

# Homework 3: Customer-side Website

**Author:** Tao Xie (USC ID: 5951684215)

**Date:** 2015/07/21

<http://cs-server.usc.edu:4215/CI/index.php/Pagedisplay/homepage>

username and password:

taoxie@usc.edu / taoxie

xie0221@126.com / taoxie

*NOTE: please test my code on Chrome. and it is perfectly displayed on almost all kinds of screen, like wide-width screen, laptop, tablet and cellphone.*

## 1. Overview

My company's customer-side website is about selling musical instruments, and it has a good name: BETTERBUY, the slogan is “no best, only better”. There are 5 kinds of instruments we sell: woodwind, brass, string, keyboard and percussion, every category has at least one special sales product. Because this homework is just rewrite the prior webpage, the function and operation is exactly the same as homework3's. If you want to know how to use my page, the prior writeup file is put at the end of this file.

In this homework, I rewrite and modify my code using CodeIgniter and jQuery, and add more CSS and jQuery code to make my page adjust all kinds of screen.

## 2. CodeIgniter

In order to put code into CodeIgniter, I divide my codes into 4 parts based on their similar functions: product display, customer login and validation, product purchase, sign up and profile edit.

### 2.1 Product Display

Controller: Pagedisplay.php

Model: Pagedisplay\_model.php

View: homeBETTERBUY.php, showSingleCategory.php, showSingleProduct.php, keywordSearch.php

homeBETTERBUY.php is the homepage of my company, and it displays all category's picture, and let customer to hit to view. In homepage() function, data related to category name is got from database, and is sent to View.

After hitting the category's picture or the category name on the submenu on top of screen, customer can see the entire products of the category. Like the prior page, an array named \$data is filled with product information by Model and is sent to View.

The design of page of single product and keyword search is similar to the homepage.

## **2.2 Customer Login and Validation**

Controller: Loginout.php

Model: Loginou\_model.php

View: customerLogin.php

There are only three functions in the controller and model in this part. The first one is customerLogin(), username and password are got on customerLogin.php, and they are validated by both browser and server, and then database is queried to get customer information. If the identity is validated correctly, the signin/up icon on the top of screen is turned to be the name of customer, and when customer move mouse over this new icon, a customer dashboard is pop up to let people review their profile, orders, and logout.

The second function is customerlogout(), session is destroyed in this function, and page is redirected to homepage.

The third function is validateCustomerLogin(). Every time when customer visit my site, this function is called to validate the identity of customer, if the session information is correct based on the database query, this customer is allowed to continuous operation, like order placing, profile edit and so on. If the session information is not correct, the session is destroyed and let people to type in their username and password. And a timer of 5 minutes is set in this function to logout automatically if customer does not do anything for 5 minutes.

## **2.3 Sign up and Profile Edit**

Controller: Signupmodify.php

Model: Signupmodify\_model.php

View: customerSignup.php, customerSignUpResult.php, customerAccount.php,  
customerModifyResult.php

In function customerAddUser(), all profile information are got and validated by Javascript and php, and then the related function in model is called to insert data into database. In this process, some validation are processed, like whether you enter a existed username, whether the information are valid, and so on.

The function about profile edit is similar to the prior one.

## **2.4 Product Purchase**

Controller: Productpurchase.php

Model: Productpurchase\_model.php

View: customerOrders.php, customerOrdersDetail.php, shoppingCart.php,  
customerAddProduct.php

When people add some product into their shopping cart, the function customerAddProduct() is called, and the product is inserted into shopping cart table, and then when people place an order, shoppingCart() is called, and all products in the shopping cart are emptied and an order is placed, and all shipping information is stored into orderSummary table.

