Udacity Nanodegree Program

Project On Exploring Weather Trends

We were instructed to prepare a visualization between the global temperature trends and temperature trends in the closest biggest city to where we live:

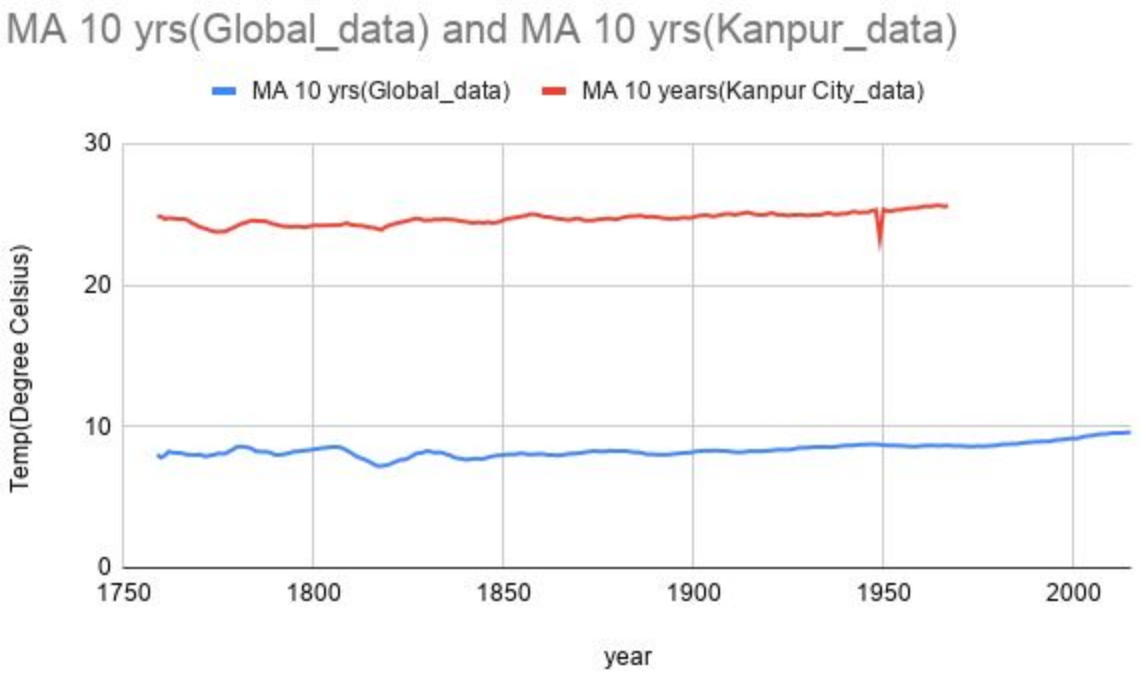
For the given problem, first of all, I passed SQL queries extracting the data from the database given.
We were provided with 3 tables namely City_data, City_list, Global Data

Table	SQL queries
City_list	SELECT * FROM city_list WHERE country = 'India’
City_data	SELECT * FROM city_data WHERE country = 'India' AND city = 'Kanpur';
Global_data	SELECT * FROM global_data;

After extracting the data it is downloaded as a CSV file and I used Google sheets to view the data.
For calculating the moving average of the global data and the city-data, the 10-year moving average is applied to obtain smooth graphs.

The moving average was calculated by selecting the required data and clicking on the average option in the side lower menu.

Creating the line chart:



Observations:

- **Yes, my city is hotter by approximately 16 degrees as compared to the global temperature and the difference has been consistent over time.**
- **According to the chart demonstrated above, there has been a consistent/ constant temperature change in the Global temperature and Kanpur, although I see a sudden dip in the temperature of Kanpur around 1949 which I do not when data is assumed globally.**
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Year	Temperature difference	Comparison
1750-1800	8.38-7.8	Increasing
1800-1850	8.03-8.38	Decreasing
1850-1900	8.25-8.03	Increasing
1900-1950	8.67-8.25	Increasing

1950-2000	**9.15-8.67**	**Increasing**
2000-2014	**9.59-9.15**	**Increasing**

- **Overall trends show that the global temperature has been increasing continuously and the trend has been consistent from the past few years.**