TABLE OF CONTENTS

The Project Definition:

The Food Ordering System is a comprehensive platform that aims to revolutionize the way customers order food for delivery or pickup. With an interactive and up-to-date menu, dynamic pricing based on selected options, and real-time updates for restaurants, the system provides a seamless and efficient experience for all parties involved.

One of the key business processes of the Food Ordering System is the order placement process. Customers can easily browse the menu, select items, and place their orders through the system's web interface. The system calculates the total cost of the order based on the selected items and any applicable discounts or promotions, and allows the customer to enter their payment information and place the order. Once the order is placed, the system sends a notification to the restaurant to begin preparing the food. The restaurant can view the order details, including the items and any special instructions, in real-time through the system. This allows the restaurant to efficiently prepare and fulfill the order.

In addition to the order placement process, the Food Ordering System includes a number of other key business processes that are designed to streamline the food ordering process and improve the customer experience. For example, the system allows restaurants to manage their inventory and track their sales data, which is important for managing costs and ensuring that the restaurant has the necessary ingredients on hand to fulfill orders.

The system also includes a range of features to enhance the customer experience. For example, the system can send notifications to customers about the status of their order, such as when the food is being prepared or when it is ready for pickup or delivery. This helps to keep customers informed and reduce wait times. The system also includes a ratings and reviews feature, which allows customers to provide feedback on their experience with the restaurant and the food they ordered. This helps restaurants to improve their service and better meet the needs of their customers.

In terms of data management, the Food Ordering System stores a range of data related to orders, customers, and restaurants. This includes information such as customer contact details, order history, and payment information. The system also stores data about the menu, including item details and pricing, as well as inventory and sales data for the restaurant. This data is used to power the various features of the system, such as the interactive menu and real-time updates for restaurants.

Customers: This table stores information about the customers who use the Food Ordering System, including their contact details and order history.

Restaurants: This table stores information about the restaurants that are registered with the system, including their location and contact details. The menu for each restaurant is stored in a separate table and linked to the restaurant via a foreign key.

Menu: This table stores information about the items that are available on the menus of the registered restaurants, including their names, descriptions, and prices.

Orders: This table stores information about the orders that have been placed through the system, including the customer and restaurant involved, the date the order was placed, the total cost of the order, and the payment method used.

Order Details: This table stores the details of each order, including the items that were ordered and the quantities of each item. It is linked to the Orders table via a foreign key.

Ratings and Reviews: This table stores customer ratings and reviews of the restaurants and their food. This information can be used by the restaurants to improve their service and better meet the needs of their customers.

Customers:

- customer_id (primary key)
- customer_fname
- customer_lname
- customer_email
- customer_phones
- customer_address

Restaurants:

- res_id(primary key)
- res_name
- res_address
- res_phone
- res_menu (foreign key to Menu table)

Menu:

- res_menu(primary key)
- res_id(foreign key to Restaurants table)
- item_name
- item_descr
- item_price

Orders:

- order_id (primary key)
- customer_id (foreign key to Customers table)
- res_id(foreign key to Restaurants table)
- orderdate
- total_order
- payment

Order Details:

- Order ID (primary key, foreign key to Orders table)
- Item ID (primary key, foreign key to Menu table)
- Quantity

Ratings and Reviews:

- review_id (primary key)
- customer_id (foreign key to Customers table)
- res_id (foreign key to Restaurants table)
- rating (on a scale of 1-5)
- review_text

The Food Ordering System involves a range of actors, both human and nonhuman. Customers are the primary human actors, interacting with the system through the app interface to browse the menu, place orders, and make payments. The restaurant staff are also human actors, interacting with the system through a separate interface to view and make the orders. The nonhuman actors in the system include the servers and databases that store and process the data for the system.

Overall, the Food Ordering System is a powerful and efficient platform that streamlines the process of ordering food for delivery or pickup. It provides a convenient and seamless experience for customers, while also helping restaurants manage their operations and grow their business.

Use-case Estimation:

Unadjusted Actor Weighting Table

Actor Type	Description	Weighting Factor	Number	Res
Simple	External System with well-defined API	1	1	1
Average	Another system through a protocal	2	2	4
Complex	A person through through a graphical user interface	3	3	9
Total				

Unadjusted Use-Case Weighting Table

Use Case Type	Description	Weighting Factor	Number	Resu
Simple	1-3 Transactions	5	2	10
Average	4-7 Transactions	10	3	30
Complex	>7 Transactions	15	3	45
Total				85

UUCP = UAW + UUCW → 85+14 = 99

Technical Complexity Factors

Factor Number	Description	Weight	Assigned Value	Weighted Value
T1	Distrubited System Required	2.0	0	0.0
T2	End user Efficiency	1.0	3	3.0
T3	Highly Concurrent	1.0	3	3.0
T4	Data Communication	1.0	2	2.0
T5	High Transaction Rates	1.5	3	4.5
T6	Security of Customer & Resteraunt	2.0	2	4.0
T7	Ease of update	0.5	2	1.0

T8	Reliable back-up and Recovery	2.0	3	6.0
T9	Ease of use	1.5	2	3.0
T10	Reusability of Code	1.0	1	1.0
T11	User Training Needs	0.5	0	0.0
Total	998			27.5

