02.06.2020

**UDACITY- Data Analyst Nanodegree**

**Project Submission: Explore Weather Trends**

Tools:

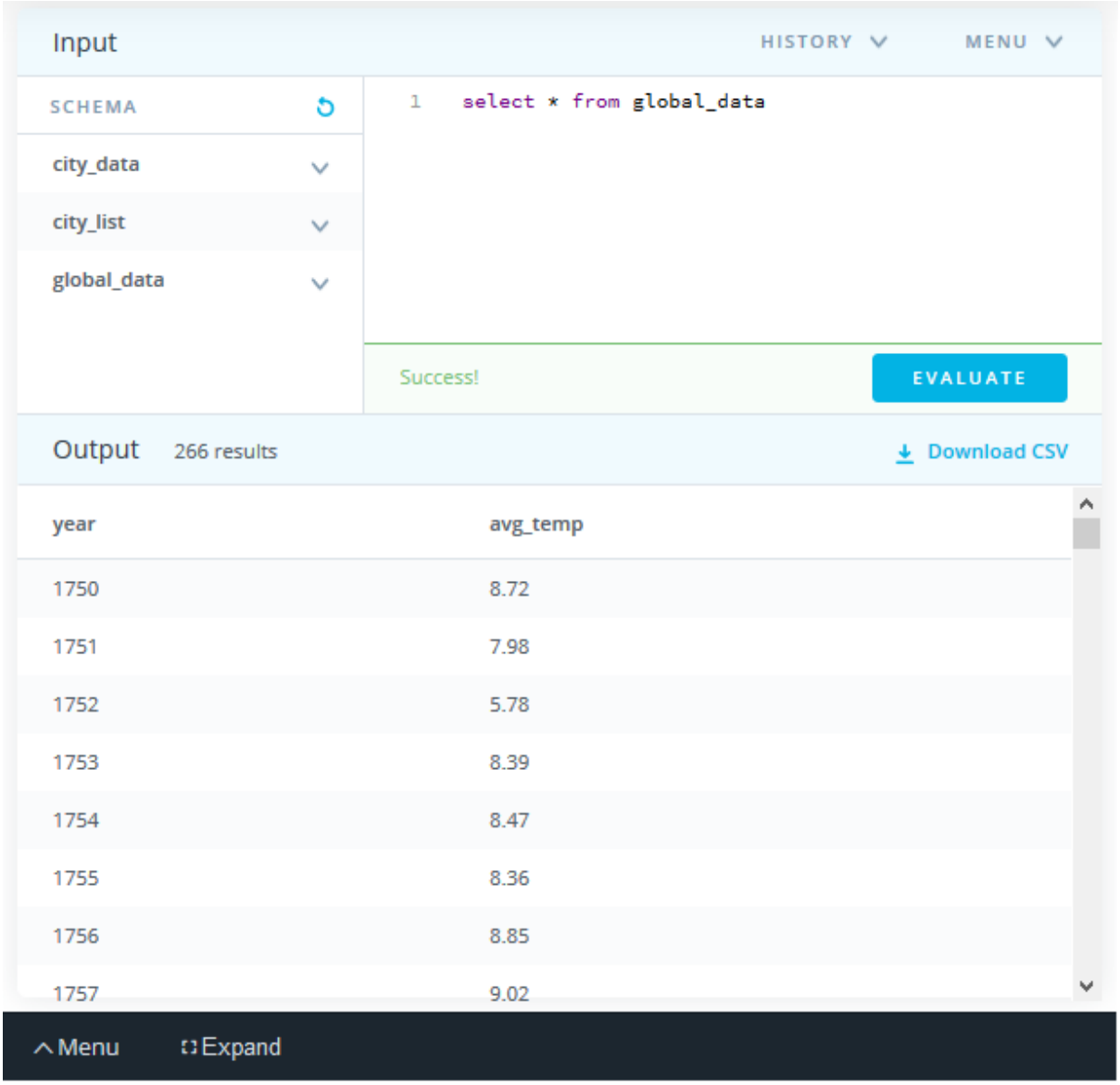
SQL

Ms-Excel

Step 1: Accessing Data With SQL

Extract data from a database using SQL

select * from global_data




Observation: We got 266 results after running SQL query.

