

**Objective:**

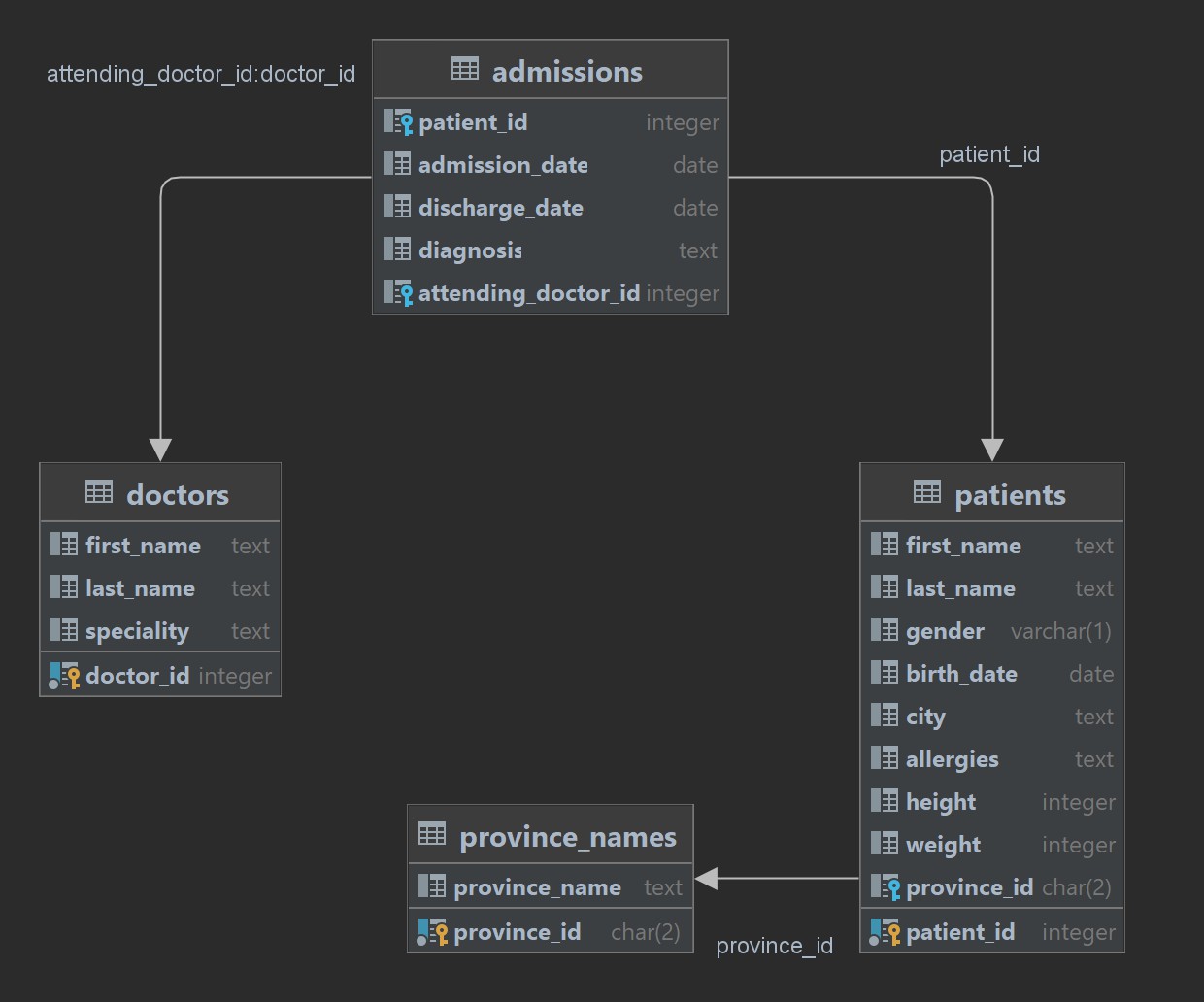


**Medical Data History Analysis**

**M Y S Q L P R O J E C T**

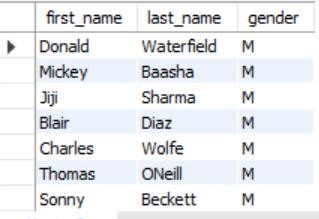
The Medical Data History Analysis project aims to improve healthcare delivery and operational efficiency by analyzing patient data using SQL, improving personalized care, optimizing resource allocation, supporting informed decision- making, and contributing to public health research.business growth by answering simple questions.

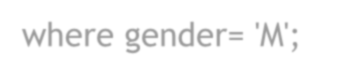
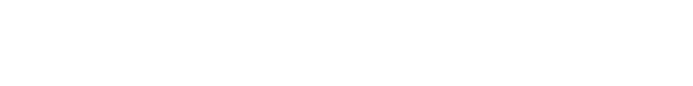
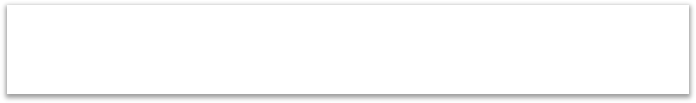
**Medical Data History Analysis :**





Q1 Show first name, last name, and gender of patients who's gender is 'M'.





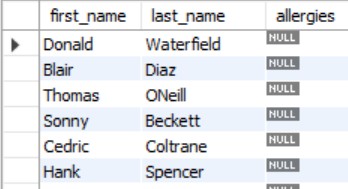
INPUT

select first\_name,last\_name,gender from patients where gender= 'M';



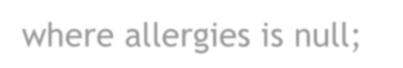
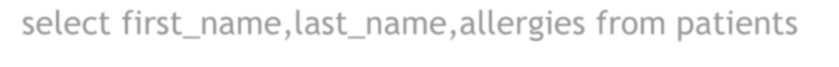
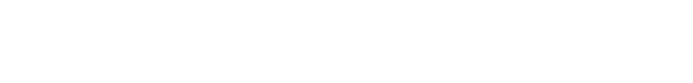
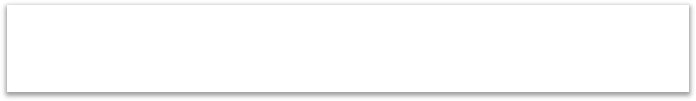
OUTPUT

Q2 Show first name and last name of patients who does not have allergies.





