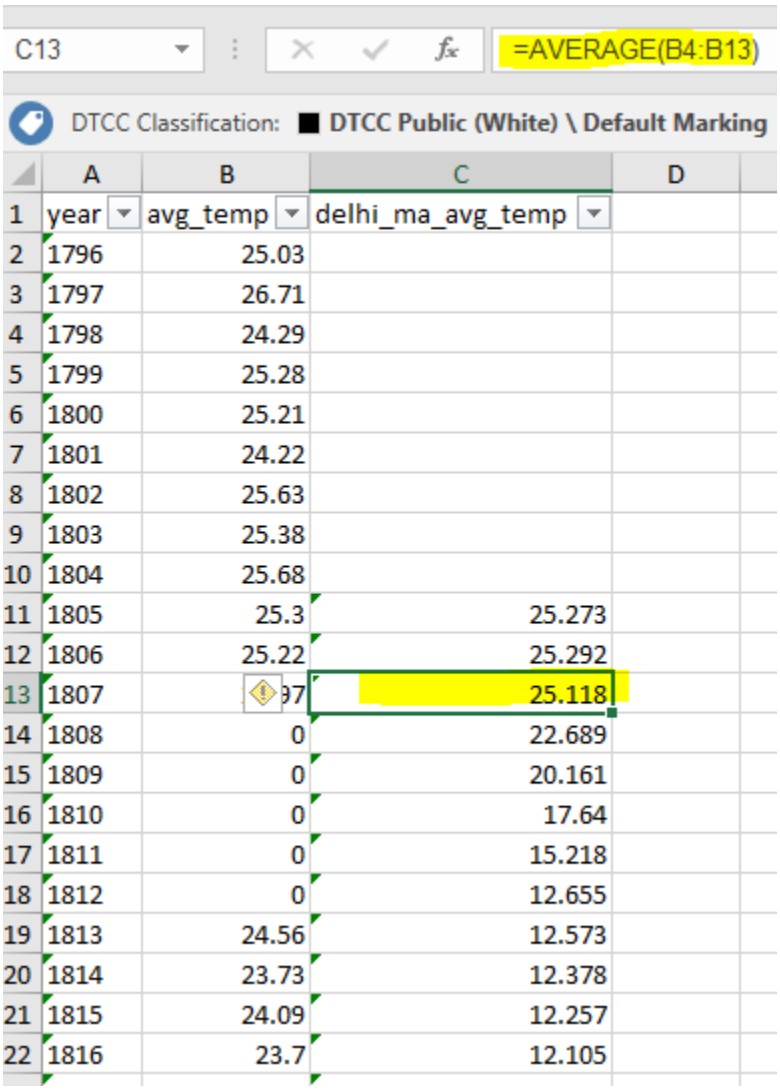
Project: Weather trends

1. **Extract the data :** Downloaded the data from SQL query:

select * from city_list;
select * from city_data;
select * from global_data;

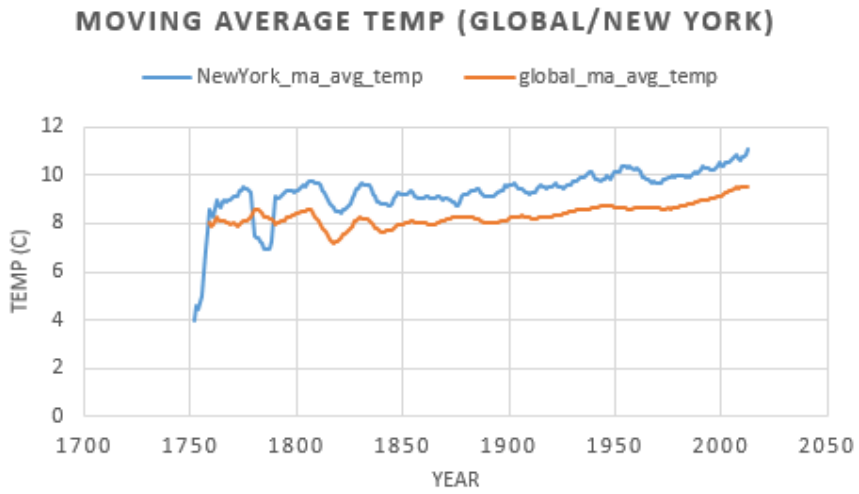
2. **Open up the CSV :** Calculated moving averages in Excel for New York and Delhi city.

