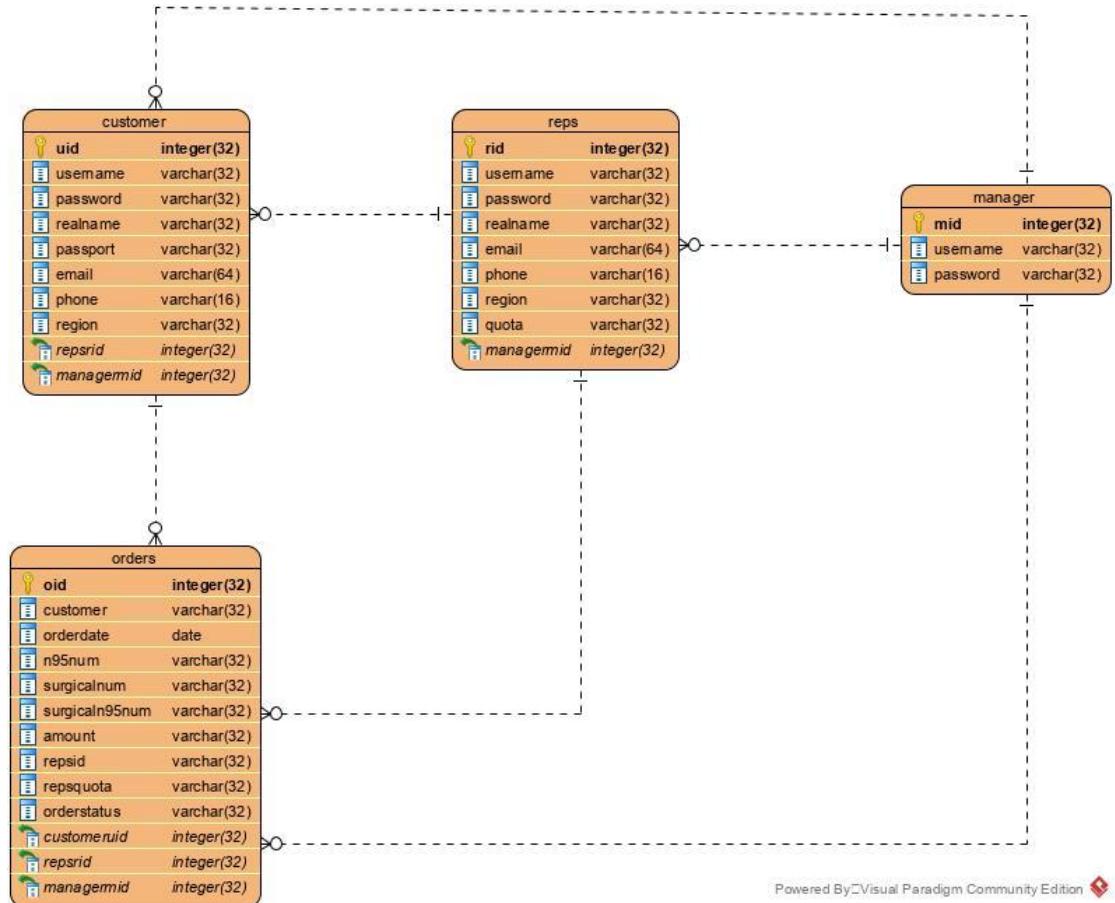


## Sales Management System Reference

### a. Entity-Relationship Diagram



(Assume that there is only one manager in the system)

The manager can assign many reps, but a rep can only be assigned by one manager.

The manager can view many customers information, but a customer can only been seen by one manager.

The manager can view many orders, but an order can only been seen by one manager.

A rep can be chosen by many customer, but a customer can only choose one rep.

A rep can deal with many orders, but an order can only be dealt with one rep.

A customer can make many orders, but a order can only be made by one customer.

b. Create table statement

```
CREATE TABLE customer(
    uid INT PRIMARY KEY AUTO_INCREMENT,
    username VARCHAR(32),
    userpassword VARCHAR(32),
    realname VARCHAR(32),
    passport VARCHAR(32),
    email VARCHAR(64),
    phone VARCHAR(16),
    region VARCHAR(32)
);
```

```
CREATE TABLE reps(
    rid INT PRIMARY KEY AUTO_INCREMENT,
    username VARCHAR(32),
    userpassword VARCHAR(32),
    realname VARCHAR(32),
    email VARCHAR(64),
    phone VARCHAR(16),
    region VARCHAR(32),
    quota VARCHAR(32)
);
```

```
CREATE TABLE manager(
    mid INT PRIMARY KEY AUTO_INCREMENT,
    username VARCHAR(32),
    userpassword VARCHAR(32)
);
```

```
CREATE TABLE orders(
    oid INT PRIMARY KEY AUTO_INCREMENT,
```

```
customer VARCHAR(32),  
orderdate DATETIME,  
n95num VARCHAR(32),  
surgicalnum VARCHAR(32),  
surgicaln95num VARCHAR(32),  
amount VARCHAR(32),  
repsid VARCHAR(32),  
repsquota VARCHAR(32),  
orderstatus VARCHAR(32)  
);
```

c. A brief discussion on why/how the design will work

This website design for 3 types of people, customer, sales representative and manager.

