30 Days SQL Micro Course Certificate Assignment

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

```
select count(*)as total_patients from hospital_data2;
```

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

```
SELECT `Hospital_Name`, AVG(`Doctors Count`) AS avg_doctors
FROM hospital_data2
GROUP BY `Hospital_Name`;
```

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

```
select  Department,SUM(`No_of_patients`)AS total_patients
from hospital_data2
group by Department
order by  total_patients  desc
limit 3;
```

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

```
select `Hospital_Name`, `Medical Expenses`
from hospital_data2
where `Medical Expenses`=(
                        select max(`Medical Expenses`)
                        from hospital_data2
    );
```

5.Calculate the average medical expenses per day for each hospital.

```
SELECT
`Hospital_Name`,
AVG(`Medical Expenses` / DATEDIFF(STR_TO_DATE(`Discharge Date`, '%d-%m-%Y'),
                    STR_TO_DATE(`Admission Date`, '%d-%m-%Y')))
AS avg_expenses_per_day
FROM hospital_data2
WHERE `Discharge Date` IS NOT NULL
 AND `Admission Date` IS NOT NULL
 AND DATEDIFF(STR_TO_DATE(`Discharge Date`, '%d-%m-%Y'), STR_TO_DATE(`Admission Date`, '%d-%m-%Y')) > 0
GROUP BY `Hospital_Name`;
```

6.Find the patient with the longest stay by calculating the difference between

Discharge Date and Admission Date.

```
select 'Hospital_Name',Department,`Admission Date`,`Discharge Date`,
DATEDIFF(STR_TO_DATE(`Discharge Date`, '%d-%m-%Y'), STR_TO_DATE(`Admission Date`, '%d-%m-%Y'))as stay_length
from hospital_data2
where  `Discharge Date` IS NOT NULL
and `Admission Date` IS NOT NULL
order by stay_length desc
limit 1;
```

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

```
Select `Location`, SUM(`No_Of_patients`) AS total_patients
from hospital_data2
Group by `Location`
Order by total_patients DESC;
```

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

```
  Select
   Department,
   AVG(DATEDIFF(
      STR_TO_DATE(`Discharge Date`, '%d-%m-%Y'),
      STR_TO_DATE(`Admission Date`, '%d-%m-%Y')
   )) AS avg_stay_days
From hospital_data2
Where `Discharge Date` IS NOT NULL
 And `Admission Date` IS NOT NULL
 And DATEDIFF(
      STR_TO_DATE(`Discharge Date`, '%d-%m-%Y'),
      STR_TO_DATE(`Admission Date`, '%d-%m-%Y')
    ) > 0
Group By Department
Order By avg_stay_days DESC;
```

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

```
Select Department, SUM(`No_Of_Patients`) AS total_patients
From hospital_data2
Group by Department
```

```
Order by total_patients ASC
Limit 1;
```

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

```
Select
   DATE_FORMAT(STR_TO_DATE(`Admission Date`, '%d-%m-%Y'), '%m') AS month,
   SUM(`Medical Expenses`) AS total_expenses
From hospital_data2
Where `Admission Date` IS NOT NULL
Group by month
Order by month;
```