INPUT



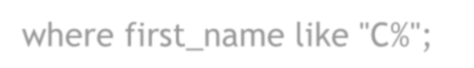
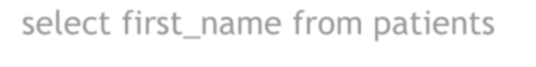
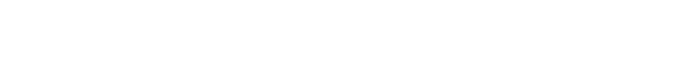
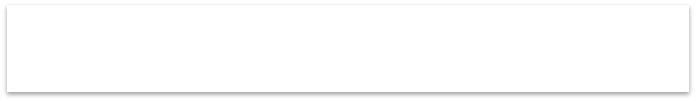
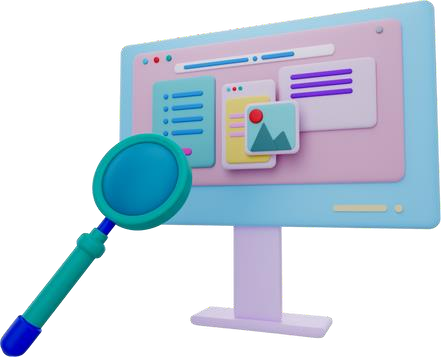
select first\_name,last\_name,allergies from patients where allergies is null;



OUTPUT

**Q3 Show first name of patients that start with the letter 'C'.**





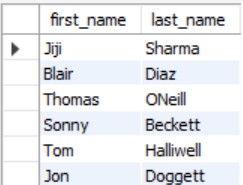
INPUT

OUTPUT

select first\_name from patients

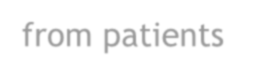
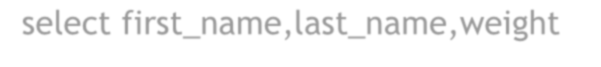
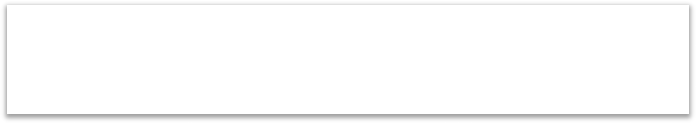
where first\_name like "C%";

Q4 **Show first name and last name of patients that weight within the range of 100 to 120 (inclusive)**





INPUT



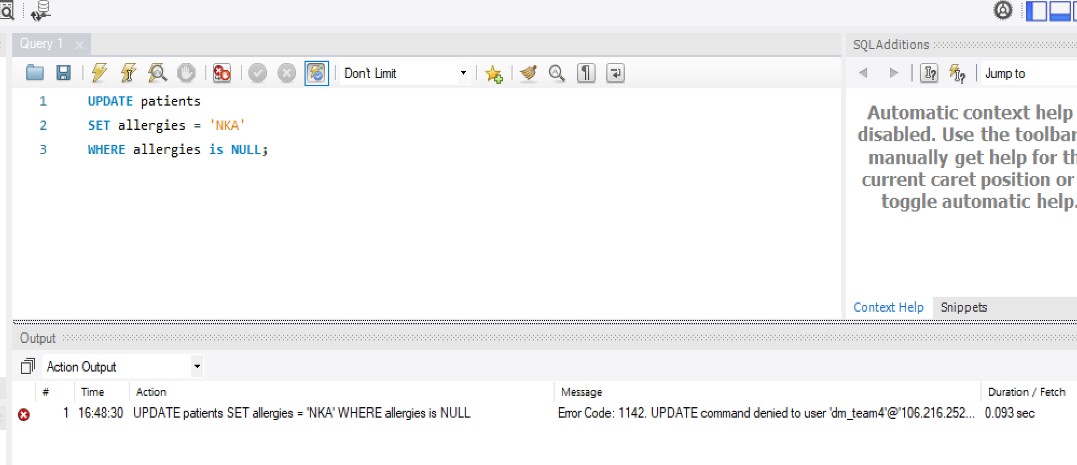
select first\_name,last\_name,weight from patients

where weight between '100' and '120';



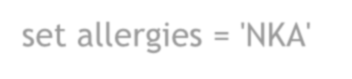
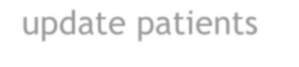
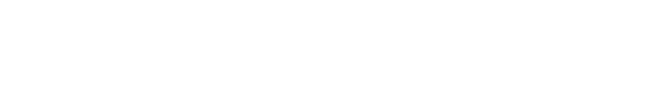
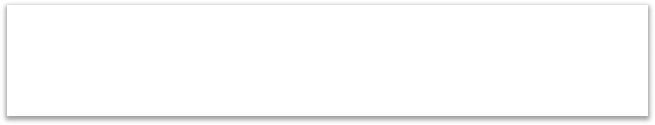
OUTPUT

Q5 Update the patients table for the allergies column. If the patient's allergies is null then replace it with 'NKA'.





INPUT



update patients

set allergies = 'NKA'

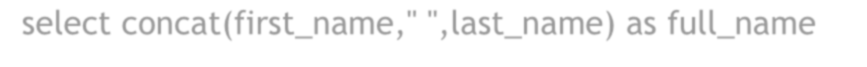
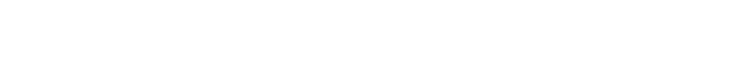
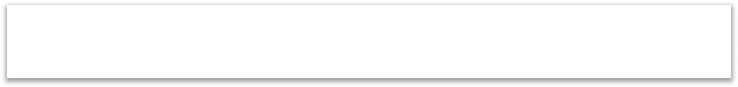
where allergies is NULL;



OUTPUT

Q6 Show first name and last name concatenated into one column to show their full name.





INPUT

select concat(first\_name," ",last\_name) as full\_name

from patients;

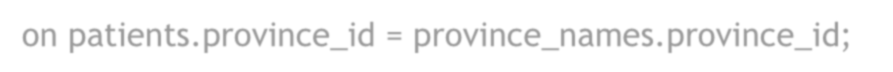
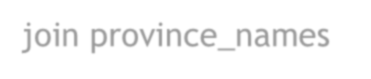
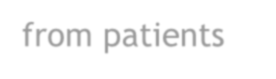
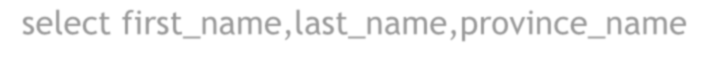
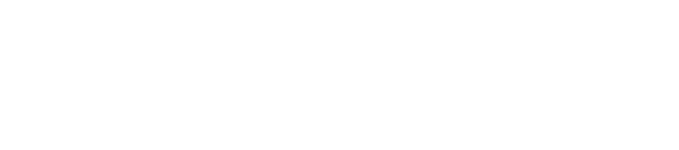
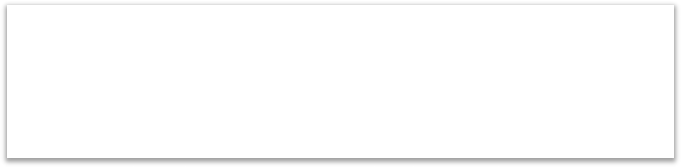


OUTPUT

Q7 Show first name, last name, and the full province name of each patient.



