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SQL queries used to get the data:

SELECT * FROM city_list WHERE city_list.country = 'Germany' → nearest city is Hamburg

```
SELECT * FROM city_data WHERE city_data.city = 'Hamburg'
```

```
SELECT * FROM global_data
```

After i collected the data, i copied the global data to Hamburg's data and calculated moving averages for both of them in new columns:

Zwischenablage		Schriftart		Ausrichtung			
C26				7.95			
	A	B	C	D	E	F	G
1	year	avg_temp_H	7day_ma_H	avg_temp_g	7day_ma_g		
2	1750	9.31		8.72			
3	1751	8.94		7.98			
4	1752	4.65		5.78			
5	1753	8.12		8.39			
6	1754	7.88		8.47			
7	1755	7.69		8.36			
8	1756	8.64	7.89	8.85	8.08		
9	1757	8.48	7.77	9.02	8.12		
10	1758	7.76	7.6	6.74	7.94		
11	1759	8.69	8.18	7.99	8.26		
12	1760	8.36	8.21	7.19	8.09		
13	1761	8.86	8.35	8.77	8.13		
14	1762	7.81	8.37	8.61	8.17		
15	1763	7.8	8.25	7.5	7.97		
16	1764	8.25	8.22	8.4	7.89		
17	1765	7.91	8.24	8.25	8.1		
18	1766	8.27	8.18	8.41	8.16		
19	1767	7.59	8.07	8.22	8.31		
20	1768	7.64	7.9	6.78	8.02		
21	1769	7.97	7.92	7.69	7.89		
22	1770	7.98	7.94	7.69	7.92		
23	1771	7.1	7.78	7.85	7.84		

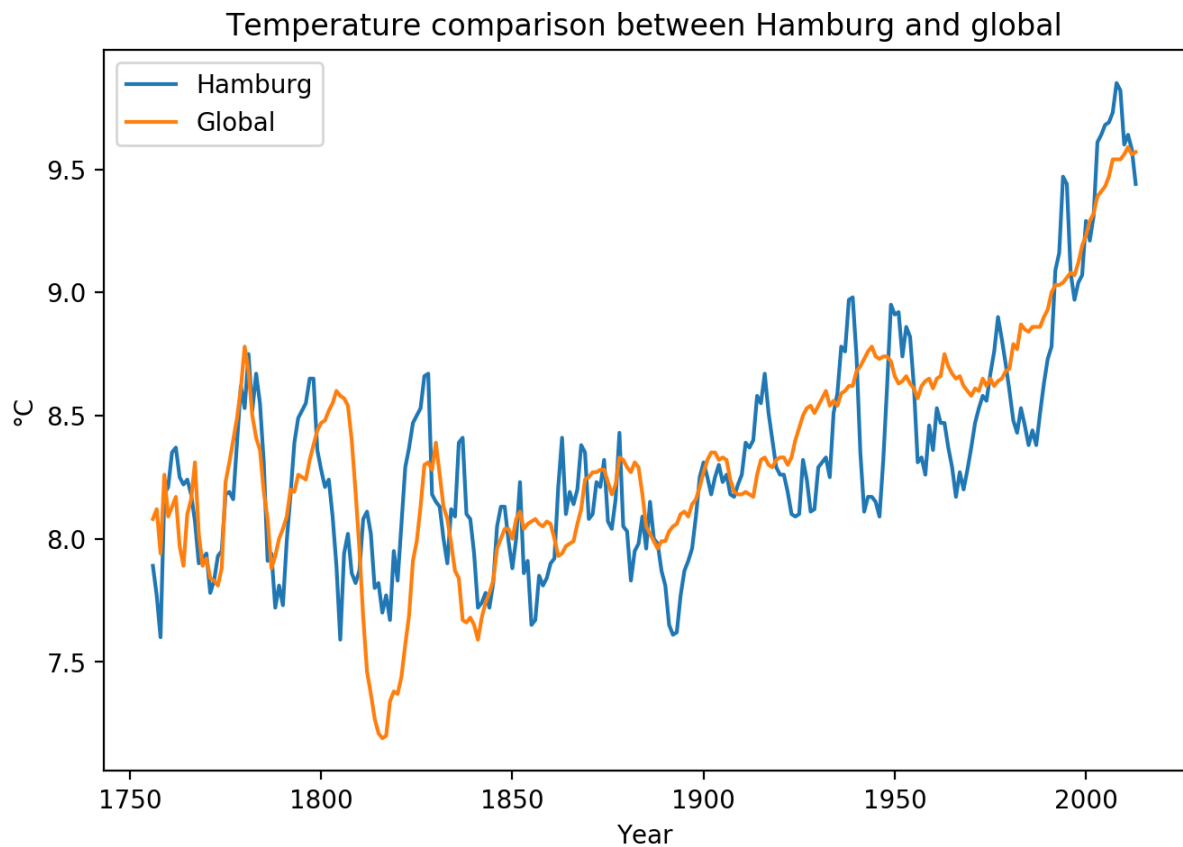
I did so, to use the csv file as a dataframe with Python. After that I converted the columns year, 7day_ma_HH and 7day_ma_GL to numpy (needed arrays) to use them for matplotlib.

```
In [41]: diag = plt.figure()

ax = diag.add_axes([0,0,1,1])

ax.plot(year, ma_HH, label="Hamburg")
ax.plot(year, ma_gl, label="Global")
ax.set_xlabel("Year")
ax.set_ylabel("°C")
ax.set_title("Temperature comparison between Hamburg and global")
ax.legend()
```

That way i could create a line chart with matplotlib.



Observations:

- The difference in temperature in Hamburg seems to be more volatile over the last 250 years than the global average
- But overall the global temperature and Hamburg's temperature are very close to another (no difference bigger than 1°C)
- Temperature is trending up since around 1900, since around 1970 the rise in temperature was even steeper than in the years before
- The global temperature had a steep dip around 1815, temperature in Hamburg did not