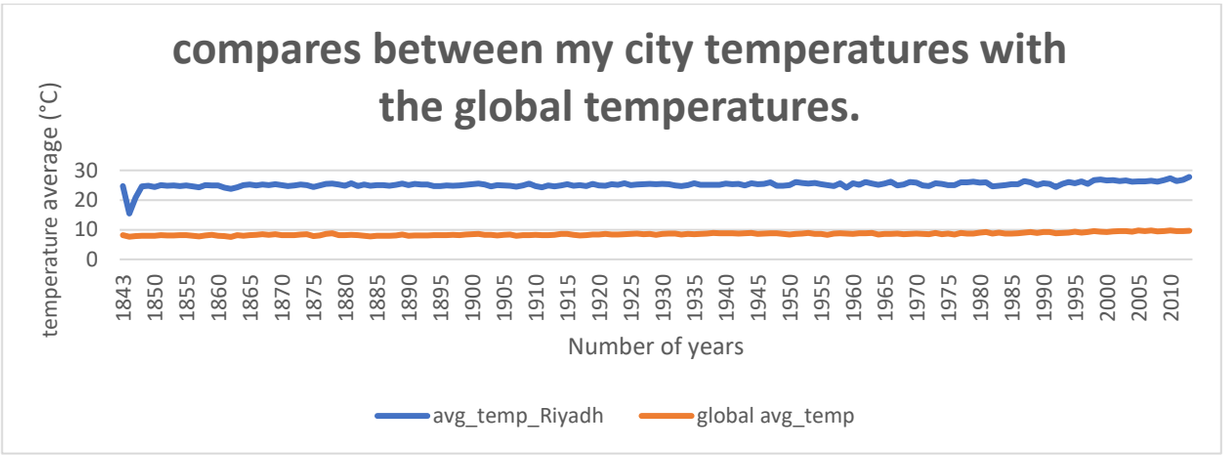
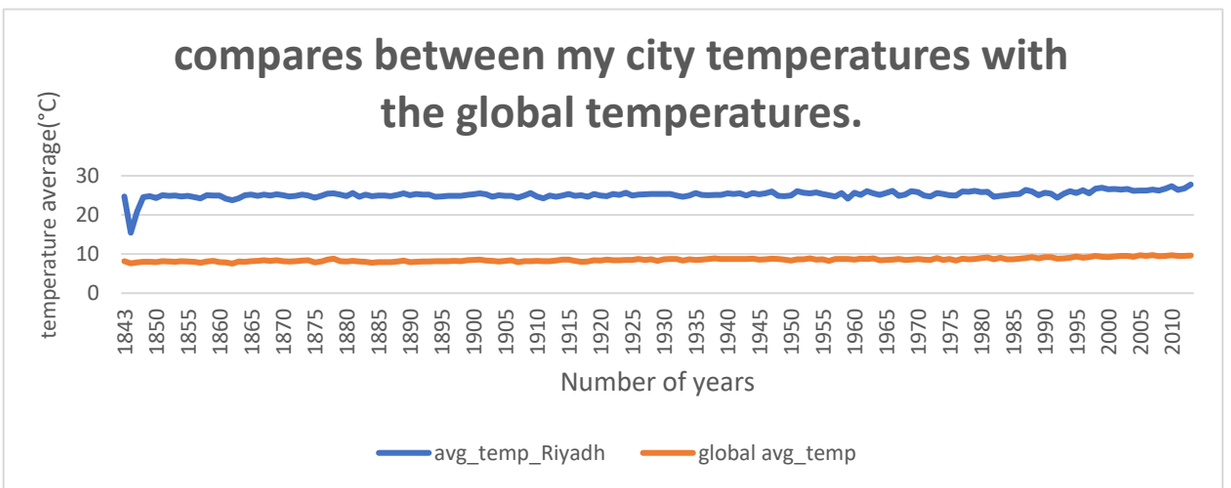
is your city hotter or cooler on average compared to the global average? Has the difference been consistent over time?

- **Yes, Riyadh is hotter than global average.**
- **The global average is cooler than Riyadh .**
- **N0, difference Hasn't been consistent over time.**



How do the changes in your city's temperatures over time compare to the changes in the global average?"

