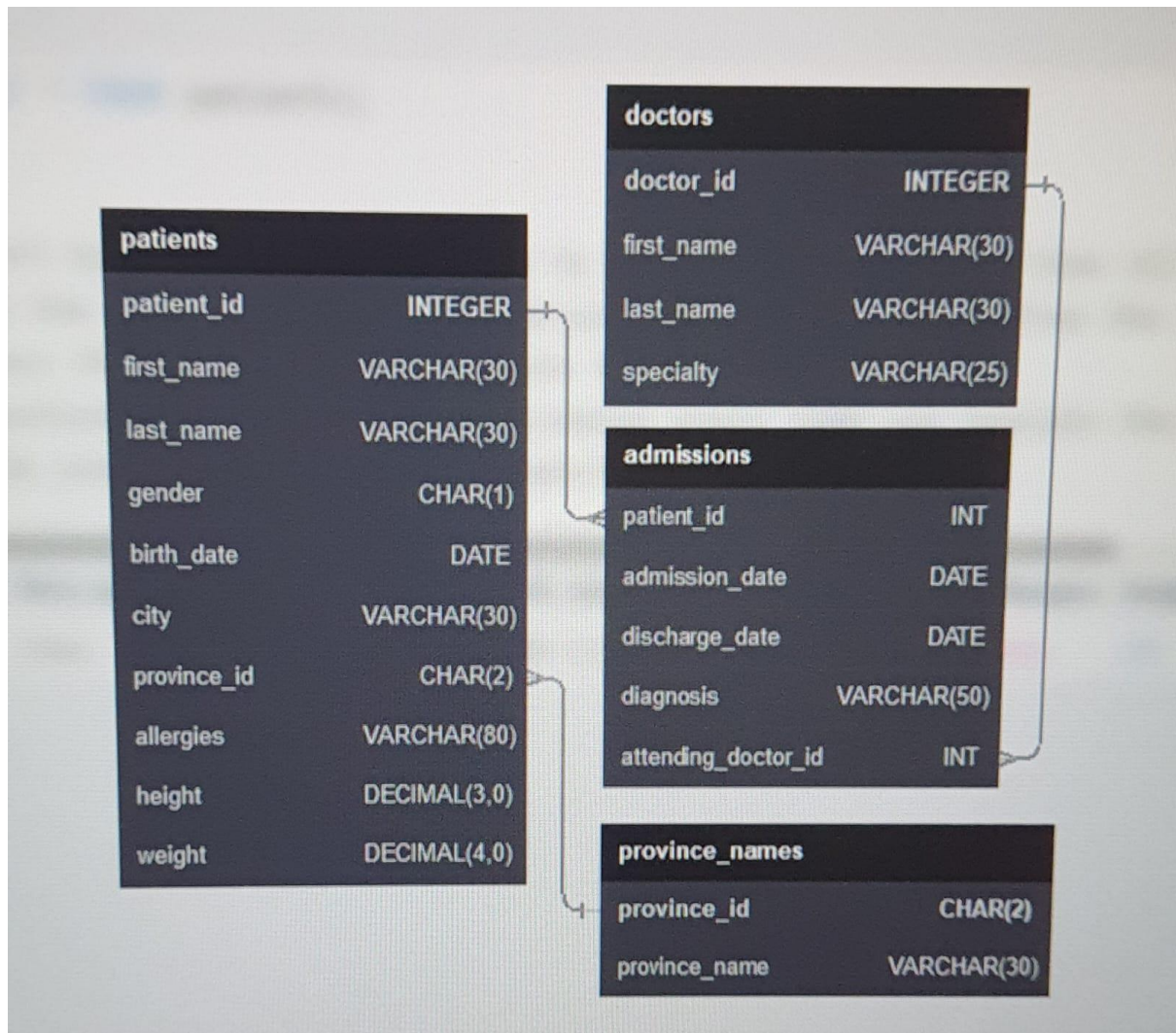


Here Use Database Hospital , Which consist Four Table .  
Table names are patients , doctors ,admissions , province\_names.  
Schema for database is as follow .



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 ;
```

2) 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 number 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 occurrences  
    FROM patients  
    GROUP BY first_name  
)  
WHERE occurrences = 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 alphabetically

```
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_addmissions from
admissions group by day_num order by no_of_addmissions
```

```
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
```