PROJECT SUBMISSION

Outline:

The tools used in the analysis of the given data are SQL and Excel.

City Level Data

From the city_data, the temperature data for Lagos (which is the biggest city close to me) was exported. The exported data was within the range of 1873 and 2013. This range was preferred as a result of the presence of NaN/missing values in the city_data. Consequently, this range helps eliminate Nan values. The query used to obtain the local temperate data used is given below:

```
SELECT *

FROM city_data

WHERE city IN ('Lagos') AND year >1872
```

Global Level Data

From the global_data, the exported data was also within the range 1873 and 2013 to be commensurate with the exported city_data. The query used to obtain the global level temperature data used is given below:

```
SELECT *

FROM global_data

WHERE year >1872 AND year <2014
```

Moving Average

The two temperature data were merged in Excel and the moving average of the two temperatures was computed. Two other columns were created named Lagos temperature moving average (Lag Temp MV) and Global temperature moving average (Global Temp MV). A 20-year moving average was computed for both temperature data.

The plot of the year against local and global temperature moving average obtained is shown below:

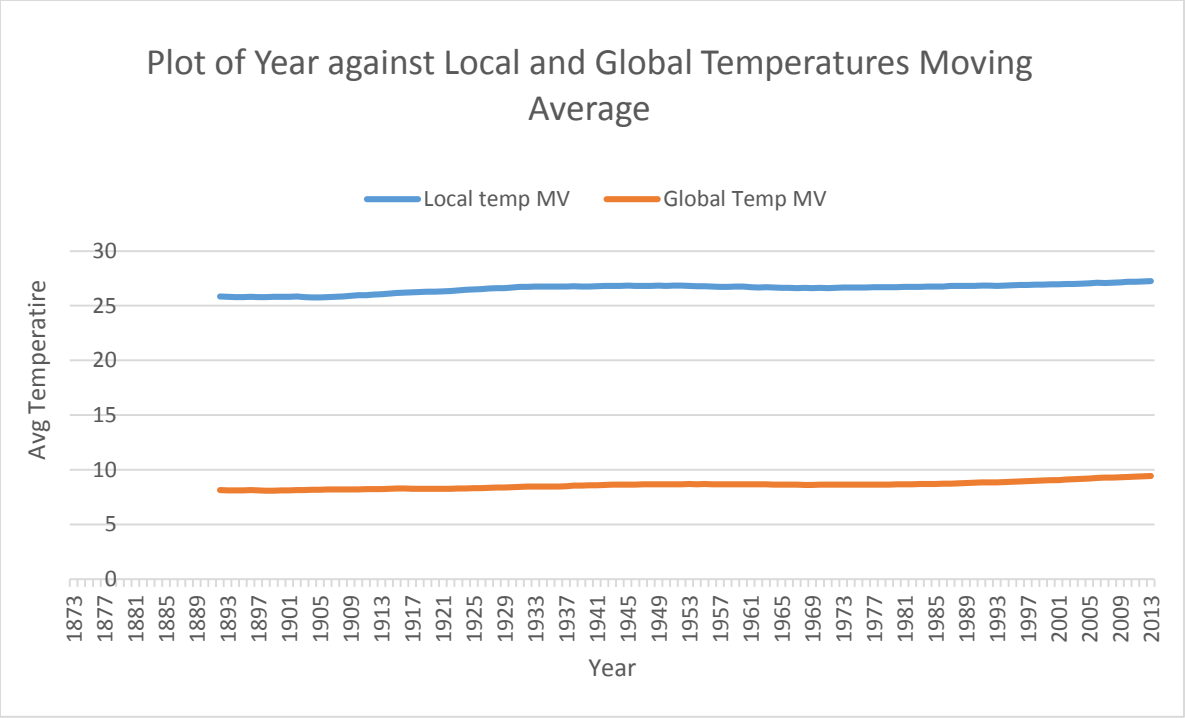

Figure 1: Plot of year against local and global temperature moving average

Observations:

1. It is clear from the graph that Lagos is hotter on average compared to the global average. This was observed to be consistent throughout the 140 years considered (i.e. 1873-2013)

2. The difference in average temperature between the two plots is enormous. This implies that Lagos city is more susceptible to global warming in the coming years compared to other cities in this discourse.

3. The change in Lagos' temperature as seen on the graph is similar to that of the global temperature over the period considered

4. As observed on the graph, both the local and global average temperature plots have a positive slope, which implies the world is getting hotter.