CCPS109 Lab 3

Due: March 14th @ 23:00hr

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File io and module

Create a program that read in weather data from the weather_data.dat file and write a report. The weather data is recorded in Fahrenheit (F) but the report must have all information in Celsius(C).

Weather_data.dat: Each line corresponds to one month of recorded temperatures

The first number of each line specifies the respective month:

```
6,54 , 69 , 73…  <= 6 is June, and 54 , 69 , 73… are
temperature in F
```

your report will be crafted by your program and will includes the following:

- the actual name of the month and respective data in celcius:

ex: **June,**12.2,20.6,22.8,…

- Make sure not to have any duplicate month.
- After all the months and temp, print a summary in an ascending and visually pleasing tabular formatted for easy consumption:

…

June**:** 12.2,20.6,22.8,…

…

```
Month            average temp (c)    high/low (c)
Jan                   -23              9/-20
```

…

- You write 2 python files: main.py and weatherstat.py

weatherstat.py is a module that contains the following functions

- temperature conversion function that Fahrenheit to Celsius
- average temperature function for the month

- high_low function that return both the highest and lowest recorded temperature for each month in the data file.

The main part you program is in main.py which import functions from weatherstat.py to help with the calculations. In main.py :

- Open and read in data from weather_data.dat
- Format and interpret that data into usable data structure
- Make calls to functions for calculating
- writing report new to file named weathreport.txt

- Function for formatting read in data
- Function for writing data to file

decompose and group relating logic into functions for maintainability. Should have 'monolith' code in main.py

Helps and hints:

https://docs.python.org/3/tutorial/inputoutput.html

https://en.wikipedia.org/wiki/Arithmetic_mean

split() method for strings or line

remove empty spaces

format reading data as list?

may store summary as dictionary

Submission: 2 files

- main.py
- weatherstat.py