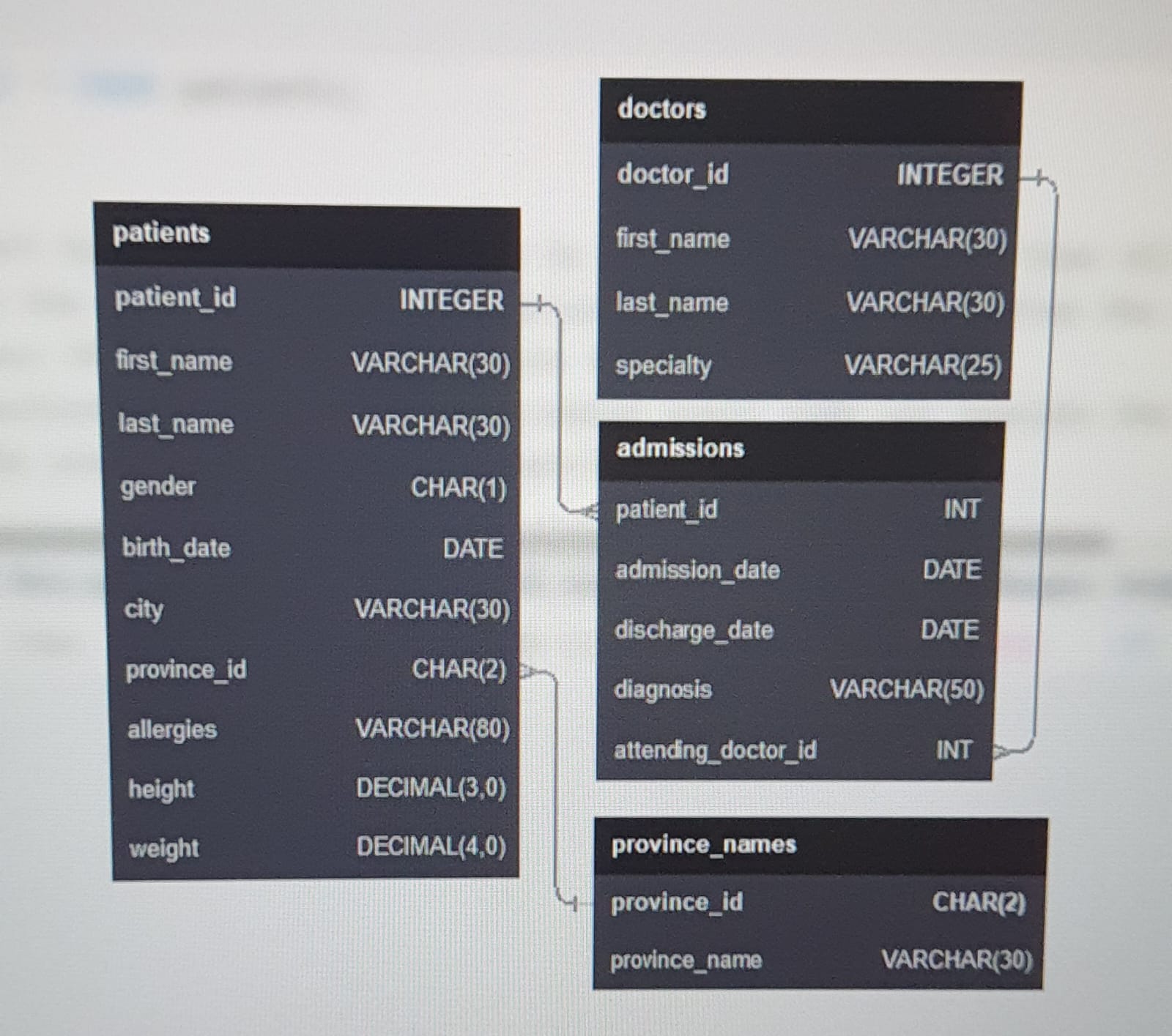
Here Use Database Hospital , Which consist Four Table .

Table names are patients , doctors ,admissions , province\_names.

Schema for database is as follow .



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

SELECT first\_name , last\_name , gender FROM patients WHERE gender = ‘M ;

1. Show first name and last name of patients who does not have allergies. (null)

SELECT

first\_name,

last\_name

FROM patients

WHERE allergies IS NULL;

3)

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

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)

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'

UPDATE patients

SET allergies = 'NKA'

WHERE allergies IS NULL;

6) SELECT the patients first name and last name from table and combine them as full name .

