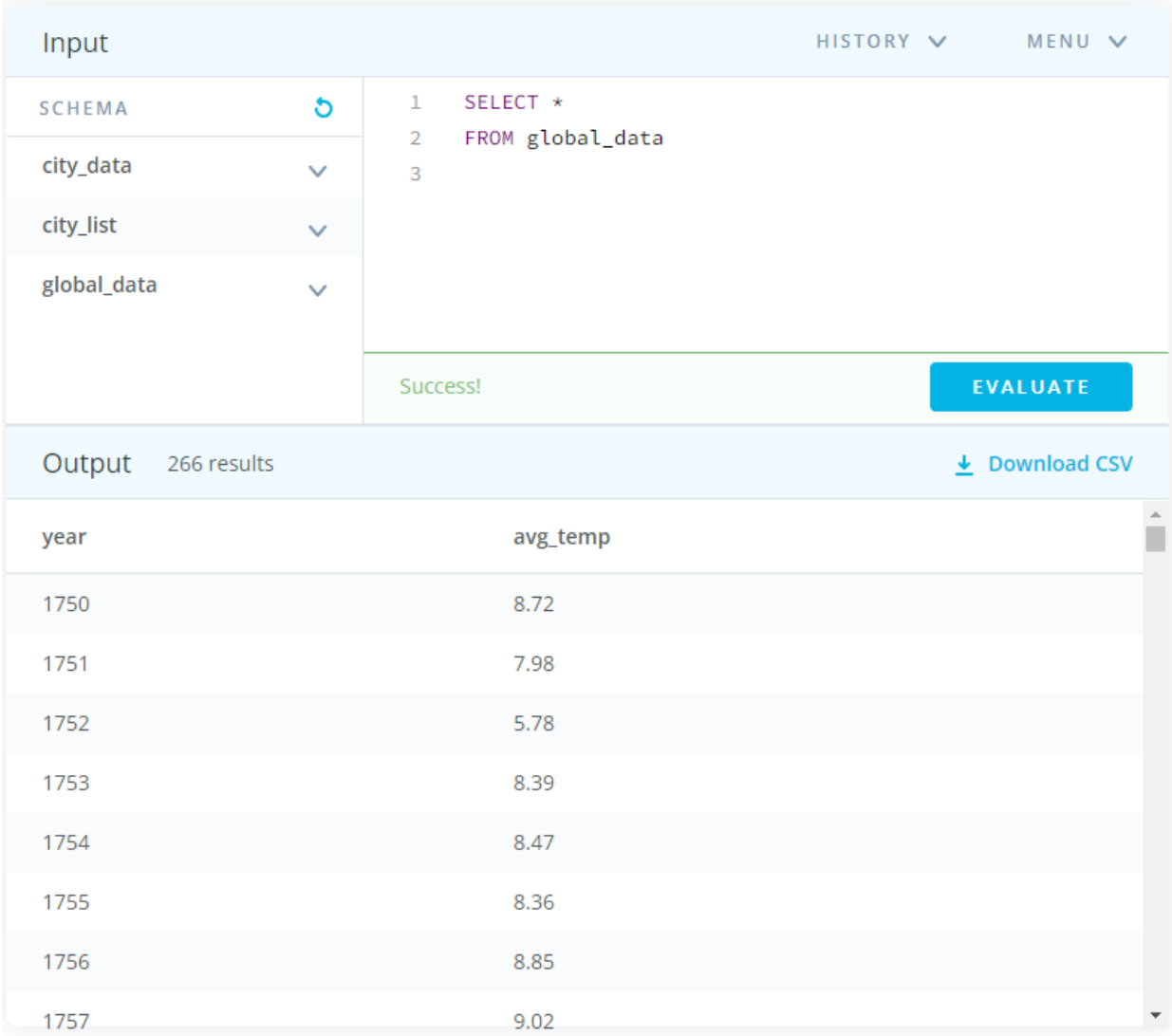
