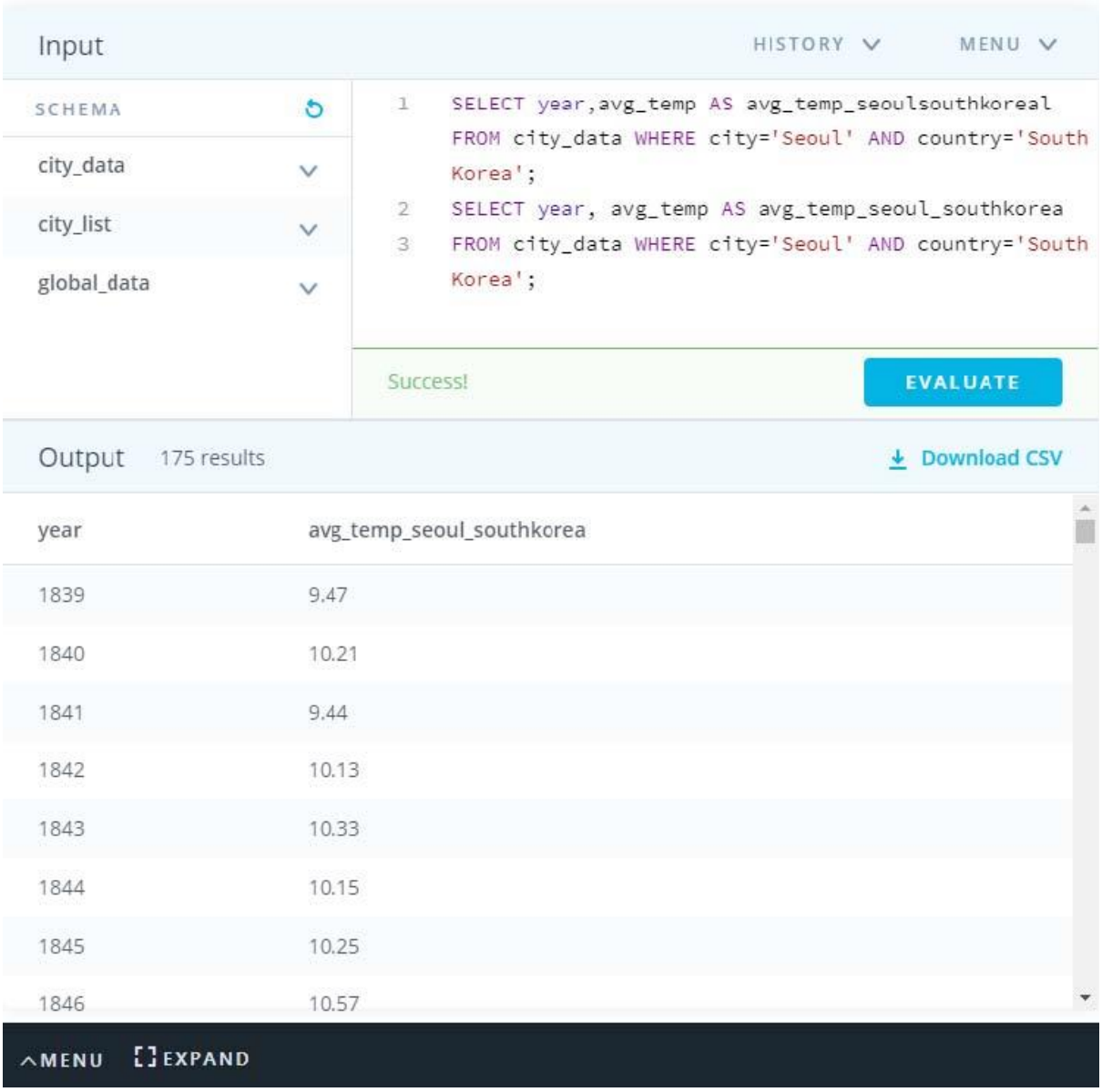
An Outline:

What tools did you use for each step? (Python, SQL, Excel, etc)

I have used the SQL and Excel as a tool to solve the project.



SELECT year,avg_temp AS avg_temp_seoulsouthkoreal FROM city_data WHERE city='Seoul' AND country='South Korea';

SELECT year, avg_temp AS avg_temp_seoul_southkorea

FROM city_data WHERE city='Seoul' AND country='South Korea';

SELECT year,avg_temp AS avg_temp_Global FROM global_data WHERE year>1838 AND year < 2014;

How did you calculate the moving average?

