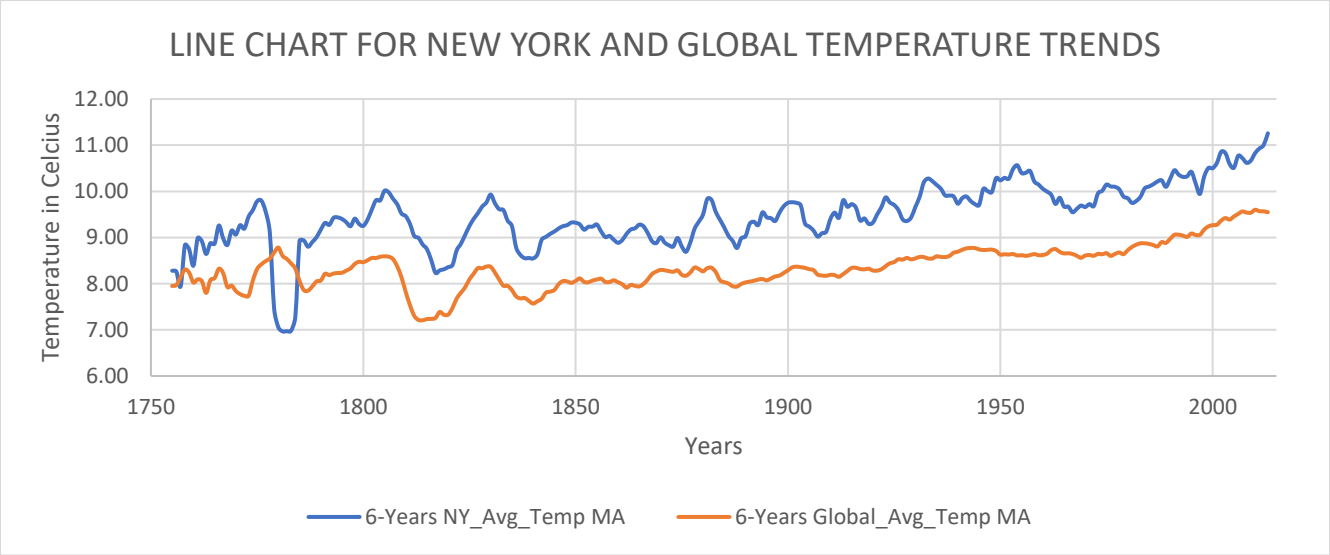
ANALYSIS FOR WEATHER TRENDS

AN OUTLINE

- I have used SQL to extract the data from the database. I have used following queries to extract data:
  1. SELECT * FROM city_list WHERE country = 'United States'
  2. SELECT year, avg_temp FROM city_data WHERE city = 'New York'
  3. SELECT * FROM global_data
- After downloading all the CSV's file, I extracted them in excel and transformed them for further analysis. Firstly, I deleted the missing data from all the columns and then I took the 6-Years Moving Average for Global_Avg_Temp and NY_Avg_Temp. I did that by creating a column named 6-Years NY_Avg_Temp MA and went down to the year 1755 and use the AVERAGE() function to calculate the average for the first six years and I did the same thing for the column 6-Years Global_Avg_Temp MA.
- The key considerations were the data extracted is according to the specifications and requirements of the project. Transforming the data and calculating the moving average of local and global average temperature and plotting the line chart for the same.

LINE CHART



OBSERVATIONS

1) New York tends to be hotter as compared to the global average temperature but, between 1775-1785 New York is colder compared to global temperature. Mostly from the visual above it is witnessed that New York has more ups and downs in the temperature but, the global temperature tends to be consistent.
2) New York's temperature tends to change frequently over the years whereas the global temperature has changes between 1750-1850 but, after that mostly it remains consistent. New York even has a major outlier where it tends to be colder than global temperature. But New York is getting hotter gradually over the years.
3) As we see the global weather trend, the world is colder than New York. Globally there are some variations between 1750-1850 but, over the years globally temperature tends to be consistent. When we see the trend, it is getting hotter over the years with a slow pace as we witnessed in New York.
4) New York has a major outlier at one point where it tends to be colder than the world and after that it follows the same trend as the world. But, after 1850 globally temperature remains mostly consistent whereas New York has some ups and downs.