Assignment
Code Coverage
Points: 50

For this assignment, use MagicSquares program that you designed and implemented in Assignment1. If needed, refactor it for better readability, performance, & design.

Readings:

EclEmma Java Code Coverage tool: http://www.eclemma.org/index.html

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Step 1:
Get the source code for MagicSquares program from Lab 1 and place it in core package. Perform any necessary refactoring. Ensure that you have used good object-oriented design. Creation and checking of MagicSquare should be in a separate class called *MagicSquare*. The main method is optional for this assignment, as all testing will happen through JUnit test cases. If you decide to keep the main method, it should be in a separate class (outside of *MagicSquare*).

Step 2:
Create a package called test and add JUnit test cases to verify the following in your *MagicSquare* class:

1. The proper number of input values was provided.
2. Each of the numbers between 1 and n^2 occurs exactly once in the input.
3. When the numbers are arranged in a matrix,
    a. sum of the rows,
    b. sum of columns,
    c. and sum of diagonals

must be the same value.

Create four test cases; one where each of criteria 1, 2, 3 above fail, and one where they all pass.

Step 3:
Use the tool EclEmma to produce a code coverage report. Add/edit your test cases to achieve at least 85% coverage in the core package.

Step 4:
After you have performed code coverage analysis create report in HTML format using the Export feature. Click on File → Export → Java → Coverage Report and click Next. Select HTML format, pick appropriate session and destination to save the report.

Submission:

Compress the following into a zip file titled ASURiteID-Assignment#.zip

- Your complete src folder of the project that contains core and test package
- Your complete HTML coverage report
- Do not submit any other files.
- Do not submit the entire project