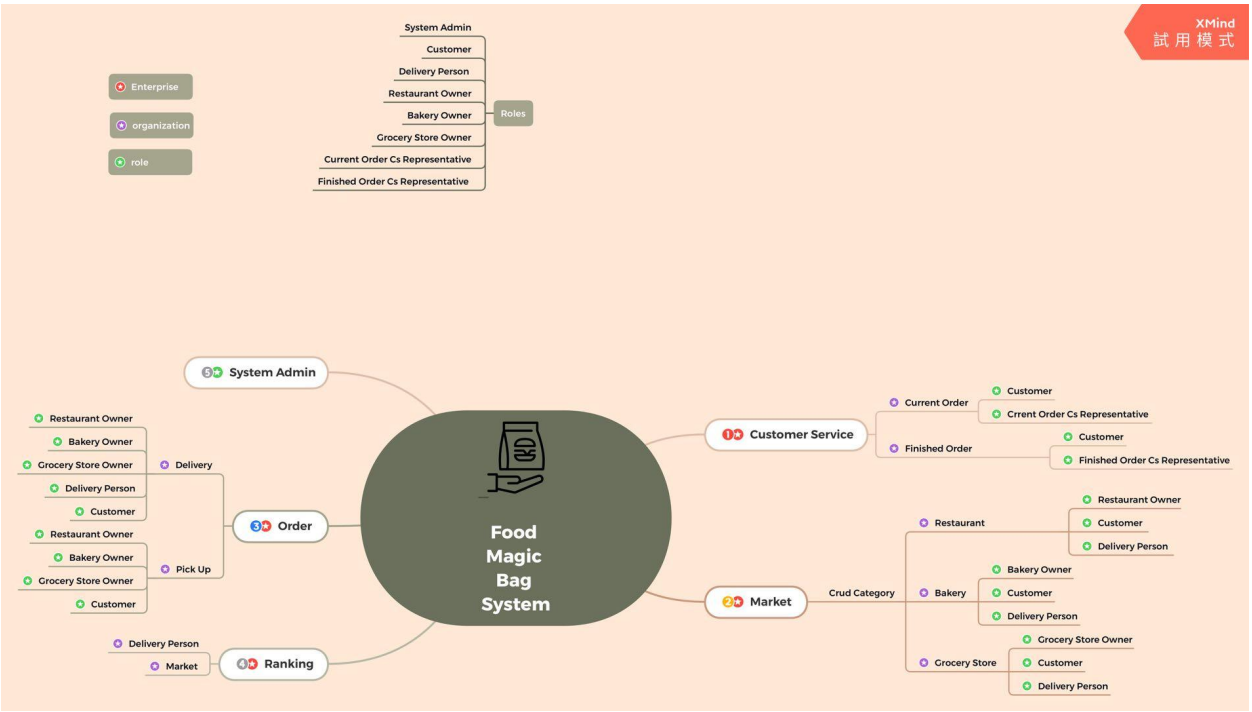
Introduction

Nowadays, food waste has become a serious problem worldwide. Many food shops waste their food if it is not sold at the end of the day. To reduce this kind of waste, our team came up with an idea called the “Magic Box Plan”. We intend to ask the food shop to wrap magic boxes with whatever is left that day and sell them at a low price. Ideally, customers could purchase with a higher quality-price ratio, and shop owners could reduce their loss of waste food. Additionally, it is very fun to purchase a magic bag because people don’t know what they will receive. Therefore, based on this idea, we have designed a system to manage and sell the magic bags.

Model Design



Our model structure is shown in the diagram intuitively. Enterprises are marked by red stars, organizations are marked by purple stars and roles are marked by green stars. In the figure, one can tell the relationships between enterprises and organizations, and which roles have access to certain organizations. Details will be introduced more in corresponding sections below.

