

```
DROP TABLE IF EXISTS hospital;
```

```
CREATE TABLE hospital(  
Hospital_Name    VARCHAR (100),  
Location        VARCHAR (100),  
Department      VARCHAR (100),  
Doctors_Count   INT,  
Patients_Count  INT,  
Admission_Date  DATE,  
Discharge_Date  DATE,  
Medical_Expenses NUMERIC (10,2)  
);
```

```
SELECT * FROM hospital;
```

```
-- 1. Total Number of Patients
```

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

```
SELECT SUM(Patients_Count) AS total_patients  
FROM Hospital;
```

	total_patients bigint
1	9347

```
-- 2. Average Number of Doctors per Hospital
```

```
-- Retrieve the average count of doctors available in each hospital.
```

```
SELECT Hospital_Name,  
       AVG(Doctors_Count) AS avg_doctors_per_hospital  
FROM Hospital  
GROUP BY Hospital_Name  
ORDER BY avg_doctors_per_hospital DESC;
```

hospital_name	avg_doctors_per_hospital
Wellness Clinic	34
Green Valley Hospital	28.875
Global Medicare	28.72727273
Sunrise Medical	28.625
Metro Hospital	27.45454545
Healing Touch	25.64285714
City Hospital	24.7
Heritage Hospital	24.66666667
Fortis Care	24.54545455
Apollo Health	23.36363636

```
-- 3. Top 3 Departments with the Highest Number of Patients
```

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

```

SELECT  Department,
        SUM(Patients_Count) AS total_patients
FROM Hospital
GROUP BY Department
ORDER BY total_patients DESC
LIMIT 3;

```

department	total_patients
Urology	1766
Neurology	1229
ENT	1064

```

-- 4. Hospital with the Maximum Medical Expenses
-- Identify the hospital that recorded the highest medical expenses.

```

```

SELECT Hospital_Name, MAX(Medical_Expenses) AS max_expenses
FROM Hospital
GROUP BY Hospital_Name
ORDER BY max_expenses DESC
LIMIT 1;

```

hospital_name	medical_expenses
Healing Touch	49955.41

```

-- 5. Daily Average Medical Expenses
-- Calculate the average medical expenses per day for each hospital.

```

```

SELECT hospital_name,
        ROUND(SUM(medical_expenses)::numeric
              / NULLIF(SUM((discharge_date - admission_date) + 1), 0), 2) AS
avg_expense_per_day
FROM hospital
GROUP BY hospital_name
ORDER BY hospital_name;

```

hospital_name	avg_expense_per_day
Apollo Health	2829.95
City Hospital	3824.05
Fortis Care	3837.24
Global Medicare	3140.38
Green Valley Hospital	2316.98
Healing Touch	3062.42
Heritage Hospital	2099.99
Metro Hospital	2914.69
Sunrise Medical	3758.89
Wellness Clinic	2543.01

```

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

```

```

SELECT hospital_name,location,department,admission_date,discharge_date,
      (discharge_date - admission_date) AS stay_duration_days_exclusive, -
- like MySQL DATEDIFF
      (discharge_date - admission_date + 1) AS stay_duration_days_inclusive
FROM hospital
ORDER BY stay_duration_days_exclusive DESC
LIMIT 1;

```

hospital_name	location	department	admission_date	discharge_date	stay_duration_days_exclusive	stay_duration_days_inclusive
Apollo Health	Lucknow	ENT	06-04-2023	21-04-2023	15	16

```

-- 7. Total Patients Treated Per City
-- Count the total number of patients treated in each city.

```

```

SELECT Location AS city,
SUM(Patients_Count) AS total_patients_treated
FROM Hospital
GROUP BY Location
ORDER BY total_patients_treated DESC;

```

city	total_patients_treated
Jaipur	1505
Ahmedabad	1467
Lucknow	1264
Hyderabad	1261
Bangalore	955
Chennai	840
Kolkata	596
Pune	555
Mumbai	483
Delhi	421

```

-- 8. Average Length of Stay Per Department
-- Calculate the average number of days patients spend in each
department.

```

```

SELECT
      department,
      ROUND(AVG((discharge_date -
admission_date) + 1), 2) AS
avg_stay_days
FROM hospital
WHERE admission_date IS NOT NULL
      AND discharge_date IS NOT NULL
      AND discharge_date >=
admission_date
GROUP BY department
ORDER BY avg_stay_days DESC;

```

department	avg_stay_days
Neurology	10.25
Pediatrics	10.11
Urology	9.72
Oncology	9.11
ENT	9.08
Gynecology	8.67
General Medicine	8.43
Orthopedics	8.14
Cardiology	7.86
Dermatology	6.6

```
-- 9. Identify the Department with the Lowest Number of Patients
-- Find the department with the least number of patients.
```

```
SELECT Department,
SUM(Patients_Count) AS total_patients
FROM Hospital
GROUP BY Department
ORDER BY total_patients ASC
LIMIT 1;
```

department	total_patients
Cardiology	544

```
-- 10. Monthly Medical Expenses Report
-- Group the data by month and calculate the total medical expenses for
each month.
```

```
SELECT
    EXTRACT(YEAR FROM admission_date)::int AS year,
    EXTRACT(MONTH FROM admission_date)::int AS month,
    TO_CHAR(admission_date, 'FMMonth') AS month_name,
    SUM(medical_expenses) AS total_monthly_expenses,
    COUNT(*) AS total_admissions
FROM hospital
WHERE admission_date IS NOT NULL
GROUP BY 1,2,3
ORDER BY year, month;
```

year	month	month_name	total_monthly_expenses	total_admissions
2023	1	January	173971.54	6
2023	2	February	301722.72	10
2023	3	March	199247.42	9
2023	4	April	88995.93	5
2023	5	May	222986.72	7
2023	6	June	165926.36	10
2023	7	July	211527.13	6
2023	8	August	181039.55	7
2023	9	September	341284.23	11
2023	10	October	158450.68	7
2023	11	November	334370.33	11
2023	12	December	337788.45	11