CMSC246 Systems Programming - Lab 4

Arrays Practice –2 dimensional arrays, strings, and file reading

The file `/home/gtowell/Public206/Lab04/temps.txt` contains 5 days of hour by hour weather data for Philadelphia. Each line of the file contain the following fields

time
temperature
dew point
relative humidity
Wind direction and max speed
Average speed
Barometric pressure
Unused

The fields are separated by tab chars (\t)

Tasks:

1. All functions should use pointers rather than array indexing
2. Read the data file line-by-line (use `fgets`) then parse the lines using `strtok`.
3. Store temperature into a 2-d array of integers (use `strtof` to do conversion) of size 5x24 In other words the first dimension is a day and the second is the hour. Ignore all other data.
4. Write a function that prints out the temperatures of a given day.
5. Write a function that takes the data for a day and a temperature and prints out a list of all the times that have the given temperature.
6. Write a function that prints out the highest temperature observed on each day.
7. In case you have time… store dew points in a 5x24 array of strings. Then print the dew points from this array. You may use array indexing in any way for this task.

In case any of the above is unclear, make a reasonable interpretation of the directions and go with that.

I do not expect or require you to complete all of these steps during lab.