

```
use sql_project;
```

```
select *
```

```
from hospital_data1;
```

```
ALTER TABLE hospital_data1
```

```
CHANGE COLUMN `Hospital_Name` Hospital_Name Text;
```

-- 1) Write an SQL query to find the total number of patients across all hospitals ?

```
select count(Patients_count)
```

```
from hospital_data1;
```

-- 2) Retrieve the average count of doctors available in each hospital ?

```
select Hospital_Name,avg(Doctors_count) as average_dectors
```

```
from hospital_data1
```

```
group by Hospital_Name;
```

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

```
select Department,Patients_count
```

```
from hospital_data1
```

```
order by Patients_count desc
```

```
limit 3;
```

-- 4) Identify the hospital that recorded the highest medical expenses?

```
SELECT
```

```
    Hospital_Name,Medical_Expenses
```

```
FROM
```

hospital_data1

WHERE

```
Medical_Expenses = (SELECT
    MAX(Medical_Expenses)
FROM
    hospital_data1);
```

-- 5) Calculate the average medical expenses per day for each hospital

SELECT

```
Hospital_Name,
    AVG(Medical_Expenses / DATEDIFF(Discharge_date, Admission_Date)) AS
per_day_average_medical_expenses
FROM
    hospital_data1
GROUP BY Hospital_Name;
```

-- 6) Find the patient with the longest stay by calculating the difference between
-- Discharge Date and Admission Date ?

```
SELECT Patients_Count, Admission_Date, Discharge_Date,
    DATEDIFF(Discharge_Date, Admission_Date) AS Stay_Duration_Days
FROM hospital_data1
ORDER BY Stay_Duration_Days DESC
LIMIT 1;
```

-- 7) Count the total number of patients treated in each city ?

```
select Location,sum(Patients_count) as Patients_count_in_each_city
from hospital_data1
group by Location;
```

-- 8) Calculate the average number of days patients spend in each department ?

```
select Department,avg(DATEDIFF(Discharge_Date, Admission_Date)) as Avg_Stay_Duration
from hospital_data1
group by Department;
```

-- 9) Find the department with the least number of patients ?

```
SELECT Department, COUNT(Patients_Count) AS Total_Patients
FROM hospital_data1
GROUP BY Department
LIMIT 1;
```

-- 10) Group the data by month and calculate the total medical expenses for each month ?

```
SELECT
    DATE_FORMAT(Admission_Date, '%Y-%m') AS Month,
    SUM(Medical_Expenses) AS Total_Expenses
FROM hospital_data1
GROUP BY Month
ORDER BY Month;
```