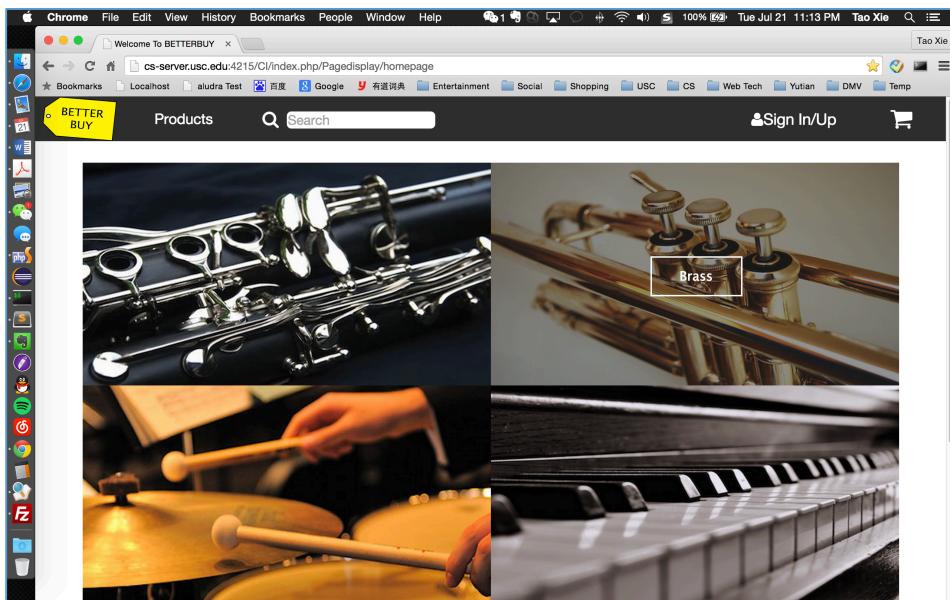
### 3. jQuery

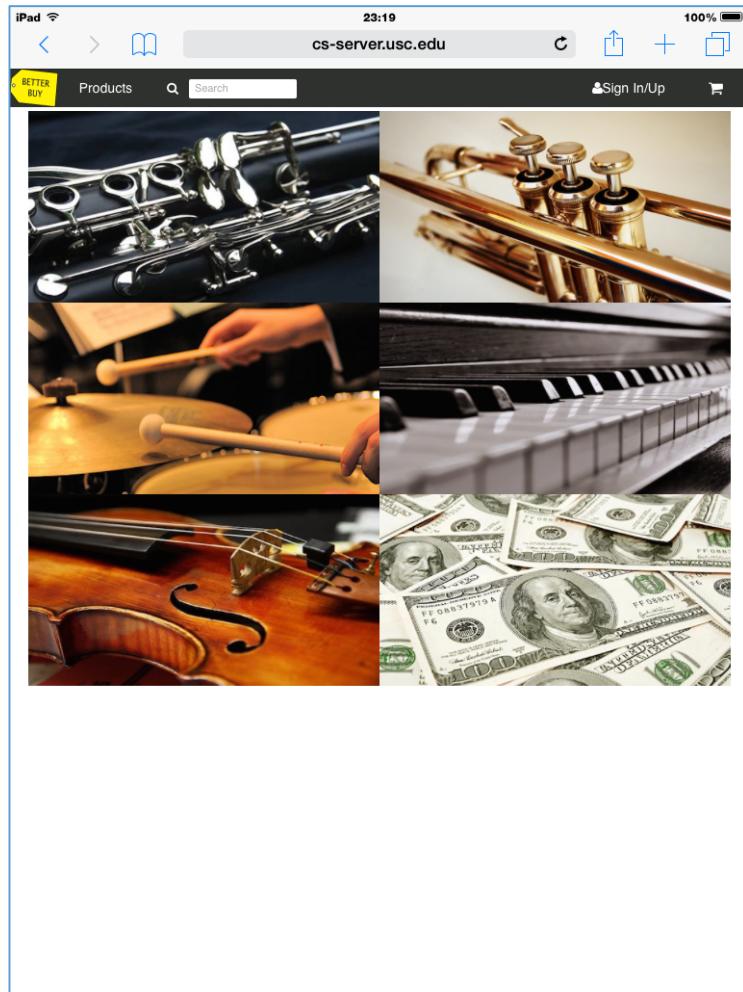
All Javascript codes are rewrote using jQuery. All jQuery codes are in the folder of /CI/assets/js/

### 4. CSS and Responsive Web Design

In order to adjust my page with all kinds of screen, some CSS codes are added. For different view page, 2 or 3 sets of CSS codes are composed to make my page perfectly displayed on almost all kinds of screen. The following are some screen shots. All CSS codes are in the folder of /CI/assets/css

