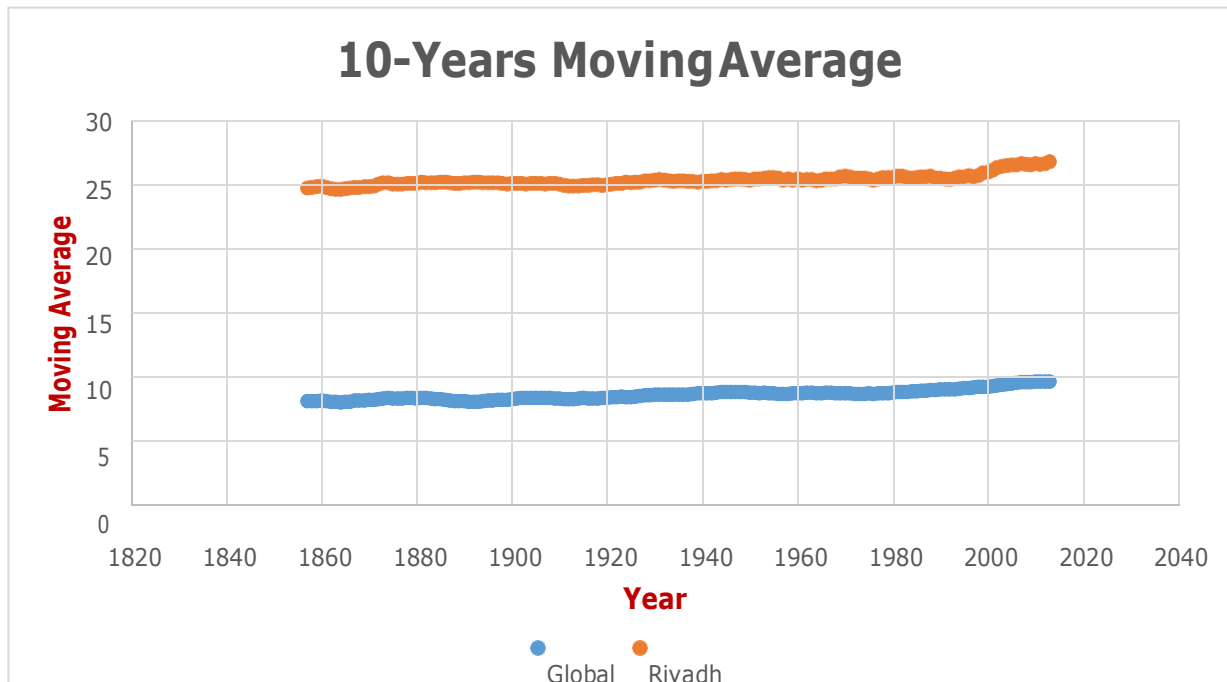


Global			Riyadh		
avg_temp	year	10-years MA	avg_temp	year	10-years MA
7.98	1848		24.56	1848	
7.98	1849		24.8	1849	
7.9	1850		24.34	1850	
8.18	1851		25.03	1851	
8.1	1852		24.85	1852	
8.04	1853		24.93	1853	
8.21	1854		24.72	1854	
8.11	1855		24.92	1855	
8	1856		24.57	1856	
7.76	1857	8.0	24.26	1857	24.7
8.1	1858	8.0	25.01	1858	24.7
8.25	1859	8.1	24.95	1859	24.8
7.96	1860	8.1	24.94	1860	24.8
7.85	1861	8.0	24.13	1861	24.7
7.56	1862	8.0	23.77	1862	24.6
8.11	1863	8.0	24.28	1863	24.6
7.98	1864	8.0	25.03	1864	24.6
8.18	1865	8.0	25.23	1865	24.6
8.29	1866	8.0	24.92	1866	24.7
8.44	1867	8.1	25.22	1867	24.7
8.25	1868	8.1	25	1868	24.7
8.43	1869	8.1	25.3	1869	24.8
8.2	1870	8.1	25.02	1870	24.8
8.12	1871	8.2	24.73	1871	24.9
8.19	1872	8.2	24.87	1872	25.0
8.35	1873	8.2	25.24	1873	25.1
8.43	1874	8.3	24.98	1874	25.1
7.86	1875	8.3	24.43	1875	25.0
8.08	1876	8.2	24.89	1876	25.0
8.54	1877	8.2	25.47	1877	25.0
8.83	1878	8.3	25.51	1878	25.0
8.17	1879	8.3	25.24	1879	25.0
8.12	1880	8.3	24.8	1880	25.0
8.27	1881	8.3	25.63	1881	25.1
8.13	1882	8.3	24.66	1882	25.1
7.98	1883	8.2	25.19	1883	25.1
7.77	1884	8.2	24.8	1884	25.1
7.92	1885	8.2	24.98	1885	25.1
7.95	1886	8.2	24.98	1886	25.1
7.91	1887	8.1	24.81	1887	25.1
8.09	1888	8.0	25.13	1888	25.0
8.32	1889	8.0	25.52	1889	25.1
7.97	1890	8.0	25.07	1890	25.1
8.02	1891	8.0	25.39	1891	25.1

8.07	1892	8.0	25.22	1892	25.1
