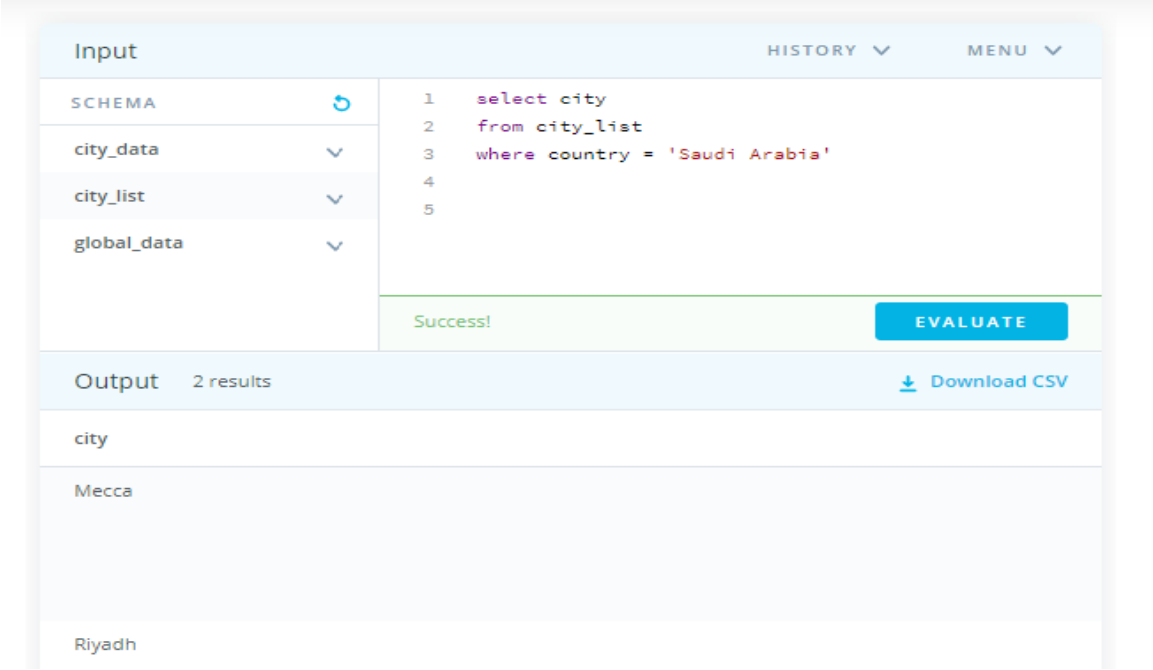
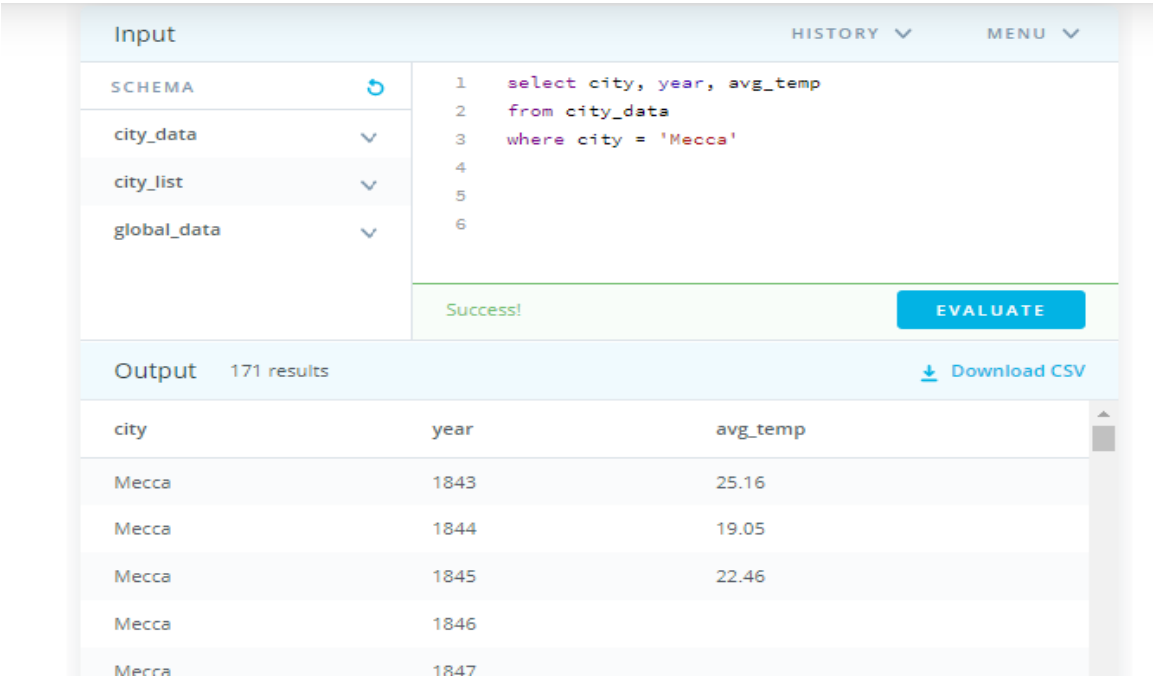
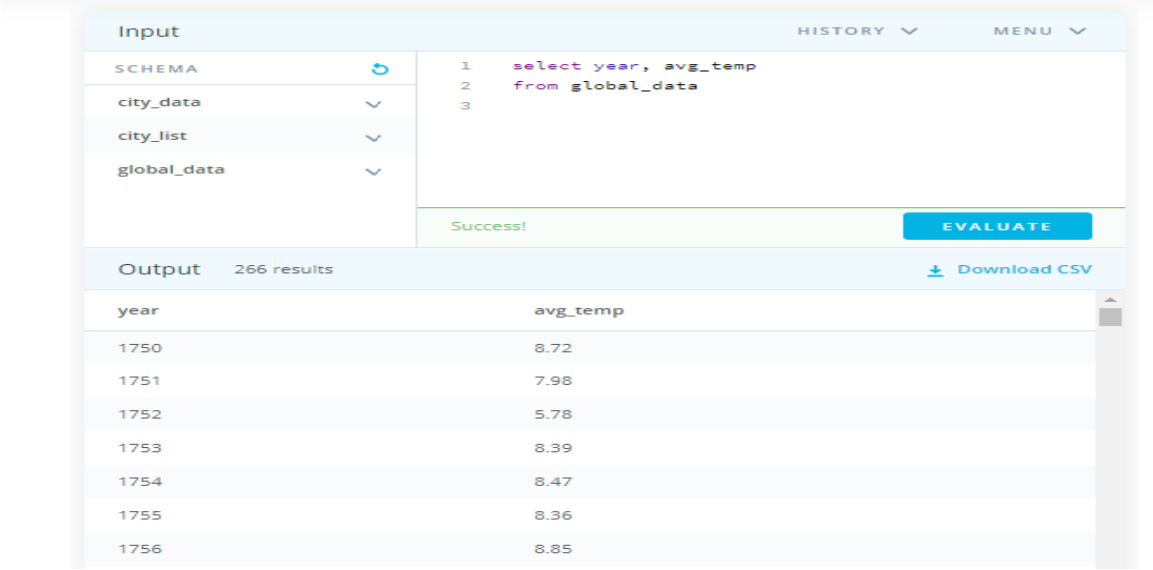
- write query to show cities inside my county “Saudi Arabia “ of city_list and select which city the closest big city from me “Macca”