#### 4.1 HomePage





## 2. Single Category Display

Chrome File Edit View History Bookmarks People Window Help 1 100% Tue Jul 21 11:15 PM Tao Xie

Single Category cs-server.usc.edu:4215/Ci/index.php/Pagedisplay/showSingleCategory/Woodwind

Bookmarks Localhost aludra Test Google 有道词典 Entertainment Social Shopping USC CS Web Tech Yutian DMV Temp

BETTER BUY Products Search Sign In/Up Cart

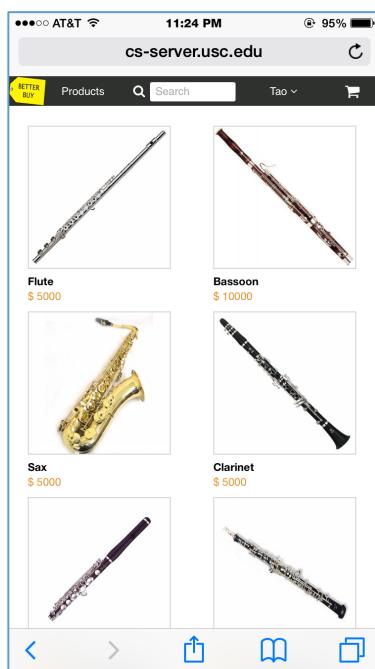
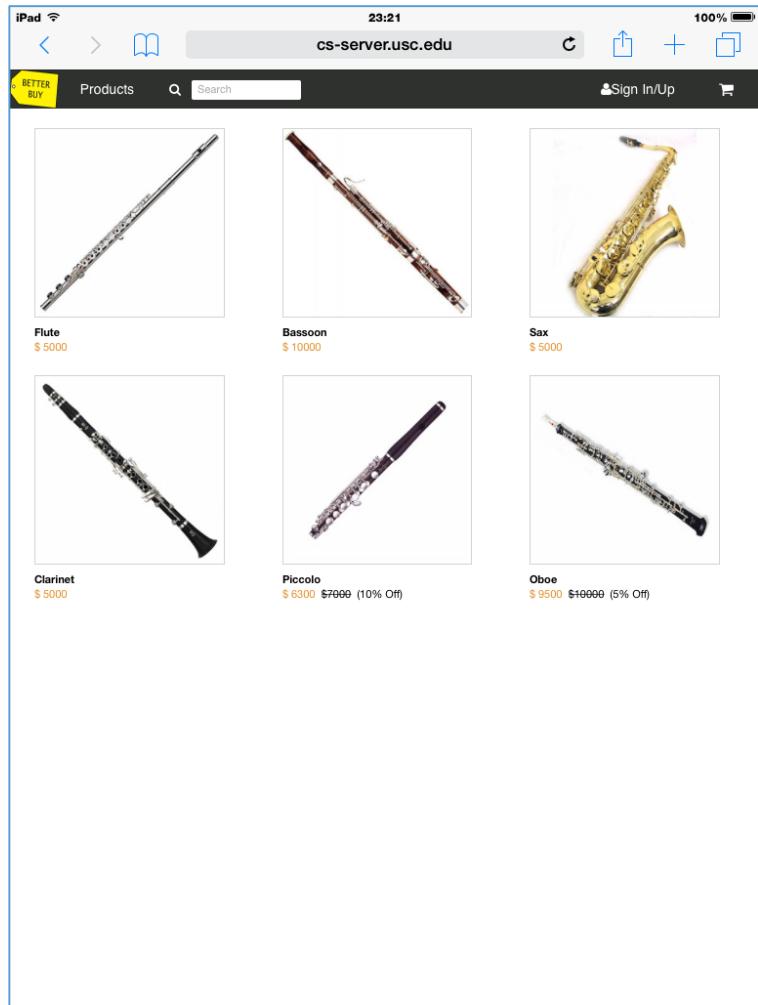
Flute \$ 5000

Bassoon \$ 10000

Sax \$ 5000

Clarinet \$ 5000

Oboe \$ 5000



### 3. Single Product Display

The screenshot shows a web browser window displaying a single product page for a saxophone. The browser's address bar shows the URL: cs-server.usc.edu:4215/CI/index.php/Pagedisplay/showSingleProduct/W005. The page title is "Single Product". The main content area features a large image of a gold-colored saxophone. To the right of the image, the word "Sax" is displayed in a large, bold, black font. Below it, the price "\$5000" is shown in orange. Underneath the price, the text "Stock: 30" indicates the availability. A quantity selector with a value of "1" is positioned next to the stock information. An "Add To Cart" button is located below the selector. On the far left, there is a vertical toolbar with various icons, and at the top, a navigation bar with links like "Products", "Search", "Sign In/Up", and a shopping cart icon.

