UTCN
Computer Science Department
Software Design 2018

ASSIGNMENT A1 (TudorV Lab)

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1. Objective

The objective of this assignment is to allow students to become familiar with architectural patterns, particularly Layers.

2. Application Description

Design and implement a Java application for the management of students in the CS Department at TUCN. The application should have two types of users (student and teacher/administrator user) which have to provide a username and a password in order to use the application.

The regular user can perform the following operations:
- Add/update/view client information (name, identity card number, personal numerical code, address, etc.).
- Create/update/delete/view student profile (account information: identification number, group, enrolments, grades).
- Process class enrolment (enroll, exams, grades).

The administrator user can perform the following operations:
- CRUD on students information.
- Generate reports for a particular period containing the activities performed by a student.

3. Application Constraints
- The data will be stored in a relational database (Postgres / MySql / MsSql). Use the Layers architectural pattern to organize your application. Create the Data Access Layer using SQL statements in the way you find most suitable for the application

- All the inputs of the application will be validated against invalid data before submitting the data and saving it in the database.

4. Requirements
- Create the analysis and design document (see the template).
- Implement and test the application.

5. Deliverables
- Analysis and design document.
- Implementation source files.
- SQL script for creating and populating the database with initial values.
- Readme file that describes the installation process of the application and how to use it:
    o how to install your application on a clean computer
    o how to access your application and with what users
    o images with all use cases and their scenarios implemented

6. References

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(this is an exercise meant to highlight your existing knowledge & learning skills //besides the scope of this practical work)