30 Days SQL Micro Course Certificate Assignment Answer

use PROJECT
select * from [Hospital data]

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) AS Number_of_Patients
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_Number_of_Doctors
FROM [Hospital data]
 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.
SELECT TOP(3) Department,SUM(Patients_Count) AS Highest_patients
FROM [Hospital data]
GROUP BY Department
ORDER BY Highest_patients DESC

4. Hospital with the Maximum Medical Expenses
    ● Identify the hospital that recorded the highest medical expenses.
SELECT TOP(1) Hospital_Name, Medical_Expenses AS Highest_medical_expenses
FROM [Hospital data]
ORDER BY Medical_Expenses DESC

5. Daily Average Medical Expenses
    ● Calculate the average medical expenses per day for each hospital.
SELECT Hospital_Name,
ROUND(AVG(Medical_Expenses /DATEDIFF(DAY
,ADMISSION_DATE,DISCHARGE_DATE)),2) AS "Avg Expenses Per Day"
FROM [Hospital data]
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.
SELECT TOP 1

DATEDIFF(DAY,Admission_Date,Discharge_Date) AS "Longest Day Stay in hospital",SUM(Patients_Count) AS TOTAL_PATIENTS
FROM [Hospital data]
GROUP BY DATEDIFF(DAY,Admission_Date,Discharge_Date)
ORDER BY "Longest Day Stay in hospital" DESC

7. Total Patients Treated Per City
   ● Count the total number of patients treated in each city.
SELECT Location,SUM(Patients_Count) AS "Total number of 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)) AS "Average number of days stay"
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 "Total Patients" ASC

10. Monthly Medical Expenses Report
   ● Group the data by month and calculate the total medical expenses for each month.
SELECT DATEPART(MONTH,DISCHARGE_DATE) AS Index_no,
DATENAME(MONTH,Discharge_Date) AS "Monthly Expenses Report",
ROUND(SUM(Medical_Expenses),2) AS "Medical Expenses"
FROM [Hospital data]
GROUP BY DATENAME(MONTH,Discharge_Date),DATEPART(MONTH,DISCHARGE_DATE)