**Sax**

\$5000

Stock: 30

- 1 +

Add To Cart

BETTERBUY offers a complete line of saxophones to suit every level of player from the beginning band student to the seasoned pro. Through the BETTERBUY ideology of vertical integration, the highest level Custom saxophone models are designed first, and elements of those models are carried down into the professional, intermediate, and even standard level saxophones.

iPad 23:21 100%

BETTER BUY Products Search Sign In/Up



**Bassoon**

\$10000

Stock: 10

BETTERBUY Custom bassoons, which are considered the finest bassoons currently being produced, can be heard in some of the world's greatest orchestras. They deliver a full rich sound which allows control of the most subtle tone shadings in delicate passages, while letting you open the sound up beyond traditional limits. With redesigned tonehole shapes and positions, and ergonomic finger-friendly key shapes, they also feature extremely accurate intonation and a comfortable playability.

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cs-server.usc.edu

BETTER BUY Products Search Tao Cart



**Trumpet**

\$4000

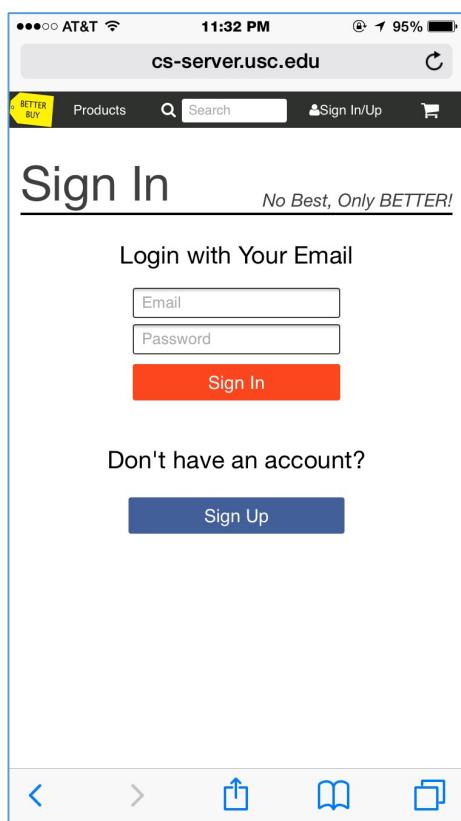
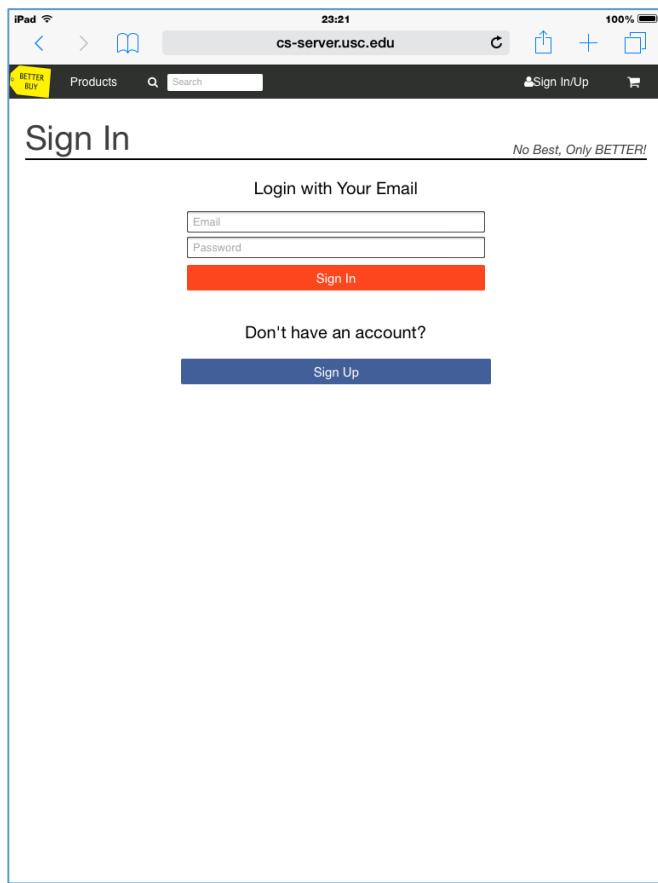
Stock: 19

