```sql
-- 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 [dbo].[Hospital_Data];



-- 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_doc_per_hospital

from [dbo].[Hospital_Data]

group by [Hospital_Name];



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

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

select top 3 [Department],[Patients_Count]

from [dbo].[Hospital_Data]

order by [Patients_Count] desc ;



4. Hospital with the Maximum Medical Expenses

Identify the hospital that recorded the highest medical expenses.

select top 1 * from [dbo].[Hospital_Data]

order by Medical_Expenses desc;



5. Daily Average Medical Expenses

 Calculate the average medical expenses per day for each hospital.

select [Hospital_Name], avg(Medical_Expenses) as Avg_medi_expense

from [dbo].[Hospital_Data]

group by [Hospital_Name];
```

```sql
-- 6. Longest Hospital Stay

-- Find the patient with the longest stay by calculating the difference between

-- Discharge Date and Admission Date.

select top 1  *,

        DATEDIFF(DAY,Admission_Date,[Discharge_Date]) as Stay

        from [dbo].[Hospital_Data]

        order by Stay desc;


-- 7.Total Patients Treated Per City

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

select [Location],sum([Patients_Count]) as Patient_count_per_city

from [dbo].[Hospital_Data]

group by [Location];


-- 8.Average Length of Stay Per Department

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


select [Department],

        avg(DATEDIFF(DAY,Admission_Date,[Discharge_Date])) as Avg_Stay

        from [dbo].[Hospital_Data]

        group by [Department];
```

-- 9. Identify the Department with the Lowest Number of Patients

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

```sql
select top 1 [Department],sum ([Patients_Count]) as Total_patient

        from [dbo].[Hospital_Data]

        group by [Department]

        order by Total_patient asc;
```


-- 10. Monthly Medical Expenses Report

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

```sql
select format(Admission_Date,'yyyy-MM') as Month,

sum([Medical_Expenses]) as Total_expense

from [dbo].[Hospital_Data]

group by format(Admission_Date,'yyyy-MM')

order by Month;
```