Project Title: Food Delivery Application

INTRODUCTION:

The food delivery industry has witnessed significant growth in recent years. With busy schedules and hectic lifestyles, people are turning to food delivery applications to order their favorite meals from the comfort of their homes or offices. This project aims to develop a food delivery application that will enable users to order food from a variety of restaurants and have it delivered to their location. The application will consist of a front-end user interface and a back-end server, which will be responsible for handling user authentication and authorization, restaurant and menu management, order processing and delivery, and payment processing.

SCOPE:

This project's scope is to create a functional and user-friendly food delivery application that meets the needs of both customers and restaurants. The application will enable customers to create an account, search for restaurants, browse menus, place orders, and track the status of their deliveries. The application will also include additional features, such as secure payment processing, customer feedback, and analytics, custom order, and restaurant management, to enhance user experience.

OBJECTIVE

The main objective of this project is to provide users with a convenient, secure, and efficient way to order food from their favorite restaurants.

The specific objectives are:

- ✓ To design and implement a front-end user interface that is user-friendly, responsive, and visually appealing.

- ✓ To design and implement a back-end server that can handle large data and user traffic.
- ✓ To implement user management, restaurant management, menu management, order management, delivery management, analytics and reporting, and integration modules to provide a comprehensive solution.
- ✓ To ensure that the application is secure, reliable, and scalable, with robust authentication and authorization mechanisms, secure payment processing, and effective error handling.

Product Function:

Here are some possible modules that could be part of an online food ordering system:

i. User Management Module: This module would handle user registration, login, and profile management. It would also handle user authentication and authorization.

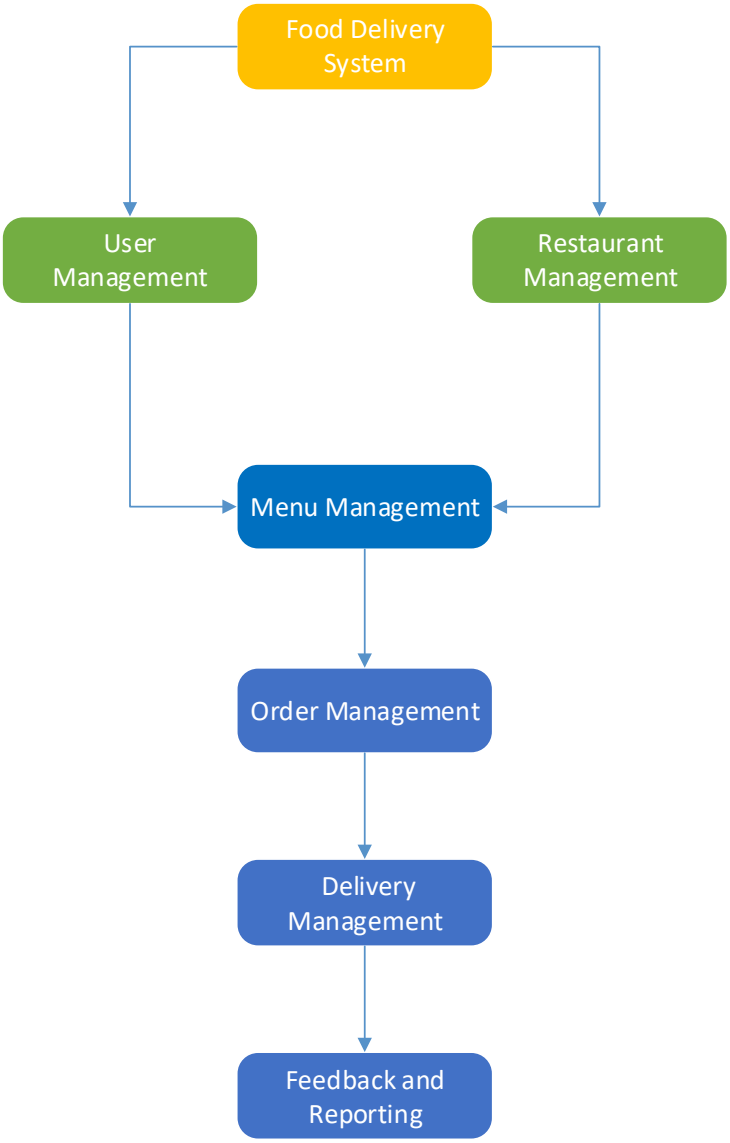
ii. Restaurant Management Module: This module would handle the registration and management of restaurants and their menus. It would also include tools for managing delivery zones and fees.

