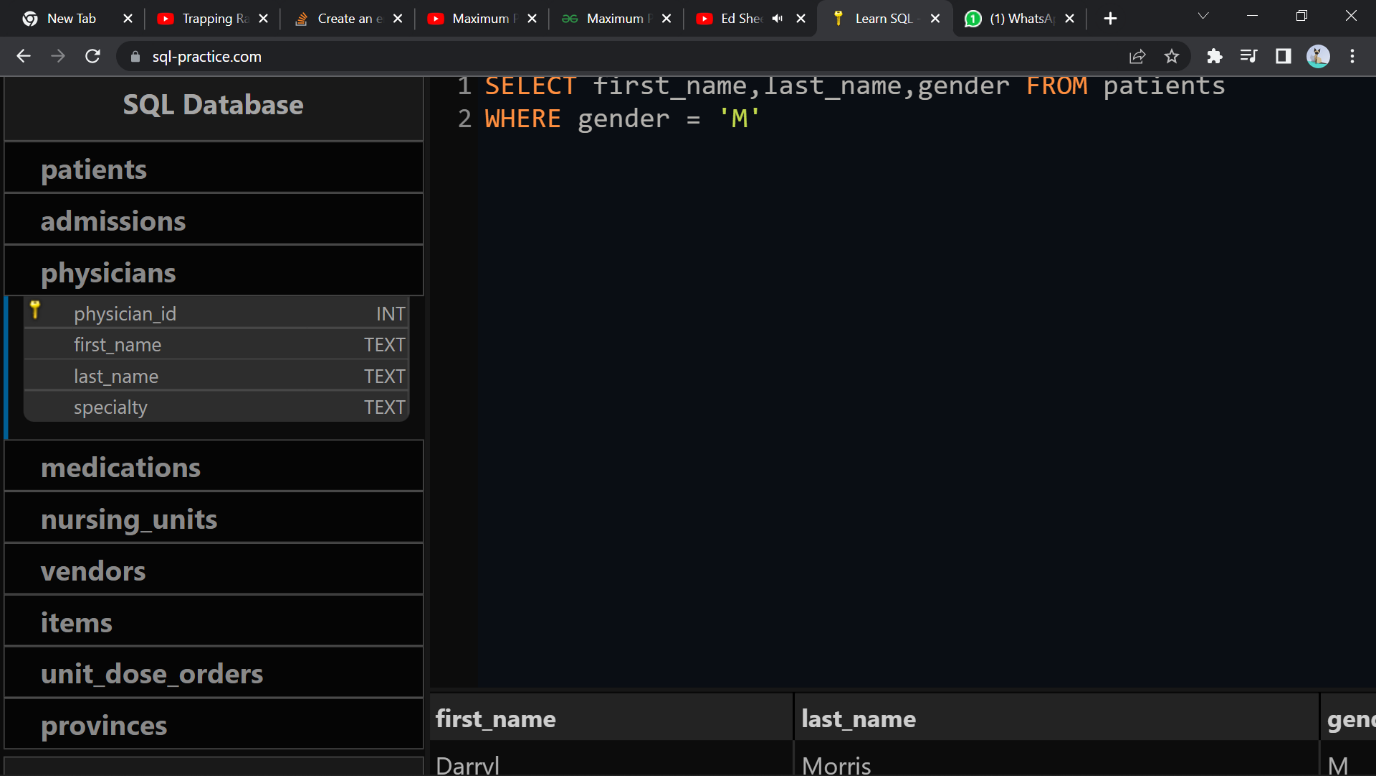
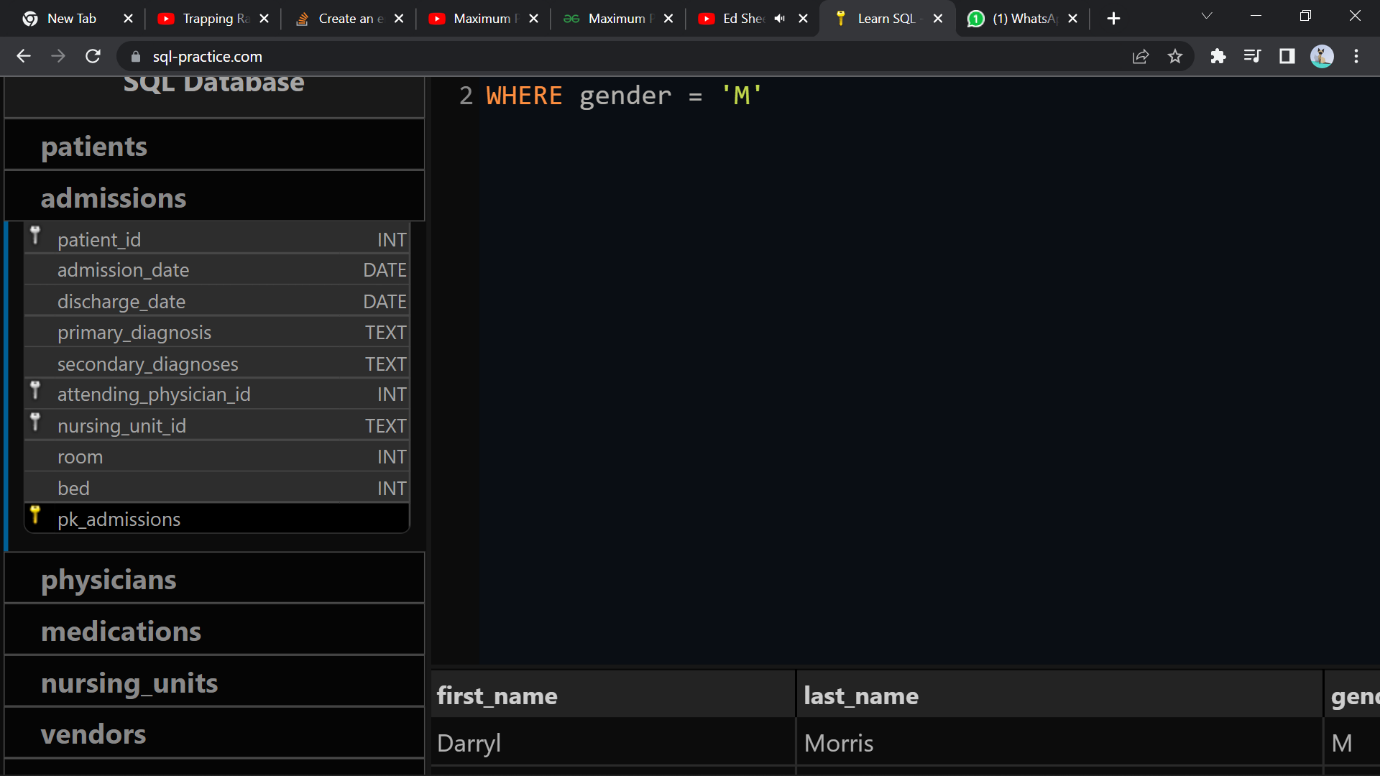
