



# PROJECT - 1

ANALYSING GLOBAL TEMPERATURES

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## STEPS TAKEN TO VISUALISE DATA IN A LINE CHART

The following are the steps taken progressively in order to prepare the required Line Chart.

### SQL QUERY

The following sql query was written in order to extract data from the **city\_list**, **city\_data** and **global\_data** databases :-

SELECT \* FROM city\_list

SELECT \* FROM city\_data

SELECT \* FROM global\_data

- With the help of city\_data database I was able to extract average temperature data of city Agra located within India by downloading the data from the output box into a csv file.
- Similarly, with the help of global\_data database, I was able to extract the average global temperature data.

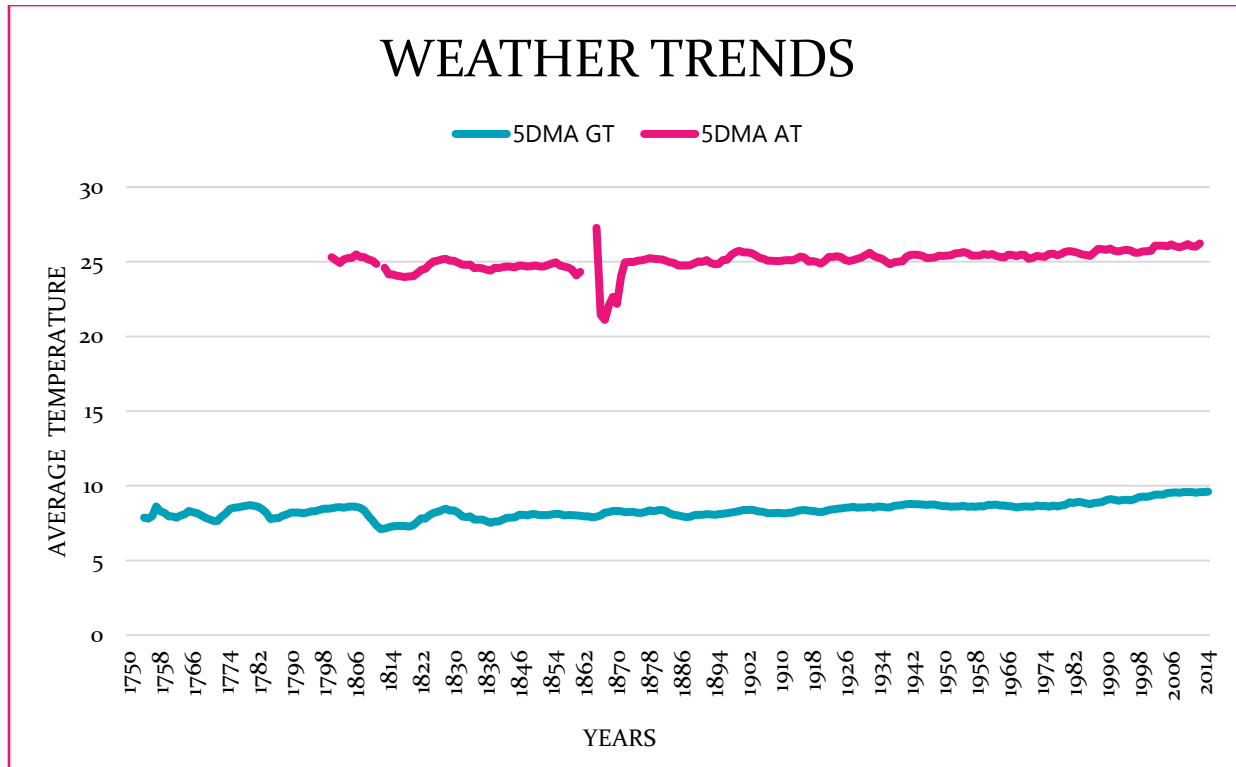
### CALCULATING MOVING AVERAGES

The programme used for calculating moving averages is **Microsoft Excel**.

The following steps were taken in order to calculate the moving averages[MA] :-

1. The **interval** taken for calculating the moving averages is **5 days**, so it is the 5 day moving averages[**5DMA**] that is calculated.
2. The two set of data sets on which the MA'S are calculated are :
  - A. Average Temperature of Agra [**AT**]
  - B. Average Global Temperature [**GT**]
3. For calculating the MA, the formula of calculating average [=AVERAGE( )] was applied at the 5<sup>th</sup> data point and then dragging the cursor from the 1<sup>st</sup> to 5<sup>th</sup> data point, the 5DMA was calculated for the 5<sup>th</sup> data point. Dragging the formula to all the below data points, the 5DMA was calculated for all data points.

# THE LINE CHART



The above Line Chart was made in Microsoft Excel by taking **5DMA AT**, **5DMA GT** and **YEARS** data sets.

## OBSERVATIONS

On the basis of above analysis, the following observations have been made :-

1. The global and local average temperatures have been very consistent individually with local being more consistent than the global.
2. Average Local Temperature(AT) is considerably much higher than the Average Global Temperature(GT), with the average difference in 5DMA to be 16.75°C (approx.)

3. The world as whole is getting hotter(indicating global warming) with the consistent increase in temperature to be more globally than locally (as the local temperature is already very high) .
4. The volatility in the temperatures was more in the earlier years of observations than in the latter years.