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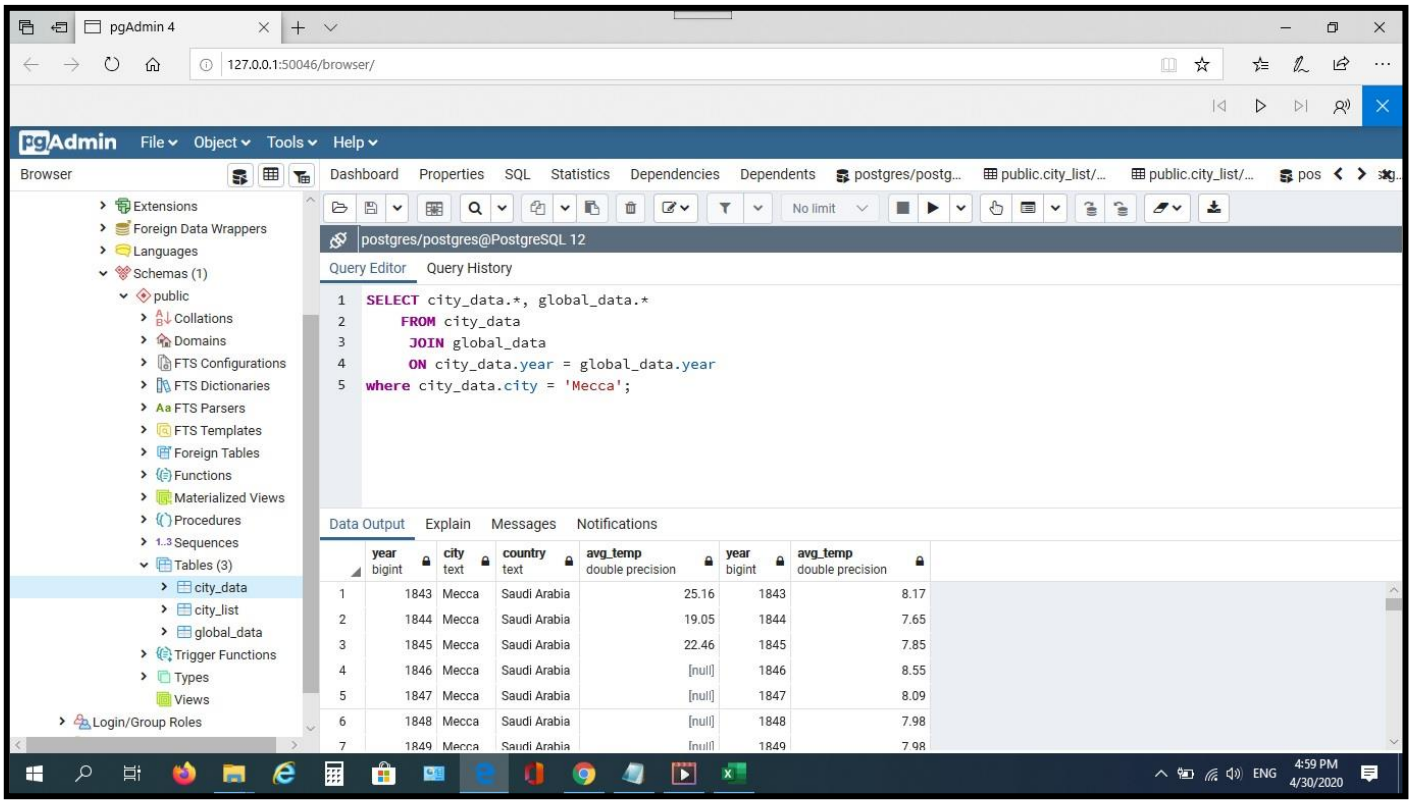
EXPLORING WEATHER TRENDS

TOOL TO PREPARE THE DATA

i. I have installed pgAdmin to deal with dataset easly using SQL.
ii. I have added the three required tables tables (city_list, city_data, global_data) to the pgAdmin App.
iii. I have used SQL statements to query the required information.
iv. I have downloaded the uer result from pgAdmin to CSV file.



