The improvement and extend of gradually expiring food online store

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0　Abstract

This project is about the gradually expiring foods. Because the lack of the understanding of gradually expiring foods, most of people in Taiwan even don't know what is this. Thus, in this project, I want to provide a platform to enhance the chance that people can understand about gradually expiring foods. I think the features of this platform is not just for making money. I expect that this platform can do more big things. Such as help the vulnerable groups and reduce the pollution. We are all inhabitants of the earth, we have to protect our home.

1　Introduction

1.1　Research background and motivation

Nowadays, there are about 13 tons of food waste in the world each year. The pollution caused by food waste is more than the pollution caused by exhaust gas produced by cars and motorcycles.

Many countries pay more and more attention on the problem of waste food. France even ask supermarkets must to donate the food to the charity if food is not sold.

As for what is gradually expiring food(□ □ □ □)? Many people only know that it is the product which is near the expiry date. However, how to define "almost expired". And how to get the product which is almost expired? I think this lots of people's questions. Because there are just too few gradually expiring food entity store in the market right now. If you want to search the store on google map, you do not even know what keyword you should key in. You can get difference results if you type gradually expiring foods, gradually expiring items, or gradually expiring products. Moreover, the numbers of stores you get by googled is very small.

If you want to search for the platform which is used to integrate the gradually expiring food, you can't find it easily. The first result you search is auction website instead of anything about gradually expiring items. And if you want to search for the app about gradually expiring food, you can only find a simple app which is coded by university student. This shows, the visibility and reputation of gradually expiring

food are too low in Taiwan.

And the charity event about selling gradually expiring food is usually a promotion which is hold by specific type store, for example, organic vegetables store. In this way, only people of this group can get this information, and other people miss the chance to reduce the waste of food and do good things.

1.2 Research purposes

To Build an online platform which is used to sell the gradually expiring product specially. Through this expiring product online store, customer can use some functions like adding products to the favorite, add products to shopping cart, modifying personal information, etc. Every user can see the gradually expiring food entity store near her or himself. Sellers can upload the products to the website, they can also know that how many people are following their products, and they can also know that the quantity of products ordered by customers.
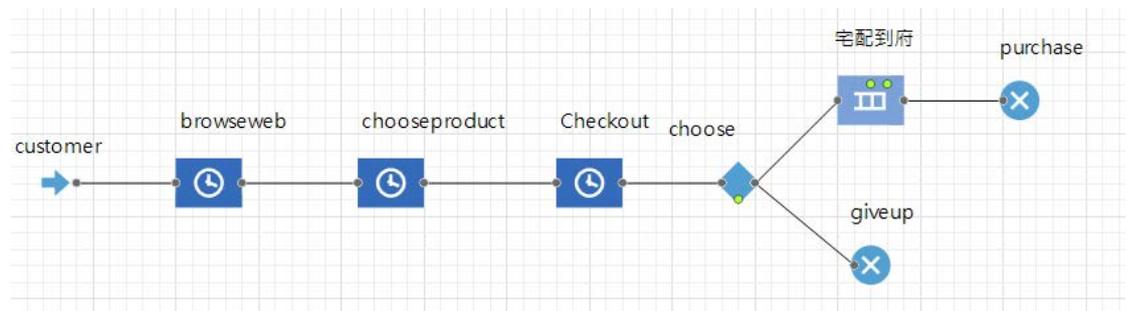
The final goal of this project is hope that through this platform to enhance people's understanding of gradually expiring food, and enhance the visibility of gradually expiring food, to make people

