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**Database Management System 1**

**CPS 542 – Spring 2024**

**DATABASE DESIGN**

**OF**

**BLOOD BANK MANAGEMENT SYSTEM**

**(FINAL REPORT)**

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**INTRODUCTION**

**Database Proposal:**   
A manual approach to managing blood bank operations is outdated and inefficient. Implementing a database management system can enhance the process by efficiently handling blood stock levels, donor registration, recipient registration, and blood distribution. Manual tracking of blood stock, donor details, and blood distribution is inefficient and error-prone, potentially leading to wasted resources such as expired blood and blood shortages for patients in need. The proposed database includes 8 entities connected by 8 relationships. The system aims to facilitate the tracking and organization of blood donations, storage, and distribution. It is anticipated to enhance the accuracy and efficiency of blood inventory management, donor registration, and blood stock level monitoring. This system will contribute to the timely provision of safe blood to patients in need.

The scope of the database includes following functions:

* Hospital Management
* Patient Information
* Inventory Management
* Request Management
* Donor Information
* Blood Bank Information
* Blood Camp Information

**DATABASE ENTITIES AND RELATIONSHIPS**

**Entities:**

**Hospital:** An entity that represents different hospitals.

(**hospital\_id**, h\_phone, operation\_hours, h\_address, h\_name)

**Patient:** An entity that stores details about patients and their association with a hospital.

(**patient\_id**, name, gender, p\_blood\_group, mobile\_number)

**Blood Camp:** An entity representing blood donation camps.

(**bc\_id**, bc\_operation\_hours, bc\_name, start\_date, end\_date)

**Blood\_Stored:** An entity representing blood stored in different camps and their association with blood camps.

(**bs\_id**, expiry\_date, blood\_type, stored\_blood\_quantity)

**Blood Bank:** An entity representing different blood banks.

(**bb\_id**, bb\_operation\_hours, bb\_phone, bb\_name)

**Inventory:** An entity to make note of all the availability of different blood types and quantity to donate.

(**inventory\_id**, quantity, blood\_type, expiry\_date)

**Request:** An entity to manage blood request from hospitals, blood banks and blood camps.

(**req\_id**, req\_quantity, blood\_group)

**Donor:** An entity that has the information about blood donors and their association with blood banks and blood camps.

(**donor\_id**, donor\_name, gender, age, date\_of\_last\_donation)

**Relations:**

1. Patient **admits** in Hospital
2. Hospital **sends** Request
3. Request **sent\_to\_bb** to Blood\_Bank.
4. Request **sent\_to\_bc** to Blood\_camp.
5. Blood bank **contains** Inventory.
6. Donor **donates\_to\_bb to** Bloodbank.
7. Donor **donates\_to\_bc to** Bloodcamp.
8. Bloodcamp **stores** Blood\_Stored.

**ER MODEL**

**Description:**

The ER model for a blood bank database consists of several entities, including **Patient**, **Hospital**, **Donor**, **Blood\_Camp**, **Blood\_Bank**, **Inventory**, **Request**, and **Blood\_Stored**. Each entity has its own set of attributes and relationships with other entities. The ER model provides a visual representation of the database schema, which is useful for designing and maintaining the blood bank database.

The database keeps track of information about patients who admit to hospitals and donors who provide blood to blood banks or blood camps. It also manages blood requests from hospitals and the storage and distribution of blood products.

When a patient admits to a hospital, their information is recorded in the database. Hospitals send requests for blood products to blood banks and blood camps. Donors provide blood to either blood banks or blood camps, and the database keeps track of donor information and donation history.

Blood banks manage blood inventory and fulfill requests from hospitals. They store blood products and track their expiration dates. Blood camps organize events for collecting blood from donors and storing it for future use.

**Entities:**

Hospital (**hospital\_id**, h\_phone, operation\_hours, h\_address, h\_name)

Patient (**patient\_id**, name, gender, p\_blood\_group, mobile\_number)

Blood\_Camp (**bc\_id**, bc\_operation\_hours, bc\_name, start\_date, end\_date)

Blood\_stored (**bs\_id**, expiry\_date, blood\_type, stored\_blood\_quantity)

Blood\_bank (**bb\_id**, bb\_operation\_hours, bb\_phone, bb\_name)

Inventory (**inventory\_id**, quantity, blood\_type, expiry\_date)

Request (**req\_id**, req\_quantity, blood\_group)

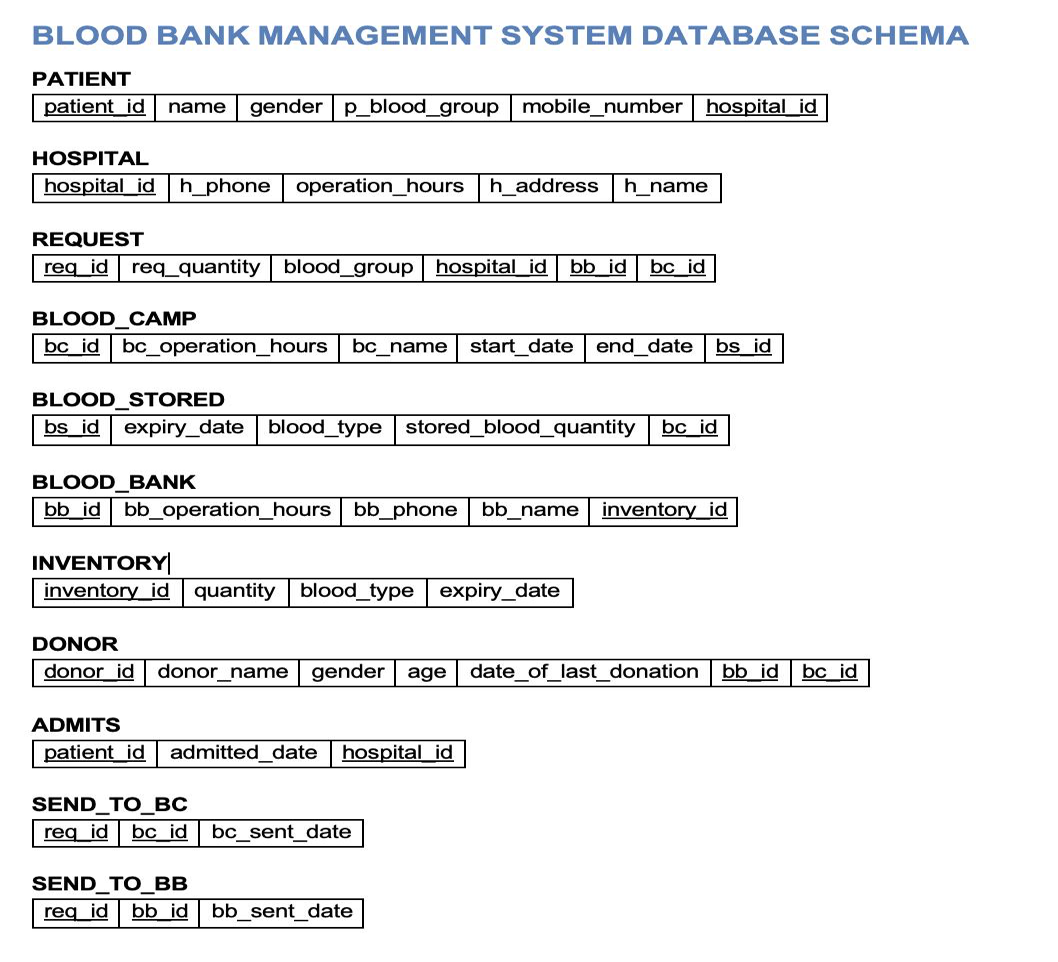
Donor (**donor\_id**, donor\_name, gender, age, date\_of\_last\_donation)

**ENTITY-RELATIONSHIP DIAGRAM**

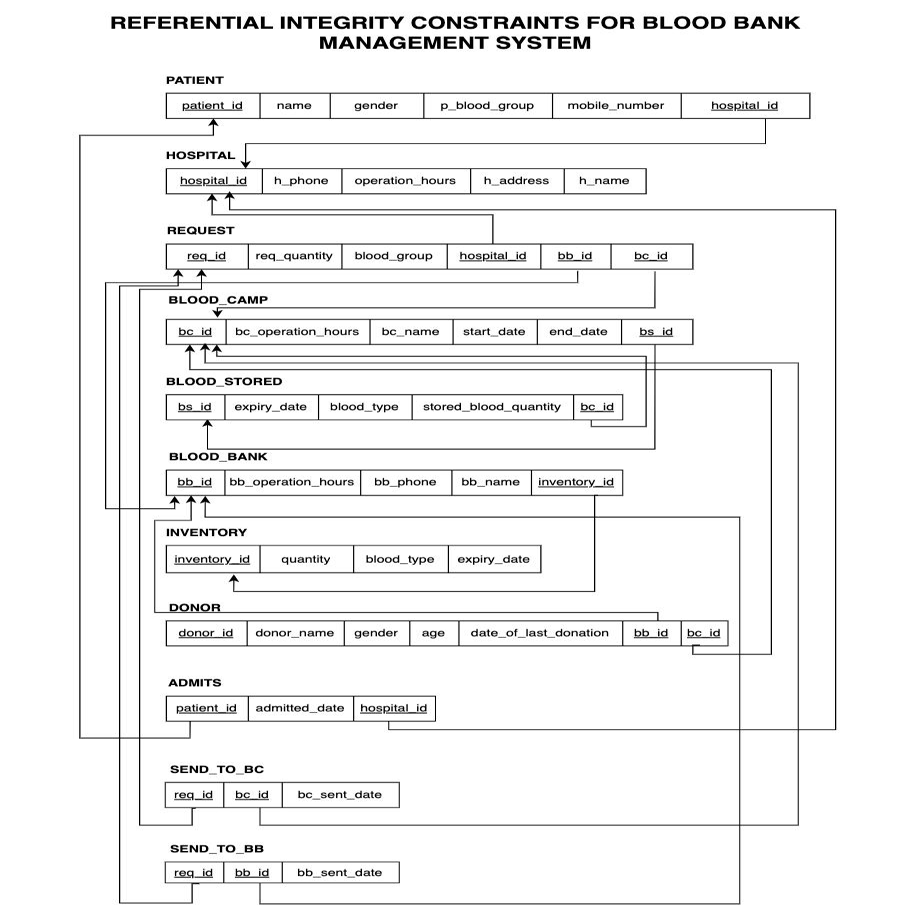
**A diagram of a flowchart

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**DATABASE SCHEMA DIAGRAM**

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**REFERENTIAL INTEGRITY CONSTRAINTS**

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**NORMALIZATION**

Normalization is a database design approach focused on reducing data redundancy and resolving issues like Insertion, Update, and Deletion Anomalies within the database structure. This method involves splitting tables and creating relationships between them. In SQL, the main objective of normalization is to eliminate redundant data and ensure that information is stored logically and securely. There are six types of normalization in database systems, with the first three being the most commonly used. These normalization forms are as follows:

**Database Normal Forms**

Here is a list of Normal Forms

* 1NF (First Normal Form)
* 2NF (Second Normal Form)
* 3NF (Third Normal Form)

**1NF (First Normal Form)**

A database achieves First Normal Form when it adheres to the following principles:

* Every cell within a table holds only one value.
* Each record in the table is unique.