select * from city_list

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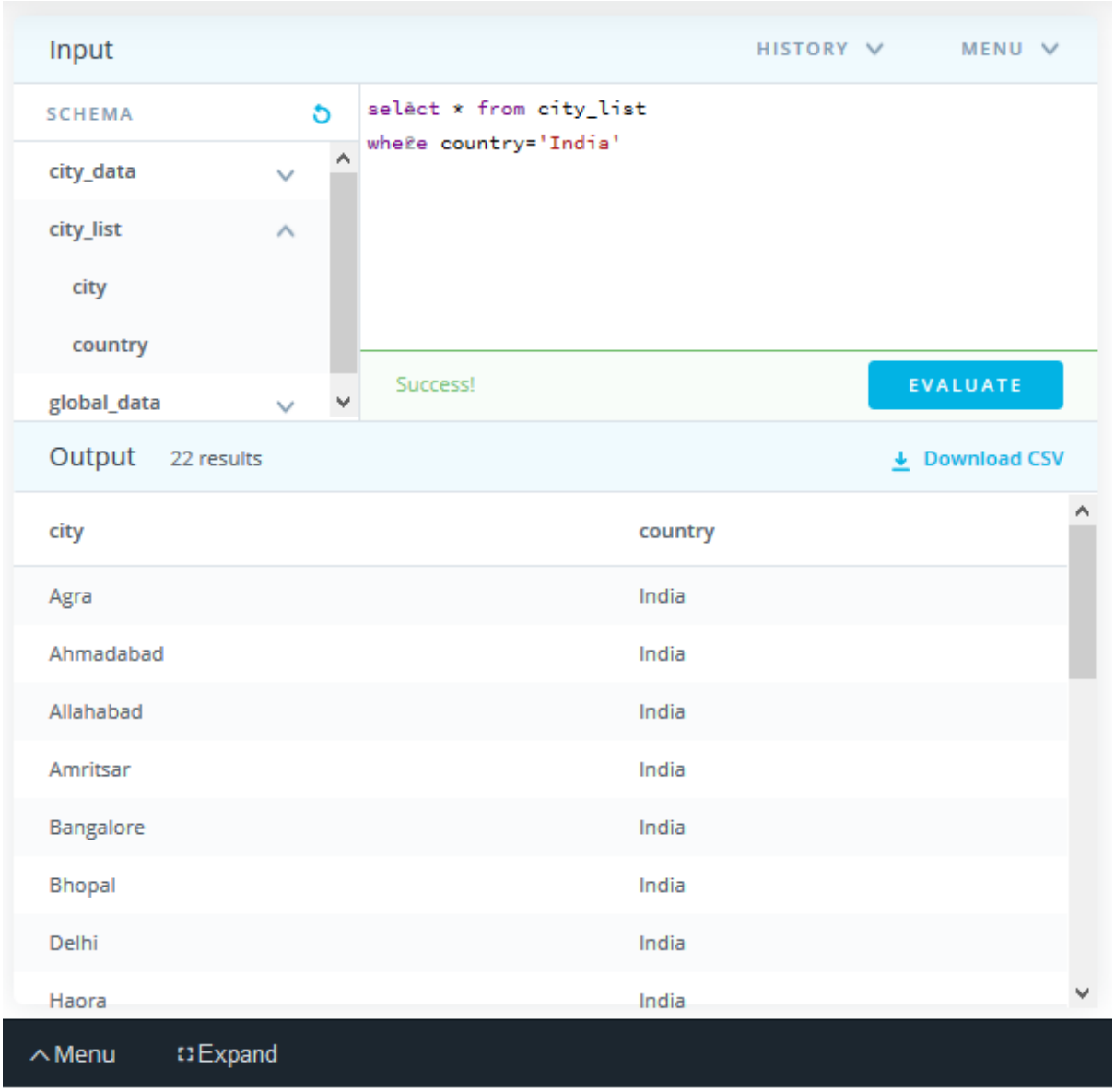
where country='India'




Observation: We got 22 results after running SQL query. Data of 22 cities of India provided in global_data database.

Our nearest big city is “Jaipur”. Now we will Alter columns ‘avg_temp’. This column is contained by both city_data and global_data.