realize the benefit of gradually expiring food (for example: very

cheap). And through this platform to publicize the charity events. As

this way, people can purchase the gradually expiring food at a cheap

price, and reduce the food waste, and more to benefit the vulnerable

groups, you could say so it is kill three birds with one stone.
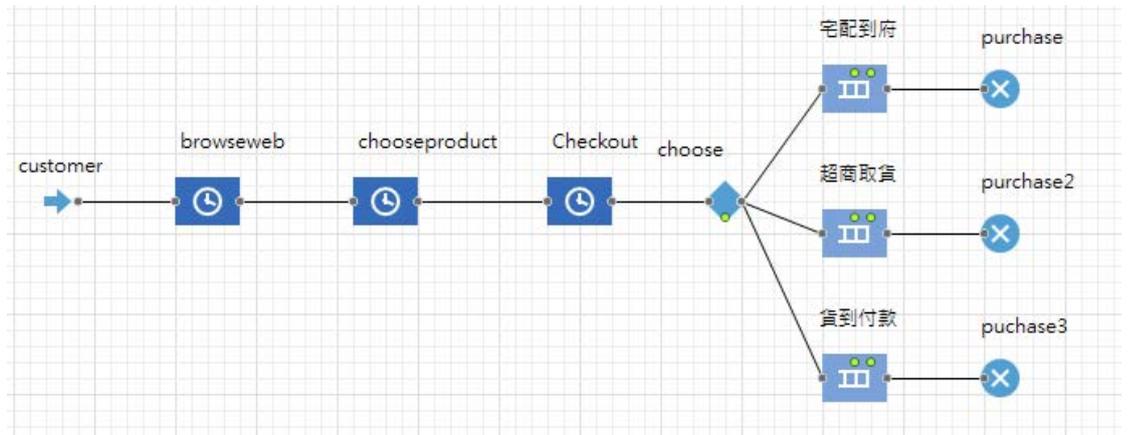
2 Improve model

2.1 As-is process

The process before improve is show in following picture. When

customer visit the website, he or she choose the products and add in

to the shopping cart. Then he or she wants to check out, when he or

she finds that there are only one way to get goods, he or she may still

purchase the products. However, most of customer would give up on

purchasing the products.

2.2 To-be process

After improvement. To-be model is show in following picture,

there are many ways to get the goods. Thus, customer would

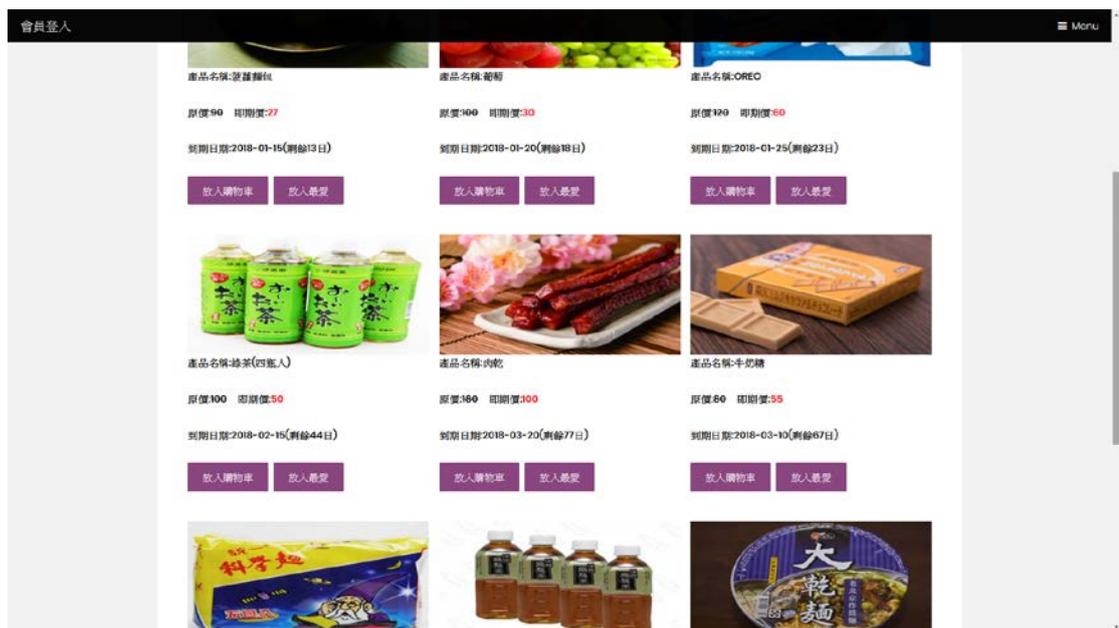purchase the products instead of giving up.

3　Website application

In this project, I use lots of php to build a complete website. I only

have one html file. This mean almost all files can connect to database. Thus,

visitors can experience complete functions in my platform.

