30 Days SQL Micro Course Certificate Assignment

Instruction:

First, download the **Hospital Data.csv** file and import it into SQL. Then, solve the given queries to complete the **30-Day Micro Course** and earn your certificate. Once all queries are solved, copy the results, paste them into a Word document, convert it to a PDF, and upload the PDF using the Google Form link provided in the video description.

1. **Total Number of Patients** ○ Write an SQL query to find the total number of patients across all hospitals.

   Answer

   SELECT SUM(patients_count) AS total_patients

   FROM hospital_data;

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2. **Average Number of Doctors per Hospital** ○ Retrieve the average count of doctors available in each hospital.

   Answer

```
SELECT AVG(doctors_count) AS average_doctors_per_hospital
FROM (
  SELECT hospital_name, AVG(doctors_count) AS doctors_count
  FROM hospital_data
  GROUP BY hospital_name
) AS sub;
```

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3. **Top 3 Departments with the Highest Number of Patients** ○ Find the top 3 hospital departments that have the highest number of patients.

   Answer

```
SELECT department, SUM(patients_count) AS total_patients
FROM hospital_data
GROUP BY department
```

```
ORDER BY total_patients DESC
LIMIT 3;
```

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4. **Hospital with the Maximum Medical Expenses** ○ Identify the hospital that recorded the highest medical expenses.

   Answer

```
SELECT hospital_name, SUM(medical_expenses) AS total_expenses
FROM hospital_data
GROUP BY hospital_name
ORDER BY total_expenses DESC
LIMIT 1;
```

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5. **Daily Average Medical Expenses** ○ Calculate the average medical expenses per day for each hospital.

   Answer

```
SELECT hospital_name,
    ROUND(SUM(medical_expenses) * 1.0 / SUM(DATE_PART('day',
        discharge_date - admission_date)), 2) AS avg_daily_expense
FROM hospital_data
GROUP BY hospital_name;
```

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6. **Longest Hospital Stay**

   - Find the patient with the longest stay by calculating the difference between Discharge Date and Admission Date.

   Answer

```
SELECT hospital_name, department, admission_date, discharge_date,
```

```
    DATE_PART('day', discharge_date - admission_date) AS stay_length
FROM hospital_data
ORDER BY stay_length DESC
LIMIT 1;
```

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7. **Total Patients Treated Per City** ○ Count the total number of patients treated in each city

   Answer

```
SELECT location AS city, SUM(patients_count) AS total_patients
FROM hospital_data
GROUP BY location
ORDER BY total_patients DESC;
```

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8. **Average Length of Stay Per Department** ○ Calculate the average number of days patients spend in each department.

   Answer

```
SELECT department,
    ROUND(AVG(DATE_PART('day', discharge_date - admission_date)), 2) AS
        avg_stay_days
FROM hospital_data
GROUP BY department;
```

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9. **Identify the Department with the Lowest Number of Patients** ○ Find the department with the least number of patients.

   Answer

```
SELECT department, SUM(patients_count) AS total_patients
FROM hospital_data
```

```
GROUP BY department
ORDER BY total_patients ASC
LIMIT 1;
```

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10. **Monthly Medical Expenses Report**

Answer

- Group the data by month and calculate the total medical expenses for each month.

```
SELECT TO_CHAR(admission_date, 'Month') AS month,
    ROUND(SUM(medical_expenses), 2) AS total_expenses
FROM hospital_data
GROUP BY TO_CHAR(admission_date, 'Month'), EXTRACT(MONTH FROM admission_date)
ORDER BY EXTRACT(MONTH FROM admission_date);
```

Note: A minimum of 6 queries must be correct to qualify for the certificate, only 1 Attempt Available.

Complete the assignment and upload it using the provided Google Form. Our A.I. system will review it within few seconds and then you will be able to download your certificate. For more details or support, you can raise a query at - info@satishdhawale.com