TCF = 0.6 + (0.01* TFactor) → 0.875

Environmental Factors

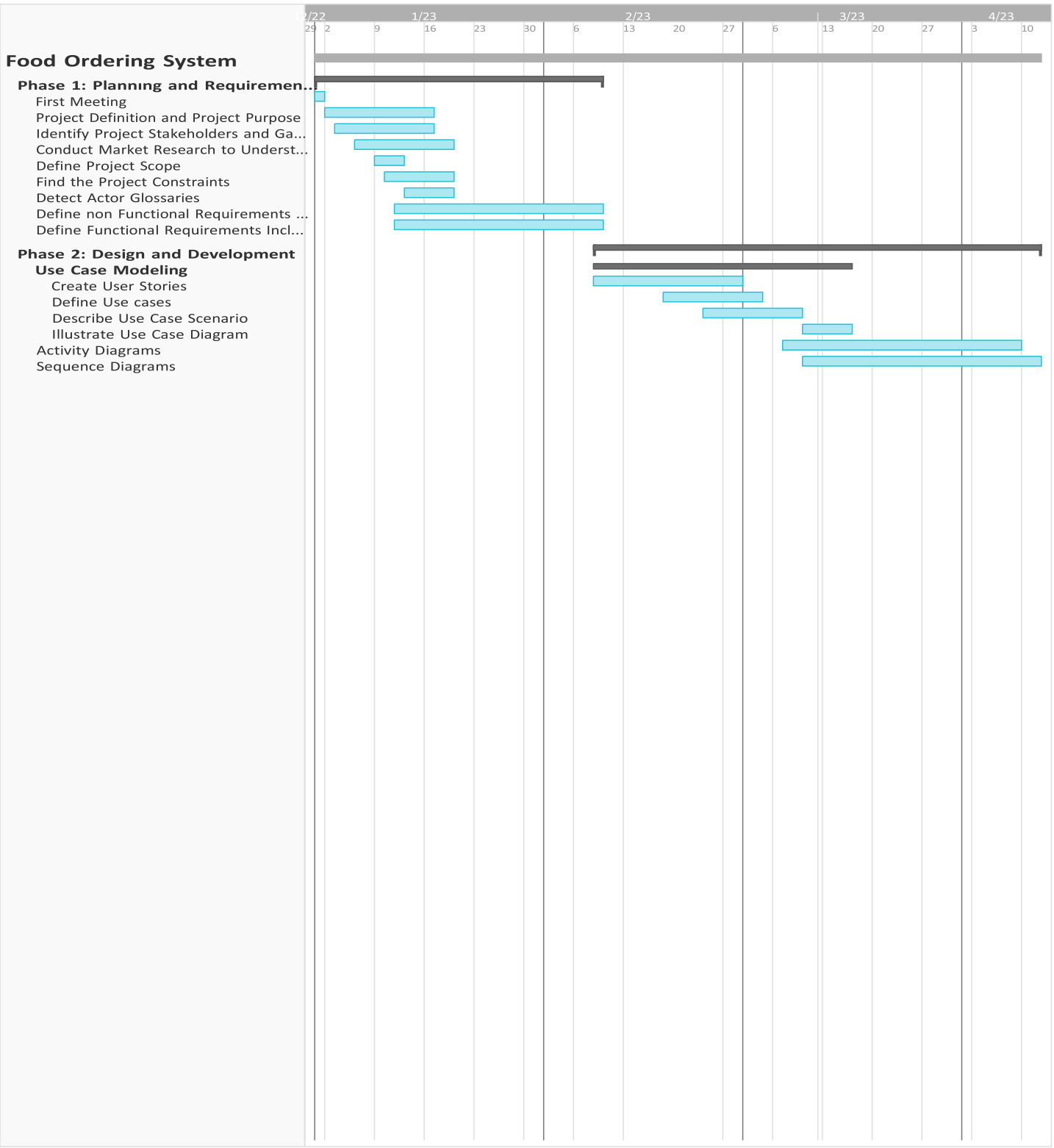
Factor Number	Description	Weight	Assigned Value	Weighted
E1	Familiar with the dev process	2.0	3	6.0
E2	Application experience	1.0	5	5.0
E3	Object Oriented Experience	1.0	4	4.0
E4	Lead Analyst Capability	0.5	3	1.5
E5	Motivation	1.0	5	5.0
E6	Stable Requirements	1.5	4	6.0
E7	Part-time Staff	-0.5	0	0
E8	Diffucult Programming Language	-1.0	4	-4.0
Total				23.5

EF = 1.4 + (-0.3 * EFactor) → 0.695

UCP = UUCP * TCF * ECF → 99 * 0.875 * 0.695 = 60.20

Effort in person-hours = UCP * PHM → 20 * 60.20 = 1204

GANTT CHART:


/22
1/23
2/23
3/23
4/23
29
2
9
16
23
30
6
13
20
27
6
13
20
27
3
10
Food Ordering System
Phase 1: Planning and Requiremen...
First Meeting
Project Definition and Project Purpose
Identify Project Stakeholders and Ga...
Conduct Market Research to Underst...
Define Project Scope
Find the Project Constraints
Detect Actor Glossaries
Define non Functional Requirements ...
Define Functional Requirements Incl...
Phase 2: Design and Development
Use Case Modeling
Create User Stories
Define Use cases
Describe Use Case Scenario
Illustrate Use Case Diagram
Activity Diagrams
Sequence Diagrams

The Project Purpose:

The purpose of the food ordering system is to provide customers with an easy and convenient way to order food from the restaurant, and to enable the restaurant to efficiently manage and accomplish orders. The system will allow customers to quickly browse the menu and place orders, without having to wait for a server or call the restaurant. The system will also provide the restaurant with real-time updates on new orders, allowing them to quickly and efficiently prepare the items and serve out the customer's request.

The system consists of three main components: the food ordering app, the restaurant's order management system, and the real-time communication between the customer and the restaurant.

The food ordering app is the primary interface for customers, and allows them to browse the menu, select items, and place orders. The app is connected to the restaurant's order management system, which stores and updates the menu, prices, and order information. The app also allows the customer to track the status of their order, and provide feedback or ratings on the quality of the food and service.

The restaurant's order management system is the central hub for managing and fulfilling orders. The system receives real-time updates from the food ordering app, and displays the details of each order on a screen or tablet. The restaurant staff can use the system to view and manage orders, update the menu and prices, and track the status of each order. The system also provides real-time updates to the customer, allowing them to see the status of their order and the estimated time of delivery or pickup.

The real-time communication between the customer and the restaurant is the key feature of the system, and allows for efficient and seamless order management. The system uses web sockets or other real-time communication technologies to send and receive updates between the customer's device and the restaurant's order management system. This allows the restaurant to quickly and accurately prepare and fulfill orders, and allows the customer to track the status of their order and receive timely updates.

Overall, the system model for the food ordering system is designed to provide a user-friendly and efficient experience for both the customer and the restaurant, and to enable real-time communication and coordination between the two parties. The system is scalable and flexible, and can be easily adapted to meet the changing needs and preferences of the customer and the restaurant. The Food Ordering System provides a range of tangible and intangible benefits to its stakeholders.

For customers, the system provides a convenient and easy way to order food for delivery or pickup. Customers can quickly and easily browse the menu, select items, and place their orders through the system's web interface. The system also allows customers to

track the status of their order and receive real-time updates, which helps to reduce wait times and improve the overall experience.

The system also provides a number of intangible benefits for customers. For example, the ratings and reviews feature allows customers to provide feedback on their experience with the restaurant and the food they ordered. This helps restaurants to improve their service and better meet the needs of their customers. Additionally, the system's real-time communication features allow for a more seamless and efficient ordering process, which can enhance the customer's overall satisfaction with the service.

For restaurants, the Food Ordering System provides a range of tangible benefits. The system allows restaurants to efficiently manage and fulfill orders, which can help to improve their operations and increase their profitability. The system also provides real-time updates to the restaurant, which allows them to quickly and accurately prepare and fulfill orders. Additionally, the system allows restaurants to track their sales data and manage their inventory, which can help to reduce waste and improve their bottom line.

The Food Ordering System also provides a number of intangible benefits for restaurants. For example, the system's ratings and reviews feature can help restaurants to improve their reputation and attract new customers. Additionally, the system's real-time communication features can help to create a more efficient and seamless ordering process, which can enhance the overall customer experience and drive repeat business.

The Project Scope:

The scope of the project includes the development of the food ordering app, which will be built in-house by the project team. This includes the design and implementation of the user interface, the ordering and checkout process, and the real-time communication between the customer and the restaurant.

As part of the project, the team will also need to integrate the food ordering app with the restaurant's existing order management system. This integration will involve connecting the app to the order management system, and ensuring that the two systems can exchange data and updates in real-time.

The project does not include the development of the restaurant's order management system, as this is an existing system that is outside of the scope of the project. However, the project team may need to work closely with the restaurant to ensure that the integration between the food ordering app and the order management system is successful.

Other components and features that may be outside of the scope of the project include any additional systems or processes that are not directly related to the food

ordering app. For example, the project may not include the development of separate systems for managing the restaurant's inventory or tracking employee hours.

Overall, the scope of the project includes the development of the food ordering app, as well as the integration with the restaurant's existing order management system. The project team will be responsible for building and implementing the food ordering app in-house, while other components and features may be outside of the scope of the project.