iii. Menu Management Module: This module would handle the management of menus for each restaurant, including adding and removing items, updating prices, and managing availability.

iv. Order Management Module: This module would handle the placement and processing of orders, including payment processing and order tracking.

v. Delivery Management Module: This module would handle the management of the delivery process, including assigning drivers to orders and tracking delivery progress.

vi. Feedback and Reporting Module: This module would collect data on sales, customer behavior, and feedback, and generate reports and insights for business decision-making.



REQUIREMENT ANALYSIS

The requirements can be classified as functional and non-functional requirements.

Functional Requirements:

i. User Registration: The application should allow users to create a new account by providing their personal information, such as name, email address, and phone number.
ii. Restaurant Search: Users should be able to search for nearby restaurants by entering their location or browsing through a list of restaurants.
iii. Menu browsing: Users should be able to browse restaurant menus to view food items and their prices.
iv. Order Placement: Users should be able to place orders by selecting food items from the menu and adding them to the cart.
v. Order Tracking: Users should be able to track the status of their orders, from order placement to delivery.
vi. Payment Processing: The application should allow users to pay for their orders using various payment options, such as credit/debit cards, mobile wallets, and cash on delivery.
vii. Feedback and Ratings: Users should be able to leave feedback and ratings for restaurants and food items.

Non-Functional Requirements

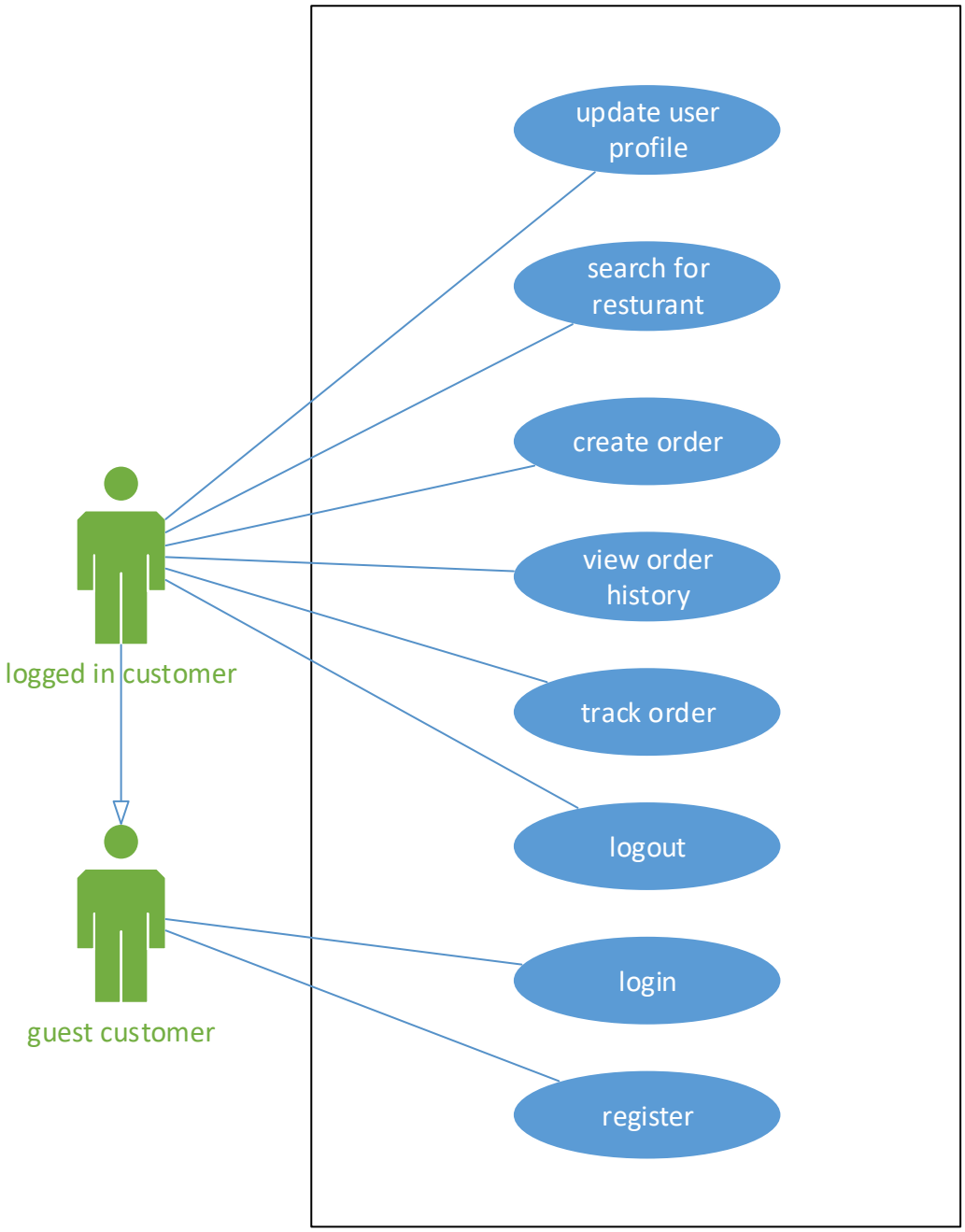
i. Security: The application should ensure the security of user data, including personal information and payment details.
ii. Performance: The application should be able to handle a large number of users and restaurant listings without experiencing slow response times or downtime.
iii. Usability: The application should have a user-friendly interface that is easy to navigate and use.
iv. Availability: The application should be available 24/7 to ensure that users can place orders at any time.
v. Scalability: The application should be scalable to accommodate new users, restaurants, and food items as the business grows.