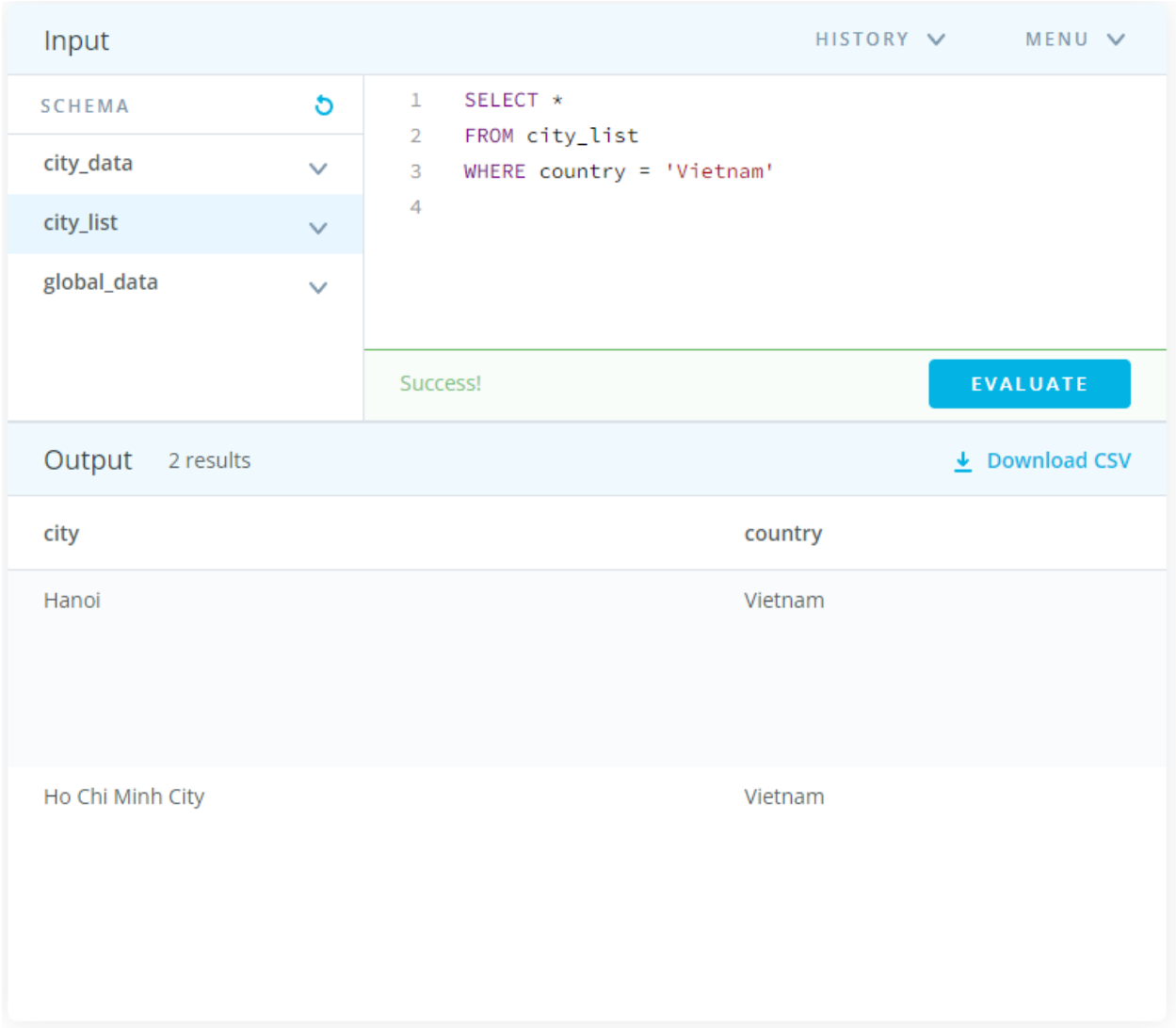
Exploring Weather Trends Project

