Instructions

<u>Extract the data</u>

1. Zambia: **select** * **from** city_data **where** country = 'Zambia' **and** year >= 1875
2. Budapest: **select** * **from** city_data **where** city = 'Budapest' **and** year >= 1750
3. New York: **select** * **from** city_data **where** city = 'New York' **and** year >= 1750
4. Global: **select** * **from** global_data

Zambia temperature data was retrieved from 1875 because before that it contains empty data points. Budapest and New York temperate data do not contain empty data points after 1750. Global temperate data contains no empty data points, therefore no filtering is necessary.

Outline

<u>What tools did you use for each step?</u>

1. SQL: Extracting and filtering data
2. Excel: Calculating moving average and visualizing data

<u>How did you calculate the moving average?</u>

The simple moving average was calculated using a 15-year rolling window over the data. Excel function example: =**AVERAGE**(B2:B16)

<u>What were your key considerations when deciding how to visualize the trends?</u>

I would like to contain developed, developing, and least developed countries to see the difference between them.

Line chart
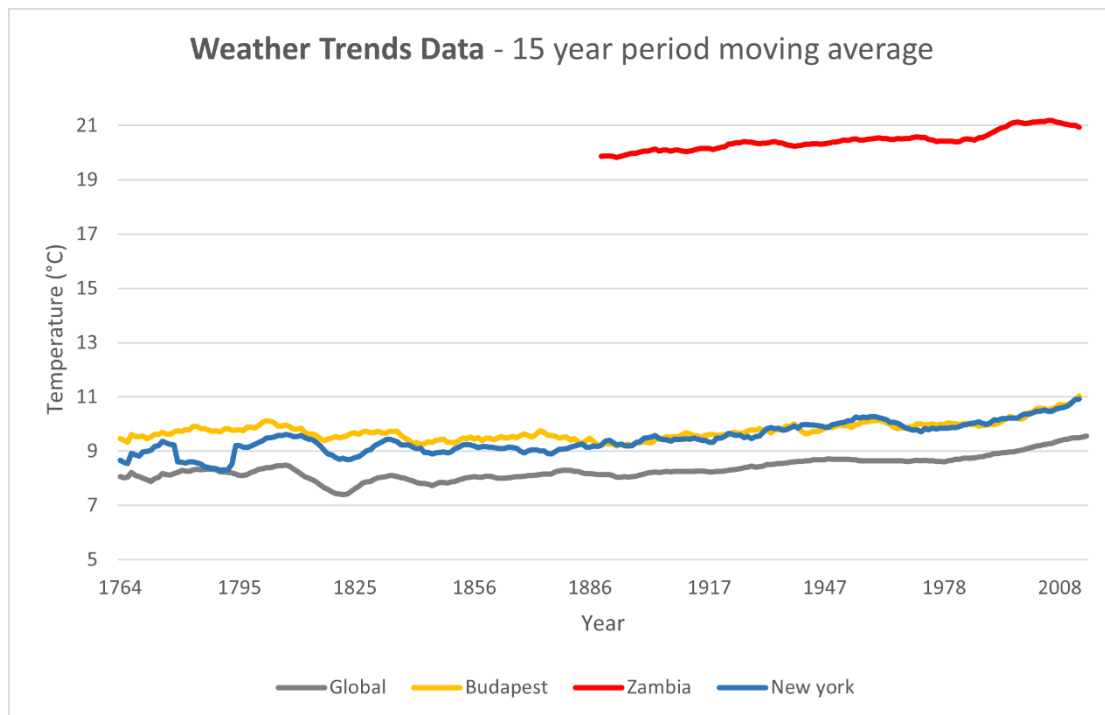
1. figure - Weather trends based on the country's development level. The red color indicates the least developed. The blue color indicates the most developed country.

City	Temperature difference (°C)
Global	1.513
Budapest	1.585
Zambia	1.142
New York	2.266

1. table - Difference between the first and the last recorded temperature data

Observations

1. Every city's average temperature is increased more than 1 °C.
2. Our city (Budapest) temperature increased more than the global temperature.
3. New york (developed country) temperature increased twice as much as Zambia (undeveloped country) temperature.
4. Temperature oscillates every year, however it is increasing steadily over time.