

Project “Explore Weather Trends”

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- **Extracting Data.**

Using SQL query to extracting data:

```
Select c. year, c.city, c. avg_temp , g. avg_temp as "global_temp"  
From city_data c  
Inner join global_data g  
On c.year = g.year  
Where c.city = 'Mecca';
```

```
1  select c. year, c.city, c. avg_temp , g. avg_temp as  
   "global_temp"  
2  from city_data c  
3  inner join global_data g  
4  on c.year = g.year  
5  where c.city = 'Mecca';
```

Success!

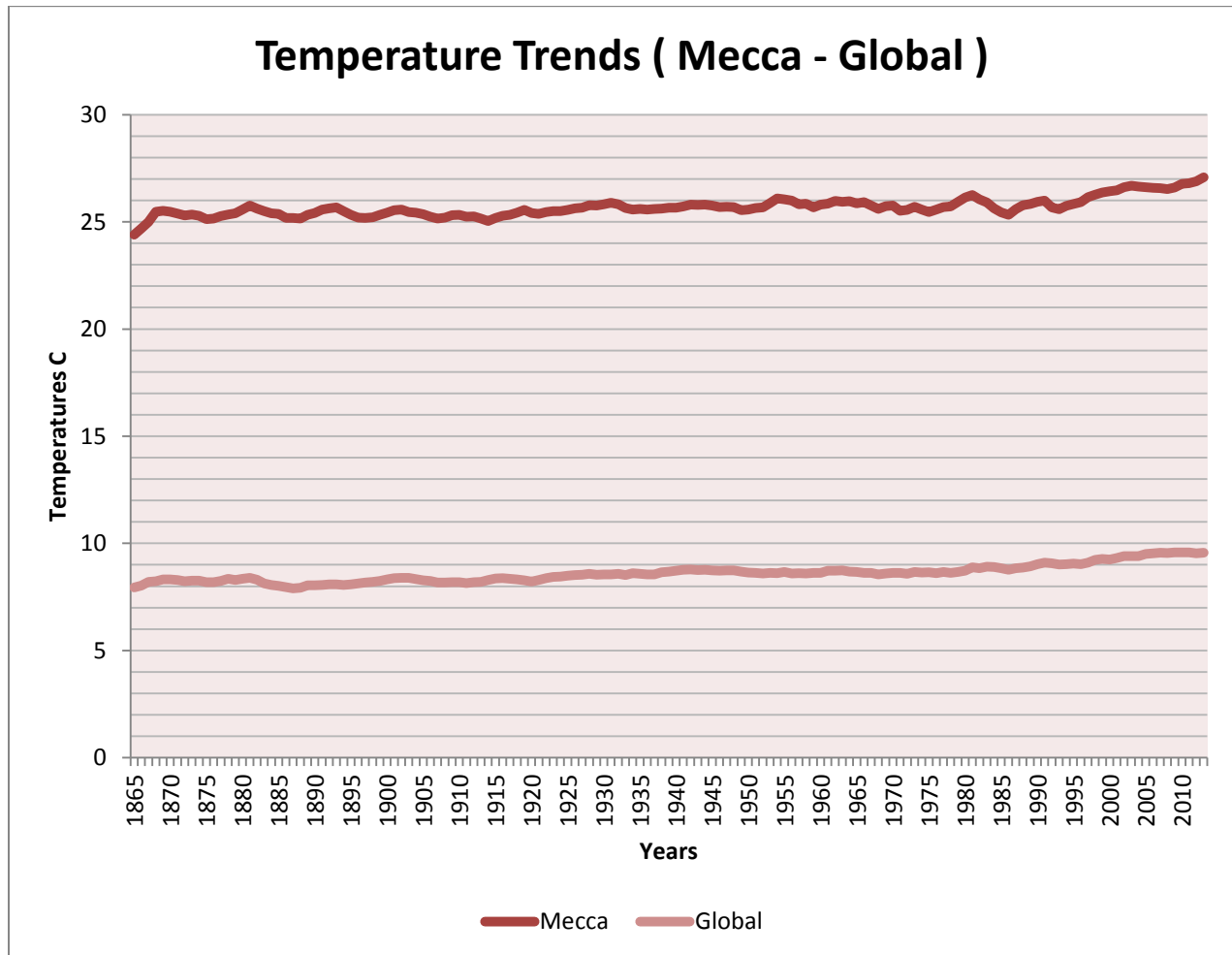
EVALUATE

- **Moving Average.**

I used Excel average function to find the moving average for every five years, starting from 1865 to 2013.

D10		f_x =AVERAGE(C6:C10)				
	A	B	C	D	E	F
1	year	city	avg_temp	Moving avg - Mecca	global_temp	Moving avg - Global
2	1861	Mecca	23.98		7.85	
3	1862	Mecca	24.13		7.56	
4	1863	Mecca	22.87		8.11	
5	1864	Mecca	25.43		7.98	
6	1865	Mecca	25.6	24.402	8.18	7.936
7	1866	Mecca	25.42	24.69	8.29	8.024
8	1867	Mecca	25.62	24.988	8.44	8.2
9	1868	Mecca	25.3	25.474	8.25	8.228
10	1869	Mecca	25.5	25.518	8.43	8.318
11	1870	Mecca	25.35	25.468	8.2	8.322
12	1871	Mecca	24.97	25.378	8.12	8.288
13	1872	Mecca	25.2	25.294	8.19	8.238
14	1873	Mecca	25.57	25.348	8.35	8.258
15	1874	Mecca	25.32	25.282	8.43	8.258
16	1875	Mecca	24.53	25.118	7.86	8.19
17	1876	Mecca	25.13	25.15	8.08	8.182
18	1877	Mecca	25.81	25.272	8.54	8.252
19	1878	Mecca	25.94	25.346	8.83	8.348
20	1879	Mecca	25.57	25.396	8.17	8.296

- **Data Visualization.**



- **Observations.**

1. Mecca's average temperature is much higher than global average temperature from 1865 to 2013.
2. Mecca's temperature is considered stable from 1865 until 1915, and then it's become hotter.
3. Graph shows that global temperature over the year consider stable comparing with Mecca, whereas Mecca's temperature is more dynamic
4. Similarity is that the overall changes for Mecca and globally is only (2C·) over the chosen years.