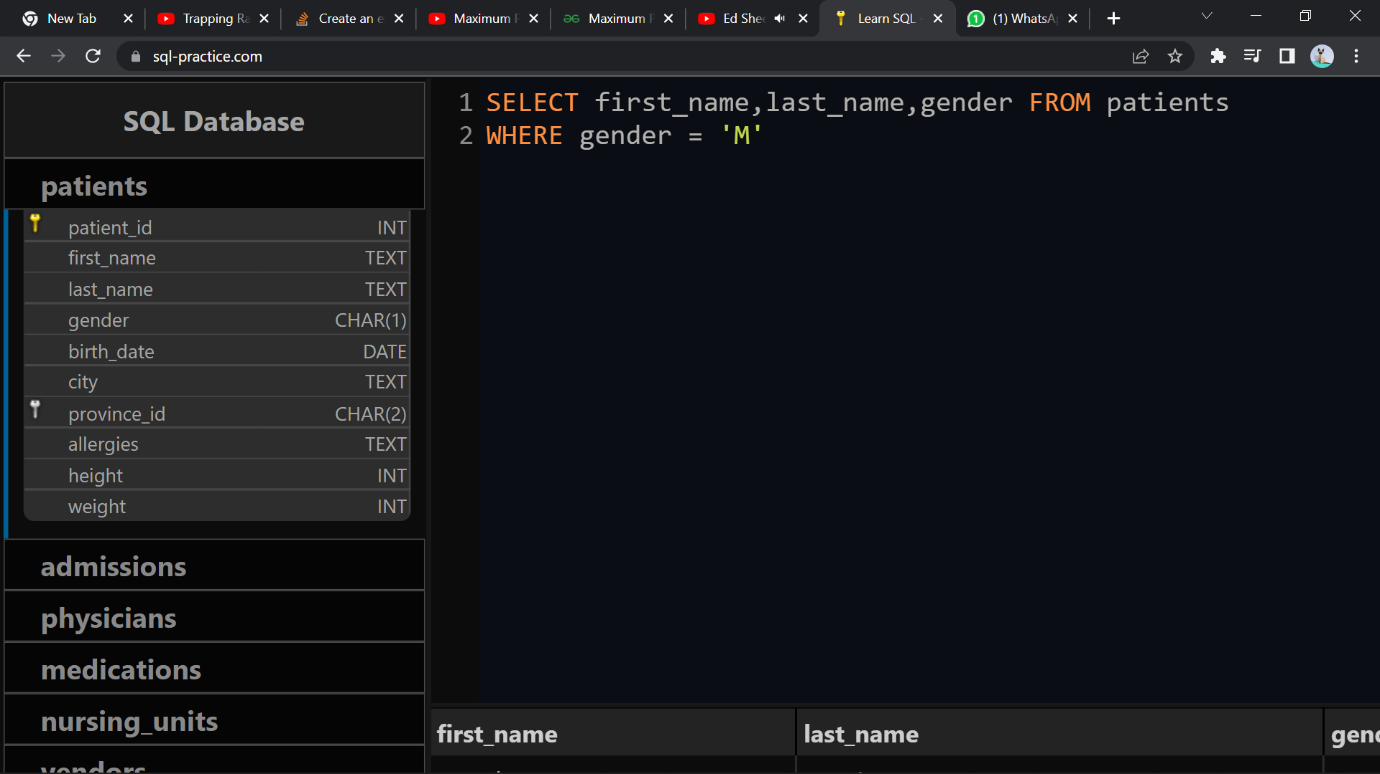