Over the 20+ year history of the series, Xeno trumpets have continued to evolve with the artists who play them. In 2014, drawing from the knowledge and innovative concepts learned through the development of the Artist Model Chicago C trumpet, the entire Xeno Bb series was redesigned to attain the ultimate goal of ideas musical expression.

#### 4. Sign In / Up

The screenshot shows a Chrome browser window with the following details:

- Address Bar:** Log In | Sign Up - cs-server.usc.edu:4215/C1/index.php/Loginout/customerLogin
- Toolbar:** Chrome, File, Edit, View, History, Bookmarks, People, Window, Help, and various system icons.
- Bookmark Bar:** Bookmarks, Localhost, aludra Test, 百度, Google, 有道词典, Entertainment, Social, Shopping, USC, CS, Web Tech, Yutian, DMV, Temp.
- Page Content:**
  - A yellow sticky note labeled "BETTER BUY" is pinned to the left side of the page.
  - The main heading is "Sign In".
  - A sub-heading below it is "*No Best, Only BETTER!*".
  - A "Login with Your Email" form on the left contains fields for "Email" and "Password", and a "Sign In" button.
  - To the right of the login form is a link "Don't have an account?" and a "Sign Up" button.



## 5. Profile Edit

The screenshot shows a Google Chrome browser window with the following details:

- Title Bar:** Chrome, File, Edit, View, History, Bookmarks, People, Window, Help. Date and time: Tue Jul 21 11:16 PM. User: Tao Xie.
- Address Bar:** cs-server.usc.edu:4215/C/index.php/Signupmodify/showCustomerAccount
- Toolbar:** Bookmarks (calhost, aludra Test, 百度, Google, 有道词典, Entertainment, Social, Shopping, USC, CS, Web Tech, Yutian, DMV, Temp). A yellow button labeled "BETTER BUY" is visible.
- Right Side:** Never for this site, Save password buttons.
- Header:** Products, Search bar, Tao, Cart icon.
- Main Content:**
  - # Update Profile
  - Section 1: Update Your Personal Information Below**

NOTE: Your name and billing address must be entered exactly as they appear on your credit card.

Email Address *	taoxie@usc.edu
Password *	<input type="password"/>
Confirm Password *	<input type="password"/>
Gender *	<input checked="" type="radio"/> Male <input type="radio"/> Female
First Name *	Tao
Last Name *	Xie

iPad 23:22 100% cs-server.usc.edu Tao

RETTIE BUY Products Search

## Update Profile

**1. Update Your Personal Information Below**

NOTE: Your name and billing address must be entered exactly as they appear on your credit card.

Email Address \*

taoxie@usc.edu

Password \*

Confirm Password \*

Gender \*

Male  Female

First Name \*

Tao

Last Name \*

Xie

Address Line 1 \*

2632 Ellendale Pl

Address Line 2 \*

Apt 311

City \*

Los Angeles

State \*

CA

Zip Code \*

90007

Telephone Number \*

2134007759

**2. Update Your Credit Card Information Below**

NOTE: You can pay in the following ways:  

AT&T 11:24 PM 95% cs-server.usc.edu

RETTIE BUY Products Search Tao

## Update Profile

**1. Update Your Personal Information Below**

NOTE: Your name and billing address must be entered exactly as they appear on your credit card.

Email Address \*

taoxie@usc.edu

Password \*

Confirm Password \*

Gender \*

Male  Female

First Name \*

Tao

Last Name \*

Xie

## 6. Orders

Screenshot of a web browser showing the "Your Order Summary" page from a local server at cs-server.usc.edu:4215. The page displays two orders for musical instruments.

The browser window title is "Your Order Summary". The address bar shows the URL "cs-server.usc.edu:4215/C1/index.php/Productpurchase/customerOrder". The user is logged in as "Tao Xie".