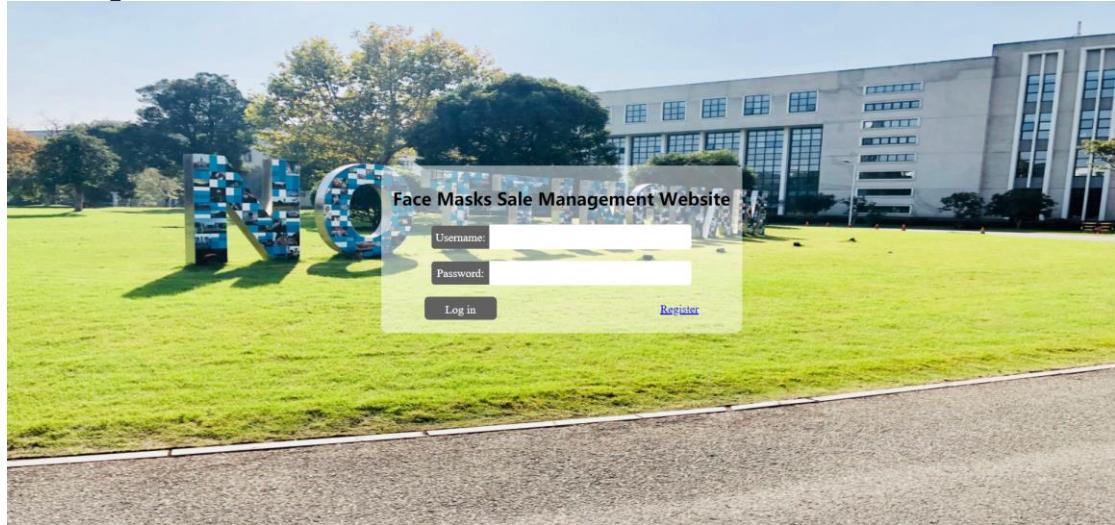
Customers can do registration and log in to the system. Then they can see their own information and also update it. They can make new orderings and cancel it within 24 hours and view the past orders.

Sales Reps can log in to the system and viewing their information including quota and viewing their past orders with customer information. He can also delete the ordering record if the customer's ordering amount exceeds his quota.

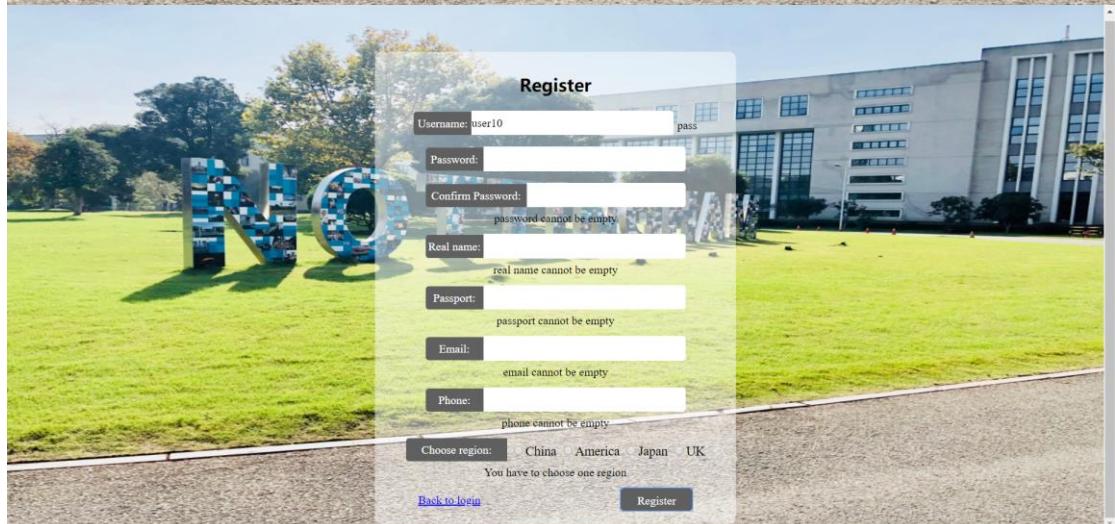
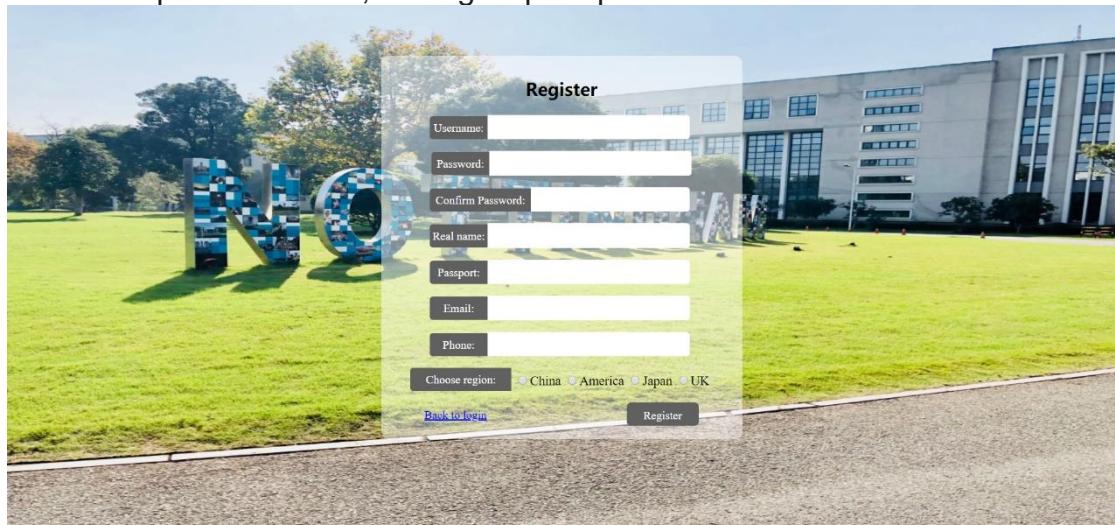
Manager can log in to the system, view many statistics, assign reps, re-grant or update quota for sales reps, and check the ordering in specific conditions.

