

SQL LOGICAL QUESTIONS (Task 1: Submitted by Dhanya Shetty)

Scenario: You are given a dataset containing information about global temperatures and CO2 emissions.

Table name: country_pollution

Country	Temperature	CO2 Emissions	Date(Year)
.....

1. Question: Write a query to find the countries with the highest temperatures in the dataset?

Solution:

```
SELECT YEAR(year), country, temperature
FROM country_pollutions cp
WHERE temperature=(SELECT MAX(temperature) FROM country_pollutions
WHERE year=cp.year)
ORDER BY year;
```

2. Question: Write a query to identify the countries with the lowest CO2 emissions in the dataset.

Solution:

```
SELECT YEAR(year) AS Year, country, CO2_Emission
FROM country_pollutions p
WHERE CO2_Emission=(SELECT MIN(CO2_Emission) FROM country_pollutions c
WHERE p.year=c.year)
ORDER BY year;
```

3. Question: Write a query to find all temperature records above a specific value, for example, 20 degrees Celsius.

Solution:

```
SELECT country, temperature  
  
FROM country_pollutions  
  
WHERE temperature>20.0;
```

4. Question: Write a query to list all countries with CO2 emissions data available for the year 2020.

Solution:

```
SELECT country, CO2_Emission, YEAR(year) as Year  
  
FROM country_pollutions  
  
WHERE YEAR(year)=2020  
  
ORDER BY CO2_Emission DESC;
```

5. Question: Write a query to count the total number of temperature records in the dataset.

Solution:

```
SELECT COUNT(temperature) AS No_of_temp_record  
  
FROM country_pollutions;
```

6. Question: Write a query to identify any countries with missing temperature data for a specific year, for example, 2015.

Solution:

```
SELECT country  
  
FROM country_pollutions  
  
WHERE temperature is null and YEAR(year)=2015;
```

7. Question: Write a query to find the average temperature for each year in the dataset.

Solution:

```
SELECT year, ROUND(AVG(temperature),2) AS Avg_Temperature  
FROM country_pollutions  
GROUP BY year;
```

8. Question: Write a query to calculate the total CO2 emissions for all countries in the dataset.

Solution:

```
SELECT country, SUM(CO2_emission) AS Total_CO2_Emission  
FROM country_pollutions  
GROUP BY country;
```

9. Question: Write a query to sort the temperature data in descending order based on the temperature values.

Solution:

```
SELECT temperature  
FROM country_pollutions  
ORDER BY temperature DESC;
```