

COMP1041 coursework 2

Face Mask Sale Management Website

Reference

2020/5/25

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1. Overview

1.1 website intro

1.1.1 purpose

A website for brand Woolin Auto to sale their mask, includes N95 respirators, surgical masks and surgical N95 respirators.

1.1.2 font-end

Tech: HTML, CSS, JS, UIkit

The website contains three parts (four more precise). They are customer, sales reps and manager. The customer contains products information, purchase, ordering, inform and account. The sales reps contain ordering, inform, quota, and account. The manager contains statistics (e.g. reps sale he responsible, region, in a period of time...), inform, account and update the price of product. And a special manager admin who can distribute sale reps to manager, see the total statistics for the sales reps and the function other manager has, also, he can register manager, sales reps. Of course, the website contains login, register, update page.....

1.1.3 back-end

Tech: MySQL, PHP

The database contains four table: customer, reps, manager, ordering

and prices. Later, I will intro it more detail.

1.2 Web framework

The framework I use is UIKit, a design library. I use it to beautify my page and just use it on the navigate, card, alert and select. For the card and select, I also generate the same style in my own code same as use the library in 'statistics.php' and some other page, however, not change the precise code which is use UIKit and navigate I use is just let it float at the top. The list of navigate is using my own css.

1.3 Script in 'src'

Create database ---- 'cw.sql'

Back-end ---- folder 'php'

Images use in font-end ---- folder 'images'

Css and js ---- folder 'css' and js in the document with html

Font-end page for customer ---- the scripts start with 'customer-'

Font-end page for reps ---- the scripts start with 'reps-'

Font-end page for manager ---- the scripts start with 'manager-' and 'statistics.php'

Font-end page for admin ---- the scripts start with 'admin-'

1.4 Contributor

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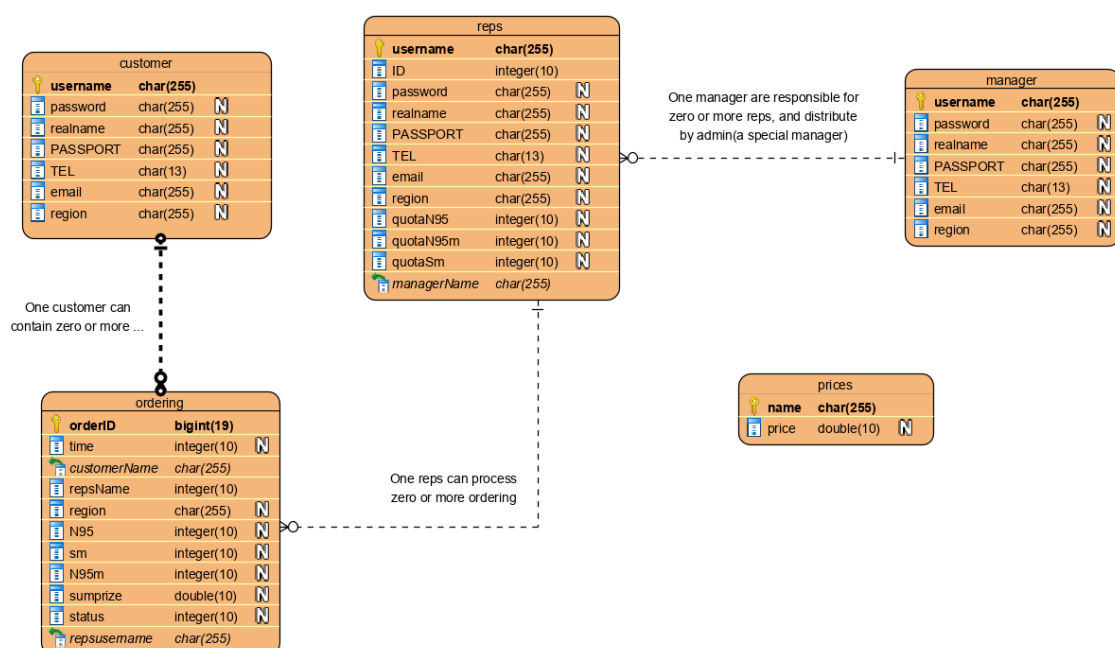
2.Database Design

2.1 Database Intro

There are five table in the database: customer, reps, manager, ordering, prczes. Their relation (same as relation in ER Diagram):

- One customer can contain zero or more orderings (one-to-many).
- One sale rep can process zero or more orderings (one-to-many).
- One manager is responsible for zero or more reps and distributed by admin (a special manager).
- Price is an independent existence; it can modify by manager and it is use in the ordering. However, it deletes and modify not influence other table (the rows have existed).

2.2 Entity-Relationship Diagram



2.3 SQL statements

In 'src/cw.sql' (need to run in database 'scywh1 to create table')

2.3.1 table 'customer'

```
drop table if exists customer;
create table customer(
    username CHAR(255) Primary key,
    password CHAR(255) not null,
    realname CHAR(255) not null,
    PASSPORT CHAR(255) not null,
    TEL CHAR(13) not null,
    email CHAR(255) not null,
    region CHAR(255) not null
);
```

Special key: username | primary key

2.3.2 table 'reps'

```
drop table if exists reps;
create table reps(
    ID int not null,
    username CHAR(255) primary KEY not null,
    password CHAR(255) not null,
    realname CHAR(255) not null,
    PASSPORT CHAR(255) not null,
    TEL CHAR(13) not null,
    email CHAR(255) not null,
    region CHAR(255) not null,
    quotaN95 int not null default 0,
    quotaN95m int not null default 0,
    quotaSm int not null default 0,
    managerName CHAR(255) not null,

    constraint repsFK FOREIGN key (managerName)
        references manager (username)
        on update cascade
);
```

