Saikiran Ambati

In this Project, we will analyze the global and local temperature trends and compare the trends of a location to overall global trends.

I. Data Extraction:

The given Data base has three tables,

1) City_list – This contains a list of cities and countries in the database
2) City_data- This contains the average temperatures for each city by year (°C)
3) Global_data- Thus contains the average global temperatures by year (°C)

We use SQL to extract the data from the database and save them to a .csv file.

For extracting the global data, we use

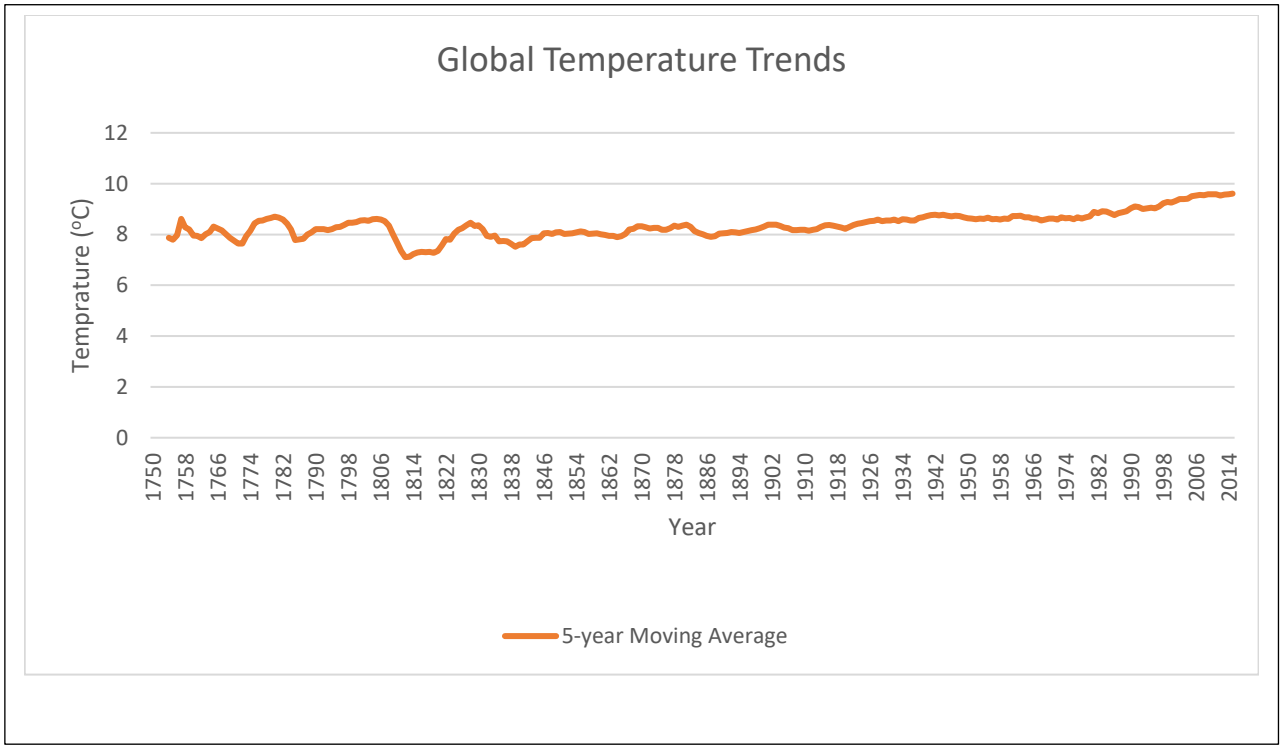
```
SELECT * FROM global_data
```

For extracting temperature data related to Houston in United States we use

```
1   SELECT * FROM city_data WHERE (country='United
    States' ) AND (city = 'Houston');
```

II. Visualizing the Temperature trends

In this project, we used EXCEL to visualize the data.