**2NF (Second Normal Form)**

For a database to meet the requirements of Second Normal Form:

* It must already satisfy the conditions of First Normal Form.
* All attributes not part of the primary key must be entirely dependent on the primary key.

**3NF (Third Normal Form)**

For a database to be considered in Third Normal Form:

* It must already meet the criteria of Fourth Normal Form.
* It should not have any non-key attributes that are dependent on other non-key attributes within the relation.

We have our database designed in such a way that it carefully follows all the rules of Normalization and maintains the Normal Forms while functioning.

**All tables are in 3NF.**

**PHYSICAL MODEL**

DROP TABLE Hospital CASCADE CONSTRAINTS;

CREATE TABLE Hospital (

hospital\_id NUMBER,

h\_name VARCHAR2(100),

h\_phone VARCHAR2(20),

operation\_hours VARCHAR2(100),

h\_address VARCHAR2(200),

CONSTRAINT pk\_hospital PRIMARY KEY (hospital\_id)

);

DROP TABLE Patient CASCADE CONSTRAINTS;

CREATE TABLE Patient (

patient\_id NUMBER,

FirstName VARCHAR2(100),

LastName VARCHAR2(100),

p\_blood\_group VARCHAR2(50),

gender VARCHAR2(50),

hos\_id NUMBER,

CONSTRAINT pk\_patient PRIMARY KEY (patient\_id),

CONSTRAINT fk\_hospital FOREIGN KEY (hos\_id)

REFERENCES Hospital(hospital\_id)

);

DROP TABLE MobileNumbers CASCADE CONSTRAINTS;

CREATE TABLE MobileNumbers (

mobile\_id INT PRIMARY KEY,

p\_id INT NOT NULL,

mobile\_number VARCHAR2(20),

CONSTRAINT fk\_p\_id FOREIGN KEY (p\_id)

REFERENCES Patient(patient\_id)

ON DELETE CASCADE

);

DROP TABLE Blood\_Camp CASCADE CONSTRAINTS;

CREATE TABLE Blood\_Camp (

bc\_id NUMBER NOT NULL,

bc\_operation\_hours VARCHAR2(100),

bc\_name VARCHAR2(100),

start\_date DATE,

end\_date DATE,

PRIMARY KEY (bc\_id)

);

DROP TABLE Blood\_Stored CASCADE CONSTRAINTS;

CREATE TABLE Blood\_Stored (

bs\_id NUMBER NOT NULL,

expiry\_date DATE,

blood\_type VARCHAR2(10),

stored\_blood\_quantity NUMBER,

bc\_id NUMBER,

CONSTRAINT pk\_blood\_stored PRIMARY KEY (bs\_id),

CONSTRAINT fk\_bc\_id FOREIGN KEY (bc\_id)

REFERENCES Blood\_Camp(bc\_id)

ON DELETE CASCADE

);

DROP TABLE Blood\_Bank CASCADE CONSTRAINTS;

CREATE TABLE Blood\_Bank (

bb\_id NUMBER NOT NULL,

bb\_operation\_hours VARCHAR2(100),

bb\_phone VARCHAR2(20),

bb\_name VARCHAR2(100),

PRIMARY KEY (bb\_id)

);

DROP TABLE Inventory CASCADE CONSTRAINTS;

CREATE TABLE Inventory (

inventory\_id NUMBER NOT NULL,

quantity NUMBER,

blood\_type VARCHAR2(10),

expiry\_date DATE,

bb\_id NUMBER,

PRIMARY KEY (inventory\_id),

CONSTRAINT fk\_bb\_id FOREIGN KEY (bb\_id)

REFERENCES Blood\_Bank(bb\_id)

ON DELETE CASCADE

);

DROP TABLE Request CASCADE CONSTRAINTS;

CREATE TABLE Request (

req\_id NUMERIC NOT NULL,

req\_quantity NUMERIC NOT NULL,

blood\_group VARCHAR(10) NOT NULL,

hospital\_id NUMERIC,

bb\_id NUMERIC,

bc\_id NUMERIC,

PRIMARY KEY (req\_id),

CONSTRAINT fk\_hospital\_request FOREIGN KEY (hospital\_id)

REFERENCES Hospital(hospital\_id) ON DELETE CASCADE,

CONSTRAINT fk\_blood\_bank\_request FOREIGN KEY (bb\_id)

REFERENCES Blood\_Bank(bb\_id) ON DELETE CASCADE,

CONSTRAINT fk\_blood\_camp\_request FOREIGN KEY (bc\_id)

REFERENCES Blood\_Camp(bc\_id) ON DELETE CASCADE

);

DROP TABLE Donor CASCADE CONSTRAINTS;

CREATE TABLE Donor (

donor\_id NUMBER NOT NULL,

donor\_name VARCHAR2(100),

gender VARCHAR2(10),

age NUMBER,

date\_of\_last\_donation DATE,

bb\_id NUMBER,

bc\_id NUMBER,

PRIMARY KEY (donor\_id),

CONSTRAINT fk\_blood\_bank\_donor FOREIGN KEY (bb\_id)

REFERENCES Blood\_Bank(bb\_id) ON DELETE CASCADE,

CONSTRAINT fk\_blood\_camp\_donor FOREIGN KEY (bc\_id)

REFERENCES Blood\_Camp(bc\_id) ON DELETE CASCADE

);

DROP TABLE Admits CASCADE CONSTRAINTS;

CREATE TABLE Admits (

patient\_id NUMBER NOT NULL,

admitted\_date DATE,

hospital\_id NUMBER NOT NULL,

PRIMARY KEY (patient\_id, hospital\_id),

CONSTRAINT fk\_patient\_admits FOREIGN KEY (patient\_id)

REFERENCES Patient(patient\_id),

CONSTRAINT fk\_hospital\_admits FOREIGN KEY (hospital\_id)

REFERENCES Hospital(hospital\_id)

);

DROP TABLE Send\_to\_bc CASCADE CONSTRAINTS;

CREATE TABLE Send\_to\_bc (

req\_id NUMBER NOT NULL,

bc\_id NUMBER NOT NULL,

bc\_sent\_date DATE,

PRIMARY KEY (req\_id, bc\_id),

CONSTRAINT fk\_request\_tobc FOREIGN KEY (req\_id)

REFERENCES Request(req\_id),

CONSTRAINT fk\_blood\_camp FOREIGN KEY (bc\_id)

REFERENCES Blood\_Camp(bc\_id)

);

DROP TABLE Send\_to\_bb CASCADE CONSTRAINTS;

CREATE TABLE Send\_to\_bb (

req\_id NUMBER NOT NULL,

bb\_id NUMBER NOT NULL,

bb\_sent\_date DATE,

PRIMARY KEY( req\_id, bb\_id),

CONSTRAINT fk\_request FOREIGN KEY (req\_id)

REFERENCES Request(req\_id),

CONSTRAINT fk\_blood\_bank\_tobb FOREIGN KEY (bb\_id)

REFERENCES Blood\_Bank(bb\_id)

);

DROP VIEW Patient\_View;

CREATE VIEW Patient\_View AS

SELECT FirstName, LastName, FirstName || ' ' || LastName AS Name

FROM Patient;

**DATA INSERTION**

**Hospital**

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (1, 'City Hospital', '123-456-7890', '8:00 AM - 5:00 PM', '123 Main St, City');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (2, 'County Medical Center', '456-789-0123', '24/7', '456 Elm St, County');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (3, 'General Hospital', '789-012-3456', '9:00 AM - 7:00 PM', '789 Oak St, Town');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES

(4, 'University Hospital', '012-345-6789', '10:00 AM - 6:00 PM', '456 Maple St, University');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (5, 'Community Hospital', '234-567-8901', '8:00 AM - 4:00 PM', '789 Pine St, Community');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (6, 'Veterans Hospital', '345-678-9012', '24/7', '123 Oak St, Veterans');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (7, 'Childrens Hospital', '111-222-3333', '9:00 AM - 5:00 PM', '456 Cedar St, Children');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (8, 'Medical Center', '567-890-1234', '8:00 AM - 6:00 PM', '789 Walnut St, Medical');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (9, 'Regional Hospital', '678-901-2345', '10:00 AM - 8:00 PM', '123 Pine St, Regional');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (10, 'Saint Mary Hospital', '444-555-6666', '7:00 AM - 3:00 PM', '456 Maple St, Saint Mary');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (11, 'Memorial Hospital', '890-123-4567', '8:00 AM - 4:00 PM', '789 Oak St, Memorial');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (12, 'Mercy Hospital', '901-234-5678', '24/7', '123 Pine St, Mercy');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (13, 'Parkview Hospital', '000-111-2222', '9:00 AM - 5:00 PM', '456 Cedar St, Parkview');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (14, 'St. Joseph Hospital', '999-000-1111', '8:00 AM - 6:00 PM', '789 Walnut St, St. Joseph');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (15, 'Northwest Hospital', '888-999-0000', '10:00 AM - 8:00 PM', '123 Pine St, Northwest');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (16, 'Community Medical Center', '777-888-9999', '7:00 AM - 3:00 PM', '456 Maple St, Community Medical');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (17, 'Baptist Hospital', '666-777-8888', '8:00 AM - 4:00 PM', '789 Oak St, Baptist');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (18, 'University Medical Center', '555-666-7777', '24/7', '123 Pine St, University Medical');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (19, 'Central Hospital', '443-555-6666', '9:00 AM - 5:00 PM', '456 Cedar St, Central');

INSERT INTO Hospital (hospital\_id, h\_name, h\_phone, operation\_hours, h\_address)

VALUES (20, 'South Hospital', '333-444-5555', '8:00 AM - 6:00 PM', '789 Walnut St, South');

**Patient**

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (101, 'John', 'Doe', 'O+', 'Male', 1);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (102, 'Jane', 'Smith', 'A-', 'Female', 1);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (103, 'Michael', 'Johnson', 'AB+', 'Male', 2);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (104, 'Emily', 'Brown', 'B+', 'Female', 2);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (105, 'David', 'Lee', 'O-', 'Male', 3);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (106, 'Sophia', 'Martinez', 'AB-', 'Female', 3);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (107, 'Christopher', 'Garcia', 'A+', 'Male', 4);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (108, 'Emma', 'Wilson', 'B-', 'Female', 4);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (109, 'Ethan', 'Anderson', 'O+', 'Male', 5);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (110, 'Olivia', 'Taylor', 'AB+', 'Female', 5);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (111, 'Aiden', 'Clark', 'A-', 'Male', 6);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (112, 'Mia', 'Rodriguez', 'O-', 'Female', 6);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (113, 'Lucas', 'Martinez', 'B+', 'Male', 7);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (114, 'Isabella', 'Lee', 'AB-', 'Female', 7);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (115, 'Liam', 'Thompson', 'A+', 'Male', 8);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (116, 'Charlotte', 'Hall', 'B-', 'Female', 8);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (117, 'Noah', 'Garcia', 'O+', 'Male', 9);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (118, 'Amelia', 'Brown', 'AB+', 'Female', 9);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (119, 'James', 'Wilson', 'A-', 'Male', 10);