Special key: ID | primary key

 managerName | foreign key | reps

2.3.3 Table ‘manager’

```
drop table if exists manager;
create table manager(
    username CHAR(255) primary KEY,
    password CHAR(255) not null,
    realname CHAR(255) not null,
    PASSPORT CHAR(255) not null,
    TEL CHAR(13) not null,
    email CHAR(255) not null,
    region CHAR(255) not null
);
```

Special key: username | primary key

2.3.4 Table ‘ordering’

```
drop table if exists ordering;
create table ordering(
    orderID bigint primary KEY auto_increment,
    time datetime not null,
    customerName CHAR(255) not null,
    repsName CHAR(255) not null,
    region char(255) not null,
    N95 int not null,
    sm int not null,
    N95m int not null,
    sumprize DOUBLE not null,
    status int not null default 0,

    constraint ordFKcus FOREIGN key (customerName)
        references customer (username)
        on update cascade,

    constraint ordFKrep FOREIGN key (repsName)
        references reps (username)
        on update cascade
);
```

Special key: orderID | primary key

customerName | foreign key | customer

repsName | foreign key | reps

2.3.5 Table 'prices'

```
drop table if exists prices;
create table prices(
    name char(255) Primary key not null,
    price double not null
);

INSERT INTO prices (name, price) values ('N95', 19.9);
INSERT INTO prices (name, price) values ('Sm', 9.9);
INSERT INTO prices (name, price) values ('N95m', 29.9);
```

Special key: orderID | primary key

2.4 Pre data insert into database

2.4.1 Customer

```
INSERT INTO customer (username,password,realname,passport,tel,email,region) values
('CHINAboy','85bf25001ea9d1c256983a951be449a7330cceleaabefd374d67cad2aa00aaf54','jack','11
11111','123-4567-8910','aaa@aaa.aaa','China');

INSERT INTO customer (username,password,realname,passport,tel,email,region) values
('william','d0784c6b1785dcd474688d46b1fe99792ff66f6b56bebf26dda0c08516bac22e','william','
2222222','123-4567-8911','bbb@bbb.bbb','China');

INSERT INTO customer (username,password,realname,passport,tel,email,region) values
('goodnight','55f444d50e5af6bd1ff2c737ab09b613b77be2dc00dc2f330f23d9dc02291517','Paul','3
333333','123-4567-8912','ccc@ccc.ccc','United States');
```

sql

2.4.2 Manager


```

INSERT INTO manager (username,password,realname,passport,tel,email,region) values
('admin','8c6976e5b5410415bde908bd4dee15dfb167a9c873fc4bb8a81f6f2ab448a918','admin','admin','111','111','china');

INSERT INTO manager (username,password,realname,passport,tel,email,region) values
('manCHINA','8d971acc1f30515307abea2ced00c4a4d43d88466392221292a3f29261d61a80','Tom','6666666','123-4567-8915','fff@fff.fff','China');

INSERT INTO manager (username,password,realname,passport,tel,email,region) values
('manCHINA2','0334b83f5c234b3a1709c41d86f7b7628cb66761b3f252c0f589792c0818a80f','Bob','777777','123-4567-8916','ggg@ggg.ggg','United States');

```

2.4.3 Reps

```

INSERT INTO reps (ID, username, password, realname, passport, tel, email, region,
quotaN95, quotaN95m, quotaSm, managerName) values
(20200526,'repsCHINA','a12be54200ea14f082529d7d39ba0805bc6fd3dc6a094e6e7e4e4ad2dfb12a74','Richard','4444444','123-4567-8913','ddd@ddd.ddd','China',10,10,10, 'manCHINA');

INSERT INTO reps (ID, username, password, realname, passport, tel, email, region,
quotaN95,quotaN95m,quotaSm, managerName) values
(20200526,'repsCHINA2','abf7e4010787936fd56c509732b539e8da6850564c4ea26cfed0896960441df4','Wendy','5555555','123-4567-8914','eee@eee.eee','United States',10,10,10, 'manCHINA');

INSERT INTO reps (ID, username, password, realname, passport, tel, email, region,
quotaN95,quotaN95m,quotaSm, managerName) values
(20200526,'repsCHINA3','46d459a8857569e0e792fdb92763f1315cbd3e1ae171694975867379d1109ed','lamb','7777777','123-4567-8916','ggg@ggg.ggg','China',10,10,10, 'manCHINA');

