

30 Days SQL Micro Course Certificate Assignment

1. Number of Patients

```
SELECT SUM(patients_count) AS total_number_of_patients
FROM hospital_data;
```

2. Average Number of Doctors per Hospital

```
SELECT hospital_name, AVG(doctors_count) AS AVG_DOCTORS
FROM hospital_data
GROUP BY hospital_name;
```

3. Top 3 Departments with 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

```
SELECT hospital_name, location, department, medical_expenses
FROM hospital_data
ORDER BY medical_expenses DESC
LIMIT 1;
```

5. Daily Average Medical Expenses per Hospital

```
SELECT hospital_name,
       AVG(
         medical_expenses / NULLIF(
           (TO_DATE(discharge_date, 'DD-MM-YYYY') - TO_DATE(admission_date, 'DD-MM-YYYY') + 1),
           0
         )
       ) AS daily_avg_expenses
FROM hospital_data
GROUP BY hospital_name;
```

6. Longest Hospital Stay

```
SELECT hospital_name,
       (TO_DATE(discharge_date, 'DD-MM-YYYY') - TO_DATE(admission_date, 'DD-MM-YYYY') + 1) AS total_days_stayed
FROM hospital_data
ORDER BY total_days_stayed DESC;
```

7. Total Patients Treated Per City

```
SELECT location, SUM(patients_count) AS TOTAL_PATIENT_COUNT
FROM hospital_data
GROUP BY location
ORDER BY TOTAL_PATIENT_COUNT DESC;
```

7b. Total Patients Treated Per City and Hospital

```
SELECT location, hospital_name, SUM(patients_count) AS total_patient_count
FROM hospital_data
GROUP BY location, hospital_name;
```

8. Average Length of Stay Per Department

```
SELECT department, ROUND(AVG(total_days_stayed),3) AS avg_total_days_stayed
FROM(
    SELECT department,
        (TO_DATE(discharge_date,'DD-MM-YYYY') - TO_DATE(admission_date,'DD-MM-
YYYY')+1) AS total_days_stayed
    FROM hospital_data
) AS t
GROUP BY department
ORDER BY avg_total_days_stayed DESC;
```

9. Identify the Department with the Lowest Number of Patients

```
SELECT department, SUM(patients_count) AS TOTAL_PATIENTS
FROM hospital_data
GROUP BY department
ORDER BY TOTAL_PATIENTS ASC
LIMIT 1;
```

10. Monthly Medical Expenses Report

```
SELECT TO_CHAR(TO_DATE(admission_date, 'DD-MM-YYYY'), 'YYYY-MM') AS month,
    SUM(medical_expenses) AS total_expenses
FROM hospital_data
GROUP BY TO_CHAR(TO_DATE(admission_date, 'DD-MM-YYYY'), 'YYYY-MM')
ORDER BY month;
```