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Data Analyst Nanodegree Program
Project: Explore Weather Trends
18 September 2017

OUTLINE

SQL queries used to extract the data.

(0) Query resulted in a list of cities with the option to download a .csv file.

```
SELECT *
FROM city_list
```

(1) Query resulted in a list of year, city, country, and average temperature with the option to download a .csv file.

```
SELECT *
FROM city_data
```

(2) Query resulted in a list of year and average temperature for Toronto with the option to download a .csv file.

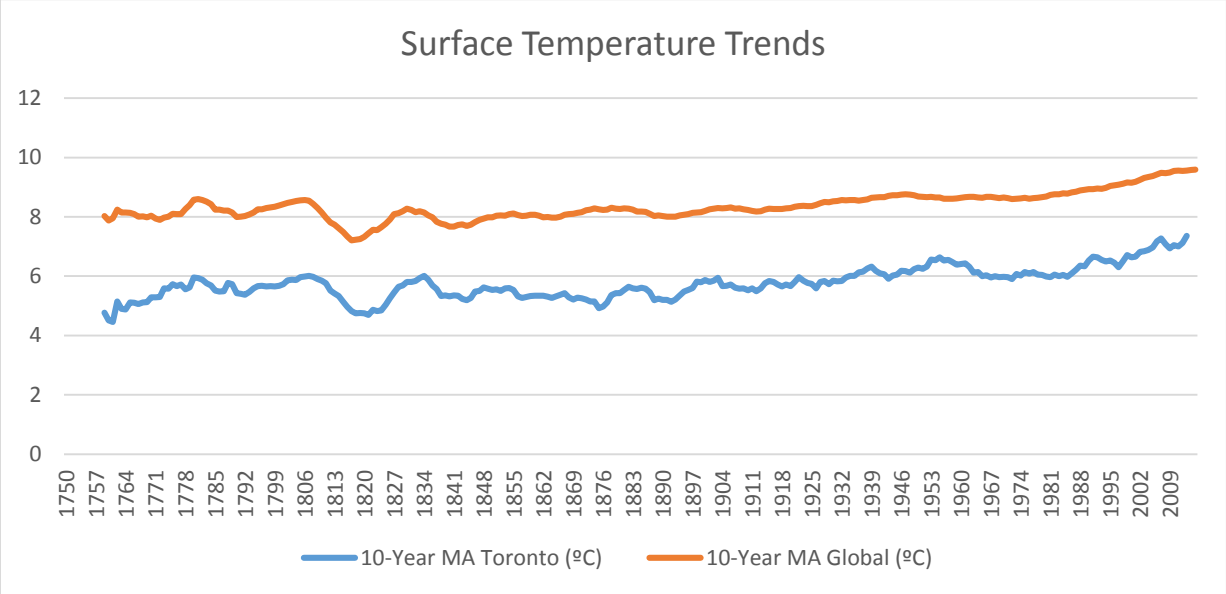
```
SELECT *
FROM city_data
WHERE city = 'Toronto'
```

(3) Query resulted in a list of year and average temperature with the option to download a .csv file.

```
SELECT *
FROM global_data
```

LINE CHART

Note: Used MS Excel (=AVERAGE(B2:B11) formula) to calculate 10-Year moving averages based on global and city of Toronto's annual average temperatures from 1750 to 2013.



FOUR OBSERVATIONS

(1) 10-Year moving average surface temperature in Toronto closely follows the same trajectory as the 10-Year moving average surface temperature globally.
(2) Between 1806 and 1820, surface temperatures declined sharply both in Toronto and globally, though rose sharply in decades that followed.
(3) Since 1750, the 10-Year moving average surface temperature in Toronto has risen approximately 2.59°C, whereas globally it has risen approximately 1.53°C. This suggests our planet has been getting warmer during this period.
(4) Surface temperatures – both globally and in Toronto – have been steadily rising since the early 1900s, though there has been a sharp upward trend since the early 1980s, which accounts for the greatest change in recorded history.