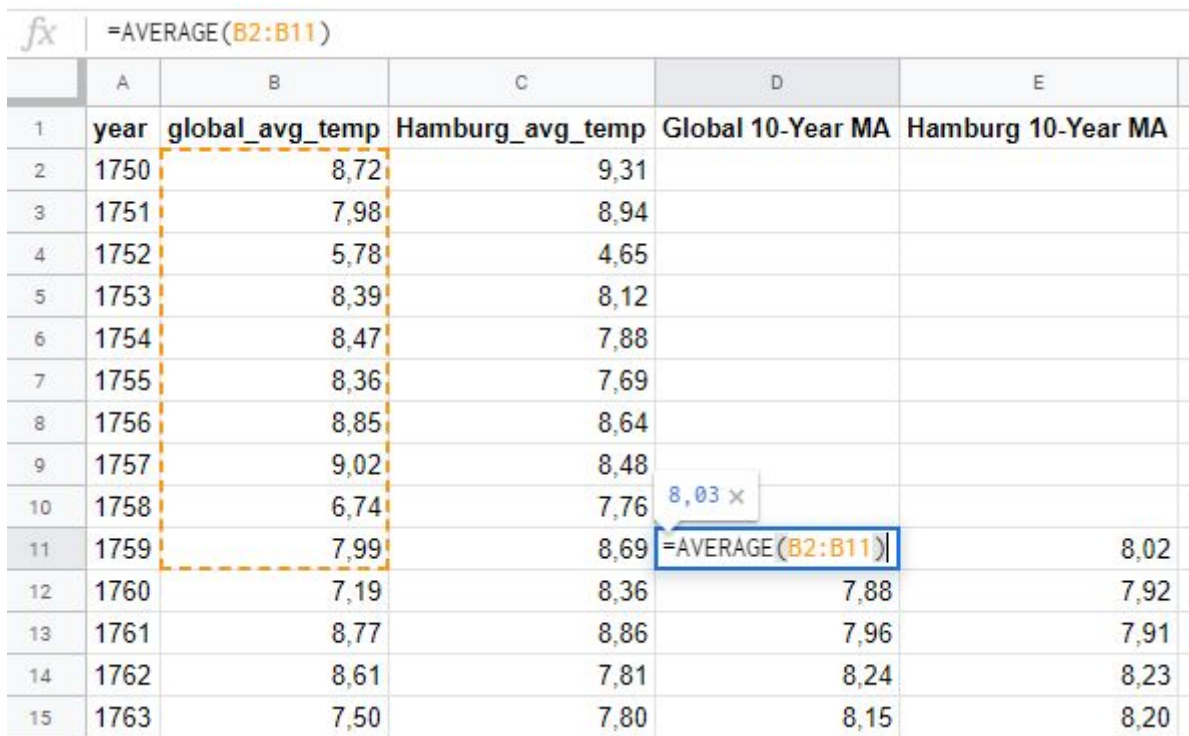


Udacity Project #1: Explore Weather Trends

Steps taken to prepare the data to be visualized in the chart

- What tools did you use for each step?
 - SQL and Google Spreadsheets.
- How did you calculate the moving average?
 - I decided to use a 10-year moving average (e.g. `=AVERAGE(B2:B11)`).



	A	B	C	D	E
1	year	global_avg_temp	Hamburg_avg_temp	Global 10-Year MA	Hamburg 10-Year MA
2	1750	8,72	9,31		
3	1751	7,98	8,94		
4	1752	5,78	4,65		
5	1753	8,39	8,12		
6	1754	8,47	7,88		
7	1755	8,36	7,69		
8	1756	8,85	8,64		
9	1757	9,02	8,48		
10	1758	6,74	7,76		
11	1759	7,99	8,69	<code>=AVERAGE(B2:B11)</code>	8,02
12	1760	7,19	8,36	7,88	7,92
13	1761	8,77	8,86	7,96	7,91
14	1762	8,61	7,81	8,24	8,23
15	1763	7,50	7,80	8,15	8,20

- What were your key considerations when deciding how to visualize the trends?
 - Simplicity and comfort zone.