The Project Constraints:

1. Time constraint: The project is expected to take approximately 6 months to complete, including design, development, testing, and deployment. Any delays or changes to the project timeline may impact the overall success of the project. This means that the project team must carefully plan and manage their time to ensure that all tasks are completed within the allocated time frame, and that any potential delays or obstacles are addressed in a timely and effective manner.

2. Resource constraint: The project will require a team of web developers, designers, and project managers, as well as the necessary equipment and software to develop and test the food ordering app. The availability and allocation of these resources may impact the progress and quality of the project. This means that the project team must carefully plan and manage their resources, to ensure that they have the necessary personnel, equipment, and materials to complete the project successfully.

3. Budget constraint: The project has a fixed budget, and any unexpected costs or changes to the scope of the project may impact the overall cost and profitability of the project. This means that the project team must carefully plan and manage their budget, to ensure that they are staying within the allocated funds, and that any changes to the project scope are carefully considered and justified.

4. Technical constraint: The project involves the development of a web-based platform, and may be subject to technical challenges or limitations that could impact the performance, stability, or security of the system. This means that the project team must have the necessary expertise and experience to develop a high-quality and reliable system, and must be prepared to troubleshoot and resolve any technical issues that may arise during the project.

5. Legal and regulatory constraints: The system may be subject to certain legal and regulatory constraints, such as data protection or privacy laws. These constraints may impact the way that the system handles and stores data, and may require additional measures to ensure compliance.

6. Stakeholder constraint: The project involves multiple stakeholders, including the customers, the restaurant, and the project team, and their needs, preferences, and expectations may impact the scope, direction, and success of the project. This means that

the project team must actively engage with and listen to the stakeholders, and must be prepared to adapt to their feedback and suggestions in order to ensure the success of the project.

7. User preferences and expectations: The system will also be constrained by the preferences and expectations of the users, both customers and restaurant staff. It will be important to understand these preferences and expectations in order to develop a system that meets the needs and expectations of the users.

Actor Glossary:

1. Customers: Customers are the primary human actors in the system, interacting with the system through the web interface to browse the menu, place orders, and make payments. Customers can access the system from any device with an internet connection, and can place orders for delivery or pickup.

2. Restaurant: The restaurant is the provider of the food and services, and is responsible for managing and fulfilling the orders placed through the food ordering system. The restaurant will use the system to view and manage orders, update the menu and prices, and track the status of each order.

3. Project team: The project team is responsible for designing, developing, and maintaining the food ordering system. The team will work closely with the restaurant and the customer to ensure that the system meets their needs and provides a positive user experience.

4. Delivery drivers: If the system offers food delivery as a service, there may be a team of delivery drivers who are responsible for transporting the food from the restaurant to the customer's location. These drivers may interact with the system through a separate interface or app to receive delivery instructions and track the status of their orders.

5. Servers and databases: The nonhuman actors in the system include the servers and databases that store and process the data for the system. These actors are responsible for handling the data related to orders, customers, and restaurants, and powering the various features of the system such as the interactive menu and real-time updates.

6. Payment processors: The system may also include a payment processing component, which handles the financial transactions between the customer and the restaurant. This may involve a third-party payment processor, such as a credit card company or a payment gateway, which handles the actual payment processing and ensures the security of the transactions.

Strategies Used To Define Requirements

First and foremost, we did a problem analysis by asking users of the system(which is our team in this case) to identify issues with the present system and how they would remedy these issues in order to obtain the requirements for our online food ordering system project. This made it easier for us to see the places where the system's functionality and efficiency may be enhanced.

We then conducted a root cause analysis to prioritize the identified problems and determine their causes. This allowed us to develop targeted solutions to address these issues.

Additionally, We also performed informal benchmarking by looking at related processes in other successful firms and seeing how they were carried out. This allowed us to learn how other businesses handled comparable procedures and to find best practices that we might use for our own project.

Lastly, we gathered requirements by utilizing surveys which were conducted by other firms about the customers needs, we have also made joint application development (JAD) sessions and observations. By using a variety of methods, by using these methods we were able to synthesize non-functional and functional requirements.

NON FUNCTIONAL REQUIREMENTS

Usability

1-) The menu should be easy to navigate and understand for customers, with clear and intuitive organization and layout, including clear and descriptive categories and subcategories, a search function, and other filtering and sorting options.
(high-priority)

2-) The menu should also be visually appealing and easy to read, with high-quality images and other media to help customers better understand the offerings and make informed decisions. The layout and design should be consistent and well-organized, with clear and concise descriptions of each item and any customization options available.

(medium-priority)

2-) The order review and checkout process should be easy for customers to understand and complete, with clear and concise instructions and minimal required input. This should include step-by-step guides, progress indicators, and error messages to help customers navigate the process and avoid mistakes. The process should also be optimized for mobile devices, with responsive design and touch-friendly controls to make it easy for customers to complete their orders on the go.

(high-priority)

Reliability

• The system should be able to handle high levels of traffic and orders without crashing or becoming unresponsive, even during peak periods of activity. This could include using robust and scalable infrastructure, such as load balancers, server clusters, and other technologies, to distribute the load and ensure that the system can handle a large number of users and orders.

(high-priority)

• The system should be able to process orders accurately and reliably, with minimal errors or mistakes. This could include using robust and reliable algorithms and data structures, as well as testing and validation procedures, to ensure that orders are correctly processed and recorded.

(high-priority)

• The system should be able to handle unexpected errors and recover gracefully, without affecting the overall availability or performance of the system. This could include using error handling and logging mechanisms, as well as monitoring and alerting systems, to detect and respond to errors in a timely and effective manner.

(high-priority)

Performance

- The system should be able to process orders quickly and efficiently, with minimal delays or bottlenecks in the order processing workflow.
(high priority)

- The system should be able to display updates to the menu and prices in real-time, ensuring that customers always have access to the most current and accurate information. This could include using real-time data feeds and other technologies to keep the menu and pricing information up-to-date and accurate.
(high priority)

- The system should be able to handle large amounts of data without significant performance degradation, with the ability to scale up or out as needed to support an increasing volume of data. This could include using robust and scalable database and storage systems, as well as optimized data access and manipulation techniques, to ensure that the system can efficiently manage and process large amounts of data.

(medium priority)

- The system should be able to provide real-time updates on the status of orders for both customers and restaurant staff, including information on the current stage of the order process, delivery or pickup details, and any other relevant information. This could include using real-time notifications and other technologies to keep customers and staff informed about the status of their orders. (high priority)

Flexibility

- The system should be able to easily accommodate changes to the menu, prices, and available options, with minimal effort or disruption to the overall system. This could include using a modular and extensible design, as well as providing easy-to-use tools for managing and updating menu and pricing information.

(high-priority)

- The system should be able to integrate with other systems, such as the restaurant's POS (point of scale) system, allowing for seamless data exchange and automation of key processes. This could include using APIs, integration platforms, or other technologies to facilitate integration with other systems. (high-priority)

- The system should be able to support multiple languages, allowing customers from different regions and countries to use the system in their preferred language.

