**30 DAYS SQL MICRO ASSIGNMENT PROJECT**

### Project – Hospital Data Analysis:

This project focuses on analyzing hospital-related data collected over a period of time. The dataset includes information about patient counts, doctor availability, admission and discharge details, department-wise distribution, and medical expenses. The purpose of this analysis is to extract useful insights that can help improve healthcare services and understand hospital performance

**Dataset Name:** hospital\_data.csv  
**Dataset Description:** The dataset contains the following fields:

* **Hospital Nam**e**:** Name of the hospital.
* **Location:** City or area where the hospital is situated.
* **Department:** Hospital department (e.g., cardiology, neurology, etc.).
* **Doctors Count:** Number of doctors available in the hospital.
* **Patients Count:** Number of patients admitted in the department.
* **Admission Date:** Date on which the patient was admitted.
* **Discharge Date:** Date on which the patient was discharged.
* **Medical Expense**s**:** Cost of treatment per patient.

### ****Table Name :**** hospital\_data

### ****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\_patients

FROM hospital\_data;

### ****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\_doctors\_per\_hospital

FROM hospital\_data

GROUP BY Hospital\_name;

### ****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, COUNT(Patients\_count) AS Patients\_count

FROM hospital\_data

GROUP BY Department

ORDER BY Patients\_count 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 total\_expenses

FROM hospital\_data

GROUP BY Hospital\_name

ORDER BY total\_expenses DESC

LIMIT 1;

### 5. ****Daily Average Medical Expenses****

Calculate the average medical expenses per day for each hospital.

**Answer:**

SELECT Hospital\_name, AVG(Medical\_expenses) AS daily\_avg\_expenses

FROM hospital\_data

GROUP BY Hospital\_name;

### ****Longest Hospital Stay****

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

Answer:

SELECT Patients\_count, DATEDIFF(Discharge\_date, Admission\_date) AS stay\_length

FROM hospital\_data

ORDER BY stay\_length DESC

LIMIT 1;

### ****Total Patients Treated Per City****

Count the total number of patients treated in each city.

**Answer:**

SELECT Location, COUNT(Patients\_count) AS total\_patients

FROM hospital\_data

GROUP BY Location;

### ****Average Length of Stay Per Department****

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

**Answer:**

SELECT Department, AVG(DATEDIFF(Discharge\_date, Admission\_date)) AS AVG\_stay\_per\_dept

FROM hospital\_data

GROUP BY Department;

### ****Department with the Lowest Number of Patients****

Find the department with the least number of patients.

**Answer:**

SELECT Department, COUNT(Patients\_count) AS Patients\_count

FROM hospital\_data

GROUP BY Department

ORDER BY Patients\_count

LIMIT 1;

### ****Monthly Medical Expenses Report****

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

**Answer:**

SELECT MONTH(Admission\_date) AS month, SUM(Medical\_expenses) AS total\_expenses

FROM hospital\_data

GROUP BY MONTH(Admission\_date)

ORDER BY month;

**Prepared by:** Tanisha Maheshwari  
**Course:** 30-Day SQL Micro Course  
**Instructor:** Sir Satish Dhawale  
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