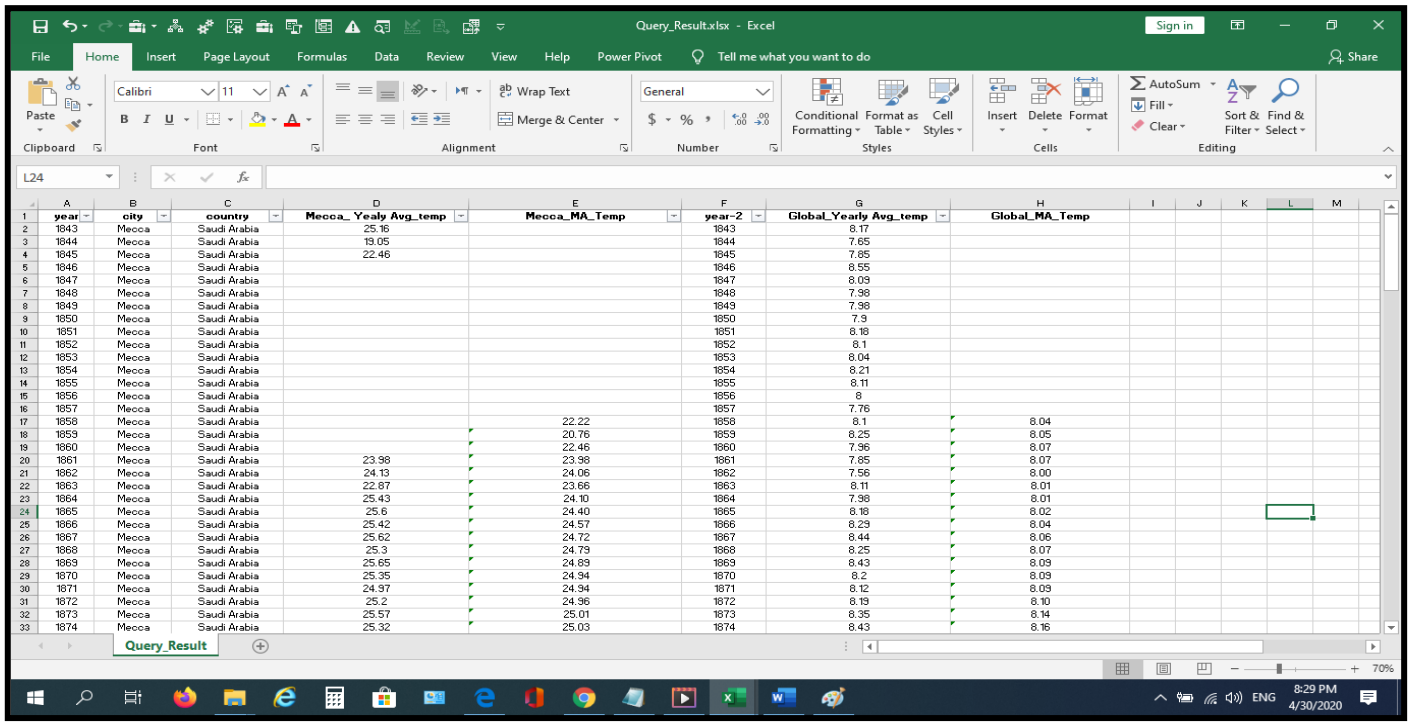
	year bigint	city text	country text	avg_temp double precision	year bigint	avg_temp double precision
1	1843	Mecca	Saudi Arabia	25.16	1843	8.17
2	1844	Mecca	Saudi Arabia	19.05	1844	7.65
3	1845	Mecca	Saudi Arabia	22.46	1845	7.85
4	1846	Mecca	Saudi Arabia	[null]	1846	8.55
5	1847	Mecca	Saudi Arabia	[null]	1847	8.09
6	1848	Mecca	Saudi Arabia	[null]	1848	7.98
7	1849	Mecca	Saudi Arabia	[null]	1849	7.98