3.1　Homepage(php type)

My website named as "□ □ □ □ ". In my index, I use the styles

of simple and fashion, which can make visitors feel comfortable. And I

use javascript to make the pictures in cover switch automatically, it

can increase the level of my platform. Visitors also can click the menu

in the upper right corner of the page to pop up the list of function

(red box). This design can make the platform more simple.
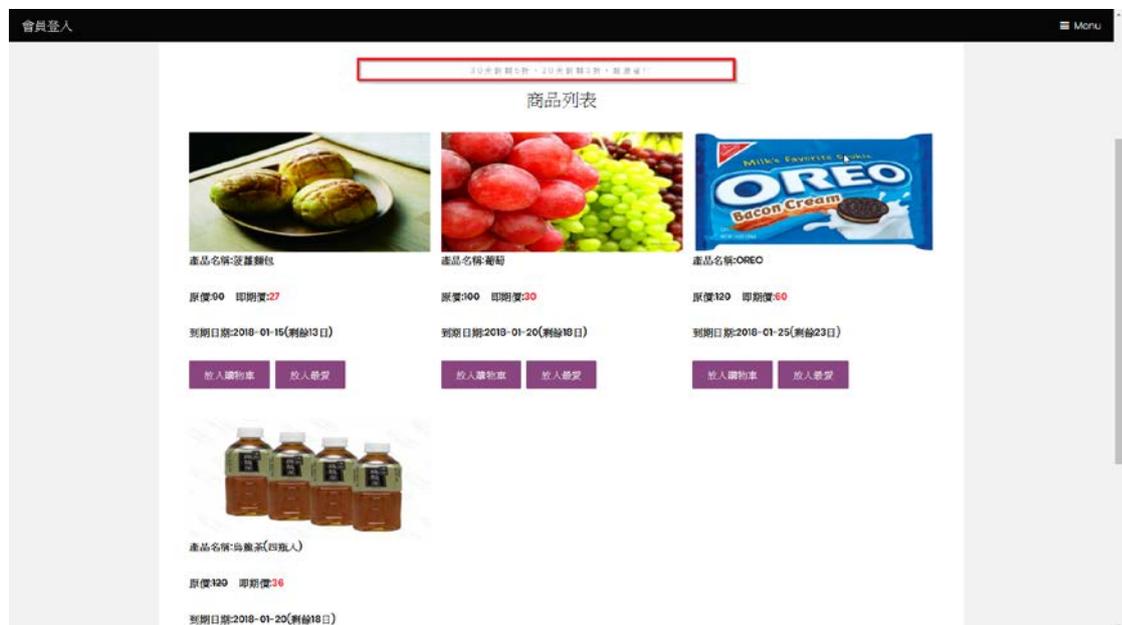
3.2 Product page (php type)

This is product page, in this page you can browse all gradually

expiring foods. And you also can see the due date of every product. Base

on the characteristics of gradually expiring foods, they have the good

discount. You can buy the product at a cost-effective price, so you can

save a lot of money.

In this page you also can add the products you want to purchase to shopping cart, and you also can add the products you are interested in to the favorite. And you can check what you add in the customer's function after login.

