**Explore Weather Trends**

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# **Problem Statement**

Comparative analysis between the local temperature in Riyadh in Saudi Arabia and the global overall temperature. Riyadh was selected for this comparison because it is the nearest city to me.

# **Extraction of Data**

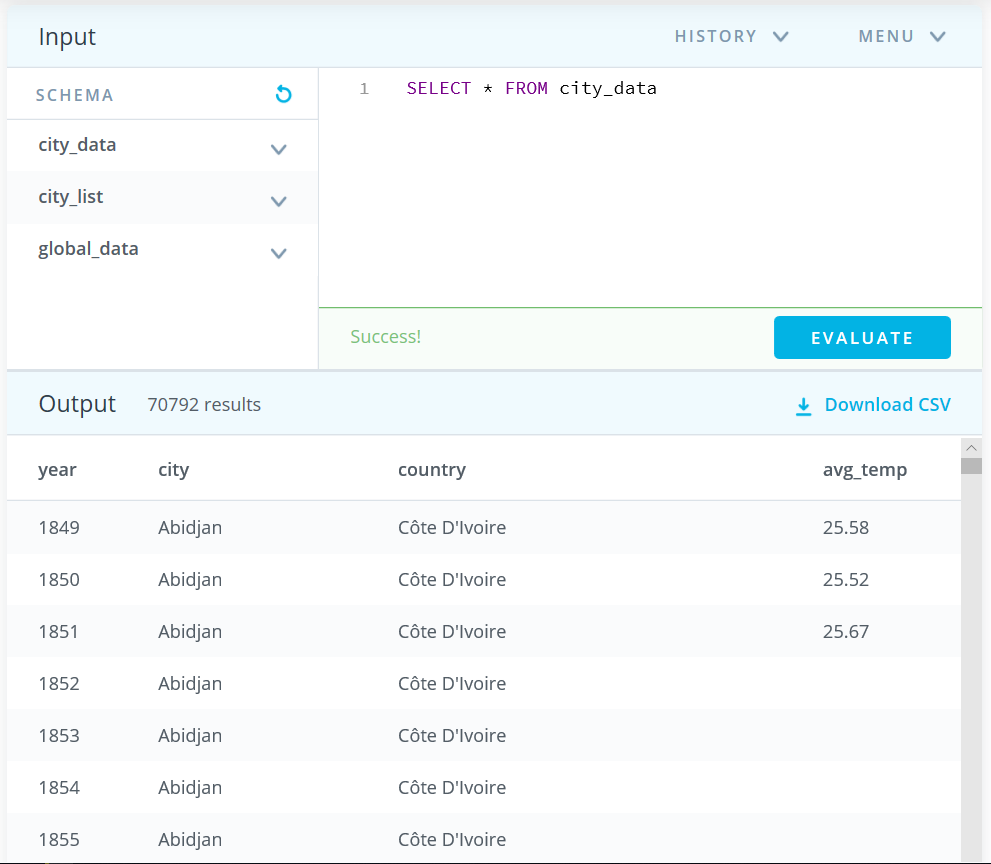
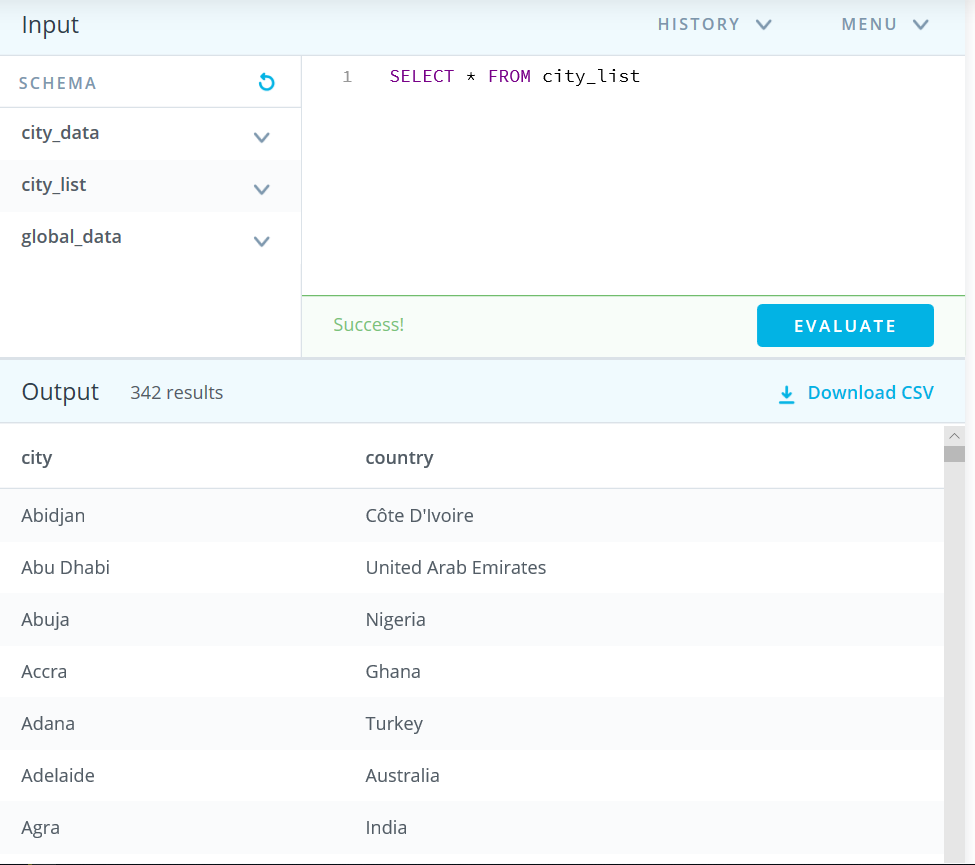
Data was extracted using SQL commands:

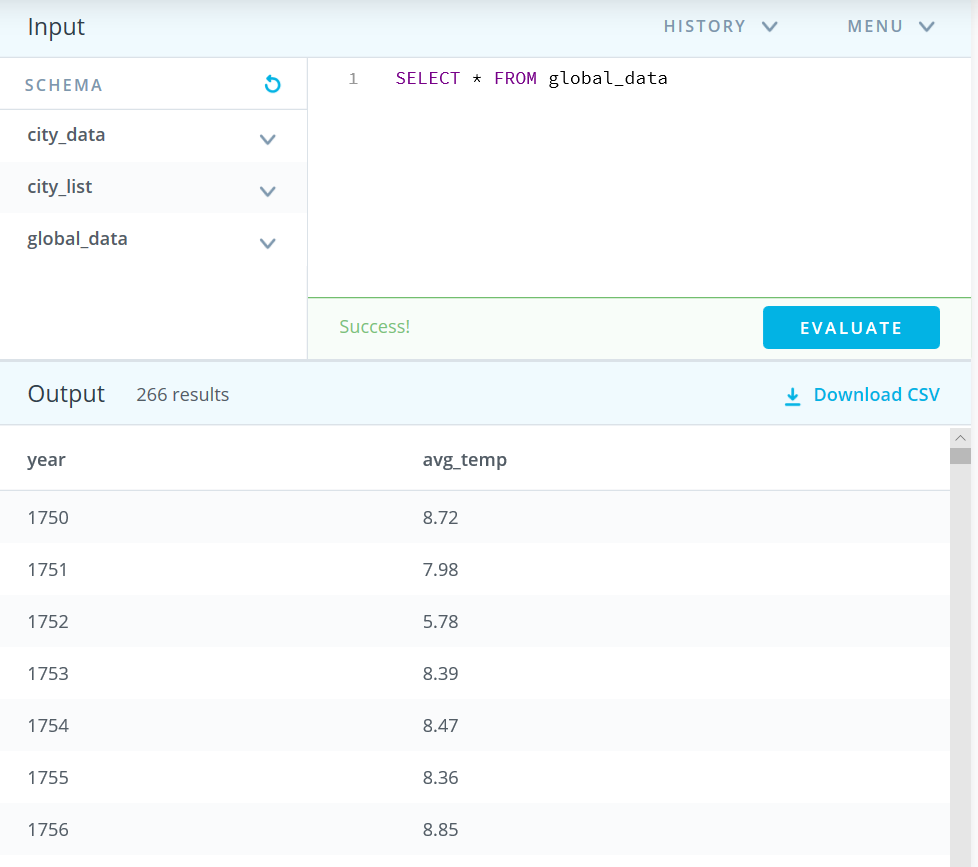
SELECT \* FROM city\_data

SELECT \* FROM city\_list

SELECT \* FROM global\_data

The data was successfully extracted and downloaded as a CSV file (Figure 1)



***Figure 1: Extracted SQL Data for City\_Data, City\_list and global\_list***

* City\_list is a list with cities that has available temperature data
* City\_data includes the recorded annual average temperature of various cities. In the case of Riyadh, the data is available from 1843 to 2013.
* Global\_list includes the worldwide annual average temperature.