8.06	1893	8.0	25.19	1893	25.1
8.16	1894	8.0	24.66	1894	25.1
8.15	1895	8.1	24.69	1895	25.1
8.21	1896	8.1	24.88	1896	25.1
8.29	1897	8.1	24.86	1897	25.1
8.18	1898	8.1	24.88	1898	25.0
8.4	1899	8.2	25.12	1899	25.0
8.5	1900	8.2	25.29	1900	25.0
8.54	1901	8.3	25.55	1901	25.0
8.3	1902	8.3	25.25	1902	25.0
8.22	1903	8.3	24.64	1903	25.0
8.09	1904	8.3	25.07	1904	25.0
8.23	1905	8.3	24.87	1905	25.0
8.38	1906	8.3	24.85	1906	25.0
7.95	1907	8.3	24.44	1907	25.0
8.19	1908	8.3	24.95	1908	25.0
8.18	1909	8.3	25.57	1909	25.0
8.22	1910	8.2	24.75	1910	25.0
8.18	1911	8.2	24.24	1911	24.9
8.17	1912	8.2	24.96	1912	24.8
8.3	1913	8.2	24.63	1913	24.8
8.59	1914	8.2	24.94	1914	24.8
8.59	1915	8.3	25.38	1915	24.9
8.23	1916	8.3	24.85	1916	24.9
8.02	1917	8.3	25.03	1917	24.9
8.13	1918	8.3	24.66	1918	24.9
8.38	1919	8.3	25.39	1919	24.9
8.36	1920	8.3	24.94	1920	24.9
8.57	1921	8.3	24.84	1921	25.0
8.41	1922	8.4	25.35	1922	25.0
8.42	1923	8.4	25.1	1923	25.0
8.51	1924	8.4	25.69	1924	25.1
8.53	1925	8.4	25	1925	25.1
8.73	1926	8.4	25.19	1926	25.1
8.52	1927	8.5	25.29	1927	25.1
8.63	1928	8.5	25.39	1928	25.2
8.24	1929	8.5	25.36	1929	25.2
8.63	1930	8.5	25.39	1930	25.3
8.72	1931	8.5	25.38	1931	25.3
8.71	1932	8.6	24.96	1932	25.3
8.34	1933	8.6	24.67	1933	25.2
8.63	1934	8.6	24.97	1934	25.2
8.52	1935	8.6	25.61	1935	25.2
8.55	1936	8.5	25.15	1936	25.2
8.7	1937	8.6	25.08	1937	25.2
8.86	1938	8.6	25.11	1938	25.2