(medium-priority)

- The system should be able to support different types of payment methods, including credit and debit cards, online payment platforms, and other options, to allow customers to choose the payment method that is most convenient for them. (high-priority)

- The system should be able to support different types of discounts and promotions, allowing restaurants to offer special deals and incentives to customers. This could include using coupon codes, loyalty programs, and other techniques to offer discounts and promotions to customers. (medium-priority)

Maintenance

- The system should be easy to maintain and update, with a clear and well-organized codebase and a user-friendly interface for managing system settings and configurations. This could include using tools such as version control systems, bug tracking systems, and automated testing tools to help manage the maintenance process. (medium-priority)

- The system should be able to generate reports and statistics on orders and customer behavior, providing insights into key metrics such as sales, customer demographics, and purchasing patterns. This could include using tools such as data visualization and analytics platforms to help analyze and understand customer behavior. (high-priority)

- The system should be able to automatically backup and restore data in case of system failure, ensuring that important data is preserved in the event of an cyber-attack or other system issue. This could include using backup and recovery tools, as well as implementing redundant systems and processes to minimize the risk of data loss. (high-priority)

- The system should be able to provide notifications for upcoming maintenance and downtime, helping to keep customers and staff informed about any planned outages or disruptions to the system. This could include using email, push notifications, or other communication methods to alert customers and staff about any planned maintenance or downtime. (high-priority)

Security and Privacy

- The system should encrypt and protect customer and restaurant information and data, using secure protocols and technologies such as SSL/TLS and secure data storage to ensure that sensitive data is kept safe and confidential. (high-priority)

- The system should enforce secure passwords and authentication for staff accounts, using strong password policies and other authentication methods such as two-factor authentication to help prevent unauthorized access to the system. This could include using password managers, password hashing algorithms, and other security measures to help keep staff accounts secure. (high-priority)

• The system should prevent unauthorized access to the system and data, using measures such as access controls, firewalls, and intrusion detection systems to help prevent unauthorized access to the system. This could include using network segmentation, data isolation, and other security measures to help protect the system from external threats.

(high-priority)

• The system should comply with relevant privacy laws and regulations, including data protection laws and other regulations that apply to the handling of personal data. This could include implementing measures such as data minimization, data protection impact assessments, and data subject rights management to ensure compliance with relevant laws and regulations. (low-priority)

• The system should provide customers with the option to opt-out of data collection, allowing customers to choose whether they want their data to be collected and used for marketing or other purposes. This could include using opt-out mechanisms such as cookie consent banners, data privacy settings, and data subject access requests to help customers manage their data privacy preferences. (low-priority)

FUNCTIONAL REQUIREMENTS

Menu and Ordering

- Customers of the system should be able to browse and view the menu, including all available options and prices. (high priority)
- Customers of the system should be able to select items and add them to their order.

(high priority)

- Customers of the system should be able to review and modify their order before checking out. (high priority)
- Customers of the system should be able to o enter their contact and delivery information. (high priority)
- Customers of the system should be able to choose their preferred payment method and process the payment. (high priority)

Order Management

• The system must provide restaurant staff with a real-time view of all incoming orders, including the status, details, and customer information. (high priority)

• The system must allow restaurant staff to easily update the status of orders as they are being prepared, ready for pickup or delivery, or completed. (high priority)

• The system must provide restaurant staff with tools to manage the availability and preparation time of menu items, including setting limits, changing prices, or marking items as out of stock. (medium-priority)

• The system must allow restaurant staff to track the location and status of delivery orders, including any delays or issues that may arise. (low priority)

• The system must provide restaurant staff with the ability to manage customer information and preferences, such as contact details, order history, or loyalty rewards. (low priority)

Order Delivery

• The system must allow the carrier to easily indicate when a delivery has been made, using a simple interface that will inform the carrier the time of order. (high priority)

• The system must provide the carrier with real-time information about the location and details of the customer and delivery, including the address, contact information, and contents of the order. (high priority)

• Carriers should be allowed to report any issues or delays with the delivery, including providing the customer with updates on the status. (medium priority)

• The system must provide the carrier with tools to manage their schedule and routes, including mapping and navigation tools, as well as real-time traffic updates. (low priority)

User Stories:

1. As a customer, I want to easily browse the menu and select items for my order, so that I can quickly and conveniently place an order for food delivery or pickup.

2. As a customer, I want to be able to view and modify my order at any time, so that I can make changes or add additional items as needed.

3. As a restaurant, I want to receive real-time updates on new orders, so that I can efficiently prepare and fulfill the orders with minimal delay and confusion.

4. As a restaurant, I want to be able to update the menu and prices on the food ordering website, so that I can accurately reflect the current availability and pricing of the items on the menu.

5. As a customer, I want to receive real-time updates on the status of my order, so that I can track the progress of my order and know when it will be ready for pickup or delivery.

6. As a customer, I want to be able to securely pay for my order using a variety of payment methods, including credit card, debit card, or mobile payment, so that I can easily and securely complete the checkout process.

7. As a restaurant, I want to be able to customize the appearance and branding of the food ordering website, so that it reflects the unique style and identity of my restaurant.

8. As a customer, I want to be able to provide feedback or ratings on the quality of the food and service, so that the restaurant can improve and provide a better experience for future customers.

9. As a restaurant, I want to be able to monitor and analyze the performance of the food ordering system, so that I can identify any trends or issues and make data-driven decisions to improve the system and the customer experience.

10. As a customer, I want to be able to easily access and use the food ordering website on a variety of devices, including desktop computers, laptops, tablets, and smartphones, so that I can place an order from any location and on any device.

#1 Use case name: Browse and select items from the menu

Description: The customer browses the menu and selects items to add to their order.

Primary actors: Customer

Supporting actors: Food ordering website, Restaurant's order management system

Triggers: The customer opens the food ordering website on their device and begins browsing the menu.

Preconditions: The customer has an active account on the food ordering website, and the restaurant's menu and prices are up-to-date on the website.

Post conditions: The customer's order is updated with the selected items, and the restaurant's order management system is notified of the updated order.

Normal flow:

1. The customer opens the food ordering website on their device.

2. The website displays the menu with the available items and options.

3. The customer browses the menu and selects the items they want to add to their order.

4. The website updates the order details with the selected items, including the price and any additional options or modifications.

5. The customer reviews the updated order details and confirms the order.

6. The website sends a notification to the restaurant's order management system, updating the order details.

7. Website displays a confirmation message to the customer, indicating that the order has been placed successfully.

Alternate flows:

1. If the customer is not logged in, the website prompts them to sign in or create an account before they can place an order.

2. If the customer is not satisfied with the order details, they can modify the order or remove items before confirming the order.

3. If the restaurant's menu or prices are not up-to-date on the website, the customer is notified and asked to contact the restaurant directly to place their order.

Business rules:

1. The customer must have an active account on the food ordering website to place an order.

2. The restaurant's menu and prices must be up-to-date on the website.

3. The customer can only add items to their order that are currently available on the menu.

4. The customer must confirm their order before it is sent to the restaurant's order management system.

5. The customer is responsible for the accuracy and completeness of their order, including the selection of items and any additional options or modifications.

6. View and modify the order

#2 Use case name: View and modify the order

Description**:** The customer views and modifies the details of their order.

Primary actors: Customer

Supporting actors**:** Food ordering website, Restaurant's order management system

Triggers: The customer opens the food ordering website on their device and wants to view or modify their order.

Preconditions: The customer has an active account on the food ordering website, and has placed an order that has not yet been fulfilled by the restaurant.

Post conditions**:** The customer's order is updated with the modified details, and the restaurant's order management system is notified of the updated order.

