Exploring Weather Trends

SQL

The SQL query to pull the global_data from the database:

```
select *

from global_data
```

The SQL query to pull the city_data from the database:

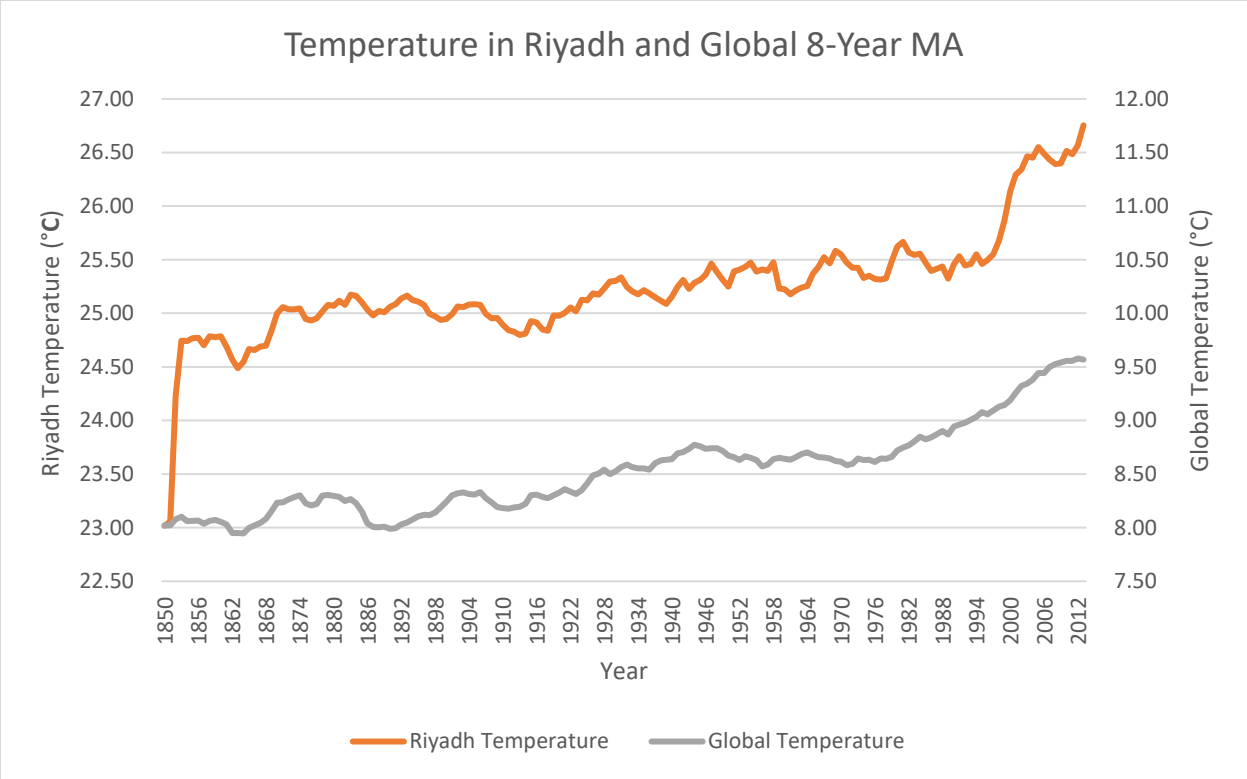
```
select *

from city_data

where city = 'Riyadh'
```

Moving Average:

I use excel to analyze the data taken from SQL, I used different time MA, and I saw the better MA is an 8-year MA. The excel formula =AVERAGE(B2:B9)

There were two missing records in the city_data for Riyadh for the two years 1846 and 1847. I use the average of temperature from 1848-1857 for 1847, and the average of temperature from 1847-1856 for 1846. And then I used an 8-year MA.

Line chart:



Due to large difference in temperature between Riyadh and Global, I put the Global in a secondary axis and adjust the bounds for both axes to have a better look and understanding of the chart.

Observations:

- Riyadh temperature is hotter than the Global temperature
- Riyadh temperature varies between 23.02 and 26.75, where Global temperature varies between 7.95 and 9.58
- The standard deviation for Riyadh is 0.51 and for Global is 0.41. which means Riyadh temperature is more volatile than the Global
- There is a jump increase in Riyadh temperature between 1995 and 2005 from 25.46 to 26.55
- In the early years the temperature is nearly steady, where in the late years the temperature is increasing at a higher rate than before.
- The world is getting hotter and hotter, where in advanced years the rate of increasing will be higher in the future.