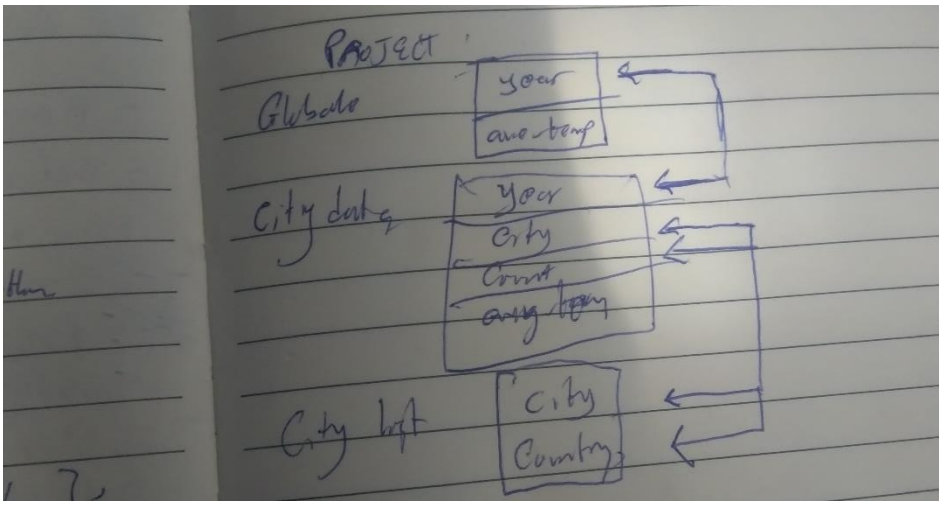
NAME: Emmanuel Ikpesu

PROJECT: Exploring Weather Trends

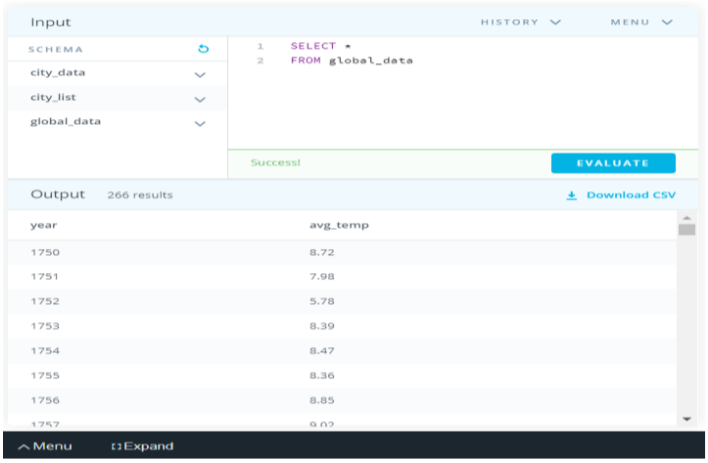
STEPS

The project was carried out following the below steps:

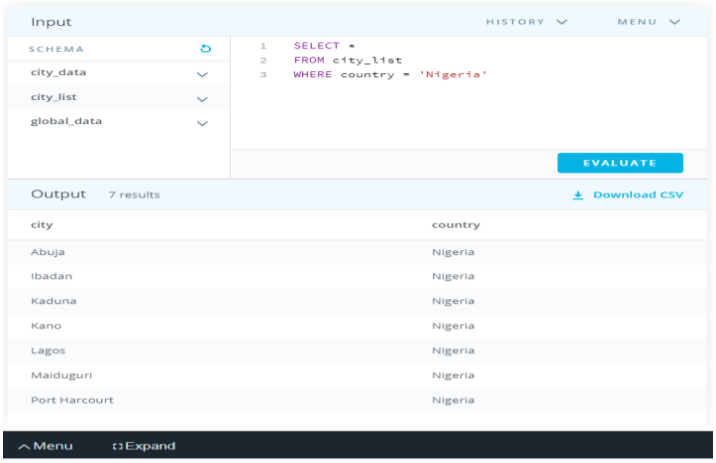
1. Previewed each table on the data base using SQL, made a rough table of the columns and observes the tables relationship



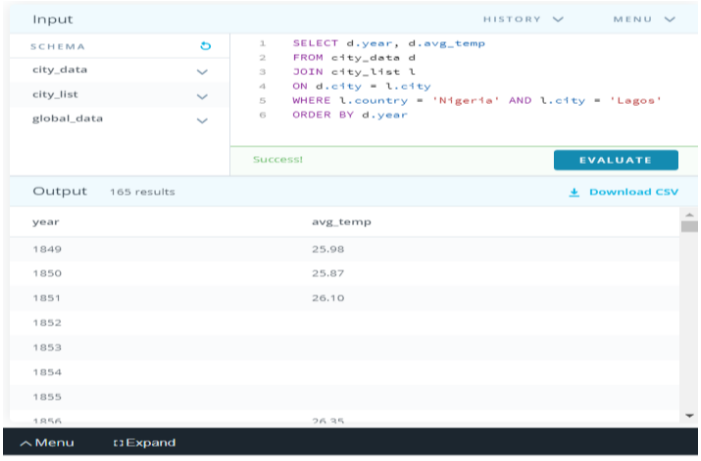
2. Extracted Global avg. temp data from data base



