30 DAYS SQL MICRO COURSE Answer sheet

```
DROP TABLE IF EXISTS hospital_data;


CREATE TABLE hospital_data (
    hospital_name VARCHAR(100),
    locations VARCHAR(100),
    department VARCHAR(100),
    doctors_count INTEGER,
    patients_count INTEGER,
    admission_date DATE,
    discharge_date DATE,
    medical_expenses NUMERIC
);
SELECT *FROM
hospital_data
--path copy didn't work so used the import method(Permission Denied)


-- 1. Total Number of Patients( Write an SQL query to find the total number of patients across all hospitals)
SELECT hospital_name, SUM(patients_count) as total_sum
FROM hospital_data
group by hospital_name
ORDER BY total_sum DESC;
--if total number is needed
SELECT SUM(patients_count) as total_sum
```

```
FROM 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)

FROM 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 department, SUM(patients_count) as total_patients

FROM hospital_data

group by department

ORDER BY total_patients DESC LIMIT 3;


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

SELECT hospital_name, SUM(medical_expenses) as total_expense

   FROM hospital_data

   group by hospital_name

   ORDER BY total_expense DESC LIMIT 3;


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


SELECT

   hospital_name, AVG(medical_expenses / (discharge_date - admission_date) + 1) AS avg_daily_expenses
```

```
FROM hospital_data

GROUP BY hospital_name

ORDER BY avg_daily_expenses DESC;
```

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

```
SELECT

   hospital_name,department, ((discharge_date - admission_date) + 1) AS
avg_daily_expenses

FROM hospital_data

ORDER BY avg_daily_expenses DESC limit 1;
```

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

```
SELECT hospital_name,locations AS city, SUM(patients_count) as total_patients

   FROM hospital_data

   group by city ,hospital_name

   ORDER BY total_patients DESC;
```

(--added hospital name as extra to practice)

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

```
SELECT department, AVG((discharge_date - admission_date) + 1) AS avg_stay

FROM hospital_data

GROUP BY department;
```

--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_data
group by department
ORDER BY total_patients ASC;

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

 SELECT
    SUM(medical_expenses),
    EXTRACT(MONTH FROM admission_date) AS month_name
FROM hospital_data
GROUP BY month_name;
```