Exploring weather trends Udacity Data analysis

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Introduction:

I used SQL query to take some data that contain yearly average temperature of city 'Riyadh' and the global temperature.
And then analyzed these data which these analyzed data shown some information in chart for more clarity.

Steps taken to prepare the data to be shown or visualized:

The first step is writing the SQL query to extract the data from the database to csv file that related to the temperature information or data.

SQL queries I have used to extract Riyadh temperature:

```
Select * From city_data
Where city = 'riyadh' ;
```

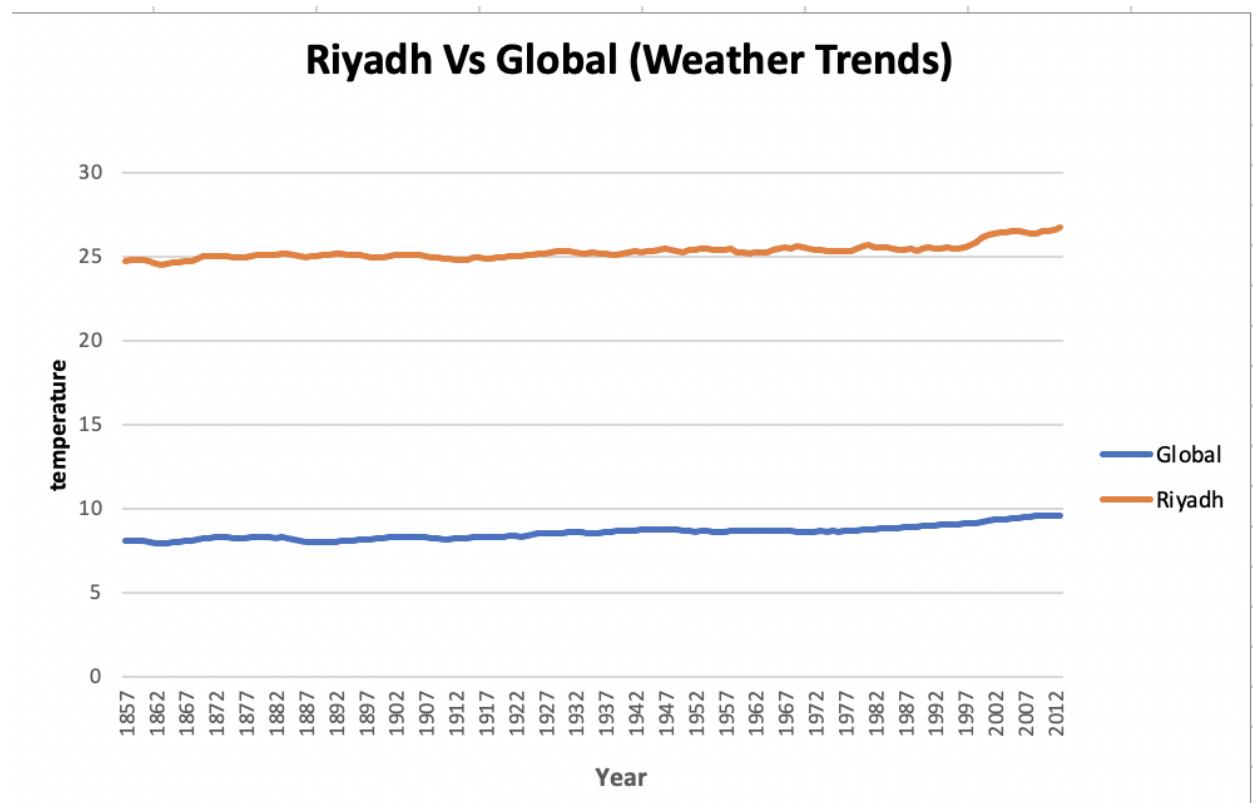SQL queries I have used to extract global temperature:

select * from global_data ;

The second step in drag csv file into excel sheet

To calculate the moving average each of 7 years from 1857 to 2013 years for Riyadh city temperature and Global cities temperature.