1. **Outline**
   1.1. **First step: Accessing Data with SQL**



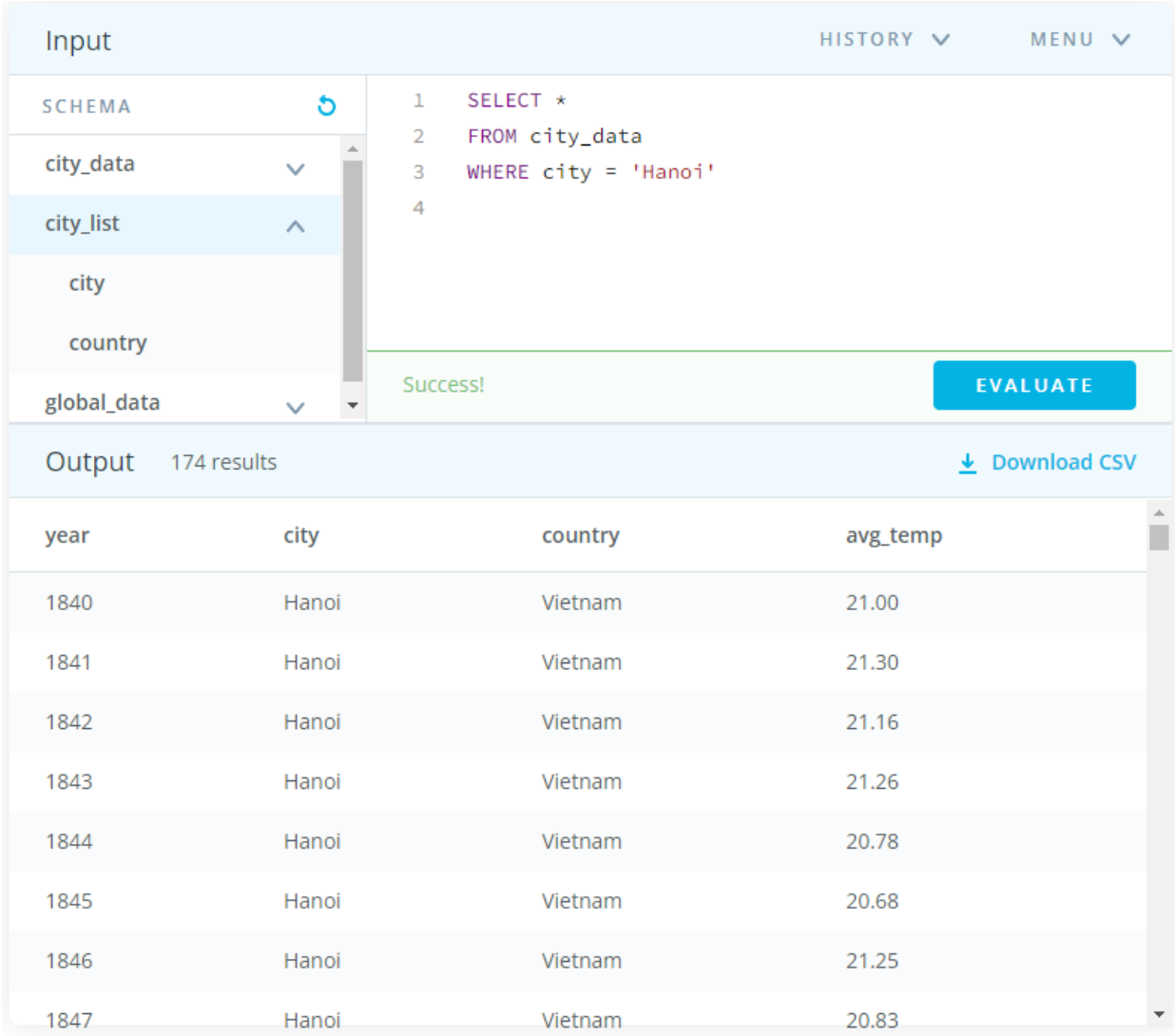
To get global data, download CSV

then



To get big city in my country where I live.