SQL

1. Check the table 'city_list' to get the closest city for the comparison:

```
SELECT *  
FROM city_list t  
WHERE t.country = 'Germany'
```

2. Select the data for the city of choice:

```
SELECT *  
FROM city_data t  
WHERE t.city = 'Hamburg'
```

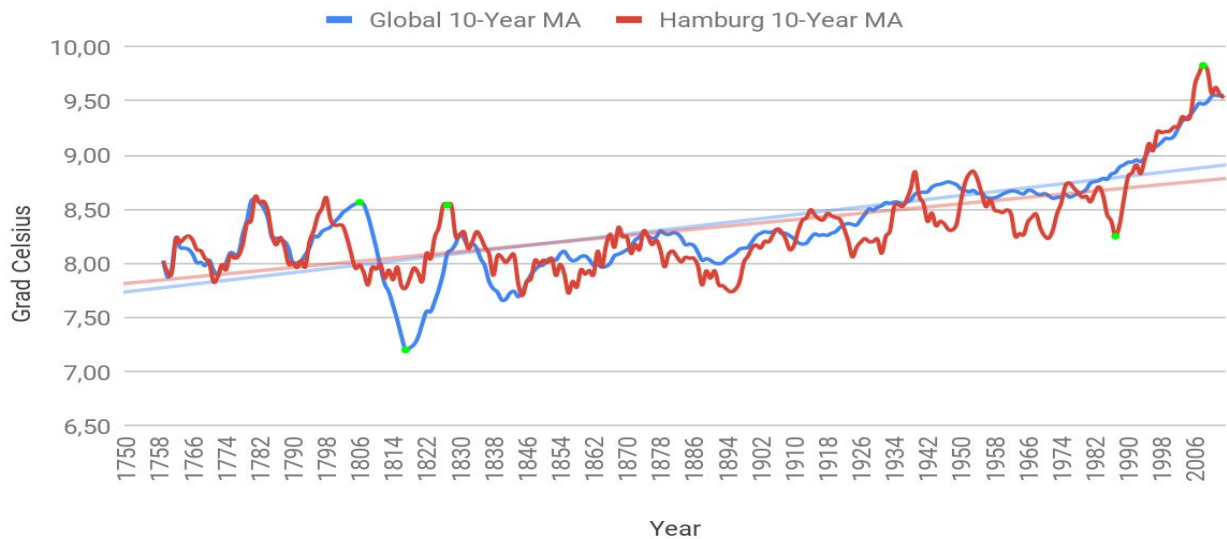
3. Select the complete data of the table 'global_data':

```
SELECT *  
FROM global_data
```

Analysis & Visualisation

1. Google [Spreadsheet](#)

10 Year Moving Average Temperatur 1759-2013



Observations

- Is your city hotter or cooler on average compared to the global average? Has the difference been consistent over time?

The global average temperature from 1750 - 2013 is 8,36 °C. The average of the city Hamburg during the same time period is 8,33 °C. There are some spikes in both chart lines of opposite directions. Overall, there is no consistency over time.

- How do the changes in your city's temperatures over time compare to the changes in the global average?

The changes of my city's temperature, over time, is more fluctuant than the global average. But the average temperature of both, the global and my city's, trend to getting hotter. The global trend is higher than my city's trend.

- What does the overall trend look like? Is the world getting hotter or cooler? Has the trend been consistent over the last few hundred years?

There are many ups and downs. But starting from 1840, you can see an increasing trend of the global average temperature. The 10 year moving average between 1759 and 2013 is 1,53 °C for the global average and 1,51 °C for the city's average.

Final conclusion

The data clearly outlines the trend of the world's temperature is going up.