**CAN302 Technologies for E-Commerce**


**COURSEWORK TWO**


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# Catalogue

# 1. Ecommerce Update and Limitation

### a. Promotion

During the build process, the creative team identified the possibility of increasing the proportion of advertising in the commercial plan of the site. Combined with the direction of related competing products, the team found that a particular scale of advertising was necessary before the community-building function was fully implemented.

Internal advertising: the website has white space on the website's home page and product introduction pages. After the site has been used, the company may seek external partnerships such as renting out advertising space to complementary product companies. This can help the company generate revenue. At the same time, opening up advertising space to complementary companies can increase the number of relevant purchases by customers. This is because opening up advertising space to some of the companies selling complementary products means that the one-stop shopping mentality of consumers can be better met. A comprehensive range of products will attract many one-stop furniture shoppers to the site. This in turn drives consumer purchase intent and sales on the site.

External advertising: As a B2C company, how to connect the product/service with the end-user is an essential thing. Based on the direct positive impact of online + offline advertising on brand awareness and sales. We chose to use a more reliable and executable solution for the initial promotion of our website, based on our previous business plan for an offline promotion in conjunction with a brand flash shop. The reason for this is that during the build of the website model, the creative team found that the large-scale promotion of the offline panoramic VR experience was not feasible based on the current level of technology in the company. Therefore, we changed the promotional advertising model to a more mature online + offline advertising model. The specific strategies are as follows.

A. Online: select large search engines for advertising and select some shopping platforms for advertising. And according to the number of clicks, exposure, channel conversion rate, and user contact information change, the number of advertising and platform. Depending on how much money is spent, the company will also consider using KOLs (key opinion leaders) and KOCs (key opinion customers) on social media to promote the campaign.

B. Offline: precise placement in large flats, metro, and shopping areas where target groups are often found. Reinforcing the brand image of the brand as a stylish and versatile business.

After measuring the number of new users per day and the customer acquisition cost for online and offline advertising, the company will favor the following advertising platforms.

**b. Keynote Color**

In the original business strategy, the company chose green as the primary background color for the website based on the environmental friendliness of the furniture. However, during the actual web build, the creative team found that red was more representative with further analysis of the national and some international markets. This color scheme is more striking in the furniture industry. As the preferred color for local brands, red is more local in many products. For example, local Chinese brands such as Taobao, Jingdong, Jindo, and Xiaohongshu all use red as the background color. In international development, red is more oriental and easier to highlight brand differentiation than cold colors such as blue and green.

**c. Community Function**

Based on the marketing strategy background of "wine is not afraid of alleyways," the company used to create a community communication platform on the website. However, during further implementation, the team found a large gap between the number of tasks and

the potential benefits of this platform. In the specific business planning, the team used the funds from building the platform for advertising and community operations on social media platforms. Because of the rapid development of social media nowadays, various social media platforms have been promoted and popularized on a large scale. The platforms have a more extensive potential user base suitable for the company. Opening a community communication platform on its own requires creating a multi-party login system, which can make it more difficult for managers to manage. Established social media platforms such as Twitter and Weibo are quicker, easier, and cheaper to attract more users. It is even easier to break down the user base barriers and increase brand awareness if you focus on running your company's platform account. The conversion rate, CTR, and ROI of channels such as CPC/CPA may be higher on these platforms. In addition, many brands on those mentioned above mature social media platforms have successfully developed private domain traffic pools and accumulated valuable experience. Companies can learn from this experience and stand on the shoulders of giants to establish their domain traffic building plans more quickly and efficiently to gain a stickier user base.

**d. Model Display**

The model display is an essential function of this website. This website provides decoration samples for customers' reference. The website administrator adds the products contained in the page in the template page and uploads the product parameters and information. Specifically, if customers like the decoration style of a model house, all products in the model house can be found in the sidebar. This function turns the single website product browsing into an overall visit, which increases customers' interest. And it can let customers know about other kinds of products and increase potential consumption opportunities.

