# SQL Hospital Data Assignment Solution

1. **Total Number of Patients**

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

**SELECT Hospital\_Name, SUM(Patients\_Count) AS Total\_Number\_of\_Patients**

**FROM [Hospital].[dbo].[Hospital\_Data]**

**GROUP BY Hospital\_Name**

**ORDER BY Total\_Number\_of\_Patients ASC**

2. **Average Number of Doctors per Hospital**

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

**SELECT Hospital\_Name, AVG(Doctors\_Count) AS Average\_count\_of\_Doctors**

**FROM [Hospital].[dbo].[Hospital\_Data]**

**GROUP BY Hospital\_Name**

**ORDER BY Average\_count\_of\_Doctors ASC**

3. **Top 3 Departments with the Highest Number of Patients**

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

**SELECT TOP 3 Department, SUM(Patients\_count) AS Number\_of\_patients**

**FROM [Hospital].[dbo].[Hospital\_Data]**

**GROUP BY Department**

**ORDER BY Number\_of\_patients DESC**

4. **Hospital with the Maximum Medical Expenses**

o Identify the hospital that recorded the highest medical expenses.

**SELECT TOP 1 Hospital\_Name, SUM(Medical\_Expenses) AS Medical\_Expenses**

**FROM [Hospital].[dbo].[Hospital\_Data]**

**GROUP BY Hospital\_Name**

**ORDER BY Medical\_Expenses DESC**

5. **Daily Average Medical Expenses**

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

**SELECT Hospital\_Name,**

**AVG(Medical\_Expenses / (DATEDIFF(day, Admission\_Date, Discharge\_Date) + 1))**

**AS Avg\_Expenses\_Per\_Day**

**FROM [Hospital].[dbo].[Hospital\_Data]**

**GROUP BY Hospital\_Name;**

6. **Longest Hospital Stay**

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

**SELECT TOP 1 Hospital\_Name, Admission\_Date, Discharge\_Date,**

**Patients\_count, DATEDIFF(day, Admission\_Date, Discharge\_Date) AS Stay\_Duration**

**FROM [Hospital].[dbo].[Hospital\_Data]**

**ORDER BY Stay\_Duration DESC**

7. **Total Patients Treated Per City**

o Count the total number of patients treated in each city.

**SELECT Location, SUM(Patients\_Count) AS Total\_Number\_of\_Patients**

**FROM [Hospital].[dbo].[Hospital\_Data]**

**GROUP BY Location**

**ORDER BY Total\_Number\_of\_Patients ASC**

8. **Average Length of Stay Per Department**

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

**SELECT Department,Admission\_Date, Discharge\_Date,**

**AVG( DATEDIFF(day, Admission\_Date, Discharge\_Date)) AS Avg\_Stay\_Duration**

**FROM [Hospital].[dbo].[Hospital\_Data]**

**GROUP BY Department, Admission\_Date, Discharge\_Date**

**ORDER BY Avg\_Stay\_Duration DESC**

9. **Identify the Department with the Lowest Number of Patients**

o Find the department with the least number of patients.

**SELECT TOP 1 Department, SUM(Patients\_Count) AS Number\_Of\_Patients**

**FROM [Hospital].[dbo].[Hospital\_Data]**

**GROUP BY Department**

**ORDER BY Number\_Of\_Patients ASC**

10. **Monthly Medical Expenses Report**

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

**SELECT FORMAT(Admission\_Date, 'yyy-MMMM') AS Month,**

**SUM(Medical\_Expenses) AS Total\_Medical\_Expenses**

**FROM [Hospital].[dbo].[Hospital\_Data]**

**GROUP BY FORMAT(Admission\_Date, 'yyy-MMMM')**

**ORDER BY Month ASC;**