- Using query “select” to display city data “Macca” with 3 column (year, avg_temp, city) by condition where cite is Macca and download as csv.



- Using “select” SQL query to display the global data temp and year from global_data table and export as CSV.

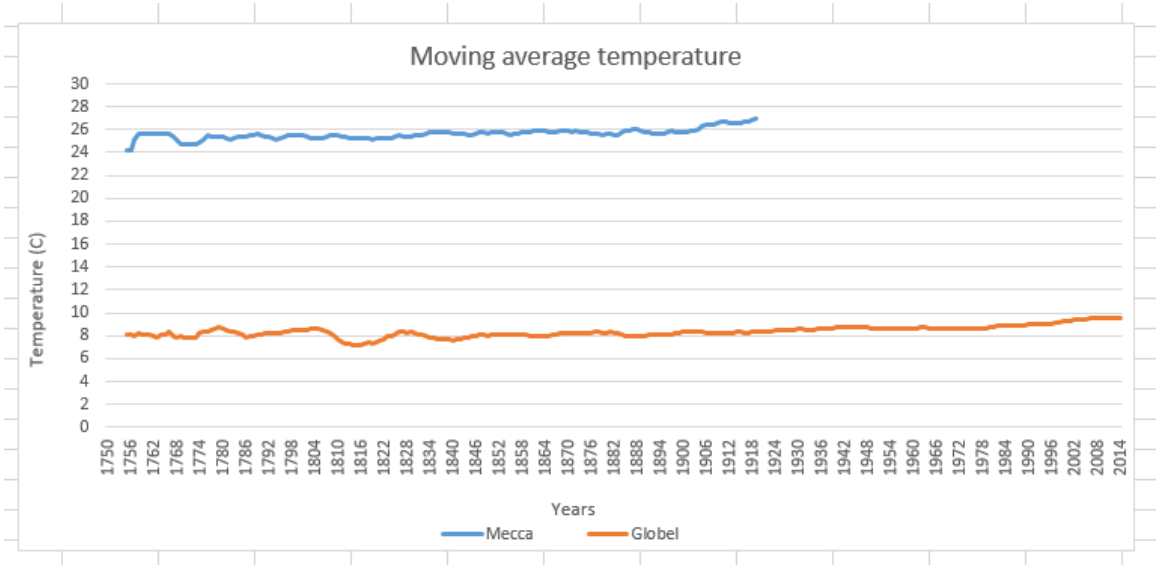


- The tools using Microsoft Excel to analysis and visualization, compares data temperature between local city’s temperatures and global.
  - Combination two dataset into one sheet in excel
  - It have missing value in avg_temp for Macca and handling that by mean imputation.
  - Apply Moving average on avg_temp local and avg_temp global to allow you to observe the long term trend.
    - Created 2 column called MA_ Macca and MA global, which is where the moving average field will be stored. For example taken seventh years and use the AVERAGE () function to calculate the average temperature Macca for the first seven years of temperature. Then calculates the average temp for the second through eighth year and apply the same way for all field in the column.
    - Repeat same steps for avg_temp global and store it in MA global.

	A	B	C	D	E	F	G
1	city	year	avg_temp	MA_Mecc	year	avg_temp	MA_Globe
2	Mecca	1843	25.16		1750	8.72	
3	Mecca	1844	19.05		1751	7.98	
4	Mecca	1845	22.46		1752	5.78	
5	Mecca	1846	25.6		1753	8.39	
6	Mecca	1847	25.6		1754	8.47	
7	Mecca	1848	25.6		1755	8.36	
8	Mecca	1849	25.6	24.15286	1756	8.85	8.078571
9	Mecca	1850	25.6	24.21571	1757	9.02	8.121429
10	Mecca	1851	25.6	25.15143	1758	6.74	7.944286
11	Mecca	1852	25.6	25.6	1759	7.99	8.26
12	Mecca	1853	25.6	25.6	1760	7.19	8.088571
13	Mecca	1854	25.6	25.6	1761	8.77	8.131429
14	Mecca	1855	25.6	25.6	1762	8.61	8.167143
15	Mecca	1856	25.6	25.6	1763	7.5	7.974286
16	Mecca	1857	25.6	25.6	1764	8.4	7.885714
17	Mecca	1858	25.6	25.6	1765	8.25	8.101429
18	Mecca	1859	25.6	25.6	1766	8.41	8.161429
19	Mecca	1860	25.6	25.6	1767	8.22	8.308571
20	Mecca	1861	23.98	25.36857	1768	6.78	8.024286
21	Mecca	1862	24.13	25.15857	1769	7.69	7.892857
22	Mecca	1863	22.87	24.76857	1770	7.69	7.92
23	Mecca	1864	25.43	24.74429	1771	7.85	7.841429

Project 1 - DA

- line chart that compares (Macca city's temperatures - global)



- This chart trend shows us the analysis of temperature data between Mecca and the world, where it has been found that Mecca is hotter than the world's cities, with temperatures range from 24° C to 27° C but it is steadily rising throughout the years between these degrees until the last years then increased. While the world's cities are cooler than Mecca, but they have begun vacillating until few past years they started with a small rise. Therefore, all world's cities overall trend is cold and in recent years have begun to rise in temperatures. And the difference between Mecca and the countries of the world are constant.
- What were your key considerations when deciding how to visualize the trends?
  Based on the comparison of the world's cities and my city of the temperature difference between them and the changes in temperature over the years.