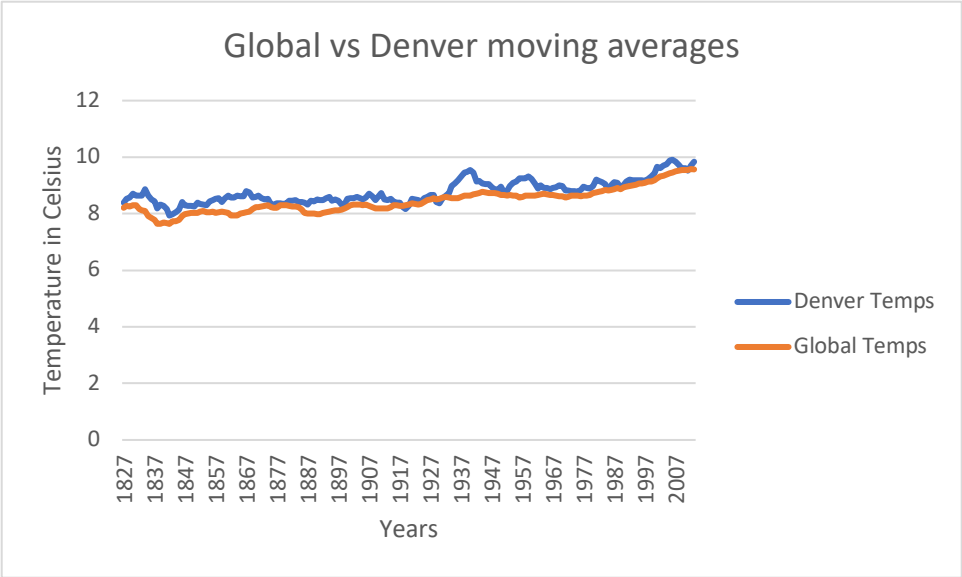
Cole Lineberry
Project 1 submission.

- **An outline** of steps taken to prepare the data to be visualized in the chart, such as:
    - What tools did you use for each step? (Python, SQL, Excel, etc)
    - How did you calculate the moving average?
    - What were your key considerations when deciding how to visualize the trends?
- **Line chart** with local and global temperature trends
- At least **four observations** about the similarities and/or differences in the trends

These are the steps I have taken to prepare the data:

1. Using the previous pages connection to the database I ran the following SQL:
    a. select * from city_list
        i. This told me the city names were capitalized.
    b. select * from city_data where city = 'Denver'
        i. This is how I found the data for the city I live nearest.
    c. select * from global_data
        i. This returned the global data for each year.
    d. select cd.year as Year, cd.avg_temp as cityTemp,
    gd.avg_temp as globalTemp
    from city_data cd, global_data gd
    where cd.city = 'Denver'
    and cd.year = gd.year
        i. This combines the two tables into one table of data with everything we need.

2. I used the Excel spread sheets to prepare the data I downloaded using the SQL.
    a. I used this calculation to find the moving average - =AVERAGE(D47:D54)
    b. I considered that I would need to start the calculations 7 days after the first set of data. Denver was missing a few years of data so I removed the dates where there was no value and threw out the first two years as outliers.
    c. I created the following chart to show the 7 day moving average of Denver vs Global Temperatures using Excell



3. Observations of the data set –
    a. My city of Denver is mildly warmer than the global average. I would say this has stayed consistent over time.
    b. My city seems to have more fluctuation over time than the global average.
    c. The overall trend of this data is up over time. This means the temperatures across the globe are going up and the temperatures in my city of Denver are generally keeping pace.
    d. The world overall is getting hotter and has been on a consistent upward trend over the last hundred years.
    e. I would say that we will reach an average of 10 Celsius in the next 10 years at this current trajectory.