

SQL Statements for the dataset

Database Schema for the dataset:

```
CREATE TABLE PROVIDER_INFO(  
Federal_Provider_Number varchar(50) PRIMARY KEY,  
Provider_Name varchar(200),  
Provider_Address varchar(200),  
Provider_City varchar(100),  
Provider_State varchar(5),  
Provider_Zip_Code integer,  
Provider_Phone_Number bigint,  
Provider_SSA_County integer,  
Provider_County_Name varchar(50),  
Ownership_Type varchar(38),  
Number_of_Certified_Beds integer,  
Average_Number_of_Residents_Per_Day DECIMAL(10,5),  
Provider_Type varchar(21),  
Provider_Resides_in_Hospital varchar(5),  
Legal_Business_Name varchar(200),  
Date_First_Approved_to_Provide_Medicare_and_Medicaid_services DATE,  
Continuing_Care_Retirement_Community varchar(5),  
Special_Focus_Status varchar(20),  
Abuse_Icon varchar(5),  
Most_Recent_Health_Inspection_More_Than_2_Years_Ago varchar(5),  
Provider_Changed_Ownership_in_Last_12_Months varchar(5),  
With_a_Resident_and_Family_Council varchar(30),  
Automatic_Sprinkler_Systems_in_All_Required_Areas varchar(10),  
Overall_Rating integer,  
Overall_Rating_Footnote integer,
```

Health_Inspection_Rating integer,
Health_Inspection_Rating_Footnote integer,
QM_Rating integer,
QM_Rating_Footnote integer,
Long_Stay_QM_Rating integer,
Long_Stay_QM_Rating_Footnote integer,
Short_Stay_QM_Rating integer,
Short_Stay_QM_Rating_Footnote integer,
Staffing_Rating integer,
Staffing_Rating_Footnote integer,
RN_Staffing_Rating integer,
RN_Staffing_Rating_Footnote integer,
Reported_Staffing_Footnote integer,
Physical_Therapist_Staffing_Footnote integer,
Reported_Nurse_Aide_Staffing_Hours_per_Resident_per_Day DECIMAL(10, 5),
Reported_LPN_Staffing_Hours_per_Resident_per_Day DECIMAL(10, 5),
Reported_RN_Staffing_Hours_per_Resident_per_Day DECIMAL(10, 5),
Reported_Licensed_Staffing_Hours_per_Resident_per_Day DECIMAL(10, 5),
Reported_Total_Nurse_Staffing_Hours_per_Resident_per_Day DECIMAL(10, 5),
Reported_Physical_Therapist_Staffing_Hours_per_Resident_Per_Day DECIMAL(10, 5),
Case_Mix_Nurse_Aide_Staffing_Hours_per_Resident_per_Day DECIMAL(10, 5),
Case_Mix_LPN_Staffing_Hours_per_Resident_per_Day DECIMAL(10, 5),
Case_Mix_RN_Staffing_Hours_per_Resident_per_Day DECIMAL(10, 5),
Case_Mix_Total_Nurse_Staffing_Hours_per_Resident_per_Day DECIMAL(10, 5),
Adjusted_Nurse_Aide_Staffing_Hours_per_Resident_per_Day DECIMAL(10, 5),
Adjusted_LPN_Staffing_Hours_per_Resident_per_Day DECIMAL(10, 5),
Adjusted_RN_Staffing_Hours_per_Resident_per_Day DECIMAL(10, 5),
Adjusted_Total_Nurse_Staffing_Hours_per_Resident_per_Day DECIMAL(10, 5),
Rating_Cycle_1_Standard_Survey_Health_Date DATE,

Rating_Cycle_1_Total_Number_of_Health_Deficiencies integer,
Rating_Cycle_1_Number_of_Standard_Health_Deficiencies integer,
Rating_Cycle_1_Number_of_Complaint_Health_Deficiencies integer,
Rating_Cycle_1_Health_Deficiency_Score integer,
Rating_Cycle_1_Number_of_Health_Revisits integer,
Rating_Cycle_1_Health_Revisit_Score integer,
Rating_Cycle_1_Total_Health_Score integer,
Rating_Cycle_2_Standard_Health_Survey_Date DATE,
Rating_Cycle_2_Total_Number_of_Health_Deficiencies integer,
Rating_Cycle_2_Number_of_Standard_Health_Deficiencies integer,
Rating_Cycle_2_Number_of_Complaint_Health_Deficiencies integer,
Rating_Cycle_2_Health_Deficiency_Score integer,
Rating_Cycle_2_Number_of_Health_Revisits integer,
Rating_Cycle_2_Health_Revisit_Score integer,
Rating_Cycle_2_Total_Health_Score integer,
Rating_Cycle_3_Standard_Health_Survey_Date DATE,
Rating_Cycle_3_Total_Number_of_Health_Deficiencies integer,
Rating_Cycle_3_Number_of_Standard_Health_Deficiencies integer,
Rating_Cycle_3_Number_of_Complaint_Health_Deficiencies integer,
Rating_Cycle_3_Number_of_Health_Revisits integer,
Rating_Cycle_3_Health_Deficiency_Score integer,
Rating_Cycle_3_Health_Revisit_Score integer,
Rating_Cycle_3_Total_Health_Score integer,
Total_Weighted_Health_Survey_Score DECIMAL(10,5),
Number_of_Facility_Reported_Incidents integer,
Number_of_Substantiated_Complaints integer,
Number_of_Fines integer,
Total_Amount_of_Fines_in_Dollars integer,
Number_of_Payment_Denials integer,

Total_Number_of_Penalties integer,

Location_address varchar(300),

Processing_Date DATE);

