**PRSQ-01-Medical Data History**

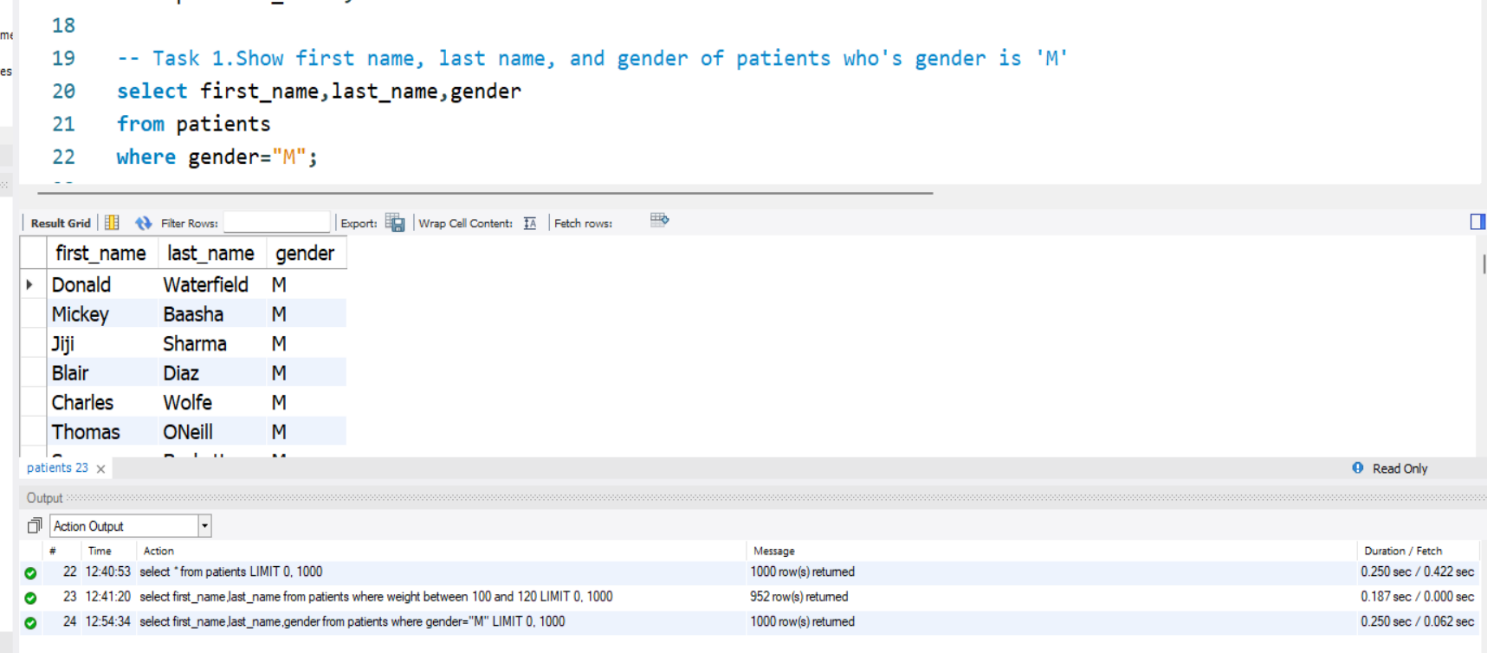
**Solutions To The Problem Queries:**

1. Show first name, last name, and gender of patients who's gender is 'M'

Ans :select first\_name,last\_name,gender

from patients

where gender="M";



2. Show first name and last name of patients who does not have allergies.

Ans: select first\_name,last\_name

from patients

where allergies is null;