#### d. A walk through of the SMS

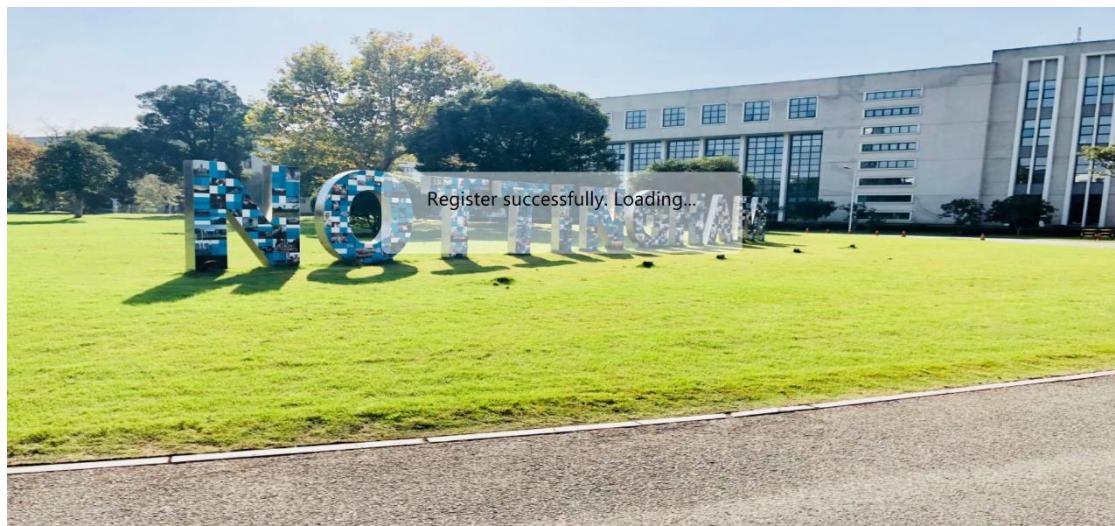
This is the login page. Users can input username and password to log in or click register to create an account.



If the user click register, then he can input information to create an account. If the user input is not valid, it will give prompt.

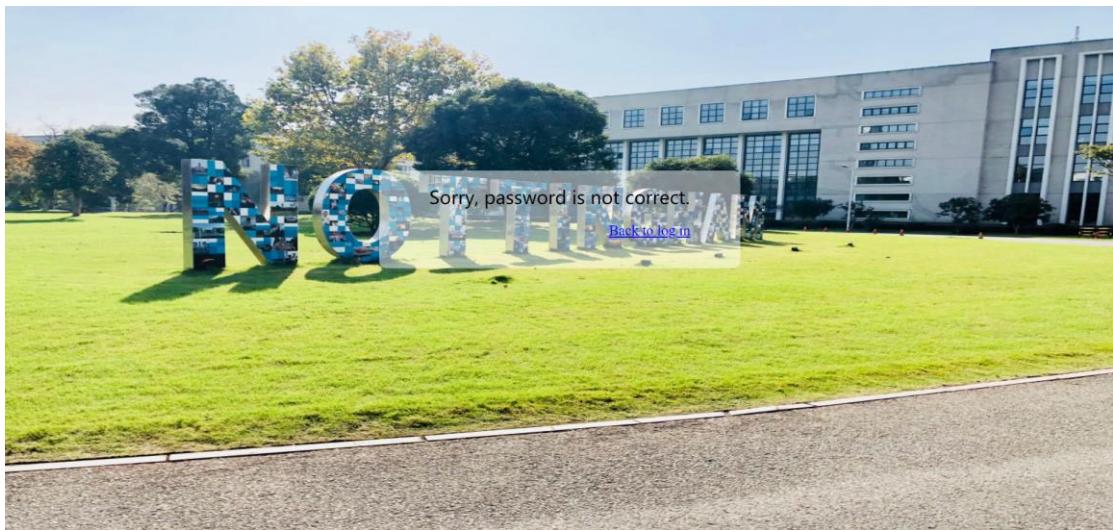


Username must be unique. If register successfully, it will jump to the login page in 2 seconds.