ALTER TABLE city_data RENAME COLUMN avg_temp to city_avg_temp;

ALTER TABLE global_data RENAME COLUMN avg_temp to global_avg_temp;

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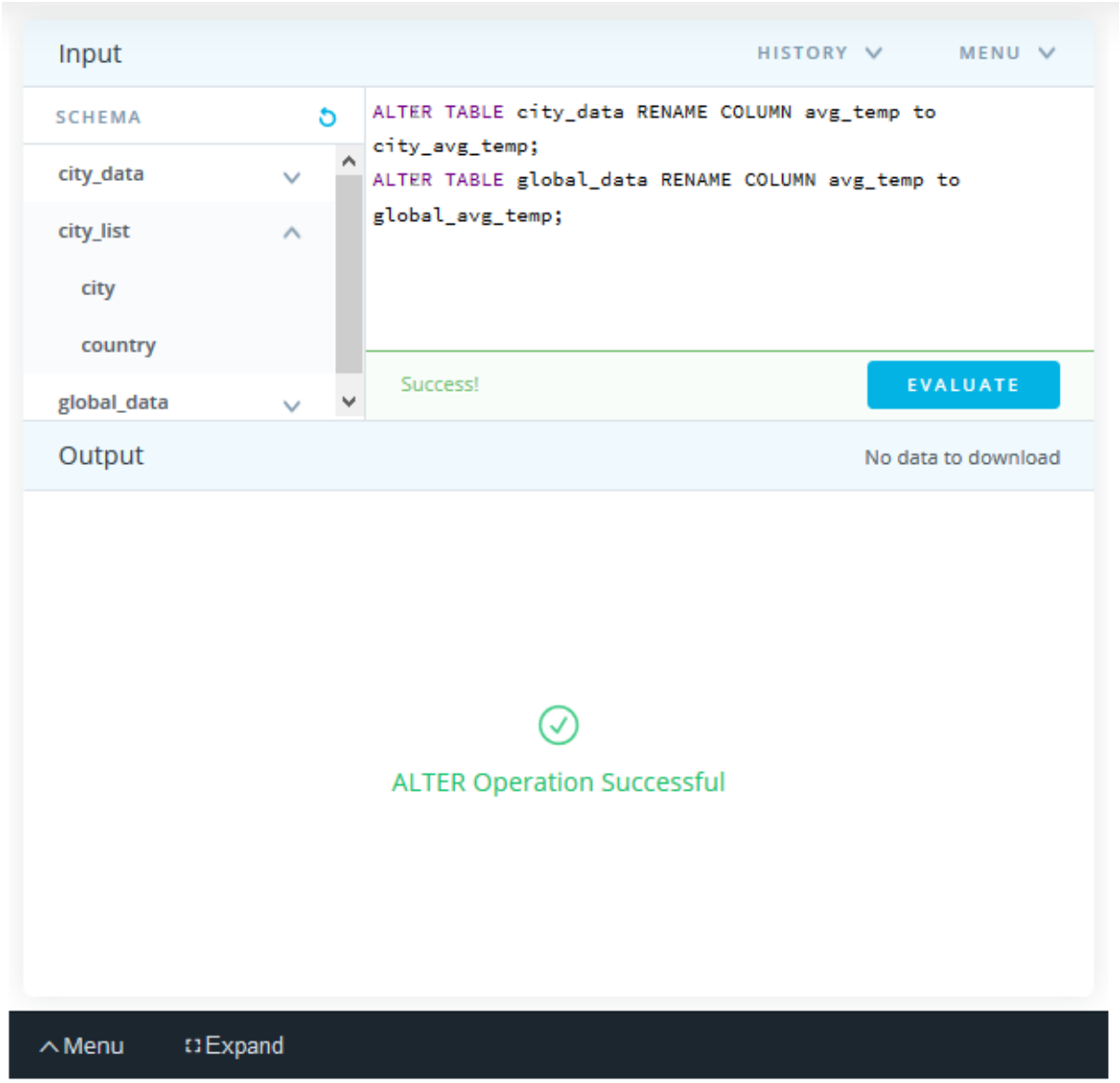


Join the two tables and have the relevant data

SELECT global_data.year, global_data.global_avg_temp, city_data.city_avg_temp

FROM global_data

JOIN city_data

ON global_data.year = city_data.year

WHERE city LIKE 'Jaipur';