The page header includes a "BETTER BUY" badge, a "Products" menu, a search bar, and a user dropdown for "Tao".

### Your Orders

Order Placed	Total	Ship To	Order Number
2015-07-21	\$4000	Tao Xie, 2134007759 2632 Ellendale Pl, Apt 311, Los Angeles, CA. 90007.	<a href="#">00721205923</a>
 Name: Cello Price: \$4000 Quantity: 1			
Order Placed	Total	Ship To	Order Number
2015-07-21	\$10400	Tao Xie, 2134007759 2632 Ellendale Pl, Apt 311, Los Angeles, CA. 90007.	<a href="#">00721231756</a>
 Name: Horn Price: \$6400 Quantity: 1 			

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cs-server.usc.edu Tao

BETTER BUY Products Search

## Your Orders

**Order Placed**  
2015-07-21

**Total**  
\$4000

**Ship To**  
Tao Xie, [2134007759](#)  
2632 Ellendale Pl, Apt 311, Los Angeles, CA. 90007.

**Order Number**  
[Q0721205923](#)



Name: Cello Price: \$4000 Quantity: 1

**Order Placed**  
2015-07-21

**Total**  
\$10400

**Ship To**  
Tao Xie, [2134007759](#)  
2632 Ellendale Pl, Apt 311, Los Angeles, CA. 90007.

**Order Number**  
[Q0721231756](#)



Name: Horn Price: \$6400 Quantity: 1



Name: Trumpet Price: \$4000 Quantity: 1

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cs-server.usc.edu Tao

BETTER BUY Products Search

## Your Orders

**Order Placed**  
2015-07-21

**Total**  
\$4000

**Ship To**  
Tao Xie, [2134007759](#)  
2632 Ellendale Pl, Apt 311, Los Angeles, CA. 90007.

**Order Number**  
[Q0721205923](#)



Name: Cello Price: \$4000 Quantity: 1

**Order Placed**  
2015-07-21

**Total**  
\$10400

**Ship To**  
Tao Xie, [2134007759](#)  
2632 Ellendale Pl, Apt 311, Los Angeles, CA. 90007.

## **5. Security**

All data typed in are validated by Javascript and PHP using regular expression and special character filter, and Query Bindings is used to avoid SQL injection.

# **Homework 3: Customer-side Website**

**Author: Tao Xie (USC ID: 5951684215)**

**Date: 2015/07/09**

**Customer-side:**

<http://cs-server.usc.edu:4215/HW3/homeBETTERBUY.php>

username and password:

taoxie@usc.edu / taoxie

xie0221@126.com / taoxie

**Company-side:**

<http://cs-server.usc.edu:4215/HW3/login.php>

username and password:

manager: tao / tao

administrator: rose / rose

sales manager: kevin / kevin

NOTE: I test my page on Chrome, and the page is perfectly displayed on 13-inch screen.

## **1. Overview**

My company's customer-side website is about selling musical instruments, and it has a good name: BETTERBUY, the slogan is "no best, only better". There are 5 kinds of instruments we sell: woodwind, brass, string, keyboard and percussion, every category has at least one special sales product.

When you open the homepage, you can see 6 big pictures named: woodwind, brass, string, keyboard, percussion and special sales, which are 5 product categories and all special sales. Without login, you can also review all product, but you can only save your shopping cart and place orders by setting up an account and logging in. By hitting these 6 big pictures, you can enter every product category. In each category's page, you can see the normal products and special sales products. Special sales products are highlighted by using in-line mark and discount mark to attract customer to buy it. By hitting the product's picture, you will enter this product's introduction page and see the product detail including name, price, discount, description, etc. After login, you can add product into your shopping cart and place order. When you add some product into your shopping cart, some other product will be recommended to you, because other customers also buy those products together in the past. After placing an order, the order summary will come up, you can review all your history orders.

On the company-side website, you can use sales manager's account to login to add, delete, modify any products, or even add a new category. Every change will be displayed immediately on the company-side website.

I compose a 'resetSql.php' to reset my database, that is easy to set all data. If you want to reset my database, just refresh that page. All database information can be checked in this file.

