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Project #1 Explore Weather Trends
Denver vs Global

Used:
SQL - Extract data from database
Microsoft Excel - Analyze and create visualization

Step 1 : Extraction from database

1. Check records in database matching the city of 'Denver'

SELECT *

    FROM city_list
    WHERE city= 'Denver'

2. Join other table to pull average global temperature and match through the year to start my comparison for the linear graph.

SELECT year, city, country, avg_temp as average, (**SELECT** avg_temp as global **FROM** global_data **AS** g **WHERE** c.year=g.year)
    FROM city_data as c
    WHERE city='Denver' and year **IN** (**SELECT** year **FROM** global_data)
    ORDER BY year

3. Downloaded CVS file and saved it as excel file.

Step 2 :EXCEL steps taken:

Added a column named 10 Year-AVG and did a moving average every 10 years.

year	city	country	average	10 Year-AVG	global
1785	Denver	United States		8.275	7.36
1832	Denver	United State	8.35	8.54090909	7.45
1845	Denver	United State	8.71	8.00545455	7.85
1862	Denver	United State	8.59	8.55272727	7.56
1875	Denver	United State	7.68	8.44272727	7.86
1892	Denver	United State	8	8.39545455	8.07
1905	Denver	United State	8.13	8.48909091	8.23
1922	Denver	United State	8.75	8.36545455	8.41
1935	Denver	United State	9.36	9.02545455	8.52
1952	Denver	United State	9.15	8.84	8.64
1965	Denver	United State	8.73	8.94454545	8.53
1982	Denver	United State	8.67	9.03909091	8.64
1995	Denver	United State	9.21	9.18909091	9.35
2012	Denver	United State	10.92	9.70272727	9.51

Step 3: Linear Graph
1. Filtered data to include the 10 Year moving average and global for the selected years.
2. Added a linear graph for visualization and edit the xaxis to include the years and the yaxis to include the temperature range and modified bounds.
3. Added another line for the global temperature for comparison throughout the years.
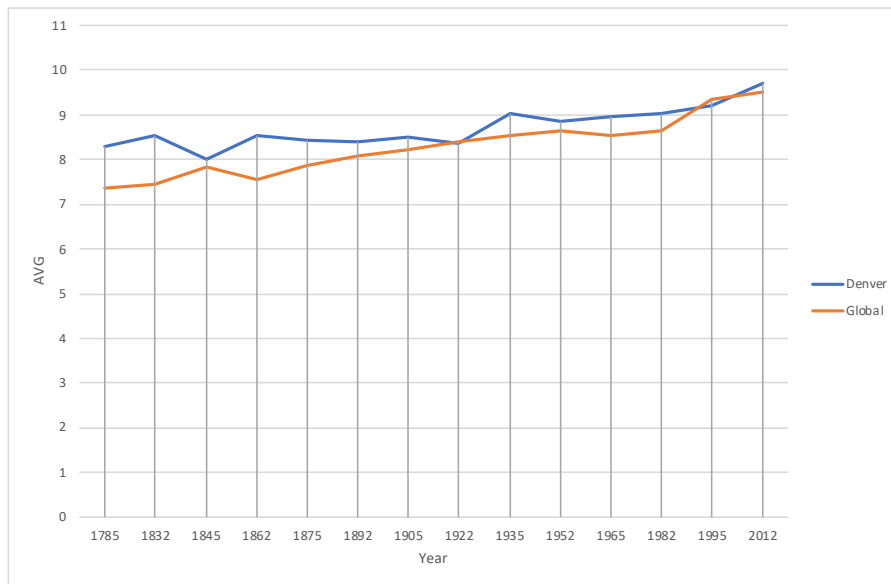
Step 4: Observations
1. Temperature average has been on an upward trend in Denver and globally
2. The Denver temprature average has been above global average except for year 1922 and 1955 where it fell below average.
3. Denver is quite close in temperature changes with the global chart, they almost were the same in 1922.
4. According to the graph and data, Denver temperatures are hotter than global temperatures.