Normal flow:

1. The customer opens the food ordering website on their device.

2. The website displays the order details, including the items, options, and price.

3. The customer reviews the order details and decides to make changes or modifications.

4. The customer uses the website to modify the order details, including adding, removing, or changing items or options.

5. The website updates the order details with the modifications, and displays the updated order details to the customer.

6. The customer reviews the updated order details and confirms the changes.

7. The website sends a notification to the restaurant's order management system, updating the order details.

8. The website displays a confirmation message to the customer, indicating that the order has been modified successfully.

Alternate flows:

1. If the customer is not logged in, the website prompts them to sign in or create an account before they can view or modify their order.

2. If the customer does not have an active order, the website displays an error message and does not allow them to view or modify the order.

3. If the restaurant has already started preparing the order, the customer may not be able to make further changes to the order.

Business rules:

1. The customer must have an active account on the food ordering website to view or modify their order.

2. The customer must have an active order that has not yet been fulfilled by the restaurant in order to view or modify the order. 3. The customer may only make changes to their order that are within the constraints of the restaurant's menu and availability of items.

4. The customer must confirm their modified order before it is sent to the restaurant's order management system.

5. The customer is responsible for the accuracy and completeness of their modified order, including the selection of items and any additional options or modifications.

6. Receive real-time updates on new orders

#3 Use case name: Receive real-time updates on new orders

Description**:** The restaurant receives real-time updates on new orders placed through the food ordering website.

Primary actors**:** Restaurant staff

Supporting actors**:** Food ordering website, Restaurant's order management system

Triggers**:** A new order is placed on the food ordering website by a customer.

Preconditions**:** The restaurant has an active account on the food ordering website, and has enabled real-time updates on new orders.

Post conditions: The restaurant's order management system is updated with the details of the new order, and the restaurant staff can view and manage the order.

Normal flow:

1. A customer places a new order on the food ordering website.

2. The website sends a notification to the restaurant's order management system, updating the order details.

3. The restaurant's order management system receives the notification and updates the order details.

4. The restaurant staff views the updated order details on the order management system.

5. The restaurant staff begins preparing and fulfilling the order according to the details provided on the order management system.

Alternate flows:

1. If the restaurant has not enabled real-time updates on new orders, the restaurant staff will not receive notifications of new orders and will not be able to view the details of the order until they manually check the order management system.

2. If the restaurant's order management system is offline or experiencing technical issues, the notification may not be delivered and the restaurant staff will not be able to view the details of the order.

Business rules:

1. The restaurant must have an active account on the food ordering website and must have enabled real-time updates on new orders in order to receive notifications of new orders.

2. The restaurant staff must monitor the order management system and respond to new orders in a timely manner in order to fulfill the orders efficiently and minimize delays.

3. The restaurant staff must follow the instructions provided on the order management system in order to prepare and fulfill the orders accurately and according to the customer's preferences.

4. Update the menu and prices on the website

#4 Use case name: Update the menu and prices on the website

Description: The restaurant updates the menu and prices on the food ordering website.

Primary actors: Restaurant staff

Supporting actors: Food ordering website

Triggers: The restaurant wants to update the menu and prices on the food ordering website.

Preconditions: The restaurant has an active account on the food ordering website, and has access to the website's menu and pricing management tools.

Post conditions: The menu and prices on the food ordering website are updated and reflect the current availability and pricing of the items on the restaurant's menu.

Normal flow:

1. The restaurant staff logs in to the food ordering website using their account credentials.

2. The website displays the menu and pricing management tools.

3. The restaurant staff uses the tools to update the menu and prices on the website.

4. The website updates the menu and prices and displays a confirmation message to the restaurant staff.

Alternate flows:

1. If the restaurant staff is not logged in, the website prompts them to sign in before they can access the menu and pricing management tools.

2. If the restaurant staff does not have access to the menu and pricing management tools, the website displays an error message and does not allow them to make changes to the menu and prices.

Business rules:

1. The restaurant must have an active account on the food ordering website and must have access to the menu and pricing management tools in order to update the menu and prices on the website. 2. The menu and prices on the website must be updated regularly to reflect the current availability and pricing of the items on the restaurant's menu.

3. The restaurant staff must carefully review the updates to the menu and prices before confirming and applying the changes on the website.

4. The restaurant staff must notify the customers of any significant changes to the menu or prices through the website or other communication channels.

5. The restaurant is responsible for the accuracy and completeness of the information on the menu and prices on the website.

#5 Use case name: Track and manage the status of orders

Description**:** The restaurant tracks and manages the status of orders placed through the food ordering website.

Primary actors**:** Restaurant staff

Supporting actors: Food ordering website, Restaurant's order management system

Triggers**:** The restaurant receives a new order through the food ordering website, or an existing order is updated.

Preconditions**:** The restaurant has an active account on the food ordering website, and has enabled real-time updates on new orders.

Post conditions**:** The restaurant's order management system is updated with the latest status of the orders, and the restaurant staff can view and manage the orders accordingly.

Normal flow:

1. A new order is placed on the food ordering website by a customer, or an existing order is updated.

2. The website sends a notification to the restaurant's order management system, updating the order details and status.

3. Restaurant's order management system receives the notification and updates the order details and status.

4. The restaurant staff views the updated order details and status on the order management system.

5. The restaurant staff manages the orders according to their status, including preparing, fulfilling, and delivering the orders.

6. Restaurant staff updates the status of the orders on the order management system as they progress through the various stages of preparation and fulfillment.

Alternate flows:

1. If the restaurant has not enabled real-time updates on new orders, the restaurant staff will not receive notifications of new orders and will not be able to view the details and status of the orders until they manually check the order management system.

2. If the restaurant's order management system is offline or experiencing technical issues, the notifications may not be delivered and the restaurant staff will not be able to view the details and status of the orders.

Business rules:

1. The restaurant must have an active account on the food ordering website and must have enabled real-time updates on new orders in order to receive notifications of orders and track their status.

