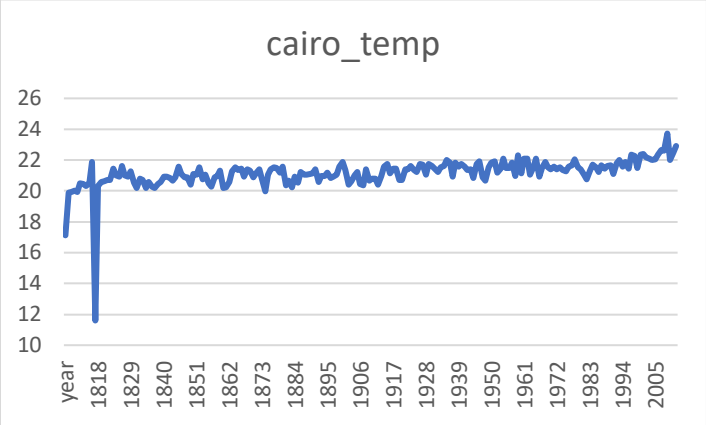
Explore Weather Data

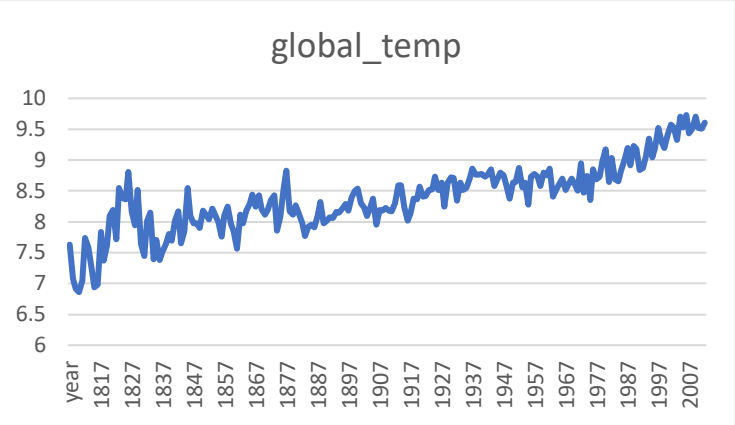
1 - Steps

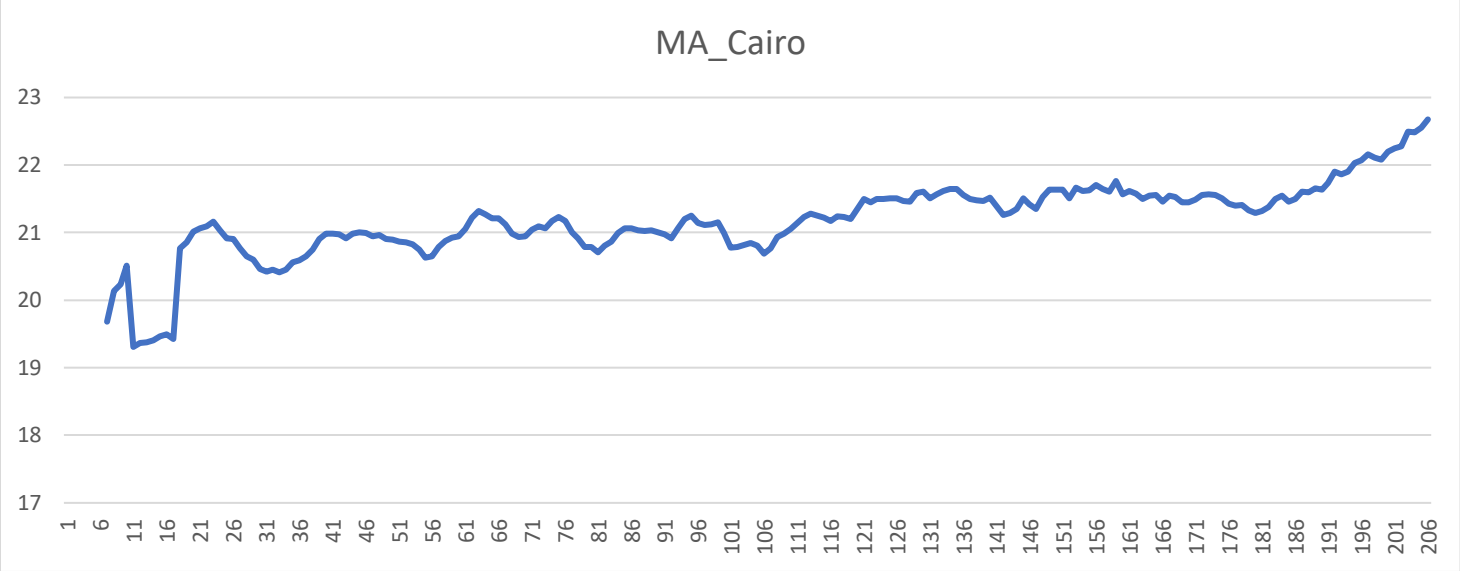
- **Extracting the Data**
  - My city is Cairo so I will be extracting the data for it.
  - Used the following SQL commands to extract Global Data and my City's Data.
    - SELECT * FROM global_data
    - SELECT year, avg_temp FROM city_data WHERE city = 'Cairo'
    - SELECT c.year, c.avg_temp as cairo_temp, g.avg_temp as global_temp FROM city_data JOIN global_data g ON c.year = g.year WHERE city = 'Cairo'
  - Download result as CSV file.

