Due: Thursday, June 30, 2016 by 11:59 pm

Total Points: 20

Week 6: Regular Expressions (Regexes)

Q1 (20 points)**:**
Write a Java program that reads data (line by line) from a text file, `input.txt`. The input text file has 500 lines of data and one header line. When you read data from the `input.txt` file, you must use the `javax.swing.JFileChooser` class to get the file path.

The data in the input file is cluttered, some text lines have fields stored in an improper sequence. The program repairs the data fields sequence and stores the repaired data in another text file, `output.txt`. The `output.txt` file must have exactly 500 lines of correctly structured data fields in each line. Data fields in each line must be stored in a correct sequence as follows:

first_name**,**last_name**,**company_name**,**address**,**city**,**county**,**state**,**zip**,**phone1**,**phone2**,**email**,**web

Some lines in file `input.txt` have the last three fields (phone2**,** email**,** web) replaced with other data fields; the last three data fields are placed in incorrect places within the same string line.

The program defines a `repairData(String fileName)` method that reads String lines from file `input.txt` and stores the correct structured data in file `output.txt`. Note, some text lines in file `input.txt` have data fields in a correct sequence, hence these lines must be entirely stored without data rearrangements in file `output.txt`.

Your program must use class `Pattern` to define three `Pattern` objects for the phone2, email, and web URL data fields. Also, the program uses the `Matcher` class in order to find matches between String inputs phone, email, and web URL and regular expressions defined in the `Pattern` objects.

Evaluation Criteria:

1. You must use the class template in your program classes
2. The program must not have any compilation or runtime errors
3. Classes Pattern and Matcher must be used in this program
4. Create correct regexes for phone, email, and web URL String inputs
5. You must use `javax.swing.JFileChooser` to get the file path

6. All tasks must be completed to receive a complete credit for this assignment
7. The program must perform all the requirements correctly, including the read and output of data
8. The program must have a correct logical order and produce the anticipated results
9. The sequence, selection, and iteration structures must constitute correct program logic solutions to the assignment problem
10. The program must terminate gracefully
11. The program must not abnormally abort
12. You must follow the correct submissions format as described in this document

Submission (This is an Individual Assignment!)

> Copy the .java source file/s from the *src* folder in your Eclipse *workspace* to another folder that should be named following the provided naming format in this course, then zip and upload the file under this assignment answer in Canvas.
>
> *File Name: FFFFLLLLPA05.zip (FFFF = first name and LLLL = your last name)*