Project 01
Exploring Weather Trends

- I used 'SQL' to extract data from the database. I extracted data from the three database tables i.e. city_list, city_data and global_data.
  Some of the SQL queries that are used in extracting data from the database:

➢ SELECT *
  FROM city_list
  WHERE country='India' AND city='Delhi'

➢ SELECT *
  FROM city_data
 WHERE country='India' AND city='Delhi'

➢ SELECT *
  FROM global_data

- I used 'MS Excel' to visualize data in the chart. I calculate Moving Average of the local city and the world.I first used the AVERAGE function on the first 10 rows and then dragged the columns down. I also used 'Scatter Chart' to visualize data in form of chart with smooth lines.
- My key considerations are:
  1. Analyzing Moving Average of next 10 years from the previous 10 years.
  2. Studying the similarities and dissimilarities of average temperatures of both Delhi and the world.

Here are some of the points that are observed in exploring weather trends i.e. Temperature in my own city Delhi and around the world.

1. From 1875 to 1900, the Moving Average (10 year) of temperatures of Delhi shows that the average temperature of city increases at very small rate. Whereas, the global data shows that the average temperature of the earth begun to rise.
2. From 1900 to 1950, the temperature of Delhi shows that the city gets hotter in these years . This is similar to the global data which is also getting hotter. The world average temperature also going up from the normal.
3. From 1950 to 2000, the earth is getting hotter at much faster rate than ever in history.
4. From 2000 to 2015, the data shows that the increasing rate of temperature goes at same rate as it was in late 20th Century .

Line Chart:

I. Year vs Average Temperature(Delhi)

Delhi Avg Temp vs Year
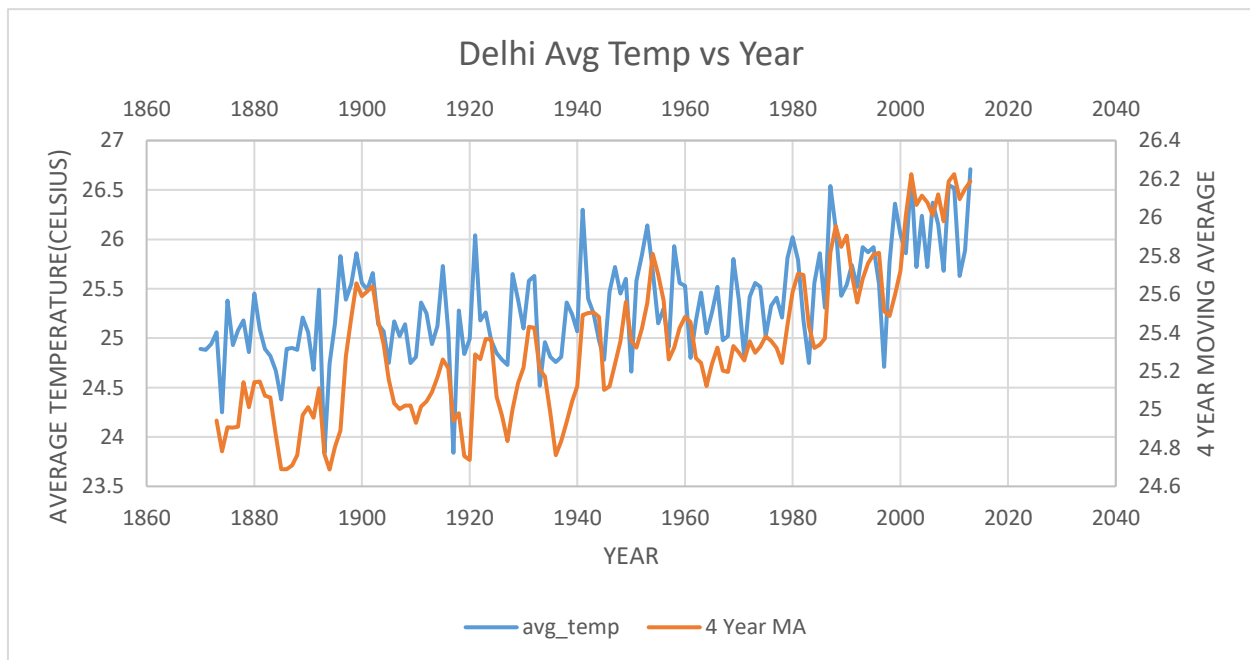
II. Year vs Average Temperature(World)

Global Avg Temp vs Year
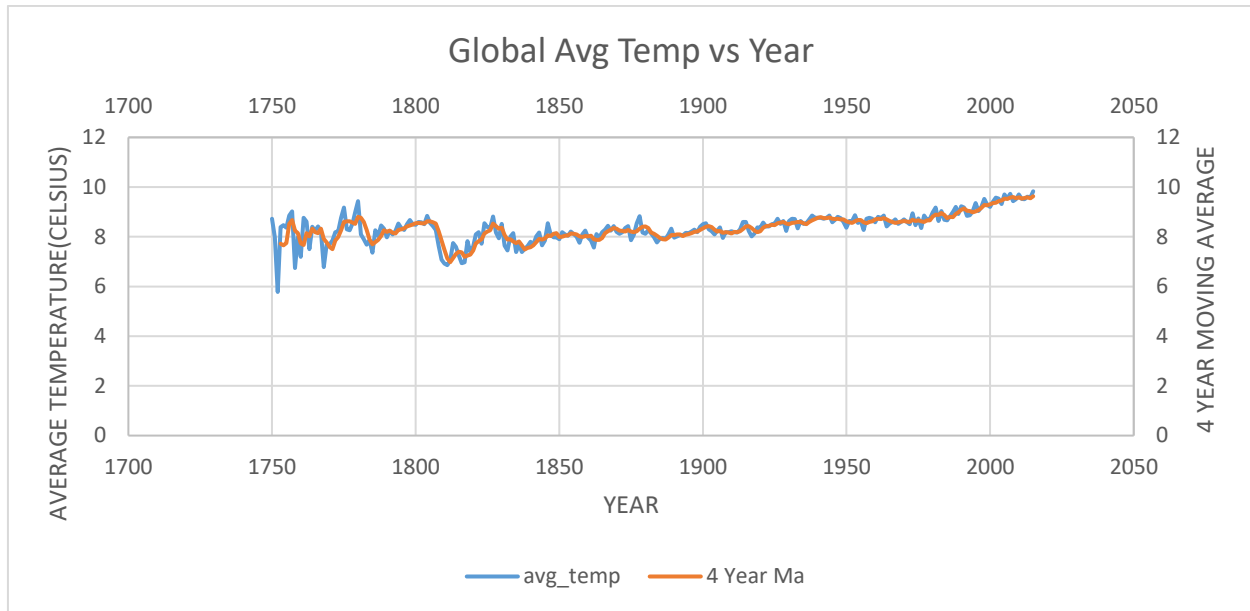
III. Year vs Average Temperature(Delhi,World)

Average Temp vs Year