MTAT.03.083 – Systems Modelling

Homework 3 (HW3) – Class Design and Code Generation (10 points)

Due on 04.11.2014 at 10 am
complete the homework in groups of 2 students.

Modelling a computer game: "The Restaurant Owner"

Create a class design report and implement "The Restaurant Owner" computer game starting from the application model created in the previous assignment.
In detail:

- Create a class design report (in Word) with all the implementative decisions you make. The report should contain at least: (i) the pseudo-code representing the body of the methods of your application class model; (ii) the data structures used; (iii) documentation about additional classes/operations/attributes you need to implement the application;
- Update your class model with the additional classes/operations/attributes coming from your class design task;
- Generate code with MagicDraw and use engineering and reengineering to keep code and models aligned;
- Integrate the generated code with the methods and the data structures defined in the class design task.

Deliverables:

- A class design report (including parts (i), (ii) and (iii) as specified before);
- An update class model with the additional classes/operations/attributes coming from your class design task;
- A command-line application that we can invoke as follows: "java -jar myApplication.jar". Use System.in.read() to get inputs from the player at the beginning of the game or at the end of a day/week.

Non-functional requirements

- The UML class model should be designed using MagicDraw;
- The command-line tool should be developed in Java – use MagicDraw code generation and round-trip engineering features as much as possible;
- Right from the start of the assignment, every team must maintain their models and code in a publicly accessible version control system. Teams should use one of the following services: Assembla, Google code, Bitbucket or GitHub. Every team member must use his/her own

username when making commits to the version control system – making commits using someone else's username is forbidden.

Notes:

1. Use MagicDraw to generate code;
2. Submissions: one of the members of the group has to login and submit the assignment using the link "submit" on the course webpage. Please specify in a comment the other member of the group;
3. The submission should take the form of a "zip" file containing the MagicDraw project file (".mdzip"), the compiled ".jar" file, a README.txt file containing the link to the public repository, and a pdf file containing the class design report.

Grading Criteria:

1. Correctness and completeness of the class design report (3 points);
2. Alignment between the updated UML class model and the code (2 points);
3. Use of version control system (1 point);
4. Correctness and completeness of the implementation (all the functionalities implemented correctly) (4 points);