After that

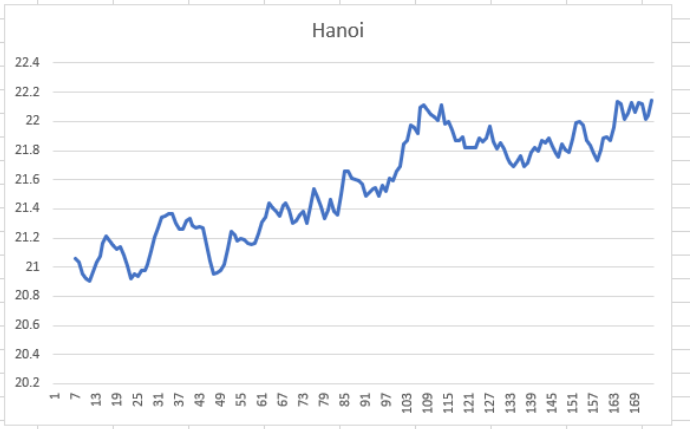


To get data average temperature of my city, download CSV

1.2. Second step: Import data from csv file to sheet in Excel.

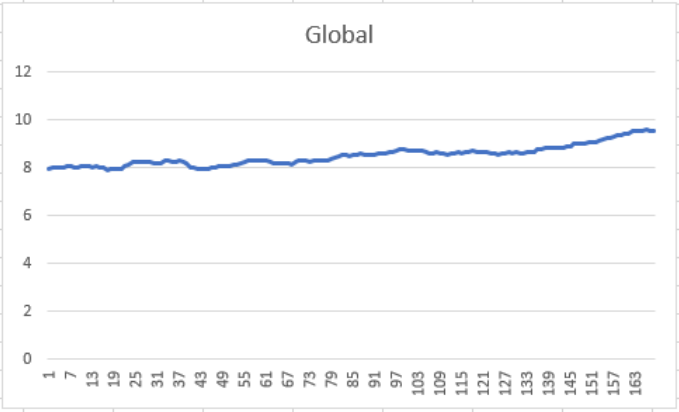
Create a 7-day MA column

year	city	country	avg_temp	7-Day M
1840	Hanoi	Vietnam	21	
1841	Hanoi	Vietnam	21.3	
1842	Hanoi	Vietnam	21.16	
1843	Hanoi	Vietnam	21.26	
1844	Hanoi	Vietnam	20.78	
1845	Hanoi	Vietnam	20.68	
1846	Hanoi	Vietnam	21.25	21.06143
1847	Hanoi	Vietnam	20.83	21.03714
1848	Hanoi	Vietnam	20.73	20.95571
1849	Hanoi	Vietnam	20.94	20.92429
1850	Hanoi	Vietnam	21.11	20.90286
1851	Hanoi	Vietnam	21.26	20.97143
1852	Hanoi	Vietnam	21.12	21.03429
1853	Hanoi	Vietnam	21.51	21.07143
1854	Hanoi	Vietnam	21.45	21.16
1855	Hanoi	Vietnam	21.1	21.21286
1856	Hanoi	Vietnam	20.69	21.17714
1857	Hanoi	Vietnam	20.89	21.14571
1858	Hanoi	Vietnam	21.1	21.12286
1859	Hanoi	Vietnam	21.24	21.14
1860	Hanoi	Vietnam	21.12	21.08429
1861	Hanoi	Vietnam	20.95	21.01286
1862	Hanoi	Vietnam	20.48	20.92429

