

# 30 DAYS SQL MICRO COURSE ANSWERS

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## 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 patients_across_all_hospitals  
FROM hospital ;
```

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## 2. Average Number of Doctors per Hospital

Retrieve the average count of doctors available in each hospital.

**ANSWER:**

```
SELECT hospital_name ,AVG(doctors_count) AS avg_count_of_doctors  
FROM hospital  
GROUP BY hospital_name  
ORDER BY avg_count_of_doctors DESC ;
```

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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  
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_medical_expenses  
FROM hospital  
GROUP BY hospital_name  
ORDER BY total_medical_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,AVG(medical_expenses) AS avg_medical_expenses
FROM hospital
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,location,admission_date,discharge_date,
(discharge_date - admission_date + 1) AS stay_time
FROM hospital
ORDER BY stay_time 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,SUM(patients_count) AS patients_treated
FROM hospital
GROUP BY location
ORDER BY patients_treated 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,AVG(discharge_date-admission_date +1)AS avg_days_patient_spent
FROM hospital
GROUP BY department
ORDER BY avg_days_patient_spent DESC ;
```

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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 no_of_patients
FROM hospital_data
GROUP BY department
ORDER BY no_of_patients
LIMIT 5 ;
```

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### 10. Monthly Medical Expenses Report

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

**ANSWER:**

```
SELECT
    TO_CHAR(admission_date, 'YYYY-MM') AS month,
    SUM(medical_expenses) AS total_monthly_expense
FROM hospital_data
GROUP BY TO_CHAR(admission_date, 'YYYY-MM')
ORDER BY month;
```