```

sql

2.4.4 Ordering

```

INSERT INTO ordering (orderId, time, customerName, repsName, region, N95, Sm, N95m,
sumprize, status) value ('1','2020-05-11 00:00:00', 'CHINAboy', 'repsCHINA', 'China',
'1','1','1','59.7','0');

INSERT INTO ordering (orderId, time, customerName, repsName, region, N95, Sm, N95m,
sumprize, status) value ('2','2020-05-23 22:00:00','goodnight','repsCHINA2', 'United
States','1','1','1','59.7','0');

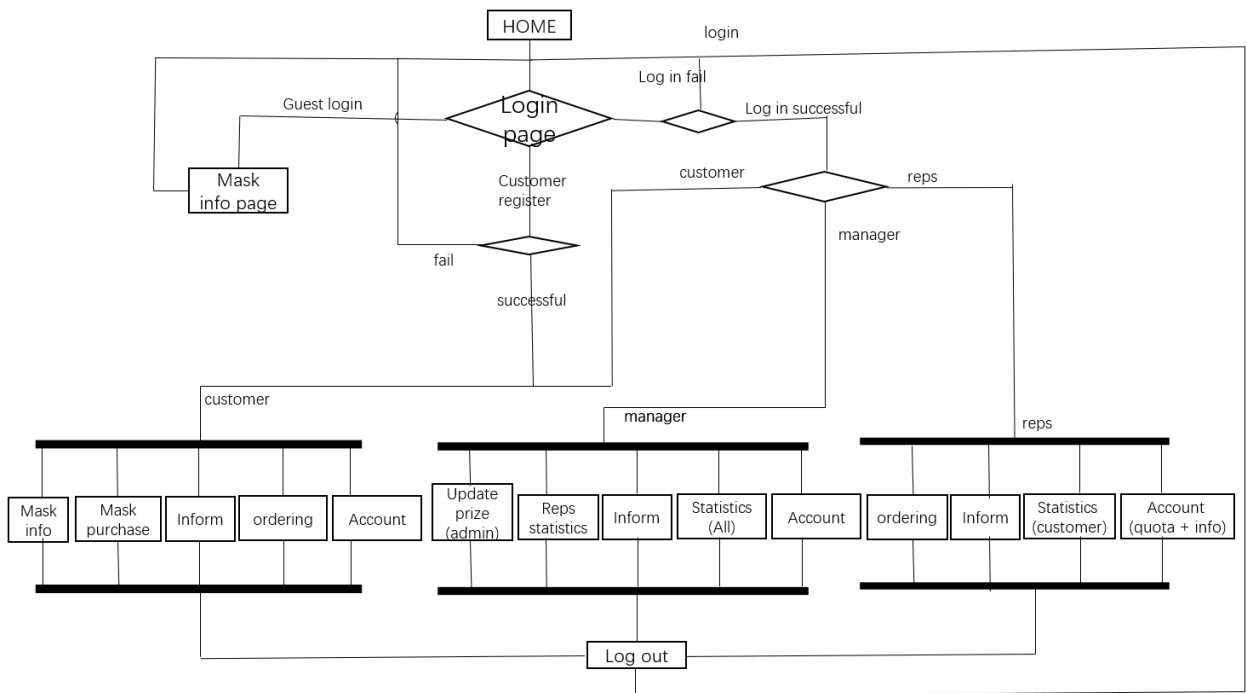
INSERT INTO ordering (orderId, time, customerName, repsName, region, N95, Sm, N95m,
sumprize, status) value ('3','2020-05-11 00:00:00', 'CHINAboy', 'repsCHINA', 'China',
'1','1','1','59.7','2');

INSERT INTO ordering (orderId, time, customerName, repsName, region, N95, Sm, N95m,
sumprize, status) value ('4','2020-05-11 00:00:00', 'CHINAboy', 'repsCHINA3', 'China',
'1','1','1','59.7','0');

```

3.SMS

3.1 Walk Through



3.2 Login, Register Page

3.2.1 Login ---- 'login.php', 'php/login-check.php', 'logout.php'

The screenshot shows the 'Woolin Auto' login interface for customers. At the top, there are three tabs: 'CUSTOMERS' (selected), 'SALES REPS', and 'MANAGER'. Below the tabs, there are input fields for 'User name:' (containing 'username') and 'Password:' (containing 'password'). There are 'LOGIN' and 'RESET' buttons. At the bottom, there is a link 'no account? register' and a link 'Guest login'.

The screenshot shows the 'Woolin Auto' login interface for sales reps. At the top, there are three tabs: 'CUSTOMERS', 'SALES REPS' (selected), and 'MANAGER'. Below the tabs, there are input fields for 'Reps Name:' (containing 'reps name') and 'Password:' (containing 'password'). There are 'LOGIN' and 'RESET' buttons.

These two figures are the login page. The login page for sale reps is same as manager. For all three, if **username or password is not entered**, it will give alert, “Please enter username or password!”. If **username not exist or password is wrong**, it will alert, “Username or password is not correct!”

For the page of customer login, it has two hyperlinks to **register** and **guest login**. If user click guest login, user cannot visit other pages except product information (detail in 3.3). And if user click register, it will jump to register page as below. *(mention: rep sale and manager also can register, but this privilege is only for admin roles, detail in 3.4)*. If log in successful, it will **save username in session**.

3.2.2 Register ---- ‘register.php’, ‘php/addDB.php’

Woolin Auto

Username(6-10, start from letter and only can contains letter, number and '_');

password(6-10, cannot contain space)

password(6-10, cannot contain space, input again)

Password same

Real Name

passport

tel

e-mail

❗ Please match the requested format.

