Project: Explore Weather Trend

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Udacity-Data Analysis

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1) What tools did you use for each step? (Python, SQL, Excel, etc)

   a) used SQL to extract the data from database provided in Udacity:

      i) Local Data:
         1. SELECT *FROM city_data
         2. WHERE city='Riyadh';

      ii) Global Data:
         1. Select *From
         2. Global data;

      iii) Downloaded the excel as csv format from Udacity

   b) I used python to create line chart, using Jupiter Notebook. I wrote the code and the comment in Jupiter notebook

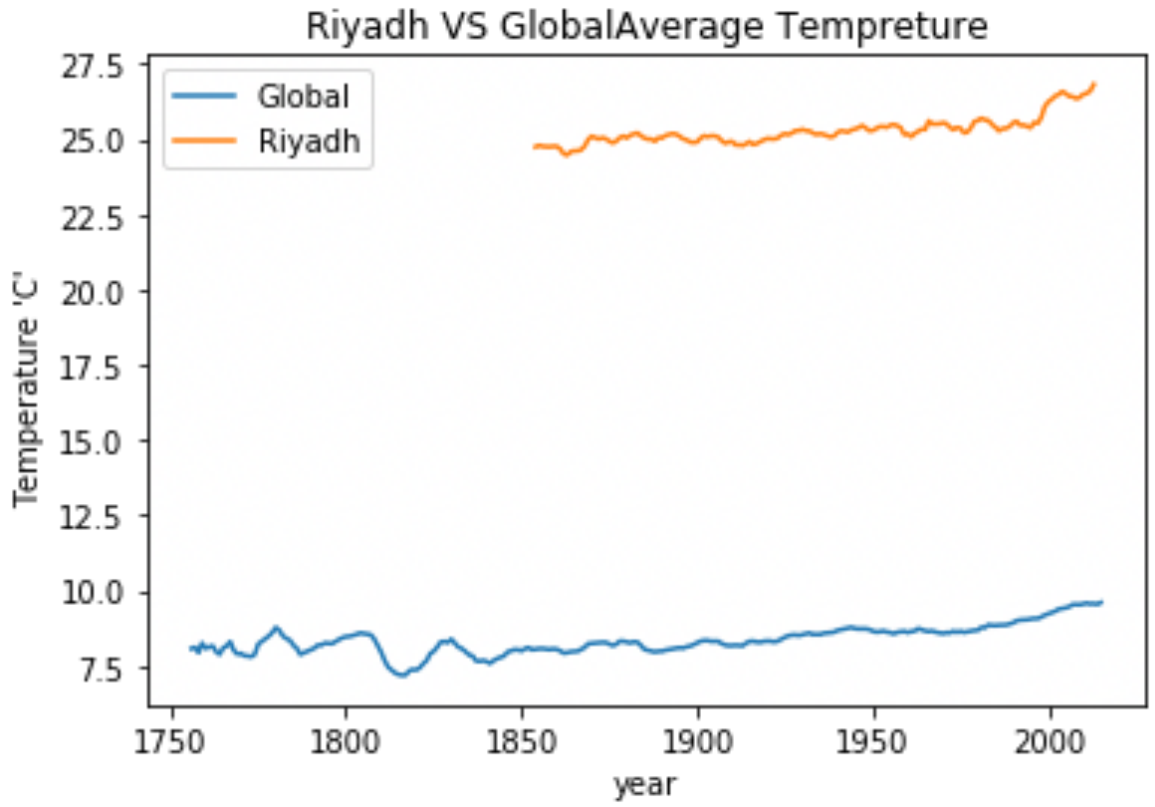
2) Using python to create line chart?
   i) I used rolling function in python to calculate the moving avg in every 7 years
   ii) The following is the code I used to show the chart line in python with explaining each code, I used # for comment in Jupiter Notebook:

```
In [4]:
1 #Finding the current directory 2 pwd
Out[4]:
'/Users/hamedbintalib'
In [12]:
1 #changing the directory to data-analysis folder, to open the excel in python 2 the
cd/Users/hamedbintalib/desktop/DATA-ANALYSIS
/Users/hamedbintalib/Desktop/DATA-ANALYSIS
In [13]:
1 #reading the excel global-data
2 globaltemp=pd.read_csv('global-8.csv')
In [14]:
1 #reading the excel for local temp
2 localtemp=pd.read_csv('local-7.csv')
In [15]:
1 #calculating the moving avg of global temp/local temp 2
glb_mv_avg=globaltemp['avg_temp'].rolling(7).mean()
3
local_mv_avg=localtemp['avg_temp'].rolling(7).mean()
```

In [16]:

```
1  #drawing the graph and the line with labels
2  plt.plot(globaltemp['year'],glb_mv_avg,label='Global')
3  plt.plot(localtemp['year'],local_mv_avg,label='Riyadh')
4  plt.legend()
5  plt.xlabel("year")
6  plt.ylabel("Temperature 'C' ")
7  plt.title('Riyadh VS GlobalAverage Tempreture')
8  plt.show()
```

In [5]:



Observation:

- According to graph above table the difference between global average temperature and Riyadh average temperature is been consistent over time
- Riyadh temperature is quickly changing over time comparing to Global temperature. As you can see the in chart above, in 2000 the temperature increased 2 C.
- The following is the componence between Riyadh Temperature and Global temperature

Year	Changing in global average temperature	Changing in Riyadh average temperature	Increasing/Decreasing over time
1850-1900	7.6-7.8	25.0-25.6	increasing
1900-1950	7.8 – 8.5	25.6 – 25.8	Increasing
1950 - 2000	8.5-9	25.9 - 27	increasing