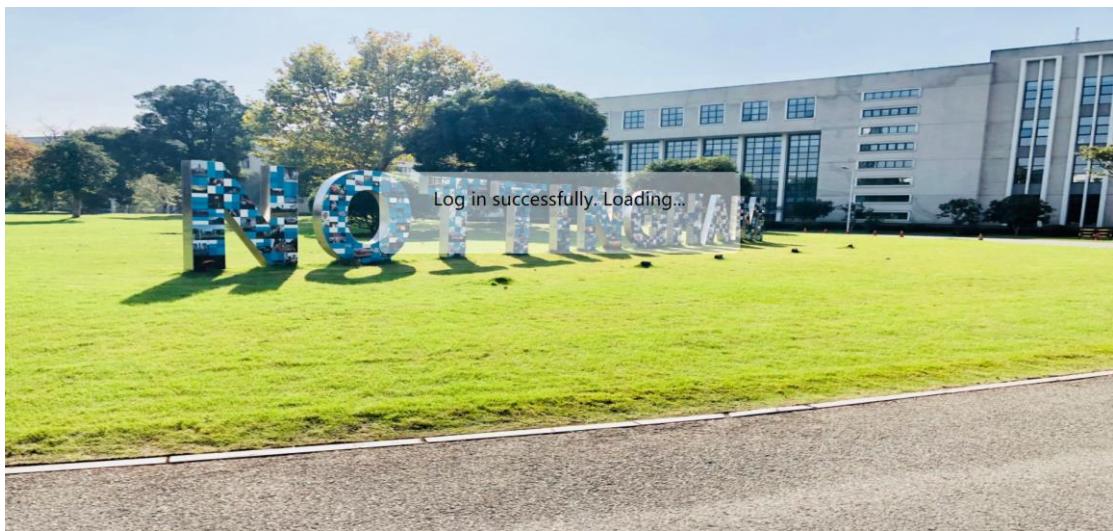


If user input wrong username or password, he cannot enter the system.



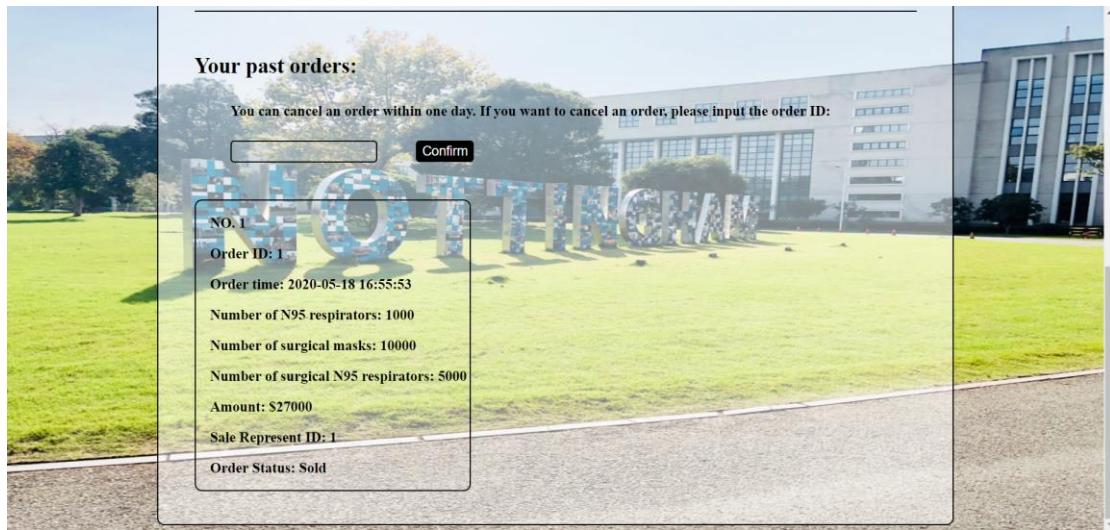


When log in successfully, it will give prompt and enter the corresponding page in 2 seconds.



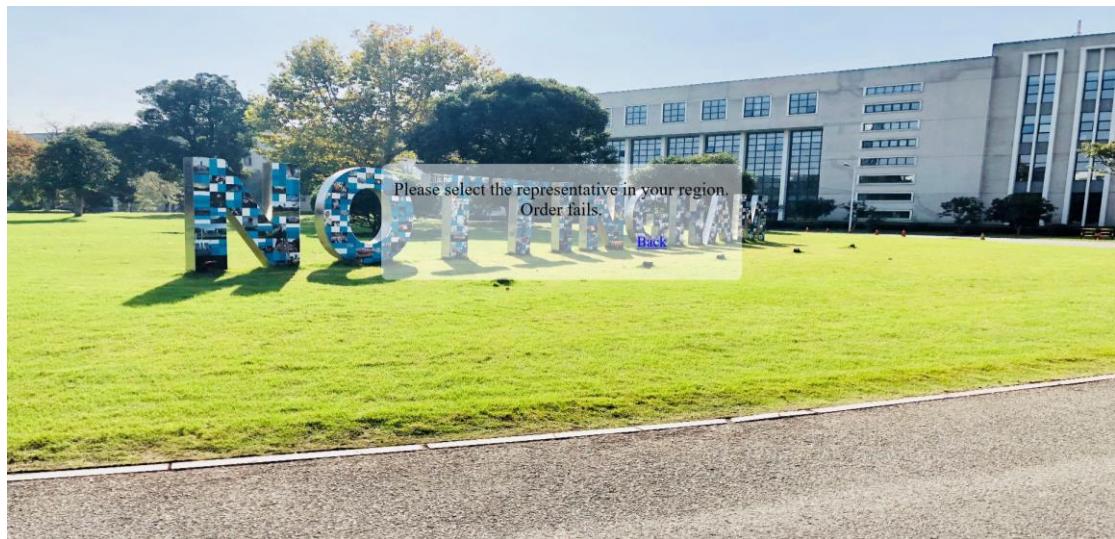
When a customer log in to the system, he can make new orders, view his personal information, update his information, view his past orders, and input the order ID to cancel an order within 24 hours.