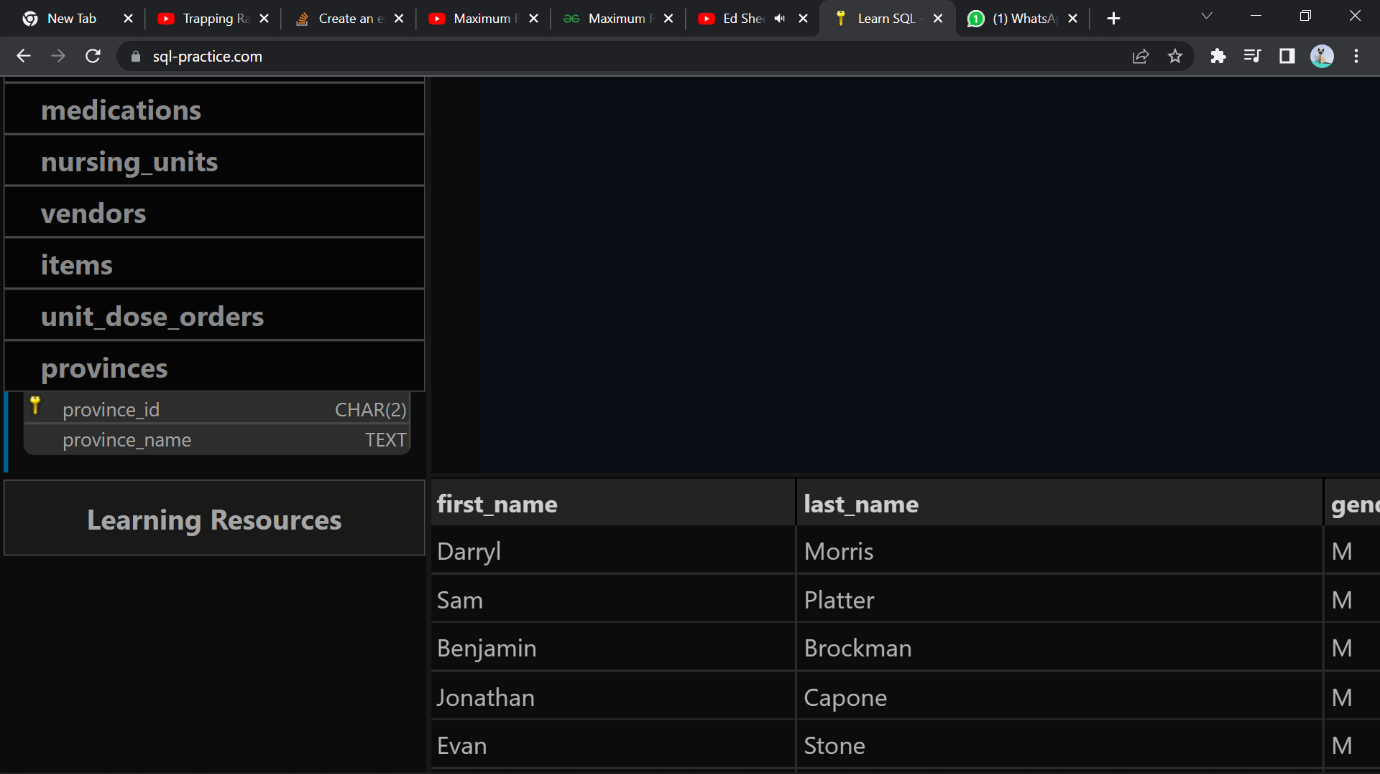
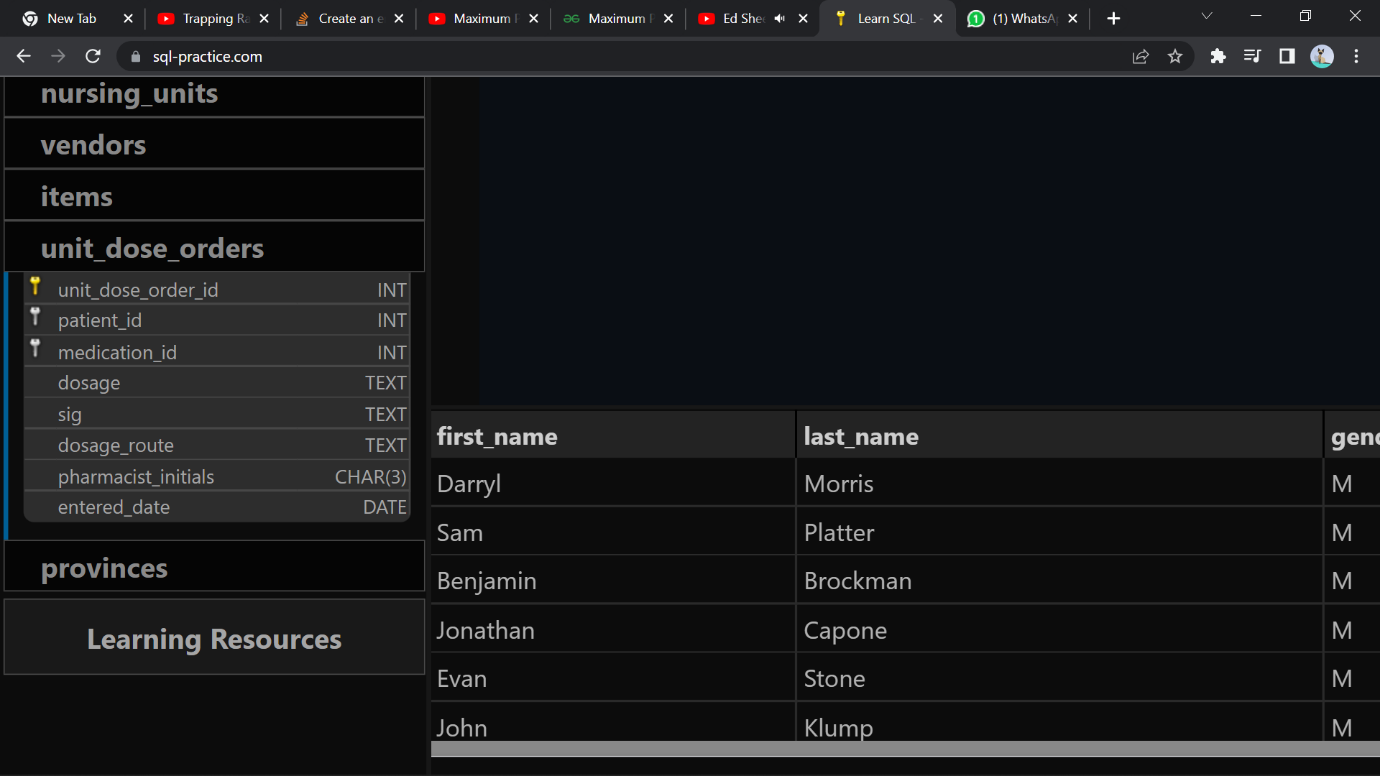