## 2. Database Introduction

There is one database called "betterbuy" to store all customer, employee and product information. In this database, there are 10 tables: user, employee, product, sales, customerProfile, customerCreditCard, shoppingCart, orderSummary, orderDetail, productCategory.

**TABLE user:** only contains userID, user type, username and password. Each time you log in the website, this table is to be visited to verify user's authority.

**TABLE employee:** contains all employees' personal information which are described in the writeup file of homework2.

**TABLE product:** contains product information, which includes productID, productName, productImage, category, salesType, stock, quantity, price and so on. When sales manager adds, deletes, modifies any product's information, this table is to be changed. When one product is sold out, this product cannot be deleted from database, but its value of stock is 0, and it cannot be displayed on the website, and other customer cannot buy it.

**TABLE sales:** if salesType in TABLE product is 1, that product is a special sales and is stored in this table. This table contains productID, discount, startDate, endDate. If today is not between start date and end date, which means that product is not in the date range of special sales, and it is a normal product, and it cannot be displayed in the page of special sales.

**TABLE productCategory:** contains categoryName and its image.

**TABLE customerProfile:** contains customer's information which includes userID, shipping information, phone number, and so on. When order is placed, this information will be retrieved from this table. Customer have authority to change all of personal information.

**TABLE customerCredit:** contains customer's credit card information which includes cardType, cardNumber, cvv and expiration month and year.

**TABLE shoppingCart:** contains productID, userID and quantity. This table is a temporary table for restoring the product customers save but have not buy yet. When order is placed, related product information will be deleted from this table.

**TABLE orderSummary:** contains orderDate, userID, total and shipping information at that time. Because people could change their address, phone number, even name, these history information need to be stored into this table for shipping and review later.

**TABLE orderDetail:** contains orderID, productID, price, quantity, every orderID could have multiple rows because customers could buy multiple products each time.

## 3. Customer Dashboard Design

On the top-right of page, you can see an icon named “sign in/up”, you can sign up a new account or log in your exist account. All information you type in is to be validated by Javascript. If you type in invalid information, you have to correct it in order to sign up successfully. After signing up, you can edit and update your personal information as well, and all information will be verified also.

After Logging in, the icon I mentioned above is turned to be your first name, and when you put your mouse over this icon, a dashboard pop up to let you edit profile, review history orders and log out. I will introduce history order reviewing function in the following section.

By hitting logout button, the login session will be destroyed to protect your account. 5 minutes is to be set as inactive time limit, that means this account will be log out automatically when you do nothing in the 5 minutes.

#### **4. Shopping Cart Design**

After logging in, if you want to buy something, you can add it into your shopping cart, each time you can add only one kind of product, but the quantity can be more than one as you want. Every product has a stock, the quantity each product you buy must less than this stock, and Javascript validation will remind and stop you when you add too many products. When customer A buy 1 product, the stock will reduce one, when the stock turn to 0, this product cannot be bought and cannot be displayed on the page.

You can buy whatever you want in a single order, so the shopping cart will help you save these products and let you edit the quantity or even delete them. When you change anything in the shopping cart, the subtotal and total will change dynamically to help you evaluate this order. I compose a 'resetSql.php' to reset my database, that is easy to set all data. If you want to reset my database, just refresh that page. All database information can be checked in this file. Note that you need to hit the “save your cart” button when you leave that page, otherwise changes cannot be saved into database.

Each time you put a product into your shopping cart, some other products are recommended on the bottom of page, because these products are bought together by other people when they buy this product. You can also hit the picture of recommended product to buy them or just ignore them.

After you place an order, your shopping cart will be emptied and all your current shipping information is stored into database. You can review your history orders by hitting the “review orders” button in the user dashboard. On every order frame, there is a order ID, you can review the order detail by clicking that order ID.

#### **5. Menu and Searching Design**

On the left-top of page, there is an icon called “product”. When you put your mouse over this icon, all product category and special sales assembly will come out, and you can choose what you want to review them.

Beside the “product” menu, there is a keyword search field, you can input some keyword to search items. For example, you type in “pi”, the piccolo and piano will come up. To make the searching more concise, the keyword is just match the product name.

## **6. UE and UI Design**

I spend almost half of time to choose font, picture, icon and design every detail to improve user experience and make my page beautiful.