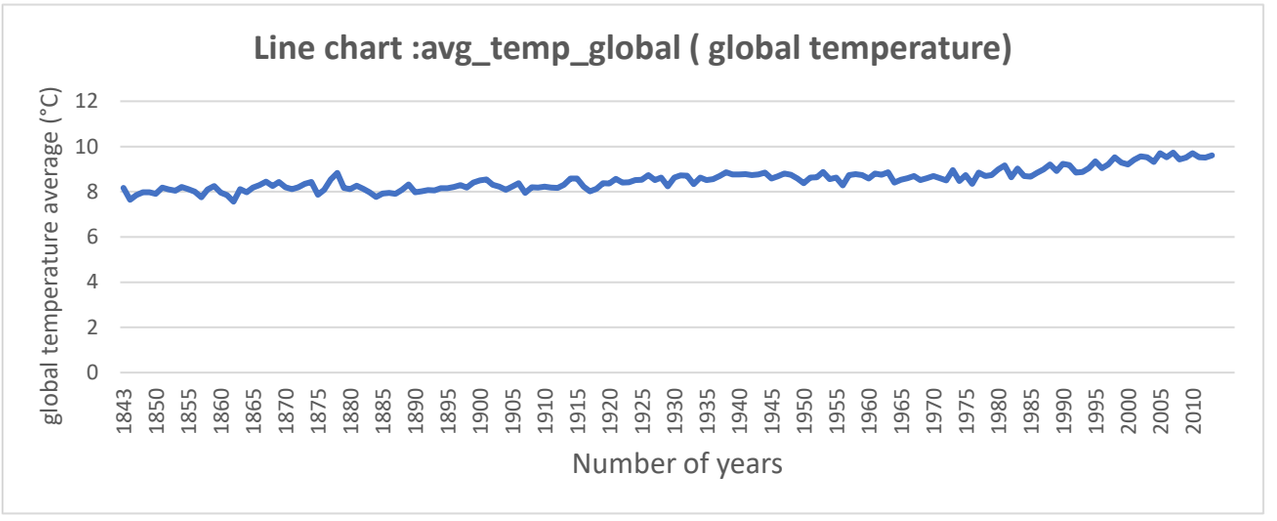
- **Average temperature in my city over the over time: is 24.7**
- **Average temperature in global average over the over time: is 8.5**
- **We noticed that temperatures in my city is hotter than global temperatures**
- **We noticed that global average is cooler than my city**
- **also difference Hasn't been consistent over time.**

