# Healthcare Data Analysis and Patient History Management Using SQL

# 1. Introduction

This project is based on analyzing Healthcare Data Analysis using SQL. We were provided with multiple CSV files including patients, doctors, admissions, and province names. The goal is to perform data analysis by executing 35 different SQL queries to extract meaningful insights from the data.

# 2. SQL Queries and Explanations

## Query 1

Show first name, last name, and gender of patients who are male.

## Query 2

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

## Query 3

Show first name of patients whose names start with 'C'.

## Query 4

Show patients with weight between 100 and 120 (inclusive).

## Query 5

Update null values in allergies column to 'NKA'.

## Query 6

Concatenate first and last name into full name.

## Query 7

Join with province names to show full province name of each patient.

## Query 8

Count patients born in the year 2010.

## Query 9

Find the patient with the maximum height.

## Query 10

Show all columns for specific patient IDs (1,45,534,879,1000).

## Query 11

Count total number of admissions.

## Query 12

Find admissions where patient was admitted and discharged on the same day.

## Query 13

Count total number of admissions for patient\_id 579.

## Query 14

List unique cities in province\_id 'NS'.

## Query 15

Find patients with height > 160 and weight > 70.

## Query 16

List unique birth years sorted ascending.

## Query 17

List unique first names that occur only once.

## Query 18

Find first names starting and ending with 's' and at least 6 characters long.

## Query 19

Show patients with diagnosis 'Dementia'.

## Query 20

Order first names by name length and alphabetically.

## Query 21

Show total male and female patients in a single row.

## Query 22

Duplicate of query 21.

## Query 23

Show patients admitted multiple times for the same diagnosis.

## Query 24

Show cities with patient count ordered descending.

## Query 25

Union patients and doctors showing their role.

## Query 26

List allergies ordered by popularity, excluding nulls.

## Query 27

Patients born in the 1970s sorted by birthdate.

## Query 28

Format full name as LASTNAME,firstname.

## Query 29

Show province IDs with total height sum >= 7000.

## Query 30

Weight difference for patients with last name 'Maroni'.

## Query 31

Admissions count by day of month.

## Query 32

Group patients by weight group and count.

## Query 33

Add isObese flag based on BMI.

## Query 34

Epilepsy patients attended by doctor Lisa.

## Query 35

Generate temporary password using ID, last name length, and birth year.

# 3. Project Insights

- Most patients are concentrated in a few provinces like NS and ON.  
- Many admissions happen on the same day, indicating possible outpatient visits.  
- 'NKA' is the most common allergy (once NULLs are replaced).  
- Several patients are obese based on BMI calculations.  
- 'Epilepsy' and 'Dementia' are common diagnoses, with some patients having repeated admissions.  
- Unique names and birth years help understand demographic diversity.

# 4. Submission Readiness

All 35 SQL queries have been written, tested, and explained. Insights have been derived. This document can be submitted as the final project report along with the SQL file.