Exploring Weather Trends Project

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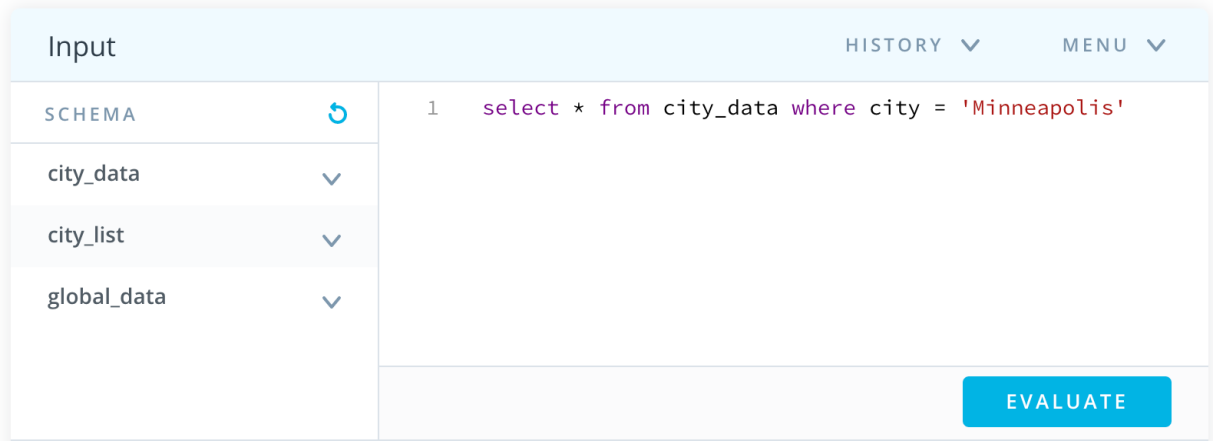
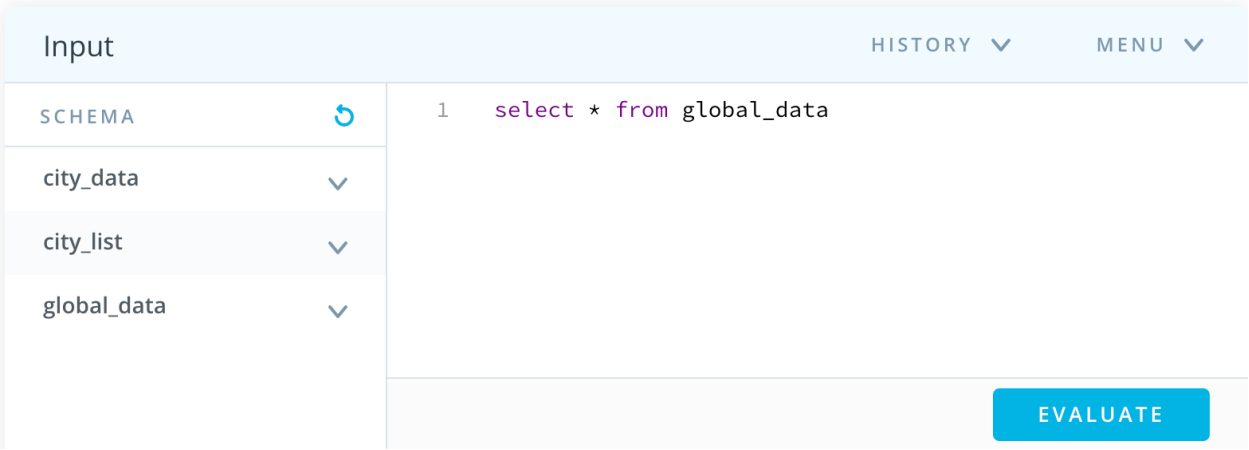
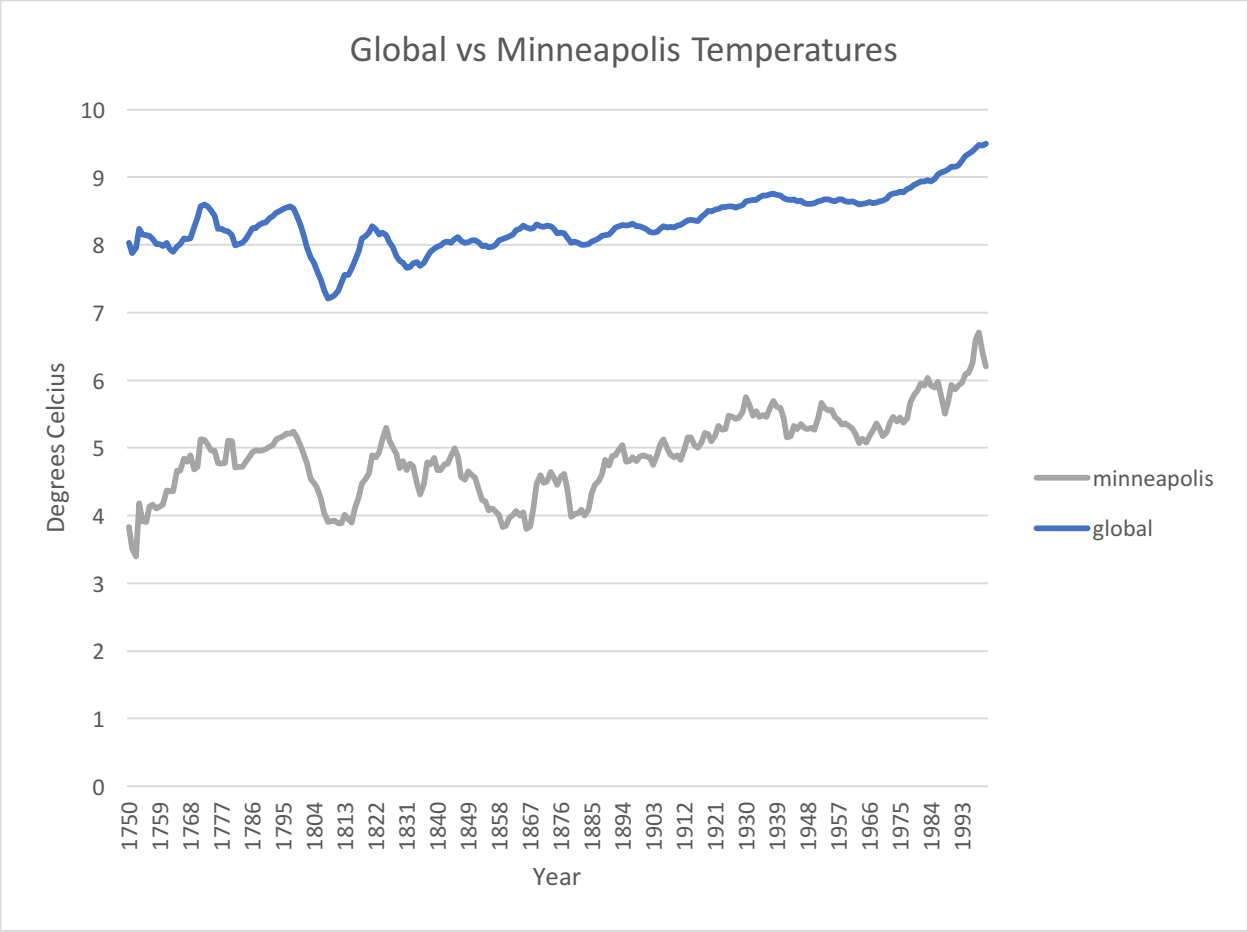
1) **What tools did you use for each steps?**
   a) I used Excel to complete this project.
2) **How did you calculate the moving average?**
   a) First of all, I noticed that the Minneapolis data contained a few more years than the global temperatures did. It also had some blank data. In order to avoid skewing the data, I removed the blank years and only used the years that both data sets had collected data for. Then, I used the Excel SUM function to add up a consecutive 10 years of temperatures and then divided that sum by 10. I then dragged that function I created in the first cell to automatically apply to the rest of the rows.
3) **What were your key considerations when deciding how to visualize the trends?**
   a) I first started out with a smaller moving average because I was afraid of over smoothing the lines and for them to not show enough of the trends. I started by calculating a 5-year moving average, but once I saw the visualization for this, there were just too many drastic spikes and not enough correlation was seen between the data sets. That is what prompted me to try calculating a 10-year moving average and this ended up being a better choice given the data sets. It made the visual much more easy to read and you could actually start to see a correlation between the 2 data sets.