Food Ordering and Delivery Management System Design

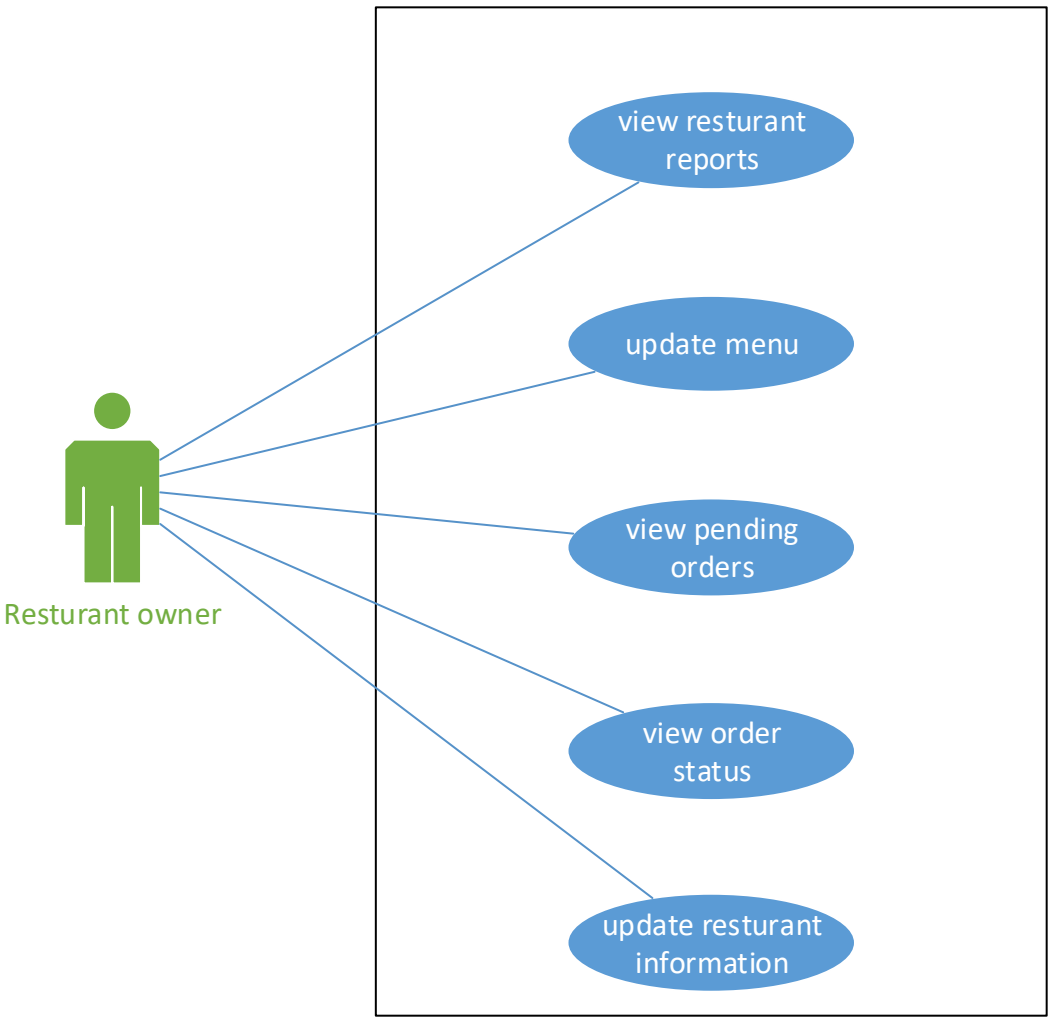
The below sections discuss the architecture of the system using the UML diagrams