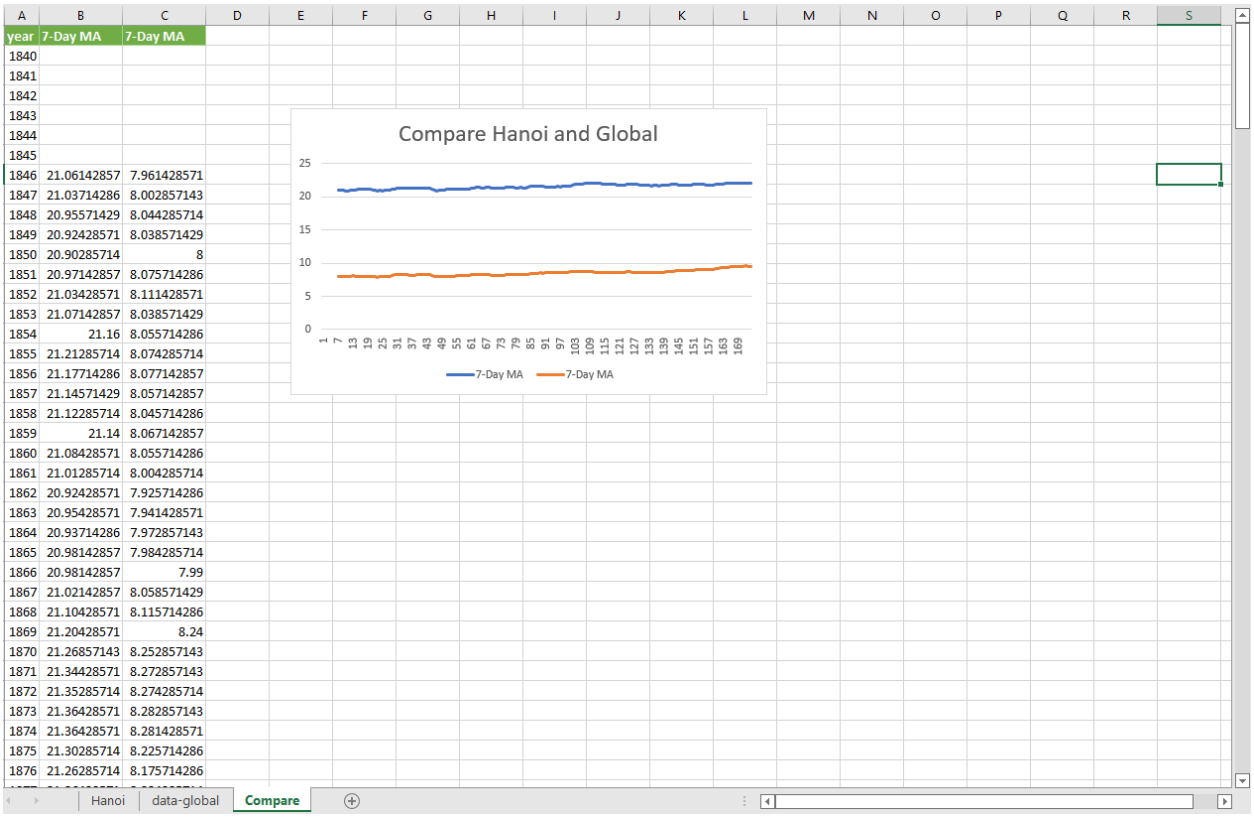


With the global delete data out side of 1840-2013 because data in Hanoi just from 1840-2013.

year	avg_temp	7-Day MA
1840	7.8	
1841	7.69	
1842	8.02	
1843	8.17	
1844	7.65	
1845	7.85	
1846	8.55	7.961428571
1847	8.09	8.002857143
1848	7.98	8.044285714
1849	7.98	8.038571429
1850	7.9	8
1851	8.18	8.075714286
1852	8.1	8.111428571
1853	8.04	8.038571429
1854	8.21	8.055714286
1855	8.11	8.074285714
1856	8	8.077142857
1857	7.76	8.057142857
1858	8.1	8.045714286
1859	8.25	8.067142857
1860	7.96	8.055714286
1861	7.85	8.004285714
1862	7.56	7.925714286
1863	8.11	7.941428571



