

## Lab 11

Design and implement a webshop framework with the following list of requirements:

### **Product catalog**

You can add, remove and get products from the product catalog.

### **ShoppingCart**

You can add products to the shoppingcart, you can remove products from the shoppingcart, and you can update the quantity of products in the shoppingcart. Assume that every shoppingCart has an unique id.

You can get the content of the shoppingCart

If you checkout the shoppingcart, an order is created based on the content of the shoppingcart.

### **Order**

You can create an order based on the content of the shoppingCart. Once an order is created, you can add payment information (amount, date, creditcard number, validation date, creditcard type), customer information (name, email, phone), and the shipping address and billing address (street, city, zip) to the order. Every order has an unique orderNumber. The framework only supports credit card payments, but it should be easy to plugin other type of payments. The billing and shipping addresses are domestic (street, city, zip)

You can get the content of the order

If you place an order, an email is send to the particular customer.

All data is stored in the database. The DAO classes just keep an in-memory list of all the objects (orders, shoppingcarts, products, ...)

- a. Draw the class diagram of your design of the framework
- b. Implement the framework in Java. Package the framework as a jar file
- c. Write a simple application that uses the framework. This application should also support PayPal payments. This application also supports international addresses (within a certain country)