Basics and Aggregations

1. **Show the first names of our patients in alphabetical order**

    **SELECT first_name FROM patients
    ORDER BY first_name ASC;**

2. **Show the total number of doctors**

    **SELECT COUNT(*) AS total_doctors
    FROM doctors;**

3. **Show the total number of specialities**

    **SELECT COUNT(DISTINCT specialty)
    FROM doctors;**

4. **Show the average weight of all the patients**

    **SELECT AVG(weight)
    FROM patients;**

5. **What is the height of our tallest patient**

    **SELECT MAX(height)
    FROM patients;**

Let's combine our knowledge

6. **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 ASC;**

Entering the realm of complex data wrangling

7. 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 total_height > 7000;
   ```

8. Show first name, last name and gender in a way that wherever gender is F, it is shown as Female

   ```
   SELECT first_name, last_name,
   CASE WHEN gender='F' THEN 'Female'
   ELSE gender END AS gender_new
   FROM patients;
   ```