# **Moving Average Calculation**

5 years moving average (5Y-MA) were calculated using the AVERAGE function in excel for the global and Riyadh temperatures (Figure 1). The following is a demonstration of the 5Y-MA computation for C7, C8, C9 and Cn in the excel sheet:

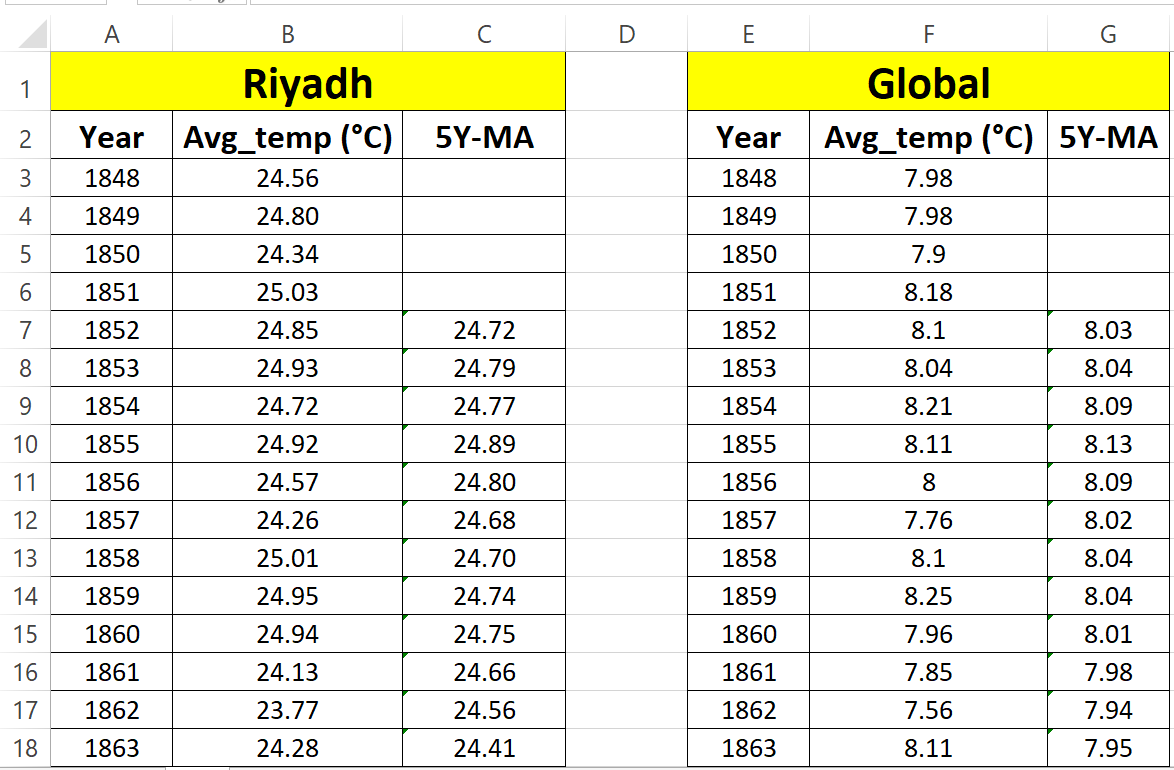
C7 =AVERAGE(B3:B7)

C8 =AVERAGE(B4:B8)

C9 =AVERAGE(B5:B9)

Cn =AVERAGE(B(n-4):B(n))

A similar computation was performed in excel for the 5Y-MA global temperatures and a sample results is shown in Figure 2.



***Figure 2: A sample 5Y-MA results for Riyadh and global temperatures***