year	city	country	avg_temp	AVG-moving			year	avg_temp	AVG-moving
1850	Riyadh	Saudi Arabia	24.34				1850	7.9	
1851	Riyadh	Saudi Arabia	25.03				1851	8.18	
1852	Riyadh	Saudi Arabia	24.85				1852	8.1	
1853	Riyadh	Saudi Arabia	24.93				1853	8.04	
1854	Riyadh	Saudi Arabia	24.72				1854	8.21	
1855	Riyadh	Saudi Arabia	24.92				1855	8.11	
1856	Riyadh	Saudi Arabia	24.57				1856	8	
1857	Riyadh	Saudi Arabia	24.26	24.7025			1857	7.76	8.0375
1858	Riyadh	Saudi Arabia	25.01	24.78625			1858	8.1	8.0625
1859	Riyadh	Saudi Arabia	24.95	24.77625			1859	8.25	8.07125
1860	Riyadh	Saudi Arabia	24.94	24.7875			1860	7.96	8.05375
1861	Riyadh	Saudi Arabia	24.13	24.6875			1861	7.85	8.03
1862	Riyadh	Saudi Arabia	23.77	24.56875			1862	7.56	7.94875
1863	Riyadh	Saudi Arabia	24.28	24.48875			1863	8.11	7.94875
1864	Riyadh	Saudi Arabia	25.03	24.54625			1864	7.98	7.94625
1865	Riyadh	Saudi Arabia	25.23	24.6675			1865	8.18	7.99875
1866	Riyadh	Saudi Arabia	24.92	24.65625			1866	8.29	8.0225
1867	Riyadh	Saudi Arabia	25.22	24.69			1867	8.44	8.04625
1868	Riyadh	Saudi Arabia	25	24.6975			1868	8.25	8.0825
1869	Riyadh	Saudi Arabia	25.3	24.84375			1869	8.43	8.155
1870	Riyadh	Saudi Arabia	25.02	25			1870	8.2	8.235
1871	Riyadh	Saudi Arabia	24.73	25.05625			1871	8.12	8.23625
1872	Riyadh	Saudi Arabia	24.87	25.03625			1872	8.19	8.2625
1873	Riyadh	Saudi Arabia	25.24	25.0375			1873	8.35	8.28375
1874	Riyadh	Saudi Arabia	24.98	25.045			1874	8.43	8.30125
1875	Riyadh	Saudi Arabia	24.43	24.94625			1875	7.86	8.22875
1876	Riyadh	Saudi Arabia	24.89	24.9325			1876	8.08	8.2075
1877	Riyadh	Saudi Arabia	25.47	24.95375			1877	8.54	8.22125
1878	Riyadh	Saudi Arabia	25.51	25.015			1878	8.83	8.3
1879	Riyadh	Saudi Arabia	25.24	25.07875			1879	8.17	8.30625
1880	Riyadh	Saudi Arabia	24.8	25.07			1880	8.12	8.2975
1881	Riyadh	Saudi Arabia	25.63	25.11875			1881	8.27	8.2875
1882	Riyadh	Saudi Arabia	24.66	25.07875			1882	8.13	8.25
1883	Riyadh	Saudi Arabia	25.19	25.17375			1883	7.98	8.265
1884	Riyadh	Saudi Arabia	24.8	25.1625			1884	7.77	8.22625
1885	Riyadh	Saudi Arabia	24.98	25.10125			1885	7.92	8.14875
1886	Riyadh	Saudi Arabia	24.98	25.035			1886	7.95	8.03875
1887	Riyadh	Saudi Arabia	24.81	24.98125			1887	7.91	8.00625
1888	Riyadh	Saudi Arabia	25.13	25.0225			1888	8.09	8.0025
1889	Riyadh	Saudi Arabia	25.52	25.00875			1889	8.32	8.00875
1890	Riyadh	Saudi Arabia	25.07	25.06			1890	7.97	7.98875
1891	Riyadh	Saudi Arabia	25.39	25.085			1891	8.02	7.99375
1892	Riyadh	Saudi Arabia	25.22	25.1375			1892	8.07	8.03125
1893	Riyadh	Saudi Arabia	25.19	25.16375			1893	8.06	8.04875
1894	Riyadh	Saudi Arabia	24.66	25.12375			1894	8.16	8.075

Then I draw a line chart that shown the comparison average temperature between the Riyadh city and the global cities to make it easier to observe the difference between them.

Riyadh Vs Global (Weather Trends)

Observations:

1- Through the drawing, it shows that the temperatures rise over time

2- riyadh is hotter on average compared to the global average.

3- Through the drawing, it shows that the increase in world temperatures increases every year, and this is a dangerous indicator
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4- Riyadh has temperatures much higher than the world average , Riyadh has temperatures much higher than the world average