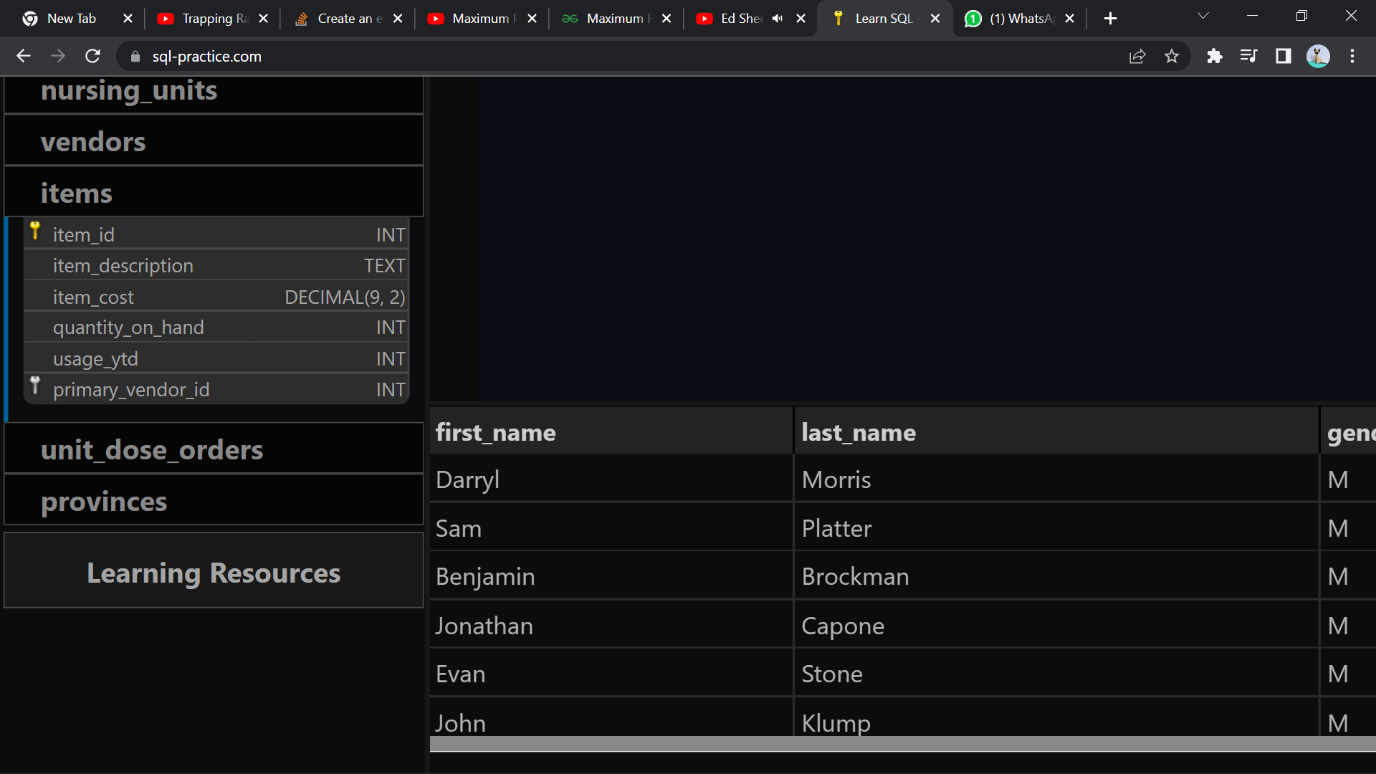
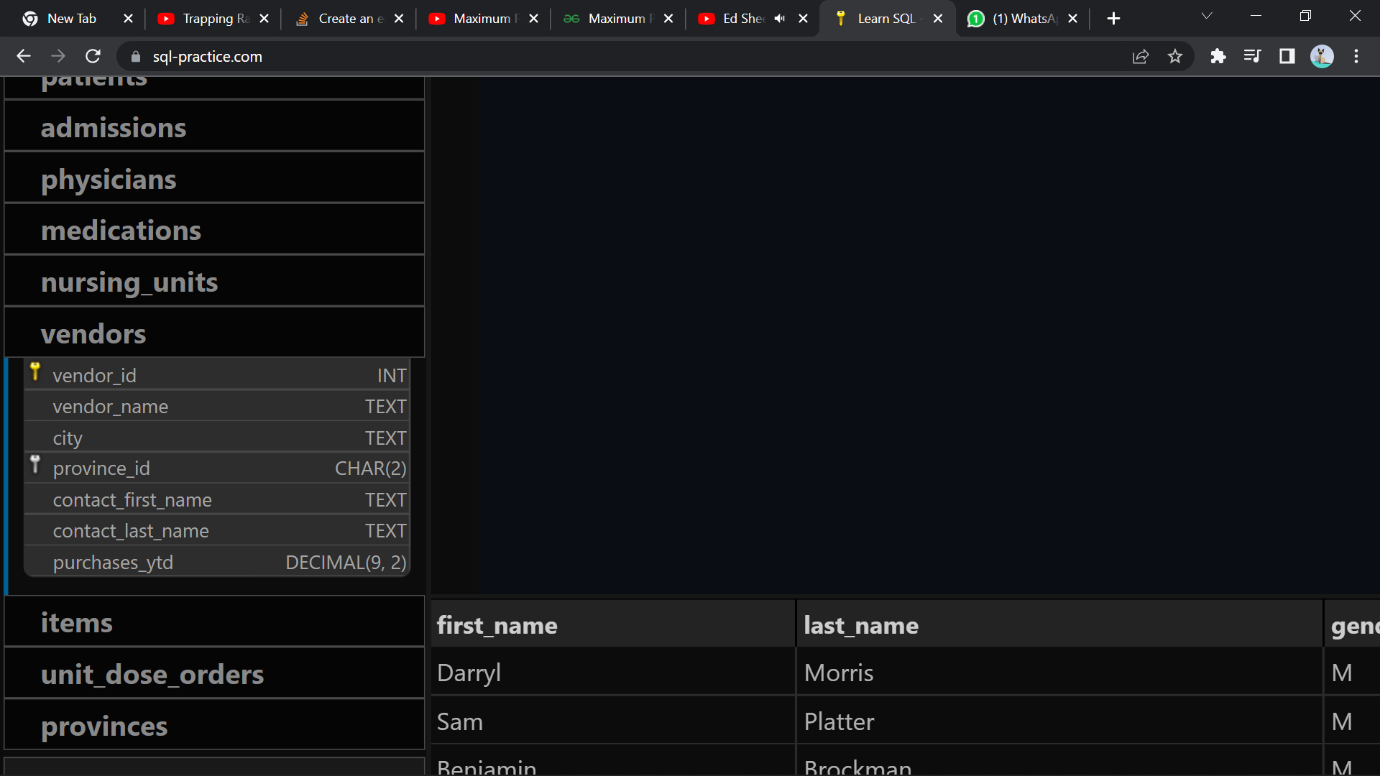
