Requirements Analysis

**3.1 User Module**

Registration page

* Verify that the username is not already taken during registration.
* Complete the registration of user information.
* Send an email to the user's registered email address with an activation link, which the user must click to activate their account.

Login page

* Implement user login functionality.

User Center

* User Center Information page: displays the logged-in user's information, including their username, phone number, and address. Additionally, the page displays the user's recently viewed products.
* User Center Address page: displays the logged-in user's default shipping address, and a form at the bottom of the page allows the user to add new shipping addresses.
* User Center Order page: displays the logged-in user's order information.

Other

* If the user is logged in, their information is displayed at the top of the page.

**3.2 Product Module**

Homepage

* Dynamically display information for the homepage's carousel products.
* Dynamically display information for the homepage's promotions.
* Dynamically retrieve product categories and display them.
* Dynamically display each category's products on the homepage (including images and text). (need further study)
* When a user clicks on a product, they should be taken to the product's detail page.

Product detail page

* Display detailed information about a particular product.
* Display some related products from the same category in the lower left-hand corner of the page.

Product list page

* Display a list of products from a specific category with the ability to sort by default, price, or popularity.
* Display some related products from the same category in the lower left-hand corner of the page.

Other

* Allow users to search for products using the search bar on the page.

**3.3 Shopping Cart Module**

* Allow users to add products to their shopping cart from both the product list page and the product detail page.
* After a user logs in, display the number of items in their shopping cart on the homepage, product detail page, and product list page.
* Shopping Cart page: allow users to interact with their shopping cart, such as selecting items and adjusting the quantity.

**3.4 Order-related Module**

Checkout page: display information about the products the user intends to purchase.

After clicking the "submit order" button, create the order.

User Center Order page displays information about the user's orders.

After clicking the "pay" button, complete payment for the order.