A composite image showing a screenshot of a web application's login or order page overlaid on a photograph of the "N95" sculpture. The web application interface includes fields for "Number of N95 respirators(\$2)", "Number of surgical masks(\$1)", "Number of surgical N95 respirators(\$3)", and "Select 1 sale representation in your region with Id:". It also displays user information: Username: user1, Realname: jlk, Passport: 1357, Email: my@qq.com, Phone: 213213, Region: China, and links for "Update information" and "Back to login".

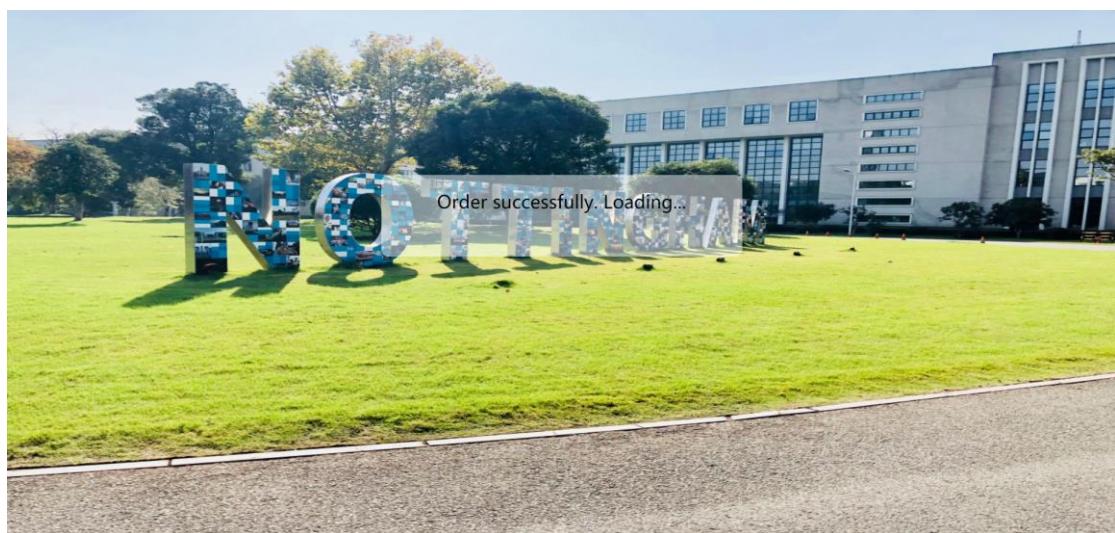


For making order part, the input of numbers and ID must be non-negative integer, and the ID has to be correct.





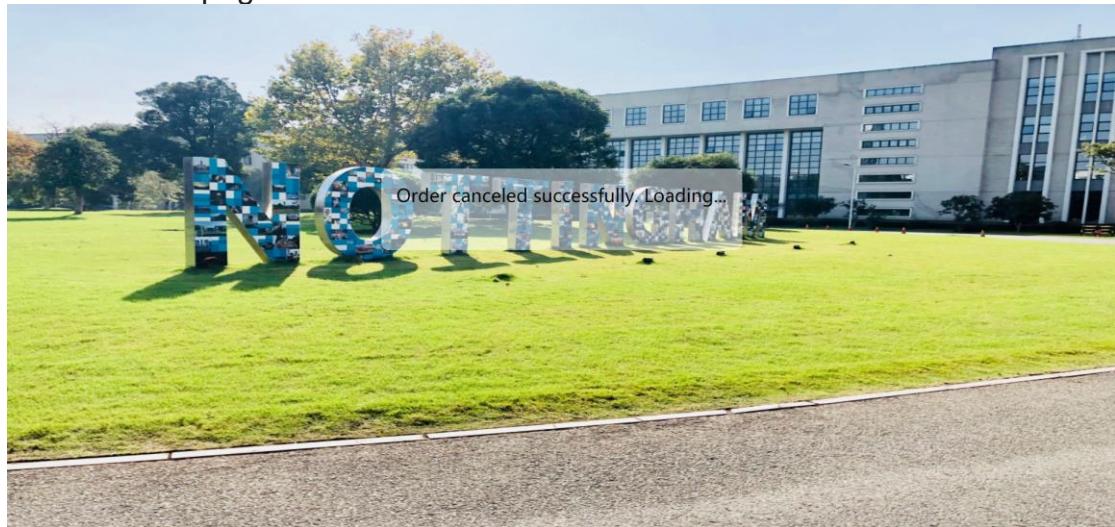
If order successfully, it will give prompt and back to customer page in 2 seconds, and customer can see this order in his past orders.



For cancel order part, the ID input has to be correct, and it should be within 24 hours after the ordering.

