```
create database hospital_data;


drop table hospital if exists;
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

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

```
SELECT SUM(Patients_Count) AS Total_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 Average_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.

```
SELECT Department, SUM(Patients_Count) AS Total_Patients
FROM Hospital
GROUP BY Department
```

```
ORDER BY Total_Patients DESC
LIMIT 3;
```

4. Hospital with the Maximum Medical Expenses

o Identify the hospital that recorded the highest medical expenses.

```
SELECT Hospital_Name, SUM(Medical_Expenses) AS Total_Expenses
FROM Hospital
GROUP BY Hospital_Name
ORDER BY Total_Expenses DESC
LIMIT 1;
```

5. Daily Average Medical Expenses

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

```
SELECT Hospital_Name, AVG(Medical_Expenses) AS Avg_Daily_Expenses
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.

```
SELECT *, ((Discharge_Date) - (Admission_Date)) AS Stay_Duration
FROM Hospital
ORDER BY Stay_Duration DESC
LIMIT 1;
```

7. Total Patients Treated Per City

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

```
SELECT Location AS City, SUM(Patients_Count) AS Total_Patients
FROM Hospital
GROUP BY Location;
```

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) AS Avg_Stay
FROM Hospital
GROUP BY Department
order by avg_stay desc ;
```

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 Total_Patients
FROM Hospital
GROUP BY Department
ORDER BY Total_Patients ASC
LIMIT 1;
```

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 month,
   SUM(medical_expenses) AS total_monthly_expenses
FROM hospital
GROUP BY month
ORDER BY month;
```