Region

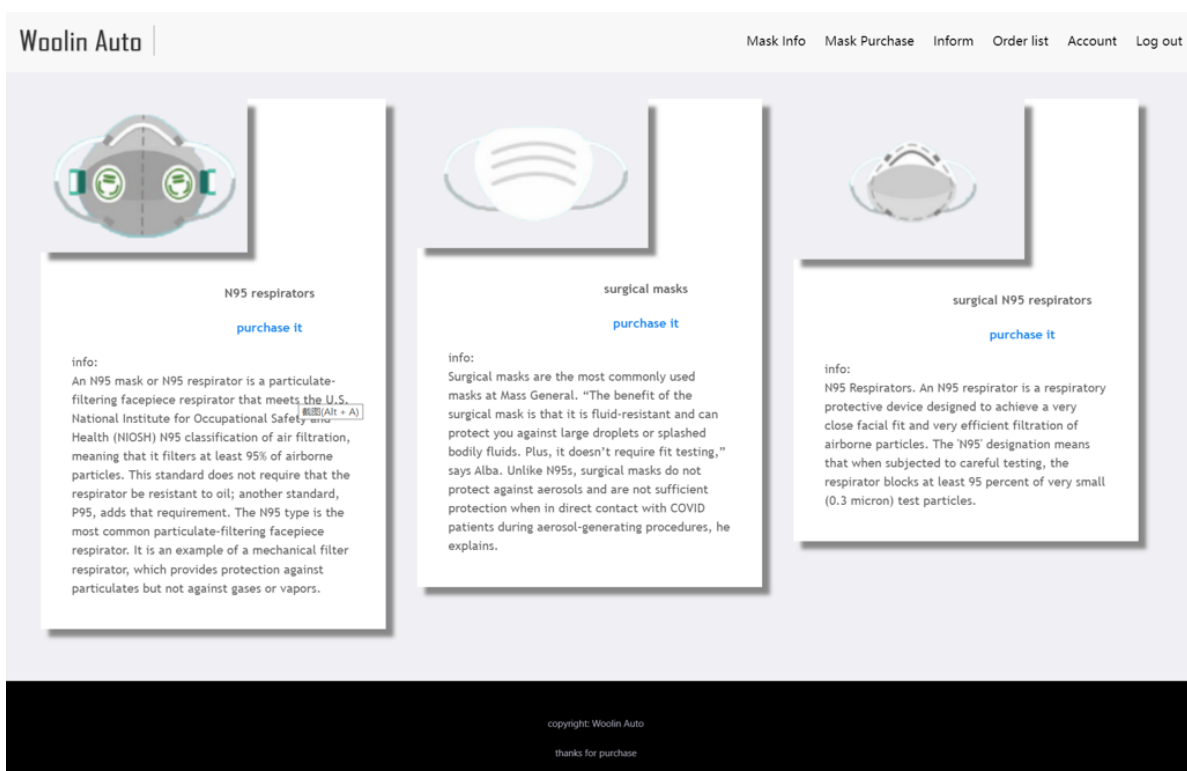
REGISTER

User need to fill in the form which is need to save in database. The eye icon near the password can **show or hide password**. The text “**password same**” will be red and say “**password different**” if input twice not same, also, if password not same, the button ‘register’ is grey and **cannot press**. Also, if user input non-compliant(dotted frame) and press register, it will show as figure. If no input, it will show

‘Please fill out this field’ in same way. After register, it will directly jump to customer index page with the status of login. Also, the password is **encryption** by sha256 and save in database.

3.3 Detail for customer

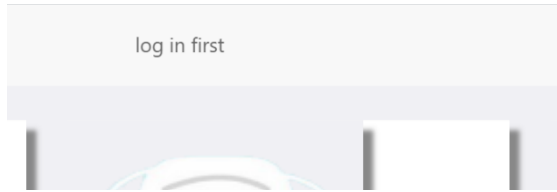
3.3.1 Mask information page ----- ‘customer-index.php’



The page divide into three part: **navigation bar, mask information and footer**. The navigate include a photo in left and a list of navigation. The second part is mask information, includes mask photo and detail info. And the second part is a footer.

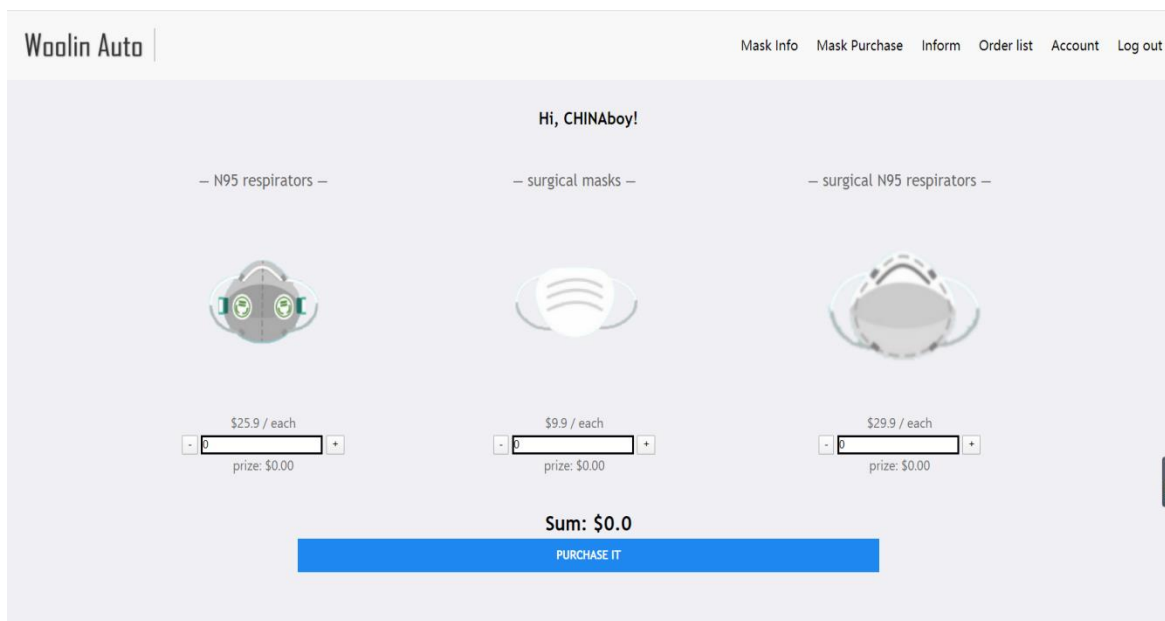
This page also **can be viewed as guest**, and guest cannot click the navigate or ‘purchase it’. For ‘purchase it’, it will jump back to this

page (so not happen anything) For navigate, it will show as below.



An alert can be deleted

3.3.2 Mask purchase page ---- 'customer-purchase.php', 'php/customer-suborder.php'



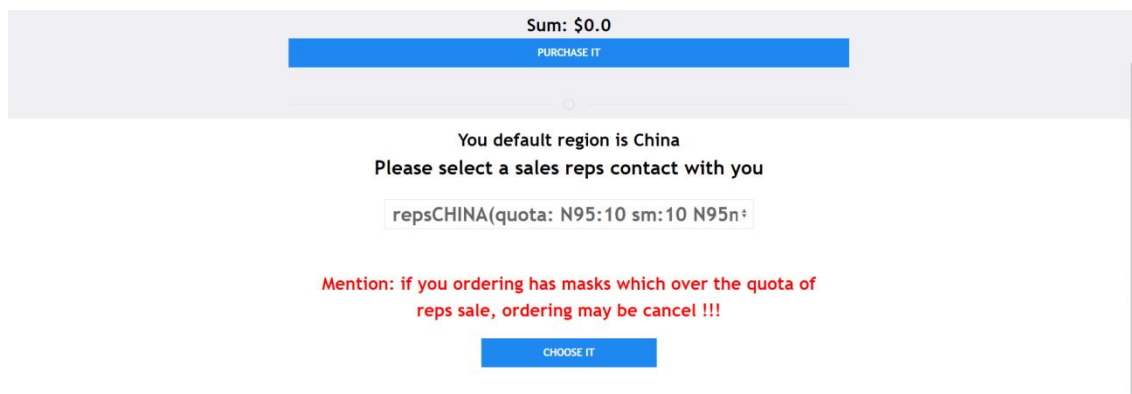
The purchase page also has navigation can jump to other page for customer.