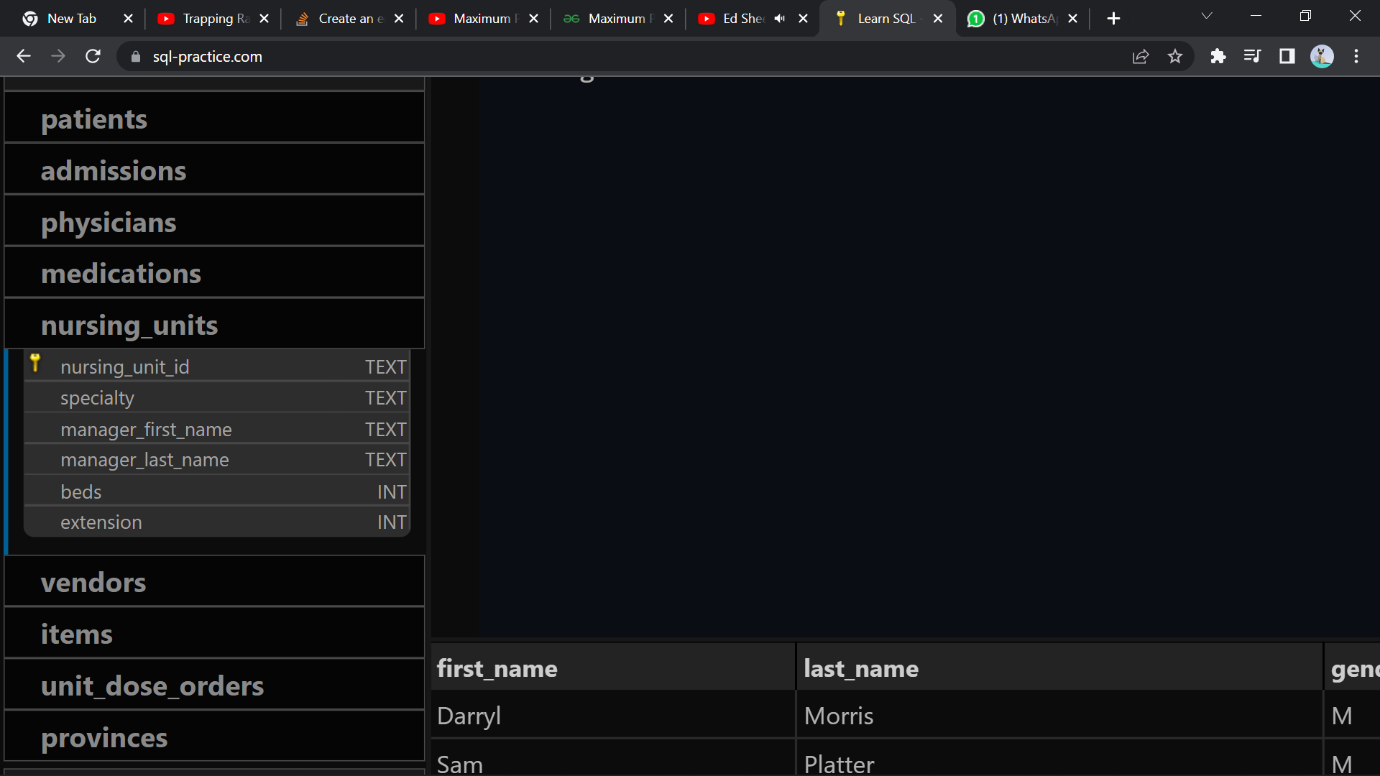