3.3 Discount page (php type)

There are so many products in product page. Sometimes customers just want to find the products which are fifty percent off or more. Therefore, I design this page only to show the products which are fifty percent off or more cheaper.
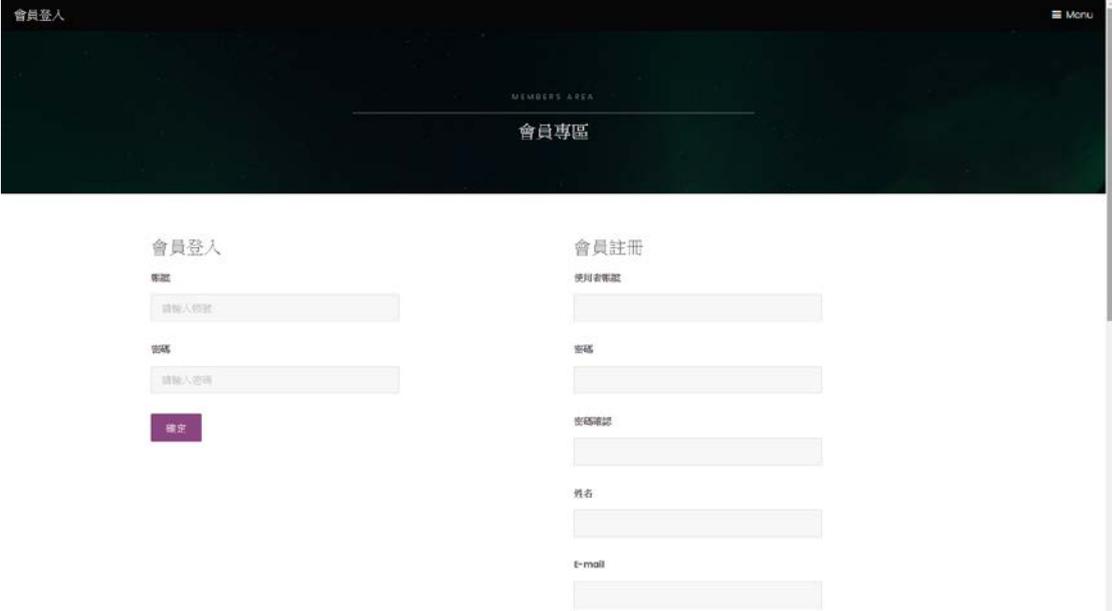
Our promotion is that if product will be expired in thirty days, it would get fifty percent off. And if product will be expired in twenty days, it would get thirty percent off.

3.4 Member page (before login)

In this page, visitors can sign in or login. If they don't have

account, they can sign in at right column, and they need to choose a

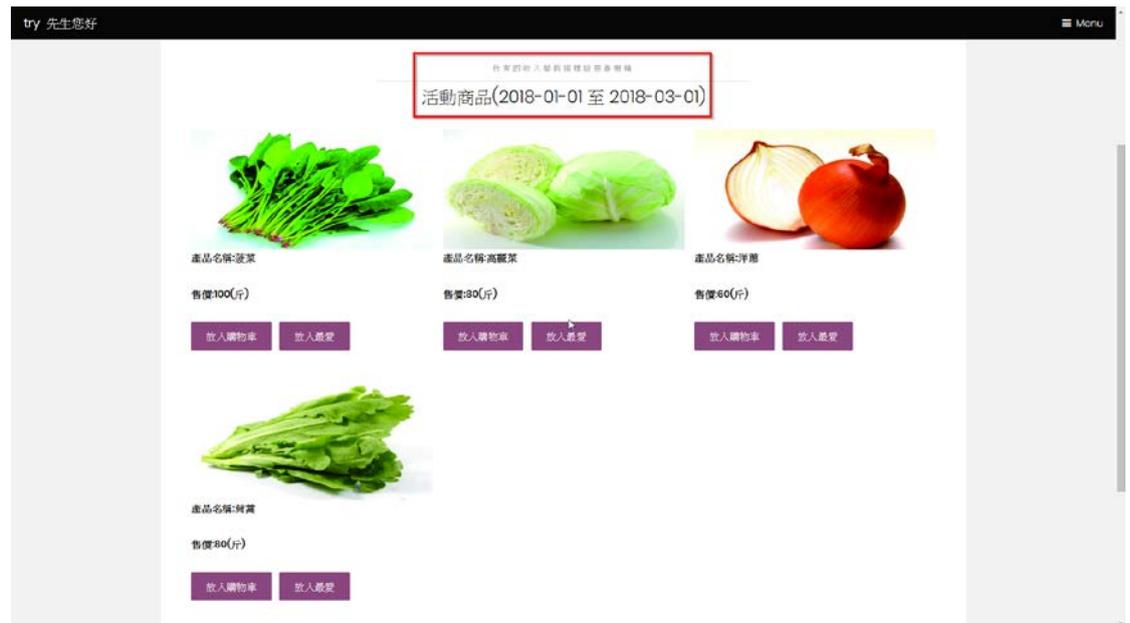identity. They can't change their identity after they sign in successfully.

If visitors are already have account, they can login in at left column.

After they login, they can use all functions in this platform.

