```
CREATE DATABASE HOSPITAL;

DROP TABLE IF EXISTS Hospital_Data;

CREATE TABLE HOSPITAL_DATA (

        HOSPITAL_NAME VARCHAR(100),

        LOCATION VARCHAR(50),

        DEPARTMENT VARCHAR(50),

        DOCTORS_COUNT INT,

        PATIENTS_COUNT INT,

        ADMISSION_DATE DATE,

        DISCHARGE_DATE DATE,

        MEDICAL_EXPENSES NUMERIC(12, 2)

);
```

--Importing Hospital Data into SQL Table

```
COPY HOSPITAL_DATA (HOSPITAL_NAME, LOCATION, DEPARTMENT, DOCTORS_COUNT, PATIENTS_COUNT,

        ADMISSION_DATE, DISCHARGE_DATE,

        MEDICAL_EXPENSES)

FROM 'D:\DATA ANALYST LEARNING\hospital_data .csv'

DELIMITER ','

CSV HEADER;
```

SELECT * FROM hospital_data;

--Updating invalid values to NULL

```
UPDATE hospital_data

SET doctors_count = NULL

WHERE doctors_count !~ '^[0-9]+$';
```

--Changing data types

```
ALTER TABLE hospital_data

ALTER COLUMN doctors_count TYPE INT

USING doctors_count::INT;
```

```
ALTER TABLE hospital_data
```

```
ALTER COLUMN patients_count TYPE INT

USING patients_count::INT;


ALTER TABLE hospital_data

ALTER COLUMN admission_date TYPE DATE

USING admission_date::DATE;


ALTER TABLE hospital_data

ALTER COLUMN discharge_date TYPE DATE

USING discharge_date::DATE;
```

--Assignment question

--Q1. Total Number of Patients.

```
SELECT SUM(PATIENTS_COUNT) AS TOTAL_PATIENTS

FROM HOSPITAL_DATA;
```

--Q2. Average Number of Doctors per Hospital.

```
SELECT AVG(DOCTORS_COUNT) AS AVG_DOCTORS_PER_HOSPITAL

FROM HOSPITAL_DATA;
```

--Q3. Top 3 Departments with the Highest Number of Patients.

```
SELECT DEPARTMENT, COUNT(*) AS PATIENTS_COUNT

FROM HOSPITAL_DATA

GROUP BY DEPARTMENT

ORDER BY PATIENTS_COUNT DESC

LIMIT 3;
```

--Q4. Hospital with the Maximum Medical Expenses.

```
SELECT HOSPITAL_NAME, SUM(MEDICAL_EXPENSES) AS TOTAL_EXPENSES

FROM HOSPITAL_DATA

GROUP BY HOSPITAL_NAME

ORDER BY TOTAL_EXPENSES DESC

LIMIT 1;
```

--Q5. Daily Average Medical Expenses.

```
SELECT ADMISSION_DATE, AVG(MEDICAL_EXPENSES) AS AVG_DAILY_EXPENSES

FROM HOSPITAL_DATA
```

GROUP BY ADMISSION_DATE

ORDER BY ADMISSION_DATE;

--Q6. Longest Hospital Stay.

SELECT HOSPITAL_NAME, DEPARTMENT, LOCATION, (DISCHARGE_DATE - ADMISSION_DATE) AS STAY_DAYS

FROM HOSPITAL_DATA

ORDER BY STAY_DAYS DESC

LIMIT 1;

--Q7. Total Patients Treated Per City.

SELECT LOCATION, SUM(PATIENTS_COUNT) AS TOTAL_PATIENTS

FROM HOSPITAL_DATA

GROUP BY LOCATION

ORDER BY TOTAL_PATIENTS DESC;

--Q8. Average Length of Stay Per Department.

SELECT DEPARTMENT, AVG(DISCHARGE_DATE - ADMISSION_DATE) AS AVG_STAY_DAYS

FROM HOSPITAL_DATA

GROUP BY DEPARTMENT

ORDER BY AVG_STAY_DAYS DESC;

--Q9. 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;

--Q10. Monthly Medical Expenses Report .

SELECT DATE_TRUNC('month', ADMISSION_DATE) AS MONTH,

        SUM(MEDICAL_EXPENSES) AS TOTAL_EXPENSES

FROM HOSPITAL_DATA

GROUP BY MONTH

ORDER BY MONTH;