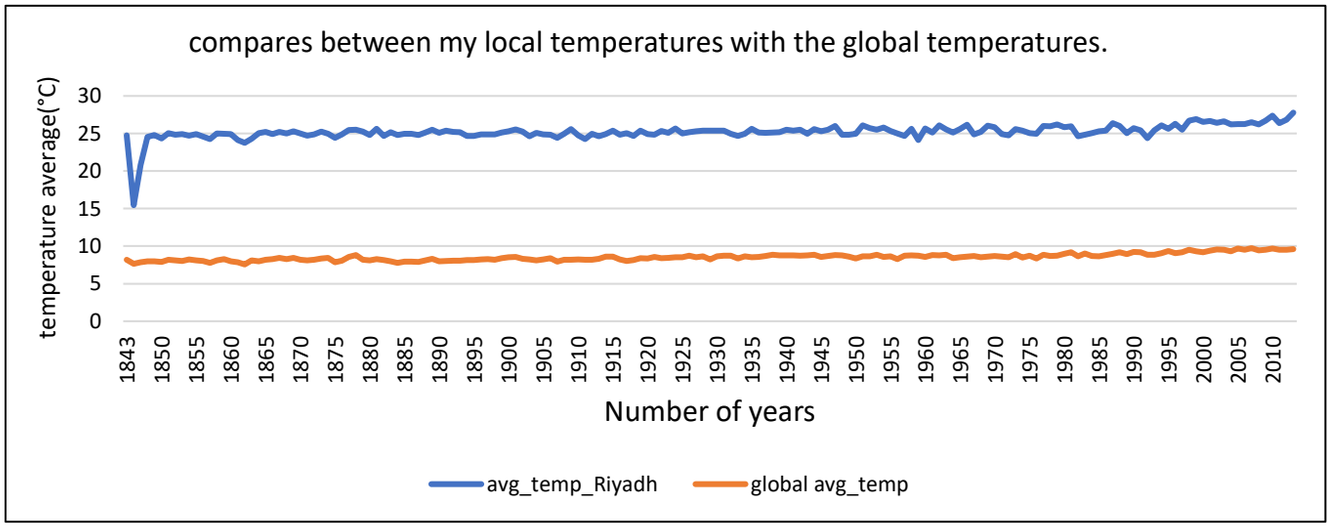


What does the overall trend look like? Is the world getting hotter or cooler?

Has the trend been consistent over the last few hundred years?

- **The trend is getting hotter**
- **trend has not consistent over the last few hundred years.**





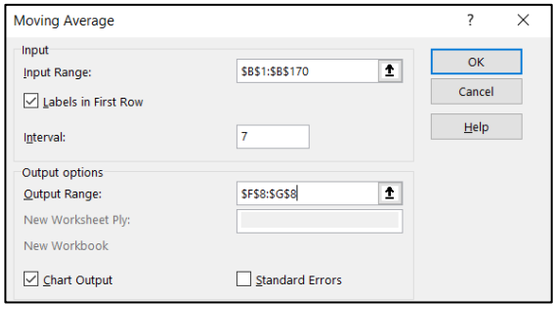
- What tools did you use for each step? (Python, SQL, Excel, etc)
    - **I used Excel .**
- How did you calculate the moving average?
    - **I calculated by using Data analysis from excel.**

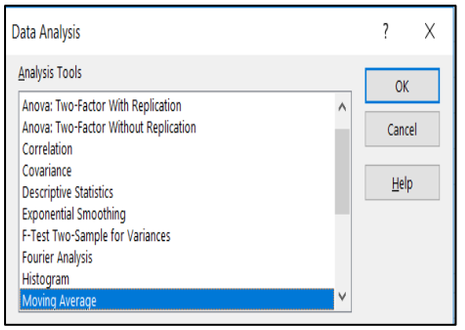
    - A moving average is a technique to get an overall idea of the trends in a data set; it is an average of any subset of numbers. The moving average is extremely useful for **forecasting long-term trends**. You can calculate it for any period of time.

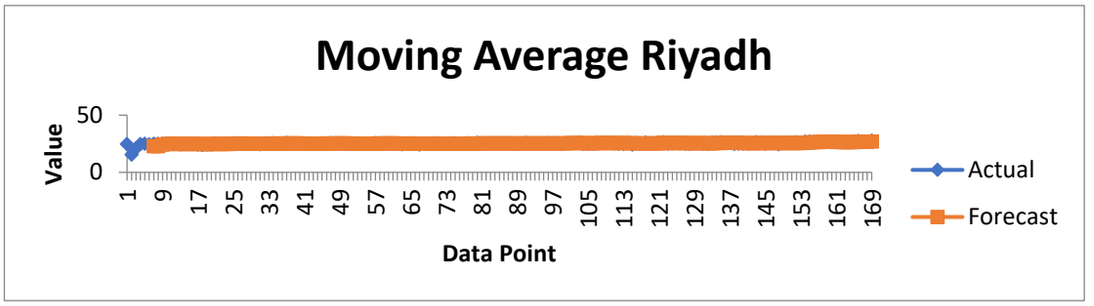
- first step go to data then i select data analysis after that I choose moving average and click ok .