INSERT INTO Patient (patient\_id, FirstName, LastName, p\_blood\_group, gender, hos\_id)

VALUES (120, 'Ava', 'Anderson', 'B+', 'Female', 10);

**MobileNumbers**

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (200, 107, '512-345-6789');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (201, 101, '523-456-7890');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (202, 102, '534-567-8901');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (203, 103, '545-678-9012');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (204, 104, '556-789-0123');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (205, 105, '567-890-1234');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (206, 106, '578-901-2345');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (207, 107, '589-012-3456');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (208, 108, '590-123-4567');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (209, 109, '501-234-5678');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (210, 110, '502-345-6789');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (211, 111, '503-456-7890');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (212, 112, '504-567-8901');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (213, 113, '505-678-9012');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (214, 114, '506-789-0123');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (215, 115, '507-890-1234');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (216, 116, '508-901-2345');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (217, 117, '509-012-3456');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (218, 118, '510-123-4567');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (219, 119, '511-234-5678');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (220, 108, '513-456-7890');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (221, 103, '514-567-8901');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (222, 106, '515-678-9012');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (223, 110, '516-789-0123');

INSERT INTO MobileNumbers (mobile\_id, p\_id, mobile\_number)

VALUES (224, 114, '517-890-1234');

**Blood\_Camp**

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (300, '8:00 AM - 5:00 PM', 'Blood Drive 1', '05/15/2024', '05/20/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (301, '9:00 AM - 6:00 PM', 'Blood Donation Camp 2', '06/01/2024', '06/05/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (302, '10:00 AM - 4:00 PM', 'Health Fair Blood Donation', '06/15/2024', '06/20/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (303, '7:00 AM - 3:00 PM', 'Community Blood Drive', '07/01/2024', '07/05/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (304, '8:00 AM - 4:00 PM', 'Blood Donor Clinic', '07/15/2024', '07/20/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (305, '9:00 AM - 5:00 PM', 'Blood Donation Event', '08/01/2024', '08/05/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (306, '10:00 AM - 6:00 PM', 'Blood Drive 2', '08/15/2024', '08/20/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (307, '8:00 AM - 5:00 PM', 'Health Fair Blood Drive', '09/01/2024', '09/05/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (308, '9:00 AM - 6:00 PM', 'Community Blood Donation', '09/15/2024', '09/20/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (309, '7:00 AM - 3:00 PM', 'Blood Drive 3', '10/01/2024', '10/05/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (310, '8:00 AM - 4:00 PM', 'Mobile Blood Donation', '10/15/2024', '10/20/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (311, '9:00 AM - 5:00 PM', 'Blood Donor Day', '11/01/2024', '11/05/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (312, '10:00 AM - 6:00 PM', 'Blood Drive 4', '11/15/2024', '11/20/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (313, '8:00 AM - 5:00 PM', 'Blood Donation Fair', '12/01/2024', '12/05/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (314, '9:00 AM - 6:00 PM', 'Blood Drive 5', '12/15/2024', '12/20/2024');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (315, '7:00 AM - 3:00 PM', 'Community Blood Donor Day', '01/01/2025', '01/05/2025');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (316, '8:00 AM - 4:00 PM', 'Blood Donation Marathon', '01/15/2025', '01/20/2025');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (317, '9:00 AM - 5:00 PM', 'Blood Drive 6', '02/01/2025', '02/05/2025');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (318, '10:00 AM - 6:00 PM', 'Blood Donor Festival', '02/15/2025', '02/20/2025');

INSERT INTO Blood\_Camp (bc\_id, bc\_operation\_hours, bc\_name, start\_date, end\_date)

VALUES (319, '8:00 AM - 5:00 PM', 'Mobile Blood Drive', '03/01/2025', '03/05/2025');

**Blood\_Stored**

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (401, '05/15/2024', 'A+', 100, 300);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (402, '05/15/2024', 'A-', 100, 300);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (403, '05/15/2024', 'B+', 100, 300);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (404, '05/15/2024', 'B-', 100, 300);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (405, '05/15/2024', 'AB+', 100, 300);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (406, '05/15/2024', 'AB-', 100, 300);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (407, '05/15/2024', 'O+', 100, 300);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (408, '05/15/2024', 'O-', 100, 300);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (409, '06/20/2024', 'A+', 150, 301);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (410, '06/20/2024', 'A-', 150, 301);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (411, '06/20/2024', 'B+', 150, 301);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (412, '06/20/2024', 'B-', 150, 301);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (413, '06/20/2024', 'AB+', 150, 301);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (414, '06/20/2024', 'AB-', 150, 301);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (415, '06/20/2024', 'O+', 150, 301);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (416, '06/20/2024', 'O-', 150, 301);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (417, '07/10/2024', 'A+', 200, 302);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (418, '07/10/2024', 'A-', 200, 302);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (419, '07/10/2024', 'B+', 200, 302);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (420, '07/10/2024', 'B-', 200, 302);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (421, '07/10/2024', 'AB+', 200, 302);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (422, '07/10/2024', 'AB-', 200, 302);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (423, '07/10/2024', 'O+', 200, 302);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (424, '07/10/2024', 'O-', 200, 302);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (425, '08/05/2024', 'A+', 120, 303);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (426, '08/05/2024', 'A-', 120, 303);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (427, '08/05/2024', 'B+', 120, 303);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (428, '08/05/2024', 'B-', 120, 303);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (429, '08/05/2024', 'AB+', 120, 303);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (430, '08/05/2024', 'AB-', 120, 303);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (431, '08/05/2024', 'O+', 120, 303);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (432, '08/05/2024', 'O-', 120, 303);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (433, '09/18/2024', 'A+', 180, 304);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (434, '09/18/2024', 'A-', 180, 304);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (435, '09/18/2024', 'B+', 180, 304);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (436, '09/18/2024', 'B-', 180, 304);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (437, '09/18/2024', 'AB+', 180, 304);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (438, '09/18/2024', 'AB-', 180, 304);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (439, '09/18/2024', 'O+', 180, 304);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (440, '09/18/2024', 'O-', 180, 304);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (441, '10/25/2024', 'A+', 50, 305);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (442, '10/25/2024', 'A-', 50, 305);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (443, '10/25/2024', 'B+', 50, 305);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (444, '10/25/2024', 'B-', 50, 305);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (445, '10/25/2024', 'AB+', 50, 305);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (446, '10/25/2024', 'AB-', 50, 305);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (447, '10/25/2024', 'O+', 50, 305);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (448, '10/25/2024', 'O-', 50, 305);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (449, '11/30/2024', 'A+', 0, 306);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (450, '11/30/2024', 'A-', 0, 306);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (451, '11/30/2024', 'B+', 0, 306);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (452, '11/30/2024', 'B-', 0, 306);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (453, '11/30/2024', 'AB+', 0, 306);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (454, '11/30/2024', 'AB-', 0, 306);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (455, '11/30/2024', 'O+', 0, 306);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (456, '11/30/2024', 'O-', 0, 306);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (457, '01/15/2025', 'A+', 0, 307);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (458, '01/15/2025', 'A-', 0, 307);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (459, '01/15/2025', 'B+', 0, 307);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (460, '01/15/2025', 'B-', 0, 307);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (461, '01/15/2025', 'AB+', 0, 307);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (462, '01/15/2025', 'AB-', 0, 307);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (463, '01/15/2025', 'O+', 0, 307);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (464, '01/15/2025', 'O-', 0, 307);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (465, '03/10/2025', 'A+', 0, 308);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (466, '03/10/2025', 'A-', 0, 308);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (467, '03/10/2025', 'B+', 0, 308);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (468, '03/10/2025', 'B-', 0, 308);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (469, '03/10/2025', 'AB+', 0, 308);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (470, '03/10/2025', 'AB-', 0, 308);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (471, '03/10/2025', 'O+', 0, 308);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (472, '03/10/2025', 'O-', 0, 308);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (473, '04/20/2025', 'A+', 0, 309);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (474, '04/20/2025', 'A-', 0, 309);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (475, '04/20/2025', 'B+', 0, 309);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (476, '04/20/2025', 'B-', 0, 309);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (477, '04/20/2025', 'AB+', 0, 309);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (478, '04/20/2025', 'AB-', 0, 309);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id)

VALUES (479, '04/20/2025', 'O+', 0, 309);

INSERT INTO Blood\_Stored (bs\_id, expiry\_date, blood\_type, stored\_blood\_quantity, bc\_id) VALUES (480, '04/20/2025', 'O-', 0, 309);

**Blood\_Bank:**

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (500, 'Monday-Friday: 9am-5pm', '7372887890', 'Red Cross Blood Bank');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (501, 'Monday-Saturday: 8am-6pm', '7372887690', 'Community Blood Center');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (502, 'Monday-Friday: 10am-4pm', '7372587890', 'LifeStream Blood Bank');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (503, 'Monday-Thursday: 8:30am-4:30pm', '2372887890', 'Bloodworks Northwest');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (504, 'Monday-Friday: 9am-5pm', '7372887892', 'New York Blood Center');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (505, 'Monday-Friday: 8am-4pm', '7372887893', 'Stanford Blood Center');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (506, 'Monday-Friday: 9am-5pm', '7372887894', 'Vitalant Blood Donation Center');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (507, 'Monday-Friday: 8am-4pm', '7372887895', 'American Red Cross');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (508, 'Monday-Saturday: 9am-5pm', '7372887896', 'Memorial Blood Centers');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (509, 'Monday-Friday: 10am-6pm', '7372887897', 'Blood Bank of Hawaii');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (510, 'Monday-Friday: 8am-4pm', '7372887891', 'Hoxworth Blood Center');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (511, 'Monday-Thursday: 9am-5pm', '7372887898', 'Gulf Coast Regional Blood Center');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (512, 'Monday-Friday: 9am-5pm', '7372887899', 'Blood Connection');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (513, 'Monday-Friday: 8am-4pm', '9374226594', 'Michigan Blood');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (514, 'Monday-Saturday: 9am-5pm', '9374226593', 'BloodSource');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (515, 'Monday-Friday: 10am-4pm', '9374226592', 'Blood Bank of Delmarva');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (516, 'Monday-Friday: 9am-5pm', '9374226591', 'LifeShare Blood Center');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (517, 'Monday-Friday: 8am-4pm', '9374226595', 'Mississippi Valley Regional Blood Center');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (518, 'Monday-Thursday: 9am-5pm', '9374226596', 'Oklahoma Blood Institute');

INSERT INTO Blood\_Bank (bb\_id, bb\_operation\_hours, bb\_phone, bb\_name)

VALUES (519, 'Monday-Friday: 8am-4pm', '9374226597', 'Rock River Valley Blood Center');

