Hospital Analysis on SQL

--Creating database

```
CREATE DATABASE Hospital;
```

--Go to database

```
\c Hospital;
```

```
--Changing datestyle
SHOW DATESTYLE;
SET DATESTYLE TO 'DMY';
```

--Creating the table

```
DROP TABLE IF EXISTS Details;
CREATE TABLE Details(
                    hospital_id SERIAL PRIMARY KEY,
                    Hospital_Name VARCHAR(60),
                    Hospital_Location VARCHAR(20),
                    Department VARCHAR(20),
                    Doctors_Count INTEGER,
                    Patients_Count INTEGER,
                    Admission_Date DATE,
                    Discharge_Date DATE,
                    Medical_Expenses NUMERIC(10,2)
);
```

--Checking the data

```
SELECT * FROM Details;
```

--Importing Data

```
COPY Details(Hospital_Name, Hospital_Location, Department, Doctors_Count, Patients_Count,
        Admission_Date, Discharge_Date, Medical_Expenses)
FROM 'D:\PROGRAMMING\DATA SCIENCE\DATA ANALYTICS\SQL\Project\Hospital\Hospital_Data.csv'
CSV HEADER;
```

--QUERY QUESTIONS

-- 1. Total Number of Patients

```
SELECT SUM(patients_count) AS total_patients
FROM Details;
```

-- 2. Average Number of Doctors per Hospital

```
SELECT AVG(doctors_count) AS avg_doctors
FROM Details;
```

-- 3. Top 3 Departments with the Highest Number of Patients

```
SELECT department, SUM(patients_count) AS patients
FROM Details
GROUP BY department
ORDER BY patients DESC
LIMIT 3;
```

-- 4. Hospital with the Maximum Medical Expenses

```
SELECT hospital_id, hospital_name, SUM(medical_expenses) AS max_medical_expense
FROM Details
GROUP BY hospital_id
ORDER BY max_medical_expense DESC
LIMIT 1;
```

-- 5. Daily Average Medical Expenses

```
SELECT admission_date,AVG(medical_expenses) AS avg_expense
FROM Details
GROUP BY admission_date
ORDER BY admission_date;
```

-- 6. Longest Hospital Stay

```
SELECT admission_date, discharge_date, AGE(discharge_date, admission_date) AS longest_stay
FROM Details
ORDER BY longest_stay DESC
```

```
LIMIT 100;

-- 7. Total Patients Treated Per City

SELECT hospital_location, SUM(patients_count) AS total_patients

FROM Details

GROUP BY hospital_location;

-- 8. Average Length of Stay Per Department

SELECT department, AVG(AGE(discharge_date ,admission_date))

FROM Details

GROUP BY department;

-- 9. Identify the Department with the Lowest Number of Patients

SELECT department, SUM(patients_count) AS patients

FROM Details

GROUP BY department

ORDER BY patients

LIMIT 1;

-- 10.Monthly Medical Expenses Report

SELECT admission_date, EXTRACT(MONTH FROM admission_date) AS extracted_month, SUM(medical_expenses) AS avg_expense

FROM Details

GROUP BY admission_date

ORDER BY extracted_month;

SELECT EXTRACT(MONTH FROM admission_date) AS extracted_month, SUM(medical_expenses) AS avg_expense

FROM Details

GROUP BY extracted_month

ORDER BY extracted_month;

-- Created by VIEVK SAHU

-- Project link:-" https:/github.com/VIVEKSAHU-06/Data-Analysis/tree/602d17c5bd0a6d99eebd1101d40c114537873015/SQL/Hospital%20Analysis"
```