The customer can **directly input the number** they want in **input box**, or click the **'+' or '-' button** (*accomplished by javascript*) to **add number or sub number**. The min value is 0, that mean if it is 0, click '-' button, nothing happened. For the flowing condition using input box, it will auto set the value to 0:

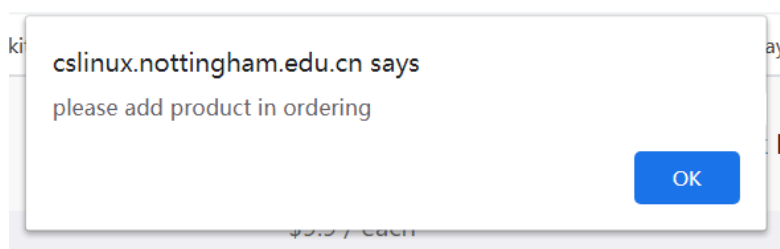
- a. Input nothing.
- b. Input not a number.

c. Input is negative.

The price for each type of mask show behind the input box of that mask, and the total cost is at the top of button ‘purchase it’. If you **modify a number of masks, they will change too**. You can directly click ‘choose it’ or after choose a number of masks. It will show as below (*html display attributes*).



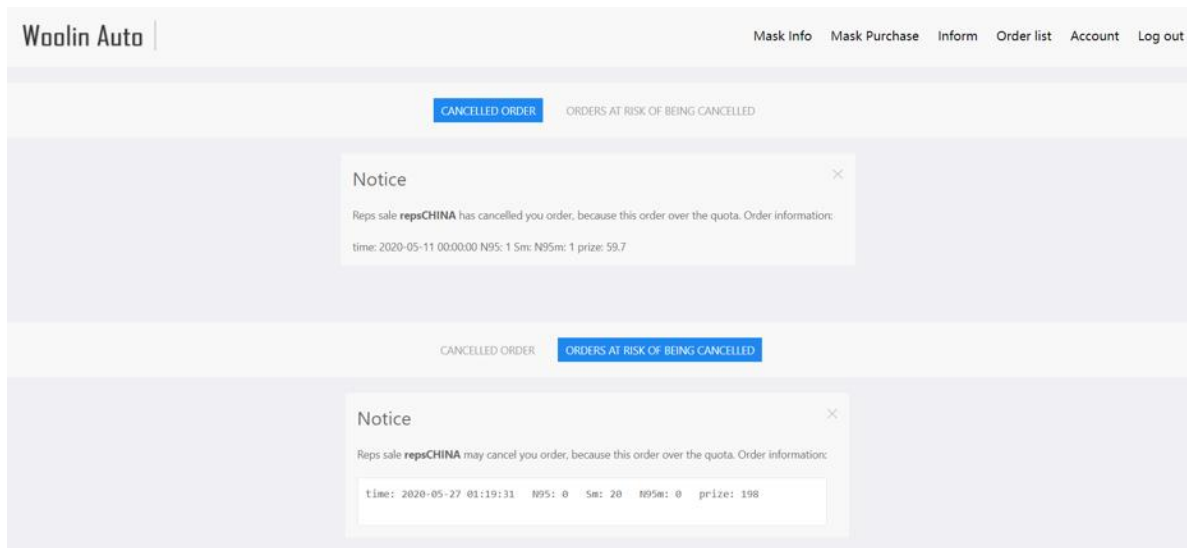
You can choose one sale reps to process you order. And each rep has their own quota for different masks. You can choose one which have enough quota or has a risk be canceled to choose the rep who not have enough quota (see detail in rep part). As I say before, you



can see that without choose a number of masks, however, **you cannot submit**, it will

show you alert as figure. If you choose a number of masks, it will **jump to mask info page**, and you can check it in **ordering page**.

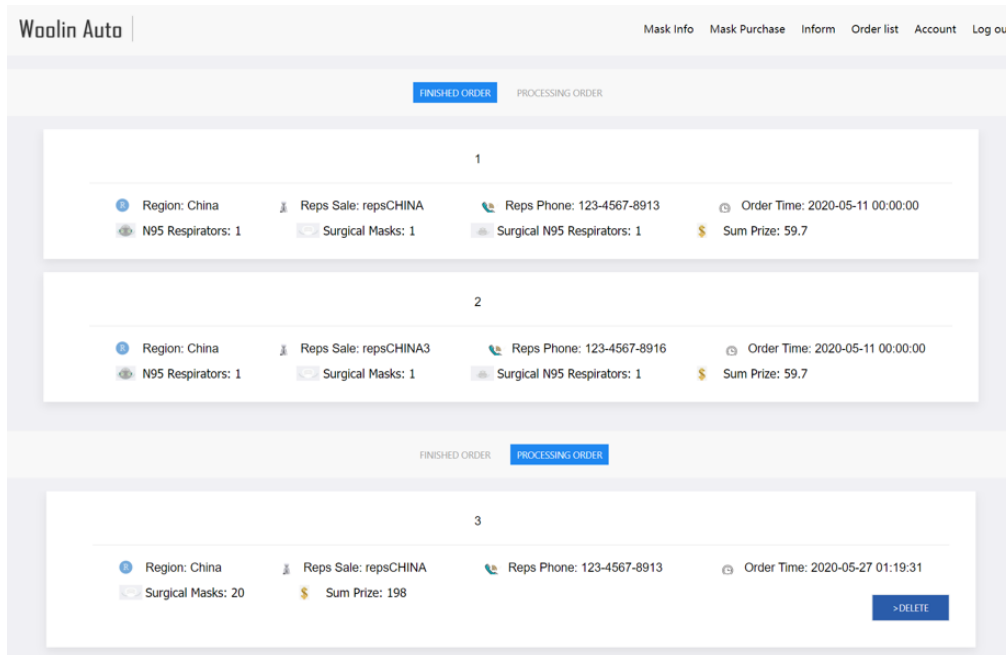
3.3.3 Inform page ---- ‘customer-inform.php’