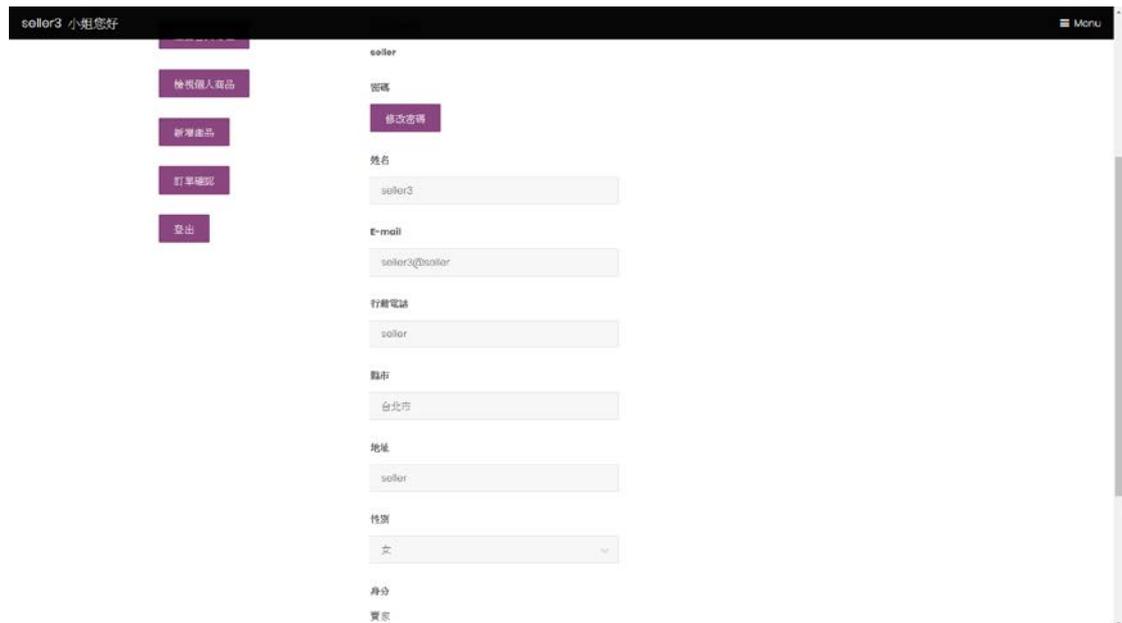
3.5 Charity event page (php type)

Every charity event will be integrate in this page, we can show not only one event here. For convenience, I only show one charity event here.

This charity event is about organic fruits and vegetables. During the event, If customers buy the products, the income of the platform will all donate to the charity. Thus, customers can easily to do a good things.
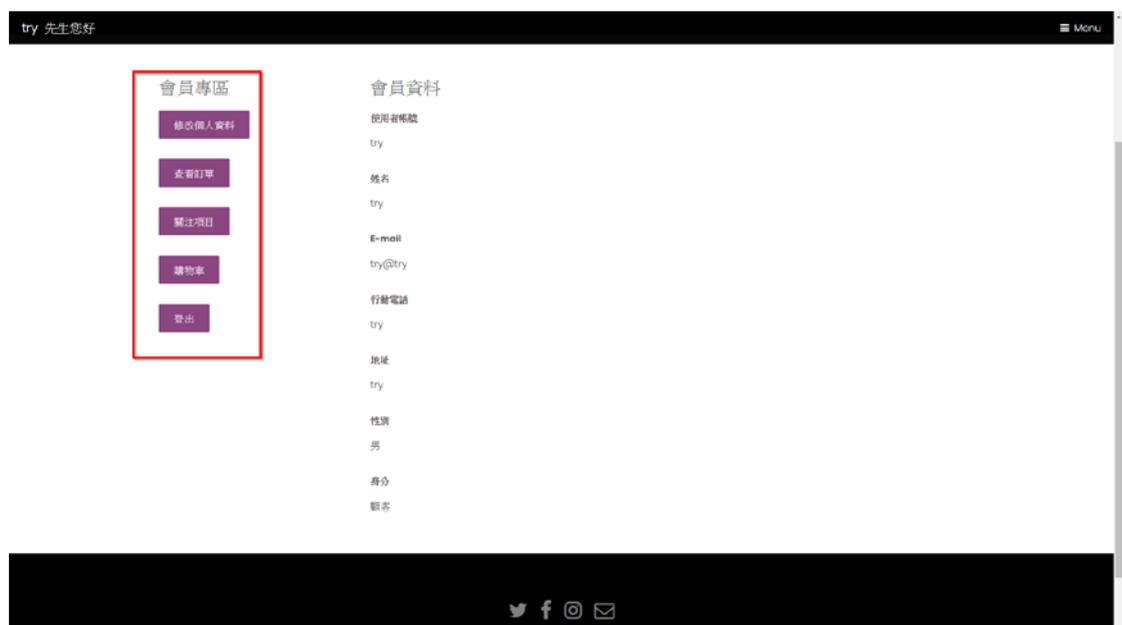
3.6 Modify page