8.76	1939	8.6	25.16	1939	25.1
8.76	1940	8.7	25.51	1940	25.2
8.77	1941	8.7	25.37	1941	25.2
8.73	1942	8.7	25.49	1942	25.2
8.76	1943	8.7	24.96	1943	25.2
8.85	1944	8.7	25.6	1944	25.3
8.58	1945	8.7	25.3	1945	25.3
8.68	1946	8.7	25.49	1946	25.3
8.8	1947	8.8	26	1947	25.4
8.75	1948	8.7	24.85	1948	25.4
8.59	1949	8.7	24.82	1949	25.3
8.37	1950	8.7	24.98	1950	25.3
8.63	1951	8.7	26.1	1951	25.4
8.64	1952	8.7	25.72	1952	25.4
8.87	1953	8.7	25.51	1953	25.4
8.56	1954	8.6	25.8	1954	25.5
8.63	1955	8.7	25.33	1955	25.5
8.28	1956	8.6	25.02	1956	25.4
8.73	1957	8.6	24.69	1957	25.3
8.77	1958	8.6	25.64	1958	25.4
8.73	1959	8.6	24.14	1959	25.3
8.58	1960	8.6	25.67	1960	25.4
8.8	1961	8.7	25.12	1961	25.3
8.75	1962	8.7	26.1	1962	25.3
8.86	1963	8.7	25.54	1963	25.3
8.41	1964	8.7	25.14	1964	25.2
8.53	1965	8.6	25.59	1965	25.3
8.6	1966	8.7	26.16	1966	25.4
8.7	1967	8.7	24.87	1967	25.4
8.52	1968	8.6	25.21	1968	25.4
8.6	1969	8.6	26.05	1969	25.5
8.7	1970	8.6	25.84	1970	25.6
8.6	1971	8.6	24.93	1971	25.5
8.5	1972	8.6	24.74	1972	25.4
8.95	1973	8.6	25.6	1973	25.4
8.47	1974	8.6	25.4	1974	25.4
8.74	1975	8.6	25.04	1975	25.4
8.35	1976	8.6	24.97	1976	25.3
8.85	1977	8.6	25.99	1977	25.4
8.69	1978	8.6	25.95	1978	25.5
8.73	1979	8.7	26.2	1979	25.5
8.98	1980	8.7	25.83	1980	25.5
9.17	1981	8.7	25.95	1981	25.6
8.64	1982	8.8	24.62	1982	25.6
9.03	1983	8.8	24.85	1983	25.5
8.69	1984	8.8	25.05	1984	25.4
8.66	1985	8.8	25.3	1985	25.5

8.83	1986	8.8	25.36	1986	25.5
8.99	1987	8.8	26.37	1987	25.5
9.2	1988	8.9	25.99	1988	25.6
8.92	1989	8.9	25.05	1989	25.4
9.23	1990	8.9	25.7	1990	25.4
9.18	1991	8.9	25.43	1991	25.4
8.84	1992	9.0	24.37	1992	25.3
8.87	1993	8.9	25.42	1993	25.4
9.04	1994	9.0	26.08	1994	25.5
9.35	1995	9.0	25.64	1995	25.5
9.04	1996	9.1	26.28	1996	25.6
9.2	1997	9.1	25.49	1997	25.5
9.52	1998	9.1	26.73	1998	25.6
9.29	1999	9.2	26.92	1999	25.8
9.2	2000	9.2	26.55	2000	25.9
9.41	2001	9.2	26.67	2001	26.0
9.57	2002	9.2	26.44	2002	26.2
9.53	2003	9.3	26.62	2003	26.3
9.32	2004	9.3	26.2	2004	26.4
9.7	2005	9.4	26.27	2005	26.4
9.53	2006	9.4	26.24	2006	26.4
9.73	2007	9.5	26.49	2007	26.5
9.43	2008	9.5	26.21	2008	26.5
9.51	2009	9.5	26.71	2009	26.4
9.7	2010	9.5	27.37	2010	26.5
9.52	2011	9.6	26.4	2011	26.5
9.51	2012	9.5	26.83	2012	26.5
9.61	2013	9.6	27.78	2013	26.7



