ASSIGNMENT: HOSPITAL DATA

INTRODUCTION:

This assignment focuses on analysing hospital management data using SQL queries. The data provided includes detailed records about various hospitals, their departments, doctors, patients, admission and discharge dates, and related medical expenses.
The primary objective is to demonstrate the ability to extract meaningful insights from structured data through SQL operations such as calculating durations, summarizing costs, and grouping information.

DATASET INFORMATION:

- **Hospital_ID**: A unique identification number assigned to each hospital.

- **Hospital_Name**: The name of the hospital where the treatments were conducted.

- **Location**: The city where the hospital is located.

- **Department**: The medical department (e.g., Orthopaedics, ENT, Paediatrics) handling the patients.

- **Doctors_Count**: The total number of doctors working in the respective hospital.

- **Patients_Count**: The number of patients treated during the given period.

- **Admission_Date**: The date when patients were admitted to the hospital.

- **Discharge_Date**: The date when patients were discharged from the hospital.

- **Medical_Expenses**: The total cost incurred during the patient's hospital stay.

ASSIGNMENT QUESTIONS:

\# 1. Write an SQL query to find the total number of patients across all hospitals.

- SELECT SUM(PATIENTS_COUNT) AS TOTAL_NUMBER_OF_PATIENTS
  FROM HOSPITAL_DATA;

\# 2. Retrieve the average count of doctors available in each hospital.

- SELECT HOSPITAL_NAME, AVG(DOCTORS_COUNT) AS
  AVERAGE_COUNT_OF_DOCTORS
  FROM HOSPITAL_DATA
  GROUP BY HOSPITAL_NAME;

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

- SELECT HOSPITAL_NAME, DEPARTMENT,PATIENTS_COUNT
  FROM HOSPITAL_DATA
  ORDER BY PATIENTS_COUNT DESC LIMIT 3;

4. Identify the hospital that recorded the highest medical expenses.

- SELECT HOSPITAL_NAME, MEDICAL_EXPENSES AS
  HIGHEST_MEDICAL_EXPENSES
  FROM HOSPITAL_DATA
  ORDER BY MEDICAL_EXPENSES DESC LIMIT 1;

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

- SELECT HOSPITAL_NAME, AVG(MEDICAL_EXPENSES) AS
  AVERAGE_EXPENSES_PER_DAY
  FROM HOSPITAL_DATA
  GROUP BY HOSPITAL_NAME;

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

- SELECT HOSPITAL_NAME, ADMISSION_DATE, DISCHARGE_DATE,
  COALESCE (DISCHARGE_DATE) - COALESCE (ADMISSION_DATE) AS
  STAY_DURATION
  FROM HOSPITAL_DATA
  ORDER BY STAY_DURATION DESC
  LIMIT 1;

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

- SELECT DEPARTMENT,
  AVG (COALESCE (DISCHARGE_DATE) - COALESCE (ADMISSION_DATE)) AS
  AVG_STAY_DURATION_DAYS
  FROM HOSPITAL_DATA
  GROUP BY DEPARTMENT;

9. Find the department with the least number of patients.

- SELECT DEPARTMENT, PATIENTS_COUNT
  FROM HOSPITAL_DATA
  ORDER BY PATIENTS_COUNT LIMIT 1;

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

- SELECT DATE_FORMAT(ADMISSION_DATE, '%Y-%m') AS MONTH,
  SUM (MEDICAL_EXPENSES) AS TOTAL_MEDICAL_EXPENSES
  FROM HOSPITAL_DATA
  GROUP BY MONTH
  ORDER BY MONTH;

THE END