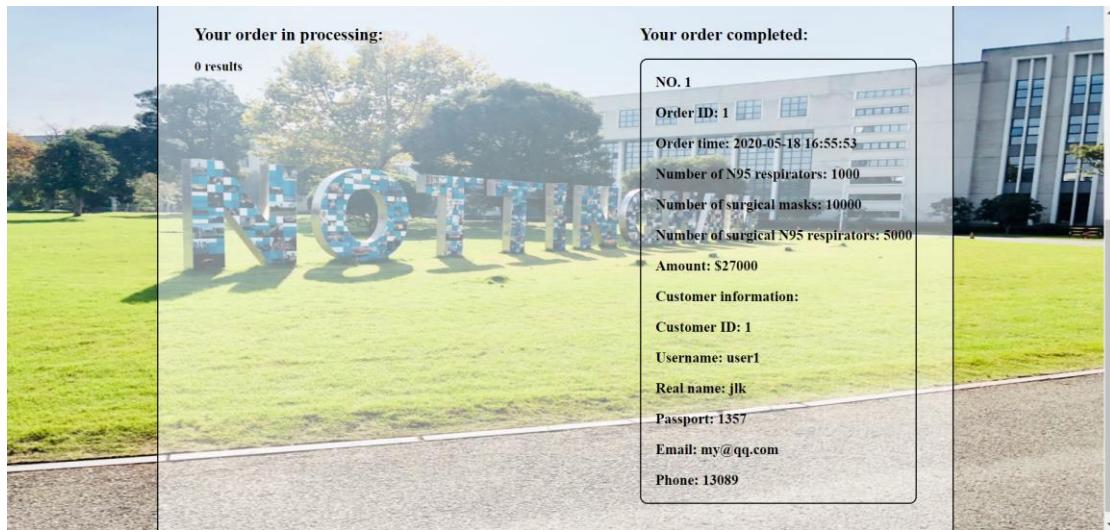


If the customer cancels the order successfully, it will give prompt and back to the customer page.

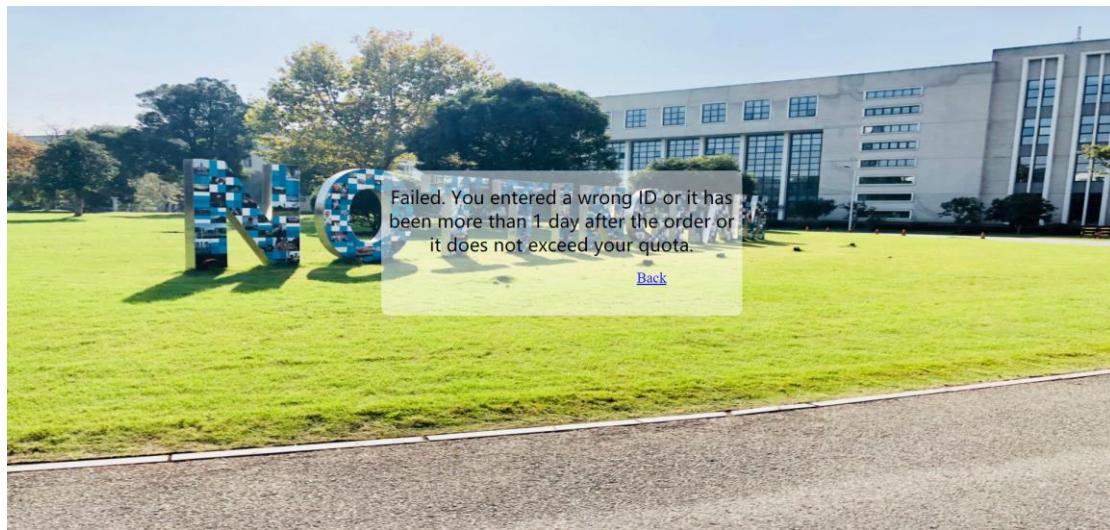
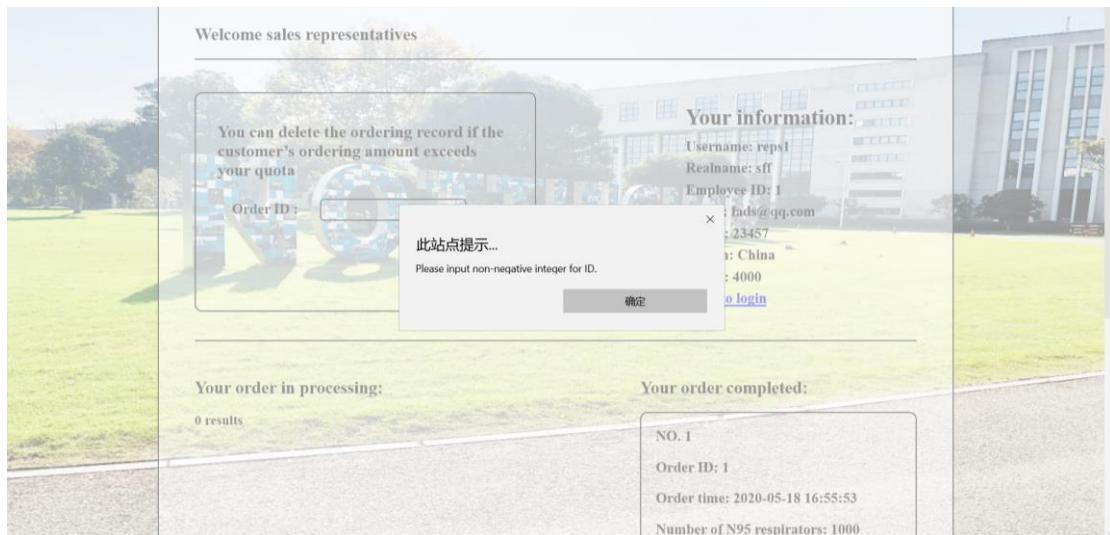


If reps log in to the system, he can delete the order exceed his quota in 24 hours, view his information including quota and past orders.

A screenshot of a web application for sales representatives. The top navigation bar says "Welcome sales representatives". On the left, there is a message box: "You can delete the ordering record if the customer's ordering amount exceeds your quota". It contains an "Order ID:" input field with the value "1" and a "Confirm" button. To the right, under "Your information:", the following details are listed: Username: reps1, Realname: sff, Employee ID: 1, Email: 123@qq.com, Phone: 23457, Region: China, Quota: 4000, and a "Back to login" link. Below this section, there are two tables: "Your order in processing:" (0 results) and "Your order completed:". The "Your order completed:" table shows one entry: NO. 1, Order ID: 1, and Order time: 2020-05-18 16:55:53. The URL <http://cslinux.nottingham.edu.cn/~scylj1/secret/customer.php> is visible at the bottom left.