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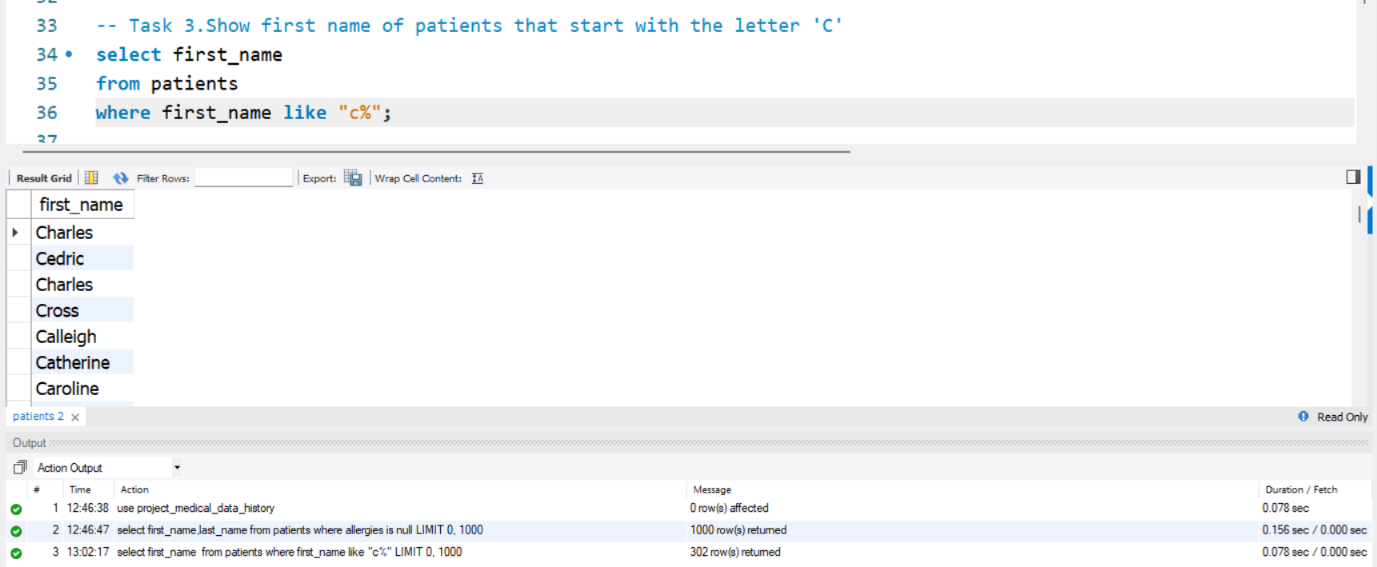
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3. Show first name of patients that start with the letter 'C'

Ans: select first\_name

from patients

where first\_name like "c%";



4. Show first name and last name of patients that weight within the range of 100 to 120 (inclusive)

Ans: select first\_name,last\_name

from patients

where weight between 100 and 120;



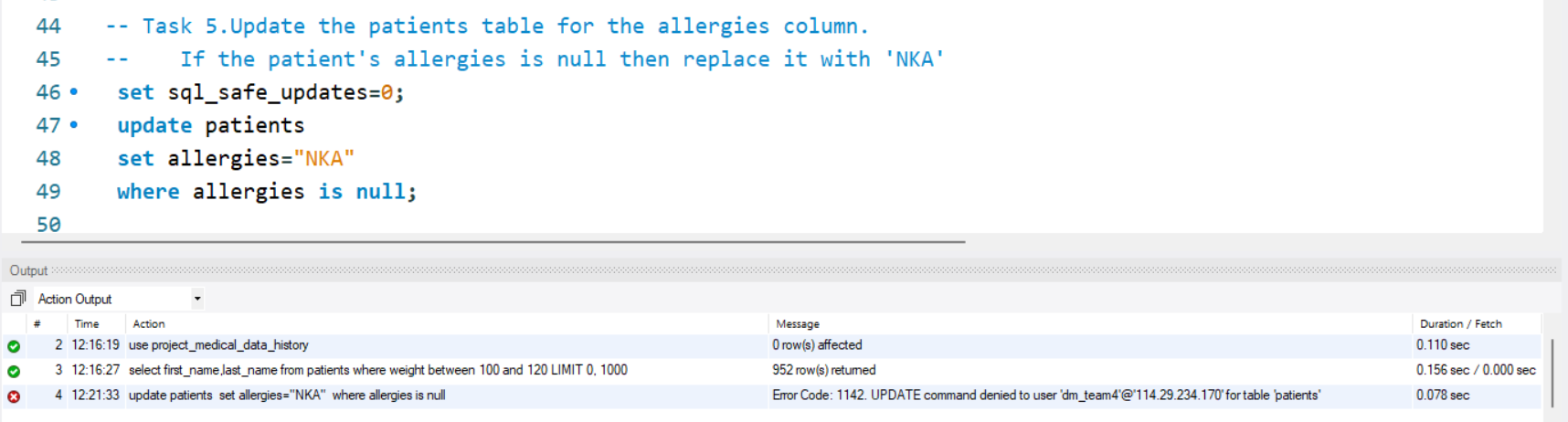
5. Update the patients table for the allergies column. If the patient's allergies is null then replace it with 'NKA'

