```sql
CREATE TABLE Hospital_data (

    Hospital_Name VARCHAR(100),

    Location VARCHAR(100),

    Department VARCHAR(100),

    Doctors_Count INT,

    Patients_Count INT,

    Admission_Date DATE,

    Discharge_Date DATE,

    Medical_Expenses DECIMAL(10, 2)

);
SELECT * FROM hospital_data;
```

---Q1)Total Number of Patients

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

```sql
SELECT * FROM hospital_data;
SELECT

        SUM(PATIENTS_COUNT) AS "Total number of patient"

FROM

        HOSPITAL_DATA;
```

--Q2). Average Number of Doctors per Hospital

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

```sql
SELECT * FROM hospital_data;


SELECT

        HOSPITAL_NAME,

        AVG(DOCTORS_COUNT) AS "Average number of doctors"

FROM

        HOSPITAL_DATA

GROUP BY
```

HOSPITAL_NAME;

---Q3)Top 3 Departments with the Highest Number of Patients

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

SELECT * FROM hospital_data;

SELECT

DEPARTMENT,

SUM(PATIENTS_COUNT) AS "Highest number of patient"

FROM

HOSPITAL_DATA

GROUP BY

DEPARTMENT

ORDER BY

SUM(PATIENTS_COUNT) DESC LIMIT

3;

---Q4)Hospital with the Maximum Medical Expenses

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

SELECT * FROM hospital_data;

SELECT

HOSPITAL_NAME,

SUM(MEDICAL_EXPENSES) AS "Highest medical expenses"

FROM

HOSPITAL_DATA

GROUP BY

HOSPITAL_NAME

ORDER BY

```
SUM(MEDICAL_EXPENSES) DESC LIMIT

1;
```

---**5)Daily Average Medical ExpensesQ**

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

```
SELECT * FROM hospital_data;

SELECT

    HOSPITAL_NAME,

    AVG(MEDICAL_EXPENSES)

FROM

    HOSPITAL_DATA

GROUP BY

    HOSPITAL_NAME

ORDER BY

    HOSPITAL_NAME;
```

---**Q6)Longest Hospital Stay**

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

---**Discharge Date and Admission Date.**

```
SELECT * FROM hospital_data;

SELECT

    HOSPITAL_NAME,

    DEPARTMENT,

    ADMISSION_DATE,

    DISCHARGE_DATE,

    (DISCHARGE_DATE - ADMISSION_DATE) AS "longest stay"

FROM

    HOSPITAL_DATA

ORDER BY

    "longest stay" DESC

LIMIT

    1;
```

---7)Total Patients Treated Per CityQ

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

SELECT * FROM hospital_data;

SELECT

      LOCATION AS "City",

      SUM(PATIENTS_COUNT) AS "Number of treated patients"

FROM

      HOSPITAL_DATA

GROUP BY

      LOCATION

ORDER BY

      "Number of treated patients" DESC;

---Q8) Average Length of Stay Per Department

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

SELECT * FROM hospital_data;

SELECT

   Department,

   ROUND(AVG(Discharge_Date - Admission_Date + 1), 2) AS Avg_Stay_Days

FROM

   Hospital_data

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;

---Q9)Identify the Department with the Lowest Number of Patients

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

```sql
SELECT * FROM hospital_data;
SELECT
        DEPARTMENT,
        SUM(PATIENTS_COUNT) AS NUMBER_OF_PATIENT_COUNT
FROM
        HOSPITAL_DATA
GROUP BY
        DEPARTMENT
ORDER BY
        NUMBER_OF_PATIENT_COUNT LIMIT
        1;
```

---Q10)Monthly Medical Expenses Report

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

```sql
SELECT * FROM hospital_data;
SELECT
        EXTRACT(
                YEAR
                FROM
                        ADMISSION_DATE
        ) AS "Year",
        EXTRACT(
                MONTH
                FROM
                        ADMISSION_DATE
        ) AS "Month",
        SUM(MEDICAL_EXPENSES) AS "Total medical expenses"
FROM
        HOSPITAL_DATA
GROUP BY
```

```
        EXTRACT(
                YEAR
                FROM
                        ADMISSION_DATE
        ),
        EXTRACT(
                MONTH
                FROM
                        ADMISSION_DATE
        )
ORDER BY
        "Year",
        "Month";
```