INPUT



select first\_name,last\_name,province\_name

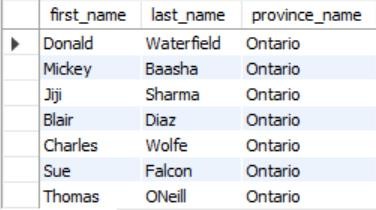
from patients

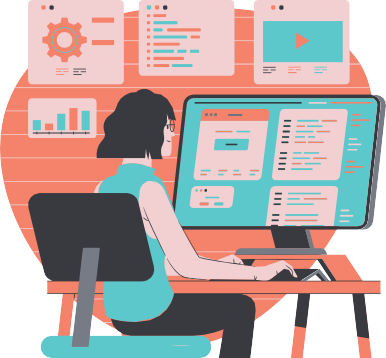
join province\_names

on patients.province\_id = province\_names.province\_id;

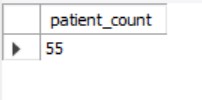


OUTPUT



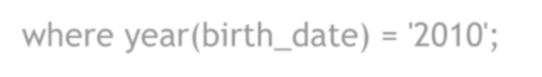
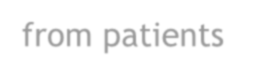
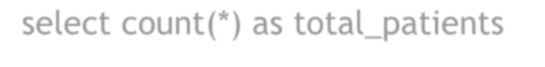
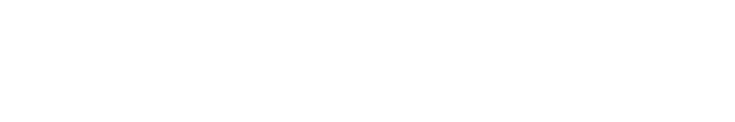
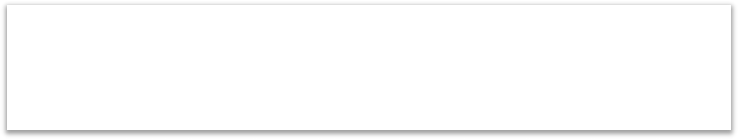


Q8 Show how many patients have a birth\_date with 2010 as the birth year.





INPUT



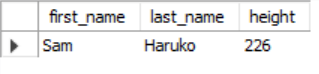
select count(\*) as total\_patients from patients

where year(birth\_date) = '2010';



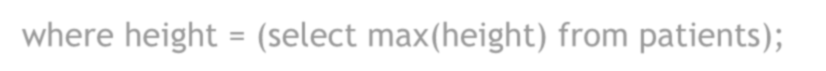
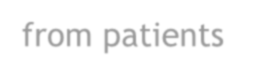
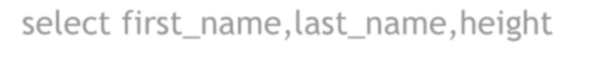
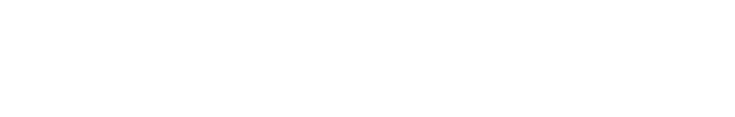
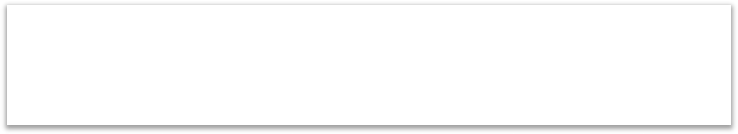
OUTPUT

Q9 Show the first\_name, last\_name, and height of the patient with the greatest height.





INPUT



select first\_name,last\_name,height from patients

where height = (select max(height) from patients);

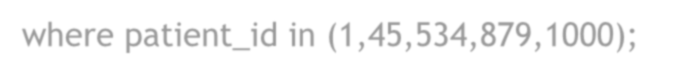
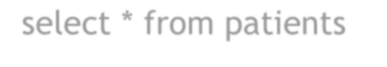
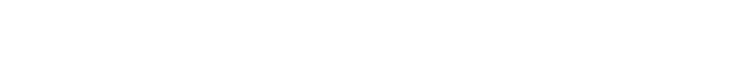
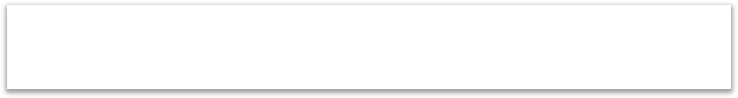


OUTPUT

**Q10** Show all columns for patients who have one of the following patient\_ids: 1,45,534,879,1000

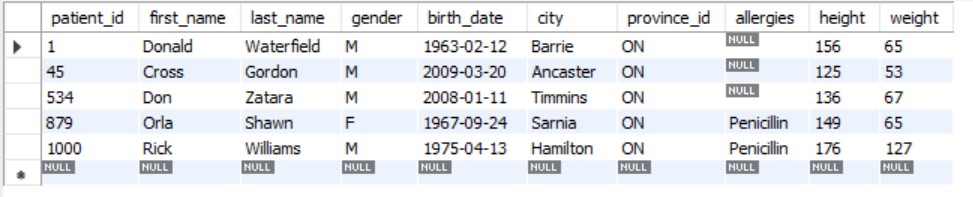


INPUT



select \* from patients

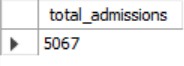
where patient\_id in (1,45,534,879,1000);





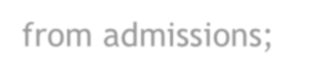
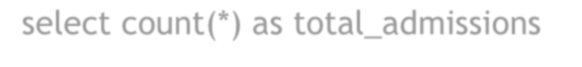
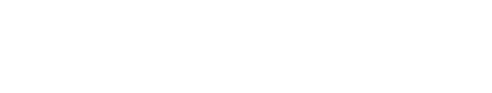
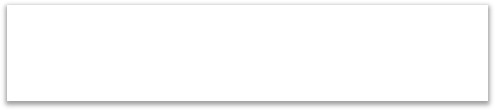
OUTPUT

**Q11** Show the total number of admissions.





INPUT

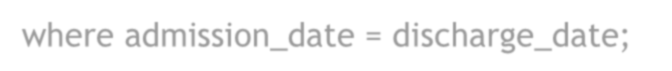
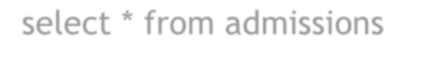
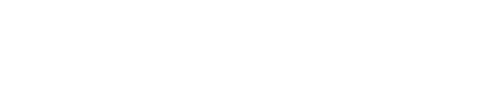
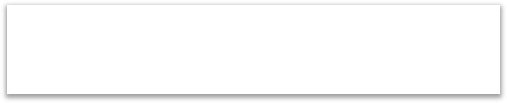


select count(\*) as total\_admissions from admissions;



OUTPUT

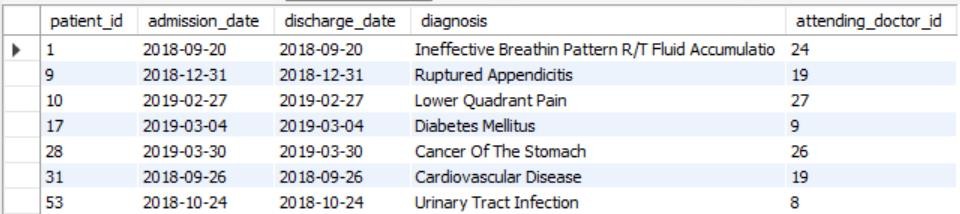
**Q12** Show all the columns from admissions where the patient was admitted and discharged on the same day.