The inform page divide into two part: cancelled order and orders at risk of being cancelled. For the former you can see you order which is cancelled by reps (*this is accomplished by give different order different status*). The reason it cancels is over the quota of reps even if you order not exceed the quota when purchase it, if further someone purchase over the ordering, reps also have risks to cancel it.

The second part is orders at risk of being cancelled, if the reps you choose to process your special order and **one type of masks you buy over his quota** (for the **whole customer** who purchase from he), it has risks to be cancelled by reps.

3.3.4 Order list page ---- 'customer-order.php', 'delete-order.php'

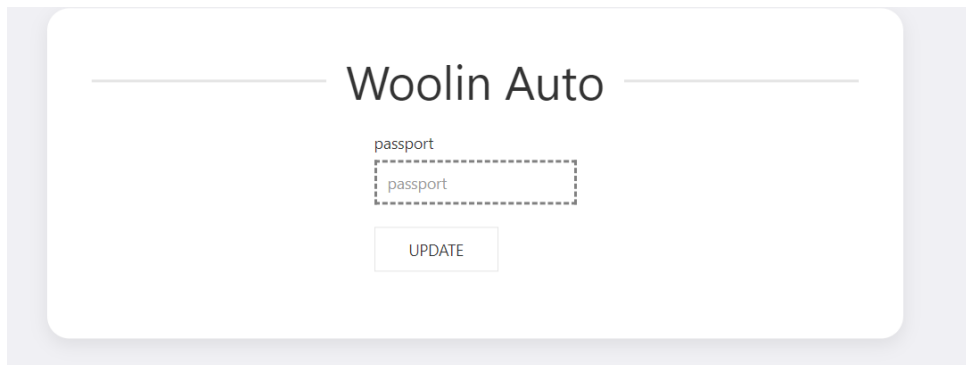


This page also divides to two part: finished order and processing order. They all **order by time (desc, now to past)**. For finished order, you only can check them and no order operate. For the processing order, you can delete it, and it will **give order a new status** which will use to inform the reps that you cancel it. Also, if purchase masks, you can see the order in this page and contact with reps by email of phone. The different between these two statuses is **if order over 24 hours it will seen as finished**, and its status will show when customer see this page. Also, when you delete order, the quota will back to reps.

3.3.5 Account page ---- ‘customer-account.php’, ‘update.php’, ‘updateDB.php’

User Information						
username	password	realname	passport	tel	email	region
CHINAboy	Cannot check	jack	1111111	123-4567-8910	aaa@aaa.aaa	China
	update	update	update	update	update	update

This page just gives customer privilege to modify their basic information.



Woolin Auto

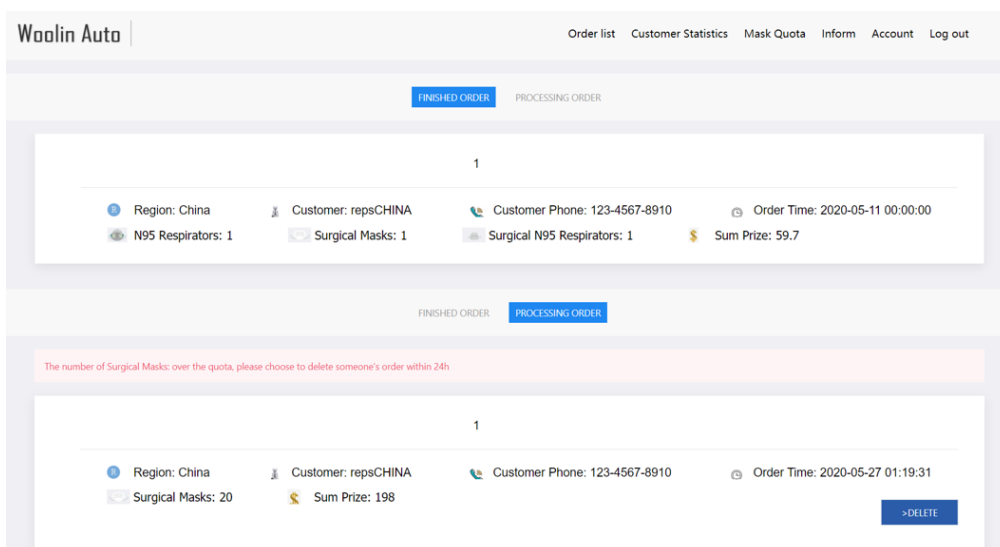
passport

UPDATE

The update page look like this (just an example to update one of customers' info) and it update the information in database. All the update use two file 'update.php' which contain the update page, and 'updateDB.php' in php folder to operate the operation modify in database.