Ans: set sql\_safe\_updates=0;

update patients

set allergies="NKA"

where allergies is null;



6. Show first name and last name concatenated into one column to show their full name.

Ans: select concat(first\_name,' ',last\_name)as full\_name

from patients;

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7. Show first name, last name, and the full province name of each patient.

Ans: select p.first\_name,p.last\_name,pr.province\_name

from patients as p

inner join province\_names as pr

on p.province\_id=pr.province\_id;

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8. Show how many patients have a birth\_date with 2010 as the birth year.

Ans: select count(\*) as Total\_Patients

from patients

where year(birth\_date)=2010 ;

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9. Show the first\_name, last\_name, and height of the patient with the greatest height.

Ans: select first\_name,last\_name,height

from patients

order by height desc

limit 1;

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10. Show all columns for patients who have one of the following patient\_ids: 1,45,534,879,1000

Ans: select \* from patients

where patient\_id in (1,45,534,879,1000);

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11. Show the total number of admissions

Ans: select count(\*) as Total\_admission

from admissions;

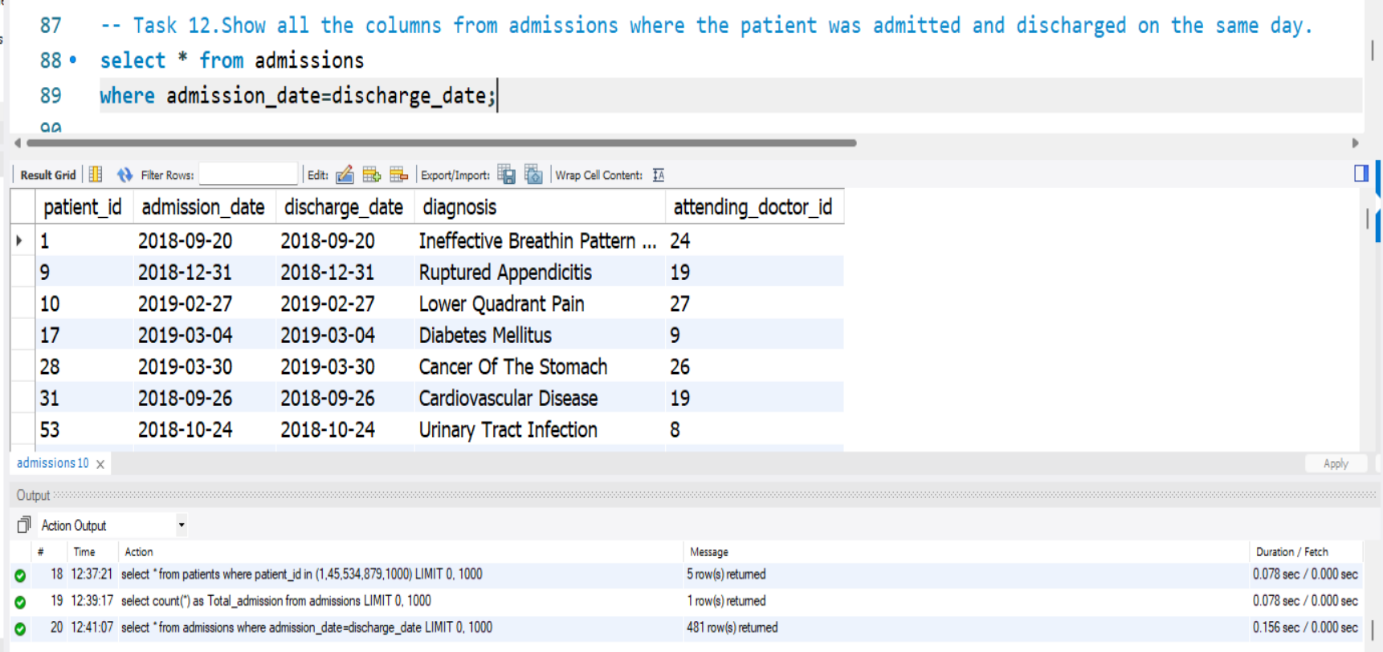
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12. Show all the columns from admissions where the patient was admitted and discharged on the same day.

