

## Webshop problem description

The company WSC (We Sell Cheap) wants to sell products over the Internet. So we need to develop a webshop where customers can buy products online. WSC sells various products, from books to computers to toilet paper.

WSC now offers their products through a catalog that they send to their customers every three months. They hope that with an online shop they can increase the number of customers and the number of orders.

It is important that the webshop is very user friendly. It should be easy to find products or browse through the different product categories. For example, it should be possible to first select the category "books" and then we should see all subcategories of books. We can then select the subcategory "computer books", and then should see all subcategories of computer books. If we have found a product, then we can add it to the shopping cart. We should then see the content of the shopping cart

Also checking out the shopping cart should be very user friendly. The webshop system should store the customer data so that customers have to enter their personal data and payment information only once. When a customer places an order, the system will automatically send an order confirmation by email to the customer. All orders must be paid by credit card. The shop uses an external credit card verification system to check the credit card information

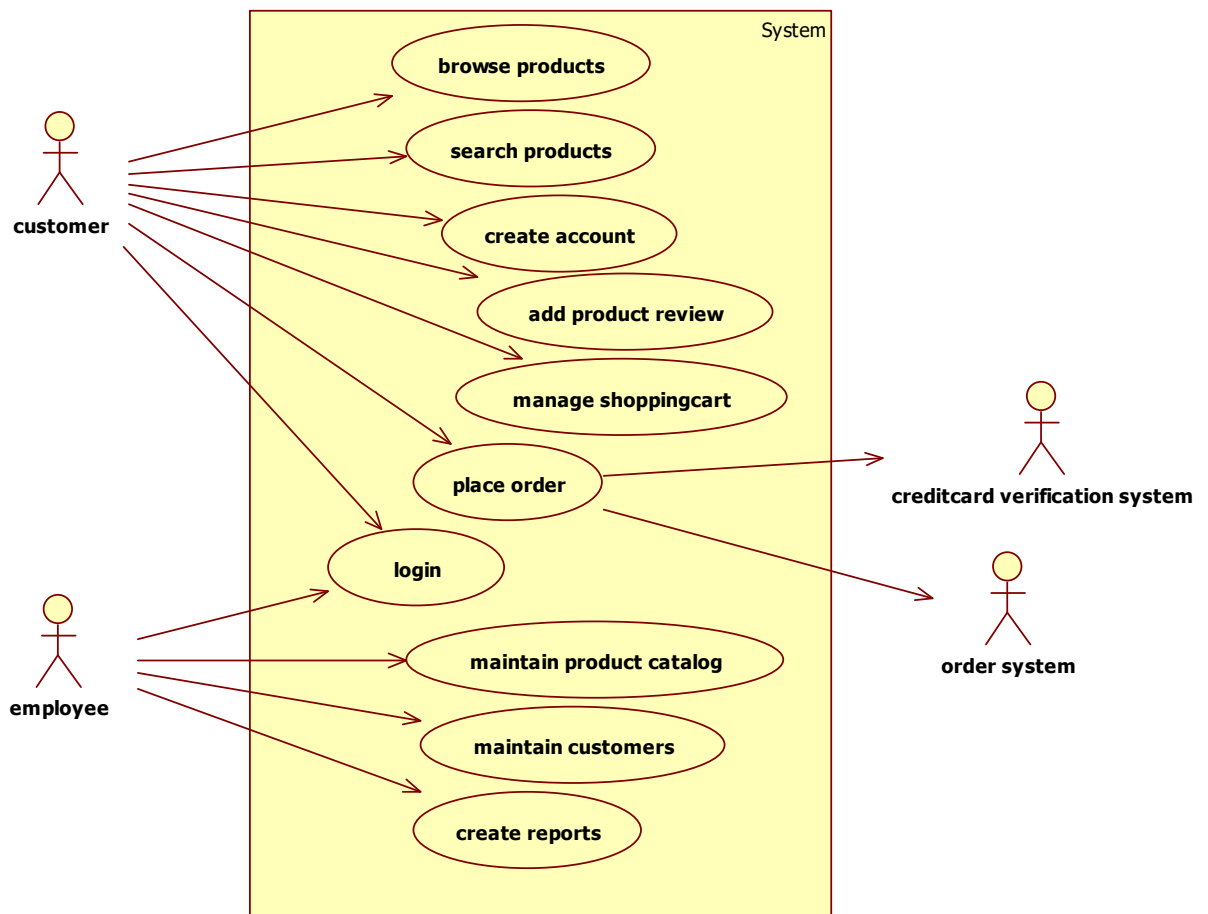
It should be possible for customers to place a "product review" for a product that they bought. These product reviews are shown in the detailed description of a particular product.

The shop application is managed by WSC staff that can add and remove products, and perform all the normal management functions.

Also, the application can generate reports for management support.

WCS has an already existing order application that process the incoming orders. The web shop application should use this existing order application to process orders.

