**HOMEWORK 2**

For the given company and a specific year, 20 statistical features are saved in the table **statistics**. A characteristic called *safe value* is calculated by method ***safeValue(String ID, int year),*** where *ID* is a company name. The method calculates the value depending of data for two last years. If data for two last years are similar (*>Threshold*) up to Spearman’s correlation coefficient, safe value is calculated by the following formula:

otherwise, the safe value is calculated as

where is data of the year X, avg(A) and std(A) are the average and standard deviation values of the array A, correspondingly.

**Unit testing** in Java

1. Class ***statistic\_block*** depends oncomponent ***SpearmansCorrelation*** and on database. Refactor the code of the class ***statistic\_block*** (from the attached project **hw2\_unit\_testing**) to isolate these dependencies. Take care that functionality was not changed!
2. Write a complete Junit test suit for the method ***safeValue()*** by using constructor dependency injection approach (assume that you have no real implementation of ***SpearmansCorrelation***; test cases have to be independent from the database).
3. Present test case results in a table of the following structure:

|  |  |  |
| --- | --- | --- |
| Test case name | Description | Result (pass/failed) |
|  |  |  |

**Don't forget test cases description and code notes about performed changes!**

**Note:** The table **statistics** is saved in the backup file hw.sql.

**Format of submission:**

Homework is submitted on Moodle as a ".zip" file called G<#>-<first submitter ID1>\_<second submitter ID2>\_HW2.zip or G<#>-<submitter ID>.zip if you are alone.

It has to include **full eclipse project** but not single files like <>.java or <>.jar.

**Submission date**: 14.06.2020 until 8.00 a.m.