Ans: select \* from admissions

where admission\_date=discharge\_date;



13. Show the total number of admissions for patient\_id 579.

Ans: select count(\*) as Total\_admission

from admissions

where patient\_id=579;

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14. Based on the cities that our patients live in, show unique cities that are in province\_id 'NS'?

Ans: select distinct city from patients

where province\_id="NS";

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AI-generated content may be incorrect.15. Write a query to find the first\_name, last name and birth date of patients who have height more than 160 and weight more than 70

Ans: select first\_name,last\_name,birth\_date

from patients

where height > 160 and weight > 70;

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16. Show unique birth years from patients and order them by ascending.

Ans: select distinct year(birth\_date) as birth\_year

from patients

order by birth\_year;

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17. Show unique first names from the patients table which only occurs once in the list.

For example, if two or more people are named 'John' in the first\_name column then don't include their name in the output list. If only 1 person is named 'Leo' then include them in the output. Tip: HAVING clause was added to SQL because the WHERE keyword cannot be used with aggregate functions.

Ans: select first\_name

from patients

group by first\_name

having count(first\_name)=1;

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18.Show patient\_id and first\_name from patients where their first\_name start and ends with 's' and is at least 6 characters long.

Ans: select first\_name,patient\_id

from patients

where first\_name like "s%s" and length(first\_name)>=6;

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19. Show patient\_id, first\_name, last\_name from patients whos diagnosis is 'Dementia'.   Primary diagnosis is stored in the admissions table.

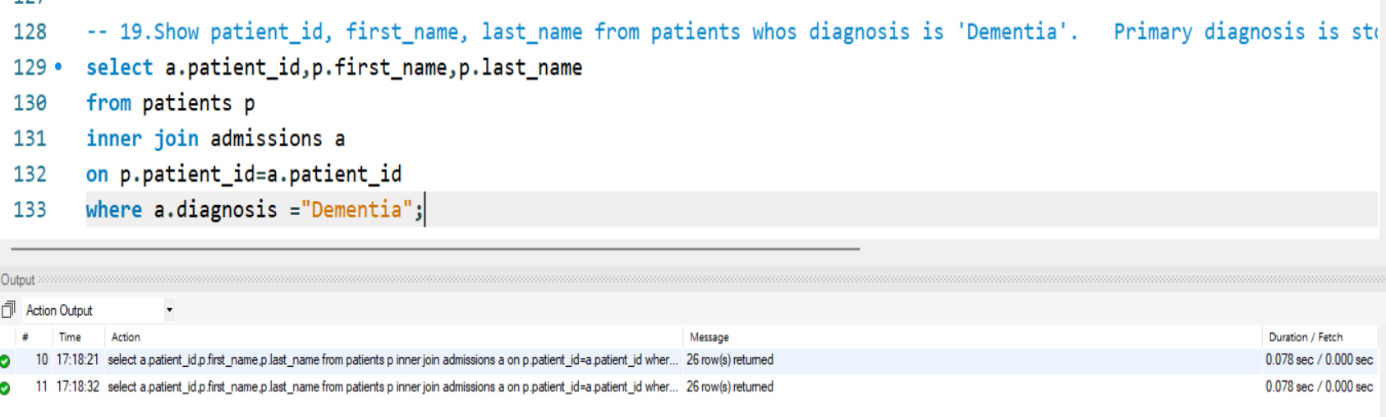
Ans: select a.patient\_id,p.first\_name,p.last\_name

From patients p

inner join admissions a

on p.patient\_id=a.patient\_id

where a.diagnosis ="Dementia";



20. Display every patient's first\_name. Order the list by the length of each name and then by alphbetically.

Ans: select first\_name

from patients

order by length(first\_name) asc ,first\_name;

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21. Show the total amount of male patients and the total amount of female patients in the patients table. Display the two results in the same row.