INPUT

select \* from admissions

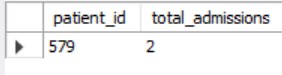
where admission\_date = discharge\_date;





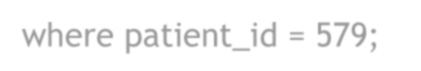
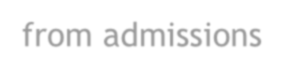
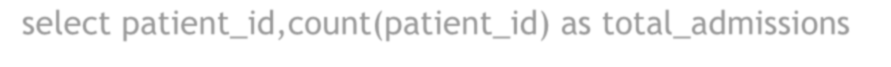
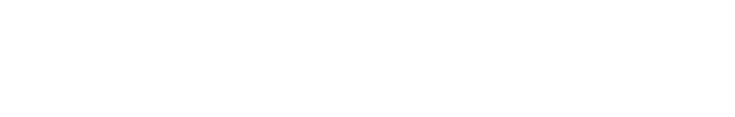
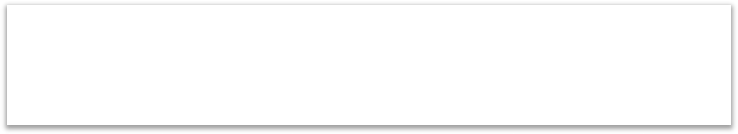
OUTPUT

**Q13** Show the total number of admissions for patient\_id 579.





INPUT



select patient\_id,count(patient\_id) as total\_admissions

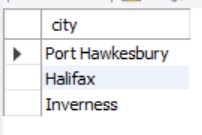
from admissions

where patient\_id = 579;



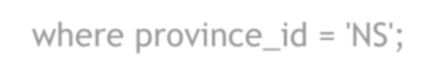
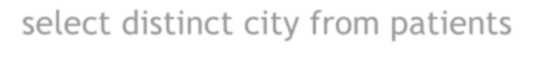
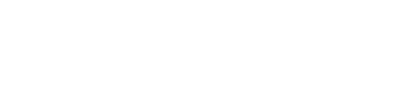
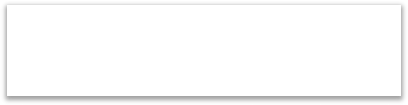
OUTPUT

**Q14** Based on the cities that our patients live in, show unique cities that are in province\_id 'NS'?





INPUT

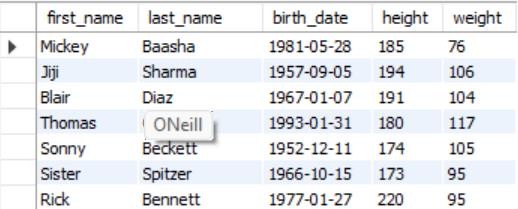


select distinct city from patients where province\_id = 'NS';



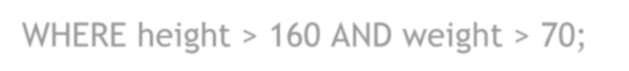
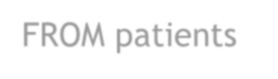
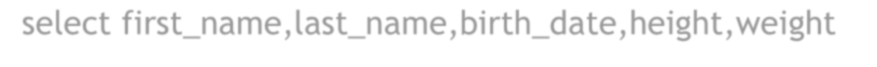
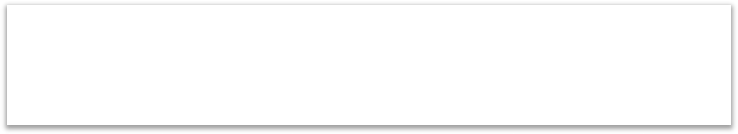
OUTPUT

**Q15** 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





INPUT



select first\_name,last\_name,birth\_date,height,weight FROM patients

WHERE height > 160 AND weight > 70;

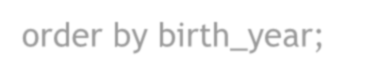
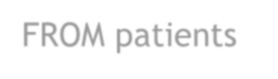
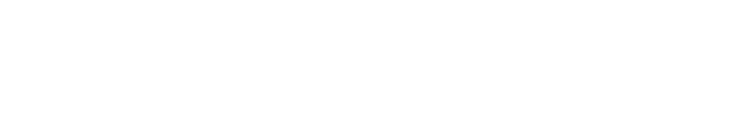
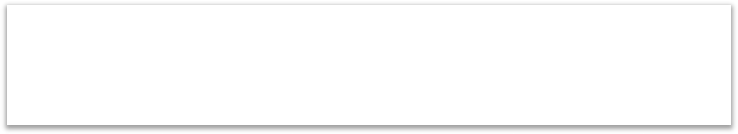


OUTPUT

**Q16** Show unique birth years from patients and order them by ascending.



INPUT

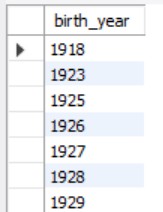


select distinct year(birth\_date) AS birth\_year FROM patients

order by birth\_year;



OUTPUT

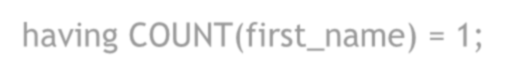
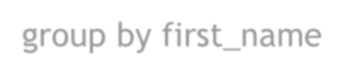
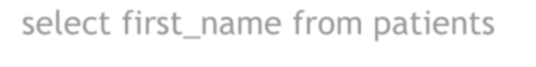
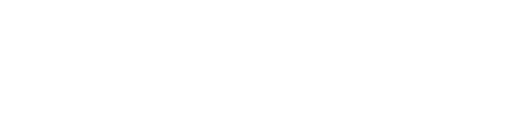
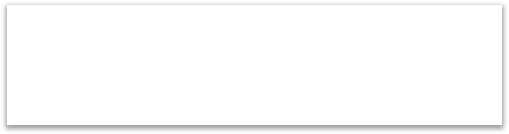


**Q17** Show unique first names from the patients table which only occurs once in the list.





INPUT



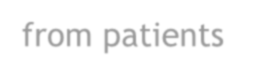
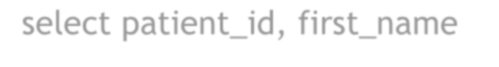
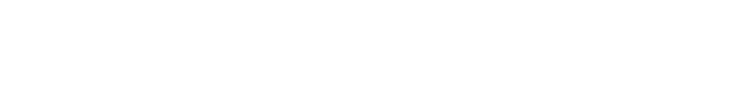
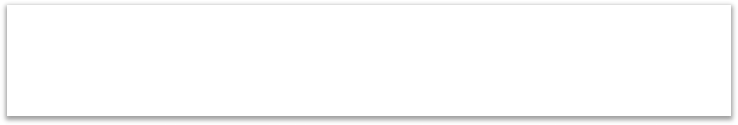
select first\_name from patients group by first\_name

having COUNT(first\_name) = 1;



OUTPUT

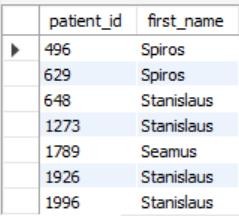
**Q18** Show patient\_id and first\_name from patients where their first\_name start and ends with 's' and is at least 6 characters long.