HIGH LEVEL USE CASE DIAGRAMS

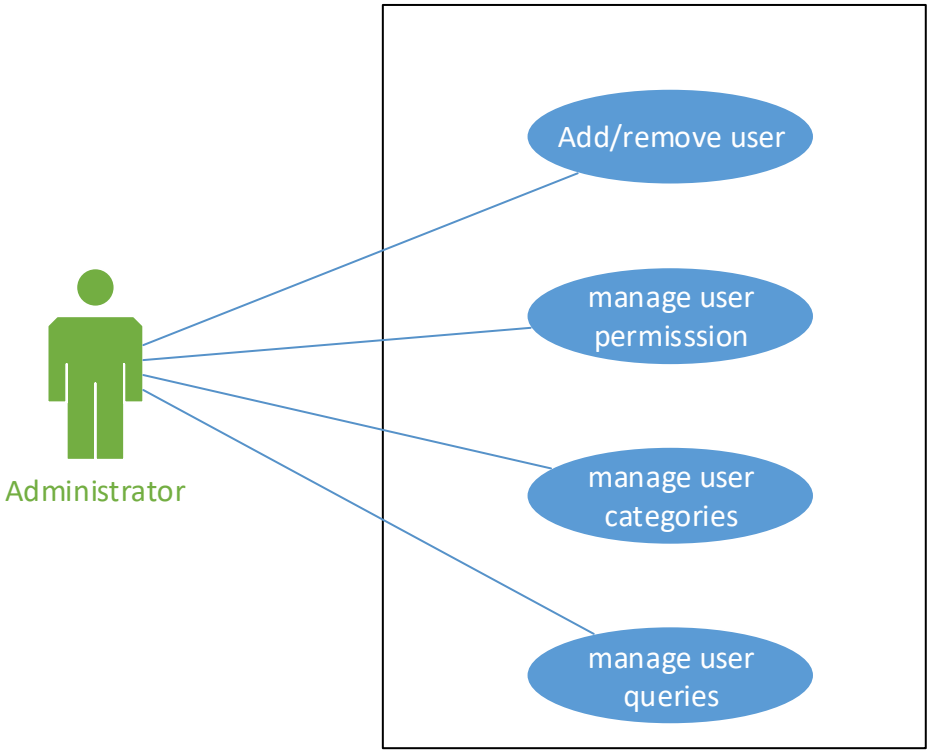
i. Use case diagram for the Customer