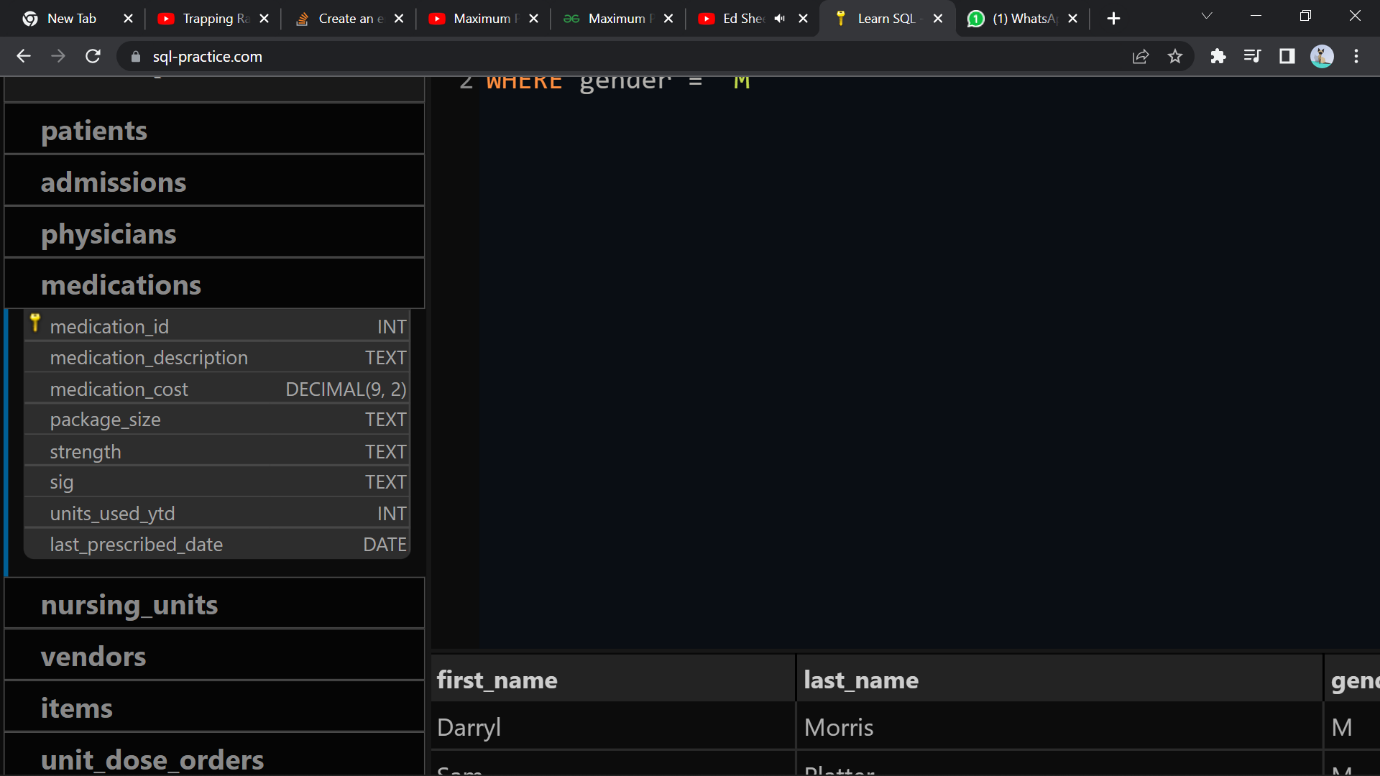
**Sql-practice.com Solution**

