HW 3

Weather Stats

Write a program that reads in weather data and then presents the user with a menu that allows the user to:

1) Display a month's temperatures including the monthly average temperature for all years
2) Write a year's temperatures including the yearly average temperature
3) Add a new month's data to the array
4) Quit

File Format
The file will contain lines and lines of data. Each line of data will be for a single month. The months are not guaranteed to be in order of any kind

- The first element of the line will contain the month as a string, all lower case. The full month word.
- The second element of the line will be the year of the data
- Then each temperature for the month each separated by a space
- NOTE: you don't need to worry about leap year.

Example of the text file:

january 2008 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
march 2009 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
january 2006 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
february 2008 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8

Specifics

- When displaying the months or years temperature, you must give the user the option to write to a file or the screen. Filename will be user specified.

- You must use a 3 file format

- All scores should be treated as integer numbers.

- You must utilize dynamic arrays on this assignment

- You must name your C file that contains main cscd240_s13_hw3Tester.c.

- You must create a simple makefile that will be used to compile your code and create a target named hw3

- Include comments at the top of your source file that has your name, a description of the program, and a list of shortcomings (if any).

- You must clean up all dynamic memory

- I have provided main. You can't change it.

To Turn In

- Submit a zip file
    - Containing your C files and H file(s).
    - Your makefile
    - Include an output captures from running your program that includes :
        - A month of january run
        - A year for 2008 run
        - Saved as cscd240_s13_hw3out.txt
    - Include a valgrind run to illustrate you don't leak memory. This run will be named cscd240_s13_hw3valgrind.txt.

    Your zip will be named your last name first letter of your first name hw3.zip (Example: steinershw3.zip)

GET STARTED ASAP