In this page, all members can modify their personal information. And I add the security mechanism. All members need to entire their password first to confirm whether they are not the hack. After they enter the right password. They can enter the other page to modify their password.

3.7 Customer function (php type)

After customers login, they can see the functions in member

area (red box in following picture). They can check the products they

just add to the shopping cart or favorite. And if they want to check

out, they can click "shopping cart(□ □ □)" button to pay for the

product they just add.

3.8 Checkout page (php type)

After you click "Check out (□ □)" button, you will enter the check-out page, and you can choose the way to pay and the way to get the goods. This is different from other website, other website only can delivery to home. I think this is very inconvenient because some customers is the office workers, they always busy so they can't get the products on time. Thus, it would reduce the willingness of buying gradually expiring foods.

Therefore, we offer many different choice, you can get the goods in convenience store, and you also can pay for the products in convenience store.
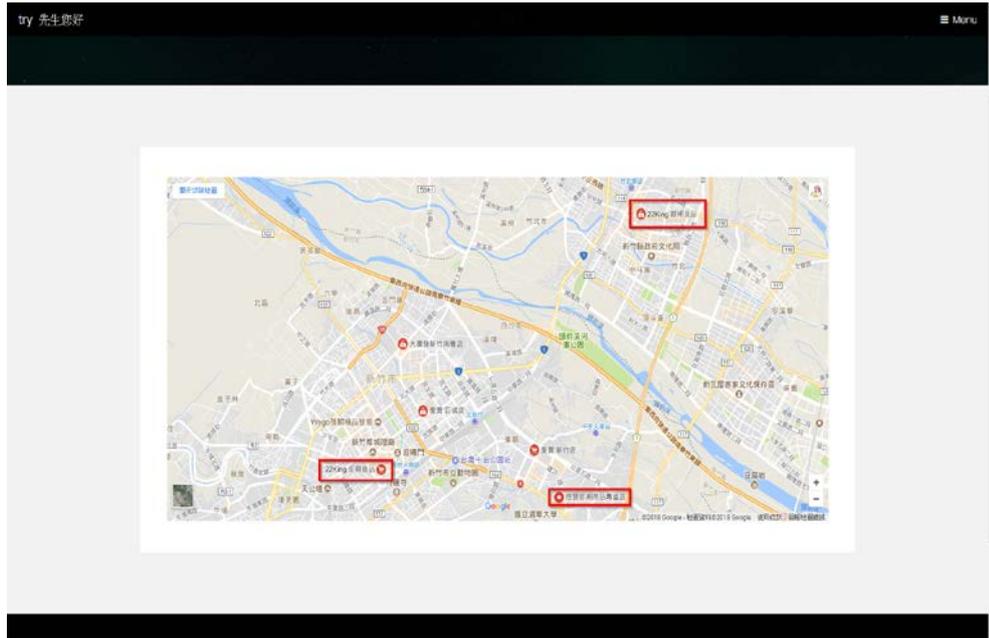

3.9 Check order (php type)

After check out, customers can check the order they just send in check-order page by clicking check-order button(□ □ □ □). In this page , they can see the gradually expiring food, price, quantity, and total price they just send, and they also can see the way to pay and the way to get products they just pick.

