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

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

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

select first\_name from patients where first\_name like 'C%';

1. 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 >= 100 and weight <=120;

1. 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;

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

select first\_name || ' ' || last\_name as 'full name' from patients;

1. Show first name, last name, and the **full** province name of each patient.  
     
   Example: 'Ontario' instead of 'ON'

select first\_name, last\_name, province\_name from patients p join province\_names pn on p.province\_id = pn.province\_id;

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

select count(patient\_id) from patients where year(birth\_date) == 2010;

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

select first\_name, last\_name, height from patients where height = (select height from patients order by height desc limit 1)

1. 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);

1. Show the total number of admissions

select count(\*) from admissions;

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

select \* from admissions where admission\_date = discharge\_date;

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

select patient\_id, count(admission\_date) as total from admissions where patient\_id = 579;

1. 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';

1. Write a query to find the first\_name, last name and birth date of patients who has height greater than 160 and weight greater than 70

select first\_name,last\_name,birth\_date from patients where height > 160 and weight > 70;

1. Write a query to find list of patients first\_name, last\_name, and allergies where allergies are not null and are from the city of 'Hamilton'

select first\_name,last\_name,allergies from patients where allergies is not null and city is 'Hamilton';

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

select distinct year(birth\_date) from patients order by year(birth\_date);

1. 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.

SELECT first\_name FROM patients GROUP BY first\_name HAVING COUNT(first\_name) = 1;

1. 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';

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

SELECT p.patient\_id, first\_name, last\_name

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

where a.diagnosis = 'Dementia';

1. 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;

1. 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.

* 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;

* SELECT

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

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

FROM patients

* SELECT

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

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

1. 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 is 'Penicillin' or allergies is 'Morphine' order by allergies, first\_name, last\_name;

1. 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;

1. 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(patient\_id) as Total\_patients from patients

group by city

order by Total\_patients desc, city;

1. 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;

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

select allergies, count(allergies) from patients

group by allergies having allergies is not null order by count(allergies) desc;

1. 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;

1. 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

select upper(last\_name) || ',' || lower(first\_name) from patients order by first\_name desc;

1. 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 pn.province\_id, sum(height) s from

patients p join province\_names pn

on p.province\_id = pn.province\_id group by pn.province\_id having s >= 7000;

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

select max(weight) - min(weight) from patients where patient\_id in

(select patient\_id from patients where last\_name is 'Maroni')

1. 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) DayNUM, count(day(admission\_date)) as total from admissions

group by DayNUM order by total desc;

1. Show all columns for patient\_id 542's most recent admission\_date.

select \* from admissions where patient\_id = 542 and admission\_date =

(select admission\_date from admissions where patient\_id = 542 order by admission\_date desc limit 1)

1. Show patient\_id, attending\_doctor\_id, and diagnosis for admissions that match one of the two criteria:  
   1. patient\_id is an odd number and attending\_doctor\_id is either 1, 5, or 19.  
   2. attending\_doctor\_id contains a 2 and the length of patient\_id is 3 characters.

select patient\_id, attending\_doctor\_id, diagnosis from admissions where

(patient\_id%2 != 0 and attending\_doctor\_id in (1,5,19)) OR

((attending\_doctor\_id like '%2%') and (len(patient\_id) = 3))

1. 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(patient\_id) as total from admissions a join doctors d

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

1. For each doctor, display their id, full name, and the first and last admission date they attended.

select doctor\_id, first\_name || ' ' || last\_name as full\_name, max(admission\_date) as Last\_day,

min(admission\_date) as First\_day

from admissions a join doctors d

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

group by attending\_doctor\_id order by admission\_date

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

select count(patient\_id) total\_patients, pn.province\_name from patients p join province\_names pn on

p.province\_id = pn.province\_id group by p.province\_id order by total\_patients desc;

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

select p.first\_name || ' ' || p.last\_name as patient\_full\_name,a.diagnosis,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;

1. display the first name, last name and number of duplicate patients based on their first name and last name.   
   Ex: A patient with an identical name can be considered a duplicate.

select first\_name, last\_name, count(\*) from patients group by first\_name,last\_name having count(\*) > 1

1. 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.  
     
   Convert CM to feet by dividing by 30.48.  
   Convert KG to pounds by multiplying by 2.205.

select first\_name || ' ' || last\_name as patient\_name, round(height/30.48,1) as height\_ft,

round(weight\*2.205,0) as weight\_pounds, birth\_date,case gender when 'M' then 'MALE' else 'FEMALE' end

from patients;

1. Show patient\_id, first\_name, last\_name from patients whose does not have any records in the admissions table. (Their patient\_id does not exist in any admissions.patient\_id rows.)

select patient\_id, first\_name, last\_name

from patients where patient\_id not in (select distinct patient\_id from admissions);