Explore Weather Trends

Overview:

At this project I will show you the tools that I used to extract the temperature data from the database and I will discuss how to make the data smooth and easy to be observed in detail.
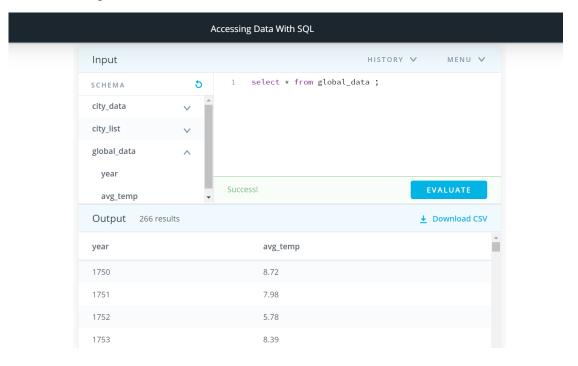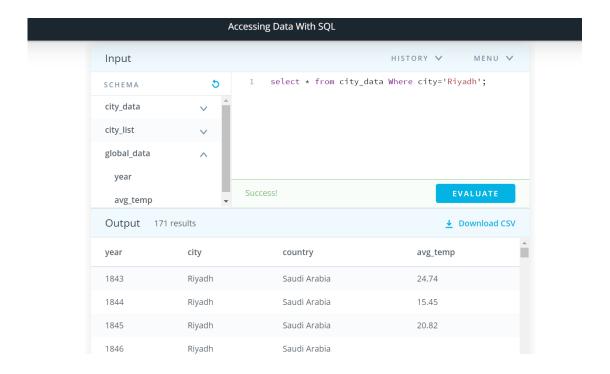
Extract the data:

First of all, I had to extract the local and global temperature data from the schema, I used SQL query for this purpose. For the local temperature I choose Riyadh city which is I live.

The SQL queries are:

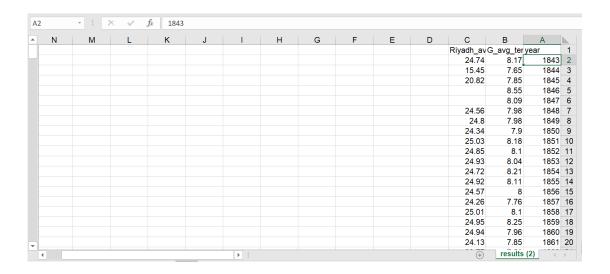select * from city_data Where city='Riyadh';

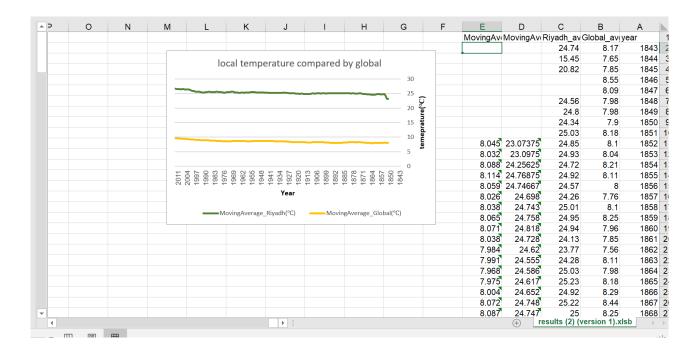select * from global_data;

Moving Average:

In this step I worked on the Excel to show the line chart with the moving average. I chose 10 years for the moving average, I made sure the starting year at the both local and global data are the same, I kept only the 3 columns which is Year, G_avg_temp and Riyadh_avg_temp as shown below.

I calculated the moving average for both columns using this formula:
=AVERAGE(B2:B11) and so on. Also, I added new colomns MA_Global and
MA_Riyadh, And the line chart.

				E	D	C	B	A	
				MovingAv	MovingAv	Riyadh_av	Global_av	year	1
						24.74	8.17	1843	2
						15.45	7.65	1844	3
						20.82	7.85	1845	4
							8.55	1846	5
							8.09	1847	6
						24.56	7.98	1848	7
						24.8	7.98	1849	8
						24.34	7.9	1850	9
						25.03	8.18	1851	10
				8.045	23.07375	24.85	8.1	1852	1
				8.032	23.0975	24.93	8.04	1853	1
				8.088	24.25625	24.72	8.21	1854	1
				8.114	24.76875	24.92	8.11	1855	1
				8.059	24.74667	24.57	8	1856	1
				8.026	24.698	24.26	7.76	1857	1
				8.038	24.743	25.01	8.1	1858	1
				8.065	24.758	24.95	8.25	1859	1
				8.071	24.818	24.94	7.96	1860	1
				8.038	24.728	24.13	7.85	1861	2
				7.984	24.62	23.77	7.56	1862	2
				7.991	24.555	24.28	8.11	1863	2
				7.968	24.586	25.03	7.98	1864	2
				7.975	24.617	25.23	8.18	1865	2
				8.004	24.652	24.92	8.29	1866	2
				8.072	24.748	25.22	8.44	1867	2
				8.087	24.747	25	8.25	1868	2

local temperature compared by global

MovingAverage_Riyadh(°C)   MovingAverage_Global(°C)

The observations that I got from the line chart :

1. The global moving average is smaller than the local moving average (Riyadh).

2. The temperature at both of them got increase recently.

3. The older temperatures at the both of them was low compared by the recent temperatures.

4. The temperature in Riyadh is hotter than the global.

Done by Ghaida Abdulaziz AlHajri.