**Inventory**

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (600, 100, 'A+', '05/15/2024', 500);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (601, 100, 'A-', '05/15/2024', 500);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (602, 100, 'B+', '05/15/2024', 500);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (603, 0, 'B-', '05/15/2024', 500);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (604, 0, 'AB+', '05/15/2024', 500);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (605, 100, 'AB-', '05/15/2024', 500);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (606, 100, 'O+', '05/15/2024', 500);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (607, 0, 'O-', '05/15/2024', 500);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (608, 150, 'A+', '06/20/2024', 501);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (609, 150, 'A-', '06/20/2024', 501);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (610, 150, 'B+', '06/20/2024', 501);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (611, 0, 'B-', '06/20/2024', 501);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (612, 150, 'AB+', '06/20/2024', 501);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (613, 0, 'AB-', '06/20/2024', 501);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (614, 0, 'O+', '06/20/2024', 501);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (615, 150, 'O-', '06/20/2024', 501);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (616, 200, 'A+', '07/10/2024', 502);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (617, 0, 'A-', '07/10/2024', 502);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (618, 200, 'B+', '07/10/2024', 502);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (619, 200, 'B-', '07/10/2024', 502);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (620, 0, 'AB+', '07/10/2024', 502);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (621, 200, 'AB-', '07/10/2024', 502);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (622, 0, 'O+', '07/10/2024', 502);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (623, 0, 'O-', '07/10/2024', 502);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (624, 100, 'A+', '05/15/2024', 503);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (625, 0, 'A-', '05/15/2024', 503);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (626, 100, 'B+', '05/15/2024', 503);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (627, 0, 'B-', '05/15/2024', 503);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (628, 100, 'AB+', '05/15/2024', 503);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (629, 100, 'AB-', '05/15/2024', 503);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (630, 0, 'O+', '05/15/2024', 503);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (631, 100, 'O-', '05/15/2024', 503);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (632, 150, 'A+', '06/20/2024', 504);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (633, 0, 'A-', '06/20/2024', 504);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (634, 0, 'B+', '06/20/2024', 504);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (635, 150, 'B-', '06/20/2024', 504);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (636, 150, 'AB+', '06/20/2024', 504);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (637, 0, 'AB-', '06/20/2024', 504);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (638, 150, 'O+', '06/20/2024', 504);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (639, 0, 'O-', '06/20/2024', 504);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (640, 0, 'A+', '07/10/2024', 505);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (641, 0, 'A-', '07/10/2024', 505);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (642, 200, 'B+', '07/10/2024', 505);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (643, 0, 'B-', '07/10/2024', 505);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (644, 0, 'AB+', '07/10/2024', 505);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (645, 200, 'AB-', '07/10/2024', 505);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (646, 0, 'O+', '07/10/2024', 505);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (647, 200, 'O-', '07/10/2024', 505);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (648, 0, 'A+', '05/15/2024', 506);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (649, 100, 'A-', '05/15/2024', 506);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (650, 100, 'B+', '05/15/2024', 506);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (651, 0, 'B-', '05/15/2024', 506);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (652, 0, 'AB+', '05/15/2024', 506);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (653, 0, 'AB-', '05/15/2024', 506);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (654, 100, 'O+', '05/15/2024', 506);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (655, 0, 'O-', '05/15/2024', 506);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (656, 150, 'A+', '06/20/2024', 507);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (657, 0, 'A-', '06/20/2024', 507);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (658, 0, 'B+', '06/20/2024', 507);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (659, 150, 'B-', '06/20/2024', 507);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (660, 0, 'AB+', '06/20/2024', 507);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (661, 150, 'AB-', '06/20/2024', 507);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (662, 150, 'O+', '06/20/2024', 507);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (663, 0, 'O-', '06/20/2024', 507);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (664, 0, 'A+', '07/10/2024', 508);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (665, 0, 'A-', '07/10/2024', 508);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (666, 0, 'B+', '07/10/2024', 508);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (667, 200, 'B-', '07/10/2024', 508);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (668, 200, 'AB+', '07/10/2024', 508);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (669, 200, 'AB-', '07/10/2024', 508);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (670, 200, 'O+', '07/10/2024', 508);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (671, 0, 'O-', '07/10/2024', 508);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (672, 100, 'A+', '05/15/2024', 509);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (673, 0, 'A-', '05/15/2024', 509);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (674, 100, 'B+', '05/15/2024', 509);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (675, 0, 'B-', '05/15/2024', 509);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (676, 100, 'AB+', '05/15/2024', 509);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (677, 100, 'AB-', '05/15/2024', 509);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (678, 100, 'O+', '05/15/2024', 509);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (679, 0, 'O-', '05/15/2024', 509);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (680, 150, 'A+', '06/20/2024', 510);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (681, 0, 'A-', '06/20/2024', 510);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (682, 150, 'B+', '06/20/2024', 510);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (683, 150, 'B-', '06/20/2024', 510);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (684, 0, 'AB+', '06/20/2024', 510);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (685, 150, 'AB-', '06/20/2024', 510);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (686, 150, 'O+', '06/20/2024', 510);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (687, 0, 'O-', '06/20/2024', 510);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (688, 0, 'A+', '07/10/2024', 511);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (689, 0, 'A-', '07/10/2024', 511);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (690, 200, 'B+', '07/10/2024', 511);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (691, 200, 'B-', '07/10/2024', 511);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (692, 0, 'AB+', '07/10/2024', 511);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (693, 0, 'AB-', '07/10/2024', 511);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (694, 200, 'O+', '07/10/2024', 511);

INSERT INTO Inventory (inventory\_id, quantity, blood\_type, expiry\_date, bb\_id)

VALUES (695, 0, 'O-', '07/10/2024', 511);

**Request**

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (700, 457, 'A+', 1, 500, 300);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (701, 327, 'A-', 1, 501, 301);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (702, 314, 'B+', 2, 502, 302);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (703, 269, 'B-', 3, 503, 303);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (704, 375, 'AB+', 4, 504, 304);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (705, 487, 'AB-', 4, 505, 305);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (706, 142, 'O+', 4, 506, 306);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (707, 225, 'O-', 5, 507, 307);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (708, 218, 'A+', 6, 508, 308);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (709, 459, 'A-', 7, 509, 309);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (710, 139, 'B+', 8, 510, 310);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (711, 295, 'B-', 9, 511, 311);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (712, 438, 'AB+', 10, 512, 312);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (713, 384, 'AB-', 11, 513, 313);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (714, 273, 'O+', 12, 514, 314);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (715, 411, 'O-', 13, 515, 315);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (716, 132, 'A+', 14, 516, 316);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (717, 184, 'A-', 14, 517, 317);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (718, 287, 'B+', 15, 518, 318);

INSERT INTO Request (req\_id, req\_quantity, blood\_group, hospital\_id, bb\_id, bc\_id)

VALUES (719, 403, 'B-', 16, 519, 319);

**Donor**

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (820, 'John Smith', 'Male', 25, '05/12/2023', 500, 300);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (821, 'Emily Johnson', 'Female', 30, '06/18/2023', 500, 300);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (822, 'Michael Davis', 'Male', 35, '08/25/2023', NULL, 300);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (823, 'Sophia Brown', 'Female', 28, '10/10/2023', 500, NULL);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (824, 'William Wilson', 'Male', 40, '11/30/2023', 501, 301);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (825, 'Olivia Martinez', 'Female', 32, '12/15/2023', NULL, 301);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (826, 'James Taylor', 'Male', 29, '01/20/2024', 501, 301);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (827, 'Amelia Anderson', 'Female', 27, '02/28/2024', NULL, 301);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (828, 'Aiden Thompson', 'Male', 33, '04/05/2024', 502, 302);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (829, 'Emma Hall', 'Female', 26, '05/10/2024', 502, 302);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (830, 'Charlotte Garcia', 'Male', 31, '06/15/2024', NULL, 302);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (831, 'Noah Wilson', 'Female', 34, '08/20/2024', 502, NULL);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (832, 'Liam Brown', 'Male', 38, '09/25/2024', 503, 303);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (833, 'Amelia Lee', 'Female', 23, '10/30/2024', NULL, 303);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (834, 'Oliver Rodriguez', 'Male', 36, '12/05/2024', 503, 303);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (835, 'Ethan Thompson', 'Female', 25, '01/10/2025', NULL, 303);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (836, 'Lucas Miller', 'Male', 41, '02/15/2025', 504, 304);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (837, 'Ava Harris', 'Female', 24, '03/20/2025', 504, 304);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (838, 'Mia Martinez', 'Male', 37, '04/25/2025', NULL, 304);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (839, 'Isabella Wilson', 'Female', 29, '06/01/2025', 504, NULL);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (840, 'Sophia Garcia', 'Male', 30, '05/12/2023', 505, 305);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (841, 'Daniel Wilson', 'Female', 27, '06/18/2023', NULL, 305);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (842, 'Emily Rodriguez', 'Male', 33, '08/25/2023', 505, 305);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (843, 'Ethan Martinez', 'Female', 28, '10/10/2023', 505, NULL);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (844, 'Madison Brown', 'Male', 35, '11/30/2023', 506, 306);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (845, 'Benjamin Taylor', 'Female', 32, '12/15/2023', 506, NULL);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (846, 'Harper Garcia', 'Male', 29, '01/20/2024', NULL, 306);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (847, 'Alexander Davis', 'Female', 26, '02/28/2024', 506, 306);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (848, 'Charlotte Thompson', 'Male', 34, '04/05/2024', 507, 307);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (849, 'William Hall', 'Female', 31, '05/10/2024', NULL, 307);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (850, 'Scarlett Lopez', 'Male', 38, '06/15/2024', 507, 307);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (851, 'Henry Wilson', 'Female', 25, '08/20/2024', 507, NULL);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (852, 'Liam Martin', 'Male', 36, '09/25/2024', 508, 308);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (853, 'Chloe Martinez', 'Female', 23, '10/30/2024', NULL, 308);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (854, 'Ella Thompson', 'Male', 40, '12/05/2024', 508, 308);

INSERT INTO Donor (donor\_id, donor\_name, gender, age, date\_of\_last\_donation, bb\_id, bc\_id)

VALUES (855, 'Emma Harris', 'Female', 28, '01/10/2025', 508, NULL);

**Admits**

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (120, '01/01/2023', 1);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (101, '01/02/2023', 2);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (102, '01/03/2023', 1);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (103, '01/04/2023', 4);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (104, '01/05/2023', 1);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (105, '01/06/2023', 6);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (106, '01/07/2023', 1);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (107, '01/08/2023', 8);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (108, '01/09/2023', 9);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (109, '01/10/2023', 10);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (110, '01/11/2023', 10);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (111, '01/12/2023', 10);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (112, '01/13/2023', 13);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (113, '01/14/2023', 14);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (114, '01/15/2023', 13);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (115, '01/16/2023', 12);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (116, '01/17/2023', 12);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (117, '01/18/2023', 18);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (118, '01/19/2023', 19);

INSERT INTO Admits (patient\_id, admitted\_date, hospital\_id)

VALUES (119, '01/20/2023', 20);

