

# Project 1

## 1- Outlines

### Processing Data

Steps:

1-*Using Udacity SQL workspace* to write a SQL code to export global and local temperature data and download them as CSV files

My codes are:

A- **For exporting global data:**

```
SELECT *  
FROM global_data
```

B- **For exporting local data:**

```
SELECT *  
FROM city_data  
WHERE city = 'Cairo'
```

Then I downloaded these data files as CSV files

2-*Using Google Sheets* to open the CSV data files

3-*Move average* for recorded temp data for each 10 years (a decade) for global and local temp data

(Using average function on (D2 to D11) cells for local temp and on (I2 to I11) cells for global temp, and then dragged the formula down)

	C	D	E	F	G
	country	avg_temp_loc	m_avg_loc		
	Egypt	17.11			
	Egypt	19.87			
	Egypt	19.93			
	Egypt	20			
	Egypt	19.93			
	Egypt	20.51			
	Egypt	20.43			
	Egypt	20.3			
	Egypt	20.51			
	Egypt	21.88			
	Egypt	11.6			

E11

20.047 ×

=average(D2:D11)

20.047

Calculating moving average for local temperature data

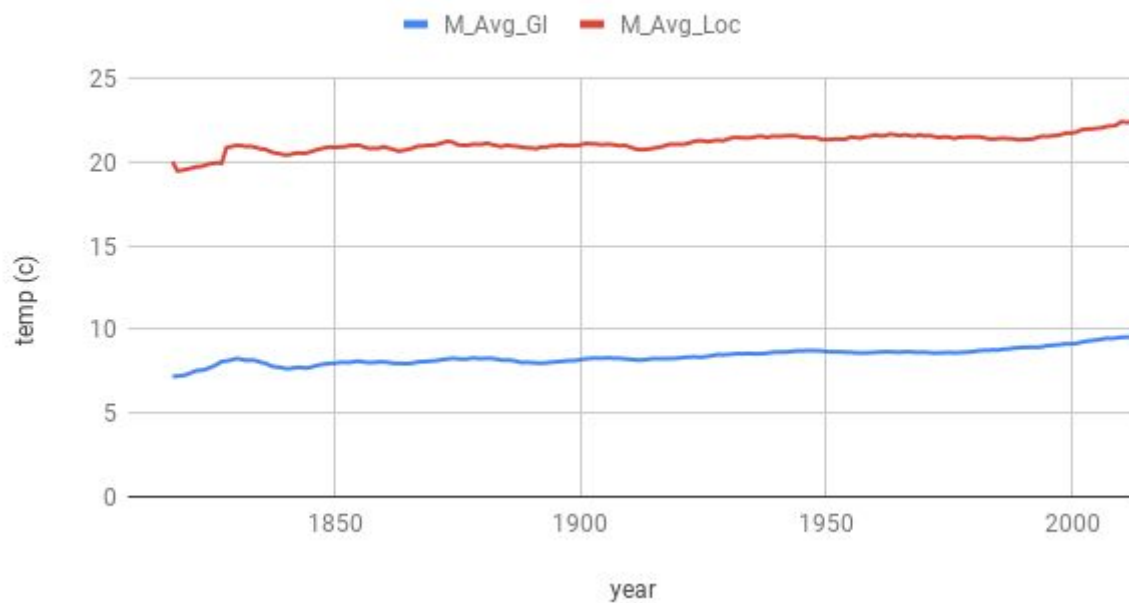
F	G	H	I	J	K
		year	avg_temp_GL	m_avg_GL	
		1808	7.63		
		1809	7.08		
		1810	6.92		
		1811	6.86		
		1812	7.05		
		1813	7.74		
		1814	7.59		
		1815	7.24		
		1816	6.94		
		1817	6.98		
		1818	7.83	7.223	
		1819	7.37	7.252	

Calculating moving average for global temperature data

4- *Plot line chart* for new averages to smooth lines

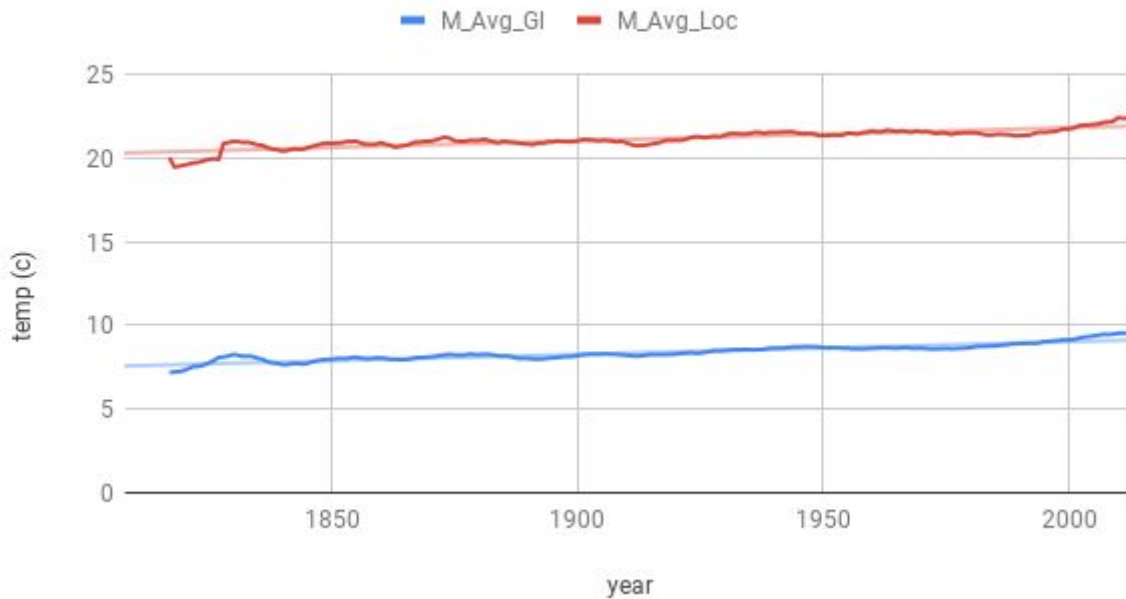
## 2- Line charts

Moving average temperature for global and local data



Line chart comparing global and local average temp over time

## Overall trends average temperature for global and local data



**Line chart comparing overall trend for both global and local average temp over time**

### ***3- Observations***

- 1- My city (Cairo) is hotter on average compared to the global average.
- 2- The difference has been consistent over time.
- 3- Changes in temperature in both local and global average has been consistent over time.
- 4- Both local and global overall trends are increasing.