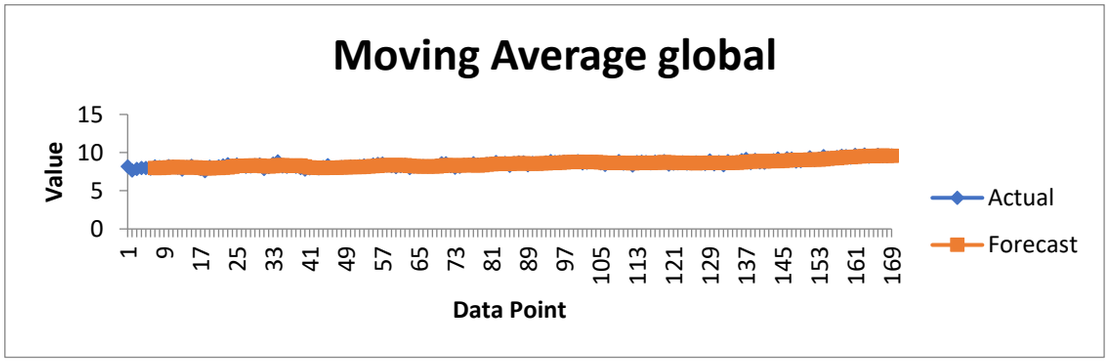
- I selected input range would be the (avg_temp_Riyadh column) I selected that starting with the label avg_temp_Riyadh all the way down the last data point
- Interval in this case would be, I want the Day moving average and output range were you want the data to display then I put Tick mark to chart output

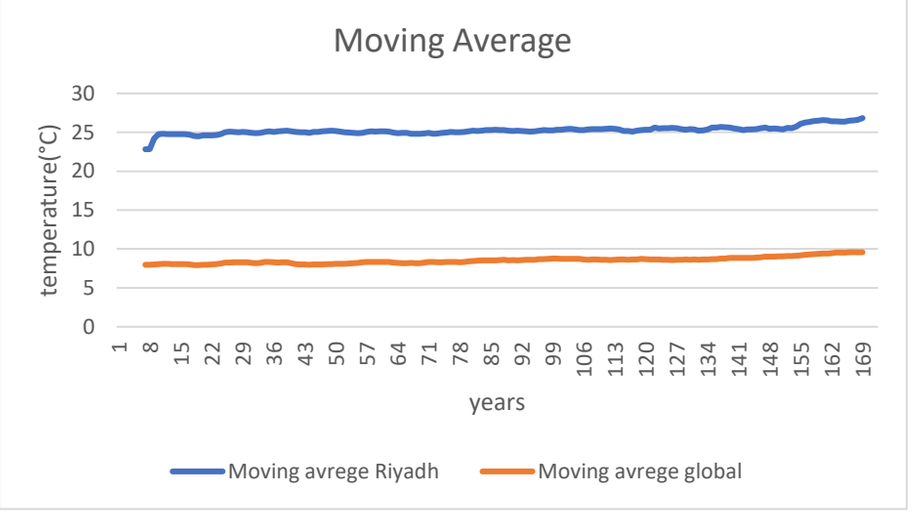
- After I finish moving chart for my city and global temperature I have made compare between to column



