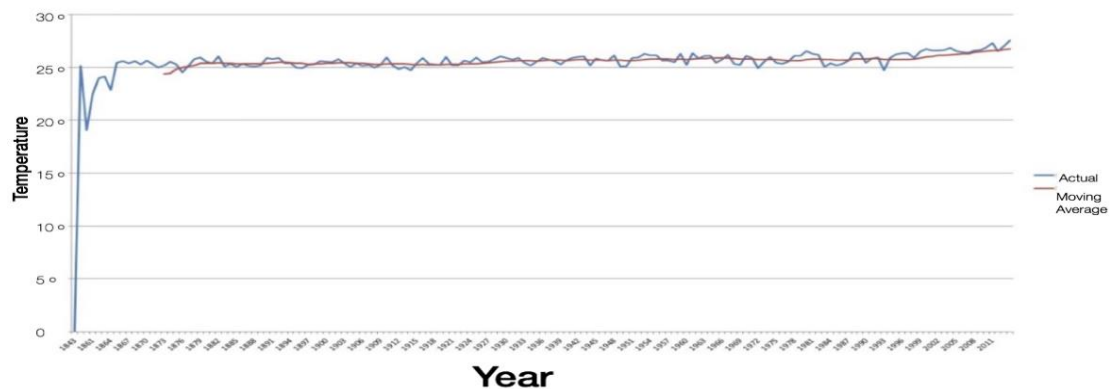
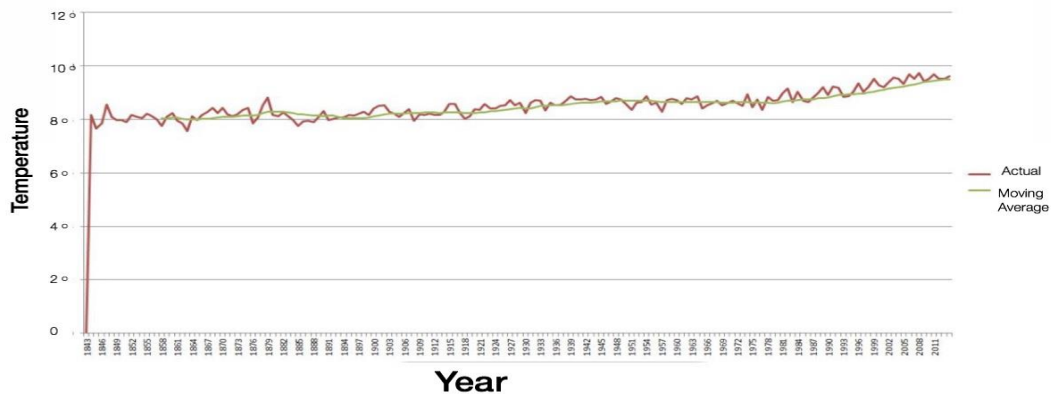


Explore Weather Trends – Project

Mecca Average Temperature



Global Average Temperature



- 1 – We can clearly see that Mecca is around 25 temperature and hotter than the global average temperature which is around 9.
- 2 – Both, the global average temperature and Mecca average temperature, are increasing during the years.
- 3 – We can see in the global average temperature after the year 1978 the temperature is increasing faster than the years before.
- 4 – Mecca average temperature is higher, but increasing slower than the global average temperature.

The SQL queries used to extract the data

#1 Query 1:

```
SELECT year, city, avg_temp  
  
FROM city_data  
  
WHERE city = 'Mecca' AND (year >= 1861 OR year <= 1845);
```

#2 Query 2:

```
SELECT year, avg_temp  
  
FROM global_data  
  
WHERE year >= 1843 AND year <= 2013;
```

The steps:

1 – First, I wrote sql queries to extract the data, downloaded the csv files.

2 – Used Excel to calculate the moving average for each 15 years.

"Moving Average=(the sum of the data/the number of the data)". Below a screenshot on how I calculated the MA using excel.

	A	B	C	D	E	F	G	H	I
1	year	avg_temp							
2	1843	8.17							
3	1844	7.65							
4	1845	7.85							
5	1846	8.55							
6	1847	8.09							
7	1848	7.98							
8	1849	7.98							
9	1850	7.9							
10	1851	8.18							
11	1852	8.1							
12	1853	8.04							
13	1854	8.21							
14	1855	8.11							
15	1856	8							
16	1857	7.76							
17	1858	8.1							
18	1859	8.25							
19	1860	7.96							
20	1861	7.85							
21	1862	7.36							
22	1863	8.11							

– For the line chart, there are no missing data at the beginning of the curves, but the moving average start from the 15th year.

3 - Did the visualization using line charts.