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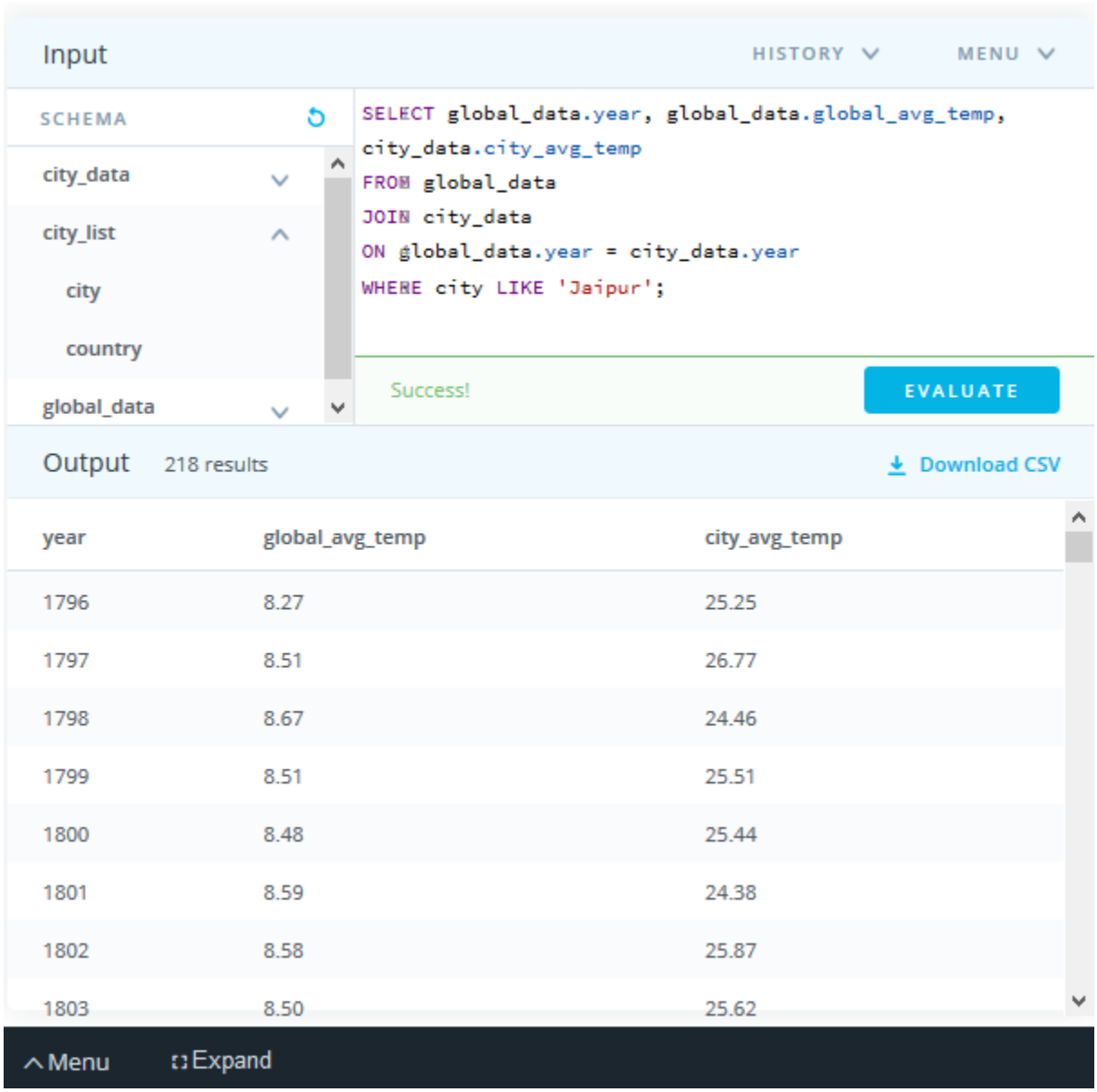


Download the file as CSV Format. Downloaded as “results-4.csv”.

Here, we got 218 results starting from year 1796 for both.

