In this project, we are expected to explore weather trends of both the Global average temperature and the average temperature of the City that we closest near. I examined Kansas City and the global temperature average from 1758 to 2010.

To extract the data from the database, I used SQL.

- I searched the city_list to find the City that I lived closest to. I used the query "SELECT * FROM city_list ORDER BY country DESC" to do this.
- To collect the data from Kansas City I used the query "SELECT year, avg_temp FROM city_data WHERE = 'Kansas City'"
- For the Global data, I used "SELECT * FROM global_data"

I download both CSV files, which I had to manipulate further in Excel to create a line graph. I did consider using a JOIN statement to combine the two CSV files. The query that I used to attempt this was

 "SELECT city_data.*, global_data.avg_temp FROM city_data JOIN global_data ON global.year = city_data.year WHERE city_data.city = 'Kansas City'

The reason why I decide not to use this query and choose to manipulate the data further in Excel is that this query only returned the global average when I wanted it to return both the Kansas City data and the global data.

In Excel, I copied and pasted the temperature from Kansas City CSV to the Global data CSV. From there, I calculated the moving average using a 10-year moving average. I choose ten because it was long enough not to cause a calculation error to do to the fact that Kansas City had some missing data.

To visualize the data, I choose only to graph the moving averages because there were some years in Kansas City that had some outliers that affected the ability to read the graph. I also chose to use grid lines for the line chart because it helped with the overall readability.

Moving Average Temperature

KC moving Average, 13.99

Moving Average Global, 9.61

— Moving Average Global
— KC moving Average
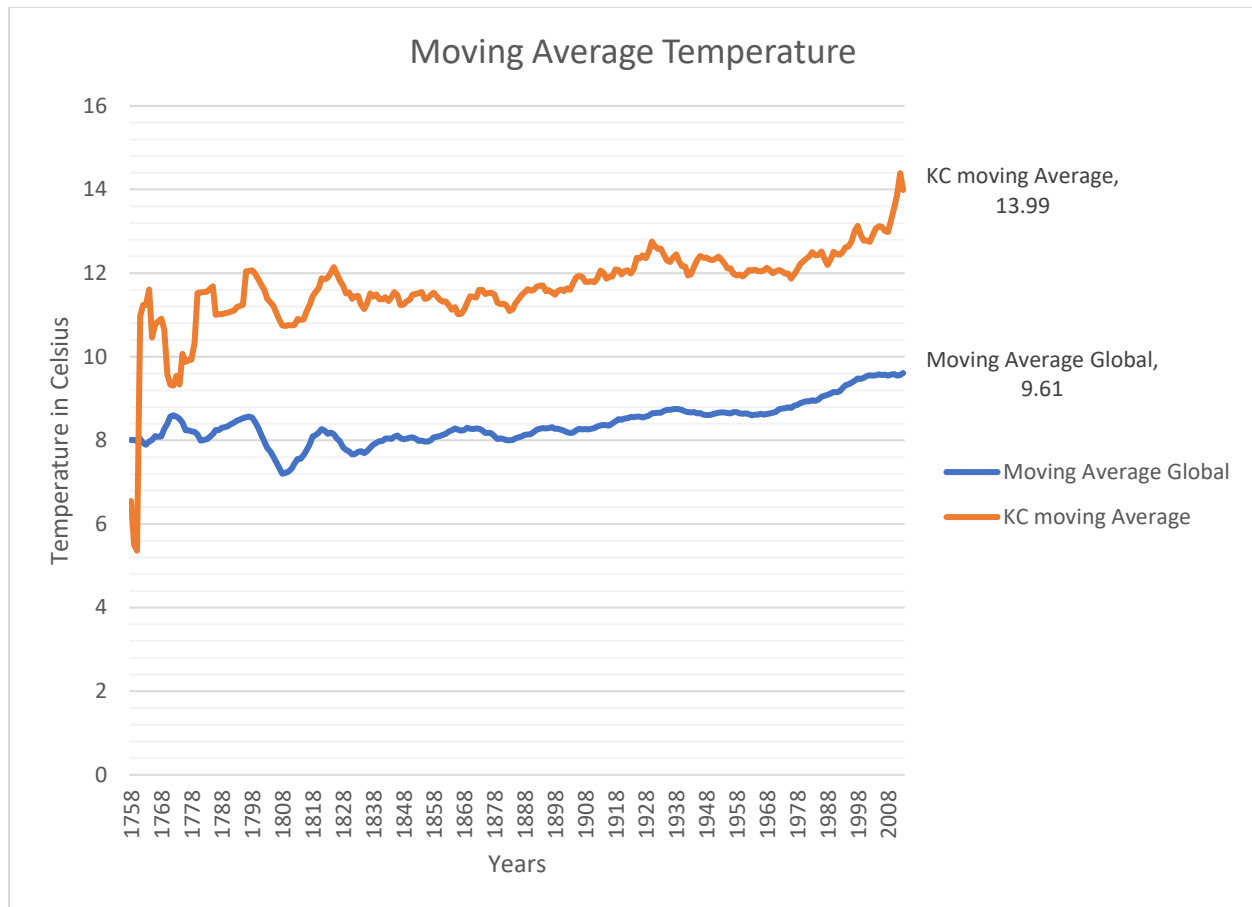
Observations

The Kansas City line has been consistently hotter than the Global Average, with being 4 degrees hotter at the end of the graph. Although in the mid-1700 Kansas City temperature did dip below the global average.

Kansas City has been warming at more of a rapid rate than the overall global average. Since 1950 the temperature average has risen by two degrees. So it does not appear to be rising at a constant rate. I would call an exponential rate.

Both Kansas City and the Global average had both significant dips in weather temperatures in the early 1800s.

The global average has been more stable and gradual with its rise over 200 years of data, and the temperature has only risen 2 degrees. So the world and Kansas City have both been getting warmer