3.4 Detail for reps

3.4.1 Order List page ---- 'reps-index.php', 'delete-order2.php'



Woolin Auto

Order list Customer Statistics Mask Quota Inform Account Log out

FINISHED ORDER PROCESSING ORDER

1

Region: China Customer: repsCHINA Customer Phone: 123-4567-8910 Order Time: 2020-05-11 00:00:00

N95 Respirators: 1 Surgical Masks: 1 Surgical N95 Respirators: 1 Sum Prize: 59.7

FINISHED ORDER PROCESSING ORDER

The number of Surgical Masks: over the quota, please choose to delete someone's order within 24h

1

Region: China Customer: repsCHINA Customer Phone: 123-4567-8910 Order Time: 2020-05-27 01:19:31

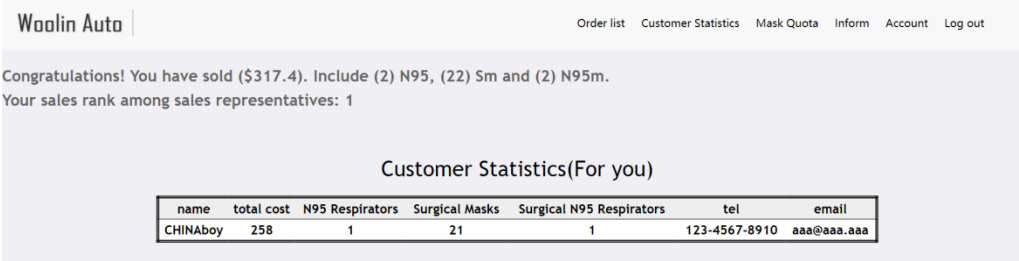
Surgical Masks: 20 Sum Prize: 198

>DELETE

The order page is same as order page in customer, and only different is reps do not have privilege to casually delete customer's order, only when quota of mask become negative, he can choose to **delete the orders which contain this type of masks**. Also, reps cannot delete the order over 24h, even if it over the quota. The **delete order will have a new status** and if customer login, he can **check it in inform page**.

3.4.2 Customer Statistics page ---- 'reps-statistics.php'

It only has a table, include all the customers who purchase from this sale rep **order by desc**. It also shows the **total mask he has sold** and **the rank of all the sale reps**.



Woolin Auto | Order list Customer Statistics Mask Quota Inform Account Log out

Congratulations! You have sold (\$317.4). Include (2) N95, (22) 5m and (2) N95m.
Your sales rank among sales representatives: 1

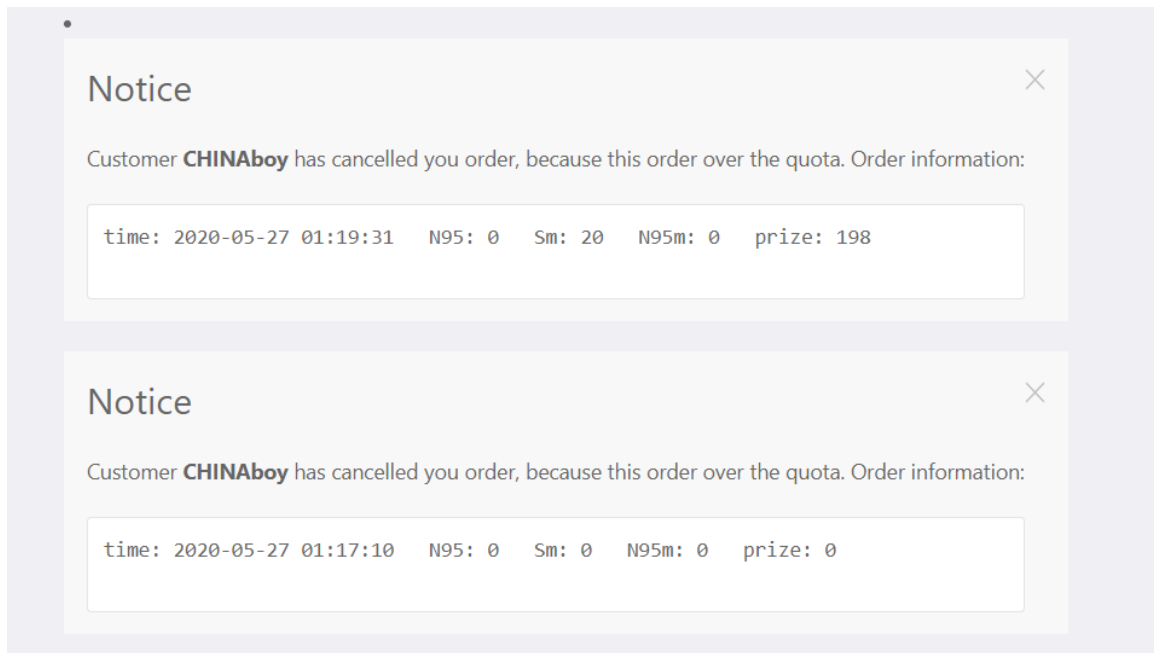
Customer Statistics(For you)

name	total cost	N95 Respirators	Surgical Masks	Surgical N95 Respirators	tel	email
CHINAboby	258	1	21	1	123-4567-8910	aaa@aaa.aaa

3.4.3 Mask Quota page ---- 'reps-quota.php'

From this page, reps can **get the remain quota and how many quotas exceed**. The number of **masks under processing** and **how many masks he can cancels**.

3.4.4 Inform page ---- 'reps-inform.php'



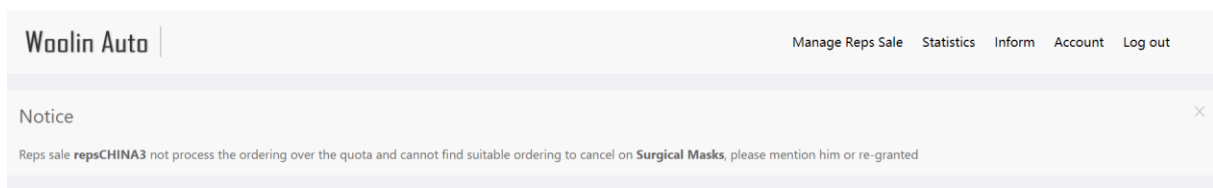
This page shows the order which is delete by customer (by **get the status of order in database**).

3.4.5 Account page ---- 'reps-account.php'

Same as account in customer, except sale reps cannot modify the region it responsible for, also a new basic information ID show in this table.