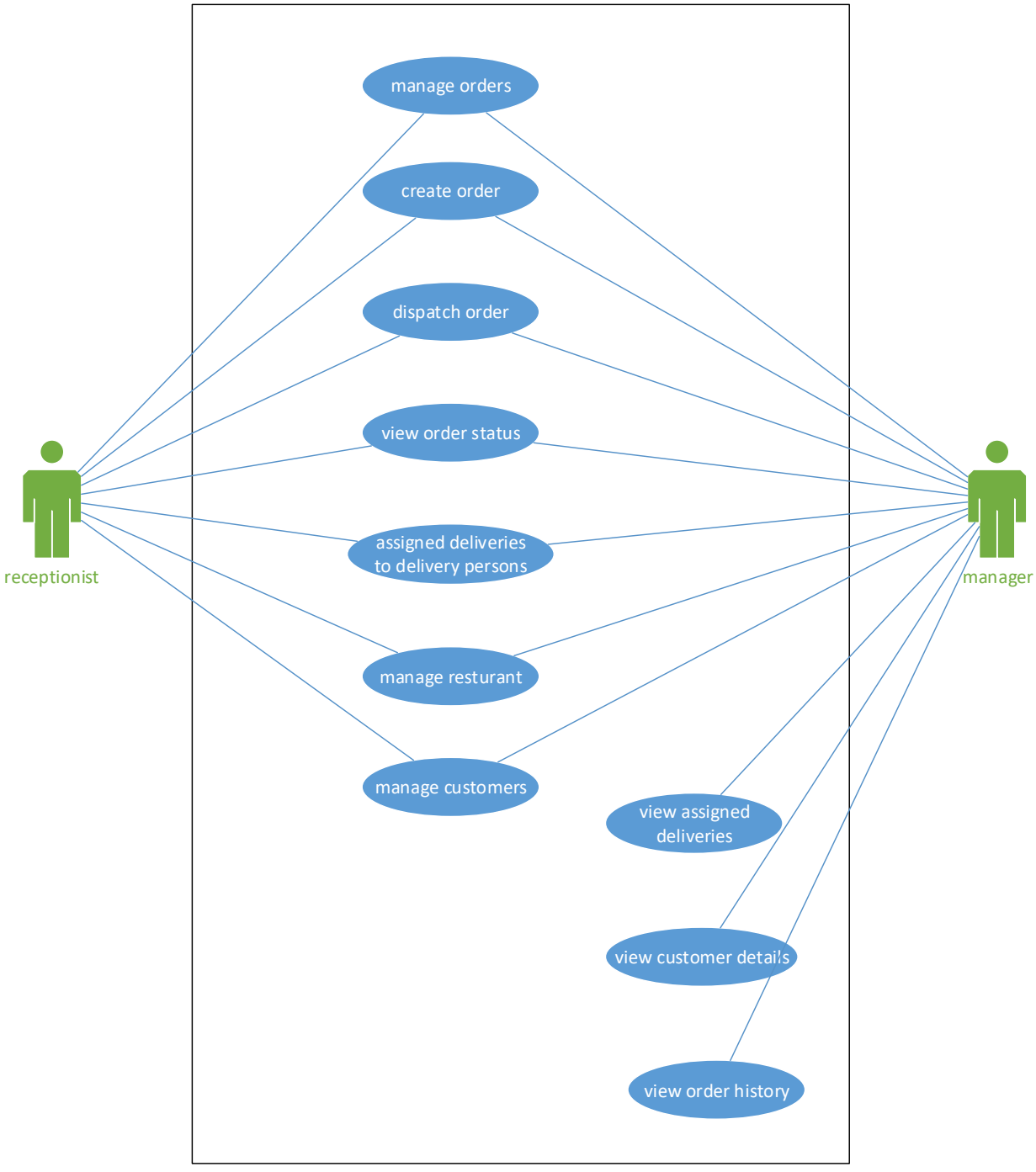
ii. Use case diagram for Restaurant Owner