**e. To be Improved**

There are still many deficiencies in the design of this website. After the panel discussion, we found that platform supervision was not considered in the initial assumption. This website is in the form of a non-physical store operation, and there is no need to present products in a fixed trading place. Therefore, it is not easy to supervise the operation status on site. First of all, this website has no complaint function. The staff task of this website is to customize furniture or interior design for customers. It does not include dealing with the service attitude of designers, which may lead to the loss of some customers and cause losses to the website. The solution is to add the complaint function so that customers can contact the staff and get feedback on their opinions. Secondly, the personal information will be saved in the database after the customer registers. This website does not supervise the database, which may lead to user data disclosure. Next, the website should encrypt the database and strengthen internal supervision to avoid data leakage. Finally, as a furniture selling website, FURN+ should ensure transaction security. As a secure e-commerce system, we must first have a secure communication network to provide transaction information's safe and rapid transmission. Secondly, we should improve the reviewability, identify and monitor the activities of each authorized user, and record the results of the data review to audit and track the operation contents used by them and ensure the security of the shopping process and website.

## 2. Function List and Description

**a. Sign Up**

When a new user wants to purchase an item on our furniture website, they need to register for an account to do so. Therefore, when a purchase is triggered by a new user who is not logged in, a registration page will pop up. Alternatively the user can actively trigger access to the registration page by clicking on the registration portal. When the user enters this page, they

will need to fill in their name, password and email details, and when they click on the register button the data will be stored in the database to register their information. The data connection to the database is implemented in *conn.php*.

**b. Login**

In a similar way to triggering the registration page, the user can actively click on the login portal to access the login page. Also, if a new user who is not logged in triggers a purchase, a login page will pop up. Once the user has entered the user name and password, the system will use this information to query the database and when a match is found, the user will be logged in and the login information will be stored in the session. The relevant code will be recorded in the database and in files such as *index.php*.

**c. Product Purchase and Order**

When the user clicks on the product card on the home page or on the product category page, they will be taken to the product details page. On this page the user can buy the product or add it to the shopping cart. When the user clicks the Buy button, the product data will be stored in the table of order and the order status will be changed by modifying the status in the order table to complete the purchase. The user's order will then be displayed in the order management section of the user's home page.

**d. Shopping Cart Related**

As mentioned above, when the user clicks the add to cart button on the product detail page, the product information and user information will be stored in the database in the cart table and will be displayed in the shopping cart screen. When the user changes the number of items in the cart screen, this will in fact change the count field in the database. When the user clicks on the Clear button, all the product information on the page will disappear as the cart table in the database is cleared. When the user clicks on the Pay button, the status of the product and the payment method will be recorded in the database and the order information will appear in the order management screen on the personal home page once payment has been made. The code

will be recorded in the database and in *goods.php*.

**e. Product Search**

The product search function is supported on the website. When the user enters a product name in the search box and clicks the search button, the system will search the product database based on the user's input and will return the product information. This will complete the product search operation and give you the search results. The relevant code can be seen in *search.php* and in the database.

**f. Product Categories**

The product categories are selected and managed on the Goods page in the admin interface. Once the administrator has selected the product type on this page, the product type will be saved in the database. In addition, on the Goods categories page, products will be displayed in categories according to their classification fields in the database. See the database and *goods.php* for the specific category fields and code.

**g. Community**

Once a user has posted a message in the community, data such as title, content, author and time will be stored in the database. By calling the community article data from the database, the article can be displayed on the community page and more detailed information can be displayed on the article details page. The relevant code is documented in the database and in *community.php*.

**h. Address Management**

Because shopping for goods involves delivery, an address management function has been added to the website. In the user's personal home page, you can make adjustments to your personal delivery address. Once the user has filled in the address and saved it, data such as area code, area name, area level and city code will be stored in the database.

**i. Backstage Management (Administration)**

The administrator's back office allows you to view the website homepage, perform user management, product category management, product management and order management respectively. User management is done by calling up the user registration information stored in the database and displaying it on the page. The product category management interface allows you to adjust the product categories and the latest adjustment data will be recorded in the database. Order management is done by calling the data from the Pay table in the database and displaying it in the interface. The product management interface shows the ID, picture, name, plus one, status and quantity of all the products uploaded in the website. This information is filled in the Add Product Information screen after the administrator clicks the Add Product button in this screen, and the filled data will be stored in the database in the goods table. In addition, you can also edit, downgrade and delete products in this interface. Clicking on the Edit button will change the data stored in the database for the product. Clicking on the Shelve button will change the status of the product to Shelve and the product status will be updated in the database. Clicking on the Delete button will remove the product from the site and the product information will be cleared from the database in the goods table.

