

Exploring Weather Trends - Project

STEPS:

1. Extract the data Using SQL :

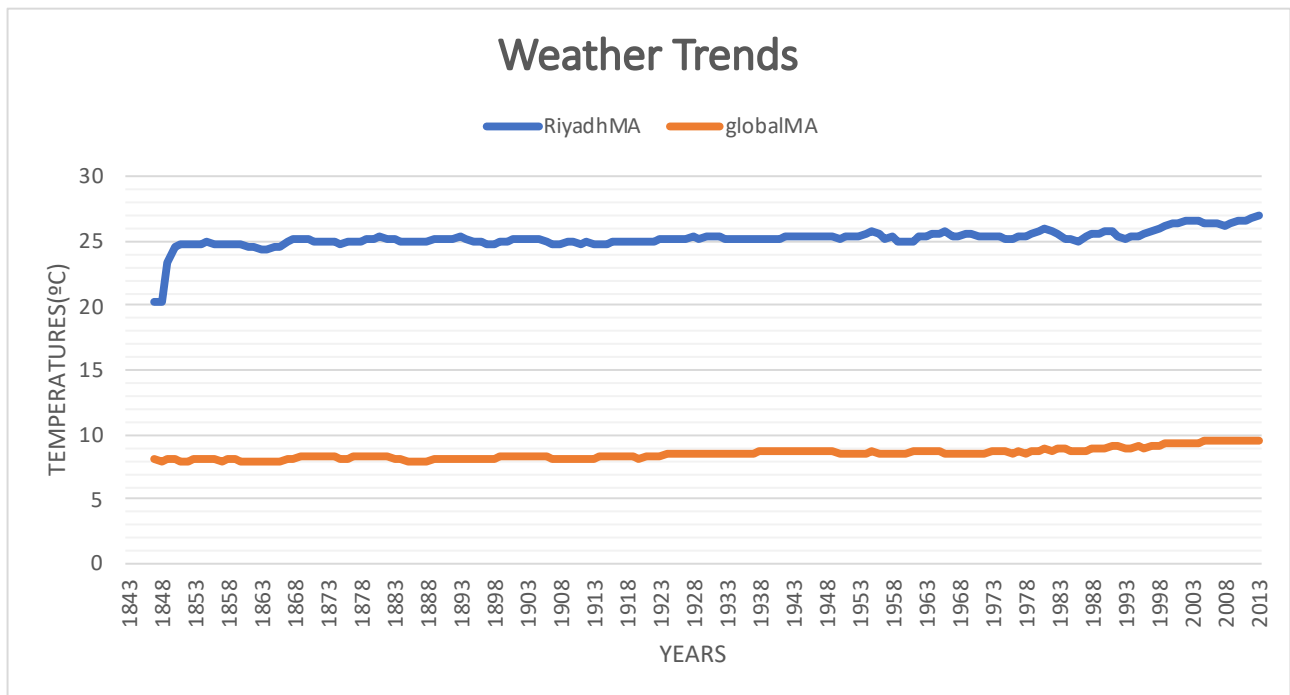
```
SELECT c.year,c.avg_temp AS city_temp, g.avg_temp AS global_temp
FROM city_data c
JOIN global_data g
ON c.year=g.year
WHERE city='Riyadh';
```

2. Open the CSV using Excel :

- Calculate moving average using data analysis tool , with 5 years interval

| A | B | C | D | E |
|-------|-----------|-------------|----------|----------|
| Years | city_temp | global_temp | RiyadhMA | globalMA |
| 1843 | 24.74 | 8.17 | #N/A | #N/A |
| 1844 | 15.45 | 7.65 | #N/A | #N/A |
| 1845 | 20.82 | 7.85 | #N/A | #N/A |
| 1846 | | 8.55 | #N/A | #N/A |
| 1847 | | 8.09 | 20.33667 | 8.062 |
| 1848 | 24.56 | 7.98 | 20.27667 | 8.024 |
| 1849 | 24.8 | 7.98 | 23.39333 | 8.09 |
| 1850 | 24.34 | 7.9 | 24.56667 | 8.1 |
| 1851 | 25.03 | 8.18 | 24.6825 | 8.026 |
| 1852 | 24.85 | 8.1 | 24.716 | 8.028 |
| 1853 | 24.93 | 8.04 | 24.79 | 8.04 |
| 1854 | 24.72 | 8.21 | 24.774 | 8.086 |
| 1855 | 24.92 | 8.11 | 24.89 | 8.128 |
| 1856 | 24.57 | 8 | 24.798 | 8.092 |
| 1857 | 24.26 | 7.76 | 24.68 | 8.024 |
| 1858 | 25.01 | 8.1 | 24.696 | 8.036 |
| 1859 | 24.95 | 8.25 | 24.742 | 8.044 |
| 1860 | 24.94 | 7.96 | 24.746 | 8.014 |
| 1861 | 24.13 | 7.85 | 24.658 | 7.984 |
| 1862 | 23.77 | 7.56 | 24.56 | 7.944 |
| 1863 | 24.28 | 8.11 | 24.414 | 7.946 |
| 1864 | 25.03 | 7.98 | 24.43 | 7.892 |
| 1865 | 25.23 | 8.18 | 24.488 | 7.936 |
| 1866 | 24.92 | 8.29 | 24.646 | 8.024 |
| 1867 | 25.22 | 8.44 | 24.936 | 8.2 |
| 1868 | 25 | 8.25 | 25.08 | 8.228 |
| 1869 | 25.3 | 8.43 | 25.134 | 8.318 |
| 1870 | 25.02 | 8.2 | 25.092 | 8.322 |
| 1871 | 24.73 | 8.12 | 25.054 | 8.288 |
| 1872 | 24.87 | 8.19 | 24.984 | 8.238 |
| 1873 | 25.24 | 8.35 | 25.032 | 8.258 |
| 1874 | 24.98 | 8.43 | 24.968 | 8.258 |

- Create a line chart using Line symbol. tool.



Observations :

- Riyadh city is hotter than the global temperature. And the difference is almost constant over time.
- Riyadh city and World getting hotter over time.
- World and Riyadh city temperatures both have Significantly increased in the last few thirty years. But Riyadh's temperature fluctuated slightly at the beginning.
- World temperature trend smoother than Riyadh temperature trend.