**Send\_to\_bc**

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (700, 300, '01/01/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (701, 301, '01/02/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (702, 302, '01/03/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (703, 303, '01/04/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (704, 304, '01/05/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (705, 305, '01/06/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (706, 306, '01/07/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (707, 307, '01/08/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (708, 308, '01/09/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (709, 309, '01/10/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (710, 310, '01/11/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (711, 311, '01/12/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (712, 312, '01/13/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (713, 313, '01/14/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (714, 314, '01/15/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (715, 315, '01/16/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (716, 316, '01/17/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (717, 317, '01/18/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (718, 318, '01/19/2023');

INSERT INTO Send\_to\_bc (req\_id, bc\_id, bc\_sent\_date)

VALUES (719, 319, '01/20/2023');

**Send\_to\_bb**

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (700, 500, '01/01/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (701, 501, '01/02/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (702, 502, '01/03/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (703, 503, '01/04/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (704, 504, '01/05/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (705, 505, '01/06/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (706, 506, '01/07/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (707, 507, '01/08/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (708, 508, '01/09/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (709, 509, '01/10/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (710, 510, '01/11/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (711, 511, '01/12/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (712, 512, '01/13/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (713, 513, '01/14/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (714, 514, '01/15/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (715, 515, '01/16/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (716, 516, '01/17/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

VALUES (717, 517, '01/18/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

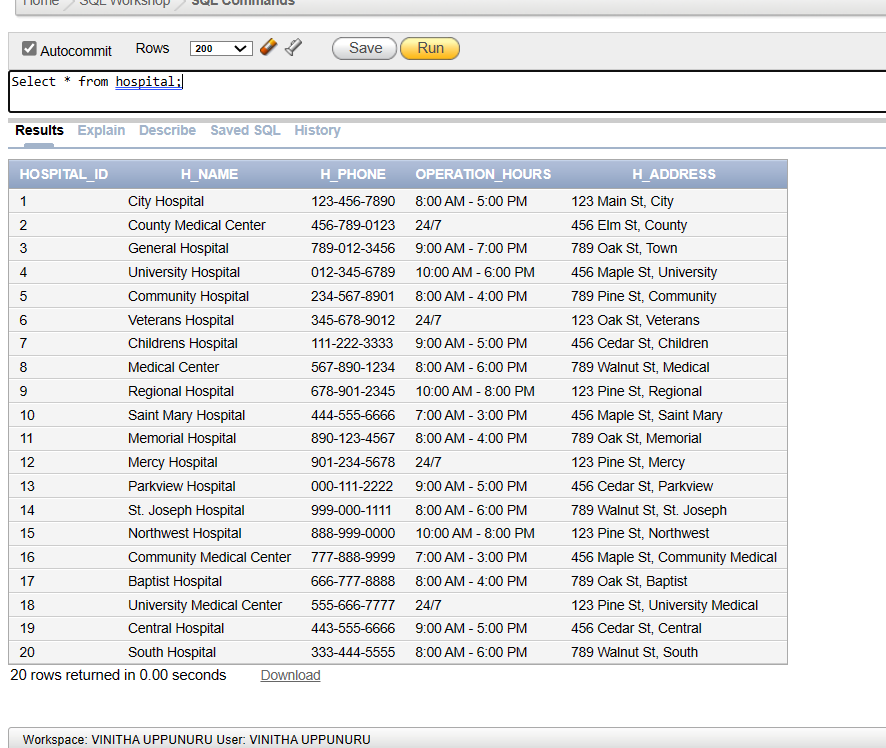
VALUES (718, 518, '01/19/2023');

INSERT INTO Send\_to\_bb (req\_id, bb\_id, bb\_sent\_date)

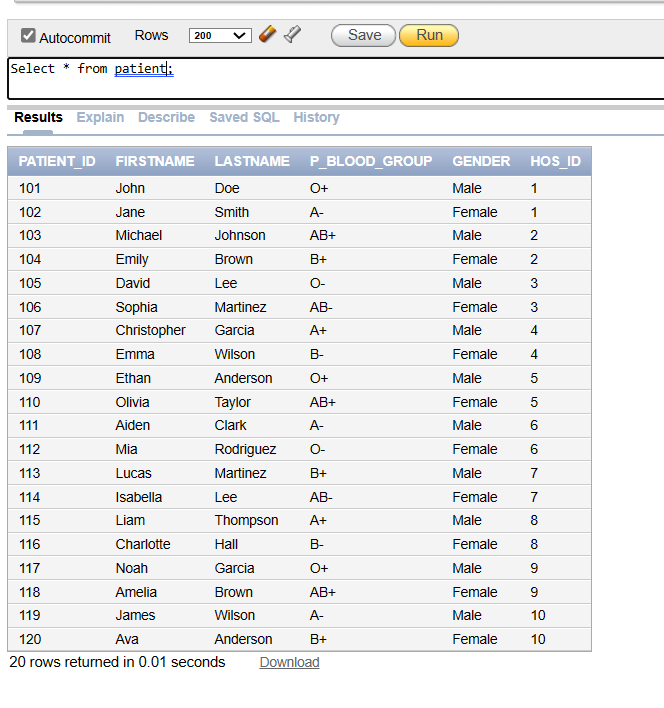
VALUES (719, 519, '01/20/2023');