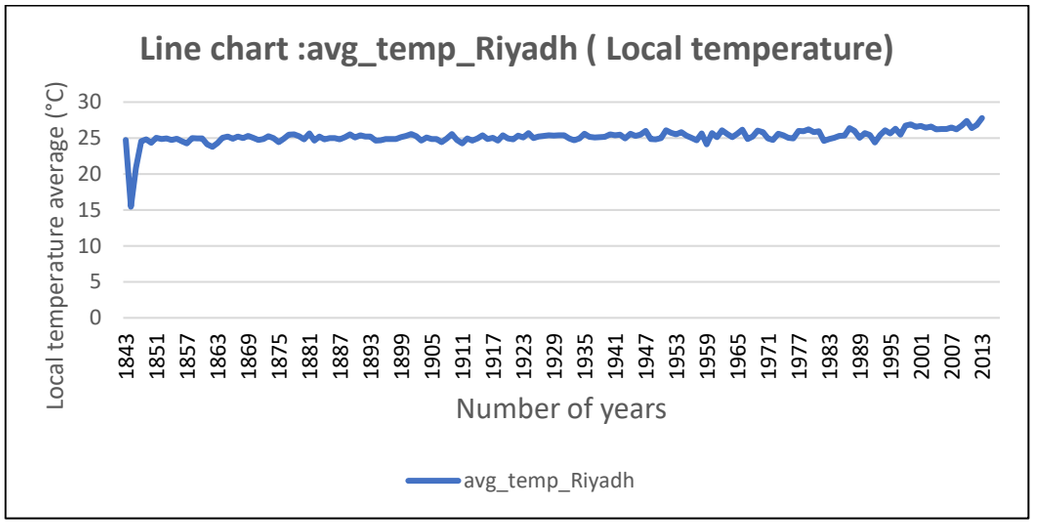


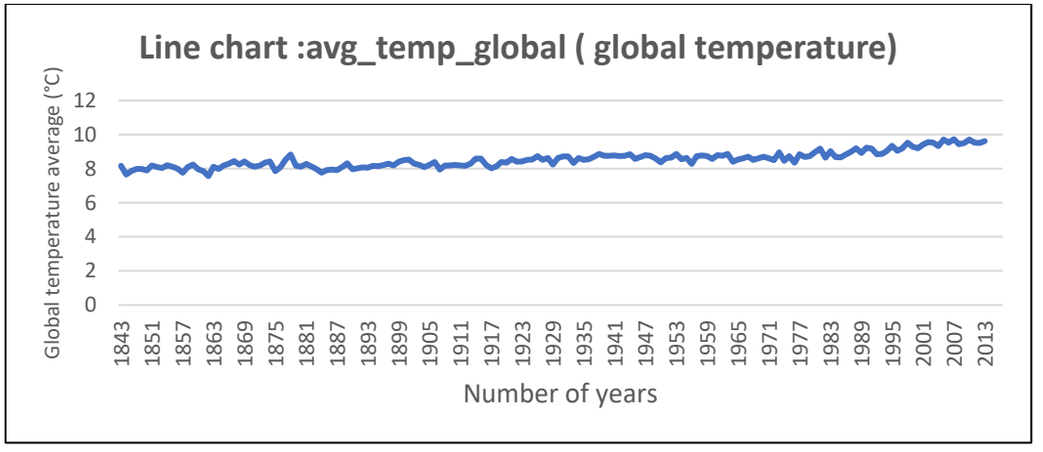

Moving Average Riyadh
Value
50
0
1
9
17
25
33
41
49
57
65
73
81
89
97
105
113
121
129
137
145
153
161
169
Data Point
Actual
Forecast

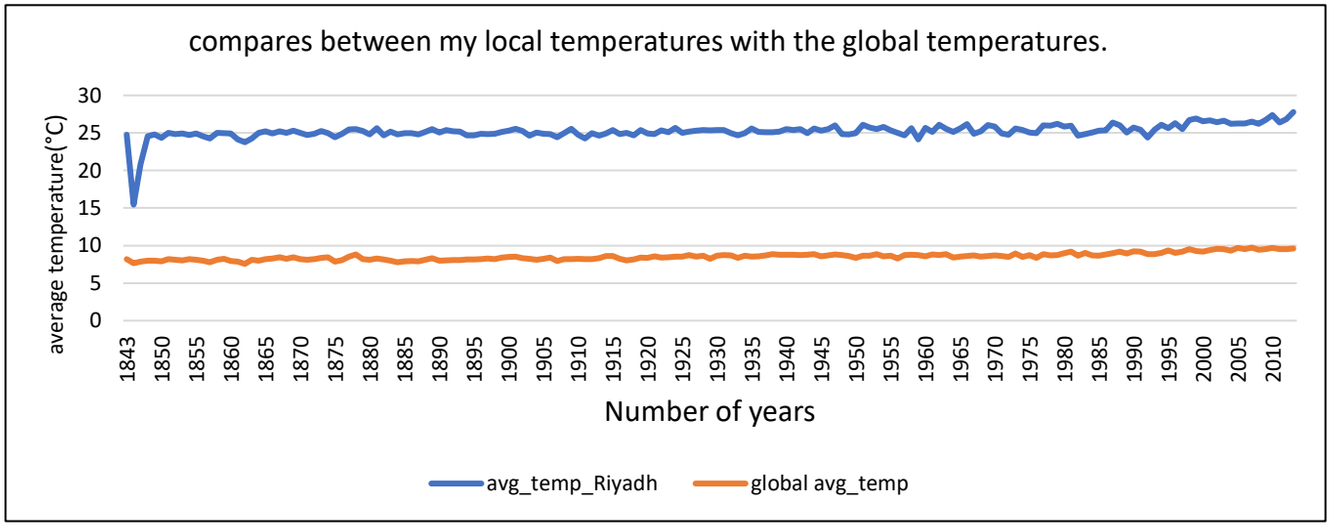

Moving Average global
Value
15
10
5
0
1
9
17
25
33
41
49
57
65
73
81
89
97
105
113
121
129
137
145
153
161
169
Data Point
Actual
Forecast


