ELEC 390 Lab 2

Thursday, February 2nd, 2023
Section 3
Group 9
Liam Salass (20229595)
Charlotte Lombard (20232888)
Mile Stosic (20233349)

Lab2 code not updated:

```python
# ELEC390_Lab2.py > ...
import requests
from bs4 import BeautifulSoup

http_text = requests.get("https://weather.com/en-CA/weather/tenday/l/63f4de10a8c7b229661a9674a3d0915b9740827451d381e82b730ca1b96bbbf5#d
#print(http_text)

soup = BeautifulSoup(http_text, 'lxml')
weather_data = soup.find_all('div', class_="DetailsSummary--DetailsSummary--1DqhO DetailsSummary--fadeOnOpen--KnNyF")

for day in weather_data:
    date = day.find('h3', class_='DetailsSummary--daypartName--kbngc').text
    temp_section = day.find('div', class_='DetailsSummary--temperature--1kVVp')
    span_tags = temp_section.find_all ('span')
    high_temp = span_tags[0].text
    low_temp = span_tags[1].span.text
    weather_condition = day.find('div', class_='DetailsSummary--condition--2JmHb').span.text
    percipitation = day.find('div', class_='DetailsSummary--precip--1a980').span.text
    wind_section = day.find('div', class_='DetailsSummary--wind--1tv7t DetailsSummary--extendedData--307Ax').span.text
    wind_seperated = wind_section.split()
    wind_direction = wind_seperated[0]
    wind_speed = wind_seperated[1]
    final_data = (date, high_temp, low_temp, weather_condition, percipitation, wind_direction, wind_speed)


    with open('ELEC390_Lab2.txt', 'a') as f:
        print(final_data, file=f)
```

Updated lab 2 code:

```python
# ELEC390_Lab2_updated.py > ...
import requests
from bs4 import BeautifulSoup

http_text = requests.get("https://weather.com/en-CA/weather/tenday/l/63f4de10a8c7b229661a9674a3d0915b9740827451d381e82b730ca1b96bbbf5#de
#print(http_text)

soup = BeautifulSoup(http_text, 'lxml')
weather_data = soup.find_all('div', class_="DetailsSummary--DetailsSummary--1DqhO DetailsSummary--fadeOnOpen--KnNyF")
count = 0
final_data = []
for day in weather_data:
    col = []
    date = day.find('h3', class_='DetailsSummary--daypartName--kbngc').text
    temp_section = day.find('div', class_='DetailsSummary--temperature--1kVVp')
    span_tags = temp_section.find_all ('span')
    high_temp = span_tags[0].text
    low_temp = span_tags[1].span.text
    weather_condition = day.find('div', class_='DetailsSummary--condition--2JmHb').span.text
    percipitation = day.find('div', class_='DetailsSummary--precip--1a980').span.text
    wind_section = day.find('div', class_='DetailsSummary--wind--1tv7t DetailsSummary--extendedData--307Ax').span.text
    wind_seperated = wind_section.split()
    wind_direction = wind_seperated[0]
    wind_speed = wind_seperated[1]
    data = [date, high_temp, low_temp, weather_condition, percipitation, wind_direction, wind_speed]
    col.append(data)
    final_data.append(col)

with open('ELEC390_Lab2.txt', 'a') as f:
    for col in final_data:
        for data in col:
            print(data, file=f)
```

Only opens the file for writing once by excluding it from the for loop, and storing the data in a list within a list.

Output from running both code:

```
ELEC390_Lab2.txt
  1    ['Tonight', '--', '-21�', 'Snow Showers/Wind Early', '52%', 'WNW', '41']
  2    ['Fri 03', '-19�', '-27�', 'Mostly Sunny', '5%', 'NW', '23']
  3    ['Sat 04', '-7�', '-8�', 'Snow Showers', '74%', 'SE', '21']
  4    ['Sun 05', '3�', '-2�', 'PM Rain/Snow Showers', '75%', 'SSW', '26']
  5    ['Mon 06', '0�', '-5�', 'Partly Cloudy', '15%', 'NW', '13']
  6    ['Tue 07', '4�', '-1�', 'Rain', '85%', 'SSW', '31']
  7    ['Wed 08', '2�', '-2�', 'Mostly Cloudy', '19%', 'WSW', '19']
  8    ['Thu 09', '3�', '-1�', 'Rain/Snow Showers', '58%', 'SSW', '15']
  9    ['Fri 10', '2�', '-5�', 'Rain/Snow Showers', '58%', 'WSW', '18']
 10    ['Sat 11', '-2�', '-8�', 'Snow Showers', '58%', 'NW', '15']
 11    ['Sun 12', '-3�', '-6�', 'Partly Cloudy', '24%', 'WNW', '14']
 12    ['Mon 13', '2�', '-3�', 'Mostly Cloudy', '24%', 'SW', '20']
 13    ['Tue 14', '1�', '-3�', 'Rain/Snow', '58%', 'SW', '18']
 14    ['Wed 15', '2�', '-2�', 'Snow Showers', '58%', 'WSW', '16']
 15    ['Thu 16', '3�', '-2�', 'Snow Showers', '58%', 'S', '17']
 16
```

Question:
To avoid constantly opening and closing the text file, the 'open' loop was excluded from the data-scraping for loop and placed at the bottom of the code. One 'open' command is issued and then all the data is written in by storing the data in a nested list. Then using nested for loops to print out the data.