SELECT CONCAT(first\_name, ' ', last\_name) AS full\_name FROM patients;

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

SELECT

first\_name,

last\_name,

province\_name

FROM patients

JOIN province\_names ON province\_names.province\_id = patients.province\_id;

SELECT

first\_name,

last\_name,

province\_name

FROM patients

LEFT JOIN province\_names ON province\_names.province\_id = patients.province\_id;

8) Show Total no of patients have birth year 2010

SELECT COUNT(\*) AS total\_patients

FROM patients

WHERE YEAR(birth\_date) = 2010;

9)Show last name , first name and height of patient have maximum height .

select first\_name ,last\_name , MAX(height) from patients;

SELECT

first\_name,

last\_name,

height FROM patients WHERE height = (SELECT max(height FROM patients )

10) Show all details of patients where patient ids are ,45,534,879,1000);

SELECT \*

FROM patients

WHERE

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

11) Show Total numeber Of admission

SELECT COUNT(\*) AS total\_admissions

FROM admissions;

12 ) Show all details of patient from admission who have admission date and discharge date are same .

SELECT \*

FROM admissions

WHERE admission\_date = discharge\_date;

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

SELECT

patient\_id,

COUNT(\*) AS total\_admissions

FROM admissions

WHERE patient\_id = 579;

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

SELECT DISTINCT(city) AS unique\_cities

FROM patients

WHERE province\_id = 'NS';

15) Select first name , last name , birth date of patients have height greater than 160 and weight greater than 70

SELECT first\_name, last\_name, birth\_date FROM patients

WHERE height > 160 AND weight > 70;

16) Write a query to find list of patients first\_name, last\_name, and allergies from Hamilton where allergies are not null

SELECT first\_name, last\_name, allergies FROM patients WHERE city = 'Hamilton' AND allergies NOT null

17) Based on cities where our patient lives in, write a query to display the list of unique city starting with a vowel (a, e, i, o, u). Show the result order in ascending by city.

SELECT DISTINCT(city) from patients where city like '%a' OR city LIKE '%e' OR city LIKE '%i' OR city LIKE '%o' OR city LIKE '%u' order by city

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

SELECT DISTINCT YEAR(birth\_date) AS birth\_year FROM patients ORDER BY birth\_year;

SELECT year(birth\_date) FROM patients GROUP BY year(birth\_date)

19)

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

SELECT first\_name

FROM patients

GROUP BY first\_name

HAVING COUNT(first\_name) = 1

SELECT first\_name

FROM (

SELECT

first\_name,

count(first\_name) AS occurrencies

FROM patients

GROUP BY first\_name

)

WHERE occurrencies = 1

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

select patient\_id ,first\_name from patients where first\_name like 's%s' AND len(first\_name) >= 6 ;

SELECT patient\_id, first\_name FROM patients WHERE first\_name LIKE 's\_\_\_\_%s';

21) Show patient\_id, first\_name, last\_name from patients whos diagnosis is 'Dementia'.

SELECT

patients.patient\_id,

first\_name,

last\_name

FROM patients

JOIN admissions ON admissions.patient\_id = patients.patient\_id

WHERE diagnosis = 'Dementia';

SELECT

patient\_id,

first\_name,

last\_name

FROM patients

WHERE patient\_id IN (

SELECT patient\_id

FROM admissions

WHERE diagnosis = 'Dementia'

);

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

SELECT first\_name

FROM patients

order by

len(first\_name),

first\_name;

22) select count(\*) From patients group by gender ;

SELECT (SELECT count(\*) FROM patients WHERE gender='M') AS male\_count, (SELECT count(\*) FROM patients WHERE gender='F') AS female\_count;

SELECT

SUM(Gender = 'M') as male\_count,

SUM(Gender = 'F') AS female\_count

FROM patients

SELECT

sum(case when gender = 'M' then 1 end) as male\_count,

sum(case when gender = 'F' then 1 end) as female\_count

from patients;

23)

Show first and last name, allergies from patients which have allergies to either 'Penicillin' or 'Morphine'. Show results ordered ascending by allergies then by first\_name then by last\_name.

SELECT

first\_name,

last\_name,

allergies

FROM

patients

WHERE

allergies = 'Penicillin'

OR allergies = 'Morphine'

ORDER BY

allergies ASC,

first\_name ASC,

last\_name ASC;

SELECT

first\_name,

last\_name,

allergies

FROM patients

WHERE

allergies IN ('Penicillin', 'Morphine')

ORDER BY allergies, first\_name, last\_name;

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

SELECT

patient\_id,

diagnosis

FROM admissions

GROUP BY

patient\_id,

diagnosis

HAVING COUNT(\*) > 1;

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

SELECT city,

COUNT(\*) AS num\_patient

FROM patients

GROUP BY city

ORDER BY num\_patients DESC, city asc;

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

SELECT first\_name, last\_name, 'Patient' as role FROM patients union all select first\_name, last\_name, 'Doctor' from doctors;

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

SELECT

allergies,

COUNT(\*) AS total\_diagnosis

FROM patients

WHERE

allergies IS NOT NULL

GROUP BY allergies

ORDER BY total\_diagnosis DESC

28) 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.