For delete order part, the input ID should be correct, and it should be no more than 24 hours and exceed the reps quota.

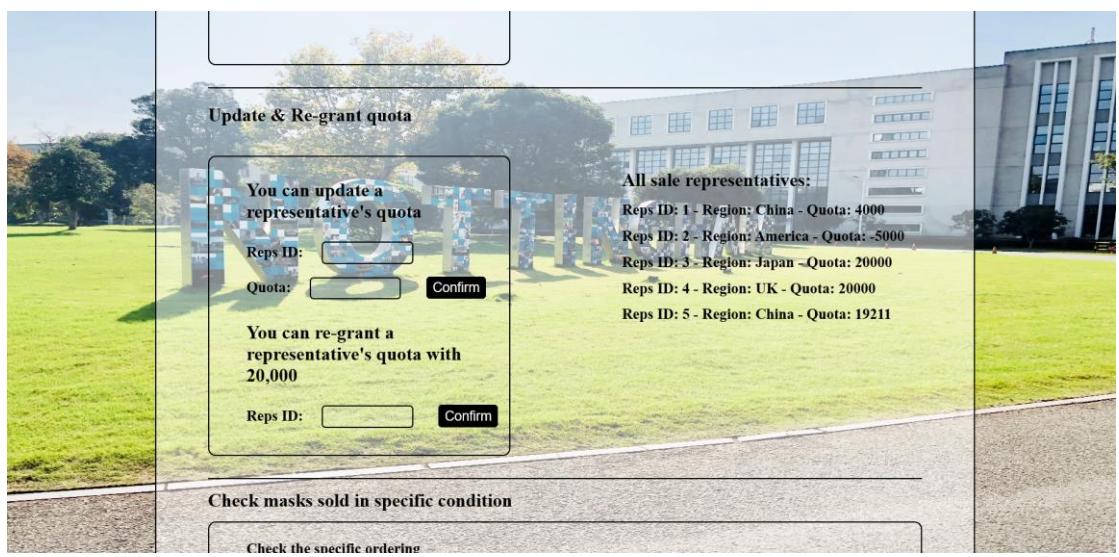


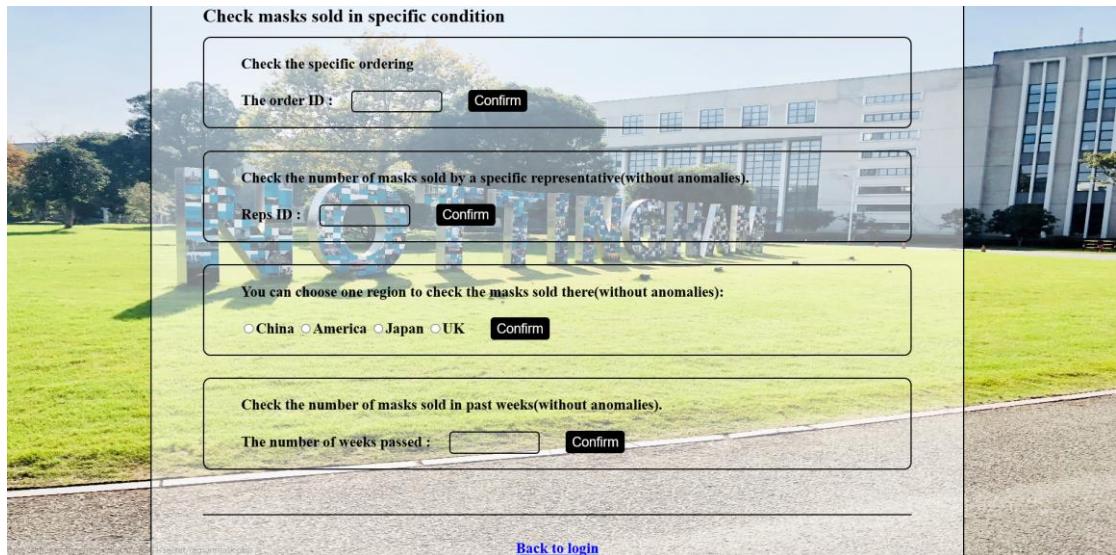
If delete successfully, it will give prompt and back to reps page in 2 seconds.



When manager log in to the system, he can view the abnormal ordering and delete it (means that it will be treated as normal ordering). Manager can view different statistics, including total number of masks sold(with and without anomalies), number of different types of masks sold without anomalies, total revenue and separate revenue, different masks under ordering, total number of customers, number of customers in different regions, average number of masks sold to per customer, masks sold in different regions and reps distribution in different regions. Manager can also assign reps with region and quota. He can update the reps quota when the quota is still available or re-grant quota with 20,000 if the quota is smaller or equal to 0. He can view the detailed information of a specific ordering, check number of masks sold by a specific rep, check number of masks sold in a specific region, and check number of masks sold in the past weeks.







For the abnormal part, manager can click “DELETE” to mark this ordering as normal. If deleting successfully, it will give prompt and back to manager page.



For assigning part, the input ID has to be correct, one region has to be chosen and quota has to be a non-negative integer.