**TABLE VIEWS**

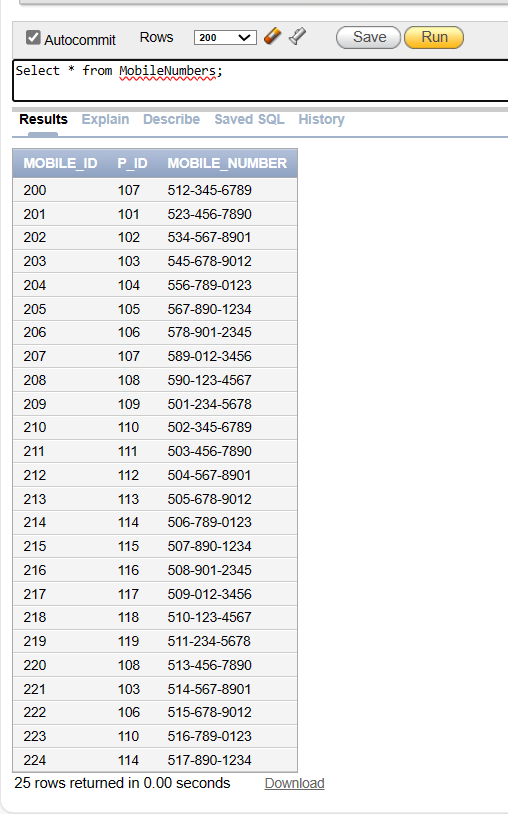
**HOSPITAL**



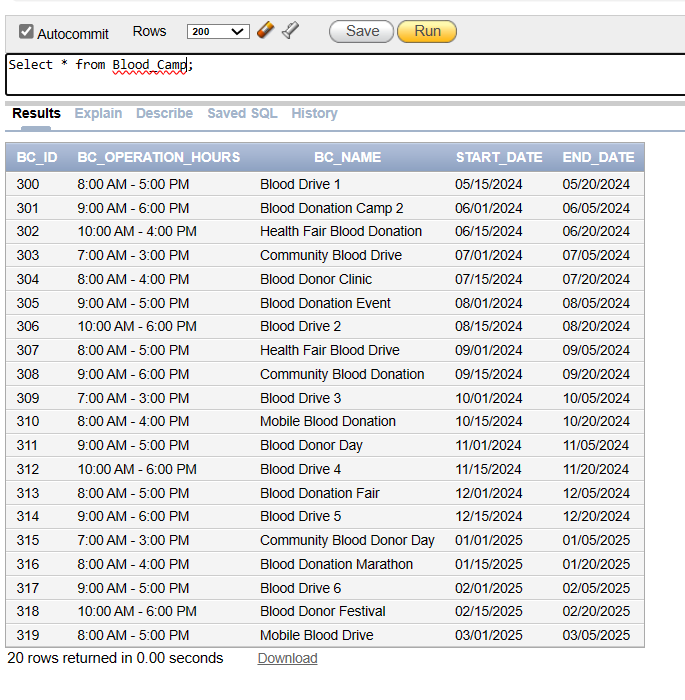
**PATIENT**



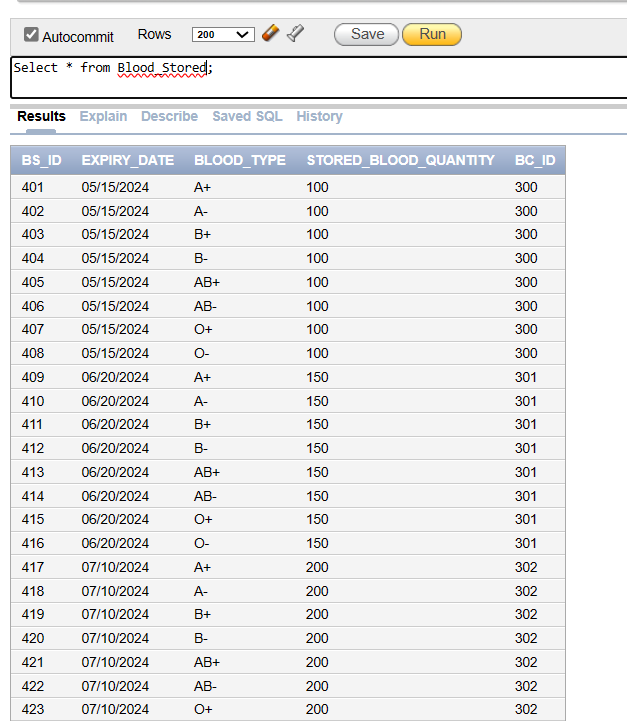
**MOBILE NUMBERS**



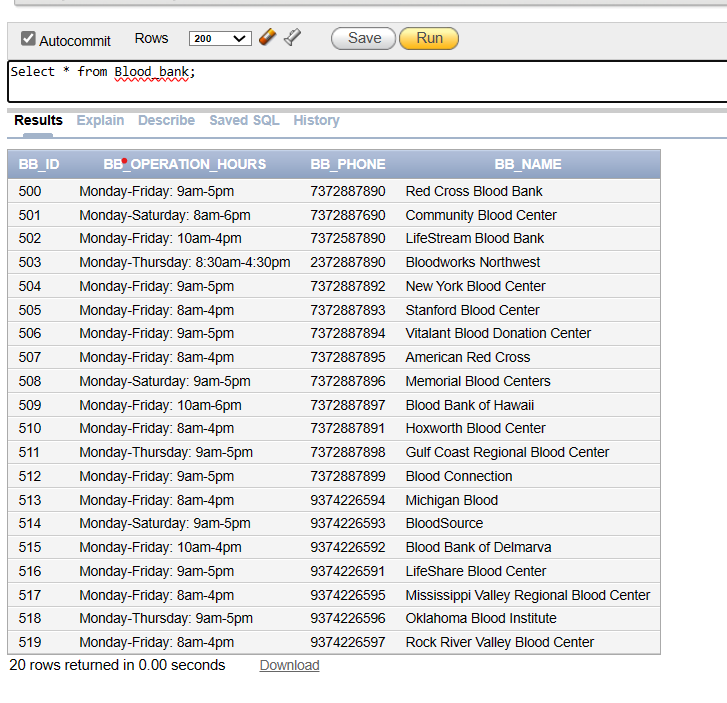
**BLOOD\_CAMP**



**BLOOD\_STORED**



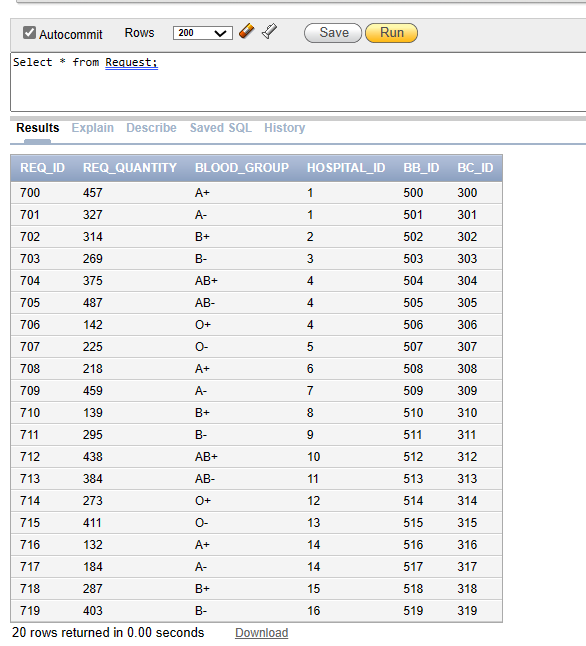
**BLOOD\_BANK**



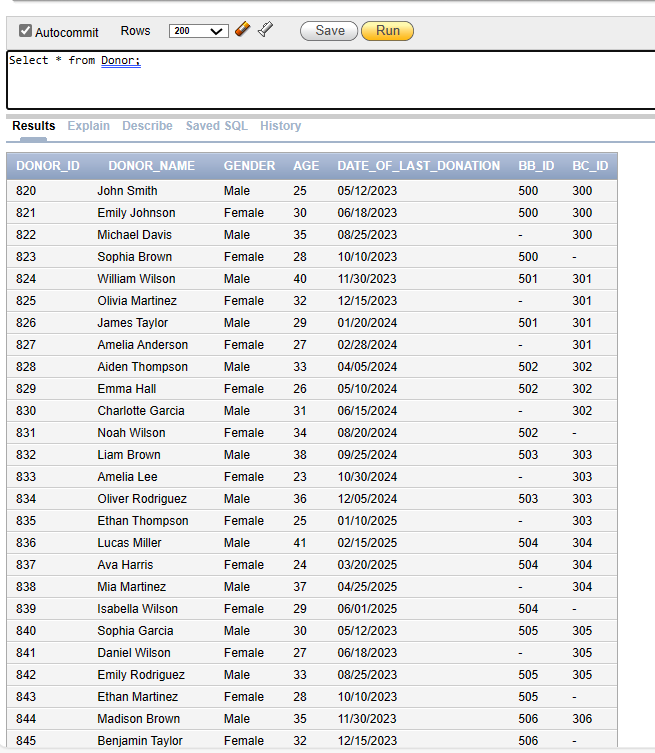
**INVENTORY**



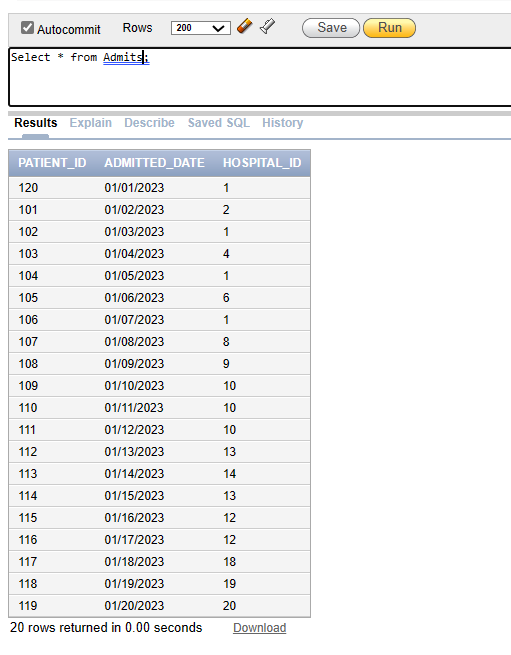
**REQUEST**



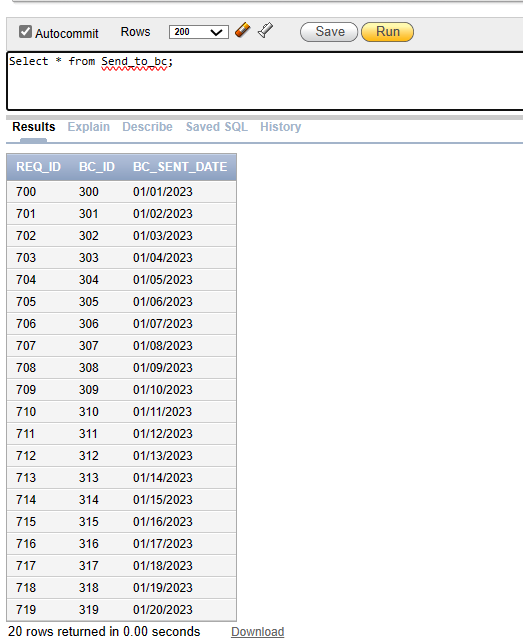
**DONOR**



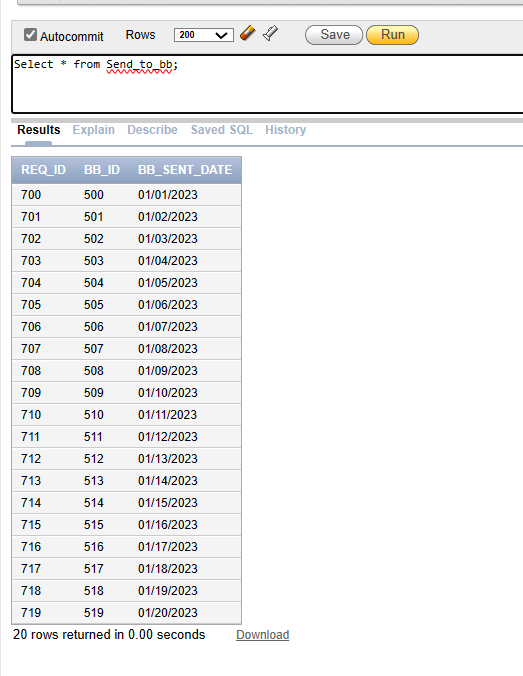
**ADMITS**



**SEND\_TO\_BC**



**SEND\_TO\_BB**



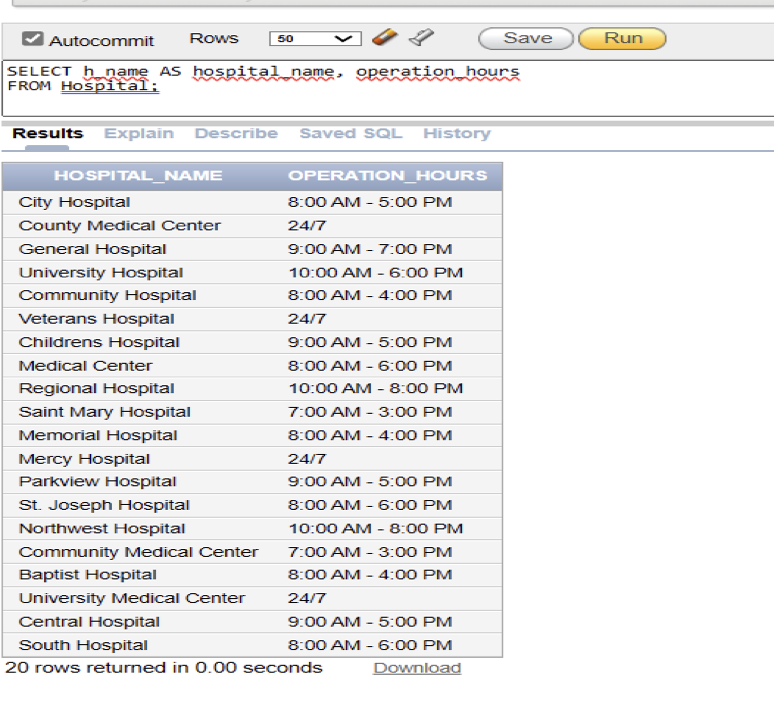
**TRANSACTIONS:**

**1. Query to retrieve the names of all hospitals and their operation hours.**

SELECT h\_name AS hospital\_name, operation\_hours

FROM Hospital;

**Result:**

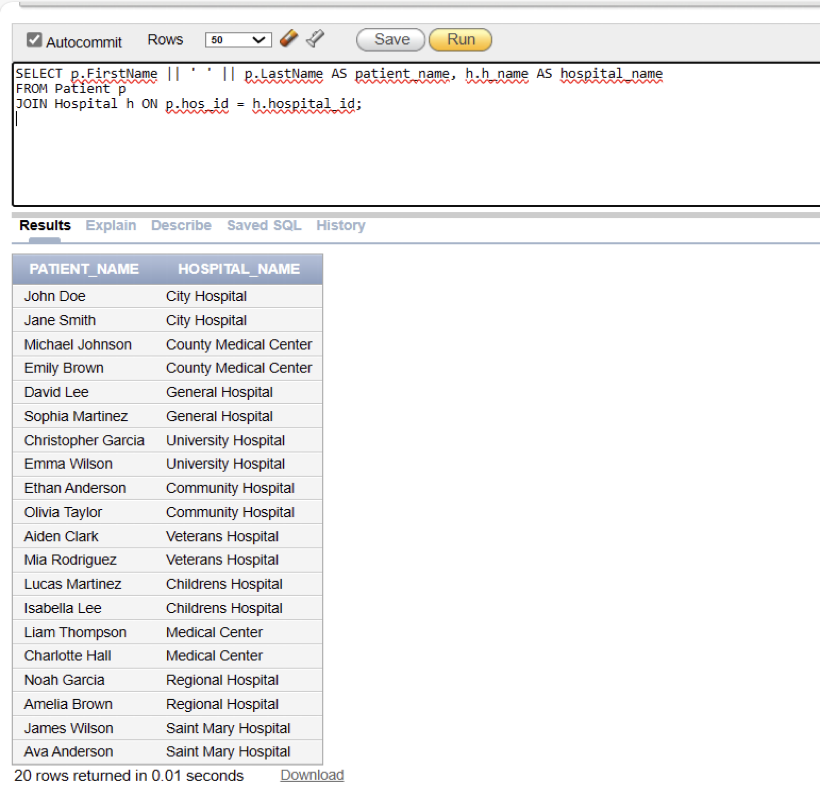
****

**2. Query to retrieve the names of patients along with the names of the hospitals they are admitted to.**

SELECT p.FirstName || ' ' || p.LastName AS patient\_name, h.h\_name AS hospital\_name