Ans: select

sum(case when gender="m" then 1 else 0 end) as male\_patients,

sum(case when gender="f" then 1 else 0 end) as female\_patients

from patients;

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23. Show patient\_id, diagnosis from admissions. Find patients admitted multiple times for the same diagnosis.

Ans: select patient\_id,diagnosis,count(\*) as patients\_admitted\_mul\_times

from admissions

group by patient\_id,diagnosis

having count(\*)>1;

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24. Show the city and the total number of patients in the city. Order from most to least patients and then by city name ascending.

Ans: select city,count(\*) as total\_patients

from patients

group by city

order by total\_patients desc,city asc;

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25. Show first name, last name and role of every person that is either patient or doctor.    The roles are either "Patient" or "Doctor"

Ans: select first\_name,last\_name,"patient" as role from patients

union all

select first\_name,last\_name,"Doctor" as role from doctors;

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26. Show all allergies ordered by popularity. Remove NULL values from query.

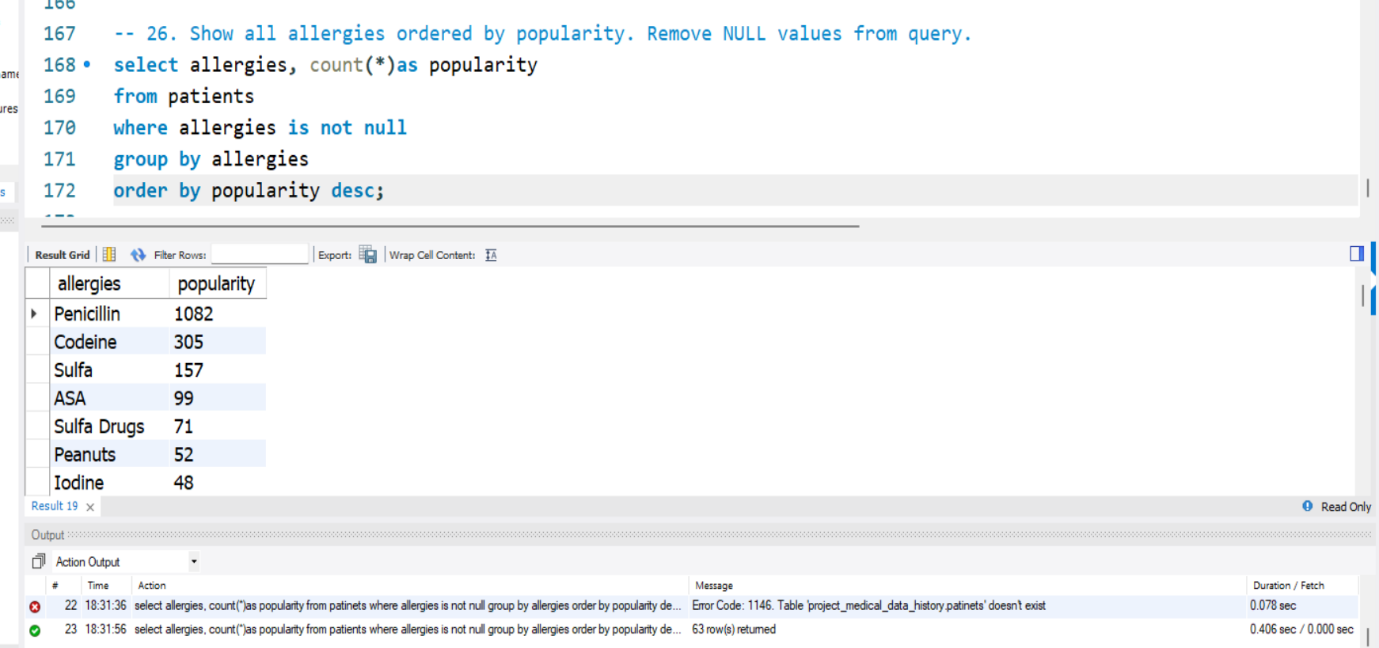
Ans: select allergies, count(\*)as popularity

from patients

where allergies is not null

group by allergies

order by popularity desc;



27. Show all patient's first\_name, last\_name, and birth\_date who were born in the 1970s decade. Sort the list starting from the earliest birth\_date.

