Exploring the weather trends project

Steps taken to prepare the data to be visualized:

- **What tools did I use for each step?**

  - For the visualization and calculating the moving average I intended to use Excel and Excel only, due to the easiest of use for calculating the moving average and the quick analysis tool for visualizing also.
  - Used SQL for extracting the data For Mecca and Global dataset, and that Queries was as the following :

1- For extracting The Global data set :

```
select year,avg_temp from global_data
```

2- For extracting Mecca city data I used the following query :

```
Select year,avg_temp
From city_data
Where city_data.city = 'Mecca';
```

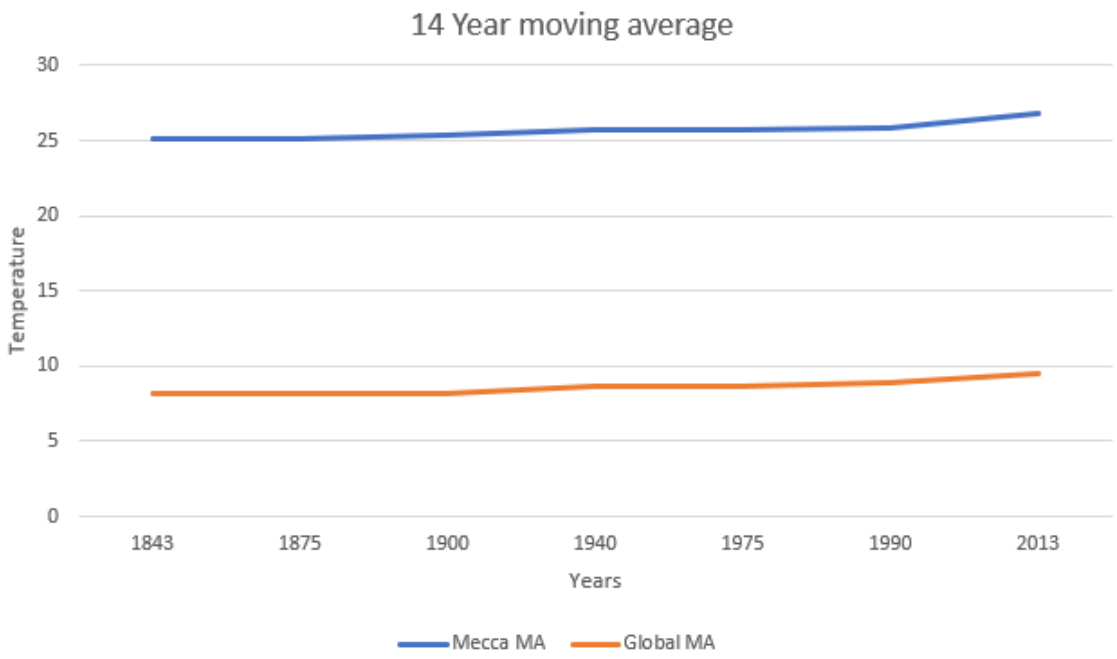
- **How did I calculate the moving average?**

  - **I took the average for the last 14 years of each year showed in the Years axis, example, the point at year 1875 is actually the number resulted from calculating the last 14 years, including the year 1875.**

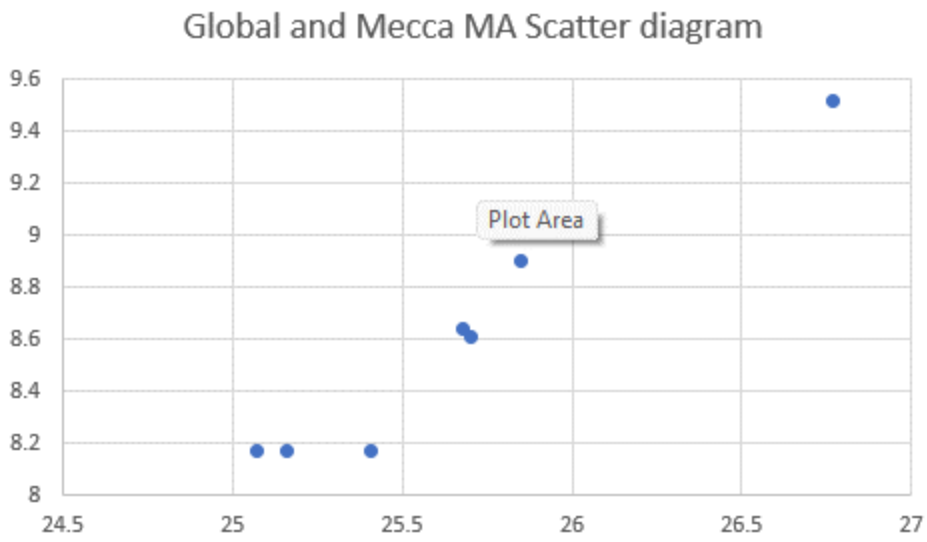
- **What were my key considerations when deciding how to visualize the trends?**

  - **Using Excel, due to ease of use and less time-consuming.**
  - **If data needed cleaning.**
  - **How to deal with the null cells in the csv such as the ones in the Mecca database rows.**

Line chart with local and global temperature trends including observations:



- As the graph shows, we see a noticeable increasing in Temperature through the years in both.
- The line chart illustrates the huge differences in the temperature, as we can see it is about 18 degrees.



- **The Scatter above illustrates the relationship between the Global MA and Mecca MA, which tells us the way temperature had gaps in time between each 14 Year moving average.**
- **The thing is when having an increment in temperature for one of each, is actually related in a way to the other.**

We can conclude from that that when Global MA temperature increase through time, we also see that increase in Mecca MA temperature to.

It may show reasons why global warming is a problem for all of us (people), on what ever area we are living in.