

Exercise 8 (1)

Scope: Lecture material

8.1 What are the advantages and disadvantages to deploy an online shop system like Intershop on a single server system vs. a staging system? Explain, taking into consideration the following scenario:

- For Christmas shopping, products like “Weihnachtsbaum”, “Lebkuchenhaus”, “Zimtsterne”, “Stollen” (= typical German Christmas decoration / food) shall be sold that will be removed from sale after Christmas time.
- The shop only creates high traffic (> 5000 orders per day) during Christmas time. For the rest of the year, some 50-100 orders are placed per day.
- From 1.1.2003 all prices shall be augmented by 10%

Take also into consideration hardware and software resource requirements and costs.

8.2 Explain where in the shop reference architecture one can find the three-tier architecture described in detail in chapter 3. In which component(s) would you locate each tier? Explain.

Exercise 8 (2)

8.3 What is the purpose of an editor system? Why is it separated from the core shop system?

8.4 Compare shops and malls. Would you set up your business solution as a single shop / service or include it in a mall? Give reasons.

8.5 Find at least 3 payment gateway vendors on the Internet and identify

- what type of payment clearing they support
- whether they are offering service world-wide or only for North America
- the fees to pay (fix costs, per transaction costs).

Which payment gateway (of these) would you choose for your online shop solution and why? Give reasons.

Exercise 8 (3)

Scope: Realization of a web-based software system

8.6 Set up a MS Access database to store Users, Shopping Carts and Products (see exercise 6 + 7). For this, either adapt the sample database provided in Exercise 7 or create a new database from scratch.

8.7 Populate the database with products / services that your business shall sell.

8.8 Read the slides on JDBC provided on the ECommerce page to understand how to connect to a database from Java. Find additional material on the Internet and at <http://java.sun.com> > *Tutorials*.

Exercise 8 (4)

8.9 Following the description on the ECommerce page, use JDBC to connect to the database from your business logic layer classes. Map the

- life-cycle management methods and
- finder methods of the containers as well as the
- getter / setter methods of the Business Objects to the database.

NOTE: You need not implement caching mechanisms.

A sample solution will be provided for this.

8.10 To test your system, try to run a product search, i.e., enter your shop and enter a search expression into the search form. See if the search returns matching products.

8.11 *Voilà!* (so say the French), you have a three-tier shop system in Java. Now go and buy Christmas presents.