FROM Patient p  
JOIN Hospital h ON p.hos\_id = h.hospital\_id;

**Result:**

****

**3. Query to count the number of patients in each hospital.**

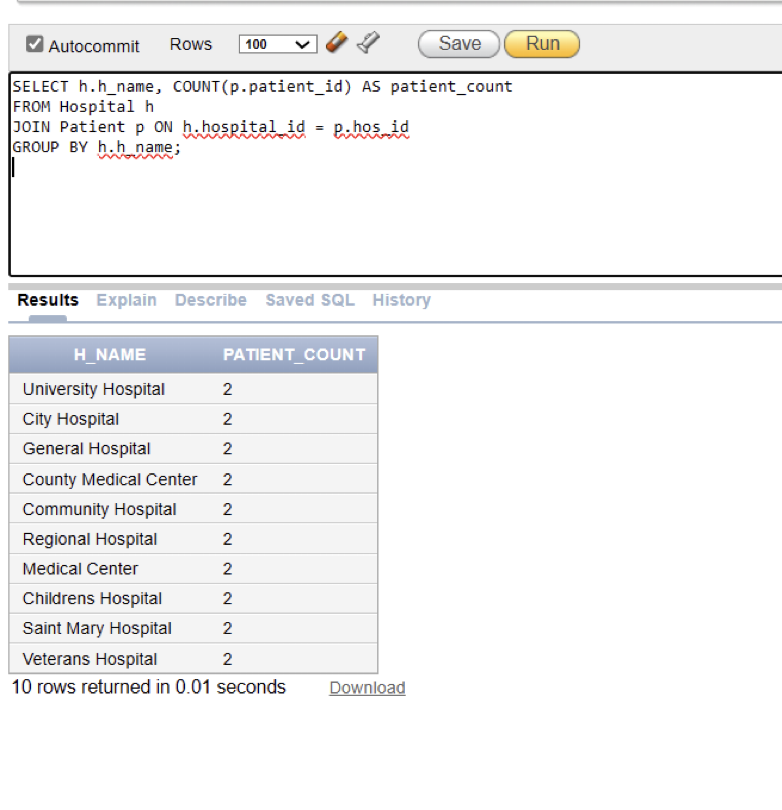
SELECT h.h\_name, COUNT(p.patient\_id) AS patient\_count

FROM Hospital h

Patient p ON h.hospital\_id = p.hos\_id

GROUP BY h.h\_name;

**Result:**

****

**4. Query to calculate the total blood donation quantity by gender.**

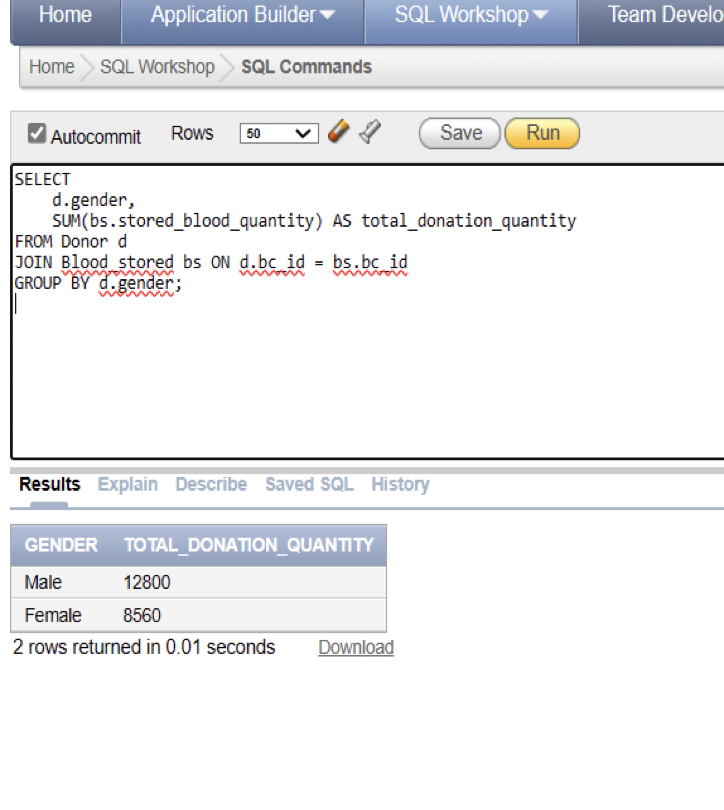
SELECT d.gender, SUM(bs.stored\_blood\_quantity) AS total\_donation\_quantity

FROM Donor d

JOIN Blood\_stored bs ON d.bc\_id = bs.bc\_id

GROUP BY d.gender;

**Result:**

****

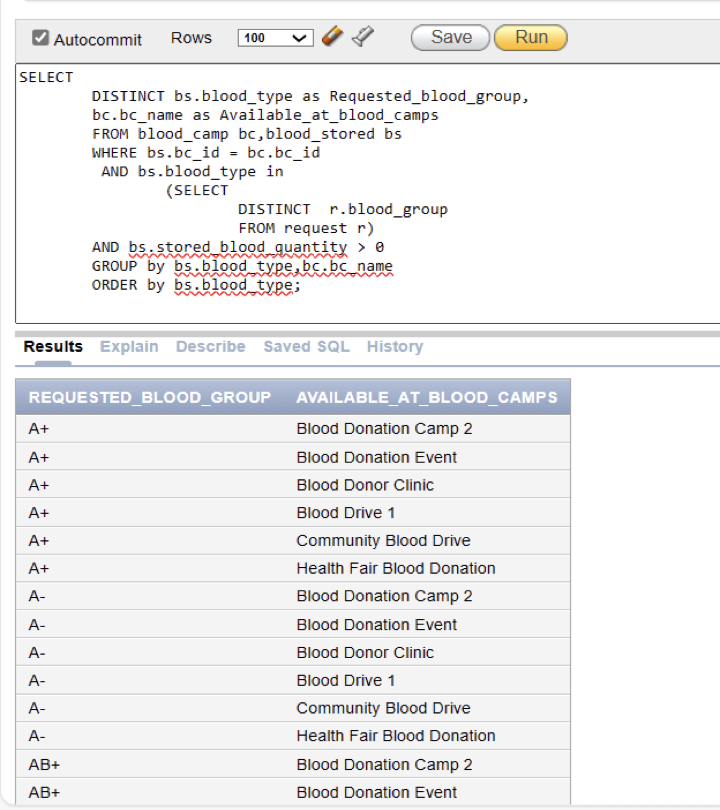
**5. Query to retrieve requested blood groups that are available at specific blood donation camps and provides the names of those camps.**

SELECT DISTINCT bs.blood\_type as Requested\_blood\_group, bc.bc\_name as Available\_at\_blood\_camps FROM blood\_camp bc,blood\_stored bs WHERE bs.bc\_id = bc.bc\_id AND bs.blood\_type in(SELECT DISTINCT r.blood\_group FROM request r) AND bs.stored\_blood\_quantity > 0

GROUP by bs.blood\_type,bc.bc\_name

ORDER by bs.blood\_type;

**Result:**

****



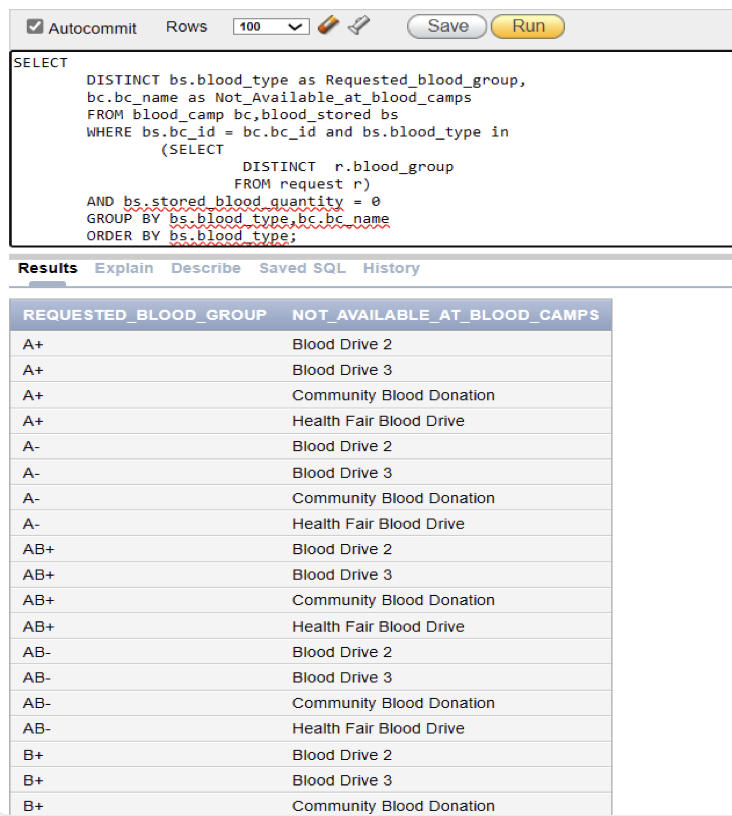
**6. Query to retrieve requested blood groups that are not available at specific blood donation camps and provides the names of those camps.**

SELECT DISTINCT bs.blood\_type as Requested\_blood\_group, bc.bc\_name as Not\_Available\_at\_blood\_camps

FROM blood\_camp bc,blood\_stored bs WHERE bs.bc\_id = bc.bc\_id and bs.blood\_type in (SELECT DISTINCT r.blood\_group FROM request r) AND bs.stored\_blood\_quantity = 0 GROUP BY bs.blood\_type,bc.bc\_name

ORDER BY bs.blood\_type;

**Result:**



**7. Query to identify blood requests for specific blood group and hospital.**

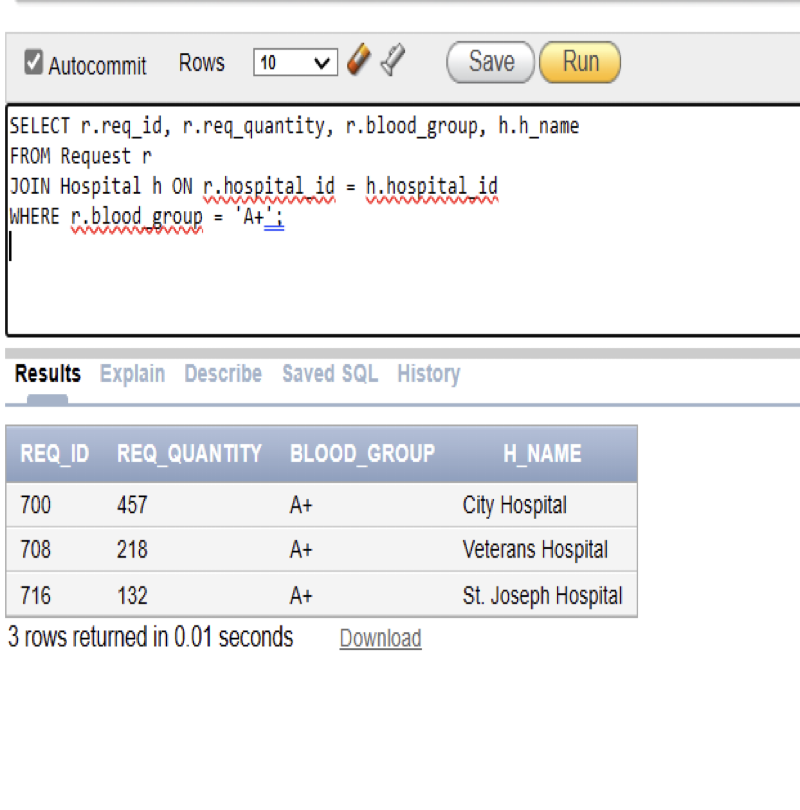
SELECT r.req\_id, r.req\_quantity, r.blood\_group, h.h\_name