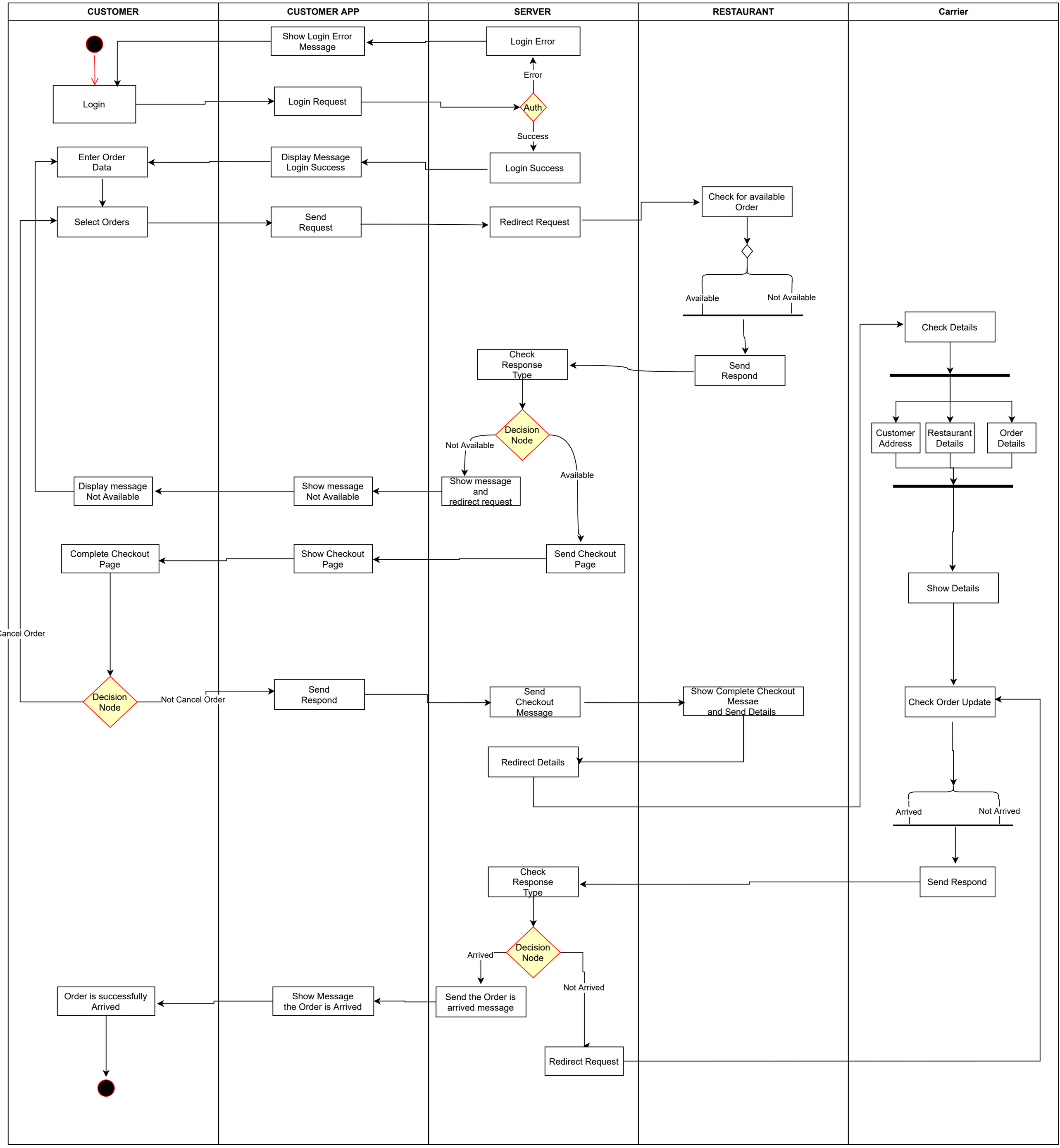
2. The restaurant staff must monitor the order management system and respond to new orders in a timely manner in order to fulfill the orders efficiently and minimize delays.

3. The restaurant staff must follow the instructions provided on the order management system in order to prepare and fulfill the orders accurately and according to the customer's preferences.

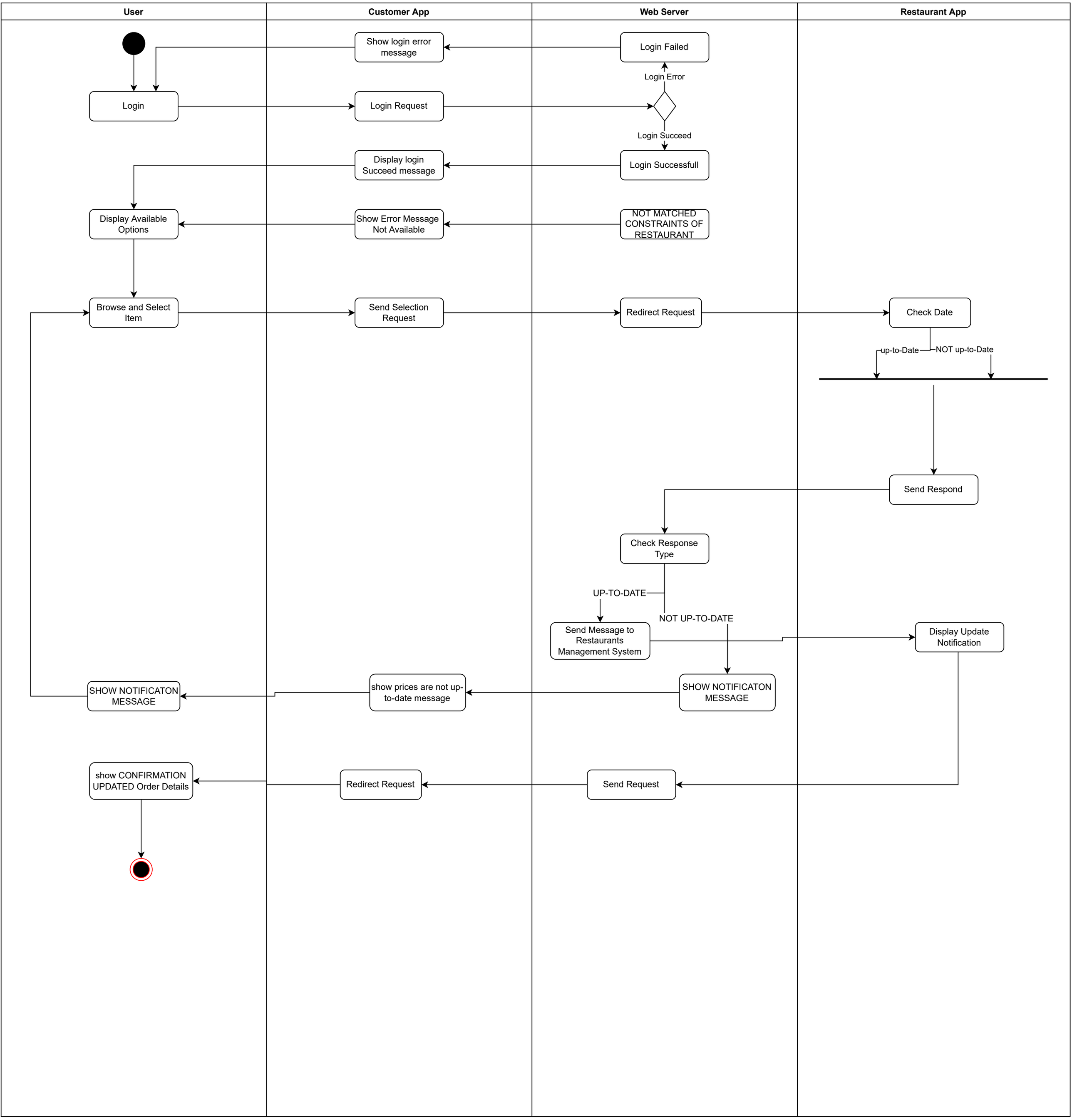
4. The restaurant staff must update the status of the orders on the order management system as they progress through the various stages of preparation and fulfillment.

5. The restaurant is responsible for the accuracy and completeness of the information on the status of the orders on the order management system.

