

A web based shop

Compulsory project

Software Architecture with Java, spring 2013

1 Introduction

The purpose of the project is to build a web application using an n-tier architecture. It should be constructed according to the MVC model using the Java EE components that have been discussed in the course.

2 The System

We do have a shop that has a number of basic components in stock. The shop sells a number of products (eg computers, bakery, cars) that are assembled from a predefined set of these components. There are also a number of registered customers in a customer database.

A product can be a computer, a salad, a pizza or something completely different. A pizza is composed of components like ham, mushrooms, tomato sauce etc. These are the components that build a product.

When receiving an order, the shop collects the required components, assembles the product and delivers it to the customer. This requires that all required components are in stock, if not, the shop cannot currently deliver the requested product.

There should be two different web interfaces, one for customers that allows them to place an order. An order may contain more than one product. The customer should also be able to edit his personal data. For new customers, the system should create a new user profile and register the customer. Once an order is placed, it should be saved in the order database and the customer should receive an acceptance of the order. If you are unable to deliver any of the ordered products, it should be announced somehow.

There should also be an interface for the manager that allows him/her to

order new components and to add new products. This should of course affect the data stored in the databases.

You don't need to put too much effort in the authorization system. It must be possible to identify the user somehow to connect him to the correct profile, but a full password based system might be overkill here.

2.1 Technical details

To produce such a web application you will need access to Java, Tomcat and to a suitable RDBMS system with a JDBC level 4 driver. MySQL is such a database but there are others. Since all software are Open Source it is recommended that you install them on your own computer.

You will need a number of tables in your database:

- A customer table, describing name, address and other customerspecific data
- A component table describing a component that you may have in stock. Data could be name, number of items in stock, price per item and a textual description.
- A product table that describes the products that you sell and what components are needed to produce it.
- An order table describing all orders that you have received from the customers.

You may need more tables to implement the application but these are the basic ones.

Your application may optionally use JSF or XML-documents and XSLT to internally store, transmit and to display data, but this is not required.

2.2 Others

Work in group of 2-3 person. Your application should be demonstrated with a written report and an interactive demo no later than on June 10th.

There is a complete bookshop webapplication on the course page that you can use as a reference. We will discuss that application later in the course.