FROM Request r

JOIN Hospital h ON r.hospital\_id = h.hospital\_id

WHERE r.blood\_group = 'A+’;

**Result:**



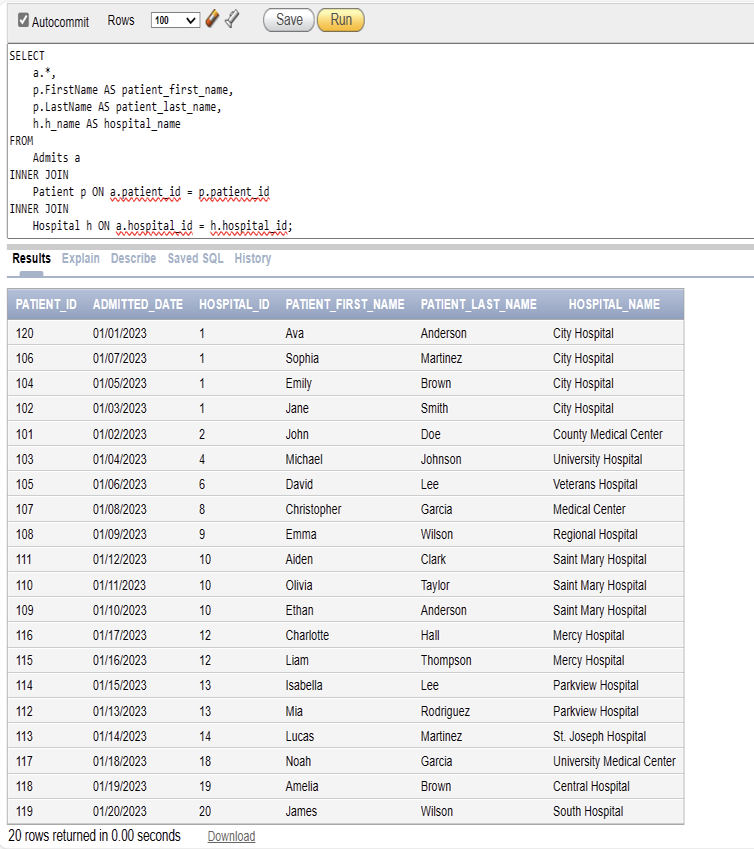
**8. Query to fetch all admissions with corresponding patient and hospital.**

SELECT a.\*, p.FirstName AS patient\_first\_name, p.LastName AS patient\_last\_name, h.h\_name AS hospital\_name FROM Admits a

INNER JOIN Patient p ON a.patient\_id = p.patient\_id

INNER JOIN Hospital h ON a.hospital\_id = h.hospital\_id;

**Result:**

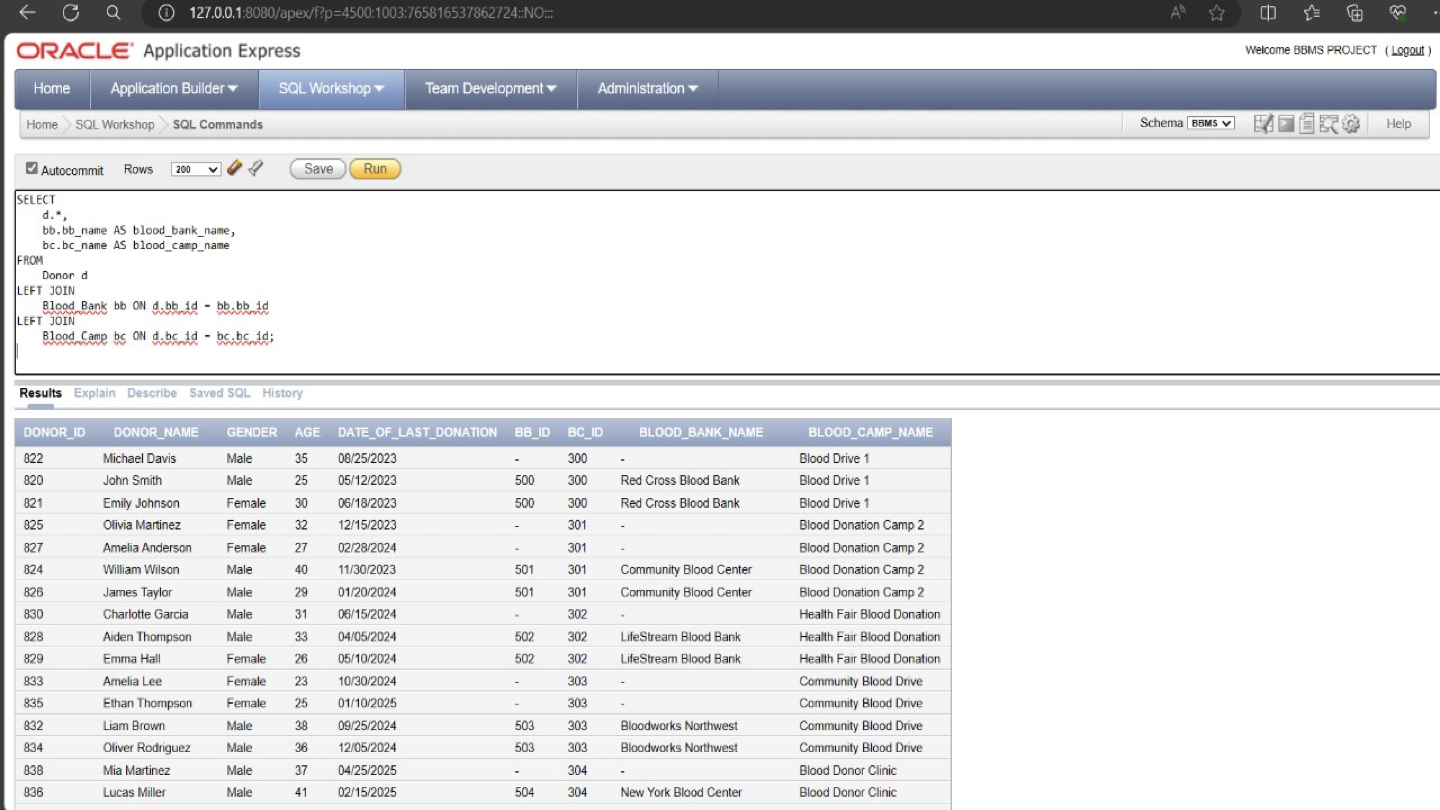


**9. Query to fetch all donors with corresponding blood bank and blood camp.**

SELECT d.\*, bb.bb\_name AS blood\_bank\_name, bc.bc\_name AS blood\_camp\_name FROM Donor d

LEFT JOIN Blood\_Bank bb ON d.bb\_id = bb.bb\_id LEFT JOIN Blood\_Camp bc ON d.bc\_id = bc.bc\_id;

**Result:**



**10. Query to retrieve requested blood quantity, blood group, blood bank name and the request sent date to the blood bank for all the request Id’s.**

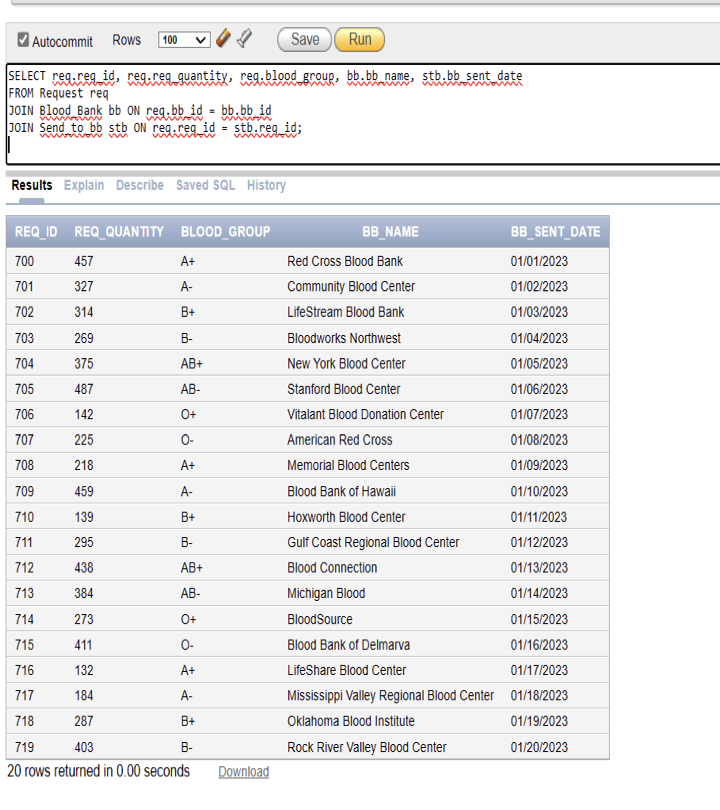
SELECT req.req\_id, req.req\_quantity, req.blood\_group, bb.bb\_name, stb.bb\_sent\_date

FROM Request req

JOIN Blood\_Bank bb ON req.bb\_id = bb.bb\_id

JOIN Send\_to\_bb stb ON req.req\_id = stb.req\_id;

**Result:**



**CONCLUSION**

The Blood Bank Management System stands as a testament to the innovation and dedication of healthcare professionals in optimizing the utilization of limited blood resources. It serves as a vital tool for enhancing operational efficiency and quality within blood banks, empowering organizations to streamline key processes and meet the needs of patients effectively. By adopting systematic approaches to documentation management and leveraging evolving technological landscapes, blood banks can extend their reach, foster ongoing donor engagement, and ensure a steady supply of blood donations. Throughout the development of the blood bank database, challenges were encountered and overcome, leading to the creation of a robust and effective solution that meets the diverse requirements of blood bank management. This project offers valuable insights into the complexities of database development, showcasing the importance of careful planning, thorough analysis, and diligent application of concepts. As the demand for efficient data management and analysis continues to rise in the healthcare sector, the skills and techniques demonstrated in this project will undoubtedly remain invaluable for both students and professionals striving to make a meaningful impact in blood bank management and beyond.