INPUT

select patient\_id, first\_name from patients

where first\_name like 's %s';



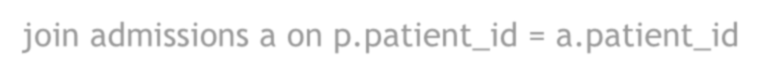
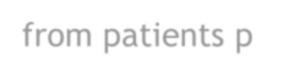
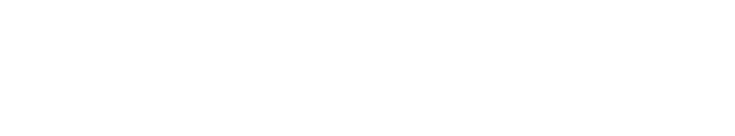
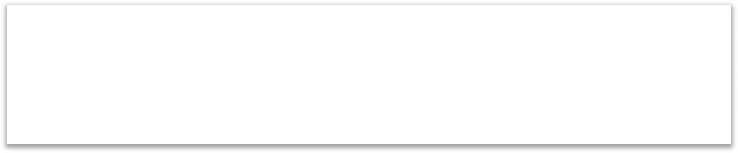
OUTPUT

**Q19** Show patient\_id, first\_name, last\_name from patients whos diagnosis is 'Dementia'. Primary diagnosis is stored in the admissions table.





INPUT



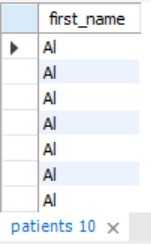
select p.patient\_id, p.first\_name, p.last\_name from patients p

join admissions a on p.patient\_id = a.patient\_id where diagnosis = 'Dementia';



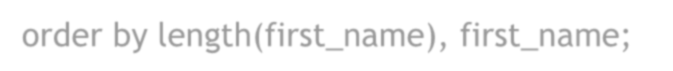
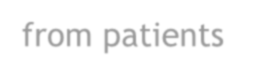
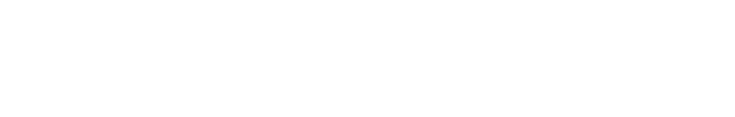
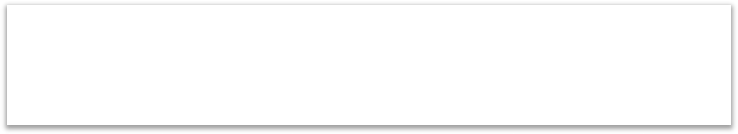
OUTPUT

**Q20** Display every patient's first\_name. Order the list by the length of each name and then by alphbetically.





INPUT



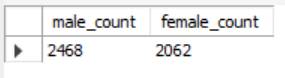
select first\_name from patients

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



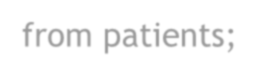
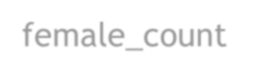
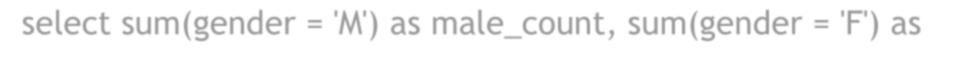
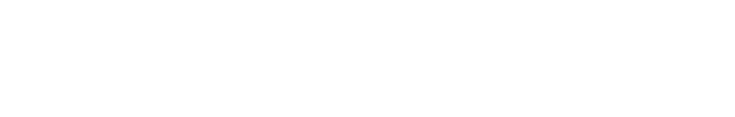
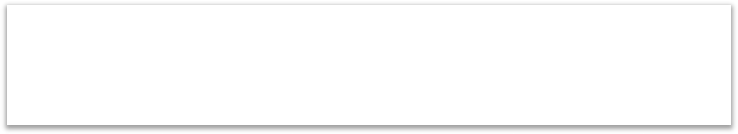
OUTPUT

**Q21** 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.





INPUT



select sum(gender = 'M') as male\_count, sum(gender = 'F') as

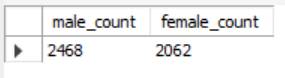
female\_count

from patients;



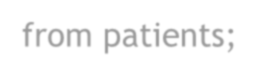
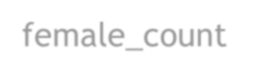
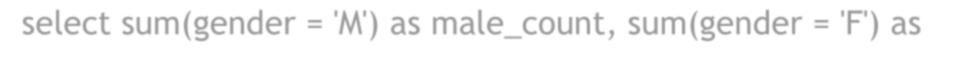
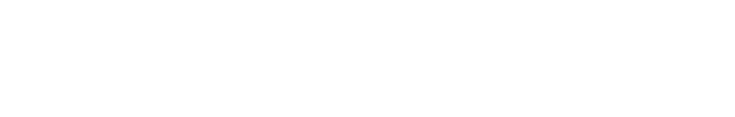
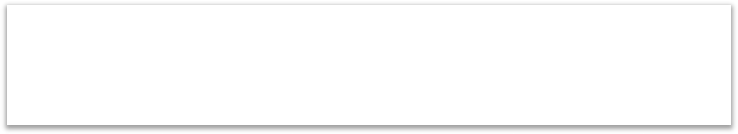
OUTPUT

**Q22** 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.





INPUT



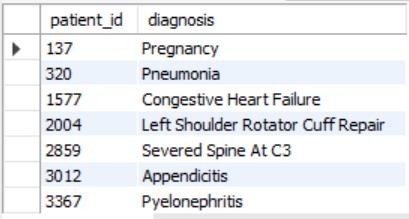
select sum(gender = 'M') as male\_count, sum(gender = 'F') as female\_count

from patients;



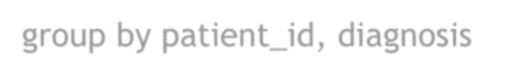
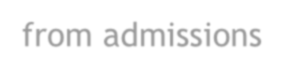
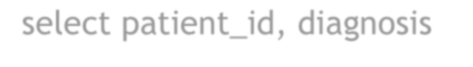
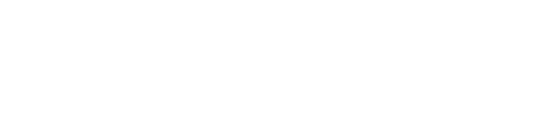
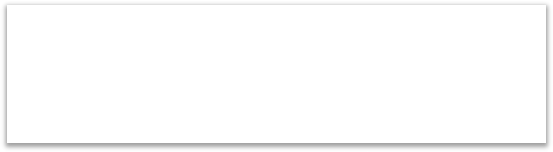
OUTPUT

**Q23** Show patient\_id, diagnosis from admissions. Find patients admitted multiple times for the same diagnosis.





INPUT



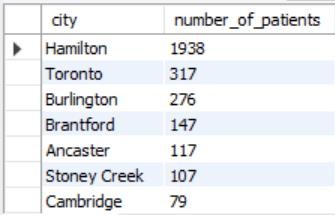
select patient\_id, diagnosis from admissions

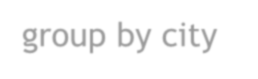
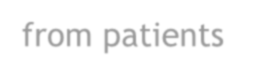
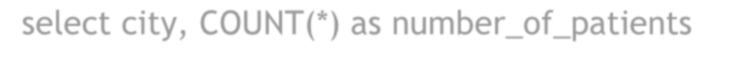
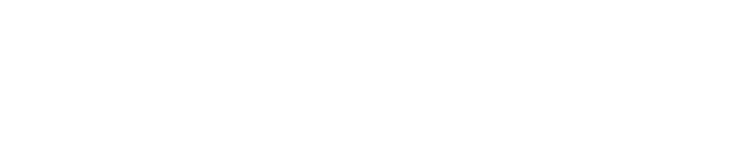
group by patient\_id, diagnosis having COUNT(diagnosis) > 1;



OUTPUT

**Q24** Show the city and the total number of patients in the city. Order from most to least patients and then by city name ascending.





