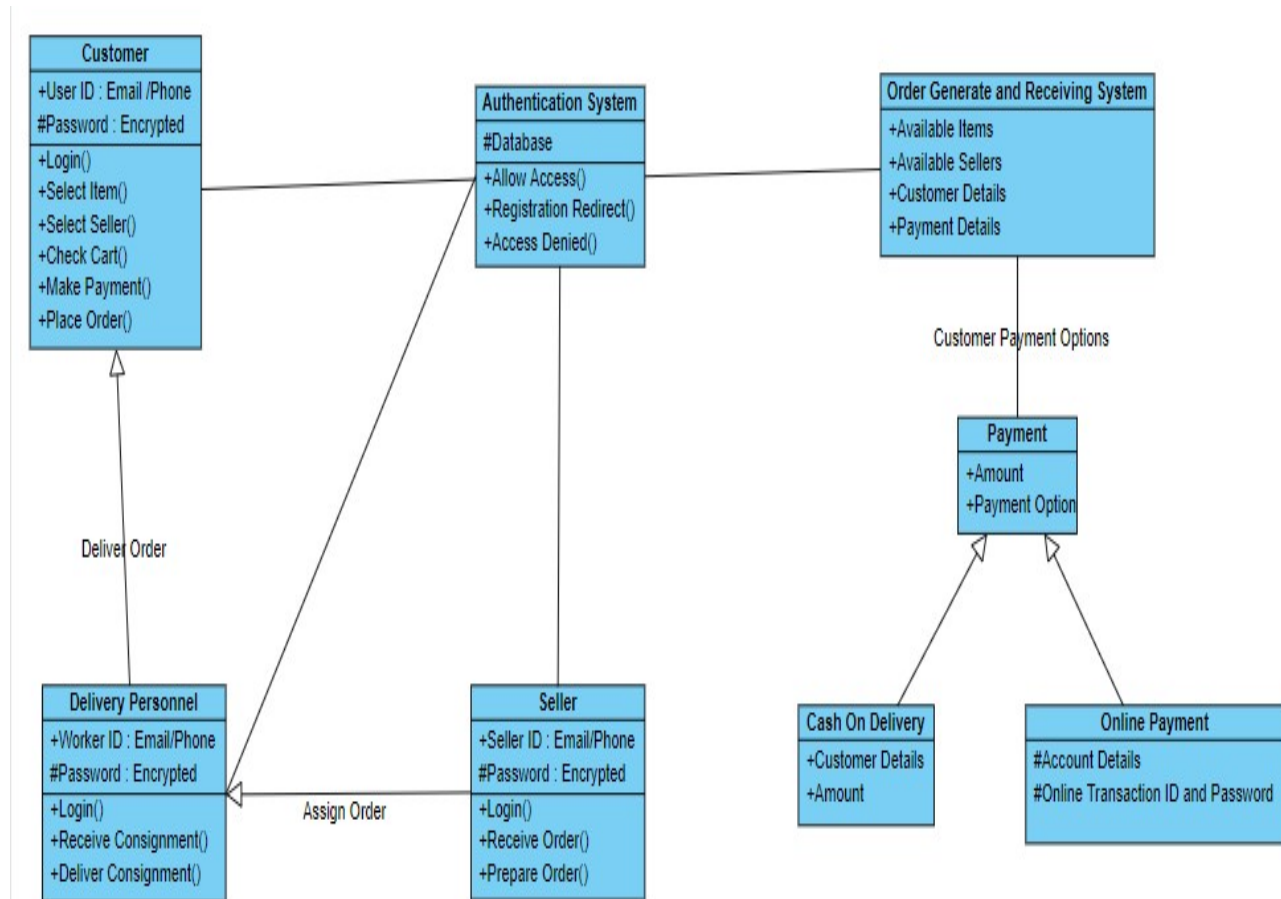


Sequence Diagram For Order Request And Summary Generation



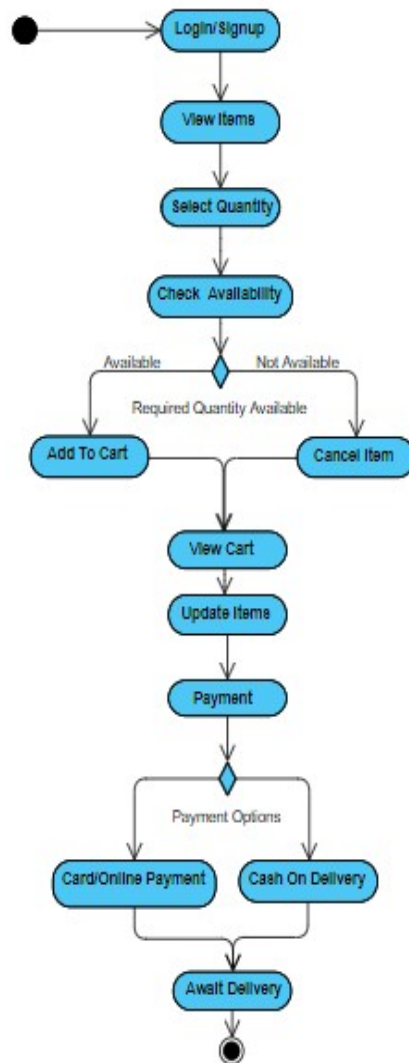
Sequence Diagram For Searching Items and Making Order Request