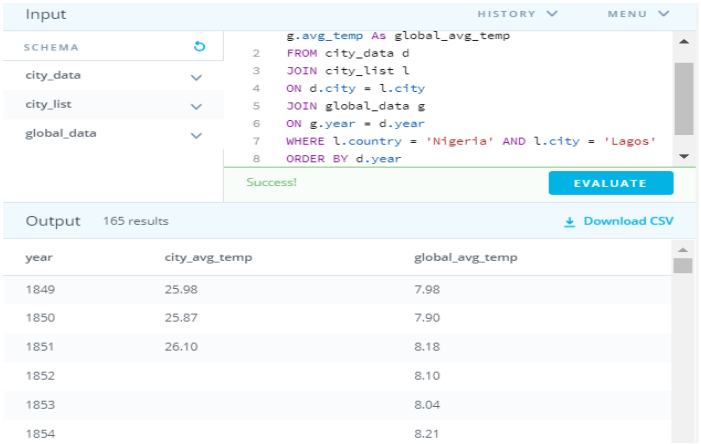
3. Opened the city_list table and filtered the data to know the list of cities in my country (Nigeria) which are available on the data base and choose Lagos because it was the one closest to me.



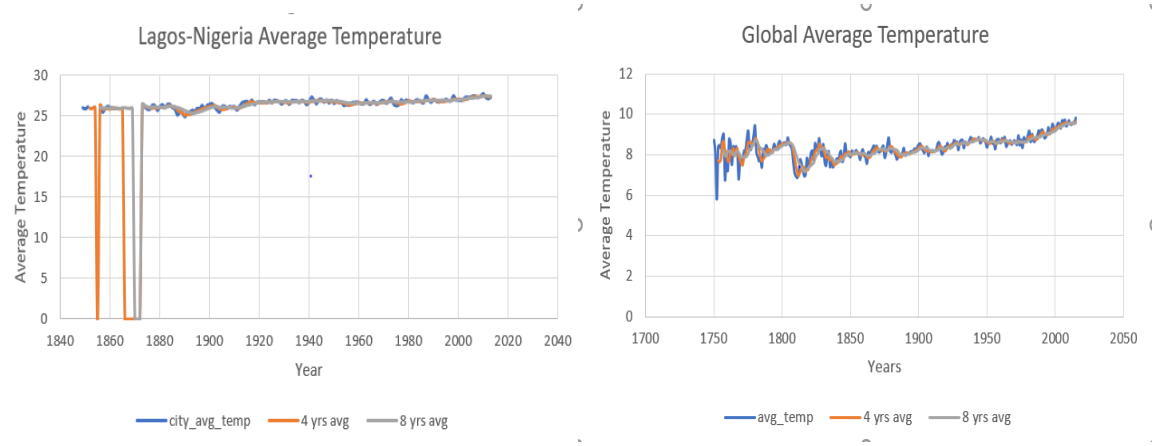
4. Combined city_data and city_list (Optional), filtered by country being Nigeria and city being Lagos and extracted data with only year and avg_tempt (as city_avg_temp).



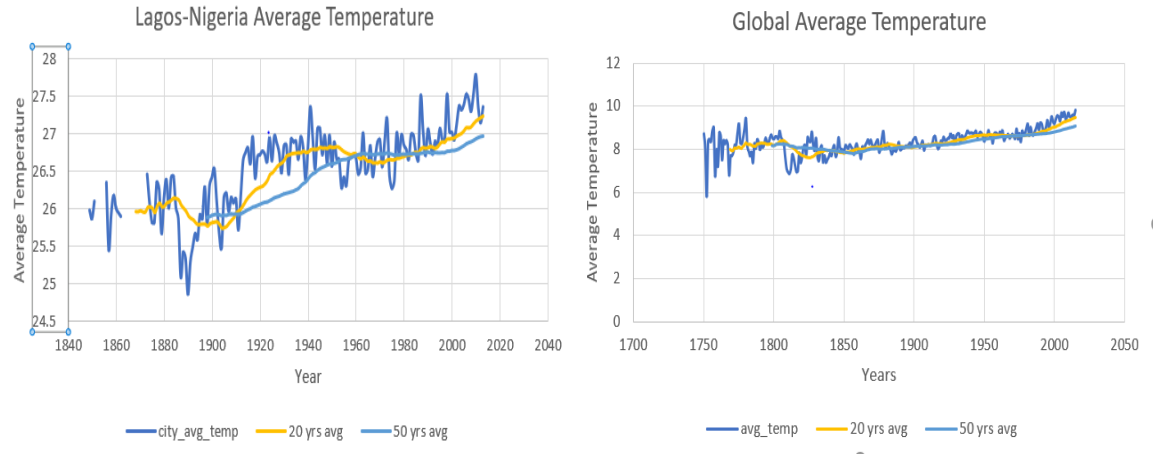
5. Combined the global_data table with the table in step 4 and extracted it.