**🡪Prepared by @balwant singh**

**req tables in the problems :-**

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Easy ->

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'

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

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

Select

first\_name

from patients

where first\_name like 'C%'

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

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 patient\_id in (select patient\_id from patients where allergies is null)

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

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

from patients

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

select

first\_name,last\_name,pr.province\_name

from patients

join provinces pr on pr.province\_id = patients.province\_id;

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

select count(patient\_id)

from patients

where birth\_date like "2010%"

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

select

first\_name,last\_name,height

from patients

where patient\_id = (select patient\_id from patients order by height desc limit 1)

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

select \*

from patients

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

Show the total number of admissions

select

count(patient\_id)

from admissions

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

Show the total number of admissions for patient\_id 573.

select

patient\_id, count(admission\_date) as total\_admissions

from admissions

where patient\_id = 573 group by patient\_id

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"

Medium ->

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

select

distinct year(birth\_date)

from patients

order by birth\_date

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(\*)=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'

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

select

patients.patient\_id,first\_name,last\_name

from patients

join admissions on patients.patient\_id = admissions.patient\_id

where primary\_diagnosis = 'Dementia';

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 length(first\_name),concat(first\_name,last\_name)

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 (select count(\*) from patients where gender = "M") male, (select count(\*) from patients where gender = "F")

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 in ("Penicillin","Morphine")

order by allergies,first\_name,last\_name

Show patient\_id, primary\_diagnosis from admissions. Find patients admitted multiple times for the same primary\_diagnosis.

select

patient\_id,primary\_diagnosis

from admissions

group by primary\_diagnosis,patient\_id

having count(patient\_id)>1

Show the city and the total number of patients in the city in the order from most to least patients.

select

city,count(\*)

from patients

group by city

order by count(\*) desc

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

select

first\_name,last\_name,'patient' role

from patients

union

select

first\_name,last\_name,'physician' as role

from physicians

Show all allergies ordered by popularity. Remove 'NKA' and NULL values from query.