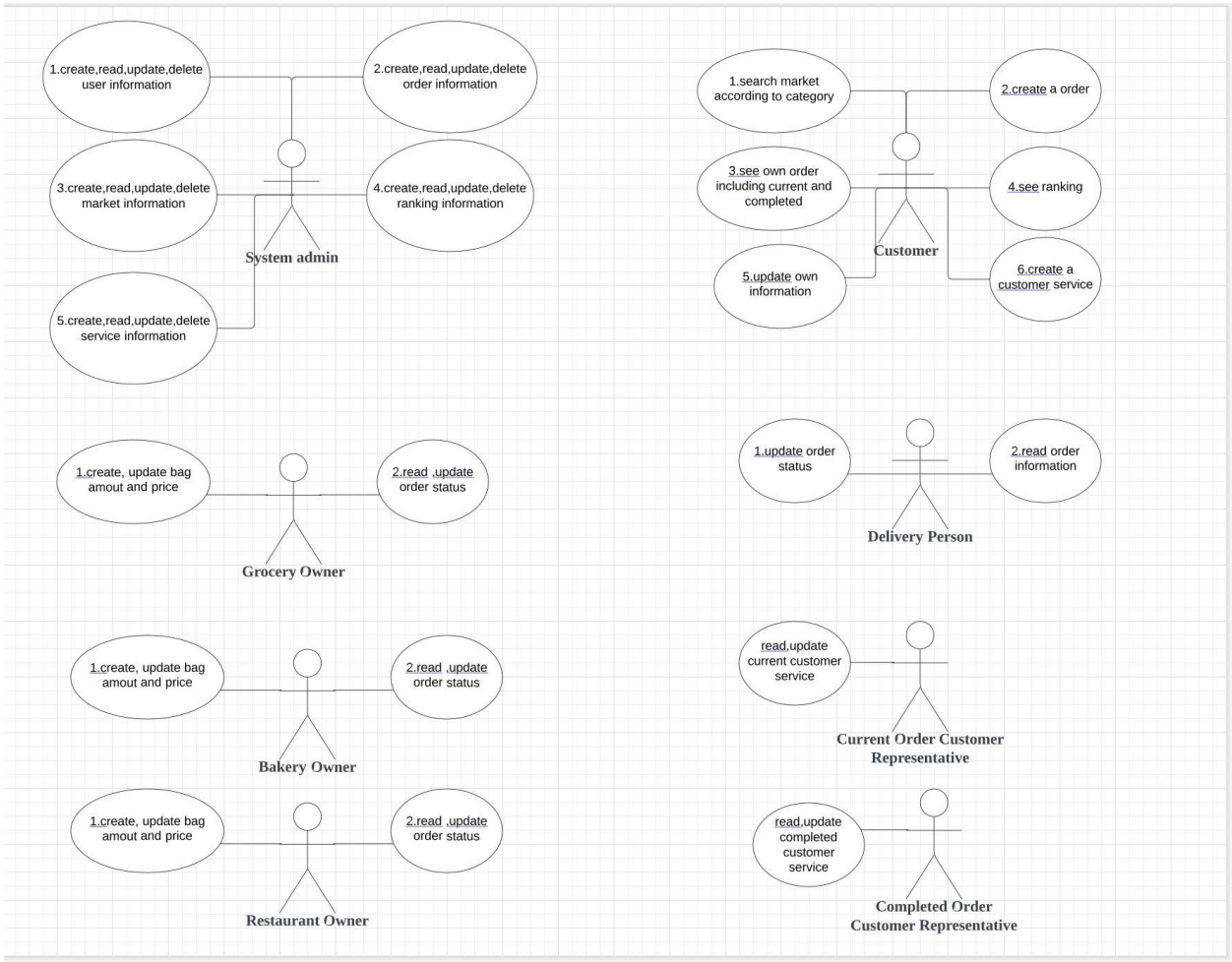
Enterprises

We have designed four enterprises for the system: Order, Market, Ranking, and Customer Service. For each enterprise, different roles will have different access. Details are explained in the next section.