4) **4 Observations of Similarities/Differences:**
   a) The first most obvious observation is that Minneapolis weather tends to fluctuate more than the overall global temperature. There are more peaks and valleys in the Minneapolis line.
   b) Although the Minneapolis line changes more, both lines tend to follow an overall similar pattern. Where there are big rises or drops in temperature, both lines seem to reflect that drop and follow a similar look.
   c) The last observation I make is that my hometown weather tends to be around a steady 3 degrees Celsius below the global temperature. It's indeed a chilly place to live!
   d) It's also interesting to notice that over the last 100 years the global temperature has been steadily increasing. It's not a significant jump from one year to the next but the accumulation of increases over 100 years shows temperatures steadily rising.


Input
HISTORY
MENU
SCHEMA
city_data
city_list
global_data
1 select * from city_data where city = 'Minneapolis'
EVALUATE


Input
HISTORY
MENU
SCHEMA
city_data
city_list
global_data
1 select * from global_data
EVALUATE


Global vs Minneapolis Temperatures
Degrees Celcius
10
9
8
7
6
5
4
3
2
1
0
1750
1759
1768
1777
1786
1795
1804
1813
1822
1831
1840
1849
1858
1867
1876
1885
1894
1903
1912
1921
1930
1939
1948
1957
1966
1975
1984
1993
Year
minneapolis
global