6. Using excel, a line chart was created to visualize the different extracted data. Due to the fluctuation of this data, different moving average where created and the 20 years moving average was server to be best to conduct the analysis. v



Yearly average, 4- and 8-years moving average



Yearly average, 20- and 50-years moving average

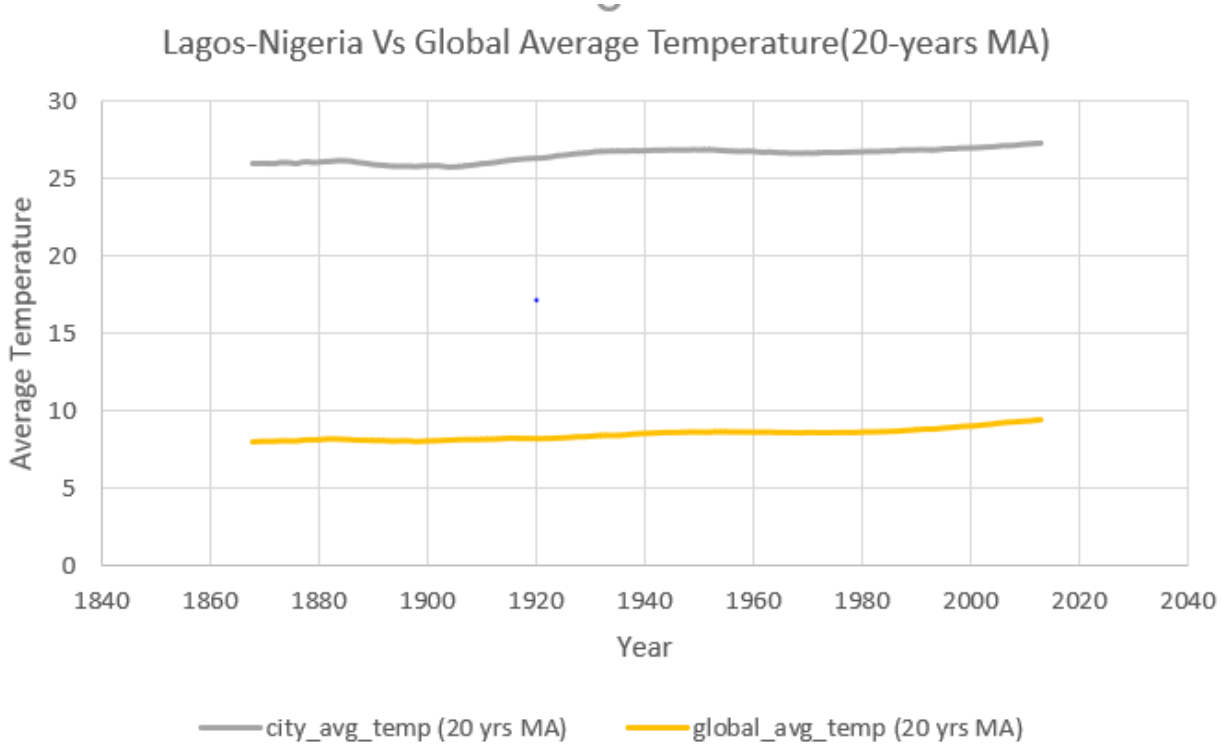
It was observed that 20-years moving average had a smoother trend with less unaccounted years.

D13 =AVERAGE(B6:B13)

	A	B	C	D	E	F
1	year	city_avg_t	4 yrs avg	8 yrs avg	20 yrs avg	50 yrs avg
2	1849	25.98				
3	1850	25.87				
4	1851	26.1				
5	1852		25.98333			
6	1853		25.985			
7	1854		26.1			
8	1855		#DIV/0!			
9	1856	26.35	26.35	26.075		
10	1857	25.45	25.9	25.9425		
11	1858	25.92	25.90667	25.955		
12	1859	26.18	25.975	25.975		
13	1860	26.01	25.89	25.982		
14	1861	25.95	26.015	25.97667		
15	1862	25.9	26.01	25.96571		
16	1863		25.95333	25.96571		
17	1864		25.925	25.90167		
18	1865		25.9	25.992		
19	1866		#DIV/0!	26.01		
20	1867		#DIV/0!	25.95333		
21	1868		#DIV/0!	25.925	25.971	
22	1869		#DIV/0!	25.9	25.97	
23	1870		#DIV/0!	#DIV/0!	25.9825	
24	1871		#DIV/0!	#DIV/0!	25.96571	

Table sample

7. A line chart was then created using the table extracted in step 5 and 20-years moving average was used.



OBSERVATIONS

1. My city (Lagos- Nigeria) is hotter on average compared to the global average
2. The difference in both average temperatures has been approximately consistent (18)
3. The change in temperature over time in my city (Lagos-Nigeria) is similar to the global average change
4. The overall trend is an upward moving curve, which implies that the world is getting hotter and this trend has been consistent over the last 100-years
5. My city (Lagos- Nigeria) average temperature is approximately equal to 3 times the global average