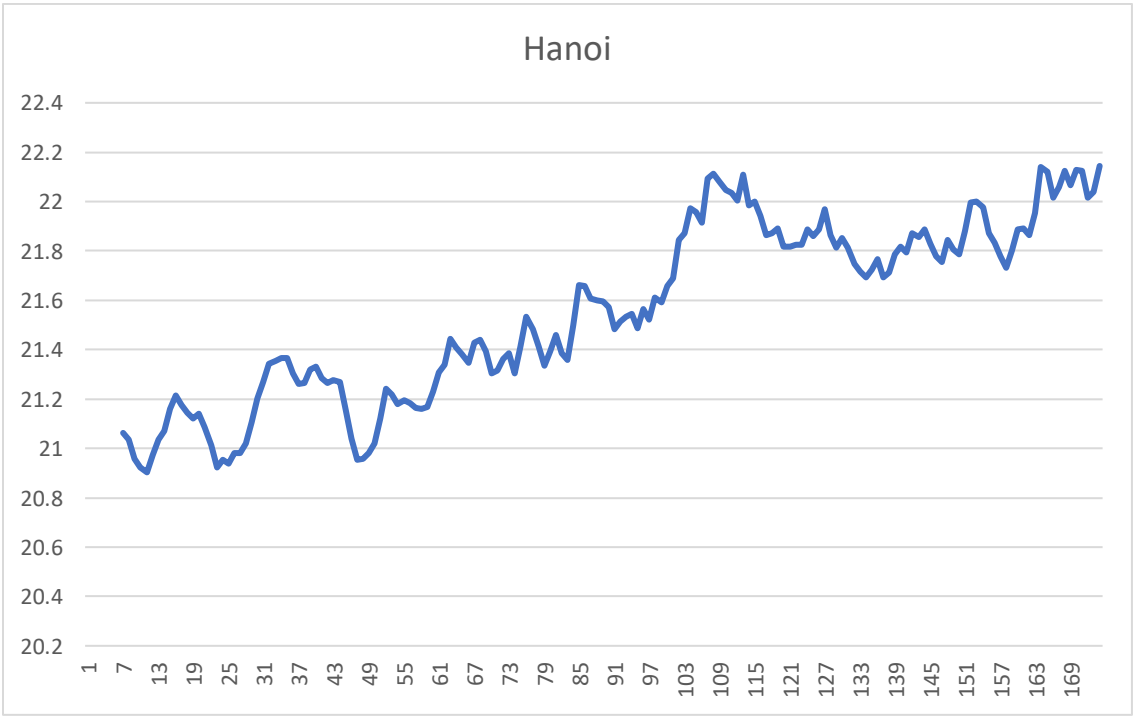
1.3. Third step: Create compare sheet, copy 2 MA col and create line chart compare