INPUT

select city, COUNT(\*) as number\_of\_patients from patients

group by city

order by number\_of\_patients desc, city asc;

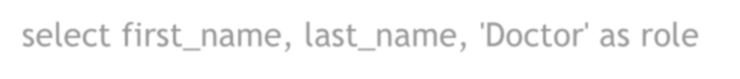
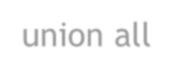
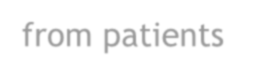
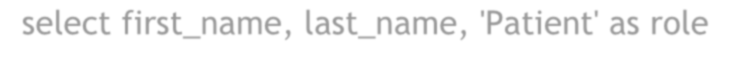
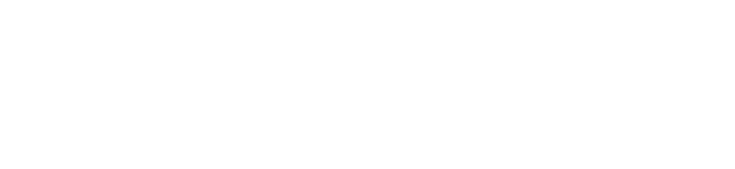
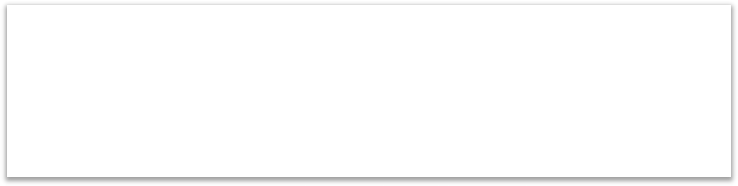


OUTPUT

Q25 Show first name, last name and role of every person that is either patient or doctor. The roles are either "Patient" or "Doctor".



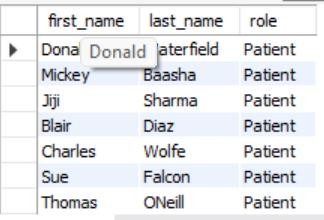
INPUT



select first\_name, last\_name, 'Patient' as role from patients

union all

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



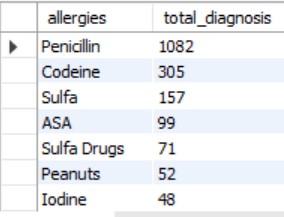


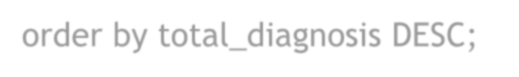
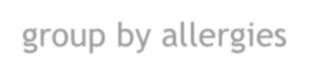
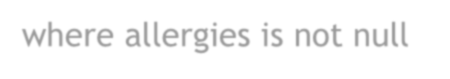
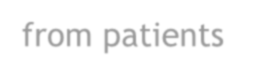
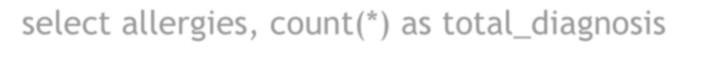
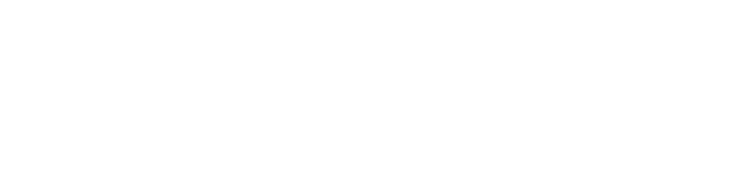
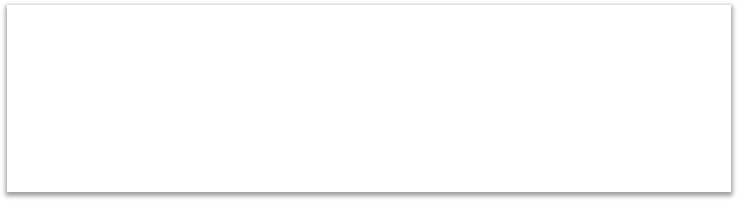
OUTPUT

Q26 Show all allergies ordered by popularity. Remove NULL values from query.



INPUT





select allergies, count(\*) as total\_diagnosis

from patients

where allergies is not null group by allergies

order by total\_diagnosis DESC;

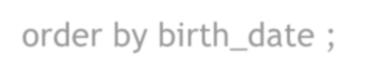
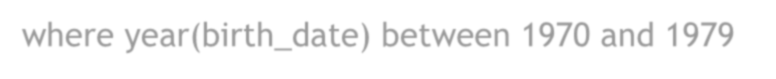
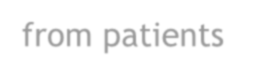
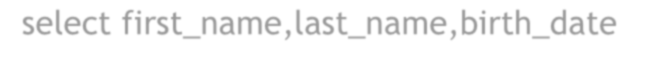
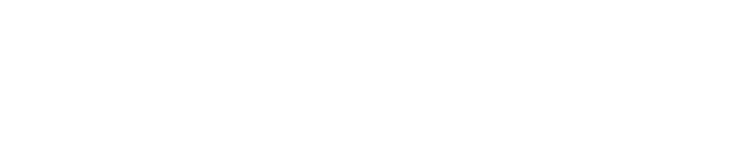
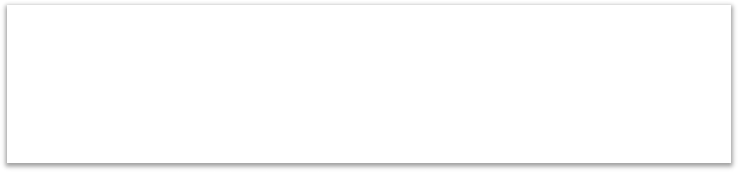


OUTPUT

Q27 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.



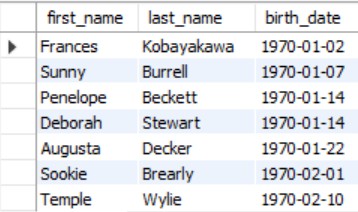
INPUT



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

from patients

where year(birth\_date) between 1970 and 1979 order by birth\_date ;



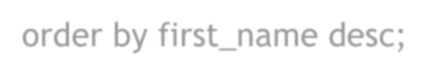
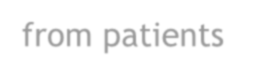
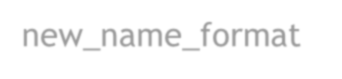
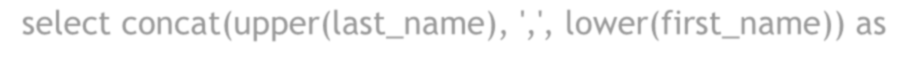
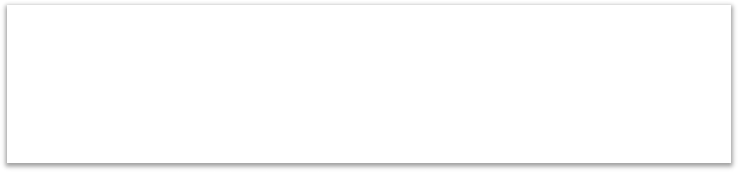


OUTPUT

Q28 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 .