此站点提示...

User ID cannot be empty

此站点提示...

You have to choose one region.

此站点提示...

Please input non-negative integer for quota.



If assigning successfully, it will give prompt and back to manager page in 2 seconds.



For update and re-grant quota part, the input ID has to be correct, quota has to be a non-negative integer. Only when the reps' quota is smaller or equal to 0, it can be re-grant with 20,000.

此站点提示...

Reps ID cannot be empty

此站点提示...

Please input non-negative integer for quota.



If quota updated or re-grant successfully, it will give prompt and back to manger page in 2 seconds.





Quota re-grant successfully. Loading...

For check specific ordering part, the input cannot be empty.

## 此站点提示...

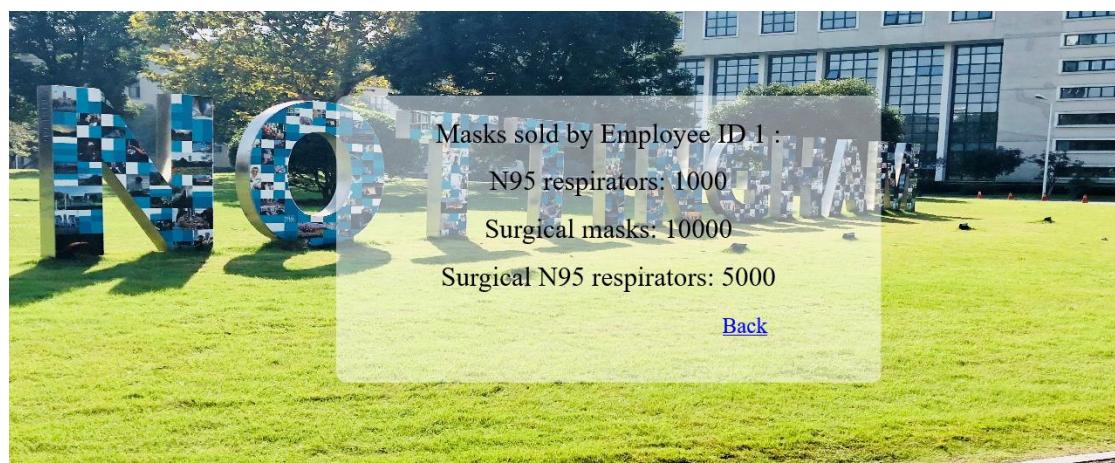
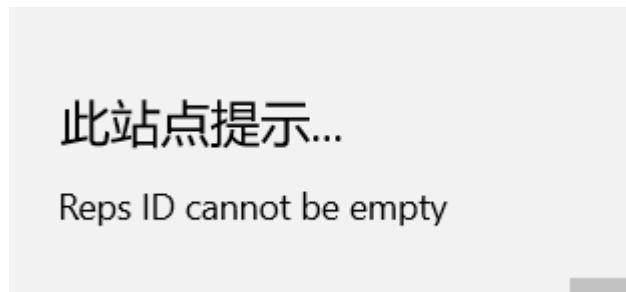
Order ID cannot be empty



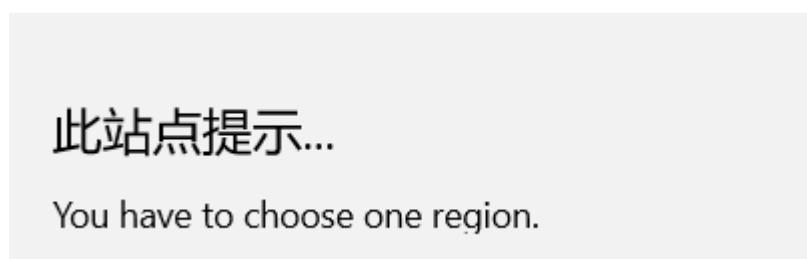
Order ID: 1  
Order time: 2020-05-18 16:55:53  
Number of N95 respirators: 1000  
Number of surgical masks: 10000  
Number of surgical N95 respirators: 5000  
Amount: \$27000  
Customer information:  
Customer ID: 1  
Username: user1  
Real name: jlk  
Passport: 1357  
Email: my@qq.com  
Phone: 13089

Back

For part of “Check the number of masks sold by a specific representative”, the input cannot be empty.

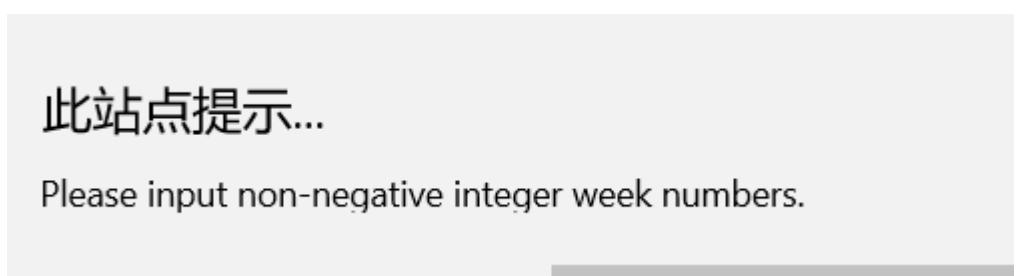


For part of “check masks sold in regions”, the manager have to choose a region.





For part of “check masks in the past weeks”, the input have to be a non-negative number.



#### e. What external libraries are used?

No external libraries, all based on the knowledge taught in class. The picture is taken by myself.