To pull a sql image on docker run following commands in wsl

- mysql --version(TO CHECK WHETHER THE MY SQL INSTALLED OR NOT)
- sudo apt update(IF NOT TO INSTALL RUN THIS COMMAND)
- sudo apt install mysql-server
- sudo nano /etc/mysql/mysql.conf.d/mysqld.cnf(TO PULL SQL IMAGE)
- docker run --name mysql-container -e MYSQL_ROOT_PASSWORD=rootpassword -p 3306:3306 -d mysql:latest
- mysql -h 18.136.157.135 -u dm_team4 -p(TO CONNECT GIVEN SERVER)
- DM!$!Team!47@4!23&(WHEN PROMPTED FOR ENTER FOLLOWING)
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show databases;

use project_medical_data_history;
show tables;

##1. Show first name, last name, and gender of patients whose gender is 'M'
select first_name,last_name,gender from patients
where gender = "m";

##2. Show first name and last name of patients who do not have allergies.
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'

## AS THE update function not working i dont have grants used trigger and created a new column
called updated allergies
SELECT *,
    CASE
      WHEN allergies IS NULL THEN 'NKA'
      ELSE allergies
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    END AS updated_allergies
FROM patients;


##6. Show first name and last name concatenated into one column to show their 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 pa.first_name,pa.last_name,p.province_name from patients as pa
join province_names as p
on p.province_id = pa.province_id;

##8. Show how many patients have a birth_date with 2010 as the birth year
## the number patients having birth year as 2010
select count(*) from patients
where year(birth_date) = 2010;

##9. Show the first_name, last_name, and height of the patient with the greatest height.
select first_name,last_name,height from patients
order by height desc
limit 1;

##10. Show all columns for patients who have one of the following patient_ids: 1,45,534,879,1000
select * from patients
where patient_id in (1,45,534,879,1000);

##11. Show the total number of admissions
select count(*) as total_no_admissions from admissions;

##12. Show all the columns from admissions where the patient was admitted and discharged on the
same day.
select * from admissions
where date(admission_date) = date(discharge_date);

##13. Show the total number of admissions for patient_id 579
select count(*) 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  from patients
where province_id = "NS";

##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
select * from patients
where height > 160 and weight > 70;

##16. Show unique birth years from patients and order them by ascending.
select  distinct YEAR(birth_date) from patients
order by year(birth_date) ASC;

####17. Show unique first names from the patients table which only occurs once in the list.
select distinct first_name from patients
group by first_name;

##18. Show patient_id and first_name from patients where their first_name starts and ends with 's'
and is at least 6 characters long.
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select patient_id,first_name from patients
where first_name like "S%" and length(first_name) >= 6;

##19. Show patient_id, first_name, last_name from patients whose diagnosis is 'Dementia'. Primary diagnosis is stored in the admissions table.
select  p.patient_id, p.first_name, p.last_name from patients as p
join admissions as 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 alphabetically.
select first_name from patients
order by char_length(first_name), first_name;

##21. Show the total number of male patients and the total number of female patients in the patients table. Display the two results in the same row.
SELECT
   COUNT(CASE WHEN gender = 'M' THEN 1 END) AS male_count,
   COUNT(CASE WHEN gender = 'F' THEN 1 END) AS female_count
FROM patients;

##23. 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 ;

##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.
SELECT city, COUNT(*) AS total_patients FROM patients
GROUP BY city
ORDER BY total_patients DESC, city ASC;

## 25  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, 'Doctor' AS role FROM doctors
UNION
SELECT first_name, last_name, 'Patient' AS role FROM patients;


## 26 Show all allergies ordered by popularity. Remove NULL values from the query.
select allergies from patients
group by allergies
order by allergies 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.
select first_name,last_name,birth_date from patients
where year(birth_date) = 1970
order by birth_date;

##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
##e letters. Separate the last_name and first_name with a comma. Order the
## list by the first_name in descending order
select concat(upper(last_name), "," ,lower(first_name)) as full_name from patients
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order by lower(first_name) desc;

##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.
SELECT province_id,SUM(height) AS total_height FROM patients
GROUP BY province_id
HAVING SUM(height) >= 7000;

##30. Show the difference between the largest weight and smallest weight for patients with the last
name 'Maroni'
select max(weight) - min(weight) as weight_diff from patients
where last_name = 'Maroni';

##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.
select admission_date,count(patient_id) as sum_admissions from admissions
group by admission_date
order by sum_admissions desc;

##if we want show day only
select day(admission_date),count(patient_id) as sum_admissions from admissions
group by admission_date
order by sum_admissions desc;

##32. Show all of the patients grouped into weight groups. Show the total number of patients in each
weight group. Order the list by the weight group
##descending. e.g. if they weigh 100 to 109 they are placed in the 100 weight group, 110-119 = 110
weight group, etc.
SELECT
  CONCAT(FLOOR(weight / 10) * 10, '-', FLOOR(weight / 10) * 10 + 9) AS weight_group,
  COUNT(*) AS patient_count
FROM
  patients
GROUP BY
  weight_group
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.
SELECT
  patient_id,
  weight,
  height,
  CASE
    WHEN (weight / (POW(height / 100, 2))) >= 30 THEN 1
    ELSE 0
  END AS isObese
FROM
  patients;

##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.

SELECT
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    p.patient_id,
    p.first_name,
    p.last_name,
    d.specialty
FROM
    patients p
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';

##35. 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.
SELECT
    p.patient_id,
    CONCAT(p.patient_id,
        LENGTH(p.last_name),
        YEAR(p.birth_date)) AS temp_password
FROM
    patients p;
```