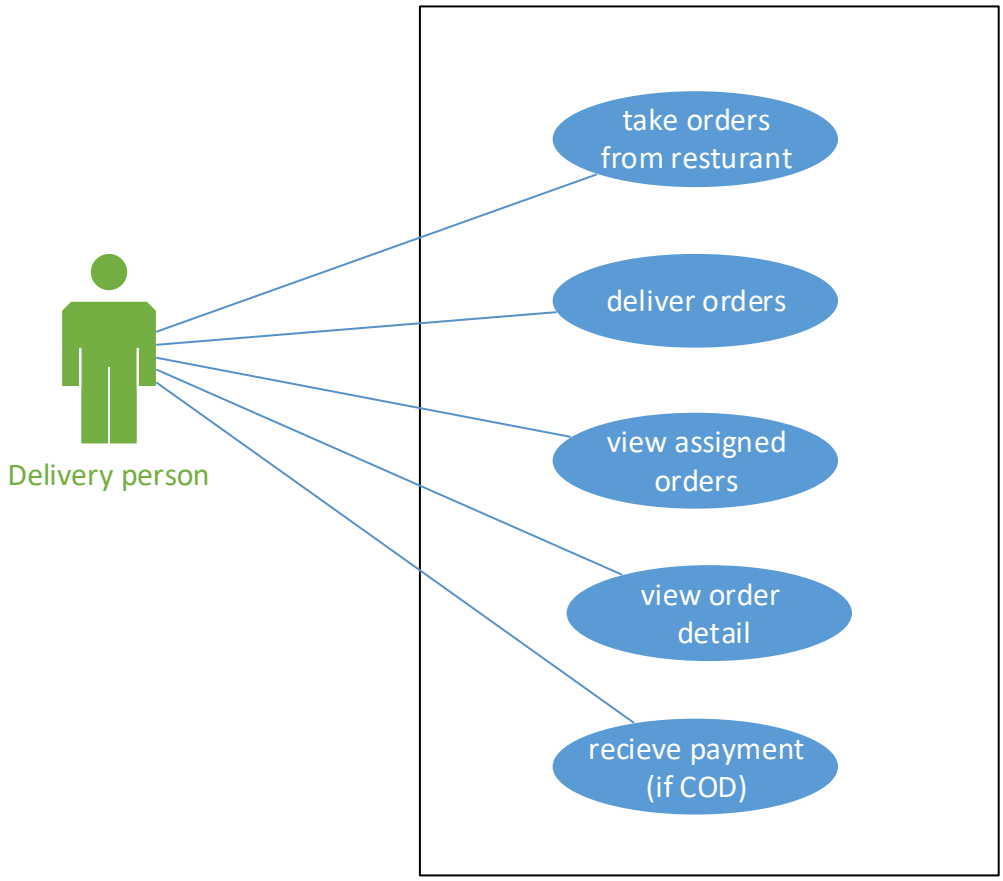
iii. Use case diagram for the Administrator



