Step 1: SQL Query Code

Extract Toronto Data:

```
SELECT *

FROM city_data

WHERE country = 'Canada' AND city = 'Toronto'
```

Extract Global Data:

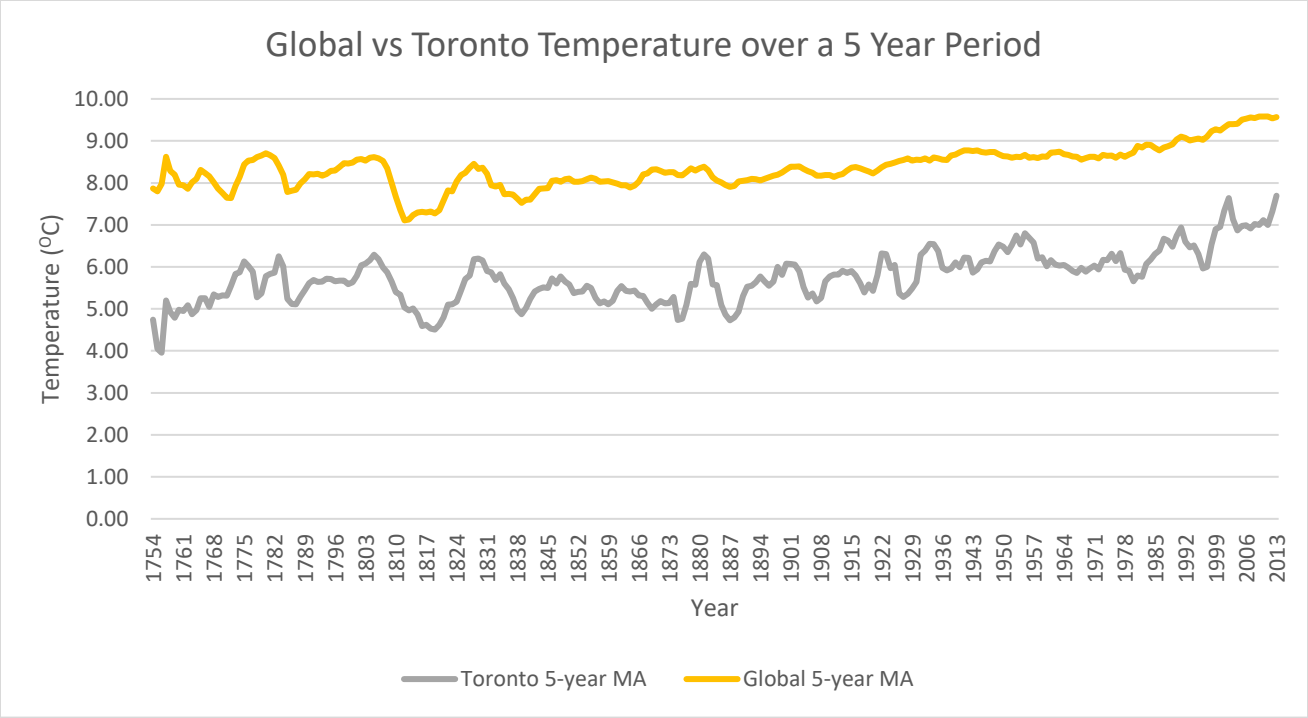
```
SELECT *

FROM global_data
```

Step 2: Export both files into a CSV file then convert it to an xlsx file to be read in Excel

Step 3: Used a vlookup formula to align the yearly global data with my city data to be used to visualize the both trends on the same chart

Step 4: Calculated the moving average by adding 2 additional columns (1 for global and 1 for my city) as a 5-Year MA. I calculated it by using the formula (for example: =average(D9:D13)) by taking the previous 5 year yearly average temperature data and copying the formula to the bottom of the data set to populate the rest of the years up until 2013

Step 5: The consideration I have taken to visualize the trend is to consolidate the data into 1 worksheet. There were some years for my city that had blanks so I had nothing to compare it to the global temperature trends. Those datasets were omitted in the line chart.



Observation 1:

The city of Toronto is a little cooler than the global temperatures on average consistently for every single year across a 270 year period. Every year there is consistently a 2 – 3 degrees difference between Toronto and the global temperature. But as we approach closer to the 21st century the range gap would start to narrow at around 1.5 – 2.5 degrees.

Observation 2:

Between the years of 1996 – 2002 for Toronto, there was an overall 1.68 degree spike in the moving average temperature and in 2002 reached its highest peak in record time. Temperature rarely dropped below 5 degrees in Toronto on average and comparing it globally to a minimum of 7 degrees across its history. The peak represents that Toronto has met and broken through the global minimum temperature barrier.

Observation 3:

There are more fluctuations in temperatures for Toronto compared to the steady incline globally. This means temperatures are climbing and will eventually meet the global average. Forecasting the future temperatures, Toronto will eventually catch up to the moving average global temperatures but it can estimate it will take around 100 years before it is able to surpass and climb above average.

Observation 4:

Looking at the overall trends, the world is definitely getting warmer but very very slowly. Toronto will get warmer in a shorter period of time and this may be due to the result of global warming and all the

greenhouse gas emissions we release in the city and carbon dioxide we release into the atmosphere due to power plants and automobiles.