-- Healthcare SQL Analysis

```sql
drop table if exists hospital;
create table hospital(
        Hospital_Name       varchar(40),
        Location_State      varchar(40),
        Department   varchar(40),
        Doctors_Count       int,
        Patients_Count      int,
        Admission_Date      date,
        Discharge_Date      date,
        Medical_Expenses  decimal(10,2)
);


select * from hospital;


-- Queries :-
/*1. Total Number of Patients
o 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;


/*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 avg_number_of_doctors
from hospital
group by hospital_name;


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

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

```sql
select department, sum(patients_count)as number_of_patients from hospital
group by department
order by sum(patients_count) desc  limit 3;
```

/*4. Hospital with the Maximum Medical Expenses

o Identify the hospital that recorded the highest medical expenses. */

```sql
select hospital_name, sum(medical_expenses)as highest_medical_bill from hospital
group by hospital_name
order by highest_medical_bill desc  limit 1;
```

/*5. Daily Average Medical Expenses

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

```sql
select hospital_name, avg(medical_expenses/(discharge_date - admission_date+1)) as Avg_medical_expense
from hospital
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. */

```sql
select discharge_date-admission_date+1 as Stay_Period
from hospital
order by stay_period desc
 limit 1;
```

/*7. Total Patients Treated Per City

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

```sql
select location_state as City , sum(patients_count)as Patients_treated_in_this_city
from hospital
group by location_state;
```

```sql
/*8. Average Length of Stay Per Department
o Calculate the average number of days patients spend in each department. */
select department, avg(discharge_date-admission_date+1)as Stay_length
from hospital
group by department;
```

```sql
/*9. Identify the Department with the Lowest Number of Patients
o Find the department with the least number of patients. */
select department, sum(patients_count)as Patients_admitted
from hospital
group by department
order by Patients_admitted ASC  limit 1;
```

```sql
/*10. Monthly Medical Expenses Report
• Group the data by month and calculate the total medical expenses for each month.*/
select to_char(admission_date,'YYYY-MM')as Months, sum(medical_expenses)AS Total_expense
from hospital
group by Months
order by  Months ASC;
```