Class Diagram:

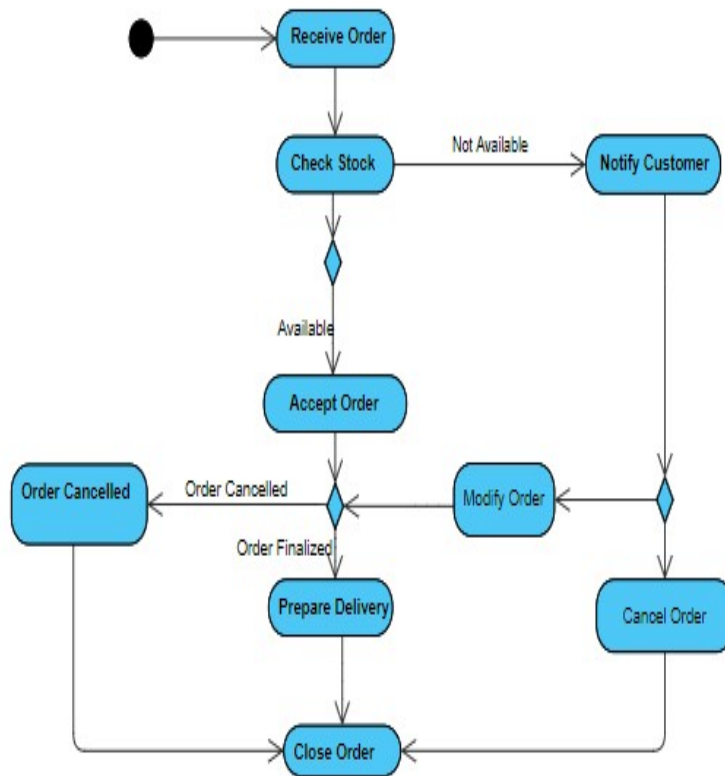


Class Diagram For System

Activity Diagrams:

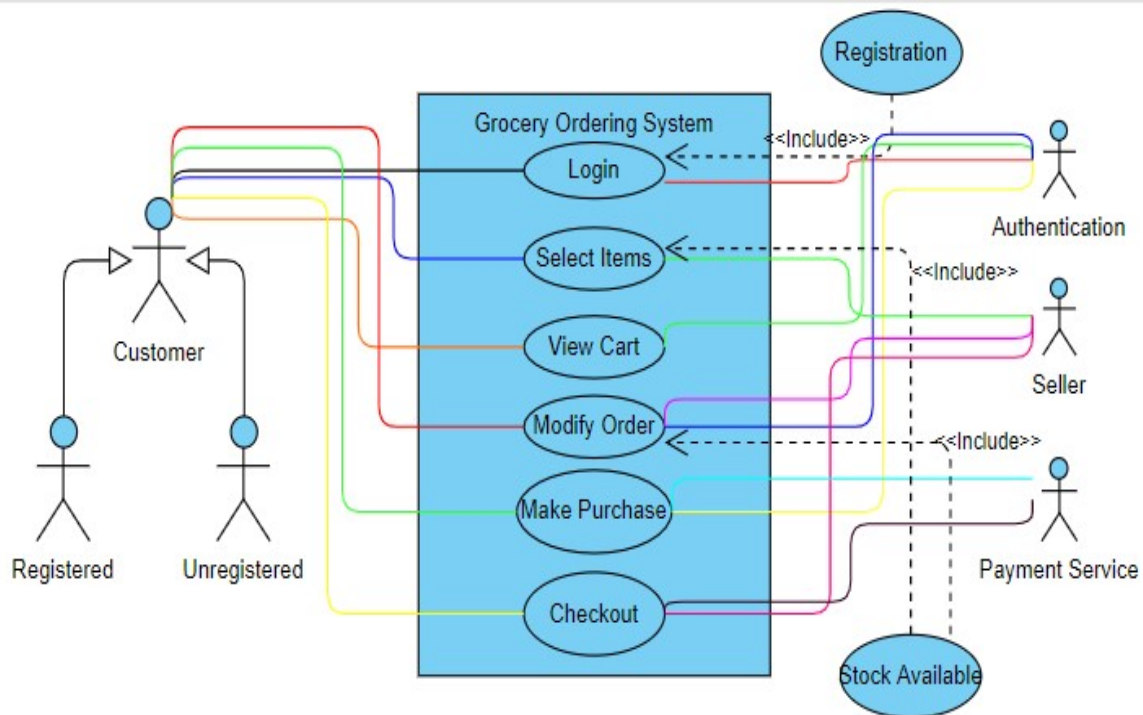


Activity Diagram For User Ordering Module



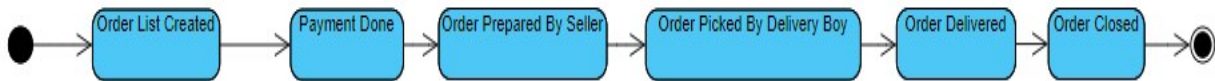
Activity Diagram For Accepting Orders By Sellers