Several basic SQL-based queries of the dataset

Query 1: Inserting a row into the created table.

```
INSERT INTO PROVIDER_INFO values (
  '1541009','CAMI MANOR','670 HUGH RD','ANDALUSIA','AL','36420','3342224544',190,'FARMINGTON','For profit - Corporation',154,
  130.1,'Medicare and Medicaid','FALSE','CAMI MANOR LLC','4/17/1991','FALSE','','FALSE','FALSE',
  'FALSE','Resident','Yes',3,1,2,5,3,6,2,7,5,8,4,9,4,10,11,12,
  2.43207,0.97621,0.6759,1.65212,4.08418,0.03002,1.88717,0.68967,
  0.33241,2.90924,2.67843,1.06436,0.76532,4.50172,
  '10/17/2019',2,2,0,20,1,0,20,'10/12/2018',7,7,2,40,1,0,40,
  '2/23/2018',11,11,4,1,44,0,44,30.667,1,2,0,0,0,
  0,'MARINE ROAD, AL 36420 (31.282419, -86.497781)',
  '4/1/2020');
```

Result:

Data Output	Explain	Messages	History
Query returned successfully: one row affected, 14 msec execution time.			

Query 2: Display the Provider State and the sum of Overall Ratings for each state in the descending order.

```
SELECT    Provider_State, SUM(Overall_Rating)
FROM      PROVIDER_INFO
GROUP BY  Provider_State
ORDER BY  SUM(Overall_Rating) DESC;
```

Result:

	provider_state character varying(5)	sum bigint
1	CA	4035
2	TX	3087
3	OH	2947
4	FL	2376
5	PA	2224
6	IL	2158
7	NY	2009
8	IN	1620
9	MO	1516
10	MI	1501
11	IA	1434
12	MN	1317
13	NJ	1317

Query 3: Display the federal provider number, provider name, provider address and provider state for all the nursing homes with total number of penalties equal to 8 using a nested query.

```
SELECT Federal_Provider_Number, Provider_Name, Provider_Address, Provider_State
FROM PROVIDER_INFO
WHERE Federal_Provider_Number IN (SELECT Federal_Provider_Number
FROM PROVIDER_INFO
WHERE Total_Number_of_Penalties = 8)
```

Result:

	federal_provider_number character varying(50)	provider_name character varying(200)	provider_address character varying(200)	provider_state character varying(5)
1	285238	KEYSTONE RIDGE POST ACUTE NURSING AND REHAB	7501 KEYSTONE DRIVE	NE
2	235343	KITH HAVEN	G 1069 BALLENGER HWY	MI
3	175180	OVERLAND PARK REHABILITATION AND HEALTHCARE	5211 W 103RD STREET	KS
4	235600	MEDILODGE OF MONTROSE INC	9317 W VIENNA RD	MI
5	165161	TOUCHSTONE HEALTHCARE COMMUNITY	1800 INDIAN HILLS DRIVE	IA
6	375206	LINDSAY NURSING & REHAB	1103 WEST CHEROKEE	OK

Query 4: Display the Provider Name, Provider Address, Provider State in the decreasing order of Provider Name followed by increasing order of Provider Address.

```
SELECT Provider_Name, Provider_Address, Provider_State FROM PROVIDER_INFO
ORDER BY Provider_Name ASC, Provider_Address DESC;
```

Result:

Data Output	Explain	Messages	History
	provider_name character varying(200)	provider_address character varying(200)	provider_state character varying(5)
1	15 CRAIGSIDE	15 CRAIGSIDE PLACE	HI
2	60 WEST	60 WEST STREET	CT
3	AARON MANOR NURSING & REHABILITATION	3 SOUTH WIG HILL RD	CT
4	AARON MANOR REHABILITATION AND NURSING CENTER	100 ST CAMILLUS WAY	NY
5	AASE HAUGEN HOME	FOUR OHIO STREET	IA
6	ABBEVILLE NURSING HOME, INC.	83 THOMSON CIRCLE	SC
7	ABBAY DELRAY	2105 SW 11TH COURT	FL
8	ABBAY DELRAY SOUTH	1717 HOMEWOOD BLVD	FL
9	ABBAY REHABILITATION AND NURSING CENTER	7101 DR MARTIN LUTHER KING JR ST N	FL
10	ABBAY SENIOR HEALTH	206 NORTH MAIN STREET	MO
11	ABBAY WOODS CENTER FOR REHABILITATION AND HEALING	5026 FARAON ST	MO
12	ABBIEJEAN RUSSELL CARE CENTER LLC	700 S 29TH STREET	FL
13	ABBINGTON REHAB & NURSING CTR	31 WEST CENTRAL	IL

Query 5: Increase the number of fines by one, for the nursing homes whose total number of penalties are greater than 9. Display the relevant records before and after the update. Use a nested query to perform the update operation.

5.1

```
SELECT Total_Number_of_Penalties, Number_of_Fines, Federal_Provider_Number FROM PROVIDER_INFO
WHERE Total_Number_of_Penalties > 9
```

5.2

```
UPDATE PROVIDER_INFO
SET Number_of_Fines = Number_of_Fines + 1
WHERE Federal_Provider_Number IN (SELECT Federal_Provider_Number FROM PROVIDER_INFO
WHERE Total_Number_of_Penalties > 9);
```

5.3

```
SELECT Total_Number_of_Penalties, Number_of_Fines, Federal_Provider_Number FROM PROVIDER_INFO
WHERE Total_Number_of_Penalties > 9
```

Result:

Result 5.1:

	total_number_of_penalties integer	number_of_fines integer	federal_provider_number character varying(50)
1	10	10	235249

Result 5.2:

Query returned successfully: one row affected, 115 msec execution time.

Result 5.3:

	total_number_of_penalties integer	number_of_fines integer	federal_provider_number character varying(50)
1	10	11	235249