INPUT



select concat(upper(last\_name), ',', lower(first\_name)) as new\_name\_format

from patients

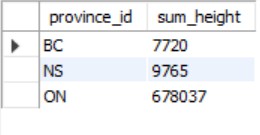
order by first\_name desc;



OUTPUT

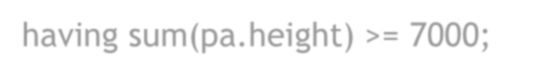
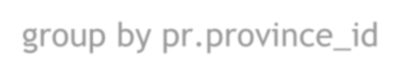
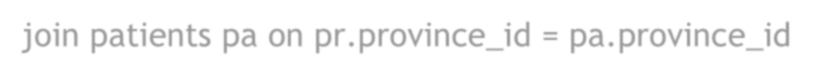
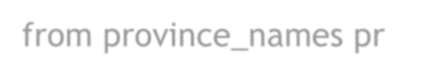
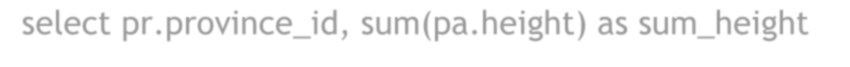
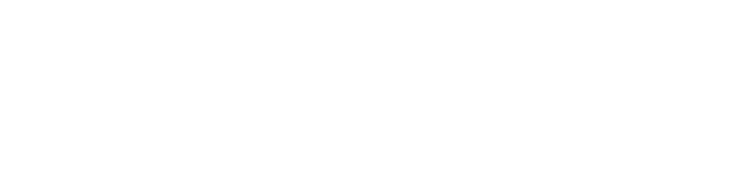
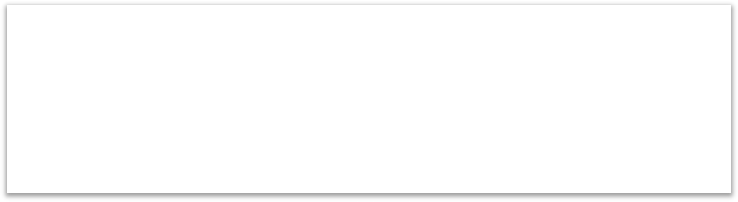


Q29 Show the province\_id(s), sum of height; where the total sum of its patient's height is greater than or equal to 7,000.





INPUT



select pr.province\_id, sum(pa.height) as sum\_height from province\_names pr

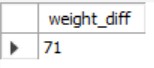
join patients pa on pr.province\_id = pa.province\_id group by pr.province\_id

having sum(pa.height) >= 7000;



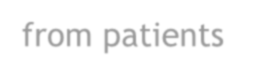
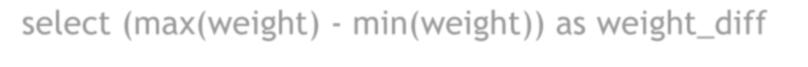
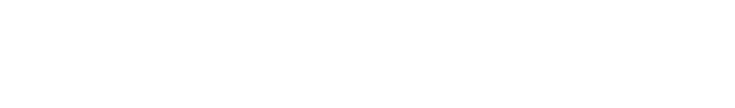
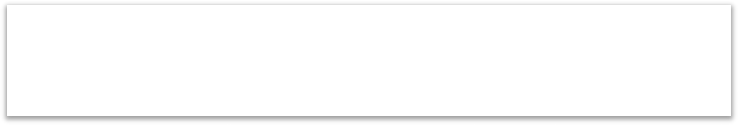
OUTPUT

Q30 Show the difference between the largest weight and smallest weight for patients with the last name 'Maroni'.





INPUT



select (max(weight) - min(weight)) as weight\_diff from patients

where last\_name = 'Maroni';

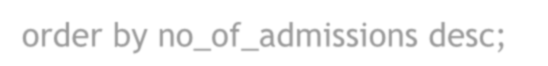
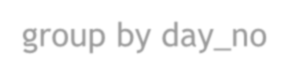
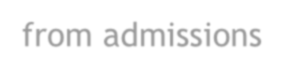
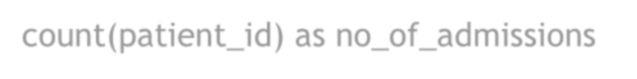
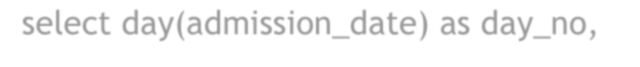
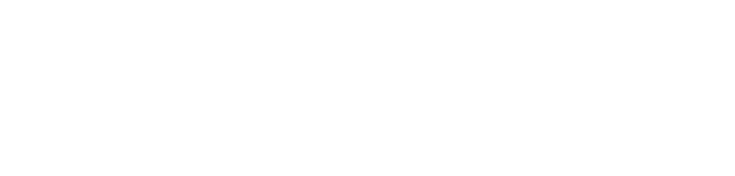
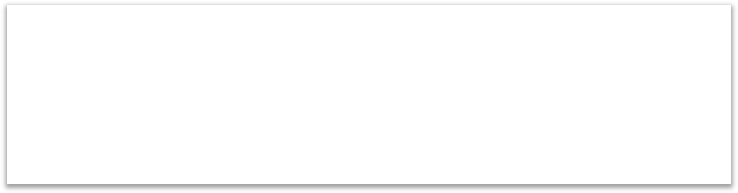


OUTPUT

Q31 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.



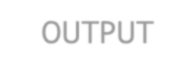
INPUT



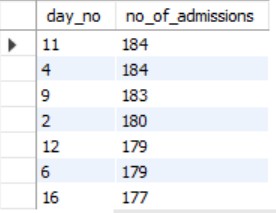
select day(admission\_date) as day\_no, count(patient\_id) as no\_of\_admissions from admissions

group by day\_no

order by no\_of\_admissions desc;



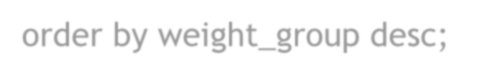
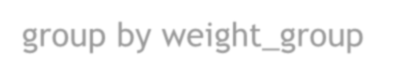
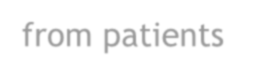
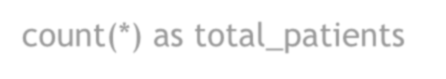
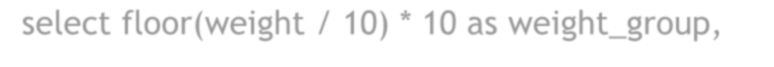
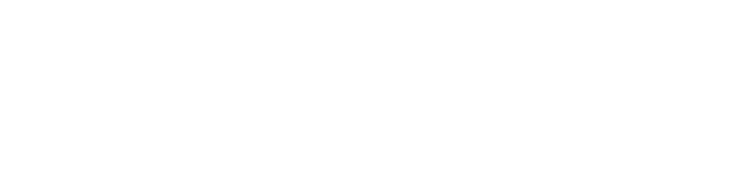
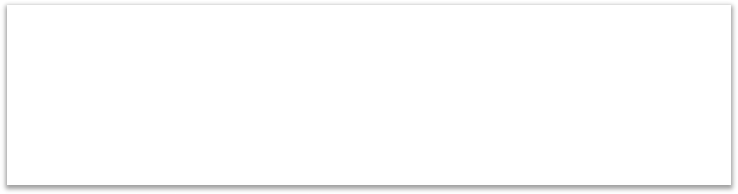
OUTPUT



Q32 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.