iv. Use case diagram for the Front desk Officer and Manager



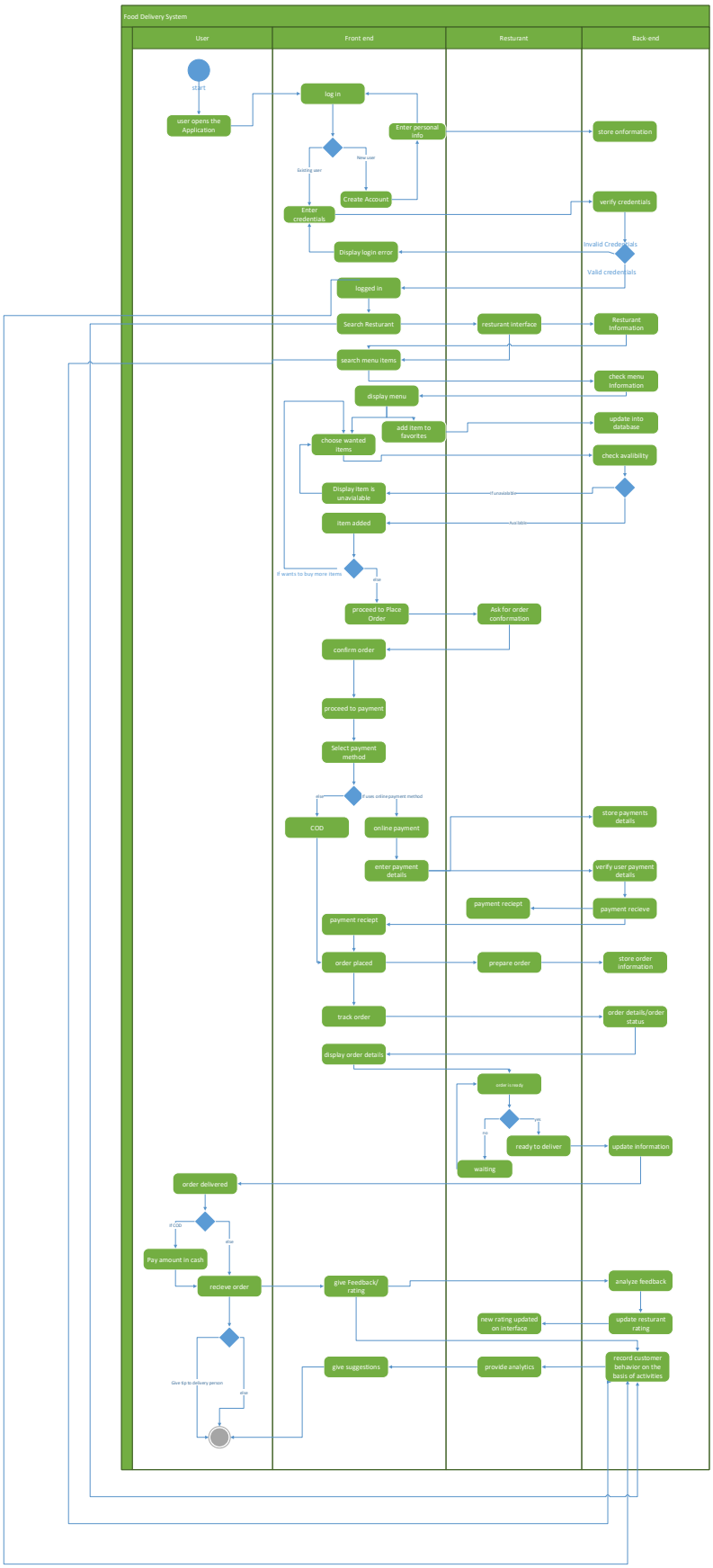
v. Use case Diagram for Delivery person



ACTIVITY DIAGRAM FOOD DELIVERY APPLICATION

The activity diagram is use to describe the flow of activity through a series of actions. An activity diagram is an important diagram to describe the system. The below activity diagram is for Food Delivery Application In this diagram, the Customer and Restaurant modules are represented as swim lanes, and their interactions with other modules are shown as arrows. The activities within each module are represented by rectangular boxes, and the arrows show the flow of information or actions between them. For example, the customer logs in and searches for restaurants and menu items, adds items to their cart and places an order, and then tracks the status of their order and delivery. They can also leave feedback and ratings.

On the back-end server side, the Order Processing module receives and processes orders, updates order status, and assigns drivers to


Food Delivery System
User
Front end
Resturant
Back-end
start
user opens the Application
log in
Enter personal info
store information
Existing user
New user
Create Account
Enter credentials
verify credentials
Display login error
Invalid Credentials
Valid credentials
logged in
Search Resturant
resturant interface
Resturant Information
search menu items
check menu information
display menu
add item to favorites
update into database
choose wanted items
check availibility
Display item is unavailable
item added
If wants to buy more items
else
proceed to Place Order
Ask for order conformation
confirm order
proceed to payment
Select payment method
else
If uses online payment method
COD
online payment
store payments details
enter payment details
verify user payment details
payment reciept
payment recieve
payment reciept
order placed
prepare order
store order information
track order
order details/order status
display order details
order is ready
no
yes
ready to deliver
update information
waiting
order delivered
If COD
else
Pay amount in cash
recieve order
give Feedback/ rating
analyze feedback
new rating updated on interface
update resturant rating
Give tip to delivery person
else
give suggestions
provide analytics
record customer behavior on the basis of activities