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Explore Weather Trends

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Udacity - Data Analyst Nanodegree
Project (1), Explore Weather Trends
Riyadh, Saudi Arabia

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Project Overview

In this project, I have analyzed local temperature of Riyadh, Saudi Arabia in accordance with the global temperature data and compared

Tools Used

1. **SQL**: To extract the data from the database
2. **Excel**: For calculating moving average , plotting line chart and making observations

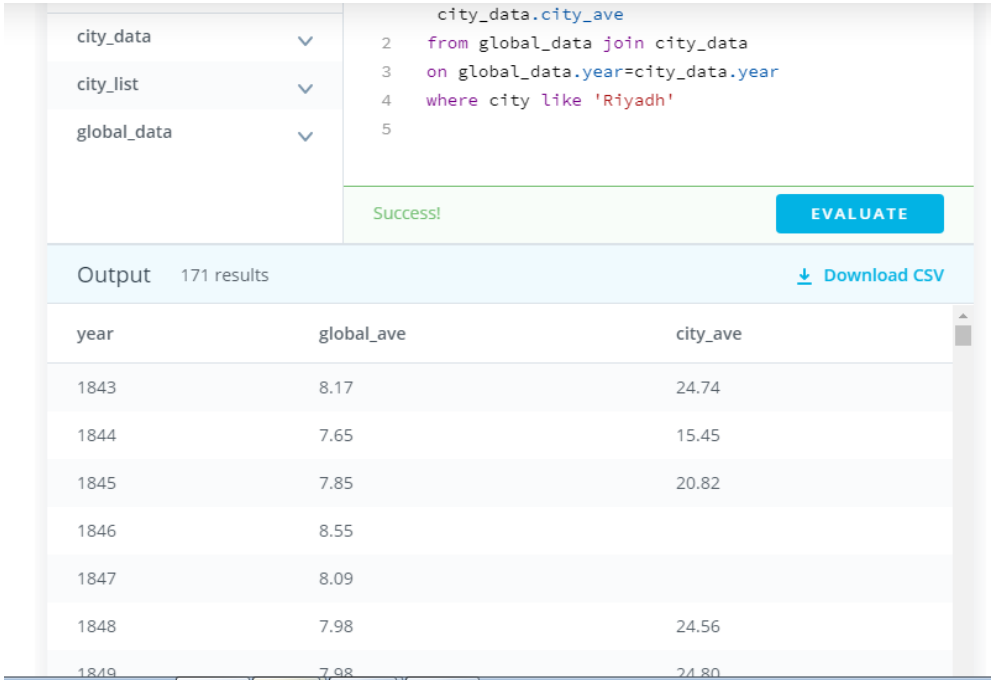
Extraction of Data from provided Database Using SQL Query

1) changing the names of the columns in order to have distinct columns, because the tables (city_data and global_data) contain same column named 'avg_temp'.

```
ALTER TABLE city_data rename column avg_temp to city_ave
ALTER TABLE global_data rename column avg_temp to global_ave
```

2) Joining the two tables together using (Join)

```
select global_data.year, global_data.global_ave, city_data.city_ave
from global_data join city_data
on global_data.year=city_data.year
where city like 'Riyadh'
```



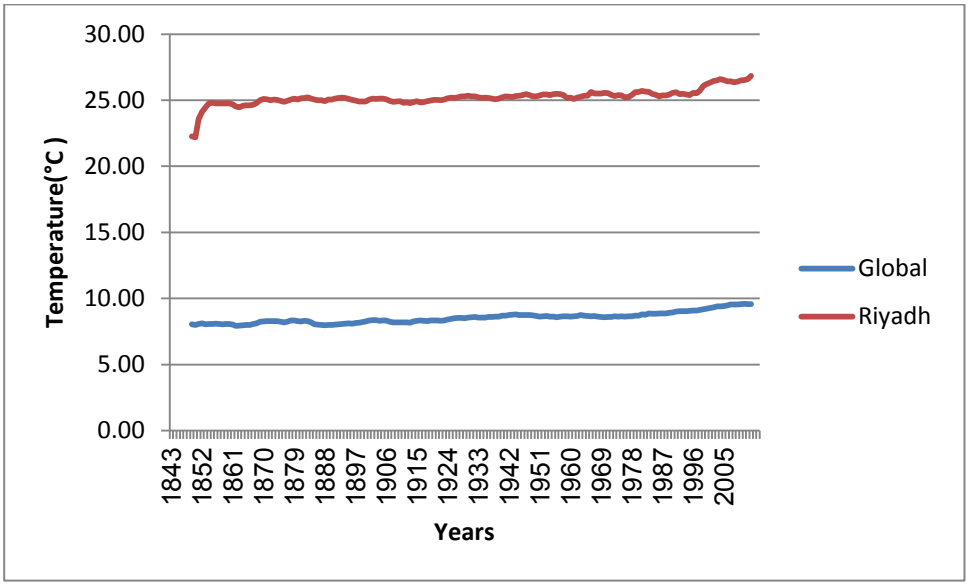
3) downloading the file as CSV format

Calculate Moving Averages and create the Chart Line

-I have done 7 years moving average
-I have making the middle average for two missing values

	year	global_ave	city_ave	Moving (global_ave)	Moving (city_ave)
2	1843	8.17	24.74		
3	1844	7.65	15.45		
4	1845	7.85	20.82		
5	1846	8.55	22.69		
6	1847	8.09	22.69		
7	1848	7.98	24.56		
8	1849	7.98	24.8	8.04	22.25
9	1850	7.9	24.34	8.00	22.19
10	1851	8.18	25.03	8.08	23.56
11	1852	8.1	24.85	8.11	24.14
12	1853	8.04	24.93	8.04	24.46
13	1854	8.21	24.72	8.06	24.75
14	1855	8.11	24.92	8.07	24.80
15	1856	8	24.57	8.08	24.77
16	1857	7.76	24.26	8.06	24.75
17	1858	8.1	25.01	8.05	24.75
18	1859	8.25	24.95	8.07	24.77
19	1860	7.96	24.94	8.06	24.77
20	1861	7.85	24.13	8.00	24.68
21	1862	7.56	23.77	7.93	24.52

Global vs Riyadh 7-year Moving Average Temperature



Observations

- Riyadh and Global average temperature have similar kind of trend
- World is getting hotter because from 1850 to 2013 temperature is increase
- Riyadh is 16.65 degrees hotter than the world.

(the average for Global=8.54 , the average for Riyadh =25.18. So Riyadh is hotter than Global celsius degree 16.65)

- Riyadh gets hotter over time there are not many rains

Conclusion

The world is getting hotter