**SQL Commands for Medical history Dataset**

select \* from admissions;

select \* from doctors;

select \* from patients;

select \* from province\_names;

**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 or allergies='';

**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='' where allergies='NKA';

update patients set allergies='NKA' where allergies='' or allergies is null;

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

select first\_name,last\_name, 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 left join province\_names on patients.province\_id=province\_names.province\_id;

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

select count(\*) from patients where birth\_date like '%2010%';

(or)

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(\*) from admissions;

**12.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;

**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';

select distinct city from patients; /\* Total different cities \*/

**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 first\_name, last\_name,birth\_date 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) as birth\_year from patients order by birth\_year 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 having count(first\_name)=1;

(or)

select first\_name from patients group by first\_name having COUNT(\*) = 1;

**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**

select patient\_id, first\_name from patients where first\_name like 's%s' having length(first\_name)>=6; **(or)**

select patient\_id, first\_name from patients where first\_name like 's%' and 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, a.diagnosis 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 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 sum(case when gender='M' then 1 else 0 end) as male\_patients, sum(case when gender='F' then 1 else 0 end) as female\_patients from patients;

**22.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 sum(case when gender='M' then 1 else 0 end) as Male\_Patients,sum(case when gender='F' then 1 else 0 end) as Female\_Patients 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, "Patient" as role from patients union all select first\_name, last\_name , "Doctor" as role from doctors;

**26.Show all allergies ordered by popularity. Remove NULL values from the query**

select allergies, count(patient\_id) as popularity from patients where patient\_id is not null group by allergies order by popularity 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 ASC;

**(or)**

select first\_name, last\_name,birth\_date from patients where year(birth\_date) between '1970-01-01' and '1970-12-31' order by birth\_date ASC;

**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 case letters. Separate the last\_name and first\_name with a comma. Order the list by the first\_name in descending order EX: SMITH,jane**

select concat(upper(last\_name),',',lower(first\_name)) as full\_name from patients 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 sum\_of\_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\_difference from patients where last\_name like '%Maroni%'; **(OR)**

select max(weight)-min(weight) as weight\_difference 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 day(admission\_date) as day\_of\_month,count(\*) as admission\_count from admissions group by day\_of\_month order by day\_of\_month 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 count(\*) as total\_patients, case when weight between 100 and 109 then '100\_weight\_group'

when weight between 110 and 119 then '110\_weight\_group'

when weight between 120 and 129 then '120\_weight\_group'

when weight between 130 and 139 then '130\_weight\_group'

when weight between 140 and 149 then '140\_weight\_group'

when weight between 150 and 159 then '150\_weight\_group'

else 'other\_group'

end as weight\_group

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/((height/100)\*(height/100))>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 firstname is 'Lisa'. Check patients, admissions, and doctors tables for required information**

select p.patient\_id,p.first\_name,p.last\_name,d.specialty from patients as p join

admissions as a on p.patient\_id=a.patient\_id join

doctors as 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.**

**The password must be the following, in order:**

**- patient\_id**

**- the numerical length of patient's last\_name**

**- year of patient's birth\_date**

select patient\_id, concat(patient\_id, length(last\_name), year(birth\_date)) as temp\_password from patients where patient\_id in (select distinct patient\_id from admissions);