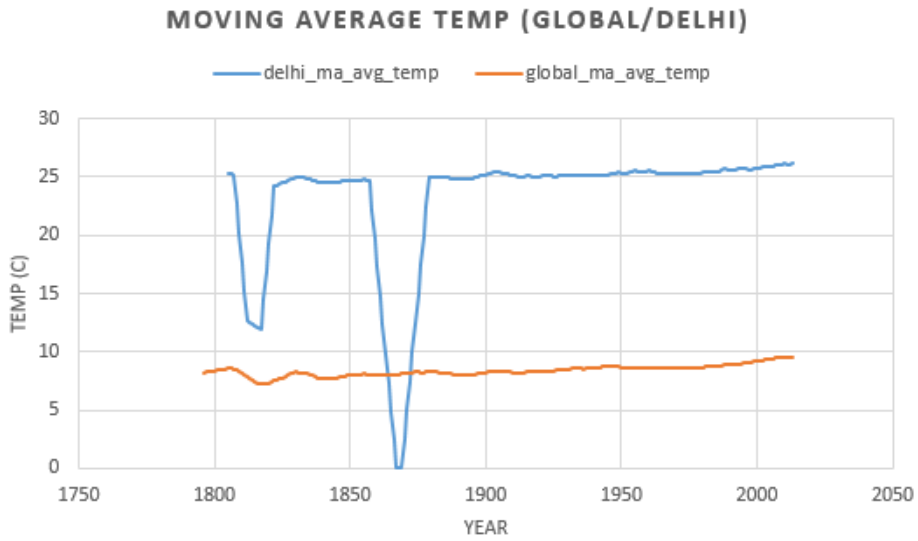
3. **Create a line chart :** Created basic plot in Excel and used panda,matplotlib libraries for Python. I have taken 10 years of moving average for my plots. Some entry is empty for Delhi so I have mentioned '0'.
Used average function "=AVERAGE()" of 10 years for the cell and then format the same for all the cell.



	A	B	C	D
1	year	avg_temp	delhi_ma_avg_temp	
2	1796	25.03		
3	1797	26.71		
4	1798	24.29		
5	1799	25.28		
6	1800	25.21		
7	1801	24.22		
8	1802	25.63		
9	1803	25.38		
10	1804	25.68		
11	1805	25.3	25.273	
12	1806	25.22	25.292	
13	1807	97	25.118	
14	1808	0	22.689	
15	1809	0	20.161	
16	1810	0	17.64	
17	1811	0	15.218	
18	1812	0	12.655	
19	1813	24.56	12.573	
20	1814	23.73	12.378	
21	1815	24.09	12.257	
22	1816	23.7	12.105	

Line chart with local and global temperature trends



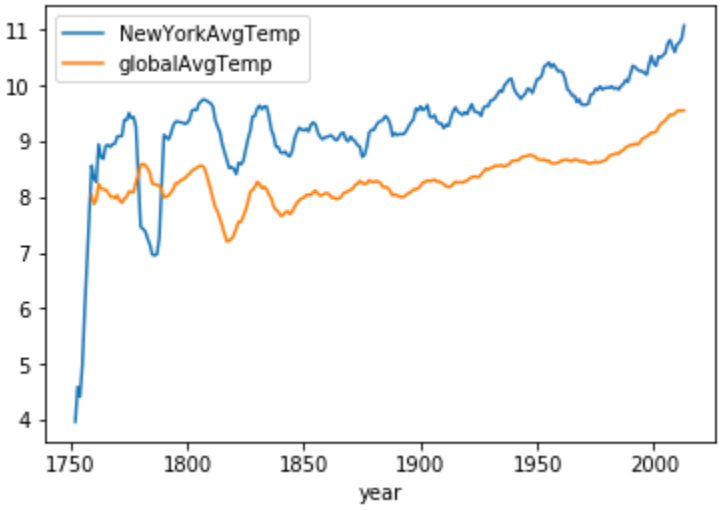


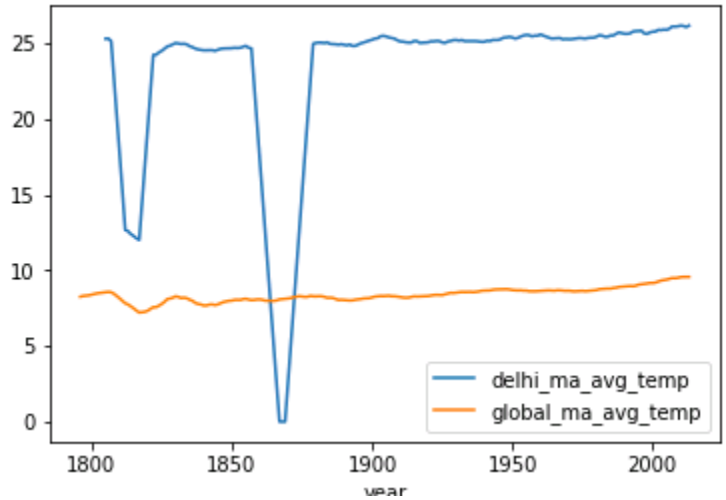
Used below python script to create the plots:

```
import pandas as pd

df = pd.read_csv("delhi.csv",  index_col=0)

import matplotlib.pyplot as plt

print(df.head())

df.plot()
```

plt.show()

Line chart with local and global temperature trends





4. **Observations** :

New York is not have much variance from global temperature.

Obviously Delhi is hotter compared with global temperature.

Both, new York and Delhi has positive slope.

Compared to New York, Delhi is warmer and slope is on increasing side.