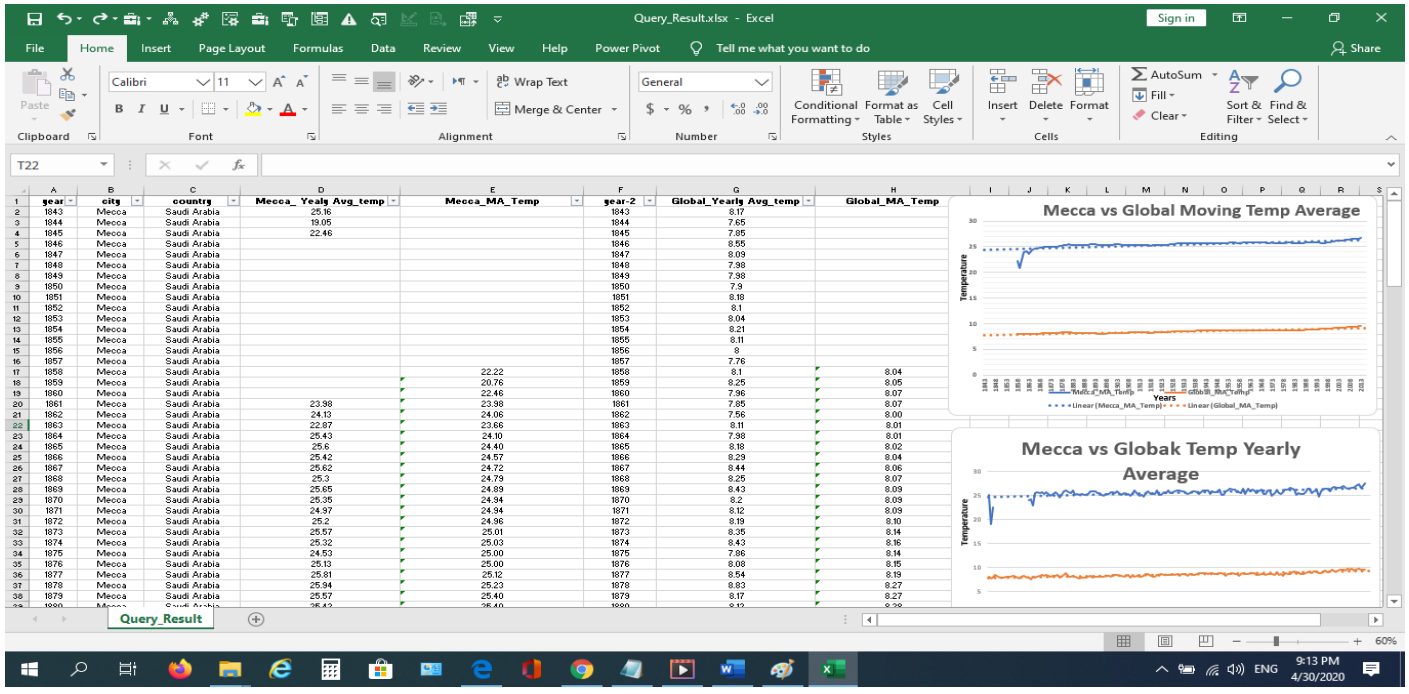
CALCULATE THE MOVING AVERAGE

i. I converted the (csv) result file to (xlsx) file.

ii. I decided to use 16 fileds moving average for cleaning data and to ignor the Zeros values.

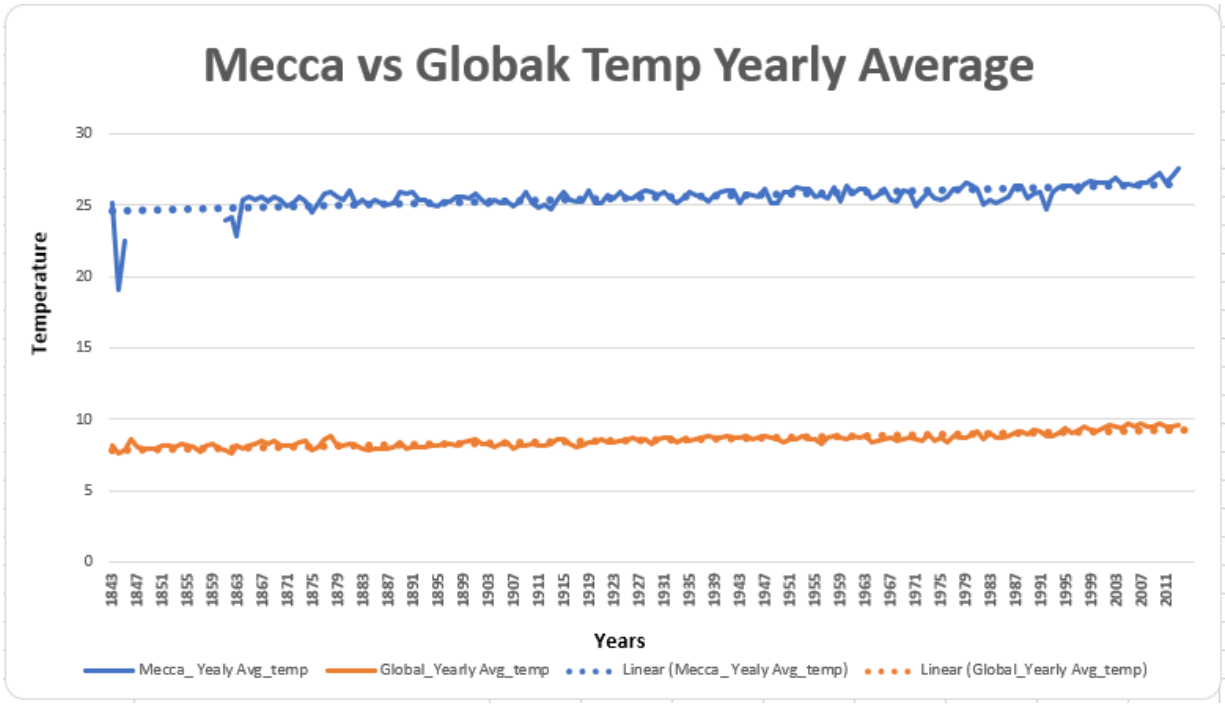
iii. I used the command (=AVERAGEIFS(D2:D17,D2:D17,">0")) to defin the 16 fileds moving average and ignoring Zeeros values.

