**Current Ratio**
**Assignment Specifications**

In this assignment, you develop a program to produce a current ratio report.

The current ratio is used in accounting to measure a company's financial condition. To compute the ratio, one divides the company's current assets by the current liabilities. Here is a sample set of data (2010 to 2012). The first line is the company name, appearing in column one (a maximum of 30 characters in length). In each subsequent line, the first number (starting in column 1) represents the current assets and the second number (starting in column 10) represents current liabilities. Here is some sample data to use (no blank line appears in the data file at the beginning)::

```
Hi-Tech Leisure Products
47900       31007
34500        9100
57984       14822
```

You should write a batch (file input) program that reads this data in this format (laid out as you see it above, on four lines) from a textfile, then produces a report (sent to a disk file) that displays it along with the current ratio for each year. Assume 2010, 2011, and 2012 are the three years in question. Here's sample output for the data you see above:

```
Hi-Tech Leisure Products
Current Ratio Report

                Current           Current           Current
Year            Assets            Liabilities       Ratio
-----------------------------------------------------------
2010              47900             31007              1.54
2011              34500              9100              3.79
2012              57984             14822              3.91
-----------------------------------------------------------
Average           46795             18310              3.08

This report produced by Raul Jimenez.
```

The data will allows be whole values (no cents), but may run into the millions. No cents are to be displayed. The current ratio will always be displayed rounded to two decimal digits, and could be up to 9999.99. The averages are rounded to the nearest whole dollar.

You must create the data file in the manner discussed in the lecture.

Note that the various asset and liability numbers could be 5 digit, 4 digit, or even 3 digit or 6 digit. The numeric formats you use to print should **not** vary

based on what you see for this particular set of sample data. Your program should be able to consistently produce a properly aligned report with all different sizes of numbers without changing the code!

Please be careful in noting how things are aligned. The "t" in "Current" is over the last digit of each number. Proper and exact alignment of all elements of the report will be part of your score.

The program must be written using modularity (voided functions), which is this week's topic. If you do not build this program using void functions, major points will be deducted.

Replace Raul Jimenez with your name. You can "hard-code" this into the statement; it won't be necessary to use a defined constant for this.

*Warning*: Be careful with your calculations. The average current ratio (at the bottom of the table) is the average of the three current ratios, **not** the quotient of the average assets and average liabilities. The wrong algorithm will cost you major points.

**Hint**

You will need to use fgets() instead of fscanf() for the name of the company. fscanf() cannot read a string with embedded spaces.

**What You Are Expected To Submit**

For this assignment, I want you to develop (but not turn in) a full top-down design including a Hierarchy Chart, and a Nassi-Schneiderman Chart for each module box.

You will submit only the source code file (**.c**) and the unaltered (ahem!) output file (**.txt**) from your run of the program. Place your name in the comments of the source code file and make sure your program prints your name in the last line of the report in the output file. Do not zip the files. And please, use .c for the source code and **.txt** for the output file. No Word documents or other such formats.

In the program itself:
* Your source code filename should be YOUR first initial and last name and the addition **_cr** plus the **.c** extension (such as **kjefferies_cr.c** for me).
* Your external filename for the input file **must** be **c:\class\current.txt**.
* Your external filename for the output file should be YOUR first initial and last name and the addition **_cr** plus the **.txt** extension (such as **kjefferies_cr.txt** for me).

Please use these filenames and the **c:\class** directory; it will make your programs much easier for the reader to score. You will need to manually create the **class** folder under the **c:\** folder.

Submit only one test run (output file) of your program, using the data shown above. Check your answers carefully! (especially the current ratio calculation)

Be sure to include appropriate comments and indentation in your source code.