1. Project Description

BestWell Second-hand system is a full-featured Web-based application for the management and maintenance of simplified second-hand shopping platform databases. This application is mainly used as a background management system, and the main service object of this application is the administrators and user groups of the second-hand e-commerce platform. This system fully summarizes the operation practice of the backstage management system of the actual online shopping mall in the initial stage of development. The development of this system is carried out on the premise of fully understanding the online shopping mall management system and fully understanding the analysis of system requirements.

2. Authentication and Permissions scheme
   The user groups are shown in table1.
   There are mainly 4 roles:
   1) normal user (names as ci_user, e.g. buyer):
      they can only view different pages. They cannot add, delete or update the data in the system because only back-end administrators have permission to change data.
   2) Superuser (e.g. tester and sysadmin):
      The administrator with the most authority. They can browse, query, and delete any piece of data in the system. They can also add user and modify user authentication permissions
   3) sale_manager (e.g. salemanager)
      Administrators who mainly manage products and categories. They are responsible for the daily maintenance of product information, can view all pages, but can only change categories and products.
   4) order_manager (e.g. ordermanager):
      Administrators who mainly manage order, user, and address. They can view all pages, and have access to delete, update and add information on web pages including user, order, order items, cart, cart items, and user address.
   User ID and password are show in table 1:

Username/Group	Password	Active	Staff	Superuser	ci_user	ci_sale _manager	ci_order _manager
tester	{iSchoolUI}	X	X	X			
sysadmin	{iSchoolUI}	X	X	X			
buyer	{iSchoolUI}	X	X		X		
salemanager	{iSchoolUI}	X	X			X	
ordermanager	{iSchoolUI}	X	X				X
coworker	{iSchoolUI}	X	X				

Table 1

Permission/Group	ci_user	ci_sale_manager	ci_order_manager	*SuperUser*
Product				
View	X	X	X	X
Add		X		X
Change		X		X
Delete		X		X
Category				
View	X	X	X	X
Add		X		X
Change		X		X
Delete		X		X
User				
View	X	X	X	X
Add		X	X	X
Change		X	X	X
Delete		X	X	X
Address				
View	X	X	X	X
Add			X	X
Change			X	X
Delete			X	X
Order Item				
View	X	X	X	X
Add			X	X
Change			X	X
Delete			X	X
Order				
View	X	X	X	X
Add			X	X
Change			X	X
Delete			X	X
Cart				
View	X	X	X	X
Add			X	X
Change			X	X
Delete			X	X
Cart Item				
View	X	X	X	X
Add			X	X
Change			X	X
Delete			X	X

Table 2: user group permission

3. Tips on using the BestWell application:
   1) Add products into cart_items dataset first, then add cart_items into the cart.
   2) Add products into order_items and then add order_items into order.
   3) When viewing the user web page, it shows a list of products the user purchased, a list of products the uses sells, and also a list of orders belonging to the user.
   4) The address has the foreign key on order rather than on user. Because each order may be shipped to someone who is not the buyer.