Use Case Diagram:



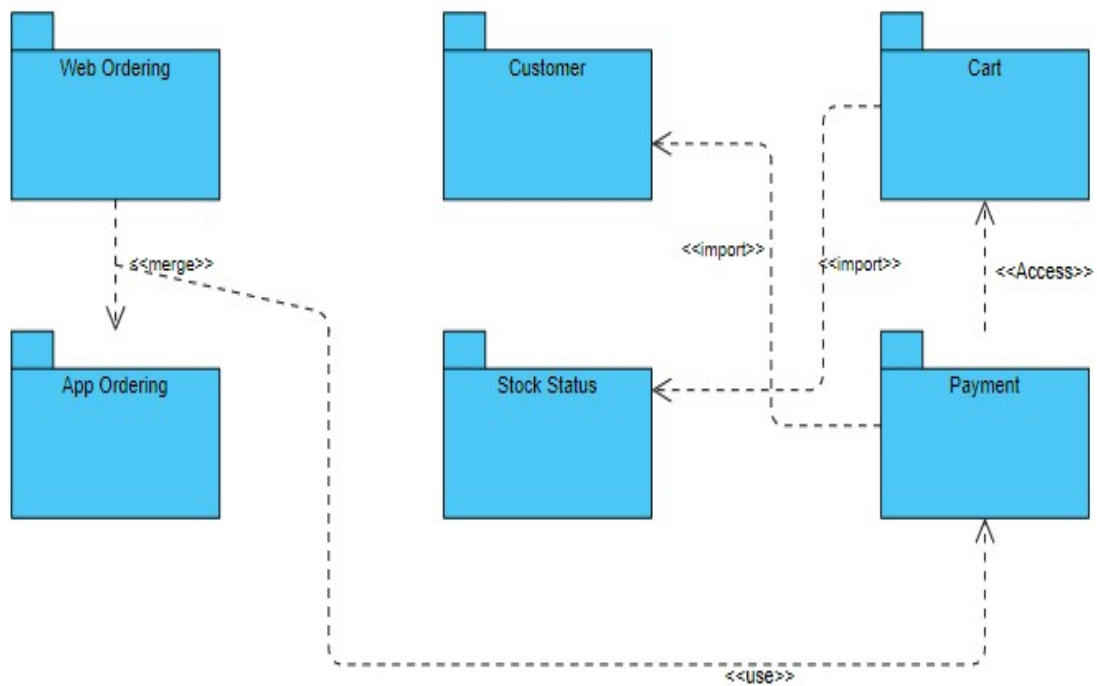
Use Case Diagram For Ordering System

State Machine Diagram:



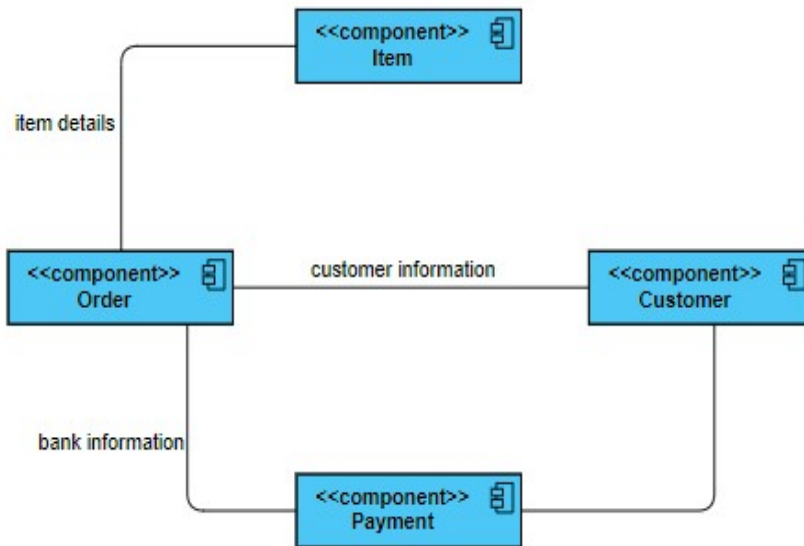
State Machine Diagram For Grocery Ordering System

Package Diagram:



Package Diagram For Grocery Ordering System

Component Diagram:



Component Diagram For Farm Fresh