However, they can't cancel the order easily, they must send the mail to the manager or seller to cancel the order.
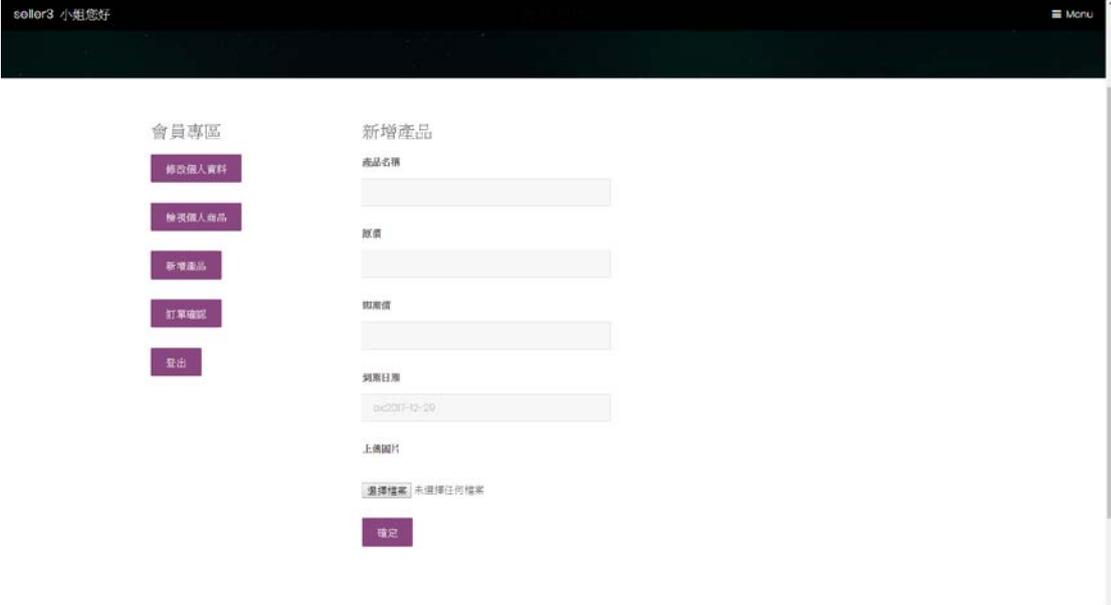

3.10 Map (php type)

In this page, google map will base on the address which customer key in when they signed the member to search the gradually expiring foods entity store near them. However, the quantity of the stores is too few. They must scroll the mouse wheel to see how many stores near them.

3.11 Seller page (php type)

In this page, sellers can see the functions they can use. The functions for sellers and the functions for customers are different, you can see the functions for sellers in following picture(red box). Sellers can add their own product, check the products the add, and also can check the orders from each customer.

3.12   Check own product (php type)

In this page, sellers can see the products they add, so they can

manage product easily. They also can see the number of following

people, it could be a reference for sellers if they want add new

product in future.

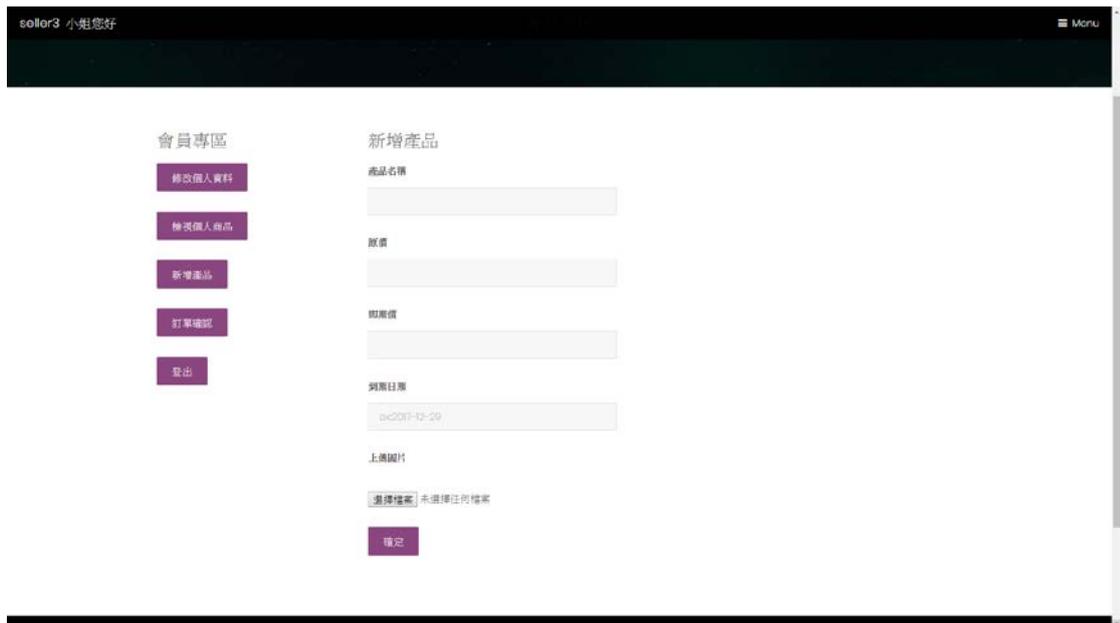## 3.13   Add new product (php type)

In this page, sellers can add the products they want to sell. They also can upload the picture of product. After they add new products successfully, they will see the products updated on product page instantly.