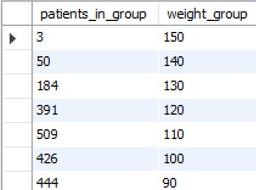
INPUT

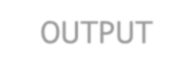


select floor(weight / 10) \* 10 as weight\_group, count(\*) as total\_patients

from patients

group by weight\_group order by weight\_group desc;



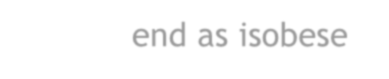
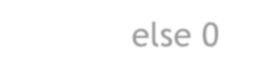
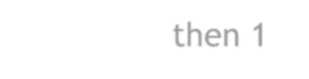
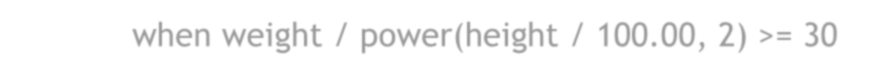
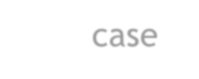
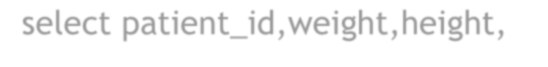
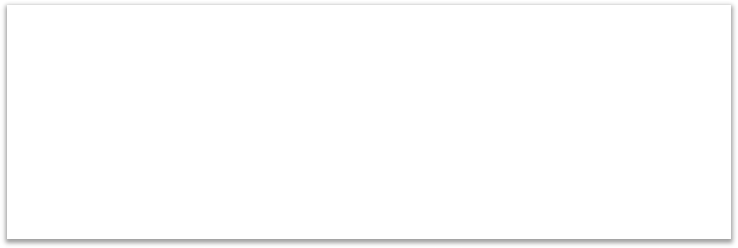


OUTPUT

Q33 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.



INPUT



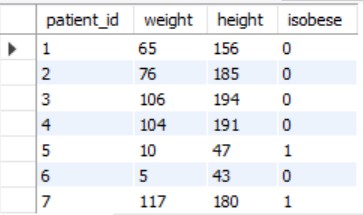
select patient\_id,weight,height, case

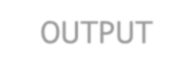
when weight / power(height / 100.00, 2) >= 30

then 1

else 0

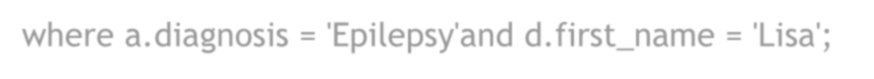
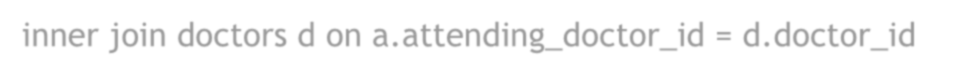
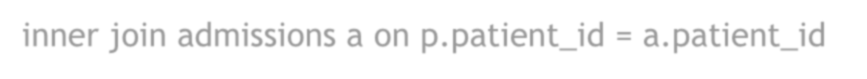
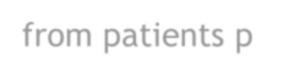
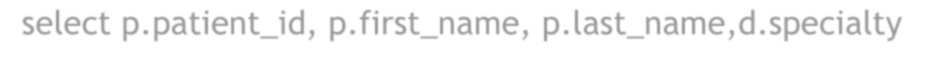
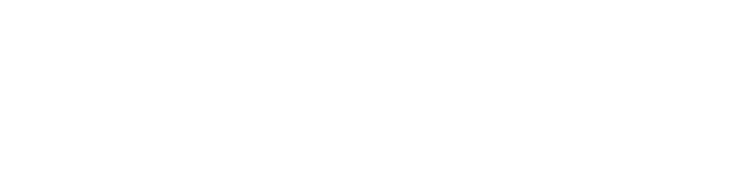
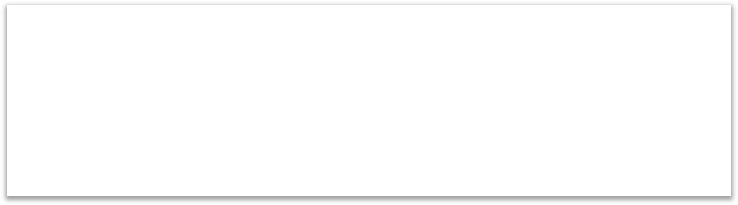
end as isobese from patients;





OUTPUT

Q34 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.

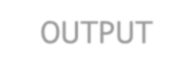


INPUT

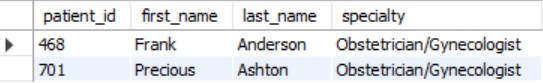
select p.patient\_id, p.first\_name, p.last\_name,d.specialty from patients p

inner join admissions a on p.patient\_id = a.patient\_id

inner join doctors d on a.attending\_doctor\_id = d.doctor\_id where a.diagnosis = 'Epilepsy'and d.first\_name = 'Lisa';



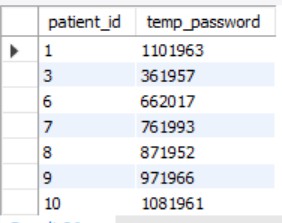
OUTPUT

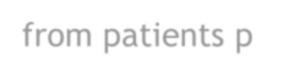
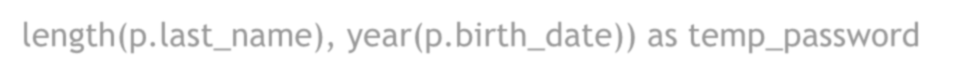
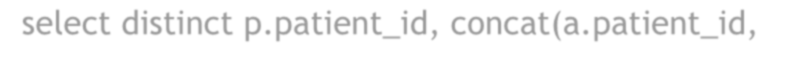
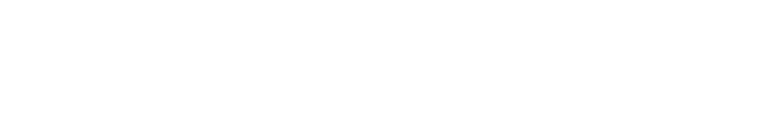
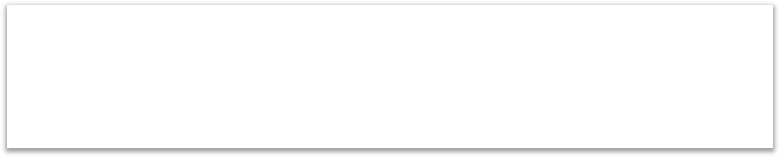


Q35 All patients who have gone through admissions, can see their medical documents on our site. Those patients are given a temporary password after their first admission. Show the patient\_id and temp\_password.

The password must be the following, in order:

* **patient\_id**
* **the numerical length of patient's last\_name**
* **year of patient's birth\_date**

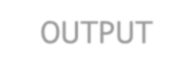




INPUT

select distinct p.patient\_id, concat(a.patient\_id, length(p.last\_name), year(p.birth\_date)) as temp\_password from patients p

inner join admissions a on p.patient\_id = a.patient\_id;



OUTPUT

Profile Links

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