Ans: select first\_name,last\_name,birth\_date

from patients

where year(birth\_date) between 1970 and 1979

order by birth\_date asc;

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28. We want to display each patient's full name in a single column. Their last\_name in all upper letters must appear first, then first\_name in all lower case letters. Separate the last\_name and first\_name with a comma. Order the list by the first\_name in decending order    EX: SMITH,jane

Ans: select

concat(upper(last\_name), ",", lower(first\_name)) as Full\_name

from patients

order by first\_name desc;

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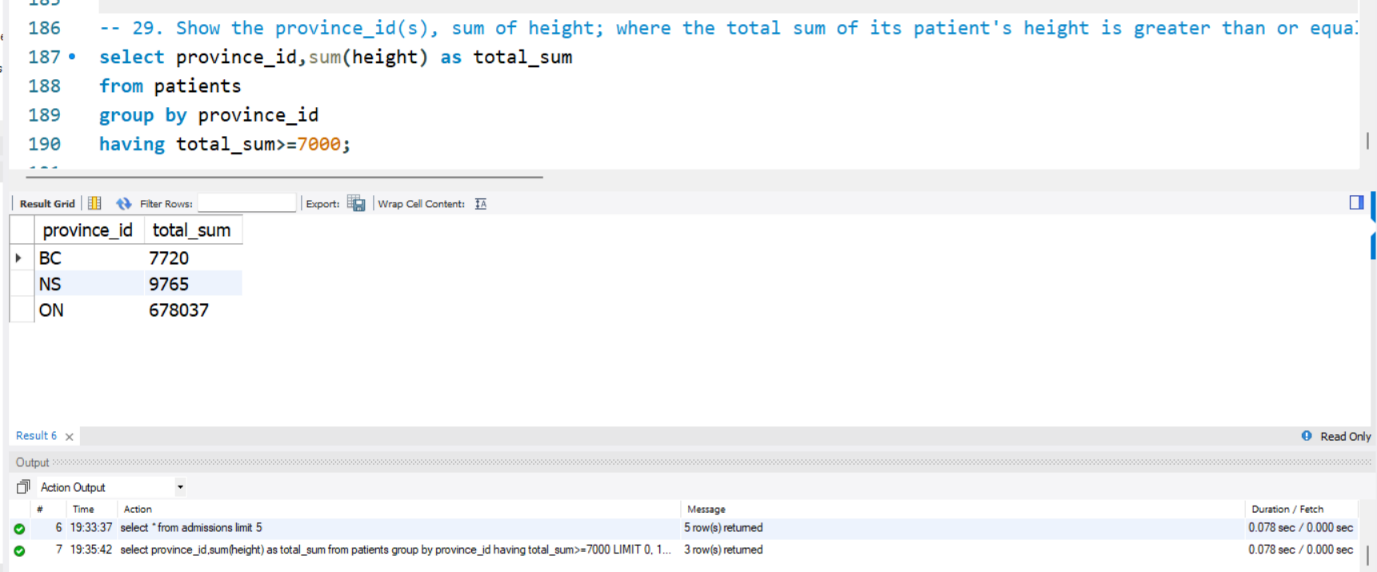
29. Show the province\_id(s), sum of height; where the total sum of its patient's height is greater than or equal to 7,000.

Ans: select province\_id,sum(height) as total\_sum

from patients

group by province\_id

having total\_sum>=7000;



30. Show the difference between the largest weight and smallest weight for patients with the last name 'Maroni'

Ans: select max(weight)-min(weight) as difference

from patients

where last\_name="maroni";

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31. Show all of the days of the month (1-31) and how many admission\_dates occurred on that day. Sort by the day with most admissions to least admissions.