## Use case diagram:



## **Use case scenarios**

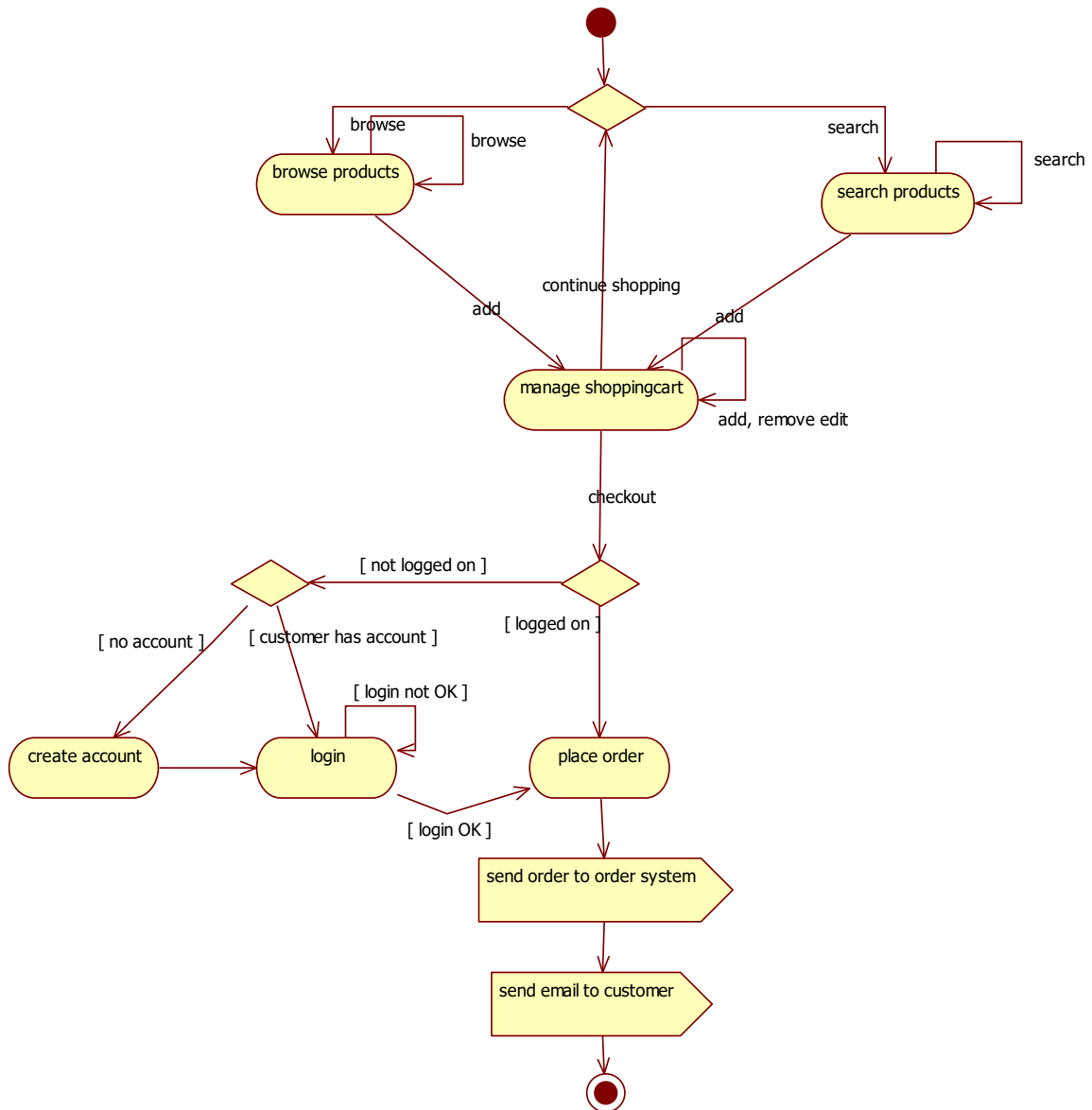
### **Manage the shoppingcart**

- Add product
  1. The system shows a product
  2. The customer adds the product to shoppingcart
  3. The system shows the current shoppingcart
- Remove product
  1. The system shows the shoppingcart
  2. The customer removes a product from the shoppingcart
  3. The system shows the updated shoppingcart
- Change quantity
  1. The system shows the shoppingcart
  2. The customer changes the quantity of a certain product
  3. The system shows the updated shoppingcart

### **Place an order**

1. The system shows the current shoppingcart
2. The customer checks-out the shoppingcart
3. The system shows the order
4. The customer confirms the order
5. The system shows the address details
6. The customer confirms the address
7. The system shows the shipping options
8. The customer selects a shipping option
9. The system shows the available payment options
10. The customer chooses the creditcard payment option
11. The system sends the creditcard information for verification to the creditcard verification system
12. The creditcard verification system notifies that the creditcard information is correct
13. The system shows the complete order
14. The customer confirms the order
15. The system sends the order to the ordersystem
16. The system sends a confirmation email to the customer

## Activity diagram



Exercises:

- a. Draw the domain model of the webshop. Show all classes, attributes, relations and multiplicity.
- b. Draw the sequence diagram of the scenarios of manage the shoppingcart
- c. Draw the sequence diagram of the scenario of placing an order

You can draw these diagrams either with pen and paper, or use an UML tool of your choice.