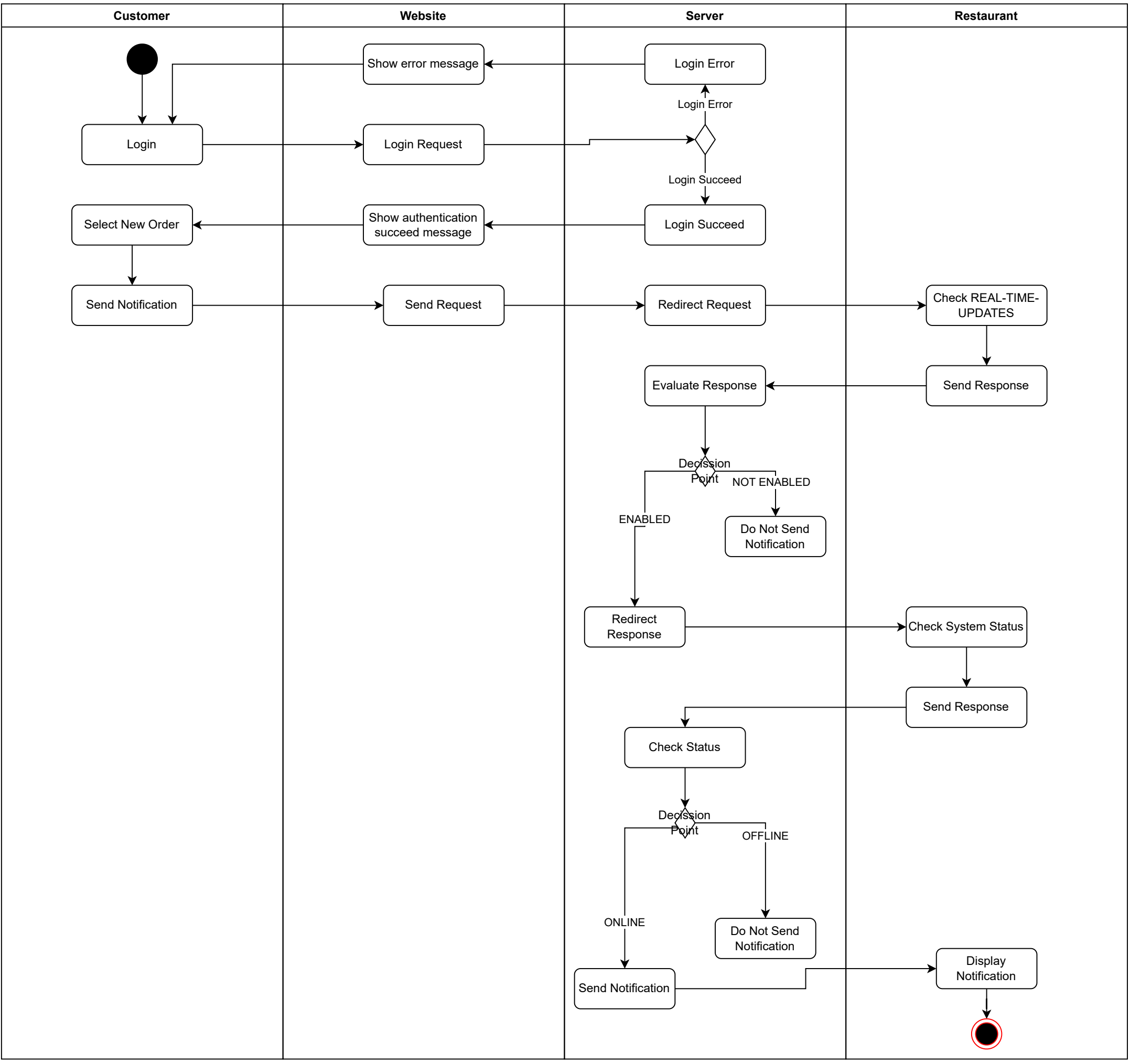
Activity Diagram



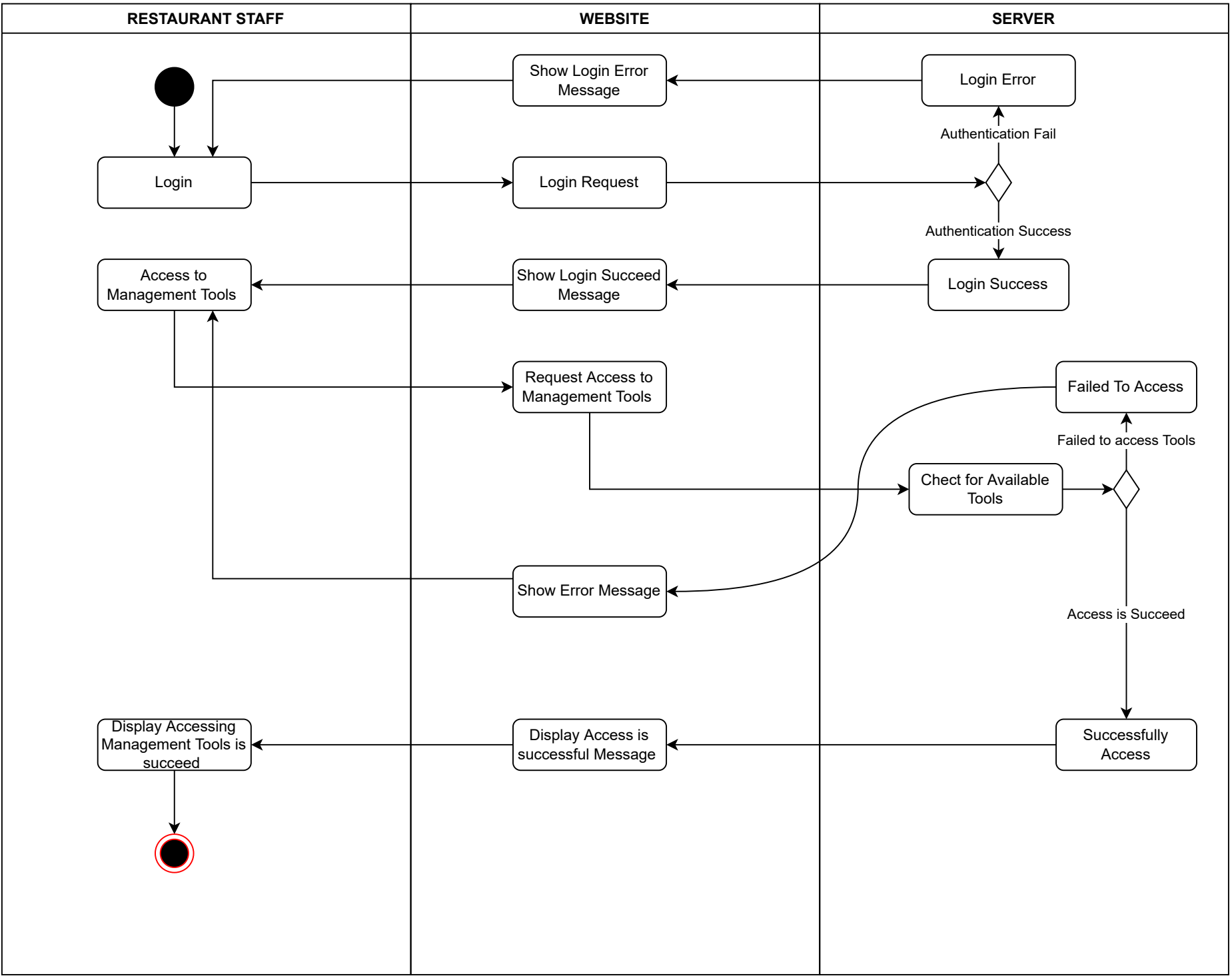
Browse and Select



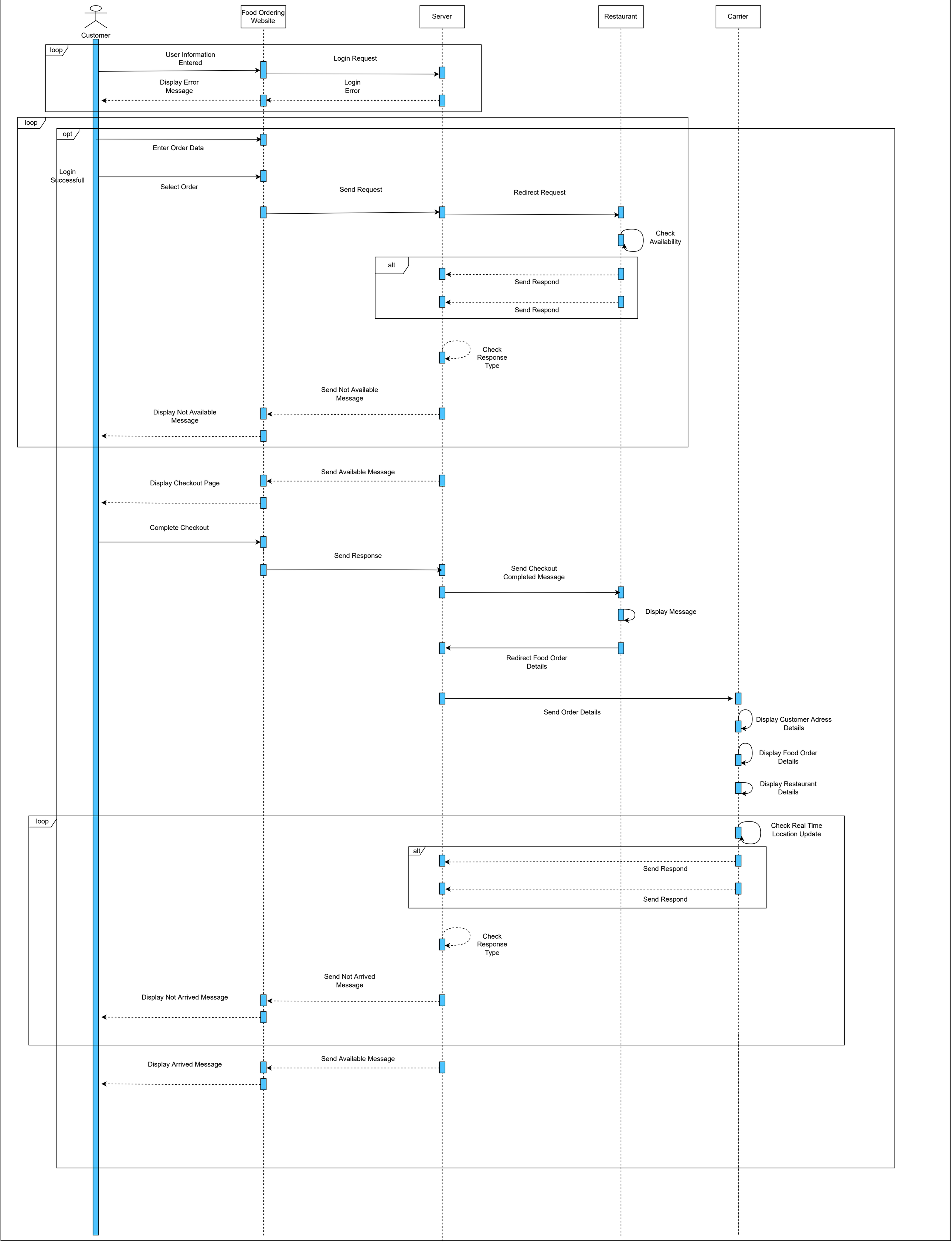
Receive Real-Time Updates