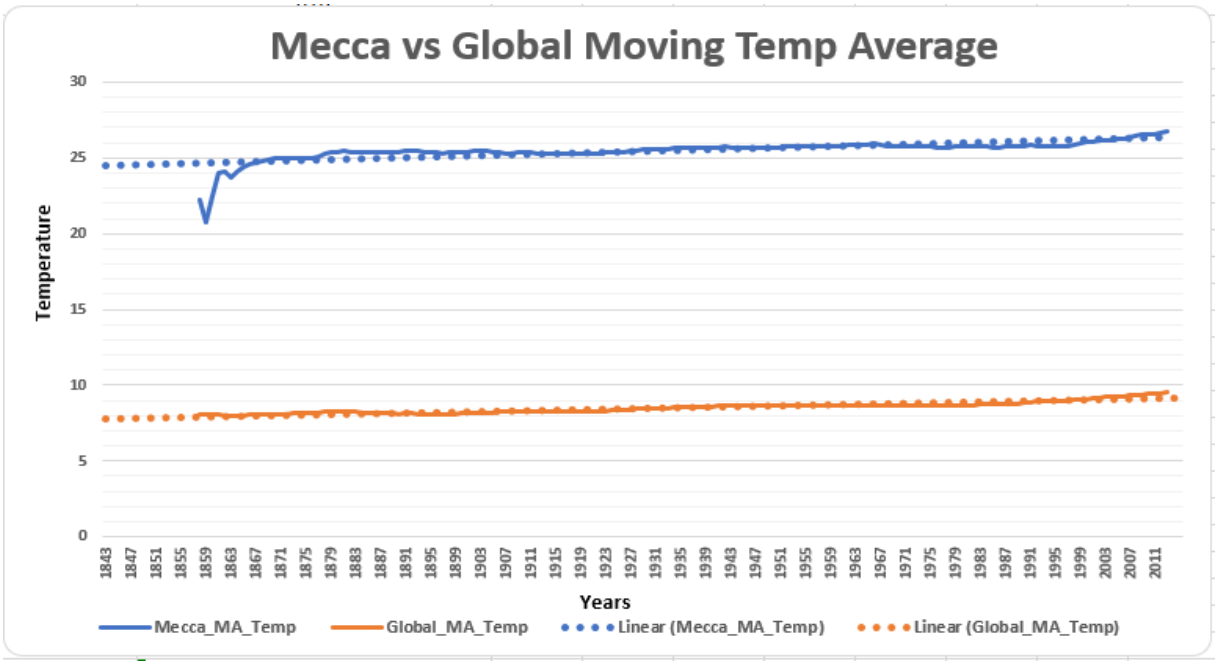




VISUALIZING THE TRENDS & THE RESULT

i. Drawing line chart to show Mecca vs Global temperature yearly average.
ii. Drawing line chart to show Mecca vs Global moving average using 16 filed for each movment.





OBSERVATIONS ABOUT THE DATA VISUALIZATION

i. The temperature in Makkah is approximately 20 °C higher than the global temperature.

ii. Meccah temperature changing gradually, the trend is up, so it is an increasing linear forecast.

iii. Global temperature changing slightly, the trend is up, so it is a very somewhat linear increasing forecast.

iv. The temperature relation between Mecca temperature average and the Global temperature average is directly proportional.