6.092: Assignment 7: Magic Squares!

A magic square of order n is an arrangement of $n \times n$ numbers, usually distinct integers, in a square, such that the n numbers in all rows, all columns, and both diagonals sum to the same constant (see Wikipedia: Magic Square).

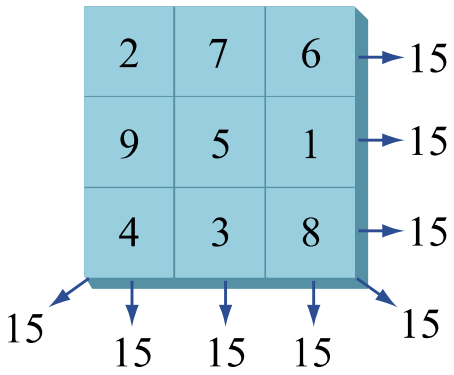

Figure by MIT OpenCourseWare.

Checking the row values

We give you two text files: Mercury.txt and Luna.txt

For each file: open the file, and check that all rows indeed sum to the same constant.

Hints

Copy both text files to the root directory of your project. This is the directory that contains the `src` folder. Alternative: Use absolute paths to the files (`c:\somedir\Mercury.txt` on Windows or `/Users/myuser/Mercury.txt` on Mac)

You will need to handle or rethrow `IOException`

Read the files line by line as explained during the lecture today.

Use `... = myLine.split("\t");` to break apart each line at the tab character, producing an array of String (String[]), each containing one value. Consult the Java API reference for String.split).

Finally, use `... = Integer.valueOf(substring);` to transform each string value into an integer value.

Optional Part: Column / Diagonal Values

Optionally, try to check that the columns and the diagonal also sum to the same constant. This is slightly trickier!

Submission Instructions

Submit your `MagicSquares.java` file via Stellar.

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