

## **PHP Programming Exercise**

Sales Orders of partner platforms are often provided in CSV flat files. These files have heterogeneous columns, e.g. sometimes the street and number are in one column, sometimes in two.

We need a tool to import heterogeneous CSV files into one homogenous order database.

The exercise is about some parts of this tool.

For the order database consider following entities

entity	fields
order	order id, shipment address fields*, invoice address fields*, order grand total
order items	qty, price
customer	name, firstname, email, telephone number
product	sku, name

\*name, firstname, company, street1, street2, zip, city, state, country

Of course there are more fields needed e.g. for taxes, discounts, etc. But these details are not needed for the exercise.

### **Exercise**

- 1.) DB Model: Provide an Entity Relation Ship Model diagram that shows the relations between the above mentioned entities.
- 2.) SQL: Please setup the database and fill it with example data. Please provide the SQL scripts for it.
- 3.) GUI: Please create an HTML page, where we can see a list/table of orders with following fields: order id, customer firstname, customer lastname, ship country, order grand total. In this list we want to filter in each column for its values. On top we want to be able to sort table by each column.

One main feature of the tool is to map the CSV columns to the corresponding fields in database. The idea is to define CSV profiles, which contain the mapping for each kind of CSV. Attached you can find 2 different CSV files. CSV files also contain data that is not needed in our database (columns from partner). They can be ignored.

Eventually the tool will have menus to view and edit order data (such as table in Exercise 3.), to define and edit the profiles and to import the orders via a CSV.

Additionally there will be features such as an import log, exporting and adding information to orders, such as shipment and tracking information.

- 4.) Show a brief MVC model of this application. Shortly describe classes and some methods in it.
- 5.) Program the PHP controller class(es) that are responsible for the column mapping (import profile) feature.
- 6.) Describe a GUI for column mapping. What would be a good approach to map columns easily? What framework would you use to build such a GUI. If you feel it's very easy to program, you can provide such a GUI

Eventually, we would love to see all code (PHP, HTML, SQL) that you created for this exercise.

If you have any questions, don't hesitate to ask me.

Christian ([christian.haker@returbo.de](mailto:christian.haker@returbo.de), skype: c.haker.berlin)