

30 Days SQL Micro Course Certificate Assignment

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_no_of_patient
from Hospitals;
```

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_dr_each_hospital
from Hospitals
group by Hospital_Name;
```

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 top_Patients_dapartment
from Hospitals
group by Department
order by top_Patients_dapartment desc limit 3 ;
```

4 . Hospital with the Maximum Medical Expenses

- Identify the hospital that recorded the highest medical expenses.

Answer : -

```
select Hospital_Name , sum (Medical_Expenses) as
highest_medical_expenses
```

```
from Hospitals
group by Hospital_Name
order by highest_medical_expenses desc limit 1;
```

5. Daily Average Medical Expenses

- Calculate the average medical expenses per day for each hospital.

Answer : -

```
SELECT Hospital_Name,
       sum (Medical_Expenses) as total_Medical_Expenses ,
       sum (Discharge_Date - Admission_Date) AS Total_Days ,
       round (
       sum (Medical_Expenses) /nullif (sum (Discharge_Date -
       Admission_Date),0),2) as per_day_avg_Medical_Expenses
FROM Hospitals
group by Hospital_Name ;
```

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, Location, Department, Admission_Date, Discharge_Date,
       (Discharge_Date :: Date - Admission_Date ::Date) as logest_stay_date
from Hospitals
order by logest_stay_date desc limit 1 ;
```

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_per_city
from Hospitals
```

```
group by Location  
order by total_Patients_per_city desc ;
```

8. Average Length of Stay Per Department

- Calculate the average number of days patients spend in each department.

Answer : -

```
select Department , round (avg (Discharge_Date - Admission_Date),2) as  
avg_length_of_stay_days  
from Hospitals  
group by Department  
order by avg_length_of_stay_days desc ;
```

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 lowest_no_Patients  
from Hospitals  
group by Department  
order by lowest_no_Patients asc limit 1 ;
```

10. Monthly Medical Expenses Report

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

Answer : -

```
SELECT  
TO_CHAR(Discharge_Date::date, 'Month') AS month_name,  
DATE_TRUNC('month', Discharge_Date::date) AS month_start,
```

```
SUM(REPLACE(Medical_Expenses::TEXT, ',', ' '))::NUMERIC) AS  
total_medical_expenses  
FROM Hospitals  
GROUP BY month_name, month_start  
ORDER BY month_start;
```