Blood Donation Database Report

This report explains the structure and design of a Blood Donation Database, which includes tables for storing information about donors, blood banks, donations, recipients, and blood transfusions. The database is designed to track blood donations from donors, the storage and availability of blood at blood banks, and the transfer of blood to recipients in need.

Database Tables and Relationships

1. Donors Table

The 'Donors' table stores information about blood donors, including personal details such as their name, gender, blood type, birth date, and contact information. The table also stores the donation frequency to classify donors as 'Once', 'Regular', or 'Occasional'.

Fields:

- donor_id (Primary Key)
- first_name, last_name, gender, blood_type
- birth_date, contact_number, email, address
- donation_frequency

2. Blood Bank Table

The 'Blood Bank' table stores information about blood banks, including their name, contact details, capacity for storing blood, and the currently available amount of blood (in liters).

Fields:

- blood_bank_id (Primary Key)
- bank_name, address, contact_number, email
- capacity, available_blood

3. Donations Table

The 'Donations' table records blood donations made by donors. It tracks the donor who made the donation, the blood bank where the donation was made, the quantity of blood donated (in liters), and the date of donation.

Fields:

- donation_id (Primary Key)
- donor_id (Foreign Key referencing Donors table)
- blood_bank_id (Foreign Key referencing Blood Bank table)
- donation_date, quantity

4. Recipients Table

The 'Recipients' table stores information about individuals who receive blood transfusions. It includes personal information such as name, gender, blood type, and contact details.

Fields:

- recipient_id (Primary Key)
- first_name, last_name, gender, blood_type
- contact_number, email, address

5. Transfusions Table

The 'Transfusions' table records the transfusions of blood from blood banks to recipients. It tracks the recipient who received the blood, the blood bank that supplied the blood, the date of transfusion, and the quantity of blood used (in liters).

Fields:

- transfusion_id (Primary Key)
- recipient_id (Foreign Key referencing Recipients table)
- blood_bank_id (Foreign Key referencing Blood Bank table)
- transfusion_date, quantity

Conclusion

The Blood Donation Database is designed to efficiently manage and track the blood donation process, ensuring that information about donors, blood banks, donations, recipients, and transfusions is stored in an organized and accessible manner. The use of foreign keys in the 'Donations' and 'Transfusions' tables establishes relationships between donors, blood banks, and recipients, enabling the easy tracking of blood movement.