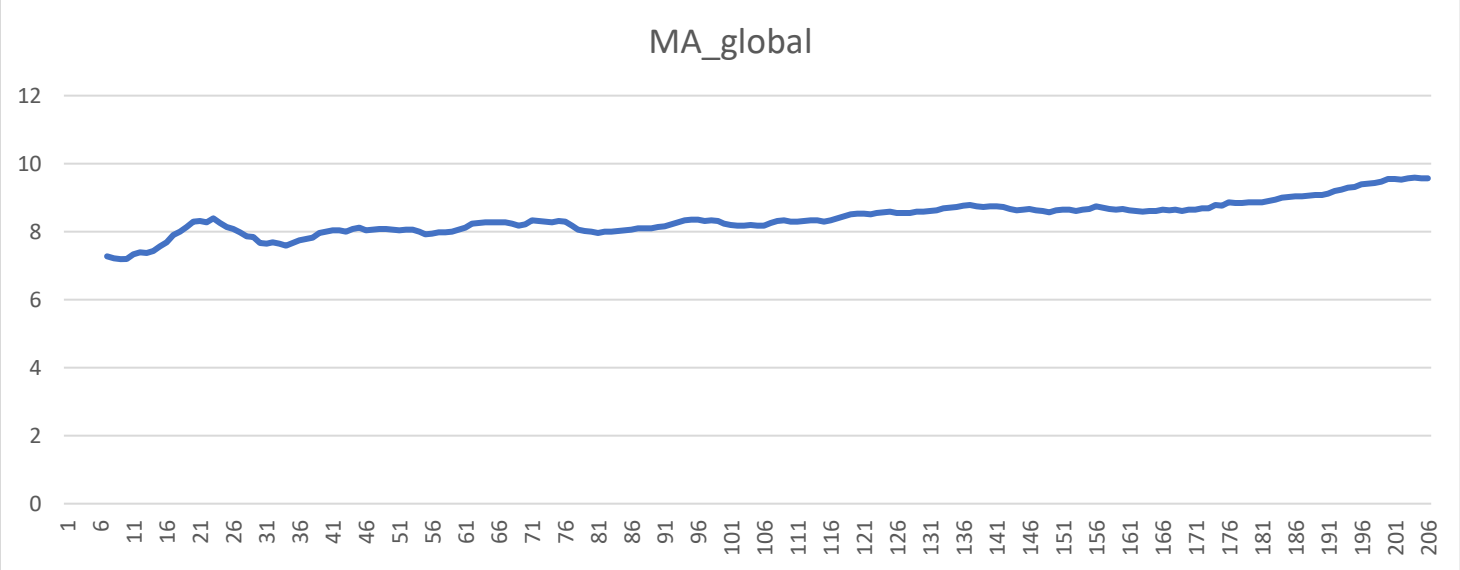
- **Creating the line charts**
  - Open the file using Excel
  - Create the 7-year moving average for both columns cairo_temp and global_temp using AVERAGE function into MA_cairo and MA_global.
  - Create the line charts using Line Plot in Excel for cairo_temp, global_temp, MA_cairo, and MA_global.

2 - Line Charts









3 – Observations

- The minimum average degree for Cairo is 11.6 and the maximum is 23.72 while the minimum average degree globally is 6.86 and the maximum is 9.73 .
- Cairo's average temperature is much higher than the global average temperature.
- Cairo's average temperature undergoes more changes and fluctuations than the global average temperature.
- Both Cairo and global temperature are trending upwards.
- Cairo had a significant drop in average temperate in the year 1818.

year	cairo_temp	global_temp	MA_Cairo	MA_global	
1808	17.11	7.63			min_cairo
1809	19.87	7.08			11.6
1810	19.93	6.92			Max_cairo
1811	20	6.86			23.72
1812	19.93	7.05			
1813	20.51	7.74			min_global
1814	20.43	7.59	19.6828571	7.26714286	6.86
1815	20.3	7.24	20.1385714	7.21142857	Max_global
1816	20.51	6.94	20.23	7.19142857	9.73
1817	21.88	6.98	20.5085714	7.2	
1818	11.6	7.83	19.3085714	7.33857143	
1819	20.31	7.37	19.3628571	7.38428571	
1820	20.58	7.62	19.3728571	7.36714286	
1821	20.63	8.09	19.4014286	7.43857143	
1822	20.72	8.19	19.4614286	7.57428571	
1823	20.71	7.72	19.49	7.68571429	
1824	21.44	8.55	19.4271429	7.91	
1825	21	8.39	20.77	7.99	
1826	20.94	8.36	20.86	8.13142857	
1827	21.63	8.81	21.01	8.30142857	
1828	20.99	8.17	21.0614286	8.31285714	
1829	20.91	7.94	21.0885714	8.27714286	
1830	21.25	8.52	21.1657143	8.39142857	
1831	20.52	7.64	21.0342857	8.26142857	
1832	20.2	7.45	20.92	8.12714286	
1833	20.81	8.01	20.9014286	8.07714286	
1834	20.69	8.15	20.7671429	7.98285714