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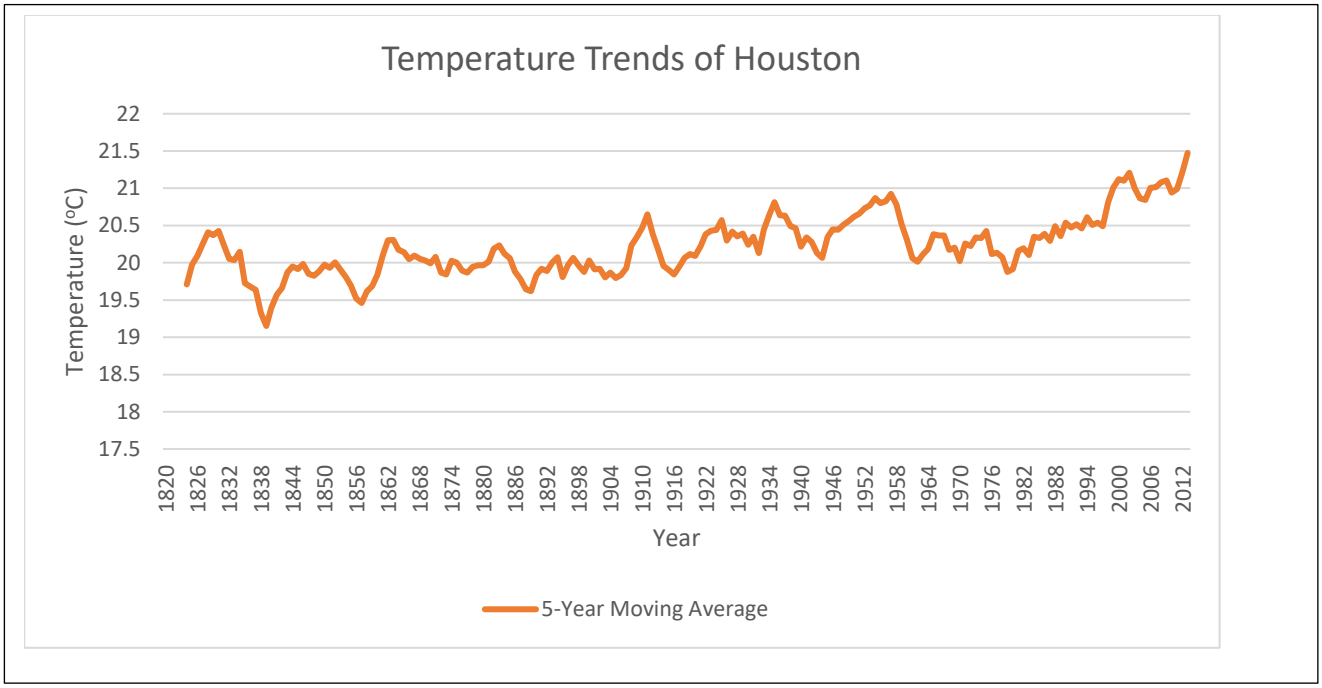

III. Observations:

1) Globally, minimum 7.01 º C is measured in year 1807-1812, maximum 9.608 is recorded in year 2010-2015
2) There is approximately 1.9 º C raise in Global Temperature over the course of 1750-2015
3) The correlation coefficient or the measure of linear dependency is 0.71684 for global temperatures
4) Houston in United States has recorded a minimum of 19.152 in 1834-1839, maximum of 21.474 has been recorded in year 2008-2013
5) There is approximately 1.85 º C raise in Houston Temperature over the course of 1820-2013
6) The correlation coefficient for Houston temperatures is 0.7118
7) We notice that the linear dependencies for both global and local trends is approximately the same.
8) There has been a rapid raise in temperature in recent years than the change observed a century ago
9) The overall raise in temperatures is almost the same globally and in Houston
10) With all these observations we can say that, if the trend continues, the world will be a warmer place then it is a century ago.