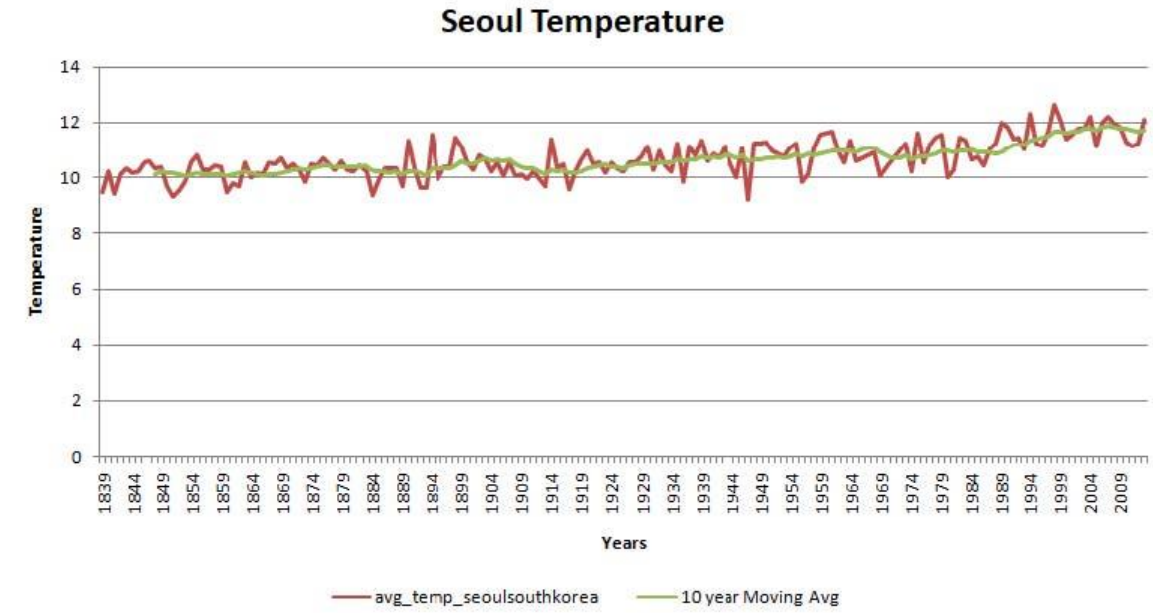
I have made the moving average on 10 year term.

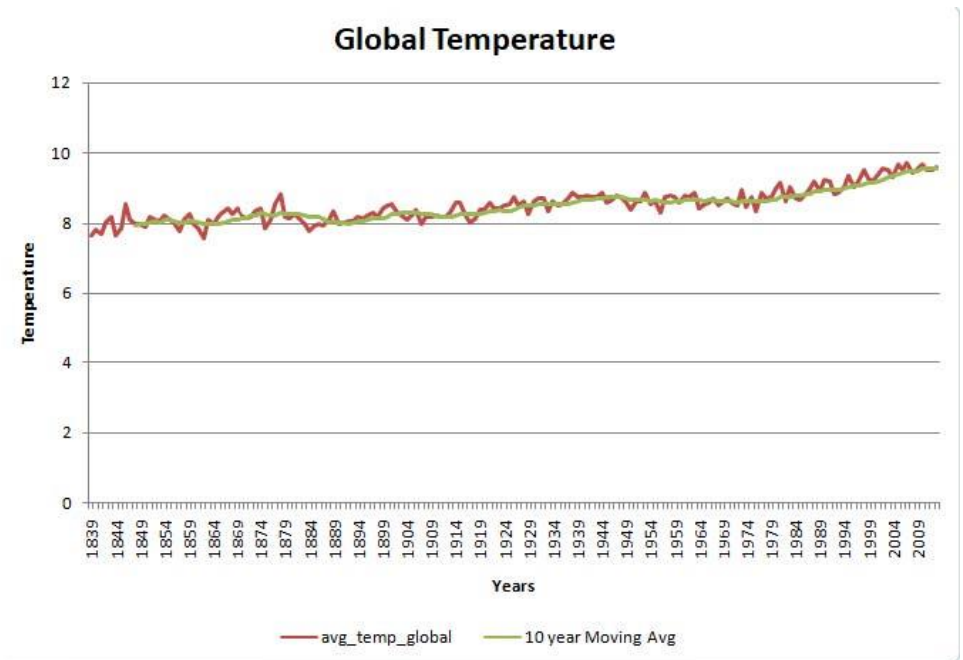
The answer came out using the average and sum of 10 year temperature on Excel sheet; shown in the following picture.