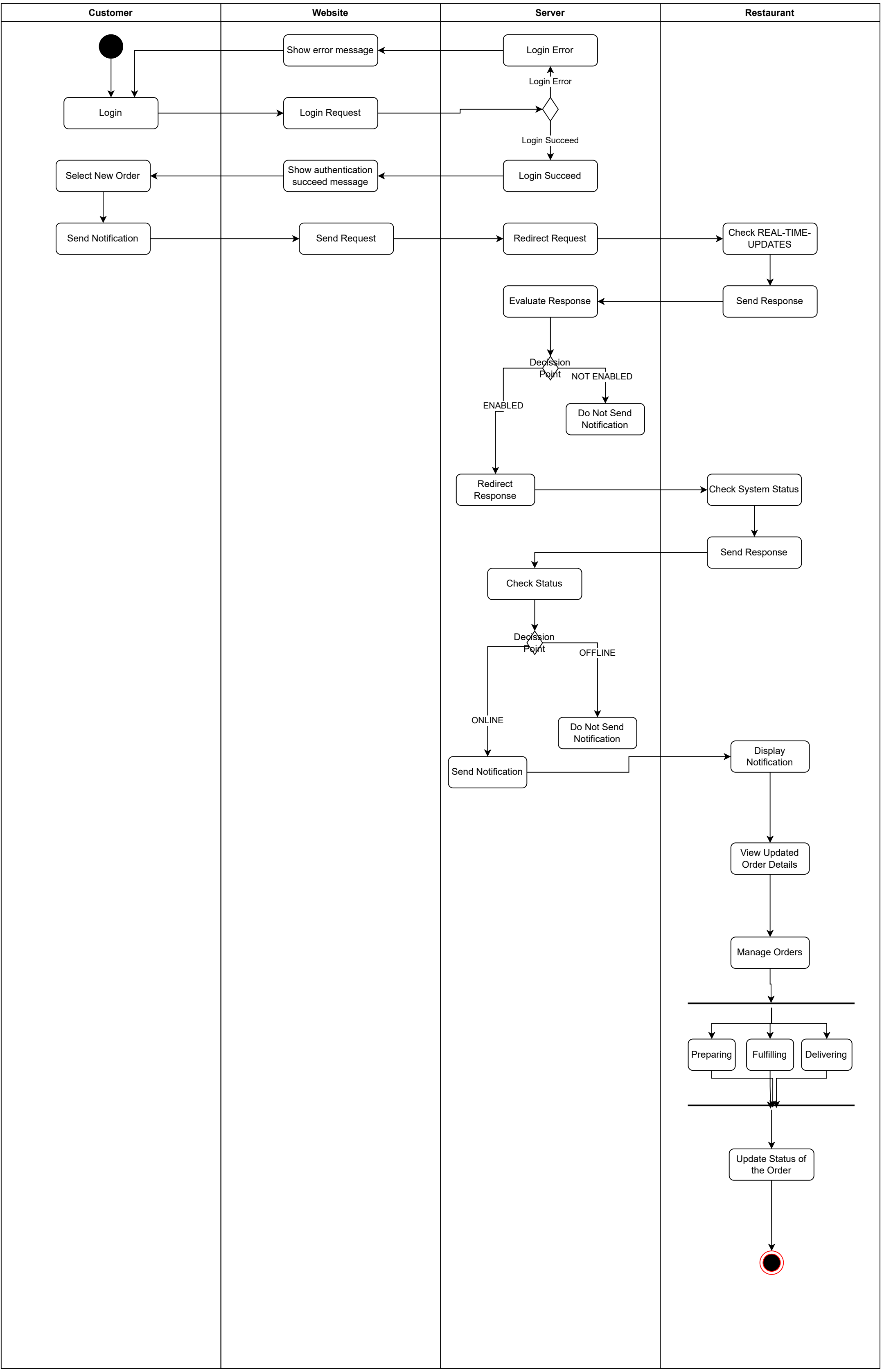
Update the Menu and Prices on the Website



Sequence Diagram



Track and manage the status of orders



View and Modify Order