Übung 5 – Mensch-Machine-Interaktion 2

Exercise 5: Using the Eclipse Visual Editor

Building an example view for a shop application

Create an example for a shop view with Java and Swing. Use the Eclipse Java IDE and the Eclipse Visual Editor introduced in Exercise 4. The application should provide a graphical view where a user can choose articles and put them into his shopping cart. He can view the content of his shopping cart and push a button to submit his order. The view should contain the following parts:

- Article overview table:
  The offered articles should be listed in a table. The table shows the main properties of each article: brand, product name and price. The user should be able to sort the articles by their different properties.
- Article details:
  If an article is selected in the table the article's details are shown in a separate area. They consist of a textual description and a picture.
- Shopping cart:
  The user should be able to put articles in his shopping cart. He can increase the number of an article in his shopping cart. The content of the shopping cart and total price of the order should always be visible for the user.
- Order submission:
  The user should be able to submit his order by pressing a button. This triggers a small dialog which shows the total price and asks the user to confirm the order.
- Overall layout:
  The application should start with a packed window. If the user enlarges the window, the components in the window should be rearranged in a useful manner. Try to achieve this by using the Java Layout Managers.

Technical hints:
- Keep the Model-View-Controller Structure. Your model should contain:
  - A class A*rticle*.
  - A class *Catalog*, which holds all articles.
  - A class *ShoppingCart*, which holds the articles a user added to his shopping cart.
- Initialize the catalog with articles.
- To keep it simple, you can e. g. define *Catalog* as a subclass of *AbstractTableModel* to easily show the articles in a table.
- The Java Tutorial *How To Use Tables* provides a class *TableSorter*, which you can use to sort the data in the table.

Design and implement the described application. Provide it as a zip archive containing the source code and the compiled classes. Please name your zip archive *vorname_nachname.*zip and name the main class *Shop.class*. Send the link to the zip archive (or the archive itself) by email to Andreas Pleuss (**Andreas.Pleuss@ifi.lmu.de**). Submission deadline is **4th of June 2004**.

Links:

- Eclipse: http://www.eclipse.org
- Eclipse Visual Editor: http://www.eclipse.org/vep/
- Other Eclipse Subprojects: http://www.eclipse.org/tools/index.html
- The Java Tutorial (containing "How to use…" for many Swing Classes): http://java.sun.com/docs/books/tutorial/index.html (could also be downloaded)