PROJECT 1 – Exploring Weather Trends
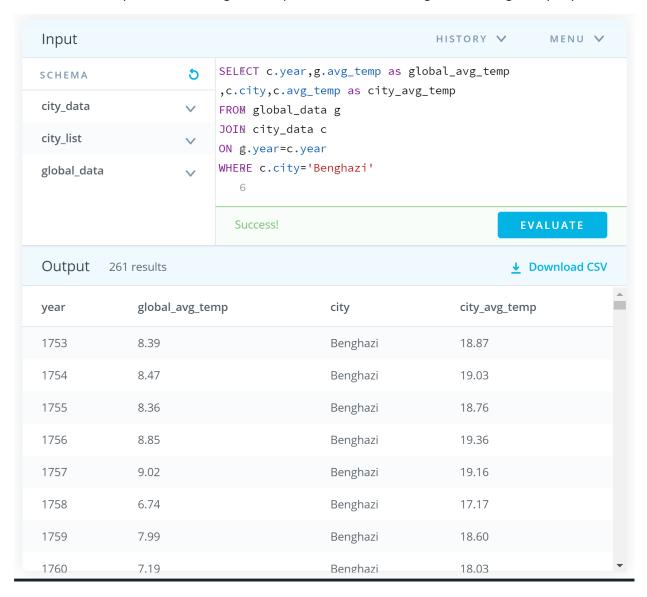
- Sanjay.S

1)AIM:

To compare the trends of weather(avg temperature) of the city BENGHAZI with the whole world.
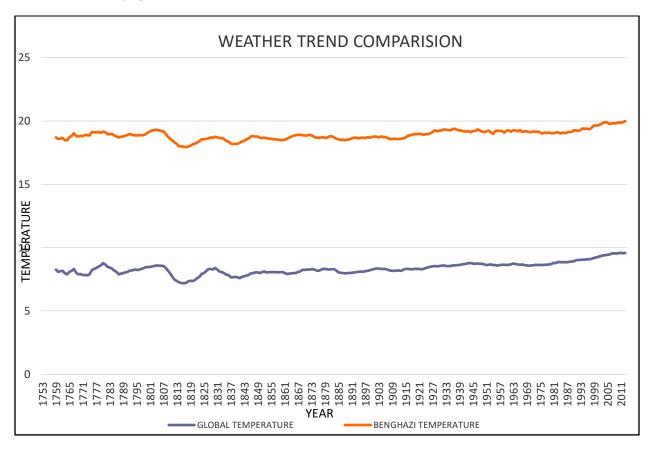
2)Data Collection:

Data was queried from the given temperature data base using the following SQL query:

The data was downloaded as a csv file and was opened in a Excel for Analysis.

3)Data analysis:

- Moving Average is calculated over a period of 7 years over both global data and city data(city here refers to Benghazi)
- Line chart is visualized to compare the trends between global data and city data(city here refers to Benghazi) with Year being the X axis and Average Temperature being the Y axis.

WEATHER TREND COMPARISION

4) Insights:

- Differences:
    1. BENGHAZI is a hotter city when compared with the whole world.
    2. The average temperature of globe ranges from 7-10 while the average temperature of BENGHAZI ranges from 18-20.
- Similarities:

    1. Both Benghazi and the whole world had a dip in average temperature in first 2 decades of 19th century (1800-1820).
    2. Both Benghazi and the whole world's average temperature is rising from the end of 20th century(1980 onwards)

P.S - WORKSPACE IN MS EXCEL :

Snippet of the excel workspace of the project.

year	global_avg_temp	city_avg_temp	city	GLOBAL TEM	BENGHAZI TEMPERATURE
1753	8.39	18.87	Benghazi		
1754	8.47	19.03	Benghazi		
1755	8.36	18.76	Benghazi		
1756	8.85	19.36	Benghazi		
1757	9.02	19.16	Benghazi		
1758	6.74	17.17	Benghazi		
1759	7.99	18.6	Benghazi	8.26	18.70714286
1760	7.19	18.03	Benghazi	8.08857143	18.58714286
1761	8.77	19.14	Benghazi	8.13142857	18.60285714
1762	8.61	19.05	Benghazi	8.16714286	18.64428571
1763	7.5	18.23	Benghazi	7.97428571	18.48285714
1764	8.4	19.09	Benghazi	7.88571429	18.47285714
1765	8.25	19	Benghazi	8.10142857	18.73428571
1766	8.41	19.08	Benghazi	8.16142857	18.80285714
1767	8.22	19.6	Benghazi	8.30857143	19.02714286
1768	6.78	17.63	Benghazi	8.02428571	18.81142857
1769	7.69	18.73	Benghazi	7.89285714	18.76571429
1770	7.69	18.62	Benghazi	7.92	18.82142857
1771	7.85	18.97	Benghazi	7.84142857	18.80428571
1772	8.19	19.74	Benghazi	7.83285714	18.91
1773	8.22	18.89	Benghazi	7.80571429	18.88285714
1774	8.77	19.38	Benghazi	7.88428571	18.85142857
1775	9.18	19.54	Benghazi	8.22714286	19.12428571
1776	8.3	18.65	Benghazi	8.31428571	19.11285714
1777	8.26	18.57	Benghazi	8.39571429	19.10571429
1778	8.54	19.15	Benghazi	8.49428571	19.13142857
1779	8.98	19.19	Benghazi	8.60714286	19.05285714
1780	9.43	19.61	Benghazi	8.78	19.15571429
1781	8.1	18.98	Benghazi	8.68428571	19.09857143
1782	7.9	18.54	Benghazi	8.50142857	18.95571429
1783	7.68	18.57	Benghazi	8.41285714	18.94428571
1784	7.86	18.74	Benghazi	8.35571429	18.96857143
1785	7.36	18.32	Benghazi	8.18714286	18.85
1786	8.26	18.77	Benghazi	8.08428571	18.79
1787	8.03	18.96	Benghazi	7.88428571	18.69714286
1788	8.45	19.29	Benghazi	7.93428571	18.74142857
1789	8.33	18.8	Benghazi	7.99571429	18.77857143
1790	7.98	18.94	Benghazi	8.03857143	18.83142857
1791	8.23	19.2	Benghazi	8.09142857	18.89714286
1792	8.09	18.82	Benghazi	8.19571429	18.96857143
1793	8.23	18.39	Benghazi	8.19142857	18.91428571
1794	8.53	18.8	Benghazi	8.26285714	18.89142857
1795	8.35	18.97	Benghazi	8.24857143	18.84571429
1796	8.27	19.02	Benghazi	8.24	18.77714286
1797	8.51	19.03	Benghazi	8.31571429	18.89
1798	8.67	19.16	Benghazi	8.37857143	18.88428571
1799	8.51	19.29	Benghazi	8.43857143	18.95142857

Note : Moving Average is calculated over a period of 7 years

WEATHER TREND COMPARISION

(Chart: GLOBAL TEMPERATURE and BENGHAZI TEMPERATURE plotted against YEAR, 1753–2011. Y-axis: TEMPERATURE.)

INSIGHTS :

DIFFERENCE
1) BENGHAZI is a hotter city when compared with the whole world
2) The average temperature of globe ranges from 7-10 while the average temperature of BENGHAZI ranges from 18-20

SIMILARITY
3) Both Benghazi and the whole world had a dip in average temperature in first 2 decades of 19th century(1800-1820)
4) Both Benghazi and the whole world's average temperature is rising from the end of 20 th century(1980 onwards)
Hence we can conclude that globe is getting hotter in recent years and so is BENGHAZI but at a higher level.

MOVING AVG