

Exploring Weather Trends Project

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1. An SQL query to extract the city-level data from the database.

Q ? SK

There are three tables in the database:

- city_list - This contains a list of cities and countries in the database. Look through them in order to find the city nearest to you.
- city_data - This contains the average temperatures for each city by year (°C).
- global_data - This contains the average global temperatures by year (°C).

Input

SCHEMA

city_data

year

city

country

avg_temp

1

2

SELECT * FROM city_data

WHERE city = 'Tashkent';

Success!

EVALUATE

Output

182 results

Download CSV

year	city	country	avg_temp
1832	Tashkent	Uzbekistan	9.48
1833	Tashkent	Uzbekistan	9.93

2. An SQL query to extract the global-level data from the database.

Q ? SK

The Database Schema

There are three tables in the database:

- city_list - This contains a list of cities and countries in the database. Look through them in order to find the city nearest to you.
- city_data - This contains the average temperatures for each city by year (°C).
- global_data - This contains the average global temperatures by year (°C).

Input

SCHEMA

city_data

year

city

country

avg_temp

1

SELECT * FROM global_data;

Success!

EVALUATE

Output

266 results

Download CSV

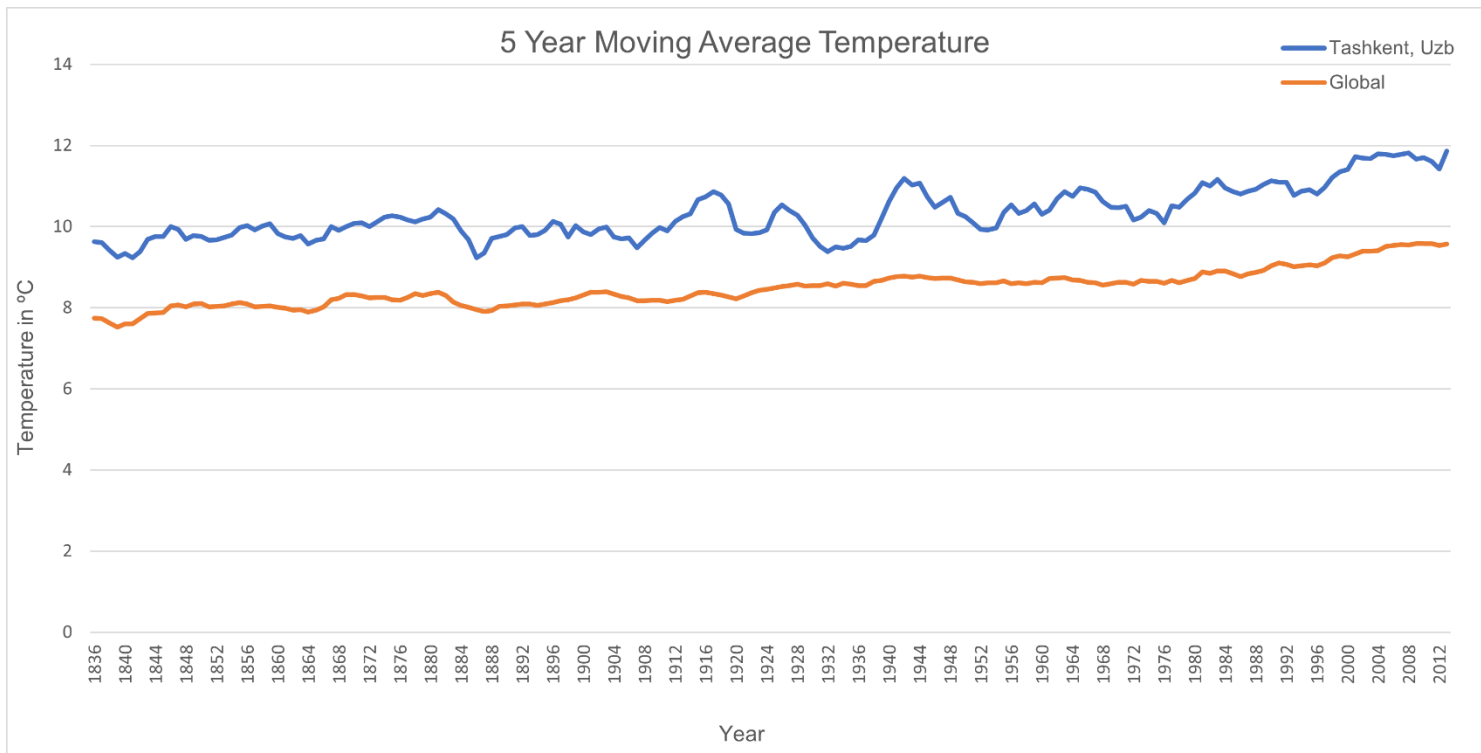
year	avg_temp
1750	8.72

3. After exporting the files I opened them in Excel, and calculated the 5-year moving average temperature of the Tashkent city starting from the available year 1832.

Moreover, I also calculated the same trend in the global range starting from the same year.

Chart 1								
	1	2	3	4	5	6	7	8
1	year	city	country	avg_temp_tashkent	5_year_avg	year_global	avg_temp_global	5_year_global_avg
2	1832	Tashkent	Uzbekistan	9.48		1832	7.45	
3	1833	Tashkent	Uzbekistan	9.93		1833	8.01	
4	1834	Tashkent	Uzbekistan	9.95		1834	8.15	
5	1835	Tashkent	Uzbekistan	9.15		1835	7.39	
6	1836	Tashkent	Uzbekistan	9.65	9.632	1836	7.7	7.74
7	1837	Tashkent	Uzbekistan	9.32	9.6	1837	7.38	7.726
8	1838	Tashkent	Uzbekistan	9.02	9.418	1838	7.51	7.626