Moving Average
temperature(°C)
30
25
20
15
10
5
0
1
8
15
22
29
36
43
50
57
64
71
78
85
92
99
106
113
120
127
134
141
148
155
162
169
years
Moving avrege Riyadh
Moving avrege global

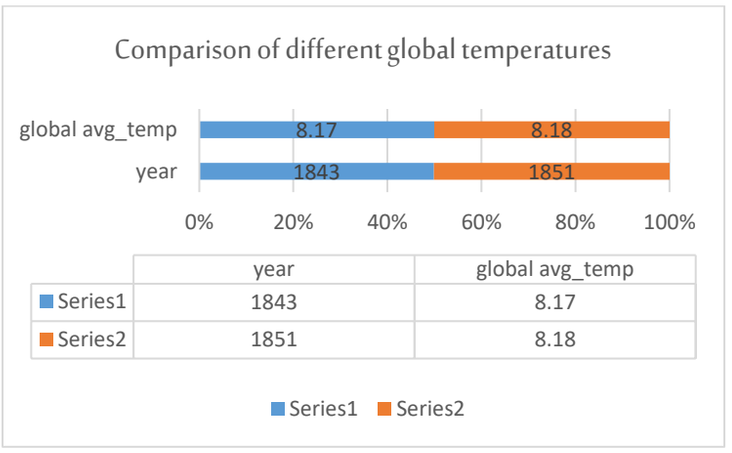
- **Line chart** with local and global temperature trends

