COMP-10066 – Assignment 1

Learning Objectives

This assignment will cover quality code, documentation and using a local git repository.

Complete the following assignment and submit electronically to the assignment folder in **MyCanvas**. See the course Calendar for the exact date and time of the submission. This assignment must be done individually.

Background

You are working for a company that recently had one of the programmers leave. The programmer was working on a library of methods in Java to support Statistical Calculations. The library was designed using an ArrayList of Double values and it is currently only expected to work with that data type.

The code was thoroughly tested and is working as expected, there are no bugs. However, the quality of the code is severely lacking. Your boss has asked you to improve the quality of the code by refactoring and adding appropriate documentation.

The code includes a main method that executes each of the public methods in the class. Since these are general-purpose methods each has been declared static (class methods). All parameters to obtain the required functionality are passed as method arguments.

The source code, **StatisticalLibrary.java,** can be downloaded from the Assignment 1 on MyCanvas.

General Assignment Requirements

Set up a project using IntelliJ and run the program. It should produce a set of results as shown below:

```
m1: 60.099999999999994
m2: 50.5
m3: 25.5
m4: 100.0
```

Place the code into a source control system. Specifically, you have been asked to use Git for this project. Git is included in IntelliJ. Please refer to lab activity 2 for instructions on how to use Git in IntelliJ .

Provided Guidelines

- Refactor the code using the rules listed in the provided guide: https://google.github.io/styleguide/javaguide.html
- Comment all of the code according to the JavaDoc standards: https://www.oracle.com/ca-en/technical-resources/articles/java/javadoc-tool.html

Tasks / Check List

The specific steps for this lab are listed below:

1. Create a new IntelliJ project and add the source file (StatisticalLibrary.java) to the project.
2. Execute the project and ensure you see the results in the output window.
3. In order to understand the methods, it is suggested that you modify the main method and attempt to pass different parameters to the methods.
4. Document and improve the source code using the rules from the style guide provided on the first page of the assignment.
    a. A list of the rules that you applied from the style guide to the code must be included at the top of the source file in a comment.
    b. List only the rules you actually applied to the code.
    c. List the rules by name, (i.e. 5.2.2 Class Names).
5. Comment / Document the code following the JavaDoc guide provided on the first page of the assignment.

Submission

- Your submission for this assignment must be a single ZIP file with the entire IntelliJ project

Evaluation

Your submission will be evaluated for:

- Code refactoring based on Guidelines, and including rules applied as a comment (50%),
- Commenting the methods as required with documentation comments (50%).