## 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;