9	1839	Tashkent	Uzbekistan	9.05	9.238	1839	7.63	7.522
10	1840	Tashkent	Uzbekistan	9.63	9.334	1840	7.8	7.604
11	1841	Tashkent	Uzbekistan	9.13	9.23	1841	7.69	7.602
12	1842	Tashkent	Uzbekistan	10.1	9.386	1842	8.02	7.73
13	1843	Tashkent	Uzbekistan	10.51	9.684	1843	8.17	7.862
14	1844	Tashkent	Uzbekistan	9.38	9.75	1844	7.65	7.866
15	1845	Tashkent	Uzbekistan	9.66	9.756	1845	7.85	7.876
16	1846	Tashkent	Uzbekistan	10.33	9.996	1846	8.55	8.048
17	1847	Tashkent	Uzbekistan	9.79	9.934	1847	8.09	8.062
18	1848	Tashkent	Uzbekistan	9.25	9.682	1848	7.98	8.024
19	1849	Tashkent	Uzbekistan	9.84	9.774	1849	7.98	8.09
20	1850	Tashkent	Uzbekistan	9.59	9.76	1850	7.9	8.1
21	1851	Tashkent	Uzbekistan	9.84	9.662	1851	8.18	8.026
22	1852	Tashkent	Uzbekistan	9.84	9.672	1852	8.1	8.028
23	1853	Tashkent	Uzbekistan	9.53	9.728	1853	8.04	8.04
24	1854	Tashkent	Uzbekistan	10.16	9.792	1854	8.21	8.086
25	1855	Tashkent	Uzbekistan	10.51	9.976	1855	8.11	8.128
26	1856	Tashkent	Uzbekistan	10.05	10.018	1856	8	8.092
27	1857	Tashkent	Uzbekistan	9.33	9.916	1857	7.76	8.024
28	1858	Tashkent	Uzbekistan	9.99	10.008	1858	8.1	8.036
29	1859	Tashkent	Uzbekistan	10.49	10.074	1859	8.25	8.044

4. Finally, I visualized the outcomes using the required line chart in Excel.



5. My observations:

- According to the given data, the 5-year moving average temperature of the Tashkent city has always been higher than the global one for about 2° C during the period of 1836-2012.
- It is noticeable that both trends have gradually risen over the period.
- We can also conclude that the 5-year moving average temperature of the Tashkent city has fluctuated. The temperature had numerous drops between 1880 and 1884, as well as between 1924 and 1932 after a consistent rise along the proceeding years.
- The city-level line indicates the so-called stretched version of the global-level line showing the similar rises and drops between the similar periods.
- The 5-year moving average temperature of the globe and the Tashkent city have risen for about 1.8° C and 2.2° C, respectively, between 1836 and 2012, which clearly indicate the global warming.