Meets Specifications

**Analysis**

* **The SQL query used to extract the data is included.**
* **The query runs without error and pulls the intended data.**

Great work here in extracting the data for Islamabad and comparing that to global temperatures. Your queries were spot on!

If you're interested in bolstering your SQL mastery with more questions and puzzles, here are a couple websites I often enjoy to looking for extra coding practice for SQL:

<https://www.hackerrank.com/domains/sql/select>  
<https://lagunita.stanford.edu/courses/DB/SQL/SelfPaced/courseware/ch-sql/seq-vid-introduction_to_sql/>

You'll get a chance to practice increasingly difficult questions and learn how to interact with multiple tables at once. As an example, here is another way to get the data that you want for both Islamabad and Global while excluding the empty years in one table output!

SELECT city\_data.year,

city\_data.avg\_temp as city\_temp,

global\_data.avg\_temp as global\_temp

FROM city\_data, global\_data

WHERE city\_data.year = global\_data.year

AND NOT city\_data.avg\_temp is NULL

AND city\_data.city = ‘Islamabad’

**Moving averages are calculated to be used in the line chart.**

Excellent work here in calculating the 7 year moving average for both Islamabad and Global temperatures. There’s no specific rule of thumb when trying to find the correct number for moving averages, although something like 2 and 3 years would be too short to succinctly smooth out the data and something like 50 years would certainly be too large given the context of our dataset. From that perspective your choice of moving average works well given what we are trying to achieve with the output. The gap between these two lines is very apparent here.

I noticed that that there were some missing data from Islamabad. Here's a link to a blog that details a number of techniques we can use when dealing with missing data. I encourage you to check it out in your free time!

<https://www.iriseekhout.com/missing-data/missing-data-methods/>

* **A line chart is included in the submission.**
* **The chart and its axes have titles, and there's a clear legend (if applicable).**

The line chart included in your submission looks fantastic! The chart contains a clearly represented title that explains the details of the presented line graph. It also includes a well place legend, intuitive axis labels and clear tick labels. This attention to detail really goes a long way to help communicate your results to an audience.

Here is a handy link describing some best practices when creating graphs!

<https://www.fusioncharts.com/charting-best-practices/>

* **The student includes four observations about their provided data visualization.**
* **The four observations are accurate.**

Great work in looking at the output of your graph and making four observations from them. Your observations are accurate, and can be clearly reflected from the output of your visualization. Well done! Global temperatures are indeed getting warmer, but hopefully with your new skills in data wrangling, you can help better inform and advise others on the importance of climate change and conservation!