

**Level: 2nd Year Bachelor's in Computer Science (2025/2026)**

**Module: Databases**

**TP 5: SQL**

Connect your **Blood-Donation** database to the RAT tool and execute the following queries using SQL based on the following schema:

Donor (**Donor\_ID**, First\_Name, Last\_Name, Gender, Date\_Of\_Birth, Blood\_Type, Phone)

Donation (**Donation\_ID**, Donation\_Date, Volume\_ML, Donation\_Type, #*Donor\_ID*)

Blood\_Inventory (**Unit\_ID**, Blood\_Type, Collection\_Date, Expiration\_Date, Status, #*Donation\_ID*)

Recipient(**Recipient\_ID**, First\_Name, Last\_Name, Gender, Date\_Of\_Birth, Blood\_Type, Hospital\_name, Town)

Transfusion (**Transfusion\_ID**, Transfusion\_Date, #*Recipient\_ID*, #*Unit\_ID*)

- 1- Display donor full names with blood type 'A+'
- 2- Display recipients from the city of 'Oran'.
- 3- Display the towns where recipients are located
- 4- Display donations made during the last 60 days.
- 5- Display all donations made between January 1, 2025 and March 31, 2025.
- 6- List all donors who use the DJEEZY operator
- 7- Display all donors whose first name starts with 'Sam'
- 8- Using both the OR operator and the IN operator, write two queries to list all donors whose blood types are
- 9- Display a combined list of first and last names of all donors and recipients
- 10- Display the total blood volume donated for each donation type.
- 11- Display the number of donors for each blood type.
- 12- Show how many recipients live in each town.
- 13- Who is the youngest donor?
- 14- Display the oldest 30% of donors
- 15- List the three towns with the highest number of recipients
- 16- List donations that have a volume greater than the average donation volume
- 17- List the most recent donation for each donor
- 18- Now, list donors who have donated more than the average donation volume
- 19- List donors with more than 2 donations
- 20- List donation types with total volume above 5000 ml
- 21- Find the hospitals that have patients with all available blood groups.
- 22- Display donors who made a donation this year.
- 23- Calculate the number of days between each blood donation and its corresponding transfusion
- 24- List donors with their ID, first\_name and last names and the total amount of blood they have donated
- 25- List donors who have donated more than 1000 ml.