Universitatea Tehnica din Cluj-Napoca
Departament Calculatoare

Programming Techniques, Undergraduate 2018/19
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TP Lab – Homework 3

Consider an application **OrderManagement** for processing customer orders for a warehouse.
Relational databases are used to store the products, the clients and the orders. Furthermore, the application uses (minimally) the following classes:

- **Model classes** - represent the data models of the application
- **Business Logic classes -** contain the application logic
- **Presentation classes –** classes that contain the graphical user interface
- **Data access classes -** classes that contain the access to the database

Other classes and packages can be added to implement the full functionality of the application.

a. Analyze the application domain, determine the structure and behavior of its classes and draw an extended UML class diagram.
b. Implement the application classes. Use javadoc for documenting classes.
c. Use reflection techniques to create a method *createTable* that receives a list of objects and generates the header of the table by extracting through reflection the object properties and then populates the table with the values of the elements from the list:

JTable createTable(List<Object> objects);

d. Implement a system of utility programs for reporting such as: under-stock, totals, filters, etc.