SELECT

allergies,

COUNT(\*) AS total\_diagnosis

FROM patients

WHERE

NOT allergies = 'NKA'

AND allergies NOT NULL

GROUP BY allergies

ORDER BY total\_diagnosis DESC

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;

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

concat(upper(last\_name),",",lower(first\_name))

from patients

order by first\_name desc

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)

from patients

group by province\_id

having sum(height)>=7000

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 last\_name = 'Maroni';

Show all of the month's day numbers and how many admission\_dates occurred on that number. Sort by the day with most admissions to least admissions.

select

day(admission\_date) , count(admission\_date)

from admissions

group by day(admission\_date)

order by count(admission\_date) desc

Show the patient\_id, nursing\_unit\_id, room, and bed for patient\_id 542's most recent admission\_date.

select

patient\_id,nursing\_unit\_id,room,bed

from admissions

where patient\_id = 542

order by admission\_date desc

limit 1

Show the nursing\_unit\_id and count of admissions for each nursing\_unit\_id. Exclude the following nursing\_unit\_ids: 'CCU', 'OR', 'ICU', 'ER'.

select

nursing\_unit\_id , count()

from admissions

where nursing\_unit\_id not in ('CCU','OR','ICU','ER')

group by nursing\_unit\_id

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

select

patient\_id,attending\_physician\_id,primary\_diagnosis

from admissions

where (patient\_id%2<>0 and attending\_physician\_id in (1,5,19)) or (attending\_physician\_id like "%2%" and len(patient\_id) =3)

Hard ->

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.  
  
For example, if they weight 100 to 109 they are placed in the 100 weight group, 110-119 = 110 weight group, etc.

SELECT

FLOOR(t.weight/10) \* 10 as weightGroup, count(\*) as cnt

FROM patients t

GROUP BY FLOOR(t.weight/10)

ORDER BY FLOOR(t.weight/10) DESC

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)2) >= 30.  
  
weight is in units kg.  
  
height is in units cm.

select

patient\_id,weight,height,

case

when (weight/power(height/100.,2))>=30 then 1

else 0

end

as isObese

from

patients

Show patient\_id, first\_name, last\_name, and attending physician's specialty.  
Show only the patients who has a primary\_diagnosis as 'Dementia' and the physician's first name is 'Lisa'  
  
Check patients, admissions, and physicians tables for required information.

select

patients.patient\_id,patients.first\_name,patients.last\_name,ph.specialty

from patients

join admissions on admissions.patient\_id = patients.patient\_id

join physicians ph on ph.physician\_id = admissions.attending\_physician\_id

where primary\_diagnosis = "Dementia" and ph.first\_name = "Lisa"

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:  
1. patient\_id  
2. the numerical length of patient's last\_name  
3. year of patient's birth\_date

select

distinct p.patient\_id,concat(p.patient\_id,len(p.last\_name),year(p.birth\_date))

from patients p

join

admissions a

on a.patient\_id = p.patient\_id

Each admission costs $50 for patients without insurance, and $10 for patients with insurance. All patients with an even patient\_id have insurance.  
  
Give each patient a 'Yes' if they have insurance, and a 'No' if they don't have insurance. Add up the admission\_total cost for each has\_insurance group.

select

case

when patient\_id%2=0 then 'Yes'

when patient\_id%2<>0 then 'No'

end

as has\_insurance,

sum(

case

when patient\_id%2=0 then 10

when patient\_id%2<>0 then 50

end

)

as cost\_after\_insurance

from admissions

group by has\_insurance

Show the provinces that has more patients identified as 'M' than 'F'. Must only show full province\_name

Select

p.province\_name

from provinces p

join patients pa on pa.province\_id = p.province\_id

group by p.province\_name

having count(case when gender = "M" then 1 end)>count(case when gender = "F" then 1 end)

We are looking for a specific patient. Pull all columns for the patient who matches the following criteria:  
- First\_name contains an 'r' after the first two letters.  
- Identifies their gender as 'F'  
- Born in February, May, or December  
- Their weight would be between 60kg and 80kg  
- Their patient\_id is an odd number  
- They are from the city 'Halifax'

select \*

from patients

where first\_name like "\_\_r%" and gender="F"

and month(birth\_date) in (02,05,12)

and weight between 60 and 80

and patient\_id%2<>0

and city = 'Halifax'

Show the percent of patients that have 'M' as their gender. Round the answer to the nearest hundreth number and in percent form.

SELECT

CONCAT( ROUND((

SELECT COUNT(\*)

FROM patients

WHERE gender = 'M'

) / CAST(COUNT(\*) as float),

4

) \* 100,

'%'

) as percent\_of\_male\_patients

FROM patients;

Show the patient\_id and total\_spent for patients who spent over 150 in medication\_cost. Sort by most total\_spent to least total\_spent.

select

patient\_id,sum(medication\_cost)

from medications m join unit\_dose\_orders u on m.medication\_id = u.medication\_id

group by patient\_id

having sum(medication\_cost)>150

order by sum(medication\_cost) desc

Provide the description of each item, along with the total cost of the quantity on hand (rounded to the nearest whole dollar), and the associated primary vendor. Sort the output by the most spent to the least spent on inventory.

SELECT

i.item\_description,

ROUND(i.item\_cost \* i.quantity\_on\_hand, 0) as total\_cost,

v.vendor\_name

FROM items i

JOIN vendors v ON i.primary\_vendor\_id = v.vendor\_id

GROUP BY i.item\_description

ORDER BY total\_cost DESC;