Ans: select day(admission\_date) as day\_months,count(\*) as total\_admission

from admissions

group by day(admission\_date)

order by total\_admission desc;

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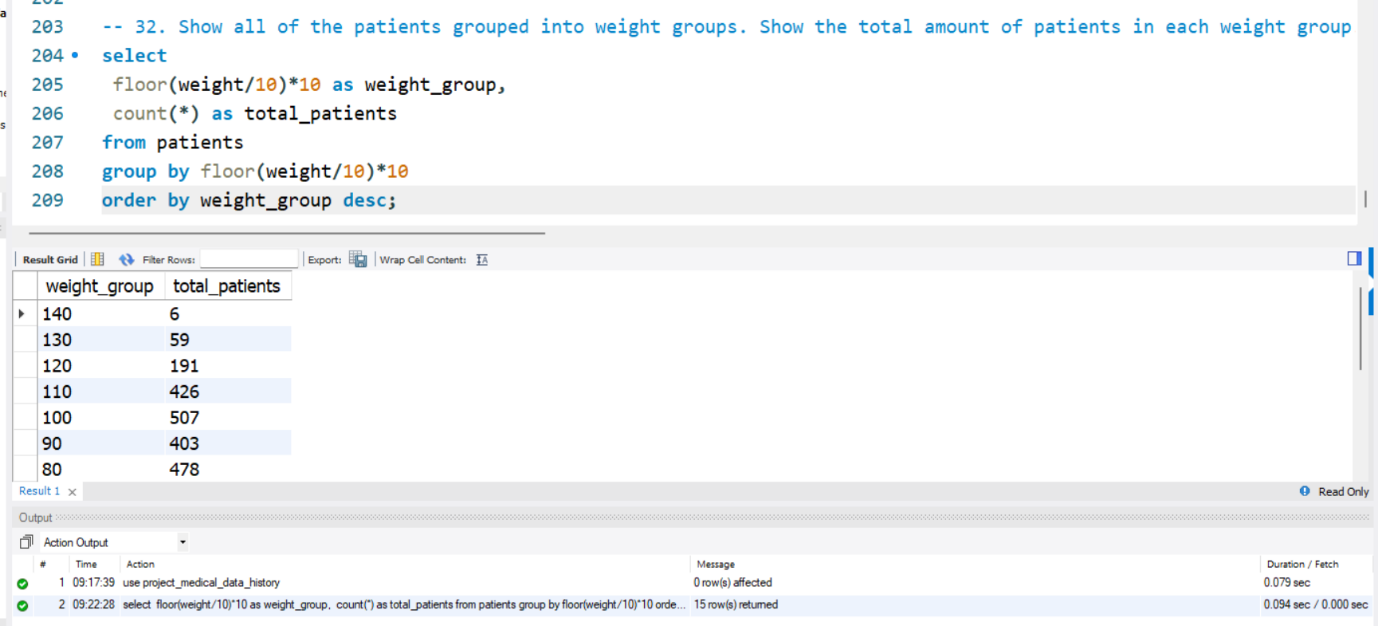
32. Show all of the patients grouped into weight groups. Show the total amount of patients in each weight group. Order the list by the weight group decending. e.g. if they weight 100 to 109 they are placed in the 100 weight group, 110-119 = 110 weight group, etc.

Ans: select floor(weight/10)\*10 as weight\_group,

count(\*) as total\_patients from patients

group by floor(weight/10)\*10

order by weight\_group desc;



33. Show patient\_id, weight, height, isObese from the patients table. Display isObese as a boolean 0 or 1. Obese is defined as weight(kg)/(height(m). Weight is in units kg. Height is in units cm.

Ans: select patient\_id,weight,height,

case when weight/((height/100)\*(height/100))>30 then 1 else 0

end as isObese

from patients;

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34. Show patient\_id, first\_name, last\_name, and attending doctor's specialty. Show only the patients who has a diagnosis as 'Epilepsy' and the doctor's first name is 'Lisa'. Check patients, admissions, and doctors tables for required information.

Ans: select p.patient\_id,p.first\_name,p.last\_name,d.specialty

from patients p

inner join admissions a

on p.patient\_id=a.patient\_id

join doctors d

on a.attending\_doctor\_id=d.doctor\_id

where a.diagnosis="Epilepsy" and d.first\_name="Lisa";

