

## 1. Sql queries that I used :

- **for city data**  
select year , avg\_temp  
from city\_data  
where city = 'Riyadh'
- **for global data**  
select g.year , g.avg\_temp  
from city\_data as c , global\_data as g  
where c.year = g.year and c.city = 'Riyadh'

## 2. Outline of steps taken to prepare the data to be visualized in the chart

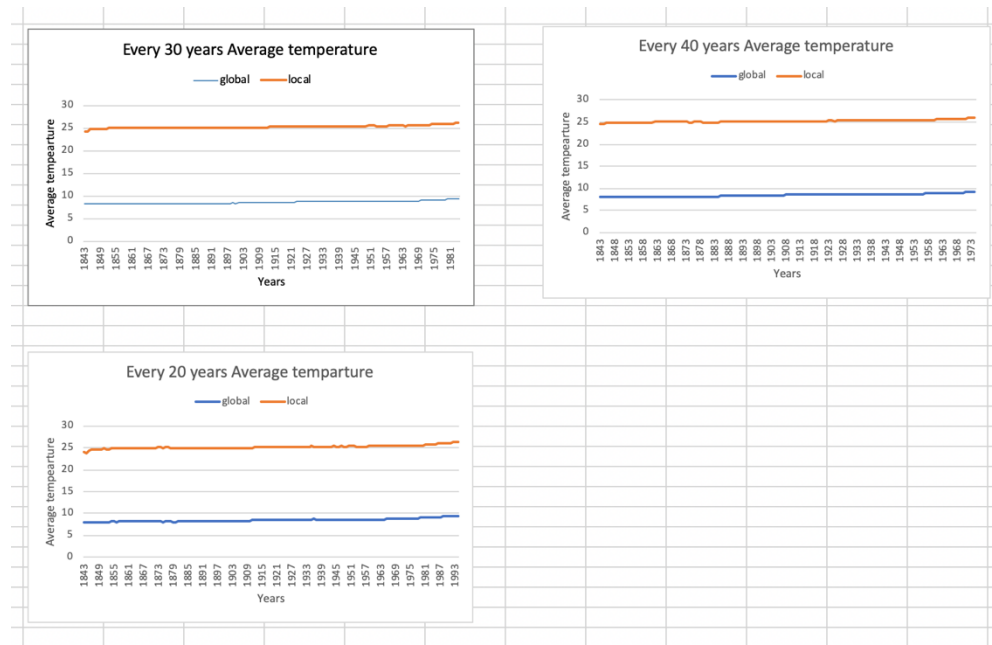
- **What tools did you use for each step? (Python, SQL, Excel, etc.):**  
SQL for extracting the data from the database, Excel for open the CSV and I use the average function and create line chart from it.
- **How did you calculate the moving average?**  
In the beginning I chose the moving average every 10 years, but it didn't make sense for me, so I tried every 20,30,40 years and I think every 40 years more convenient and it is my choice.

I used Average function by writing in specific cell = Average(), inside the brackets of the function I select on the data by choose the first data then the command button then I keep selecting the data after that I will get the result in the cell. Then I just click and drag the formula down to the next cell and that all the process how I did calculate the moving average.

D21     fx = AVERAGE(B2:B21)													
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	year	avg_temp	30 years	20 years	40 years	year	avg_temp	30 years	20 years	40 years	D.E.local		
2	1843	8.17				1843	24.74						
3	1844	7.65				1844	15.45						
4	1845	7.85				1845	20.82						
5	1846					1846							
6	1847					1847							
7	1848	7.98				1848	24.56						
8	1849	7.98				1849	24.8						
9	1850	7.9				1850	24.34						
10	1851	8.18				1851	25.03						
11	1852	8.1				1852	24.85						
12	1853	8.04				1853	24.93						
13	1854	8.21				1854	24.72						
14	1855	8.11				1855	24.92						
15	1856	8				1856	24.57						
16	1857	7.76				1857	24.26						
17	1858	8.1				1858	25.01						
18	1859	8.25				1859	24.95						
19	1860	7.56				1860	24.94						
20	1861	7.85				1861	24.13						
21	1862	7.56				1862	23.77						
22	1863	8.11				1863	24.28						
23	1864	7.98				1864	25.03						
24	1865	8.18				1865	25.23						
25	1866	8.29				1866	24.92						
26	1867	8.44				1867	25.22						
27	1868	8.25				1868	25						
28	1869	8.43				1869	25.3						
29	1870	8.2				1870	25.02						
30	1871	8.12				1871	24.73						
31	1872	8.19				1872	24.87						
32	1873	8.15				1873	25.24						
33	1874	8.43				1874	24.98						
34	1875	7.86				1875	24.43						
35	1876	7.98				1876	24.89						
36	1877	8.54				1877	25.47						
37	1878	8.83				1878	25.51						
38	1879	8.17				1879	25.24						
39	1880	8.12				1880	24.8						
40	1881	8.27				1881	25.63						
41	1882	8.19				1882	24.66						
42	1883	7.98				1883	25.19						
43	1884	7.77				1884	24.8						
44	1885	7.92				1885	24.98						
45	1886	7.95				1886	24.98						

- **What were your key considerations when deciding how to visualize the trends?**  
Good start for the lines in the chart, the lines not have a lot of up's and down's, also if the line make sense to make an observation.

### 3. Line chart with local and global temperature trends



### 4. Observations about the similarities and/or differences in the trends

- They are similar in increasing hotter temperature in overall years.
- The local temperature hotter than the global
- The global temperature cooler than the local
- The local temperature is between 24 to 26 overall years
- The global temperature is between 8 to 9.5