SELECT

first\_name,

last\_name,

birth\_date

FROM patients

WHERE

YEAR(birth\_date) BETWEEN 1970 AND 1979

ORDER BY birth\_date ASC;

SELECT

first\_name,

last\_name,

birth\_date

FROM patients

WHERE

birth\_date >= '1970-01-01'

AND birth\_date < '1980-01-01'

ORDER BY birth\_date ASC ;

SELECT

first\_name,

last\_name,

birth\_date

FROM patients

WHERE year(birth\_date) LIKE '197%'

ORDER BY birth\_date ASC

29) 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

SELECT CONCAT(UPPER(last\_name), ',', LOWER(first\_name)) AS new\_name\_format

FROM patients

ORDER BY first\_name DESC;

SELECT

UPPER(last\_name) || ',' || LOWER(first\_name) AS new\_name\_format

FROM patients

ORDER BY first\_name DESC;

30) 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.

SELECT

province\_id,

SUM(height) AS sum\_height

FROM patients

GROUP BY province\_id

HAVING sum\_height >= 7000

31) Show the difference between the largest weight and smallest weight for patients with the last name 'Maroni'

SELECT

(MAX(weight) - MIN(weight)) AS weight\_delta

FROM patients

WHERE last\_name = 'Maroni';

32)

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.

select DAy(admission\_date) AS day\_num , count(\*) AS no\_of\_addmisions from admissions group by day\_num order by no\_of\_addmisions

SELECT

DAY(admission\_date) AS day\_number,

COUNT(\*) AS number\_of\_admissions

FROM admissions

GROUP BY day\_number

ORDER BY number\_of\_admissions DESC

33) Show all columns for patient\_id 542's most recent admission\_date

SELECT

patient\_id, max(admission\_date) AS admission\_date , discharge\_date , diagnosis ,attending\_doctor\_id

FROM admissions

where patient\_id = '542'

SELECT \*

FROM admissions

WHERE patient\_id = 542

GROUP BY patient\_id

HAVING

admission\_date = MAX(admission\_date);

SELECT \*

FROM admissions

WHERE

patient\_id = '542'

AND admission\_date = (

SELECT MAX(admission\_date)

FROM admissions

WHERE patient\_id = '542'

)

SELECT \*

FROM admissions

WHERE patient\_id = 542

ORDER BY admission\_date DESC

LIMIT 1

34) Show first\_name, last\_name, and the total number of admissions attended for each doctor. Every admission has been attended by a doctor.

select first\_name , last\_name, count(\*) AS total\_attended

from doctors

join admissions ON doctors.doctor\_id = admissions.attending\_doctor\_id

group by doctors.doctor\_id

SELECT

first\_name,

last\_name,

COUNT(\*) as admissions\_total

FROM admissions a

JOIN doctors ph on ph.doctor\_id = a.attending\_doctor\_id

group by attending\_doctor\_id

SELECT

first\_name,

last\_name,

count(\*)

from

doctors p,

admissions a

where

a.attending\_doctor\_id = p.doctor\_id

group by p.doctor\_id;

35 ) for each doctor, display their id, full name, and the first and last admission date they attended.

select doctor\_id , concat(first\_name ,' ',last\_name) AS full\_name,

MIN(admission\_date) as first\_date , max(admission\_date) AS last\_date

FROM doctors join admissions ON doctors.doctor\_id = admissions.attending\_doctor\_id

group by admissions.attending\_doctor\_id

36) Display the total amount of patients for each province. Order by descending.

select province\_name, count(\*)as Amount\_of\_patients from province\_names

join patients ON patients.province\_id = province\_names.province\_id group by patients.province\_id order by Amount\_of\_patients desc

37) For every admission, display the patient's full name, their admission diagnosis, and their doctor's full name who diagnosed their problem.

select concat(p.first\_name ,' ',p.last\_name)AS patient\_full\_name ,diagnosis,

concat(d.first\_name ,' ',d.last\_name) AS doctor\_full\_name

FROM patients p join admissions a ON p.patient\_id = a.patient\_id

join doctors d

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

38) display the number of duplicate patients based on their first\_name and last\_name.

select first\_name ,last\_name, COUNT(\*) As no\_of\_duplicate

from patients group by first\_name,last\_name having no\_of\_duplicate > 1

39)Display patient's full name, height in the units feet rounded to 1 decimal,  
weight in the unit pounds rounded to 0 decimals, birth\_date, gender non abbreviated.

select concat(first\_name ,' ', last\_name) As full\_name ,

ROUND(height/30.48 ,1) As height , ROUND(weight\* 2.205 , 0) AS weight,

birth\_date ,

CASE

When gender = 'M' THEN 'Male'

WHEN gender = 'F' THEN 'Female'

END AS gender\_type

From patients