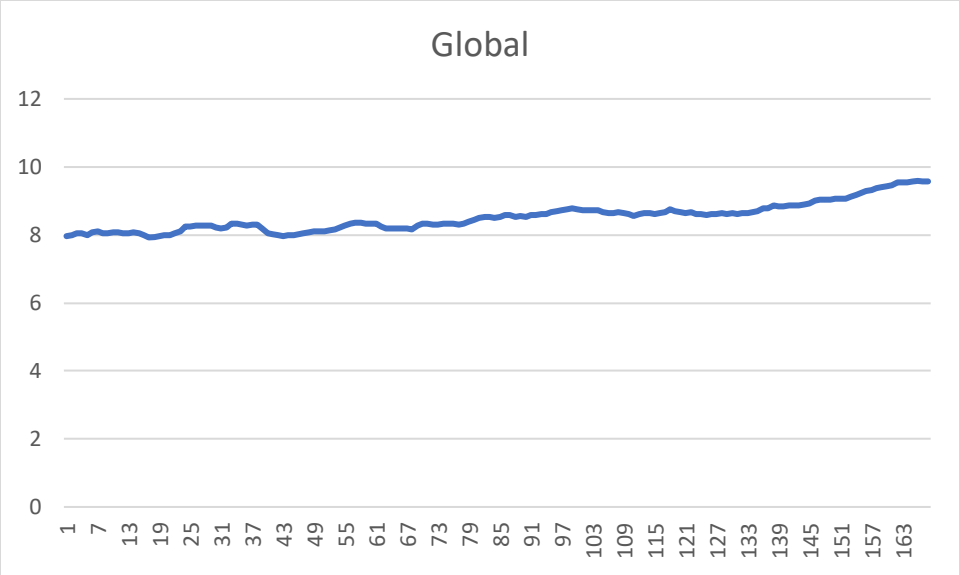


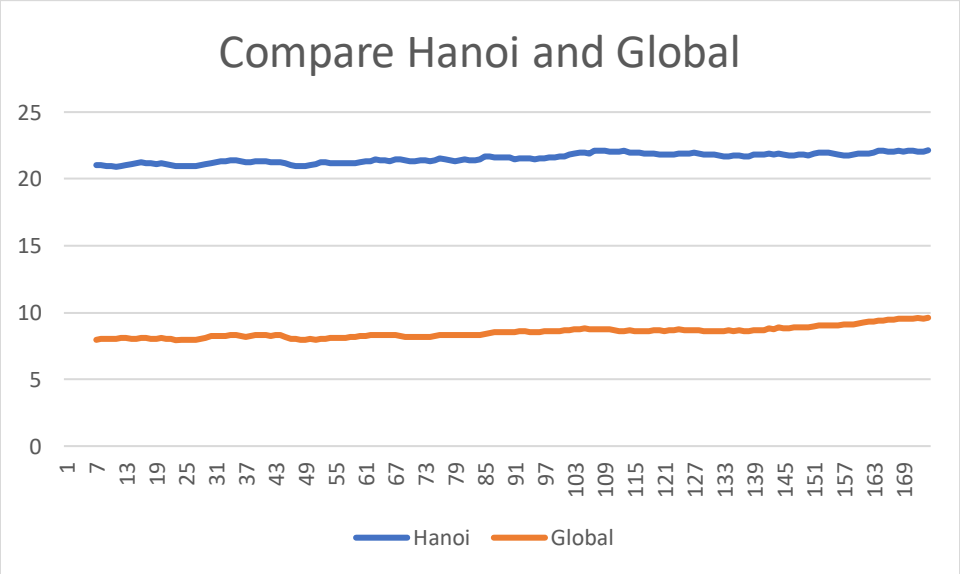
year	7-Day MA	7-Day MA
1840		
1841		
1842		
1843		
1844		
1845		
1846	21.06142857	7.961428571
1847	21.03714286	8.002857143
1848	20.95571429	8.044285714
1849	20.92428571	8.038571429
1850	20.90285714	8
1851	20.97142857	8.075714286
1852	21.03428571	8.111428571
1853	21.07142857	8.038571429
1854	21.16	8.055714286
1855	21.21285714	8.074285714
1856	21.17714286	8.077142857
1857	21.14571429	8.057142857
1858	21.12285714	8.045714286
1859	21.14	8.067142857
1860	21.08428571	8.055714286
1861	21.01285714	8.004285714
1862	20.92428571	7.925714286
1863	20.95428571	7.941428571
1864	20.93714286	7.972857143
1865	20.98142857	7.984285714
1866	20.98142857	7.99
1867	21.02142857	8.058571429
1868	21.10428571	8.115714286
1869	21.20428571	8.24
1870	21.26857143	8.252857143
1871	21.34428571	8.272857143
1872	21.35285714	8.274285714
1873	21.36428571	8.282857143
1874	21.36428571	8.281428571
1875	21.30285714	8.225714286
1876	21.26285714	8.175714286

Hanoi | data-global | Compare

2. The result







3. Observations:

- Hanoi's average temperature was much higher than the global between 1840 and 2013.
- Hanoi's average temperature is usually 2 times higher than the world's average temperature
- The trend line shows that the average temperature of both Hanoi and the global is increasing.
- The average temperature fluctuation range of Hanoi is from 21 to 21 degrees Celsius.
- The average temperature range of the world is between 8 and 10 degrees Celsius