3.14 Confirm order (php type)

In this page, sellers can confirm the orders from customers. Including the products and the quantity. Thus, they can know the order of customers' order, so they can send goods according to the order.

3.15 Example of php

In this project, I spent lot of time to make most functions

completed. I use lots of cookies and for chain to build the functions.

And I use lots of if else to reduce the numbers of my file.

```php
//建立資料連接
$link = create_connection();
//執行 SELECT 陳述式取得使用者資料
$sql = "SELECT * FROM product106034560 Where owner = $id";
$result = execute_sql($link, "group8", $sql);
$total_records = mysqli_num_rows($result);

$sqlp = "SELECT * FROM order_list";
$resultp = execute_sql($link, "group8", $sqlp);
$total_recordsp = mysqli_num_rows($resultp);

for($i=0 ;$i < $total_records; $i++)
{
    $sqlp = "SELECT * FROM order_list";
    $resultp = execute_sql($link, "group8", $sqlp);
    $row = mysqli_fetch_assoc($result);

    for($a=0; $a < $total_recordsp; $a++)
    {
        $rowp = mysqli_fetch_assoc($resultp);

        $product_id_array = explode(",", $rowp["product"]);
        $product_price_array = explode(",", $rowp["price"]);
        $product_quantity_array = explode(",", $rowp["quantity"]);
        for($b=0; $b < count($product_id_array); $b++)
        {
            if( $product_id_array[$b] == $row["id"])
            {
                $customer_id = $rowp["customer_id"];
                $sqlc = "SELECT * FROM user106034560 Where id = '$customer_id'";
                $resultc = execute_sql($link, "group8", $sqlc);
                $rowc = mysqli_fetch_assoc($resultc);

                echo "<tr>";
                echo "<td>" . $rowc["name"] . "</td>";
                echo "<td>" . $row["product"] . "</td>";
                echo "<td>" . $product_quantity_array[$b] . "</td>";
                echo "</tr>";
            }
        }
    }
    $rowp = 0;
}
?>
```

3.16 Upload picture function

When I build my platform, I found something interesting. I always think that the picture need to upload to database. However, there is the limit of capacity. It means that I can upload picture to database, but I can't show it successfully. Then, I find the way which is show in following picture.

Through these codes, I can not only upload the files, but also resize the pictures. Thus, I can upgrade my product page easily after sellers add new products. I think this is also an advantage to attract sellers use my to sell products.

```php
$newwidth=600;
$newheight=300;
$uploadedfile = $_FILES['upfile']['tmp_name'];
list($width,$height)=getimagesize($uploadedfile);
$src = imagecreatefromjpeg($uploadedfile);
$tmp=imagecreatetruecolor($newwidth,$newheight);
imagecopyresampled($tmp,$src,0,0,0,0,$newwidth,$newheight,$width,$height);
$filename = "images/". $_FILES['upfile']['name'];
move_uploaded_file(imagejpeg($tmp,$filename,100),"images/".$_FILES["upfile"]["name"]);
```

4 Conclusion

With this website, the willingness of consumers to purchase gradually expiring foods can be effectively increased, as well as the visibility of entity stores and consumer awareness of gradually expiring foods.

Using the cheap features of gradually expiring foods to effectively attract consumers and engage consumers in charity activities will not only allow them to be loving, but also reduce food waste, reduce pollution and

protect the earth

5 Future

There are still much improvement in this research, such as how to advertise gradually expiring foods and increase the probability the public contact with them more frequently. After all, this is still a website that may be alike as an existing similar website and its visibility is not high enough to be seen easily. As a result, how to promote the gradually expiring foods and expand visibility of the website can be the direction of future development.