**j. Products Display and Details**

As mentioned earlier, administrators can add products in the product management interface, and when adding products they will fill in and upload specific product data information. As a result, products can be displayed on the homepage, category pages and detail pages by calling up the corresponding product data information. Specifically, the image and title of the product will be called up on the homepage and the image, title, new price (promotion price), original price and description of the product will be called up on the details page. The implementation is documented in the database and in files such as *goods.php* and *details.php.*

# 3. Data Structure

## Table List

| Table | Explanation |
|---|---|
| address | Customer address and contact details |
| cart | Shopping cart information including customers, product price totals, etc. |
| class | Classify furniture according to the type of furniture. For example, bedroom, living room, etc. |
| comment | The comments of customers after they purchase an item |
| community | Details of the products designed by the designer |
| goods | Detailed information on products' prices, stock, pictures, etc. |
| member | Information about all users in the administrator's view |
| orders | Order details for each order placed by a customer |
| pay | Customer's payment method, WeChat, Alipay, etc. |
| user | Customer's personal information and avatar etc. |

## Table structure

### Address

| Attribute | Type | Key |
|---|---|---|
| id | int(10) | primary key |
| uid | int(11) | foreign key in "address" table; primary key in "user" table |
| city | varchar(255) | |
| phone | varchar(255) | |

### Cart

| Attribute | Type | Key |
|---|---|---|
| id | int(11) | primary key |
| user_id | int(11) | foreign key in "cart" table; primary key in "user" table |
| goods_id | int(11) | foreign key in "cart" table; primary key in "goods" table |
| price | varchar(10) | |
| size | varchar(200) | |

### Class

| Attribute | Type | Key |
|---|---|---|

| | | |
|---|---|---|
| id | int(11) | primary key |
| name | varchar(255) | |
| pid | int(11) | |
| created | varchar(255) | |
| author | varchar(255) | |

## Comment

| Attribute | Type | Key |
|---|---|---|
| id | int(10) | primary key |
| uid | int(11) | foreign key in "comment" table; primary key in "user" table |
| oid | int(11) | foreign key in "comment" table; primary key in "order" table |
| gid | int(11) | foreign key in "comment" table; primary key in "goods" table |
| content | varchar(255) | |
| created | varchar(255) | |
| type | varchar(255) | |
| status | varchar(255) | |

## Community

| Attribute | Type | Key |
|---|---|---|
| id | int(11) | primary key |
| goods_name | varchar(255) | |
| price | float | |
| description | text | |
| old_price | float(11,2) | |
| picture | varchar(255) | |
| status | varchar(255) | |
| created | varchar(255) | |
| author | varchar(255) | |
| image | varchar(255) | |
| size | varchar(255) | |
| num | varchar(255) | |

## Goods

| Attribute | Type | Key |
|---|---|---|
| id | int(11) | primary key |
| goods_name | varchar(255) | |
| price | float | |
| description | text | |
| old_price | float(11,2) | |
| picture | varchar(255) | |
| status | varchar(255) | |
| cid | int(11) | foreign key in "goods" table; primary key in "class" table |

| | | |
|---|---|---|
| created | varchar(255) | |
| author | varchar(255) | |
| image | varchar(255) | |
| size | varchar(255) | |
| num | varchar(255) | |

## Member

| Attribute | Type | Key |
|---|---|---|
| id | int(10) | primary key |
| mid | varchar(255) | |
| name | varchar(255) | |
| idcard | varchar(255) | |
| phone | varchar(255) | |
| sex | varchar(255) | |
| address | varchar(255) | |

## Orders

| Attribute | Type | Key |
|---|---|---|
| id | int(11) | primary key |
| user_id | int(11) | foreign key in "orders" table; primary key in "user" table |
| goods_id | int(11) | foreign key in "orders" table; primary key in "goods" table |
| count | int(11) | |
| pay | varchar(255) | |
| address_id | varchar(255) | foreign key in "orders" table; primary key in "address" table |
| out_id | varchar(255) | |
| total | varchar(255) | |
| status | varchar(255) | |
| created | datetime | |
| modified | datetime | |
| image | varchar(255) | |
| size | varchar(255) | |

## Pay

| Attribute | Type | Key |
|---|---|---|
| id | int(11) | primary key |
| pay_method | varchar(255) | |

| | User | |
|---|---|---|
| Attribute | Type | Key |
| id | int(11) | primary key |
| uname | varchar(255) | |
| pwd | varchar(255) | |
| tel | varchar(30) | |
| sex | varchar(20) | |
| email | varchar(255) | |
| avatar | varchar(255) | |
| type | varchar(255) | |
| status | varchar(255) | |
| address | varchar(255) | |
| stuimg | varchar(255) | |