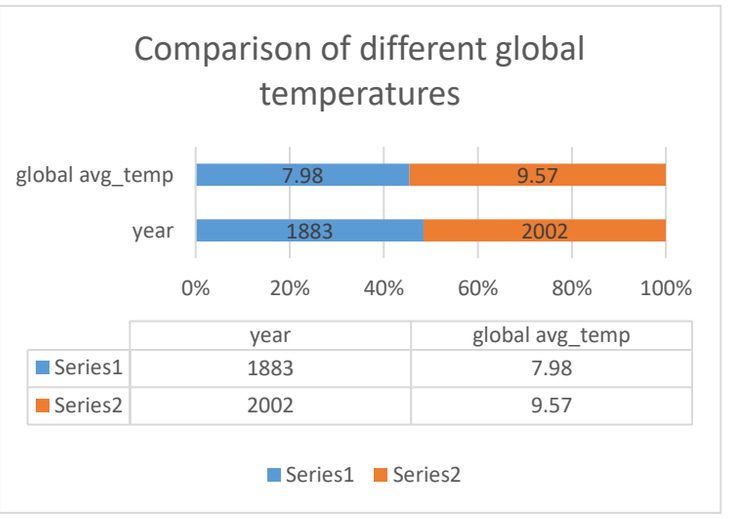


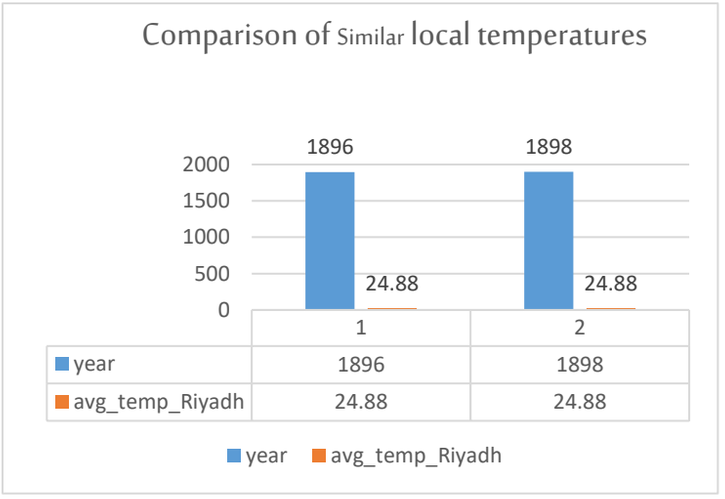


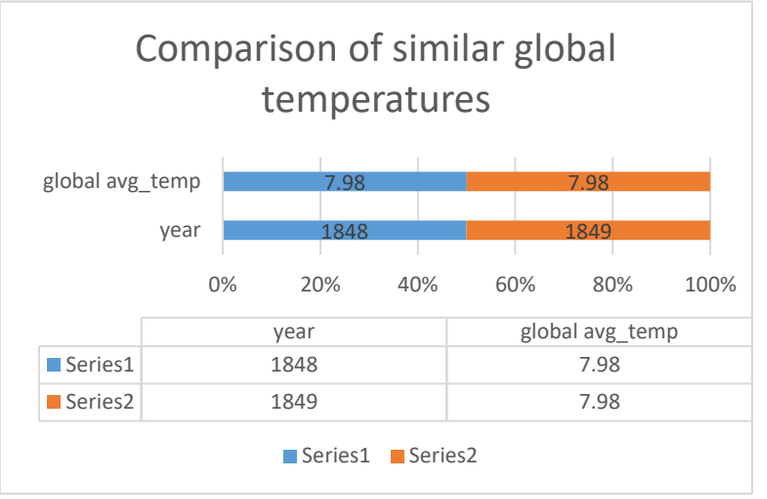


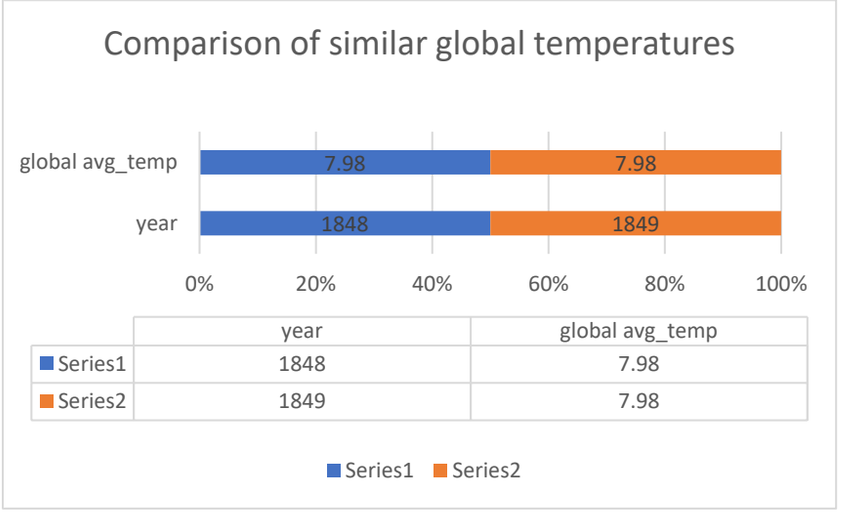
- At least **four observations** about the similarities and/or differences in the trends