3.5 Detail for manager (include admin)

3.5.1 Inform page ---- 'manager-inform.php'



This page shows the inform only if **some sale reps cannot recover**

their quota to positive or 0, it will give manager a inform. This page is **load once manager login**. It will show which sale reps which mask is over the quota. And manager can choose to regrant it in the manager reps sale page.

3.5.2 Manager rep sale ---- ‘manager-inform.php’, ‘update.php’, ‘updateDB.php’

👑 Champion sale reps(only you responsible): repsCHINA

Select reps sale to see:

repsCHINA

Reps Sale Information

name	tel	email	region	update region
repsCHINA	123-4567-8913	ddd@ddd.ddd	China	update
quotaN95	quota5m	quotaN95m	re-grant quota(<0)	update quota(>=0)
10	10	-5	re-grant	update
sale N95	sale 5m	sale N95m	total number	total revenues
1	1	16	18	508

👑 Champion sale reps(only you responsible): repsCHINA

Select reps sale to see:

repsCHINA3

repsCHINA
repsCHINA2
repsCHINA3

Reps Sale Information

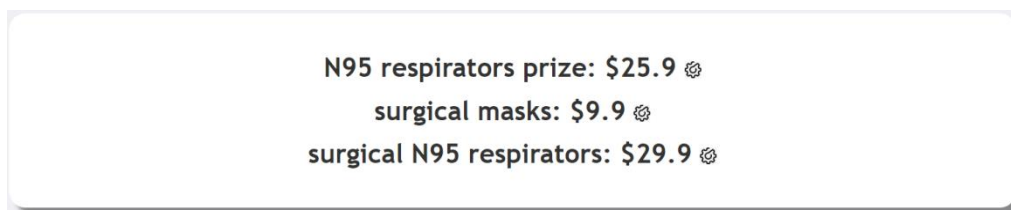
name	tel	email	region	update region
repsCHINA3	123-4567-8916	ggg@ggg.ggg	China	update
quotaN95	quota5m	quotaN95m	re-grant quota(<0)	update quota(>=0)
10	-5	10	re-grant	update
sale N95	sale 5m	sale N95m	total number	total revenues
1	1	1	3	60

The manage sale reps page contain a select bar, table and champion sale reps. For the manager exception admin, he **only** can **check the reps he responsible**, and **for admin**, he can **check all the reps**. Manager can re-grant or update the quota. For re-grant, manager **only can re-grant the mask which is less than 0** (in update page quota ≥ 0 cannot input), also, for update,

manager can only update the quota of mask which is ≥ 0 (in update page quota < 0 cannot input). Also, manager can update the region of reps he responsible. *In this table, table change accomplished by set disable element of 'div', and add mouse listen in javascript to make sure it changes or not. If change delete the 'select' tag and add in selected one.*

3.5.3 Statistics ---- 'statistics.php', 'showR.php', 'showT.php', 'update.php', 'updateDB.php'

This page contains five part.



The first part shows the price of different product, also, **manager have the privilege to modify them.** After modify, it will not affect the order have sold, but the future order.

The second part is three table contains the whole masks has sold, number of different masks have sold, total revenues. And three table is for the whole order, the order under processing ($< 24h$), the order finished ($\geq 24h$).

👑 Sale champion region: China

Select region to see(only the region have orders):

China ▾

Region statistics

N95 respirators	surgical masks	surgical N95 respirators	total Number	total Revenues	customer number
2	2	17	21	568	2

The third part is Region statistics. You can select the region you want to see. *This is accomplished by onchange to call the js function and get table from a php file.*

Statistics(A range of time)

Start Date:

End Date(not include):

The fourth part is statistics in a range of time. Manager can choose a time between 'start' and 'end'. And it will show the statistics as above. *This is accomplished a little same as above, except pass the start and end date to statistic by id and GET. (Mention: end date not include)*

The last part is customer statistics, include two table, a total statistic and a table include all the customer order by cost desc.

3.5.4 Account ---- 'manager-account.php', 'update.php', 'updateDB.php'

This page same as other account page can update info.

3.5.5 admin

Admin include all the thing manager can do. Also, he can see all the sale reps. There are three extra function.

- a. Add manager. (Register)
- b. Add sale reps. (Register)
- c. Distribute reps to manager (A table for all the reps and manager responsible for them, admin can distributer reps to a new manger).

Distribute reps to manager

Manager Name	Reps Name	Operation
manCHINA	repsCHINA	update
manCHINA	repsCHINA2	update
manCHINA	repsCHINA3	update

4. Additional functions over expect.

4.1 Customer informs

If customer order is cancelled by reps, it will give a inform, also, for the order has a risk of cancelled by reps.

4.2 Customer Info Update

Customer can update their information in account page.

4.3 Reps customer statistic

Sale reps can scan the customer who have ever buy from his order by cost desc. Also, he can check the rank of he in all reps in 'customer statistics' page.

4.4 Reps inform

If customer delete the order, the reps who process this order can receive a inform.

4.5 Reps Info update

Sale reps can update their information in account page.

4.6 Manager Info update

Manager can update their information in account page.

4.7 Manager sale champion and region champion...

Each statistic has a champion, manager can see who sale the most mask or which region sold most.

4.8 Manager update price

Price of product can be update by manager. It will not influence the order have sold, just the future order.

4.9 Admin role

Admin can see the statistic of all the sale reps. Also, he can distribute the reps to manager, create new reps and managers.

4.10 Status of order

Give order different status make sure it will give different inform if delete by different people. Not just delete it.

5. Security

5.1 Password Encryption

Use sha256 to process the password.

5.2 Use session rather than cookie to keep login status

When I first finish my code. I use cookie to save my login status. However, when I finish all the work and check the cookie in Google. I find its easy to add new cookie and if someone know username, he can easily enter the page. Also, I try to encryption the password, but not deal with the problems. So, I use session (back-end) to keep the login status, make sure it not easily login by someone else.