Step2: Moving averages

Calculated Moving averages to use in the line chart

Note: We delete the missing year data

| | | | |
|---|---|---|---|
| 14 | 1808 | 7.63 | |
| 15 | 1809 | 7.08 | |
| 16 | 1810 | 6.92 | |
| 17 | 1811 | 6.86 | |
| 18 | 1812 | 7.05 | |

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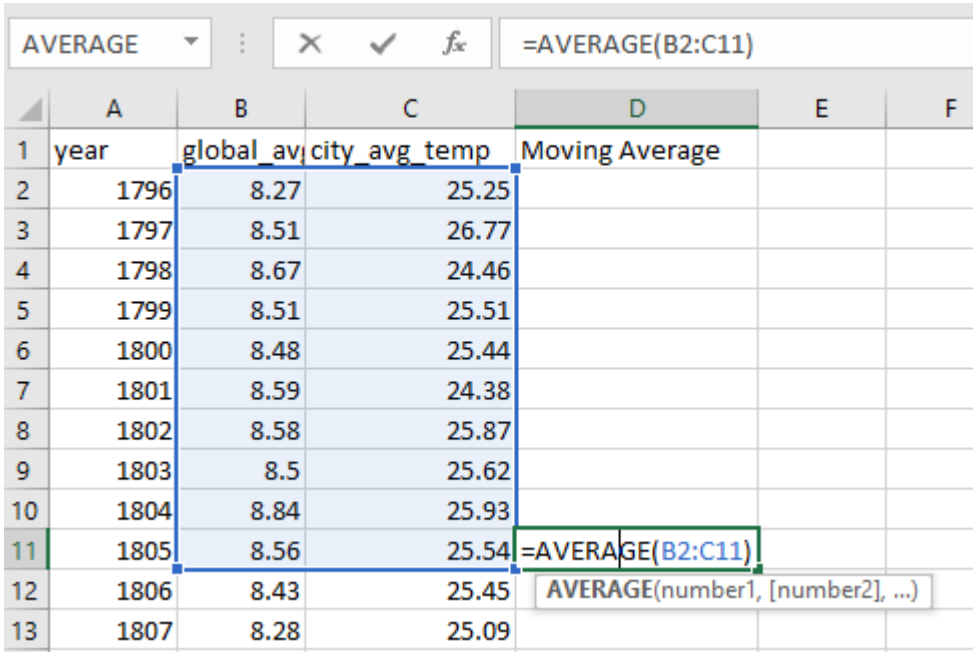
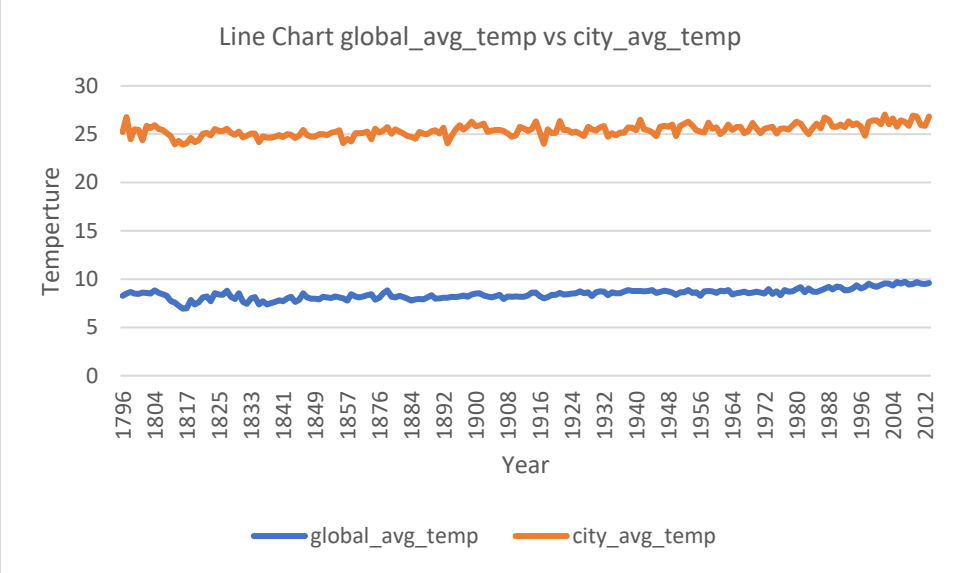
Now We calculate Moving Average for the first 10 years




AVERAGE (B2:C11) = 17.014

Plot Line Chart global_avg_temp vs city_avg_temp




Observations:

1. Chart shows a difference between Jaipur city's average temperature and global average temperature. Jaipur city have temperatures greater than the global average.
2. Jaipur city seems to be hotter than any other cities in world.
3. Since India lies near to equator and all other cities lies between equator so have high temperatures as compare to global average.
4. From chart global temperature rise is constant.