Roles

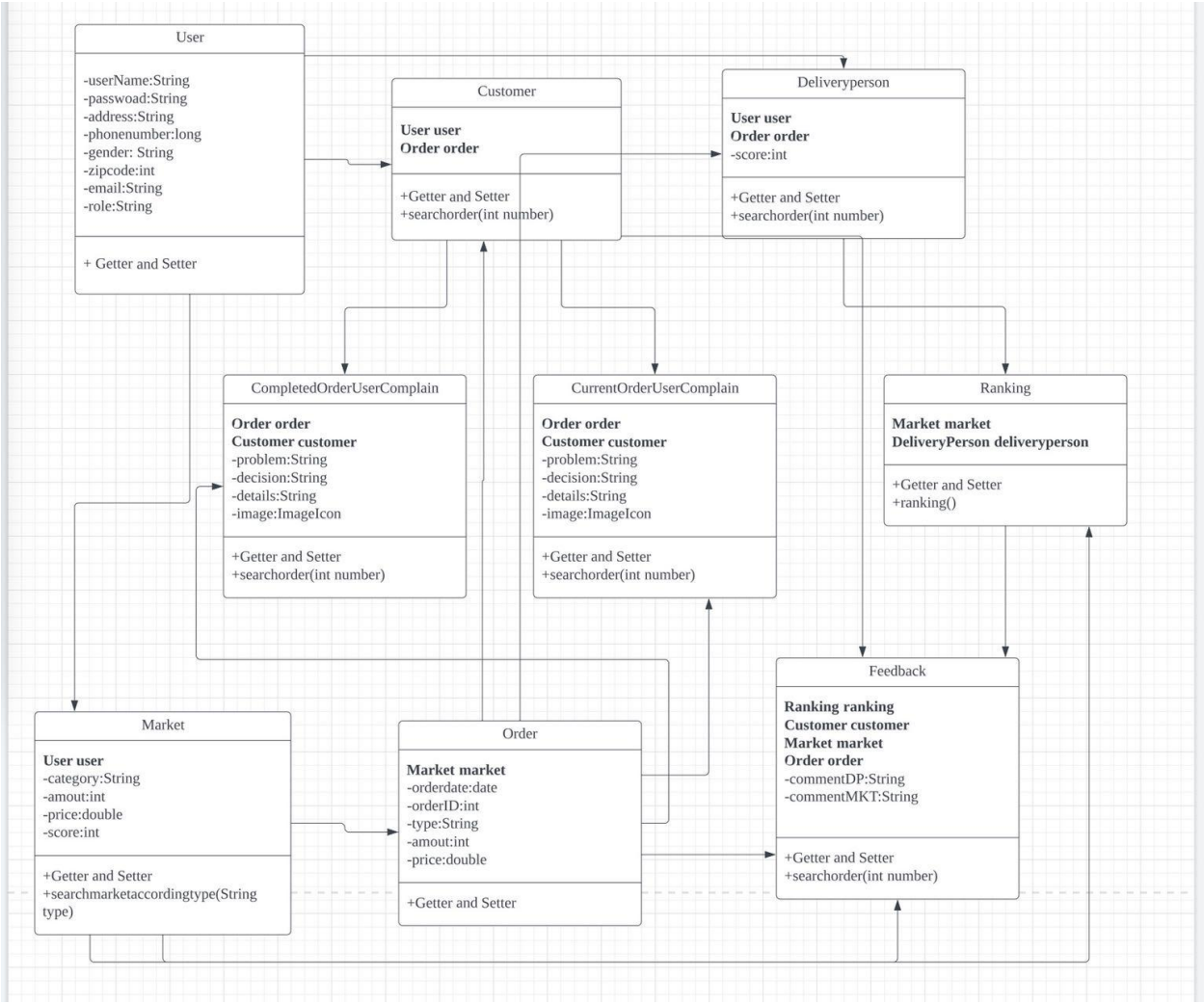
We have set 8 roles for the system: System Administrator, Customer, Delivery Person, Bakery Owner, Grocery Owner, Restaurant Owner, Current Order Customer Service, and Completed Order Customer Service.

1. Customers could check the market, view the market information, view the ranking of the market and delivery person, make an order, provide feedback on the market and delivery person and find customer service.
2. Delivery Persons could view the order information, choose to deliver an order, and change the status of an order.
3. The Bakery Owner could manage the amount and price of the magic bags, view the orders, and change the status of an order.
4. The Grocery Owner could manage the amount and price of the magic bags, view the orders, and change the status of an order.
5. The Restaurant Owner could manage the amount and price of the magic bags, view the orders, and change the status of an order.
6. Current Order Customer Service could view all the problems a customer could have for a current in-progress order. According to the problem a customer meets with, customer service could choose to make up for the customer by giving a certain discount on the order.
7. Completed Order Customer Service could view all the problems a customer could have with a completed order. According to the problem a customer meets with, customer service could choose to make up for the customer by giving a certain discount on the order.
8. The System Administrator could manage all the functions in the system, including CRUD the other 7 users, CRUD orders, CRUD user complaints, and CRUD delivery person.



Classes

We have 9 classes to store different attributes: User, Customer, Deliveryperson, CompletedOrderUserComplain, CurrentOrderUserComplain, Ranking, Market, Order, and Feedback.
Every class has their own methods to be implemented.
Every attribute has their own type like String, Integer, Float, or Date.



Run the Application

Basically, after downloading the project and opening it with NetBeans, one can simply click on the ‘RUN’ button and play with all the functions. User can try with clicking on different buttons and see what happens.