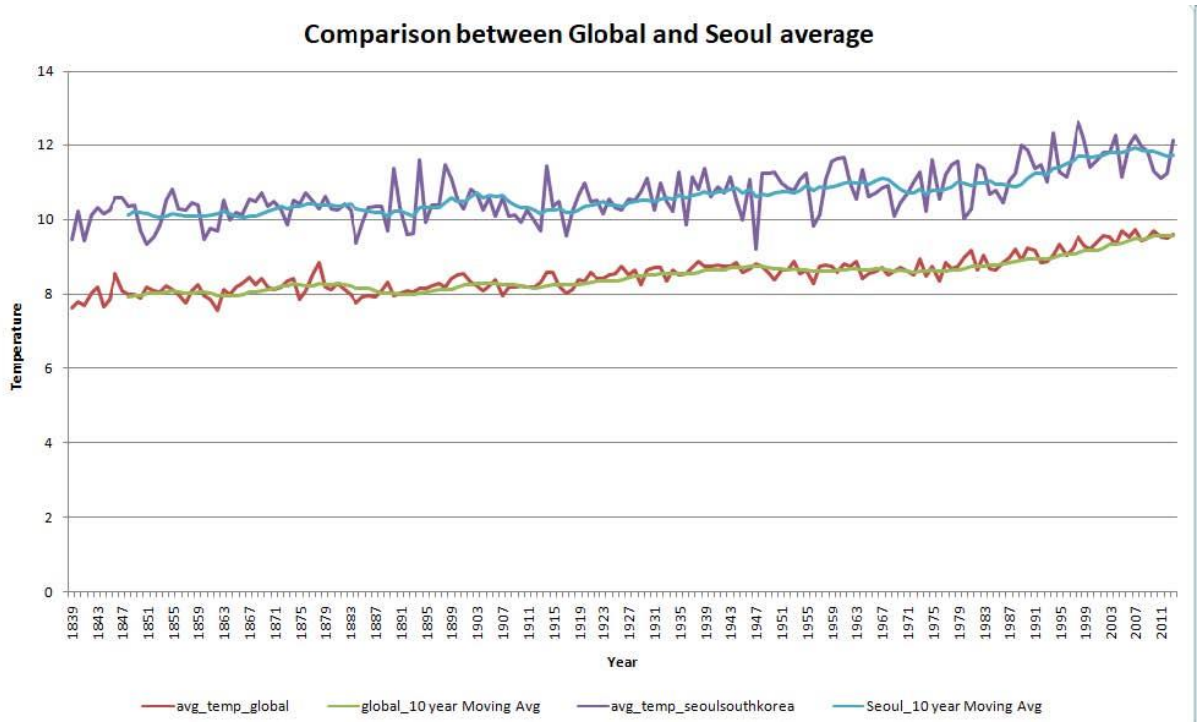
SUM =AVERAGE(B2:B11)

AVERAGE(**number1**, [number2], ...)

	A	B	C
1	year	avg_temp_	10 year Moving Avg
2	1839	9.47	
3	1840	10.21	
4	1841	9.44	
5	1842	10.13	
6	1843	10.33	
7	1844	10.15	
8	1845	10.25	
9	1846	10.57	
10	1847	10.59	
11	1848	10.36	=AVERAG
12	1849	10.39	10.242
13	1850	9.69	10.19







Key Considerations:

I have tried to make the x- and y- axes were correct when I was making the graph. It was a bit hard to change the axes. And I tried to follow the instructions to make similar graph as shown.

Observation:

Our city (Seoul, South Korea) has higher temperature average compared to the global average; which means our city is hotter. The differences were consistent over time. The overall change shape is similar; they tend to increase over time. However, Seoul city's average temperature has increased over 2 degree range while the global city's average temperature has increased within 2 degree range. Seoul average temperature tends to fluctuate more compared to the global temperature. The slope of moving average of global temperature is more gradual compared Seoul moving average. Overall trend of the World average temperature are getting hotter even though there were some fluctuations and this trend were consistence over hundreds of years.