In this project, I analyzed local and global temperature data and compare the temperature trends. To do this; First, I extracted the data from the database by using these **SQL commands**:

**-For Riyadh city (where I live):**

```
SELECT avg_temp, year
```

```
FROM city_data
```

```
WHERE city = 'Riyadh' and year between 1848 and 2013
```

(I choose this condition because the data in Riyadh is missing before 1848.)

**-For Global:**

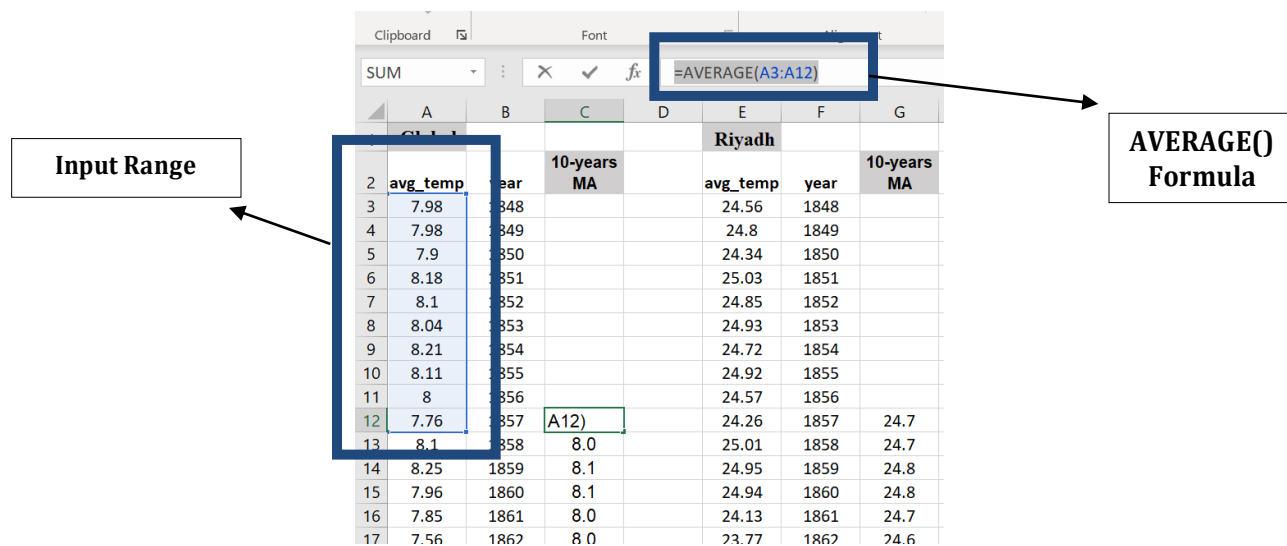
```
SELECT avg_temp, year
```

```
FROM global_data
```

```
WHERE year between 1848 and 2013
```

(I choose this condition to compare correctly because the data in Riyadh is limited between these years.)

Then, I need **Moving Average** (or rolling average) to analyze data points by smoothing out data to make it easier to observe long term trends. I can calculate it by creating a series of average values of different subsets of the full dataset. As long as I used **Excel sheets**, so I can calculate the moving average by selecting the input range (**10 years**) and put it into the **AVERAGE()** formula. (The moving average result is rounded to decimal to make it easier to read it). An example of how I used moving average for this dataset:



So, we observe: (As we see in the chart)

- The Riyadh average is **hotter** than the global average.
- The difference between the Riyadh average and the global average **has been consistent** in lots of years.
- There is some difference in temperature **over time** (increase or/and decrease) either in Riyadh or the world (especially in the last ten years).
- The whole world is **getting hotter** than in the past.