

SQL Micro Course Answer PDF

1.Total Number of Patients

.Write an SQL query to find the total number of patients across all hospitals?

```
SELECT Hospital_Name, SUM(Patients_Count) Hospital_Wise_Patients_Count  
FROM Hospital_Data  
GROUP BY Hospital_Name;
```

2.Average Number of Doctors per Hospital

. Retrieve the average count of doctors available in each hospital?

```
SELECT Hospital_Name, AVG(Doctors_Count) AS average_doctors  
FROM Hospital_Data ;
```

3. Top 3 Departments with the Highest Number of Patients

. Find the top 3 hospital departments that have the highest number of patients?

```
WITH number_of_patients AS ( SELECT Hospital_Name, Department,  
DENSE_RANK () OVER (PARTITION BY Hospital_Name ORDER BY  
MAX(Patients_Count) DESC) AS highest_number_of_patients  
FROM Hospital_Data  
GROUP BY Hospital_Name, Department)  
SELECT TOP 3 * FROM number_of_patients  
WHERE highest_number_of_patients = '1'  
GROUP BY Hospital_Name ;
```

4.Hospital with the Maximum Medical Expenses

Identify the hospital that recorded the highest medical expenses?

```
WITH hospital AS (SELECT Hospital_Name, Medical_Expenses,  
DENSE_RANK () OVER(PARTITION BY Hospital_Name ORDER BY Medical_Expenses DESC) AS  
highest_medical_expenses FROM Hospital_Data )  
SELECT Hospital_Name, Medical_Expenses FROM hospital  
WHERE highest_medical_expenses = '1';
```

5.Daily Average Medical Expenses

Calculate the average medical expenses per day for each hospital.

```
WITH Average_medical_expenses AS ( SELECT Hospital_Name,  
ROUND(SUM( Medical_Expenses),2)AS Total_expenses ,  
SUM( DATEDIFF (DAY,Admission_Date,Discharge_Date)+1) AS Total_Day  
FROM Hospital_Data  
GROUP BY Hospital_Name)  
SELECT Hospital_Name ,ROUND((Total_expenses/Total_Day),2) AS per_day_expenses  
FROM Average_medical_expenses ;
```

6.Longest Hospital Stay

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

```
WITH longest_stay AS (SELECT Hospital_Name,  
DENSE_RANK()OVER(ORDER BY ( DATEDIFF(DAY,Admission_Date,Discharge_Date)+1) DESC )AS  
Total_Day_Stay  
FROM Hospital_Data)  
SELECT Hospital_Name,Total_Day_Stay FROM longest_stay WHERE Total_Day_Stay = '1' ;
```

-7.Total Patients Treated Per City

Count the total number of patients treated in each city?

```
SELECT Location , SUM (Patients_Count) AS Total_patients FROM Hospital_Data GROUP BY  
Location ;
```

--8.Average Length of Stay Per Department

Calculate the average number of days patients spend in each department

```
SELECT Department, AVG(DATEDIFF(DAY,Admission_Date,Discharge_Date)+1) AS  
patients_spend_Days FROM Hospital_Data GROUP BY Department ;
```

9.Identify the Department with the Lowest Number of Patients

Find the department with the least number of patients.

```
SELECT TOP 1 Department,SUM(Patients_Count) AS Total_patients FROM Hospital_Data  
GROUP BY Department ORDER BY SUM(Patients_Count) ASC
```

-10.Monthly Medical Expenses Report

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

```
SELECT FORMAT(Admission_Date,'MMMM') AS Month_Name , ROUND( SUM (Medical_Expenses),2) AS  
Total_Expenses FROM Hospital_Data GROUP BY FORMAT(Admission_Date,'MMMM')
```