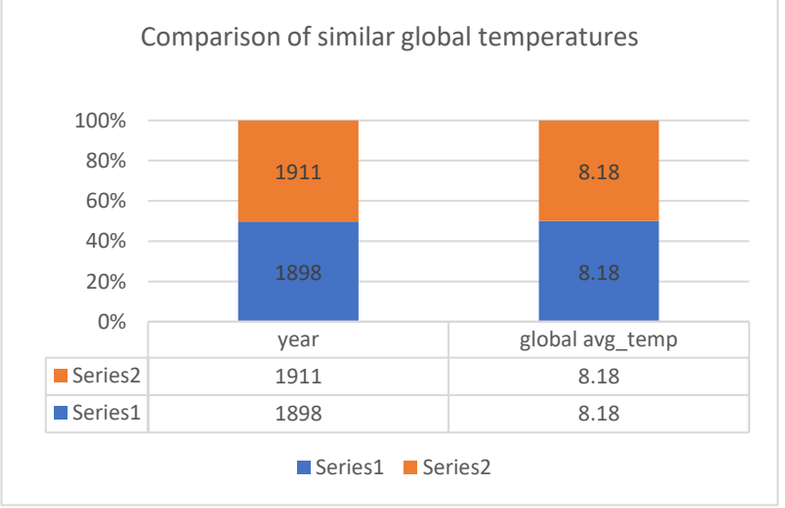


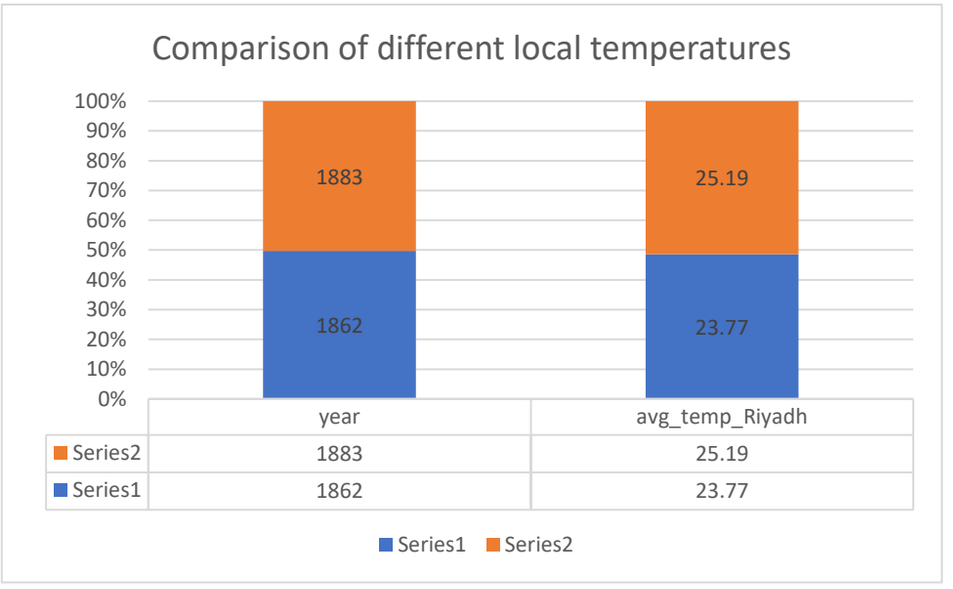


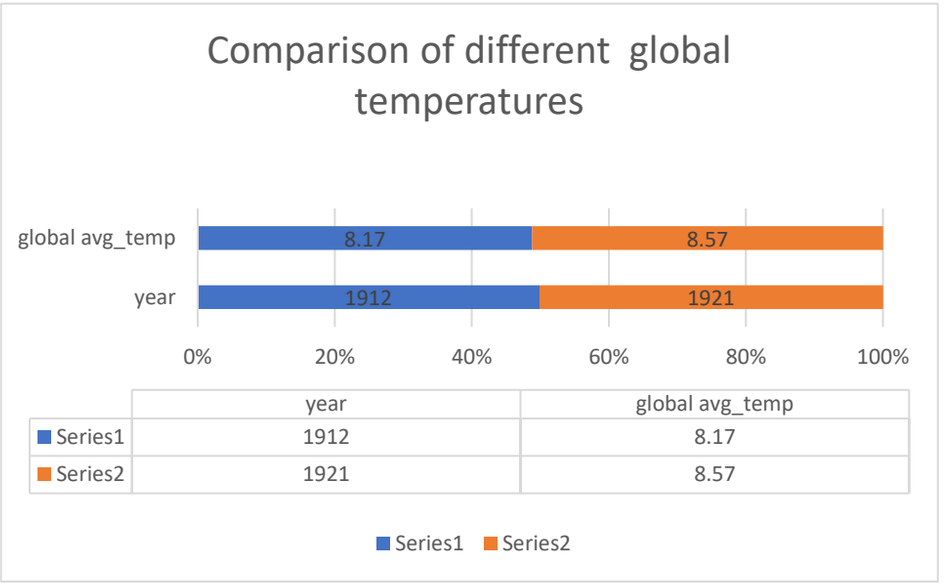









Comparison of different local temperatures
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1883
25.19
1862
23.77
year
avg_temp_Riyadh
Series2
1883
25.19
Series1
1862
23.77
Series1
Series2


Comparison of different global temperatures
global avg_temp
8.17
8.57
year
1912
1921
0%
20%
40%
60%
80%
100%
year
global avg_temp
Series1
1912
8.17
Series2
1921
8.57
Series1
Series2

SQL query

I used pivot table to extract Riyadh value .